Planck 2018 Results: Cosmological Parameter Tables

July 9, 2018

Abstract

These tables summarize the results of *Planck* 2018 parameter estimation exploration results. They are based on *Planck* HFI data and *Planck* lensing, as well as additional non-CMB data as detailed in the main parameter papers.

1 Introduction

The tables are arranged in groups, firstly by cosmological model, and then by data combination. The name tags match those of the full chains also provided on the PLA. The names all start with `base` to denote the baseline model, followed by the parameter tags of any additional parameters that are also varied (as defined in the parameter paper). Data combination tags are as follows (see the parameters paper for full description and references):

Data tag	Data used
`plikHM`	Baseline high-ℓ *Planck* power spectra (`plik` cross-half-mission, $30 \leq \ell \leq 2508$).
`CamSpecHM`	`CamSpec` high-ℓ *Planck* power spectra.
`CleanedCamSpecHM`	Foreground-cleaned `CamSpec` high-ℓ *Planck* power spectra.
`lowl`	Low-ℓ *Planck* temperature (`Commander`, $2 \leq \ell \leq 29$).
`lowE`	Low-ℓ HFI EE polarization only (`SimAll`, $2 \leq \ell \leq 29$).
`lensing`	*Planck* lensing power spectrum reconstruction. When used without other CMB likelihoods, it is marginalized over the theory CMB spectra given.
`BAO`	Baryon oscillation data from BOSS DR12, MGS, and 6DF.
`Pantheon`	Supernova data from the Pantheon sample.
`JLA`	Supernova data from the SDSS-II/SNLS3 Joint Light-curve Analysis.
`Riess18`	Hubble parameter measurement from SHOES (Riess et al. 2018a, $H_0 = 73.45 \pm 1.66$).
`zre6p5`	A hard prior, $z_{\rm re} > 6.5$.
`reion`	A hard prior, $z_{\rm re} > 6.5$, combined with a Gaussian prior, $z_{\rm re} = 7 \pm 1$.
`lenspriors`	Standard base parameters with $n_{\rm s} = 0.96 \pm 0.02$, $\Omega_{\rm b}h^2 = 0.0222 \pm 0.0005$, $100 > H_0 > 40$, $\tau = 0.055$.
`DESpriors`	DES cosmological parameter priors (flat on $0.1 < \Omega_{\rm m} < 0.9$, $0.03 < \Omega_{\rm b} < 0.07$, $55 < H_0 < 91$, $0.5 < 10^9 A_{\rm s} < 5$, $Y_{\rm P} = 0.245341$ and, if varied, $0.05{\rm eV} < \sum m_\nu < 1{\rm eV}$).
`CookeDH`	A Gaussian prior $\Omega_{\rm b}h^2 = 0.0222 \pm 0.0005$ (conservative, motivated by Cooke et al. 2017).
`Cooke17`	A Gaussian prior on D/H (Cooke et al. 2017), mean and error adjusted to approximately agree with `CookeDH` for $N_{\rm eff} = 3.046$.
`Aver15`	A Gaussian constraint on $Y_{\rm P}^{\rm BBN} = 0.2449 \pm 0.0040$ (Aver et al. 2015).
`theta`	A Gaussian prior $100\theta_{\rm MC} = 1.0409 \pm 0.0006$ (acoustic scale from *Planck* CMB without LCDM assumption).
`WMAP`	The full WMAP (temperature and polarization) 9-year data.
`DES`	DES 1yr, cosmic shear+galaxy auto+cross.
`DESlens`	DES 1yr, cosmic shear only.
`DESwt`	DES 1yr, galaxy auto+cross only.

The high-ℓ *Planck* likelihoods have `TT`, `TE`, `EE` variants from each spectrum alone, plus the `TTTEEE` joint constraint. Note that unless `mnu` is specified in the file name, the neutrino mass sum is fixed to $\sum_\nu m_\nu = 0.06{\rm eV}$ (including for DES chains). Non-linear corrections are modelled with HMCode in all cases (including when using DESpriors).

Data likelihoods are either included when running the chains, or by importance sampling. Data combinations that are added by importance sampling appear at the end of the list, following the `post_` tag. Note that the best fits are merely examples of parameter combinations that fit the data well; due to parameter degeneracies there may be other combinations of parameters that fit the data nearly equally well.

Beneath each table is the $\chi^2_{\rm eff} = -2\log({\rm likelihood})$ for each best-fit model, and also the contributions coming from each separate part of the likelihood. Mean minus log likelihoods are also given, as $\bar{\chi}^2_{\rm eff}$. The tables also give the $\chi^2_{\rm eff}$ of the various component parts of the likelihood, where quoted values are the best-fit and mean, standard deviation (in the case of $1\,\sigma$ tables), or effective degrees of freedom (ν, defined by $\sigma^2/2$). Normalization of likelihoods is arbitrary, i.e., a constant can be added to log likelihoods without affecting any results. Only some likelihoods normalize so that the number is immediately interpretable as similar to a χ^2 for some number of data points.

The $R-1$ value is also given, which measures the convergence of the sampling chains, with small values being better converged. The sampling uncertainty on quoted mean values are typically of order $R-1$ in units of the standard deviation.

Parameter constraints were calculated from Monte Carlo chains from `CosmoMC` using `GetDist` (getdist.readthedocs.org).

Parameters and derived parameters, along with the name tags used in the chain files, are briefly described in the tables below.

Additional nuisance parameters for each likelihood are described in more detail in the respective papers.

Parameter	Tag	baseline	Definition
$\Omega_{\rm b}h^2$	omegabh2	...	Baryon density today
$\Omega_{\rm c}h^2$	omegach2	...	Cold dark matter density today
$100\theta_{\rm MC}$	theta	...	$100\times$ approximation to $r_{\rm s}/D_{\rm M}$ (`CosmoMC`)
τ	tau	...	Thomson scattering optical depth due to reionization
Ω_K	omegak	0	$\Omega_{\rm tot}=1-\Omega_K$
Σm_ν	mnu	0.06	Sum of active neutrino masses in eV
$m^{\rm eff}_{\nu,{\rm sterile}}$	meffsterile	0	Effective mass in sterile neutrinos in eV
w_0	w	-1	Dark energy equation of state, $w(a)=w_0+(1-a)w_a$
w_a	wa	0	As above (perturbations modelled using PPF)
$N_{\rm eff}$	nnu	3.046	Total effective number of massive and massless neutrinos (see text)
$Y_{\rm P}$	yhe	BBN	Fraction of baryonic mass in helium (only if varied independently of BBN)
α_{-1}	alpha1	0	Fully correlated isocurvature amplitude parameter
$A_{\rm L}$	Alens	1	Amplitude of the lensing power relative to the physical value
$A^{\phi\phi}_{\rm L}$	Aphiphi	1	Amplitude of the lensing reconstruction power relative to the physical value
$A^{\rm fid}_{\rm L}$	Alensf	...	Amplitude of the lensing power relative to a fixed fiducial spectrum
$n_{\rm s}$	ns	...	Scalar spectrum power-law index ($k_0=0.05{\rm Mpc}^{-1}$)
$n_{\rm t}$	nt	Inflation	Tensor spectrum power-law index ($k_0=0.05{\rm Mpc}^{-1}$)
${\rm d}\ln n_{\rm s}/{\rm d}\ln k$	nrun	0	Running of the spectral index
$\log[10^{10}A_{\rm s}]$	logA	...	Log power of the primordial curvature perturbations ($k_0=0.05{\rm Mpc}^{-1}$)
$r_{0.05}$	r	0	Tensor power spectrum amplitude ($k_0=0.05{\rm Mpc}^{-1}$)
H_0	H0	...	Current expansion rate in ${\rm km\,s^{-1}Mpc^{-1}}$
$\Omega_{\rm m}$	omegam	...	Matter density (incl. massive neutrinos) today divided by the critical density
Ω_Λ	omegal	...	Dark energy density divided by the critical density today
$\Omega_{\rm m}h^2$	omegamh2	...	Total matter density today (incl. massive neutrinos)
$\Omega_{\rm m}h^3$	omegamh3	...	$h\times$total matter density today
σ_8	sigma8	...	RMS matter fluctuations today in linear theory
S_8	S8	...	$\sigma_8(\Omega_{\rm m}/0.3)^{0.5}$
$\sigma_8\Omega_{\rm m}^{0.5}$	s8omegamp5	...	$\sigma_8\Omega_{\rm m}^{0.5}$ constrained by low-redshift lensing
$\sigma_8\Omega_{\rm m}^{0.25}$	s8omegamp25	...	$\sigma_8\Omega_{\rm m}^{0.25}$ constrained by CMB lensing
$\sigma_8/h^{0.5}$	s8h5	...	$\sigma_8/h^{0.5}$
$\sigma_8/h^{0.5}$	rdragh	...	$r_{\rm drag}h$ in Mpc
$\langle d^2\rangle^{1/2}$	rmsdeflect	...	RMS CMB lensing deflection angle in arcmin (approx. using $2\le L\le 2000$)
$z_{\rm re}$	zrei	...	Redshift at which Universe is half reionized
$10^9A_{\rm s}$	A	...	Power of the primordial curvature perturbations ($k_0=0.05{\rm Mpc}^{-1}$)
$10^9A_{\rm s}e^{-2\tau}$	clamp	...	Parameter determining the small-scale CMB power
$Y_{\rm P}$	yheused	bbn	Fraction of baryonic mass in helium
$Y^{\rm BBN}_{\rm P}$	YpBBN	bbn	Nucleon fraction in helium
$10^5{\rm D/H}$	DHBBN	bbn	10^5 deuterium-helium ratio from `Parthenope` BBN prediction (pre-Marcucci rates)
Age/Gyr	age	...	Time since the start of the hot big bang

Parameter	Tag	baseline	Definitions
z_*	zstar	...	Redshift for which the optical depth equals unity
$r_* = r_{\rm s}(z_*)$	rstar	...	Comoving size of the sound horizon at $z = z_*$
$100\theta_*$	thetastar	...	100× Angular size of the sound horizon at last scattering
$D_{\rm M}/{\rm Gpc}(z_*)$	DAstar	...	Comoving angular diameter distance to last scattering
$z_{\rm drag}$	zdrag	...	Redshift at which baryon-drag optical depth equals unity
$r_{\rm drag} = r_{\rm s}(z_{\rm drag})$	rdrag	...	Comoving size of the sound horizon at $z = z_{\rm drag}$
$k_{\rm D}$	kd	...	Characteristic damping comoving wavenumber ($\rm Mpc^{-1}$)
$100\theta_{\rm D}$	thetad	...	100× angular extent of photon diffusion at last scattering
$z_{\rm eq}$	zeq	...	Redshift of matter-radiation equality (massless neutrinos)
$k_{\rm eq}$	keq	...	$[a(z_{\rm eq})H(z_{\rm eq}]^{-1}$
$100\theta_{\rm eq}$	thetaeq	...	100× angular size of the comoving Horizon at matter-radiation equality
$100\theta_{s,{\rm eq}}$	thetarseq	...	100× angular size of the comoving sound Horizon at matter-radiation equality
D_{40}	D40	...	$\ell(\ell+1)C_\ell^{TT}/2\pi$ at $\ell = 40$ in $\mu{\rm K}^2$
D_{220}	D200	...	$\ell(\ell+1)C_\ell^{TT}/2\pi$ at $\ell = 220$ in $\mu{\rm K}^2$
D_{810}	D810	...	$\ell(\ell+1)C_\ell^{TT}/2\pi$ at $\ell = 810$ in $\mu{\rm K}^2$
D_{1420}	D1420	...	$\ell(\ell+1)C_\ell^{TT}/2\pi$ at $\ell = 1420$ in $\mu{\rm K}^2$
D_{2000}	D2000	...	$\ell(\ell+1)C_\ell^{TT}/2\pi$ at $\ell = 2000$ in $\mu{\rm K}^2$
$n_{s,0.002}$	ns02	...	Scalar spectral index at $k = 0.002{\rm Mpc}^{-1}$
$r_{0.002}$	r02	0	Tensor/scalar ratio at $k = 0.002{\rm Mpc}^{-1}$
$r_{0.01}$	rBB	0	Tensor/scalar ratio at $k = 0.01{\rm Mpc}^{-1}$ (roughly BB peak)
r_{10}	r10	0	Tensor-scalar temperature C_ℓ amplitude at $\ell = 10$
$A_{\rm t}$	AT	0	$10^9 A_{\rm t}$ ($k_0 = 0.05{\rm Mpc}^{-1}$)
$10^9 A_{\rm t} e^{-2\tau}$	ctlamp	0	Parameter determining $\ell \simeq 100$ tensor C_ℓ amplitude
$H(z)$	Hubble{100z}	...	Hubble parameter at redshift z ($\rm km\,s^{-1}Mpc^{-1}$)
$D_{\rm M}(z)$	DM{100z}	...	Comoving angular diameter distance to redshift z in Mpc
$f\sigma_8(z)$	fsigma8z{100z}	...	Growth parameter $f\sigma_8$ at redshift z
$\sigma_8(z)$	sigma8z{100z}	...	σ_8 at redshift z
f_{2000}^{143}	f2000_143	...	Total temperature foreground power at $\ell = 2000$ in 143GHz C_ℓ
$f_{2000}^{143\times217}$	f2000_x	...	Total temperature foreground power at $\ell = 2000$ in 217GHz × 143GHz C_ℓ
f_{2000}^{217}	f2000_217	...	Total temperature foreground power at $\ell = 2000$ in 217GHz C_ℓ
χ^2_x	chi2_x	...	$-2\log$(likelihood) for likelihood x; (most are normalized like a χ^2).

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9.2 base_nnu_mnu_plikHM_TT_lowl_lowE_post_lensing . . . 736
9.3 base_nnu_mnu_plikHM_TT_lowl_lowE_post_zre6p5 . . . 737
9.4 base_nnu_mnu_plikHM_TT_lowl_lowE_post_lensing_zre6p5 . . . 738
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9.8 base_nnu_mnu_plikHM_TTTEEE_lowl_lowE_post_lensing_zre6p5 . . . 742
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9.16 base_nnu_mnu_plikHM_TT_lowl_lowE_BAO_post_Cooke17_Aver15 . . . 750
9.17 base_nnu_mnu_plikHM_TT_lowl_lowE_BAO_post_zre6p5 . . . 751
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9.23 base_nnu_mnu_plikHM_TTTEEE_lowl_lowE_BAO_post_Aver15 . . . 757
9.24 base_nnu_mnu_plikHM_TTTEEE_lowl_lowE_BAO_post_Cooke17_Aver15 . . . 758
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9.26 base_nnu_mnu_plikHM_TTTEEE_lowl_lowE_BAO_post_Pantheon_zre6p5 . . . 760
9.27 base_nnu_mnu_plikHM_TTTEEE_lowl_lowE_BAO_post_Aver15_zre6p5 . . . 761
9.28 base_nnu_mnu_plikHM_TTTEEE_lowl_lowE_BAO_post_Cooke17_Aver15_zre6p5 . . . 762
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9.30 base_nnu_mnu_CamSpecHM_TTTEEE_lowl_lowE_BAO_post_Pantheon . . . 764
9.31 base_nnu_mnu_CamSpecHM_TTTEEE_lowl_lowE_BAO_post_Aver15 . . . 765
9.32 base_nnu_mnu_CamSpecHM_TTTEEE_lowl_lowE_BAO_post_Cooke17_Aver15 . . . 766
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9.34 base_nnu_mnu_CamSpecHM_TTTEEE_lowl_lowE_BAO_post_Pantheon_zre6p5 . . . 768
9.35 base_nnu_mnu_CamSpecHM_TTTEEE_lowl_lowE_BAO_post_Aver15_zre6p5 . . . 769
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9.43 base_nnu_mnu_plikHM_TT_lowl_lowE_lensing_BAO_post_Aver15_zre6p5 . . . 777
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9.46 base_nnu_mnu_plikHM_TTTEEE_lowl_lowE_lensing_BAO_post_Pantheon . . . 780
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9.49 base_nnu_mnu_plikHM_TTTEEE_lowl_lowE_lensing_BAO_post_zre6p5 . . . 783
9.50 base_nnu_mnu_plikHM_TTTEEE_lowl_lowE_lensing_BAO_post_Pantheon_zre6p5 . . . 784
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9.53 base_nnu_mnu_CamSpecHM_TTTEEE_lowl_lowE_lensing_BAO . . . 787
9.54 base_nnu_mnu_CamSpecHM_TTTEEE_lowl_lowE_lensing_BAO_post_Pantheon . . . 788
9.55 base_nnu_mnu_CamSpecHM_TTTEEE_lowl_lowE_lensing_BAO_post_Aver15 . . . 789
9.56 base_nnu_mnu_CamSpecHM_TTTEEE_lowl_lowE_lensing_BAO_post_Cooke17_Aver15 . . . 790
9.57 base_nnu_mnu_CamSpecHM_TTTEEE_lowl_lowE_lensing_BAO_post_zre6p5 . . . 791
9.58 base_nnu_mnu_CamSpecHM_TTTEEE_lowl_lowE_lensing_BAO_post_Pantheon_zre6p5 . . . 792

9.59 base_nnu_mnu_CamSpecHM_TTTEEE_lowl_lowE_lensing_BAO_post_Aver15_zre6p5 . . . 793
9.60 base_nnu_mnu_CamSpecHM_TTTEEE_lowl_lowE_lensing_BAO_post_Cooke17_Aver15_zre6p5 . . . 794
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9.62 base_nnu_mnu_lensing_lenspriors_BAO_Cooke17_Aver15_post_Pantheon . . . 796
9.63 base_nnu_mnu_lensing_lenspriors_BAO_Cooke17_Aver15_theta . . . 797
9.64 base_nnu_mnu_lensing_lenspriors_BAO_Cooke17_Aver15_theta_post_Pantheon . . . 798
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9.66 base_nnu_mnu_BAO_Cooke17_Aver15_Pantheon . . . 799
9.67 base_nnu_mnu_BAO_Cooke17_Aver15_theta . . . 799
9.68 base_nnu_mnu_BAO_Cooke17_Aver15_Pantheon_theta . . . 800
9.69 base_nnu_mnu_BAO_Cooke17Marc_Aver15 . . . 800
9.70 base_nnu_mnu_BAO_Cooke17Marc_Aver15_Pantheon . . . 801
9.71 base_nnu_mnu_BAO_Cooke17Marc_Aver15_theta . . . 801
9.72 base_nnu_mnu_BAO_Cooke17Marc_Aver15_Pantheon_theta . . . 802
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9.74 base_nnu_mnu_BAO_Cooke17Adel_Aver15_Pantheon . . . 803
9.75 base_nnu_mnu_BAO_Cooke17Adel_Aver15_theta . . . 803
9.76 base_nnu_mnu_BAO_Cooke17Adel_Aver15_Pantheon_theta . . . 804

10 nnu+nrun **805**
10.1 base_nnu_nrun_plikHM_TTTEEE_lowl_lowE . . . 805
10.2 base_nnu_nrun_plikHM_TTTEEE_lowl_lowE_post_BAO . . . 806
10.3 base_nnu_nrun_plikHM_TTTEEE_lowl_lowE_post_lensing . . . 807
10.4 base_nnu_nrun_plikHM_TTTEEE_lowl_lowE_post_BAO_lensing . . . 808
10.5 base_nnu_nrun_plikHM_TTTEEE_lowl_lowE_post_zre6p5 . . . 809
10.6 base_nnu_nrun_plikHM_TTTEEE_lowl_lowE_post_BAO_zre6p5 . . . 810
10.7 base_nnu_nrun_plikHM_TTTEEE_lowl_lowE_post_lensing_zre6p5 . . . 811
10.8 base_nnu_nrun_plikHM_TTTEEE_lowl_lowE_post_BAO_lensing_zre6p5 . . . 812

11 nnu+yhe **813**
11.1 base_nnu_yhe_plikHM_TT_lowl_lowE . . . 813
11.2 base_nnu_yhe_plikHM_TT_lowl_lowE_post_BAO . . . 814
11.3 base_nnu_yhe_plikHM_TT_lowl_lowE_post_lensing . . . 815
11.4 base_nnu_yhe_plikHM_TT_lowl_lowE_post_BAO_lensing . . . 816
11.5 base_nnu_yhe_plikHM_TT_lowl_lowE_post_zre6p5 . . . 817
11.6 base_nnu_yhe_plikHM_TT_lowl_lowE_post_BAO_zre6p5 . . . 818
11.7 base_nnu_yhe_plikHM_TT_lowl_lowE_post_lensing_zre6p5 . . . 819
11.8 base_nnu_yhe_plikHM_TT_lowl_lowE_post_BAO_lensing_zre6p5 . . . 820
11.9 base_nnu_yhe_plikHM_TTTEEE_lowl_lowE . . . 821
11.10 base_nnu_yhe_plikHM_TTTEEE_lowl_lowE_post_BAO . . . 822
11.11 base_nnu_yhe_plikHM_TTTEEE_lowl_lowE_post_lensing . . . 823
11.12 base_nnu_yhe_plikHM_TTTEEE_lowl_lowE_post_BAO_lensing . . . 824
11.13 base_nnu_yhe_plikHM_TTTEEE_lowl_lowE_post_zre6p5 . . . 825
11.14 base_nnu_yhe_plikHM_TTTEEE_lowl_lowE_post_BAO_zre6p5 . . . 826
11.15 base_nnu_yhe_plikHM_TTTEEE_lowl_lowE_post_lensing_zre6p5 . . . 827
11.16 base_nnu_yhe_plikHM_TTTEEE_lowl_lowE_post_BAO_lensing_zre6p5 . . . 828
11.17 base_nnu_yhe_CamSpecHM_TTTEEE_lowl_lowE . . . 829
11.18 base_nnu_yhe_CamSpecHM_TTTEEE_lowl_lowE_post_BAO . . . 830
11.19 base_nnu_yhe_CamSpecHM_TTTEEE_lowl_lowE_post_lensing . . . 831
11.20 base_nnu_yhe_CamSpecHM_TTTEEE_lowl_lowE_post_BAO_lensing . . . 832
11.21 base_nnu_yhe_CamSpecHM_TTTEEE_lowl_lowE_post_zre6p5 . . . 833
11.22 base_nnu_yhe_CamSpecHM_TTTEEE_lowl_lowE_post_BAO_zre6p5 . . . 834
11.23 base_nnu_yhe_CamSpecHM_TTTEEE_lowl_lowE_post_lensing_zre6p5 . . . 835
11.24 base_nnu_yhe_CamSpecHM_TTTEEE_lowl_lowE_post_BAO_lensing_zre6p5 . . . 836
11.25 base_nnu_yhe_plikHM_TT_lowl_lowE_Aver15 . . . 837
11.26 base_nnu_yhe_plikHM_TT_lowl_lowE_Aver15_post_BAO . . . 838
11.27 base_nnu_yhe_plikHM_TT_lowl_lowE_Aver15_post_lensing . . . 839
11.28 base_nnu_yhe_plikHM_TT_lowl_lowE_Aver15_post_BAO_lensing . . . 840
11.29 base_nnu_yhe_plikHM_TT_lowl_lowE_Aver15_post_zre6p5 . . . 841
11.30 base_nnu_yhe_plikHM_TT_lowl_lowE_Aver15_post_BAO_zre6p5 . . . 842
11.31 base_nnu_yhe_plikHM_TT_lowl_lowE_Aver15_post_lensing_zre6p5 . . . 843
11.32 base_nnu_yhe_plikHM_TT_lowl_lowE_Aver15_post_BAO_lensing_zre6p5 . . . 844
11.33 base_nnu_yhe_plikHM_TTTEEE_lowl_lowE_Aver15 . . . 845
11.34 base_nnu_yhe_plikHM_TTTEEE_lowl_lowE_Aver15_post_BAO . . . 846
11.35 base_nnu_yhe_plikHM_TTTEEE_lowl_lowE_Aver15_post_lensing . . . 847
11.36 base_nnu_yhe_plikHM_TTTEEE_lowl_lowE_Aver15_post_BAO_lensing . . . 848
11.37 base_nnu_yhe_plikHM_TTTEEE_lowl_lowE_Aver15_post_zre6p5 . . . 849
11.38 base_nnu_yhe_plikHM_TTTEEE_lowl_lowE_Aver15_post_BAO_zre6p5 . . . 850
11.39 base_nnu_yhe_plikHM_TTTEEE_lowl_lowE_Aver15_post_lensing_zre6p5 . . . 851

11.40 base_nnu_yhe_plikHM_TTTEEE_lowl_lowE_Aver15_post_BAO_lensing_zre6p5 . . . 852
11.41 base_nnu_yhe_CamSpecHM_TTTEEE_lowl_lowE_Aver15 . . . 853
11.42 base_nnu_yhe_CamSpecHM_TTTEEE_lowl_lowE_Aver15_post_BAO . . . 854
11.43 base_nnu_yhe_CamSpecHM_TTTEEE_lowl_lowE_Aver15_post_lensing . . . 855
11.44 base_nnu_yhe_CamSpecHM_TTTEEE_lowl_lowE_Aver15_post_BAO_lensing . . . 856
11.45 base_nnu_yhe_CamSpecHM_TTTEEE_lowl_lowE_Aver15_post_zre6p5 . . . 857
11.46 base_nnu_yhe_CamSpecHM_TTTEEE_lowl_lowE_Aver15_post_BAO_zre6p5 . . . 858
11.47 base_nnu_yhe_CamSpecHM_TTTEEE_lowl_lowE_Aver15_post_lensing_zre6p5 . . . 859
11.48 base_nnu_yhe_CamSpecHM_TTTEEE_lowl_lowE_Aver15_post_BAO_lensing_zre6p5 . . . 860

12 nrun **861**
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12.2 base_nrun_plikHM_TT_lowl_lowE_post_BAO . . . 862
12.3 base_nrun_plikHM_TT_lowl_lowE_post_lensing . . . 863
12.4 base_nrun_plikHM_TT_lowl_lowE_post_BAO_lensing . . . 864
12.5 base_nrun_plikHM_TT_lowl_lowE_post_Riess18 . . . 865
12.6 base_nrun_plikHM_TT_lowl_lowE_post_zre6p5 . . . 866
12.7 base_nrun_plikHM_TT_lowl_lowE_post_BAO_zre6p5 . . . 867
12.8 base_nrun_plikHM_TT_lowl_lowE_post_lensing_zre6p5 . . . 868
12.9 base_nrun_plikHM_TT_lowl_lowE_post_BAO_lensing_zre6p5 . . . 869
12.10 base_nrun_plikHM_TT_lowl_lowE_post_Riess18_zre6p5 . . . 870
12.11 base_nrun_plikHM_TTTEEE_lowl_lowE . . . 871
12.12 base_nrun_plikHM_TTTEEE_lowl_lowE_post_BAO . . . 872
12.13 base_nrun_plikHM_TTTEEE_lowl_lowE_post_lensing . . . 873
12.14 base_nrun_plikHM_TTTEEE_lowl_lowE_post_BAO_lensing . . . 874
12.15 base_nrun_plikHM_TTTEEE_lowl_lowE_post_Riess18 . . . 875
12.16 base_nrun_plikHM_TTTEEE_lowl_lowE_post_zre6p5 . . . 876
12.17 base_nrun_plikHM_TTTEEE_lowl_lowE_post_BAO_zre6p5 . . . 877
12.18 base_nrun_plikHM_TTTEEE_lowl_lowE_post_lensing_zre6p5 . . . 878
12.19 base_nrun_plikHM_TTTEEE_lowl_lowE_post_BAO_lensing_zre6p5 . . . 879
12.20 base_nrun_plikHM_TTTEEE_lowl_lowE_post_Riess18_zre6p5 . . . 880
12.21 base_nrun_CamSpecHM_TT_lowl_lowE . . . 881
12.22 base_nrun_CamSpecHM_TT_lowl_lowE_post_BAO . . . 882
12.23 base_nrun_CamSpecHM_TT_lowl_lowE_post_lensing . . . 883
12.24 base_nrun_CamSpecHM_TT_lowl_lowE_post_BAO_lensing . . . 884
12.25 base_nrun_CamSpecHM_TT_lowl_lowE_post_zre6p5 . . . 885
12.26 base_nrun_CamSpecHM_TT_lowl_lowE_post_BAO_zre6p5 . . . 886
12.27 base_nrun_CamSpecHM_TT_lowl_lowE_post_lensing_zre6p5 . . . 887
12.28 base_nrun_CamSpecHM_TT_lowl_lowE_post_BAO_lensing_zre6p5 . . . 888
12.29 base_nrun_CamSpecHM_TTTEEE_lowl_lowE . . . 889
12.30 base_nrun_CamSpecHM_TTTEEE_lowl_lowE_post_BAO . . . 890
12.31 base_nrun_CamSpecHM_TTTEEE_lowl_lowE_post_lensing . . . 891
12.32 base_nrun_CamSpecHM_TTTEEE_lowl_lowE_post_BAO_lensing . . . 892
12.33 base_nrun_CamSpecHM_TTTEEE_lowl_lowE_post_Riess18 . . . 893
12.34 base_nrun_CamSpecHM_TTTEEE_lowl_lowE_post_zre6p5 . . . 894
12.35 base_nrun_CamSpecHM_TTTEEE_lowl_lowE_post_BAO_zre6p5 . . . 895
12.36 base_nrun_CamSpecHM_TTTEEE_lowl_lowE_post_lensing_zre6p5 . . . 896
12.37 base_nrun_CamSpecHM_TTTEEE_lowl_lowE_post_BAO_lensing_zre6p5 . . . 897
12.38 base_nrun_CamSpecHM_TTTEEE_lowl_lowE_post_Riess18_zre6p5 . . . 898
12.39 base_nrun_plikHM_TE_lowE . . . 899
12.40 base_nrun_plikHM_TE_lowE_post_BAO . . . 900
12.41 base_nrun_plikHM_TE_lowE_post_zre6p5 . . . 901
12.42 base_nrun_plikHM_TE_lowE_post_BAO_zre6p5 . . . 902
12.43 base_nrun_plikHM_EE_lowE . . . 903
12.44 base_nrun_plikHM_EE_lowE_post_BAO . . . 904
12.45 base_nrun_plikHM_EE_lowE_post_zre6p5 . . . 905
12.46 base_nrun_plikHM_EE_lowE_post_BAO_zre6p5 . . . 906
12.47 base_nrun_CleanedCamSpecHM_TT_lowl_lowE . . . 907

13 nrun+nnu+w+mnu **908**
13.1 base_nrun_nnu_w_mnu_plikHM_TTTEEE_lowl_lowE_BAO_Riess18_Pantheon_lensing . . . 908
13.2 base_nrun_nnu_w_mnu_plikHM_TTTEEE_lowl_lowE_BAO_Riess18_Pantheon_lensing_post_zre6p5 . . . 909

14 nrun+nrunrun **910**
14.1 base_nrun_nrunrun_plikHM_TTTEEE_lowl_lowE . . . 910
14.2 base_nrun_nrunrun_plikHM_TTTEEE_lowl_lowE_post_BAO . . . 911
14.3 base_nrun_nrunrun_plikHM_TTTEEE_lowl_lowE_post_lensing . . . 912
14.4 base_nrun_nrunrun_plikHM_TTTEEE_lowl_lowE_post_BAO_lensing . . . 913
14.5 base_nrun_nrunrun_plikHM_TTTEEE_lowl_lowE_post_zre6p5 . . . 914
14.6 base_nrun_nrunrun_plikHM_TTTEEE_lowl_lowE_post_BAO_zre6p5 . . . 915
14.7 base_nrun_nrunrun_plikHM_TTTEEE_lowl_lowE_post_lensing_zre6p5 . . . 916
14.8 base_nrun_nrunrun_plikHM_TTTEEE_lowl_lowE_post_BAO_lensing_zre6p5 . . . 917

15 nrun+r **918**
15.1 base_nrun_r_plikHM_TT_lowl_lowE . . . 918
15.2 base_nrun_r_plikHM_TT_lowl_lowE_post_BAO . . . 919
15.3 base_nrun_r_plikHM_TT_lowl_lowE_post_Riess18 . . . 920
15.4 base_nrun_r_plikHM_TT_lowl_lowE_post_zre6p5 . . . 921
15.5 base_nrun_r_plikHM_TT_lowl_lowE_post_BAO_zre6p5 . . . 922
15.6 base_nrun_r_plikHM_TT_lowl_lowE_post_Riess18_zre6p5 . . . 923
15.7 base_nrun_r_plikHM_TTTEEE_lowl_lowE . . . 924
15.8 base_nrun_r_plikHM_TTTEEE_lowl_lowE_post_BAO . . . 925
15.9 base_nrun_r_plikHM_TTTEEE_lowl_lowE_post_Riess18 . . . 926
15.10 base_nrun_r_plikHM_TTTEEE_lowl_lowE_post_zre6p5 . . . 927
15.11 base_nrun_r_plikHM_TTTEEE_lowl_lowE_post_BAO_zre6p5 . . . 928
15.12 base_nrun_r_plikHM_TTTEEE_lowl_lowE_post_Riess18_zre6p5 . . . 929
15.13 base_nrun_r_CamSpecHM_TT_lowl_lowE . . . 930
15.14 base_nrun_r_CamSpecHM_TT_lowl_lowE_post_BAO . . . 931
15.15 base_nrun_r_CamSpecHM_TT_lowl_lowE_post_zre6p5 . . . 932
15.16 base_nrun_r_CamSpecHM_TT_lowl_lowE_post_BAO_zre6p5 . . . 933
15.17 base_nrun_r_plikHM_TT_lowl_lowE_lensing . . . 934
15.18 base_nrun_r_plikHM_TT_lowl_lowE_lensing_post_BAO . . . 935
15.19 base_nrun_r_plikHM_TT_lowl_lowE_lensing_post_zre6p5 . . . 936
15.20 base_nrun_r_plikHM_TT_lowl_lowE_lensing_post_BAO_zre6p5 . . . 937
15.21 base_nrun_r_plikHM_TTTEEE_lowl_lowE_lensing . . . 938
15.22 base_nrun_r_plikHM_TTTEEE_lowl_lowE_lensing_post_BAO . . . 939
15.23 base_nrun_r_plikHM_TTTEEE_lowl_lowE_lensing_post_zre6p5 . . . 940
15.24 base_nrun_r_plikHM_TTTEEE_lowl_lowE_lensing_post_BAO_zre6p5 . . . 941
15.25 base_nrun_r_CamSpecHM_TTTEEE_lowl_lowE_lensing . . . 942
15.26 base_nrun_r_CamSpecHM_TTTEEE_lowl_lowE_lensing_post_BAO . . . 943
15.27 base_nrun_r_CamSpecHM_TTTEEE_lowl_lowE_lensing_post_zre6p5 . . . 944
15.28 base_nrun_r_CamSpecHM_TTTEEE_lowl_lowE_lensing_post_BAO_zre6p5 . . . 945

16 omegak **946**
16.1 base_omegak_plikHM_TT_lowl_lowE . . . 946
16.2 base_omegak_plikHM_TT_lowl_lowE_post_zre6p5 . . . 947
16.3 base_omegak_plikHM_TTTEEE_lowl_lowE . . . 948
16.4 base_omegak_plikHM_TTTEEE_lowl_lowE_post_zre6p5 . . . 949
16.5 base_omegak_CamSpecHM_TT_lowl_lowE . . . 950
16.6 base_omegak_CamSpecHM_TT_lowl_lowE_post_zre6p5 . . . 951
16.7 base_omegak_CamSpecHM_TTTEEE_lowl_lowE . . . 952
16.8 base_omegak_CamSpecHM_TTTEEE_lowl_lowE_post_zre6p5 . . . 953
16.9 base_omegak_plikHM_TT_lowl_lowE_BAO . . . 954
16.10 base_omegak_plikHM_TT_lowl_lowE_BAO_post_lensing . . . 955
16.11 base_omegak_plikHM_TT_lowl_lowE_BAO_post_lensing_Pantheon . . . 956
16.12 base_omegak_plikHM_TT_lowl_lowE_BAO_post_zre6p5 . . . 957
16.13 base_omegak_plikHM_TT_lowl_lowE_BAO_post_lensing_zre6p5 . . . 958
16.14 base_omegak_plikHM_TT_lowl_lowE_BAO_post_lensing_Pantheon_zre6p5 . . . 959
16.15 base_omegak_plikHM_TTTEEE_lowl_lowE_BAO . . . 960
16.16 base_omegak_plikHM_TTTEEE_lowl_lowE_BAO_post_lensing . . . 961
16.17 base_omegak_plikHM_TTTEEE_lowl_lowE_BAO_post_lensing_Pantheon . . . 962
16.18 base_omegak_plikHM_TTTEEE_lowl_lowE_BAO_post_zre6p5 . . . 963
16.19 base_omegak_plikHM_TTTEEE_lowl_lowE_BAO_post_lensing_zre6p5 . . . 964
16.20 base_omegak_plikHM_TTTEEE_lowl_lowE_BAO_post_lensing_Pantheon_zre6p5 . . . 965
16.21 base_omegak_CamSpecHM_TT_lowl_lowE_BAO . . . 966
16.22 base_omegak_CamSpecHM_TT_lowl_lowE_BAO_post_lensing . . . 967
16.23 base_omegak_CamSpecHM_TT_lowl_lowE_BAO_post_lensing_Pantheon . . . 968
16.24 base_omegak_CamSpecHM_TT_lowl_lowE_BAO_post_zre6p5 . . . 969
16.25 base_omegak_CamSpecHM_TT_lowl_lowE_BAO_post_lensing_zre6p5 . . . 970
16.26 base_omegak_CamSpecHM_TT_lowl_lowE_BAO_post_lensing_Pantheon_zre6p5 . . . 971
16.27 base_omegak_CamSpecHM_TTTEEE_lowl_lowE_BAO . . . 972
16.28 base_omegak_CamSpecHM_TTTEEE_lowl_lowE_BAO_post_lensing . . . 973

16.29 base_omegak_CamSpecHM_TTTEEE_lowl_lowE_BAO_post_lensing_Pantheon . . . 974
16.30 base_omegak_CamSpecHM_TTTEEE_lowl_lowE_BAO_post_zre6p5 . . . 975
16.31 base_omegak_CamSpecHM_TTTEEE_lowl_lowE_BAO_post_lensing_zre6p5 . . . 976
16.32 base_omegak_CamSpecHM_TTTEEE_lowl_lowE_BAO_post_lensing_Pantheon_zre6p5 . . . 977
16.33 base_omegak_plikHM_TT_lowl_lowE_BAO_Riess18_JLA . . . 978
16.34 base_omegak_plikHM_TT_lowl_lowE_BAO_Riess18_JLA_post_lensing . . . 979
16.35 base_omegak_plikHM_TT_lowl_lowE_BAO_Riess18_JLA_post_zre6p5 . . . 980
16.36 base_omegak_plikHM_TT_lowl_lowE_BAO_Riess18_JLA_post_lensing_zre6p5 . . . 981
16.37 base_omegak_plikHM_TTTEEE_lowl_lowE_BAO_Riess18_JLA . . . 982
16.38 base_omegak_plikHM_TTTEEE_lowl_lowE_BAO_Riess18_JLA_post_lensing . . . 983
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16.40 base_omegak_plikHM_TTTEEE_lowl_lowE_BAO_Riess18_JLA_post_lensing_zre6p5 . . . 985
16.41 base_omegak_plikHM_TT_lowl_lowE_lensing . . . 986
16.42 base_omegak_plikHM_TT_lowl_lowE_lensing_post_zre6p5 . . . 987
16.43 base_omegak_plikHM_TTTEEE_lowl_lowE_lensing . . . 988
16.44 base_omegak_plikHM_TTTEEE_lowl_lowE_lensing_post_zre6p5 . . . 989
16.45 base_omegak_CamSpecHM_TT_lowl_lowE_lensing . . . 990
16.46 base_omegak_CamSpecHM_TT_lowl_lowE_lensing_post_zre6p5 . . . 991
16.47 base_omegak_CamSpecHM_TTTEEE_lowl_lowE_lensing . . . 992
16.48 base_omegak_CamSpecHM_TTTEEE_lowl_lowE_lensing_post_zre6p5 . . . 993
16.49 base_omegak_CleanedCamSpecHM_TT_lowl_lowE . . . 994

17 r **995**
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17.2 base_r_plikHM_TT_lowl_lowE_post_BAO . . . 996
17.3 base_r_plikHM_TT_lowl_lowE_post_Riess18 . . . 997
17.4 base_r_plikHM_TT_lowl_lowE_post_zre6p5 . . . 998
17.5 base_r_plikHM_TT_lowl_lowE_post_BAO_zre6p5 . . . 999
17.6 base_r_plikHM_TT_lowl_lowE_post_Riess18_zre6p5 . . . 1000
17.7 base_r_plikHM_TTTEEE_lowl_lowE . . . 1001
17.8 base_r_plikHM_TTTEEE_lowl_lowE_post_BAO . . . 1002
17.9 base_r_plikHM_TTTEEE_lowl_lowE_post_Riess18 . . . 1003
17.10 base_r_plikHM_TTTEEE_lowl_lowE_post_zre6p5 . . . 1004
17.11 base_r_plikHM_TTTEEE_lowl_lowE_post_BAO_zre6p5 . . . 1005
17.12 base_r_plikHM_TTTEEE_lowl_lowE_post_Riess18_zre6p5 . . . 1006
17.13 base_r_CamSpecHM_TT_lowl_lowE . . . 1007
17.14 base_r_CamSpecHM_TT_lowl_lowE_post_BAO . . . 1008
17.15 base_r_CamSpecHM_TT_lowl_lowE_post_zre6p5 . . . 1009
17.16 base_r_CamSpecHM_TT_lowl_lowE_post_BAO_zre6p5 . . . 1010
17.17 base_r_CamSpecHM_TTTEEE_lowl_lowE . . . 1011
17.18 base_r_CamSpecHM_TTTEEE_lowl_lowE_post_BAO . . . 1012
17.19 base_r_CamSpecHM_TTTEEE_lowl_lowE_post_zre6p5 . . . 1013
17.20 base_r_CamSpecHM_TTTEEE_lowl_lowE_post_BAO_zre6p5 . . . 1014
17.21 base_r_plikHM_TE_lowE . . . 1015
17.22 base_r_plikHM_TE_lowE_post_BAO . . . 1016
17.23 base_r_plikHM_TE_lowE_post_zre6p5 . . . 1017
17.24 base_r_plikHM_TE_lowE_post_BAO_zre6p5 . . . 1018
17.25 base_r_plikHM_EE_lowE . . . 1019
17.26 base_r_plikHM_EE_lowE_post_BAO . . . 1020
17.27 base_r_plikHM_EE_lowE_post_zre6p5 . . . 1021
17.28 base_r_plikHM_EE_lowE_post_BAO_zre6p5 . . . 1022
17.29 base_r_plikHM_TT_lowl_lowE_lensing . . . 1023
17.30 base_r_plikHM_TT_lowl_lowE_lensing_post_BAO . . . 1024
17.31 base_r_plikHM_TT_lowl_lowE_lensing_post_zre6p5 . . . 1025
17.32 base_r_plikHM_TT_lowl_lowE_lensing_post_BAO_zre6p5 . . . 1026
17.33 base_r_plikHM_TTTEEE_lowl_lowE_lensing . . . 1027
17.34 base_r_plikHM_TTTEEE_lowl_lowE_lensing_post_BAO . . . 1028
17.35 base_r_plikHM_TTTEEE_lowl_lowE_lensing_post_zre6p5 . . . 1029
17.36 base_r_plikHM_TTTEEE_lowl_lowE_lensing_post_BAO_zre6p5 . . . 1030
17.37 base_r_CamSpecHM_TTTEEE_lowl_lowE_lensing . . . 1031
17.38 base_r_CamSpecHM_TTTEEE_lowl_lowE_lensing_post_BAO . . . 1032
17.39 base_r_CamSpecHM_TTTEEE_lowl_lowE_lensing_post_zre6p5 . . . 1033
17.40 base_r_CamSpecHM_TTTEEE_lowl_lowE_lensing_post_BAO_zre6p5 . . . 1034
17.41 base_r_CleanedCamSpecHM_TT_lowl_lowE . . . 1035

18 w **1036**
18.1 base_w_plikHM_TT_lowl_lowE . . . 1036
18.2 base_w_plikHM_TT_lowl_lowE_post_lensing . . . 1037
18.3 base_w_plikHM_TT_lowl_lowE_post_Riess18 . . . 1038
18.4 base_w_plikHM_TT_lowl_lowE_post_zre6p5 . . . 1039
18.5 base_w_plikHM_TT_lowl_lowE_post_lensing_zre6p5 . . . 1040
18.6 base_w_plikHM_TT_lowl_lowE_post_Riess18_zre6p5 . . . 1041
18.7 base_w_plikHM_TTTEEE_lowl_lowE . . . 1042
18.8 base_w_plikHM_TTTEEE_lowl_lowE_post_lensing . . . 1043
18.9 base_w_plikHM_TTTEEE_lowl_lowE_post_Riess18 . . . 1044
18.10 base_w_plikHM_TTTEEE_lowl_lowE_post_zre6p5 . . . 1045
18.11 base_w_plikHM_TTTEEE_lowl_lowE_post_lensing_zre6p5 . . . 1046
18.12 base_w_plikHM_TTTEEE_lowl_lowE_post_Riess18_zre6p5 . . . 1047
18.13 base_w_CamSpecHM_TT_lowl_lowE . . . 1048
18.14 base_w_CamSpecHM_TT_lowl_lowE_post_lensing . . . 1049
18.15 base_w_CamSpecHM_TT_lowl_lowE_post_zre6p5 . . . 1050
18.16 base_w_CamSpecHM_TT_lowl_lowE_post_lensing_zre6p5 . . . 1051
18.17 base_w_CamSpecHM_TTTEEE_lowl_lowE . . . 1052
18.18 base_w_CamSpecHM_TTTEEE_lowl_lowE_post_lensing . . . 1053
18.19 base_w_CamSpecHM_TTTEEE_lowl_lowE_post_Riess18 . . . 1054
18.20 base_w_CamSpecHM_TTTEEE_lowl_lowE_post_zre6p5 . . . 1055
18.21 base_w_CamSpecHM_TTTEEE_lowl_lowE_post_lensing_zre6p5 . . . 1056
18.22 base_w_CamSpecHM_TTTEEE_lowl_lowE_post_Riess18_zre6p5 . . . 1057
18.23 base_w_plikHM_TT_lowl_lowE_BAO . . . 1058
18.24 base_w_plikHM_TT_lowl_lowE_BAO_post_lensing . . . 1059
18.25 base_w_plikHM_TT_lowl_lowE_BAO_post_zre6p5 . . . 1060
18.26 base_w_plikHM_TT_lowl_lowE_BAO_post_lensing_zre6p5 . . . 1061
18.27 base_w_plikHM_TTTEEE_lowl_lowE_BAO . . . 1062
18.28 base_w_plikHM_TTTEEE_lowl_lowE_BAO_post_lensing . . . 1063
18.29 base_w_plikHM_TTTEEE_lowl_lowE_BAO_post_zre6p5 . . . 1064
18.30 base_w_plikHM_TTTEEE_lowl_lowE_BAO_post_lensing_zre6p5 . . . 1065
18.31 base_w_CamSpecHM_TTTEEE_lowl_lowE_BAO . . . 1066
18.32 base_w_CamSpecHM_TTTEEE_lowl_lowE_BAO_post_lensing . . . 1067
18.33 base_w_CamSpecHM_TTTEEE_lowl_lowE_BAO_post_zre6p5 . . . 1068
18.34 base_w_CamSpecHM_TTTEEE_lowl_lowE_BAO_post_lensing_zre6p5 . . . 1069
18.35 base_w_plikHM_TT_lowl_lowE_BAO_Riess18_JLA . . . 1070
18.36 base_w_plikHM_TT_lowl_lowE_BAO_Riess18_JLA_post_lensing . . . 1071
18.37 base_w_plikHM_TT_lowl_lowE_BAO_Riess18_JLA_post_zre6p5 . . . 1072
18.38 base_w_plikHM_TT_lowl_lowE_BAO_Riess18_JLA_post_lensing_zre6p5 . . . 1073
18.39 base_w_plikHM_TTTEEE_lowl_lowE_BAO_Riess18_JLA . . . 1074
18.40 base_w_plikHM_TTTEEE_lowl_lowE_BAO_Riess18_JLA_post_lensing . . . 1075
18.41 base_w_plikHM_TTTEEE_lowl_lowE_BAO_Riess18_JLA_post_zre6p5 . . . 1076
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18.44 base_w_plikHM_TT_lowl_lowE_BAO_Pantheon_post_lensing . . . 1079
18.45 base_w_plikHM_TT_lowl_lowE_BAO_Pantheon_post_zre6p5 . . . 1080
18.46 base_w_plikHM_TT_lowl_lowE_BAO_Pantheon_post_lensing_zre6p5 . . . 1081
18.47 base_w_plikHM_TTTEEE_lowl_lowE_BAO_Pantheon . . . 1082
18.48 base_w_plikHM_TTTEEE_lowl_lowE_BAO_Pantheon_post_lensing . . . 1083
18.49 base_w_plikHM_TTTEEE_lowl_lowE_BAO_Pantheon_post_zre6p5 . . . 1084
18.50 base_w_plikHM_TTTEEE_lowl_lowE_BAO_Pantheon_post_lensing_zre6p5 . . . 1085
18.51 base_w_CamSpecHM_TTTEEE_lowl_lowE_BAO_Pantheon . . . 1086
18.52 base_w_CamSpecHM_TTTEEE_lowl_lowE_BAO_Pantheon_post_lensing . . . 1087
18.53 base_w_CamSpecHM_TTTEEE_lowl_lowE_BAO_Pantheon_post_zre6p5 . . . 1088
18.54 base_w_CamSpecHM_TTTEEE_lowl_lowE_BAO_Pantheon_post_lensing_zre6p5 . . . 1089
18.55 base_w_plikHM_TT_lowl_lowE_BAO_Riess18_Pantheon . . . 1090
18.56 base_w_plikHM_TT_lowl_lowE_BAO_Riess18_Pantheon_post_lensing . . . 1091
18.57 base_w_plikHM_TT_lowl_lowE_BAO_Riess18_Pantheon_post_zre6p5 . . . 1092
18.58 base_w_plikHM_TT_lowl_lowE_BAO_Riess18_Pantheon_post_lensing_zre6p5 . . . 1093
18.59 base_w_plikHM_TTTEEE_lowl_lowE_BAO_Riess18_Pantheon . . . 1094
18.60 base_w_plikHM_TTTEEE_lowl_lowE_BAO_Riess18_Pantheon_post_lensing . . . 1095
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18.62 base_w_plikHM_TTTEEE_lowl_lowE_BAO_Riess18_Pantheon_post_lensing_zre6p5 . . . 1097
18.63 base_w_CamSpecHM_TTTEEE_lowl_lowE_BAO_Riess18_Pantheon . . . 1098
18.64 base_w_CamSpecHM_TTTEEE_lowl_lowE_BAO_Riess18_Pantheon_post_lensing . . . 1099
18.65 base_w_CamSpecHM_TTTEEE_lowl_lowE_BAO_Riess18_Pantheon_post_zre6p5 . . . 1100
18.66 base_w_CamSpecHM_TTTEEE_lowl_lowE_BAO_Riess18_Pantheon_post_lensing_zre6p5 . . . 1101
18.67 base_w_CleanedCamSpecHM_TT_lowl_lowE . . . 1102

19 w+wa **1103**
19.1 base_w_wa_plikHM_TT_lowl_lowE_BAO . . . 1103
19.2 base_w_wa_plikHM_TT_lowl_lowE_BAO_post_lensing . . . 1104
19.3 base_w_wa_plikHM_TT_lowl_lowE_BAO_post_zre6p5 . . . 1105
19.4 base_w_wa_plikHM_TT_lowl_lowE_BAO_post_lensing_zre6p5 . . . 1106
19.5 base_w_wa_plikHM_TTTEEE_lowl_lowE_BAO . . . 1107
19.6 base_w_wa_plikHM_TTTEEE_lowl_lowE_BAO_post_lensing . . . 1108
19.7 base_w_wa_plikHM_TTTEEE_lowl_lowE_BAO_post_zre6p5 . . . 1109
19.8 base_w_wa_plikHM_TTTEEE_lowl_lowE_BAO_post_lensing_zre6p5 . . . 1110
19.9 base_w_wa_plikHM_TT_lowl_lowE_BAO_Riess18_JLA . . . 1111
19.10 base_w_wa_plikHM_TT_lowl_lowE_BAO_Riess18_JLA_post_lensing . . . 1112
19.11 base_w_wa_plikHM_TT_lowl_lowE_BAO_Riess18_JLA_post_zre6p5 . . . 1113
19.12 base_w_wa_plikHM_TT_lowl_lowE_BAO_Riess18_JLA_post_lensing_zre6p5 . . . 1114
19.13 base_w_wa_plikHM_TTTEEE_lowl_lowE_BAO_Riess18_JLA . . . 1115
19.14 base_w_wa_plikHM_TTTEEE_lowl_lowE_BAO_Riess18_JLA_post_lensing . . . 1116
19.15 base_w_wa_plikHM_TTTEEE_lowl_lowE_BAO_Riess18_JLA_post_zre6p5 . . . 1117
19.16 base_w_wa_plikHM_TTTEEE_lowl_lowE_BAO_Riess18_JLA_post_lensing_zre6p5 . . . 1118
19.17 base_w_wa_plikHM_TT_lowl_lowE_BAO_Pantheon . . . 1119
19.18 base_w_wa_plikHM_TT_lowl_lowE_BAO_Pantheon_post_lensing . . . 1120
19.19 base_w_wa_plikHM_TT_lowl_lowE_BAO_Pantheon_post_zre6p5 . . . 1121
19.20 base_w_wa_plikHM_TT_lowl_lowE_BAO_Pantheon_post_lensing_zre6p5 . . . 1122
19.21 base_w_wa_plikHM_TTTEEE_lowl_lowE_BAO_Pantheon . . . 1123
19.22 base_w_wa_plikHM_TTTEEE_lowl_lowE_BAO_Pantheon_post_lensing . . . 1124
19.23 base_w_wa_plikHM_TTTEEE_lowl_lowE_BAO_Pantheon_post_zre6p5 . . . 1125
19.24 base_w_wa_plikHM_TTTEEE_lowl_lowE_BAO_Pantheon_post_lensing_zre6p5 . . . 1126
19.25 base_w_wa_CamSpecHM_TTTEEE_lowl_lowE_BAO_Pantheon . . . 1127
19.26 base_w_wa_CamSpecHM_TTTEEE_lowl_lowE_BAO_Pantheon_post_lensing . . . 1128
19.27 base_w_wa_CamSpecHM_TTTEEE_lowl_lowE_BAO_Pantheon_post_zre6p5 . . . 1129
19.28 base_w_wa_CamSpecHM_TTTEEE_lowl_lowE_BAO_Pantheon_post_lensing_zre6p5 . . . 1130
19.29 base_w_wa_plikHM_TT_lowl_lowE_BAO_Riess18_Pantheon . . . 1131
19.30 base_w_wa_plikHM_TT_lowl_lowE_BAO_Riess18_Pantheon_post_lensing . . . 1132
19.31 base_w_wa_plikHM_TT_lowl_lowE_BAO_Riess18_Pantheon_post_zre6p5 . . . 1133
19.32 base_w_wa_plikHM_TT_lowl_lowE_BAO_Riess18_Pantheon_post_lensing_zre6p5 . . . 1134
19.33 base_w_wa_plikHM_TTTEEE_lowl_lowE_BAO_Riess18_Pantheon . . . 1135
19.34 base_w_wa_plikHM_TTTEEE_lowl_lowE_BAO_Riess18_Pantheon_post_lensing . . . 1136
19.35 base_w_wa_plikHM_TTTEEE_lowl_lowE_BAO_Riess18_Pantheon_post_zre6p5 . . . 1137
19.36 base_w_wa_plikHM_TTTEEE_lowl_lowE_BAO_Riess18_Pantheon_post_lensing_zre6p5 . . . 1138
19.37 base_w_wa_CamSpecHM_TTTEEE_lowl_lowE_BAO_Riess18_Pantheon . . . 1139
19.38 base_w_wa_CamSpecHM_TTTEEE_lowl_lowE_BAO_Riess18_Pantheon_post_lensing . . . 1140
19.39 base_w_wa_CamSpecHM_TTTEEE_lowl_lowE_BAO_Riess18_Pantheon_post_zre6p5 . . . 1141
19.40 base_w_wa_CamSpecHM_TTTEEE_lowl_lowE_BAO_Riess18_Pantheon_post_lensing_zre6p5 . . . 1142

20 yhe **1143**
20.1 base_yhe_plikHM_TT_lowl_lowE . . . 1143
20.2 base_yhe_plikHM_TT_lowl_lowE_post_BAO . . . 1144
20.3 base_yhe_plikHM_TT_lowl_lowE_post_lensing . . . 1145
20.4 base_yhe_plikHM_TT_lowl_lowE_post_BAO_lensing . . . 1146
20.5 base_yhe_plikHM_TT_lowl_lowE_post_Riess18 . . . 1147
20.6 base_yhe_plikHM_TT_lowl_lowE_post_zre6p5 . . . 1148
20.7 base_yhe_plikHM_TT_lowl_lowE_post_BAO_zre6p5 . . . 1149
20.8 base_yhe_plikHM_TT_lowl_lowE_post_lensing_zre6p5 . . . 1150
20.9 base_yhe_plikHM_TT_lowl_lowE_post_BAO_lensing_zre6p5 . . . 1151
20.10 base_yhe_plikHM_TT_lowl_lowE_post_Riess18_zre6p5 . . . 1152
20.11 base_yhe_plikHM_TTTEEE_lowl_lowE . . . 1153
20.12 base_yhe_plikHM_TTTEEE_lowl_lowE_post_BAO . . . 1154
20.13 base_yhe_plikHM_TTTEEE_lowl_lowE_post_lensing . . . 1155
20.14 base_yhe_plikHM_TTTEEE_lowl_lowE_post_BAO_lensing . . . 1156
20.15 base_yhe_plikHM_TTTEEE_lowl_lowE_post_Riess18 . . . 1157
20.16 base_yhe_plikHM_TTTEEE_lowl_lowE_post_zre6p5 . . . 1158
20.17 base_yhe_plikHM_TTTEEE_lowl_lowE_post_BAO_zre6p5 . . . 1159
20.18 base_yhe_plikHM_TTTEEE_lowl_lowE_post_lensing_zre6p5 . . . 1160
20.19 base_yhe_plikHM_TTTEEE_lowl_lowE_post_BAO_lensing_zre6p5 . . . 1161
20.20 base_yhe_plikHM_TTTEEE_lowl_lowE_post_Riess18_zre6p5 . . . 1162
20.21 base_yhe_CamSpecHM_TT_lowl_lowE . . . 1163
20.22 base_yhe_CamSpecHM_TT_lowl_lowE_post_BAO . . . 1164
20.23 base_yhe_CamSpecHM_TT_lowl_lowE_post_lensing . . . 1165
20.24 base_yhe_CamSpecHM_TT_lowl_lowE_post_BAO_lensing . . . 1166
20.25 base_yhe_CamSpecHM_TT_lowl_lowE_post_zre6p5 . . . 1167

20.26 base_yhe_CamSpecHM_TT_lowl_lowE_post_BAO_zre6p5 . . . 1168
20.27 base_yhe_CamSpecHM_TT_lowl_lowE_post_lensing_zre6p5 . . . 1169
20.28 base_yhe_CamSpecHM_TT_lowl_lowE_post_BAO_lensing_zre6p5 . . . 1170
20.29 base_yhe_CamSpecHM_TTTEEE_lowl_lowE . . . 1171
20.30 base_yhe_CamSpecHM_TTTEEE_lowl_lowE_post_BAO . . . 1172
20.31 base_yhe_CamSpecHM_TTTEEE_lowl_lowE_post_lensing . . . 1173
20.32 base_yhe_CamSpecHM_TTTEEE_lowl_lowE_post_BAO_lensing . . . 1174
20.33 base_yhe_CamSpecHM_TTTEEE_lowl_lowE_post_Riess18 . . . 1175
20.34 base_yhe_CamSpecHM_TTTEEE_lowl_lowE_post_zre6p5 . . . 1176
20.35 base_yhe_CamSpecHM_TTTEEE_lowl_lowE_post_BAO_zre6p5 . . . 1177
20.36 base_yhe_CamSpecHM_TTTEEE_lowl_lowE_post_lensing_zre6p5 . . . 1178
20.37 base_yhe_CamSpecHM_TTTEEE_lowl_lowE_post_BAO_lensing_zre6p5 . . . 1179
20.38 base_yhe_CamSpecHM_TTTEEE_lowl_lowE_post_Riess18_zre6p5 . . . 1180
20.39 base_yhe_plikHM_TE_lowE . . . 1181
20.40 base_yhe_plikHM_TE_lowE_post_BAO . . . 1182
20.41 base_yhe_plikHM_TE_lowE_post_zre6p5 . . . 1183
20.42 base_yhe_plikHM_TE_lowE_post_BAO_zre6p5 . . . 1184
20.43 base_yhe_plikHM_EE_lowE . . . 1185
20.44 base_yhe_plikHM_EE_lowE_post_BAO . . . 1186
20.45 base_yhe_plikHM_EE_lowE_post_zre6p5 . . . 1187
20.46 base_yhe_plikHM_EE_lowE_post_BAO_zre6p5 . . . 1188
20.47 base_yhe_plikHM_TT_lowl_lowE_Aver15 . . . 1189
20.48 base_yhe_plikHM_TT_lowl_lowE_Aver15_post_BAO . . . 1190
20.49 base_yhe_plikHM_TT_lowl_lowE_Aver15_post_lensing . . . 1191
20.50 base_yhe_plikHM_TT_lowl_lowE_Aver15_post_BAO_lensing . . . 1192
20.51 base_yhe_plikHM_TT_lowl_lowE_Aver15_post_zre6p5 . . . 1193
20.52 base_yhe_plikHM_TT_lowl_lowE_Aver15_post_BAO_zre6p5 . . . 1194
20.53 base_yhe_plikHM_TT_lowl_lowE_Aver15_post_lensing_zre6p5 . . . 1195
20.54 base_yhe_plikHM_TT_lowl_lowE_Aver15_post_BAO_lensing_zre6p5 . . . 1196
20.55 base_yhe_plikHM_TTTEEE_lowl_lowE_Aver15 . . . 1197
20.56 base_yhe_plikHM_TTTEEE_lowl_lowE_Aver15_post_BAO . . . 1198
20.57 base_yhe_plikHM_TTTEEE_lowl_lowE_Aver15_post_lensing . . . 1199
20.58 base_yhe_plikHM_TTTEEE_lowl_lowE_Aver15_post_BAO_lensing . . . 1200
20.59 base_yhe_plikHM_TTTEEE_lowl_lowE_Aver15_post_zre6p5 . . . 1201
20.60 base_yhe_plikHM_TTTEEE_lowl_lowE_Aver15_post_BAO_zre6p5 . . . 1202
20.61 base_yhe_plikHM_TTTEEE_lowl_lowE_Aver15_post_lensing_zre6p5 . . . 1203
20.62 base_yhe_plikHM_TTTEEE_lowl_lowE_Aver15_post_BAO_lensing_zre6p5 . . . 1204
20.63 base_yhe_CamSpecHM_TTTEEE_lowl_lowE_Aver15 . . . 1205
20.64 base_yhe_CamSpecHM_TTTEEE_lowl_lowE_Aver15_post_BAO . . . 1206
20.65 base_yhe_CamSpecHM_TTTEEE_lowl_lowE_Aver15_post_lensing . . . 1207
20.66 base_yhe_CamSpecHM_TTTEEE_lowl_lowE_Aver15_post_BAO_lensing . . . 1208
20.67 base_yhe_CamSpecHM_TTTEEE_lowl_lowE_Aver15_post_zre6p5 . . . 1209
20.68 base_yhe_CamSpecHM_TTTEEE_lowl_lowE_Aver15_post_BAO_zre6p5 . . . 1210
20.69 base_yhe_CamSpecHM_TTTEEE_lowl_lowE_Aver15_post_lensing_zre6p5 . . . 1211
20.70 base_yhe_CamSpecHM_TTTEEE_lowl_lowE_Aver15_post_BAO_lensing_zre6p5 . . . 1212
20.71 base_yhe_CleanedCamSpecHM_TT_lowl_lowE . . . 1213

2 Baseline model

2.1 base_plikHM_TT_lowl_lowE

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022126	0.02212 ± 0.00022	$\sigma_8\Omega_m^{0.25}$	0.6116	0.611 ± 0.012	$H(0.15)$	72.23	72.25 ± 0.78
$\boldsymbol{\Omega_c h^2}$	0.12068	0.1206 ± 0.0021	$\sigma_8/h^{0.5}$	0.9938	0.993 ± 0.016	$D_M(0.15)$	647.8	647.7 ± 7.9
$\boldsymbol{100\theta_{MC}}$	1.040748	1.04077 ± 0.00047	$r_{drag}h$	98.40	98.5 ± 1.6	$H(0.38)$	82.50	82.52 ± 0.56
$\boldsymbol{\tau}$	0.0523	0.0522 ± 0.0080	$\langle d^2\rangle^{1/2}$	2.4537	2.454 ± 0.038	$D_M(0.38)$	1542.6	1542 ± 16
$\boldsymbol{\ln(10^{10}A_s)}$	3.0413	3.040 ± 0.016	z_{re}	7.54	7.50 ± 0.82	$H(0.51)$	89.310	89.32 ± 0.44
$\boldsymbol{n_s}$	0.9635	0.9626 ± 0.0057	$10^9 A_s$	2.0933	2.092 ± 0.034	$D_M(0.51)$	1996.8	1997 ± 18
$\boldsymbol{y_{cal}}$	1.00046	1.0004 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.8853	1.884 ± 0.014	$H(0.61)$	94.998	95.01 ± 0.35
$\boldsymbol{A_{217}^{CIB}}$	48.5	48 ± 7	D_{40}	1231.7	1234 ± 15	$D_M(0.61)$	2322.3	2322 ± 20
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.32	—	D_{220}	5710.4	5713 ± 42	$H(2.33)$	236.75	236.7 ± 1.3
$\boldsymbol{A_{143}^{tSZ}}$	7.03	5.1 ± 2.0	D_{810}	2538.2	2536 ± 14	$D_M(2.33)$	5777.8	5778 ± 16
$\boldsymbol{A_{100}^{PS}}$	254.9	263 ± 28	D_{1420}	815.5	814.4 ± 5.1	$f\sigma_8(0.15)$	0.4642	0.464 ± 0.012
$\boldsymbol{A_{143}^{PS}}$	49.8	49 ± 8	D_{2000}	229.94	229.5 ± 1.8	$\sigma_8(0.15)$	0.7500	0.7492 ± 0.0075
$\boldsymbol{A_{143\times217}^{PS}}$	47.3	44 ± 9	$n_{s,0.002}$	0.9635	0.9626 ± 0.0057	$f\sigma_8(0.38)$	0.4804	0.4798 ± 0.0095
$\boldsymbol{A_{217}^{PS}}$	119.9	115 ± 10	Y_P	0.245295	$0.24529^{+0.00011}_{-0.000088}$	$\sigma_8(0.38)$	0.6638	0.6631 ± 0.0060
$\boldsymbol{A^{kSZ}}$	0.00	< 4.84	Y_P^{BBN}	0.246621	$0.24661^{+0.00011}_{-0.000089}$	$f\sigma_8(0.51)$	0.4779	0.4773 ± 0.0082
$\boldsymbol{A_{100}^{dust TT}}$	8.86	8.9 ± 1.8	10^5D/H	2.6321	2.634 ± 0.042	$\sigma_8(0.51)$	0.6208	0.6202 ± 0.0055
$\boldsymbol{A_{143}^{dust TT}}$	10.80	10.7 ± 1.8	Age/Gyr	13.8300	13.830 ± 0.037	$f\sigma_8(0.61)$	0.4722	0.4716 ± 0.0072
$\boldsymbol{A_{143\times217}^{dust TT}}$	19.43	18.3 ± 3.3	z_*	1090.292	1090.30 ± 0.41	$\sigma_8(0.61)$	0.5904	0.5899 ± 0.0051
$\boldsymbol{A_{217}^{dust TT}}$	94.8	93.3 ± 7.4	r_*	144.442	144.46 ± 0.48	$f\sigma_8(2.33)$	0.29733	0.2971 ± 0.0025
$\boldsymbol{c_{100}}$	0.99965	0.99961 ± 0.00061	$100\theta_*$	1.040956	1.04097 ± 0.00046	$\sigma_8(2.33)$	0.30613	0.3059 ± 0.0027
$\boldsymbol{c_{217}}$	0.99825	0.99826 ± 0.00063	$D_M(z_*)$/Gpc	13.8759	13.878 ± 0.044	f_{2000}^{143}	30.49	31.2 ± 3.0
H_0	66.86	66.88 ± 0.92	z_{drag}	1059.437	1059.39 ± 0.46	$f_{2000}^{143\times217}$	33.34	33.6 ± 2.0
Ω_Λ	0.6791	0.679 ± 0.013	r_{drag}	147.182	147.21 ± 0.48	f_{2000}^{217}	107.77	108.2 ± 1.9
Ω_m	0.3209	0.321 ± 0.013	k_D	0.14058	0.14054 ± 0.00052	χ^2_{simall}	395.88	397.0 ± 1.7
$\Omega_m h^2$	0.14345	0.1434 ± 0.0020	$100\theta_D$	0.161051	0.16107 ± 0.00027	χ^2_{lowl}	23.60	23.9 ± 1.3
$\Omega_m h^3$	0.095909	0.09589 ± 0.00046	z_{eq}	3412.7	3411 ± 48	χ^2_{plik}	758.7	771.4 ± 5.5
σ_8	0.8126	0.8118 ± 0.0089	k_{eq}	0.010416	0.01041 ± 0.00014	χ^2_{prior}	1.35	7.3 ± 3.7
S_8	0.8405	0.840 ± 0.024	$100\theta_{eq}$	0.8106	0.8109 ± 0.0089	χ^2_{CMB}	1178.2	1192.3 ± 5.5
$\sigma_8\Omega_m^{0.5}$	0.4604	0.460 ± 0.013	$100\theta_{s,eq}$	0.44817	0.4483 ± 0.0046			

Best-fit $\chi^2_{eff} = 1179.58$; $\bar{\chi}^2_{eff} = 1199.58$; $R - 1 = 0.00927$

χ^2_{eff}: CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.88 commander_dx12_v3_2_29: 23.60 plik_rd12_HM_v22_TT: 758.75

2.2 base_plikHM_TT_lowl_lowE_post_BAO

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022225	0.02222 ± 0.00020	$\sigma_8/h^{0.5}$	0.9814	0.982 ± 0.012	$H(0.38)$	82.969	82.96 ± 0.35
$\boldsymbol{\Omega_c h^2}$	0.11898	0.1190 ± 0.0012	$r_{\rm drag}h$	99.76	99.76 ± 0.94	$D_{\rm M}(0.38)$	1529.5	1529.7 ± 9.4
$\boldsymbol{100\theta_{MC}}$	1.041017	1.04098 ± 0.00041	$\langle d^2\rangle^{1/2}$	2.4251	2.429 ± 0.028	$H(0.51)$	89.668	89.66 ± 0.29
$\boldsymbol{\tau}$	0.0532	$0.0539^{+0.0075}_{-0.0085}$	$z_{\rm re}$	7.59	7.64 ± 0.83	$D_{\rm M}(0.51)$	1981.5	1982 ± 11
$\boldsymbol{\ln(10^{10}A_s)}$	3.0390	3.040 ± 0.017	$10^9 A_{\rm s}$	2.0885	$2.091^{+0.033}_{-0.037}$	$H(0.61)$	95.272	95.26 ± 0.25
$\boldsymbol{n_s}$	0.96734	0.9664 ± 0.0043	$10^9 A_{\rm s}e^{-2\tau}$	1.8777	1.877 ± 0.012	$D_{\rm M}(0.61)$	2305.9	2306 ± 12
$\boldsymbol{y_{cal}}$	1.00044	1.0005 ± 0.0025	D_{40}	1223.2	1226 ± 13	$H(2.33)$	235.75	235.73 ± 0.79
$\boldsymbol{A_{217}^{CIB}}$	49.2	48 ± 7	D_{220}	5716.9	5721 ± 41	$D_{\rm M}(2.33)$	5766.2	5767 ± 12
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.26	—	D_{810}	2536.8	2536 ± 14	$f\sigma_8(0.15)$	0.4542	0.4543 ± 0.0077
$\boldsymbol{A_{143}^{tSZ}}$	7.06	$5.1^{+2.2}_{-2.0}$	D_{1420}	816.26	815.4 ± 5.0	$\sigma_8(0.15)$	0.7459	0.7461 ± 0.0070
$\boldsymbol{A_{100}^{PS}}$	254.6	264 ± 29	D_{2000}	230.24	229.9 ± 1.8	$f\sigma_8(0.38)$	0.4727	0.4729 ± 0.0065
$\boldsymbol{A_{143}^{PS}}$	48.1	48 ± 8	$n_{\rm s,0.002}$	0.96734	0.9664 ± 0.0043	$\sigma_8(0.38)$	0.6613	0.6615 ± 0.0060
$\boldsymbol{A_{143\times217}^{PS}}$	44.9	43 ± 9	$Y_{\rm P}$	0.245336	$0.245329^{+0.000090}_{-0.000075}$	$f\sigma_8(0.51)$	0.4715	0.4716 ± 0.0058
$\boldsymbol{A_{217}^{PS}}$	118.4	114 ± 10	$Y_{\rm P}^{\rm BBN}$	0.246663	$0.246655^{+0.000090}_{-0.000075}$	$\sigma_8(0.51)$	0.6190	$0.6191^{+0.0051}_{-0.0057}$
$\boldsymbol{A^{kSZ}}$	0.01	< 4.84	10^5D/H	2.6131	2.615 ± 0.038	$f\sigma_8(0.61)$	0.4666	0.4667 ± 0.0054
$\boldsymbol{A_{100}^{dust TT}}$	8.85	9.0 ± 1.8	Age/Gyr	13.8050	13.807 ± 0.028	$\sigma_8(0.61)$	0.5890	$0.5891^{+0.0049}_{-0.0054}$
$\boldsymbol{A_{143}^{dust TT}}$	10.85	10.8 ± 1.8	z_*	1090.014	1090.03 ± 0.30	$f\sigma_8(2.33)$	0.29703	$0.2971^{+0.0024}_{-0.0027}$
$\boldsymbol{A_{143\times217}^{dust TT}}$	19.36	18.3 ± 3.4	r_*	144.806	144.82 ± 0.32	$\sigma_8(2.33)$	0.30628	$0.3063^{+0.0025}_{-0.0028}$
$\boldsymbol{A_{217}^{dust TT}}$	94.4	93.3 ± 7.5	$100\theta_*$	1.041213	1.04118 ± 0.00041	f_{2000}^{143}	30.25	30.9 ± 2.9
$\boldsymbol{c_{100}}$	0.99963	0.99961 ± 0.00063	$D_{\rm M}(z_*)$/Gpc	13.9074	13.909 ± 0.031	$f_{2000}^{143\times217}$	33.11	33.3 ± 2.0
$\boldsymbol{c_{217}}$	0.99826	0.99827 ± 0.00062	$z_{\rm drag}$	1059.513	1059.50 ± 0.45	f_{2000}^{217}	107.61	107.9 ± 1.9
H_0	67.62	67.61 ± 0.55	$r_{\rm drag}$	147.524	147.54 ± 0.35	$\chi^2_{\rm simall}$	395.89	397.1 ± 1.9
Ω_Λ	0.6898	0.6897 ± 0.0073	$k_{\rm D}$	0.140301	0.14027 ± 0.00045	$\chi^2_{\rm lowl}$	22.83	23.09 ± 0.93
$\Omega_{\rm m}$	0.3102	0.3103 ± 0.0073	$100\theta_{\rm D}$	0.161006	0.16102 ± 0.00026	$\chi^2_{\rm plik}$	760.1	772.2 ± 5.5
$\Omega_{\rm m}h^2$	0.14185	0.1418 ± 0.0012	$z_{\rm eq}$	3374.4	3374 ± 29	$\chi^2_{\rm 6DF}$	0.0217	0.059 ± 0.077
$\Omega_{\rm m}h^3$	0.095926	0.09589 ± 0.00046	$k_{\rm eq}$	0.010299	0.010297 ± 0.000087	$\chi^2_{\rm MGS}$	1.28	1.35 ± 0.52
σ_8	0.8071	0.8073 ± 0.0078	$100\theta_{\rm eq}$	0.8180	0.8181 ± 0.0053	$\chi^2_{\rm DR12BAO}$	4.18	4.8 ± 1.6
S_8	0.8207	0.821 ± 0.015	$100\theta_{\rm s,eq}$	0.45193	0.4520 ± 0.0027	$\chi^2_{\rm prior}$	1.44	7.4 ± 3.7
$\sigma_8\Omega_{\rm m}^{0.5}$	0.4495	0.4497 ± 0.0081	$H(0.15)$	72.887	72.88 ± 0.47	$\chi^2_{\rm BAO}$	5.49	6.2 ± 1.3
$\sigma_8\Omega_{\rm m}^{0.25}$	0.6023	0.6025 ± 0.0080	$D_{\rm M}(0.15)$	641.18	641.3 ± 4.7	$\chi^2_{\rm CMB}$	1178.8	1192.4 ± 5.5

Best-fit $\chi^2_{\rm eff} = 1185.74$; $\bar{\chi}^2_{\rm eff} = 1206.02$; $R - 1 = 0.01940$

$\chi^2_{\rm eff}$: BAO - 6DF: 0.02 MGS: 1.28 DR12BAO: 4.18 CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.89 commander_dx12_v3_2_29: 22.83 plik_rd12_HM_v22_TT: 760.10

2.3 base_plikHM_TT_lowl_lowE_post_Riess18

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022379	0.02237 ± 0.00022	$\sigma_8\Omega_m^{0.25}$	0.5933	0.593 ± 0.011	$H(0.15)$	73.62	73.65 ± 0.73
$\boldsymbol{\Omega_c h^2}$	0.11720	0.1171 ± 0.0019	$\sigma_8/h^{0.5}$	0.9695	0.969 ± 0.016	$D_M(0.15)$	634.0	633.8 ± 7.1
$\boldsymbol{100\theta_{MC}}$	1.041273	1.04127 ± 0.00047	$r_{drag}h$	101.22	101.3 ± 1.5	$H(0.38)$	83.50	83.52 ± 0.54
$\boldsymbol{\tau}$	0.0554	0.0562 ± 0.0083	$\langle d^2\rangle^{1/2}$	2.3979	2.400 ± 0.037	$D_M(0.38)$	1515.0	1515 ± 14
$\boldsymbol{\ln(10^{10}A_s)}$	3.0399	3.041 ± 0.018	z_{re}	7.74	7.80 ± 0.82	$H(0.51)$	90.089	90.10 ± 0.43
$\boldsymbol{n_s}$	0.9719	0.9710 ± 0.0053	$10^9 A_s$	2.0903	2.093 ± 0.037	$D_M(0.51)$	1964.6	1964 ± 17
$\boldsymbol{y_{cal}}$	1.00067	1.0006 ± 0.0026	$10^9 A_s e^{-2\tau}$	1.8711	1.870 ± 0.013	$H(0.61)$	95.607	95.62 ± 0.35
$\boldsymbol{A_{217}^{CIB}}$	48.4	48 ± 7	D_{40}	1214.7	1217 ± 15	$D_M(0.61)$	2287.7	2287 ± 18
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.35	—	D_{220}	5729.5	5732 ± 42	$H(2.33)$	234.75	234.7 ± 1.2
$\boldsymbol{A_{143}^{tSZ}}$	7.07	$5.2^{+2.3}_{-2.0}$	D_{810}	2537.4	2535 ± 14	$D_M(2.33)$	5751.9	5752 ± 16
$\boldsymbol{A_{100}^{PS}}$	252.8	262 ± 28	D_{1420}	818.14	816.9 ± 4.9	$f\sigma_8(0.15)$	0.4442	0.444 ± 0.011
$\boldsymbol{A_{143}^{PS}}$	48.0	47^{+9}_{-8}	D_{2000}	231.01	230.6 ± 1.7	$\sigma_8(0.15)$	0.7426	0.7424 ± 0.0080
$\boldsymbol{A_{143\times217}^{PS}}$	46.4	43 ± 10	$n_{s,0.002}$	0.9719	0.9710 ± 0.0053	$f\sigma_8(0.38)$	0.4652	$0.4648^{+0.0097}_{-0.0088}$
$\boldsymbol{A_{217}^{PS}}$	118.6	114 ± 10	Y_P	0.245399	0.245393 ± 0.000086	$\sigma_8(0.38)$	0.6596	0.6595 ± 0.0065
$\boldsymbol{A^{kSZ}}$	0.01	< 4.76	Y_P^{BBN}	0.246725	0.246720 ± 0.000086	$f\sigma_8(0.51)$	0.4652	$0.4649^{+0.0085}_{-0.0076}$
$\boldsymbol{A_{100}^{dustTT}}$	8.96	9.1 ± 1.8	10^5D/H	2.5839	2.586 ± 0.040	$\sigma_8(0.51)$	0.6178	0.6177 ± 0.0059
$\boldsymbol{A_{143}^{dustTT}}$	10.84	10.7 ± 1.8	Age/Gyr	13.7739	13.774 ± 0.035	$f\sigma_8(0.61)$	0.4613	$0.4610^{+0.0076}_{-0.0069}$
$\boldsymbol{A_{143\times217}^{dustTT}}$	19.43	18.1 ± 3.2	z_*	1089.662	1089.67 ± 0.37	$\sigma_8(0.61)$	0.5882	0.5881 ± 0.0055
$\boldsymbol{A_{217}^{dustTT}}$	94.7	93.1 ± 7.3	r_*	145.154	145.18 ± 0.45	$f\sigma_8(2.33)$	0.29710	0.2971 ± 0.0027
$\boldsymbol{c_{100}}$	0.99967	0.99962 ± 0.00063	$100\theta_*$	1.041458	1.04146 ± 0.00046	$\sigma_8(2.33)$	0.30686	0.3069 ± 0.0028
$\boldsymbol{c_{217}}$	0.99826	0.99826 ± 0.00059	$D_M(z_*)$/Gpc	13.9375	13.940 ± 0.042	f_{2000}^{143}	29.50	30.2 ± 2.9
H_0	68.47	68.50 ± 0.85	z_{drag}	1059.742	1059.73 ± 0.46	$f_{2000}^{143\times217}$	32.53	32.8 ± 2.0
Ω_Λ	0.7009	0.701 ± 0.011	r_{drag}	147.829	147.86 ± 0.47	f_{2000}^{217}	107.06	107.4 ± 1.9
Ω_m	0.2991	0.299 ± 0.011	k_D	0.14010	0.14006 ± 0.00053	χ^2_{simall}	396.07	397.3 ± 2.1
$\Omega_m h^2$	0.14022	0.1401 ± 0.0018	$100\theta_D$	0.160892	0.16091 ± 0.00026	χ^2_{lowl}	22.09	22.35 ± 0.98
$\Omega_m h^3$	0.096015	0.09599 ± 0.00047	z_{eq}	3335.4	3333 ± 43	χ^2_{plik}	763.0	775.9 ± 6.9
σ_8	0.8023	0.8020 ± 0.0094	k_{eq}	0.010180	0.01017 ± 0.00013	$\chi^2_{H073p45}$	8.99	9.1 ± 3.1
S_8	0.8010	0.800 ± 0.022	$100\theta_{eq}$	0.8257	0.8262 ± 0.0084	χ^2_{prior}	1.41	7.4 ± 3.8
$\sigma_8\Omega_m^{0.5}$	0.4387	0.438 ± 0.012	$100\theta_{s,eq}$	0.45587	0.4561 ± 0.0043	χ^2_{CMB}	1181.2	1195.6 ± 6.5

Best-fit $\chi^2_{eff} = 1191.57$; $\bar{\chi}^2_{eff} = 1212.08$; $R - 1 = 0.09494$

χ^2_{eff}: CMB - simall_100x143_offlike5_EE_Aplanck_B: 396.07 commander_dx12_v3_2_29: 22.09 plik_rd12_HM_v22_TT: 763.02 Hubble - H073p45: 8.98

2.4 base_plikHM_TT_lowl_lowE_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02212 ± 0.00022	$\sigma_8\Omega_m^{0.25}$	0.612 ± 0.012	$H(0.15)$	72.28 ± 0.78
$\boldsymbol{\Omega_c h^2}$	0.1206 ± 0.0021	$\sigma_8/h^{0.5}$	0.994 ± 0.016	$D_M(0.15)$	647.4 ± 7.9
$\boldsymbol{100\theta_{MC}}$	1.04077 ± 0.00047	$r_{drag}h$	98.5 ± 1.6	$H(0.38)$	82.54 ± 0.56
$\boldsymbol{\tau}$	$0.0538^{+0.0047}_{-0.0084}$	$\langle d^2\rangle^{1/2}$	2.457 ± 0.037	$D_M(0.38)$	1542 ± 16
$\boldsymbol{\ln(10^{10}A_s)}$	$3.044^{+0.012}_{-0.016}$	z_{re}	$7.68^{+0.53}_{-0.84}$	$H(0.51)$	89.34 ± 0.44
$\boldsymbol{n_s}$	0.9629 ± 0.0057	$10^9 A_s$	$2.098^{+0.025}_{-0.034}$	$D_M(0.51)$	1996 ± 18
$\boldsymbol{y_{cal}}$	1.0004 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.884 ± 0.014	$H(0.61)$	95.02 ± 0.35
$\boldsymbol{A_{217}^{CIB}}$	48 ± 7	D_{40}	1234 ± 15	$D_M(0.61)$	2321 ± 20
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{220}	5713 ± 42	$H(2.33)$	236.7 ± 1.3
$\boldsymbol{A_{143}^{tSZ}}$	$5.1^{+2.2}_{-2.0}$	D_{810}	2536 ± 14	$D_M(2.33)$	5777 ± 16
$\boldsymbol{A_{100}^{PS}}$	263 ± 28	D_{1420}	814.4 ± 5.1	$f\sigma_8(0.15)$	0.464 ± 0.012
$\boldsymbol{A_{143}^{PS}}$	49 ± 8	D_{2000}	229.6 ± 1.8	$\sigma_8(0.15)$	0.7502 ± 0.0070
$\boldsymbol{A_{143\times217}^{PS}}$	44 ± 9	$n_{s,0.002}$	0.9629 ± 0.0057	$f\sigma_8(0.38)$	0.4803 ± 0.0095
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	Y_P	$0.24529^{+0.00010}_{-0.000088}$	$\sigma_8(0.38)$	$0.6641^{+0.0051}_{-0.0059}$
$\boldsymbol{A^{kSZ}}$	< 4.79	Y_P^{BBN}	$0.24661^{+0.00011}_{-0.000088}$	$f\sigma_8(0.51)$	0.4778 ± 0.0081
$\boldsymbol{A_{100}^{dustTT}}$	8.9 ± 1.8	10^5D/H	2.633 ± 0.042	$\sigma_8(0.51)$	$0.6211^{+0.0044}_{-0.0054}$
$\boldsymbol{A_{143}^{dustTT}}$	10.7 ± 1.8	Age/Gyr	13.829 ± 0.037	$f\sigma_8(0.61)$	0.4721 ± 0.0071
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.3 ± 3.3	z_*	1090.29 ± 0.41	$\sigma_8(0.61)$	$0.5907^{+0.0040}_{-0.0050}$
$\boldsymbol{A_{217}^{dustTT}}$	93.3 ± 7.4	r_*	144.48 ± 0.48	$f\sigma_8(2.33)$	$0.2975^{+0.0018}_{-0.0025}$
$\boldsymbol{c_{100}}$	0.99961 ± 0.00062	$100\theta_*$	1.04098 ± 0.00046	$\sigma_8(2.33)$	$0.3064^{+0.0019}_{-0.0027}$
$\boldsymbol{c_{217}}$	0.99826 ± 0.00063	$D_M(z_*)$/Gpc	13.879 ± 0.044	f_{2000}^{143}	31.1 ± 2.9
H_0	66.91 ± 0.92	z_{drag}	1059.40 ± 0.46	$f_{2000}^{143\times217}$	33.5 ± 2.0
Ω_Λ	0.680 ± 0.013	r_{drag}	147.22 ± 0.48	f_{2000}^{217}	108.1 ± 1.9
Ω_m	0.320 ± 0.013	k_D	0.14054 ± 0.00052	χ^2_{simall}	396.9 ± 1.7
$\Omega_m h^2$	0.1433 ± 0.0020	$100\theta_D$	0.16107 ± 0.00027	χ^2_{lowl}	23.9 ± 1.3
$\Omega_m h^3$	0.09589 ± 0.00046	z_{eq}	3410 ± 47	χ^2_{plik}	771.3 ± 5.4
σ_8	0.8128 ± 0.0085	k_{eq}	0.01041 ± 0.00014	χ^2_{prior}	7.3 ± 3.7
S_8	0.840 ± 0.024	$100\theta_{eq}$	0.8113 ± 0.0088	χ^2_{CMB}	1192.0 ± 5.4
$\sigma_8\Omega_m^{0.5}$	0.460 ± 0.013	$100\theta_{s,eq}$	0.4485 ± 0.0046		

$\bar{\chi}^2_{eff} = 1199.32$; $R - 1 = 0.00921$

2.5 base_plikHM_TT_lowl_lowE_post_BAO_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02222 ± 0.00020	$\sigma_8/h^{0.5}$	0.983 ± 0.011	$H(0.38)$	82.97 ± 0.35
$\boldsymbol{\Omega_c h^2}$	0.1189 ± 0.0012	$r_{\rm drag}h$	99.78 ± 0.94	$D_{\rm M}(0.38)$	1529.5 ± 9.4
$\boldsymbol{100\theta_{MC}}$	1.04099 ± 0.00041	$\langle d^2\rangle^{1/2}$	2.431 ± 0.027	$H(0.51)$	89.66 ± 0.29
$\boldsymbol{\tau}$	$0.0552^{+0.0053}_{-0.0087}$	$z_{\rm re}$	$7.77^{+0.58}_{-0.89}$	$D_{\rm M}(0.51)$	1982 ± 11
$\boldsymbol{\ln(10^{10}A_s)}$	$3.043^{+0.012}_{-0.017}$	$10^9 A_{\rm s}$	$2.097^{+0.026}_{-0.037}$	$H(0.61)$	95.27 ± 0.25
$\boldsymbol{n_s}$	0.9665 ± 0.0043	$10^9 A_{\rm s}e^{-2\tau}$	1.877 ± 0.012	$D_{\rm M}(0.61)$	2306 ± 12
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	D_{40}	1226 ± 13	$H(2.33)$	235.72 ± 0.79
$\boldsymbol{A^{CIB}_{217}}$	48 ± 7	D_{220}	5721 ± 41	$D_{\rm M}(2.33)$	5767 ± 12
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{810}	2536 ± 14	$f\sigma_8(0.15)$	0.4548 ± 0.0076
$\boldsymbol{A^{tSZ}_{143}}$	$5.1^{+2.2}_{-2.0}$	D_{1420}	815.4 ± 5.0	$\sigma_8(0.15)$	$0.7469^{+0.0057}_{-0.0070}$
$\boldsymbol{A^{PS}_{100}}$	263 ± 29	D_{2000}	230.0 ± 1.8	$f\sigma_8(0.38)$	0.4733 ± 0.0063
$\boldsymbol{A^{PS}_{143}}$	48 ± 8	$n_{\rm s,0.002}$	0.9665 ± 0.0043	$\sigma_8(0.38)$	$0.6623^{+0.0047}_{-0.0061}$
$\boldsymbol{A^{PS}_{143\times217}}$	43 ± 9	$Y_{\rm P}$	$0.245331^{+0.000090}_{-0.000075}$	$f\sigma_8(0.51)$	0.4721 ± 0.0056
$\boldsymbol{A^{PS}_{217}}$	114 ± 10	$Y_{\rm P}^{\rm BBN}$	$0.246657^{+0.000091}_{-0.000075}$	$\sigma_8(0.51)$	$0.6198^{+0.0043}_{-0.0056}$
$\boldsymbol{A^{kSZ}}$	< 4.77	10^5D/H	2.615 ± 0.038	$f\sigma_8(0.61)$	0.4673 ± 0.0052
$\boldsymbol{A^{dust}_{100}}$	8.9 ± 1.8	Age/Gyr	13.806 ± 0.028	$\sigma_8(0.61)$	$0.5898^{+0.0040}_{-0.0053}$
$\boldsymbol{A^{dust}_{143}}$	10.8 ± 1.8	z_*	1090.02 ± 0.30	$f\sigma_8(2.33)$	$0.2974^{+0.0020}_{-0.0027}$
$\boldsymbol{A^{dust}_{143\times217}}$	18.3 ± 3.3	r_*	144.82 ± 0.32	$\sigma_8(2.33)$	$0.3067^{+0.0020}_{-0.0028}$
$\boldsymbol{A^{dust}_{217}}$	93.3 ± 7.5	$100\theta_*$	1.04119 ± 0.00041	f^{143}_{2000}	30.8 ± 2.9
$\boldsymbol{c_{100}}$	0.99961 ± 0.00063	$D_{\rm M}(z_*)$/Gpc	13.909 ± 0.031	$f^{143\times217}_{2000}$	33.3 ± 2.0
$\boldsymbol{c_{217}}$	0.99827 ± 0.00062	$z_{\rm drag}$	1059.51 ± 0.45	f^{217}_{2000}	107.9 ± 1.9
H_0	67.63 ± 0.55	$r_{\rm drag}$	147.54 ± 0.35	$\chi^2_{\rm simall}$	397.1 ± 2.0
Ω_Λ	0.6898 ± 0.0073	$k_{\rm D}$	0.14028 ± 0.00045	$\chi^2_{\rm lowl}$	23.11 ± 0.93
$\Omega_{\rm m}$	0.3102 ± 0.0073	$100\theta_{\rm D}$	0.16101 ± 0.00026	$\chi^2_{\rm plik}$	772.0 ± 5.4
$\Omega_{\rm m}h^2$	0.1418 ± 0.0012	$z_{\rm eq}$	3373 ± 29	$\chi^2_{\rm 6DF}$	0.058 ± 0.075
$\Omega_{\rm m}h^3$	0.09589 ± 0.00046	$k_{\rm eq}$	0.010296 ± 0.000087	$\chi^2_{\rm MGS}$	1.36 ± 0.53
σ_8	$0.8082^{+0.0066}_{-0.0079}$	$100\theta_{\rm eq}$	0.8182 ± 0.0053	$\chi^2_{\rm DR12BAO}$	4.8 ± 1.6
S_8	0.822 ± 0.015	$100\theta_{\rm s,eq}$	0.4520 ± 0.0027	$\chi^2_{\rm prior}$	7.4 ± 3.7
$\sigma_8\Omega_{\rm m}^{0.5}$	0.4501 ± 0.0081	$H(0.15)$	72.89 ± 0.47	$\chi^2_{\rm BAO}$	6.2 ± 1.3
$\sigma_8\Omega_{\rm m}^{0.25}$	0.6031 ± 0.0078	$D_{\rm M}(0.15)$	641.2 ± 4.7	$\chi^2_{\rm CMB}$	1192.2 ± 5.5

$\bar{\chi}^2_{\rm eff} = 1205.76$; $R - 1 = 0.02069$

2.6 base_plikHM_TT_lowl_lowE_post_Riess18_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02237 ± 0.00021	$\sigma_8\Omega_m^{0.25}$	0.594 ± 0.011	$H(0.15)$	73.64 ± 0.72
$\boldsymbol{\Omega_c h^2}$	0.1171 ± 0.0019	$\sigma_8/h^{0.5}$	0.970 ± 0.015	$D_M(0.15)$	633.8 ± 6.9
$\boldsymbol{100\theta_{MC}}$	1.04127 ± 0.00046	$r_{drag}h$	101.3 ± 1.5	$H(0.38)$	83.52 ± 0.53
$\boldsymbol{\tau}$	$0.0573^{+0.0067}_{-0.0082}$	$\langle d^2\rangle^{1/2}$	2.403 ± 0.035	$D_M(0.38)$	1515 ± 14
$\boldsymbol{\ln(10^{10}A_s)}$	$3.043^{+0.014}_{-0.017}$	z_{re}	$7.92^{+0.69}_{-0.82}$	$H(0.51)$	90.10 ± 0.42
$\boldsymbol{n_s}$	0.9710 ± 0.0053	$10^9 A_s$	$2.097^{+0.029}_{-0.036}$	$D_M(0.51)$	1964 ± 16
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0026	$10^9 A_s e^{-2\tau}$	1.870 ± 0.013	$H(0.61)$	95.62 ± 0.34
$\boldsymbol{A_{217}^{CIB}}$	48 ± 7	D_{40}	1217 ± 15	$D_M(0.61)$	2287 ± 18
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{220}	5732 ± 43	$H(2.33)$	234.7 ± 1.1
$\boldsymbol{A_{143}^{tSZ}}$	$5.2^{+2.3}_{-2.0}$	D_{810}	2535 ± 14	$D_M(2.33)$	5752 ± 15
$\boldsymbol{A_{100}^{PS}}$	262 ± 28	D_{1420}	816.9 ± 4.9	$f\sigma_8(0.15)$	0.444 ± 0.011
$\boldsymbol{A_{143}^{PS}}$	47^{+9}_{-8}	D_{2000}	230.6 ± 1.7	$\sigma_8(0.15)$	0.7432 ± 0.0075
$\boldsymbol{A_{143\times217}^{PS}}$	42 ± 9	$n_{s,0.002}$	0.9710 ± 0.0053	$f\sigma_8(0.38)$	0.4654 ± 0.0090
$\boldsymbol{A_{217}^{PS}}$	114 ± 10	Y_P	0.245394 ± 0.000085	$\sigma_8(0.38)$	$0.6602^{+0.0054}_{-0.0063}$
$\boldsymbol{A^{kSZ}}$	< 4.76	Y_P^{BBN}	0.246720 ± 0.000086	$f\sigma_8(0.51)$	0.4655 ± 0.0078
$\boldsymbol{A_{100}^{dustTT}}$	9.1 ± 1.8	10^5D/H	2.586 ± 0.040	$\sigma_8(0.51)$	$0.6184^{+0.0048}_{-0.0057}$
$\boldsymbol{A_{143}^{dustTT}}$	10.6 ± 1.8	Age/Gyr	13.774 ± 0.034	$f\sigma_8(0.61)$	0.4616 ± 0.0070
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.1 ± 3.2	z_*	1089.66 ± 0.36	$\sigma_8(0.61)$	$0.5888^{+0.0045}_{-0.0054}$
$\boldsymbol{A_{217}^{dustTT}}$	93.1 ± 7.3	r_*	145.18 ± 0.45	$f\sigma_8(2.33)$	$0.2974^{+0.0022}_{-0.0026}$
$\boldsymbol{c_{100}}$	0.99962 ± 0.00064	$100\theta_*$	1.04145 ± 0.00045	$\sigma_8(2.33)$	$0.3072^{+0.0023}_{-0.0027}$
$\boldsymbol{c_{217}}$	0.99827 ± 0.00059	$D_M(z_*)$/Gpc	13.940 ± 0.042	f_{2000}^{143}	30.2 ± 2.9
H_0	68.50 ± 0.83	z_{drag}	1059.74 ± 0.46	$f_{2000}^{143\times217}$	32.7 ± 2.0
Ω_Λ	0.701 ± 0.011	r_{drag}	147.85 ± 0.46	f_{2000}^{217}	107.4 ± 1.9
Ω_m	0.299 ± 0.011	k_D	0.14007 ± 0.00053	χ^2_{simall}	397.3 ± 2.1
$\Omega_m h^2$	0.1401 ± 0.0018	$100\theta_D$	0.16090 ± 0.00026	χ^2_{lowl}	22.37 ± 0.98
$\Omega_m h^3$	0.09599 ± 0.00048	z_{eq}	3334 ± 43	χ^2_{plik}	775.6 ± 6.7
σ_8	0.8029 ± 0.0088	k_{eq}	0.01017 ± 0.00013	$\chi^2_{H073p45}$	9.1 ± 3.0
S_8	0.801 ± 0.021	$100\theta_{eq}$	0.8261 ± 0.0083	χ^2_{prior}	7.4 ± 3.7
$\sigma_8\Omega_m^{0.5}$	0.439 ± 0.012	$100\theta_{s,eq}$	0.4561 ± 0.0042	χ^2_{CMB}	1195.3 ± 6.3

$\bar{\chi}^2_{eff} = 1211.81$; $R - 1 = 0.08503$

2.7 base_plikHM_TTTEEE_lowl_lowE

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022377	0.02236 ± 0.00015	$\Omega_m h^3$	0.096355	0.09633 ± 0.00029	$100\theta_{eq}$	0.8128	0.8125 ± 0.0058
$\boldsymbol{\Omega_c h^2}$	0.12010	0.1202 ± 0.0014	σ_8	0.8120	0.8120 ± 0.0073	$100\theta_{s,eq}$	0.44914	0.4490 ± 0.0030
$\boldsymbol{100\theta_{MC}}$	1.040920	1.04090 ± 0.00031	S_8	0.8331	0.834 ± 0.016	$H(0.15)$	72.65	72.61 ± 0.52
$\boldsymbol{\tau}$	0.0543	$0.0544^{+0.0070}_{-0.0081}$	$\sigma_8\Omega_m^{0.5}$	0.4563	0.4568 ± 0.0087	$D_M(0.15)$	643.7	644.1 ± 5.2
$\boldsymbol{\ln(10^{10}A_s)}$	3.0447	3.045 ± 0.016	$\sigma_8\Omega_m^{0.25}$	0.6087	0.6090 ± 0.0081	$H(0.38)$	82.848	82.82 ± 0.37
$\boldsymbol{n_s}$	0.96589	0.9649 ± 0.0044	$\sigma_8/h^{0.5}$	0.9896	0.990 ± 0.012	$D_M(0.38)$	1534.0	1535 ± 10
$\boldsymbol{y_{cal}}$	1.00061	1.0005 ± 0.0025	$r_{drag}h$	99.00	98.9 ± 1.0	$H(0.51)$	89.614	89.59 ± 0.29
$\boldsymbol{A_{217}^{CIB}}$	47.2	47 ± 7	$\langle d^2\rangle^{1/2}$	2.4451	2.448 ± 0.028	$D_M(0.51)$	1986.5	1988 ± 12
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.42	—	z_{re}	7.68	7.68 ± 0.79	$H(0.61)$	95.270	95.25 ± 0.24
$\boldsymbol{A_{143}^{tSZ}}$	7.23	$5.5^{+2.2}_{-1.9}$	$10^9 A_s$	2.1004	$2.101^{+0.031}_{-0.034}$	$D_M(0.61)$	2311.1	2312 ± 13
$\boldsymbol{A_{100}^{PS}}$	250.5	258 ± 28	$10^9 A_s e^{-2\tau}$	1.8843	1.884 ± 0.012	$H(2.33)$	236.64	236.68 ± 0.82
$\boldsymbol{A_{143}^{PS}}$	47.4	46 ± 8	D_{40}	1229.3	1232 ± 13	$D_M(2.33)$	5763.6	5765 ± 11
$\boldsymbol{A_{143\times217}^{PS}}$	47.3	42 ± 9	D_{220}	5730.4	5731 ± 39	$f\sigma_8(0.15)$	0.4605	0.4610 ± 0.0081
$\boldsymbol{A_{217}^{PS}}$	119.8	115 ± 10	D_{810}	2541.1	2539 ± 14	$\sigma_8(0.15)$	0.7499	0.7498 ± 0.0065
$\boldsymbol{A^{kSZ}}$	0.01	< 4.22	D_{1420}	818.28	817.2 ± 4.9	$f\sigma_8(0.38)$	0.4779	0.4782 ± 0.0066
$\boldsymbol{A_{100}^{dust TT}}$	8.86	8.9 ± 1.8	D_{2000}	231.26	230.9 ± 1.6	$\sigma_8(0.38)$	0.6642	0.6641 ± 0.0055
$\boldsymbol{A_{143}^{dust TT}}$	11.10	10.9 ± 1.8	$n_{s,0.002}$	0.96589	0.9649 ± 0.0044	$f\sigma_8(0.51)$	0.4760	0.4762 ± 0.0058
$\boldsymbol{A_{143\times217}^{dust TT}}$	19.83	18.6 ± 3.3	Y_P	0.245398	$0.245389^{+0.000062}_{-0.000055}$	$\sigma_8(0.51)$	0.6214	0.6213 ± 0.0051
$\boldsymbol{A_{217}^{dust TT}}$	95.1	93.8 ± 7.3	Y_P^{BBN}	0.246725	$0.246716^{+0.000062}_{-0.000055}$	$f\sigma_8(0.61)$	0.4707	0.4708 ± 0.0053
$\boldsymbol{A_{100}^{dust TE}}$	0.1142	0.114 ± 0.038	10^5D/H	2.5841	2.588 ± 0.028	$\sigma_8(0.61)$	0.59117	0.5910 ± 0.0048
$\boldsymbol{A_{100\times143}^{dust TE}}$	0.1345	0.135 ± 0.030	Age/Gyr	13.7973	13.800 ± 0.024	$f\sigma_8(2.33)$	0.29790	0.2978 ± 0.0024
$\boldsymbol{A_{100\times217}^{dust TE}}$	0.482	0.480 ± 0.085	z_*	1089.920	1089.95 ± 0.27	$\sigma_8(2.33)$	0.30694	$0.3068^{+0.0024}_{-0.0026}$
$\boldsymbol{A_{143}^{dust TE}}$	0.224	0.226 ± 0.053	r_*	144.399	144.39 ± 0.30	f_{2000}^{143}	28.90	29.5 ± 2.7
$\boldsymbol{A_{143\times217}^{dust TE}}$	0.664	0.666 ± 0.080	$100\theta_*$	1.041097	1.04109 ± 0.00030	$f_{2000}^{143\times217}$	32.04	32.2 ± 1.9
$\boldsymbol{A_{217}^{dust TE}}$	2.081	2.09 ± 0.27	$D_M(z_*)$/Gpc	13.8699	13.869 ± 0.028	f_{2000}^{217}	106.69	107.0 ± 1.8
$\boldsymbol{c_{100}}$	0.99969	0.99966 ± 0.00062	z_{drag}	1059.971	1059.93 ± 0.30	χ^2_{simall}	396.05	397.1 ± 2.0
$\boldsymbol{c_{217}}$	0.99816	0.99819 ± 0.00062	r_{drag}	147.055	147.05 ± 0.30	χ^2_{lowl}	23.26	23.55 ± 0.97
H_0	67.32	67.27 ± 0.60	k_D	0.140910	0.14090 ± 0.00032	χ^2_{plik}	2344.6	2359.5 ± 5.8
Ω_Λ	0.6842	0.6834 ± 0.0084	$100\theta_D$	0.160744	0.16077 ± 0.00017	χ^2_{prior}	1.82	11.6 ± 4.5
Ω_m	0.3158	0.3166 ± 0.0084	z_{eq}	3404.9	3407 ± 31	χ^2_{CMB}	2764.0	2780.2 ± 5.8
$\Omega_m h^2$	0.14313	0.1432 ± 0.0013	k_{eq}	0.010392	0.010398 ± 0.000094			

Best-fit $\chi^2_{eff} = 2765.77$; $\bar{\chi}^2_{eff} = 2791.77$; $R - 1 = 0.01231$

χ^2_{eff}: CMB - simall_100x143_offlike5_EE_Aplanck_B: 396.05 commander_dx12_v3_2_29: 23.26 plik_rd12_HM_v22b_TTTEEE: 2344.65

2.8 base_plikHM_TTTEEE_lowl_lowE_post_BAO

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022432	0.02242 ± 0.00013	σ_8	0.8098	0.8099 ± 0.0071	$H(0.15)$	72.968	72.94 ± 0.39
$\boldsymbol{\Omega_c h^2}$	0.11926	0.1193 ± 0.0010	S_8	0.8240	0.825 ± 0.012	$D_M(0.15)$	640.50	640.8 ± 3.8
$\boldsymbol{100\theta_{MC}}$	1.041000	1.04101 ± 0.00029	$\sigma_8\Omega_m^{0.5}$	0.4513	0.4517 ± 0.0068	$H(0.38)$	83.072	83.05 ± 0.28
$\boldsymbol{\tau}$	0.0553	$0.0559^{+0.0068}_{-0.0084}$	$\sigma_8\Omega_m^{0.25}$	0.6046	0.6048 ± 0.0068	$D_M(0.38)$	1527.8	1528.3 ± 7.7
$\boldsymbol{\ln(10^{10}A_s)}$	3.0452	$3.046^{+0.015}_{-0.017}$	$\sigma_8/h^{0.5}$	0.9843	0.985 ± 0.010	$H(0.51)$	89.785	89.77 ± 0.23
$\boldsymbol{n_s}$	0.96801	0.9670 ± 0.0038	$r_{drag}h$	99.66	99.62 ± 0.78	$D_M(0.51)$	1979.2	1979.8 ± 9.0
$\boldsymbol{y_{cal}}$	1.00071	1.0006 ± 0.0025	$\langle d^2\rangle^{1/2}$	2.4326	2.436 ± 0.024	$H(0.61)$	95.401	95.39 ± 0.19
$\boldsymbol{A_{217}^{CIB}}$	46.7	47 ± 7	z_{re}	7.76	$7.80^{+0.72}_{-0.81}$	$D_M(0.61)$	2303.2	2303.8 ± 9.7
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.54	—	10^9A_s	2.1014	$2.103^{+0.030}_{-0.036}$	$H(2.33)$	236.14	236.17 ± 0.62
$\boldsymbol{A_{143}^{tSZ}}$	7.12	$5.5^{+2.1}_{-1.8}$	$10^9A_se^{-2\tau}$	1.8813	1.880 ± 0.011	$D_M(2.33)$	5758.2	5758.8 ± 8.9
$\boldsymbol{A_{100}^{PS}}$	248.9	258 ± 28	D_{40}	1225.2	1227 ± 12	$f\sigma_8(0.15)$	0.4560	0.4563 ± 0.0064
$\boldsymbol{A_{143}^{PS}}$	48.6	45 ± 8	D_{220}	5735.3	5735 ± 38	$\sigma_8(0.15)$	0.7484	0.7485 ± 0.0064
$\boldsymbol{A_{143\times217}^{PS}}$	49.8	42 ± 9	D_{810}	2541.5	2539 ± 13	$f\sigma_8(0.38)$	0.4745	0.4747 ± 0.0055
$\boldsymbol{A_{217}^{PS}}$	120.4	115.0 ± 9.9	D_{1420}	819.11	817.8 ± 4.8	$\sigma_8(0.38)$	0.6635	$0.6635^{+0.0051}_{-0.0058}$
$\boldsymbol{A^{kSZ}}$	0.00	< 4.18	D_{2000}	231.58	231.1 ± 1.6	$f\sigma_8(0.51)$	0.47322	0.4734 ± 0.0050
$\boldsymbol{A_{100}^{dust TT}}$	8.89	8.9 ± 1.8	$n_{s,0.002}$	0.96801	0.9670 ± 0.0038	$\sigma_8(0.51)$	0.6210	$0.6210^{+0.0047}_{-0.0054}$
$\boldsymbol{A_{143}^{dust TT}}$	11.01	10.9 ± 1.8	Y_P	0.245420	$0.245413^{+0.000055}_{-0.000048}$	$f\sigma_8(0.61)$	0.46832	0.4685 ± 0.0047
$\boldsymbol{A_{143\times217}^{dust TT}}$	19.94	18.6 ± 3.3	Y_P^{BBN}	0.246746	$0.246739^{+0.000055}_{-0.000048}$	$\sigma_8(0.61)$	0.59088	$0.5909^{+0.0045}_{-0.0051}$
$\boldsymbol{A_{217}^{dust TT}}$	95.2	93.8 ± 7.2	10^5D/H	2.5740	2.577 ± 0.025	$f\sigma_8(2.33)$	0.29796	$0.2979^{+0.0022}_{-0.0026}$
$\boldsymbol{A_{100}^{dust TE}}$	0.1145	0.113 ± 0.038	Age/Gyr	13.7857	13.787 ± 0.020	$\sigma_8(2.33)$	0.30722	$0.3072^{+0.0023}_{-0.0027}$
$\boldsymbol{A_{100\times143}^{dust TE}}$	0.1349	0.135 ± 0.030	z_*	1089.776	1089.80 ± 0.22	f_{2000}^{143}	28.52	29.3 ± 2.7
$\boldsymbol{A_{100\times217}^{dust TE}}$	0.481	0.479 ± 0.086	r_*	144.576	144.57 ± 0.24	$f_{2000}^{143\times217}$	31.78	32.0 ± 1.9
$\boldsymbol{A_{143}^{dust TE}}$	0.225	0.225 ± 0.054	$100\theta_*$	1.041178	1.04119 ± 0.00028	f_{2000}^{217}	106.39	106.8 ± 1.7
$\boldsymbol{A_{143\times217}^{dust TE}}$	0.666	0.665 ± 0.080	$D_M(z_*)$/Gpc	13.8858	13.885 ± 0.023	χ^2_{simall}	396.20	397.3 ± 2.2
$\boldsymbol{A_{217}^{dust TE}}$	2.081	2.09 ± 0.26	z_{drag}	1060.009	1060.00 ± 0.29	χ^2_{lowl}	22.87	23.13 ± 0.82
$\boldsymbol{c_{100}}$	0.99971	0.99966 ± 0.00063	r_{drag}	147.221	147.22 ± 0.24	χ^2_{plik}	2345.5	2359.6 ± 5.8
$\boldsymbol{c_{217}}$	0.99817	0.99817 ± 0.00061	k_D	0.140779	0.14077 ± 0.00029	χ^2_{6DF}	0.0288	0.057 ± 0.066
H_0	67.693	67.67 ± 0.45	$100\theta_D$	0.160709	0.16073 ± 0.00017	χ^2_{MGS}	1.217	1.25 ± 0.42
Ω_Λ	0.6894	0.6890 ± 0.0061	z_{eq}	3385.9	3387 ± 23	$\chi^2_{DR12BAO}$	4.41	4.9 ± 1.4
Ω_m	0.3106	0.3110 ± 0.0061	k_{eq}	0.010334	0.010338 ± 0.000070	χ^2_{prior}	1.68	11.6 ± 4.6
$\Omega_m h^2$	0.14233	0.14238 ± 0.00096	$100\theta_{eq}$	0.81645	0.8162 ± 0.0043	χ^2_{BAO}	5.66	6.2 ± 1.2
$\Omega_m h^3$	0.096350	0.09634 ± 0.00028	$100\theta_{s,eq}$	0.45098	0.4509 ± 0.0022	χ^2_{CMB}	2764.6	2780.1 ± 5.7

Best-fit $\chi^2_{eff} = 2771.92$; $\bar{\chi}^2_{eff} = 2797.91$; $R - 1 = 0.01929$

χ^2_{eff}: BAO - 6DF: 0.03 MGS: 1.22 DR12BAO: 4.41 CMB - simall_100x143_offlike5_EE_Aplanck_B: 396.20 commander_dx12_v3_2_29: 22.87 plik_rd12_HM_v22b_TTTEEE: 2345.51

2.9 base_plikHM_TTTEEE_lowl_lowE_post_Riess18

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022507	$0.02249^{+0.00015}_{-0.00013}$	$\Omega_m h^3$	0.096417	0.09638 ± 0.00027	$100\theta_{eq}$	0.8195	0.8192 ± 0.0055
$\boldsymbol{\Omega_c h^2}$	0.11853	0.1186 ± 0.0013	σ_8	0.8085	0.8084 ± 0.0077	$100\theta_{s,eq}$	0.45255	0.4524 ± 0.0028
$\boldsymbol{100\theta_{MC}}$	1.041114	1.04109 ± 0.00030	S_8	0.8165	0.817 ± 0.015	$H(0.15)$	73.276	73.23 ± 0.48
$\boldsymbol{\tau}$	0.0570	$0.0573^{+0.0073}_{-0.0090}$	$\sigma_8\Omega_m^{0.5}$	0.4472	0.4477 ± 0.0082	$D_M(0.15)$	637.47	638.0 ± 4.8
$\boldsymbol{\ln(10^{10}A_s)}$	3.0469	$3.047^{+0.015}_{-0.018}$	$\sigma_8\Omega_m^{0.25}$	0.6013	0.6016 ± 0.0079	$H(0.38)$	83.299	83.26 ± 0.35
$\boldsymbol{n_s}$	0.97011	0.9687 ± 0.0042	$\sigma_8/h^{0.5}$	0.9801	0.980 ± 0.011	$D_M(0.38)$	1521.7	1522.6 ± 9.6
$\boldsymbol{y_{cal}}$	1.00063	1.0006 ± 0.0025	$r_{drag}h$	100.25	100.18 ± 0.99	$H(0.51)$	89.966	89.94 ± 0.28
$\boldsymbol{A_{217}^{CIB}}$	45.8	46 ± 7	$\langle d^2\rangle^{1/2}$	2.4226	2.427 ± 0.027	$D_M(0.51)$	1972.0	1973 ± 11
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.68	—	z_{re}	7.90	$7.91^{+0.76}_{-0.85}$	$H(0.61)$	95.547	95.52 ± 0.22
$\boldsymbol{A_{143}^{tSZ}}$	7.08	$5.6^{+2.2}_{-1.8}$	10^9A_s	2.1051	$2.105^{+0.031}_{-0.038}$	$D_M(0.61)$	2295.5	2297 ± 12
$\boldsymbol{A_{100}^{PS}}$	246.6	257 ± 28	$10^9A_se^{-2\tau}$	1.8782	1.877 ± 0.012	$H(2.33)$	235.75	235.78 ± 0.76
$\boldsymbol{A_{143}^{PS}}$	49.4	45 ± 8	D_{40}	1221.2	1224 ± 12	$D_M(2.33)$	5751.8	5753 ± 10
$\boldsymbol{A_{143\times217}^{PS}}$	52.7	42 ± 9	D_{220}	5738.8	5740 ± 37	$f\sigma_8(0.15)$	0.4522	0.4526 ± 0.0077
$\boldsymbol{A_{217}^{PS}}$	121.3	115 ± 10	D_{810}	2541.3	2539 ± 14	$\sigma_8(0.15)$	0.7476	0.7475 ± 0.0068
$\boldsymbol{A^{kSZ}}$	0.01	< 4.12	D_{1420}	819.91	818.4 ± 4.8	$f\sigma_8(0.38)$	0.4718	0.4720 ± 0.0065
$\boldsymbol{A_{100}^{dust}}$	8.83	8.8 ± 1.9	D_{2000}	231.96	231.4 ± 1.6	$\sigma_8(0.38)$	0.6633	$0.6631^{+0.0054}_{-0.0061}$
$\boldsymbol{A_{143}^{dust}}$	11.00	10.9 ± 1.8	$n_{s,0.002}$	0.97011	0.9687 ± 0.0042	$f\sigma_8(0.51)$	0.4710	0.4712 ± 0.0058
$\boldsymbol{A_{143\times217}^{dust}}$	20.02	18.5 ± 3.3	Y_P	0.245447	$0.245438^{+0.000057}_{-0.000046}$	$\sigma_8(0.51)$	0.6210	$0.6208^{+0.0050}_{-0.0057}$
$\boldsymbol{A_{217}^{dust}}$	95.3	93.6 ± 7.2	Y_P^{BBN}	0.246774	$0.246765^{+0.000057}_{-0.000046}$	$f\sigma_8(0.61)$	0.4665	0.4666 ± 0.0053
$\boldsymbol{A_{100}^{dust}}$	0.1131	0.113 ± 0.039	10^5D/H	2.5606	$2.565^{+0.023}_{-0.027}$	$\sigma_8(0.61)$	0.5911	$0.5908^{+0.0047}_{-0.0054}$
$\boldsymbol{A_{100\times143}^{dust}}$	0.1346	0.134 ± 0.029	Age/Gyr	13.7716	13.775 ± 0.022	$f\sigma_8(2.33)$	0.29824	$0.2981^{+0.0023}_{-0.0027}$
$\boldsymbol{A_{100\times217}^{dust}}$	0.479	0.478 ± 0.087	z_*	1089.620	1089.66 ± 0.25	$\sigma_8(2.33)$	0.30772	$0.3076^{+0.0024}_{-0.0029}$
$\boldsymbol{A_{143}^{dust}}$	0.224	0.224 ± 0.055	r_*	144.706	144.70 ± 0.29	f_{2000}^{143}	27.88	28.9 ± 2.8
$\boldsymbol{A_{143\times217}^{dust}}$	0.663	0.664 ± 0.080	$100\theta_*$	1.041286	1.04127 ± 0.00029	$f_{2000}^{143\times217}$	31.41	31.7 ± 1.9
$\boldsymbol{A_{217}^{dust}}$	2.075	2.07 ± 0.26	$D_M(z_*)$/Gpc	13.8968	13.897 ± 0.027	f_{2000}^{217}	105.97	106.6 ± 1.8
$\boldsymbol{c_{100}}$	0.99975	0.99966 ± 0.00062	z_{drag}	1060.162	$1060.10^{+0.30}_{-0.26}$	χ^2_{simall}	396.47	397.6 ± 2.5
$\boldsymbol{c_{217}}$	0.99817	0.99817 ± 0.00061	r_{drag}	147.326	147.33 ± 0.28	χ^2_{lowl}	22.54	22.86 ± 0.85
H_0	68.05	68.00 ± 0.56	k_D	0.140722	$0.14070^{+0.00028}_{-0.00033}$	χ^2_{plik}	2346.8	2361.0 ± 6.5
Ω_Λ	0.6940	0.6933 ± 0.0076	$100\theta_D$	0.160647	$0.16067^{+0.00015}_{-0.00017}$	$\chi^2_{H073p45}$	10.58	10.9 ± 2.2
Ω_m	0.3060	0.3067 ± 0.0076	z_{eq}	3370.4	3372 ± 29	χ^2_{prior}	1.58	11.7 ± 4.8
$\Omega_m h^2$	0.14169	0.1418 ± 0.0012	k_{eq}	0.010287	0.010292 ± 0.000088	χ^2_{CMB}	2765.8	2781.5 ± 6.4

Best-fit $\chi^2_{eff} = 2777.94$; $\bar{\chi}^2_{eff} = 2804.16$; $R - 1 = 0.03140$

χ^2_{eff}: CMB - simall_100x143_offlike5_EE_Aplanck_B: 396.47 commander_dx12_v3_2_29: 22.54 plik_rd12_HM_v22b_TTTEEE: 2346.76 Hubble - H073p45: 10.59

2.10 base_plikHM_TTTEEE_lowl_lowE_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02236 ± 0.00015	$\Omega_m h^3$	0.09633 ± 0.00029	$100\theta_{eq}$	0.8126 ± 0.0058
$\boldsymbol{\Omega_c h^2}$	0.1202 ± 0.0014	σ_8	$0.8127^{+0.0063}_{-0.0073}$	$100\theta_{s,eq}$	0.4490 ± 0.0029
$\boldsymbol{100\theta_{MC}}$	1.04091 ± 0.00031	S_8	0.834 ± 0.016	$H(0.15)$	72.62 ± 0.51
$\boldsymbol{\tau}$	$0.0555^{+0.0051}_{-0.0084}$	$\sigma_8\Omega_m^{0.5}$	0.4571 ± 0.0087	$D_M(0.15)$	644.0 ± 5.2
$\boldsymbol{\ln(10^{10} A_s)}$	$3.047^{+0.012}_{-0.016}$	$\sigma_8\Omega_m^{0.25}$	0.6094 ± 0.0080	$H(0.38)$	82.83 ± 0.37
$\boldsymbol{n_s}$	0.9650 ± 0.0044	$\sigma_8/h^{0.5}$	0.991 ± 0.011	$D_M(0.38)$	1535 ± 10
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	$r_{drag}h$	99.0 ± 1.0	$H(0.51)$	89.60 ± 0.29
$\boldsymbol{A^{CIB}_{217}}$	47 ± 7	$\langle d^2\rangle^{1/2}$	2.450 ± 0.027	$D_M(0.51)$	1987 ± 12
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	z_{re}	$7.79^{+0.56}_{-0.83}$	$H(0.61)$	95.26 ± 0.23
$\boldsymbol{A^{tSZ}_{143}}$	$5.5^{+2.2}_{-1.9}$	$10^9 A_s$	$2.105^{+0.025}_{-0.034}$	$D_M(0.61)$	2312 ± 13
$\boldsymbol{A^{PS}_{100}}$	258 ± 28	$10^9 A_s e^{-2\tau}$	1.884 ± 0.012	$H(2.33)$	236.66 ± 0.81
$\boldsymbol{A^{PS}_{143}}$	46 ± 8	D_{40}	1232 ± 13	$D_M(2.33)$	5764 ± 11
$\boldsymbol{A^{PS}_{143\times217}}$	42 ± 9	D_{220}	5731 ± 38	$f\sigma_8(0.15)$	0.4612 ± 0.0080
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	D_{810}	2539 ± 14	$\sigma_8(0.15)$	$0.7505^{+0.0054}_{-0.0065}$
$\boldsymbol{A^{kSZ}}$	< 4.21	D_{1420}	817.2 ± 4.9	$f\sigma_8(0.38)$	0.4785 ± 0.0065
$\boldsymbol{A^{dustTT}_{100}}$	8.9 ± 1.8	D_{2000}	230.9 ± 1.6	$\sigma_8(0.38)$	$0.6647^{+0.0044}_{-0.0056}$
$\boldsymbol{A^{dustTT}_{143}}$	10.9 ± 1.8	$n_{s,0.002}$	0.9650 ± 0.0044	$f\sigma_8(0.51)$	0.4766 ± 0.0057
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.6 ± 3.3	Y_P	$0.245391^{+0.000061}_{-0.000055}$	$\sigma_8(0.51)$	$0.6219^{+0.0040}_{-0.0052}$
$\boldsymbol{A^{dustTT}_{217}}$	93.8 ± 7.3	Y_P^{BBN}	$0.246717^{+0.000062}_{-0.000055}$	$f\sigma_8(0.61)$	0.4712 ± 0.0051
$\boldsymbol{A^{dustTE}_{100}}$	0.114 ± 0.038	10^5D/H	2.587 ± 0.027	$\sigma_8(0.61)$	$0.5916^{+0.0038}_{-0.0049}$
$\boldsymbol{A^{dustTE}_{100\times143}}$	0.135 ± 0.029	Age/Gyr	13.799 ± 0.024	$f\sigma_8(2.33)$	$0.2981^{+0.0018}_{-0.0025}$
$\boldsymbol{A^{dustTE}_{100\times217}}$	0.480 ± 0.085	z_*	1089.94 ± 0.27	$\sigma_8(2.33)$	$0.3071^{+0.0019}_{-0.0026}$
$\boldsymbol{A^{dustTE}_{143}}$	0.226 ± 0.053	r_*	144.40 ± 0.30	f^{143}_{2000}	29.4 ± 2.7
$\boldsymbol{A^{dustTE}_{143\times217}}$	0.666 ± 0.080	$100\theta_*$	1.04109 ± 0.00030	$f^{143\times217}_{2000}$	32.1 ± 1.9
$\boldsymbol{A^{dustTE}_{217}}$	2.09 ± 0.27	$D_M(z_*)$/Gpc	13.870 ± 0.028	f^{217}_{2000}	106.9 ± 1.8
$\boldsymbol{c_{100}}$	0.99966 ± 0.00062	z_{drag}	1059.93 ± 0.30	χ^2_{small}	397.1 ± 2.0
$\boldsymbol{c_{217}}$	0.99819 ± 0.00062	r_{drag}	147.06 ± 0.30	χ^2_{lowl}	23.56 ± 0.97
H_0	67.29 ± 0.60	k_D	0.14090 ± 0.00032	χ^2_{plik}	2359.3 ± 5.7
Ω_Λ	0.6837 ± 0.0084	$100\theta_D$	0.16076 ± 0.00017	χ^2_{prior}	11.6 ± 4.5
Ω_m	0.3163 ± 0.0084	z_{eq}	3406 ± 31	χ^2_{CMB}	2779.9 ± 5.7
$\Omega_m h^2$	0.1432 ± 0.0013	k_{eq}	0.010395 ± 0.000094		

$\bar{\chi}^2_{eff} = 2791.53$; $R - 1 = 0.01241$

2.11 base_plikHM_TTTEEE_lowl_lowE_post_BAO_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02242 ± 0.00013	σ_8	$0.8105^{+0.0060}_{-0.0072}$	$H(0.15)$	72.95 ± 0.39
$\boldsymbol{\Omega_c h^2}$	0.1193 ± 0.0010	S_8	0.825 ± 0.012	$D_{\rm M}(0.15)$	640.7 ± 3.8
$\boldsymbol{100\theta_{MC}}$	1.04101 ± 0.00029	$\sigma_8\Omega_{\rm m}^{0.5}$	0.4519 ± 0.0067	$H(0.38)$	83.06 ± 0.28
$\boldsymbol{\tau}$	$0.0566^{+0.0053}_{-0.0086}$	$\sigma_8\Omega_{\rm m}^{0.25}$	0.6052 ± 0.0067	$D_{\rm M}(0.38)$	1528.1 ± 7.7
$\boldsymbol{\ln(10^{10}A_s)}$	$3.047^{+0.012}_{-0.017}$	$\sigma_8/h^{0.5}$	$0.9852^{+0.0091}_{-0.010}$	$H(0.51)$	89.78 ± 0.23
$\boldsymbol{n_s}$	0.9670 ± 0.0037	$r_{\rm drag}h$	99.63 ± 0.78	$D_{\rm M}(0.51)$	1979.6 ± 9.0
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0025	$\langle d^2\rangle^{1/2}$	2.437 ± 0.023	$H(0.61)$	95.39 ± 0.19
$\boldsymbol{A^{CIB}_{217}}$	47 ± 7	$z_{\rm re}$	$7.88^{+0.58}_{-0.85}$	$D_{\rm M}(0.61)$	2303.6 ± 9.7
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	10^9A_s	$2.106^{+0.025}_{-0.036}$	$H(2.33)$	236.16 ± 0.62
$\boldsymbol{A^{tSZ}_{143}}$	$5.5^{+2.1}_{-1.8}$	$10^9A_se^{-2\tau}$	1.880 ± 0.011	$D_{\rm M}(2.33)$	5758.7 ± 8.8
$\boldsymbol{A^{PS}_{100}}$	258 ± 28	D_{40}	1227 ± 11	$f\sigma_8(0.15)$	0.4565 ± 0.0063
$\boldsymbol{A^{PS}_{143}}$	45 ± 8	D_{220}	5735 ± 37	$\sigma_8(0.15)$	$0.7490^{+0.0053}_{-0.0066}$
$\boldsymbol{A^{PS}_{143\times217}}$	42 ± 9	D_{810}	2539 ± 13	$f\sigma_8(0.38)$	0.4750 ± 0.0054
$\boldsymbol{A^{PS}_{217}}$	115.0 ± 9.9	D_{1420}	817.8 ± 4.8	$\sigma_8(0.38)$	$0.6640^{+0.0044}_{-0.0058}$
$\boldsymbol{A^{kSZ}}$	< 4.17	D_{2000}	231.1 ± 1.6	$f\sigma_8(0.51)$	0.4737 ± 0.0049
$\boldsymbol{A^{dustTT}_{100}}$	8.9 ± 1.8	$n_{\rm s,0.002}$	0.9670 ± 0.0037	$\sigma_8(0.51)$	$0.6214^{+0.0041}_{-0.0054}$
$\boldsymbol{A^{dustTT}_{143}}$	10.9 ± 1.8	$Y_{\rm P}$	$0.245414^{+0.000055}_{-0.000048}$	$f\sigma_8(0.61)$	$0.4687^{+0.0042}_{-0.0047}$
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.6 ± 3.2	$Y_{\rm P}^{\rm BBN}$	$0.246740^{+0.000055}_{-0.000048}$	$\sigma_8(0.61)$	$0.5913^{+0.0038}_{-0.0052}$
$\boldsymbol{A^{dustTT}_{217}}$	93.7 ± 7.2	10^5D/H	2.577 ± 0.025	$f\sigma_8(2.33)$	$0.2982^{+0.0019}_{-0.0026}$
$\boldsymbol{A^{dustTE}_{100}}$	0.114 ± 0.038	Age/Gyr	13.787 ± 0.020	$\sigma_8(2.33)$	$0.3074^{+0.0020}_{-0.0027}$
$\boldsymbol{A^{dustTE}_{100\times143}}$	0.135 ± 0.030	z_*	1089.80 ± 0.22	f^{143}_{2000}	29.2 ± 2.7
$\boldsymbol{A^{dustTE}_{100\times217}}$	0.478 ± 0.086	r_*	144.57 ± 0.23	$f^{143\times217}_{2000}$	31.9 ± 1.9
$\boldsymbol{A^{dustTE}_{143}}$	0.225 ± 0.054	$100\theta_*$	1.04119 ± 0.00028	f^{217}_{2000}	106.8 ± 1.7
$\boldsymbol{A^{dustTE}_{143\times217}}$	0.665 ± 0.080	$D_{\rm M}(z_*)$/Gpc	13.886 ± 0.023	$\chi^2_{\rm simall}$	397.3 ± 2.2
$\boldsymbol{A^{dustTE}_{217}}$	2.09 ± 0.27	$z_{\rm drag}$	1060.00 ± 0.29	$\chi^2_{\rm lowl}$	23.14 ± 0.81
$\boldsymbol{c_{100}}$	0.99966 ± 0.00063	$r_{\rm drag}$	147.22 ± 0.24	$\chi^2_{\rm plik}$	2359.5 ± 5.7
$\boldsymbol{c_{217}}$	0.99817 ± 0.00061	$k_{\rm D}$	0.14077 ± 0.00029	$\chi^2_{\rm 6DF}$	0.056 ± 0.065
H_0	67.67 ± 0.45	$100\theta_{\rm D}$	0.16072 ± 0.00017	$\chi^2_{\rm MGS}$	1.26 ± 0.42
Ω_Λ	0.6891 ± 0.0061	$z_{\rm eq}$	3387 ± 23	$\chi^2_{\rm DR12BAO}$	4.9 ± 1.4
$\Omega_{\rm m}$	0.3109 ± 0.0061	$k_{\rm eq}$	0.010336 ± 0.000070	$\chi^2_{\rm prior}$	11.6 ± 4.6
$\Omega_{\rm m}h^2$	0.14237 ± 0.00096	$100\theta_{\rm eq}$	0.8163 ± 0.0043	$\chi^2_{\rm BAO}$	6.2 ± 1.1
$\Omega_{\rm m}h^3$	0.09634 ± 0.00028	$100\theta_{\rm s,eq}$	0.4509 ± 0.0022	$\chi^2_{\rm CMB}$	2779.9 ± 5.6

$\bar{\chi}^2_{\rm eff} = 2797.72$; $R - 1 = 0.02064$

2.12 base_plikHM_TTTEEE_lowl_lowE_post_Riess18_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	$0.02249^{+0.00015}_{-0.00013}$	$\Omega_m h^3$	0.09638 ± 0.00027	$100\theta_{eq}$	0.8193 ± 0.0054
$\boldsymbol{\Omega_c h^2}$	0.1186 ± 0.0013	σ_8	0.8089 ± 0.0072	$100\theta_{s,eq}$	0.4524 ± 0.0028
$\boldsymbol{100\theta_{MC}}$	1.04110 ± 0.00030	S_8	0.818 ± 0.015	$H(0.15)$	73.24 ± 0.48
$\boldsymbol{\tau}$	$0.0579^{+0.0060}_{-0.0091}$	$\sigma_8\Omega_m^{0.5}$	0.4479 ± 0.0080	$D_M(0.15)$	637.9 ± 4.7
$\boldsymbol{\ln(10^{10}A_s)}$	$3.048^{+0.013}_{-0.018}$	$\sigma_8\Omega_m^{0.25}$	0.6019 ± 0.0077	$H(0.38)$	83.27 ± 0.35
$\boldsymbol{n_s}$	0.9687 ± 0.0042	$\sigma_8/h^{0.5}$	0.981 ± 0.011	$D_M(0.38)$	1522.5 ± 9.5
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0024	$r_{drag}h$	100.19 ± 0.98	$H(0.51)$	89.94 ± 0.28
$\boldsymbol{A^{CIB}_{217}}$	46 ± 7	$\langle d^2\rangle^{1/2}$	2.428 ± 0.026	$D_M(0.51)$	1973 ± 11
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	z_{re}	$7.98^{+0.63}_{-0.90}$	$H(0.61)$	95.52 ± 0.22
$\boldsymbol{A^{tSZ}_{143}}$	$5.6^{+2.1}_{-1.8}$	10^9A_s	$2.108^{+0.027}_{-0.038}$	$D_M(0.61)$	2297 ± 12
$\boldsymbol{A^{PS}_{100}}$	257 ± 28	$10^9A_se^{-2\tau}$	1.877 ± 0.011	$H(2.33)$	235.78 ± 0.76
$\boldsymbol{A^{PS}_{143}}$	45 ± 8	D_{40}	1224 ± 12	$D_M(2.33)$	5753 ± 10
$\boldsymbol{A^{PS}_{143\times217}}$	42 ± 9	D_{220}	5741 ± 37	$f\sigma_8(0.15)$	0.4528 ± 0.0075
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	D_{810}	2539 ± 13	$\sigma_8(0.15)$	$0.7480^{+0.0059}_{-0.0069}$
$\boldsymbol{A^{kSZ}}$	< 4.10	D_{1420}	818.4 ± 4.7	$f\sigma_8(0.38)$	0.4722 ± 0.0063
$\boldsymbol{A^{dustTT}_{100}}$	8.8 ± 1.8	D_{2000}	231.4 ± 1.6	$\sigma_8(0.38)$	$0.6635^{+0.0048}_{-0.0061}$
$\boldsymbol{A^{dustTT}_{143}}$	10.9 ± 1.8	$n_{s,0.002}$	0.9687 ± 0.0042	$f\sigma_8(0.51)$	0.4714 ± 0.0056
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.5 ± 3.3	Y_P	$0.245438^{+0.000057}_{-0.000046}$	$\sigma_8(0.51)$	$0.6212^{+0.0044}_{-0.0057}$
$\boldsymbol{A^{dustTT}_{217}}$	93.6 ± 7.2	Y_P^{BBN}	$0.246765^{+0.000057}_{-0.000046}$	$f\sigma_8(0.61)$	0.4669 ± 0.0051
$\boldsymbol{A^{dustTE}_{100}}$	0.113 ± 0.039	10^5D/H	$2.565^{+0.023}_{-0.027}$	$\sigma_8(0.61)$	$0.5912^{+0.0041}_{-0.0054}$
$\boldsymbol{A^{dustTE}_{100\times143}}$	0.134 ± 0.029	Age/Gyr	13.774 ± 0.022	$f\sigma_8(2.33)$	$0.2983^{+0.0020}_{-0.0028}$
$\boldsymbol{A^{dustTE}_{100\times217}}$	0.478 ± 0.087	z_*	$1089.65^{+0.24}_{-0.27}$	$\sigma_8(2.33)$	$0.3078^{+0.0020}_{-0.0029}$
$\boldsymbol{A^{dustTE}_{143}}$	0.223 ± 0.055	r_*	144.70 ± 0.28	f^{143}_{2000}	28.9 ± 2.8
$\boldsymbol{A^{dustTE}_{143\times217}}$	0.663 ± 0.080	$100\theta_*$	1.04127 ± 0.00029	$f^{143\times217}_{2000}$	31.7 ± 1.9
$\boldsymbol{A^{dustTE}_{217}}$	2.07 ± 0.26	$D_M(z_*)$/Gpc	13.897 ± 0.027	f^{217}_{2000}	106.5 ± 1.8
$\boldsymbol{c_{100}}$	0.99966 ± 0.00062	z_{drag}	$1060.11^{+0.29}_{-0.26}$	χ^2_{simall}	397.6 ± 2.6
$\boldsymbol{c_{217}}$	0.99817 ± 0.00061	r_{drag}	147.33 ± 0.28	χ^2_{lowl}	22.87 ± 0.85
H_0	68.00 ± 0.56	k_D	$0.14070^{+0.00028}_{-0.00033}$	χ^2_{plik}	2360.9 ± 6.4
Ω_Λ	0.6934 ± 0.0075	$100\theta_D$	$0.16067^{+0.00015}_{-0.00017}$	$\chi^2_{H073p45}$	10.9 ± 2.2
Ω_m	0.3066 ± 0.0075	z_{eq}	3372 ± 29	χ^2_{prior}	11.6 ± 4.6
$\Omega_m h^2$	0.1417 ± 0.0012	k_{eq}	0.010291 ± 0.000087	χ^2_{CMB}	2781.4 ± 6.3

$\bar{\chi}^2_{eff} = 2803.89$; $R - 1 = 0.03660$

2.13 base_CamSpecHM_TT_lowl_lowE

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022132	0.02214 ± 0.00022	$\sigma_8\Omega_m^{0.5}$	0.4585	0.458 ± 0.013	$100\theta_{s,eq}$	0.44861	0.4487 ± 0.0046
$\boldsymbol{\Omega_c h^2}$	0.12049	0.1205 ± 0.0021	$\sigma_8\Omega_m^{0.25}$	0.6098	0.610 ± 0.012	$H(0.15)$	72.32	72.34 ± 0.79
$\boldsymbol{100\theta_{MC}}$	1.040846	1.04084 ± 0.00048	$\sigma_8/h^{0.5}$	0.9911	0.991 ± 0.016	$D_M(0.15)$	646.9	646.8 ± 8.0
$\boldsymbol{\tau}$	0.0519	0.0521 ± 0.0080	$r_{drag}h$	98.58	98.6 ± 1.6	$H(0.38)$	82.57	82.59 ± 0.57
$\boldsymbol{\ln(10^{10}A_s)}$	3.0384	3.039 ± 0.016	$\langle d^2\rangle^{1/2}$	2.4473	2.448 ± 0.038	$D_M(0.38)$	1540.8	1541 ± 16
$\boldsymbol{n_s}$	0.9639	0.9638 ± 0.0058	z_{re}	7.50	$7.49^{+0.83}_{-0.75}$	$H(0.51)$	89.362	89.38 ± 0.44
$\boldsymbol{y_{cal}}$	1.00037	1.0005 ± 0.0025	$10^9 A_s$	2.0872	2.089 ± 0.034	$D_M(0.51)$	1994.7	1994 ± 19
$\boldsymbol{A_{100}^{PS}}$	238.8	242 ± 25	$10^9 A_s e^{-2\tau}$	1.8813	1.882 ± 0.014	$H(0.61)$	95.040	95.05 ± 0.35
$\boldsymbol{A_{143}^{PS}}$	41.3	41 ± 8	D_{40}	1228.7	1230 ± 15	$D_M(0.61)$	2320.0	2320 ± 20
$\boldsymbol{A_{217}^{PS}}$	100.6	101 ± 10	D_{220}	5701.7	5704 ± 43	$H(2.33)$	236.64	236.6 ± 1.3
$\boldsymbol{A_{217}^{CIB}}$	45.0	41^{+7}_{-8}	D_{810}	2534.0	2534 ± 14	$D_M(2.33)$	5775.9	5775 ± 16
$\boldsymbol{A_{143}^{tSZ}}$	5.89	$3.7^{+1.8}_{-2.6}$	D_{1420}	814.3	814.3 ± 5.2	$f\sigma_8(0.15)$	0.4624	0.462 ± 0.012
$\boldsymbol{r_{143\times217}^{PS}}$	0.582	0.65 ± 0.13	D_{2000}	229.56	229.6 ± 1.8	$\sigma_8(0.15)$	0.7486	0.7486 ± 0.0075
$\boldsymbol{r_{143\times217}^{CIB}}$	0.791	> 0.456	$n_{s,0.002}$	0.9639	0.9638 ± 0.0058	$f\sigma_8(0.38)$	0.4789	0.4788 ± 0.0096
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.12	—	Y_P	0.245298	$0.24529^{+0.00010}_{-0.000082}$	$\sigma_8(0.38)$	0.6627	0.6627 ± 0.0060
$\boldsymbol{A^{kSZ}}$	1.2	—	Y_P^{BBN}	0.246624	$0.24662^{+0.00010}_{-0.000082}$	$f\sigma_8(0.51)$	0.4766	0.4765 ± 0.0082
$\boldsymbol{A_{100}^{dust}}$	1.011	1.01 ± 0.19	10^5D/H	2.6309	2.630 ± 0.042	$\sigma_8(0.51)$	0.6199	0.6198 ± 0.0054
$\boldsymbol{A_{143}^{dust}}$	0.991	0.98 ± 0.18	Age/Gyr	13.8257	13.825 ± 0.037	$f\sigma_8(0.61)$	0.4710	0.4708 ± 0.0073
$\boldsymbol{A_{217}^{dust}}$	0.966	0.97 ± 0.10	z_*	1090.266	1090.26 ± 0.41	$\sigma_8(0.61)$	0.5896	0.5896 ± 0.0051
$\boldsymbol{A_{143\times217}^{dust}}$	0.995	1.03 ± 0.16	r_*	144.485	144.49 ± 0.48	$f\sigma_8(2.33)$	0.29696	0.2970 ± 0.0025
$\boldsymbol{c_{100}}$	0.99755	0.9975 ± 0.0011	$100\theta_*$	1.041053	1.04105 ± 0.00047	$\sigma_8(2.33)$	0.30581	0.3058 ± 0.0027
$\boldsymbol{c_{217}}$	1.00139	1.0012 ± 0.0016	$D_M(z_*)$/Gpc	13.8788	13.879 ± 0.044	f_{2000}^{143}	31.12	30.8 ± 3.0
H_0	66.96	66.98 ± 0.92	z_{drag}	1059.437	1059.43 ± 0.45	f_{2000}^{217}	107.60	107.6 ± 2.0
Ω_Λ	0.6805	0.680 ± 0.013	r_{drag}	147.225	147.23 ± 0.48	$f_{2000}^{143\times217}$	32.96	33.0 ± 2.1
Ω_m	0.3195	0.320 ± 0.013	k_D	0.14054	0.14054 ± 0.00052	χ^2_{simall}	395.83	396.9 ± 1.6
$\Omega_m h^2$	0.14327	0.1432 ± 0.0020	$100\theta_D$	0.161064	0.16106 ± 0.00026	χ^2_{lowl}	23.40	23.5 ± 1.3
$\Omega_m h^3$	0.095935	0.09593 ± 0.00045	z_{eq}	3408.3	3408 ± 48	$\chi^2_{CamSpec}$	7050.3	7063.4 ± 5.4
σ_8	0.8110	0.8110 ± 0.0089	k_{eq}	0.010403	0.01040 ± 0.00015	χ^2_{prior}	2.17	7.7 ± 3.6
S_8	0.8370	0.837 ± 0.024	$100\theta_{eq}$	0.8115	0.8117 ± 0.0089	χ^2_{CMB}	7469.6	7483.8 ± 5.5

Best-fit $\chi^2_{eff} = 7471.74$; $\bar{\chi}^2_{eff} = 7491.54$; $R - 1 = 0.00710$

χ^2_{eff}: CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.83 commander_dx12_v3_2_29: 23.40 CamSpec like_10.7HM: 7050.34

2.14 base_CamSpecHM_TT_lowl_lowE_post_BAO

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02223 ± 0.00019	$\sigma_8/h^{0.5}$	0.981 ± 0.012	$D_M(0.38)$	1528.8 ± 9.3
$\boldsymbol{\Omega_c h^2}$	0.1189 ± 0.0012	$r_{drag}h$	99.84 ± 0.94	$H(0.51)$	89.69 ± 0.29
$\boldsymbol{100\theta_{MC}}$	1.04105 ± 0.00042	$\langle d^2\rangle^{1/2}$	2.424 ± 0.028	$D_M(0.51)$	1981 ± 11
$\boldsymbol{\tau}$	0.0537 ± 0.0079	z_{re}	7.61 ± 0.81	$H(0.61)$	95.29 ± 0.24
$\boldsymbol{\ln(10^{10}A_s)}$	3.039 ± 0.017	$10^9 A_s$	2.088 ± 0.035	$D_M(0.61)$	2305 ± 12
$\boldsymbol{n_s}$	0.9674 ± 0.0042	$10^9 A_s e^{-2\tau}$	1.875 ± 0.012	$H(2.33)$	235.71 ± 0.78
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0025	D_{40}	1222 ± 13	$D_M(2.33)$	5765 ± 12
$\boldsymbol{A^{PS}_{100}}$	241 ± 25	D_{220}	5711 ± 42	$f\sigma_8(0.15)$	0.4537 ± 0.0077
$\boldsymbol{A^{PS}_{143}}$	40 ± 8	D_{810}	2534 ± 14	$\sigma_8(0.15)$	0.7456 ± 0.0069
$\boldsymbol{A^{PS}_{217}}$	101 ± 10	D_{1420}	815.3 ± 5.1	$f\sigma_8(0.38)$	0.4723 ± 0.0065
$\boldsymbol{A^{CIB}_{217}}$	41^{+7}_{-8}	D_{2000}	229.9 ± 1.8	$\sigma_8(0.38)$	0.6611 ± 0.0059
$\boldsymbol{A^{tSZ}_{143}}$	$3.9^{+1.9}_{-2.5}$	$n_{s,0.002}$	0.9674 ± 0.0042	$f\sigma_8(0.51)$	0.4711 ± 0.0059
$\boldsymbol{r^{PS}_{143\times217}}$	0.65 ± 0.13	Y_P	$0.245334^{+0.000085}_{-0.000072}$	$\sigma_8(0.51)$	0.6188 ± 0.0055
$\boldsymbol{r^{CIB}_{143\times217}}$	> 0.458	Y_P^{BBN}	$0.246660^{+0.000085}_{-0.000073}$	$f\sigma_8(0.61)$	0.4663 ± 0.0054
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	10^5D/H	2.613 ± 0.037	$\sigma_8(0.61)$	0.5888 ± 0.0052
$\boldsymbol{A^{kSZ}}$	—	Age/Gyr	13.803 ± 0.027	$f\sigma_8(2.33)$	0.2970 ± 0.0026
$\boldsymbol{A^{dust}_{100}}$	1.01 ± 0.19	z_*	1090.01 ± 0.29	$\sigma_8(2.33)$	0.3062 ± 0.0027
$\boldsymbol{A^{dust}_{143}}$	0.97 ± 0.17	r_*	144.82 ± 0.32	f^{143}_{2000}	30.4 ± 3.0
$\boldsymbol{A^{dust}_{217}}$	0.97 ± 0.10	$100\theta_*$	1.04125 ± 0.00041	f^{217}_{2000}	107.4 ± 2.0
$\boldsymbol{A^{dust}_{143\times217}}$	1.03 ± 0.17	$D_M(z_*)$/Gpc	13.909 ± 0.031	$f^{143\times217}_{2000}$	32.7 ± 2.1
$\boldsymbol{c_{100}}$	0.9975 ± 0.0010	z_{drag}	1059.52 ± 0.44	χ^2_{simall}	397.0 ± 1.7
$\boldsymbol{c_{217}}$	1.0012 ± 0.0016	r_{drag}	147.54 ± 0.34	χ^2_{lowl}	22.81 ± 0.89
H_0	67.67 ± 0.54	k_D	0.14028 ± 0.00044	$\chi^2_{CamSpec}$	7063.9 ± 5.3
Ω_Λ	0.6902 ± 0.0073	$100\theta_D$	0.16102 ± 0.00026	χ^2_{6DF}	0.054 ± 0.072
Ω_m	0.3098 ± 0.0073	z_{eq}	3373 ± 28	χ^2_{MGS}	1.39 ± 0.53
$\Omega_m h^2$	0.1418 ± 0.0012	k_{eq}	0.010294 ± 0.000087	$\chi^2_{DR12BAO}$	4.7 ± 1.6
$\Omega_m h^3$	0.09593 ± 0.00045	$100\theta_{eq}$	0.8183 ± 0.0053	χ^2_{prior}	7.7 ± 3.5
σ_8	0.8067 ± 0.0078	$100\theta_{s,eq}$	0.4521 ± 0.0027	χ^2_{BAO}	6.1 ± 1.3
S_8	0.820 ± 0.015	$H(0.15)$	72.92 ± 0.47	χ^2_{CMB}	7483.8 ± 5.4
$\sigma_8\Omega_m^{0.5}$	0.4490 ± 0.0082	$D_M(0.15)$	640.9 ± 4.6		
$\sigma_8\Omega_m^{0.25}$	0.6018 ± 0.0080	$H(0.38)$	83.00 ± 0.35		

$\bar{\chi}^2_{eff} = 7497.55$; $R - 1 = 0.01113$

2.15 base_CamSpecHM_TT_lowl_lowE_post_Riess18

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02239 ± 0.00022	$\sigma_8\Omega_m^{0.25}$	0.592 ± 0.011	$D_M(0.15)$	633.5 ± 7.0
$\boldsymbol{\Omega_c h^2}$	0.1171 ± 0.0018	$\sigma_8/h^{0.5}$	0.968 ± 0.015	$H(0.38)$	$83.55^{+0.50}_{-0.55}$
$\boldsymbol{100\theta_{MC}}$	1.04132 ± 0.00046	$r_{drag}h$	101.3 ± 1.5	$D_M(0.38)$	1514 ± 14
$\boldsymbol{\tau}$	0.0558 ± 0.0082	$\langle d^2\rangle^{1/2}$	2.396 ± 0.034	$H(0.51)$	$90.13^{+0.40}_{-0.45}$
$\boldsymbol{\ln(10^{10}A_s)}$	3.039 ± 0.016	z_{re}	7.76 ± 0.81	$D_M(0.51)$	1963 ± 17
$\boldsymbol{n_s}$	0.9718 ± 0.0053	$10^9 A_s$	2.089 ± 0.034	$H(0.61)$	$95.64^{+0.32}_{-0.37}$
$\boldsymbol{y_{cal}}$	1.0008 ± 0.0026	$10^9 A_s e^{-2\tau}$	1.868 ± 0.013	$D_M(0.61)$	2286 ± 18
$\boldsymbol{A_{100}^{PS}}$	240 ± 25	D_{40}	1214 ± 14	$H(2.33)$	234.7 ± 1.1
$\boldsymbol{A_{143}^{PS}}$	39 ± 8	D_{220}	5724 ± 43	$D_M(2.33)$	5750^{+17}_{-15}
$\boldsymbol{A_{217}^{PS}}$	101^{+10}_{-10}	D_{810}	2534 ± 14	$f\sigma_8(0.15)$	0.443 ± 0.011
$\boldsymbol{A_{217}^{CIB}}$	40 ± 7	D_{1420}	$816.9^{+5.3}_{-4.8}$	$\sigma_8(0.15)$	0.7419 ± 0.0074
$\boldsymbol{A_{143}^{tSZ}}$	$3.8^{+1.9}_{-2.4}$	D_{2000}	230.6 ± 1.8	$f\sigma_8(0.38)$	0.4644 ± 0.0088
$\boldsymbol{r_{143\times217}^{PS}}$	0.66 ± 0.13	$n_{s,0.002}$	0.9718 ± 0.0053	$\sigma_8(0.38)$	0.6591 ± 0.0060
$\boldsymbol{r_{143\times217}^{CIB}}$	> 0.417	Y_P	0.245400 ± 0.000086	$f\sigma_8(0.51)$	0.4646 ± 0.0077
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	0.246726 ± 0.000086	$\sigma_8(0.51)$	0.6174 ± 0.0054
$\boldsymbol{A^{kSZ}}$	4.9 ± 2.7	10^5D/H	2.583 ± 0.040	$f\sigma_8(0.61)$	0.4607 ± 0.0069
$\boldsymbol{A_{100}^{dust}}$	1.02 ± 0.20	Age/Gyr	13.771 ± 0.035	$\sigma_8(0.61)$	0.5878 ± 0.0051
$\boldsymbol{A_{143}^{dust}}$	0.97 ± 0.17	z_*	1089.65 ± 0.38	$f\sigma_8(2.33)$	0.2969 ± 0.0025
$\boldsymbol{A_{217}^{dust}}$	0.97 ± 0.10	r_*	145.17 ± 0.43	$\sigma_8(2.33)$	0.3067 ± 0.0026
$\boldsymbol{A_{143\times217}^{dust}}$	1.03 ± 0.16	$100\theta_*$	1.04151 ± 0.00045	f_{2000}^{143}	$29.9^{+2.8}_{-3.1}$
$\boldsymbol{c_{100}}$	0.9975 ± 0.0010	$D_M(z_*)$/Gpc	13.938 ± 0.040	f_{2000}^{217}	106.9 ± 2.0
$\boldsymbol{c_{217}}$	1.0012 ± 0.0015	z_{drag}	1059.77 ± 0.45	$f_{2000}^{143\times217}$	32.2 ± 2.1
H_0	68.54 ± 0.84	r_{drag}	147.84 ± 0.43	χ^2_{simall}	397.2 ± 1.9
Ω_Λ	0.701 ± 0.011	k_D	0.14009 ± 0.00049	χ^2_{lowl}	22.13 ± 0.92
Ω_m	0.299 ± 0.011	$100\theta_D$	0.16089 ± 0.00026	$\chi^2_{CamSpec}$	7067.0 ± 6.0
$\Omega_m h^2$	0.1401 ± 0.0017	z_{eq}	3334 ± 42	$\chi^2_{H073p45}$	9.0 ± 3.0
$\Omega_m h^3$	0.09604 ± 0.00045	k_{eq}	0.01017 ± 0.00013	χ^2_{prior}	7.6 ± 3.4
σ_8	0.8015 ± 0.0086	$100\theta_{eq}$	0.8262 ± 0.0081	χ^2_{CMB}	7486.3 ± 5.9
S_8	0.800 ± 0.021	$100\theta_{s,eq}$	0.4561 ± 0.0042		
$\sigma_8\Omega_m^{0.5}$	0.438 ± 0.011	$H(0.15)$	73.68 ± 0.73		

$\bar{\chi}^2_{eff} = 7502.88$; $R - 1 = 0.07941$

2.16 base_CamSpecHM_TT_lowl_lowE_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02214 ± 0.00022	$\sigma_8\Omega_m^{0.5}$	0.459 ± 0.013	$100\theta_{s,eq}$	0.4489 ± 0.0046
$\boldsymbol{\Omega_c h^2}$	0.1204 ± 0.0021	$\sigma_8\Omega_m^{0.25}$	0.610 ± 0.012	$H(0.15)$	72.38 ± 0.78
$\boldsymbol{100\theta_{MC}}$	1.04086 ± 0.00047	$\sigma_8/h^{0.5}$	0.992 ± 0.016	$D_M(0.15)$	646.4 ± 7.9
$\boldsymbol{\tau}$	$0.0538^{+0.0048}_{-0.0082}$	$r_{drag}h$	98.7 ± 1.6	$H(0.38)$	82.61 ± 0.56
$\boldsymbol{\ln(10^{10}A_s)}$	$3.042^{+0.012}_{-0.016}$	$\langle d^2\rangle^{1/2}$	2.450 ± 0.037	$D_M(0.38)$	1540 ± 16
$\boldsymbol{n_s}$	0.9641 ± 0.0058	z_{re}	$7.67^{+0.54}_{-0.81}$	$H(0.51)$	89.40 ± 0.44
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	$10^9 A_s$	$2.095^{+0.025}_{-0.033}$	$D_M(0.51)$	1994 ± 18
$\boldsymbol{A^{PS}_{100}}$	242 ± 25	$10^9 A_s e^{-2\tau}$	1.881 ± 0.014	$H(0.61)$	95.07 ± 0.35
$\boldsymbol{A^{PS}_{143}}$	41 ± 8	D_{40}	1229 ± 15	$D_M(0.61)$	2319 ± 20
$\boldsymbol{A^{PS}_{217}}$	101 ± 10	D_{220}	5704 ± 42	$H(2.33)$	236.6 ± 1.3
$\boldsymbol{A^{CIB}_{217}}$	41 ± 7	D_{810}	2534 ± 14	$D_M(2.33)$	5775 ± 16
$\boldsymbol{A^{tSZ}_{143}}$	$3.8^{+1.8}_{-2.6}$	D_{1420}	814.4 ± 5.2	$f\sigma_8(0.15)$	0.463 ± 0.012
$\boldsymbol{r^{PS}_{143\times217}}$	0.65 ± 0.13	D_{2000}	229.6 ± 1.8	$\sigma_8(0.15)$	0.7496 ± 0.0069
$\boldsymbol{r^{CIB}_{143\times217}}$	> 0.455	$n_{s,0.002}$	0.9641 ± 0.0058	$f\sigma_8(0.38)$	0.4792 ± 0.0095
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P	$0.24530^{+0.00010}_{-0.000082}$	$\sigma_8(0.38)$	$0.6637^{+0.0051}_{-0.0057}$
$\boldsymbol{A^{kSZ}}$	—	Y_P^{BBN}	$0.24662^{+0.00010}_{-0.000082}$	$f\sigma_8(0.51)$	0.4769 ± 0.0081
$\boldsymbol{A^{dust}_{100}}$	1.01 ± 0.20	10^5D/H	2.629 ± 0.041	$\sigma_8(0.51)$	$0.6208^{+0.0044}_{-0.0052}$
$\boldsymbol{A^{dust}_{143}}$	0.98 ± 0.18	Age/Gyr	13.824 ± 0.036	$f\sigma_8(0.61)$	0.4713 ± 0.0071
$\boldsymbol{A^{dust}_{217}}$	0.97 ± 0.10	z_*	1090.24 ± 0.41	$\sigma_8(0.61)$	$0.5905^{+0.0040}_{-0.0049}$
$\boldsymbol{A^{dust}_{143\times217}}$	1.03 ± 0.16	r_*	144.51 ± 0.48	$f\sigma_8(2.33)$	$0.2974^{+0.0019}_{-0.0024}$
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	$100\theta_*$	1.04106 ± 0.00046	$\sigma_8(2.33)$	$0.3063^{+0.0020}_{-0.0026}$
$\boldsymbol{c_{217}}$	1.0012 ± 0.0016	$D_M(z_*)$/Gpc	13.881 ± 0.044	f^{143}_{2000}	30.7 ± 3.0
H_0	67.02 ± 0.92	z_{drag}	1059.44 ± 0.45	f^{217}_{2000}	107.5 ± 2.0
Ω_Λ	0.681 ± 0.013	r_{drag}	147.25 ± 0.48	$f^{143\times217}_{2000}$	32.9 ± 2.1
Ω_m	0.319 ± 0.013	k_D	0.14053 ± 0.00051	χ^2_{simall}	396.8 ± 1.6
$\Omega_m h^2$	0.1432 ± 0.0020	$100\theta_D$	0.16106 ± 0.00026	χ^2_{lowl}	23.5 ± 1.3
$\Omega_m h^3$	0.09594 ± 0.00045	z_{eq}	3406 ± 48	$\chi^2_{CamSpec}$	7063.2 ± 5.4
σ_8	0.8120 ± 0.0084	k_{eq}	0.01040 ± 0.00014	χ^2_{prior}	7.7 ± 3.5
S_8	0.837 ± 0.024	$100\theta_{eq}$	0.8121 ± 0.0089	χ^2_{CMB}	7483.6 ± 5.4

$\bar{\chi}^2_{eff} = 7491.26$; $R - 1 = 0.00680$

2.17 base_CamSpecHM_TT_lowl_lowE_post_BAO_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02223 ± 0.00019	$\sigma_8/h^{0.5}$	0.982 ± 0.011	$D_M(0.38)$	1528.7 ± 9.3
$\boldsymbol{\Omega_c h^2}$	0.1189 ± 0.0012	$r_{drag}h$	99.85 ± 0.94	$H(0.51)$	89.70 ± 0.29
$\boldsymbol{100\theta_{MC}}$	1.04105 ± 0.00042	$\langle d^2\rangle^{1/2}$	2.427 ± 0.026	$D_M(0.51)$	1981 ± 11
$\boldsymbol{\tau}$	$0.0550^{+0.0055}_{-0.0080}$	z_{re}	$7.75^{+0.60}_{-0.81}$	$H(0.61)$	95.30 ± 0.24
$\boldsymbol{\ln(10^{10}A_s)}$	$3.041^{+0.013}_{-0.016}$	$10^9 A_s$	$2.093^{+0.026}_{-0.034}$	$D_M(0.61)$	2305 ± 12
$\boldsymbol{n_s}$	0.9675 ± 0.0042	$10^9 A_s e^{-2\tau}$	1.875 ± 0.012	$H(2.33)$	235.71 ± 0.78
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0025	D_{40}	1222^{+12}_{-14}	$D_M(2.33)$	5765 ± 12
$\boldsymbol{A^{PS}_{100}}$	241 ± 25	D_{220}	5711 ± 41	$f\sigma_8(0.15)$	0.4542 ± 0.0075
$\boldsymbol{A^{PS}_{143}}$	40 ± 8	D_{810}	2534 ± 14	$\sigma_8(0.15)$	$0.7466^{+0.0057}_{-0.0066}$
$\boldsymbol{A^{PS}_{217}}$	101 ± 10	D_{1420}	815.3 ± 5.0	$f\sigma_8(0.38)$	0.4729 ± 0.0063
$\boldsymbol{A^{CIB}_{217}}$	41^{+7}_{-8}	D_{2000}	230.0 ± 1.7	$\sigma_8(0.38)$	$0.6620^{+0.0047}_{-0.0056}$
$\boldsymbol{A^{tSZ}_{143}}$	$3.9^{+2.0}_{-2.5}$	$n_{s,0.002}$	0.9675 ± 0.0042	$f\sigma_8(0.51)$	0.4717 ± 0.0056
$\boldsymbol{r^{PS}_{143\times217}}$	0.65 ± 0.13	Y_P	$0.245335^{+0.000084}_{-0.000073}$	$\sigma_8(0.51)$	$0.6196^{+0.0043}_{-0.0052}$
$\boldsymbol{r^{CIB}_{143\times217}}$	> 0.457	Y_P^{BBN}	$0.246662^{+0.000084}_{-0.000073}$	$f\sigma_8(0.61)$	0.4669 ± 0.0051
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	10^5D/H	2.613 ± 0.036	$\sigma_8(0.61)$	$0.5896^{+0.0041}_{-0.0049}$
$\boldsymbol{A^{kSZ}}$	—	Age/Gyr	13.803 ± 0.027	$f\sigma_8(2.33)$	$0.2974^{+0.0020}_{-0.0025}$
$\boldsymbol{A^{dust}_{100}}$	1.01 ± 0.19	z_*	1090.00 ± 0.29	$\sigma_8(2.33)$	$0.3067^{+0.0020}_{-0.0026}$
$\boldsymbol{A^{dust}_{143}}$	0.97 ± 0.18	r_*	144.83 ± 0.31	f^{143}_{2000}	30.4 ± 3.0
$\boldsymbol{A^{dust}_{217}}$	0.97 ± 0.10	$100\theta_*$	1.04125 ± 0.00041	f^{217}_{2000}	107.3 ± 2.0
$\boldsymbol{A^{dust}_{143\times217}}$	1.03 ± 0.17	$D_M(z_*)$/Gpc	13.909 ± 0.031	$f^{143\times217}_{2000}$	32.7 ± 2.1
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	z_{drag}	1059.53 ± 0.44	χ^2_{simall}	396.9 ± 1.7
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	r_{drag}	147.54 ± 0.34	χ^2_{lowl}	22.83 ± 0.89
H_0	67.67 ± 0.54	k_D	0.14028 ± 0.00044	$\chi^2_{CamSpec}$	7063.8 ± 5.3
Ω_Λ	0.6904 ± 0.0073	$100\theta_D$	0.16101 ± 0.00025	χ^2_{6DF}	0.054 ± 0.071
Ω_m	0.3096 ± 0.0073	z_{eq}	3372 ± 28	χ^2_{MGS}	1.40 ± 0.53
$\Omega_m h^2$	0.1418 ± 0.0012	k_{eq}	0.010293 ± 0.000087	$\chi^2_{DR12BAO}$	4.6 ± 1.5
$\Omega_m h^3$	0.09594 ± 0.00045	$100\theta_{eq}$	0.8184 ± 0.0053	χ^2_{prior}	7.7 ± 3.5
σ_8	$0.8078^{+0.0066}_{-0.0075}$	$100\theta_{s,eq}$	0.4522 ± 0.0027	χ^2_{BAO}	6.1 ± 1.2
S_8	0.821 ± 0.015	$H(0.15)$	72.93 ± 0.47	χ^2_{CMB}	7483.5 ± 5.3
$\sigma_8\Omega_m^{0.5}$	0.4495 ± 0.0080	$D_M(0.15)$	640.8 ± 4.6		
$\sigma_8\Omega_m^{0.25}$	0.6025 ± 0.0077	$H(0.38)$	83.00 ± 0.35		

$\bar{\chi}^2_{eff} = 7497.31$; $R - 1 = 0.01176$

2.18 base_CamSpecHM_TT_lowl_lowE_post_Riess18_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02240 ± 0.00022	$\sigma_8\Omega_m^{0.25}$	0.593 ± 0.011	$D_M(0.15)$	633.4 ± 7.0
$\boldsymbol{\Omega_c h^2}$	0.1171 ± 0.0018	$\sigma_8/h^{0.5}$	0.969 ± 0.015	$H(0.38)$	$83.57^{+0.50}_{-0.56}$
$\boldsymbol{100\theta_{MC}}$	1.04133 ± 0.00046	$r_{drag}h$	101.4 ± 1.5	$D_M(0.38)$	1514 ± 14
$\boldsymbol{\tau}$	$0.0568^{+0.0063}_{-0.0081}$	$\langle d^2\rangle^{1/2}$	2.398 ± 0.034	$H(0.51)$	$90.14^{+0.40}_{-0.45}$
$\boldsymbol{\ln(10^{10}A_s)}$	$3.041^{+0.013}_{-0.016}$	z_{re}	$7.86^{+0.64}_{-0.83}$	$D_M(0.51)$	1963 ± 17
$\boldsymbol{n_s}$	0.9719 ± 0.0052	$10^9 A_s$	$2.093^{+0.028}_{-0.033}$	$H(0.61)$	$95.65^{+0.33}_{-0.37}$
$\boldsymbol{y_{cal}}$	1.0008 ± 0.0026	$10^9 A_s e^{-2\tau}$	1.868 ± 0.012	$D_M(0.61)$	2286 ± 18
$\boldsymbol{A_{100}^{PS}}$	240 ± 25	D_{40}	1214 ± 14	$H(2.33)$	234.7 ± 1.1
$\boldsymbol{A_{143}^{PS}}$	39 ± 8	D_{220}	5725 ± 43	$D_M(2.33)$	5750^{+17}_{-15}
$\boldsymbol{A_{217}^{PS}}$	101^{+10}_{-10}	D_{810}	2534^{+14}_{-13}	$f\sigma_8(0.15)$	0.444 ± 0.011
$\boldsymbol{A_{217}^{CIB}}$	40^{+7}_{-8}	D_{1420}	$816.9^{+5.3}_{-4.8}$	$\sigma_8(0.15)$	$0.7425^{+0.0064}_{-0.0076}$
$\boldsymbol{A_{143}^{tSZ}}$	$3.8^{+1.9}_{-2.4}$	D_{2000}	230.7 ± 1.7	$f\sigma_8(0.38)$	0.4647 ± 0.0088
$\boldsymbol{r_{143\times217}^{PS}}$	0.66 ± 0.13	$n_{s,0.002}$	0.9719 ± 0.0052	$\sigma_8(0.38)$	$0.6597^{+0.0049}_{-0.0061}$
$\boldsymbol{r_{143\times217}^{CIB}}$	> 0.417	Y_P	0.245402 ± 0.000086	$f\sigma_8(0.51)$	0.4648 ± 0.0076
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	0.246728 ± 0.000086	$\sigma_8(0.51)$	$0.6180^{+0.0044}_{-0.0055}$
$\boldsymbol{A^{kSZ}}$	4.9 ± 2.7	10^5D/H	2.582 ± 0.040	$f\sigma_8(0.61)$	0.4610 ± 0.0068
$\boldsymbol{A_{100}^{dust}}$	1.02 ± 0.20	Age/Gyr	13.770 ± 0.035	$\sigma_8(0.61)$	$0.5884^{+0.0040}_{-0.0051}$
$\boldsymbol{A_{143}^{dust}}$	0.97 ± 0.17	z_*	1089.63 ± 0.38	$f\sigma_8(2.33)$	$0.2972^{+0.0019}_{-0.0025}$
$\boldsymbol{A_{217}^{dust}}$	0.97 ± 0.10	r_*	145.18 ± 0.43	$\sigma_8(2.33)$	$0.3070^{+0.0021}_{-0.0025}$
$\boldsymbol{A_{143\times217}^{dust}}$	1.03 ± 0.16	$100\theta_*$	1.04151 ± 0.00045	f_{2000}^{143}	$29.8^{+2.7}_{-3.1}$
$\boldsymbol{c_{100}}$	0.9975 ± 0.0010	$D_M(z_*)$/Gpc	13.939 ± 0.040	f_{2000}^{217}	106.9 ± 2.0
$\boldsymbol{c_{217}}$	1.0012 ± 0.0015	z_{drag}	1059.78 ± 0.45	$f_{2000}^{143\times217}$	32.2 ± 2.1
H_0	68.56 ± 0.84	r_{drag}	147.85 ± 0.43	χ^2_{simall}	397.2 ± 2.0
Ω_Λ	0.702 ± 0.011	k_D	0.14009 ± 0.00048	χ^2_{lowl}	22.13 ± 0.92
Ω_m	0.298 ± 0.011	$100\theta_D$	0.16089 ± 0.00026	$\chi^2_{CamSpec}$	7066.9 ± 5.9
$\Omega_m h^2$	0.1401 ± 0.0017	z_{eq}	3333 ± 42	$\chi^2_{H073p45}$	8.9 ± 3.0
$\Omega_m h^3$	0.09605 ± 0.00045	k_{eq}	0.01017 ± 0.00013	χ^2_{prior}	7.5 ± 3.4
σ_8	$0.8021^{+0.0079}_{-0.0088}$	$100\theta_{eq}$	0.8264 ± 0.0081	χ^2_{CMB}	7486.2 ± 5.8
S_8	0.800 ± 0.021	$100\theta_{s,eq}$	0.4562 ± 0.0042		
$\sigma_8\Omega_m^{0.5}$	0.438 ± 0.012	$H(0.15)$	73.70 ± 0.73		

$\bar{\chi}^2_{eff} = 7502.64$; $R - 1 = 0.09766$

2.19 base_CamSpecHM_TTTEEE_lowl_lowE

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022297	0.02229 ± 0.00016	S_8	0.8261	0.827 ± 0.016	$100\theta_{s,eq}$	0.45045	0.4503 ± 0.0030
$\boldsymbol{\Omega_c h^2}$	0.11956	0.1196 ± 0.0014	$\sigma_8\Omega_m^{0.5}$	0.4525	0.4529 ± 0.0089	$H(0.15)$	72.73	72.71 ± 0.53
$\boldsymbol{100\theta_{MC}}$	1.040870	1.04088 ± 0.00032	$\sigma_8\Omega_m^{0.25}$	0.6047	0.6050 ± 0.0083	$D_M(0.15)$	642.8	643.0 ± 5.3
$\boldsymbol{\tau}$	0.0531	0.0528 ± 0.0080	$\sigma_8/h^{0.5}$	0.9843	0.985 ± 0.012	$H(0.38)$	82.874	82.86 ± 0.38
$\boldsymbol{\ln(10^{10}A_s)}$	3.0390	3.039 ± 0.016	$r_{drag}h$	99.32	99.3 ± 1.1	$D_M(0.38)$	1532.6	1533 ± 11
$\boldsymbol{n_s}$	0.96623	0.9658 ± 0.0045	$\langle d^2\rangle^{1/2}$	2.4329	2.434 ± 0.028	$H(0.51)$	89.610	89.60 ± 0.30
$\boldsymbol{y_{cal}}$	1.00034	1.0005 ± 0.0025	z_{re}	7.56	$7.52^{+0.83}_{-0.75}$	$D_M(0.51)$	1985.0	1985 ± 12
$\boldsymbol{A_{100}^{PS}}$	234.8	240 ± 25	$10^9 A_s$	2.0884	2.088 ± 0.034	$H(0.61)$	95.243	95.24 ± 0.24
$\boldsymbol{A_{143}^{PS}}$	41.1	40 ± 8	$10^9 A_s e^{-2\tau}$	1.8780	1.879 ± 0.011	$D_M(0.61)$	2309.6	2310 ± 13
$\boldsymbol{A_{217}^{PS}}$	101.9	102 ± 10	D_{40}	1225.0	1226 ± 13	$H(2.33)$	236.19	236.24 ± 0.83
$\boldsymbol{A_{217}^{CIB}}$	44.3	40 ± 7	D_{220}	5716.0	5718 ± 39	$D_M(2.33)$	5766.4	5767 ± 11
$\boldsymbol{A_{143}^{tSZ}}$	6.43	$3.9^{+1.8}_{-2.5}$	D_{810}	2534.7	2535 ± 13	$f\sigma_8(0.15)$	0.4569	0.4572 ± 0.0083
$\boldsymbol{r_{143\times217}^{PS}}$	0.629	0.66 ± 0.13	D_{1420}	815.77	815.6 ± 4.8	$\sigma_8(0.15)$	0.7467	0.7467 ± 0.0067
$\boldsymbol{r_{143\times217}^{CIB}}$	0.764	$0.56^{+0.40}_{-0.17}$	D_{2000}	230.27	230.2 ± 1.6	$f\sigma_8(0.38)$	0.4748	0.4750 ± 0.0068
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.20	—	$n_{s,0.002}$	0.96623	0.9658 ± 0.0045	$\sigma_8(0.38)$	0.6616	0.6616 ± 0.0057
$\boldsymbol{A^{kSZ}}$	0.26	$4.7^{+2.2}_{-4.0}$	Y_P	0.245366	$0.245362^{+0.000068}_{-0.000059}$	$f\sigma_8(0.51)$	0.4731	0.4733 ± 0.0060
$\boldsymbol{A_{100}^{dust}}$	1.003	1.01 ± 0.20	Y_P^{BBN}	0.246692	$0.246689^{+0.000068}_{-0.000059}$	$\sigma_8(0.51)$	0.6191	0.6190 ± 0.0053
$\boldsymbol{A_{143}^{dust}}$	0.980	0.96 ± 0.18	10^5D/H	2.5994	2.601 ± 0.030	$f\sigma_8(0.61)$	0.4680	0.4681 ± 0.0055
$\boldsymbol{A_{217}^{dust}}$	0.966	0.97 ± 0.10	Age/Gyr	13.8046	13.805 ± 0.025	$\sigma_8(0.61)$	0.58903	0.5890 ± 0.0050
$\boldsymbol{A_{143\times217}^{dust}}$	1.012	1.03 ± 0.16	z_*	1089.976	1089.99 ± 0.28	$f\sigma_8(2.33)$	0.29692	0.2969 ± 0.0025
$\boldsymbol{c_{100}}$	0.99760	0.9975 ± 0.0010	r_*	144.600	144.58 ± 0.31	$\sigma_8(2.33)$	0.30603	0.3060 ± 0.0026
$\boldsymbol{c_{217}}$	1.00127	1.0011 ± 0.0016	$100\theta_*$	1.041058	1.04107 ± 0.00031	f_{2000}^{143}	30.03	29.8 ± 2.8
$\boldsymbol{c_{TE}}$	0.99645	0.9968 ± 0.0049	$D_M(z_*)$/Gpc	13.8897	13.888 ± 0.029	f_{2000}^{217}	106.72	106.9 ± 1.9
$\boldsymbol{c_{EE}}$	0.99197	0.9921 ± 0.0049	z_{drag}	1059.742	1059.73 ± 0.33	$f_{2000}^{143\times217}$	32.23	32.2 ± 2.0
H_0	67.43	67.41 ± 0.62	r_{drag}	147.288	147.27 ± 0.31	χ^2_{simall}	395.90	396.9 ± 1.7
Ω_Λ	0.6866	0.6861 ± 0.0085	k_D	0.140603	0.14061 ± 0.00034	χ^2_{lowl}	23.00	23.16 ± 0.94
Ω_m	0.3134	0.3139 ± 0.0085	$100\theta_D$	0.160865	0.16087 ± 0.00019	$\chi^2_{CamSpec}$	11499.6	11514.5 ± 5.6
$\Omega_m h^2$	0.14250	0.1426 ± 0.0013	z_{eq}	3390.0	3392 ± 31	χ^2_{prior}	2.22	7.8 ± 3.5
$\Omega_m h^3$	0.096089	0.09610 ± 0.00031	k_{eq}	0.010347	0.010352 ± 0.000095	χ^2_{CMB}	11918.5	11934.6 ± 5.7
σ_8	0.8082	0.8083 ± 0.0076	$100\theta_{eq}$	0.8152	0.8150 ± 0.0059			

Best-fit $\chi^2_{eff} = 11920.76$; $\bar{\chi}^2_{eff} = 11942.46$; $R - 1 = 0.01233$

χ^2_{eff}: CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.90 commander_dx12_v3_2_29: 23.00 CamSpec like_10.7HM_1400_unified: 11499.65

2.20 base_CamSpecHM_TTTEEE_lowl_lowE_post_BAO

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02234 ± 0.00015	$\sigma_8\Omega_m^{0.5}$	0.4488 ± 0.0070	$D_M(0.15)$	640.4 ± 3.9
$\boldsymbol{\Omega_c h^2}$	0.1190 ± 0.0010	$\sigma_8\Omega_m^{0.25}$	0.6017 ± 0.0070	$H(0.38)$	83.05 ± 0.29
$\boldsymbol{100\theta_{MC}}$	1.04097 ± 0.00030	$\sigma_8/h^{0.5}$	0.980 ± 0.010	$D_M(0.38)$	1527.8 ± 7.8
$\boldsymbol{\tau}$	0.0538 ± 0.0079	$r_{drag}h$	99.81 ± 0.79	$H(0.51)$	89.75 ± 0.24
$\boldsymbol{\ln(10^{10}A_s)}$	3.039 ± 0.016	$\langle d^2\rangle^{1/2}$	2.425 ± 0.025	$D_M(0.51)$	1979.4 ± 9.2
$\boldsymbol{n_s}$	0.9674 ± 0.0039	z_{re}	$7.60^{+0.83}_{-0.73}$	$H(0.61)$	95.35 ± 0.20
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	10^9A_s	2.089 ± 0.034	$D_M(0.61)$	2303.5 ± 9.9
$\boldsymbol{A_{100}^{PS}}$	240 ± 25	$10^9A_se^{-2\tau}$	1.876 ± 0.011	$H(2.33)$	235.84 ± 0.64
$\boldsymbol{A_{143}^{PS}}$	39 ± 8	D_{40}	1223 ± 12	$D_M(2.33)$	5761.9 ± 9.3
$\boldsymbol{A_{217}^{PS}}$	102 ± 10	D_{220}	5722 ± 39	$f\sigma_8(0.15)$	0.4535 ± 0.0066
$\boldsymbol{A_{217}^{CIB}}$	40 ± 7	D_{810}	2535 ± 13	$\sigma_8(0.15)$	0.7455 ± 0.0065
$\boldsymbol{A_{143}^{tSZ}}$	$3.9^{+1.8}_{-2.6}$	D_{1420}	816.1 ± 4.7	$f\sigma_8(0.38)$	0.4722 ± 0.0057
$\boldsymbol{r_{143\times217}^{PS}}$	0.66 ± 0.13	D_{2000}	230.4 ± 1.6	$\sigma_8(0.38)$	0.6611 ± 0.0057
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.56^{+0.37}_{-0.20}$	$n_{s,0.002}$	0.9674 ± 0.0039	$f\sigma_8(0.51)$	0.4710 ± 0.0052
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P	$0.245381^{+0.000061}_{-0.000053}$	$\sigma_8(0.51)$	0.6187 ± 0.0053
$\boldsymbol{A^{kSZ}}$	$4.7^{+2.1}_{-4.0}$	Y_P^{BBN}	$0.246707^{+0.000062}_{-0.000054}$	$f\sigma_8(0.61)$	0.4662 ± 0.0048
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.19	10^5D/H	2.592 ± 0.027	$\sigma_8(0.61)$	0.5888 ± 0.0050
$\boldsymbol{A_{143}^{dust}}$	0.96 ± 0.18	Age/Gyr	13.795 ± 0.021	$f\sigma_8(2.33)$	0.2969 ± 0.0025
$\boldsymbol{A_{217}^{dust}}$	0.98 ± 0.10	z_*	1089.87 ± 0.23	$\sigma_8(2.33)$	0.3062 ± 0.0026
$\boldsymbol{A_{143\times217}^{dust}}$	1.03 ± 0.16	r_*	144.73 ± 0.25	f_{2000}^{143}	29.6 ± 2.8
$\boldsymbol{c_{100}}$	0.9975 ± 0.0010	$100\theta_*$	1.04116 ± 0.00030	f_{2000}^{217}	106.8 ± 1.9
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	$D_M(z_*)$/Gpc	13.901 ± 0.024	$f_{2000}^{143\times217}$	32.0 ± 2.0
$\boldsymbol{c_{TE}}$	0.9969 ± 0.0049	z_{drag}	1059.79 ± 0.32	χ^2_{simall}	397.0 ± 1.7
$\boldsymbol{c_{EE}}$	0.9924 ± 0.0049	r_{drag}	147.40 ± 0.26	χ^2_{lowl}	22.87 ± 0.82
H_0	67.71 ± 0.46	k_D	0.14051 ± 0.00032	$\chi^2_{CamSpec}$	11514.6 ± 5.7
Ω_Λ	0.6904 ± 0.0062	$100\theta_D$	0.16084 ± 0.00019	χ^2_{6DF}	0.045 ± 0.057
Ω_m	0.3096 ± 0.0062	z_{eq}	3377 ± 24	χ^2_{MGS}	1.36 ± 0.45
$\Omega_m h^2$	0.14194 ± 0.00098	k_{eq}	0.010305 ± 0.000072	$\chi^2_{DR12BAO}$	4.6 ± 1.3
$\Omega_m h^3$	0.09611 ± 0.00031	$100\theta_{eq}$	0.8179 ± 0.0044	χ^2_{prior}	7.8 ± 3.4
σ_8	0.8066 ± 0.0073	$100\theta_{s,eq}$	0.4518 ± 0.0023	χ^2_{BAO}	6.0 ± 1.0
S_8	0.819 ± 0.013	$H(0.15)$	72.97 ± 0.39	χ^2_{CMB}	11934.5 ± 5.7

$\bar{\chi}^2_{eff} = 11948.28$; $R - 1 = 0.01864$

2.21 base_CamSpecHM_TTTEEE_lowl_lowE_post_Riess18

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02242 ± 0.00015	S_8	0.810 ± 0.015	$100\theta_{s,eq}$	0.4538 ± 0.0029
$\boldsymbol{\Omega_c h^2}$	0.1181 ± 0.0013	$\sigma_8\Omega_m^{0.5}$	0.4435 ± 0.0083	$H(0.15)$	73.34 ± 0.50
$\boldsymbol{100\theta_{MC}}$	$1.04108^{+0.00032}_{-0.00028}$	$\sigma_8\Omega_m^{0.25}$	0.5973 ± 0.0080	$D_M(0.15)$	636.8 ± 4.9
$\boldsymbol{\tau}$	0.0553 ± 0.0079	$\sigma_8/h^{0.5}$	0.974 ± 0.011	$H(0.38)$	83.32 ± 0.36
$\boldsymbol{\ln(10^{10}A_s)}$	3.041 ± 0.016	$r_{drag}h$	100.5 ± 1.0	$D_M(0.38)$	1520.5 ± 9.7
$\boldsymbol{n_s}$	0.9696 ± 0.0043	$\langle d^2\rangle^{1/2}$	2.412 ± 0.027	$H(0.51)$	89.96 ± 0.29
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0025	z_{re}	$7.72^{+0.83}_{-0.71}$	$D_M(0.51)$	1971 ± 11
$\boldsymbol{A^{PS}_{100}}$	240 ± 25	$10^9 A_s$	2.092 ± 0.034	$H(0.61)$	95.52 ± 0.23
$\boldsymbol{A^{PS}_{143}}$	38 ± 8	$10^9 A_s e^{-2\tau}$	1.873 ± 0.011	$D_M(0.61)$	2294 ± 12
$\boldsymbol{A^{PS}_{217}}$	102 ± 10	D_{40}	1219 ± 13	$H(2.33)$	235.34 ± 0.79
$\boldsymbol{A^{CIB}_{217}}$	39 ± 7	D_{220}	5729 ± 39	$D_M(2.33)$	5755 ± 11
$\boldsymbol{A^{tSZ}_{143}}$	$3.9^{+1.8}_{-2.7}$	D_{810}	2535 ± 13	$f\sigma_8(0.15)$	0.4487 ± 0.0078
$\boldsymbol{r^{PS}_{143\times217}}$	0.66 ± 0.13	D_{1420}	817.0 ± 4.8	$\sigma_8(0.15)$	0.7440 ± 0.0066
$\boldsymbol{r^{CIB}_{143\times217}}$	$0.55^{+0.35}_{-0.22}$	D_{2000}	230.8 ± 1.6	$f\sigma_8(0.38)$	0.4685 ± 0.0065
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$n_{s,0.002}$	0.9696 ± 0.0043	$\sigma_8(0.38)$	0.6604 ± 0.0057
$\boldsymbol{A^{kSZ}}$	$4.6^{+1.8}_{-4.2}$	Y_P	$0.245413^{+0.000063}_{-0.000053}$	$f\sigma_8(0.51)$	0.4680 ± 0.0058
$\boldsymbol{A^{dust}_{100}}$	1.02 ± 0.20	Y_P^{BBN}	$0.246739^{+0.000063}_{-0.000054}$	$\sigma_8(0.51)$	0.6183 ± 0.0052
$\boldsymbol{A^{dust}_{143}}$	0.96 ± 0.18	10^5D/H	$2.577^{+0.026}_{-0.029}$	$f\sigma_8(0.61)$	0.4637 ± 0.0054
$\boldsymbol{A^{dust}_{217}}$	0.98 ± 0.10	Age/Gyr	13.779 ± 0.023	$\sigma_8(0.61)$	0.5886 ± 0.0049
$\boldsymbol{A^{dust}_{143\times217}}$	1.03 ± 0.16	z_*	1089.69 ± 0.26	$f\sigma_8(2.33)$	0.2971 ± 0.0025
$\boldsymbol{c_{100}}$	0.9976 ± 0.0010	r_*	144.90 ± 0.30	$\sigma_8(2.33)$	0.3066 ± 0.0026
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	$100\theta_*$	$1.04126^{+0.00031}_{-0.00028}$	f^{143}_{2000}	29.2 ± 2.8
$\boldsymbol{c_{TE}}$	0.9969 ± 0.0049	$D_M(z_*)$/Gpc	13.916 ± 0.028	f^{217}_{2000}	106.5 ± 1.9
$\boldsymbol{c_{EE}}$	0.9925 ± 0.0049	z_{drag}	1059.91 ± 0.32	$f^{143\times217}_{2000}$	31.8 ± 2.0
H_0	68.14 ± 0.58	r_{drag}	147.55 ± 0.31	χ^2_{simall}	397.1 ± 1.8
Ω_Λ	0.6960 ± 0.0077	k_D	0.14042 ± 0.00034	χ^2_{lowl}	22.52 ± 0.83
Ω_m	0.3040 ± 0.0077	$100\theta_D$	0.16078 ± 0.00018	$\chi^2_{CamSpec}$	11516.4 ± 6.4
$\Omega_m h^2$	0.1411 ± 0.0012	z_{eq}	3357 ± 30	$\chi^2_{H073p45}$	10.3 ± 2.2
$\Omega_m h^3$	0.09615 ± 0.00031	k_{eq}	0.010245 ± 0.000090	χ^2_{prior}	7.8 ± 3.5
σ_8	0.8044 ± 0.0075	$100\theta_{eq}$	0.8218 ± 0.0057	χ^2_{CMB}	11936.1 ± 6.3

$\bar{\chi}^2_{eff} = 11954.26$; $R - 1 = 0.03390$

2.22 base_CamSpecHM_TTTEEE_lowl_lowE_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02230 ± 0.00016	S_8	0.828 ± 0.016	$100\theta_{s,eq}$	0.4504 ± 0.0030
$\boldsymbol{\Omega_c h^2}$	0.1196 ± 0.0014	$\sigma_8\Omega_m^{0.5}$	0.4533 ± 0.0088	$H(0.15)$	72.73 ± 0.53
$\boldsymbol{100\theta_{MC}}$	1.04089 ± 0.00031	$\sigma_8\Omega_m^{0.25}$	0.6057 ± 0.0081	$D_M(0.15)$	642.8 ± 5.3
$\boldsymbol{\tau}$	$0.0545^{+0.0049}_{-0.0082}$	$\sigma_8/h^{0.5}$	0.986 ± 0.011	$H(0.38)$	82.88 ± 0.38
$\boldsymbol{\ln(10^{10}A_s)}$	$3.042^{+0.011}_{-0.016}$	$r_{drag}h$	99.3 ± 1.1	$D_M(0.38)$	1533 ± 11
$\boldsymbol{n_s}$	0.9660 ± 0.0044	$\langle d^2\rangle^{1/2}$	2.437 ± 0.027	$H(0.51)$	89.62 ± 0.30
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	z_{re}	$7.69^{+0.55}_{-0.81}$	$D_M(0.51)$	1985 ± 12
$\boldsymbol{A^{PS}_{100}}$	240 ± 25	$10^9 A_s$	$2.095^{+0.023}_{-0.034}$	$H(0.61)$	95.25 ± 0.24
$\boldsymbol{A^{PS}_{143}}$	39 ± 8	$10^9 A_s e^{-2\tau}$	1.878 ± 0.011	$D_M(0.61)$	2310 ± 13
$\boldsymbol{A^{PS}_{217}}$	102 ± 10	D_{40}	1226 ± 13	$H(2.33)$	236.22 ± 0.83
$\boldsymbol{A^{CIB}_{217}}$	40 ± 7	D_{220}	5718 ± 39	$D_M(2.33)$	5766 ± 11
$\boldsymbol{A^{tSZ}_{143}}$	$3.9^{+1.9}_{-2.5}$	D_{810}	2535 ± 13	$f\sigma_8(0.15)$	0.4577 ± 0.0082
$\boldsymbol{r^{PS}_{143\times217}}$	0.66 ± 0.13	D_{1420}	815.7 ± 4.9	$\sigma_8(0.15)$	$0.7477^{+0.0054}_{-0.0064}$
$\boldsymbol{r^{CIB}_{143\times217}}$	$0.56^{+0.40}_{-0.17}$	D_{2000}	230.3 ± 1.6	$f\sigma_8(0.38)$	0.4755 ± 0.0066
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$n_{s,0.002}$	0.9660 ± 0.0044	$\sigma_8(0.38)$	$0.6626^{+0.0043}_{-0.0055}$
$\boldsymbol{A^{kSZ}}$	$4.7^{+2.1}_{-4.1}$	Y_P	$0.245364^{+0.000068}_{-0.000059}$	$f\sigma_8(0.51)$	0.4738 ± 0.0058
$\boldsymbol{A^{dust}_{100}}$	1.01 ± 0.20	Y_P^{BBN}	$0.246691^{+0.000068}_{-0.000059}$	$\sigma_8(0.51)$	$0.6200^{+0.0039}_{-0.0051}$
$\boldsymbol{A^{dust}_{143}}$	0.96 ± 0.18	10^5D/H	2.600 ± 0.030	$f\sigma_8(0.61)$	0.4687 ± 0.0052
$\boldsymbol{A^{dust}_{217}}$	0.97 ± 0.10	Age/Gyr	13.804 ± 0.025	$\sigma_8(0.61)$	$0.5899^{+0.0036}_{-0.0048}$
$\boldsymbol{A^{dust}_{143\times217}}$	1.03 ± 0.16	z_*	1089.98 ± 0.28	$f\sigma_8(2.33)$	$0.2973^{+0.0018}_{-0.0024}$
$\boldsymbol{c_{100}}$	0.9975 ± 0.0010	r_*	144.59 ± 0.31	$\sigma_8(2.33)$	$0.3065^{+0.0018}_{-0.0026}$
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	$100\theta_*$	1.04108 ± 0.00031	f^{143}_{2000}	29.7 ± 2.8
$\boldsymbol{c_{TE}}$	0.9966 ± 0.0049	$D_M(z_*)$/Gpc	13.889 ± 0.029	f^{217}_{2000}	106.9 ± 1.9
$\boldsymbol{c_{EE}}$	0.9921 ± 0.0049	z_{drag}	1059.74 ± 0.33	$f^{143\times217}_{2000}$	32.1 ± 2.0
H_0	67.43 ± 0.61	r_{drag}	147.28 ± 0.31	χ^2_{simall}	396.8 ± 1.7
Ω_Λ	0.6864 ± 0.0085	k_D	0.14061 ± 0.00035	χ^2_{lowl}	23.17 ± 0.94
Ω_m	0.3136 ± 0.0085	$100\theta_D$	0.16087 ± 0.00019	$\chi^2_{CamSpec}$	11514.3 ± 5.6
$\Omega_m h^2$	0.1425 ± 0.0013	z_{eq}	3391 ± 31	χ^2_{prior}	7.8 ± 3.5
$\Omega_m h^3$	0.09610 ± 0.00031	k_{eq}	0.010349 ± 0.000095	χ^2_{CMB}	11934.4 ± 5.7
σ_8	$0.8094^{+0.0065}_{-0.0073}$	$100\theta_{eq}$	0.8152 ± 0.0059		

$\bar{\chi}^2_{eff} = 11942.19$; $R - 1 = 0.01099$

2.23 base_CamSpecHM_TTTEEE_lowl_lowE_post_BAO_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02234 ± 0.00015	$\sigma_8\Omega_m^{0.5}$	0.4493 ± 0.0068	$D_M(0.15)$	640.3 ± 3.9
$\boldsymbol{\Omega_c h^2}$	0.1189 ± 0.0010	$\sigma_8\Omega_m^{0.25}$	0.6024 ± 0.0067	$H(0.38)$	83.06 ± 0.29
$\boldsymbol{100\theta_{MC}}$	1.04097 ± 0.00030	$\sigma_8/h^{0.5}$	0.9814 ± 0.0097	$D_M(0.38)$	1527.5 ± 7.8
$\boldsymbol{\tau}$	$0.0552^{+0.0054}_{-0.0079}$	$r_{drag}h$	99.83 ± 0.79	$H(0.51)$	89.75 ± 0.23
$\boldsymbol{\ln(10^{10}A_s)}$	$3.042^{+0.012}_{-0.016}$	$\langle d^2\rangle^{1/2}$	2.427 ± 0.023	$D_M(0.51)$	1979.1 ± 9.2
$\boldsymbol{n_s}$	0.9675 ± 0.0039	z_{re}	$7.75^{+0.59}_{-0.79}$	$H(0.61)$	95.36 ± 0.20
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	10^9A_s	$2.095^{+0.025}_{-0.034}$	$D_M(0.61)$	2303.2 ± 9.9
$\boldsymbol{A^{PS}_{100}}$	240 ± 25	$10^9A_se^{-2\tau}$	1.876 ± 0.011	$H(2.33)$	235.83 ± 0.64
$\boldsymbol{A^{PS}_{143}}$	39 ± 8	D_{40}	1223 ± 12	$D_M(2.33)$	5761.6 ± 9.3
$\boldsymbol{A^{PS}_{217}}$	102 ± 10	D_{220}	5722 ± 39	$f\sigma_8(0.15)$	0.4540 ± 0.0065
$\boldsymbol{A^{CIB}_{217}}$	40 ± 7	D_{810}	2535 ± 13	$\sigma_8(0.15)$	$0.7465^{+0.0052}_{-0.0063}$
$\boldsymbol{A^{tSZ}_{143}}$	$3.9^{+1.8}_{-2.5}$	D_{1420}	816.1 ± 4.8	$f\sigma_8(0.38)$	0.4727 ± 0.0055
$\boldsymbol{r^{PS}_{143\times217}}$	0.66 ± 0.13	D_{2000}	230.4 ± 1.6	$\sigma_8(0.38)$	$0.6620^{+0.0044}_{-0.0055}$
$\boldsymbol{r^{CIB}_{143\times217}}$	$0.56^{+0.37}_{-0.20}$	$n_{s,0.002}$	0.9675 ± 0.0039	$f\sigma_8(0.51)$	0.4716 ± 0.0049
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P	$0.245382^{+0.000061}_{-0.000053}$	$\sigma_8(0.51)$	$0.6196^{+0.0041}_{-0.0051}$
$\boldsymbol{A^{kSZ}}$	$4.7^{+2.1}_{-4.0}$	Y_P^{BBN}	$0.246709^{+0.000061}_{-0.000053}$	$f\sigma_8(0.61)$	0.4668 ± 0.0045
$\boldsymbol{A^{dust}_{100}}$	1.01 ± 0.19	10^5D/H	2.591 ± 0.027	$\sigma_8(0.61)$	$0.5896^{+0.0038}_{-0.0049}$
$\boldsymbol{A^{dust}_{143}}$	0.96 ± 0.18	Age/Gyr	13.794 ± 0.021	$f\sigma_8(2.33)$	$0.2974^{+0.0019}_{-0.0025}$
$\boldsymbol{A^{dust}_{217}}$	0.98 ± 0.10	z_*	1089.86 ± 0.23	$\sigma_8(2.33)$	$0.3067^{+0.0020}_{-0.0026}$
$\boldsymbol{A^{dust}_{143\times217}}$	1.03 ± 0.16	r_*	144.73 ± 0.25	f^{143}_{2000}	29.5 ± 2.8
$\boldsymbol{c_{100}}$	0.9975 ± 0.0010	$100\theta_*$	1.04116 ± 0.00029	f^{217}_{2000}	106.7 ± 1.9
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	$D_M(z_*)$/Gpc	13.901 ± 0.024	$f^{143\times217}_{2000}$	32.0 ± 2.0
$\boldsymbol{c_{TE}}$	0.9968 ± 0.0048	z_{drag}	1059.79 ± 0.32	χ^2_{simall}	396.9 ± 1.7
$\boldsymbol{c_{EE}}$	0.9923 ± 0.0049	r_{drag}	147.41 ± 0.26	χ^2_{lowl}	22.88 ± 0.82
H_0	67.73 ± 0.46	k_D	0.14051 ± 0.00032	$\chi^2_{CamSpec}$	11514.4 ± 5.6
Ω_Λ	0.6905 ± 0.0061	$100\theta_D$	0.16084 ± 0.00019	χ^2_{6DF}	0.044 ± 0.056
Ω_m	0.3095 ± 0.0061	z_{eq}	3376 ± 23	χ^2_{MGS}	1.37 ± 0.45
$\Omega_m h^2$	0.14192 ± 0.00098	k_{eq}	0.010304 ± 0.000072	$\chi^2_{DR12BAO}$	4.5 ± 1.3
$\Omega_m h^3$	0.09611 ± 0.00032	$100\theta_{eq}$	0.8180 ± 0.0044	χ^2_{prior}	7.8 ± 3.4
σ_8	$0.8076^{+0.0060}_{-0.0071}$	$100\theta_{s,eq}$	0.4519 ± 0.0023	χ^2_{BAO}	5.96 ± 0.97
S_8	0.820 ± 0.013	$H(0.15)$	72.98 ± 0.39	χ^2_{CMB}	11934.2 ± 5.7

$\bar{\chi}^2_{eff} = 11947.99$; $R - 1 = 0.01741$

2.24 base_CamSpecHM_TTTEEE_lowl_lowE_post_Riess18_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02242 ± 0.00015	S_8	0.810 ± 0.015	$100\theta_{s,eq}$	0.4539 ± 0.0029
$\boldsymbol{\Omega_c h^2}$	0.1180 ± 0.0013	$\sigma_8\Omega_m^{0.5}$	0.4438 ± 0.0083	$H(0.15)$	73.36 ± 0.49
$\boldsymbol{100\theta_{MC}}$	$1.04108^{+0.00032}_{-0.00028}$	$\sigma_8\Omega_m^{0.25}$	0.5977 ± 0.0078	$D_M(0.15)$	636.6 ± 4.8
$\boldsymbol{\tau}$	$0.0564^{+0.0062}_{-0.0076}$	$\sigma_8/h^{0.5}$	0.975 ± 0.011	$H(0.38)$	83.33 ± 0.36
$\boldsymbol{\ln(10^{10}A_s)}$	$3.043^{+0.013}_{-0.016}$	$r_{drag}h$	100.6 ± 1.0	$D_M(0.38)$	1520.2 ± 9.7
$\boldsymbol{n_s}$	0.9697 ± 0.0043	$\langle d^2\rangle^{1/2}$	2.414 ± 0.026	$H(0.51)$	89.97 ± 0.29
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0025	z_{re}	$7.84^{+0.65}_{-0.75}$	$D_M(0.51)$	1971 ± 11
$\boldsymbol{A^{PS}_{100}}$	239 ± 25	$10^9 A_s$	$2.096^{+0.027}_{-0.033}$	$H(0.61)$	95.53 ± 0.23
$\boldsymbol{A^{PS}_{143}}$	38 ± 8	$10^9 A_s e^{-2\tau}$	1.873 ± 0.011	$D_M(0.61)$	2294 ± 12
$\boldsymbol{A^{PS}_{217}}$	102 ± 10	D_{40}	1219 ± 13	$H(2.33)$	235.32 ± 0.79
$\boldsymbol{A^{CIB}_{217}}$	39 ± 7	D_{220}	5729 ± 39	$D_M(2.33)$	5754 ± 10
$\boldsymbol{A^{tSZ}_{143}}$	$3.9^{+1.8}_{-2.7}$	D_{810}	2535 ± 13	$f\sigma_8(0.15)$	0.4489 ± 0.0078
$\boldsymbol{r^{PS}_{143\times217}}$	0.66 ± 0.13	D_{1420}	817.0 ± 4.8	$\sigma_8(0.15)$	$0.7448^{+0.0057}_{-0.0064}$
$\boldsymbol{r^{CIB}_{143\times217}}$	$0.55^{+0.35}_{-0.22}$	D_{2000}	230.8 ± 1.6	$f\sigma_8(0.38)$	0.4689 ± 0.0064
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$n_{s,0.002}$	0.9697 ± 0.0043	$\sigma_8(0.38)$	$0.6610^{+0.0047}_{-0.0055}$
$\boldsymbol{A^{kSZ}}$	$4.6^{+1.8}_{-4.2}$	Y_P	$0.245414^{+0.000062}_{-0.000053}$	$f\sigma_8(0.51)$	0.4684 ± 0.0057
$\boldsymbol{A^{dust}_{100}}$	1.02 ± 0.20	Y_P^{BBN}	$0.246741^{+0.000062}_{-0.000054}$	$\sigma_8(0.51)$	$0.6190^{+0.0043}_{-0.0050}$
$\boldsymbol{A^{dust}_{143}}$	0.96 ± 0.18	10^5D/H	$2.576^{+0.026}_{-0.029}$	$f\sigma_8(0.61)$	0.4641 ± 0.0052
$\boldsymbol{A^{dust}_{217}}$	0.98 ± 0.10	Age/Gyr	13.778 ± 0.023	$\sigma_8(0.61)$	$0.5892^{+0.0041}_{-0.0048}$
$\boldsymbol{A^{dust}_{143\times217}}$	1.03 ± 0.16	z_*	1089.68 ± 0.26	$f\sigma_8(2.33)$	$0.2974^{+0.0020}_{-0.0024}$
$\boldsymbol{c_{100}}$	0.9976 ± 0.0010	r_*	144.91 ± 0.30	$\sigma_8(2.33)$	$0.3069^{+0.0021}_{-0.0025}$
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	$100\theta_*$	$1.04126^{+0.00031}_{-0.00027}$	f^{143}_{2000}	29.1 ± 2.8
$\boldsymbol{c_{TE}}$	0.9968 ± 0.0049	$D_M(z_*)$/Gpc	13.916 ± 0.028	f^{217}_{2000}	106.5 ± 1.9
$\boldsymbol{c_{EE}}$	0.9925 ± 0.0049	z_{drag}	1059.92 ± 0.32	$f^{143\times217}_{2000}$	31.7 ± 2.0
H_0	68.16 ± 0.57	r_{drag}	147.56 ± 0.31	χ^2_{simall}	397.1 ± 1.8
Ω_Λ	0.6962 ± 0.0077	k_D	0.14041 ± 0.00034	χ^2_{lowl}	22.52 ± 0.83
Ω_m	0.3038 ± 0.0077	$100\theta_D$	0.16077 ± 0.00018	$\chi^2_{CamSpec}$	11516.3 ± 6.5
$\Omega_m h^2$	0.1411 ± 0.0012	z_{eq}	3356 ± 30	$\chi^2_{H073p45}$	10.3 ± 2.2
$\Omega_m h^3$	0.09615 ± 0.00031	k_{eq}	0.010243 ± 0.000090	χ^2_{prior}	7.8 ± 3.5
σ_8	$0.8052^{+0.0066}_{-0.0073}$	$100\theta_{eq}$	0.8220 ± 0.0056	χ^2_{CMB}	11935.9 ± 6.3

$\bar{\chi}^2_{eff} = 11954.01$; $R - 1 = 0.03572$

2.25 base_plikHM_TE_lowE

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022460	0.02249 ± 0.00025	$\langle d^2 \rangle^{1/2}$	2.3883	2.384 ± 0.043	$H(0.15)$	73.51	73.61 ± 0.78
$\boldsymbol{\Omega_c h^2}$	0.11788	0.1177 ± 0.0020	$z_{\rm re}$	7.09	$7.11^{+0.91}_{-0.75}$	$D_{\rm M}(0.15)$	635.2	634.3 ± 7.6
$\boldsymbol{100\theta_{MC}}$	1.041369	1.04139 ± 0.00049	$10^9 A_{\rm s}$	2.0440	2.045 ± 0.041	$H(0.38)$	83.46	83.54 ± 0.57
$\boldsymbol{\tau}$	0.0491	0.0496 ± 0.0085	$10^9 A_{\rm s} e^{-2\tau}$	1.8528	1.851 ± 0.018	$D_{\rm M}(0.38)$	1517.1	1515 ± 15
$\boldsymbol{\ln(10^{10} A_s)}$	3.0175	$3.018^{+0.020}_{-0.018}$	D_{40}	1214.8	1212 ± 26	$H(0.51)$	90.081	$90.15^{+0.43}_{-0.48}$
$\boldsymbol{n_s}$	0.9660	0.967 ± 0.011	D_{220}	5695	5693 ± 57	$D_{\rm M}(0.51)$	1966.8	1965 ± 18
$\boldsymbol{A_{100}^{dustTE}}$	0.1132	0.114 ± 0.038	D_{810}	2507.0	2507 ± 25	$H(0.61)$	95.628	$95.68^{+0.35}_{-0.40}$
$\boldsymbol{A_{100\times143}^{dustTE}}$	0.1362	0.136 ± 0.030	D_{1420}	806.8	807 ± 12	$D_{\rm M}(0.61)$	2289.8	2287 ± 19
$\boldsymbol{A_{100\times217}^{dustTE}}$	0.477	0.478 ± 0.085	D_{2000}	227.46	227.6 ± 4.3	$H(2.33)$	235.29	235.2 ± 1.2
$\boldsymbol{A_{143}^{dustTE}}$	0.222	0.221 ± 0.055	$n_{\rm s,0.002}$	0.9660	0.967 ± 0.011	$D_{\rm M}(2.33)$	5749.0	5747 ± 17
$\boldsymbol{A_{143\times217}^{dustTE}}$	0.657	0.657 ± 0.081	$Y_{\rm P}$	0.245430	0.24544 ± 0.00010	$f\sigma_8(0.15)$	0.4413	0.440 ± 0.012
$\boldsymbol{A_{217}^{dustTE}}$	2.038	2.04 ± 0.27	$Y_{\rm P}^{\rm BBN}$	0.246756	0.24676 ± 0.00010	$\sigma_8(0.15)$	0.7343	0.7339 ± 0.0096
$\boldsymbol{c_{100}}$	1.00017	1.00017 ± 0.00070	10^5D/H	2.5691	2.565 ± 0.046	$f\sigma_8(0.38)$	0.4614	0.460 ± 0.010
$\boldsymbol{c_{217}}$	0.99799	0.99799 ± 0.00065	Age/Gyr	13.7661	13.761 ± 0.038	$\sigma_8(0.38)$	0.6519	0.6517 ± 0.0080
$\boldsymbol{y_{cal}}$	1.00005	0.99999 ± 0.0025	z_*	1089.621	1089.57 ± 0.42	$f\sigma_8(0.51)$	0.4611	0.4604 ± 0.0090
H_0	68.33	68.44 ± 0.91	r_*	144.914	144.95 ± 0.48	$\sigma_8(0.51)$	0.6105	0.6104 ± 0.0073
Ω_Λ	0.6980	0.699 ± 0.012	$100\theta_*$	1.041540	1.04156 ± 0.00049	$f\sigma_8(0.61)$	0.4570	0.4563 ± 0.0082
$\Omega_{\rm m}$	0.3020	0.301 ± 0.012	$D_{\rm M}(z_*)$/Gpc	13.9134	13.917 ± 0.045	$\sigma_8(0.61)$	0.5812	0.5811 ± 0.0069
$\Omega_{\rm m} h^2$	0.14098	0.1408 ± 0.0019	$z_{\rm drag}$	1060.01	1060.03 ± 0.54	$f\sigma_8(2.33)$	0.29342	0.2934 ± 0.0034
$\Omega_{\rm m} h^3$	0.09633	0.09635 ± 0.00051	$r_{\rm drag}$	147.554	147.59 ± 0.49	$\sigma_8(2.33)$	0.30292	0.3030 ± 0.0035
σ_8	0.7936	0.793 ± 0.011	$k_{\rm D}$	0.14044	0.14043 ± 0.00057	$\chi^2_{\rm simall}$	395.69	396.8 ± 1.5
S_8	0.7962	0.794 ± 0.024	$100\theta_{\rm D}$	0.160772	0.16075 ± 0.00031	$\chi^2_{\rm plikTE}$	852.85	859.8 ± 3.7
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4361	0.435 ± 0.013	$z_{\rm eq}$	3353.6	3349 ± 46	$\chi^2_{\rm prior}$	0.44	7.4 ± 3.7
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.5883	0.587 ± 0.012	$k_{\rm eq}$	0.010235	0.01022 ± 0.00014	$\chi^2_{\rm CMB}$	1248.54	1256.6 ± 4.0
$\sigma_8/h^{0.5}$	0.9601	0.959 ± 0.017	$100\theta_{\rm eq}$	0.8227	0.8237 ± 0.0088			
$r_{\rm drag} h$	100.82	101.0 ± 1.6	$100\theta_{\rm s,eq}$	0.45423	0.4547 ± 0.0045			

Best-fit $\chi^2_{\rm eff} = 1248.98$; $\bar{\chi}^2_{\rm eff} = 1264.01$; $R - 1 = 0.00711$

$\chi^2_{\rm eff}$: CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.69 plik_rd12_HM_v22_TE: 852.85

2.26 base_plikHM_TE_lowE_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02250 ± 0.00025	$\langle d^2 \rangle^{1/2}$	2.390 ± 0.041	$H(0.15)$	73.65 ± 0.77
$\boldsymbol{\Omega_c h^2}$	0.1176 ± 0.0020	$z_{\rm re}$	$7.45^{+0.33}_{-0.86}$	$D_{\rm M}(0.15)$	633.9 ± 7.5
$\boldsymbol{100\theta_{MC}}$	1.04139 ± 0.00049	$10^9 A_{\rm s}$	$2.058^{+0.027}_{-0.036}$	$H(0.38)$	83.56 ± 0.57
$\boldsymbol{\tau}$	$0.0528^{+0.0036}_{-0.0079}$	$10^9 A_{\rm s} e^{-2\tau}$	1.852 ± 0.018	$D_{\rm M}(0.38)$	1515 ± 15
$\boldsymbol{\ln(10^{10} A_{\rm s})}$	$3.024^{+0.013}_{-0.017}$	D_{40}	1212 ± 26	$H(0.51)$	90.17 ± 0.46
$\boldsymbol{n_{\rm s}}$	0.968 ± 0.011	D_{220}	5693 ± 57	$D_{\rm M}(0.51)$	1964 ± 18
$\boldsymbol{A^{{\rm dust}TE}_{100}}$	0.114 ± 0.038	D_{810}	2508 ± 25	$H(0.61)$	$95.70^{+0.35}_{-0.39}$
$\boldsymbol{A^{{\rm dust}TE}_{100\times143}}$	0.136 ± 0.030	D_{1420}	808 ± 12	$D_{\rm M}(0.61)$	2287 ± 19
$\boldsymbol{A^{{\rm dust}TE}_{100\times217}}$	0.478 ± 0.085	D_{2000}	227.9 ± 4.2	$H(2.33)$	235.1 ± 1.2
$\boldsymbol{A^{{\rm dust}TE}_{143}}$	0.220 ± 0.055	$n_{\rm s,0.002}$	0.968 ± 0.011	$D_{\rm M}(2.33)$	5746 ± 17
$\boldsymbol{A^{{\rm dust}TE}_{143\times217}}$	0.657 ± 0.081	$Y_{\rm P}$	0.24544 ± 0.00010	$f\sigma_8(0.15)$	0.441 ± 0.012
$\boldsymbol{A^{{\rm dust}TE}_{217}}$	2.03 ± 0.27	$Y_{\rm P}^{\rm BBN}$	0.24677 ± 0.00010	$\sigma_8(0.15)$	0.7363 ± 0.0085
$\boldsymbol{c_{100}}$	1.00018 ± 0.00070	10^5D/H	2.563 ± 0.046	$f\sigma_8(0.38)$	0.4618 ± 0.0098
$\boldsymbol{c_{217}}$	0.99800 ± 0.00065	Age/Gyr	13.760 ± 0.038	$\sigma_8(0.38)$	$0.6539^{+0.0064}_{-0.0073}$
$\boldsymbol{y_{\rm cal}}$	1.0000 ± 0.0025	z_*	1089.55 ± 0.42	$f\sigma_8(0.51)$	0.4617 ± 0.0086
H_0	68.48 ± 0.90	r_*	144.96 ± 0.48	$\sigma_8(0.51)$	$0.6125^{+0.0057}_{-0.0067}$
Ω_Λ	0.700 ± 0.012	$100\theta_*$	1.04157 ± 0.00048	$f\sigma_8(0.61)$	0.4577 ± 0.0078
$\Omega_{\rm m}$	0.300 ± 0.012	$D_{\rm M}(z_*)$/Gpc	13.918 ± 0.045	$\sigma_8(0.61)$	$0.5831^{+0.0053}_{-0.0063}$
$\Omega_{\rm m} h^2$	0.1407 ± 0.0019	$z_{\rm drag}$	1060.05 ± 0.54	$f\sigma_8(2.33)$	$0.2945^{+0.0025}_{-0.0031}$
$\Omega_{\rm m} h^3$	0.09636 ± 0.00052	$r_{\rm drag}$	147.60 ± 0.49	$\sigma_8(2.33)$	$0.3041^{+0.0026}_{-0.0032}$
σ_8	0.796 ± 0.010	$k_{\rm D}$	0.14043 ± 0.00057	$\chi^2_{\rm simall}$	396.4 ± 1.1
S_8	0.796 ± 0.023	$100\theta_{\rm D}$	0.16074 ± 0.00031	$\chi^2_{\rm plikTE}$	859.8 ± 3.7
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.436 ± 0.013	$z_{\rm eq}$	3347 ± 46	$\chi^2_{\rm prior}$	7.4 ± 3.7
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.589 ± 0.012	$k_{\rm eq}$	0.01022 ± 0.00014	$\chi^2_{\rm CMB}$	1256.2 ± 3.9
$\sigma_8 / h^{0.5}$	0.962 ± 0.017	$100\theta_{\rm eq}$	0.8241 ± 0.0088		
$r_{\rm drag} h$	101.1 ± 1.6	$100\theta_{\rm s,eq}$	0.4549 ± 0.0045		

$\bar{\chi}^2_{\rm eff} = 1263.64$; $R - 1 = 0.00713$

2.27 base_plikHM_EE_lowE

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02372	0.0240 ± 0.0012	D_{220}	5924	5959 ± 190	$H(0.38)$	84.36	$84.7^{+1.8}_{-2.0}$
$\boldsymbol{\Omega_c h^2}$	0.11641	0.1158 ± 0.0046	D_{810}	2585.1	2590 ± 38	$D_{\rm M}(0.38)$	1496.6	1489 ± 46
$\boldsymbol{100\theta_{MC}}$	1.04002	1.03999 ± 0.00089	D_{1420}	841.3	844 ± 19	$H(0.51)$	90.91	$91.3^{+1.5}_{-1.8}$
$\boldsymbol{\tau}$	0.0526	0.0527 ± 0.0090	D_{2000}	240.2	241.2 ± 7.2	$D_{\rm M}(0.51)$	1942	1933 ± 55
$\boldsymbol{\ln(10^{10} A_s)}$	3.0504	3.052 ± 0.022	$n_{\rm s,0.002}$	0.9781	0.980 ± 0.015	$H(0.61)$	96.40	$96.7^{+1.3}_{-1.6}$
$\boldsymbol{n_s}$	0.9781	0.980 ± 0.015	$Y_{\rm P}$	0.245954	$0.24603^{+0.00043}_{-0.00053}$	$D_{\rm M}(0.61)$	2262	2252 ± 60
$\boldsymbol{y_{cal}}$	1.00009	0.9999 ± 0.0025	$Y_{\rm P}^{\rm BBN}$	0.247283	$0.24736^{+0.00043}_{-0.00053}$	$H(2.33)$	235.47	$235.3^{+1.9}_{-2.2}$
H_0	69.46	69.9 ± 2.7	10^5D/H	2.352	$2.32^{+0.18}_{-0.20}$	$D_{\rm M}(2.33)$	5709	5695^{+71}_{-62}
Ω_Λ	0.7082	$0.711^{+0.033}_{-0.026}$	Age/Gyr	13.672	$13.64^{+0.16}_{-0.14}$	$f\sigma_8(0.15)$	0.4374	0.433 ± 0.029
$\Omega_{\rm m}$	0.2918	$0.289^{+0.026}_{-0.033}$	z_*	1088.01	$1087.8^{+1.6}_{-1.7}$	$\sigma_8(0.15)$	0.7399	0.737 ± 0.014
$\Omega_{\rm m} h^2$	0.14078	$0.1404^{+0.0034}_{-0.0039}$	r_*	144.33	144.29 ± 0.64	$f\sigma_8(0.38)$	0.4598	0.456 ± 0.023
$\Omega_{\rm m} h^3$	0.09778	$0.0981^{+0.0016}_{-0.0018}$	$100\theta_*$	1.04007	1.04001 ± 0.00086	$\sigma_8(0.38)$	0.6581	$0.656^{+0.011}_{-0.0095}$
σ_8	0.7986	0.796 ± 0.018	$D_{\rm M}(z_*)$/Gpc	13.877	13.874 ± 0.060	$f\sigma_8(0.51)$	0.4608	0.457 ± 0.020
S_8	0.788	$0.781^{+0.052}_{-0.060}$	$z_{\rm drag}$	1062.76	1063.2 ± 2.4	$\sigma_8(0.51)$	0.6168	$0.6152^{+0.0091}_{-0.0081}$
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4314	$0.427^{+0.028}_{-0.033}$	$r_{\rm drag}$	146.55	146.46 ± 0.70	$f\sigma_8(0.61)$	0.4575	0.454 ± 0.017
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.5870	0.583 ± 0.027	$k_{\rm D}$	0.14239	0.1426 ± 0.0012	$\sigma_8(0.61)$	0.5874	$0.5861^{+0.0081}_{-0.0073}$
$\sigma_8/h^{0.5}$	0.9583	0.952 ± 0.039	$100\theta_{\rm D}$	0.15899	$0.1588^{+0.0011}_{-0.0013}$	$f\sigma_8(2.33)$	0.29698	0.2965 ± 0.0035
$r_{\rm drag} h$	101.79	102.4 ± 4.0	$z_{\rm eq}$	3349	3340^{+81}_{-92}	$\sigma_8(2.33)$	0.30709	0.3069 ± 0.0037
$\langle d^2 \rangle^{1/2}$	2.384	2.375 ± 0.075	$k_{\rm eq}$	0.010221	$0.01019^{+0.00025}_{-0.00028}$	$\chi^2_{\rm simall}$	395.59	396.7 ± 1.6
$z_{\rm re}$	7.17	$7.10^{+0.87}_{-0.73}$	$100\theta_{\rm eq}$	0.8261	0.829 ± 0.019	$\chi^2_{\rm plikEE}$	738.96	743.9 ± 3.1
$10^9 A_{\rm s}$	2.1123	2.116 ± 0.047	$100\theta_{\rm s,eq}$	0.4550	0.4562 ± 0.0092	$\chi^2_{\rm prior}$	0.001	0.98 ± 1.4
$10^9 A_{\rm s} e^{-2\tau}$	1.9014	1.904 ± 0.024	$H(0.15)$	74.55	75.0 ± 2.4	$\chi^2_{\rm CMB}$	1134.55	1140.6 ± 3.4
D_{40}	1229.3	1230 ± 30	$D_{\rm M}(0.15)$	625.6	622 ± 22			

Best-fit $\chi^2_{\rm eff} = 1134.55$; $\bar{\chi}^2_{\rm eff} = 1141.61$; $R - 1 = 0.00482$

$\chi^2_{\rm eff}$: CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.59 plik_rd12_HM_v22_EE: 738.96

2.28 base_plikHM_EE_lowE_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.0240 ± 0.0012	D_{220}	5954 ± 190	$H(0.38)$	$84.7^{+1.8}_{-2.0}$
$\boldsymbol{\Omega_c h^2}$	$0.1158^{+0.0044}_{-0.0049}$	D_{810}	2589 ± 39	$D_{\rm M}(0.38)$	1489 ± 46
$\boldsymbol{100\theta_{MC}}$	1.04000 ± 0.00089	D_{1420}	844 ± 19	$H(0.51)$	$91.3^{+1.5}_{-1.8}$
$\boldsymbol{\tau}$	$0.0559^{+0.0049}_{-0.0080}$	D_{2000}	241.2 ± 7.3	$D_{\rm M}(0.51)$	1933 ± 56
$\boldsymbol{\ln(10^{10} A_s)}$	$3.058^{+0.017}_{-0.020}$	$n_{\rm s,0.002}$	0.981 ± 0.015	$H(0.61)$	$96.7^{+1.3}_{-1.6}$
$\boldsymbol{n_s}$	0.981 ± 0.015	$Y_{\rm P}$	$0.24602^{+0.00043}_{-0.00053}$	$D_{\rm M}(0.61)$	2252 ± 61
$\boldsymbol{y_{cal}}$	0.99996 ± 0.0025	$Y_{\rm P}^{\rm BBN}$	$0.24735^{+0.00044}_{-0.00053}$	$H(2.33)$	$235.3^{+1.9}_{-2.2}$
H_0	69.9 ± 2.8	10^5D/H	$2.33^{+0.18}_{-0.20}$	$D_{\rm M}(2.33)$	5696^{+71}_{-63}
Ω_Λ	$0.711^{+0.033}_{-0.026}$	Age/Gyr	13.65 ± 0.15	$f\sigma_8(0.15)$	$0.435^{+0.027}_{-0.030}$
$\Omega_{\rm m}$	$0.289^{+0.026}_{-0.033}$	z_*	$1087.8^{+1.6}_{-1.8}$	$\sigma_8(0.15)$	0.740 ± 0.014
$\Omega_{\rm m} h^2$	$0.1404^{+0.0034}_{-0.0039}$	r_*	144.32 ± 0.64	$f\sigma_8(0.38)$	0.458 ± 0.023
$\Omega_{\rm m} h^3$	$0.0981^{+0.0016}_{-0.0019}$	$100\theta_*$	1.04002 ± 0.00086	$\sigma_8(0.38)$	0.6583 ± 0.0095
σ_8	0.798 ± 0.018	$D_{\rm M}(z_*)$/Gpc	13.876 ± 0.061	$f\sigma_8(0.51)$	0.459 ± 0.020
S_8	$0.783^{+0.051}_{-0.060}$	$z_{\rm drag}$	1063.2 ± 2.4	$\sigma_8(0.51)$	0.6172 ± 0.0079
$\sigma_8 \Omega_{\rm m}^{0.5}$	$0.429^{+0.028}_{-0.033}$	$r_{\rm drag}$	146.49 ± 0.70	$f\sigma_8(0.61)$	0.456 ± 0.017
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.585 ± 0.027	$k_{\rm D}$	0.1426 ± 0.0013	$\sigma_8(0.61)$	0.5880 ± 0.0070
$\sigma_8 / h^{0.5}$	0.955 ± 0.039	$100\theta_{\rm D}$	$0.1588^{+0.0012}_{-0.0014}$	$f\sigma_8(2.33)$	$0.2974^{+0.0028}_{-0.0032}$
$r_{\rm drag} h$	102.5 ± 4.0	$z_{\rm eq}$	3339^{+81}_{-93}	$\sigma_8(2.33)$	$0.3079^{+0.0029}_{-0.0034}$
$\langle d^2 \rangle^{1/2}$	2.381 ± 0.075	$k_{\rm eq}$	$0.01019^{+0.00025}_{-0.00028}$	$\chi^2_{\rm simall}$	396.4 ± 1.3
$z_{\rm re}$	$7.43^{+0.33}_{-0.82}$	$100\theta_{\rm eq}$	0.829 ± 0.019	$\chi^2_{\rm plikEE}$	743.9 ± 3.2
$10^9 A_{\rm s}$	$2.128^{+0.036}_{-0.043}$	$100\theta_{\rm s,eq}$	0.4563 ± 0.0093	$\chi^2_{\rm prior}$	1.0 ± 1.4
$10^9 A_{\rm s} e^{-2\tau}$	1.903 ± 0.024	$H(0.15)$	75.0 ± 2.4	$\chi^2_{\rm CMB}$	1140.3 ± 3.4
D_{40}	1229 ± 30	$D_{\rm M}(0.15)$	622 ± 22		

$\bar{\chi}^2_{\rm eff} = 1141.31$; $R - 1 = 0.00558$

2.29 base_CamSpecHM_TE_lowE

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022470	0.02248 ± 0.00026	D_{220}	5719	5716 ± 61	$H(0.38)$	83.66	83.69 ± 0.59
$\boldsymbol{\Omega_c h^2}$	0.11696	0.1169 ± 0.0021	D_{810}	2547.9	2546 ± 26	$D_{\rm M}(0.38)$	1511.4	1511 ± 16
$\boldsymbol{100\theta_{MC}}$	1.04140	1.04141 ± 0.00051	D_{1420}	824.6	824 ± 12	$H(0.51)$	90.225	90.26 ± 0.47
$\boldsymbol{\tau}$	0.0518	0.0504 ± 0.0088	D_{2000}	233.38	233.3 ± 4.4	$D_{\rm M}(0.51)$	1960.2	1959 ± 18
$\boldsymbol{\ln(10^{10} A_s)}$	3.0345	3.031 ± 0.021	$n_{\rm s,0.002}$	0.9781	0.978 ± 0.011	$H(0.61)$	95.730	95.76 ± 0.39
$\boldsymbol{n_s}$	0.9781	0.978 ± 0.011	$Y_{\rm P}$	0.245433	0.24544 ± 0.00010	$D_{\rm M}(0.61)$	2282.8	2282 ± 20
$\boldsymbol{y_{cal}}$	1.00007	0.99999 ± 0.0025	$Y_{\rm P}^{\rm BBN}$	0.246760	0.24676 ± 0.00010	$H(2.33)$	234.70	234.7 ± 1.3
H_0	68.68	68.72 ± 0.93	10^5D/H	2.5673	2.566 ± 0.047	$D_{\rm M}(2.33)$	5745.7	5745 ± 17
Ω_Λ	0.7030	0.703 ± 0.012	Age/Gyr	13.7598	13.757 ± 0.039	$f\sigma_8(0.15)$	0.4421	0.441 ± 0.013
$\Omega_{\rm m}$	0.2970	0.297 ± 0.012	z_*	1089.531	1089.51 ± 0.42	$\sigma_8(0.15)$	0.7415	0.740 ± 0.010
$\Omega_{\rm m} h^2$	0.14007	0.1400 ± 0.0020	r_*	145.146	145.15 ± 0.50	$f\sigma_8(0.38)$	0.4634	0.462 ± 0.011
$\Omega_{\rm m} h^3$	0.09620	0.09622 ± 0.00054	$100\theta_*$	1.04158	1.04158 ± 0.00050	$\sigma_8(0.38)$	0.6589	0.6576 ± 0.0084
σ_8	0.8009	0.799 ± 0.012	$D_{\rm M}(z_*)$/Gpc	13.9352	13.936 ± 0.047	$f\sigma_8(0.51)$	0.4638	0.4626 ± 0.0095
S_8	0.7968	0.795 ± 0.025	$z_{\rm drag}$	1059.93	1059.98 ± 0.55	$\sigma_8(0.51)$	0.6173	0.6161 ± 0.0077
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4364	0.435 ± 0.013	$r_{\rm drag}$	147.79	147.79 ± 0.52	$f\sigma_8(0.61)$	0.4600	0.4589 ± 0.0086
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.5912	0.590 ± 0.013	$k_{\rm D}$	0.14021	0.14021 ± 0.00060	$\sigma_8(0.61)$	0.5878	0.5866 ± 0.0072
$\sigma_8/h^{0.5}$	0.9664	0.964 ± 0.018	$100\theta_{\rm D}$	0.160793	0.16078 ± 0.00032	$f\sigma_8(2.33)$	0.29696	0.2964 ± 0.0036
$r_{\rm drag} h$	101.50	101.6 ± 1.6	$z_{\rm eq}$	3331.9	3331 ± 48	$\sigma_8(2.33)$	0.30681	0.3063 ± 0.0037
$\langle d^2 \rangle^{1/2}$	2.3760	2.370 ± 0.043	$k_{\rm eq}$	0.010169	0.01017 ± 0.00014	$\chi^2_{\rm simall}$	395.67	396.9 ± 1.6
$z_{\rm re}$	7.36	$7.18^{+0.93}_{-0.75}$	$100\theta_{\rm eq}$	0.8267	0.8271 ± 0.0092	$\chi^2_{\rm CamSpec}$	2575.95	2581.0 ± 3.2
$10^9 A_{\rm s}$	2.0790	2.072 ± 0.042	$100\theta_{\rm s,eq}$	0.45633	0.4565 ± 0.0047	$\chi^2_{\rm prior}$	10.03	11.0 ± 1.4
$10^9 A_{\rm s} e^{-2\tau}$	1.8744	1.873 ± 0.019	$H(0.15)$	73.80	73.85 ± 0.80	$\chi^2_{\rm CMB}$	2971.61	2977.9 ± 3.6
D_{40}	1201.3	1200 ± 26	$D_{\rm M}(0.15)$	632.3	632.0 ± 7.7			

Best-fit $\chi^2_{\rm eff} = 2981.64$; $\bar{\chi}^2_{\rm eff} = 2988.91$; $R - 1 = 0.00640$

$\chi^2_{\rm eff}$: CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.67 CamSpec like_10.7HM_1400_unified: 2575.95

2.30 base_CamSpecHM_TE_lowE_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02249 ± 0.00026	D_{220}	5716 ± 61	$H(0.38)$	83.72 ± 0.59
$\boldsymbol{\Omega_c h^2}$	0.1168 ± 0.0021	D_{810}	2547 ± 26	$D_{\rm M}(0.38)$	1510 ± 16
$\boldsymbol{100\theta_{MC}}$	1.04141 ± 0.00051	D_{1420}	825 ± 12	$H(0.51)$	90.28 ± 0.47
$\boldsymbol{\tau}$	$0.0535^{+0.0039}_{-0.0081}$	D_{2000}	233.6 ± 4.4	$D_{\rm M}(0.51)$	1959 ± 18
$\boldsymbol{\ln(10^{10} A_s)}$	$3.037^{+0.015}_{-0.018}$	$n_{\rm s,0.002}$	0.979 ± 0.011	$H(0.61)$	95.77 ± 0.39
$\boldsymbol{n_s}$	0.979 ± 0.011	$Y_{\rm P}$	0.24544 ± 0.00010	$D_{\rm M}(0.61)$	2281 ± 20
$\boldsymbol{y_{cal}}$	0.99997 ± 0.0025	$Y_{\rm P}^{\rm BBN}$	0.24677 ± 0.00010	$H(2.33)$	234.6 ± 1.3
H_0	68.76 ± 0.93	10^5D/H	2.564 ± 0.047	$D_{\rm M}(2.33)$	5744 ± 17
Ω_Λ	0.704 ± 0.012	Age/Gyr	13.756 ± 0.039	$f\sigma_8(0.15)$	0.442 ± 0.013
$\Omega_{\rm m}$	0.296 ± 0.012	z_*	1089.49 ± 0.42	$\sigma_8(0.15)$	0.7423 ± 0.0091
$\Omega_{\rm m} h^2$	0.1400 ± 0.0020	r_*	145.17 ± 0.50	$f\sigma_8(0.38)$	0.464 ± 0.010
$\Omega_{\rm m} h^3$	0.09622 ± 0.00053	$100\theta_*$	1.04159 ± 0.00050	$\sigma_8(0.38)$	0.6597 ± 0.0074
σ_8	0.802 ± 0.011	$D_{\rm M}(z_*)$/Gpc	13.937 ± 0.047	$f\sigma_8(0.51)$	0.4639 ± 0.0091
S_8	0.797 ± 0.024	$z_{\rm drag}$	1059.99 ± 0.55	$\sigma_8(0.51)$	0.6181 ± 0.0067
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.436 ± 0.013	$r_{\rm drag}$	147.80 ± 0.52	$f\sigma_8(0.61)$	0.4602 ± 0.0083
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.591 ± 0.013	$k_{\rm D}$	0.14021 ± 0.00060	$\sigma_8(0.61)$	$0.5885^{+0.0058}_{-0.0065}$
$\sigma_8/h^{0.5}$	0.967 ± 0.017	$100\theta_{\rm D}$	0.16077 ± 0.00032	$f\sigma_8(2.33)$	$0.2974^{+0.0027}_{-0.0032}$
$r_{\rm drag} h$	101.6 ± 1.6	$z_{\rm eq}$	3329 ± 47	$\sigma_8(2.33)$	$0.3073^{+0.0027}_{-0.0033}$
$\langle d^2 \rangle^{1/2}$	2.376 ± 0.042	$k_{\rm eq}$	0.01016 ± 0.00014	$\chi^2_{\rm simall}$	396.4 ± 1.2
$z_{\rm re}$	$7.51^{+0.40}_{-0.84}$	$100\theta_{\rm eq}$	0.8274 ± 0.0092	$\chi^2_{\rm CamSpec}$	2581.0 ± 3.2
$10^9 A_{\rm s}$	$2.085^{+0.030}_{-0.037}$	$100\theta_{\rm s,eq}$	0.4567 ± 0.0047	$\chi^2_{\rm prior}$	11.0 ± 1.4
$10^9 A_{\rm s} e^{-2\tau}$	1.873 ± 0.019	$H(0.15)$	73.88 ± 0.80	$\chi^2_{\rm CMB}$	2977.5 ± 3.4
D_{40}	1199 ± 26	$D_{\rm M}(0.15)$	631.7 ± 7.7		

$\bar{\chi}^2_{\rm eff} = 2988.52$; $R - 1 = 0.00517$

2.31 base_CamSpecHM_EE_lowE

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02320	0.0233 ± 0.0012	D_{220}	5947	5950 ± 190	$H(0.38)$	83.13	$83.3^{+1.7}_{-1.9}$
$\boldsymbol{\Omega_c h^2}$	0.11965	0.1192 ± 0.0047	D_{810}	2597.7	2597 ± 39	$D_{\rm M}(0.38)$	1527.9	1525 ± 46
$\boldsymbol{100\theta_{MC}}$	1.03933	1.03928 ± 0.00087	D_{1420}	839.2	840 ± 19	$H(0.51)$	89.90	$90.1^{+1.4}_{-1.6}$
$\boldsymbol{\tau}$	0.0500	0.0504 ± 0.0088	D_{2000}	238.6	238.8 ± 7.1	$D_{\rm M}(0.51)$	1979	1975 ± 54
$\boldsymbol{\ln(10^{10} A_s)}$	3.0583	3.058 ± 0.022	$n_{\rm s,0.002}$	0.9650	0.967 ± 0.014	$H(0.61)$	95.55	$95.7^{+1.1}_{-1.4}$
$\boldsymbol{n_s}$	0.9650	0.967 ± 0.014	$Y_{\rm P}$	0.245745	0.24575 ± 0.00047	$D_{\rm M}(0.61)$	2302	2298 ± 59
$\boldsymbol{y_{cal}}$	0.99999	1.0000 ± 0.0025	$Y_{\rm P}^{\rm BBN}$	0.247073	0.24708 ± 0.00047	$H(2.33)$	237.00	236.8 ± 2.2
H_0	67.63	67.9 ± 2.6	10^5D/H	2.439	$2.44^{+0.18}_{-0.21}$	$D_{\rm M}(2.33)$	5748	5743^{+66}_{-59}
Ω_Λ	0.6863	$0.687^{+0.035}_{-0.028}$	Age/Gyr	13.760	13.75 ± 0.14	$f\sigma_8(0.15)$	0.4585	0.456 ± 0.029
$\Omega_{\rm m}$	0.3137	$0.313^{+0.028}_{-0.035}$	z_*	1088.88	$1088.8^{+1.6}_{-1.8}$	$\sigma_8(0.15)$	0.7490	$0.747^{+0.015}_{-0.013}$
$\Omega_{\rm m} h^2$	0.14350	0.1431 ± 0.0038	r_*	143.89	143.94 ± 0.66	$f\sigma_8(0.38)$	0.4764	0.474 ± 0.023
$\Omega_{\rm m} h^3$	0.09705	$0.0971^{+0.0015}_{-0.0017}$	$100\theta_*$	1.03943	1.03937 ± 0.00084	$\sigma_8(0.38)$	0.6637	$0.662^{+0.010}_{-0.0089}$
σ_8	0.8108	$0.809^{+0.019}_{-0.017}$	$D_{\rm M}(z_*)$/Gpc	13.843	13.849 ± 0.062	$f\sigma_8(0.51)$	0.4747	0.473 ± 0.019
S_8	0.829	0.825 ± 0.058	$z_{\rm drag}$	1061.80	1061.9 ± 2.3	$\sigma_8(0.51)$	0.6210	$0.6198^{+0.0087}_{-0.0077}$
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4541	0.452 ± 0.032	$r_{\rm drag}$	146.27	146.31 ± 0.69	$f\sigma_8(0.61)$	0.4696	$0.468^{+0.017}_{-0.016}$
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.6068	0.604 ± 0.028	$k_{\rm D}$	0.14235	0.1423 ± 0.0012	$\sigma_8(0.61)$	0.5908	0.5898 ± 0.0076
$\sigma_8/h^{0.5}$	0.9859	0.982 ± 0.039	$100\theta_{\rm D}$	0.15943	$0.1594^{+0.0012}_{-0.0014}$	$f\sigma_8(2.33)$	0.29780	0.2974 ± 0.0035
$r_{\rm drag} h$	98.92	99.3 ± 3.9	$z_{\rm eq}$	3414	3405 ± 90	$\sigma_8(2.33)$	0.30692	0.3067 ± 0.0037
$\langle d^2 \rangle^{1/2}$	2.457	2.449 ± 0.075	$k_{\rm eq}$	0.010419	0.01039 ± 0.00027	$\chi^2_{\rm simall}$	395.62	396.8 ± 1.6
$z_{\rm re}$	7.06	$7.06^{+0.90}_{-0.76}$	$100\theta_{\rm eq}$	0.8123	0.814 ± 0.019	$\chi^2_{\rm CamSpec}$	1886.52	1891.5 ± 3.1
$10^9 A_{\rm s}$	2.1292	2.130 ± 0.046	$100\theta_{\rm s,eq}$	0.4482	0.4492 ± 0.0091	$\chi^2_{\rm prior}$	10.03	11.0 ± 1.4
$10^9 A_{\rm s} e^{-2\tau}$	1.9264	1.925 ± 0.024	$H(0.15)$	72.95	73.2 ± 2.3	$\chi^2_{\rm CMB}$	2282.13	2288.3 ± 3.5
D_{40}	1264.6	1260 ± 31	$D_{\rm M}(0.15)$	640.9	639 ± 22			

Best-fit $\chi^2_{\rm eff} = 2292.16$; $\bar{\chi}^2_{\rm eff} = 2299.35$; $R - 1 = 0.00959$

$\chi^2_{\rm eff}$: CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.62 CamSpec like_10.7HM_1400_unified: 1886.52

2.32 base_CamSpecHM_EE_lowE_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.0233 ± 0.0011	D_{220}	5943 ± 190	$H(0.38)$	$83.3^{+1.7}_{-1.9}$
$\boldsymbol{\Omega_c h^2}$	0.1192 ± 0.0047	D_{810}	2596 ± 39	$D_{\rm M}(0.38)$	1525 ± 46
$\boldsymbol{100\theta_{MC}}$	1.03928 ± 0.00087	D_{1420}	839 ± 19	$H(0.51)$	$90.0^{+1.4}_{-1.6}$
$\boldsymbol{\tau}$	$0.0539^{+0.0046}_{-0.0079}$	D_{2000}	238.8 ± 7.0	$D_{\rm M}(0.51)$	1976 ± 55
$\boldsymbol{\ln(10^{10} A_s)}$	$3.065^{+0.017}_{-0.019}$	$n_{\rm s,0.002}$	$0.968^{+0.013}_{-0.014}$	$H(0.61)$	$95.7^{+1.1}_{-1.4}$
$\boldsymbol{n_s}$	$0.968^{+0.013}_{-0.014}$	$Y_{\rm P}$	0.24574 ± 0.00046	$D_{\rm M}(0.61)$	2299 ± 59
$\boldsymbol{y_{cal}}$	1.0000 ± 0.0025	$Y_{\rm P}^{\rm BBN}$	0.24707 ± 0.00047	$H(2.33)$	236.8 ± 2.2
H_0	67.9 ± 2.6	10^5D/H	$2.44^{+0.18}_{-0.20}$	$D_{\rm M}(2.33)$	5744^{+66}_{-58}
Ω_Λ	$0.687^{+0.035}_{-0.028}$	Age/Gyr	13.75 ± 0.14	$f\sigma_8(0.15)$	0.458 ± 0.029
$\Omega_{\rm m}$	$0.313^{+0.028}_{-0.035}$	z_*	$1088.9^{+1.6}_{-1.8}$	$\sigma_8(0.15)$	$0.750^{+0.014}_{-0.012}$
$\Omega_{\rm m} h^2$	0.1431 ± 0.0038	r_*	143.96 ± 0.66	$f\sigma_8(0.38)$	0.476 ± 0.023
$\Omega_{\rm m} h^3$	$0.0970^{+0.0015}_{-0.0017}$	$100\theta_*$	1.03938 ± 0.00084	$\sigma_8(0.38)$	$0.6647^{+0.0092}_{-0.0083}$
σ_8	$0.812^{+0.018}_{-0.016}$	$D_{\rm M}(z_*)$/Gpc	13.851 ± 0.062	$f\sigma_8(0.51)$	0.474 ± 0.019
S_8	0.829 ± 0.058	$z_{\rm drag}$	1061.8 ± 2.3	$\sigma_8(0.51)$	0.6220 ± 0.0075
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.454 ± 0.032	$r_{\rm drag}$	146.34 ± 0.68	$f\sigma_8(0.61)$	$0.469^{+0.017}_{-0.015}$
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.607 ± 0.027	$k_{\rm D}$	0.1423 ± 0.0012	$\sigma_8(0.61)$	0.5919 ± 0.0067
$\sigma_8/h^{0.5}$	0.986 ± 0.038	$100\theta_{\rm D}$	$0.1595^{+0.0012}_{-0.0014}$	$f\sigma_8(2.33)$	$0.2984^{+0.0028}_{-0.0031}$
$r_{\rm drag} h$	99.3 ± 3.9	$z_{\rm eq}$	3405 ± 90	$\sigma_8(2.33)$	0.3078 ± 0.0033
$\langle d^2 \rangle^{1/2}$	2.456 ± 0.074	$k_{\rm eq}$	0.01039 ± 0.00027	$\chi^2_{\rm simall}$	396.5 ± 1.4
$z_{\rm re}$	$7.43^{+0.30}_{-0.85}$	$100\theta_{\rm eq}$	0.814 ± 0.019	$\chi^2_{\rm CamSpec}$	1891.4 ± 3.1
$10^9 A_{\rm s}$	$2.144^{+0.035}_{-0.042}$	$100\theta_{\rm s,eq}$	0.4492 ± 0.0091	$\chi^2_{\rm prior}$	11.0 ± 1.4
$10^9 A_{\rm s} e^{-2\tau}$	1.924 ± 0.024	$H(0.15)$	73.2 ± 2.3	$\chi^2_{\rm CMB}$	2287.9 ± 3.4
D_{40}	1260 ± 31	$D_{\rm M}(0.15)$	640 ± 22		

$\bar{\chi}^2_{\rm eff} = 2298.97$; $R - 1 = 0.00869$

2.33 base_plikHM_TE_lowE_BAO

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022421	0.02245 ± 0.00024	z_{re}	7.08	$7.04^{+0.93}_{-0.74}$	$H(0.38)$	83.350	83.40 ± 0.36
$\boldsymbol{\Omega_c h^2}$	0.11820	0.1181 ± 0.0012	$10^9 A_s$	2.0421	2.044 ± 0.041	$D_M(0.38)$	1519.9	1518.9 ± 9.3
$\boldsymbol{100\theta_{MC}}$	1.041301	1.04133 ± 0.00046	$10^9 A_s e^{-2\tau}$	1.8520	1.854 ± 0.017	$H(0.51)$	89.994	90.04 ± 0.30
$\boldsymbol{\tau}$	0.0488	$0.0488^{+0.0085}_{-0.0076}$	D_{40}	1217.9	1217 ± 24	$D_M(0.51)$	1970.1	1969 ± 11
$\boldsymbol{\ln(10^{10} A_s)}$	3.0166	3.017 ± 0.020	D_{220}	5692	5695 ± 56	$H(0.61)$	95.557	95.60 ± 0.26
$\boldsymbol{n_s}$	0.9641	0.965 ± 0.010	D_{810}	2503.5	2507 ± 25	$D_M(0.61)$	2293.5	2292 ± 12
$\boldsymbol{y_{cal}}$	0.99984	1.0000 ± 0.0025	D_{1420}	804.8	806 ± 12	$H(2.33)$	235.46	235.45 ± 0.80
$\boldsymbol{A_{100}^{dustTE}}$	0.1139	0.114 ± 0.038	D_{2000}	226.76	227.4 ± 4.2	$D_M(2.33)$	5752.2	5750 ± 13
$\boldsymbol{A_{100\times143}^{dustTE}}$	0.1364	0.136 ± 0.030	$n_{s,0.002}$	0.9641	0.965 ± 0.010	$f\sigma_8(0.15)$	0.4428	0.4427 ± 0.0083
$\boldsymbol{A_{100\times217}^{dustTE}}$	0.481	0.477 ± 0.085	Y_P	0.245416	0.245424 ± 0.000093	$\sigma_8(0.15)$	0.7343	0.7347 ± 0.0091
$\boldsymbol{A_{143}^{dustTE}}$	0.222	0.221 ± 0.055	Y_P^{BBN}	0.246742	0.246751 ± 0.000093	$f\sigma_8(0.38)$	0.4624	0.4624 ± 0.0074
$\boldsymbol{A_{143\times217}^{dustTE}}$	0.658	0.659 ± 0.081	10^5D/H	2.5760	2.571 ± 0.043	$\sigma_8(0.38)$	0.6517	0.6521 ± 0.0079
$\boldsymbol{A_{217}^{dustTE}}$	2.036	2.04 ± 0.27	Age/Gyr	13.7732	13.769 ± 0.031	$f\sigma_8(0.51)$	0.4619	0.4619 ± 0.0069
$\boldsymbol{c_{100}}$	1.00016	1.00017 ± 0.00070	z_*	1089.698	1089.66 ± 0.33	$\sigma_8(0.51)$	0.6102	0.6106 ± 0.0073
$\boldsymbol{c_{217}}$	0.99800	0.99799 ± 0.00065	r_*	144.860	144.85 ± 0.34	$f\sigma_8(0.61)$	0.4576	0.4577 ± 0.0065
H_0	68.16	68.22 ± 0.55	$100\theta_*$	1.041484	1.04151 ± 0.00046	$\sigma_8(0.61)$	0.5809	0.5812 ± 0.0070
Ω_Λ	0.6959	0.6965 ± 0.0071	$D_M(z_*)$/Gpc	13.9090	13.908 ± 0.033	$f\sigma_8(2.33)$	0.29316	0.2934 ± 0.0035
Ω_m	0.3041	0.3035 ± 0.0071	z_{drag}	1059.93	1059.99 ± 0.53	$\sigma_8(2.33)$	0.30257	0.3028 ± 0.0036
$\Omega_m h^2$	0.14126	0.1412 ± 0.0012	r_{drag}	147.512	147.50 ± 0.38	χ^2_{simall}	395.66	396.9 ± 1.7
$\Omega_m h^3$	0.09629	0.09634 ± 0.00053	k_D	0.14046	0.14050 ± 0.00051	χ^2_{plikTE}	852.94	859.3 ± 3.5
σ_8	0.7939	0.794 ± 0.010	$100\theta_D$	0.160805	0.16077 ± 0.00031	χ^2_{6DF}	0.0002	0.037 ± 0.052
S_8	0.7992	0.799 ± 0.016	z_{eq}	3360.3	3360 ± 29	χ^2_{MGS}	1.75	1.85 ± 0.58
$\sigma_8 \Omega_m^{0.5}$	0.4377	0.4376 ± 0.0087	k_{eq}	0.010256	0.010254 ± 0.000088	$\chi^2_{DR12BAO}$	3.440	3.98 ± 0.86
$\sigma_8 \Omega_m^{0.25}$	0.5895	0.5895 ± 0.0092	$100\theta_{eq}$	0.8213	0.8216 ± 0.0053	χ^2_{prior}	0.45	7.4 ± 3.7
$\sigma_8/h^{0.5}$	0.9616	0.962 ± 0.014	$100\theta_{s,eq}$	0.45353	0.4537 ± 0.0027	χ^2_{BAO}	5.19	5.87 ± 0.94
$r_{drag} h$	100.55	100.62 ± 0.93	$H(0.15)$	73.365	73.42 ± 0.47	χ^2_{CMB}	1248.60	1256.1 ± 3.8
$\langle d^2 \rangle^{1/2}$	2.3945	2.393 ± 0.032	$D_M(0.15)$	636.56	636.1 ± 4.6			

Best-fit $\chi^2_{eff} = 1254.23$; $\bar{\chi}^2_{eff} = 1269.42$; $R - 1 = 0.00891$

χ^2_{eff}: BAO - 6DF: 0.00 MGS: 1.75 DR12BAO: 3.44 CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.66 plik_rd12_HM_v22_TE: 852.93

2.34 base_plikHM_TE_lowE_BAO_post_lensing

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02251 ± 0.00023	$z_{\rm re}$	7.66 ± 0.74	$H(0.38)$	83.28 ± 0.35
$\boldsymbol{\Omega_c h^2}$	0.1189 ± 0.0011	$10^9 A_{\rm s}$	2.087 ± 0.031	$D_{\rm M}(0.38)$	1522.7 ± 9.1
$\boldsymbol{100\theta_{\rm MC}}$	1.04129 ± 0.00045	$10^9 A_{\rm s} e^{-2\tau}$	1.871 ± 0.013	$H(0.51)$	89.97 ± 0.30
$\boldsymbol{\tau}$	0.0547 ± 0.0074	D_{40}	1222 ± 24	$D_{\rm M}(0.51)$	1973 ± 11
$\boldsymbol{\ln(10^{10} A_{\rm s})}$	3.038 ± 0.015	D_{220}	5721 ± 54	$H(0.61)$	95.56 ± 0.26
$\boldsymbol{n_{\rm s}}$	0.9676 ± 0.0098	D_{810}	2529 ± 20	$D_{\rm M}(0.61)$	2297 ± 12
$\boldsymbol{y_{\rm cal}}$	1.0005 ± 0.0025	D_{1420}	815.0 ± 9.8	$H(2.33)$	236.01 ± 0.70
$\boldsymbol{A_{100}^{{\rm dust}TE}}$	0.113 ± 0.038	D_{2000}	230.4 ± 3.6	$D_{\rm M}(2.33)$	5750 ± 13
$\boldsymbol{A_{100\times143}^{{\rm dust}TE}}$	0.136 ± 0.029	$n_{\rm s,0.002}$	0.9676 ± 0.0098	$f\sigma_8(0.15)$	0.4516 ± 0.0064
$\boldsymbol{A_{100\times217}^{{\rm dust}TE}}$	0.479 ± 0.083	$Y_{\rm P}$	0.245446 ± 0.000092	$\sigma_8(0.15)$	0.7449 ± 0.0063
$\boldsymbol{A_{143}^{{\rm dust}TE}}$	0.221 ± 0.055	$Y_{\rm P}^{\rm BBN}$	0.246773 ± 0.000092	$f\sigma_8(0.38)$	0.4707 ± 0.0054
$\boldsymbol{A_{143\times217}^{{\rm dust}TE}}$	0.663 ± 0.082	10^5D/H	2.561 ± 0.042	$\sigma_8(0.38)$	0.6607 ± 0.0056
$\boldsymbol{A_{217}^{{\rm dust}TE}}$	2.06 ± 0.28	Age/Gyr	13.768 ± 0.031	$f\sigma_8(0.51)$	0.4698 ± 0.0049
$\boldsymbol{c_{100}}$	1.00018 ± 0.00069	z_*	1089.65 ± 0.33	$\sigma_8(0.51)$	0.6185 ± 0.0052
$\boldsymbol{c_{217}}$	0.99800 ± 0.00064	r_*	144.61 ± 0.29	$f\sigma_8(0.61)$	0.4652 ± 0.0046
H_0	67.98 ± 0.52	$100\theta_*$	1.04146 ± 0.00044	$\sigma_8(0.61)$	0.5887 ± 0.0050
Ω_Λ	0.6925 ± 0.0067	$D_{\rm M}(z_*)$/Gpc	13.885 ± 0.029	$f\sigma_8(2.33)$	0.2970 ± 0.0026
$\Omega_{\rm m}$	0.3075 ± 0.0067	$z_{\rm drag}$	1060.18 ± 0.52	$\sigma_8(2.33)$	0.3063 ± 0.0027
$\Omega_{\rm m} h^2$	0.1421 ± 0.0011	$r_{\rm drag}$	147.23 ± 0.33	$\chi^2_{\rm lensing}$	10.5 ± 1.8
$\Omega_{\rm m} h^3$	0.09657 ± 0.00050	$k_{\rm D}$	0.14083 ± 0.00047	$\chi^2_{\rm simall}$	397.0 ± 1.7
σ_8	0.8057 ± 0.0070	$100\theta_{\rm D}$	0.16066 ± 0.00031	$\chi^2_{\rm plikTE}$	860.0 ± 3.5
S_8	0.816 ± 0.012	$z_{\rm eq}$	3379 ± 26	$\chi^2_{\rm 6DF}$	0.038 ± 0.052
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4468 ± 0.0068	$k_{\rm eq}$	0.010314 ± 0.000078	$\chi^2_{\rm MGS}$	1.52 ± 0.50
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.5999 ± 0.0067	$100\theta_{\rm eq}$	0.8181 ± 0.0047	$\chi^2_{\rm DR12BAO}$	4.3 ± 1.2
$\sigma_8/h^{0.5}$	0.9772 ± 0.0097	$100\theta_{\rm s,eq}$	0.4518 ± 0.0024	$\chi^2_{\rm prior}$	7.4 ± 3.6
$r_{\rm drag} h$	100.09 ± 0.86	$H(0.15)$	73.23 ± 0.46	$\chi^2_{\rm CMB}$	1267.4 ± 3.8
$\langle d^2 \rangle^{1/2}$	2.421 ± 0.029	$D_{\rm M}(0.15)$	638.1 ± 4.5	$\chi^2_{\rm BAO}$	5.87 ± 0.91

$\bar{\chi}^2_{\rm eff} = 1280.69$; $R - 1 = 0.02724$

2.35 base_plikHM_TE_lowE_BAO_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02246 ± 0.00024	$z_{\rm re}$	$7.43^{+0.27}_{-0.89}$	$H(0.38)$	83.41 ± 0.36
$\boldsymbol{\Omega_c h^2}$	0.1181 ± 0.0012	$10^9 A_{\rm s}$	$2.059^{+0.027}_{-0.036}$	$D_{\rm M}(0.38)$	1518.6 ± 9.4
$\boldsymbol{100\theta_{\rm MC}}$	1.04133 ± 0.00046	$10^9 A_{\rm s} e^{-2\tau}$	1.854 ± 0.017	$H(0.51)$	90.05 ± 0.30
$\boldsymbol{\tau}$	$0.0524^{+0.0034}_{-0.0077}$	D_{40}	1216 ± 23	$D_{\rm M}(0.51)$	1968 ± 11
$\boldsymbol{\ln(10^{10} A_{\rm s})}$	$3.025^{+0.014}_{-0.017}$	D_{220}	5694 ± 56	$H(0.61)$	95.61 ± 0.26
$\boldsymbol{n_{\rm s}}$	0.966 ± 0.010	D_{810}	2508 ± 25	$D_{\rm M}(0.61)$	2292 ± 12
$\boldsymbol{y_{\rm cal}}$	1.0000 ± 0.0025	D_{1420}	807 ± 12	$H(2.33)$	235.44 ± 0.81
$\boldsymbol{A_{100}^{{\rm dust}TE}}$	0.114 ± 0.038	D_{2000}	227.7 ± 4.2	$D_{\rm M}(2.33)$	5750 ± 13
$\boldsymbol{A_{100\times143}^{{\rm dust}TE}}$	0.136 ± 0.030	$n_{\rm s,0.002}$	0.966 ± 0.010	$f\sigma_8(0.15)$	0.4442 ± 0.0080
$\boldsymbol{A_{100\times217}^{{\rm dust}TE}}$	0.477 ± 0.085	$Y_{\rm P}$	0.245428 ± 0.000093	$\sigma_8(0.15)$	$0.7375^{+0.0071}_{-0.0081}$
$\boldsymbol{A_{143}^{{\rm dust}TE}}$	0.221 ± 0.054	$Y_{\rm P}^{\rm BBN}$	0.246754 ± 0.000093	$f\sigma_8(0.38)$	0.4641 ± 0.0069
$\boldsymbol{A_{143\times217}^{{\rm dust}TE}}$	0.659 ± 0.081	10^5D/H	2.570 ± 0.043	$\sigma_8(0.38)$	$0.6546^{+0.0060}_{-0.0070}$
$\boldsymbol{A_{217}^{{\rm dust}TE}}$	2.04 ± 0.27	Age/Gyr	13.768 ± 0.031	$f\sigma_8(0.51)$	0.4636 ± 0.0063
$\boldsymbol{c_{100}}$	1.00017 ± 0.00070	z_*	1089.64 ± 0.33	$\sigma_8(0.51)$	$0.6130^{+0.0056}_{-0.0065}$
$\boldsymbol{c_{217}}$	0.99799 ± 0.00065	r_*	144.85 ± 0.34	$f\sigma_8(0.61)$	0.4594 ± 0.0059
H_0	68.24 ± 0.55	$100\theta_*$	1.04151 ± 0.00045	$\sigma_8(0.61)$	$0.5835^{+0.0053}_{-0.0061}$
Ω_Λ	0.6967 ± 0.0071	$D_{\rm M}(z_*)$/Gpc	13.908 ± 0.033	$f\sigma_8(2.33)$	$0.2945^{+0.0026}_{-0.0031}$
$\Omega_{\rm m}$	0.3033 ± 0.0071	$z_{\rm drag}$	1060.01 ± 0.53	$\sigma_8(2.33)$	$0.3040^{+0.0027}_{-0.0032}$
$\Omega_{\rm m} h^2$	0.1412 ± 0.0012	$r_{\rm drag}$	147.49 ± 0.38	$\chi^2_{\rm simall}$	396.4 ± 1.2
$\Omega_{\rm m} h^3$	0.09636 ± 0.00053	$k_{\rm D}$	0.14051 ± 0.00052	$\chi^2_{\rm plikTE}$	859.3 ± 3.5
σ_8	$0.7972^{+0.0080}_{-0.0090}$	$100\theta_{\rm D}$	0.16076 ± 0.00031	$\chi^2_{\rm 6DF}$	0.038 ± 0.053
S_8	0.802 ± 0.015	$z_{\rm eq}$	3359 ± 29	$\chi^2_{\rm MGS}$	1.87 ± 0.59
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4391 ± 0.0084	$k_{\rm eq}$	0.010252 ± 0.000088	$\chi^2_{\rm DR12BAO}$	3.98 ± 0.86
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.5916 ± 0.0085	$100\theta_{\rm eq}$	0.8217 ± 0.0053	$\chi^2_{\rm prior}$	7.4 ± 3.7
$\sigma_8/h^{0.5}$	0.965 ± 0.012	$100\theta_{\rm s,eq}$	0.4537 ± 0.0028	$\chi^2_{\rm BAO}$	5.89 ± 0.95
$r_{\rm drag} h$	100.65 ± 0.94	$H(0.15)$	73.44 ± 0.48	$\chi^2_{\rm CMB}$	1255.7 ± 3.7
$\langle d^2 \rangle^{1/2}$	2.399 ± 0.030	$D_{\rm M}(0.15)$	635.9 ± 4.6		

$\bar{\chi}^2_{\rm eff} = 1269.00$; $R - 1 = 0.00969$

2.36 base_plikHM_TE_lowE_BAO_post_lensing_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02251 ± 0.00023	$z_{\rm re}$	$7.75^{+0.57}_{-0.78}$	$H(0.38)$	83.29 ± 0.36
$\boldsymbol{\Omega_c h^2}$	0.1189 ± 0.0011	$10^9 A_{\rm s}$	$2.091^{+0.024}_{-0.032}$	$D_{\rm M}(0.38)$	1522.5 ± 9.1
$\boldsymbol{100\theta_{\rm MC}}$	1.04129 ± 0.00045	$10^9 A_{\rm s} e^{-2\tau}$	1.871 ± 0.013	$H(0.51)$	89.97 ± 0.30
$\boldsymbol{\tau}$	$0.0556^{+0.0053}_{-0.0078}$	D_{40}	1222 ± 24	$D_{\rm M}(0.51)$	1973 ± 11
$\boldsymbol{\ln(10^{10} A_{\rm s})}$	$3.040^{+0.012}_{-0.015}$	D_{220}	5720 ± 54	$H(0.61)$	95.56 ± 0.26
$\boldsymbol{n_{\rm s}}$	0.9677 ± 0.0097	D_{810}	2528 ± 20	$D_{\rm M}(0.61)$	2296 ± 12
$\boldsymbol{y_{\rm cal}}$	1.0005 ± 0.0025	D_{1420}	814.9 ± 9.8	$H(2.33)$	236.00 ± 0.70
$\boldsymbol{A^{{\rm dust}TE}_{100}}$	0.113 ± 0.038	D_{2000}	230.4 ± 3.6	$D_{\rm M}(2.33)$	5750 ± 13
$\boldsymbol{A^{{\rm dust}TE}_{100\times143}}$	0.135 ± 0.030	$n_{\rm s,0.002}$	0.9677 ± 0.0097	$f\sigma_8(0.15)$	0.4518 ± 0.0064
$\boldsymbol{A^{{\rm dust}TE}_{100\times217}}$	0.479 ± 0.083	$Y_{\rm P}$	0.245447 ± 0.000092	$\sigma_8(0.15)$	$0.7454^{+0.0055}_{-0.0064}$
$\boldsymbol{A^{{\rm dust}TE}_{143}}$	0.221 ± 0.055	$Y_{\rm P}^{\rm BBN}$	0.246773 ± 0.000093	$f\sigma_8(0.38)$	0.4710 ± 0.0053
$\boldsymbol{A^{{\rm dust}TE}_{143\times217}}$	0.662 ± 0.082	$10^5{\rm D/H}$	2.561 ± 0.042	$\sigma_8(0.38)$	$0.6612^{+0.0048}_{-0.0056}$
$\boldsymbol{A^{{\rm dust}TE}_{217}}$	2.05 ± 0.28	Age/Gyr	13.768 ± 0.031	$f\sigma_8(0.51)$	0.4701 ± 0.0048
$\boldsymbol{c_{100}}$	1.00018 ± 0.00070	z_*	1089.65 ± 0.33	$\sigma_8(0.51)$	$0.6190^{+0.0045}_{-0.0053}$
$\boldsymbol{c_{217}}$	0.99800 ± 0.00064	r_*	144.62 ± 0.29	$f\sigma_8(0.61)$	$0.4655^{+0.0042}_{-0.0047}$
H_0	67.99 ± 0.53	$100\theta_*$	1.04146 ± 0.00044	$\sigma_8(0.61)$	$0.5891^{+0.0043}_{-0.0050}$
Ω_Λ	0.6927 ± 0.0067	$D_{\rm M}(z_*)/{\rm Gpc}$	13.886 ± 0.029	$f\sigma_8(2.33)$	$0.2972^{+0.0022}_{-0.0026}$
$\Omega_{\rm m}$	0.3073 ± 0.0067	$z_{\rm drag}$	1060.18 ± 0.52	$\sigma_8(2.33)$	$0.3066^{+0.0024}_{-0.0027}$
$\Omega_{\rm m}h^2$	0.1420 ± 0.0011	$r_{\rm drag}$	147.23 ± 0.33	$\chi^2_{\rm lensing}$	10.4 ± 1.8
$\Omega_{\rm m}h^3$	0.09657 ± 0.00050	$k_{\rm D}$	0.14082 ± 0.00047	$\chi^2_{\rm simall}$	396.9 ± 1.7
σ_8	$0.8063^{+0.0060}_{-0.0071}$	$100\theta_{\rm D}$	0.16066 ± 0.00031	$\chi^2_{\rm plikTE}$	859.9 ± 3.5
S_8	0.816 ± 0.012	$z_{\rm eq}$	3379 ± 26	$\chi^2_{\rm 6DF}$	0.037 ± 0.052
$\sigma_8\Omega_{\rm m}^{0.5}$	0.4470 ± 0.0068	$k_{\rm eq}$	0.010312 ± 0.000078	$\chi^2_{\rm MGS}$	1.54 ± 0.51
$\sigma_8\Omega_{\rm m}^{0.25}$	0.6003 ± 0.0066	$100\theta_{\rm eq}$	0.8182 ± 0.0047	$\chi^2_{\rm DR12BAO}$	4.3 ± 1.1
$\sigma_8/h^{0.5}$	$0.9778^{+0.0088}_{-0.010}$	$100\theta_{\rm s,eq}$	0.4519 ± 0.0024	$\chi^2_{\rm prior}$	7.4 ± 3.6
$r_{\rm drag}h$	100.11 ± 0.86	$H(0.15)$	73.23 ± 0.46	$\chi^2_{\rm CMB}$	1267.2 ± 3.7
$\langle d^2\rangle^{1/2}$	2.422 ± 0.029	$D_{\rm M}(0.15)$	638.0 ± 4.5	$\chi^2_{\rm BAO}$	5.86 ± 0.91

$\bar{\chi}^2_{\rm eff} = 1280.53$; $R - 1 = 0.02893$

2.37 base_plikHM_EE_lowE_BAO

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02355	0.02347 ± 0.00066	D_{810}	2581.1	2580 ± 34	$H(0.51)$	90.59	90.51 ± 0.60
$\boldsymbol{\Omega_c h^2}$	0.11753	0.1176 ± 0.0014	D_{1420}	838.8	838 ± 15	$D_{\rm M}(0.51)$	1953.7	1956 ± 18
$\boldsymbol{100\theta_{MC}}$	1.03988	1.03987 ± 0.00081	D_{2000}	239.2	238.8 ± 5.5	$H(0.61)$	96.13	96.06 ± 0.56
$\boldsymbol{\tau}$	0.0521	0.0517 ± 0.0084	$n_{\rm s,0.002}$	0.9755	0.9752 ± 0.0098	$D_{\rm M}(0.61)$	2275.0	2278 ± 20
$\boldsymbol{\ln(10^{10} A_s)}$	3.0498	3.049 ± 0.021	$Y_{\rm P}$	0.245885	$0.24584^{+0.00028}_{-0.00023}$	$H(2.33)$	236.02	235.99 ± 0.99
$\boldsymbol{n_s}$	0.9755	0.9752 ± 0.0098	$Y_{\rm P}^{\rm BBN}$	0.247214	$0.24716^{+0.00028}_{-0.00023}$	$D_{\rm M}(2.33)$	5720.6	5724 ± 30
$\boldsymbol{y_{cal}}$	0.99972	1.0000 ± 0.0025	10^5D/H	2.380	$2.40^{+0.10}_{-0.12}$	$f\sigma_8(0.15)$	0.4441	0.4449 ± 0.0098
H_0	68.86	68.76 ± 0.85	Age/Gyr	13.699	13.708 ± 0.069	$\sigma_8(0.15)$	0.7426	0.7427 ± 0.0091
Ω_Λ	0.7011	0.7000 ± 0.0090	z_*	1088.30	1088.42 ± 0.80	$f\sigma_8(0.38)$	0.4651	0.4656 ± 0.0084
$\Omega_{\rm m}$	0.2989	0.3000 ± 0.0090	r_*	144.17	144.21 ± 0.52	$\sigma_8(0.38)$	0.6597	0.6596 ± 0.0078
$\Omega_{\rm m} h^2$	0.14173	0.1417 ± 0.0014	$100\theta_*$	1.03995	1.03994 ± 0.00082	$f\sigma_8(0.51)$	0.4652	0.4656 ± 0.0076
$\Omega_{\rm m} h^3$	0.09759	0.0975 ± 0.0012	$D_{\rm M}(z_*)$/Gpc	13.863	13.867 ± 0.051	$\sigma_8(0.51)$	0.6179	0.6178 ± 0.0072
σ_8	0.8023	0.802 ± 0.010	$z_{\rm drag}$	1062.45	1062.2 ± 1.4	$f\sigma_8(0.61)$	0.4613	0.4616 ± 0.0070
S_8	0.8008	0.802 ± 0.019	$r_{\rm drag}$	146.44	146.52 ± 0.70	$\sigma_8(0.61)$	0.5883	0.5882 ± 0.0069
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4386	0.439 ± 0.010	$k_{\rm D}$	0.14240	0.1423 ± 0.0012	$f\sigma_8(2.33)$	0.29713	0.2970 ± 0.0034
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.5932	0.594 ± 0.010	$100\theta_{\rm D}$	0.15914	$0.15926^{+0.00076}_{-0.00087}$	$\sigma_8(2.33)$	0.30690	0.3068 ± 0.0036
$\sigma_8/h^{0.5}$	0.9668	0.968 ± 0.015	$z_{\rm eq}$	3371.4	3372 ± 33	$\chi^2_{\rm simall}$	395.61	396.8 ± 1.5
$r_{\rm drag} h$	100.84	100.7 ± 1.1	$k_{\rm eq}$	0.010290	0.01029 ± 0.00010	$\chi^2_{\rm plikEE}$	739.04	743.2 ± 2.9
$\langle d^2 \rangle^{1/2}$	2.4015	2.403 ± 0.035	$100\theta_{\rm eq}$	0.8213	0.8211 ± 0.0060	$\chi^2_{\rm 6DF}$	0.0044	0.056 ± 0.078
$z_{\rm re}$	7.17	$7.13^{+0.86}_{-0.76}$	$100\theta_{\rm s,eq}$	0.45266	0.4526 ± 0.0031	$\chi^2_{\rm MGS}$	1.89	1.91 ± 0.71
$10^9 A_{\rm s}$	2.1112	2.110 ± 0.045	$H(0.15)$	74.03	73.94 ± 0.77	$\chi^2_{\rm DR12BAO}$	3.60	4.4 ± 1.2
$10^9 A_{\rm s} e^{-2\tau}$	1.9024	1.902 ± 0.025	$D_{\rm M}(0.15)$	630.5	631.4 ± 7.2	$\chi^2_{\rm prior}$	0.012	1.0 ± 1.5
D_{40}	1231.6	1232 ± 30	$H(0.38)$	83.97	83.89 ± 0.66	$\chi^2_{\rm BAO}$	5.49	6.4 ± 1.3
D_{220}	5898	5891 ± 130	$D_{\rm M}(0.38)$	1506.6	1509 ± 15	$\chi^2_{\rm CMB}$	1134.66	1139.9 ± 3.3

Best-fit $\chi^2_{\rm eff} = 1140.16$; $\bar{\chi}^2_{\rm eff} = 1147.36$; $R - 1 = 0.00786$

$\chi^2_{\rm eff}$: BAO - 6DF: 0.00 MGS: 1.89 DR12BAO: 3.60 CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.61 plik_rd12_HM_v22_EE: 739.04

2.38 base_plikHM_EE_lowE_BAO_post_lensing

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02342 ± 0.00055	D_{1420}	835 ± 12	$H(0.61)$	96.05 ± 0.52
$\boldsymbol{\Omega_c h^2}$	0.1174 ± 0.0014	D_{2000}	237.9 ± 4.4	$D_{\rm M}(0.61)$	2277 ± 19
$\boldsymbol{100\theta_{MC}}$	1.03986 ± 0.00080	$n_{\rm s,0.002}$	0.9744 ± 0.0097	$H(2.33)$	235.79 ± 0.79
$\boldsymbol{\tau}$	0.0509 ± 0.0079	$Y_{\rm P}$	$0.24582^{+0.00025}_{-0.00019}$	$D_{\rm M}(2.33)$	5726 ± 27
$\boldsymbol{\ln(10^{10} A_s)}$	3.045 ± 0.016	$Y_{\rm P}^{\rm BBN}$	$0.24715^{+0.00025}_{-0.00019}$	$f\sigma_8(0.15)$	0.4429 ± 0.0086
$\boldsymbol{n_s}$	0.9744 ± 0.0097	10^5D/H	2.404 ± 0.092	$\sigma_8(0.15)$	0.7405 ± 0.0070
$\boldsymbol{y_{cal}}$	0.99996 ± 0.0024	Age/Gyr	13.712 ± 0.062	$f\sigma_8(0.38)$	0.4638 ± 0.0071
H_0	68.80 ± 0.82	z_*	1088.45 ± 0.70	$\sigma_8(0.38)$	0.6578 ± 0.0060
Ω_Λ	0.7010 ± 0.0087	r_*	144.30 ± 0.38	$f\sigma_8(0.51)$	0.4639 ± 0.0063
$\Omega_{\rm m}$	0.2990 ± 0.0087	$100\theta_*$	1.03994 ± 0.00081	$\sigma_8(0.51)$	0.6161 ± 0.0055
$\Omega_{\rm m}h^2$	0.1415 ± 0.0012	$D_{\rm M}(z_*)$/Gpc	13.876 ± 0.040	$f\sigma_8(0.61)$	0.4599 ± 0.0057
$\Omega_{\rm m}h^3$	0.0973 ± 0.0010	$z_{\rm drag}$	1062.1 ± 1.2	$\sigma_8(0.61)$	0.5866 ± 0.0053
σ_8	0.8000 ± 0.0079	$r_{\rm drag}$	146.63 ± 0.52	$f\sigma_8(2.33)$	0.2963 ± 0.0027
S_8	0.799 ± 0.017	$k_{\rm D}$	0.14211 ± 0.00088	$\sigma_8(2.33)$	0.3060 ± 0.0028
$\sigma_8\Omega_{\rm m}^{0.5}$	0.4374 ± 0.0091	$100\theta_{\rm D}$	0.15932 ± 0.00068	$\chi^2_{\rm lensing}$	9.1 ± 1.1
$\sigma_8\Omega_{\rm m}^{0.25}$	0.5916 ± 0.0086	$z_{\rm eq}$	3365 ± 28	$\chi^2_{\rm simall}$	396.6 ± 1.4
$\sigma_8/h^{0.5}$	0.965 ± 0.013	$k_{\rm eq}$	0.010270 ± 0.000085	$\chi^2_{\rm plikEE}$	742.6 ± 2.6
$r_{\rm drag}h$	100.9 ± 1.1	$100\theta_{\rm eq}$	0.8222 ± 0.0054	$\chi^2_{\rm 6DF}$	0.056 ± 0.078
$\langle d^2\rangle^{1/2}$	2.398 ± 0.030	$100\theta_{\rm s,eq}$	0.4532 ± 0.0027	$\chi^2_{\rm MGS}$	1.99 ± 0.69
$z_{\rm re}$	$7.06^{+0.82}_{-0.74}$	$H(0.15)$	73.97 ± 0.75	$\chi^2_{\rm DR12BAO}$	4.3 ± 1.1
$10^9 A_{\rm s}$	2.101 ± 0.033	$D_{\rm M}(0.15)$	631.1 ± 7.0	$\chi^2_{\rm prior}$	0.9 ± 1.4
$10^9 A_{\rm s}e^{-2\tau}$	1.898 ± 0.017	$H(0.38)$	83.89 ± 0.62	$\chi^2_{\rm CMB}$	1148.4 ± 3.3
D_{40}	1231 ± 28	$D_{\rm M}(0.38)$	1508 ± 15	$\chi^2_{\rm BAO}$	6.4 ± 1.3
D_{220}	5883 ± 110	$H(0.51)$	90.51 ± 0.56		
D_{810}	2574 ± 26	$D_{\rm M}(0.51)$	1956 ± 18		

$\bar{\chi}^2_{\rm eff} = 1155.69$; $R - 1 = 0.01010$

2.39 base_plikHM_EE_lowE_BAO_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02344 ± 0.00065	D_{810}	2579 ± 34	$H(0.51)$	90.49 ± 0.60
$\boldsymbol{\Omega_c h^2}$	0.1176 ± 0.0014	D_{1420}	838 ± 15	$D_{\rm M}(0.51)$	1957 ± 18
$\boldsymbol{100\theta_{MC}}$	1.03987 ± 0.00081	D_{2000}	238.8 ± 5.5	$H(0.61)$	96.05 ± 0.56
$\boldsymbol{\tau}$	$0.0548^{+0.0041}_{-0.0078}$	$n_{\rm s,0.002}$	0.9755 ± 0.0099	$D_{\rm M}(0.61)$	2278 ± 20
$\boldsymbol{\ln(10^{10} A_s)}$	3.055 ± 0.019	$Y_{\rm P}$	$0.24583^{+0.00028}_{-0.00023}$	$H(2.33)$	235.97 ± 0.98
$\boldsymbol{n_s}$	0.9755 ± 0.0099	$Y_{\rm P}^{\rm BBN}$	$0.24715^{+0.00028}_{-0.00023}$	$D_{\rm M}(2.33)$	5726 ± 30
$\boldsymbol{y_{cal}}$	1.0000 ± 0.0025	10^5D/H	$2.40^{+0.10}_{-0.11}$	$f\sigma_8(0.15)$	0.4464 ± 0.0094
H_0	68.74 ± 0.85	Age/Gyr	13.711 ± 0.069	$\sigma_8(0.15)$	$0.7450^{+0.0076}_{-0.0084}$
Ω_Λ	0.6999 ± 0.0090	z_*	1088.45 ± 0.80	$f\sigma_8(0.38)$	0.4671 ± 0.0079
$\Omega_{\rm m}$	0.3001 ± 0.0090	r_*	144.23 ± 0.52	$\sigma_8(0.38)$	$0.6616^{+0.0064}_{-0.0072}$
$\Omega_{\rm m} h^2$	0.1417 ± 0.0014	$100\theta_*$	1.03995 ± 0.00082	$f\sigma_8(0.51)$	0.4671 ± 0.0071
$\Omega_{\rm m} h^3$	0.0974 ± 0.0012	$D_{\rm M}(z_*)$/Gpc	13.869 ± 0.051	$\sigma_8(0.51)$	$0.6197^{+0.0059}_{-0.0067}$
σ_8	0.8050 ± 0.0091	$z_{\rm drag}$	1062.2 ± 1.4	$f\sigma_8(0.61)$	0.4631 ± 0.0065
S_8	0.805 ± 0.018	$r_{\rm drag}$	146.55 ± 0.70	$\sigma_8(0.61)$	$0.5900^{+0.0056}_{-0.0064}$
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4410 ± 0.0099	$k_{\rm D}$	0.1422 ± 0.0012	$f\sigma_8(2.33)$	$0.2979^{+0.0028}_{-0.0032}$
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.5958 ± 0.0096	$100\theta_{\rm D}$	$0.15930^{+0.00076}_{-0.00087}$	$\sigma_8(2.33)$	0.3077 ± 0.0032
$\sigma_8/h^{0.5}$	0.971 ± 0.014	$z_{\rm eq}$	3371 ± 33	$\chi^2_{\rm simall}$	396.5 ± 1.4
$r_{\rm drag} h$	100.7 ± 1.1	$k_{\rm eq}$	0.01029 ± 0.00010	$\chi^2_{\rm plikEE}$	743.2 ± 2.9
$\langle d^2 \rangle^{1/2}$	2.409 ± 0.034	$100\theta_{\rm eq}$	0.8211 ± 0.0059	$\chi^2_{\rm 6DF}$	0.056 ± 0.079
$z_{\rm re}$	$7.45^{+0.32}_{-0.87}$	$100\theta_{\rm s,eq}$	0.4526 ± 0.0031	$\chi^2_{\rm MGS}$	1.90 ± 0.71
$10^9 A_{\rm s}$	2.122 ± 0.040	$H(0.15)$	73.92 ± 0.77	$\chi^2_{\rm DR12BAO}$	4.4 ± 1.2
$10^9 A_{\rm s} e^{-2\tau}$	1.901 ± 0.024	$D_{\rm M}(0.15)$	631.6 ± 7.2	$\chi^2_{\rm prior}$	1.0 ± 1.5
D_{40}	1231 ± 31	$H(0.38)$	83.87 ± 0.66	$\chi^2_{\rm BAO}$	6.4 ± 1.3
D_{220}	5885 ± 130	$D_{\rm M}(0.38)$	1509 ± 15	$\chi^2_{\rm CMB}$	1139.7 ± 3.2

$\bar{\chi}^2_{\rm eff} = 1147.07$; $R - 1 = 0.01186$

2.40 base_plikHM_EE_lowE_BAO_post_lensing_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02337 ± 0.00055	D_{1420}	834 ± 12	$H(0.61)$	96.02 ± 0.51
$\boldsymbol{\Omega_c h^2}$	0.1173 ± 0.0014	D_{2000}	237.6 ± 4.4	$D_{\rm M}(0.61)$	2278 ± 19
$\boldsymbol{100\theta_{MC}}$	1.03988 ± 0.00081	$n_{\rm s,0.002}$	0.9747 ± 0.0099	$H(2.33)$	235.71 ± 0.78
$\boldsymbol{\tau}$	$0.0540^{+0.0036}_{-0.0071}$	$Y_{\rm P}$	$0.24580^{+0.00025}_{-0.00019}$	$D_{\rm M}(2.33)$	5728 ± 27
$\boldsymbol{\ln(10^{10} A_s)}$	3.050 ± 0.013	$Y_{\rm P}^{\rm BBN}$	$0.24713^{+0.00025}_{-0.00019}$	$f\sigma_8(0.15)$	0.4440 ± 0.0083
$\boldsymbol{n_s}$	0.9747 ± 0.0099	10^5D/H	2.413 ± 0.092	$\sigma_8(0.15)$	$0.7425^{+0.0057}_{-0.0064}$
$\boldsymbol{y_{cal}}$	0.9999 ± 0.0024	Age/Gyr	13.717 ± 0.062	$f\sigma_8(0.38)$	0.4650 ± 0.0068
H_0	68.78 ± 0.83	z_*	1088.51 ± 0.70	$\sigma_8(0.38)$	$0.6595^{+0.0048}_{-0.0054}$
Ω_Λ	0.7010 ± 0.0087	r_*	144.36 ± 0.37	$f\sigma_8(0.51)$	0.4651 ± 0.0059
$\Omega_{\rm m}$	0.2990 ± 0.0087	$100\theta_*$	1.03996 ± 0.00081	$\sigma_8(0.51)$	$0.6178^{+0.0045}_{-0.0050}$
$\Omega_{\rm m} h^2$	0.1414 ± 0.0012	$D_{\rm M}(z_*)$/Gpc	13.881 ± 0.039	$f\sigma_8(0.61)$	0.4611 ± 0.0053
$\Omega_{\rm m} h^3$	0.0972 ± 0.0010	$z_{\rm drag}$	1062.0 ± 1.2	$\sigma_8(0.61)$	$0.5882^{+0.0042}_{-0.0047}$
σ_8	0.8021 ± 0.0070	$r_{\rm drag}$	146.70 ± 0.50	$f\sigma_8(2.33)$	0.2971 ± 0.0023
S_8	0.801 ± 0.016	$k_{\rm D}$	0.14199 ± 0.00087	$\sigma_8(2.33)$	0.3069 ± 0.0025
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4386 ± 0.0089	$100\theta_{\rm D}$	0.15939 ± 0.00068	$\chi^2_{\rm lensing}$	9.1 ± 1.1
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.5931 ± 0.0082	$z_{\rm eq}$	3362 ± 28	$\chi^2_{\rm simall}$	396.3 ± 1.1
$\sigma_8 / h^{0.5}$	0.967 ± 0.012	$k_{\rm eq}$	0.010262 ± 0.000084	$\chi^2_{\rm plikEE}$	742.6 ± 2.7
$r_{\rm drag} h$	100.9 ± 1.1	$100\theta_{\rm eq}$	0.8225 ± 0.0054	$\chi^2_{\rm 6DF}$	0.056 ± 0.078
$\langle d^2 \rangle^{1/2}$	2.403 ± 0.029	$100\theta_{\rm s,eq}$	0.4534 ± 0.0026	$\chi^2_{\rm MGS}$	2.01 ± 0.69
$z_{\rm re}$	$7.39^{+0.24}_{-0.87}$	$H(0.15)$	73.94 ± 0.75	$\chi^2_{\rm DR12BAO}$	4.3 ± 1.0
$10^9 A_{\rm s}$	$2.112^{+0.026}_{-0.030}$	$D_{\rm M}(0.15)$	631.3 ± 7.0	$\chi^2_{\rm prior}$	0.9 ± 1.4
$10^9 A_{\rm s} e^{-2\tau}$	1.895 ± 0.017	$H(0.38)$	83.87 ± 0.62	$\chi^2_{\rm CMB}$	1148.1 ± 3.3
D_{40}	1229 ± 28	$D_{\rm M}(0.38)$	1509 ± 15	$\chi^2_{\rm BAO}$	6.4 ± 1.3
D_{220}	5870 ± 110	$H(0.51)$	90.48 ± 0.56		
D_{810}	2571 ± 25	$D_{\rm M}(0.51)$	1956 ± 18		

$\bar{\chi}^2_{\rm eff} = 1155.39$; $R - 1 = 0.01205$

2.41 base_CamSpecHM_TE_lowE_BAO

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022423	0.02242 ± 0.00023	D_{810}	2547.3	2547 ± 25	$H(0.51)$	90.035	90.04 ± 0.30
$\boldsymbol{\Omega_c h^2}$	0.11784	0.1179 ± 0.0012	D_{1420}	824.1	824 ± 12	$D_{\rm M}(0.51)$	1968.0	1968 ± 11
$\boldsymbol{100\theta_{MC}}$	1.041276	1.04131 ± 0.00047	D_{2000}	233.21	233.0 ± 4.2	$H(0.61)$	95.582	95.59 ± 0.26
$\boldsymbol{\tau}$	0.0511	0.0496 ± 0.0084	$n_{\rm s,0.002}$	0.9766	0.976 ± 0.010	$D_{\rm M}(0.61)$	2291.2	2291 ± 12
$\boldsymbol{\ln(10^{10} A_s)}$	3.0345	$3.032^{+0.021}_{-0.018}$	$Y_{\rm P}$	0.245416	0.245412 ± 0.000092	$H(2.33)$	235.22	235.23 ± 0.80
$\boldsymbol{n_s}$	0.9766	0.976 ± 0.010	$Y_{\rm P}^{\rm BBN}$	0.246743	0.246738 ± 0.000092	$D_{\rm M}(2.33)$	5751.7	5751 ± 13
$\boldsymbol{y_{cal}}$	0.99984	0.99996 ± 0.0025	10^5D/H	2.5756	2.577 ± 0.043	$f\sigma_8(0.15)$	0.4471	0.4464 ± 0.0083
H_0	68.28	68.29 ± 0.54	Age/Gyr	13.7724	13.771 ± 0.030	$\sigma_8(0.15)$	0.7435	0.7423 ± 0.0090
Ω_Λ	0.6977	0.6977 ± 0.0069	z_*	1089.664	1089.67 ± 0.32	$f\sigma_8(0.38)$	0.4673	0.4665 ± 0.0074
$\Omega_{\rm m}$	0.3023	0.3023 ± 0.0069	r_*	144.951	144.95 ± 0.34	$\sigma_8(0.38)$	0.6601	0.6590 ± 0.0078
$\Omega_{\rm m} h^2$	0.14091	0.1409 ± 0.0012	$100\theta_*$	1.041451	1.04149 ± 0.00047	$f\sigma_8(0.51)$	0.4670	0.4662 ± 0.0068
$\Omega_{\rm m} h^3$	0.09621	0.09623 ± 0.00052	$D_{\rm M}(z_*)$/Gpc	13.9182	13.918 ± 0.033	$\sigma_8(0.51)$	0.6181	0.6171 ± 0.0073
σ_8	0.8036	0.802 ± 0.010	$z_{\rm drag}$	1059.89	1059.90 ± 0.53	$f\sigma_8(0.61)$	0.4628	0.4621 ± 0.0065
S_8	0.8066	0.805 ± 0.016	$r_{\rm drag}$	147.606	147.61 ± 0.38	$\sigma_8(0.61)$	0.5884	0.5875 ± 0.0069
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4418	0.4411 ± 0.0086	$k_{\rm D}$	0.14036	0.14036 ± 0.00051	$f\sigma_8(2.33)$	0.29706	0.2966 ± 0.0035
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.5958	0.5949 ± 0.0091	$100\theta_{\rm D}$	0.160809	0.16082 ± 0.00031	$\sigma_8(2.33)$	0.30667	0.3062 ± 0.0036
$\sigma_8/h^{0.5}$	0.9725	0.971 ± 0.013	$z_{\rm eq}$	3351.9	3352 ± 29	$\chi^2_{\rm simall}$	395.71	396.8 ± 1.5
$r_{\rm drag} h$	100.78	100.80 ± 0.92	$k_{\rm eq}$	0.010230	0.010231 ± 0.000087	$\chi^2_{\rm CamSpec}$	2576.15	2580.4 ± 2.9
$\langle d^2 \rangle^{1/2}$	2.3882	2.387 ± 0.032	$100\theta_{\rm eq}$	0.8228	0.8228 ± 0.0053	$\chi^2_{\rm 6DF}$	0.0038	0.040 ± 0.054
$z_{\rm re}$	7.31	$7.13^{+0.91}_{-0.73}$	$100\theta_{\rm s,eq}$	0.45432	0.4543 ± 0.0027	$\chi^2_{\rm MGS}$	1.89	1.96 ± 0.58
$10^9 A_{\rm s}$	2.0791	2.074 ± 0.041	$H(0.15)$	73.461	73.47 ± 0.47	$\chi^2_{\rm DR12BAO}$	3.370	3.93 ± 0.78
$10^9 A_{\rm s} e^{-2\tau}$	1.8770	1.877 ± 0.017	$D_{\rm M}(0.15)$	635.59	635.5 ± 4.5	$\chi^2_{\rm prior}$	10.03	11.0 ± 1.4
D_{40}	1203.3	1206 ± 24	$H(0.38)$	83.411	83.42 ± 0.36	$\chi^2_{\rm BAO}$	5.266	5.93 ± 0.98
D_{220}	5710	5715 ± 59	$D_{\rm M}(0.38)$	1518.1	1517.9 ± 9.2	$\chi^2_{\rm CMB}$	2971.85	2977.2 ± 3.3

Best-fit $\chi^2_{\rm eff} = 2987.15$; $\bar{\chi}^2_{\rm eff} = 2994.10$; $R - 1 = 0.00951$

$\chi^2_{\rm eff}$: BAO - 6DF: 0.00 MGS: 1.89 DR12BAO: 3.37 CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.71 CamSpec like_10.7HM_1400_unified: 2576.15

2.42 base_CamSpecHM_TE_lowE_BAO_post_lensing

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02245 ± 0.00023	D_{1420}	827 ± 10	$H(0.61)$	95.58 ± 0.26
$\boldsymbol{\Omega_c h^2}$	0.1181 ± 0.0011	D_{2000}	234.1 ± 3.7	$D_{\rm M}(0.61)$	2292 ± 12
$\boldsymbol{100\theta_{MC}}$	1.04128 ± 0.00046	$n_{\rm s,0.002}$	0.9761 ± 0.0099	$H(2.33)$	235.42 ± 0.72
$\boldsymbol{\tau}$	0.0522 ± 0.0073	$Y_{\rm P}$	$0.245422^{+0.000092}_{-0.000082}$	$D_{\rm M}(2.33)$	5751 ± 13
$\boldsymbol{\ln(10^{10} A_s)}$	3.041 ± 0.015	$Y_{\rm P}^{\rm BBN}$	$0.246749^{+0.000092}_{-0.000083}$	$f\sigma_8(0.15)$	0.4496 ± 0.0062
$\boldsymbol{n_s}$	0.9761 ± 0.0099	10^5D/H	2.572 ± 0.041	$\sigma_8(0.15)$	0.7462 ± 0.0063
$\boldsymbol{y_{cal}}$	1.0002 ± 0.0025	Age/Gyr	13.771 ± 0.030	$f\sigma_8(0.38)$	0.4696 ± 0.0052
H_0	68.21 ± 0.52	z_*	1089.66 ± 0.32	$\sigma_8(0.38)$	0.6623 ± 0.0056
Ω_Λ	0.6965 ± 0.0066	r_*	144.87 ± 0.30	$f\sigma_8(0.51)$	0.4692 ± 0.0047
$\Omega_{\rm m}$	0.3035 ± 0.0066	$100\theta_*$	1.04146 ± 0.00046	$\sigma_8(0.51)$	0.6202 ± 0.0053
$\Omega_{\rm m}h^2$	0.1412 ± 0.0011	$D_{\rm M}(z_*)$/Gpc	13.910 ± 0.030	$f\sigma_8(0.61)$	0.4649 ± 0.0044
$\Omega_{\rm m}h^3$	0.09631 ± 0.00049	$z_{\rm drag}$	1059.98 ± 0.51	$\sigma_8(0.61)$	0.5904 ± 0.0050
σ_8	0.8067 ± 0.0068	$r_{\rm drag}$	147.51 ± 0.33	$f\sigma_8(2.33)$	0.2980 ± 0.0026
S_8	0.811 ± 0.012	$k_{\rm D}$	0.14048 ± 0.00046	$\sigma_8(2.33)$	0.3076 ± 0.0028
$\sigma_8\Omega_{\rm m}^{0.5}$	0.4444 ± 0.0065	$100\theta_{\rm D}$	0.16077 ± 0.00030	$\chi^2_{\rm lensing}$	9.6 ± 1.1
$\sigma_8\Omega_{\rm m}^{0.25}$	0.5987 ± 0.0064	$z_{\rm eq}$	3359 ± 26	$\chi^2_{\rm simall}$	396.6 ± 1.2
$\sigma_8/h^{0.5}$	0.9767 ± 0.0093	$k_{\rm eq}$	0.010251 ± 0.000079	$\chi^2_{\rm CamSpec}$	2580.2 ± 2.7
$r_{\rm drag}h$	100.62 ± 0.87	$100\theta_{\rm eq}$	0.8217 ± 0.0048	$\chi^2_{\rm 6DF}$	0.032 ± 0.044
$\langle d^2\rangle^{1/2}$	2.399 ± 0.028	$100\theta_{\rm s,eq}$	0.4537 ± 0.0025	$\chi^2_{\rm MGS}$	1.85 ± 0.54
$z_{\rm re}$	7.40 ± 0.74	$H(0.15)$	73.41 ± 0.45	$\chi^2_{\rm DR12BAO}$	3.91 ± 0.76
$10^9 A_{\rm s}$	2.092 ± 0.031	$D_{\rm M}(0.15)$	636.1 ± 4.4	$\chi^2_{\rm prior}$	11.0 ± 1.4
$10^9 A_{\rm s}e^{-2\tau}$	1.884 ± 0.013	$H(0.38)$	83.39 ± 0.35	$\chi^2_{\rm CMB}$	2986.4 ± 3.3
D_{40}	1210 ± 24	$D_{\rm M}(0.38)$	1519.1 ± 8.9	$\chi^2_{\rm BAO}$	5.79 ± 0.79
D_{220}	5731 ± 57	$H(0.51)$	90.02 ± 0.29		
D_{810}	2556 ± 20	$D_{\rm M}(0.51)$	1969 ± 11		

$\bar{\chi}^2_{\rm eff} = 3003.21$; $R - 1 = 0.01219$

2.43 base_CamSpecHM_TE_lowE_BAO_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02243 ± 0.00023	D_{810}	2549 ± 25	$H(0.51)$	90.06 ± 0.30
$\boldsymbol{\Omega_c h^2}$	0.1178 ± 0.0012	D_{1420}	824 ± 11	$D_{\rm M}(0.51)$	1967 ± 11
$\boldsymbol{100\theta_{MC}}$	1.04131 ± 0.00047	D_{2000}	233.4 ± 4.2	$H(0.61)$	95.60 ± 0.26
$\boldsymbol{\tau}$	$0.0528^{+0.0036}_{-0.0079}$	$n_{\rm s,0.002}$	0.976 ± 0.010	$D_{\rm M}(0.61)$	2291 ± 12
$\boldsymbol{\ln(10^{10} A_s)}$	$3.038^{+0.014}_{-0.017}$	$Y_{\rm P}$	0.245416 ± 0.000092	$H(2.33)$	235.23 ± 0.80
$\boldsymbol{n_s}$	0.976 ± 0.010	$Y_{\rm P}^{\rm BBN}$	0.246742 ± 0.000092	$D_{\rm M}(2.33)$	5751 ± 13
$\boldsymbol{y_{cal}}$	0.99998 ± 0.0025	10^5D/H	2.575 ± 0.043	$f\sigma_8(0.15)$	0.4478 ± 0.0079
H_0	68.31 ± 0.54	Age/Gyr	13.770 ± 0.030	$\sigma_8(0.15)$	0.7449 ± 0.0076
Ω_Λ	$0.6979^{+0.0074}_{-0.0066}$	z_*	1089.66 ± 0.32	$f\sigma_8(0.38)$	0.4681 ± 0.0068
$\Omega_{\rm m}$	$0.3021^{+0.0066}_{-0.0074}$	r_*	144.95 ± 0.34	$\sigma_8(0.38)$	$0.6613^{+0.0061}_{-0.0070}$
$\Omega_{\rm m} h^2$	0.1409 ± 0.0012	$100\theta_*$	1.04149 ± 0.00047	$f\sigma_8(0.51)$	0.4678 ± 0.0062
$\Omega_{\rm m} h^3$	0.09624 ± 0.00053	$D_{\rm M}(z_*)$/Gpc	13.918 ± 0.033	$\sigma_8(0.51)$	$0.6193^{+0.0056}_{-0.0065}$
σ_8	0.8051 ± 0.0085	$z_{\rm drag}$	1059.92 ± 0.53	$f\sigma_8(0.61)$	0.4636 ± 0.0058
S_8	0.808 ± 0.015	$r_{\rm drag}$	147.60 ± 0.38	$\sigma_8(0.61)$	$0.5895^{+0.0053}_{-0.0061}$
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4425 ± 0.0083	$k_{\rm D}$	0.14037 ± 0.00052	$f\sigma_8(2.33)$	$0.2976^{+0.0026}_{-0.0031}$
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.5968 ± 0.0084	$100\theta_{\rm D}$	0.16081 ± 0.00031	$\sigma_8(2.33)$	$0.3073^{+0.0027}_{-0.0032}$
$\sigma_8/h^{0.5}$	0.974 ± 0.012	$z_{\rm eq}$	3352 ± 29	$\chi^2_{\rm simall}$	396.4 ± 1.0
$r_{\rm drag} h$	100.82 ± 0.92	$k_{\rm eq}$	0.010230 ± 0.000087	$\chi^2_{\rm CamSpec}$	2580.4 ± 2.9
$\langle d^2 \rangle^{1/2}$	2.393 ± 0.030	$100\theta_{\rm eq}$	0.8229 ± 0.0053	$\chi^2_{\rm 6DF}$	0.040 ± 0.055
$z_{\rm re}$	$7.46^{+0.35}_{-0.85}$	$100\theta_{\rm s,eq}$	0.4544 ± 0.0027	$\chi^2_{\rm MGS}$	1.98 ± 0.59
$10^9 A_{\rm s}$	$2.087^{+0.028}_{-0.036}$	$H(0.15)$	73.49 ± 0.47	$\chi^2_{\rm DR12BAO}$	3.92 ± 0.78
$10^9 A_{\rm s} e^{-2\tau}$	1.878 ± 0.017	$D_{\rm M}(0.15)$	635.4 ± 4.5	$\chi^2_{\rm prior}$	11.0 ± 1.4
D_{40}	1206 ± 24	$H(0.38)$	83.43 ± 0.36	$\chi^2_{\rm BAO}$	5.94 ± 0.99
D_{220}	5716 ± 59	$D_{\rm M}(0.38)$	1517.6 ± 9.2	$\chi^2_{\rm CMB}$	2976.8 ± 3.1

$\bar{\chi}^2_{\rm eff} = 2993.70$; $R - 1 = 0.01568$

2.44 base_CamSpecHM_TE_lowE_BAO_post_lensing_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02245 ± 0.00022	D_{1420}	827 ± 10	$H(0.61)$	95.59 ± 0.26
$\boldsymbol{\Omega_c h^2}$	0.1180 ± 0.0011	D_{2000}	234.1 ± 3.7	$D_{\rm M}(0.61)$	2292 ± 11
$\boldsymbol{100\theta_{MC}}$	1.04128 ± 0.00046	$n_{\rm s,0.002}$	0.9763 ± 0.0099	$H(2.33)$	235.38 ± 0.71
$\boldsymbol{\tau}$	$0.0538^{+0.0047}_{-0.0074}$	$Y_{\rm P}$	$0.245423^{+0.000091}_{-0.000082}$	$D_{\rm M}(2.33)$	5751 ± 13
$\boldsymbol{\ln(10^{10} A_s)}$	$3.043^{+0.012}_{-0.014}$	$Y_{\rm P}^{\rm BBN}$	$0.246749^{+0.000091}_{-0.000083}$	$f\sigma_8(0.15)$	0.4499 ± 0.0061
$\boldsymbol{n_s}$	0.9763 ± 0.0099	10^5D/H	2.572 ± 0.041	$\sigma_8(0.15)$	0.7471 ± 0.0057
$\boldsymbol{y_{cal}}$	1.0002 ± 0.0024	Age/Gyr	13.770 ± 0.030	$f\sigma_8(0.38)$	0.4700 ± 0.0051
H_0	68.24 ± 0.51	z_*	1089.65 ± 0.32	$\sigma_8(0.38)$	$0.6632^{+0.0048}_{-0.0054}$
Ω_Λ	0.6968 ± 0.0065	r_*	144.88 ± 0.29	$f\sigma_8(0.51)$	0.4696 ± 0.0046
$\Omega_{\rm m}$	0.3032 ± 0.0065	$100\theta_*$	1.04146 ± 0.00046	$\sigma_8(0.51)$	$0.6210^{+0.0045}_{-0.0051}$
$\Omega_{\rm m}h^2$	0.1411 ± 0.0011	$D_{\rm M}(z_*)$/Gpc	13.911 ± 0.029	$f\sigma_8(0.61)$	0.4653 ± 0.0042
$\Omega_{\rm m}h^3$	0.09630 ± 0.00049	$z_{\rm drag}$	1059.97 ± 0.50	$\sigma_8(0.61)$	$0.5912^{+0.0043}_{-0.0049}$
σ_8	0.8076 ± 0.0063	$r_{\rm drag}$	147.53 ± 0.33	$f\sigma_8(2.33)$	$0.2984^{+0.0022}_{-0.0025}$
S_8	0.812 ± 0.012	$k_{\rm D}$	0.14047 ± 0.00046	$\sigma_8(2.33)$	$0.3080^{+0.0023}_{-0.0027}$
$\sigma_8\Omega_{\rm m}^{0.5}$	0.4447 ± 0.0065	$100\theta_{\rm D}$	0.16077 ± 0.00030	$\chi^2_{\rm lensing}$	9.5 ± 1.0
$\sigma_8\Omega_{\rm m}^{0.25}$	0.5993 ± 0.0062	$z_{\rm eq}$	3357 ± 26	$\chi^2_{\rm simall}$	396.5 ± 1.1
$\sigma_8/h^{0.5}$	0.9777 ± 0.0089	$k_{\rm eq}$	0.010246 ± 0.000078	$\chi^2_{\rm CamSpec}$	2580.1 ± 2.7
$r_{\rm drag}h$	100.67 ± 0.86	$100\theta_{\rm eq}$	0.8220 ± 0.0048	$\chi^2_{\rm 6DF}$	0.032 ± 0.044
$\langle d^2 \rangle^{1/2}$	2.401 ± 0.027	$100\theta_{\rm s,eq}$	0.4539 ± 0.0025	$\chi^2_{\rm MGS}$	1.88 ± 0.54
$z_{\rm re}$	$7.57^{+0.51}_{-0.74}$	$H(0.15)$	73.43 ± 0.45	$\chi^2_{\rm DR12BAO}$	3.88 ± 0.72
$10^9 A_{\rm s}$	$2.098^{+0.024}_{-0.030}$	$D_{\rm M}(0.15)$	635.9 ± 4.3	$\chi^2_{\rm prior}$	11.0 ± 1.4
$10^9 A_{\rm s} e^{-2\tau}$	1.884 ± 0.013	$H(0.38)$	83.40 ± 0.35	$\chi^2_{\rm CMB}$	2986.1 ± 3.1
D_{40}	1209 ± 24	$D_{\rm M}(0.38)$	1518.7 ± 8.9	$\chi^2_{\rm BAO}$	5.79 ± 0.80
D_{220}	5730 ± 57	$H(0.51)$	90.03 ± 0.29		
D_{810}	2555 ± 20	$D_{\rm M}(0.51)$	1969 ± 11		

$\bar{\chi}^2_{\rm eff} = 3002.87$; $R - 1 = 0.01685$

2.45 base_CamSpecHM_EE_lowE_BAO

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02359	$0.02355^{+0.00060}_{-0.00067}$	D_{810}	2607.3	2605 ± 33	$H(0.51)$	90.47	90.45 ± 0.58
$\boldsymbol{\Omega_c h^2}$	0.11770	0.1178 ± 0.0014	D_{1420}	845.0	844 ± 14	$D_{\rm M}(0.51)$	1957.7	1958 ± 18
$\boldsymbol{100\theta_{MC}}$	1.03937	1.03946 ± 0.00079	D_{2000}	240.8	240.4 ± 5.3	$H(0.61)$	96.03	$96.01^{+0.51}_{-0.57}$
$\boldsymbol{\tau}$	0.0511	0.0511 ± 0.0081	$n_{\rm s,0.002}$	0.9701	0.9702 ± 0.0094	$D_{\rm M}(0.61)$	2279.5	2280 ± 20
$\boldsymbol{\ln(10^{10} A_s)}$	3.0603	3.059 ± 0.021	$Y_{\rm P}$	0.245904	$0.24587^{+0.00026}_{-0.00023}$	$H(2.33)$	236.12	236.12 ± 0.99
$\boldsymbol{n_s}$	0.9701	0.9702 ± 0.0094	$Y_{\rm P}^{\rm BBN}$	0.247232	$0.24720^{+0.00026}_{-0.00023}$	$D_{\rm M}(2.33)$	5725.6	5727 ± 29
$\boldsymbol{y_{cal}}$	1.00012	1.0001 ± 0.0025	10^5D/H	2.373	2.38 ± 0.10	$f\sigma_8(0.15)$	0.4469	0.4472 ± 0.0096
H_0	68.66	68.64 ± 0.83	Age/Gyr	13.710	13.713 ± 0.067	$\sigma_8(0.15)$	0.7447	0.7447 ± 0.0088
Ω_Λ	0.6989	0.6986 ± 0.0089	z_*	1088.26	1088.34 ± 0.77	$f\sigma_8(0.38)$	0.4675	0.4676 ± 0.0082
$\Omega_{\rm m}$	0.3011	0.3014 ± 0.0089	r_*	144.09	144.11 ± 0.52	$\sigma_8(0.38)$	0.6613	0.6612 ± 0.0075
$\Omega_{\rm m} h^2$	0.14194	0.1419 ± 0.0014	$100\theta_*$	1.03943	1.03952 ± 0.00080	$f\sigma_8(0.51)$	0.4673	0.4674 ± 0.0074
$\Omega_{\rm m} h^3$	0.09746	0.0974 ± 0.0012	$D_{\rm M}(z_*)$/Gpc	13.862	13.863 ± 0.051	$\sigma_8(0.51)$	0.6193	0.6193 ± 0.0069
σ_8	0.8048	0.8048 ± 0.0098	$z_{\rm drag}$	1062.57	1062.4 ± 1.4	$f\sigma_8(0.61)$	0.4632	0.4633 ± 0.0068
S_8	0.8062	0.807 ± 0.018	$r_{\rm drag}$	146.35	146.39 ± 0.69	$\sigma_8(0.61)$	0.5896	0.5895 ± 0.0066
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4416	0.442 ± 0.010	$k_{\rm D}$	0.14253	0.1424 ± 0.0011	$f\sigma_8(2.33)$	0.29769	0.2977 ± 0.0033
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.5961	0.596 ± 0.010	$100\theta_{\rm D}$	0.15901	0.15910 ± 0.00079	$\sigma_8(2.33)$	0.30738	0.3073 ± 0.0034
$\sigma_8/h^{0.5}$	0.9712	0.972 ± 0.015	$z_{\rm eq}$	3376.6	3377 ± 33	$\chi^2_{\rm simall}$	395.59	396.7 ± 1.4
$r_{\rm drag} h$	100.49	100.5 ± 1.1	$k_{\rm eq}$	0.010306	0.01031 ± 0.00010	$\chi^2_{\rm CamSpec}$	1886.67	1890.8 ± 2.8
$\langle d^2 \rangle^{1/2}$	2.4275	2.427 ± 0.035	$100\theta_{\rm eq}$	0.8201	0.8201 ± 0.0060	$\chi^2_{\rm 6DF}$	0.0000	0.053 ± 0.073
$z_{\rm re}$	7.07	$7.06^{+0.84}_{-0.73}$	$100\theta_{\rm s,eq}$	0.45198	0.4520 ± 0.0031	$\chi^2_{\rm MGS}$	1.68	1.75 ± 0.68
$10^9 A_{\rm s}$	2.1333	2.132 ± 0.044	$H(0.15)$	73.86	73.84 ± 0.75	$\chi^2_{\rm DR12BAO}$	3.85	4.6 ± 1.4
$10^9 A_{\rm s} e^{-2\tau}$	1.9260	1.924 ± 0.024	$D_{\rm M}(0.15)$	632.1	632.4 ± 7.1	$\chi^2_{\rm prior}$	10.03	11.0 ± 1.4
D_{40}	1260.4	1259 ± 30	$H(0.38)$	83.83	83.81 ± 0.64	$\chi^2_{\rm BAO}$	5.52	6.4 ± 1.3
D_{220}	6001	5991 ± 130	$D_{\rm M}(0.38)$	1510.0	1511 ± 15	$\chi^2_{\rm CMB}$	2282.26	2287.4 ± 3.2

Best-fit $\chi^2_{\rm eff} = 2297.82$; $\bar{\chi}^2_{\rm eff} = 2304.89$; $R - 1 = 0.00669$

$\chi^2_{\rm eff}$: BAO - 6DF: 0.00 MGS: 1.68 DR12BAO: 3.85 CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.59 CamSpec like_10.7HM_1400_unified: 1886.67

2.46 base_CamSpecHM_EE_lowE_BAO_post_lensing

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02326 ± 0.00054	D_{1420}	835 ± 11	$H(0.61)$	95.86 ± 0.50
$\boldsymbol{\Omega_c h^2}$	0.1172 ± 0.0014	D_{2000}	237.0 ± 4.2	$D_{\rm M}(0.61)$	2282 ± 19
$\boldsymbol{100\theta_{MC}}$	1.03953 ± 0.00079	$n_{\rm s,0.002}$	0.9690 ± 0.0093	$H(2.33)$	235.46 ± 0.80
$\boldsymbol{\tau}$	$0.0485^{+0.0079}_{-0.0069}$	$Y_{\rm P}$	0.24576 ± 0.00022	$D_{\rm M}(2.33)$	5737 ± 26
$\boldsymbol{\ln(10^{10} A_s)}$	$3.045^{+0.016}_{-0.014}$	$Y_{\rm P}^{\rm BBN}$	0.24708 ± 0.00022	$f\sigma_8(0.15)$	0.4423 ± 0.0085
$\boldsymbol{n_s}$	0.9690 ± 0.0093	10^5D/H	2.432 ± 0.092	$\sigma_8(0.15)$	0.7385 ± 0.0068
$\boldsymbol{y_{cal}}$	0.9998 ± 0.0025	Age/Gyr	13.737 ± 0.061	$f\sigma_8(0.38)$	0.4629 ± 0.0070
H_0	68.62 ± 0.81	z_*	1088.62 ± 0.69	$\sigma_8(0.38)$	0.6559 ± 0.0058
Ω_Λ	0.7002 ± 0.0087	r_*	144.48 ± 0.38	$f\sigma_8(0.51)$	0.4629 ± 0.0062
$\Omega_{\rm m}$	0.2998 ± 0.0087	$100\theta_*$	1.03963 ± 0.00080	$\sigma_8(0.51)$	0.6144 ± 0.0054
$\Omega_{\rm m}h^2$	0.1411 ± 0.0012	$D_{\rm M}(z_*)$/Gpc	13.897 ± 0.040	$f\sigma_8(0.61)$	0.4589 ± 0.0056
$\Omega_{\rm m}h^3$	0.09682 ± 0.00098	$z_{\rm drag}$	1061.7 ± 1.2	$\sigma_8(0.61)$	0.5849 ± 0.0051
σ_8	0.7979 ± 0.0077	$r_{\rm drag}$	146.86 ± 0.51	$f\sigma_8(2.33)$	0.2954 ± 0.0026
S_8	0.798 ± 0.016	$k_{\rm D}$	0.14175 ± 0.00087	$\sigma_8(2.33)$	0.3051 ± 0.0027
$\sigma_8\Omega_{\rm m}^{0.5}$	0.4369 ± 0.0090	$100\theta_{\rm D}$	0.15948 ± 0.00068	$\chi^2_{\rm lensing}$	9.3 ± 1.4
$\sigma_8\Omega_{\rm m}^{0.25}$	0.5904 ± 0.0085	$z_{\rm eq}$	3356 ± 28	$\chi^2_{\rm simall}$	396.7 ± 1.4
$\sigma_8/h^{0.5}$	0.963 ± 0.013	$k_{\rm eq}$	0.010244 ± 0.000086	$\chi^2_{\rm CamSpec}$	1890.9 ± 2.7
$r_{\rm drag}h$	100.8 ± 1.1	$100\theta_{\rm eq}$	0.8230 ± 0.0054	$\chi^2_{\rm 6DF}$	0.052 ± 0.072
$\langle d^2\rangle^{1/2}$	2.408 ± 0.029	$100\theta_{\rm s,eq}$	0.4538 ± 0.0027	$\chi^2_{\rm MGS}$	1.93 ± 0.68
$z_{\rm re}$	$6.85^{+0.86}_{-0.70}$	$H(0.15)$	73.79 ± 0.73	$\chi^2_{\rm DR12BAO}$	4.3 ± 1.1
$10^9 A_{\rm s}$	$2.101^{+0.033}_{-0.029}$	$D_{\rm M}(0.15)$	632.7 ± 6.9	$\chi^2_{\rm prior}$	11.0 ± 1.4
$10^9 A_{\rm s} e^{-2\tau}$	1.906 ± 0.017	$H(0.38)$	83.71 ± 0.61	$\chi^2_{\rm CMB}$	2296.9 ± 3.2
D_{40}	1249 ± 27	$D_{\rm M}(0.38)$	1512 ± 14	$\chi^2_{\rm BAO}$	6.3 ± 1.2
D_{220}	5930 ± 110	$H(0.51)$	90.32 ± 0.55		
D_{810}	2582 ± 25	$D_{\rm M}(0.51)$	1960 ± 17		

$\bar{\chi}^2_{\rm eff} = 2314.19$; $R - 1 = 0.00959$

2.47 base_CamSpecHM_EE_lowE_BAO_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	$0.02353^{+0.00060}_{-0.00067}$	D_{810}	2603 ± 33	$H(0.51)$	90.44 ± 0.58
$\boldsymbol{\Omega_c h^2}$	0.1177 ± 0.0014	D_{1420}	843 ± 14	$D_{\rm M}(0.51)$	1959 ± 18
$\boldsymbol{100\theta_{MC}}$	1.03946 ± 0.00079	D_{2000}	240.3 ± 5.2	$H(0.61)$	96.00 ± 0.54
$\boldsymbol{\tau}$	$0.0543^{+0.0037}_{-0.0072}$	$n_{\rm s,0.002}$	0.9704 ± 0.0093	$D_{\rm M}(0.61)$	2281 ± 20
$\boldsymbol{\ln(10^{10} A_s)}$	$3.065^{+0.017}_{-0.018}$	$Y_{\rm P}$	$0.24586^{+0.00026}_{-0.00023}$	$H(2.33)$	236.09 ± 0.98
$\boldsymbol{n_s}$	0.9704 ± 0.0093	$Y_{\rm P}^{\rm BBN}$	$0.24719^{+0.00026}_{-0.00023}$	$D_{\rm M}(2.33)$	5727 ± 29
$\boldsymbol{y_{cal}}$	1.0001 ± 0.0024	10^5D/H	2.39 ± 0.11	$f\sigma_8(0.15)$	0.4486 ± 0.0093
H_0	68.63 ± 0.83	Age/Gyr	13.715 ± 0.067	$\sigma_8(0.15)$	0.7470 ± 0.0078
Ω_Λ	0.6985 ± 0.0089	z_*	1088.36 ± 0.77	$f\sigma_8(0.38)$	0.4691 ± 0.0078
$\Omega_{\rm m}$	0.3015 ± 0.0089	r_*	144.13 ± 0.52	$\sigma_8(0.38)$	0.6633 ± 0.0066
$\Omega_{\rm m} h^2$	0.1419 ± 0.0014	$100\theta_*$	1.03952 ± 0.00080	$f\sigma_8(0.51)$	0.4689 ± 0.0070
$\Omega_{\rm m} h^3$	0.0974 ± 0.0012	$D_{\rm M}(z_*)$/Gpc	13.865 ± 0.051	$\sigma_8(0.51)$	0.6212 ± 0.0061
σ_8	0.8073 ± 0.0089	$z_{\rm drag}$	1062.4 ± 1.4	$f\sigma_8(0.61)$	0.4647 ± 0.0064
S_8	0.809 ± 0.018	$r_{\rm drag}$	146.42 ± 0.69	$\sigma_8(0.61)$	0.5914 ± 0.0058
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4432 ± 0.0098	$k_{\rm D}$	0.1424 ± 0.0011	$f\sigma_8(2.33)$	$0.2986^{+0.0027}_{-0.0030}$
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.5982 ± 0.0095	$100\theta_{\rm D}$	0.15912 ± 0.00080	$\sigma_8(2.33)$	$0.3083^{+0.0028}_{-0.0031}$
$\sigma_8/h^{0.5}$	0.975 ± 0.014	$z_{\rm eq}$	3376 ± 33	$\chi^2_{\rm simall}$	396.4 ± 1.3
$r_{\rm drag} h$	100.5 ± 1.1	$k_{\rm eq}$	0.01030 ± 0.00010	$\chi^2_{\rm CamSpec}$	1890.7 ± 2.8
$\langle d^2 \rangle^{1/2}$	2.434 ± 0.033	$100\theta_{\rm eq}$	0.8202 ± 0.0059	$\chi^2_{\rm 6DF}$	0.052 ± 0.071
$z_{\rm re}$	$7.39^{+0.30}_{-0.81}$	$100\theta_{\rm s,eq}$	0.4521 ± 0.0030	$\chi^2_{\rm MGS}$	1.75 ± 0.67
$10^9 A_{\rm s}$	$2.144^{+0.035}_{-0.040}$	$H(0.15)$	73.82 ± 0.75	$\chi^2_{\rm DR12BAO}$	4.6 ± 1.4
$10^9 A_{\rm s} e^{-2\tau}$	1.923 ± 0.024	$D_{\rm M}(0.15)$	632.5 ± 7.0	$\chi^2_{\rm prior}$	11.0 ± 1.3
D_{40}	1259 ± 30	$H(0.38)$	83.80 ± 0.63	$\chi^2_{\rm BAO}$	6.4 ± 1.2
D_{220}	5986 ± 130	$D_{\rm M}(0.38)$	1511 ± 15	$\chi^2_{\rm CMB}$	2287.1 ± 3.1

$\bar{\chi}^2_{\rm eff} = 2304.51$; $R - 1 = 0.01190$

2.48 base_CamSpecHM_EE_lowE_BAO_post_lensing_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02319 ± 0.00053	D_{1420}	833 ± 11	$H(0.61)$	95.82 ± 0.49
$\boldsymbol{\Omega_c h^2}$	0.1171 ± 0.0014	D_{2000}	236.5 ± 4.1	$D_{\rm M}(0.61)$	2283 ± 19
$\boldsymbol{100\theta_{MC}}$	1.03953 ± 0.00077	$n_{\rm s,0.002}$	0.9695 ± 0.0092	$H(2.33)$	235.33 ± 0.77
$\boldsymbol{\tau}$	$0.0526^{+0.0034}_{-0.0061}$	$Y_{\rm P}$	0.24573 ± 0.00022	$D_{\rm M}(2.33)$	5739 ± 25
$\boldsymbol{\ln(10^{10} A_s)}$	$3.051^{+0.011}_{-0.013}$	$Y_{\rm P}^{\rm BBN}$	0.24706 ± 0.00022	$f\sigma_8(0.15)$	0.4435 ± 0.0083
$\boldsymbol{n_s}$	0.9695 ± 0.0092	10^5D/H	2.443 ± 0.091	$\sigma_8(0.15)$	0.7409 ± 0.0059
$\boldsymbol{y_{cal}}$	0.9997 ± 0.0024	Age/Gyr	13.744 ± 0.059	$f\sigma_8(0.38)$	0.4643 ± 0.0068
H_0	68.61 ± 0.80	z_*	1088.69 ± 0.69	$\sigma_8(0.38)$	0.6580 ± 0.0049
Ω_Λ	0.7005 ± 0.0086	r_*	144.56 ± 0.37	$f\sigma_8(0.51)$	0.4643 ± 0.0059
$\Omega_{\rm m}$	0.2995 ± 0.0086	$100\theta_*$	1.03963 ± 0.00078	$\sigma_8(0.51)$	0.6164 ± 0.0045
$\Omega_{\rm m}h^2$	0.1409 ± 0.0012	$D_{\rm M}(z_*)$/Gpc	13.905 ± 0.038	$f\sigma_8(0.61)$	0.4603 ± 0.0053
$\Omega_{\rm m}h^3$	0.09667 ± 0.00094	$z_{\rm drag}$	1061.6 ± 1.2	$\sigma_8(0.61)$	$0.5868^{+0.0039}_{-0.0044}$
σ_8	0.8005 ± 0.0068	$r_{\rm drag}$	146.96 ± 0.49	$f\sigma_8(2.33)$	$0.2964^{+0.0019}_{-0.0022}$
S_8	0.800 ± 0.016	$k_{\rm D}$	0.14159 ± 0.00085	$\sigma_8(2.33)$	$0.3061^{+0.0021}_{-0.0024}$
$\sigma_8\Omega_{\rm m}^{0.5}$	0.4381 ± 0.0089	$100\theta_{\rm D}$	0.15957 ± 0.00067	$\chi^2_{\rm lensing}$	9.4 ± 1.5
$\sigma_8\Omega_{\rm m}^{0.25}$	0.5922 ± 0.0082	$z_{\rm eq}$	3352 ± 28	$\chi^2_{\rm simall}$	396.15 ± 0.81
$\sigma_8/h^{0.5}$	0.966 ± 0.012	$k_{\rm eq}$	0.010231 ± 0.000084	$\chi^2_{\rm CamSpec}$	1890.9 ± 2.8
$r_{\rm drag}h$	100.8 ± 1.1	$100\theta_{\rm eq}$	0.8236 ± 0.0054	$\chi^2_{\rm 6DF}$	0.052 ± 0.071
$\langle d^2\rangle^{1/2}$	2.414 ± 0.028	$100\theta_{\rm s,eq}$	0.4541 ± 0.0026	$\chi^2_{\rm MGS}$	1.96 ± 0.67
$z_{\rm re}$	< 7.49	$H(0.15)$	73.77 ± 0.72	$\chi^2_{\rm DR12BAO}$	4.3 ± 1.0
$10^9 A_{\rm s}$	$2.114^{+0.023}_{-0.027}$	$D_{\rm M}(0.15)$	632.8 ± 6.8	$\chi^2_{\rm prior}$	11.0 ± 1.3
$10^9 A_{\rm s} e^{-2\tau}$	1.903 ± 0.016	$H(0.38)$	83.68 ± 0.60	$\chi^2_{\rm CMB}$	2296.5 ± 3.2
D_{40}	1246 ± 27	$D_{\rm M}(0.38)$	1512 ± 14	$\chi^2_{\rm BAO}$	6.3 ± 1.2
D_{220}	5914 ± 110	$H(0.51)$	90.29 ± 0.53		
D_{810}	2577 ± 24	$D_{\rm M}(0.51)$	1961 ± 17		

$\bar{\chi}^2_{\rm eff} = 2313.75$; $R - 1 = 0.00861$

2.49 base_plikHM_TE_lowE_lensing

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02246 ± 0.00025	$\langle d^2 \rangle^{1/2}$	2.427 ± 0.034	$H(0.15)$	73.00 ± 0.67
$\boldsymbol{\Omega_c h^2}$	0.1195 ± 0.0017	$z_{\rm re}$	$7.53^{+0.79}_{-0.71}$	$D_{\rm M}(0.15)$	640.3 ± 6.6
$\boldsymbol{100\theta_{MC}}$	1.04120 ± 0.00049	$10^9 A_{\rm s}$	2.083 ± 0.032	$H(0.38)$	83.12 ± 0.50
$\boldsymbol{\tau}$	0.0533 ± 0.0077	$10^9 A_{\rm s} e^{-2\tau}$	1.872 ± 0.014	$D_{\rm M}(0.38)$	1527 ± 13
$\boldsymbol{\ln(10^{10} A_{\rm s})}$	3.036 ± 0.015	D_{40}	1224 ± 25	$H(0.51)$	89.84 ± 0.41
$\boldsymbol{n_{\rm s}}$	0.966 ± 0.011	D_{220}	5716 ± 56	$D_{\rm M}(0.51)$	1978 ± 16
$\boldsymbol{y_{\rm cal}}$	1.0004 ± 0.0025	D_{810}	2527 ± 22	$H(0.61)$	$95.46^{+0.32}_{-0.35}$
$\boldsymbol{A^{{\rm dust}TE}_{100}}$	0.114 ± 0.038	D_{1420}	814 ± 11	$D_{\rm M}(0.61)$	2302 ± 17
$\boldsymbol{A^{{\rm dust}TE}_{100\times143}}$	0.136 ± 0.029	D_{2000}	229.9 ± 4.0	$H(2.33)$	236.3 ± 1.0
$\boldsymbol{A^{{\rm dust}TE}_{100\times217}}$	0.478 ± 0.085	$n_{\rm s,0.002}$	0.966 ± 0.011	$D_{\rm M}(2.33)$	5755 ± 16
$\boldsymbol{A^{{\rm dust}TE}_{143}}$	0.223 ± 0.054	$Y_{\rm P}$	0.24543 ± 0.00010	$f\sigma_8(0.15)$	0.4542 ± 0.0085
$\boldsymbol{A^{{\rm dust}TE}_{143\times217}}$	0.662 ± 0.080	$Y_{\rm P}^{\rm BBN}$	0.24675 ± 0.00010	$\sigma_8(0.15)$	0.7450 ± 0.0063
$\boldsymbol{A^{{\rm dust}TE}_{217}}$	2.06 ± 0.27	10^5D/H	2.570 ± 0.046	$f\sigma_8(0.38)$	0.4725 ± 0.0066
$\boldsymbol{c_{100}}$	1.00017 ± 0.00070	Age/Gyr	13.777 ± 0.037	$\sigma_8(0.38)$	0.6604 ± 0.0056
$\boldsymbol{c_{217}}$	0.99800 ± 0.00065	z_*	1089.76 ± 0.40	$f\sigma_8(0.51)$	0.4712 ± 0.0057
H_0	67.71 ± 0.78	r_*	144.50 ± 0.38	$\sigma_8(0.51)$	0.6181 ± 0.0053
Ω_Λ	0.689 ± 0.010	$100\theta_*$	1.04138 ± 0.00048	$f\sigma_8(0.61)$	0.4663 ± 0.0051
$\Omega_{\rm m}$	0.311 ± 0.010	$D_{\rm M}(z_*)$/Gpc	13.876 ± 0.037	$\sigma_8(0.61)$	0.5881 ± 0.0051
$\Omega_{\rm m} h^2$	0.1426 ± 0.0016	$z_{\rm drag}$	1060.11 ± 0.53	$f\sigma_8(2.33)$	0.2966 ± 0.0027
$\Omega_{\rm m} h^3$	0.09654 ± 0.00051	$r_{\rm drag}$	147.13 ± 0.40	$\sigma_8(2.33)$	0.3058 ± 0.0030
σ_8	0.8062 ± 0.0070	$k_{\rm D}$	0.14089 ± 0.00049	$\chi^2_{\rm lensing}$	10.4 ± 1.8
S_8	0.821 ± 0.017	$100\theta_{\rm D}$	0.16070 ± 0.00031	$\chi^2_{\rm simall}$	396.8 ± 1.5
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4496 ± 0.0092	$z_{\rm eq}$	3392 ± 38	$\chi^2_{\rm plikTE}$	860.7 ± 3.7
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.6020 ± 0.0081	$k_{\rm eq}$	0.01035 ± 0.00012	$\chi^2_{\rm prior}$	7.4 ± 3.7
$\sigma_8 / h^{0.5}$	0.980 ± 0.011	$100\theta_{\rm eq}$	0.8157 ± 0.0072	$\chi^2_{\rm CMB}$	1268.0 ± 4.1
$r_{\rm drag} h$	99.6 ± 1.3	$100\theta_{\rm s,eq}$	0.4506 ± 0.0037		

$\bar{\chi}^2_{\rm eff} = 1275.40$; $R - 1 = 0.00470$

2.50 base_plikHM_TE_lowE_lensing_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02247 ± 0.00025	$\langle d^2 \rangle^{1/2}$	2.429 ± 0.033	$H(0.15)$	73.03 ± 0.66
$\boldsymbol{\Omega_c h^2}$	0.1194 ± 0.0017	$z_{\rm re}$	$7.68^{+0.55}_{-0.76}$	$D_{\rm M}(0.15)$	640.0 ± 6.5
$\boldsymbol{100\theta_{MC}}$	1.04121 ± 0.00049	$10^9 A_{\rm s}$	$2.088^{+0.025}_{-0.032}$	$H(0.38)$	83.14 ± 0.50
$\boldsymbol{\tau}$	$0.0547^{+0.0052}_{-0.0077}$	$10^9 A_{\rm s} e^{-2\tau}$	1.871 ± 0.014	$D_{\rm M}(0.38)$	1527 ± 13
$\boldsymbol{\ln(10^{10} A_{\rm s})}$	$3.039^{+0.012}_{-0.015}$	D_{40}	1223 ± 25	$H(0.51)$	$89.86^{+0.37}_{-0.42}$
$\boldsymbol{n_{\rm s}}$	0.966 ± 0.011	D_{220}	5715 ± 56	$D_{\rm M}(0.51)$	1978 ± 15
$\boldsymbol{y_{\rm cal}}$	1.0004 ± 0.0025	D_{810}	2526 ± 22	$H(0.61)$	$95.47^{+0.31}_{-0.35}$
$\boldsymbol{A_{100}^{{\rm dust}TE}}$	0.114 ± 0.038	D_{1420}	814 ± 11	$D_{\rm M}(0.61)$	2301 ± 17
$\boldsymbol{A_{100\times143}^{{\rm dust}TE}}$	0.136 ± 0.030	D_{2000}	229.9 ± 4.0	$H(2.33)$	236.26 ± 0.99
$\boldsymbol{A_{100\times217}^{{\rm dust}TE}}$	0.478 ± 0.085	$n_{\rm s,0.002}$	0.966 ± 0.011	$D_{\rm M}(2.33)$	5754 ± 16
$\boldsymbol{A_{143}^{{\rm dust}TE}}$	0.222 ± 0.055	$Y_{\rm P}$	0.24543 ± 0.00010	$f\sigma_8(0.15)$	0.4542 ± 0.0085
$\boldsymbol{A_{143\times217}^{{\rm dust}TE}}$	0.662 ± 0.080	$Y_{\rm P}^{\rm BBN}$	0.24676 ± 0.00010	$\sigma_8(0.15)$	$0.7457^{+0.0056}_{-0.0062}$
$\boldsymbol{A_{217}^{{\rm dust}TE}}$	2.06 ± 0.27	10^5D/H	2.569 ± 0.046	$f\sigma_8(0.38)$	0.4727 ± 0.0066
$\boldsymbol{c_{100}}$	1.00017 ± 0.00070	Age/Gyr	13.776 ± 0.036	$\sigma_8(0.38)$	$0.6612^{+0.0048}_{-0.0055}$
$\boldsymbol{c_{217}}$	0.99800 ± 0.00065	z_*	1089.75 ± 0.40	$f\sigma_8(0.51)$	0.4714 ± 0.0057
H_0	67.76 ± 0.77	r_*	144.52 ± 0.38	$\sigma_8(0.51)$	$0.6188^{+0.0045}_{-0.0053}$
Ω_Λ	0.689 ± 0.010	$100\theta_*$	1.04138 ± 0.00048	$f\sigma_8(0.61)$	0.4665 ± 0.0050
$\Omega_{\rm m}$	0.311 ± 0.010	$D_{\rm M}(z_*)$/Gpc	13.878 ± 0.036	$\sigma_8(0.61)$	$0.5888^{+0.0043}_{-0.0051}$
$\Omega_{\rm m} h^2$	0.1425 ± 0.0015	$z_{\rm drag}$	1060.11 ± 0.53	$f\sigma_8(2.33)$	$0.2969^{+0.0022}_{-0.0027}$
$\Omega_{\rm m} h^3$	0.09653 ± 0.00050	$r_{\rm drag}$	147.16 ± 0.39	$\sigma_8(2.33)$	$0.3062^{+0.0025}_{-0.0030}$
σ_8	0.8069 ± 0.0067	$k_{\rm D}$	0.14087 ± 0.00048	$\chi^2_{\rm lensing}$	10.3 ± 1.8
S_8	0.821 ± 0.017	$100\theta_{\rm D}$	0.16070 ± 0.00031	$\chi^2_{\rm simall}$	396.8 ± 1.5
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4496 ± 0.0092	$z_{\rm eq}$	3389 ± 37	$\chi^2_{\rm plikTE}$	860.6 ± 3.7
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.6023 ± 0.0080	$k_{\rm eq}$	0.01034 ± 0.00011	$\chi^2_{\rm prior}$	7.5 ± 3.7
$\sigma_8 / h^{0.5}$	0.980 ± 0.011	$100\theta_{\rm eq}$	0.8162 ± 0.0070	$\chi^2_{\rm CMB}$	1267.7 ± 4.0
$r_{\rm drag} h$	99.7 ± 1.3	$100\theta_{\rm s,eq}$	0.4508 ± 0.0036		

$\bar{\chi}^2_{\rm eff} = 1275.15$; $R - 1 = 0.00477$

2.51 base_plikHM_EE_lowE_lensing

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.0240 ± 0.0010	D_{220}	5969 ± 170	$H(0.38)$	$84.8^{+1.4}_{-1.6}$
$\boldsymbol{\Omega_c h^2}$	0.1155 ± 0.0031	D_{810}	2590 ± 35	$D_{\rm M}(0.38)$	1487 ± 34
$\boldsymbol{100\theta_{MC}}$	1.03998 ± 0.00082	D_{1420}	844 ± 17	$H(0.51)$	$91.3^{+1.2}_{-1.4}$
$\boldsymbol{\tau}$	$0.0528^{+0.0086}_{-0.0077}$	D_{2000}	241.3 ± 6.6	$D_{\rm M}(0.51)$	1930 ± 41
$\boldsymbol{\ln(10^{10} A_s)}$	3.052 ± 0.019	$n_{\rm s,0.002}$	0.980 ± 0.013	$H(0.61)$	$96.7^{+1.0}_{-1.2}$
$\boldsymbol{n_s}$	0.980 ± 0.013	$Y_{\rm P}$	0.24605 ± 0.00039	$D_{\rm M}(0.61)$	2250 ± 45
$\boldsymbol{y_{cal}}$	0.99996 ± 0.0026	$Y_{\rm P}^{\rm BBN}$	0.24738 ± 0.00040	$H(2.33)$	235.2 ± 1.2
H_0	70.0 ± 2.0	10^5D/H	2.31 ± 0.16	$D_{\rm M}(2.33)$	5693 ± 54
Ω_Λ	$0.713^{+0.022}_{-0.019}$	Age/Gyr	13.64 ± 0.12	$f\sigma_8(0.15)$	0.432 ± 0.018
$\Omega_{\rm m}$	$0.287^{+0.019}_{-0.022}$	z_*	1087.7 ± 1.3	$\sigma_8(0.15)$	$0.7368^{+0.0086}_{-0.0077}$
$\Omega_{\rm m} h^2$	0.1402 ± 0.0023	r_*	144.33 ± 0.40	$f\sigma_8(0.38)$	0.455 ± 0.014
$\Omega_{\rm m} h^3$	$0.0982^{+0.0015}_{-0.0016}$	$100\theta_*$	1.04000 ± 0.00081	$\sigma_8(0.38)$	0.6560 ± 0.0062
σ_8	$0.795^{+0.011}_{-0.0097}$	$D_{\rm M}(z_*)$/Gpc	13.878 ± 0.040	$f\sigma_8(0.51)$	$0.456^{+0.013}_{-0.011}$
S_8	0.777 ± 0.036	$z_{\rm drag}$	1063.3 ± 2.0	$\sigma_8(0.51)$	0.6151 ± 0.0055
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.425 ± 0.020	$r_{\rm drag}$	146.47 ± 0.55	$f\sigma_8(0.61)$	$0.454^{+0.011}_{-0.0098}$
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.581 ± 0.017	$k_{\rm D}$	0.1426 ± 0.0011	$\sigma_8(0.61)$	0.5860 ± 0.0052
$\sigma_8 / h^{0.5}$	0.950 ± 0.024	$100\theta_{\rm D}$	$0.1587^{+0.0010}_{-0.0011}$	$f\sigma_8(2.33)$	0.2965 ± 0.0027
$r_{\rm drag} h$	102.6 ± 2.8	$z_{\rm eq}$	3335 ± 54	$\sigma_8(2.33)$	0.3069 ± 0.0032
$\langle d^2 \rangle^{1/2}$	2.372 ± 0.048	$k_{\rm eq}$	0.01018 ± 0.00017	$\chi^2_{\rm lensing}$	9.2 ± 1.1
$z_{\rm re}$	$7.10^{+0.83}_{-0.68}$	$100\theta_{\rm eq}$	0.830 ± 0.013	$\chi^2_{\rm simall}$	396.6 ± 1.3
$10^9 A_{\rm s}$	2.115 ± 0.040	$100\theta_{\rm s,eq}$	0.4566 ± 0.0059	$\chi^2_{\rm plikEE}$	742.9 ± 2.6
$10^9 A_{\rm s} e^{-2\tau}$	1.903 ± 0.019	$H(0.15)$	75.1 ± 1.8	$\chi^2_{\rm prior}$	1.0 ± 1.5
D_{40}	1231 ± 27	$D_{\rm M}(0.15)$	621 ± 16	$\chi^2_{\rm CMB}$	1148.7 ± 3.4

$\bar{\chi}^2_{\rm eff} = 1149.74$; $R - 1 = 0.00580$

2.52 base_plikHM_EE_lowE_lensing_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.0240 ± 0.0010	D_{220}	5967 ± 170	$H(0.38)$	84.9 ± 1.5
$\boldsymbol{\Omega_c h^2}$	0.1152 ± 0.0030	D_{810}	2589 ± 35	$D_{\rm M}(0.38)$	1485 ± 34
$\boldsymbol{100\theta_{MC}}$	1.04001 ± 0.00082	D_{1420}	844 ± 17	$H(0.51)$	91.4 ± 1.3
$\boldsymbol{\tau}$	$0.0558^{+0.0047}_{-0.0074}$	D_{2000}	241.3 ± 6.6	$D_{\rm M}(0.51)$	1928 ± 41
$\boldsymbol{\ln(10^{10} A_s)}$	3.057 ± 0.016	$n_{\rm s,0.002}$	0.981 ± 0.013	$H(0.61)$	$96.8^{+1.1}_{-1.2}$
$\boldsymbol{n_s}$	0.981 ± 0.013	$Y_{\rm P}$	0.24605 ± 0.00040	$D_{\rm M}(0.61)$	2247 ± 45
$\boldsymbol{y_{cal}}$	0.9999 ± 0.0026	$Y_{\rm P}^{\rm BBN}$	0.24738 ± 0.00040	$H(2.33)$	235.0 ± 1.2
H_0	70.2 ± 2.0	10^5D/H	$2.31^{+0.15}_{-0.17}$	$D_{\rm M}(2.33)$	5692 ± 54
Ω_Λ	$0.715^{+0.022}_{-0.019}$	Age/Gyr	13.64 ± 0.12	$f\sigma_8(0.15)$	0.431 ± 0.018
$\Omega_{\rm m}$	$0.285^{+0.019}_{-0.022}$	z_*	$1087.6^{+1.3}_{-1.4}$	$\sigma_8(0.15)$	$0.7381^{+0.0083}_{-0.0074}$
$\Omega_{\rm m} h^2$	0.1399 ± 0.0022	r_*	144.39 ± 0.38	$f\sigma_8(0.38)$	0.455 ± 0.014
$\Omega_{\rm m} h^3$	0.0981 ± 0.0016	$100\theta_*$	1.04002 ± 0.00080	$\sigma_8(0.38)$	0.6573 ± 0.0057
σ_8	$0.796^{+0.011}_{-0.0095}$	$D_{\rm M}(z_*)$/Gpc	13.883 ± 0.039	$f\sigma_8(0.51)$	0.457 ± 0.012
S_8	0.776 ± 0.036	$z_{\rm drag}$	1063.3 ± 2.0	$\sigma_8(0.51)$	0.6164 ± 0.0050
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.425 ± 0.020	$r_{\rm drag}$	146.53 ± 0.54	$f\sigma_8(0.61)$	$0.454^{+0.011}_{-0.010}$
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.581 ± 0.017	$k_{\rm D}$	0.1426 ± 0.0011	$\sigma_8(0.61)$	0.5873 ± 0.0046
$\sigma_8/h^{0.5}$	0.951 ± 0.024	$100\theta_{\rm D}$	$0.15872^{+0.00099}_{-0.0011}$	$f\sigma_8(2.33)$	$0.2972^{+0.0022}_{-0.0025}$
$r_{\rm drag} h$	102.8 ± 2.7	$z_{\rm eq}$	3328 ± 53	$\sigma_8(2.33)$	0.3078 ± 0.0029
$\langle d^2 \rangle^{1/2}$	2.373 ± 0.048	$k_{\rm eq}$	0.01016 ± 0.00016	$\chi^2_{\rm lensing}$	9.2 ± 1.1
$z_{\rm re}$	$7.40^{+0.35}_{-0.76}$	$100\theta_{\rm eq}$	0.831 ± 0.012	$\chi^2_{\rm simall}$	396.3 ± 1.1
$10^9 A_{\rm s}$	$2.126^{+0.033}_{-0.036}$	$100\theta_{\rm s,eq}$	0.4573 ± 0.0057	$\chi^2_{\rm plikEE}$	742.9 ± 2.6
$10^9 A_{\rm s} e^{-2\tau}$	1.901 ± 0.019	$H(0.15)$	75.2 ± 1.8	$\chi^2_{\rm prior}$	1.0 ± 1.5
D_{40}	1229 ± 27	$D_{\rm M}(0.15)$	620 ± 16	$\chi^2_{\rm CMB}$	1148.3 ± 3.2

$\bar{\chi}^2_{\rm eff} = 1149.40$; $R - 1 = 0.00683$

2.53 base_CamSpecHM_TE_lowE_lensing

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02248 ± 0.00026	D_{220}	5734 ± 57	$H(0.38)$	83.46 ± 0.51
$\boldsymbol{\Omega_c h^2}$	0.1179 ± 0.0017	D_{810}	2557 ± 22	$D_{\rm M}(0.38)$	1517 ± 13
$\boldsymbol{100\theta_{MC}}$	1.04130 ± 0.00049	D_{1420}	827 ± 11	$H(0.51)$	90.08 ± 0.41
$\boldsymbol{\tau}$	0.0527 ± 0.0078	D_{2000}	234.3 ± 4.0	$D_{\rm M}(0.51)$	1967 ± 16
$\boldsymbol{\ln(10^{10} A_s)}$	3.041 ± 0.015	$n_{\rm s,0.002}$	0.977 ± 0.011	$H(0.61)$	95.63 ± 0.35
$\boldsymbol{n_s}$	0.977 ± 0.011	$Y_{\rm P}$	0.24543 ± 0.00010	$D_{\rm M}(0.61)$	2290 ± 17
$\boldsymbol{y_{cal}}$	1.0001 ± 0.0025	$Y_{\rm P}^{\rm BBN}$	0.24676 ± 0.00010	$H(2.33)$	235.3 ± 1.0
H_0	68.33 ± 0.78	10^5D/H	2.567 ± 0.047	$D_{\rm M}(2.33)$	5749 ± 16
Ω_Λ	0.698 ± 0.010	Age/Gyr	13.766 ± 0.037	$f\sigma_8(0.15)$	0.4484 ± 0.0085
$\Omega_{\rm m}$	0.302 ± 0.010	z_*	1089.61 ± 0.40	$\sigma_8(0.15)$	0.7459 ± 0.0064
$\Omega_{\rm m} h^2$	0.1410 ± 0.0016	r_*	144.91 ± 0.39	$f\sigma_8(0.38)$	0.4687 ± 0.0067
$\Omega_{\rm m} h^3$	0.09632 ± 0.00052	$100\theta_*$	1.04147 ± 0.00049	$\sigma_8(0.38)$	0.6622 ± 0.0057
σ_8	0.8062 ± 0.0071	$D_{\rm M}(z_*)$/Gpc	13.914 ± 0.037	$f\sigma_8(0.51)$	0.4684 ± 0.0058
S_8	0.809 ± 0.017	$z_{\rm drag}$	1060.02 ± 0.55	$\sigma_8(0.51)$	0.6202 ± 0.0054
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4431 ± 0.0092	$r_{\rm drag}$	147.54 ± 0.40	$f\sigma_8(0.61)$	0.4642 ± 0.0052
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.5977 ± 0.0081	$k_{\rm D}$	0.14047 ± 0.00050	$\sigma_8(0.61)$	0.5904 ± 0.0051
$\sigma_8/h^{0.5}$	0.975 ± 0.011	$100\theta_{\rm D}$	0.16075 ± 0.00032	$f\sigma_8(2.33)$	0.2981 ± 0.0027
$r_{\rm drag} h$	100.8 ± 1.3	$z_{\rm eq}$	3354 ± 37	$\sigma_8(2.33)$	0.3077 ± 0.0030
$\langle d^2 \rangle^{1/2}$	2.396 ± 0.034	$k_{\rm eq}$	0.01024 ± 0.00011	$\chi^2_{\rm lensing}$	9.7 ± 1.3
$z_{\rm re}$	$7.44^{+0.82}_{-0.71}$	$100\theta_{\rm eq}$	0.8227 ± 0.0072	$\chi^2_{\rm simall}$	396.7 ± 1.3
$10^9 A_{\rm s}$	2.093 ± 0.032	$100\theta_{\rm s,eq}$	0.4542 ± 0.0037	$\chi^2_{\rm CamSpec}$	2580.7 ± 2.9
$10^9 A_{\rm s} e^{-2\tau}$	1.884 ± 0.014	$H(0.15)$	73.51 ± 0.67	$\chi^2_{\rm prior}$	11.0 ± 1.5
D_{40}	1208 ± 25	$D_{\rm M}(0.15)$	635.2 ± 6.5	$\chi^2_{\rm CMB}$	2987.1 ± 3.4

$\bar{\chi}^2_{\rm eff} = 2998.15$; $R - 1 = 0.00781$

2.54 base_CamSpecHM_TE_lowE_lensing_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02248 ± 0.00026	D_{220}	5732 ± 57	$H(0.38)$	83.49 ± 0.50
$\boldsymbol{\Omega_c h^2}$	0.1177 ± 0.0016	D_{810}	2556 ± 22	$D_{\rm M}(0.38)$	1516 ± 13
$\boldsymbol{100\theta_{MC}}$	1.04131 ± 0.00049	D_{1420}	827 ± 11	$H(0.51)$	90.11 ± 0.41
$\boldsymbol{\tau}$	$0.0544^{+0.0048}_{-0.0080}$	D_{2000}	234.4 ± 4.0	$D_{\rm M}(0.51)$	1966 ± 15
$\boldsymbol{\ln(10^{10} A_s)}$	$3.044^{+0.012}_{-0.015}$	$n_{\rm s,0.002}$	0.977 ± 0.011	$H(0.61)$	95.65 ± 0.35
$\boldsymbol{n_s}$	0.977 ± 0.011	$Y_{\rm P}$	0.24544 ± 0.00010	$D_{\rm M}(0.61)$	2289 ± 17
$\boldsymbol{y_{cal}}$	1.0001 ± 0.0025	$Y_{\rm P}^{\rm BBN}$	0.24676 ± 0.00010	$H(2.33)$	235.22 ± 0.98
H_0	68.38 ± 0.77	10^5D/H	2.566 ± 0.047	$D_{\rm M}(2.33)$	5748 ± 16
Ω_Λ	0.6986 ± 0.0098	Age/Gyr	13.765 ± 0.037	$f\sigma_8(0.15)$	0.4485 ± 0.0085
$\Omega_{\rm m}$	0.3014 ± 0.0098	z_*	1089.59 ± 0.40	$\sigma_8(0.15)$	0.7468 ± 0.0059
$\Omega_{\rm m} h^2$	0.1409 ± 0.0015	r_*	144.93 ± 0.38	$f\sigma_8(0.38)$	0.4689 ± 0.0067
$\Omega_{\rm m} h^3$	0.09632 ± 0.00052	$100\theta_*$	1.04148 ± 0.00049	$\sigma_8(0.38)$	$0.6631^{+0.0049}_{-0.0054}$
σ_8	0.8071 ± 0.0067	$D_{\rm M}(z_*)$/Gpc	13.916 ± 0.036	$f\sigma_8(0.51)$	0.4687 ± 0.0058
S_8	0.809 ± 0.017	$z_{\rm drag}$	1060.03 ± 0.55	$\sigma_8(0.51)$	$0.6211^{+0.0046}_{-0.0052}$
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4431 ± 0.0092	$r_{\rm drag}$	147.57 ± 0.40	$f\sigma_8(0.61)$	0.4646 ± 0.0052
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.5980 ± 0.0081	$k_{\rm D}$	0.14045 ± 0.00050	$\sigma_8(0.61)$	$0.5912^{+0.0044}_{-0.0050}$
$\sigma_8/h^{0.5}$	0.976 ± 0.011	$100\theta_{\rm D}$	0.16074 ± 0.00032	$f\sigma_8(2.33)$	$0.2985^{+0.0023}_{-0.0026}$
$r_{\rm drag} h$	100.9 ± 1.3	$z_{\rm eq}$	3351 ± 37	$\sigma_8(2.33)$	$0.3082^{+0.0025}_{-0.0029}$
$\langle d^2 \rangle^{1/2}$	2.397 ± 0.033	$k_{\rm eq}$	0.01023 ± 0.00011	$\chi^2_{\rm lensing}$	9.7 ± 1.2
$z_{\rm re}$	$7.62^{+0.52}_{-0.78}$	$100\theta_{\rm eq}$	0.8233 ± 0.0071	$\chi^2_{\rm simall}$	396.6 ± 1.3
$10^9 A_{\rm s}$	$2.100^{+0.025}_{-0.032}$	$100\theta_{\rm s,eq}$	0.4545 ± 0.0036	$\chi^2_{\rm CamSpec}$	2580.6 ± 2.9
$10^9 A_{\rm s} e^{-2\tau}$	1.883 ± 0.014	$H(0.15)$	73.56 ± 0.67	$\chi^2_{\rm prior}$	11.0 ± 1.5
D_{40}	1207 ± 25	$D_{\rm M}(0.15)$	634.8 ± 6.5	$\chi^2_{\rm CMB}$	2986.8 ± 3.3

$\bar{\chi}^2_{\rm eff} = 2997.86$; $R - 1 = 0.00847$

2.55 base_CamSpecHM_EE_lowE_lensing

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02359 ± 0.00095	D_{220}	5980 ± 160	$H(0.38)$	84.2 ± 1.4
$\boldsymbol{\Omega_c h^2}$	0.1162 ± 0.0030	D_{810}	2591 ± 34	$D_{\rm M}(0.38)$	1501 ± 33
$\boldsymbol{100\theta_{MC}}$	1.03954 ± 0.00084	D_{1420}	839 ± 17	$H(0.51)$	$90.7^{+1.1}_{-1.3}$
$\boldsymbol{\tau}$	$0.0487^{+0.0090}_{-0.0079}$	D_{2000}	238.8 ± 6.3	$D_{\rm M}(0.51)$	1947 ± 39
$\boldsymbol{\ln(10^{10} A_s)}$	3.047 ± 0.019	$n_{\rm s,0.002}$	0.972 ± 0.012	$H(0.61)$	$96.24^{+0.99}_{-1.1}$
$\boldsymbol{n_s}$	0.972 ± 0.012	$Y_{\rm P}$	0.24588 ± 0.00038	$D_{\rm M}(0.61)$	2268 ± 43
$\boldsymbol{y_{cal}}$	0.9999 ± 0.0024	$Y_{\rm P}^{\rm BBN}$	0.24721 ± 0.00038	$H(2.33)$	235.1 ± 1.2
H_0	69.3 ± 1.9	10^5D/H	$2.38^{+0.15}_{-0.17}$	$D_{\rm M}(2.33)$	5719 ± 51
Ω_Λ	$0.707^{+0.022}_{-0.019}$	Age/Gyr	13.70 ± 0.12	$f\sigma_8(0.15)$	0.436 ± 0.018
$\Omega_{\rm m}$	$0.293^{+0.019}_{-0.022}$	z_*	1088.2 ± 1.3	$\sigma_8(0.15)$	$0.7357^{+0.0087}_{-0.0077}$
$\Omega_{\rm m} h^2$	0.1404 ± 0.0022	r_*	144.49 ± 0.41	$f\sigma_8(0.38)$	0.458 ± 0.014
$\Omega_{\rm m} h^3$	0.0973 ± 0.0015	$100\theta_*$	1.03960 ± 0.00082	$\sigma_8(0.38)$	$0.6542^{+0.0066}_{-0.0059}$
σ_8	$0.794^{+0.011}_{-0.0097}$	$D_{\rm M}(z_*)$/Gpc	13.899 ± 0.041	$f\sigma_8(0.51)$	0.458 ± 0.012
S_8	0.785 ± 0.035	$z_{\rm drag}$	1062.4 ± 1.9	$\sigma_8(0.51)$	0.6131 ± 0.0057
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.430 ± 0.019	$r_{\rm drag}$	146.77 ± 0.54	$f\sigma_8(0.61)$	0.455 ± 0.010
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.584 ± 0.016	$k_{\rm D}$	0.1420 ± 0.0011	$\sigma_8(0.61)$	0.5839 ± 0.0054
$\sigma_8/h^{0.5}$	0.954 ± 0.024	$100\theta_{\rm D}$	$0.15915^{+0.00099}_{-0.0011}$	$f\sigma_8(2.33)$	0.2952 ± 0.0028
$r_{\rm drag} h$	101.7 ± 2.7	$z_{\rm eq}$	3340 ± 54	$\sigma_8(2.33)$	0.3052 ± 0.0033
$\langle d^2 \rangle^{1/2}$	2.392 ± 0.046	$k_{\rm eq}$	0.01019 ± 0.00016	$\chi^2_{\rm lensing}$	9.4 ± 1.4
$z_{\rm re}$	$6.77^{+0.92}_{-0.70}$	$100\theta_{\rm eq}$	0.827 ± 0.012	$\chi^2_{\rm simall}$	396.8 ± 1.7
$10^9 A_{\rm s}$	2.105 ± 0.040	$100\theta_{\rm s,eq}$	0.4556 ± 0.0057	$\chi^2_{\rm CamSpec}$	1891.5 ± 2.9
$10^9 A_{\rm s} e^{-2\tau}$	1.910 ± 0.018	$H(0.15)$	74.4 ± 1.7	$\chi^2_{\rm prior}$	11.0 ± 1.3
D_{40}	1249 ± 27	$D_{\rm M}(0.15)$	627 ± 16	$\chi^2_{\rm CMB}$	2297.7 ± 3.6

$\bar{\chi}^2_{\rm eff} = 2308.71$; $R - 1 = 0.00642$

2.56 base_CamSpecHM_EE_lowE_lensing_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02360 ± 0.00095	D_{220}	5975 ± 160	$H(0.38)$	$84.3^{+1.3}_{-1.5}$
$\boldsymbol{\Omega_c h^2}$	0.1158 ± 0.0029	D_{810}	2589 ± 34	$D_{\rm M}(0.38)$	1498 ± 33
$\boldsymbol{100\theta_{MC}}$	1.03956 ± 0.00083	D_{1420}	839 ± 17	$H(0.51)$	$90.8^{+1.1}_{-1.3}$
$\boldsymbol{\tau}$	$0.0535^{+0.0039}_{-0.0071}$	D_{2000}	238.8 ± 6.3	$D_{\rm M}(0.51)$	1944 ± 39
$\boldsymbol{\ln(10^{10} A_s)}$	$3.055^{+0.014}_{-0.017}$	$n_{\rm s,0.002}$	0.973 ± 0.012	$H(0.61)$	$96.28^{+0.97}_{-1.1}$
$\boldsymbol{n_s}$	0.973 ± 0.012	$Y_{\rm P}$	0.24588 ± 0.00038	$D_{\rm M}(0.61)$	2265 ± 43
$\boldsymbol{y_{cal}}$	0.9998 ± 0.0024	$Y_{\rm P}^{\rm BBN}$	0.24721 ± 0.00038	$H(2.33)$	234.9 ± 1.2
H_0	$69.4^{+1.8}_{-2.0}$	10^5D/H	2.38 ± 0.16	$D_{\rm M}(2.33)$	5718^{+54}_{-49}
Ω_Λ	0.709 ± 0.020	Age/Gyr	13.70 ± 0.12	$f\sigma_8(0.15)$	0.436 ± 0.018
$\Omega_{\rm m}$	0.291 ± 0.020	z_*	1088.1 ± 1.3	$\sigma_8(0.15)$	$0.7380^{+0.0079}_{-0.0071}$
$\Omega_{\rm m} h^2$	0.1400 ± 0.0022	r_*	144.58 ± 0.39	$f\sigma_8(0.38)$	0.458 ± 0.014
$\Omega_{\rm m} h^3$	$0.0972^{+0.0014}_{-0.0016}$	$100\theta_*$	1.03962 ± 0.00081	$\sigma_8(0.38)$	0.6565 ± 0.0054
σ_8	$0.796^{+0.010}_{-0.0092}$	$D_{\rm M}(z_*)$/Gpc	13.907 ± 0.039	$f\sigma_8(0.51)$	$0.459^{+0.012}_{-0.011}$
S_8	0.785 ± 0.035	$z_{\rm drag}$	1062.4 ± 1.9	$\sigma_8(0.51)$	0.6153 ± 0.0048
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.430 ± 0.019	$r_{\rm drag}$	146.86 ± 0.53	$f\sigma_8(0.61)$	$0.456^{+0.011}_{-0.0093}$
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.585 ± 0.016	$k_{\rm D}$	0.1419 ± 0.0011	$\sigma_8(0.61)$	0.5861 ± 0.0044
$\sigma_8/h^{0.5}$	0.956 ± 0.023	$100\theta_{\rm D}$	0.1592 ± 0.0010	$f\sigma_8(2.33)$	$0.2964^{+0.0022}_{-0.0024}$
$r_{\rm drag} h$	102.0 ± 2.6	$z_{\rm eq}$	3331 ± 52	$\sigma_8(2.33)$	0.3065 ± 0.0028
$\langle d^2 \rangle^{1/2}$	2.396 ± 0.046	$k_{\rm eq}$	0.01017 ± 0.00016	$\chi^2_{\rm lensing}$	9.4 ± 1.5
$z_{\rm re}$	< 7.45	$100\theta_{\rm eq}$	0.829 ± 0.012	$\chi^2_{\rm simall}$	396.18 ± 0.94
$10^9 A_{\rm s}$	$2.122^{+0.029}_{-0.035}$	$100\theta_{\rm s,eq}$	0.4565 ± 0.0056	$\chi^2_{\rm CamSpec}$	1891.6 ± 2.9
$10^9 A_{\rm s} e^{-2\tau}$	1.907 ± 0.018	$H(0.15)$	$74.5^{+1.6}_{-1.8}$	$\chi^2_{\rm prior}$	11.0 ± 1.4
D_{40}	1247 ± 27	$D_{\rm M}(0.15)$	626 ± 16	$\chi^2_{\rm CMB}$	2297.2 ± 3.3

$\bar{\chi}^2_{\rm eff} = 2308.23$; $R - 1 = 0.00344$

2.57 base_plikHM_TE_lowE_lensing_BAO_CookeDH

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02245 ± 0.00021	z_{re}	7.66 ± 0.74	$H(0.38)$	83.22 ± 0.34
$\boldsymbol{\Omega_c h^2}$	0.1190 ± 0.0011	$10^9 A_s$	2.086 ± 0.031	$D_M(0.38)$	1524.0 ± 8.8
$\boldsymbol{100\theta_{MC}}$	1.04128 ± 0.00047	$10^9 A_s e^{-2\tau}$	1.870 ± 0.013	$H(0.51)$	89.91 ± 0.28
$\boldsymbol{\tau}$	0.0546 ± 0.0073	D_{40}	1224 ± 24	$D_M(0.51)$	1975 ± 10
$\boldsymbol{\ln(10^{10} A_s)}$	3.038 ± 0.015	D_{220}	5720 ± 56	$H(0.61)$	95.51 ± 0.25
$\boldsymbol{n_s}$	0.9664 ± 0.0099	D_{810}	2527 ± 21	$D_M(0.61)$	2298 ± 11
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	D_{1420}	814 ± 10	$H(2.33)$	236.00 ± 0.72
$\boldsymbol{A_{100}^{dustTE}}$	0.114 ± 0.038	D_{2000}	229.8 ± 3.6	$D_M(2.33)$	5753 ± 12
$\boldsymbol{A_{100\times143}^{dustTE}}$	0.136 ± 0.030	$n_{s,0.002}$	0.9664 ± 0.0099	$f\sigma_8(0.15)$	0.4520 ± 0.0062
$\boldsymbol{A_{100\times217}^{dustTE}}$	0.477 ± 0.085	Y_P	0.245425 ± 0.000082	$\sigma_8(0.15)$	0.7447 ± 0.0063
$\boldsymbol{A_{143}^{dustTE}}$	0.223 ± 0.054	Y_P^{BBN}	0.246752 ± 0.000082	$f\sigma_8(0.38)$	0.4710 ± 0.0053
$\boldsymbol{A_{143\times217}^{dustTE}}$	0.662 ± 0.079	10^5D/H	2.571 ± 0.038	$\sigma_8(0.38)$	0.6605 ± 0.0056
$\boldsymbol{A_{217}^{dustTE}}$	2.06 ± 0.27	Age/Gyr	13.774 ± 0.028	$f\sigma_8(0.51)$	0.4700 ± 0.0048
$\boldsymbol{c_{100}}$	1.00018 ± 0.00069	z_*	1089.73 ± 0.30	$\sigma_8(0.51)$	0.6183 ± 0.0052
$\boldsymbol{c_{217}}$	0.99801 ± 0.00065	r_*	144.63 ± 0.29	$f\sigma_8(0.61)$	0.4653 ± 0.0045
H_0	67.91 ± 0.51	$100\theta_*$	1.04145 ± 0.00047	$\sigma_8(0.61)$	0.5884 ± 0.0050
Ω_Λ	0.6918 ± 0.0066	$D_M(z_*)$/Gpc	13.888 ± 0.029	$f\sigma_8(2.33)$	0.2968 ± 0.0026
Ω_m	0.3082 ± 0.0066	z_{drag}	1060.06 ± 0.47	$\sigma_8(2.33)$	0.3061 ± 0.0028
$\Omega_m h^2$	0.1421 ± 0.0011	r_{drag}	147.27 ± 0.33	$\chi^2_{lensing}$	10.5 ± 1.8
$\Omega_m h^3$	0.09647 ± 0.00048	k_D	0.14074 ± 0.00044	χ^2_{simall}	396.9 ± 1.7
σ_8	0.8055 ± 0.0069	$100\theta_D$	0.16073 ± 0.00028	χ^2_{plikTE}	860.0 ± 3.5
S_8	0.816 ± 0.012	z_{eq}	3380 ± 26	χ^2_{6DF}	0.041 ± 0.055
$\sigma_8 \Omega_m^{0.5}$	0.4472 ± 0.0066	k_{eq}	0.010315 ± 0.000080	χ^2_{MGS}	1.48 ± 0.50
$\sigma_8 \Omega_m^{0.25}$	0.6002 ± 0.0065	$100\theta_{eq}$	0.8179 ± 0.0048	$\chi^2_{DR12BAO}$	4.4 ± 1.2
$\sigma_8/h^{0.5}$	0.9776 ± 0.0094	$100\theta_{s,eq}$	0.4517 ± 0.0025	χ^2_{prior}	7.8 ± 3.7
$r_{drag}h$	100.01 ± 0.86	$H(0.15)$	73.16 ± 0.44	χ^2_{CMB}	1267.4 ± 3.8
$\langle d^2 \rangle^{1/2}$	2.423 ± 0.028	$D_M(0.15)$	638.7 ± 4.3	χ^2_{BAO}	5.90 ± 0.95

$\bar{\chi}^2_{eff} = 1281.13$; $R - 1 = 0.00651$

2.58 base_plikHM_EE_lowE_lensing_BAO_CookeDH

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02275 ± 0.00036	D_{1420}	825.8 ± 9.9	$H(0.61)$	95.48 ± 0.36
$\boldsymbol{\Omega_c h^2}$	0.1183 ± 0.0013	D_{2000}	234.2 ± 3.6	$D_{\rm M}(0.61)$	2298 ± 14
$\boldsymbol{100\theta_{MC}}$	1.03995 ± 0.00079	$n_{\rm s,0.002}$	0.9732 ± 0.0097	$H(2.33)$	235.70 ± 0.80
$\boldsymbol{\tau}$	0.0519 ± 0.0077	$Y_{\rm P}$	$0.24555^{+0.00014}_{-0.00016}$	$D_{\rm M}(2.33)$	5755 ± 19
$\boldsymbol{\ln(10^{10} A_s)}$	3.040 ± 0.015	$Y_{\rm P}^{\rm BBN}$	$0.24687^{+0.00014}_{-0.00016}$	$f\sigma_8(0.15)$	0.4500 ± 0.0073
$\boldsymbol{n_s}$	0.9732 ± 0.0097	10^5D/H	2.518 ± 0.065	$\sigma_8(0.15)$	0.7430 ± 0.0066
$\boldsymbol{y_{cal}}$	1.0000 ± 0.0025	Age/Gyr	13.780 ± 0.043	$f\sigma_8(0.38)$	0.4692 ± 0.0062
H_0	67.96 ± 0.62	z_*	1089.30 ± 0.49	$\sigma_8(0.38)$	0.6591 ± 0.0057
Ω_Λ	0.6932 ± 0.0075	r_*	144.59 ± 0.34	$f\sigma_8(0.51)$	0.4684 ± 0.0055
$\Omega_{\rm m}$	0.3068 ± 0.0075	$100\theta_*$	1.04010 ± 0.00080	$\sigma_8(0.51)$	0.6170 ± 0.0054
$\Omega_{\rm m}h^2$	0.1417 ± 0.0012	$D_{\rm M}(z_*)$/Gpc	13.902 ± 0.036	$f\sigma_8(0.61)$	0.4638 ± 0.0051
$\Omega_{\rm m}h^3$	0.09627 ± 0.00074	$z_{\rm drag}$	1060.69 ± 0.80	$\sigma_8(0.61)$	0.5873 ± 0.0051
σ_8	0.8035 ± 0.0074	$r_{\rm drag}$	147.13 ± 0.42	$f\sigma_8(2.33)$	0.2963 ± 0.0026
S_8	0.813 ± 0.014	$k_{\rm D}$	0.14111 ± 0.00065	$\sigma_8(2.33)$	0.3057 ± 0.0027
$\sigma_8\Omega_{\rm m}^{0.5}$	0.4451 ± 0.0078	$100\theta_{\rm D}$	0.16015 ± 0.00049	$\chi^2_{\rm lensing}$	9.3 ± 1.0
$\sigma_8\Omega_{\rm m}^{0.25}$	0.5980 ± 0.0076	$z_{\rm eq}$	3370 ± 28	$\chi^2_{\rm simall}$	396.7 ± 1.3
$\sigma_8/h^{0.5}$	0.975 ± 0.011	$k_{\rm eq}$	0.010285 ± 0.000086	$\chi^2_{\rm plikEE}$	743.4 ± 2.6
$r_{\rm drag}h$	99.99 ± 0.94	$100\theta_{\rm eq}$	0.8195 ± 0.0052	$\chi^2_{\rm 6DF}$	0.048 ± 0.066
$\langle d^2\rangle^{1/2}$	2.407 ± 0.030	$100\theta_{\rm s,eq}$	0.4523 ± 0.0026	$\chi^2_{\rm MGS}$	1.46 ± 0.54
$z_{\rm re}$	$7.30^{+0.81}_{-0.73}$	$H(0.15)$	73.19 ± 0.55	$\chi^2_{\rm DR12BAO}$	4.7 ± 1.5
$10^9 A_{\rm s}$	2.091 ± 0.031	$D_{\rm M}(0.15)$	638.3 ± 5.3	$\chi^2_{\rm prior}$	2.7 ± 2.3
$10^9 A_{\rm s}e^{-2\tau}$	1.884 ± 0.015	$H(0.38)$	83.23 ± 0.44	$\chi^2_{\rm CMB}$	1149.3 ± 3.4
D_{40}	1218 ± 27	$D_{\rm M}(0.38)$	1523 ± 11	$\chi^2_{\rm BAO}$	6.2 ± 1.2
D_{220}	5769 ± 86	$H(0.51)$	89.90 ± 0.39		
D_{810}	2552 ± 21	$D_{\rm M}(0.51)$	1974 ± 13		

$\bar{\chi}^2_{\rm eff} = 1158.27$; $R - 1 = 0.00909$

2.59 base_CamSpecHM_TE_lowE_lensing_BAO_CookeDH

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02240 ± 0.00021	D_{1420}	825.3 ± 9.8	$H(0.61)$	95.54 ± 0.24
$\boldsymbol{\Omega_c h^2}$	0.1182 ± 0.0011	D_{2000}	233.5 ± 3.6	$D_{\rm M}(0.61)$	2294 ± 11
$\boldsymbol{100\theta_{MC}}$	1.04127 ± 0.00047	$n_{\rm s,0.002}$	0.9749 ± 0.0098	$H(2.33)$	235.43 ± 0.71
$\boldsymbol{\tau}$	0.0525 ± 0.0073	$Y_{\rm P}$	0.245405 ± 0.000082	$D_{\rm M}(2.33)$	5753 ± 12
$\boldsymbol{\ln(10^{10} A_s)}$	3.041 ± 0.015	$Y_{\rm P}^{\rm BBN}$	0.246732 ± 0.000082	$f\sigma_8(0.15)$	0.4501 ± 0.0062
$\boldsymbol{n_s}$	0.9749 ± 0.0098	10^5D/H	2.580 ± 0.038	$\sigma_8(0.15)$	0.7462 ± 0.0062
$\boldsymbol{y_{cal}}$	1.0001 ± 0.0024	Age/Gyr	13.776 ± 0.028	$f\sigma_8(0.38)$	0.4700 ± 0.0052
H_0	68.15 ± 0.50	z_*	1089.72 ± 0.30	$\sigma_8(0.38)$	0.6623 ± 0.0055
Ω_Λ	0.6958 ± 0.0064	r_*	144.88 ± 0.29	$f\sigma_8(0.51)$	0.4694 ± 0.0048
$\Omega_{\rm m}$	0.3042 ± 0.0064	$100\theta_*$	1.04145 ± 0.00047	$\sigma_8(0.51)$	0.6201 ± 0.0052
$\Omega_{\rm m}h^2$	0.1412 ± 0.0011	$D_{\rm M}(z_*)$/Gpc	13.911 ± 0.029	$f\sigma_8(0.61)$	0.4651 ± 0.0044
$\Omega_{\rm m}h^3$	0.09624 ± 0.00048	$z_{\rm drag}$	1059.88 ± 0.47	$\sigma_8(0.61)$	0.5903 ± 0.0049
σ_8	0.8068 ± 0.0068	$r_{\rm drag}$	147.54 ± 0.33	$f\sigma_8(2.33)$	0.2979 ± 0.0025
S_8	0.812 ± 0.012	$k_{\rm D}$	0.14042 ± 0.00044	$\sigma_8(2.33)$	0.3075 ± 0.0027
$\sigma_8\Omega_{\rm m}^{0.5}$	0.4449 ± 0.0065	$100\theta_{\rm D}$	0.16083 ± 0.00028	$\chi^2_{\rm lensing}$	9.6 ± 1.1
$\sigma_8\Omega_{\rm m}^{0.25}$	0.5991 ± 0.0064	$z_{\rm eq}$	3359 ± 26	$\chi^2_{\rm simall}$	396.7 ± 1.3
$\sigma_8/h^{0.5}$	0.9773 ± 0.0094	$k_{\rm eq}$	0.010254 ± 0.000078	$\chi^2_{\rm CamSpec}$	2580.2 ± 2.7
$r_{\rm drag}h$	100.54 ± 0.85	$100\theta_{\rm eq}$	0.8214 ± 0.0048	$\chi^2_{\rm 6DF}$	0.030 ± 0.043
$\langle d^2\rangle^{1/2}$	2.403 ± 0.028	$100\theta_{\rm s,eq}$	0.4536 ± 0.0025	$\chi^2_{\rm MGS}$	1.80 ± 0.52
$z_{\rm re}$	7.44 ± 0.75	$H(0.15)$	73.35 ± 0.44	$\chi^2_{\rm DR12BAO}$	3.91 ± 0.79
$10^9 A_{\rm s}$	2.092 ± 0.031	$D_{\rm M}(0.15)$	636.7 ± 4.2	$\chi^2_{\rm prior}$	11.3 ± 1.4
$10^9 A_{\rm s}e^{-2\tau}$	1.884 ± 0.013	$H(0.38)$	83.33 ± 0.33	$\chi^2_{\rm CMB}$	2986.5 ± 3.2
D_{40}	1212 ± 24	$D_{\rm M}(0.38)$	1520.3 ± 8.6	$\chi^2_{\rm BAO}$	5.74 ± 0.77
D_{220}	5729 ± 56	$H(0.51)$	89.98 ± 0.28		
D_{810}	2553 ± 20	$D_{\rm M}(0.51)$	1971 ± 10		

$\bar{\chi}^2_{\rm eff} = 3003.53$; $R - 1 = 0.00799$

2.60 base_CamSpecHM_EE_lowE_lensing_BAO_CookeDH

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02268 ± 0.00037	D_{1420}	827 ± 10	$H(0.61)$	95.36 ± 0.36
$\boldsymbol{\Omega_c h^2}$	0.1179 ± 0.0013	D_{2000}	233.8 ± 3.6	$D_{\rm M}(0.61)$	2301 ± 15
$\boldsymbol{100\theta_{MC}}$	1.03953 ± 0.00077	$n_{\rm s,0.002}$	0.9683 ± 0.0096	$H(2.33)$	235.37 ± 0.80
$\boldsymbol{\tau}$	0.0491 ± 0.0077	$Y_{\rm P}$	$0.24552^{+0.00014}_{-0.00016}$	$D_{\rm M}(2.33)$	5763 ± 19
$\boldsymbol{\ln(10^{10} A_s)}$	3.040 ± 0.015	$Y_{\rm P}^{\rm BBN}$	$0.24684^{+0.00014}_{-0.00016}$	$f\sigma_8(0.15)$	0.4484 ± 0.0074
$\boldsymbol{n_s}$	0.9683 ± 0.0096	10^5D/H	2.531 ± 0.066	$\sigma_8(0.15)$	0.7405 ± 0.0067
$\boldsymbol{y_{cal}}$	0.9999 ± 0.0025	Age/Gyr	13.799 ± 0.044	$f\sigma_8(0.38)$	0.4676 ± 0.0062
H_0	67.88 ± 0.63	z_*	1089.36 ± 0.50	$\sigma_8(0.38)$	0.6569 ± 0.0058
Ω_Λ	0.6933 ± 0.0076	r_*	144.73 ± 0.34	$f\sigma_8(0.51)$	0.4667 ± 0.0056
$\Omega_{\rm m}$	0.3067 ± 0.0076	$100\theta_*$	1.03968 ± 0.00077	$\sigma_8(0.51)$	0.6150 ± 0.0054
$\Omega_{\rm m}h^2$	0.1413 ± 0.0012	$D_{\rm M}(z_*)$/Gpc	13.921 ± 0.036	$f\sigma_8(0.61)$	0.4622 ± 0.0052
$\Omega_{\rm m}h^3$	0.09588 ± 0.00073	$z_{\rm drag}$	1060.50 ± 0.82	$\sigma_8(0.61)$	0.5853 ± 0.0051
σ_8	0.8008 ± 0.0074	$r_{\rm drag}$	147.30 ± 0.42	$f\sigma_8(2.33)$	0.2953 ± 0.0026
S_8	0.810 ± 0.014	$k_{\rm D}$	0.14088 ± 0.00066	$\sigma_8(2.33)$	0.3047 ± 0.0027
$\sigma_8\Omega_{\rm m}^{0.5}$	0.4435 ± 0.0079	$100\theta_{\rm D}$	0.16020 ± 0.00050	$\chi^2_{\rm lensing}$	9.1 ± 1.1
$\sigma_8\Omega_{\rm m}^{0.25}$	0.5959 ± 0.0077	$z_{\rm eq}$	3360 ± 28	$\chi^2_{\rm simall}$	396.7 ± 1.4
$\sigma_8/h^{0.5}$	0.972 ± 0.011	$k_{\rm eq}$	0.010256 ± 0.000086	$\chi^2_{\rm CamSpec}$	1891.7 ± 2.8
$r_{\rm drag}h$	99.98 ± 0.95	$100\theta_{\rm eq}$	0.8207 ± 0.0052	$\chi^2_{\rm 6DF}$	0.049 ± 0.066
$\langle d^2\rangle^{1/2}$	2.415 ± 0.030	$100\theta_{\rm s,eq}$	0.4530 ± 0.0027	$\chi^2_{\rm MGS}$	1.46 ± 0.54
$z_{\rm re}$	$7.03^{+0.83}_{-0.70}$	$H(0.15)$	73.10 ± 0.56	$\chi^2_{\rm DR12BAO}$	4.8 ± 1.5
$10^9 A_{\rm s}$	2.090 ± 0.031	$D_{\rm M}(0.15)$	639.1 ± 5.4	$\chi^2_{\rm prior}$	12.5 ± 2.2
$10^9 A_{\rm s}e^{-2\tau}$	1.895 ± 0.015	$H(0.38)$	83.12 ± 0.45	$\chi^2_{\rm CMB}$	2297.5 ± 3.4
D_{40}	1237 ± 27	$D_{\rm M}(0.38)$	1525 ± 11	$\chi^2_{\rm BAO}$	6.3 ± 1.2
D_{220}	5829 ± 87	$H(0.51)$	89.78 ± 0.39		
D_{810}	2563 ± 22	$D_{\rm M}(0.51)$	1977 ± 13		

$\bar{\chi}^2_{\rm eff} = 2316.30$; $R - 1 = 0.00893$

2.61 base_plikHM_TE_lowE_lensing_CookeDH

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02242 ± 0.00022	$\langle d^2 \rangle^{1/2}$	2.432 ± 0.032	$H(0.15)$	72.91 ± 0.62
$\boldsymbol{\Omega_c h^2}$	0.1196 ± 0.0016	$z_{\rm re}$	7.54 ± 0.77	$D_{\rm M}(0.15)$	641.2 ± 6.2
$\boldsymbol{100\theta_{MC}}$	1.04119 ± 0.00048	$10^9 A_{\rm s}$	2.082 ± 0.031	$H(0.38)$	83.05 ± 0.46
$\boldsymbol{\tau}$	0.0533 ± 0.0077	$10^9 A_{\rm s} e^{-2\tau}$	1.871 ± 0.013	$D_{\rm M}(0.38)$	1529 ± 12
$\boldsymbol{\ln(10^{10} A_{\rm s})}$	3.036 ± 0.015	D_{40}	1227 ± 25	$H(0.51)$	89.78 ± 0.37
$\boldsymbol{n_{\rm s}}$	0.964 ± 0.011	D_{220}	5715 ± 55	$D_{\rm M}(0.51)$	1981 ± 15
$\boldsymbol{y_{\rm cal}}$	1.0004 ± 0.0025	D_{810}	2524 ± 21	$H(0.61)$	$95.41^{+0.29}_{-0.33}$
$\boldsymbol{A_{100}^{{\rm dust}TE}}$	0.114 ± 0.038	D_{1420}	812 ± 10	$D_{\rm M}(0.61)$	2305 ± 16
$\boldsymbol{A_{100\times143}^{{\rm dust}TE}}$	0.137 ± 0.030	D_{2000}	229.3 ± 3.7	$H(2.33)$	236.39 ± 0.97
$\boldsymbol{A_{100\times217}^{{\rm dust}TE}}$	0.478 ± 0.085	$n_{\rm s,0.002}$	0.964 ± 0.011	$D_{\rm M}(2.33)$	5757 ± 15
$\boldsymbol{A_{143}^{{\rm dust}TE}}$	0.223 ± 0.054	$Y_{\rm P}$	0.245410 ± 0.000088	$f\sigma_8(0.15)$	0.4550 ± 0.0080
$\boldsymbol{A_{143\times217}^{{\rm dust}TE}}$	0.663 ± 0.081	$Y_{\rm P}^{\rm BBN}$	0.246736 ± 0.000088	$\sigma_8(0.15)$	0.7450 ± 0.0061
$\boldsymbol{A_{217}^{{\rm dust}TE}}$	2.06 ± 0.27	$10^5{\rm D/H}$	2.578 ± 0.041	$f\sigma_8(0.38)$	0.4731 ± 0.0063
$\boldsymbol{c_{100}}$	1.00018 ± 0.00070	Age/Gyr	13.783 ± 0.033	$\sigma_8(0.38)$	0.6603 ± 0.0054
$\boldsymbol{c_{217}}$	0.99800 ± 0.00065	z_*	1089.83 ± 0.36	$f\sigma_8(0.51)$	0.4716 ± 0.0054
H_0	67.61 ± 0.72	r_*	144.49 ± 0.37	$\sigma_8(0.51)$	0.6179 ± 0.0052
Ω_Λ	0.6877 ± 0.0098	$100\theta_*$	1.04136 ± 0.00048	$f\sigma_8(0.61)$	0.4666 ± 0.0049
$\Omega_{\rm m}$	0.3123 ± 0.0098	$D_{\rm M}(z_*)/{\rm Gpc}$	13.875 ± 0.036	$\sigma_8(0.61)$	0.5880 ± 0.0050
$\Omega_{\rm m} h^2$	0.1427 ± 0.0015	$z_{\rm drag}$	1060.01 ± 0.48	$f\sigma_8(2.33)$	0.2964 ± 0.0026
$\Omega_{\rm m} h^3$	0.09647 ± 0.00047	$r_{\rm drag}$	147.14 ± 0.39	$\sigma_8(2.33)$	0.3056 ± 0.0029
σ_8	0.8063 ± 0.0068	$k_{\rm D}$	0.14085 ± 0.00047	$\chi^2_{\rm lensing}$	10.3 ± 1.7
S_8	0.823 ± 0.016	$100\theta_{\rm D}$	0.16075 ± 0.00028	$\chi^2_{\rm simall}$	396.9 ± 1.6
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4506 ± 0.0087	$z_{\rm eq}$	3394 ± 36	$\chi^2_{\rm plikTE}$	860.6 ± 3.7
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.6027 ± 0.0077	$k_{\rm eq}$	0.01036 ± 0.00011	$\chi^2_{\rm prior}$	7.9 ± 3.7
$\sigma_8 / h^{0.5}$	0.981 ± 0.011	$100\theta_{\rm eq}$	0.8151 ± 0.0068	$\chi^2_{\rm CMB}$	1267.7 ± 3.9
$r_{\rm drag} h$	99.5 ± 1.2	$100\theta_{\rm s,eq}$	0.4503 ± 0.0035		

$\bar{\chi}^2_{\rm eff} = 1275.56$; $R - 1 = 0.00845$

2.62 base_plikHM_EE_lowE_lensing_CookeDH

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02255 ± 0.00043	D_{220}	5745 ± 91	$H(0.38)$	82.77 ± 0.69
$\boldsymbol{\Omega_c h^2}$	0.1196 ± 0.0020	D_{810}	2546 ± 23	$D_{\rm M}(0.38)$	1536 ± 18
$\boldsymbol{100\theta_{MC}}$	1.03975 ± 0.00080	D_{1420}	822 ± 11	$H(0.51)$	89.53 ± 0.58
$\boldsymbol{\tau}$	0.0497 ± 0.0080	D_{2000}	232.6 ± 4.1	$D_{\rm M}(0.51)$	1989 ± 21
$\boldsymbol{\ln(10^{10} A_s)}$	3.036 ± 0.016	$n_{\rm s,0.002}$	0.969 ± 0.011	$H(0.61)$	95.18 ± 0.50
$\boldsymbol{n_s}$	0.969 ± 0.011	$Y_{\rm P}$	0.24547 ± 0.00018	$D_{\rm M}(0.61)$	2313 ± 23
$\boldsymbol{y_{cal}}$	0.9999 ± 0.0025	$Y_{\rm P}^{\rm BBN}$	0.24679 ± 0.00018	$H(2.33)$	236.4 ± 1.1
H_0	67.3 ± 1.0	10^5D/H	2.554 ± 0.079	$D_{\rm M}(2.33)$	5770 ± 25
Ω_Λ	$0.684^{+0.014}_{-0.012}$	Age/Gyr	13.812 ± 0.057	$f\sigma_8(0.15)$	0.457 ± 0.011
$\Omega_{\rm m}$	0.316 ± 0.013	z_*	1089.66 ± 0.66	$\sigma_8(0.15)$	0.7440 ± 0.0066
$\Omega_{\rm m} h^2$	0.1428 ± 0.0018	r_*	144.40 ± 0.40	$f\sigma_8(0.38)$	0.4742 ± 0.0084
$\Omega_{\rm m} h^3$	0.09604 ± 0.00077	$100\theta_*$	1.03991 ± 0.00080	$\sigma_8(0.38)$	0.6591 ± 0.0056
σ_8	0.8056 ± 0.0077	$D_{\rm M}(z_*)$/Gpc	13.885 ± 0.040	$f\sigma_8(0.51)$	0.4722 ± 0.0071
S_8	0.827 ± 0.022	$z_{\rm drag}$	1060.33 ± 0.91	$\sigma_8(0.51)$	0.6166 ± 0.0053
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.453 ± 0.012	$r_{\rm drag}$	147.00 ± 0.43	$f\sigma_8(0.61)$	0.4670 ± 0.0062
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.604 ± 0.010	$k_{\rm D}$	0.14110 ± 0.00064	$\sigma_8(0.61)$	0.5866 ± 0.0050
$\sigma_8 / h^{0.5}$	0.982 ± 0.014	$100\theta_{\rm D}$	0.16035 ± 0.00055	$f\sigma_8(2.33)$	0.2956 ± 0.0027
$r_{\rm drag} h$	98.9 ± 1.6	$z_{\rm eq}$	3397 ± 42	$\sigma_8(2.33)$	0.3046 ± 0.0030
$\langle d^2 \rangle^{1/2}$	2.425 ± 0.036	$k_{\rm eq}$	0.01037 ± 0.00013	$\chi^2_{\rm lensing}$	9.6 ± 1.3
$z_{\rm re}$	$7.13^{+0.84}_{-0.73}$	$100\theta_{\rm eq}$	0.8139 ± 0.0082	$\chi^2_{\rm simall}$	396.7 ± 1.4
$10^9 A_{\rm s}$	2.082 ± 0.032	$100\theta_{\rm s,eq}$	0.4495 ± 0.0041	$\chi^2_{\rm plikEE}$	743.7 ± 2.8
$10^9 A_{\rm s} e^{-2\tau}$	1.885 ± 0.015	$H(0.15)$	72.59 ± 0.90	$\chi^2_{\rm prior}$	2.3 ± 2.2
D_{40}	1223 ± 27	$D_{\rm M}(0.15)$	644.3 ± 8.9	$\chi^2_{\rm CMB}$	1150.0 ± 3.6

$\bar{\chi}^2_{\rm eff} = 1152.26$; $R - 1 = 0.00449$

2.63 base_CamSpecHM_TE_lowE_lensing_CookeDH

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02242 ± 0.00023	D_{220}	5729 ± 60	$H(0.38)$	83.40 ± 0.47
$\boldsymbol{\Omega_c h^2}$	0.1180 ± 0.0016	D_{810}	2554 ± 21	$D_{\rm M}(0.38)$	1519 ± 12
$\boldsymbol{100\theta_{MC}}$	1.04129 ± 0.00049	D_{1420}	826 ± 11	$H(0.51)$	90.03 ± 0.38
$\boldsymbol{\tau}$	0.0527 ± 0.0080	D_{2000}	233.7 ± 3.9	$D_{\rm M}(0.51)$	1969 ± 15
$\boldsymbol{\ln(10^{10} A_s)}$	3.041 ± 0.016	$n_{\rm s,0.002}$	0.976 ± 0.011	$H(0.61)$	95.58 ± 0.32
$\boldsymbol{n_s}$	0.976 ± 0.011	$Y_{\rm P}$	$0.245410^{+0.000094}_{-0.000083}$	$D_{\rm M}(0.61)$	2292 ± 16
$\boldsymbol{y_{cal}}$	1.0002 ± 0.0025	$Y_{\rm P}^{\rm BBN}$	$0.246737^{+0.000094}_{-0.000083}$	$H(2.33)$	235.30 ± 0.99
H_0	68.25 ± 0.74	10^5D/H	2.578 ± 0.042	$D_{\rm M}(2.33)$	5752 ± 15
Ω_Λ	0.6971 ± 0.0096	Age/Gyr	13.773 ± 0.034	$f\sigma_8(0.15)$	0.4489 ± 0.0082
$\Omega_{\rm m}$	0.3029 ± 0.0096	z_*	1089.68 ± 0.37	$\sigma_8(0.15)$	0.7459 ± 0.0064
$\Omega_{\rm m} h^2$	0.1410 ± 0.0015	r_*	144.93 ± 0.38	$f\sigma_8(0.38)$	0.4691 ± 0.0065
$\Omega_{\rm m} h^3$	0.09623 ± 0.00048	$100\theta_*$	1.04147 ± 0.00048	$\sigma_8(0.38)$	0.6621 ± 0.0057
σ_8	0.8062 ± 0.0071	$D_{\rm M}(z_*)$/Gpc	13.916 ± 0.037	$f\sigma_8(0.51)$	0.4687 ± 0.0057
S_8	0.810 ± 0.016	$z_{\rm drag}$	1059.90 ± 0.49	$\sigma_8(0.51)$	0.6200 ± 0.0054
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4437 ± 0.0088	$r_{\rm drag}$	147.58 ± 0.40	$f\sigma_8(0.61)$	0.4644 ± 0.0051
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.5981 ± 0.0079	$k_{\rm D}$	0.14038 ± 0.00049	$\sigma_8(0.61)$	0.5902 ± 0.0052
$\sigma_8/h^{0.5}$	0.976 ± 0.011	$100\theta_{\rm D}$	0.16082 ± 0.00029	$f\sigma_8(2.33)$	0.2979 ± 0.0027
$r_{\rm drag} h$	100.7 ± 1.3	$z_{\rm eq}$	3354 ± 37	$\sigma_8(2.33)$	0.3076 ± 0.0030
$\langle d^2 \rangle^{1/2}$	2.399 ± 0.033	$k_{\rm eq}$	0.01024 ± 0.00011	$\chi^2_{\rm lensing}$	9.7 ± 1.3
$z_{\rm re}$	7.45 ± 0.80	$100\theta_{\rm eq}$	0.8224 ± 0.0070	$\chi^2_{\rm simall}$	396.8 ± 1.5
$10^9 A_{\rm s}$	2.092 ± 0.033	$100\theta_{\rm s,eq}$	0.4541 ± 0.0036	$\chi^2_{\rm CamSpec}$	2580.6 ± 2.9
$10^9 A_{\rm s} e^{-2\tau}$	1.883 ± 0.014	$H(0.15)$	73.44 ± 0.64	$\chi^2_{\rm prior}$	11.4 ± 1.5
D_{40}	1210 ± 26	$D_{\rm M}(0.15)$	635.9 ± 6.2	$\chi^2_{\rm CMB}$	2987.1 ± 3.5

$\bar{\chi}^2_{\rm eff} = 2998.52$; $R - 1 = 0.00490$

2.64 base_CamSpecHM_EE_lowE_lensing_CookeDH

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02251 ± 0.00043	D_{220}	5809 ± 91	$H(0.38)$	82.72 ± 0.70
$\boldsymbol{\Omega_c h^2}$	0.1191 ± 0.0020	D_{810}	2558 ± 23	$D_{\rm M}(0.38)$	1536 ± 18
$\boldsymbol{100\theta_{MC}}$	1.03936 ± 0.00079	D_{1420}	823 ± 11	$H(0.51)$	89.46 ± 0.58
$\boldsymbol{\tau}$	$0.0469^{+0.0083}_{-0.0075}$	D_{2000}	232.5 ± 4.0	$D_{\rm M}(0.51)$	1989 ± 22
$\boldsymbol{\ln(10^{10} A_s)}$	3.036 ± 0.016	$n_{\rm s,0.002}$	0.965 ± 0.011	$H(0.61)$	95.09 ± 0.50
$\boldsymbol{n_s}$	0.965 ± 0.011	$Y_{\rm P}$	0.24545 ± 0.00018	$D_{\rm M}(0.61)$	2314 ± 23
$\boldsymbol{y_{cal}}$	0.9998 ± 0.0025	$Y_{\rm P}^{\rm BBN}$	0.24677 ± 0.00018	$H(2.33)$	236.0 ± 1.1
H_0	67.3 ± 1.0	10^5D/H	$2.563^{+0.074}_{-0.084}$	$D_{\rm M}(2.33)$	5776 ± 25
Ω_Λ	0.685 ± 0.013	Age/Gyr	13.826 ± 0.057	$f\sigma_8(0.15)$	0.454 ± 0.011
$\Omega_{\rm m}$	0.315 ± 0.013	z_*	$1089.68^{+0.63}_{-0.70}$	$\sigma_8(0.15)$	0.7413 ± 0.0067
$\Omega_{\rm m} h^2$	0.1422 ± 0.0018	r_*	144.56 ± 0.41	$f\sigma_8(0.38)$	0.4718 ± 0.0085
$\Omega_{\rm m} h^3$	0.09568 ± 0.00077	$100\theta_*$	1.03953 ± 0.00079	$\sigma_8(0.38)$	0.6568 ± 0.0057
σ_8	0.8025 ± 0.0078	$D_{\rm M}(z_*)$/Gpc	13.907 ± 0.041	$f\sigma_8(0.51)$	0.4700 ± 0.0072
S_8	0.822 ± 0.022	$z_{\rm drag}$	1060.18 ± 0.91	$\sigma_8(0.51)$	0.6145 ± 0.0054
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.450 ± 0.012	$r_{\rm drag}$	147.18 ± 0.44	$f\sigma_8(0.61)$	0.4649 ± 0.0063
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.601 ± 0.010	$k_{\rm D}$	0.14087 ± 0.00065	$\sigma_8(0.61)$	0.5846 ± 0.0051
$\sigma_8 / h^{0.5}$	0.979 ± 0.014	$100\theta_{\rm D}$	0.16037 ± 0.00055	$f\sigma_8(2.33)$	0.2947 ± 0.0027
$r_{\rm drag} h$	99.0 ± 1.6	$z_{\rm eq}$	3384 ± 43	$\sigma_8(2.33)$	0.3037 ± 0.0030
$\langle d^2 \rangle^{1/2}$	2.430 ± 0.036	$k_{\rm eq}$	0.01033 ± 0.00013	$\chi^2_{\rm lensing}$	9.6 ± 1.5
$z_{\rm re}$	$6.84^{+0.91}_{-0.73}$	$100\theta_{\rm eq}$	0.8159 ± 0.0084	$\chi^2_{\rm simall}$	396.8 ± 1.5
$10^9 A_{\rm s}$	2.082 ± 0.033	$100\theta_{\rm s,eq}$	0.4506 ± 0.0042	$\chi^2_{\rm CamSpec}$	1891.6 ± 2.7
$10^9 A_{\rm s} e^{-2\tau}$	1.896 ± 0.015	$H(0.15)$	72.58 ± 0.90	$\chi^2_{\rm prior}$	12.2 ± 2.0
D_{40}	1241 ± 27	$D_{\rm M}(0.15)$	644.4 ± 9.0	$\chi^2_{\rm CMB}$	2298.0 ± 3.3

$\bar{\chi}^2_{\rm eff} = 2310.16$; $R - 1 = 0.00957$

2.65 base_plikHM_TT_lowl

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022496	0.02238 ± 0.00027	$\sigma_8\Omega_m^{0.25}$	0.6370	0.630 ± 0.016	$H(0.15)$	73.68	73.3 ± 1.0
$\boldsymbol{\Omega_c h^2}$	0.11728	0.1181 ± 0.0025	$\sigma_8/h^{0.5}$	1.0406	1.028 ± 0.026	$D_M(0.15)$	633.5	637.0 ± 9.8
$\boldsymbol{100\theta_{MC}}$	1.04124	1.04112 ± 0.00052	$r_{drag}h$	101.20	100.6 ± 2.0	$H(0.38)$	83.57	83.31 ± 0.74
$\boldsymbol{\tau}$	0.1259	$0.108^{+0.034}_{-0.031}$	$\langle d^2\rangle^{1/2}$	2.564	2.539 ± 0.061	$D_M(0.38)$	1513.9	1521 ± 20
$\boldsymbol{\ln(10^{10}A_s)}$	3.180	$3.145^{+0.065}_{-0.058}$	z_{re}	13.82	$12.3^{+3.0}_{-2.1}$	$H(0.51)$	90.16	89.95 ± 0.59
$\boldsymbol{n_s}$	0.9756	0.9713 ± 0.0077	$10^9 A_s$	2.405	2.33 ± 0.14	$D_M(0.51)$	1963.1	1971 ± 23
$\boldsymbol{y_{cal}}$	1.00013	1.0003 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.8693	1.872 ± 0.015	$H(0.61)$	95.679	$95.51^{+0.45}_{-0.50}$
$\boldsymbol{A_{217}^{CIB}}$	42.8	46 ± 7	D_{40}	1238.9	1240 ± 16	$D_M(0.61)$	2285.9	2295 ± 25
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.986	> 0.390	D_{220}	5715.5	5718 ± 42	$H(2.33)$	234.92	235.3 ± 1.5
$\boldsymbol{A_{143}^{tSZ}}$	6.86	$5.5^{+2.1}_{-1.9}$	D_{810}	2531.7	2531 ± 14	$D_M(2.33)$	5747.6	5755 ± 21
$\boldsymbol{A_{100}^{PS}}$	239.7	254 ± 30	D_{1420}	817.1	815.2 ± 5.1	$f\sigma_8(0.15)$	0.4770	0.473 ± 0.013
$\boldsymbol{A_{143}^{PS}}$	50.5	44 ± 9	D_{2000}	232.59	231.4 ± 2.1	$\sigma_8(0.15)$	0.7973	0.785 ± 0.022
$\boldsymbol{A_{143\times217}^{PS}}$	58.0	42 ± 9	$n_{s,0.002}$	0.9756	0.9713 ± 0.0077	$f\sigma_8(0.38)$	0.4994	0.494 ± 0.013
$\boldsymbol{A_{217}^{PS}}$	123.8	115 ± 10	Y_P	0.245443	0.24540 ± 0.00011	$\sigma_8(0.38)$	0.7082	0.697 ± 0.020
$\boldsymbol{A^{kSZ}}$	0.00	< 3.71	Y_P^{BBN}	0.246770	0.24672 ± 0.00011	$f\sigma_8(0.51)$	0.4995	0.494 ± 0.012
$\boldsymbol{A_{100}^{dustTT}}$	8.74	8.8 ± 1.8	10^5D/H	2.5627	2.584 ± 0.050	$\sigma_8(0.51)$	0.6634	0.652 ± 0.019
$\boldsymbol{A_{143}^{dustTT}}$	10.66	10.5 ± 1.8	Age/Gyr	13.7636	13.781 ± 0.046	$f\sigma_8(0.61)$	0.4953	0.489 ± 0.012
$\boldsymbol{A_{143\times217}^{dustTT}}$	19.94	18.1 ± 3.3	z_*	1089.53	1089.74 ± 0.51	$\sigma_8(0.61)$	0.6316	0.621 ± 0.019
$\boldsymbol{A_{217}^{dustTT}}$	96.2	93.7 ± 7.3	r_*	145.04	144.92 ± 0.54	$f\sigma_8(2.33)$	0.3190	0.3134 ± 0.0097
$\boldsymbol{c_{100}}$	0.99968	0.99960 ± 0.00061	$100\theta_*$	1.04141	1.04131 ± 0.00050	$\sigma_8(2.33)$	0.3295	0.323 ± 0.011
$\boldsymbol{c_{217}}$	0.99816	0.99820 ± 0.00062	$D_M(z_*)$/Gpc	13.9273	13.918 ± 0.049	f_{2000}^{143}	26.13	28 ± 3
H_0	68.53	68.1 ± 1.2	z_{drag}	1060.05	1059.83 ± 0.52	$f_{2000}^{143\times217}$	30.11	31.2 ± 2.5
Ω_Λ	0.7010	0.696 ± 0.015	r_{drag}	147.67	147.59 ± 0.52	f_{2000}^{217}	104.67	106.1 ± 2.2
Ω_m	0.2990	0.304 ± 0.015	k_D	0.14035	0.14035 ± 0.00053	χ^2_{lowl}	24.89	25.0 ± 1.7
$\Omega_m h^2$	0.14042	0.1411 ± 0.0023	$100\theta_D$	0.160722	0.16084 ± 0.00029	χ^2_{plik}	753.5	768.0 ± 5.7
$\Omega_m h^3$	0.096230	0.09610 ± 0.00048	z_{eq}	3340	3356 ± 56	χ^2_{prior}	1.05	7.2 ± 3.6
σ_8	0.8614	0.849 ± 0.023	k_{eq}	0.010195	0.01024 ± 0.00017	χ^2_{CMB}	778.4	793.0 ± 5.5
S_8	0.8600	0.854 ± 0.025	$100\theta_{eq}$	0.8251	0.822 ± 0.011			
$\sigma_8\Omega_m^{0.5}$	0.4710	0.468 ± 0.014	$100\theta_{s,eq}$	0.4555	0.4539 ± 0.0056			

Best-fit $\chi^2_{eff} = 779.48$; $\bar{\chi}^2_{eff} = 800.20$; $R - 1 = 0.00744$
χ^2_{eff}: CMB - commander_dx12_v3_2_29: 24.89 plik_rd12_HM_v22_TT: 753.54

2.66 base_plikHM_TTTEEE_lowl

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022555	0.02251 ± 0.00016	$\Omega_m h^3$	0.096458	0.09641 ± 0.00030	$100\theta_{eq}$	0.8205	0.8197 ± 0.0066
$\boldsymbol{\Omega_c h^2}$	0.11829	0.1185 ± 0.0015	σ_8	0.8551	0.848 ± 0.018	$100\theta_{s,eq}$	0.45301	0.4526 ± 0.0034
$\boldsymbol{100\theta_{MC}}$	1.041103	1.04108 ± 0.00033	S_8	0.8614	0.857 ± 0.019	$H(0.15)$	73.38	73.28 ± 0.60
$\boldsymbol{\tau}$	0.1141	0.106 ± 0.024	$\sigma_8\Omega_m^{0.5}$	0.4718	0.469 ± 0.010	$D_M(0.15)$	636.4	637.5 ± 5.9
$\boldsymbol{\ln(10^{10}A_s)}$	3.1595	3.143 ± 0.047	$\sigma_8\Omega_m^{0.25}$	0.6352	0.631 ± 0.013	$H(0.38)$	83.380	83.31 ± 0.44
$\boldsymbol{n_s}$	0.9730	0.9707 ± 0.0052	$\sigma_8/h^{0.5}$	1.0356	1.028 ± 0.021	$D_M(0.38)$	1519.6	1522 ± 12
$\boldsymbol{y_{cal}}$	1.00020	1.0003 ± 0.0025	$r_{drag}h$	100.44	100.3 ± 1.2	$H(0.51)$	90.032	89.97 ± 0.35
$\boldsymbol{A_{217}^{CIB}}$	42.5	45 ± 7	$\langle d^2\rangle^{1/2}$	2.5543	$2.541^{+0.051}_{-0.046}$	$D_M(0.51)$	1969.6	1972 ± 14
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.9996	> 0.420	z_{re}	12.90	$12.2^{+2.1}_{-1.7}$	$H(0.61)$	95.602	95.55 ± 0.28
$\boldsymbol{A_{143}^{tSZ}}$	6.85	$5.7^{+2.1}_{-1.8}$	10^9A_s	2.356	2.32 ± 0.11	$D_M(0.61)$	2292.8	2295 ± 15
$\boldsymbol{A_{100}^{PS}}$	239.0	251 ± 28	$10^9A_se^{-2\tau}$	1.8754	1.875 ± 0.012	$H(2.33)$	235.64	235.74 ± 0.91
$\boldsymbol{A_{143}^{PS}}$	49.7	43 ± 8	D_{40}	1239.7	1241 ± 14	$D_M(2.33)$	5749.3	5752 ± 12
$\boldsymbol{A_{143\times217}^{PS}}$	57.7	42 ± 9	D_{220}	5727.6	5731 ± 38	$f\sigma_8(0.15)$	0.4773	0.474 ± 0.010
$\boldsymbol{A_{217}^{PS}}$	124.3	116 ± 10	D_{810}	2535.6	2534 ± 14	$\sigma_8(0.15)$	0.7909	0.785 ± 0.017
$\boldsymbol{A^{kSZ}}$	0.00	< 3.24	D_{1420}	818.26	816.7 ± 4.7	$f\sigma_8(0.38)$	0.4983	0.495 ± 0.010
$\boldsymbol{A_{100}^{dust}}$	8.68	8.8 ± 1.9	D_{2000}	232.84	232.0 ± 1.7	$\sigma_8(0.38)$	0.7019	0.696 ± 0.016
$\boldsymbol{A_{143}^{dust}}$	10.72	10.6 ± 1.8	$n_{s,0.002}$	0.9730	0.9707 ± 0.0052	$f\sigma_8(0.51)$	0.4977	0.494 ± 0.010
$\boldsymbol{A_{143\times217}^{dust}}$	19.79	18.2 ± 3.3	Y_P	0.245464	0.245448 ± 0.000062	$\sigma_8(0.51)$	0.6572	0.652 ± 0.015
$\boldsymbol{A_{217}^{dust}}$	95.5	93.7 ± 7.3	Y_P^{BBN}	0.246791	0.246775 ± 0.000062	$f\sigma_8(0.61)$	0.4930	0.489 ± 0.010
$\boldsymbol{A_{100}^{dustTE}}$	0.1131	0.113 ± 0.038	10^5D/H	2.5522	2.560 ± 0.029	$\sigma_8(0.61)$	0.6255	0.620 ± 0.014
$\boldsymbol{A_{100\times143}^{dustTE}}$	0.1342	0.134 ± 0.029	Age/Gyr	13.7660	13.772 ± 0.027	$f\sigma_8(2.33)$	0.3157	0.3130 ± 0.0074
$\boldsymbol{A_{100\times217}^{dustTE}}$	0.477	0.483 ± 0.085	z_*	1089.539	1089.61 ± 0.31	$\sigma_8(2.33)$	0.3258	0.3230 ± 0.0078
$\boldsymbol{A_{143}^{dustTE}}$	0.221	0.222 ± 0.054	r_*	144.732	144.71 ± 0.33	f_{2000}^{143}	25.70	27.2 ± 2.9
$\boldsymbol{A_{143\times217}^{dustTE}}$	0.662	0.663 ± 0.080	$100\theta_*$	1.041272	1.04125 ± 0.00032	$f_{2000}^{143\times217}$	29.78	30.4 ± 2.0
$\boldsymbol{A_{217}^{dustTE}}$	2.057	2.07 ± 0.27	$D_M(z_*)$/Gpc	13.8995	13.897 ± 0.031	f_{2000}^{217}	104.53	105.4 ± 1.9
$\boldsymbol{c_{100}}$	0.99975	0.99967 ± 0.00061	z_{drag}	1060.238	1060.16 ± 0.31	χ^2_{lowl}	24.77	25.0 ± 1.4
$\boldsymbol{c_{217}}$	0.99812	0.99814 ± 0.00062	r_{drag}	147.338	147.33 ± 0.32	χ^2_{plik}	2337.6	2354.2 ± 5.9
H_0	68.17	68.06 ± 0.70	k_D	0.140745	0.14073 ± 0.00033	χ^2_{prior}	1.29	11.3 ± 4.5
Ω_Λ	0.6955	0.6940 ± 0.0093	$100\theta_D$	0.160589	0.16064 ± 0.00018	χ^2_{CMB}	2362.3	2379.2 ± 5.8
Ω_m	0.3045	0.3060 ± 0.0093	z_{eq}	3365.8	3370 ± 34			
$\Omega_m h^2$	0.14149	0.1417 ± 0.0014	k_{eq}	0.010273	0.01029 ± 0.00011			

Best-fit $\chi^2_{eff} = 2363.64$; $\bar{\chi}^2_{eff} = 2390.54$; $R - 1 = 0.00817$

χ^2_{eff}: CMB - commander_dx12_v3_2_29: 24.77 plik_rd12_HM_v22b_TTTEEE: 2337.58

2.67 base_CamSpecHM_TT_lowl

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022525	0.02242 ± 0.00028	$\sigma_8\Omega_m^{0.5}$	0.4693	0.468 ± 0.014	$100\theta_{s,eq}$	0.4563	0.4547 ± 0.0058
$\boldsymbol{\Omega_c h^2}$	0.11691	0.1177 ± 0.0026	$\sigma_8\Omega_m^{0.25}$	0.6359	0.631 ± 0.016	$H(0.15)$	73.84	73.5 ± 1.0
$\boldsymbol{100\theta_{MC}}$	1.04132	1.04122 ± 0.00053	$\sigma_8/h^{0.5}$	1.0394	1.030 ± 0.026	$D_M(0.15)$	631.9	635 ± 10
$\boldsymbol{\tau}$	0.1282	$0.113^{+0.036}_{-0.032}$	$r_{drag}h$	101.52	100.9 ± 2.1	$H(0.38)$	83.69	83.44 ± 0.77
$\boldsymbol{\ln(10^{10}A_s)}$	3.183	$3.154^{+0.068}_{-0.060}$	$\langle d^2\rangle^{1/2}$	2.560	2.542 ± 0.061	$D_M(0.38)$	1510.7	1518 ± 20
$\boldsymbol{n_s}$	0.9775	0.9734 ± 0.0081	z_{re}	13.98	$12.7^{+3.0}_{-2.1}$	$H(0.51)$	90.26	90.05 ± 0.61
$\boldsymbol{y_{cal}}$	1.00018	1.0003 ± 0.0025	$10^9 A_s$	2.411	2.35 ± 0.15	$D_M(0.51)$	1959.3	1967 ± 24
$\boldsymbol{A_{100}^{PS}}$	219.3	233 ± 25	$10^9 A_s e^{-2\tau}$	1.8656	1.868 ± 0.015	$H(0.61)$	95.758	95.60 ± 0.49
$\boldsymbol{A_{143}^{PS}}$	45.0	36 ± 9	D_{40}	1234.6	1237 ± 16	$D_M(0.61)$	2281.8	2291 ± 26
$\boldsymbol{A_{217}^{PS}}$	109.7	104 ± 10	D_{220}	5706.2	5708 ± 41	$H(2.33)$	234.71	235.1 ± 1.5
$\boldsymbol{A_{217}^{CIB}}$	37.6	38^{+7}_{-8}	D_{810}	2529.3	2528 ± 14	$D_M(2.33)$	5744.2	5752 ± 22
$\boldsymbol{A_{143}^{tSZ}}$	6.20	$4.0^{+2.0}_{-2.4}$	D_{1420}	817.0	815.1 ± 5.2	$f\sigma_8(0.15)$	0.4754	0.473 ± 0.013
$\boldsymbol{r_{143\times217}^{PS}}$	0.807	0.67 ± 0.13	D_{2000}	232.68	231.6 ± 2.2	$\sigma_8(0.15)$	0.7978	0.788 ± 0.022
$\boldsymbol{r_{143\times217}^{CIB}}$	0.700	$0.52^{+0.35}_{-0.25}$	$n_{s,0.002}$	0.9775	0.9734 ± 0.0081	$f\sigma_8(0.38)$	0.4984	0.495 ± 0.013
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.96	—	Y_P	0.245453	0.24541 ± 0.00011	$\sigma_8(0.38)$	0.7089	0.700 ± 0.021
$\boldsymbol{A^{kSZ}}$	0.06	< 5.56	Y_P^{BBN}	0.246780	0.24674 ± 0.00011	$f\sigma_8(0.51)$	0.4988	0.495 ± 0.013
$\boldsymbol{A_{100}^{dust}}$	1.006	1.01 ± 0.20	10^5D/H	2.557	2.577 ± 0.051	$\sigma_8(0.51)$	0.6642	0.655 ± 0.020
$\boldsymbol{A_{143}^{dust}}$	0.962	0.96 ± 0.18	Age/Gyr	13.7563	13.773 ± 0.048	$f\sigma_8(0.61)$	0.4948	0.490 ± 0.013
$\boldsymbol{A_{217}^{dust}}$	0.978	0.98 ± 0.10	z_*	1089.46	1089.66 ± 0.52	$\sigma_8(0.61)$	0.6324	0.624 ± 0.019
$\boldsymbol{A_{143\times217}^{dust}}$	1.030	1.02 ± 0.16	r_*	145.12	144.99 ± 0.55	$f\sigma_8(2.33)$	0.3195	0.315 ± 0.010
$\boldsymbol{c_{100}}$	0.99783	0.9975 ± 0.0011	$100\theta_*$	1.04150	1.04140 ± 0.00051	$\sigma_8(2.33)$	0.3302	0.325 ± 0.011
$\boldsymbol{c_{217}}$	1.00070	1.0009 ± 0.0016	$D_M(z_*)$/Gpc	13.9335	13.922 ± 0.050	f_{2000}^{143}	25.95	27 ± 4
H_0	68.72	68.3 ± 1.2	z_{drag}	1060.09	1059.89 ± 0.53	f_{2000}^{217}	103.94	105.3 ± 2.4
Ω_Λ	0.7034	$0.698^{+0.016}_{-0.015}$	r_{drag}	147.74	147.65 ± 0.53	$f_{2000}^{143\times217}$	29.32	30.3 ± 2.6
Ω_m	0.2966	$0.302^{+0.015}_{-0.016}$	k_D	0.14030	0.14032 ± 0.00053	χ^2_{lowl}	24.50	24.8 ± 1.7
$\Omega_m h^2$	0.14008	0.1408 ± 0.0024	$100\theta_D$	0.160707	0.16081 ± 0.00029	$\chi^2_{CamSpec}$	7046.4	7060.1 ± 5.5
$\Omega_m h^3$	0.096258	0.09616 ± 0.00048	z_{eq}	3332	3349 ± 57	χ^2_{prior}	1.41	7.4 ± 3.3
σ_8	0.8616	0.851 ± 0.023	k_{eq}	0.010170	0.01022 ± 0.00018	χ^2_{CMB}	7070.9	7084.8 ± 5.4
S_8	0.8568	0.854 ± 0.025	$100\theta_{eq}$	0.8268	0.824 ± 0.011			

Best-fit $\chi^2_{eff} = 7072.29$; $\bar{\chi}^2_{eff} = 7092.24$; $R - 1 = 0.00797$
χ^2_{eff}: CMB - commander_dx12_v3_2_29: 24.50 CamSpec like_10.7HM: 7046.38

2.68 base_CamSpecHM_TTTEEE_lowl

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022467	0.02243 ± 0.00018	S_8	0.8498	0.846 ± 0.020	$100\theta_{s,eq}$	0.45334	0.4530 ± 0.0034
$\boldsymbol{\Omega_c h^2}$	0.11820	0.1184 ± 0.0016	$\sigma_8\Omega_m^{0.5}$	0.4655	0.463 ± 0.011	$H(0.15)$	73.32	73.23 ± 0.62
$\boldsymbol{100\theta_{MC}}$	1.041045	1.04102 ± 0.00033	$\sigma_8\Omega_m^{0.25}$	0.6265	0.623 ± 0.015	$D_M(0.15)$	637.0	637.9 ± 6.1
$\boldsymbol{\tau}$	0.1012	0.094 ± 0.028	$\sigma_8/h^{0.5}$	1.0219	1.015 ± 0.024	$H(0.38)$	83.314	83.25 ± 0.46
$\boldsymbol{\ln(10^{10}A_s)}$	3.132	3.117 ± 0.054	$r_{drag}h$	100.44	100.3 ± 1.2	$D_M(0.38)$	1520.8	1523 ± 12
$\boldsymbol{n_s}$	0.9723	0.9707 ± 0.0055	$\langle d^2\rangle^{1/2}$	2.521	2.508 ± 0.056	$H(0.51)$	89.963	89.91 ± 0.37
$\boldsymbol{y_{cal}}$	1.00023	1.0002 ± 0.0024	z_{re}	11.89	$11.2^{+2.6}_{-2.0}$	$D_M(0.51)$	1971.2	1973 ± 14
$\boldsymbol{A_{100}^{PS}}$	221.6	234 ± 25	$10^9 A_s$	2.293	2.26 ± 0.12	$H(0.61)$	95.530	$95.48^{+0.28}_{-0.31}$
$\boldsymbol{A_{143}^{PS}}$	48.3	37 ± 9	$10^9 A_s e^{-2\tau}$	1.8726	1.872 ± 0.012	$D_M(0.61)$	2294.6	2297 ± 16
$\boldsymbol{A_{217}^{PS}}$	108.5	104 ± 10	D_{40}	1231.7	1233 ± 14	$H(2.33)$	235.48	235.56 ± 0.91
$\boldsymbol{A_{217}^{CIB}}$	38.8	38 ± 7	D_{220}	5716.2	5716 ± 38	$D_M(2.33)$	5753.6	5756 ± 13
$\boldsymbol{A_{143}^{tSZ}}$	6.38	$4.0^{+2.0}_{-2.4}$	D_{810}	2532.6	2531 ± 13	$f\sigma_8(0.15)$	0.4708	0.468 ± 0.011
$\boldsymbol{r_{143\times217}^{PS}}$	0.768	0.67 ± 0.13	D_{1420}	816.86	815.5 ± 4.7	$\sigma_8(0.15)$	0.7800	0.774 ± 0.020
$\boldsymbol{r_{143\times217}^{CIB}}$	0.842	$0.52^{+0.36}_{-0.24}$	D_{2000}	231.94	231.3 ± 1.8	$f\sigma_8(0.38)$	0.4915	0.489 ± 0.011
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.96	—	$n_{s,0.002}$	0.9723	0.9707 ± 0.0055	$\sigma_8(0.38)$	0.6922	0.687 ± 0.018
$\boldsymbol{A^{kSZ}}$	0.01	< 5.50	Y_P	0.245433	0.245416 ± 0.000071	$f\sigma_8(0.51)$	0.4909	0.488 ± 0.011
$\boldsymbol{A_{100}^{dust}}$	1.000	1.00 ± 0.20	Y_P^{BBN}	0.246759	0.246743 ± 0.000072	$\sigma_8(0.51)$	0.6481	0.643 ± 0.017
$\boldsymbol{A_{143}^{dust}}$	0.960	0.95 ± 0.18	10^5D/H	2.5677	2.575 ± 0.034	$f\sigma_8(0.61)$	0.4863	0.483 ± 0.011
$\boldsymbol{A_{217}^{dust}}$	0.993	0.98 ± 0.10	Age/Gyr	13.7762	13.781 ± 0.029	$\sigma_8(0.61)$	0.6169	0.612 ± 0.016
$\boldsymbol{A_{143\times217}^{dust}}$	1.008	1.01 ± 0.16	z_*	1089.641	1089.70 ± 0.33	$f\sigma_8(2.33)$	0.3114	0.3090 ± 0.0084
$\boldsymbol{c_{100}}$	0.99782	0.9975 ± 0.0011	r_*	144.824	144.81 ± 0.33	$\sigma_8(2.33)$	0.3213	0.3188 ± 0.0089
$\boldsymbol{c_{217}}$	1.00104	1.0009 ± 0.0016	$100\theta_*$	1.041222	1.04120 ± 0.00032	f_{2000}^{143}	27.38	28 ± 3
$\boldsymbol{c_{TE}}$	0.9932	0.9938 ± 0.0053	$D_M(z_*)$/Gpc	13.9091	13.908 ± 0.031	f_{2000}^{217}	104.79	105.5 ± 2.1
$\boldsymbol{c_{EE}}$	0.9906	0.9907 ± 0.0050	z_{drag}	1060.047	1059.96 ± 0.36	$f_{2000}^{143\times217}$	30.07	30.6 ± 2.3
H_0	68.11	68.01 ± 0.72	r_{drag}	147.460	147.46 ± 0.33	χ^2_{lowl}	23.92	24.1 ± 1.4
Ω_Λ	0.6954	0.6940 ± 0.0095	k_D	0.140550	0.14053 ± 0.00034	$\chi^2_{CamSpec}$	11496.2	11512.2 ± 5.7
Ω_m	0.3046	0.3060 ± 0.0095	$100\theta_D$	0.160702	0.16075 ± 0.00021	χ^2_{prior}	1.90	7.8 ± 3.4
$\Omega_m h^2$	0.14131	0.1415 ± 0.0015	z_{eq}	3361.4	3365 ± 35	χ^2_{CMB}	11520.1	11536.3 ± 5.6
$\Omega_m h^3$	0.096250	0.09620 ± 0.00032	k_{eq}	0.010259	0.01027 ± 0.00011			
σ_8	0.8434	0.837 ± 0.021	$100\theta_{eq}$	0.8210	0.8203 ± 0.0067			

Best-fit $\chi^2_{eff} = 11522.05$; $\bar{\chi}^2_{eff} = 11544.10$; $R - 1 = 0.00836$

χ^2_{eff}: CMB - commander_dx12_v3_2_29: 23.92 CamSpec like_10.7HM_1400_unified: 11496.23

2.69 base_plikHM_TT_lowl_lensing

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022403	0.02232 ± 0.00027	$\sigma_8\Omega_m^{0.25}$	0.6118	0.6112 ± 0.0080	$H(0.15)$	73.60	73.4 ± 1.0
$\boldsymbol{\Omega_c h^2}$	0.11722	0.1178 ± 0.0026	$\sigma_8/h^{0.5}$	0.9997	0.998 ± 0.012	$D_M(0.15)$	634.2	637 ± 10
$\boldsymbol{100\theta_{MC}}$	1.04117	1.04111 ± 0.00051	$r_{drag}h$	101.17	100.7 ± 2.1	$H(0.38)$	83.49	83.31 ± 0.75
$\boldsymbol{\tau}$	0.0862	0.080 ± 0.025	$\langle d^2\rangle^{1/2}$	2.4689	2.468 ± 0.030	$D_M(0.38)$	1515.4	1521 ± 20
$\boldsymbol{\ln(10^{10}A_s)}$	3.1002	3.089 ± 0.044	z_{re}	10.61	$9.98^{+2.4}_{-1.9}$	$H(0.51)$	90.08	$89.94^{+0.56}_{-0.63}$
$\boldsymbol{n_s}$	0.9733	0.9702 ± 0.0076	$10^9 A_s$	2.220	2.198 ± 0.097	$D_M(0.51)$	1965.0	1971 ± 24
$\boldsymbol{y_{cal}}$	1.00008	1.0002 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.8685	1.870 ± 0.015	$H(0.61)$	95.600	$95.49^{+0.45}_{-0.51}$
$\boldsymbol{A_{217}^{CIB}}$	45.6	47 ± 7	D_{40}	1221.5	1227 ± 13	$D_M(0.61)$	2288.1	2295 ± 25
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.73	—	D_{220}	5716.3	5718 ± 42	$H(2.33)$	234.79	235.1 ± 1.5
$\boldsymbol{A_{143}^{tSZ}}$	6.92	5.3 ± 2.0	D_{810}	2532.4	2531 ± 14	$D_M(2.33)$	5752.2	5758 ± 21
$\boldsymbol{A_{100}^{PS}}$	246.5	260 ± 28	D_{1420}	816.7	814.9 ± 5.2	$f\sigma_8(0.15)$	0.4582	0.4588 ± 0.0084
$\boldsymbol{A_{143}^{PS}}$	51.3	47 ± 8	D_{2000}	231.32	230.5 ± 2.0	$\sigma_8(0.15)$	0.7656	0.762 ± 0.013
$\boldsymbol{A_{143\times217}^{PS}}$	54.7	42 ± 9	$n_{s,0.002}$	0.9733	0.9702 ± 0.0076	$f\sigma_8(0.38)$	0.4797	0.4793 ± 0.0065
$\boldsymbol{A_{217}^{PS}}$	122.1	115 ± 10	Y_P	0.245408	$0.24537^{+0.00011}_{-0.000096}$	$\sigma_8(0.38)$	0.6800	0.677 ± 0.013
$\boldsymbol{A^{kSZ}}$	0.01	< 4.40	Y_P^{BBN}	0.246735	$0.24670^{+0.00011}_{-0.000096}$	$f\sigma_8(0.51)$	0.4798	0.4789 ± 0.0060
$\boldsymbol{A_{100}^{dustTT}}$	8.87	9.0 ± 1.8	10^5D/H	2.5794	2.595 ± 0.050	$\sigma_8(0.51)$	0.6369	0.634 ± 0.012
$\boldsymbol{A_{143}^{dustTT}}$	10.79	10.7 ± 1.8	Age/Gyr	13.7744	13.787 ± 0.047	$f\sigma_8(0.61)$	0.4757	0.4745 ± 0.0060
$\boldsymbol{A_{143\times217}^{dustTT}}$	19.80	18.3 ± 3.3	z_*	1089.63	1089.79 ± 0.52	$\sigma_8(0.61)$	0.6064	0.603 ± 0.012
$\boldsymbol{A_{217}^{dustTT}}$	95.4	93.6 ± 7.3	r_*	145.13	145.04 ± 0.55	$f\sigma_8(2.33)$	0.3063	0.3044 ± 0.0067
$\boldsymbol{c_{100}}$	0.99965	0.99960 ± 0.00062	$100\theta_*$	1.04136	1.04130 ± 0.00050	$\sigma_8(2.33)$	0.3163	0.3143 ± 0.0075
$\boldsymbol{c_{217}}$	0.99822	0.99823 ± 0.00063	$D_M(z_*)$/Gpc	13.9364	13.929 ± 0.050	f_{2000}^{143}	28.26	29.8 ± 3.2
H_0	68.45	68.2 ± 1.2	z_{drag}	1059.818	1059.67 ± 0.51	$f_{2000}^{143\times217}$	31.73	32.4 ± 2.3
Ω_Λ	0.7006	$0.697^{+0.016}_{-0.015}$	r_{drag}	147.79	147.73 ± 0.53	f_{2000}^{217}	106.10	107.1 ± 2.1
Ω_m	0.2994	0.303 ± 0.016	k_D	0.14015	0.14016 ± 0.00053	$\chi^2_{lensing}$	9.11	9.8 ± 1.6
$\Omega_m h^2$	0.14027	0.1408 ± 0.0024	$100\theta_D$	0.160844	0.16093 ± 0.00029	χ^2_{lowl}	22.92	23.5 ± 1.0
$\Omega_m h^3$	0.096020	0.09594 ± 0.00046	z_{eq}	3337	3349 ± 57	χ^2_{plik}	757.8	770.5 ± 5.5
σ_8	0.8271	0.824 ± 0.013	k_{eq}	0.010184	0.01022 ± 0.00017	χ^2_{prior}	1.21	7.4 ± 3.7
S_8	0.8262	0.828 ± 0.017	$100\theta_{eq}$	0.8255	0.823 ± 0.011	χ^2_{CMB}	789.8	803.7 ± 5.5
$\sigma_8\Omega_m^{0.5}$	0.4526	0.4535 ± 0.0094	$100\theta_{s,eq}$	0.4557	0.4546 ± 0.0057			

Best-fit $\chi^2_{eff} = 791.01$; $\bar{\chi}^2_{eff} = 811.06$; $R - 1 = 0.00623$

χ^2_{eff}: CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 9.11 commander_dx12_v3_2_29: 22.92 plik_rd12_HM_v22_TT: 757.77

2.70 base_plikHM_TT_lowl_lensing_post_BAO

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022337	0.02230 ± 0.00020	$\sigma_8/h^{0.5}$	0.9986	0.998 ± 0.012	$H(0.38)$	83.271	83.23 ± 0.39
$\boldsymbol{\Omega_c h^2}$	0.11798	0.1180 ± 0.0013	$r_{\rm drag}h$	100.56	100.5 ± 1.0	$D_{\rm M}(0.38)$	1521.3	1522 ± 10
$\boldsymbol{100\theta_{MC}}$	1.041099	1.04108 ± 0.00042	$\langle d^2\rangle^{1/2}$	2.4677	2.468 ± 0.030	$H(0.51)$	89.907	89.87 ± 0.32
$\boldsymbol{\tau}$	0.0794	0.078 ± 0.016	$z_{\rm re}$	10.05	$9.9^{+1.6}_{-1.4}$	$D_{\rm M}(0.51)$	1971.9	1973 ± 12
$\boldsymbol{\ln(10^{10}A_s)}$	3.0879	3.085 ± 0.031	$10^9 A_{\rm s}$	2.193	2.188 ± 0.067	$H(0.61)$	95.464	95.43 ± 0.27
$\boldsymbol{n_s}$	0.97050	0.9694 ± 0.0047	$10^9 A_{\rm s} e^{-2\tau}$	1.8710	1.872 ± 0.012	$D_{\rm M}(0.61)$	2295.6	2297 ± 13
$\boldsymbol{y_{cal}}$	0.99994	1.0002 ± 0.0026	D_{40}	1224.4	1227 ± 12	$H(2.33)$	235.21	235.22 ± 0.80
$\boldsymbol{A_{217}^{CIB}}$	47.7	47 ± 7	D_{220}	5714.4	5718 ± 41	$D_{\rm M}(2.33)$	5757.9	5760 ± 13
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.39	—	D_{810}	2531.6	2531 ± 14	$f\sigma_8(0.15)$	0.4596	0.4594 ± 0.0065
$\boldsymbol{A_{143}^{tSZ}}$	7.07	5.3 ± 2.0	D_{1420}	815.5	814.8 ± 5.1	$\sigma_8(0.15)$	0.7623	0.761 ± 0.011
$\boldsymbol{A_{100}^{PS}}$	251.0	260 ± 28	D_{2000}	230.70	230.4 ± 1.8	$f\sigma_8(0.38)$	0.4800	0.4796 ± 0.0061
$\boldsymbol{A_{143}^{PS}}$	48.0	47 ± 8	$n_{\rm s,0.002}$	0.97050	0.9694 ± 0.0047	$\sigma_8(0.38)$	0.6766	0.6756 ± 0.0097
$\boldsymbol{A_{143\times217}^{PS}}$	47.2	43 ± 9	$Y_{\rm P}$	0.245382	$0.245365^{+0.000087}_{-0.000075}$	$f\sigma_8(0.51)$	0.4795	0.4790 ± 0.0060
$\boldsymbol{A_{217}^{PS}}$	119.1	115 ± 10	$Y_{\rm P}^{\rm BBN}$	0.246709	$0.246691^{+0.000087}_{-0.000075}$	$\sigma_8(0.51)$	0.6335	0.6326 ± 0.0093
$\boldsymbol{A^{kSZ}}$	0.01	< 4.49	10^5D/H	2.5916	2.599 ± 0.038	$f\sigma_8(0.61)$	0.4750	0.4746 ± 0.0060
$\boldsymbol{A_{100}^{dust}}$	8.87	8.9 ± 1.8	Age/Gyr	13.7867	13.791 ± 0.030	$\sigma_8(0.61)$	0.6030	0.6021 ± 0.0090
$\boldsymbol{A_{143}^{dust}}$	10.80	10.7 ± 1.8	z_*	1089.786	1089.84 ± 0.31	$f\sigma_8(2.33)$	0.30436	0.3039 ± 0.0047
$\boldsymbol{A_{143\times217}^{dust}}$	19.42	18.2 ± 3.3	r_*	144.980	144.99 ± 0.32	$\sigma_8(2.33)$	0.3141	0.3136 ± 0.0051
$\boldsymbol{A_{217}^{dust}}$	94.7	93.5 ± 7.4	$100\theta_*$	1.041289	1.04127 ± 0.00041	f_{2000}^{143}	29.17	30.0 ± 2.9
$\boldsymbol{c_{100}}$	0.99964	0.99960 ± 0.00062	$D_{\rm M}(z_*)$/Gpc	13.9232	13.924 ± 0.031	$f_{2000}^{143\times217}$	32.29	32.6 ± 2.0
$\boldsymbol{c_{217}}$	0.99823	0.99822 ± 0.00062	$z_{\rm drag}$	1059.704	1059.64 ± 0.45	f_{2000}^{217}	106.73	107.2 ± 1.9
H_0	68.10	68.04 ± 0.59	$r_{\rm drag}$	147.665	147.69 ± 0.34	$\chi^2_{\rm lensing}$	9.05	9.8 ± 1.6
Ω_Λ	0.6961	0.6954 ± 0.0077	$k_{\rm D}$	0.140239	0.14019 ± 0.00043	$\chi^2_{\rm lowl}$	23.17	23.42 ± 0.91
$\Omega_{\rm m}$	0.3039	0.3046 ± 0.0077	$100\theta_{\rm D}$	0.160895	0.16094 ± 0.00026	$\chi^2_{\rm plik}$	757.5	769.8 ± 5.3
$\Omega_{\rm m}h^2$	0.14096	0.1410 ± 0.0012	$z_{\rm eq}$	3353.1	3354 ± 29	$\chi^2_{\rm 6DF}$	0.0003	0.043 ± 0.061
$\Omega_{\rm m}h^3$	0.095997	0.09593 ± 0.00045	$k_{\rm eq}$	0.010234	0.010237 ± 0.000090	$\chi^2_{\rm MGS}$	1.75	1.78 ± 0.62
σ_8	0.8241	0.823 ± 0.011	$100\theta_{\rm eq}$	0.8222	0.8220 ± 0.0056	$\chi^2_{\rm DR12BAO}$	3.432	4.1 ± 1.1
S_8	0.8295	0.829 ± 0.012	$100\theta_{\rm s,eq}$	0.45406	0.4540 ± 0.0029	$\chi^2_{\rm prior}$	1.35	7.4 ± 3.7
$\sigma_8\Omega_{\rm m}^{0.5}$	0.4543	0.4542 ± 0.0068	$H(0.15)$	73.30	73.25 ± 0.51	$\chi^2_{\rm CMB}$	789.7	803.0 ± 5.3
$\sigma_8\Omega_{\rm m}^{0.25}$	0.6119	0.6114 ± 0.0078	$D_{\rm M}(0.15)$	637.1	637.7 ± 5.0	$\chi^2_{\rm BAO}$	5.180	6.0 ± 1.1

Best-fit $\chi^2_{\rm eff} = 796.25$; $\bar{\chi}^2_{\rm eff} = 816.31$; $R - 1 = 0.00781$

$\chi^2_{\rm eff}$: BAO - 6DF: 0.00 MGS: 1.75 DR12BAO: 3.43 CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 9.05 commander_dx12_v3_2_29: 23.17 plik_rd12_HM_v22_TT: 757.49

2.71 base_plikHM_TT_lowl_lensing_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02235 ± 0.00025	$\sigma_8\Omega_m^{0.25}$	0.6115 ± 0.0079	$H(0.15)$	$73.47^{+0.86}_{-1.0}$
$\boldsymbol{\Omega_c h^2}$	$0.1175^{+0.0025}_{-0.0022}$	$\sigma_8/h^{0.5}$	0.999 ± 0.012	$D_M(0.15)$	$635.6^{+9.8}_{-8.7}$
$\boldsymbol{100\theta_{MC}}$	1.04114 ± 0.00050	$r_{drag}h$	$100.9^{+1.7}_{-2.1}$	$H(0.38)$	$83.39^{+0.62}_{-0.77}$
$\boldsymbol{\tau}$	$0.084^{+0.018}_{-0.026}$	$\langle d^2\rangle^{1/2}$	2.471 ± 0.029	$D_M(0.38)$	1518^{+20}_{-17}
$\boldsymbol{\ln(10^{10}A_s)}$	$3.095^{+0.034}_{-0.045}$	z_{re}	10.3 ± 1.8	$H(0.51)$	$90.00^{+0.49}_{-0.62}$
$\boldsymbol{n_s}$	$0.9710^{+0.0065}_{-0.0078}$	$10^9 A_s$	$2.210^{+0.071}_{-0.10}$	$D_M(0.51)$	1968^{+24}_{-20}
$\boldsymbol{y_{cal}}$	1.0002 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.869 ± 0.015	$H(0.61)$	$95.54^{+0.39}_{-0.50}$
$\boldsymbol{A_{217}^{CIB}}$	47 ± 7	D_{40}	1226 ± 13	$D_M(0.61)$	2292^{+25}_{-22}
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{220}	5718 ± 42	$H(2.33)$	$234.9^{+1.5}_{-1.3}$
$\boldsymbol{A_{143}^{tSZ}}$	5.3 ± 2.0	D_{810}	2530 ± 14	$D_M(2.33)$	5755^{+21}_{-18}
$\boldsymbol{A_{100}^{PS}}$	259 ± 28	D_{1420}	815.0 ± 5.2	$f\sigma_8(0.15)$	0.4585 ± 0.0084
$\boldsymbol{A_{143}^{PS}}$	46 ± 8	D_{2000}	230.6 ± 1.9	$\sigma_8(0.15)$	$0.764^{+0.010}_{-0.013}$
$\boldsymbol{A_{143\times217}^{PS}}$	42 ± 9	$n_{s,0.002}$	$0.9710^{+0.0065}_{-0.0078}$	$f\sigma_8(0.38)$	0.4795 ± 0.0065
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	Y_P	0.24538 ± 0.00010	$\sigma_8(0.38)$	$0.678^{+0.010}_{-0.013}$
$\boldsymbol{A^{kSZ}}$	< 4.36	Y_P^{BBN}	0.24671 ± 0.00010	$f\sigma_8(0.51)$	0.4793 ± 0.0059
$\boldsymbol{A_{100}^{dust TT}}$	9.0 ± 1.8	10^5D/H	2.591 ± 0.047	$\sigma_8(0.51)$	$0.6352^{+0.0097}_{-0.013}$
$\boldsymbol{A_{143}^{dust TT}}$	10.7 ± 1.8	Age/Gyr	$13.782^{+0.047}_{-0.040}$	$f\sigma_8(0.61)$	0.4751 ± 0.0057
$\boldsymbol{A_{143\times217}^{dust TT}}$	18.3 ± 3.3	z_*	1089.74 ± 0.48	$\sigma_8(0.61)$	$0.6047^{+0.0095}_{-0.013}$
$\boldsymbol{A_{217}^{dust TT}}$	93.6 ± 7.3	r_*	$145.10^{+0.49}_{-0.54}$	$f\sigma_8(2.33)$	$0.3053^{+0.0051}_{-0.0069}$
$\boldsymbol{c_{100}}$	0.99960 ± 0.00062	$100\theta_*$	1.04133 ± 0.00049	$\sigma_8(2.33)$	$0.3153^{+0.0057}_{-0.0079}$
$\boldsymbol{c_{217}}$	0.99823 ± 0.00062	$D_M(z_*)$/Gpc	13.934 ± 0.047	f_{2000}^{143}	29.6 ± 3.1
H_0	$68.3^{+1.0}_{-1.2}$	z_{drag}	1059.70 ± 0.50	$f_{2000}^{143\times217}$	32.3 ± 2.2
Ω_Λ	0.698 ± 0.014	r_{drag}	147.78 ± 0.50	f_{2000}^{217}	106.9 ± 2.1
Ω_m	0.302 ± 0.014	k_D	0.14012 ± 0.00051	$\chi^2_{lensing}$	9.8 ± 1.6
$\Omega_m h^2$	$0.1405^{+0.0023}_{-0.0021}$	$100\theta_D$	0.16091 ± 0.00028	χ^2_{lowl}	23.40 ± 0.99
$\Omega_m h^3$	0.09595 ± 0.00046	z_{eq}	3342^{+56}_{-50}	χ^2_{plik}	770.3 ± 5.5
σ_8	$0.825^{+0.011}_{-0.013}$	k_{eq}	$0.01020^{+0.00017}_{-0.00015}$	χ^2_{prior}	7.4 ± 3.7
S_8	0.827 ± 0.017	$100\theta_{eq}$	$0.8244^{+0.0095}_{-0.011}$	χ^2_{CMB}	803.5 ± 5.4
$\sigma_8\Omega_m^{0.5}$	0.4531 ± 0.0092	$100\theta_{s,eq}$	$0.4552^{+0.0048}_{-0.0057}$		

$\bar{\chi}^2_{eff} = 810.86$; $R - 1 = 0.00629$

2.72 base_plikHM_TT_lowl_lensing_post_BAO_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02230 ± 0.00020	$\sigma_8/h^{0.5}$	0.998 ± 0.012	$H(0.38)$	83.24 ± 0.38
$\boldsymbol{\Omega_c h^2}$	0.1180 ± 0.0013	$r_{\rm drag}h$	100.52 ± 0.99	$D_{\rm M}(0.38)$	1522 ± 10
$\boldsymbol{100\theta_{MC}}$	1.04108 ± 0.00042	$\langle d^2\rangle^{1/2}$	2.469 ± 0.029	$H(0.51)$	89.88 ± 0.31
$\boldsymbol{\tau}$	0.079 ± 0.016	$z_{\rm re}$	9.9 ± 1.4	$D_{\rm M}(0.51)$	1973 ± 12
$\boldsymbol{\ln(10^{10}A_s)}$	3.087 ± 0.029	$10^9 A_{\rm s}$	$2.191^{+0.061}_{-0.069}$	$H(0.61)$	95.44 ± 0.27
$\boldsymbol{n_s}$	0.9695 ± 0.0046	$10^9 A_{\rm s}e^{-2\tau}$	1.871 ± 0.012	$D_{\rm M}(0.61)$	2297 ± 13
$\boldsymbol{y_{cal}}$	1.0002 ± 0.0026	D_{40}	1227 ± 12	$H(2.33)$	235.20 ± 0.79
$\boldsymbol{A^{CIB}_{217}}$	47 ± 7	D_{220}	5718 ± 41	$D_{\rm M}(2.33)$	5760 ± 13
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{810}	2531 ± 14	$f\sigma_8(0.15)$	0.4595 ± 0.0065
$\boldsymbol{A^{tSZ}_{143}}$	5.3 ± 2.0	D_{1420}	814.8 ± 5.1	$\sigma_8(0.15)$	0.762 ± 0.010
$\boldsymbol{A^{PS}_{100}}$	260 ± 28	D_{2000}	230.4 ± 1.8	$f\sigma_8(0.38)$	0.4798 ± 0.0060
$\boldsymbol{A^{PS}_{143}}$	47 ± 8	$n_{\rm s,0.002}$	0.9695 ± 0.0046	$\sigma_8(0.38)$	0.6760 ± 0.0093
$\boldsymbol{A^{PS}_{143\times217}}$	43 ± 9	$Y_{\rm P}$	$0.245366^{+0.000086}_{-0.000074}$	$f\sigma_8(0.51)$	0.4792 ± 0.0059
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	$Y_{\rm P}^{\rm BBN}$	$0.246692^{+0.000087}_{-0.000075}$	$\sigma_8(0.51)$	0.6329 ± 0.0089
$\boldsymbol{A^{kSZ}}$	< 4.48	10^5D/H	2.599 ± 0.038	$f\sigma_8(0.61)$	0.4748 ± 0.0058
$\boldsymbol{A^{dustTT}_{100}}$	8.9 ± 1.8	Age/Gyr	13.791 ± 0.030	$\sigma_8(0.61)$	0.6025 ± 0.0086
$\boldsymbol{A^{dustTT}_{143}}$	10.7 ± 1.8	z_*	1089.83 ± 0.31	$f\sigma_8(2.33)$	0.3041 ± 0.0045
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.2 ± 3.3	r_*	145.00 ± 0.31	$\sigma_8(2.33)$	0.3138 ± 0.0049
$\boldsymbol{A^{dustTT}_{217}}$	93.5 ± 7.3	$100\theta_*$	1.04128 ± 0.00041	f^{143}_{2000}	29.9 ± 2.9
$\boldsymbol{c_{100}}$	0.99960 ± 0.00062	$D_{\rm M}(z_*)$/Gpc	13.925 ± 0.031	$f^{143\times217}_{2000}$	32.5 ± 2.0
$\boldsymbol{c_{217}}$	0.99822 ± 0.00062	$z_{\rm drag}$	1059.64 ± 0.45	f^{217}_{2000}	107.2 ± 1.9
H_0	68.06 ± 0.58	$r_{\rm drag}$	147.69 ± 0.34	$\chi^2_{\rm lensing}$	9.8 ± 1.6
Ω_Λ	0.6956 ± 0.0075	$k_{\rm D}$	0.14018 ± 0.00043	$\chi^2_{\rm lowl}$	23.43 ± 0.91
$\Omega_{\rm m}$	0.3044 ± 0.0075	$100\theta_{\rm D}$	0.16094 ± 0.00026	$\chi^2_{\rm plik}$	769.7 ± 5.3
$\Omega_{\rm m}h^2$	0.1410 ± 0.0012	$z_{\rm eq}$	3353 ± 29	$\chi^2_{\rm 6DF}$	0.041 ± 0.059
$\Omega_{\rm m}h^3$	0.09593 ± 0.00045	$k_{\rm eq}$	0.010234 ± 0.000088	$\chi^2_{\rm MGS}$	1.79 ± 0.61
σ_8	0.823 ± 0.011	$100\theta_{\rm eq}$	0.8221 ± 0.0055	$\chi^2_{\rm DR12BAO}$	4.1 ± 1.0
S_8	0.829 ± 0.012	$100\theta_{\rm s,eq}$	0.4541 ± 0.0028	$\chi^2_{\rm prior}$	7.4 ± 3.7
$\sigma_8\Omega_{\rm m}^{0.5}$	0.4543 ± 0.0067	$H(0.15)$	73.26 ± 0.51	$\chi^2_{\rm CMB}$	802.9 ± 5.2
$\sigma_8\Omega_{\rm m}^{0.25}$	0.6116 ± 0.0076	$D_{\rm M}(0.15)$	637.5 ± 4.9	$\chi^2_{\rm BAO}$	5.9 ± 1.0

$\bar{\chi}^2_{\rm eff} = 816.23$; $R - 1 = 0.00814$

2.73 base_plikHM_TTTEEE_lowl_lensing

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022525	0.02249 ± 0.00017	$\Omega_m h^3$	0.096392	0.09635 ± 0.00029	$100\theta_{eq}$	0.8208	0.8200 ± 0.0067
$\boldsymbol{\Omega_c h^2}$	0.11824	0.1184 ± 0.0016	σ_8	0.8270	0.825 ± 0.011	$100\theta_{s,eq}$	0.45317	0.4528 ± 0.0034
$\boldsymbol{100\theta_{MC}}$	1.041106	1.04108 ± 0.00032	S_8	0.8330	$0.833^{+0.012}_{-0.013}$	$H(0.15)$	73.37	73.29 ± 0.61
$\boldsymbol{\tau}$	0.0816	0.079 ± 0.018	$\sigma_8\Omega_m^{0.5}$	0.4562	$0.4561^{+0.0066}_{-0.0073}$	$D_M(0.15)$	636.5	637.4 ± 6.0
$\boldsymbol{\ln(10^{10} A_s)}$	3.0938	3.089 ± 0.033	$\sigma_8\Omega_m^{0.25}$	0.6143	0.6134 ± 0.0074	$H(0.38)$	83.366	83.30 ± 0.45
$\boldsymbol{n_s}$	0.9716	0.9696 ± 0.0051	$\sigma_8/h^{0.5}$	1.0017	0.9999 ± 0.012	$D_M(0.38)$	1519.8	1522 ± 12
$\boldsymbol{y_{cal}}$	1.00002	1.0002 ± 0.0025	$r_{drag}h$	100.46	100.3 ± 1.2	$H(0.51)$	90.016	89.96 ± 0.36
$\boldsymbol{A_{217}^{CIB}}$	44.3	46 ± 7	$\langle d^2\rangle^{1/2}$	2.4741	2.474 ± 0.029	$D_M(0.51)$	1969.9	1972 ± 14
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.85	—	z_{re}	10.19	$9.9^{+1.7}_{-1.4}$	$H(0.61)$	95.583	95.54 ± 0.29
$\boldsymbol{A_{143}^{tSZ}}$	7.04	$5.7^{+2.1}_{-1.8}$	$10^9 A_s$	2.206	2.196 ± 0.072	$D_M(0.61)$	2293.1	2295 ± 15
$\boldsymbol{A_{100}^{PS}}$	244.0	255 ± 28	$10^9 A_s e^{-2\tau}$	1.8739	1.874 ± 0.012	$H(2.33)$	235.57	235.67 ± 0.92
$\boldsymbol{A_{143}^{PS}}$	50.9	44 ± 8	D_{40}	1225.0	1229 ± 12	$D_M(2.33)$	5750.5	5753 ± 13
$\boldsymbol{A_{143\times217}^{PS}}$	56.3	42 ± 9	D_{220}	5726.8	5731 ± 39	$f\sigma_8(0.15)$	0.4615	0.4612 ± 0.0066
$\boldsymbol{A_{217}^{PS}}$	122.8	115 ± 10	D_{810}	2535.5	2534 ± 14	$\sigma_8(0.15)$	0.7649	0.763 ± 0.011
$\boldsymbol{A^{kSZ}}$	0.01	< 3.87	D_{1420}	818.16	816.8 ± 4.7	$f\sigma_8(0.38)$	0.4819	0.4812 ± 0.0059
$\boldsymbol{A_{100}^{dust TT}}$	8.79	8.9 ± 1.8	D_{2000}	231.99	231.4 ± 1.6	$\sigma_8(0.38)$	0.6788	0.677 ± 0.010
$\boldsymbol{A_{143}^{dust TT}}$	11.02	10.9 ± 1.8	$n_{s,0.002}$	0.9716	0.9696 ± 0.0051	$f\sigma_8(0.51)$	0.4813	0.4805 ± 0.0057
$\boldsymbol{A_{143\times217}^{dust TT}}$	20.32	18.6 ± 3.3	Y_P	0.245453	$0.245440^{+0.000064}_{-0.000058}$	$\sigma_8(0.51)$	0.6356	0.6338 ± 0.0096
$\boldsymbol{A_{217}^{dust TT}}$	95.8	93.8 ± 7.3	Y_P^{BBN}	0.246780	$0.246767^{+0.000064}_{-0.000058}$	$f\sigma_8(0.61)$	0.4768	0.4759 ± 0.0057
$\boldsymbol{A_{100}^{dust TE}}$	0.1132	0.114 ± 0.038	10^5D/H	2.5575	2.564 ± 0.030	$\sigma_8(0.61)$	0.6050	0.6032 ± 0.0093
$\boldsymbol{A_{100\times143}^{dust TE}}$	0.1345	0.134 ± 0.029	Age/Gyr	13.7689	13.774 ± 0.028	$f\sigma_8(2.33)$	0.3053	0.3044 ± 0.0050
$\boldsymbol{A_{100\times217}^{dust TE}}$	0.482	0.479 ± 0.085	z_*	1089.572	1089.63 ± 0.31	$\sigma_8(2.33)$	0.3151	0.3141 ± 0.0054
$\boldsymbol{A_{143}^{dust TE}}$	0.224	0.223 ± 0.054	r_*	144.768	144.74 ± 0.33	f_{2000}^{143}	27.31	28.4 ± 2.8
$\boldsymbol{A_{143\times217}^{dust TE}}$	0.665	0.662 ± 0.080	$100\theta_*$	1.041274	1.04125 ± 0.00032	$f_{2000}^{143\times217}$	30.95	31.3 ± 2.0
$\boldsymbol{A_{217}^{dust TE}}$	2.070	2.07 ± 0.27	$D_M(z_*)$/Gpc	13.9030	13.901 ± 0.031	f_{2000}^{217}	105.43	106.2 ± 1.9
$\boldsymbol{c_{100}}$	0.99972	0.99965 ± 0.00061	z_{drag}	1060.162	1060.11 ± 0.32	$\chi^2_{lensing}$	9.66	10.1 ± 1.9
$\boldsymbol{c_{217}}$	0.99816	0.99817 ± 0.00061	r_{drag}	147.385	147.37 ± 0.32	χ^2_{lowl}	23.14	23.54 ± 0.90
H_0	68.16	68.06 ± 0.71	k_D	0.140674	0.14066 ± 0.00033	χ^2_{plik}	2342.0	2357.3 ± 6.0
Ω_Λ	0.6956	$0.694^{+0.010}_{-0.0089}$	$100\theta_D$	0.160631	0.16067 ± 0.00018	χ^2_{prior}	1.50	11.5 ± 4.5
Ω_m	0.3044	$0.3058^{+0.0089}_{-0.010}$	z_{eq}	3363.9	3368 ± 35	χ^2_{CMB}	2374.8	2391.0 ± 5.8
$\Omega_m h^2$	0.14141	0.1416 ± 0.0015	k_{eq}	0.010267	0.01028 ± 0.00011			

Best-fit $\chi^2_{eff} = 2376.35$; $\bar{\chi}^2_{eff} = 2402.48$; $R - 1 = 0.01194$

χ^2_{eff}: CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 9.66 commander_dx12_v3_2_29: 23.14 plik_rd12_HM_v22b_TTTEEE: 2342.04

2.74 base_plikHM_TTTEEE_lowl_lensing_post_BAO

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022524	0.02250 ± 0.00014	σ_8	0.8263	0.825 ± 0.011	$H(0.15)$	73.366	73.33 ± 0.42
$\boldsymbol{\Omega_c h^2}$	0.11825	0.1183 ± 0.0011	S_8	0.8324	0.832 ± 0.011	$D_M(0.15)$	636.58	637.0 ± 4.1
$\boldsymbol{100\theta_{MC}}$	1.041102	1.04109 ± 0.00030	$\sigma_8\Omega_m^{0.5}$	0.4559	0.4557 ± 0.0062	$H(0.38)$	83.361	83.33 ± 0.31
$\boldsymbol{\tau}$	0.0808	0.080 ± 0.015	$\sigma_8\Omega_m^{0.25}$	0.6138	0.6132 ± 0.0074	$D_M(0.38)$	1519.9	1520.7 ± 8.4
$\boldsymbol{\ln(10^{10}A_s)}$	3.0922	3.090 ± 0.029	$\sigma_8/h^{0.5}$	1.0009	0.9998 ± 0.012	$H(0.51)$	90.011	89.98 ± 0.25
$\boldsymbol{n_s}$	0.97153	0.9699 ± 0.0041	$r_{drag}h$	100.45	100.39 ± 0.85	$D_M(0.51)$	1970.0	1971.0 ± 9.8
$\boldsymbol{y_{cal}}$	1.00003	1.0002 ± 0.0025	$\langle d^2\rangle^{1/2}$	2.4724	2.474 ± 0.029	$H(0.61)$	95.579	95.56 ± 0.21
$\boldsymbol{A_{217}^{CIB}}$	44.7	46 ± 7	z_{re}	10.12	$9.98^{+1.5}_{-1.2}$	$D_M(0.61)$	2293.3	2294 ± 11
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.79	—	$10^9 A_s$	2.202	2.198 ± 0.063	$H(2.33)$	235.58	235.60 ± 0.65
$\boldsymbol{A_{143}^{tSZ}}$	7.06	$5.7^{+2.1}_{-1.9}$	$10^9 A_s e^{-2\tau}$	1.8738	1.874 ± 0.011	$D_M(2.33)$	5750.7	5751.9 ± 9.6
$\boldsymbol{A_{100}^{PS}}$	244.5	254 ± 28	D_{40}	1224.8	1229 ± 11	$f\sigma_8(0.15)$	0.4612	0.4609 ± 0.0060
$\boldsymbol{A_{143}^{PS}}$	49.9	44 ± 8	D_{220}	5726.7	5731 ± 39	$\sigma_8(0.15)$	0.7643	0.763 ± 0.010
$\boldsymbol{A_{143\times217}^{PS}}$	54.8	42 ± 9	D_{810}	2535.4	2534 ± 14	$f\sigma_8(0.38)$	0.4815	0.4810 ± 0.0058
$\boldsymbol{A_{217}^{PS}}$	122.3	114.9 ± 9.9	D_{1420}	818.10	816.8 ± 4.7	$\sigma_8(0.38)$	0.6783	0.6772 ± 0.0092
$\boldsymbol{A^{kSZ}}$	0.00	< 3.89	D_{2000}	231.95	231.4 ± 1.5	$f\sigma_8(0.51)$	0.4809	0.4804 ± 0.0058
$\boldsymbol{A_{100}^{dust TT}}$	8.85	8.9 ± 1.8	$n_{s,0.002}$	0.97153	0.9699 ± 0.0041	$\sigma_8(0.51)$	0.6351	0.6341 ± 0.0087
$\boldsymbol{A_{143}^{dust TT}}$	11.07	10.9 ± 1.8	Y_P	0.245453	0.245443 ± 0.000053	$f\sigma_8(0.61)$	0.4764	0.4759 ± 0.0057
$\boldsymbol{A_{143\times217}^{dust TT}}$	20.17	18.6 ± 3.2	Y_P^{BBN}	0.246780	0.246770 ± 0.000053	$\sigma_8(0.61)$	0.6045	0.6035 ± 0.0084
$\boldsymbol{A_{217}^{dust TT}}$	95.6	93.8 ± 7.3	10^5D/H	2.5578	2.562 ± 0.025	$f\sigma_8(2.33)$	0.30509	0.3046 ± 0.0044
$\boldsymbol{A_{100}^{dust TE}}$	0.1143	0.114 ± 0.038	Age/Gyr	13.7693	13.772 ± 0.022	$\sigma_8(2.33)$	0.31485	0.3143 ± 0.0047
$\boldsymbol{A_{100\times143}^{dust TE}}$	0.1342	0.134 ± 0.029	z_*	1089.575	1089.61 ± 0.24	f_{2000}^{143}	27.33	28.4 ± 2.7
$\boldsymbol{A_{100\times217}^{dust TE}}$	0.480	0.478 ± 0.085	r_*	144.766	144.77 ± 0.25	$f_{2000}^{143\times217}$	30.96	31.3 ± 1.9
$\boldsymbol{A_{143}^{dust TE}}$	0.224	0.223 ± 0.054	$100\theta_*$	1.041267	1.04126 ± 0.00029	f_{2000}^{217}	105.48	106.2 ± 1.8
$\boldsymbol{A_{143\times217}^{dust TE}}$	0.663	0.663 ± 0.079	$D_M(z_*)$/Gpc	13.9029	13.903 ± 0.023	$\chi^2_{lensing}$	9.54	10.1 ± 1.9
$\boldsymbol{A_{217}^{dust TE}}$	2.064	2.06 ± 0.27	z_{drag}	1060.162	1060.11 ± 0.29	χ^2_{lowl}	23.12	23.49 ± 0.87
$\boldsymbol{c_{100}}$	0.99971	0.99965 ± 0.00061	r_{drag}	147.384	147.39 ± 0.25	χ^2_{plik}	2342.2	2356.8 ± 5.9
$\boldsymbol{c_{217}}$	0.99815	0.99818 ± 0.00062	k_D	0.140674	0.14065 ± 0.00029	χ^2_{6DF}	0.0001	0.030 ± 0.043
H_0	68.156	68.11 ± 0.49	$100\theta_D$	0.160632	0.16066 ± 0.00017	χ^2_{MGS}	1.68	1.70 ± 0.51
Ω_Λ	0.6956	0.6950 ± 0.0065	z_{eq}	3364.1	3365 ± 24	$\chi^2_{DR12BAO}$	3.523	4.03 ± 0.89
Ω_m	0.3044	0.3050 ± 0.0065	k_{eq}	0.010268	0.010271 ± 0.000074	χ^2_{prior}	1.54	11.5 ± 4.5
$\Omega_m h^2$	0.14142	0.1415 ± 0.0010	$100\theta_{eq}$	0.82072	0.8205 ± 0.0047	χ^2_{CMB}	2374.8	2390.4 ± 5.7
$\Omega_m h^3$	0.096388	0.09635 ± 0.00029	$100\theta_{s,eq}$	0.45315	0.4530 ± 0.0024	χ^2_{BAO}	5.201	5.77 ± 0.75

Best-fit $\chi^2_{eff} = 2381.55$; $\bar{\chi}^2_{eff} = 2407.65$; $R - 1 = 0.01895$

χ^2_{eff}: BAO - 6DF: 0.00 MGS: 1.68 DR12BAO: 3.52 CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 9.54 commander_dx12_v3_2_29: 23.12 plik_rd12_HM_v22b_TTTEEE: 2342.15

2.75 base_plikHM_TTTEEE_lowl_lensing_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02250 ± 0.00016	$\Omega_m h^3$	0.09635 ± 0.00029	$100\theta_{eq}$	0.8203 ± 0.0065
$\boldsymbol{\Omega_c h^2}$	0.1184 ± 0.0015	σ_8	0.826 ± 0.010	$100\theta_{s,eq}$	0.4529 ± 0.0033
$\boldsymbol{100\theta_{MC}}$	1.04108 ± 0.00032	S_8	$0.833^{+0.012}_{-0.013}$	$H(0.15)$	73.31 ± 0.60
$\boldsymbol{\tau}$	0.080 ± 0.017	$\sigma_8\Omega_m^{0.5}$	$0.4561^{+0.0066}_{-0.0073}$	$D_M(0.15)$	637.2 ± 5.8
$\boldsymbol{\ln(10^{10} A_s)}$	3.090 ± 0.031	$\sigma_8\Omega_m^{0.25}$	0.6136 ± 0.0073	$H(0.38)$	83.32 ± 0.44
$\boldsymbol{n_s}$	0.9698 ± 0.0050	$\sigma_8/h^{0.5}$	1.000 ± 0.012	$D_M(0.38)$	1521 ± 12
$\boldsymbol{y_{cal}}$	1.0001 ± 0.0025	$r_{drag}h$	100.4 ± 1.2	$H(0.51)$	89.98 ± 0.35
$\boldsymbol{A_{217}^{CIB}}$	46 ± 7	$\langle d^2\rangle^{1/2}$	2.475 ± 0.028	$D_M(0.51)$	1971 ± 14
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	z_{re}	$9.99^{+1.6}_{-1.4}$	$H(0.61)$	95.55 ± 0.28
$\boldsymbol{A_{143}^{tSZ}}$	$5.7^{+2.1}_{-1.8}$	$10^9 A_s$	$2.199^{+0.065}_{-0.073}$	$D_M(0.61)$	2295 ± 15
$\boldsymbol{A_{100}^{PS}}$	255 ± 28	$10^9 A_s e^{-2\tau}$	1.874 ± 0.012	$H(2.33)$	235.63 ± 0.89
$\boldsymbol{A_{143}^{PS}}$	44 ± 8	D_{40}	1229 ± 12	$D_M(2.33)$	5752 ± 12
$\boldsymbol{A_{143\times217}^{PS}}$	42 ± 9	D_{220}	5731 ± 39	$f\sigma_8(0.15)$	$0.4613^{+0.0062}_{-0.0069}$
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	D_{810}	2534 ± 14	$\sigma_8(0.15)$	0.763 ± 0.010
$\boldsymbol{A^{kSZ}}$	< 3.86	D_{1420}	816.7 ± 4.7	$f\sigma_8(0.38)$	0.4813 ± 0.0058
$\boldsymbol{A_{100}^{dust TT}}$	8.9 ± 1.8	D_{2000}	231.4 ± 1.6	$\sigma_8(0.38)$	0.6774 ± 0.0095
$\boldsymbol{A_{143}^{dust TT}}$	10.9 ± 1.8	$n_{s,0.002}$	0.9698 ± 0.0050	$f\sigma_8(0.51)$	0.4807 ± 0.0056
$\boldsymbol{A_{143\times217}^{dust TT}}$	18.6 ± 3.3	Y_P	0.245442 ± 0.000062	$\sigma_8(0.51)$	0.6343 ± 0.0091
$\boldsymbol{A_{217}^{dust TT}}$	93.8 ± 7.3	Y_P^{BBN}	0.246769 ± 0.000062	$f\sigma_8(0.61)$	0.4761 ± 0.0055
$\boldsymbol{A_{100}^{dust TE}}$	0.113 ± 0.038	10^5D/H	2.563 ± 0.029	$\sigma_8(0.61)$	0.6037 ± 0.0088
$\boldsymbol{A_{100\times143}^{dust TE}}$	0.134 ± 0.029	Age/Gyr	13.773 ± 0.027	$f\sigma_8(2.33)$	0.3047 ± 0.0047
$\boldsymbol{A_{100\times217}^{dust TE}}$	0.479 ± 0.085	z_*	1089.62 ± 0.31	$\sigma_8(2.33)$	0.3144 ± 0.0051
$\boldsymbol{A_{143}^{dust TE}}$	0.223 ± 0.054	r_*	144.76 ± 0.33	f_{2000}^{143}	28.4 ± 2.8
$\boldsymbol{A_{143\times217}^{dust TE}}$	0.662 ± 0.080	$100\theta_*$	1.04125 ± 0.00032	$f_{2000}^{143\times217}$	31.3 ± 1.9
$\boldsymbol{A_{217}^{dust TE}}$	2.07 ± 0.27	$D_M(z_*)$/Gpc	13.902 ± 0.030	f_{2000}^{217}	106.2 ± 1.9
$\boldsymbol{c_{100}}$	0.99965 ± 0.00061	z_{drag}	1060.11 ± 0.31	$\chi^2_{lensing}$	10.1 ± 1.9
$\boldsymbol{c_{217}}$	0.99817 ± 0.00061	r_{drag}	147.38 ± 0.31	χ^2_{lowl}	23.54 ± 0.90
H_0	68.09 ± 0.69	k_D	0.14066 ± 0.00032	χ^2_{plik}	2357.2 ± 6.0
Ω_Λ	0.6946 ± 0.0092	$100\theta_D$	0.16066 ± 0.00018	χ^2_{prior}	11.5 ± 4.5
Ω_m	0.3054 ± 0.0092	z_{eq}	3366 ± 34	χ^2_{CMB}	2390.8 ± 5.8
$\Omega_m h^2$	0.1415 ± 0.0014	k_{eq}	0.01027 ± 0.00010		

$\bar{\chi}^2_{eff} = 2402.35$; $R - 1 = 0.01200$

2.76 base_plikHM_TTTEEE_lowl_lensing_post_BAO_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02250 ± 0.00014	σ_8	0.825 ± 0.010	$H(0.15)$	73.33 ± 0.42
$\boldsymbol{\Omega_c h^2}$	0.1183 ± 0.0011	S_8	0.832 ± 0.011	$D_M(0.15)$	636.9 ± 4.1
$\boldsymbol{100\theta_{MC}}$	1.04109 ± 0.00030	$\sigma_8\Omega_m^{0.5}$	0.4558 ± 0.0062	$H(0.38)$	83.33 ± 0.31
$\boldsymbol{\tau}$	0.080 ± 0.015	$\sigma_8\Omega_m^{0.25}$	0.6133 ± 0.0073	$D_M(0.38)$	1520.6 ± 8.3
$\boldsymbol{\ln(10^{10}A_s)}$	3.090 ± 0.028	$\sigma_8/h^{0.5}$	1.000 ± 0.012	$H(0.51)$	89.99 ± 0.25
$\boldsymbol{n_s}$	0.9699 ± 0.0041	$r_{drag}h$	100.40 ± 0.84	$D_M(0.51)$	1970.9 ± 9.7
$\boldsymbol{y_{cal}}$	1.0001 ± 0.0025	$\langle d^2\rangle^{1/2}$	2.474 ± 0.028	$H(0.61)$	95.56 ± 0.21
$\boldsymbol{A_{217}^{CIB}}$	46 ± 7	z_{re}	$10.0^{+1.4}_{-1.2}$	$D_M(0.61)$	2294 ± 11
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	10^9A_s	2.199 ± 0.061	$H(2.33)$	235.59 ± 0.64
$\boldsymbol{A_{143}^{tSZ}}$	$5.7^{+2.1}_{-1.8}$	$10^9A_se^{-2\tau}$	1.874 ± 0.011	$D_M(2.33)$	5751.8 ± 9.6
$\boldsymbol{A_{100}^{PS}}$	254 ± 28	D_{40}	1229 ± 11	$f\sigma_8(0.15)$	0.4610 ± 0.0060
$\boldsymbol{A_{143}^{PS}}$	44 ± 8	D_{220}	5731 ± 39	$\sigma_8(0.15)$	0.7634 ± 0.0097
$\boldsymbol{A_{143\times217}^{PS}}$	42 ± 9	D_{810}	2534 ± 14	$f\sigma_8(0.38)$	0.4811 ± 0.0057
$\boldsymbol{A_{217}^{PS}}$	114.9 ± 9.9	D_{1420}	816.8 ± 4.7	$\sigma_8(0.38)$	0.6775 ± 0.0089
$\boldsymbol{A^{kSZ}}$	< 3.88	D_{2000}	231.4 ± 1.5	$f\sigma_8(0.51)$	0.4805 ± 0.0057
$\boldsymbol{A_{100}^{dust}}$	8.9 ± 1.8	$n_{s,0.002}$	0.9699 ± 0.0041	$\sigma_8(0.51)$	0.6343 ± 0.0084
$\boldsymbol{A_{143}^{dust}}$	10.9 ± 1.8	Y_P	0.245444 ± 0.000052	$f\sigma_8(0.61)$	0.4760 ± 0.0056
$\boldsymbol{A_{143\times217}^{dust}}$	18.6 ± 3.2	Y_P^{BBN}	0.246770 ± 0.000053	$\sigma_8(0.61)$	0.6037 ± 0.0081
$\boldsymbol{A_{217}^{dust}}$	93.8 ± 7.3	10^5D/H	2.562 ± 0.025	$f\sigma_8(2.33)$	0.3047 ± 0.0042
$\boldsymbol{A_{100}^{dust}}$	0.114 ± 0.038	Age/Gyr	13.772 ± 0.021	$\sigma_8(2.33)$	0.3144 ± 0.0045
$\boldsymbol{A_{100\times143}^{dust}}$	0.134 ± 0.029	z_*	1089.61 ± 0.23	f_{2000}^{143}	28.4 ± 2.7
$\boldsymbol{A_{100\times217}^{dust}}$	0.478 ± 0.085	r_*	144.77 ± 0.24	$f_{2000}^{143\times217}$	31.3 ± 1.9
$\boldsymbol{A_{143}^{dust}}$	0.223 ± 0.054	$100\theta_*$	1.04127 ± 0.00029	f_{2000}^{217}	106.2 ± 1.8
$\boldsymbol{A_{143\times217}^{dust}}$	0.663 ± 0.079	$D_M(z_*)$/Gpc	13.903 ± 0.023	$\chi^2_{lensing}$	10.1 ± 1.9
$\boldsymbol{A_{217}^{dust}}$	2.06 ± 0.27	z_{drag}	1060.12 ± 0.29	χ^2_{lowl}	23.49 ± 0.87
$\boldsymbol{c_{100}}$	0.99965 ± 0.00061	r_{drag}	147.39 ± 0.25	χ^2_{plik}	2356.8 ± 5.9
$\boldsymbol{c_{217}}$	0.99818 ± 0.00062	k_D	0.14064 ± 0.00029	χ^2_{6DF}	0.030 ± 0.042
H_0	68.12 ± 0.49	$100\theta_D$	0.16066 ± 0.00017	χ^2_{MGS}	1.71 ± 0.51
Ω_Λ	0.6951 ± 0.0064	z_{eq}	3365 ± 24	$\chi^2_{DR12BAO}$	4.02 ± 0.86
Ω_m	0.3049 ± 0.0064	k_{eq}	0.010270 ± 0.000074	χ^2_{prior}	11.5 ± 4.5
$\Omega_m h^2$	0.1415 ± 0.0010	$100\theta_{eq}$	0.8205 ± 0.0046	χ^2_{CMB}	2390.4 ± 5.7
$\Omega_m h^3$	0.09635 ± 0.00029	$100\theta_{s,eq}$	0.4531 ± 0.0024	χ^2_{BAO}	5.76 ± 0.74

$\bar{\chi}^2_{eff} = 2407.58$; $R - 1 = 0.01869$

2.77 base_plikHM_TT_lowl_reion

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022143	0.02212 ± 0.00022	$\sigma_8\Omega_m^{0.25}$	0.6115	0.612 ± 0.012	$H(0.15)$	72.26	72.28 ± 0.78
$\boldsymbol{\Omega_c h^2}$	0.12065	0.1206 ± 0.0021	$\sigma_8/h^{0.5}$	0.9937	0.995 ± 0.016	$D_M(0.15)$	647.5	647.4 ± 7.9
$\boldsymbol{100\theta_{MC}}$	1.040768	1.04079 ± 0.00048	$r_{drag}h$	98.44	98.5 ± 1.6	$H(0.38)$	82.53	82.54 ± 0.56
$\boldsymbol{\tau}$	0.0526	$0.0549^{+0.0047}_{-0.010}$	$\langle d^2\rangle^{1/2}$	2.4535	2.459 ± 0.038	$D_M(0.38)$	1542.0	1542 ± 16
$\boldsymbol{\ln(10^{10}A_s)}$	3.0417	$3.046^{+0.013}_{-0.019}$	z_{re}	7.57	$7.79^{+0.51}_{-1.1}$	$H(0.51)$	89.331	89.34 ± 0.44
$\boldsymbol{n_s}$	0.9636	0.9629 ± 0.0056	$10^9 A_s$	2.0941	$2.103^{+0.026}_{-0.040}$	$D_M(0.51)$	1996.1	1996 ± 18
$\boldsymbol{y_{cal}}$	1.00035	1.0003 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.8850	1.884 ± 0.014	$H(0.61)$	95.016	95.02 ± 0.35
$\boldsymbol{A_{217}^{CIB}}$	48.3	48 ± 7	D_{40}	1231.5	1234 ± 15	$D_M(0.61)$	2321.6	2321 ± 20
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.37	—	D_{220}	5711.1	5712 ± 42	$H(2.33)$	236.75	236.7 ± 1.3
$\boldsymbol{A_{143}^{tSZ}}$	7.03	5.1 ± 2.0	D_{810}	2538.0	2536 ± 14	$D_M(2.33)$	5776.8	5777 ± 16
$\boldsymbol{A_{100}^{PS}}$	253.3	263 ± 28	D_{1420}	815.5	814.3 ± 5.1	$f\sigma_8(0.15)$	0.4640	0.464 ± 0.012
$\boldsymbol{A_{143}^{PS}}$	50.3	49 ± 8	D_{2000}	229.99	229.6 ± 1.8	$\sigma_8(0.15)$	0.7501	$0.7511^{+0.0070}_{-0.0080}$
$\boldsymbol{A_{143\times217}^{PS}}$	48.4	44 ± 9	$n_{s,0.002}$	0.9636	0.9629 ± 0.0056	$f\sigma_8(0.38)$	0.4803	0.4808 ± 0.0096
$\boldsymbol{A_{217}^{PS}}$	120.1	115 ± 10	Y_P	0.245302	$0.24529^{+0.00011}_{-0.000085}$	$\sigma_8(0.38)$	0.6639	$0.6649^{+0.0053}_{-0.0066}$
$\boldsymbol{A^{kSZ}}$	0.00	< 4.75	Y_P^{BBN}	0.246628	$0.24662^{+0.00011}_{-0.000085}$	$f\sigma_8(0.51)$	0.4779	0.4784 ± 0.0082
$\boldsymbol{A_{100}^{dustTT}}$	8.89	8.9 ± 1.8	10^5D/H	2.6289	2.633 ± 0.042	$\sigma_8(0.51)$	0.6209	$0.6218^{+0.0046}_{-0.0061}$
$\boldsymbol{A_{143}^{dustTT}}$	10.84	10.7 ± 1.8	Age/Gyr	13.8277	13.828 ± 0.036	$f\sigma_8(0.61)$	0.4721	0.4727 ± 0.0073
$\boldsymbol{A_{143\times217}^{dustTT}}$	19.55	18.3 ± 3.3	z_*	1090.267	1090.29 ± 0.40	$\sigma_8(0.61)$	0.5905	$0.5914^{+0.0042}_{-0.0057}$
$\boldsymbol{A_{217}^{dustTT}}$	94.9	93.4 ± 7.4	r_*	144.436	144.47 ± 0.47	$f\sigma_8(2.33)$	0.29739	$0.2979^{+0.0020}_{-0.0029}$
$\boldsymbol{c_{100}}$	0.99965	0.99961 ± 0.00061	$100\theta_*$	1.040971	1.04100 ± 0.00047	$\sigma_8(2.33)$	0.30621	$0.3067^{+0.0020}_{-0.0031}$
$\boldsymbol{c_{217}}$	0.99824	0.99825 ± 0.00062	$D_M(z_*)$/Gpc	13.8752	13.878 ± 0.044	f_{2000}^{143}	30.40	31.1 ± 2.9
H_0	66.89	66.91 ± 0.91	z_{drag}	1059.437	1059.41 ± 0.45	$f_{2000}^{143\times217}$	33.29	33.5 ± 2.0
Ω_Λ	0.6794	0.680 ± 0.013	r_{drag}	147.174	147.22 ± 0.47	f_{2000}^{217}	107.68	108.1 ± 1.9
Ω_m	0.3206	0.320 ± 0.013	k_D	0.14061	0.14054 ± 0.00052	χ^2_{lowl}	23.60	23.9 ± 1.3
$\Omega_m h^2$	0.14344	0.1433 ± 0.0020	$100\theta_D$	0.161031	0.16107 ± 0.00026	χ^2_{plik}	758.7	771.1 ± 5.4
$\Omega_m h^3$	0.095943	0.09590 ± 0.00046	z_{eq}	3412.4	3410 ± 47	χ^2_{prior}	1.66	8.5 ± 4.0
σ_8	0.8127	0.8138 ± 0.0090	k_{eq}	0.010415	0.01041 ± 0.00014	χ^2_{CMB}	782.3	795.0 ± 5.4
S_8	0.8401	0.841 ± 0.024	$100\theta_{eq}$	0.8107	0.8112 ± 0.0088			
$\sigma_8\Omega_m^{0.5}$	0.4602	0.461 ± 0.013	$100\theta_{s,eq}$	0.44821	0.4485 ± 0.0045			

Best-fit $\chi^2_{eff} = 784.00$; $\bar{\chi}^2_{eff} = 803.49$; $R - 1 = 0.00586$
χ^2_{eff}: CMB - commander_dx12_v3_2_29: 23.60 plik_rd12_HM_v22_TT: 758.75

2.78 base_plikHM_TT_lowl_reion_post_BAO

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022226	0.02222 ± 0.00019	$\sigma_8/h^{0.5}$	0.9823	0.984 ± 0.012	$H(0.38)$	82.962	82.97 ± 0.35
$\boldsymbol{\Omega_c h^2}$	0.11895	0.1190 ± 0.0012	$r_{\rm drag}h$	99.76	99.78 ± 0.94	$D_{\rm M}(0.38)$	1529.6	1529.5 ± 9.4
$\boldsymbol{100\theta_{MC}}$	1.040963	1.04101 ± 0.00042	$\langle d^2\rangle^{1/2}$	2.4271	$2.434^{+0.027}_{-0.030}$	$H(0.51)$	89.660	89.67 ± 0.29
$\boldsymbol{\tau}$	0.0542	$0.0565^{+0.0055}_{-0.010}$	$z_{\rm re}$	7.69	$7.90^{+0.59}_{-1.1}$	$D_{\rm M}(0.51)$	1981.7	1981 ± 11
$\boldsymbol{\ln(10^{10}A_s)}$	3.0410	$3.045^{+0.014}_{-0.020}$	$10^9 A_{\rm s}$	2.0926	$2.102^{+0.028}_{-0.042}$	$H(0.61)$	95.264	95.27 ± 0.25
$\boldsymbol{n_s}$	0.96745	0.9666 ± 0.0042	$10^9 A_{\rm s}e^{-2\tau}$	1.8776	1.877 ± 0.012	$D_{\rm M}(0.61)$	2306.1	2306 ± 12
$\boldsymbol{y_{cal}}$	1.00044	1.0004 ± 0.0025	D_{40}	1223.2	1226 ± 13	$H(2.33)$	235.73	235.73 ± 0.79
$\boldsymbol{A_{217}^{CIB}}$	48.7	48 ± 7	D_{220}	5717.0	5719 ± 41	$D_{\rm M}(2.33)$	5766.8	5766 ± 12
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.35	—	D_{810}	2536.8	2535 ± 14	$f\sigma_8(0.15)$	0.4545	0.4554 ± 0.0078
$\boldsymbol{A_{143}^{tSZ}}$	7.08	5.1 ± 1.9	D_{1420}	816.28	815.2 ± 5.0	$\sigma_8(0.15)$	0.7465	$0.7479^{+0.0061}_{-0.0079}$
$\boldsymbol{A_{100}^{PS}}$	253.3	263 ± 28	D_{2000}	230.27	229.9 ± 1.7	$f\sigma_8(0.38)$	0.4731	0.4740 ± 0.0066
$\boldsymbol{A_{143}^{PS}}$	49.2	48 ± 8	$n_{\rm s,0.002}$	0.96745	0.9666 ± 0.0042	$\sigma_8(0.38)$	0.6619	$0.6631^{+0.0051}_{-0.0068}$
$\boldsymbol{A_{143\times217}^{PS}}$	47.4	43 ± 9	$Y_{\rm P}$	0.245337	$0.245331^{+0.000087}_{-0.000074}$	$f\sigma_8(0.51)$	0.4719	0.4727 ± 0.0059
$\boldsymbol{A_{217}^{PS}}$	119.1	115 ± 10	$Y_{\rm P}^{\rm BBN}$	0.246663	$0.246658^{+0.000087}_{-0.000074}$	$\sigma_8(0.51)$	0.6195	$0.6206^{+0.0046}_{-0.0064}$
$\boldsymbol{A^{kSZ}}$	0.02	< 4.80	10^5D/H	2.6130	2.614 ± 0.037	$f\sigma_8(0.61)$	0.4670	0.4679 ± 0.0055
$\boldsymbol{A_{100}^{dust}}$	8.92	8.9 ± 1.9	Age/Gyr	13.8062	13.805 ± 0.028	$\sigma_8(0.61)$	0.5895	$0.5906^{+0.0043}_{-0.0060}$
$\boldsymbol{A_{143}^{dust}}$	10.78	10.8 ± 1.8	z_*	1090.011	1090.02 ± 0.29	$f\sigma_8(2.33)$	0.29728	$0.2978^{+0.0021}_{-0.0030}$
$\boldsymbol{A_{143\times217}^{dust}}$	19.39	18.3 ± 3.3	r_*	144.813	144.82 ± 0.32	$\sigma_8(2.33)$	0.30654	$0.3071^{+0.0022}_{-0.0032}$
$\boldsymbol{A_{217}^{dust}}$	94.5	93.5 ± 7.4	$100\theta_*$	1.041166	1.04121 ± 0.00042	f_{2000}^{143}	30.09	30.8 ± 2.9
$\boldsymbol{c_{100}}$	0.99966	0.99961 ± 0.00061	$D_{\rm M}(z_*)$/Gpc	13.9088	13.908 ± 0.031	$f_{2000}^{143\times217}$	33.08	33.3 ± 2.0
$\boldsymbol{c_{217}}$	0.99823	0.99825 ± 0.00062	$z_{\rm drag}$	1059.513	1059.51 ± 0.44	f_{2000}^{217}	107.48	107.9 ± 1.9
H_0	67.62	67.63 ± 0.55	$r_{\rm drag}$	147.532	147.54 ± 0.35	$\chi^2_{\rm lowl}$	22.83	23.15 ± 0.94
Ω_Λ	0.6898	0.6898 ± 0.0073	$k_{\rm D}$	0.140294	0.14028 ± 0.00044	$\chi^2_{\rm plik}$	760.0	771.7 ± 5.5
$\Omega_{\rm m}$	0.3102	0.3102 ± 0.0073	$100\theta_{\rm D}$	0.160999	0.16102 ± 0.00025	$\chi^2_{\rm 6DF}$	0.0219	0.058 ± 0.075
$\Omega_{\rm m}h^2$	0.14182	0.1418 ± 0.0012	$z_{\rm eq}$	3373.7	3374 ± 29	$\chi^2_{\rm MGS}$	1.28	1.36 ± 0.53
$\Omega_{\rm m}h^3$	0.095899	0.09591 ± 0.00046	$k_{\rm eq}$	0.010297	0.010297 ± 0.000087	$\chi^2_{\rm DR12BAO}$	4.19	4.8 ± 1.6
σ_8	0.8078	$0.8093^{+0.0070}_{-0.0087}$	$100\theta_{\rm eq}$	0.8181	0.8181 ± 0.0053	$\chi^2_{\rm prior}$	1.84	8.7 ± 4.1
S_8	0.8213	0.823 ± 0.015	$100\theta_{\rm s,eq}$	0.45198	0.4520 ± 0.0027	$\chi^2_{\rm BAO}$	5.50	6.2 ± 1.3
$\sigma_8\Omega_{\rm m}^{0.5}$	0.4499	0.4507 ± 0.0082	$H(0.15)$	72.882	72.89 ± 0.47	$\chi^2_{\rm CMB}$	782.9	794.9 ± 5.3
$\sigma_8\Omega_{\rm m}^{0.25}$	0.6028	0.6039 ± 0.0081	$D_{\rm M}(0.15)$	641.22	641.2 ± 4.7			

Best-fit $\chi^2_{\rm eff} = 790.20$; $\bar{\chi}^2_{\rm eff} = 809.76$; $R - 1 = 0.01181$

$\chi^2_{\rm eff}$: BAO - 6DF: 0.02 MGS: 1.28 DR12BAO: 4.19 CMB - commander_dx12_v3_2_29: 22.83 plik_rd12_HM_v22_TT: 760.03

2.79 base_plikHM_TTTEEE_lowl_reion

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022381	0.02237 ± 0.00015	$\Omega_m h^3$	0.096363	0.09634 ± 0.00029	$100\theta_{eq}$	0.8126	0.8129 ± 0.0057
$\boldsymbol{\Omega_c h^2}$	0.12016	0.1201 ± 0.0014	σ_8	0.8138	$0.8140^{+0.0070}_{-0.0085}$	$100\theta_{s,eq}$	0.44899	0.4492 ± 0.0029
$\boldsymbol{100\theta_{MC}}$	1.040891	1.04092 ± 0.00032	S_8	0.8355	0.835 ± 0.016	$H(0.15)$	72.63	72.65 ± 0.52
$\boldsymbol{\tau}$	0.0561	$0.0573^{+0.0061}_{-0.010}$	$\sigma_8\Omega_m^{0.5}$	0.4576	0.4575 ± 0.0089	$D_M(0.15)$	643.9	643.7 ± 5.2
$\boldsymbol{\ln(10^{10}A_s)}$	3.0488	$3.050^{+0.014}_{-0.019}$	$\sigma_8\Omega_m^{0.25}$	0.6102	0.6102 ± 0.0085	$H(0.38)$	82.834	82.85 ± 0.38
$\boldsymbol{n_s}$	0.96605	0.9650 ± 0.0043	$\sigma_8/h^{0.5}$	0.9920	0.992 ± 0.012	$D_M(0.38)$	1534.4	1534 ± 10
$\boldsymbol{y_{cal}}$	1.00066	1.0006 ± 0.0025	$r_{drag}h$	98.95	99.0 ± 1.0	$H(0.51)$	89.604	89.61 ± 0.30
$\boldsymbol{A_{217}^{CIB}}$	46.2	47 ± 7	$\langle d^2\rangle^{1/2}$	2.4504	2.454 ± 0.029	$D_M(0.51)$	1987.0	1987 ± 12
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.61	—	z_{re}	7.86	$7.97^{+0.67}_{-0.99}$	$H(0.61)$	95.264	95.27 ± 0.24
$\boldsymbol{A_{143}^{tSZ}}$	7.10	$5.5^{+2.1}_{-1.9}$	$10^9 A_s$	2.1089	$2.113^{+0.029}_{-0.041}$	$D_M(0.61)$	2311.5	2311 ± 13
$\boldsymbol{A_{100}^{PS}}$	248.2	258 ± 28	$10^9 A_s e^{-2\tau}$	1.8852	1.884 ± 0.012	$H(2.33)$	236.68	236.62 ± 0.80
$\boldsymbol{A_{143}^{PS}}$	49.9	46 ± 8	D_{40}	1229.9	1233 ± 13	$D_M(2.33)$	5763.9	5764 ± 11
$\boldsymbol{A_{143\times217}^{PS}}$	52.0	43 ± 9	D_{220}	5731.2	5733 ± 39	$f\sigma_8(0.15)$	0.4618	0.4617 ± 0.0083
$\boldsymbol{A_{217}^{PS}}$	121.5	115 ± 10	D_{810}	2542.1	2539 ± 13	$\sigma_8(0.15)$	0.7515	$0.7517^{+0.0061}_{-0.0076}$
$\boldsymbol{A^{kSZ}}$	0.00	< 4.17	D_{1420}	818.68	817.3 ± 4.8	$f\sigma_8(0.38)$	0.4792	0.4791 ± 0.0069
$\boldsymbol{A_{100}^{dust TT}}$	8.81	8.9 ± 1.8	D_{2000}	231.45	231.0 ± 1.6	$\sigma_8(0.38)$	0.6657	$0.6659^{+0.0050}_{-0.0066}$
$\boldsymbol{A_{143}^{dust TT}}$	11.05	10.9 ± 1.8	$n_{s,0.002}$	0.96605	0.9650 ± 0.0043	$f\sigma_8(0.51)$	0.4772	0.4772 ± 0.0061
$\boldsymbol{A_{143\times217}^{dust TT}}$	20.08	18.6 ± 3.3	Y_P	0.245400	0.245393 ± 0.000058	$\sigma_8(0.51)$	0.6228	$0.6230^{+0.0046}_{-0.0061}$
$\boldsymbol{A_{217}^{dust TT}}$	95.4	93.7 ± 7.3	Y_P^{BBN}	0.246726	0.246719 ± 0.000058	$f\sigma_8(0.61)$	0.4719	0.4719 ± 0.0056
$\boldsymbol{A_{100}^{dust TE}}$	0.1131	0.114 ± 0.038	10^5D/H	2.5835	2.586 ± 0.027	$\sigma_8(0.61)$	0.5924	$0.5926^{+0.0043}_{-0.0058}$
$\boldsymbol{A_{100\times143}^{dust TE}}$	0.1343	0.135 ± 0.030	Age/Gyr	13.7978	13.798 ± 0.024	$f\sigma_8(2.33)$	0.29852	$0.2986^{+0.0021}_{-0.0030}$
$\boldsymbol{A_{100\times217}^{dust TE}}$	0.480	0.482 ± 0.086	z_*	1089.922	1089.93 ± 0.27	$\sigma_8(2.33)$	0.30756	$0.3077^{+0.0022}_{-0.0031}$
$\boldsymbol{A_{143}^{dust TE}}$	0.224	0.225 ± 0.054	r_*	144.381	144.41 ± 0.30	f_{2000}^{143}	28.59	29.4 ± 2.7
$\boldsymbol{A_{143\times217}^{dust TE}}$	0.667	0.666 ± 0.080	$100\theta_*$	1.041079	1.04110 ± 0.00031	$f_{2000}^{143\times217}$	31.93	32.1 ± 1.9
$\boldsymbol{A_{217}^{dust TE}}$	2.092	2.09 ± 0.27	$D_M(z_*)$/Gpc	13.8684	13.871 ± 0.027	f_{2000}^{217}	106.50	107.0 ± 1.8
$\boldsymbol{c_{100}}$	0.99972	0.99968 ± 0.00061	z_{drag}	1059.971	1059.94 ± 0.30	χ^2_{lowl}	23.30	23.63 ± 0.99
$\boldsymbol{c_{217}}$	0.99818	0.99819 ± 0.00062	r_{drag}	147.037	147.07 ± 0.29	χ^2_{plik}	2344.4	2359.0 ± 5.7
H_0	67.30	67.32 ± 0.61	k_D	0.140934	0.14089 ± 0.00031	χ^2_{prior}	2.40	13.2 ± 4.9
Ω_Λ	0.6838	0.6841 ± 0.0084	$100\theta_D$	0.160734	0.16076 ± 0.00017	χ^2_{CMB}	2367.7	2382.7 ± 5.7
Ω_m	0.3162	0.3159 ± 0.0084	z_{eq}	3406.4	3404 ± 30			
$\Omega_m h^2$	0.14319	0.1431 ± 0.0013	k_{eq}	0.010397	0.010391 ± 0.000093			

Best-fit $\chi^2_{eff} = 2370.13$; $\bar{\chi}^2_{eff} = 2395.81$; $R - 1 = 0.00802$

χ^2_{eff}: CMB - commander_dx12_v3_2_29: 23.30 plik_rd12_HM_v22b_TTTEEE: 2344.42

2.80 base_plikHM_TTTEEE_lowl_reion_post_BAO

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022447	0.02243 ± 0.00014	σ_8	0.8123	$0.8118^{+0.0067}_{-0.0083}$	$H(0.15)$	72.979	72.97 ± 0.39
$\boldsymbol{\Omega_c h^2}$	0.11928	0.1193 ± 0.0010	S_8	0.8265	0.826 ± 0.013	$D_M(0.15)$	640.41	640.5 ± 3.8
$\boldsymbol{100\theta_{MC}}$	1.041023	1.04102 ± 0.00029	$\sigma_8\Omega_m^{0.5}$	0.4527	0.4525 ± 0.0070	$H(0.38)$	83.084	83.07 ± 0.29
$\boldsymbol{\tau}$	0.0584	$0.0584^{+0.0066}_{-0.010}$	$\sigma_8\Omega_m^{0.25}$	0.6064	0.6061 ± 0.0072	$D_M(0.38)$	1527.5	1527.8 ± 7.7
$\boldsymbol{\ln(10^{10}A_s)}$	3.0512	$3.051^{+0.015}_{-0.020}$	$\sigma_8/h^{0.5}$	0.9872	$0.987^{+0.010}_{-0.011}$	$H(0.51)$	89.798	89.79 ± 0.23
$\boldsymbol{n_s}$	0.96808	0.9669 ± 0.0037	$r_{drag}h$	99.66	99.66 ± 0.78	$D_M(0.51)$	1978.9	1979.3 ± 9.1
$\boldsymbol{y_{cal}}$	1.00049	1.0007 ± 0.0025	$\langle d^2\rangle^{1/2}$	2.4398	2.442 ± 0.026	$H(0.61)$	95.415	$95.40^{+0.18}_{-0.20}$
$\boldsymbol{A_{217}^{CIB}}$	46.1	47 ± 7	z_{re}	8.07	$8.05^{+0.70}_{-0.99}$	$D_M(0.61)$	2302.9	2303.3 ± 9.8
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.62	—	$10^9 A_s$	2.1140	$2.113^{+0.030}_{-0.042}$	$H(2.33)$	236.17	236.14 ± 0.61
$\boldsymbol{A_{143}^{tSZ}}$	7.11	$5.5^{+2.2}_{-1.9}$	$10^9 A_s e^{-2\tau}$	1.8808	1.880 ± 0.011	$D_M(2.33)$	5757.4	5758.3 ± 9.0
$\boldsymbol{A_{100}^{PS}}$	248.1	258 ± 28	D_{40}	1225.8	1229 ± 12	$f\sigma_8(0.15)$	0.4574	0.4572 ± 0.0066
$\boldsymbol{A_{143}^{PS}}$	49.5	45 ± 8	D_{220}	5734.1	5737 ± 39	$\sigma_8(0.15)$	0.7507	$0.7503^{+0.0060}_{-0.0076}$
$\boldsymbol{A_{143\times217}^{PS}}$	52.0	42 ± 9	D_{810}	2540.6	2539 ± 13	$f\sigma_8(0.38)$	0.4760	0.4757 ± 0.0058
$\boldsymbol{A_{217}^{PS}}$	121.3	115 ± 10	D_{1420}	818.88	817.8 ± 4.7	$\sigma_8(0.38)$	0.6655	$0.6651^{+0.0051}_{-0.0067}$
$\boldsymbol{A^{kSZ}}$	0.00	< 4.26	D_{2000}	231.61	231.2 ± 1.5	$f\sigma_8(0.51)$	0.4747	0.4744 ± 0.0053
$\boldsymbol{A_{100}^{dust TT}}$	8.82	8.9 ± 1.8	$n_{s,0.002}$	0.96808	0.9669 ± 0.0037	$\sigma_8(0.51)$	0.6229	$0.6225^{+0.0047}_{-0.0062}$
$\boldsymbol{A_{143}^{dust TT}}$	11.02	10.9 ± 1.8	Y_P	0.245425	0.245415 ± 0.000052	$f\sigma_8(0.61)$	0.46976	$0.4695^{+0.0047}_{-0.0052}$
$\boldsymbol{A_{143\times217}^{dust TT}}$	20.01	18.6 ± 3.3	Y_P^{BBN}	0.246752	0.246742 ± 0.000052	$\sigma_8(0.61)$	0.5927	$0.5923^{+0.0044}_{-0.0059}$
$\boldsymbol{A_{217}^{dust TT}}$	95.3	93.7 ± 7.4	10^5D/H	2.5714	2.576 ± 0.025	$f\sigma_8(2.33)$	0.29888	$0.2987^{+0.0022}_{-0.0030}$
$\boldsymbol{A_{100}^{dust TE}}$	0.1133	0.114 ± 0.038	Age/Gyr	13.7837	13.786 ± 0.020	$\sigma_8(2.33)$	0.30817	$0.3080^{+0.0023}_{-0.0031}$
$\boldsymbol{A_{100\times143}^{dust TE}}$	0.1349	0.134 ± 0.030	z_*	1089.761	1089.79 ± 0.22	f_{2000}^{143}	28.33	29.2 ± 2.7
$\boldsymbol{A_{100\times217}^{dust TE}}$	0.479	0.483 ± 0.087	r_*	144.558	144.58 ± 0.23	$f_{2000}^{143\times217}$	31.72	32.0 ± 1.8
$\boldsymbol{A_{143}^{dust TE}}$	0.226	0.224 ± 0.054	$100\theta_*$	1.041198	1.04120 ± 0.00029	f_{2000}^{217}	106.27	106.8 ± 1.8
$\boldsymbol{A_{143\times217}^{dust TE}}$	0.666	0.663 ± 0.079	$D_M(z_*)$/Gpc	13.8838	13.886 ± 0.022	χ^2_{lowl}	22.97	23.23 ± 0.85
$\boldsymbol{A_{217}^{dust TE}}$	2.079	2.07 ± 0.27	z_{drag}	1060.047	1060.01 ± 0.29	χ^2_{plik}	2344.8	2359.2 ± 5.7
$\boldsymbol{c_{100}}$	0.99972	0.99967 ± 0.00061	r_{drag}	147.197	147.22 ± 0.24	χ^2_{6DF}	0.0289	0.054 ± 0.064
$\boldsymbol{c_{217}}$	0.99817	0.99820 ± 0.00063	k_D	0.140815	0.14077 ± 0.00029	χ^2_{MGS}	1.217	1.28 ± 0.43
H_0	67.703	67.69 ± 0.45	$100\theta_D$	0.160692	0.16072 ± 0.00017	$\chi^2_{DR12BAO}$	4.42	4.8 ± 1.4
Ω_Λ	0.6894	0.6893 ± 0.0061	z_{eq}	3386.9	3386 ± 23	χ^2_{prior}	2.75	13.5 ± 5.1
Ω_m	0.3106	0.3107 ± 0.0061	k_{eq}	0.010337	0.010335 ± 0.000069	χ^2_{BAO}	5.66	6.1 ± 1.1
$\Omega_m h^2$	0.14237	0.14234 ± 0.00095	$100\theta_{eq}$	0.81633	0.8165 ± 0.0043	χ^2_{CMB}	2367.8	2382.4 ± 5.6
$\Omega_m h^3$	0.096391	0.09635 ± 0.00029	$100\theta_{s,eq}$	0.45091	0.4510 ± 0.0022			

Best-fit $\chi^2_{eff} = 2376.23$; $\bar{\chi}^2_{eff} = 2402.05$; $R - 1 = 0.01766$

χ^2_{eff}: BAO - 6DF: 0.03 MGS: 1.22 DR12BAO: 4.42 CMB - commander_dx12_v3_2_29: 22.97 plik_rd12_HM_v22b_TTTEEE: 2344.84

2.81 base_plikHM_TT_lowl_lowE_lensing

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022174	0.02214 ± 0.00020	$\sigma_8\Omega_m^{0.25}$	0.6085	0.6086 ± 0.0076	$H(0.15)$	72.46	72.41 ± 0.60
$\boldsymbol{\Omega_c h^2}$	0.12010	0.1202 ± 0.0015	$\sigma_8/h^{0.5}$	0.9896	0.990 ± 0.010	$D_M(0.15)$	645.5	646.1 ± 6.0
$\boldsymbol{100\theta_{MC}}$	1.040829	1.04080 ± 0.00046	$r_{drag}h$	98.86	98.8 ± 1.2	$H(0.38)$	82.667	82.62 ± 0.44
$\boldsymbol{\tau}$	0.0527	0.0524 ± 0.0079	$\langle d^2\rangle^{1/2}$	2.4428	2.447 ± 0.025	$D_M(0.38)$	1538.0	1539 ± 12
$\boldsymbol{\ln(10^{10}A_s)}$	3.0404	3.040 ± 0.015	z_{re}	7.55	7.52 ± 0.80	$H(0.51)$	89.437	89.40 ± 0.35
$\boldsymbol{n_s}$	0.96529	0.9634 ± 0.0048	$10^9 A_s$	2.0913	2.091 ± 0.031	$D_M(0.51)$	1991.4	1993 ± 14
$\boldsymbol{y_{cal}}$	1.00033	1.0005 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.8823	1.882 ± 0.011	$H(0.61)$	95.097	95.06 ± 0.29
$\boldsymbol{A_{217}^{CIB}}$	47.9	48 ± 7	D_{40}	1227.4	1232 ± 13	$D_M(0.61)$	2316.6	2318 ± 15
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.44	—	D_{220}	5710.2	5716 ± 40	$H(2.33)$	236.43	236.45 ± 0.94
$\boldsymbol{A_{143}^{tSZ}}$	6.92	5.0 ± 2.0	D_{810}	2537.7	2536 ± 13	$D_M(2.33)$	5773.5	5775 ± 14
$\boldsymbol{A_{100}^{PS}}$	253.7	264 ± 28	D_{1420}	816.0	814.5 ± 5.1	$f\sigma_8(0.15)$	0.4608	0.4611 ± 0.0080
$\boldsymbol{A_{143}^{PS}}$	51.1	49 ± 8	D_{2000}	230.18	229.6 ± 1.8	$\sigma_8(0.15)$	0.7486	0.7482 ± 0.0056
$\boldsymbol{A_{143\times217}^{PS}}$	49.9	43 ± 9	$n_{s,0.002}$	0.96529	0.9634 ± 0.0048	$f\sigma_8(0.38)$	0.4778	0.4779 ± 0.0062
$\boldsymbol{A_{217}^{PS}}$	120.7	115 ± 10	Y_P	0.245315	$0.245295^{+0.000095}_{-0.000081}$	$\sigma_8(0.38)$	0.66299	0.6625 ± 0.0049
$\boldsymbol{A^{kSZ}}$	0.01	< 5.00	Y_P^{BBN}	0.246641	$0.246622^{+0.000096}_{-0.000081}$	$f\sigma_8(0.51)$	0.4757	0.4757 ± 0.0053
$\boldsymbol{A_{100}^{dustTT}}$	8.86	8.9 ± 1.8	10^5D/H	2.6229	2.630 ± 0.039	$\sigma_8(0.51)$	0.62019	0.6197 ± 0.0046
$\boldsymbol{A_{143}^{dustTT}}$	10.80	10.7 ± 1.8	Age/Gyr	13.8206	13.825 ± 0.032	$f\sigma_8(0.61)$	0.47032	0.4702 ± 0.0047
$\boldsymbol{A_{143\times217}^{dustTT}}$	19.54	18.3 ± 3.3	z_*	1090.177	1090.23 ± 0.34	$\sigma_8(0.61)$	0.58997	0.5895 ± 0.0044
$\boldsymbol{A_{217}^{dustTT}}$	94.8	93.2 ± 7.4	r_*	144.554	144.56 ± 0.36	$f\sigma_8(2.33)$	0.29724	0.2970 ± 0.0023
$\boldsymbol{c_{100}}$	0.99966	0.99961 ± 0.00062	$100\theta_*$	1.041029	1.04101 ± 0.00045	$\sigma_8(2.33)$	0.30620	0.3059 ± 0.0026
$\boldsymbol{c_{217}}$	0.99826	0.99826 ± 0.00063	$D_M(z_*)$/Gpc	13.8857	13.886 ± 0.034	f_{2000}^{143}	30.17	31.3 ± 2.9
H_0	67.12	67.06 ± 0.70	z_{drag}	1059.475	1059.41 ± 0.44	$f_{2000}^{143\times217}$	33.12	33.6 ± 2.0
Ω_Λ	0.6828	0.6819 ± 0.0097	r_{drag}	147.284	147.30 ± 0.38	f_{2000}^{217}	107.51	108.2 ± 1.9
Ω_m	0.3172	0.3181 ± 0.0097	k_D	0.140513	0.14047 ± 0.00045	$\chi^2_{lensing}$	8.902	9.45 ± 0.86
$\Omega_m h^2$	0.14292	0.1430 ± 0.0015	$100\theta_D$	0.161015	0.16106 ± 0.00026	χ^2_{simall}	395.86	396.9 ± 1.6
$\Omega_m h^3$	0.095935	0.09587 ± 0.00045	z_{eq}	3400.0	3401 ± 35	χ^2_{lowl}	23.23	23.7 ± 1.0
σ_8	0.8108	0.8104 ± 0.0063	k_{eq}	0.010377	0.01038 ± 0.00011	χ^2_{plik}	759.32	771.1 ± 5.2
S_8	0.8337	0.834 ± 0.016	$100\theta_{eq}$	0.8131	0.8128 ± 0.0066	χ^2_{prior}	1.25	7.3 ± 3.6
$\sigma_8\Omega_m^{0.5}$	0.4566	0.4570 ± 0.0087	$100\theta_{s,eq}$	0.44941	0.4493 ± 0.0034	χ^2_{CMB}	1187.3	1201.1 ± 5.5

Best-fit $\chi^2_{eff} = 1188.57$; $\bar{\chi}^2_{eff} = 1208.41$; $R - 1 = 0.00560$

χ^2_{eff}: CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.90 simall_100x143_offlike5_EE_Aplanck_B: 395.86 commander_dx12_v3_2_29: 23.23 plik_rd12_HM_v22_TT: 759.32

2.82 base_plikHM_TT_lowl_lowE_lensing_post_BAO

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022224	0.02221 ± 0.00019	$r_{\rm drag} h$	99.65	99.63 ± 0.83	$H(0.51)$	89.633	89.63 ± 0.27
$\boldsymbol{\Omega_c h^2}$	0.11909	0.1191 ± 0.0011	$\langle d^2 \rangle^{1/2}$	2.4309	2.436 ± 0.022	$D_{\rm M}(0.51)$	1982.8	1983 ± 10
$\boldsymbol{100\theta_{MC}}$	1.040933	1.04097 ± 0.00042	$z_{\rm re}$	7.71	7.77 ± 0.75	$H(0.61)$	95.244	95.24 ± 0.23
$\boldsymbol{\tau}$	0.0544	0.0552 ± 0.0074	$10^9 A_{\rm s}$	2.0948	$2.099^{+0.029}_{-0.032}$	$D_{\rm M}(0.61)$	2307.4	2308 ± 11
$\boldsymbol{\ln(10^{10} A_s)}$	3.0421	3.044 ± 0.015	$10^9 A_{\rm s} e^{-2\tau}$	1.8788	1.879 ± 0.011	$H(2.33)$	235.81	235.83 ± 0.71
$\boldsymbol{n_s}$	0.96694	0.9659 ± 0.0041	D_{40}	1225.0	1228 ± 12	$D_{\rm M}(2.33)$	5767.6	5768 ± 12
$\boldsymbol{y_{cal}}$	1.00051	1.0007 ± 0.0025	D_{220}	5719.8	5724 ± 39	$f\sigma_8(0.15)$	0.4555	0.4560 ± 0.0060
$\boldsymbol{A_{217}^{CIB}}$	48.5	48 ± 7	D_{810}	2537.5	2537 ± 13	$\sigma_8(0.15)$	0.7471	0.7477 ± 0.0056
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.33	—	D_{1420}	816.36	815.6 ± 4.9	$f\sigma_8(0.38)$	0.4739	0.4744 ± 0.0050
$\boldsymbol{A_{143}^{tSZ}}$	7.04	$5.1^{+2.2}_{-2.0}$	D_{2000}	230.29	230.0 ± 1.7	$\sigma_8(0.38)$	0.66232	0.6628 ± 0.0049
$\boldsymbol{A_{100}^{PS}}$	253.4	263 ± 28	$n_{\rm s,0.002}$	0.96694	0.9659 ± 0.0041	$f\sigma_8(0.51)$	0.47256	0.4730 ± 0.0045
$\boldsymbol{A_{143}^{PS}}$	49.0	49 ± 8	$Y_{\rm P}$	0.245336	$0.245326^{+0.000085}_{-0.000075}$	$\sigma_8(0.51)$	0.61984	0.6203 ± 0.0046
$\boldsymbol{A_{143\times217}^{PS}}$	46.8	43 ± 9	$Y_{\rm P}^{\rm BBN}$	0.246662	$0.246652^{+0.000085}_{-0.000076}$	$f\sigma_8(0.61)$	0.46764	0.4680 ± 0.0041
$\boldsymbol{A_{217}^{PS}}$	119.3	115 ± 10	10^5D/H	2.6134	2.617 ± 0.036	$\sigma_8(0.61)$	0.58980	0.5902 ± 0.0044
$\boldsymbol{A^{kSZ}}$	0.03	< 4.82	Age/Gyr	13.8079	13.809 ± 0.027	$f\sigma_8(2.33)$	0.29740	$0.2976^{+0.0021}_{-0.0024}$
$\boldsymbol{A_{100}^{dustTT}}$	8.84	8.9 ± 1.8	z_*	1090.027	1090.05 ± 0.28	$\sigma_8(2.33)$	0.30663	$0.3068^{+0.0023}_{-0.0026}$
$\boldsymbol{A_{143}^{dustTT}}$	10.77	10.7 ± 1.8	r_*	144.779	144.78 ± 0.29	f_{2000}^{143}	30.08	30.9 ± 2.9
$\boldsymbol{A_{143\times217}^{dustTT}}$	19.36	18.3 ± 3.3	$100\theta_*$	1.041135	1.04117 ± 0.00042	$f_{2000}^{143\times217}$	33.01	33.3 ± 2.0
$\boldsymbol{A_{217}^{dustTT}}$	94.5	93.4 ± 7.4	$D_{\rm M}(z_*)$/Gpc	13.9059	13.906 ± 0.029	f_{2000}^{217}	107.49	107.9 ± 1.9
$\boldsymbol{c_{100}}$	0.99966	0.99963 ± 0.00062	$z_{\rm drag}$	1059.513	1059.49 ± 0.43	$\chi^2_{\rm lensing}$	8.875	9.26 ± 0.70
$\boldsymbol{c_{217}}$	0.99822	0.99826 ± 0.00062	$r_{\rm drag}$	147.498	147.50 ± 0.32	$\chi^2_{\rm simall}$	396.09	397.1 ± 1.8
H_0	67.559	67.54 ± 0.49	$k_{\rm D}$	0.140329	0.14031 ± 0.00043	$\chi^2_{\rm lowl}$	22.96	23.24 ± 0.87
Ω_Λ	0.6890	0.6887 ± 0.0065	$100\theta_{\rm D}$	0.160992	0.16102 ± 0.00025	$\chi^2_{\rm plik}$	759.80	771.6 ± 5.2
$\Omega_{\rm m}$	0.3110	0.3113 ± 0.0065	$z_{\rm eq}$	3376.9	3378 ± 26	$\chi^2_{\rm 6DF}$	0.0292	0.060 ± 0.071
$\Omega_{\rm m} h^2$	0.14196	0.1420 ± 0.0011	$k_{\rm eq}$	0.010307	0.010309 ± 0.000078	$\chi^2_{\rm MGS}$	1.217	1.27 ± 0.46
$\Omega_{\rm m} h^3$	0.095904	0.09590 ± 0.00045	$100\theta_{\rm eq}$	0.81745	0.8173 ± 0.0047	$\chi^2_{\rm DR12BAO}$	4.37	4.9 ± 1.5
σ_8	0.8085	0.8091 ± 0.0062	$100\theta_{\rm s,eq}$	0.45166	0.4516 ± 0.0024	$\chi^2_{\rm prior}$	1.34	7.3 ± 3.6
S_8	0.8232	0.824 ± 0.012	$H(0.15)$	72.831	72.82 ± 0.42	$\chi^2_{\rm CMB}$	1187.7	1201.2 ± 5.4
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4509	0.4514 ± 0.0064	$D_{\rm M}(0.15)$	641.74	641.9 ± 4.2	$\chi^2_{\rm BAO}$	5.62	6.2 ± 1.2
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.6038	0.6043 ± 0.0062	$H(0.38)$	82.926	82.92 ± 0.32			
$\sigma_8 / h^{0.5}$	0.9836	0.9845 ± 0.0089	$D_{\rm M}(0.38)$	1530.6	1530.9 ± 8.5			

Best-fit $\chi^2_{\rm eff} = 1194.68$; $\bar{\chi}^2_{\rm eff} = 1214.73$; $R - 1 = 0.01723$

$\chi^2_{\rm eff}$: BAO - 6DF: 0.03 MGS: 1.22 DR12BAO: 4.37 CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.88 simall_100x143_offlike5_EE_Aplanck_B: 396.09 commander_dx12_v3_2_29: 22.96 plik_rd12_HM_v22_TT: 759.80

2.83 base_plikHM_TT_lowl_lowE_lensing_post_Riess18

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022349	0.02232 ± 0.00020	$\sigma_8/h^{0.5}$	0.9794	0.9796 ± 0.0099	$H(0.38)$	83.240	83.24 ± 0.43
$\boldsymbol{\Omega_c h^2}$	0.11826	0.1181 ± 0.0015	$r_{\rm drag}h$	100.39	100.5 ± 1.2	$D_{\rm M}(0.38)$	1522.4	1522 ± 11
$\boldsymbol{100\theta_{MC}}$	1.041151	1.04115 ± 0.00044	$\langle d^2\rangle^{1/2}$	2.4224	2.425 ± 0.024	$H(0.51)$	89.891	89.89 ± 0.35
$\boldsymbol{\tau}$	0.0572	0.0583 ± 0.0080	$z_{\rm re}$	7.95	8.04 ± 0.78	$D_{\rm M}(0.51)$	1973.2	1973 ± 13
$\boldsymbol{\ln(10^{10}A_s)}$	3.0466	3.048 ± 0.016	$10^9 A_{\rm s}$	2.1044	2.109 ± 0.033	$H(0.61)$	95.460	95.45 ± 0.29
$\boldsymbol{n_s}$	0.96915	0.9685 ± 0.0048	$10^9 A_{\rm s} e^{-2\tau}$	1.8770	$1.876^{+0.010}_{-0.011}$	$D_{\rm M}(0.61)$	2296.9	2297 ± 15
$\boldsymbol{y_{cal}}$	1.00071	1.0010 ± 0.0024	D_{40}	1222.6	1225 ± 12	$H(2.33)$	235.41	235.30 ± 0.92
$\boldsymbol{A_{217}^{CIB}}$	47.7	47 ± 7	D_{220}	5733.4	5735 ± 39	$D_{\rm M}(2.33)$	5757.4	5758 ± 13
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.47	—	D_{810}	2539.5	2538 ± 13	$f\sigma_8(0.15)$	0.4514	0.4512 ± 0.0075
$\boldsymbol{A_{143}^{tSZ}}$	6.91	5.2 ± 1.9	D_{1420}	818.0	817.1 ± 5.0	$\sigma_8(0.15)$	0.7471	0.7474 ± 0.0056
$\boldsymbol{A_{100}^{PS}}$	252.3	262 ± 27	D_{2000}	231.02	230.7 ± 1.8	$f\sigma_8(0.38)$	0.4711	0.4710 ± 0.0059
$\boldsymbol{A_{143}^{PS}}$	49.9	48 ± 8	$n_{\rm s,0.002}$	0.96915	0.9685 ± 0.0048	$\sigma_8(0.38)$	0.66295	0.6632 ± 0.0050
$\boldsymbol{A_{143\times217}^{PS}}$	49.6	43 ± 9	$Y_{\rm P}$	0.245387	$0.245371^{+0.000088}_{-0.000072}$	$f\sigma_8(0.51)$	0.4704	0.4704 ± 0.0051
$\boldsymbol{A_{217}^{PS}}$	120.0	$115^{+11}_{-9.7}$	$Y_{\rm P}^{\rm BBN}$	0.246714	$0.246697^{+0.000088}_{-0.000072}$	$\sigma_8(0.51)$	0.62069	0.6210 ± 0.0047
$\boldsymbol{A^{kSZ}}$	0.00	< 4.64	10^5D/H	2.5894	$2.596^{+0.035}_{-0.040}$	$f\sigma_8(0.61)$	0.46596	0.4660 ± 0.0046
$\boldsymbol{A_{100}^{dust TT}}$	8.88	9.0 ± 1.8	Age/Gyr	13.7853	13.788 ± 0.030	$\sigma_8(0.61)$	0.59078	0.5911 ± 0.0045
$\boldsymbol{A_{143}^{dust TT}}$	10.90	10.7 ± 1.8	z_*	1089.795	1089.83 ± 0.32	$f\sigma_8(2.33)$	0.29813	0.2983 ± 0.0024
$\boldsymbol{A_{143\times217}^{dust TT}}$	19.54	18.3 ± 3.4	r_*	144.898	144.96 ± 0.36	$\sigma_8(2.33)$	0.30764	0.3078 ± 0.0026
$\boldsymbol{A_{217}^{dust TT}}$	94.9	93.5 ± 7.7	$100\theta_*$	1.041339	1.04134 ± 0.00043	f_{2000}^{143}	29.37	30.4 ± 3.0
$\boldsymbol{c_{100}}$	0.99969	0.99966 ± 0.00064	$D_{\rm M}(z_*)$/Gpc	13.9146	13.920 ± 0.034	$f_{2000}^{143\times217}$	32.55	32.9 ± 2.0
$\boldsymbol{c_{217}}$	0.99826	0.99824 ± 0.00062	$z_{\rm drag}$	1059.780	1059.68 ± 0.43	f_{2000}^{217}	107.04	107.5 ± 1.9
H_0	68.03	68.05 ± 0.67	$r_{\rm drag}$	147.575	147.65 ± 0.38	$\chi^2_{\rm lensing}$	8.98	9.5 ± 1.1
Ω_Λ	0.6948	0.6951 ± 0.0089	$k_{\rm D}$	0.140341	0.14024 ± 0.00045	$\chi^2_{\rm simall}$	396.58	397.8 ± 2.3
$\Omega_{\rm m}$	0.3052	0.3049 ± 0.0089	$100\theta_{\rm D}$	0.160878	0.16093 ± 0.00025	$\chi^2_{\rm lowl}$	22.68	22.87 ± 0.91
$\Omega_{\rm m}h^2$	0.14126	0.1411 ± 0.0014	$z_{\rm eq}$	3360.1	3357 ± 34	$\chi^2_{\rm plik}$	760.9	772.9 ± 5.5
$\Omega_{\rm m}h^3$	0.096093	0.09601 ± 0.00043	$k_{\rm eq}$	0.010256	0.01024 ± 0.00010	$\chi^2_{\rm H073p45}$	10.67	10.8 ± 2.6
σ_8	0.8078	0.8081 ± 0.0062	$100\theta_{\rm eq}$	0.8210	0.8216 ± 0.0065	$\chi^2_{\rm prior}$	1.26	7.3 ± 3.6
S_8	0.8149	0.815 ± 0.015	$100\theta_{\rm s,eq}$	0.45343	0.4538 ± 0.0033	$\chi^2_{\rm CMB}$	1189.1	1203.1 ± 5.9
$\sigma_8\Omega_{\rm m}^{0.5}$	0.4463	0.4461 ± 0.0081	$H(0.15)$	73.24	73.25 ± 0.58			
$\sigma_8\Omega_{\rm m}^{0.25}$	0.6005	0.6004 ± 0.0072	$D_{\rm M}(0.15)$	637.7	637.6 ± 5.7			

Best-fit $\chi^2_{\rm eff} = 1201.06$; $\bar{\chi}^2_{\rm eff} = 1221.17$; $R-1 = 0.06771$

$\chi^2_{\rm eff}$: CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.98 simall_100x143_offlike5_EE_Aplanck_B: 396.58 commander_dx12_v3_2_29: 22.68 plik_rd12_HM_v22_TT: 760.89 Hubble - H073p45: 10.67

2.84 base_plikHM_TT_lowl_lowE_lensing_post_BAO_Riess18

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022352	0.02231 ± 0.00019	$r_{\rm drag} h$	100.44	100.43 ± 0.83	$H(0.51)$	89.901	89.87 ± 0.26
$\boldsymbol{\Omega_c h^2}$	0.11819	0.1182 ± 0.0011	$\langle d^2 \rangle^{1/2}$	2.4196	2.425 ± 0.022	$D_{\rm M}(0.51)$	1972.7	$1973^{+10}_{-9.2}$
$\boldsymbol{100\theta_{\rm MC}}$	1.041135	1.04114 ± 0.00041	$z_{\rm re}$	7.91	8.03 ± 0.74	$H(0.61)$	95.466	95.44 ± 0.23
$\boldsymbol{\tau}$	0.0569	0.0580 ± 0.0075	$10^9 A_{\rm s}$	2.1030	2.108 ± 0.032	$D_{\rm M}(0.61)$	2296.4	2297^{+11}_{-10}
$\boldsymbol{\ln(10^{10} A_{\rm s})}$	3.0460	3.048 ± 0.015	$10^9 A_{\rm s} e^{-2\tau}$	1.8769	1.876 ± 0.010	$H(2.33)$	235.37	235.32 ± 0.70
$\boldsymbol{n_{\rm s}}$	0.96980	0.9684 ± 0.0041	D_{40}	1221.0	1225 ± 12	$D_{\rm M}(2.33)$	5757.3	5759 ± 11
$\boldsymbol{y_{\rm cal}}$	1.00084	1.0010 ± 0.0025	D_{220}	5731.8	5735 ± 39	$f\sigma_8(0.15)$	0.4509	0.4514 ± 0.0059
$\boldsymbol{A_{217}^{\rm CIB}}$	46.5	48 ± 7	D_{810}	2540.2	2538 ± 13	$\sigma_8(0.15)$	0.7468	0.7473 ± 0.0057
$\boldsymbol{\xi^{\rm tSZ\times CIB}}$	0.61	—	D_{1420}	818.52	817.0 ± 4.9	$f\sigma_8(0.38)$	0.47070	0.4711 ± 0.0050
$\boldsymbol{A_{143}^{\rm tSZ}}$	6.92	$5.3^{+2.2}_{-1.9}$	D_{2000}	231.19	230.6 ± 1.7	$\sigma_8(0.38)$	0.6627	0.6631 ± 0.0050
$\boldsymbol{A_{100}^{\rm PS}}$	250.4	261 ± 28	$n_{\rm s,0.002}$	0.96980	0.9684 ± 0.0041	$f\sigma_8(0.51)$	0.47009	0.4705 ± 0.0045
$\boldsymbol{A_{143}^{\rm PS}}$	51.7	48 ± 8	$Y_{\rm P}$	0.245388	$0.245369^{+0.000082}_{-0.000071}$	$\sigma_8(0.51)$	0.62051	0.6209 ± 0.0047
$\boldsymbol{A_{143\times217}^{\rm PS}}$	52.9	43 ± 9	$Y_{\rm P}^{\rm BBN}$	0.246715	$0.246695^{+0.000083}_{-0.000071}$	$f\sigma_8(0.61)$	0.46567	0.4660 ± 0.0041
$\boldsymbol{A_{217}^{\rm PS}}$	121.7	115 ± 10	10^5D/H	2.5888	2.597 ± 0.035	$\sigma_8(0.61)$	0.59062	0.5910 ± 0.0045
$\boldsymbol{A^{\rm kSZ}}$	0.03	< 4.61	Age/Gyr	13.7850	13.789 ± 0.026	$f\sigma_8(2.33)$	0.29806	0.2982 ± 0.0023
$\boldsymbol{A_{100}^{{\rm dust}TT}}$	8.87	$8.9^{+2.0}_{-1.8}$	z_*	1089.785	1089.84 ± 0.27	$\sigma_8(2.33)$	0.30759	0.3078 ± 0.0025
$\boldsymbol{A_{143}^{{\rm dust}TT}}$	10.81	10.7 ± 1.8	r_*	144.915	144.95 ± 0.29	f_{2000}^{143}	29.28	30.4 ± 3.0
$\boldsymbol{A_{143\times217}^{{\rm dust}TT}}$	19.92	18.3 ± 3.4	$100\theta_*$	1.041326	1.04134 ± 0.00041	$f_{2000}^{143\times217}$	32.46	32.9 ± 2.0
$\boldsymbol{A_{217}^{{\rm dust}TT}}$	95.6	93.4 ± 7.5	$D_{\rm M}(z_*)$/Gpc	13.9164	13.919 ± 0.029	f_{2000}^{217}	106.92	107.6 ± 1.9
$\boldsymbol{c_{100}}$	0.99969	0.99966 ± 0.00064	$z_{\rm drag}$	1059.780	1059.67 ± 0.43	$\chi^2_{\rm lensing}$	9.06	9.43 ± 0.96
$\boldsymbol{c_{217}}$	0.99824	0.99824 ± 0.00062	$r_{\rm drag}$	147.592	147.64 ± 0.32	$\chi^2_{\rm simall}$	396.46	397.7 ± 2.2
H_0	68.054	$68.02^{+0.45}_{-0.51}$	$k_{\rm D}$	0.140326	0.14024 ± 0.00043	$\chi^2_{\rm lowl}$	22.53	22.87 ± 0.83
Ω_Λ	0.6952	0.6949 ± 0.0063	$100\theta_{\rm D}$	0.160874	0.16093 ± 0.00025	$\chi^2_{\rm plik}$	761.2	772.6 ± 5.3
$\Omega_{\rm m}$	0.3048	0.3051 ± 0.0063	$z_{\rm eq}$	3358.4	3357 ± 25	$\chi^2_{\rm H073p45}$	10.57	10.8 ± 1.9
$\Omega_{\rm m} h^2$	0.14118	0.1411 ± 0.0011	$k_{\rm eq}$	0.010250	0.010247 ± 0.000077	$\chi^2_{\rm 6DF}$	0.0001	0.029 ± 0.042
$\Omega_{\rm m} h^3$	0.096080	0.09601 ± 0.00044	$100\theta_{\rm eq}$	0.82133	0.8214 ± 0.0047	$\chi^2_{\rm MGS}$	1.68	1.73 ± 0.51
σ_8	0.8075	0.8080 ± 0.0062	$100\theta_{\rm s,eq}$	0.45359	0.4537 ± 0.0024	$\chi^2_{\rm DR12BAO}$	3.495	3.96 ± 0.80
S_8	0.8140	0.815 ± 0.012	$H(0.15)$	73.262	$73.23^{+0.39}_{-0.44}$	$\chi^2_{\rm prior}$	1.26	7.4 ± 3.6
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4458	0.4463 ± 0.0063	$D_{\rm M}(0.15)$	637.51	637.8 ± 4.1	$\chi^2_{\rm CMB}$	1189.2	1202.6 ± 5.6
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.6000	0.6005 ± 0.0061	$H(0.38)$	83.254	$83.23^{+0.30}_{-0.33}$	$\chi^2_{\rm BAO}$	5.173	5.71 ± 0.74
$\sigma_8 / h^{0.5}$	0.9788	0.9797 ± 0.0088	$D_{\rm M}(0.38)$	1522.0	$1522.6^{+8.6}_{-7.8}$			

Best-fit $\chi^2_{\rm eff} = 1206.21$; $\bar{\chi}^2_{\rm eff} = 1226.45$; $R - 1 = 0.05385$

$\chi^2_{\rm eff}$: BAO - 6DF: 0.00 MGS: 1.68 DR12BAO: 3.50 CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 9.06 simall_100x143_offlike5_EE_Aplanck_B: 396.46 commander_dx12_v3_2_29: 22.54 plik_rd12_HM_v22_TT: 761.15 Hubble - H073p45: 10.57

2.85 base_plikHM_TT_lowl_lowE_lensing_post_Pantheon

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022208	0.02217 ± 0.00020	$\sigma_8/h^{0.5}$	0.9880	0.9873 ± 0.0099	$H(0.38)$	82.777	82.76 ± 0.41
$\boldsymbol{\Omega_c h^2}$	0.11971	0.1197 ± 0.0014	$r_{\rm drag} h$	99.17	99.2 ± 1.1	$D_{\rm M}(0.38)$	1534.9	1535 ± 11
$\boldsymbol{100\theta_{MC}}$	1.040860	1.04087 ± 0.00045	$\langle d^2 \rangle^{1/2}$	2.4412	2.442 ± 0.024	$H(0.51)$	89.523	89.50 ± 0.33
$\boldsymbol{\tau}$	0.0541	0.0537 ± 0.0078	$z_{\rm re}$	7.70	7.64 ± 0.78	$D_{\rm M}(0.51)$	1987.8	1988 ± 13
$\boldsymbol{\ln(10^{10} A_s)}$	3.0430	3.042 ± 0.015	$10^9 A_{\rm s}$	2.0968	2.094 ± 0.031	$H(0.61)$	95.164	95.14 ± 0.28
$\boldsymbol{n_s}$	0.96556	0.9646 ± 0.0046	$10^9 A_{\rm s} e^{-2\tau}$	1.8817	1.881 ± 0.011	$D_{\rm M}(0.61)$	2312.7	2313 ± 14
$\boldsymbol{y_{cal}}$	1.00055	1.0006 ± 0.0025	D_{40}	1228.2	1230 ± 12	$H(2.33)$	236.20	236.17 ± 0.88
$\boldsymbol{A_{217}^{CIB}}$	49.5	48 ± 7	D_{220}	5719.2	5720 ± 40	$D_{\rm M}(2.33)$	5770.6	5772 ± 13
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.20	—	D_{810}	2538.2	2537 ± 13	$f\sigma_8(0.15)$	0.4590	0.4587 ± 0.0074
$\boldsymbol{A_{143}^{tSZ}}$	7.05	$5.1^{+2.2}_{-2.0}$	D_{1420}	816.2	815.1 ± 5.0	$\sigma_8(0.15)$	0.7486	0.7480 ± 0.0056
$\boldsymbol{A_{100}^{PS}}$	254.4	263 ± 28	D_{2000}	230.26	229.8 ± 1.8	$f\sigma_8(0.38)$	0.4766	0.4763 ± 0.0058
$\boldsymbol{A_{143}^{PS}}$	46.6	49 ± 8	$n_{\rm s,0.002}$	0.96556	0.9646 ± 0.0046	$\sigma_8(0.38)$	0.66326	0.6626 ± 0.0049
$\boldsymbol{A_{143\times217}^{PS}}$	43.2	43 ± 9	$Y_{\rm P}$	0.245329	$0.245311^{+0.000091}_{-0.000079}$	$f\sigma_8(0.51)$	0.4749	0.4745 ± 0.0050
$\boldsymbol{A_{217}^{PS}}$	117.9	115 ± 10	$Y_{\rm P}^{\rm BBN}$	0.246656	$0.246637^{+0.000091}_{-0.000079}$	$\sigma_8(0.51)$	0.62055	0.6200 ± 0.0046
$\boldsymbol{A^{kSZ}}$	0.00	< 4.91	10^5D/H	2.6163	2.623 ± 0.038	$f\sigma_8(0.61)$	0.46963	0.4692 ± 0.0045
$\boldsymbol{A_{100}^{dust TT}}$	8.80	8.9 ± 1.8	Age/Gyr	13.8142	13.817 ± 0.030	$\sigma_8(0.61)$	0.59038	0.5898 ± 0.0045
$\boldsymbol{A_{143}^{dust TT}}$	10.81	10.7 ± 1.8	z_*	1090.099	1090.15 ± 0.32	$f\sigma_8(2.33)$	0.29755	0.2973 ± 0.0023
$\boldsymbol{A_{143\times217}^{dust TT}}$	19.01	18.3 ± 3.3	r_*	144.629	144.66 ± 0.34	$\sigma_8(2.33)$	0.30662	0.3063 ± 0.0026
$\boldsymbol{A_{217}^{dust TT}}$	94.0	93.3 ± 7.5	$100\theta_*$	1.041066	1.04108 ± 0.00044	f_{2000}^{143}	29.98	31.1 ± 2.9
$\boldsymbol{c_{100}}$	0.99961	0.99962 ± 0.00062	$D_{\rm M}(z_*)$/Gpc	13.8924	13.895 ± 0.033	$f_{2000}^{143\times217}$	32.99	33.5 ± 2.0
$\boldsymbol{c_{217}}$	0.99825	0.99826 ± 0.00063	$z_{\rm drag}$	1059.551	1059.46 ± 0.44	f_{2000}^{217}	107.59	108.0 ± 1.9
H_0	67.30	67.28 ± 0.64	$r_{\rm drag}$	147.347	147.39 ± 0.36	$\chi^2_{\rm lensing}$	8.811	9.34 ± 0.76
Ω_Λ	0.6853	0.6850 ± 0.0087	$k_{\rm D}$	0.140472	0.14040 ± 0.00045	$\chi^2_{\rm simall}$	396.05	397.0 ± 1.7
$\Omega_{\rm m}$	0.3147	0.3150 ± 0.0087	$100\theta_{\rm D}$	0.160984	0.16104 ± 0.00026	$\chi^2_{\rm lowl}$	23.24	23.47 ± 0.97
$\Omega_{\rm m} h^2$	0.14257	0.1425 ± 0.0014	$z_{\rm eq}$	3391.5	3391 ± 32	$\chi^2_{\rm plik}$	759.02	771.3 ± 5.2
$\Omega_{\rm m} h^3$	0.095951	0.09589 ± 0.00045	$k_{\rm eq}$	0.010351	0.010348 ± 0.000099	$\chi^2_{\rm JLA}$	1036.538	1036.70 ± 0.63
σ_8	0.8105	0.8098 ± 0.0063	$100\theta_{\rm eq}$	0.8147	0.8149 ± 0.0061	$\chi^2_{\rm prior}$	1.52	7.3 ± 3.7
S_8	0.8302	0.830 ± 0.015	$100\theta_{\rm s,eq}$	0.45025	0.4503 ± 0.0031	$\chi^2_{\rm CMB}$	1187.1	1201.1 ± 5.4
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4547	0.4545 ± 0.0080	$H(0.15)$	72.61	72.59 ± 0.55			
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.6071	0.6066 ± 0.0071	$D_{\rm M}(0.15)$	643.9	644.2 ± 5.5			

Best-fit $\chi^2_{\rm eff} = 2225.18$; $\bar{\chi}^2_{\rm eff} = 2245.11$; $R - 1 = 0.01149$

$\chi^2_{\rm eff}$: CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.81 simall_100x143_offlike5_EE_Aplanck_B: 396.05 commander_dx12_v3_2_29: 23.24 plik_rd12_HM_v22_TT: 759.02 SN - JLA Pantheon: 1036.54

2.86 base_plikHM_TT_lowl_lowE_lensing_post_BAO_JLA_Riess18

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022347	0.02232 ± 0.00019	$r_{\rm drag} h$	100.44	100.48 ± 0.82	$H(0.51)$	89.894	89.89 ± 0.26
$\boldsymbol{\Omega_c h^2}$	0.11818	0.1181 ± 0.0011	$\langle d^2 \rangle^{1/2}$	2.4228	2.425 ± 0.021	$D_{\rm M}(0.51)$	1972.9	$1973^{+10}_{-9.1}$
$\boldsymbol{100\theta_{\rm MC}}$	1.041122	1.04115 ± 0.00041	$z_{\rm re}$	8.05	8.04 ± 0.74	$H(0.61)$	95.459	95.45 ± 0.23
$\boldsymbol{\tau}$	0.0582	0.0582 ± 0.0075	$10^9 A_{\rm s}$	2.1083	2.108 ± 0.032	$D_{\rm M}(0.61)$	2296.6	$2297^{+11}_{-9.8}$
$\boldsymbol{\ln(10^{10} A_{\rm s})}$	3.0485	3.048 ± 0.015	$10^9 A_{\rm s} e^{-2\tau}$	1.8765	1.876 ± 0.010	$H(2.33)$	235.35	235.29 ± 0.69
$\boldsymbol{n_{\rm s}}$	0.96973	0.9685 ± 0.0041	D_{40}	1221.3	1224 ± 12	$D_{\rm M}(2.33)$	5757.7	5758 ± 11
$\boldsymbol{y_{\rm cal}}$	1.00072	1.0010 ± 0.0025	D_{220}	5730.7	5735 ± 39	$f\sigma_8(0.15)$	0.4515	0.4511 ± 0.0059
$\boldsymbol{A_{217}^{\rm CIB}}$	47.0	48 ± 7	D_{810}	2539.5	2538 ± 13	$\sigma_8(0.15)$	0.7477	0.7473 ± 0.0057
$\boldsymbol{\xi^{\rm tSZ\times CIB}}$	0.53	—	D_{1420}	818.21	817.1 ± 4.9	$f\sigma_8(0.38)$	0.47129	0.4709 ± 0.0049
$\boldsymbol{A_{143}^{\rm tSZ}}$	6.96	$5.3^{+2.1}_{-1.9}$	D_{2000}	231.11	230.6 ± 1.7	$\sigma_8(0.38)$	0.6635	0.6632 ± 0.0050
$\boldsymbol{A_{100}^{\rm PS}}$	250.6	261 ± 28	$n_{\rm s,0.002}$	0.96973	0.9685 ± 0.0041	$f\sigma_8(0.51)$	0.47068	0.4703 ± 0.0044
$\boldsymbol{A_{143}^{\rm PS}}$	50.3	48 ± 8	$Y_{\rm P}$	0.245386	$0.245371^{+0.000082}_{-0.000070}$	$\sigma_8(0.51)$	0.62126	0.6209 ± 0.0047
$\boldsymbol{A_{143\times217}^{\rm PS}}$	50.9	43 ± 9	$Y_{\rm P}^{\rm BBN}$	0.246713	$0.246697^{+0.000082}_{-0.000071}$	$f\sigma_8(0.61)$	0.46625	0.4659 ± 0.0041
$\boldsymbol{A_{217}^{\rm PS}}$	121.0	115 ± 10	10^5D/H	2.5899	2.596 ± 0.035	$\sigma_8(0.61)$	0.59133	0.5910 ± 0.0045
$\boldsymbol{A^{\rm kSZ}}$	0.01	< 4.61	Age/Gyr	13.7860	13.788 ± 0.026	$f\sigma_8(2.33)$	0.29842	0.2983 ± 0.0023
$\boldsymbol{A_{100}^{{\rm dust}TT}}$	8.81	$8.9^{+2.0}_{-1.8}$	z_*	1089.791	1089.83 ± 0.27	$\sigma_8(2.33)$	0.30795	0.3078 ± 0.0025
$\boldsymbol{A_{143}^{{\rm dust}TT}}$	10.74	10.7 ± 1.8	r_*	144.922	144.96 ± 0.29	f_{2000}^{143}	29.18	30.4 ± 3.0
$\boldsymbol{A_{143\times217}^{{\rm dust}TT}}$	19.59	18.3 ± 3.4	$100\theta_*$	1.041312	1.04134 ± 0.00041	$f_{2000}^{143\times217}$	32.38	32.9 ± 2.0
$\boldsymbol{A_{217}^{{\rm dust}TT}}$	95.1	93.4 ± 7.5	$D_{\rm M}(z_*)$/Gpc	13.9172	13.921 ± 0.028	f_{2000}^{217}	106.89	107.5 ± 1.9
$\boldsymbol{c_{100}}$	0.99968	0.99966 ± 0.00064	$z_{\rm drag}$	1059.742	1059.67 ± 0.43	$\chi^2_{\rm lensing}$	8.94	9.44 ± 0.97
$\boldsymbol{c_{217}}$	0.99823	0.99824 ± 0.00062	$r_{\rm drag}$	147.602	147.65 ± 0.32	$\chi^2_{\rm simall}$	396.83	397.7 ± 2.2
H_0	68.046	$68.05^{+0.44}_{-0.50}$	$k_{\rm D}$	0.140312	0.14023 ± 0.00043	$\chi^2_{\rm lowl}$	22.59	22.85 ± 0.83
Ω_Λ	0.6951	0.6953 ± 0.0062	$100\theta_{\rm D}$	0.160880	0.16093 ± 0.00025	$\chi^2_{\rm plik}$	760.8	772.7 ± 5.3
$\Omega_{\rm m}$	0.3049	0.3047 ± 0.0062	$z_{\rm eq}$	3358.1	3356 ± 25	$\chi^2_{\rm H073p45}$	10.60	10.7 ± 1.9
$\Omega_{\rm m} h^2$	0.14117	0.1411 ± 0.0010	$k_{\rm eq}$	0.010249	0.010243 ± 0.000076	$\chi^2_{\rm JLA}$	706.592	706.62 ± 0.12
$\Omega_{\rm m} h^3$	0.096061	0.09601 ± 0.00044	$100\theta_{\rm eq}$	0.82136	0.8217 ± 0.0047	$\chi^2_{\rm 6DF}$	0.0001	0.028 ± 0.040
σ_8	0.8085	0.8080 ± 0.0062	$100\theta_{\rm s,eq}$	0.45361	0.4538 ± 0.0024	$\chi^2_{\rm MGS}$	1.677	1.76 ± 0.51
S_8	0.8150	0.814 ± 0.011	$H(0.15)$	73.255	$73.26^{+0.38}_{-0.44}$	$\chi^2_{\rm DR12BAO}$	3.496	3.92 ± 0.76
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4464	0.4460 ± 0.0062	$D_{\rm M}(0.15)$	637.58	637.6 ± 4.0	$\chi^2_{\rm prior}$	1.26	7.4 ± 3.6
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.6008	0.6003 ± 0.0060	$H(0.38)$	83.246	$83.24^{+0.29}_{-0.33}$	$\chi^2_{\rm CMB}$	1189.2	1202.7 ± 5.6
$\sigma_8 / h^{0.5}$	0.9801	0.9795 ± 0.0088	$D_{\rm M}(0.38)$	1522.2	$1522.2^{+8.5}_{-7.7}$	$\chi^2_{\rm BAO}$	5.174	5.70 ± 0.72

Best-fit $\chi^2_{\rm eff} = 1912.81$; $\bar{\chi}^2_{\rm eff} = 1933.05$; $R - 1 = 0.05858$

$\chi^2_{\rm eff}$: BAO - 6DF: 0.00 MGS: 1.68 DR12BAO: 3.50 CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.94 simall_100x143_offlike5_EE_Aplanck_B: 396.83 commander_dx12_v3_2_29: 22.59 plik_rd12_HM_v22_TT: 760.83 Hubble - H073p45: 10.60 SN - JLA December_2013: 706.59

2.87 base_plikHM_TT_lowl_lowE_lensing_post_BAO_Pantheon

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022246	0.02222 ± 0.00019	$r_{\rm drag} h$	99.88	99.76 ± 0.80	$H(0.51)$	89.697	89.66 ± 0.26
$\boldsymbol{\Omega_c h^2}$	0.11881	0.1190 ± 0.0011	$\langle d^2 \rangle^{1/2}$	2.4299	2.434 ± 0.021	$D_{\rm M}(0.51)$	1980.2	1981.7 ± 9.6
$\boldsymbol{100\theta_{\rm MC}}$	1.040978	1.04099 ± 0.00042	$z_{\rm re}$	7.89	7.82 ± 0.74	$H(0.61)$	95.294	95.27 ± 0.22
$\boldsymbol{\tau}$	0.0563	0.0556 ± 0.0074	$10^9 A_{\rm s}$	2.1014	$2.100^{+0.029}_{-0.032}$	$D_{\rm M}(0.61)$	2304.5	2306 ± 10
$\boldsymbol{\ln(10^{10} A_{\rm s})}$	3.0452	3.044 ± 0.015	$10^9 A_{\rm s} e^{-2\tau}$	1.8777	1.879 ± 0.011	$H(2.33)$	235.65	235.74 ± 0.69
$\boldsymbol{n_{\rm s}}$	0.96780	0.9663 ± 0.0040	D_{40}	1223.6	1227 ± 12	$D_{\rm M}(2.33)$	5765.4	5767 ± 11
$\boldsymbol{y_{\rm cal}}$	1.00056	1.0008 ± 0.0025	D_{220}	5720.5	5725 ± 39	$f\sigma_8(0.15)$	0.4546	0.4552 ± 0.0059
$\boldsymbol{A_{217}^{\rm CIB}}$	48.7	48 ± 7	D_{810}	2537.4	2537 ± 13	$\sigma_8(0.15)$	0.7478	0.7476 ± 0.0056
$\boldsymbol{\xi^{\rm tSZ\times CIB}}$	0.32	—	D_{1420}	816.62	815.8 ± 4.9	$f\sigma_8(0.38)$	0.47345	0.4738 ± 0.0049
$\boldsymbol{A_{143}^{\rm tSZ}}$	7.04	$5.1^{+2.2}_{-2.0}$	D_{2000}	230.44	230.1 ± 1.7	$\sigma_8(0.38)$	0.66309	0.6628 ± 0.0050
$\boldsymbol{A_{100}^{\rm PS}}$	253.7	263 ± 28	$n_{\rm s,0.002}$	0.96780	0.9663 ± 0.0040	$f\sigma_8(0.51)$	0.47232	0.4725 ± 0.0044
$\boldsymbol{A_{143}^{\rm PS}}$	48.6	49 ± 8	$Y_{\rm P}$	0.245345	$0.245331^{+0.000084}_{-0.000075}$	$\sigma_8(0.51)$	0.62064	0.6203 ± 0.0047
$\boldsymbol{A_{143\times217}^{\rm PS}}$	46.3	43 ± 9	$Y_{\rm P}^{\rm BBN}$	0.246671	$0.246657^{+0.000084}_{-0.000075}$	$f\sigma_8(0.61)$	0.46754	0.4677 ± 0.0041
$\boldsymbol{A_{217}^{\rm PS}}$	118.9	115 ± 10	10^5D/H	2.6090	2.615 ± 0.036	$\sigma_8(0.61)$	0.59062	0.5903 ± 0.0045
$\boldsymbol{A^{\rm kSZ}}$	0.00	< 4.79	Age/Gyr	13.8032	13.806 ± 0.026	$f\sigma_8(2.33)$	0.29788	$0.2977^{+0.0021}_{-0.0024}$
$\boldsymbol{A_{100}^{{\rm dust}TT}}$	8.86	8.9 ± 1.8	z_*	1089.971	1090.02 ± 0.27	$\sigma_8(2.33)$	0.30720	$0.3070^{+0.0023}_{-0.0026}$
$\boldsymbol{A_{143}^{{\rm dust}TT}}$	10.78	10.7 ± 1.8	r_*	144.835	144.81 ± 0.28	f_{2000}^{143}	29.94	30.9 ± 2.9
$\boldsymbol{A_{143\times217}^{{\rm dust}TT}}$	19.35	18.3 ± 3.3	$100\theta_*$	1.041175	1.04119 ± 0.00041	$f_{2000}^{143\times217}$	32.89	33.3 ± 2.0
$\boldsymbol{A_{217}^{{\rm dust}TT}}$	94.5	93.4 ± 7.4	$D_{\rm M}(z_*)$/Gpc	13.9107	13.909 ± 0.028	f_{2000}^{217}	107.40	107.9 ± 1.9
$\boldsymbol{c_{100}}$	0.99966	0.99963 ± 0.00062	$z_{\rm drag}$	1059.551	1059.51 ± 0.43	$\chi^2_{\rm lensing}$	8.865	9.27 ± 0.73
$\boldsymbol{c_{217}}$	0.99825	0.99826 ± 0.00063	$r_{\rm drag}$	147.547	147.53 ± 0.32	$\chi^2_{\rm simall}$	396.44	397.2 ± 1.9
H_0	67.691	67.62 ± 0.47	$k_{\rm D}$	0.140293	0.14028 ± 0.00043	$\chi^2_{\rm lowl}$	22.84	23.17 ± 0.86
Ω_Λ	0.6908	0.6897 ± 0.0063	$100\theta_{\rm D}$	0.160977	0.16101 ± 0.00025	$\chi^2_{\rm plik}$	759.85	771.7 ± 5.2
$\Omega_{\rm m}$	0.3092	0.3103 ± 0.0063	$z_{\rm eq}$	3370.7	3374 ± 25	$\chi^2_{\rm JLA}$	1036.228	1036.35 ± 0.33
$\Omega_{\rm m} h^2$	0.14170	0.1418 ± 0.0010	$k_{\rm eq}$	0.010288	0.010298 ± 0.000075	$\chi^2_{\rm 6DF}$	0.0154	0.049 ± 0.061
$\Omega_{\rm m} h^3$	0.095917	0.09590 ± 0.00045	$100\theta_{\rm eq}$	0.81866	0.8181 ± 0.0045	$\chi^2_{\rm MGS}$	1.343	1.34 ± 0.45
σ_8	0.8090	0.8089 ± 0.0062	$100\theta_{\rm s,eq}$	0.45228	0.4520 ± 0.0024	$\chi^2_{\rm DR12BAO}$	4.03	4.6 ± 1.3
S_8	0.8214	0.823 ± 0.011	$H(0.15)$	72.944	72.88 ± 0.41	$\chi^2_{\rm prior}$	1.37	7.3 ± 3.6
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4499	0.4505 ± 0.0063	$D_{\rm M}(0.15)$	640.61	641.2 ± 4.0	$\chi^2_{\rm CMB}$	1188.0	1201.4 ± 5.4
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.6033	0.6037 ± 0.0060	$H(0.38)$	83.008	82.96 ± 0.31	$\chi^2_{\rm BAO}$	5.39	6.0 ± 1.1
$\sigma_8 / h^{0.5}$	0.9833	0.9837 ± 0.0088	$D_{\rm M}(0.38)$	1528.4	1529.6 ± 8.1			

Best-fit $\chi^2_{\rm eff} = 2230.99$; $\bar{\chi}^2_{\rm eff} = 2251.05$; $R - 1 = 0.01890$

$\chi^2_{\rm eff}$: BAO - 6DF: 0.01 MGS: 1.34 DR12BAO: 4.03 CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.87 simall_100x143_offlike5_EE_Aplanck_B: 396.44 commander_dx12_v3_2_29: 22.84 plik_rd12_HM_v22_TT: 759.85 SN - JLA Pantheon: 1036.23

2.88 base_plikHM_TT_lowl_lowE_lensing_post_BAO_Pantheon_Riess18

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022349	0.02232 ± 0.00019	$r_{\rm drag} h$	100.45	100.50 ± 0.80	$H(0.51)$	89.901	89.89 ± 0.26
$\boldsymbol{\Omega_c h^2}$	0.11819	0.1181 ± 0.0010	$\langle d^2 \rangle^{1/2}$	2.4211	2.424 ± 0.021	$D_{\rm M}(0.51)$	1972.7	$1972.7^{+9.9}_{-8.9}$
$\boldsymbol{100\theta_{MC}}$	1.041151	1.04115 ± 0.00041	$z_{\rm re}$	7.95	8.05 ± 0.74	$H(0.61)$	95.466	95.45 ± 0.22
$\boldsymbol{\tau}$	0.0572	0.0583 ± 0.0075	$10^9 A_{\rm s}$	2.1036	2.108 ± 0.032	$D_{\rm M}(0.61)$	2296.4	$2296^{+11}_{-9.7}$
$\boldsymbol{\ln(10^{10} A_s)}$	3.0462	3.048 ± 0.015	$10^9 A_{\rm s} e^{-2\tau}$	1.8762	1.876 ± 0.010	$H(2.33)$	235.36	235.27 ± 0.68
$\boldsymbol{n_s}$	0.96922	0.9686 ± 0.0041	D_{40}	1222.1	1224 ± 12	$D_{\rm M}(2.33)$	5757.3	5758 ± 11
$\boldsymbol{y_{cal}}$	1.00069	1.0010 ± 0.0025	D_{220}	5732.5	5735 ± 39	$f\sigma_8(0.15)$	0.4509	0.4510 ± 0.0058
$\boldsymbol{A_{217}^{CIB}}$	48.1	48 ± 7	D_{810}	2538.8	2538 ± 13	$\sigma_8(0.15)$	0.7468	0.7473 ± 0.0057
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.37	—	D_{1420}	817.80	817.1 ± 4.9	$f\sigma_8(0.38)$	0.47068	0.4708 ± 0.0049
$\boldsymbol{A_{143}^{tSZ}}$	7.02	$5.3^{+2.2}_{-1.9}$	D_{2000}	230.93	230.6 ± 1.7	$\sigma_8(0.38)$	0.6627	0.6632 ± 0.0050
$\boldsymbol{A_{100}^{PS}}$	253.3	261 ± 28	$n_{\rm s,0.002}$	0.96922	0.9686 ± 0.0041	$f\sigma_8(0.51)$	0.47006	0.4702 ± 0.0044
$\boldsymbol{A_{143}^{PS}}$	48.5	48 ± 8	$Y_{\rm P}$	0.245387	$0.245371^{+0.000082}_{-0.000070}$	$\sigma_8(0.51)$	0.62048	0.6209 ± 0.0047
$\boldsymbol{A_{143\times217}^{PS}}$	46.9	43 ± 9	$Y_{\rm P}^{\rm BBN}$	0.246714	$0.246698^{+0.000082}_{-0.000070}$	$f\sigma_8(0.61)$	0.46564	0.4658 ± 0.0041
$\boldsymbol{A_{217}^{PS}}$	119.3	115 ± 10	10^5D/H	2.5894	2.596 ± 0.035	$\sigma_8(0.61)$	0.59059	0.5910 ± 0.0045
$\boldsymbol{A^{kSZ}}$	0.01	< 4.60	Age/Gyr	13.7851	13.788 ± 0.026	$f\sigma_8(2.33)$	0.29805	0.2983 ± 0.0023
$\boldsymbol{A_{100}^{dust TT}}$	8.94	$8.9^{+2.0}_{-1.8}$	z_*	1089.789	1089.82 ± 0.27	$\sigma_8(2.33)$	0.30757	0.3078 ± 0.0025
$\boldsymbol{A_{143}^{dust TT}}$	10.84	10.7 ± 1.8	r_*	144.918	144.97 ± 0.28	f_{2000}^{143}	29.54	30.4 ± 3.0
$\boldsymbol{A_{143\times217}^{dust TT}}$	19.45	18.3 ± 3.4	$100\theta_*$	1.041334	1.04134 ± 0.00041	$f_{2000}^{143\times217}$	32.56	32.9 ± 2.0
$\boldsymbol{A_{217}^{dust TT}}$	94.8	93.4 ± 7.5	$D_{\rm M}(z_*)$/Gpc	13.9166	13.921 ± 0.028	f_{2000}^{217}	107.12	107.5 ± 1.9
$\boldsymbol{c_{100}}$	0.99971	0.99966 ± 0.00064	$z_{\rm drag}$	1059.742	1059.68 ± 0.43	$\chi^2_{\rm lensing}$	9.05	9.44 ± 0.97
$\boldsymbol{c_{217}}$	0.99825	0.99824 ± 0.00062	$r_{\rm drag}$	147.598	147.66 ± 0.32	$\chi^2_{\rm simall}$	396.57	397.7 ± 2.2
H_0	68.054	$68.06^{+0.43}_{-0.49}$	$k_{\rm D}$	0.140320	0.14023 ± 0.00042	$\chi^2_{\rm lowl}$	22.65	22.84 ± 0.83
Ω_Λ	0.6952	0.6954 ± 0.0061	$100\theta_{\rm D}$	0.160879	0.16093 ± 0.00025	$\chi^2_{\rm plik}$	760.9	772.7 ± 5.3
$\Omega_{\rm m}$	0.3048	0.3046 ± 0.0061	$z_{\rm eq}$	3358.3	3355 ± 25	$\chi^2_{\rm H073p45}$	10.57	10.6 ± 1.8
$\Omega_{\rm m} h^2$	0.14118	0.1411 ± 0.0010	$k_{\rm eq}$	0.010250	0.010241 ± 0.000075	$\chi^2_{\rm JLA}$	1036.065	1036.13 ± 0.19
$\Omega_{\rm m} h^3$	0.096078	0.09601 ± 0.00044	$100\theta_{\rm eq}$	0.82134	0.8218 ± 0.0046	$\chi^2_{\rm 6DF}$	0.0001	0.027 ± 0.039
σ_8	0.8074	0.8079 ± 0.0062	$100\theta_{\rm s,eq}$	0.45360	0.4539 ± 0.0024	$\chi^2_{\rm MGS}$	1.677	1.77 ± 0.50
S_8	0.8139	0.814 ± 0.011	$H(0.15)$	73.262	$73.27^{+0.38}_{-0.43}$	$\chi^2_{\rm DR12BAO}$	3.490	3.89 ± 0.72
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4458	0.4459 ± 0.0061	$D_{\rm M}(0.15)$	637.51	637.5 ± 4.0	$\chi^2_{\rm prior}$	1.29	7.4 ± 3.6
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.6000	0.6002 ± 0.0060	$H(0.38)$	83.253	$83.25^{+0.29}_{-0.32}$	$\chi^2_{\rm CMB}$	1189.2	1202.7 ± 5.5
$\sigma_8/h^{0.5}$	0.9788	0.9793 ± 0.0087	$D_{\rm M}(0.38)$	1522.0	$1522.0^{+8.4}_{-7.5}$	$\chi^2_{\rm BAO}$	5.168	5.68 ± 0.70

Best-fit $\chi^2_{\rm eff} = 2242.27$; $\bar{\chi}^2_{\rm eff} = 2262.52$; $R - 1 = 0.06090$

$\chi^2_{\rm eff}$: BAO - 6DF: 0.00 MGS: 1.68 DR12BAO: 3.49 CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 9.05 simall_100x143_offlike5_EE_Aplanck_B: 396.57 commander_dx12_v3_2_29: 22.65 plik_rd12_HM_v22_TT: 760.90 Hubble - H073p45: 10.57 SN - JLA Pantheon: 1036.07

2.89 base_plikHM_TT_lowl_lowE_lensing_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02215 ± 0.00020	$\sigma_8\Omega_m^{0.25}$	0.6088 ± 0.0075	$H(0.15)$	72.45 ± 0.58
$\boldsymbol{\Omega_c h^2}$	0.1201 ± 0.0015	$\sigma_8/h^{0.5}$	0.990 ± 0.010	$D_M(0.15)$	645.6 ± 5.9
$\boldsymbol{100\theta_{MC}}$	1.04082 ± 0.00045	$r_{drag}h$	98.9 ± 1.2	$H(0.38)$	82.66 ± 0.43
$\boldsymbol{\tau}$	$0.0539^{+0.0047}_{-0.0083}$	$\langle d^2\rangle^{1/2}$	2.449 ± 0.024	$D_M(0.38)$	1538 ± 12
$\boldsymbol{\ln(10^{10}A_s)}$	$3.043^{+0.011}_{-0.015}$	z_{re}	$7.68^{+0.54}_{-0.80}$	$H(0.51)$	89.43 ± 0.35
$\boldsymbol{n_s}$	0.9638 ± 0.0047	$10^9 A_s$	$2.096^{+0.022}_{-0.031}$	$D_M(0.51)$	1992 ± 14
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.882 ± 0.011	$H(0.61)$	95.08 ± 0.29
$\boldsymbol{A_{217}^{CIB}}$	48 ± 7	D_{40}	1232 ± 12	$D_M(0.61)$	2317 ± 15
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{220}	5716 ± 40	$H(2.33)$	236.37 ± 0.92
$\boldsymbol{A_{143}^{tSZ}}$	5.0 ± 2.0	D_{810}	2536 ± 13	$D_M(2.33)$	5775 ± 14
$\boldsymbol{A_{100}^{PS}}$	264 ± 28	D_{1420}	814.5 ± 5.1	$f\sigma_8(0.15)$	0.4610 ± 0.0080
$\boldsymbol{A_{143}^{PS}}$	49 ± 8	D_{2000}	229.6 ± 1.8	$\sigma_8(0.15)$	$0.7490^{+0.0048}_{-0.0054}$
$\boldsymbol{A_{143\times217}^{PS}}$	43 ± 9	$n_{s,0.002}$	0.9638 ± 0.0047	$f\sigma_8(0.38)$	0.4780 ± 0.0062
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	Y_P	$0.245300^{+0.000094}_{-0.000081}$	$\sigma_8(0.38)$	$0.6633^{+0.0040}_{-0.0048}$
$\boldsymbol{A^{kSZ}}$	< 5.00	Y_P^{BBN}	$0.246626^{+0.000094}_{-0.000081}$	$f\sigma_8(0.51)$	0.4759 ± 0.0053
$\boldsymbol{A_{100}^{dustTT}}$	8.9 ± 1.8	10^5D/H	2.628 ± 0.039	$\sigma_8(0.51)$	$0.6205^{+0.0036}_{-0.0045}$
$\boldsymbol{A_{143}^{dustTT}}$	10.7 ± 1.8	Age/Gyr	13.823 ± 0.032	$f\sigma_8(0.61)$	0.4705 ± 0.0047
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.2 ± 3.3	z_*	1090.21 ± 0.33	$\sigma_8(0.61)$	$0.5903^{+0.0034}_{-0.0044}$
$\boldsymbol{A_{217}^{dustTT}}$	93.2 ± 7.4	r_*	144.59 ± 0.36	$f\sigma_8(2.33)$	$0.2974^{+0.0017}_{-0.0023}$
$\boldsymbol{c_{100}}$	0.99961 ± 0.00062	$100\theta_*$	1.04103 ± 0.00045	$\sigma_8(2.33)$	$0.3064^{+0.0019}_{-0.0026}$
$\boldsymbol{c_{217}}$	0.99826 ± 0.00062	$D_M(z_*)$/Gpc	13.889 ± 0.034	f_{2000}^{143}	31.2 ± 2.9
H_0	67.12 ± 0.68	z_{drag}	1059.42 ± 0.44	$f_{2000}^{143\times217}$	33.5 ± 2.0
Ω_Λ	0.6827 ± 0.0094	r_{drag}	147.32 ± 0.37	f_{2000}^{217}	108.1 ± 1.9
Ω_m	0.3173 ± 0.0094	k_D	0.14045 ± 0.00045	$\chi^2_{lensing}$	9.42 ± 0.86
$\Omega_m h^2$	0.1429 ± 0.0014	$100\theta_D$	0.16106 ± 0.00026	χ^2_{simall}	396.8 ± 1.6
$\Omega_m h^3$	0.09588 ± 0.00045	z_{eq}	3398 ± 34	χ^2_{lowl}	23.7 ± 1.0
σ_8	0.8112 ± 0.0059	k_{eq}	0.01037 ± 0.00010	χ^2_{plik}	771.0 ± 5.2
S_8	0.834 ± 0.016	$100\theta_{eq}$	0.8133 ± 0.0064	χ^2_{prior}	7.3 ± 3.6
$\sigma_8\Omega_m^{0.5}$	0.4569 ± 0.0087	$100\theta_{s,eq}$	0.4496 ± 0.0033	χ^2_{CMB}	1200.9 ± 5.4

$\bar{\chi}^2_{eff} = 1208.16$; $R - 1 = 0.00659$

2.90 base_plikHM_TT_lowl_lowE_lensing_post_BAO_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02221 ± 0.00019	$r_{\rm drag} h$	99.65 ± 0.83	$H(0.51)$	89.63 ± 0.26
$\boldsymbol{\Omega_c h^2}$	0.1191 ± 0.0011	$\langle d^2 \rangle^{1/2}$	2.437 ± 0.021	$D_{\rm M}(0.51)$	1982.9 ± 9.9
$\boldsymbol{100\theta_{MC}}$	1.04098 ± 0.00042	$z_{\rm re}$	$7.85^{+0.61}_{-0.76}$	$H(0.61)$	95.24 ± 0.23
$\boldsymbol{\tau}$	$0.0559^{+0.0056}_{-0.0078}$	$10^9 A_{\rm s}$	$2.101^{+0.024}_{-0.032}$	$D_{\rm M}(0.61)$	2307 ± 11
$\boldsymbol{\ln(10^{10} A_s)}$	$3.045^{+0.012}_{-0.015}$	$10^9 A_{\rm s} e^{-2\tau}$	1.879 ± 0.011	$H(2.33)$	235.81 ± 0.70
$\boldsymbol{n_s}$	0.9660 ± 0.0041	D_{40}	1228 ± 12	$D_{\rm M}(2.33)$	5768 ± 12
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0025	D_{220}	5724 ± 39	$f\sigma_8(0.15)$	0.4561 ± 0.0060
$\boldsymbol{A_{217}^{CIB}}$	48 ± 7	D_{810}	2537 ± 13	$\sigma_8(0.15)$	$0.7481^{+0.0048}_{-0.0057}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{1420}	815.6 ± 4.9	$f\sigma_8(0.38)$	0.4745 ± 0.0049
$\boldsymbol{A_{143}^{tSZ}}$	$5.1^{+2.2}_{-2.0}$	D_{2000}	230.0 ± 1.7	$\sigma_8(0.38)$	$0.6632^{+0.0041}_{-0.0051}$
$\boldsymbol{A_{100}^{PS}}$	263 ± 28	$n_{\rm s,0.002}$	0.9660 ± 0.0041	$f\sigma_8(0.51)$	0.4732 ± 0.0044
$\boldsymbol{A_{143}^{PS}}$	49 ± 8	$Y_{\rm P}$	$0.245327^{+0.000084}_{-0.000076}$	$\sigma_8(0.51)$	$0.6206^{+0.0038}_{-0.0048}$
$\boldsymbol{A_{143\times217}^{PS}}$	43 ± 9	$Y_{\rm P}^{\rm BBN}$	$0.246653^{+0.000085}_{-0.000076}$	$f\sigma_8(0.61)$	0.4682 ± 0.0040
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	10^5D/H	2.616 ± 0.036	$\sigma_8(0.61)$	$0.5906^{+0.0036}_{-0.0046}$
$\boldsymbol{A^{kSZ}}$	< 4.82	Age/Gyr	13.808 ± 0.027	$f\sigma_8(2.33)$	$0.2978^{+0.0018}_{-0.0024}$
$\boldsymbol{A_{100}^{dust TT}}$	8.9 ± 1.8	z_*	1090.05 ± 0.28	$\sigma_8(2.33)$	$0.3070^{+0.0020}_{-0.0026}$
$\boldsymbol{A_{143}^{dust TT}}$	10.7 ± 1.8	r_*	144.79 ± 0.29	f_{2000}^{143}	30.9 ± 2.9
$\boldsymbol{A_{143\times217}^{dust TT}}$	18.3 ± 3.3	$100\theta_*$	1.04118 ± 0.00042	$f_{2000}^{143\times217}$	33.3 ± 2.0
$\boldsymbol{A_{217}^{dust TT}}$	93.3 ± 7.4	$D_{\rm M}(z_*)$/Gpc	13.906 ± 0.028	f_{2000}^{217}	107.9 ± 1.9
$\boldsymbol{c_{100}}$	0.99963 ± 0.00062	$z_{\rm drag}$	1059.50 ± 0.44	$\chi^2_{\rm lensing}$	9.22 ± 0.66
$\boldsymbol{c_{217}}$	0.99826 ± 0.00062	$r_{\rm drag}$	147.51 ± 0.32	$\chi^2_{\rm simall}$	397.1 ± 1.9
H_0	67.56 ± 0.48	$k_{\rm D}$	0.14030 ± 0.00043	$\chi^2_{\rm lowl}$	23.24 ± 0.88
Ω_Λ	0.6889 ± 0.0065	$100\theta_{\rm D}$	0.16102 ± 0.00026	$\chi^2_{\rm plik}$	771.5 ± 5.2
$\Omega_{\rm m}$	0.3111 ± 0.0065	$z_{\rm eq}$	3377 ± 25	$\chi^2_{\rm 6DF}$	0.057 ± 0.069
$\Omega_{\rm m} h^2$	0.1420 ± 0.0011	$k_{\rm eq}$	0.010307 ± 0.000077	$\chi^2_{\rm MGS}$	1.28 ± 0.45
$\Omega_{\rm m} h^3$	0.09590 ± 0.00045	$100\theta_{\rm eq}$	0.8175 ± 0.0047	$\chi^2_{\rm DR12BAO}$	4.8 ± 1.5
σ_8	$0.8095^{+0.0054}_{-0.0063}$	$100\theta_{\rm s,eq}$	0.4517 ± 0.0024	$\chi^2_{\rm prior}$	7.3 ± 3.6
S_8	0.824 ± 0.012	$H(0.15)$	72.83 ± 0.42	$\chi^2_{\rm CMB}$	1201.1 ± 5.4
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4515 ± 0.0064	$D_{\rm M}(0.15)$	641.8 ± 4.1	$\chi^2_{\rm BAO}$	6.2 ± 1.2
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.6046 ± 0.0061	$H(0.38)$	82.93 ± 0.32		
$\sigma_8/h^{0.5}$	0.9849 ± 0.0087	$D_{\rm M}(0.38)$	1530.7 ± 8.4		

$\bar{\chi}^2_{\rm eff} = 1214.57$; $R - 1 = 0.01797$

2.91 base_plikHM_TT_lowl_lowE_lensing_post_Riess18_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02232 ± 0.00020	$\sigma_8/h^{0.5}$	0.9798 ± 0.0099	$H(0.38)$	83.25 ± 0.43
$\boldsymbol{\Omega_c h^2}$	0.1181 ± 0.0015	$r_{\rm drag} h$	100.5 ± 1.2	$D_{\rm M}(0.38)$	1522 ± 11
$\boldsymbol{100\theta_{MC}}$	1.04116 ± 0.00044	$\langle d^2 \rangle^{1/2}$	2.425 ± 0.024	$H(0.51)$	89.90 ± 0.34
$\boldsymbol{\tau}$	$0.0588^{+0.0069}_{-0.0083}$	$z_{\rm re}$	$8.09^{+0.70}_{-0.79}$	$D_{\rm M}(0.51)$	1973 ± 13
$\boldsymbol{\ln(10^{10} A_s)}$	$3.049^{+0.014}_{-0.016}$	$10^9 A_{\rm s}$	$2.110^{+0.028}_{-0.035}$	$H(0.61)$	95.46 ± 0.28
$\boldsymbol{n_s}$	0.9686 ± 0.0047	$10^9 A_{\rm s} e^{-2\tau}$	$1.876^{+0.010}_{-0.011}$	$D_{\rm M}(0.61)$	2296 ± 14
$\boldsymbol{y_{cal}}$	1.0010 ± 0.0024	D_{40}	1224 ± 12	$H(2.33)$	235.28 ± 0.91
$\boldsymbol{A^{CIB}_{217}}$	47 ± 7	D_{220}	5735 ± 39	$D_{\rm M}(2.33)$	5758 ± 13
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{810}	2538 ± 13	$f\sigma_8(0.15)$	0.4512 ± 0.0075
$\boldsymbol{A^{tSZ}_{143}}$	5.2 ± 1.9	D_{1420}	817.1 ± 5.0	$\sigma_8(0.15)$	0.7476 ± 0.0054
$\boldsymbol{A^{PS}_{100}}$	262 ± 27	D_{2000}	230.7 ± 1.8	$f\sigma_8(0.38)$	0.4710 ± 0.0059
$\boldsymbol{A^{PS}_{143}}$	48 ± 8	$n_{\rm s,0.002}$	0.9686 ± 0.0047	$\sigma_8(0.38)$	$0.6635^{+0.0045}_{-0.0051}$
$\boldsymbol{A^{PS}_{143\times217}}$	43 ± 9	$Y_{\rm P}$	$0.245372^{+0.000087}_{-0.000071}$	$f\sigma_8(0.51)$	0.4704 ± 0.0051
$\boldsymbol{A^{PS}_{217}}$	$115^{+11}_{-9.8}$	$Y_{\rm P}^{\rm BBN}$	$0.246698^{+0.000088}_{-0.000072}$	$\sigma_8(0.51)$	$0.6212^{+0.0042}_{-0.0049}$
$\boldsymbol{A^{kSZ}}$	< 4.64	10^5D/H	$2.596^{+0.035}_{-0.040}$	$f\sigma_8(0.61)$	0.4660 ± 0.0046
$\boldsymbol{A^{dustTT}_{100}}$	9.0 ± 1.8	Age/Gyr	13.787 ± 0.030	$\sigma_8(0.61)$	$0.5913^{+0.0040}_{-0.0047}$
$\boldsymbol{A^{dustTT}_{143}}$	10.7 ± 1.8	z_*	1089.82 ± 0.32	$f\sigma_8(2.33)$	$0.2984^{+0.0021}_{-0.0025}$
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.3 ± 3.4	r_*	144.96 ± 0.36	$\sigma_8(2.33)$	$0.3080^{+0.0023}_{-0.0028}$
$\boldsymbol{A^{dustTT}_{217}}$	93.5 ± 7.7	$100\theta_*$	1.04135 ± 0.00043	f^{143}_{2000}	30.3 ± 3.0
$\boldsymbol{c_{100}}$	0.99966 ± 0.00064	$D_{\rm M}(z_*)$/Gpc	13.921 ± 0.034	$f^{143\times217}_{2000}$	32.8 ± 2.0
$\boldsymbol{c_{217}}$	0.99823 ± 0.00062	$z_{\rm drag}$	1059.68 ± 0.43	f^{217}_{2000}	107.5 ± 1.9
H_0	68.07 ± 0.67	$r_{\rm drag}$	147.65 ± 0.38	$\chi^2_{\rm lensing}$	9.5 ± 1.0
Ω_Λ	0.6954 ± 0.0088	$k_{\rm D}$	0.14023 ± 0.00045	$\chi^2_{\rm simall}$	397.8 ± 2.4
$\Omega_{\rm m}$	0.3046 ± 0.0088	$100\theta_{\rm D}$	0.16093 ± 0.00025	$\chi^2_{\rm lowl}$	22.86 ± 0.91
$\Omega_{\rm m} h^2$	0.1411 ± 0.0014	$z_{\rm eq}$	3356 ± 34	$\chi^2_{\rm plik}$	772.9 ± 5.5
$\Omega_{\rm m} h^3$	0.09601 ± 0.00043	$k_{\rm eq}$	0.01024 ± 0.00010	$\chi^2_{\rm H073p45}$	10.7 ± 2.6
σ_8	0.8083 ± 0.0061	$100\theta_{\rm eq}$	0.8218 ± 0.0064	$\chi^2_{\rm prior}$	7.3 ± 3.6
S_8	0.814 ± 0.015	$100\theta_{\rm s,eq}$	0.4539 ± 0.0033	$\chi^2_{\rm CMB}$	1203.0 ± 5.9
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4461 ± 0.0081	$H(0.15)$	73.27 ± 0.57		
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.6005 ± 0.0072	$D_{\rm M}(0.15)$	637.5 ± 5.6		

$\bar{\chi}^2_{\rm eff} = 1221.07$; $R - 1 = 0.06981$

2.92 base_plikHM_TT_lowl_lowE_lensing_post_BAO_Riess18_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02231 ± 0.00019	$r_{\rm drag} h$	100.45 ± 0.83	$H(0.51)$	89.88 ± 0.26
$\boldsymbol{\Omega_c h^2}$	0.1182 ± 0.0011	$\langle d^2 \rangle^{1/2}$	2.426 ± 0.021	$D_{\rm M}(0.51)$	$1973^{+10}_{-9.2}$
$\boldsymbol{100\theta_{MC}}$	1.04115 ± 0.00041	$z_{\rm re}$	8.07 ± 0.69	$H(0.61)$	95.44 ± 0.23
$\boldsymbol{\tau}$	$0.0585^{+0.0066}_{-0.0077}$	$10^9 A_{\rm s}$	$2.109^{+0.028}_{-0.033}$	$D_{\rm M}(0.61)$	2297^{+11}_{-10}
$\boldsymbol{\ln(10^{10} A_s)}$	$3.049^{+0.013}_{-0.016}$	$10^9 A_{\rm s} e^{-2\tau}$	1.876 ± 0.010	$H(2.33)$	235.31 ± 0.70
$\boldsymbol{n_s}$	0.9684 ± 0.0041	D_{40}	1225 ± 12	$D_{\rm M}(2.33)$	5759 ± 11
$\boldsymbol{y_{cal}}$	1.0010 ± 0.0025	D_{220}	5734 ± 39	$f\sigma_8(0.15)$	0.4514 ± 0.0059
$\boldsymbol{A^{CIB}_{217}}$	48 ± 7	D_{810}	2538 ± 13	$\sigma_8(0.15)$	$0.7476^{+0.0051}_{-0.0058}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{1420}	817.0 ± 4.9	$f\sigma_8(0.38)$	0.4712 ± 0.0049
$\boldsymbol{A^{tSZ}_{143}}$	$5.3^{+2.2}_{-1.9}$	D_{2000}	230.6 ± 1.7	$\sigma_8(0.38)$	$0.6634^{+0.0045}_{-0.0052}$
$\boldsymbol{A^{PS}_{100}}$	261 ± 28	$n_{\rm s,0.002}$	0.9684 ± 0.0041	$f\sigma_8(0.51)$	0.4706 ± 0.0044
$\boldsymbol{A^{PS}_{143}}$	48 ± 8	$Y_{\rm P}$	$0.245369^{+0.000082}_{-0.000071}$	$\sigma_8(0.51)$	$0.6211^{+0.0042}_{-0.0049}$
$\boldsymbol{A^{PS}_{143\times217}}$	43 ± 9	$Y_{\rm P}^{\rm BBN}$	$0.246696^{+0.000083}_{-0.000071}$	$f\sigma_8(0.61)$	0.4661 ± 0.0041
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	10^5D/H	2.597 ± 0.035	$\sigma_8(0.61)$	$0.5912^{+0.0040}_{-0.0047}$
$\boldsymbol{A^{kSZ}}$	< 4.61	Age/Gyr	13.789 ± 0.026	$f\sigma_8(2.33)$	$0.2983^{+0.0021}_{-0.0024}$
$\boldsymbol{A^{dustTT}_{100}}$	$8.9^{+2.0}_{-1.8}$	z_*	1089.83 ± 0.27	$\sigma_8(2.33)$	$0.3079^{+0.0022}_{-0.0026}$
$\boldsymbol{A^{dustTT}_{143}}$	10.7 ± 1.8	r_*	144.95 ± 0.29	f^{143}_{2000}	30.4 ± 3.0
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.3 ± 3.4	$100\theta_*$	1.04134 ± 0.00041	$f^{143\times217}_{2000}$	32.9 ± 2.0
$\boldsymbol{A^{dustTT}_{217}}$	93.4 ± 7.5	$D_{\rm M}(z_*)$/Gpc	13.920 ± 0.028	f^{217}_{2000}	107.5 ± 1.9
$\boldsymbol{c_{100}}$	0.99966 ± 0.00064	$z_{\rm drag}$	1059.67 ± 0.43	$\chi^2_{\rm lensing}$	9.39 ± 0.93
$\boldsymbol{c_{217}}$	0.99824 ± 0.00062	$r_{\rm drag}$	147.64 ± 0.32	$\chi^2_{\rm simall}$	397.7 ± 2.2
H_0	$68.03^{+0.45}_{-0.51}$	$k_{\rm D}$	0.14024 ± 0.00043	$\chi^2_{\rm lowl}$	22.87 ± 0.84
Ω_Λ	0.6950 ± 0.0063	$100\theta_{\rm D}$	0.16093 ± 0.00025	$\chi^2_{\rm plik}$	772.6 ± 5.3
$\Omega_{\rm m}$	0.3050 ± 0.0063	$z_{\rm eq}$	3357 ± 25	$\chi^2_{\rm H073p45}$	10.7 ± 1.9
$\Omega_{\rm m} h^2$	0.1411 ± 0.0011	$k_{\rm eq}$	0.010246 ± 0.000077	$\chi^2_{\rm 6DF}$	0.029 ± 0.041
$\Omega_{\rm m} h^3$	0.09601 ± 0.00044	$100\theta_{\rm eq}$	0.8215 ± 0.0047	$\chi^2_{\rm MGS}$	1.74 ± 0.51
σ_8	0.8083 ± 0.0060	$100\theta_{\rm s,eq}$	0.4537 ± 0.0024	$\chi^2_{\rm DR12BAO}$	3.94 ± 0.79
S_8	0.815 ± 0.012	$H(0.15)$	$73.24^{+0.39}_{-0.44}$	$\chi^2_{\rm prior}$	7.4 ± 3.6
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4464 ± 0.0063	$D_{\rm M}(0.15)$	637.7 ± 4.1	$\chi^2_{\rm CMB}$	1202.5 ± 5.5
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.6006 ± 0.0060	$H(0.38)$	$83.23^{+0.30}_{-0.33}$	$\chi^2_{\rm BAO}$	5.71 ± 0.73
$\sigma_8/h^{0.5}$	0.9800 ± 0.0087	$D_{\rm M}(0.38)$	$1522.5^{+8.6}_{-7.8}$		

$\bar{\chi}^2_{\rm eff} = 1226.35$; $R - 1 = 0.05547$

2.93 base_plikHM_TT_lowl_lowE_lensing_post_Pantheon_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02218 ± 0.00020	$\sigma_8/h^{0.5}$	0.9878 ± 0.0098	$H(0.38)$	82.78 ± 0.40
$\boldsymbol{\Omega_c h^2}$	0.1196 ± 0.0014	$r_{\rm drag} h$	99.2 ± 1.1	$D_{\rm M}(0.38)$	1535 ± 11
$\boldsymbol{100\theta_{MC}}$	1.04088 ± 0.00045	$\langle d^2 \rangle^{1/2}$	2.443 ± 0.023	$H(0.51)$	89.52 ± 0.33
$\boldsymbol{\tau}$	$0.0548^{+0.0052}_{-0.0081}$	$z_{\rm re}$	$7.76^{+0.57}_{-0.79}$	$D_{\rm M}(0.51)$	1988 ± 13
$\boldsymbol{\ln(10^{10} A_s)}$	$3.044^{+0.011}_{-0.015}$	$10^9 A_{\rm s}$	$2.099^{+0.023}_{-0.032}$	$H(0.61)$	95.16 ± 0.27
$\boldsymbol{n_s}$	0.9648 ± 0.0045	$10^9 A_{\rm s} e^{-2\tau}$	1.881 ± 0.011	$D_{\rm M}(0.61)$	2313 ± 14
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0025	D_{40}	1230 ± 12	$H(2.33)$	236.12 ± 0.86
$\boldsymbol{A^{CIB}_{217}}$	48 ± 7	D_{220}	5720 ± 40	$D_{\rm M}(2.33)$	5771 ± 13
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{810}	2536 ± 13	$f\sigma_8(0.15)$	0.4588 ± 0.0074
$\boldsymbol{A^{tSZ}_{143}}$	$5.1^{+2.2}_{-2.0}$	D_{1420}	815.1 ± 5.0	$\sigma_8(0.15)$	$0.7486^{+0.0048}_{-0.0056}$
$\boldsymbol{A^{PS}_{100}}$	263 ± 28	D_{2000}	229.8 ± 1.8	$f\sigma_8(0.38)$	0.4764 ± 0.0058
$\boldsymbol{A^{PS}_{143}}$	49 ± 8	$n_{\rm s,0.002}$	0.9648 ± 0.0045	$\sigma_8(0.38)$	$0.6632^{+0.0040}_{-0.0049}$
$\boldsymbol{A^{PS}_{143\times217}}$	43 ± 9	$Y_{\rm P}$	$0.245313^{+0.000090}_{-0.000079}$	$f\sigma_8(0.51)$	0.4747 ± 0.0050
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	$Y^{\rm BBN}_{\rm P}$	$0.246640^{+0.000090}_{-0.000079}$	$\sigma_8(0.51)$	$0.6206^{+0.0037}_{-0.0047}$
$\boldsymbol{A^{kSZ}}$	< 4.91	10^5D/H	2.622 ± 0.038	$f\sigma_8(0.61)$	0.4695 ± 0.0045
$\boldsymbol{A^{dustTT}_{100}}$	8.9 ± 1.8	Age/Gyr	13.816 ± 0.030	$\sigma_8(0.61)$	$0.5904^{+0.0035}_{-0.0045}$
$\boldsymbol{A^{dustTT}_{143}}$	10.7 ± 1.8	z_*	1090.13 ± 0.32	$f\sigma_8(2.33)$	$0.2976^{+0.0018}_{-0.0024}$
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.3 ± 3.3	r_*	144.68 ± 0.34	$\sigma_8(2.33)$	$0.3067^{+0.0019}_{-0.0026}$
$\boldsymbol{A^{dustTT}_{217}}$	93.2 ± 7.4	$100\theta_*$	1.04109 ± 0.00044	f^{143}_{2000}	31.0 ± 2.9
$\boldsymbol{c_{100}}$	0.99962 ± 0.00062	$D_{\rm M}(z_*)$/Gpc	13.897 ± 0.032	$f^{143\times217}_{2000}$	33.4 ± 2.0
$\boldsymbol{c_{217}}$	0.99826 ± 0.00062	$z_{\rm drag}$	1059.46 ± 0.44	f^{217}_{2000}	108.0 ± 1.9
H_0	67.32 ± 0.63	$r_{\rm drag}$	147.41 ± 0.36	$\chi^2_{\rm lensing}$	9.32 ± 0.75
Ω_Λ	0.6855 ± 0.0086	$k_{\rm D}$	0.14039 ± 0.00044	$\chi^2_{\rm simall}$	397.0 ± 1.7
$\Omega_{\rm m}$	0.3145 ± 0.0086	$100\theta_{\rm D}$	0.16103 ± 0.00026	$\chi^2_{\rm lowl}$	23.46 ± 0.97
$\Omega_{\rm m} h^2$	0.1424 ± 0.0013	$z_{\rm eq}$	3389 ± 32	$\chi^2_{\rm plik}$	771.2 ± 5.2
$\Omega_{\rm m} h^3$	0.09589 ± 0.00045	$k_{\rm eq}$	0.010343 ± 0.000097	$\chi^2_{\rm JLA}$	1036.66 ± 0.60
σ_8	$0.8104^{+0.0056}_{-0.0062}$	$100\theta_{\rm eq}$	0.8152 ± 0.0060	$\chi^2_{\rm prior}$	7.3 ± 3.7
S_8	0.830 ± 0.015	$100\theta_{\rm s,eq}$	0.4505 ± 0.0031	$\chi^2_{\rm CMB}$	1201.0 ± 5.4
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4544 ± 0.0080	$H(0.15)$	72.63 ± 0.54		
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.6068 ± 0.0071	$D_{\rm M}(0.15)$	643.8 ± 5.4		

$\bar{\chi}^2_{\rm eff} = 2244.92$; $R - 1 = 0.01273$

2.94 base_plikHM_TT_lowl_lowE_lensing_post_BAO_JLA_Riess18_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02232 ± 0.00019	$r_{\rm drag} h$	100.49 ± 0.82	$H(0.51)$	89.89 ± 0.26
$\boldsymbol{\Omega_c h^2}$	0.1181 ± 0.0011	$\langle d^2 \rangle^{1/2}$	2.425 ± 0.021	$D_{\rm M}(0.51)$	$1973^{+10}_{-9.1}$
$\boldsymbol{100\theta_{MC}}$	1.04115 ± 0.00041	$z_{\rm re}$	8.08 ± 0.69	$H(0.61)$	95.45 ± 0.23
$\boldsymbol{\tau}$	$0.0586^{+0.0066}_{-0.0077}$	$10^9 A_{\rm s}$	$2.110^{+0.028}_{-0.033}$	$D_{\rm M}(0.61)$	$2296^{+11}_{-9.9}$
$\boldsymbol{\ln(10^{10} A_s)}$	$3.049^{+0.013}_{-0.016}$	$10^9 A_{\rm s} e^{-2\tau}$	1.876 ± 0.010	$H(2.33)$	235.28 ± 0.69
$\boldsymbol{n_s}$	0.9686 ± 0.0041	D_{40}	1224 ± 12	$D_{\rm M}(2.33)$	5758 ± 11
$\boldsymbol{y_{cal}}$	1.0010 ± 0.0025	D_{220}	5735 ± 39	$f\sigma_8(0.15)$	0.4512 ± 0.0059
$\boldsymbol{A^{CIB}_{217}}$	48 ± 7	D_{810}	2538 ± 13	$\sigma_8(0.15)$	$0.7475^{+0.0052}_{-0.0058}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{1420}	817.0 ± 4.9	$f\sigma_8(0.38)$	0.4710 ± 0.0049
$\boldsymbol{A^{tSZ}_{143}}$	$5.3^{+2.2}_{-1.9}$	D_{2000}	230.6 ± 1.7	$\sigma_8(0.38)$	$0.6634^{+0.0045}_{-0.0052}$
$\boldsymbol{A^{PS}_{100}}$	261 ± 28	$n_{\rm s,0.002}$	0.9686 ± 0.0041	$f\sigma_8(0.51)$	0.4704 ± 0.0044
$\boldsymbol{A^{PS}_{143}}$	48 ± 8	$Y_{\rm P}$	$0.245371^{+0.000082}_{-0.000070}$	$\sigma_8(0.51)$	$0.6211^{+0.0042}_{-0.0049}$
$\boldsymbol{A^{PS}_{143\times217}}$	43 ± 9	$Y_{\rm P}^{\rm BBN}$	$0.246698^{+0.000082}_{-0.000071}$	$f\sigma_8(0.61)$	0.4660 ± 0.0041
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	10^5D/H	2.596 ± 0.035	$\sigma_8(0.61)$	$0.5912^{+0.0040}_{-0.0047}$
$\boldsymbol{A^{kSZ}}$	< 4.61	Age/Gyr	13.788 ± 0.026	$f\sigma_8(2.33)$	$0.2984^{+0.0021}_{-0.0024}$
$\boldsymbol{A^{dustTT}_{100}}$	$8.9^{+2.0}_{-1.8}$	z_*	1089.82 ± 0.27	$\sigma_8(2.33)$	$0.3079^{+0.0022}_{-0.0026}$
$\boldsymbol{A^{dustTT}_{143}}$	10.7 ± 1.8	r_*	144.96 ± 0.29	f^{143}_{2000}	30.4 ± 3.0
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.3 ± 3.4	$100\theta_*$	1.04134 ± 0.00041	$f^{143\times217}_{2000}$	32.9 ± 2.0
$\boldsymbol{A^{dustTT}_{217}}$	93.4 ± 7.5	$D_{\rm M}(z_*)$/Gpc	13.921 ± 0.028	f^{217}_{2000}	107.5 ± 1.9
$\boldsymbol{c_{100}}$	0.99966 ± 0.00064	$z_{\rm drag}$	1059.67 ± 0.43	$\chi^2_{\rm lensing}$	9.41 ± 0.94
$\boldsymbol{c_{217}}$	0.99824 ± 0.00062	$r_{\rm drag}$	147.65 ± 0.32	$\chi^2_{\rm simall}$	397.7 ± 2.2
H_0	$68.06^{+0.44}_{-0.50}$	$k_{\rm D}$	0.14023 ± 0.00043	$\chi^2_{\rm lowl}$	22.85 ± 0.83
Ω_Λ	0.6954 ± 0.0062	$100\theta_{\rm D}$	0.16093 ± 0.00025	$\chi^2_{\rm plik}$	772.6 ± 5.3
$\Omega_{\rm m}$	0.3046 ± 0.0062	$z_{\rm eq}$	3356 ± 25	$\chi^2_{\rm H073p45}$	10.6 ± 1.9
$\Omega_{\rm m} h^2$	0.1411 ± 0.0010	$k_{\rm eq}$	0.010242 ± 0.000076	$\chi^2_{\rm JLA}$	706.62 ± 0.12
$\Omega_{\rm m} h^3$	0.09601 ± 0.00044	$100\theta_{\rm eq}$	0.8218 ± 0.0046	$\chi^2_{\rm 6DF}$	0.028 ± 0.040
σ_8	0.8082 ± 0.0060	$100\theta_{\rm s,eq}$	0.4538 ± 0.0024	$\chi^2_{\rm MGS}$	1.77 ± 0.51
S_8	0.814 ± 0.011	$H(0.15)$	$73.26^{+0.38}_{-0.44}$	$\chi^2_{\rm DR12BAO}$	3.91 ± 0.74
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4461 ± 0.0062	$D_{\rm M}(0.15)$	$637.5^{+4.2}_{-3.8}$	$\chi^2_{\rm prior}$	7.4 ± 3.6
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.6004 ± 0.0060	$H(0.38)$	$83.25^{+0.29}_{-0.33}$	$\chi^2_{\rm CMB}$	1202.6 ± 5.5
$\sigma_8/h^{0.5}$	0.9797 ± 0.0087	$D_{\rm M}(0.38)$	$1522.1^{+8.5}_{-7.7}$	$\chi^2_{\rm BAO}$	5.70 ± 0.72

$\bar{\chi}^2_{\rm eff} = 1932.95$; $R - 1 = 0.06025$

2.95 base_plikHM_TT_lowl_lowE_lensing_post_BAO_Pantheon_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02222 ± 0.00019	$r_{\rm drag} h$	99.78 ± 0.80	$H(0.51)$	89.67 ± 0.26
$\boldsymbol{\Omega_c h^2}$	0.1189 ± 0.0010	$\langle d^2 \rangle^{1/2}$	2.435 ± 0.021	$D_{\rm M}(0.51)$	1981.5 ± 9.5
$\boldsymbol{100\theta_{MC}}$	1.04100 ± 0.00042	$z_{\rm re}$	$7.88^{+0.62}_{-0.76}$	$H(0.61)$	95.27 ± 0.22
$\boldsymbol{\tau}$	$0.0563^{+0.0058}_{-0.0077}$	$10^9 A_{\rm s}$	$2.102^{+0.025}_{-0.033}$	$D_{\rm M}(0.61)$	2306 ± 10
$\boldsymbol{\ln(10^{10} A_s)}$	$3.046^{+0.012}_{-0.015}$	$10^9 A_{\rm s} e^{-2\tau}$	1.878 ± 0.010	$H(2.33)$	235.72 ± 0.68
$\boldsymbol{n_s}$	0.9664 ± 0.0040	D_{40}	1227 ± 12	$D_{\rm M}(2.33)$	5767 ± 11
$\boldsymbol{y_{cal}}$	1.0008 ± 0.0025	D_{220}	5725 ± 39	$f\sigma_8(0.15)$	0.4553 ± 0.0058
$\boldsymbol{A_{217}^{CIB}}$	48 ± 7	D_{810}	2537 ± 13	$\sigma_8(0.15)$	$0.7480^{+0.0049}_{-0.0058}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{1420}	815.8 ± 4.9	$f\sigma_8(0.38)$	0.4740 ± 0.0049
$\boldsymbol{A_{143}^{tSZ}}$	$5.1^{+2.2}_{-2.0}$	D_{2000}	230.1 ± 1.7	$\sigma_8(0.38)$	$0.6632^{+0.0042}_{-0.0051}$
$\boldsymbol{A_{100}^{PS}}$	263 ± 28	$n_{\rm s,0.002}$	0.9664 ± 0.0040	$f\sigma_8(0.51)$	0.4727 ± 0.0043
$\boldsymbol{A_{143}^{PS}}$	48 ± 8	$Y_{\rm P}$	$0.245332^{+0.000084}_{-0.000075}$	$\sigma_8(0.51)$	$0.6207^{+0.0039}_{-0.0048}$
$\boldsymbol{A_{143\times217}^{PS}}$	43 ± 9	$Y_{\rm P}^{\rm BBN}$	$0.246658^{+0.000084}_{-0.000075}$	$f\sigma_8(0.61)$	0.4679 ± 0.0040
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	10^5D/H	2.614 ± 0.036	$\sigma_8(0.61)$	$0.5906^{+0.0037}_{-0.0046}$
$\boldsymbol{A^{kSZ}}$	< 4.79	Age/Gyr	13.806 ± 0.026	$f\sigma_8(2.33)$	$0.2979^{+0.0019}_{-0.0024}$
$\boldsymbol{A_{100}^{dust TT}}$	8.9 ± 1.8	z_*	1090.02 ± 0.27	$\sigma_8(2.33)$	$0.3071^{+0.0020}_{-0.0026}$
$\boldsymbol{A_{143}^{dust TT}}$	10.7 ± 1.8	r_*	144.82 ± 0.28	f_{2000}^{143}	30.9 ± 2.9
$\boldsymbol{A_{143\times217}^{dust TT}}$	18.3 ± 3.3	$100\theta_*$	1.04120 ± 0.00041	$f_{2000}^{143\times217}$	33.3 ± 2.0
$\boldsymbol{A_{217}^{dust TT}}$	93.3 ± 7.4	$D_{\rm M}(z_*)$/Gpc	13.909 ± 0.028	f_{2000}^{217}	107.9 ± 1.9
$\boldsymbol{c_{100}}$	0.99963 ± 0.00062	$z_{\rm drag}$	1059.51 ± 0.43	$\chi^2_{\rm lensing}$	9.23 ± 0.69
$\boldsymbol{c_{217}}$	0.99826 ± 0.00062	$r_{\rm drag}$	147.54 ± 0.32	$\chi^2_{\rm smalll}$	397.2 ± 1.9
H_0	67.63 ± 0.47	$k_{\rm D}$	0.14028 ± 0.00043	$\chi^2_{\rm lowl}$	23.17 ± 0.86
Ω_Λ	0.6899 ± 0.0062	$100\theta_{\rm D}$	0.16101 ± 0.00025	$\chi^2_{\rm plik}$	771.7 ± 5.2
$\Omega_{\rm m}$	0.3101 ± 0.0062	$z_{\rm eq}$	3373 ± 25	$\chi^2_{\rm JLA}$	1036.34 ± 0.32
$\Omega_{\rm m} h^2$	0.1418 ± 0.0010	$k_{\rm eq}$	0.010296 ± 0.000075	$\chi^2_{\rm 6DF}$	0.047 ± 0.059
$\Omega_{\rm m} h^3$	0.09590 ± 0.00045	$100\theta_{\rm eq}$	0.8182 ± 0.0045	$\chi^2_{\rm MGS}$	1.35 ± 0.45
σ_8	$0.8093^{+0.0055}_{-0.0063}$	$100\theta_{\rm s,eq}$	0.4520 ± 0.0023	$\chi^2_{\rm DR12BAO}$	4.6 ± 1.3
S_8	0.823 ± 0.011	$H(0.15)$	72.89 ± 0.40	$\chi^2_{\rm prior}$	7.3 ± 3.6
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4506 ± 0.0062	$D_{\rm M}(0.15)$	641.1 ± 4.0	$\chi^2_{\rm CMB}$	1201.3 ± 5.4
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.6039 ± 0.0060	$H(0.38)$	82.97 ± 0.31	$\chi^2_{\rm BAO}$	6.0 ± 1.0
$\sigma_8/h^{0.5}$	0.9841 ± 0.0086	$D_{\rm M}(0.38)$	1529.4 ± 8.1		

$\bar{\chi}^2_{\rm eff} = 2250.91$; $R - 1 = 0.01942$

2.96 base_plikHM_TT_lowl_lowE_lensing_post_BAO_Pantheon_Riess18_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02232 ± 0.00019	$r_{\rm drag} h$	100.51 ± 0.80	$H(0.51)$	89.90 ± 0.26
$\boldsymbol{\Omega_c h^2}$	0.1181 ± 0.0010	$\langle d^2 \rangle^{1/2}$	2.425 ± 0.021	$D_{\rm M}(0.51)$	$1972.5^{+9.9}_{-8.9}$
$\boldsymbol{100\theta_{MC}}$	1.04116 ± 0.00041	$z_{\rm re}$	8.09 ± 0.69	$H(0.61)$	95.46 ± 0.22
$\boldsymbol{\tau}$	$0.0587^{+0.0067}_{-0.0077}$	$10^9 A_{\rm s}$	$2.110^{+0.028}_{-0.033}$	$D_{\rm M}(0.61)$	$2296^{+11}_{-9.7}$
$\boldsymbol{\ln(10^{10} A_s)}$	$3.049^{+0.013}_{-0.016}$	$10^9 A_{\rm s} e^{-2\tau}$	1.876 ± 0.010	$H(2.33)$	235.26 ± 0.68
$\boldsymbol{n_s}$	0.9686 ± 0.0041	D_{40}	1224 ± 12	$D_{\rm M}(2.33)$	5758 ± 11
$\boldsymbol{y_{cal}}$	1.0010 ± 0.0025	D_{220}	5735 ± 39	$f\sigma_8(0.15)$	0.4510 ± 0.0058
$\boldsymbol{A^{CIB}_{217}}$	48 ± 7	D_{810}	2538 ± 13	$\sigma_8(0.15)$	$0.7475^{+0.0052}_{-0.0058}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{1420}	817.1 ± 4.9	$f\sigma_8(0.38)$	0.4709 ± 0.0048
$\boldsymbol{A^{tSZ}_{143}}$	$5.3^{+2.2}_{-1.9}$	D_{2000}	230.6 ± 1.7	$\sigma_8(0.38)$	$0.6634^{+0.0045}_{-0.0052}$
$\boldsymbol{A^{PS}_{100}}$	261 ± 28	$n_{\rm s,0.002}$	0.9686 ± 0.0041	$f\sigma_8(0.51)$	0.4703 ± 0.0044
$\boldsymbol{A^{PS}_{143}}$	48 ± 8	$Y_{\rm P}$	$0.245372^{+0.000082}_{-0.000070}$	$\sigma_8(0.51)$	$0.6211^{+0.0042}_{-0.0049}$
$\boldsymbol{A^{PS}_{143\times217}}$	43 ± 9	$Y_{\rm P}^{\rm BBN}$	$0.246698^{+0.000082}_{-0.000070}$	$f\sigma_8(0.61)$	0.4659 ± 0.0040
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	10^5D/H	2.596 ± 0.035	$\sigma_8(0.61)$	$0.5912^{+0.0040}_{-0.0047}$
$\boldsymbol{A^{kSZ}}$	< 4.60	Age/Gyr	13.787 ± 0.026	$f\sigma_8(2.33)$	$0.2984^{+0.0021}_{-0.0024}$
$\boldsymbol{A^{dustTT}_{100}}$	$8.9^{+2.0}_{-1.8}$	z_*	1089.82 ± 0.27	$\sigma_8(2.33)$	$0.3079^{+0.0022}_{-0.0026}$
$\boldsymbol{A^{dustTT}_{143}}$	10.7 ± 1.8	r_*	144.97 ± 0.28	f^{143}_{2000}	30.3 ± 3.0
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.3 ± 3.4	$100\theta_*$	1.04135 ± 0.00040	$f^{143\times217}_{2000}$	32.9 ± 2.0
$\boldsymbol{A^{dustTT}_{217}}$	93.4 ± 7.5	$D_{\rm M}(z_*)$/Gpc	13.921 ± 0.028	f^{217}_{2000}	107.5 ± 1.9
$\boldsymbol{c_{100}}$	0.99966 ± 0.00064	$z_{\rm drag}$	1059.68 ± 0.43	$\chi^2_{\rm lensing}$	9.41 ± 0.94
$\boldsymbol{c_{217}}$	0.99824 ± 0.00062	$r_{\rm drag}$	147.66 ± 0.32	$\chi^2_{\rm simall}$	397.7 ± 2.2
H_0	$68.07^{+0.43}_{-0.49}$	$k_{\rm D}$	0.14023 ± 0.00042	$\chi^2_{\rm lowl}$	22.84 ± 0.83
Ω_Λ	0.6955 ± 0.0061	$100\theta_{\rm D}$	0.16093 ± 0.00025	$\chi^2_{\rm plik}$	772.6 ± 5.3
$\Omega_{\rm m}$	0.3045 ± 0.0061	$z_{\rm eq}$	3355 ± 25	$\chi^2_{\rm H073p45}$	10.6 ± 1.8
$\Omega_{\rm m} h^2$	0.1410 ± 0.0010	$k_{\rm eq}$	0.010240 ± 0.000075	$\chi^2_{\rm JLA}$	1036.13 ± 0.19
$\Omega_{\rm m} h^3$	0.09601 ± 0.00044	$100\theta_{\rm eq}$	0.8219 ± 0.0045	$\chi^2_{\rm 6DF}$	0.027 ± 0.039
σ_8	0.8082 ± 0.0060	$100\theta_{\rm s,eq}$	0.4539 ± 0.0024	$\chi^2_{\rm MGS}$	1.78 ± 0.50
S_8	0.814 ± 0.011	$H(0.15)$	$73.27^{+0.38}_{-0.43}$	$\chi^2_{\rm DR12BAO}$	3.88 ± 0.70
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4459 ± 0.0061	$D_{\rm M}(0.15)$	$637.4^{+4.1}_{-3.7}$	$\chi^2_{\rm prior}$	7.4 ± 3.6
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.6003 ± 0.0059	$H(0.38)$	$83.25^{+0.29}_{-0.32}$	$\chi^2_{\rm CMB}$	1202.6 ± 5.5
$\sigma_8/h^{0.5}$	0.9796 ± 0.0086	$D_{\rm M}(0.38)$	$1521.9^{+8.4}_{-7.5}$	$\chi^2_{\rm BAO}$	5.68 ± 0.70

$\bar{\chi}^2_{\rm eff} = 2262.43$; $R - 1 = 0.06260$

2.97 base_plikHM_TTTEEE_lowl_lowE_lensing

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022383	0.02237 ± 0.00015	$\Omega_m h^3$	0.096360	0.09633 ± 0.00030	$100\theta_{eq}$	0.81281	0.8134 ± 0.0050
$\boldsymbol{\Omega_c h^2}$	0.12011	0.1200 ± 0.0012	σ_8	0.8120	0.8111 ± 0.0060	$100\theta_{s,eq}$	0.44912	0.4494 ± 0.0026
$\boldsymbol{100\theta_{MC}}$	1.040909	1.04092 ± 0.00031	S_8	0.8331	0.832 ± 0.013	$H(0.15)$	72.652	72.68 ± 0.46
$\boldsymbol{\tau}$	0.0543	0.0544 ± 0.0073	$\sigma_8\Omega_m^{0.5}$	0.4563	0.4554 ± 0.0070	$D_M(0.15)$	643.66	643.4 ± 4.6
$\boldsymbol{\ln(10^{10}A_s)}$	3.0448	3.044 ± 0.014	$\sigma_8\Omega_m^{0.25}$	0.6087	0.6078 ± 0.0064	$H(0.38)$	82.848	82.87 ± 0.34
$\boldsymbol{n_s}$	0.96605	0.9649 ± 0.0042	$\sigma_8/h^{0.5}$	0.9897	0.9883 ± 0.0091	$D_M(0.38)$	1534.0	1533.5 ± 9.2
$\boldsymbol{y_{cal}}$	1.00044	1.0006 ± 0.0024	$r_{drag}h$	99.00	99.08 ± 0.92	$H(0.51)$	89.614	89.63 ± 0.27
$\boldsymbol{A_{217}^{CIB}}$	46.1	47 ± 7	$\langle d^2\rangle^{1/2}$	2.4449	2.446 ± 0.022	$D_M(0.51)$	1986.5	1986 ± 11
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.66	—	z_{re}	7.68	7.67 ± 0.73	$H(0.61)$	95.272	95.28 ± 0.22
$\boldsymbol{A_{143}^{tSZ}}$	7.08	5.4 ± 2.0	10^9A_s	2.1005	2.100 ± 0.030	$D_M(0.61)$	2311.0	2310 ± 12
$\boldsymbol{A_{100}^{PS}}$	248.2	260 ± 28	$10^9A_se^{-2\tau}$	1.8843	1.883 ± 0.011	$H(2.33)$	236.64	236.56 ± 0.70
$\boldsymbol{A_{143}^{PS}}$	50.7	46 ± 8	D_{40}	1229.0	1232 ± 12	$D_M(2.33)$	5763.6	5763 ± 10
$\boldsymbol{A_{143\times217}^{PS}}$	53.3	42 ± 9	D_{220}	5730.1	5736 ± 38	$f\sigma_8(0.15)$	0.4606	0.4597 ± 0.0065
$\boldsymbol{A_{217}^{PS}}$	121.9	115 ± 10	D_{810}	2541.3	2539 ± 13	$\sigma_8(0.15)$	0.7499	0.7492 ± 0.0054
$\boldsymbol{A^{kSZ}}$	0.00	< 4.32	D_{1420}	818.44	817.2 ± 4.8	$f\sigma_8(0.38)$	0.4780	0.4772 ± 0.0053
$\boldsymbol{A_{100}^{dust TT}}$	8.80	8.9 ± 1.8	D_{2000}	231.33	230.9 ± 1.6	$\sigma_8(0.38)$	0.66427	0.6637 ± 0.0047
$\boldsymbol{A_{143}^{dust TT}}$	11.01	10.9 ± 1.8	$n_{s,0.002}$	0.96605	0.9649 ± 0.0042	$f\sigma_8(0.51)$	0.47606	0.4754 ± 0.0046
$\boldsymbol{A_{143\times217}^{dust TT}}$	20.16	18.6 ± 3.3	Y_P	0.245401	$0.245395^{+0.000060}_{-0.000053}$	$\sigma_8(0.51)$	0.62145	0.6209 ± 0.0044
$\boldsymbol{A_{217}^{dust TT}}$	95.5	93.5 ± 7.2	Y_P^{BBN}	0.246727	$0.246721^{+0.000060}_{-0.000054}$	$f\sigma_8(0.61)$	0.47073	0.4701 ± 0.0042
$\boldsymbol{A_{100}^{dust TE}}$	0.1138	0.114 ± 0.038	10^5D/H	2.5831	2.585 ± 0.027	$\sigma_8(0.61)$	0.59120	0.5907 ± 0.0042
$\boldsymbol{A_{100\times143}^{dust TE}}$	0.1346	0.135 ± 0.029	Age/Gyr	13.7971	13.797 ± 0.023	$f\sigma_8(2.33)$	0.29792	0.2977 ± 0.0022
$\boldsymbol{A_{100\times217}^{dust TE}}$	0.479	0.481 ± 0.085	z_*	1089.914	1089.92 ± 0.25	$\sigma_8(2.33)$	0.30695	0.3068 ± 0.0024
$\boldsymbol{A_{143}^{dust TE}}$	0.225	0.225 ± 0.054	r_*	144.394	144.43 ± 0.26	f_{2000}^{143}	28.58	29.6 ± 2.8
$\boldsymbol{A_{143\times217}^{dust TE}}$	0.665	0.668 ± 0.080	$100\theta_*$	1.041085	1.04110 ± 0.00031	$f_{2000}^{143\times217}$	31.97	32.3 ± 1.9
$\boldsymbol{A_{217}^{dust TE}}$	2.082	2.09 ± 0.27	$D_M(z_*)$/Gpc	13.8696	13.873 ± 0.025	f_{2000}^{217}	106.46	107.1 ± 1.8
$\boldsymbol{c_{100}}$	0.99974	0.99967 ± 0.00061	z_{drag}	1059.971	1059.94 ± 0.30	$\chi^2_{lensing}$	8.868	9.23 ± 0.69
$\boldsymbol{c_{217}}$	0.99819	0.99819 ± 0.00062	r_{drag}	147.049	147.09 ± 0.26	χ^2_{simall}	396.05	397.0 ± 1.7
H_0	67.32	67.36 ± 0.54	k_D	0.140922	0.14087 ± 0.00030	χ^2_{lowl}	23.25	23.53 ± 0.90
Ω_Λ	0.6842	0.6847 ± 0.0073	$100\theta_D$	0.160734	0.16076 ± 0.00017	χ^2_{plik}	2344.9	2359.4 ± 5.7
Ω_m	0.3158	0.3153 ± 0.0073	z_{eq}	3405.1	3402 ± 26	χ^2_{prior}	1.53	11.5 ± 4.5
$\Omega_m h^2$	0.14314	0.1430 ± 0.0011	k_{eq}	0.010393	0.010384 ± 0.000081	χ^2_{CMB}	2773.1	2789.2 ± 5.8

Best-fit $\chi^2_{eff} = 2774.63$; $\bar{\chi}^2_{eff} = 2800.69$; $R - 1 = 0.01032$

χ^2_{eff}: CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.87 simall_100x143_offlike5_EE_Aplanck_B: 396.05 commander_dx12_v3_2_29: 23.25 plik_rd12_HM_v22b_TTTEEE: 2344.93

2.98 base_plikHM_TTTEEE_lowl_lowE_lensing_post_BAO

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022447	0.02242 ± 0.00014	S_8	0.8253	0.825 ± 0.011	$H(0.38)$	83.083	83.05 ± 0.27
$\boldsymbol{\Omega_c h^2}$	0.11928	0.11933 ± 0.00091	$\sigma_8 \Omega_m^{0.5}$	0.4520	0.4519 ± 0.0058	$D_M(0.38)$	1527.5	1528.3 ± 7.1
$\boldsymbol{100\theta_{MC}}$	1.041010	1.04101 ± 0.00029	$\sigma_8 \Omega_m^{0.25}$	0.6055	0.6051 ± 0.0058	$H(0.51)$	89.797	89.77 ± 0.22
$\boldsymbol{\tau}$	0.0568	0.0561 ± 0.0071	$\sigma_8/h^{0.5}$	0.9857	0.9850 ± 0.0085	$D_M(0.51)$	1978.9	1979.8 ± 8.4
$\boldsymbol{\ln(10^{10} A_s)}$	3.0480	3.047 ± 0.014	$r_{drag} h$	99.66	99.61 ± 0.71	$H(0.61)$	95.414	95.39 ± 0.18
$\boldsymbol{n_s}$	0.96824	0.9665 ± 0.0038	$\langle d^2 \rangle^{1/2}$	2.4356	2.438 ± 0.021	$D_M(0.61)$	2302.9	2303.8 ± 9.1
$\boldsymbol{y_{cal}}$	1.00047	1.0008 ± 0.0025	z_{re}	7.90	7.82 ± 0.71	$H(2.33)$	236.17	236.18 ± 0.56
$\boldsymbol{A_{217}^{CIB}}$	45.6	47 ± 7	$10^9 A_s$	2.1073	2.105 ± 0.030	$D_M(2.33)$	5757.5	5758.7 ± 8.8
$\boldsymbol{\xi^{tSZ \times CIB}}$	0.709	> 0.375	$10^9 A_s e^{-2\tau}$	1.8811	1.881 ± 0.010	$f\sigma_8(0.15)$	0.4567	0.4565 ± 0.0055
$\boldsymbol{A_{143}^{tSZ}}$	7.06	$5.4^{+2.2}_{-1.9}$	D_{40}	1225.0	1229 ± 12	$\sigma_8(0.15)$	0.7495	0.7487 ± 0.0054
$\boldsymbol{A_{100}^{PS}}$	246.6	259 ± 28	D_{220}	5734.2	5741 ± 38	$f\sigma_8(0.38)$	0.47523	0.4749 ± 0.0047
$\boldsymbol{A_{143}^{PS}}$	50.6	46 ± 8	D_{810}	2541.2	2540 ± 13	$\sigma_8(0.38)$	0.66450	0.6637 ± 0.0048
$\boldsymbol{A_{143\times217}^{PS}}$	54.1	42 ± 9	D_{1420}	819.18	817.9 ± 4.7	$f\sigma_8(0.51)$	0.47393	0.4736 ± 0.0042
$\boldsymbol{A_{217}^{PS}}$	122.3	115 ± 10	D_{2000}	231.67	231.1 ± 1.5	$\sigma_8(0.51)$	0.62190	0.6212 ± 0.0044
$\boldsymbol{A^{kSZ}}$	0.01	< 4.27	$n_{s,0.002}$	0.96824	0.9665 ± 0.0038	$f\sigma_8(0.61)$	0.46903	0.4686 ± 0.0039
$\boldsymbol{A_{100}^{dust TT}}$	8.78	8.9 ± 1.8	Y_P	0.245425	$0.245414^{+0.000055}_{-0.000048}$	$\sigma_8(0.61)$	0.59178	0.5911 ± 0.0042
$\boldsymbol{A_{143}^{dust TT}}$	10.97	10.9 ± 1.8	Y_P^{BBN}	0.246752	$0.246740^{+0.000055}_{-0.000048}$	$f\sigma_8(2.33)$	0.29841	0.2980 ± 0.0022
$\boldsymbol{A_{143\times217}^{dust TT}}$	20.03	18.5 ± 3.3	10^5D/H	2.5713	2.576 ± 0.025	$\sigma_8(2.33)$	0.30769	0.3073 ± 0.0023
$\boldsymbol{A_{217}^{dust TT}}$	95.3	93.5 ± 7.3	Age/Gyr	13.7839	13.787 ± 0.020	f_{2000}^{143}	28.16	29.4 ± 2.7
$\boldsymbol{A_{100}^{dust TE}}$	0.1136	0.114 ± 0.038	z_*	1089.760	1089.80 ± 0.21	$f_{2000}^{143\times217}$	31.63	32.1 ± 1.9
$\boldsymbol{A_{100\times143}^{dust TE}}$	0.1347	0.135 ± 0.030	r_*	144.559	144.57 ± 0.22	f_{2000}^{217}	106.20	106.9 ± 1.8
$\boldsymbol{A_{100\times217}^{dust TE}}$	0.483	0.481 ± 0.084	$100\theta_*$	1.041190	1.04119 ± 0.00029	$\chi^2_{lensing}$	8.730	9.10 ± 0.59
$\boldsymbol{A_{143}^{dust TE}}$	0.224	0.225 ± 0.054	$D_M(z_*)$/Gpc	13.8840	13.885 ± 0.021	χ^2_{simall}	396.52	397.2 ± 1.8
$\boldsymbol{A_{143\times217}^{dust TE}}$	0.664	0.668 ± 0.081	z_{drag}	1060.047	1060.01 ± 0.29	χ^2_{lowl}	22.90	23.25 ± 0.82
$\boldsymbol{A_{217}^{dust TE}}$	2.076	2.08 ± 0.27	r_{drag}	147.198	147.21 ± 0.23	χ^2_{plik}	2345.3	2359.6 ± 5.8
$\boldsymbol{c_{100}}$	0.99973	0.99967 ± 0.00062	k_D	0.140814	0.14078 ± 0.00028	χ^2_{6DF}	0.0289	0.053 ± 0.060
$\boldsymbol{c_{217}}$	0.99817	0.99818 ± 0.00063	$100\theta_D$	0.160690	0.16072 ± 0.00017	χ^2_{MGS}	1.217	1.24 ± 0.38
H_0	67.702	67.66 ± 0.42	z_{eq}	3386.8	3387 ± 21	$\chi^2_{DR12BAO}$	4.42	4.8 ± 1.3
Ω_Λ	0.6894	0.6889 ± 0.0056	k_{eq}	0.010337	0.010339 ± 0.000063	χ^2_{prior}	1.56	11.5 ± 4.5
Ω_m	0.3106	0.3111 ± 0.0056	$100\theta_{eq}$	0.81635	0.8162 ± 0.0039	χ^2_{CMB}	2773.5	2789.2 ± 5.9
$\Omega_m h^2$	0.14237	0.14240 ± 0.00087	$100\theta_{s,eq}$	0.45092	0.4509 ± 0.0020	χ^2_{BAO}	5.67	6.1 ± 1.0
$\Omega_m h^3$	0.096387	0.09635 ± 0.00030	$H(0.15)$	72.978	72.94 ± 0.36			
σ_8	0.8110	0.8102 ± 0.0060	$D_M(0.15)$	640.41	640.8 ± 3.5			

Best-fit $\chi^2_{eff} = 2780.70$; $\bar{\chi}^2_{eff} = 2806.84$; $R - 1 = 0.01508$

χ^2_{eff}: BAO - 6DF: 0.03 MGS: 1.22 DR12BAO: 4.42 CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.73 simall_100x143_offlike5_EE_Aplanck_B: 396.52 commander_dx12_v3_2_29: 22.90 plik_rd12_HM_v22b_TTTEEE: 2345.32

2.99 base_plikHM_TTTEEE_lowl_lowE_lensing_post_Riess18

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022506	0.02248 ± 0.00014	σ_8	0.8103	0.8095 ± 0.0060	$H(0.15)$	73.237	73.17 ± 0.44
$\boldsymbol{\Omega_c h^2}$	0.11866	0.1188 ± 0.0011	S_8	0.8193	0.820 ± 0.012	$D_M(0.15)$	637.86	638.5 ± 4.3
$\boldsymbol{100\theta_{MC}}$	1.041111	1.04109 ± 0.00031	$\sigma_8\Omega_m^{0.5}$	0.4487	0.4490 ± 0.0067	$H(0.38)$	83.273	83.22 ± 0.33
$\boldsymbol{\tau}$	0.0587	0.0575 ± 0.0074	$\sigma_8\Omega_m^{0.25}$	0.6030	0.6028 ± 0.0063	$D_M(0.38)$	1522.4	1523.8 ± 8.7
$\boldsymbol{\ln(10^{10}A_s)}$	3.0509	3.049 ± 0.014	$\sigma_8/h^{0.5}$	0.9826	0.9822 ± 0.0090	$H(0.51)$	89.947	89.91 ± 0.26
$\boldsymbol{n_s}$	0.96947	0.9679 ± 0.0042	$r_{drag}h$	100.16	100.05 ± 0.87	$D_M(0.51)$	1972.9	1974 ± 10
$\boldsymbol{y_{cal}}$	1.00073	1.0008 ± 0.0025	$\langle d^2\rangle^{1/2}$	2.4299	2.432 ± 0.022	$H(0.61)$	95.534	95.50 ± 0.22
$\boldsymbol{A_{217}^{CIB}}$	45.8	47 ± 7	z_{re}	8.07	7.94 ± 0.72	$D_M(0.61)$	2296.4	2298 ± 11
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.610	> 0.380	$10^9 A_s$	2.1134	2.109 ± 0.030	$H(2.33)$	235.83	235.90 ± 0.66
$\boldsymbol{A_{143}^{tSZ}}$	7.08	5.5 ± 2.0	$10^9 A_s e^{-2\tau}$	1.8793	1.879 ± 0.011	$D_M(2.33)$	5752.2	5754 ± 10
$\boldsymbol{A_{100}^{PS}}$	247.9	258 ± 28	D_{40}	1223.8	1227 ± 12	$f\sigma_8(0.15)$	0.4537	0.4539 ± 0.0062
$\boldsymbol{A_{143}^{PS}}$	48.8	45 ± 8	D_{220}	5742.6	5746 ± 38	$\sigma_8(0.15)$	0.7493	0.7484 ± 0.0055
$\boldsymbol{A_{143\times217}^{PS}}$	51.2	42 ± 9	D_{810}	2541.8	2540 ± 13	$f\sigma_8(0.38)$	0.4731	0.4730 ± 0.0051
$\boldsymbol{A_{217}^{PS}}$	121.4	115 ± 10	D_{1420}	819.81	818.6 ± 4.7	$\sigma_8(0.38)$	0.66469	0.6638 ± 0.0048
$\boldsymbol{A^{kSZ}}$	0.01	< 4.19	D_{2000}	231.94	231.4 ± 1.6	$f\sigma_8(0.51)$	0.47230	0.4721 ± 0.0045
$\boldsymbol{A_{100}^{dust TT}}$	8.85	8.8 ± 1.8	$n_{s,0.002}$	0.96947	0.9679 ± 0.0042	$\sigma_8(0.51)$	0.62226	0.6214 ± 0.0045
$\boldsymbol{A_{143}^{dust TT}}$	10.96	10.9 ± 1.8	Y_P	0.245447	0.245437 ± 0.000054	$f\sigma_8(0.61)$	0.46771	0.4674 ± 0.0042
$\boldsymbol{A_{143\times217}^{dust TT}}$	19.94	18.5 ± 3.3	Y_P^{BBN}	0.246774	0.246763 ± 0.000055	$\sigma_8(0.61)$	0.59223	0.5914 ± 0.0043
$\boldsymbol{A_{217}^{dust TT}}$	95.4	93.4 ± 7.4	10^5D/H	2.5608	2.565 ± 0.026	$f\sigma_8(2.33)$	0.29880	0.2983 ± 0.0022
$\boldsymbol{A_{100}^{dust TE}}$	0.1130	0.113 ± 0.038	Age/Gyr	13.7724	13.776 ± 0.022	$\sigma_8(2.33)$	0.30826	0.3077 ± 0.0024
$\boldsymbol{A_{100\times143}^{dust TE}}$	0.1349	0.135 ± 0.029	z_*	1089.632	1089.68 ± 0.24	f_{2000}^{143}	28.06	29.0 ± 2.8
$\boldsymbol{A_{100\times217}^{dust TE}}$	0.482	0.482 ± 0.083	r_*	144.674	144.66 ± 0.25	$f_{2000}^{143\times217}$	31.45	31.8 ± 1.9
$\boldsymbol{A_{143}^{dust TE}}$	0.224	0.225 ± 0.054	$100\theta_*$	1.041279	1.04127 ± 0.00030	f_{2000}^{217}	106.15	106.7 ± 1.8
$\boldsymbol{A_{143\times217}^{dust TE}}$	0.662	0.667 ± 0.083	$D_M(z_*)$/Gpc	13.8939	13.892 ± 0.023	$\chi^2_{lensing}$	8.714	9.17 ± 0.72
$\boldsymbol{A_{217}^{dust TE}}$	2.073	2.07 ± 0.27	z_{drag}	1060.162	1060.11 ± 0.30	χ^2_{simall}	396.93	397.5 ± 2.1
$\boldsymbol{c_{100}}$	0.99975	0.99968 ± 0.00062	r_{drag}	147.295	147.28 ± 0.25	χ^2_{lowl}	22.73	23.05 ± 0.84
$\boldsymbol{c_{217}}$	0.99817	0.99818 ± 0.00064	k_D	0.140755	0.14075 ± 0.00029	χ^2_{plik}	2346.0	2360.5 ± 6.1
H_0	68.002	67.93 ± 0.51	$100\theta_D$	0.160643	0.16067 ± 0.00017	$\chi^2_{H073p45}$	10.77	11.2 ± 2.0
Ω_Λ	0.6933	0.6923 ± 0.0067	z_{eq}	3373.4	3376 ± 25	χ^2_{prior}	1.63	11.6 ± 4.5
Ω_m	0.3067	0.3077 ± 0.0067	k_{eq}	0.010296	0.010305 ± 0.000076	χ^2_{CMB}	2774.3	2790.2 ± 6.1
$\Omega_m h^2$	0.14181	0.1419 ± 0.0010	$100\theta_{eq}$	0.81901	0.8184 ± 0.0048			
$\Omega_m h^3$	0.096433	0.09641 ± 0.00029	$100\theta_{s,eq}$	0.45226	0.4520 ± 0.0024			

Best-fit $\chi^2_{eff} = 2786.73$; $\bar{\chi}^2_{eff} = 2812.97$; $R - 1 = 0.03088$

χ^2_{eff}: CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.71 simall_100x143_offlike5_EE_Aplanck_B: 396.93 commander_dx12_v3_2_29: 22.73 plik_rd12_HM_v22b_TTTEEE: 2345.95 Hubble - H073p45: 10.77

2.100 base_plikHM_TTTEEE_lowl_lowE_lensing_post_BAO_Riess18

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022515	0.02249 ± 0.00013	S_8	0.8172	0.818 ± 0.010	$H(0.38)$	83.292	83.27 ± 0.26
$\boldsymbol{\Omega_c h^2}$	0.11857	0.11863 ± 0.00090	$\sigma_8 \Omega_m^{0.5}$	0.4476	0.4480 ± 0.0057	$D_M(0.38)$	1521.9	1522.4 ± 7.0
$\boldsymbol{100\theta_{MC}}$	1.041086	1.04112 ± 0.00029	$\sigma_8 \Omega_m^{0.25}$	0.6017	0.6021 ± 0.0057	$H(0.51)$	89.961	89.95 ± 0.21
$\boldsymbol{\tau}$	0.0573	0.0579 ± 0.0072	$\sigma_8/h^{0.5}$	0.9807	0.9812 ± 0.0084	$D_M(0.51)$	1972.3	1972.9 ± 8.2
$\boldsymbol{\ln(10^{10} A_s)}$	3.0482	3.049 ± 0.014	$r_{drag} h$	100.22	100.19 ± 0.70	$H(0.61)$	95.544	95.53 ± 0.18
$\boldsymbol{n_s}$	0.96965	0.9682 ± 0.0038	$\langle d^2 \rangle^{1/2}$	2.4254	2.430 ± 0.021	$D_M(0.61)$	2295.7	2296.4 ± 8.9
$\boldsymbol{y_{cal}}$	1.00084	1.0008 ± 0.0024	z_{re}	7.93	7.98 ± 0.71	$H(2.33)$	235.78	235.80 ± 0.55
$\boldsymbol{A_{217}^{CIB}}$	45.7	47 ± 7	$10^9 A_s$	2.1078	2.110 ± 0.030	$D_M(2.33)$	5751.9	5752.6 ± 8.6
$\boldsymbol{\xi^{tSZ \times CIB}}$	0.681	> 0.384	$10^9 A_s e^{-2\tau}$	1.8794	1.879 ± 0.010	$f\sigma_8(0.15)$	0.4526	0.4530 ± 0.0054
$\boldsymbol{A_{143}^{tSZ}}$	7.12	5.5 ± 2.0	D_{40}	1223.2	1226 ± 12	$\sigma_8(0.15)$	0.7480	0.7482 ± 0.0055
$\boldsymbol{A_{100}^{PS}}$	246.4	258 ± 28	D_{220}	5744.9	5747 ± 38	$f\sigma_8(0.38)$	0.47212	0.4724 ± 0.0046
$\boldsymbol{A_{143}^{PS}}$	49.7	45 ± 8	D_{810}	2542.5	2540 ± 13	$\sigma_8(0.38)$	0.66365	0.6637 ± 0.0048
$\boldsymbol{A_{143\times217}^{PS}}$	53.0	42 ± 9	D_{1420}	820.13	818.7 ± 4.6	$f\sigma_8(0.51)$	0.47135	0.4716 ± 0.0042
$\boldsymbol{A_{217}^{PS}}$	121.8	115 ± 10	D_{2000}	232.02	231.5 ± 1.5	$\sigma_8(0.51)$	0.62131	0.6214 ± 0.0045
$\boldsymbol{A^{kSZ}}$	0.01	< 4.17	$n_{s,0.002}$	0.96965	0.9682 ± 0.0038	$f\sigma_8(0.61)$	0.46681	0.4670 ± 0.0040
$\boldsymbol{A_{100}^{dust TT}}$	8.81	8.8 ± 1.8	Y_P	0.2454498	0.245441 ± 0.000050	$\sigma_8(0.61)$	0.59134	0.5914 ± 0.0043
$\boldsymbol{A_{143}^{dust TT}}$	11.02	10.9 ± 1.8	Y_P^{BBN}	0.2467765	0.246768 ± 0.000051	$f\sigma_8(2.33)$	0.29837	0.2984 ± 0.0022
$\boldsymbol{A_{143\times217}^{dust TT}}$	20.09	18.5 ± 3.3	10^5D/H	2.5593	2.563 ± 0.024	$\sigma_8(2.33)$	0.30784	0.3078 ± 0.0023
$\boldsymbol{A_{217}^{dust TT}}$	95.4	93.4 ± 7.4	Age/Gyr	13.7717	13.773 ± 0.019	f_{2000}^{143}	28.00	29.0 ± 2.7
$\boldsymbol{A_{100}^{dust TE}}$	0.1132	0.113 ± 0.038	z_*	1089.614	1089.65 ± 0.21	$f_{2000}^{143\times217}$	31.49	31.8 ± 1.9
$\boldsymbol{A_{100\times143}^{dust TE}}$	0.1344	0.135 ± 0.029	r_*	144.691	144.69 ± 0.22	f_{2000}^{217}	106.12	106.7 ± 1.8
$\boldsymbol{A_{100\times217}^{dust TE}}$	0.480	0.483 ± 0.083	$100\theta_*$	1.041261	1.04129 ± 0.00028	$\chi^2_{lensing}$	8.789	9.15 ± 0.73
$\boldsymbol{A_{143}^{dust TE}}$	0.223	0.225 ± 0.054	$D_M(z_*)$/Gpc	13.8958	13.895 ± 0.021	χ^2_{simall}	396.58	397.6 ± 2.1
$\boldsymbol{A_{143\times217}^{dust TE}}$	0.664	0.667 ± 0.083	z_{drag}	1060.162	1060.12 ± 0.29	χ^2_{lowl}	22.65	22.98 ± 0.79
$\boldsymbol{A_{217}^{dust TE}}$	2.077	2.07 ± 0.27	r_{drag}	147.310	147.32 ± 0.23	χ^2_{plik}	2346.5	2360.5 ± 6.0
$\boldsymbol{c_{100}}$	0.99974	0.99968 ± 0.00062	k_D	0.140746	0.14072 ± 0.00028	$\chi^2_{H073p45}$	10.64	10.8 ± 1.6
$\boldsymbol{c_{217}}$	0.99817	0.99818 ± 0.00063	$100\theta_D$	0.160632	0.16066 ± 0.00017	χ^2_{6DF}	0.0029	0.024 ± 0.034
H_0	68.035	68.01 ± 0.41	z_{eq}	3371.4	3372 ± 20	χ^2_{MGS}	1.540	1.57 ± 0.41
Ω_Λ	0.6938	0.6934 ± 0.0054	k_{eq}	0.010290	0.010293 ± 0.000062	$\chi^2_{DR12BAO}$	3.696	4.05 ± 0.80
Ω_m	0.3062	0.3066 ± 0.0054	$100\theta_{eq}$	0.81937	0.8192 ± 0.0039	χ^2_{prior}	1.65	11.6 ± 4.5
$\Omega_m h^2$	0.14173	0.14177 ± 0.00085	$100\theta_{s,eq}$	0.45245	0.4524 ± 0.0020	χ^2_{CMB}	2774.5	2790.2 ± 6.0
$\Omega_m h^3$	0.096425	0.09641 ± 0.00029	$H(0.15)$	73.264	73.24 ± 0.35	χ^2_{BAO}	5.239	5.64 ± 0.58
σ_8	0.8089	0.8091 ± 0.0060	$D_M(0.15)$	637.59	637.9 ± 3.4			

Best-fit $\chi^2_{eff} = 2792.01$; $\bar{\chi}^2_{eff} = 2818.25$; $R - 1 = 0.03699$

χ^2_{eff}: BAO - 6DF: 0.00 MGS: 1.54 DR12BAO: 3.70 CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.79 simall_100x143_offlike5_EE_Aplanck_B: 396.58 commander_dx12_v3_2_29: 22.66 plik_rd12_HM_v22b_TTTEEE: 2346.46 Hubble - H073p45: 10.64

2.101 base_plikHM_TTTEEE_lowl_lowE_lensing_post_Pantheon

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022408	0.02239 ± 0.00014	σ_8	0.8111	0.8108 ± 0.0060	$H(0.15)$	72.799	72.79 ± 0.43
$\boldsymbol{\Omega_c h^2}$	0.11972	0.1197 ± 0.0011	S_8	0.8291	0.829 ± 0.012	$D_M(0.15)$	642.19	642.3 ± 4.3
$\boldsymbol{100\theta_{MC}}$	1.040953	1.04095 ± 0.00031	$\sigma_8\Omega_m^{0.5}$	0.4541	0.4540 ± 0.0067	$H(0.38)$	82.953	82.94 ± 0.32
$\boldsymbol{\tau}$	0.0551	0.0551 ± 0.0073	$\sigma_8\Omega_m^{0.25}$	0.6069	0.6067 ± 0.0062	$D_M(0.38)$	1531.1	1531.4 ± 8.7
$\boldsymbol{\ln(10^{10}A_s)}$	3.0455	3.045 ± 0.014	$\sigma_8/h^{0.5}$	0.9873	0.9870 ± 0.0089	$H(0.51)$	89.695	89.69 ± 0.26
$\boldsymbol{n_s}$	0.96654	0.9655 ± 0.0041	$r_{drag}h$	99.30	99.29 ± 0.87	$D_M(0.51)$	1983.1	1983 ± 10
$\boldsymbol{y_{cal}}$	1.00056	1.0007 ± 0.0025	$\langle d^2\rangle^{1/2}$	2.4407	2.443 ± 0.022	$H(0.61)$	95.333	95.32 ± 0.21
$\boldsymbol{A_{217}^{CIB}}$	47.3	47 ± 7	z_{re}	7.75	7.73 ± 0.73	$D_M(0.61)$	2307.4	2308 ± 11
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.415	> 0.375	$10^9 A_s$	2.1020	2.102 ± 0.030	$H(2.33)$	236.42	236.40 ± 0.66
$\boldsymbol{A_{143}^{tSZ}}$	7.31	$5.4^{+2.2}_{-1.9}$	$10^9 A_s e^{-2\tau}$	1.8828	1.883 ± 0.011	$D_M(2.33)$	5761.0	5761.6 ± 9.9
$\boldsymbol{A_{100}^{PS}}$	249.3	259 ± 28	D_{40}	1228.3	1231 ± 12	$f\sigma_8(0.15)$	0.4585	0.4584 ± 0.0062
$\boldsymbol{A_{143}^{PS}}$	47.0	46 ± 8	D_{220}	5734.2	5738 ± 38	$\sigma_8(0.15)$	0.7493	0.7490 ± 0.0054
$\boldsymbol{A_{143\times217}^{PS}}$	47.1	42 ± 9	D_{810}	2540.8	2540 ± 13	$f\sigma_8(0.38)$	0.4765	0.4763 ± 0.0051
$\boldsymbol{A_{217}^{PS}}$	119.5	115 ± 10	D_{1420}	818.39	817.5 ± 4.7	$\sigma_8(0.38)$	0.66400	0.6637 ± 0.0047
$\boldsymbol{A^{kSZ}}$	0.00	< 4.30	D_{2000}	231.32	231.0 ± 1.6	$f\sigma_8(0.51)$	0.47482	0.4746 ± 0.0045
$\boldsymbol{A_{100}^{dust TT}}$	8.85	8.9 ± 1.8	$n_{s,0.002}$	0.96654	0.9655 ± 0.0041	$\sigma_8(0.51)$	0.62130	0.6210 ± 0.0044
$\boldsymbol{A_{143}^{dust TT}}$	11.02	10.9 ± 1.8	Y_P	0.245411	$0.245403^{+0.000058}_{-0.000052}$	$f\sigma_8(0.61)$	0.46969	0.4695 ± 0.0041
$\boldsymbol{A_{143\times217}^{dust TT}}$	19.86	18.5 ± 3.3	Y_P^{BBN}	0.246737	$0.246729^{+0.000058}_{-0.000052}$	$\sigma_8(0.61)$	0.59113	0.5909 ± 0.0042
$\boldsymbol{A_{217}^{dust TT}}$	95.1	93.5 ± 7.3	10^5D/H	2.5784	2.582 ± 0.026	$f\sigma_8(2.33)$	0.29797	0.2978 ± 0.0022
$\boldsymbol{A_{100}^{dust TE}}$	0.1129	0.114 ± 0.038	Age/Gyr	13.7915	13.793 ± 0.022	$\sigma_8(2.33)$	0.30711	0.3070 ± 0.0023
$\boldsymbol{A_{100\times143}^{dust TE}}$	0.1350	0.135 ± 0.030	z_*	1089.847	1089.87 ± 0.24	f_{2000}^{143}	28.79	29.5 ± 2.7
$\boldsymbol{A_{100\times217}^{dust TE}}$	0.481	0.480 ± 0.085	r_*	144.474	144.49 ± 0.25	$f_{2000}^{143\times217}$	31.97	32.2 ± 1.9
$\boldsymbol{A_{143}^{dust TE}}$	0.226	0.225 ± 0.054	$100\theta_*$	1.041133	1.04113 ± 0.00030	f_{2000}^{217}	106.61	107.0 ± 1.8
$\boldsymbol{A_{143\times217}^{dust TE}}$	0.665	0.669 ± 0.081	$D_M(z_*)$/Gpc	13.8766	13.878 ± 0.024	$\chi^2_{lensing}$	8.762	9.17 ± 0.63
$\boldsymbol{A_{217}^{dust TE}}$	2.081	2.08 ± 0.27	z_{drag}	1060.009	1059.97 ± 0.30	χ^2_{simall}	396.20	397.1 ± 1.7
$\boldsymbol{c_{100}}$	0.99973	0.99967 ± 0.00061	r_{drag}	147.122	147.14 ± 0.25	χ^2_{lowl}	23.16	23.42 ± 0.87
$\boldsymbol{c_{217}}$	0.99820	0.99819 ± 0.00062	k_D	0.140863	0.14083 ± 0.00029	χ^2_{plik}	2344.7	2359.5 ± 5.8
H_0	67.49	67.48 ± 0.50	$100\theta_D$	0.160720	0.16074 ± 0.00017	χ^2_{JLA}	1036.453	1036.55 ± 0.46
Ω_Λ	0.6866	0.6864 ± 0.0068	z_{eq}	3396.5	3396 ± 25	χ^2_{prior}	1.82	11.5 ± 4.5
Ω_m	0.3134	0.3136 ± 0.0068	k_{eq}	0.010366	0.010365 ± 0.000076	χ^2_{CMB}	2772.9	2789.2 ± 5.9
$\Omega_m h^2$	0.14278	0.1428 ± 0.0010	$100\theta_{eq}$	0.81445	0.8145 ± 0.0047			
$\Omega_m h^3$	0.096365	0.09633 ± 0.00030	$100\theta_{s,eq}$	0.44996	0.4500 ± 0.0024			

Best-fit $\chi^2_{eff} = 3811.14$; $\bar{\chi}^2_{eff} = 3837.26$; $R - 1 = 0.01289$

χ^2_{eff}: CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.76 simall_100x143_offlike5_EE_Aplanck_B: 396.20 commander_dx12_v3_2_29: 23.16 plik_rd12_HM_v22b_TTTEEE: 2344.74 SN - JLA Pantheon: 1036.45

2.102 base_plikHM_TTTEEE_lowl_lowE_lensing_post_BAO_JLA_Riess18

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022522	0.02250 ± 0.00013	S_8	0.8169	0.817 ± 0.010	$H(0.38)$	83.330	83.29 ± 0.26
$\boldsymbol{\Omega_c h^2}$	0.11843	0.11858 ± 0.00089	$\sigma_8 \Omega_m^{0.5}$	0.4474	0.4477 ± 0.0057	$D_M(0.38)$	1520.8	1522.0 ± 6.9
$\boldsymbol{100\theta_{MC}}$	1.041109	1.04112 ± 0.00029	$\sigma_8 \Omega_m^{0.25}$	0.6019	0.6018 ± 0.0057	$H(0.51)$	89.991	89.96 ± 0.21
$\boldsymbol{\tau}$	0.0588	0.0580 ± 0.0072	$\sigma_8/h^{0.5}$	0.9812	0.9809 ± 0.0084	$D_M(0.51)$	1971.1	1972.5 ± 8.1
$\boldsymbol{\ln(10^{10} A_s)}$	3.0511	3.049 ± 0.014	$r_{drag} h$	100.33	100.22 ± 0.69	$H(0.61)$	95.567	95.54 ± 0.18
$\boldsymbol{n_s}$	0.96996	0.9684 ± 0.0038	$\langle d^2 \rangle^{1/2}$	2.4267	2.429 ± 0.021	$D_M(0.61)$	2294.4	2295.9 ± 8.8
$\boldsymbol{y_{cal}}$	1.00101	1.0008 ± 0.0024	z_{re}	8.07	7.99 ± 0.71	$H(2.33)$	235.69	235.77 ± 0.55
$\boldsymbol{A_{217}^{CIB}}$	45.6	47 ± 7	$10^9 A_s$	2.1138	2.110 ± 0.030	$D_M(2.33)$	5751.0	5752.2 ± 8.6
$\boldsymbol{\xi^{tSZ \times CIB}}$	0.672	> 0.386	$10^9 A_s e^{-2\tau}$	1.8793	1.879 ± 0.010	$f\sigma_8(0.15)$	0.4525	0.4527 ± 0.0054
$\boldsymbol{A_{143}^{tSZ}}$	7.15	5.5 ± 2.0	D_{40}	1223.3	1226 ± 12	$\sigma_8(0.15)$	0.7488	0.7481 ± 0.0055
$\boldsymbol{A_{100}^{PS}}$	247.3	258 ± 28	D_{220}	5746.7	5747 ± 38	$f\sigma_8(0.38)$	0.47220	0.4722 ± 0.0046
$\boldsymbol{A_{143}^{PS}}$	49.8	45 ± 8	D_{810}	2542.8	2540 ± 13	$\sigma_8(0.38)$	0.66444	0.6637 ± 0.0048
$\boldsymbol{A_{143\times217}^{PS}}$	52.8	42 ± 9	D_{1420}	820.31	818.7 ± 4.6	$f\sigma_8(0.51)$	0.47153	0.4714 ± 0.0042
$\boldsymbol{A_{217}^{PS}}$	121.8	115 ± 10	D_{2000}	232.10	231.5 ± 1.5	$\sigma_8(0.51)$	0.62208	0.6214 ± 0.0045
$\boldsymbol{A^{kSZ}}$	0.00	< 4.17	$n_{s,0.002}$	0.96996	0.9684 ± 0.0038	$f\sigma_8(0.61)$	0.46705	0.4669 ± 0.0039
$\boldsymbol{A_{100}^{dust TT}}$	8.81	8.8 ± 1.8	Y_P	0.2454524	0.245442 ± 0.000050	$\sigma_8(0.61)$	0.59210	0.5914 ± 0.0043
$\boldsymbol{A_{143}^{dust TT}}$	11.06	10.9 ± 1.8	Y_P^{BBN}	0.2467791	0.246769 ± 0.000050	$f\sigma_8(2.33)$	0.29879	0.2984 ± 0.0022
$\boldsymbol{A_{143\times217}^{dust TT}}$	20.24	18.5 ± 3.3	10^5D/H	2.5580	2.563 ± 0.024	$\sigma_8(2.33)$	0.30831	0.3079 ± 0.0023
$\boldsymbol{A_{217}^{dust TT}}$	95.8	93.4 ± 7.4	Age/Gyr	13.7698	13.773 ± 0.019	f_{2000}^{143}	28.11	29.0 ± 2.7
$\boldsymbol{A_{100}^{dust TE}}$	0.1136	0.113 ± 0.038	z_*	1089.592	1089.64 ± 0.21	$f_{2000}^{143\times217}$	31.50	31.7 ± 1.9
$\boldsymbol{A_{100\times143}^{dust TE}}$	0.1345	0.135 ± 0.029	r_*	144.722	144.70 ± 0.21	f_{2000}^{217}	106.14	106.7 ± 1.8
$\boldsymbol{A_{100\times217}^{dust TE}}$	0.480	0.483 ± 0.083	$100\theta_*$	1.041281	1.04129 ± 0.00028	$\chi^2_{lensing}$	8.753	9.16 ± 0.74
$\boldsymbol{A_{143}^{dust TE}}$	0.224	0.225 ± 0.054	$D_M(z_*)$/Gpc	13.8984	13.896 ± 0.021	χ^2_{small}	396.93	397.6 ± 2.1
$\boldsymbol{A_{143\times217}^{dust TE}}$	0.664	0.667 ± 0.083	z_{drag}	1060.162	1060.13 ± 0.29	χ^2_{lowl}	22.63	22.96 ± 0.79
$\boldsymbol{A_{217}^{dust TE}}$	2.071	2.06 ± 0.27	r_{drag}	147.339	147.33 ± 0.23	χ^2_{plik}	2346.4	2360.6 ± 6.0
$\boldsymbol{c_{100}}$	0.99974	0.99968 ± 0.00062	k_D	0.140721	0.14071 ± 0.00028	$\chi^2_{H073p45}$	10.40	10.7 ± 1.6
$\boldsymbol{c_{217}}$	0.99817	0.99818 ± 0.00063	$100\theta_D$	0.160630	0.16066 ± 0.00017	χ^2_{JLA}	706.600	706.64 ± 0.11
H_0	68.098	68.03 ± 0.40	z_{eq}	3368.3	3371 ± 20	χ^2_{6DF}	0.00098	0.023 ± 0.032
Ω_Λ	0.6947	0.6937 ± 0.0053	k_{eq}	0.010280	0.010290 ± 0.000062	χ^2_{MGS}	1.608	1.59 ± 0.41
Ω_m	0.3053	0.3063 ± 0.0053	$100\theta_{eq}$	0.81998	0.8194 ± 0.0038	$\chi^2_{DR12BAO}$	3.602	4.01 ± 0.76
$\Omega_m h^2$	0.14160	0.14172 ± 0.00084	$100\theta_{s,eq}$	0.45276	0.4525 ± 0.0020	χ^2_{prior}	1.71	11.6 ± 4.6
$\Omega_m h^3$	0.096424	0.09641 ± 0.00029	$H(0.15)$	73.317	73.26 ± 0.35	χ^2_{CMB}	2774.7	2790.3 ± 6.1
σ_8	0.8097	0.8090 ± 0.0060	$D_M(0.15)$	637.07	637.7 ± 3.4	χ^2_{BAO}	5.211	5.62 ± 0.56

Best-fit $\chi^2_{eff} = 3498.60$; $\bar{\chi}^2_{eff} = 3524.87$; $R - 1 = 0.03975$

χ^2_{eff}: BAO - 6DF: 0.00 MGS: 1.61 DR12BAO: 3.60 CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.75 simall_100x143_offlike5_EE_Aplanck_B: 396.93 commander_dx12_v3_2_29: 22.63 plik_rd12_HM_v22b_TTTEEE: 2346.36 Hubble - H073p45: 10.40 SN - JLA December_2013: 706.60

2.103 base_plikHM_TTTEEE_lowl_lowE_lensing_post_BAO_Pantheon

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022436	0.02243 ± 0.00013	S_8	0.8237	0.824 ± 0.010	$H(0.38)$	83.101	83.09 ± 0.26
$\boldsymbol{\Omega_c h^2}$	0.11914	0.11921 ± 0.00089	$\sigma_8 \Omega_m^{0.5}$	0.4512	0.4512 ± 0.0057	$D_M(0.38)$	1526.9	1527.3 ± 6.9
$\boldsymbol{100\theta_{MC}}$	1.041015	1.04102 ± 0.00029	$\sigma_8 \Omega_m^{0.25}$	0.6047	0.6045 ± 0.0057	$H(0.51)$	89.807	89.80 ± 0.21
$\boldsymbol{\tau}$	0.0566	0.0564 ± 0.0071	$\sigma_8/h^{0.5}$	0.9847	0.9843 ± 0.0084	$D_M(0.51)$	1978.2	1978.7 ± 8.2
$\boldsymbol{\ln(10^{10} A_s)}$	3.0476	3.047 ± 0.014	$r_{drag} h$	99.75	99.71 ± 0.69	$H(0.61)$	95.418	95.41 ± 0.18
$\boldsymbol{n_s}$	0.96822	0.9668 ± 0.0037	$\langle d^2 \rangle^{1/2}$	2.4339	2.437 ± 0.021	$D_M(0.61)$	2302.2	2302.6 ± 8.8
$\boldsymbol{y_{cal}}$	1.00068	1.0008 ± 0.0025	z_{re}	7.89	7.85 ± 0.70	$H(2.33)$	236.07	236.11 ± 0.55
$\boldsymbol{A_{217}^{CIB}}$	46.3	47 ± 7	$10^9 A_s$	2.1064	2.105 ± 0.030	$D_M(2.33)$	5757.6	5757.8 ± 8.7
$\boldsymbol{\xi^{tSZ \times CIB}}$	0.595	> 0.377	$10^9 A_s e^{-2\tau}$	1.8808	1.881 ± 0.010	$f\sigma_8(0.15)$	0.4559	0.4559 ± 0.0054
$\boldsymbol{A_{143}^{tSZ}}$	7.15	$5.4^{+2.2}_{-2.0}$	D_{40}	1225.2	1229 ± 12	$\sigma_8(0.15)$	0.7491	0.7486 ± 0.0054
$\boldsymbol{A_{100}^{PS}}$	248.3	259 ± 28	D_{220}	5735.9	5742 ± 38	$f\sigma_8(0.38)$	0.47460	0.4745 ± 0.0046
$\boldsymbol{A_{143}^{PS}}$	49.4	46 ± 8	D_{810}	2541.3	2540 ± 13	$\sigma_8(0.38)$	0.66415	0.6637 ± 0.0048
$\boldsymbol{A_{143\times217}^{PS}}$	51.4	42 ± 9	D_{1420}	819.07	818.0 ± 4.7	$f\sigma_8(0.51)$	0.47338	0.4732 ± 0.0042
$\boldsymbol{A_{217}^{PS}}$	121.1	115 ± 10	D_{2000}	231.59	231.2 ± 1.5	$\sigma_8(0.51)$	0.62161	0.6212 ± 0.0045
$\boldsymbol{A^{kSZ}}$	0.01	< 4.24	$n_{s,0.002}$	0.96822	0.9668 ± 0.0037	$f\sigma_8(0.61)$	0.46853	0.4683 ± 0.0039
$\boldsymbol{A_{100}^{dust TT}}$	8.83	8.9 ± 1.8	Y_P	0.245421	$0.245418^{+0.000054}_{-0.000047}$	$\sigma_8(0.61)$	0.59152	0.5911 ± 0.0043
$\boldsymbol{A_{143}^{dust TT}}$	11.02	10.9 ± 1.8	Y_P^{BBN}	0.246748	$0.246744^{+0.000054}_{-0.000048}$	$f\sigma_8(2.33)$	0.29831	0.2981 ± 0.0022
$\boldsymbol{A_{143\times217}^{dust TT}}$	20.07	18.5 ± 3.3	10^5D/H	2.5733	2.575 ± 0.025	$\sigma_8(2.33)$	0.30761	0.3074 ± 0.0023
$\boldsymbol{A_{217}^{dust TT}}$	95.3	93.5 ± 7.4	Age/Gyr	13.7843	13.785 ± 0.020	f_{2000}^{143}	28.50	29.3 ± 2.7
$\boldsymbol{A_{100}^{dust TE}}$	0.1139	0.114 ± 0.038	z_*	1089.762	1089.77 ± 0.21	$f_{2000}^{143\times217}$	31.82	32.0 ± 1.9
$\boldsymbol{A_{100\times143}^{dust TE}}$	0.1339	0.135 ± 0.030	r_*	144.602	144.59 ± 0.21	f_{2000}^{217}	106.43	106.9 ± 1.8
$\boldsymbol{A_{100\times217}^{dust TE}}$	0.479	0.482 ± 0.084	$100\theta_*$	1.041197	1.04120 ± 0.00029	$\chi^2_{lensing}$	8.735	9.10 ± 0.60
$\boldsymbol{A_{143}^{dust TE}}$	0.224	0.225 ± 0.054	$D_M(z_*)$/Gpc	13.8881	13.887 ± 0.021	χ^2_{simall}	396.46	397.3 ± 1.9
$\boldsymbol{A_{143\times217}^{dust TE}}$	0.666	0.668 ± 0.081	z_{drag}	1060.009	1060.02 ± 0.29	χ^2_{lowl}	22.88	23.20 ± 0.81
$\boldsymbol{A_{217}^{dust TE}}$	2.080	2.08 ± 0.27	r_{drag}	147.246	147.23 ± 0.23	χ^2_{plik}	2345.4	2359.7 ± 5.8
$\boldsymbol{c_{100}}$	0.99973	0.99967 ± 0.00062	k_D	0.140755	0.14076 ± 0.00028	χ^2_{JLA}	1036.260	1036.34 ± 0.28
$\boldsymbol{c_{217}}$	0.99817	0.99818 ± 0.00063	$100\theta_D$	0.160710	0.16072 ± 0.00017	χ^2_{6DF}	0.0229	0.045 ± 0.053
H_0	67.742	67.72 ± 0.40	z_{eq}	3383.3	3385 ± 20	χ^2_{MGS}	1.279	1.30 ± 0.38
Ω_Λ	0.6901	0.6897 ± 0.0054	k_{eq}	0.010326	0.010330 ± 0.000062	$\chi^2_{DR12BAO}$	4.27	4.7 ± 1.2
Ω_m	0.3099	0.3103 ± 0.0054	$100\theta_{eq}$	0.81695	0.8167 ± 0.0038	χ^2_{prior}	1.64	11.5 ± 4.5
$\Omega_m h^2$	0.14222	0.14228 ± 0.00084	$100\theta_{s,eq}$	0.45124	0.4511 ± 0.0019	χ^2_{CMB}	2773.5	2789.3 ± 5.9
$\Omega_m h^3$	0.096346	0.09635 ± 0.00029	$H(0.15)$	73.010	72.99 ± 0.35	χ^2_{BAO}	5.57	5.99 ± 0.92
σ_8	0.8105	0.8100 ± 0.0060	$D_M(0.15)$	640.08	640.3 ± 3.4			

Best-fit $\chi^2_{eff} = 3816.96$; $\bar{\chi}^2_{eff} = 3843.13$; $R - 1 = 0.01682$

χ^2_{eff}: BAO - 6DF: 0.02 MGS: 1.28 DR12BAO: 4.27 CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.73 simall_100x143_offlike5_EE_Aplanck_B: 396.46 commander_dx12_v3_2_29: 22.88 plik_rd12_HM_v22b_TTTEEE: 2345.41 SN - JLA Pantheon: 1036.26

2.104 base_plikHM_TTTEEE_lowl_lowE_lensing_post_BAO_Pantheon_Riess18

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02250 ± 0.00013	S_8	0.817 ± 0.010	$H(0.38)$	83.29 ± 0.26
$\boldsymbol{\Omega_c h^2}$	0.11855 ± 0.00087	$\sigma_8\Omega_m^{0.5}$	0.4476 ± 0.0056	$D_M(0.38)$	1521.8 ± 6.8
$\boldsymbol{100\theta_{MC}}$	1.04113 ± 0.00028	$\sigma_8\Omega_m^{0.25}$	0.6017 ± 0.0056	$H(0.51)$	89.96 ± 0.21
$\boldsymbol{\tau}$	0.0581 ± 0.0072	$\sigma_8/h^{0.5}$	0.9807 ± 0.0084	$D_M(0.51)$	1972.2 ± 8.0
$\boldsymbol{\ln(10^{10}A_s)}$	3.049 ± 0.014	$r_{drag}h$	100.25 ± 0.68	$H(0.61)$	95.54 ± 0.18
$\boldsymbol{n_s}$	0.9684 ± 0.0038	$\langle d^2\rangle^{1/2}$	2.429 ± 0.021	$D_M(0.61)$	2295.7 ± 8.6
$\boldsymbol{y_{cal}}$	1.0008 ± 0.0024	z_{re}	7.99 ± 0.71	$H(2.33)$	235.75 ± 0.54
$\boldsymbol{A_{217}^{CIB}}$	47 ± 7	$10^9 A_s$	2.110 ± 0.030	$D_M(2.33)$	5752.0 ± 8.5
$\boldsymbol{\xi^{tSZ\times CIB}}$	> 0.387	$10^9 A_s e^{-2\tau}$	1.878 ± 0.010	$f\sigma_8(0.15)$	0.4526 ± 0.0053
$\boldsymbol{A_{143}^{tSZ}}$	5.5 ± 2.0	D_{40}	1226 ± 12	$\sigma_8(0.15)$	0.7481 ± 0.0055
$\boldsymbol{A_{100}^{PS}}$	258 ± 28	D_{220}	5748 ± 38	$f\sigma_8(0.38)$	0.4721 ± 0.0046
$\boldsymbol{A_{143}^{PS}}$	45 ± 8	D_{810}	2540 ± 13	$\sigma_8(0.38)$	0.6637 ± 0.0048
$\boldsymbol{A_{143\times217}^{PS}}$	42 ± 9	D_{1420}	818.7 ± 4.6	$f\sigma_8(0.51)$	0.4713 ± 0.0042
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	D_{2000}	231.5 ± 1.5	$\sigma_8(0.51)$	0.6214 ± 0.0045
$\boldsymbol{A^{kSZ}}$	< 4.17	$n_{s,0.002}$	0.9684 ± 0.0038	$f\sigma_8(0.61)$	0.4668 ± 0.0039
$\boldsymbol{A_{100}^{dust TT}}$	8.8 ± 1.8	Y_P	0.245443 ± 0.000050	$\sigma_8(0.61)$	0.5914 ± 0.0043
$\boldsymbol{A_{143}^{dust TT}}$	10.9 ± 1.8	Y_P^{BBN}	0.246770 ± 0.000050	$f\sigma_8(2.33)$	0.2984 ± 0.0022
$\boldsymbol{A_{143\times217}^{dust TT}}$	18.5 ± 3.3	10^5D/H	2.562 ± 0.024	$\sigma_8(2.33)$	0.3079 ± 0.0023
$\boldsymbol{A_{217}^{dust TT}}$	93.4 ± 7.4	Age/Gyr	13.772 ± 0.019	f_{2000}^{143}	28.9 ± 2.7
$\boldsymbol{A_{100}^{dust TE}}$	0.113 ± 0.038	z_*	1089.63 ± 0.21	$f_{2000}^{143\times217}$	31.7 ± 1.9
$\boldsymbol{A_{100\times143}^{dust TE}}$	0.135 ± 0.029	r_*	144.71 ± 0.21	f_{2000}^{217}	106.7 ± 1.8
$\boldsymbol{A_{100\times217}^{dust TE}}$	0.483 ± 0.082	$100\theta_*$	1.04130 ± 0.00028	$\chi^2_{lensing}$	9.16 ± 0.74
$\boldsymbol{A_{143}^{dust TE}}$	0.225 ± 0.054	$D_M(z_*)$/Gpc	13.897 ± 0.020	χ^2_{simall}	397.6 ± 2.1
$\boldsymbol{A_{143\times217}^{dust TE}}$	0.667 ± 0.083	z_{drag}	1060.13 ± 0.29	χ^2_{lowl}	22.95 ± 0.79
$\boldsymbol{A_{217}^{dust TE}}$	2.06 ± 0.27	r_{drag}	147.33 ± 0.22	χ^2_{plik}	2360.6 ± 6.0
$\boldsymbol{c_{100}}$	0.99969 ± 0.00062	k_D	0.14071 ± 0.00028	$\chi^2_{H073p45}$	10.7 ± 1.6
$\boldsymbol{c_{217}}$	0.99818 ± 0.00063	$100\theta_D$	0.16066 ± 0.00017	χ^2_{JLA}	1036.16 ± 0.19
H_0	68.04 ± 0.40	z_{eq}	3371 ± 20	χ^2_{6DF}	0.022 ± 0.030
Ω_Λ	0.6939 ± 0.0052	k_{eq}	0.010288 ± 0.000061	χ^2_{MGS}	1.61 ± 0.41
Ω_m	0.3061 ± 0.0052	$100\theta_{eq}$	0.8195 ± 0.0038	$\chi^2_{DR12BAO}$	3.98 ± 0.73
$\Omega_m h^2$	0.14170 ± 0.00083	$100\theta_{s,eq}$	0.4525 ± 0.0019	χ^2_{prior}	11.6 ± 4.6
$\Omega_m h^3$	0.09641 ± 0.00029	$H(0.15)$	73.27 ± 0.34	χ^2_{CMB}	2790.3 ± 6.1
σ_8	0.8090 ± 0.0060	$D_M(0.15)$	637.6 ± 3.3	χ^2_{BAO}	5.60 ± 0.53

$\bar{\chi}^2_{eff} = 3854.36$; $R - 1 = 0.04150$

2.105 base_plikHM_TTTEEE_lowl_lowE_lensing_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02238 ± 0.00015	$\Omega_m h^3$	0.09633 ± 0.00030	$100\theta_{eq}$	0.8136 ± 0.0049
$\boldsymbol{\Omega_c h^2}$	0.1199 ± 0.0012	σ_8	0.8116 ± 0.0057	$100\theta_{s,eq}$	0.4495 ± 0.0025
$\boldsymbol{100\theta_{MC}}$	1.04092 ± 0.00031	S_8	0.832 ± 0.013	$H(0.15)$	72.70 ± 0.45
$\boldsymbol{\tau}$	$0.0552^{+0.0053}_{-0.0077}$	$\sigma_8\Omega_m^{0.5}$	0.4555 ± 0.0070	$D_M(0.15)$	643.2 ± 4.5
$\boldsymbol{\ln(10^{10} A_s)}$	$3.046^{+0.011}_{-0.015}$	$\sigma_8\Omega_m^{0.25}$	0.6080 ± 0.0064	$H(0.38)$	82.88 ± 0.33
$\boldsymbol{n_s}$	0.9650 ± 0.0041	$\sigma_8/h^{0.5}$	0.9888 ± 0.0090	$D_M(0.38)$	1533.1 ± 9.1
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0024	$r_{drag}h$	99.12 ± 0.91	$H(0.51)$	89.64 ± 0.27
$\boldsymbol{A_{217}^{CIB}}$	47 ± 7	$\langle d^2\rangle^{1/2}$	2.447 ± 0.022	$D_M(0.51)$	1985 ± 11
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	z_{re}	$7.76^{+0.58}_{-0.75}$	$H(0.61)$	95.29 ± 0.22
$\boldsymbol{A_{143}^{tSZ}}$	5.4 ± 2.0	$10^9 A_s$	$2.103^{+0.023}_{-0.031}$	$D_M(0.61)$	2310 ± 11
$\boldsymbol{A_{100}^{PS}}$	259 ± 28	$10^9 A_s e^{-2\tau}$	1.883 ± 0.011	$H(2.33)$	236.53 ± 0.69
$\boldsymbol{A_{143}^{PS}}$	46 ± 8	D_{40}	1232 ± 12	$D_M(2.33)$	5763 ± 10
$\boldsymbol{A_{143\times217}^{PS}}$	42 ± 9	D_{220}	5735 ± 38	$f\sigma_8(0.15)$	0.4598 ± 0.0065
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	D_{810}	2539 ± 13	$\sigma_8(0.15)$	$0.7496^{+0.0047}_{-0.0054}$
$\boldsymbol{A^{kSZ}}$	< 4.30	D_{1420}	817.2 ± 4.8	$f\sigma_8(0.38)$	0.4774 ± 0.0052
$\boldsymbol{A_{100}^{dust TT}}$	8.9 ± 1.8	D_{2000}	230.9 ± 1.6	$\sigma_8(0.38)$	$0.6641^{+0.0039}_{-0.0048}$
$\boldsymbol{A_{143}^{dust TT}}$	10.9 ± 1.8	$n_{s,0.002}$	0.9650 ± 0.0041	$f\sigma_8(0.51)$	0.4755 ± 0.0046
$\boldsymbol{A_{143\times217}^{dust TT}}$	18.6 ± 3.3	Y_P	$0.245396^{+0.000060}_{-0.000053}$	$\sigma_8(0.51)$	$0.6214^{+0.0037}_{-0.0045}$
$\boldsymbol{A_{217}^{dust TT}}$	93.5 ± 7.2	Y_P^{BBN}	$0.246723^{+0.000060}_{-0.000053}$	$f\sigma_8(0.61)$	0.4703 ± 0.0041
$\boldsymbol{A_{100}^{dust TE}}$	0.114 ± 0.038	10^5D/H	2.585 ± 0.027	$\sigma_8(0.61)$	$0.5912^{+0.0035}_{-0.0043}$
$\boldsymbol{A_{100\times143}^{dust TE}}$	0.135 ± 0.029	Age/Gyr	13.796 ± 0.023	$f\sigma_8(2.33)$	$0.2979^{+0.0018}_{-0.0022}$
$\boldsymbol{A_{100\times217}^{dust TE}}$	0.481 ± 0.085	z_*	1089.91 ± 0.25	$\sigma_8(2.33)$	$0.3070^{+0.0019}_{-0.0024}$
$\boldsymbol{A_{143}^{dust TE}}$	0.225 ± 0.054	r_*	144.44 ± 0.26	f_{2000}^{143}	29.6 ± 2.7
$\boldsymbol{A_{143\times217}^{dust TE}}$	0.667 ± 0.080	$100\theta_*$	1.04110 ± 0.00031	$f_{2000}^{143\times217}$	32.2 ± 1.9
$\boldsymbol{A_{217}^{dust TE}}$	2.09 ± 0.27	$D_M(z_*)$/Gpc	13.874 ± 0.024	f_{2000}^{217}	107.0 ± 1.8
$\boldsymbol{c_{100}}$	0.99967 ± 0.00061	z_{drag}	1059.95 ± 0.30	$\chi^2_{lensing}$	9.22 ± 0.68
$\boldsymbol{c_{217}}$	0.99819 ± 0.00062	r_{drag}	147.10 ± 0.26	χ^2_{simall}	397.0 ± 1.7
H_0	67.38 ± 0.53	k_D	0.14086 ± 0.00030	χ^2_{lowl}	23.53 ± 0.90
Ω_Λ	0.6850 ± 0.0072	$100\theta_D$	0.16075 ± 0.00017	χ^2_{plik}	2359.3 ± 5.7
Ω_m	0.3150 ± 0.0072	z_{eq}	3401 ± 26	χ^2_{prior}	11.5 ± 4.5
$\Omega_m h^2$	0.1430 ± 0.0011	k_{eq}	0.010380 ± 0.000080	χ^2_{CMB}	2789.0 ± 5.8

$\bar{\chi}^2_{eff} = 2800.50$; $R - 1 = 0.01006$

2.106 base_plikHM_TTTEEE_lowl_lowE_lensing_post_BAO_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02242 ± 0.00013	S_8	0.825 ± 0.011	$H(0.38)$	83.06 ± 0.27
$\boldsymbol{\Omega_c h^2}$	0.11931 ± 0.00091	$\sigma_8\Omega_m^{0.5}$	0.4520 ± 0.0058	$D_M(0.38)$	1528.1 ± 7.1
$\boldsymbol{100\theta_{MC}}$	1.04101 ± 0.00029	$\sigma_8\Omega_m^{0.25}$	0.6052 ± 0.0057	$H(0.51)$	89.78 ± 0.22
$\boldsymbol{\tau}$	$0.0566^{+0.0058}_{-0.0075}$	$\sigma_8/h^{0.5}$	0.9853 ± 0.0083	$D_M(0.51)$	1979.6 ± 8.3
$\boldsymbol{\ln(10^{10}A_s)}$	$3.048^{+0.012}_{-0.014}$	$r_{drag}h$	99.62 ± 0.70	$H(0.61)$	95.39 ± 0.18
$\boldsymbol{n_s}$	0.9666 ± 0.0038	$\langle d^2\rangle^{1/2}$	2.439 ± 0.020	$D_M(0.61)$	2303.7 ± 9.0
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0025	z_{re}	$7.87^{+0.61}_{-0.74}$	$H(2.33)$	236.17 ± 0.56
$\boldsymbol{A^{CIB}_{217}}$	47 ± 7	$10^9 A_s$	$2.106^{+0.026}_{-0.031}$	$D_M(2.33)$	5758.6 ± 8.8
$\boldsymbol{\xi^{tSZ\times CIB}}$	> 0.375	$10^9 A_s e^{-2\tau}$	1.881 ± 0.010	$f\sigma_8(0.15)$	0.4566 ± 0.0054
$\boldsymbol{A^{tSZ}_{143}}$	$5.4^{+2.2}_{-1.9}$	D_{40}	1229 ± 12	$\sigma_8(0.15)$	0.7490 ± 0.0052
$\boldsymbol{A^{PS}_{100}}$	259 ± 28	D_{220}	5740 ± 38	$f\sigma_8(0.38)$	0.4751 ± 0.0046
$\boldsymbol{A^{PS}_{143}}$	46 ± 8	D_{810}	2540 ± 13	$\sigma_8(0.38)$	$0.6640^{+0.0042}_{-0.0048}$
$\boldsymbol{A^{PS}_{143\times217}}$	42 ± 9	D_{1420}	817.8 ± 4.7	$f\sigma_8(0.51)$	0.4737 ± 0.0042
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	D_{2000}	231.1 ± 1.5	$\sigma_8(0.51)$	$0.6214^{+0.0039}_{-0.0045}$
$\boldsymbol{A^{kSZ}}$	< 4.25	$n_{s,0.002}$	0.9666 ± 0.0038	$f\sigma_8(0.61)$	0.4688 ± 0.0039
$\boldsymbol{A^{dustTT}_{100}}$	8.9 ± 1.8	Y_P	$0.245414^{+0.000054}_{-0.000048}$	$\sigma_8(0.61)$	$0.5913^{+0.0037}_{-0.0043}$
$\boldsymbol{A^{dustTT}_{143}}$	10.9 ± 1.8	Y_P^{BBN}	$0.246741^{+0.000055}_{-0.000048}$	$f\sigma_8(2.33)$	$0.2982^{+0.0019}_{-0.0022}$
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.5 ± 3.3	10^5D/H	2.576 ± 0.025	$\sigma_8(2.33)$	$0.3074^{+0.0020}_{-0.0024}$
$\boldsymbol{A^{dustTT}_{217}}$	93.5 ± 7.3	Age/Gyr	13.786 ± 0.020	f^{143}_{2000}	29.4 ± 2.7
$\boldsymbol{A^{dustTE}_{100}}$	0.114 ± 0.038	z_*	1089.79 ± 0.21	$f^{143\times217}_{2000}$	32.1 ± 1.9
$\boldsymbol{A^{dustTE}_{100\times143}}$	0.135 ± 0.030	r_*	144.57 ± 0.22	f^{217}_{2000}	106.9 ± 1.8
$\boldsymbol{A^{dustTE}_{100\times217}}$	0.481 ± 0.084	$100\theta_*$	1.04119 ± 0.00029	$\chi^2_{lensing}$	9.08 ± 0.55
$\boldsymbol{A^{dustTE}_{143}}$	0.225 ± 0.054	$D_M(z_*)$/Gpc	13.885 ± 0.021	χ^2_{simall}	397.2 ± 1.9
$\boldsymbol{A^{dustTE}_{143\times217}}$	0.668 ± 0.081	z_{drag}	1060.01 ± 0.29	χ^2_{lowl}	23.25 ± 0.82
$\boldsymbol{A^{dustTE}_{217}}$	2.08 ± 0.27	r_{drag}	147.22 ± 0.23	χ^2_{plik}	2359.5 ± 5.8
$\boldsymbol{c_{100}}$	0.99967 ± 0.00062	k_D	0.14078 ± 0.00028	χ^2_{6DF}	0.052 ± 0.058
$\boldsymbol{c_{217}}$	0.99819 ± 0.00063	$100\theta_D$	0.16072 ± 0.00017	χ^2_{MGS}	1.25 ± 0.38
H_0	67.67 ± 0.41	z_{eq}	3387 ± 21	$\chi^2_{DR12BAO}$	4.8 ± 1.3
Ω_Λ	0.6890 ± 0.0055	k_{eq}	0.010337 ± 0.000063	χ^2_{prior}	11.5 ± 4.5
Ω_m	0.3110 ± 0.0055	$100\theta_{eq}$	0.8163 ± 0.0039	χ^2_{CMB}	2789.1 ± 5.8
$\Omega_m h^2$	0.14238 ± 0.00086	$100\theta_{s,eq}$	0.4509 ± 0.0020	χ^2_{BAO}	6.1 ± 1.0
$\Omega_m h^3$	0.09635 ± 0.00030	$H(0.15)$	72.95 ± 0.36		
σ_8	0.8105 ± 0.0058	$D_M(0.15)$	640.7 ± 3.5		

$\bar{\chi}^2_{eff} = 2806.72$; $R - 1 = 0.01624$

2.107 base_plikHM_TTTEEE_lowl_lowE_lensing_post_Riess18_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02248 ± 0.00014	σ_8	0.8097 ± 0.0059	$H(0.15)$	73.18 ± 0.44
$\boldsymbol{\Omega_c h^2}$	0.1188 ± 0.0011	S_8	0.820 ± 0.012	$D_{\rm M}(0.15)$	638.4 ± 4.3
$\boldsymbol{100\theta_{MC}}$	1.04110 ± 0.00031	$\sigma_8\Omega_{\rm m}^{0.5}$	0.4490 ± 0.0066	$H(0.38)$	83.23 ± 0.32
$\boldsymbol{\tau}$	$0.0579^{+0.0063}_{-0.0079}$	$\sigma_8\Omega_{\rm m}^{0.25}$	0.6030 ± 0.0062	$D_{\rm M}(0.38)$	1523.6 ± 8.6
$\boldsymbol{\ln(10^{10}A_s)}$	$3.049^{+0.013}_{-0.015}$	$\sigma_8/h^{0.5}$	0.9824 ± 0.0089	$H(0.51)$	89.91 ± 0.26
$\boldsymbol{n_s}$	0.9679 ± 0.0041	$r_{\rm drag}h$	100.06 ± 0.87	$D_{\rm M}(0.51)$	$1974^{+10}_{-9.2}$
$\boldsymbol{y_{cal}}$	1.0008 ± 0.0024	$\langle d^2\rangle^{1/2}$	2.433 ± 0.022	$H(0.61)$	95.51 ± 0.21
$\boldsymbol{A_{217}^{CIB}}$	47 ± 7	$z_{\rm re}$	$7.98^{+0.65}_{-0.77}$	$D_{\rm M}(0.61)$	$2298^{+11}_{-9.9}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	> 0.380	$10^9A_{\rm s}$	$2.110^{+0.027}_{-0.032}$	$H(2.33)$	235.89 ± 0.66
$\boldsymbol{A_{143}^{tSZ}}$	$5.5^{+2.2}_{-2.0}$	$10^9A_{\rm s}e^{-2\tau}$	1.879 ± 0.011	$D_{\rm M}(2.33)$	5754 ± 10
$\boldsymbol{A_{100}^{PS}}$	258 ± 28	D_{40}	1227 ± 12	$f\sigma_8(0.15)$	0.4539 ± 0.0062
$\boldsymbol{A_{143}^{PS}}$	45 ± 8	D_{220}	5746 ± 38	$\sigma_8(0.15)$	0.7486 ± 0.0053
$\boldsymbol{A_{143\times217}^{PS}}$	42 ± 9	D_{810}	2540 ± 13	$f\sigma_8(0.38)$	0.4731 ± 0.0051
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	D_{1420}	818.6 ± 4.7	$\sigma_8(0.38)$	0.6640 ± 0.0046
$\boldsymbol{A^{kSZ}}$	< 4.19	D_{2000}	231.5 ± 1.6	$f\sigma_8(0.51)$	0.4722 ± 0.0045
$\boldsymbol{A_{100}^{dust}}$	8.8 ± 1.8	$n_{\rm s,0.002}$	0.9679 ± 0.0041	$\sigma_8(0.51)$	0.6216 ± 0.0043
$\boldsymbol{A_{143}^{dust}}$	10.9 ± 1.8	$Y_{\rm P}$	0.245437 ± 0.000054	$f\sigma_8(0.61)$	0.4675 ± 0.0041
$\boldsymbol{A_{143\times217}^{dust}}$	18.5 ± 3.3	$Y_{\rm P}^{\rm BBN}$	0.246764 ± 0.000055	$\sigma_8(0.61)$	0.5916 ± 0.0041
$\boldsymbol{A_{217}^{dust}}$	93.5 ± 7.4	10^5D/H	2.565 ± 0.026	$f\sigma_8(2.33)$	0.2984 ± 0.0021
$\boldsymbol{A_{100}^{dust}}$	0.114 ± 0.038	Age/Gyr	13.776 ± 0.022	$\sigma_8(2.33)$	$0.3078^{+0.0021}_{-0.0025}$
$\boldsymbol{A_{100\times143}^{dust}}$	0.135 ± 0.029	z_*	1089.67 ± 0.24	f_{2000}^{143}	29.0 ± 2.8
$\boldsymbol{A_{100\times217}^{dust}}$	0.482 ± 0.083	r_*	144.66 ± 0.25	$f_{2000}^{143\times217}$	31.8 ± 1.9
$\boldsymbol{A_{143}^{dust}}$	0.225 ± 0.054	$100\theta_*$	1.04127 ± 0.00030	f_{2000}^{217}	106.7 ± 1.8
$\boldsymbol{A_{143\times217}^{dust}}$	0.667 ± 0.083	$D_{\rm M}(z_*)$/Gpc	13.893 ± 0.023	$\chi^2_{\rm lensing}$	9.15 ± 0.68
$\boldsymbol{A_{217}^{dust}}$	2.06 ± 0.27	$z_{\rm drag}$	1060.11 ± 0.30	$\chi^2_{\rm simall}$	397.5 ± 2.1
$\boldsymbol{c_{100}}$	0.99968 ± 0.00062	$r_{\rm drag}$	147.29 ± 0.25	$\chi^2_{\rm lowl}$	23.05 ± 0.84
$\boldsymbol{c_{217}}$	0.99818 ± 0.00064	$k_{\rm D}$	0.14075 ± 0.00029	$\chi^2_{\rm plik}$	2360.4 ± 6.1
H_0	67.94 ± 0.51	$100\theta_{\rm D}$	0.16067 ± 0.00017	$\chi^2_{\rm H073p45}$	11.1 ± 2.0
Ω_Λ	0.6924 ± 0.0067	$z_{\rm eq}$	3376 ± 25	$\chi^2_{\rm prior}$	11.6 ± 4.6
$\Omega_{\rm m}$	0.3076 ± 0.0067	$k_{\rm eq}$	0.010304 ± 0.000075	$\chi^2_{\rm CMB}$	2790.1 ± 6.1
$\Omega_{\rm m}h^2$	0.1419 ± 0.0010	$100\theta_{\rm eq}$	0.8185 ± 0.0047		
$\Omega_{\rm m}h^3$	0.09641 ± 0.00029	$100\theta_{\rm s,eq}$	0.4520 ± 0.0024		

$\bar{\chi}^2_{\rm eff} = 2812.87$; $R - 1 = 0.03339$

2.108 base_plikHM_TTTEEE_lowl_lowE_lensing_post_BAO_Riess18_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02249 ± 0.00013	S_8	0.818 ± 0.010	$H(0.38)$	83.28 ± 0.26
$\boldsymbol{\Omega_c h^2}$	0.11862 ± 0.00089	$\sigma_8\Omega_m^{0.5}$	0.4481 ± 0.0057	$D_M(0.38)$	1522.3 ± 6.9
$\boldsymbol{100\theta_{MC}}$	1.04112 ± 0.00029	$\sigma_8\Omega_m^{0.25}$	0.6022 ± 0.0056	$H(0.51)$	89.95 ± 0.21
$\boldsymbol{\tau}$	$0.0582^{+0.0064}_{-0.0077}$	$\sigma_8/h^{0.5}$	0.9814 ± 0.0083	$D_M(0.51)$	1972.8 ± 8.2
$\boldsymbol{\ln(10^{10}A_s)}$	3.050 ± 0.014	$r_{drag}h$	100.19 ± 0.70	$H(0.61)$	95.53 ± 0.18
$\boldsymbol{n_s}$	0.9683 ± 0.0038	$\langle d^2\rangle^{1/2}$	2.430 ± 0.021	$D_M(0.61)$	2296.3 ± 8.8
$\boldsymbol{y_{cal}}$	1.0008 ± 0.0024	z_{re}	$8.01^{+0.65}_{-0.75}$	$H(2.33)$	235.79 ± 0.55
$\boldsymbol{A_{217}^{CIB}}$	47 ± 7	10^9A_s	2.111 ± 0.029	$D_M(2.33)$	5752.5 ± 8.6
$\boldsymbol{\xi^{tSZ\times CIB}}$	> 0.386	$10^9A_se^{-2\tau}$	1.879 ± 0.010	$f\sigma_8(0.15)$	0.4531 ± 0.0054
$\boldsymbol{A_{143}^{tSZ}}$	$5.5^{+2.2}_{-2.0}$	D_{40}	1226 ± 12	$\sigma_8(0.15)$	0.7484 ± 0.0053
$\boldsymbol{A_{100}^{PS}}$	258 ± 28	D_{220}	5747 ± 38	$f\sigma_8(0.38)$	0.4725 ± 0.0046
$\boldsymbol{A_{143}^{PS}}$	45 ± 8	D_{810}	2540 ± 13	$\sigma_8(0.38)$	0.6639 ± 0.0046
$\boldsymbol{A_{143\times217}^{PS}}$	42 ± 9	D_{1420}	818.7 ± 4.6	$f\sigma_8(0.51)$	0.4717 ± 0.0042
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	D_{2000}	231.5 ± 1.5	$\sigma_8(0.51)$	0.6215 ± 0.0043
$\boldsymbol{A^{kSZ}}$	< 4.17	$n_{s,0.002}$	0.9683 ± 0.0038	$f\sigma_8(0.61)$	0.4671 ± 0.0039
$\boldsymbol{A_{100}^{dustTT}}$	8.8 ± 1.8	Y_P	0.245441 ± 0.000050	$\sigma_8(0.61)$	0.5915 ± 0.0041
$\boldsymbol{A_{143}^{dustTT}}$	10.9 ± 1.8	Y_P^{BBN}	0.246768 ± 0.000051	$f\sigma_8(2.33)$	0.2985 ± 0.0021
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.5 ± 3.4	10^5D/H	2.563 ± 0.024	$\sigma_8(2.33)$	$0.3079^{+0.0021}_{-0.0024}$
$\boldsymbol{A_{217}^{dustTT}}$	93.5 ± 7.4	Age/Gyr	13.773 ± 0.019	f_{2000}^{143}	29.0 ± 2.7
$\boldsymbol{A_{100}^{dustTE}}$	0.114 ± 0.038	z_*	1089.65 ± 0.21	$f_{2000}^{143\times217}$	31.8 ± 1.9
$\boldsymbol{A_{100\times143}^{dustTE}}$	0.135 ± 0.029	r_*	144.69 ± 0.22	f_{2000}^{217}	106.7 ± 1.8
$\boldsymbol{A_{100\times217}^{dustTE}}$	0.483 ± 0.082	$100\theta_*$	1.04129 ± 0.00028	$\chi^2_{lensing}$	9.13 ± 0.68
$\boldsymbol{A_{143}^{dustTE}}$	0.225 ± 0.054	$D_M(z_*)$/Gpc	13.896 ± 0.021	χ^2_{simall}	397.6 ± 2.1
$\boldsymbol{A_{143\times217}^{dustTE}}$	0.667 ± 0.083	z_{drag}	1060.12 ± 0.29	χ^2_{lowl}	22.98 ± 0.79
$\boldsymbol{A_{217}^{dustTE}}$	2.06 ± 0.27	r_{drag}	147.32 ± 0.23	χ^2_{plik}	2360.5 ± 6.0
$\boldsymbol{c_{100}}$	0.99968 ± 0.00062	k_D	0.14072 ± 0.00028	$\chi^2_{H073p45}$	10.8 ± 1.6
$\boldsymbol{c_{217}}$	0.99818 ± 0.00063	$100\theta_D$	0.16066 ± 0.00017	χ^2_{6DF}	0.024 ± 0.033
H_0	68.01 ± 0.41	z_{eq}	3372 ± 20	χ^2_{MGS}	1.57 ± 0.41
Ω_Λ	0.6935 ± 0.0053	k_{eq}	0.010292 ± 0.000062	$\chi^2_{DR12BAO}$	4.04 ± 0.79
Ω_m	0.3065 ± 0.0053	$100\theta_{eq}$	0.8192 ± 0.0038	χ^2_{prior}	11.6 ± 4.6
$\Omega_m h^2$	0.14176 ± 0.00085	$100\theta_{s,eq}$	0.4524 ± 0.0020	χ^2_{CMB}	2790.1 ± 6.0
$\Omega_m h^3$	0.09641 ± 0.00029	$H(0.15)$	73.24 ± 0.35	χ^2_{BAO}	5.64 ± 0.58
σ_8	0.8093 ± 0.0058	$D_M(0.15)$	637.8 ± 3.4		

$\bar{\chi}^2_{eff} = 2818.15$; $R - 1 = 0.03902$

2.109 base_plikHM_TTTEEE_lowl_lowE_lensing_post_Pantheon_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02240 ± 0.00014	σ_8	0.8112 ± 0.0057	$H(0.15)$	72.81 ± 0.43
$\boldsymbol{\Omega_c h^2}$	0.1197 ± 0.0011	S_8	0.829 ± 0.012	$D_{\rm M}(0.15)$	642.2 ± 4.2
$\boldsymbol{100\theta_{MC}}$	1.04096 ± 0.00031	$\sigma_8\Omega_{\rm m}^{0.5}$	0.4540 ± 0.0067	$H(0.38)$	82.96 ± 0.31
$\boldsymbol{\tau}$	$0.0558^{+0.0055}_{-0.0076}$	$\sigma_8\Omega_{\rm m}^{0.25}$	0.6069 ± 0.0062	$D_{\rm M}(0.38)$	1531.0 ± 8.5
$\boldsymbol{\ln(10^{10}A_s)}$	$3.047^{+0.012}_{-0.015}$	$\sigma_8/h^{0.5}$	0.9874 ± 0.0088	$H(0.51)$	89.70 ± 0.25
$\boldsymbol{n_s}$	0.9657 ± 0.0040	$r_{\rm drag}h$	99.33 ± 0.85	$D_{\rm M}(0.51)$	1983 ± 10
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0025	$\langle d^2\rangle^{1/2}$	2.444 ± 0.021	$H(0.61)$	95.33 ± 0.21
$\boldsymbol{A_{217}^{CIB}}$	47 ± 7	$z_{\rm re}$	$7.81^{+0.59}_{-0.75}$	$D_{\rm M}(0.61)$	2307 ± 11
$\boldsymbol{\xi^{tSZ\times CIB}}$	> 0.375	$10^9A_{\rm s}$	$2.105^{+0.024}_{-0.031}$	$H(2.33)$	236.38 ± 0.65
$\boldsymbol{A_{143}^{tSZ}}$	$5.4^{+2.2}_{-1.9}$	$10^9A_{\rm s}e^{-2\tau}$	1.882 ± 0.011	$D_{\rm M}(2.33)$	5761.3 ± 9.8
$\boldsymbol{A_{100}^{PS}}$	259 ± 28	D_{40}	1231 ± 12	$f\sigma_8(0.15)$	0.4585 ± 0.0062
$\boldsymbol{A_{143}^{PS}}$	46 ± 8	D_{220}	5737 ± 38	$\sigma_8(0.15)$	0.7494 ± 0.0051
$\boldsymbol{A_{143\times217}^{PS}}$	42 ± 9	D_{810}	2539 ± 13	$f\sigma_8(0.38)$	0.4764 ± 0.0050
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	D_{1420}	817.5 ± 4.7	$\sigma_8(0.38)$	$0.6641^{+0.0041}_{-0.0047}$
$\boldsymbol{A^{kSZ}}$	< 4.29	D_{2000}	231.0 ± 1.6	$f\sigma_8(0.51)$	0.4748 ± 0.0044
$\boldsymbol{A_{100}^{dust}}$	8.9 ± 1.8	$n_{\rm s,0.002}$	0.9657 ± 0.0040	$\sigma_8(0.51)$	$0.6214^{+0.0038}_{-0.0045}$
$\boldsymbol{A_{143}^{dust}}$	10.9 ± 1.8	$Y_{\rm P}$	$0.245404^{+0.000058}_{-0.000051}$	$f\sigma_8(0.61)$	0.4697 ± 0.0041
$\boldsymbol{A_{143\times217}^{dust}}$	18.5 ± 3.3	$Y_{\rm P}^{\rm BBN}$	$0.246731^{+0.000058}_{-0.000052}$	$\sigma_8(0.61)$	$0.5912^{+0.0036}_{-0.0043}$
$\boldsymbol{A_{217}^{dust}}$	93.5 ± 7.3	10^5D/H	2.581 ± 0.026	$f\sigma_8(2.33)$	$0.2980^{+0.0018}_{-0.0022}$
$\boldsymbol{A_{100}^{dust}}$	0.114 ± 0.038	Age/Gyr	13.792 ± 0.022	$\sigma_8(2.33)$	$0.3072^{+0.0019}_{-0.0024}$
$\boldsymbol{A_{100\times143}^{dust}}$	0.135 ± 0.030	z_*	1089.86 ± 0.24	f_{2000}^{143}	29.5 ± 2.7
$\boldsymbol{A_{100\times217}^{dust}}$	0.480 ± 0.085	r_*	144.49 ± 0.25	$f_{2000}^{143\times217}$	32.2 ± 1.9
$\boldsymbol{A_{143}^{dust}}$	0.225 ± 0.054	$100\theta_*$	1.04114 ± 0.00030	f_{2000}^{217}	107.0 ± 1.8
$\boldsymbol{A_{143\times217}^{dust}}$	0.668 ± 0.081	$D_{\rm M}(z_*)$/Gpc	13.878 ± 0.023	$\chi^2_{\rm lensing}$	9.15 ± 0.62
$\boldsymbol{A_{217}^{dust}}$	2.08 ± 0.27	$z_{\rm drag}$	1059.98 ± 0.30	$\chi^2_{\rm simall}$	397.1 ± 1.8
$\boldsymbol{c_{100}}$	0.99967 ± 0.00061	$r_{\rm drag}$	147.15 ± 0.25	$\chi^2_{\rm lowl}$	23.41 ± 0.87
$\boldsymbol{c_{217}}$	0.99820 ± 0.00063	$k_{\rm D}$	0.14083 ± 0.00029	$\chi^2_{\rm plik}$	2359.4 ± 5.8
H_0	67.50 ± 0.50	$100\theta_{\rm D}$	0.16074 ± 0.00017	$\chi^2_{\rm JLA}$	1036.53 ± 0.44
Ω_Λ	0.6867 ± 0.0067	$z_{\rm eq}$	3395 ± 25	$\chi^2_{\rm prior}$	11.5 ± 4.5
$\Omega_{\rm m}$	0.3133 ± 0.0067	$k_{\rm eq}$	0.010363 ± 0.000075	$\chi^2_{\rm CMB}$	2789.1 ± 5.8
$\Omega_{\rm m}h^2$	0.1427 ± 0.0010	$100\theta_{\rm eq}$	0.8147 ± 0.0046		
$\Omega_{\rm m}h^3$	0.09634 ± 0.00030	$100\theta_{\rm s,eq}$	0.4501 ± 0.0024		

$\bar{\chi}^2_{\rm eff} = 3837.11$; $R - 1 = 0.01281$

2.110 base_plikHM_TTTEEE_lowl_lowE_lensing_post_BAO_JLA_Riess18_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02250 ± 0.00013	S_8	0.818 ± 0.010	$H(0.38)$	83.29 ± 0.26
$\boldsymbol{\Omega_c h^2}$	0.11857 ± 0.00088	$\sigma_8\Omega_m^{0.5}$	0.4478 ± 0.0056	$D_M(0.38)$	1522.0 ± 6.9
$\boldsymbol{100\theta_{MC}}$	1.04112 ± 0.00029	$\sigma_8\Omega_m^{0.25}$	0.6020 ± 0.0056	$H(0.51)$	89.96 ± 0.21
$\boldsymbol{\tau}$	$0.0583^{+0.0064}_{-0.0077}$	$\sigma_8/h^{0.5}$	0.9811 ± 0.0082	$D_M(0.51)$	1972.4 ± 8.1
$\boldsymbol{\ln(10^{10}A_s)}$	3.050 ± 0.014	$r_{drag}h$	100.23 ± 0.69	$H(0.61)$	95.54 ± 0.18
$\boldsymbol{n_s}$	0.9684 ± 0.0038	$\langle d^2\rangle^{1/2}$	2.430 ± 0.020	$D_M(0.61)$	2295.9 ± 8.7
$\boldsymbol{y_{cal}}$	1.0008 ± 0.0024	z_{re}	$8.02^{+0.66}_{-0.75}$	$H(2.33)$	235.77 ± 0.54
$\boldsymbol{A^{CIB}_{217}}$	47 ± 7	10^9A_s	2.111 ± 0.029	$D_M(2.33)$	5752.2 ± 8.5
$\boldsymbol{\xi^{tSZ\times CIB}}$	> 0.387	$10^9A_se^{-2\tau}$	1.878 ± 0.010	$f\sigma_8(0.15)$	0.4528 ± 0.0053
$\boldsymbol{A^{tSZ}_{143}}$	$5.5^{+2.2}_{-2.0}$	D_{40}	1226 ± 12	$\sigma_8(0.15)$	0.7483 ± 0.0053
$\boldsymbol{A^{PS}_{100}}$	258 ± 28	D_{220}	5747 ± 38	$f\sigma_8(0.38)$	0.4723 ± 0.0045
$\boldsymbol{A^{PS}_{143}}$	45 ± 8	D_{810}	2540 ± 13	$\sigma_8(0.38)$	0.6639 ± 0.0046
$\boldsymbol{A^{PS}_{143\times217}}$	42 ± 9	D_{1420}	818.7 ± 4.6	$f\sigma_8(0.51)$	0.4715 ± 0.0041
$\boldsymbol{A^{PS}_{217}}$	$115^{+10}_{-9.5}$	D_{2000}	231.5 ± 1.5	$\sigma_8(0.51)$	0.6215 ± 0.0043
$\boldsymbol{A^{kSZ}}$	< 4.17	$n_{s,0.002}$	0.9684 ± 0.0038	$f\sigma_8(0.61)$	0.4670 ± 0.0039
$\boldsymbol{A^{dustTT}_{100}}$	8.8 ± 1.8	Y_P	0.245443 ± 0.000050	$\sigma_8(0.61)$	0.5916 ± 0.0041
$\boldsymbol{A^{dustTT}_{143}}$	10.9 ± 1.8	Y_P^{BBN}	0.246769 ± 0.000050	$f\sigma_8(2.33)$	0.2985 ± 0.0021
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.5 ± 3.4	10^5D/H	2.563 ± 0.024	$\sigma_8(2.33)$	0.3080 ± 0.0022
$\boldsymbol{A^{dustTT}_{217}}$	93.4 ± 7.4	Age/Gyr	13.772 ± 0.019	f^{143}_{2000}	28.9 ± 2.7
$\boldsymbol{A^{dustTE}_{100}}$	0.114 ± 0.038	z_*	1089.64 ± 0.21	$f^{143\times217}_{2000}$	31.7 ± 1.9
$\boldsymbol{A^{dustTE}_{100\times143}}$	0.135 ± 0.029	r_*	144.70 ± 0.21	f^{217}_{2000}	106.6 ± 1.8
$\boldsymbol{A^{dustTE}_{100\times217}}$	0.483 ± 0.082	$100\theta_*$	1.04130 ± 0.00028	$\chi^2_{lensing}$	9.13 ± 0.69
$\boldsymbol{A^{dustTE}_{143}}$	0.225 ± 0.054	$D_M(z_*)$/Gpc	13.896 ± 0.021	χ^2_{simall}	397.6 ± 2.1
$\boldsymbol{A^{dustTE}_{143\times217}}$	0.667 ± 0.083	z_{drag}	1060.13 ± 0.29	χ^2_{lowl}	22.96 ± 0.79
$\boldsymbol{A^{dustTE}_{217}}$	2.06 ± 0.27	r_{drag}	147.33 ± 0.23	χ^2_{plik}	2360.5 ± 6.0
$\boldsymbol{c_{100}}$	0.99969 ± 0.00062	k_D	0.14071 ± 0.00028	$\chi^2_{H073p45}$	10.7 ± 1.6
$\boldsymbol{c_{217}}$	0.99818 ± 0.00064	$100\theta_D$	0.16066 ± 0.00017	χ^2_{JLA}	706.64 ± 0.11
H_0	68.03 ± 0.40	z_{eq}	3371 ± 20	χ^2_{6DF}	0.023 ± 0.031
Ω_Λ	0.6938 ± 0.0053	k_{eq}	0.010289 ± 0.000062	χ^2_{MGS}	1.60 ± 0.41
Ω_m	0.3062 ± 0.0053	$100\theta_{eq}$	0.8194 ± 0.0038	$\chi^2_{DR12BAO}$	4.00 ± 0.75
$\Omega_m h^2$	0.14172 ± 0.00084	$100\theta_{s,eq}$	0.4525 ± 0.0020	χ^2_{prior}	11.6 ± 4.6
$\Omega_m h^3$	0.09641 ± 0.00029	$H(0.15)$	73.26 ± 0.35	χ^2_{CMB}	2790.2 ± 6.0
σ_8	0.8092 ± 0.0058	$D_M(0.15)$	637.6 ± 3.4	χ^2_{BAO}	5.62 ± 0.55

$\bar{\chi}^2_{eff} = 3524.78$; $R - 1 = 0.04178$

2.111 base_plikHM_TTTEEE_lowl_lowE_lensing_post_BAO_Pantheon_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02243 ± 0.00013	S_8	0.824 ± 0.010	$H(0.38)$	83.09 ± 0.26
$\boldsymbol{\Omega_c h^2}$	0.11919 ± 0.00088	$\sigma_8\Omega_m^{0.5}$	0.4513 ± 0.0057	$D_M(0.38)$	1527.2 ± 6.9
$\boldsymbol{100\theta_{MC}}$	1.04103 ± 0.00029	$\sigma_8\Omega_m^{0.25}$	0.6047 ± 0.0056	$H(0.51)$	89.80 ± 0.21
$\boldsymbol{\tau}$	$0.0568^{+0.0058}_{-0.0075}$	$\sigma_8/h^{0.5}$	0.9846 ± 0.0082	$D_M(0.51)$	1978.5 ± 8.1
$\boldsymbol{\ln(10^{10}A_s)}$	$3.048^{+0.012}_{-0.014}$	$r_{drag}h$	99.72 ± 0.68	$H(0.61)$	95.42 ± 0.18
$\boldsymbol{n_s}$	0.9668 ± 0.0037	$\langle d^2\rangle^{1/2}$	2.437 ± 0.020	$D_M(0.61)$	2302.5 ± 8.8
$\boldsymbol{y_{cal}}$	1.0008 ± 0.0025	z_{re}	$7.90^{+0.61}_{-0.74}$	$H(2.33)$	236.10 ± 0.54
$\boldsymbol{A^{CIB}_{217}}$	47 ± 7	$10^9 A_s$	$2.107^{+0.026}_{-0.031}$	$D_M(2.33)$	5757.7 ± 8.6
$\boldsymbol{\xi^{tSZ\times CIB}}$	> 0.377	$10^9 A_s e^{-2\tau}$	1.881 ± 0.010	$f\sigma_8(0.15)$	0.4560 ± 0.0054
$\boldsymbol{A^{tSZ}_{143}}$	$5.4^{+2.2}_{-1.9}$	D_{40}	1229 ± 12	$\sigma_8(0.15)$	0.7489 ± 0.0052
$\boldsymbol{A^{PS}_{100}}$	259 ± 28	D_{220}	5741 ± 38	$f\sigma_8(0.38)$	0.4746 ± 0.0046
$\boldsymbol{A^{PS}_{143}}$	46 ± 8	D_{810}	2540 ± 13	$\sigma_8(0.38)$	$0.6640^{+0.0043}_{-0.0048}$
$\boldsymbol{A^{PS}_{143\times217}}$	42 ± 9	D_{1420}	818.0 ± 4.7	$f\sigma_8(0.51)$	0.4734 ± 0.0041
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	D_{2000}	231.2 ± 1.5	$\sigma_8(0.51)$	$0.6214^{+0.0040}_{-0.0045}$
$\boldsymbol{A^{kSZ}}$	< 4.23	$n_{s,0.002}$	0.9668 ± 0.0037	$f\sigma_8(0.61)$	0.4685 ± 0.0038
$\boldsymbol{A^{dustTT}_{100}}$	8.9 ± 1.8	Y_P	$0.245418^{+0.000054}_{-0.000047}$	$\sigma_8(0.61)$	$0.5913^{+0.0038}_{-0.0043}$
$\boldsymbol{A^{dustTT}_{143}}$	10.9 ± 1.8	Y_P^{BBN}	$0.246745^{+0.000054}_{-0.000048}$	$f\sigma_8(2.33)$	$0.2982^{+0.0019}_{-0.0022}$
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.5 ± 3.3	10^5D/H	2.574 ± 0.024	$\sigma_8(2.33)$	$0.3075^{+0.0020}_{-0.0024}$
$\boldsymbol{A^{dustTT}_{217}}$	93.5 ± 7.3	Age/Gyr	13.785 ± 0.020	f^{143}_{2000}	29.3 ± 2.7
$\boldsymbol{A^{dustTE}_{100}}$	0.114 ± 0.038	z_*	1089.77 ± 0.21	$f^{143\times217}_{2000}$	32.0 ± 1.9
$\boldsymbol{A^{dustTE}_{100\times143}}$	0.135 ± 0.030	r_*	144.59 ± 0.21	f^{217}_{2000}	106.9 ± 1.8
$\boldsymbol{A^{dustTE}_{100\times217}}$	0.482 ± 0.084	$100\theta_*$	1.04120 ± 0.00029	$\chi^2_{lensing}$	9.07 ± 0.56
$\boldsymbol{A^{dustTE}_{143}}$	0.225 ± 0.054	$D_M(z_*)$/Gpc	13.887 ± 0.020	χ^2_{simall}	397.2 ± 1.9
$\boldsymbol{A^{dustTE}_{143\times217}}$	0.667 ± 0.081	z_{drag}	1060.02 ± 0.29	χ^2_{lowl}	23.20 ± 0.81
$\boldsymbol{A^{dustTE}_{217}}$	2.08 ± 0.27	r_{drag}	147.24 ± 0.22	χ^2_{plik}	2359.6 ± 5.8
$\boldsymbol{c_{100}}$	0.99967 ± 0.00062	k_D	0.14076 ± 0.00028	χ^2_{JLA}	1036.33 ± 0.28
$\boldsymbol{c_{217}}$	0.99818 ± 0.00063	$100\theta_D$	0.16071 ± 0.00017	χ^2_{6DF}	0.044 ± 0.051
H_0	67.73 ± 0.40	z_{eq}	3384 ± 20	χ^2_{MGS}	1.30 ± 0.38
Ω_Λ	0.6898 ± 0.0053	k_{eq}	0.010329 ± 0.000061	$\chi^2_{DR12BAO}$	4.6 ± 1.2
Ω_m	0.3102 ± 0.0053	$100\theta_{eq}$	0.8168 ± 0.0038	χ^2_{prior}	11.5 ± 4.5
$\Omega_m h^2$	0.14227 ± 0.00084	$100\theta_{s,eq}$	0.4512 ± 0.0019	χ^2_{CMB}	2789.2 ± 5.8
$\Omega_m h^3$	0.09635 ± 0.00030	$H(0.15)$	73.00 ± 0.35	χ^2_{BAO}	5.97 ± 0.89
σ_8	0.8103 ± 0.0058	$D_M(0.15)$	640.2 ± 3.4		

$\bar{\chi}^2_{eff} = 3843.02$; $R - 1 = 0.01826$

2.112 base_plikHM_TTTEEE_lowl_lowE_lensing_post_BAO_Pantheon_Riess18_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02250 ± 0.00013	S_8	0.817 ± 0.010	$H(0.38)$	83.30 ± 0.26
$\boldsymbol{\Omega_c h^2}$	0.11854 ± 0.00087	$\sigma_8\Omega_m^{0.5}$	0.4477 ± 0.0056	$D_M(0.38)$	1521.8 ± 6.8
$\boldsymbol{100\theta_{MC}}$	1.04113 ± 0.00029	$\sigma_8\Omega_m^{0.25}$	0.6019 ± 0.0056	$H(0.51)$	89.96 ± 0.21
$\boldsymbol{\tau}$	$0.0584^{+0.0064}_{-0.0077}$	$\sigma_8/h^{0.5}$	0.9810 ± 0.0082	$D_M(0.51)$	1972.2 ± 8.0
$\boldsymbol{\ln(10^{10}A_s)}$	3.050 ± 0.014	$r_{drag}h$	100.25 ± 0.68	$H(0.61)$	95.55 ± 0.18
$\boldsymbol{n_s}$	0.9685 ± 0.0038	$\langle d^2\rangle^{1/2}$	2.429 ± 0.020	$D_M(0.61)$	2295.6 ± 8.6
$\boldsymbol{y_{cal}}$	1.0008 ± 0.0024	z_{re}	$8.02^{+0.66}_{-0.75}$	$H(2.33)$	235.75 ± 0.54
$\boldsymbol{A^{CIB}_{217}}$	47 ± 7	$10^9 A_s$	2.111 ± 0.029	$D_M(2.33)$	5752.0 ± 8.5
$\boldsymbol{\xi^{tSZ\times CIB}}$	> 0.387	$10^9 A_s e^{-2\tau}$	1.878 ± 0.010	$f\sigma_8(0.15)$	0.4527 ± 0.0053
$\boldsymbol{A^{tSZ}_{143}}$	5.5 ± 2.0	D_{40}	1226 ± 12	$\sigma_8(0.15)$	0.7483 ± 0.0053
$\boldsymbol{A^{PS}_{100}}$	258 ± 28	D_{220}	5747 ± 38	$f\sigma_8(0.38)$	0.4722 ± 0.0045
$\boldsymbol{A^{PS}_{143}}$	45 ± 8	D_{810}	2540 ± 13	$\sigma_8(0.38)$	0.6639 ± 0.0046
$\boldsymbol{A^{PS}_{143\times217}}$	42 ± 9	D_{1420}	818.7 ± 4.6	$f\sigma_8(0.51)$	0.4714 ± 0.0041
$\boldsymbol{A^{PS}_{217}}$	$115^{+10}_{-9.5}$	D_{2000}	231.5 ± 1.5	$\sigma_8(0.51)$	0.6215 ± 0.0043
$\boldsymbol{A^{kSZ}}$	< 4.17	$n_{s,0.002}$	0.9685 ± 0.0038	$f\sigma_8(0.61)$	0.4669 ± 0.0038
$\boldsymbol{A^{dustTT}_{100}}$	8.8 ± 1.8	Y_P	0.245443 ± 0.000050	$\sigma_8(0.61)$	0.5916 ± 0.0041
$\boldsymbol{A^{dustTT}_{143}}$	10.9 ± 1.8	Y_P^{BBN}	0.246770 ± 0.000050	$f\sigma_8(2.33)$	0.2985 ± 0.0021
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.5 ± 3.4	10^5D/H	2.562 ± 0.024	$\sigma_8(2.33)$	0.3080 ± 0.0022
$\boldsymbol{A^{dustTT}_{217}}$	93.4 ± 7.4	Age/Gyr	13.772 ± 0.019	f^{143}_{2000}	28.9 ± 2.7
$\boldsymbol{A^{dustTE}_{100}}$	0.114 ± 0.038	z_*	1089.63 ± 0.21	$f^{143\times217}_{2000}$	31.7 ± 1.9
$\boldsymbol{A^{dustTE}_{100\times143}}$	0.135 ± 0.029	r_*	144.71 ± 0.21	f^{217}_{2000}	106.6 ± 1.8
$\boldsymbol{A^{dustTE}_{100\times217}}$	0.484 ± 0.082	$100\theta_*$	1.04130 ± 0.00028	$\chi^2_{lensing}$	9.14 ± 0.70
$\boldsymbol{A^{dustTE}_{143}}$	0.225 ± 0.054	$D_M(z_*)$/Gpc	13.897 ± 0.020	χ^2_{simall}	397.6 ± 2.1
$\boldsymbol{A^{dustTE}_{143\times217}}$	0.667 ± 0.083	z_{drag}	1060.13 ± 0.29	χ^2_{lowl}	22.95 ± 0.79
$\boldsymbol{A^{dustTE}_{217}}$	2.06 ± 0.27	r_{drag}	147.33 ± 0.23	χ^2_{plik}	2360.6 ± 6.0
$\boldsymbol{c_{100}}$	0.99969 ± 0.00062	k_D	0.14071 ± 0.00028	$\chi^2_{H073p45}$	10.7 ± 1.5
$\boldsymbol{c_{217}}$	0.99818 ± 0.00064	$100\theta_D$	0.16066 ± 0.00017	χ^2_{JLA}	1036.16 ± 0.19
H_0	68.04 ± 0.40	z_{eq}	3371 ± 20	χ^2_{6DF}	0.022 ± 0.030
Ω_Λ	0.6939 ± 0.0052	k_{eq}	0.010287 ± 0.000061	χ^2_{MGS}	1.61 ± 0.41
Ω_m	0.3061 ± 0.0052	$100\theta_{eq}$	0.8195 ± 0.0038	$\chi^2_{DR12BAO}$	3.97 ± 0.72
$\Omega_m h^2$	0.14169 ± 0.00083	$100\theta_{s,eq}$	0.4525 ± 0.0019	χ^2_{prior}	11.6 ± 4.6
$\Omega_m h^3$	0.09641 ± 0.00029	$H(0.15)$	73.27 ± 0.34	χ^2_{CMB}	2790.3 ± 6.0
σ_8	0.8092 ± 0.0058	$D_M(0.15)$	637.5 ± 3.3	χ^2_{BAO}	5.60 ± 0.53

$\bar{\chi}^2_{eff} = 3854.27$; $R - 1 = 0.04353$

2.113 base_CamSpecHM_TT_lowl_lowE_lensing

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022129	0.02215 ± 0.00020	$\sigma_8\Omega_m^{0.25}$	0.6087	0.6088 ± 0.0078	$D_M(0.15)$	646.2	646.1 ± 6.1
$\boldsymbol{\Omega_c h^2}$	0.12025	0.1203 ± 0.0016	$\sigma_8/h^{0.5}$	0.9897	0.990 ± 0.011	$H(0.38)$	82.611	82.63 ± 0.45
$\boldsymbol{100\theta_{MC}}$	1.040846	1.04085 ± 0.00045	$r_{drag}h$	98.75	98.8 ± 1.2	$D_M(0.38)$	1539.4	1539 ± 12
$\boldsymbol{\tau}$	0.0525	0.0527 ± 0.0078	$\langle d^2\rangle^{1/2}$	2.4456	2.446 ± 0.025	$H(0.51)$	89.391	89.41 ± 0.36
$\boldsymbol{\ln(10^{10}A_s)}$	3.0388	3.039 ± 0.015	z_{re}	7.55	7.55 ± 0.79	$D_M(0.51)$	1993.1	1993 ± 14
$\boldsymbol{n_s}$	0.96381	0.9639 ± 0.0049	$10^9 A_s$	2.0881	2.090 ± 0.031	$H(0.61)$	95.057	95.08 ± 0.29
$\boldsymbol{y_{cal}}$	1.00036	1.0004 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.8799	1.880 ± 0.011	$D_M(0.61)$	2318.4	2318 ± 15
$\boldsymbol{A_{100}^{PS}}$	242.2	243 ± 25	D_{40}	1228.9	1229 ± 13	$H(2.33)$	236.48	236.50 ± 0.95
$\boldsymbol{A_{143}^{PS}}$	39.7	41 ± 8	D_{220}	5703.6	5706 ± 41	$D_M(2.33)$	5775.5	5775 ± 14
$\boldsymbol{A_{217}^{PS}}$	99.6	101 ± 10	D_{810}	2532.9	2533 ± 14	$f\sigma_8(0.15)$	0.4612	0.4612 ± 0.0082
$\boldsymbol{A_{217}^{CIB}}$	44.4	41 ± 7	D_{1420}	813.7	814.0 ± 5.2	$\sigma_8(0.15)$	0.7482	0.7483 ± 0.0057
$\boldsymbol{A_{143}^{tSZ}}$	5.12	$3.7^{+1.7}_{-2.6}$	D_{2000}	229.35	229.5 ± 1.8	$f\sigma_8(0.38)$	0.4780	0.4781 ± 0.0064
$\boldsymbol{r_{143\times217}^{PS}}$	0.571	0.65 ± 0.13	$n_{s,0.002}$	0.96381	0.9639 ± 0.0049	$\sigma_8(0.38)$	0.66249	0.6626 ± 0.0049
$\boldsymbol{r_{143\times217}^{CIB}}$	0.713	$0.58^{+0.42}_{-0.12}$	Y_P	0.245296	$0.245300^{+0.000097}_{-0.000078}$	$f\sigma_8(0.51)$	0.4758	0.4759 ± 0.0054
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.06	—	Y_P^{BBN}	0.246622	$0.246626^{+0.000098}_{-0.000078}$	$\sigma_8(0.51)$	0.61968	0.6198 ± 0.0046
$\boldsymbol{A^{kSZ}}$	2.5	—	10^5D/H	2.6315	2.628 ± 0.039	$f\sigma_8(0.61)$	0.47031	0.4704 ± 0.0048
$\boldsymbol{A_{100}^{dust}}$	1.011	1.01 ± 0.20	Age/Gyr	13.8250	13.823 ± 0.032	$\sigma_8(0.61)$	0.58945	0.5896 ± 0.0045
$\boldsymbol{A_{143}^{dust}}$	0.989	0.98 ± 0.17	z_*	1090.248	1090.23 ± 0.34	$f\sigma_8(2.33)$	0.29694	0.2970 ± 0.0023
$\boldsymbol{A_{217}^{dust}}$	0.962	0.97 ± 0.10	r_*	144.550	144.54 ± 0.36	$\sigma_8(2.33)$	0.30585	0.3059 ± 0.0026
$\boldsymbol{A_{143\times217}^{dust}}$	1.008	1.03 ± 0.16	$100\theta_*$	1.041058	1.04105 ± 0.00045	f_{2000}^{143}	31.37	30.9 ± 3.0
$\boldsymbol{c_{100}}$	0.99746	0.9975 ± 0.0011	$D_M(z_*)$/Gpc	13.8849	13.884 ± 0.034	f_{2000}^{217}	107.78	107.6 ± 2.0
$\boldsymbol{c_{217}}$	1.00134	1.0012 ± 0.0016	z_{drag}	1059.399	1059.44 ± 0.44	$f_{2000}^{143\times217}$	33.18	33.0 ± 2.1
H_0	67.04	67.06 ± 0.71	r_{drag}	147.293	147.27 ± 0.37	$\chi^2_{lensing}$	8.91	9.52 ± 0.88
Ω_Λ	0.6818	0.6817 ± 0.0098	k_D	0.140467	0.14050 ± 0.00044	χ^2_{simall}	395.87	396.9 ± 1.6
Ω_m	0.3182	0.3183 ± 0.0098	$100\theta_D$	0.161077	0.16105 ± 0.00026	χ^2_{lowl}	23.42	23.5 ± 1.0
$\Omega_m h^2$	0.14303	0.1431 ± 0.0015	z_{eq}	3402.5	3403 ± 35	$\chi^2_{CamSpec}$	7050.18	7062.7 ± 5.1
$\Omega_m h^3$	0.095890	0.09592 ± 0.00044	k_{eq}	0.010385	0.01039 ± 0.00011	χ^2_{prior}	2.28	7.6 ± 3.5
σ_8	0.8104	0.8106 ± 0.0064	$100\theta_{eq}$	0.8125	0.8125 ± 0.0066	χ^2_{CMB}	7478.4	7492.6 ± 5.3
S_8	0.8346	0.835 ± 0.016	$100\theta_{s,eq}$	0.44916	0.4491 ± 0.0034			
$\sigma_8\Omega_m^{0.5}$	0.4571	0.4572 ± 0.0089	$H(0.15)$	72.39	72.41 ± 0.61			

Best-fit $\chi^2_{eff} = 7480.67$; $\bar{\chi}^2_{eff} = 7500.24$; $R - 1 = 0.00500$

χ^2_{eff}: CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.91 simall_100x143_offlike5_EE_Aplanck_B: 395.87 commander_dx12_v3_2_29: 23.42 CamSpec like_10.7HM: 7050.18

2.114 base_CamSpecHM_TT_lowl_lowE_lensing_post_BAO

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02222 ± 0.00019	$\sigma_8/h^{0.5}$	0.9842 ± 0.0090	$D_M(0.38)$	1530.4 ± 8.6
$\boldsymbol{\Omega_c h^2}$	0.1191 ± 0.0011	$r_{drag}h$	99.65 ± 0.84	$H(0.51)$	89.65 ± 0.27
$\boldsymbol{100\theta_{MC}}$	1.04102 ± 0.00042	$\langle d^2\rangle^{1/2}$	2.433 ± 0.021	$D_M(0.51)$	1983 ± 10
$\boldsymbol{\tau}$	0.0554 ± 0.0075	z_{re}	7.80 ± 0.75	$H(0.61)$	95.26 ± 0.23
$\boldsymbol{\ln(10^{10}A_s)}$	3.043 ± 0.015	$10^9 A_s$	2.097 ± 0.031	$D_M(0.61)$	2307 ± 11
$\boldsymbol{n_s}$	0.9665 ± 0.0041	$10^9 A_s e^{-2\tau}$	1.877 ± 0.011	$H(2.33)$	235.86 ± 0.70
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0025	D_{40}	1225 ± 12	$D_M(2.33)$	5767 ± 12
$\boldsymbol{A^{PS}_{100}}$	242 ± 25	D_{220}	5714 ± 40	$f\sigma_8(0.15)$	0.4558 ± 0.0061
$\boldsymbol{A^{PS}_{143}}$	41 ± 8	D_{810}	2534 ± 14	$\sigma_8(0.15)$	0.7476 ± 0.0057
$\boldsymbol{A^{PS}_{217}}$	101 ± 10	D_{1420}	815.1 ± 5.0	$f\sigma_8(0.38)$	0.4742 ± 0.0051
$\boldsymbol{A^{CIB}_{217}}$	41 ± 7	D_{2000}	229.9 ± 1.8	$\sigma_8(0.38)$	0.6627 ± 0.0050
$\boldsymbol{A^{tSZ}_{143}}$	$3.8^{+1.7}_{-2.6}$	$n_{s,0.002}$	0.9665 ± 0.0041	$f\sigma_8(0.51)$	0.4729 ± 0.0046
$\boldsymbol{r^{PS}_{143\times217}}$	0.65 ± 0.13	Y_P	$0.245332^{+0.000086}_{-0.000071}$	$\sigma_8(0.51)$	0.6202 ± 0.0047
$\boldsymbol{r^{CIB}_{143\times217}}$	> 0.457	Y_P^{BBN}	$0.246659^{+0.000086}_{-0.000071}$	$f\sigma_8(0.61)$	0.4679 ± 0.0042
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	10^5D/H	2.614 ± 0.036	$\sigma_8(0.61)$	0.5902 ± 0.0045
$\boldsymbol{A^{kSZ}}$	—	Age/Gyr	13.806 ± 0.027	$f\sigma_8(2.33)$	0.2976 ± 0.0023
$\boldsymbol{A^{dust}_{100}}$	1.01 ± 0.20	z_*	1090.03 ± 0.28	$\sigma_8(2.33)$	0.3068 ± 0.0025
$\boldsymbol{A^{dust}_{143}}$	0.97 ± 0.18	r_*	144.77 ± 0.28	f^{143}_{2000}	30.5 ± 3.0
$\boldsymbol{A^{dust}_{217}}$	0.97 ± 0.10	$100\theta_*$	1.04122 ± 0.00041	f^{217}_{2000}	107.4 ± 2.0
$\boldsymbol{A^{dust}_{143\times217}}$	1.03 ± 0.16	$D_M(z_*)$/Gpc	13.903 ± 0.028	$f^{143\times217}_{2000}$	32.8 ± 2.1
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	z_{drag}	1059.53 ± 0.43	$\chi^2_{lensing}$	9.39 ± 0.82
$\boldsymbol{c_{217}}$	1.0012 ± 0.0015	r_{drag}	147.48 ± 0.31	χ^2_{simall}	397.2 ± 1.9
H_0	67.57 ± 0.49	k_D	0.14034 ± 0.00041	χ^2_{lowl}	23.04 ± 0.84
Ω_Λ	0.6888 ± 0.0066	$100\theta_D$	0.16101 ± 0.00025	$\chi^2_{CamSpec}$	7063.1 ± 5.2
Ω_m	0.3112 ± 0.0066	z_{eq}	3378 ± 25	χ^2_{6DF}	0.059 ± 0.072
$\Omega_m h^2$	0.1420 ± 0.0011	k_{eq}	0.010311 ± 0.000077	χ^2_{MGS}	1.28 ± 0.46
$\Omega_m h^3$	0.09595 ± 0.00044	$100\theta_{eq}$	0.8173 ± 0.0047	$\chi^2_{DR12BAO}$	4.8 ± 1.5
σ_8	0.8090 ± 0.0063	$100\theta_{s,eq}$	0.4516 ± 0.0024	χ^2_{prior}	7.6 ± 3.5
S_8	0.824 ± 0.012	$H(0.15)$	72.84 ± 0.43	χ^2_{CMB}	7492.7 ± 5.4
$\sigma_8\Omega_m^{0.5}$	0.4512 ± 0.0065	$D_M(0.15)$	641.7 ± 4.2	χ^2_{BAO}	6.2 ± 1.3
$\sigma_8\Omega_m^{0.25}$	0.6042 ± 0.0063	$H(0.38)$	82.94 ± 0.32		

$\bar{\chi}^2_{eff} = 7506.48$; $R - 1 = 0.00781$

2.115 base_CamSpecHM_TT_lowl_lowE_lensing_post_Riess18

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	$0.02233^{+0.00021}_{-0.00018}$	$\sigma_8\Omega_m^{0.25}$	0.6001 ± 0.0077	$D_M(0.15)$	637.4 ± 5.8
$\boldsymbol{\Omega_c h^2}$	0.1182 ± 0.0015	$\sigma_8/h^{0.5}$	0.979 ± 0.011	$H(0.38)$	83.27 ± 0.44
$\boldsymbol{100\theta_{MC}}$	1.04121 ± 0.00045	$r_{drag}h$	100.5 ± 1.2	$D_M(0.38)$	1522 ± 12
$\boldsymbol{\tau}$	$0.0584^{+0.0074}_{-0.0087}$	$\langle d^2\rangle^{1/2}$	2.422 ± 0.025	$H(0.51)$	89.91 ± 0.36
$\boldsymbol{\ln(10^{10}A_s)}$	3.047 ± 0.016	z_{re}	8.05 ± 0.80	$D_M(0.51)$	1972 ± 14
$\boldsymbol{n_s}$	0.9691 ± 0.0049	$10^9 A_s$	$2.106^{+0.031}_{-0.035}$	$H(0.61)$	95.48 ± 0.29
$\boldsymbol{y_{cal}}$	1.0008 ± 0.0025	$10^9 A_s e^{-2\tau}$	$1.873^{+0.012}_{-0.011}$	$D_M(0.61)$	2296 ± 15
$\boldsymbol{A_{100}^{PS}}$	241 ± 25	D_{40}	1221 ± 13	$H(2.33)$	235.34 ± 0.93
$\boldsymbol{A_{143}^{PS}}$	40 ± 8	D_{220}	5724 ± 40	$D_M(2.33)$	5757 ± 14
$\boldsymbol{A_{217}^{PS}}$	102 ± 10	D_{810}	2535 ± 14	$f\sigma_8(0.15)$	$0.4510^{+0.0081}_{-0.0074}$
$\boldsymbol{A_{217}^{CIB}}$	40 ± 7	D_{1420}	816.4 ± 5.0	$\sigma_8(0.15)$	0.7471 ± 0.0059
$\boldsymbol{A_{143}^{tSZ}}$	$3.8^{+1.7}_{-2.5}$	D_{2000}	230.5 ± 1.8	$f\sigma_8(0.38)$	$0.4707^{+0.0066}_{-0.0059}$
$\boldsymbol{r_{143\times217}^{PS}}$	0.66 ± 0.12	$n_{s,0.002}$	0.9691 ± 0.0049	$\sigma_8(0.38)$	0.6630 ± 0.0052
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.57^{+0.41}_{-0.15}$	Y_P	$0.245378^{+0.000086}_{-0.000068}$	$f\sigma_8(0.51)$	0.4701 ± 0.0055
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	$0.246704^{+0.000086}_{-0.000068}$	$\sigma_8(0.51)$	0.6207 ± 0.0049
$\boldsymbol{A^{kSZ}}$	—	10^5D/H	$2.593^{+0.033}_{-0.039}$	$f\sigma_8(0.61)$	0.4657 ± 0.0050
$\boldsymbol{A_{100}^{dust}}$	1.02 ± 0.19	Age/Gyr	13.785 ± 0.031	$\sigma_8(0.61)$	0.5908 ± 0.0047
$\boldsymbol{A_{143}^{dust}}$	0.97 ± 0.17	z_*	1089.81 ± 0.32	$f\sigma_8(2.33)$	$0.2982^{+0.0023}_{-0.0026}$
$\boldsymbol{A_{217}^{dust}}$	0.97 ± 0.10	r_*	144.94 ± 0.36	$\sigma_8(2.33)$	$0.3077^{+0.0025}_{-0.0028}$
$\boldsymbol{A_{143\times217}^{dust}}$	1.03 ± 0.16	$100\theta_*$	1.04140 ± 0.00045	f_{2000}^{143}	29.9 ± 2.9
$\boldsymbol{c_{100}}$	0.9976 ± 0.0010	$D_M(z_*)$/Gpc	13.918 ± 0.034	f_{2000}^{217}	107.0 ± 2.0
$\boldsymbol{c_{217}}$	1.0012 ± 0.0015	z_{drag}	1059.72 ± 0.42	$f_{2000}^{143\times217}$	32.3 ± 2.1
H_0	68.07 ± 0.69	r_{drag}	147.62 ± 0.38	$\chi^2_{lensing}$	9.8 ± 1.4
Ω_Λ	0.6953 ± 0.0091	k_D	0.14028 ± 0.00045	χ^2_{simall}	397.8 ± 2.6
Ω_m	0.3047 ± 0.0091	$100\theta_D$	0.16092 ± 0.00024	χ^2_{lowl}	22.68 ± 0.88
$\Omega_m h^2$	0.1411 ± 0.0014	z_{eq}	3357 ± 35	$\chi^2_{CamSpec}$	7064.4 ± 5.5
$\Omega_m h^3$	0.09607 ± 0.00042	k_{eq}	0.01025 ± 0.00011	$\chi^2_{H073p45}$	10.7 ± 2.7
σ_8	0.8077 ± 0.0067	$100\theta_{eq}$	0.8216 ± 0.0066	χ^2_{prior}	7.4 ± 3.4
S_8	$0.814^{+0.016}_{-0.014}$	$100\theta_{s,eq}$	0.4537 ± 0.0034	χ^2_{CMB}	7494.8 ± 6.3
$\sigma_8\Omega_m^{0.5}$	$0.4459^{+0.0087}_{-0.0079}$	$H(0.15)$	73.28 ± 0.60		

$\bar{\chi}^2_{eff} = 7512.86$; $R - 1 = 0.03322$

2.116 base_CamSpecHM_TT_lowl_lowE_lensing_post_BAO_Riess18

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02233 ± 0.00019	$\sigma_8/h^{0.5}$	0.9794 ± 0.0090	$D_M(0.38)$	1522.2 ± 8.1
$\boldsymbol{\Omega_c h^2}$	0.1182 ± 0.0010	$r_{drag}h$	100.44 ± 0.80	$H(0.51)$	89.90 ± 0.26
$\boldsymbol{100\theta_{MC}}$	1.04119 ± 0.00041	$\langle d^2\rangle^{1/2}$	2.423 ± 0.021	$D_M(0.51)$	1972.9 ± 9.5
$\boldsymbol{\tau}$	0.0582 ± 0.0075	z_{re}	8.04 ± 0.74	$H(0.61)$	95.46 ± 0.23
$\boldsymbol{\ln(10^{10}A_s)}$	3.047 ± 0.015	$10^9 A_s$	2.106 ± 0.032	$D_M(0.61)$	2297 ± 10
$\boldsymbol{n_s}$	0.9690 ± 0.0040	$10^9 A_s e^{-2\tau}$	1.874 ± 0.011	$H(2.33)$	235.37 ± 0.67
$\boldsymbol{y_{cal}}$	1.0008 ± 0.0025	D_{40}	1222 ± 12	$D_M(2.33)$	5758 ± 11
$\boldsymbol{A_{100}^{PS}}$	241 ± 25	D_{220}	5725 ± 40	$f\sigma_8(0.15)$	0.4513 ± 0.0060
$\boldsymbol{A_{143}^{PS}}$	40 ± 8	D_{810}	2535 ± 13	$\sigma_8(0.15)$	0.7472 ± 0.0058
$\boldsymbol{A_{217}^{PS}}$	102 ± 10	D_{1420}	816.5 ± 5.0	$f\sigma_8(0.38)$	0.4710 ± 0.0051
$\boldsymbol{A_{217}^{CIB}}$	40 ± 7	D_{2000}	230.5 ± 1.7	$\sigma_8(0.38)$	0.6631 ± 0.0051
$\boldsymbol{A_{143}^{tSZ}}$	$3.8^{+1.8}_{-2.6}$	$n_{s,0.002}$	0.9690 ± 0.0040	$f\sigma_8(0.51)$	0.4704 ± 0.0046
$\boldsymbol{r_{143\times217}^{PS}}$	0.66 ± 0.13	Y_P	$0.245377^{+0.000081}_{-0.000068}$	$\sigma_8(0.51)$	0.6208 ± 0.0048
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.57^{+0.40}_{-0.16}$	Y_P^{BBN}	$0.246704^{+0.000081}_{-0.000068}$	$f\sigma_8(0.61)$	0.4659 ± 0.0043
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	10^5D/H	$2.593^{+0.033}_{-0.037}$	$\sigma_8(0.61)$	0.5909 ± 0.0046
$\boldsymbol{A^{kSZ}}$	—	Age/Gyr	13.786 ± 0.026	$f\sigma_8(2.33)$	0.2982 ± 0.0024
$\boldsymbol{A_{100}^{dust}}$	1.02 ± 0.19	z_*	1089.81 ± 0.27	$\sigma_8(2.33)$	0.3077 ± 0.0025
$\boldsymbol{A_{143}^{dust}}$	0.97 ± 0.17	r_*	144.92 ± 0.27	f_{2000}^{143}	29.9 ± 2.9
$\boldsymbol{A_{217}^{dust}}$	0.97 ± 0.10	$100\theta_*$	1.04138 ± 0.00040	f_{2000}^{217}	107.0 ± 2.1
$\boldsymbol{A_{143\times217}^{dust}}$	1.02 ± 0.16	$D_M(z_*)$/Gpc	13.917 ± 0.027	$f_{2000}^{143\times217}$	32.3 ± 2.1
$\boldsymbol{c_{100}}$	0.9976 ± 0.0010	z_{drag}	1059.72 ± 0.42	$\chi^2_{lensing}$	9.6 ± 1.1
$\boldsymbol{c_{217}}$	1.0012 ± 0.0015	r_{drag}	147.61 ± 0.30	χ^2_{simall}	397.7 ± 2.3
H_0	68.04 ± 0.47	k_D	0.14029 ± 0.00041	χ^2_{lowl}	22.69 ± 0.79
Ω_Λ	0.6950 ± 0.0061	$100\theta_D$	0.16091 ± 0.00025	$\chi^2_{CamSpec}$	7064.2 ± 5.4
Ω_m	0.3050 ± 0.0061	z_{eq}	3359 ± 24	$\chi^2_{H073p45}$	10.7 ± 1.8
$\Omega_m h^2$	0.1412 ± 0.0010	k_{eq}	0.010251 ± 0.000074	χ^2_{6DF}	0.027 ± 0.038
$\Omega_m h^3$	0.09607 ± 0.00043	$100\theta_{eq}$	0.8213 ± 0.0045	χ^2_{MGS}	1.73 ± 0.49
σ_8	0.8079 ± 0.0064	$100\theta_{s,eq}$	0.4536 ± 0.0023	$\chi^2_{DR12BAO}$	3.91 ± 0.78
S_8	0.815 ± 0.012	$H(0.15)$	73.25 ± 0.41	χ^2_{prior}	7.5 ± 3.5
$\sigma_8\Omega_m^{0.5}$	0.4462 ± 0.0063	$D_M(0.15)$	637.6 ± 4.0	χ^2_{CMB}	7494.2 ± 5.6
$\sigma_8\Omega_m^{0.25}$	0.6004 ± 0.0062	$H(0.38)$	83.25 ± 0.31	χ^2_{BAO}	5.67 ± 0.68

$\bar{\chi}^2_{eff} = 7518.00$; $R - 1 = 0.02714$

2.117 base_CamSpecHM_TT_lowl_lowE_lensing_post_Pantheon

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02218 ± 0.00020	$\sigma_8\Omega_m^{0.25}$	0.6067 ± 0.0074	$D_M(0.15)$	644.1 ± 5.6
$\boldsymbol{\Omega_c h^2}$	0.1198 ± 0.0014	$\sigma_8/h^{0.5}$	0.987 ± 0.010	$H(0.38)$	82.77 ± 0.42
$\boldsymbol{100\theta_{MC}}$	1.04092 ± 0.00044	$r_{drag}h$	99.2 ± 1.1	$D_M(0.38)$	1535 ± 11
$\boldsymbol{\tau}$	0.0539 ± 0.0077	$\langle d^2\rangle^{1/2}$	2.440 ± 0.024	$H(0.51)$	89.52 ± 0.34
$\boldsymbol{\ln(10^{10}A_s)}$	3.041 ± 0.015	z_{re}	7.66 ± 0.78	$D_M(0.51)$	1988 ± 13
$\boldsymbol{n_s}$	0.9651 ± 0.0047	$10^9 A_s$	2.093 ± 0.031	$H(0.61)$	95.16 ± 0.28
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.879 ± 0.011	$D_M(0.61)$	2313 ± 14
$\boldsymbol{A_{100}^{PS}}$	243 ± 25	D_{40}	1227 ± 12	$H(2.33)$	236.22 ± 0.88
$\boldsymbol{A_{143}^{PS}}$	41 ± 8	D_{220}	5710 ± 41	$D_M(2.33)$	5771 ± 14
$\boldsymbol{A_{217}^{PS}}$	101 ± 10	D_{810}	2534 ± 14	$f\sigma_8(0.15)$	0.4588 ± 0.0077
$\boldsymbol{A_{217}^{CIB}}$	41 ± 7	D_{1420}	814.5 ± 5.1	$\sigma_8(0.15)$	0.7480 ± 0.0057
$\boldsymbol{A_{143}^{tSZ}}$	$3.8^{+1.7}_{-2.6}$	D_{2000}	229.7 ± 1.8	$f\sigma_8(0.38)$	0.4763 ± 0.0060
$\boldsymbol{r_{143\times217}^{PS}}$	0.65 ± 0.13	$n_{s,0.002}$	0.9651 ± 0.0047	$\sigma_8(0.38)$	0.6627 ± 0.0050
$\boldsymbol{r_{143\times217}^{CIB}}$	> 0.462	Y_P	$0.245316^{+0.000094}_{-0.000075}$	$f\sigma_8(0.51)$	0.4745 ± 0.0052
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	$0.246642^{+0.000094}_{-0.000075}$	$\sigma_8(0.51)$	0.6200 ± 0.0047
$\boldsymbol{A^{kSZ}}$	—	10^5D/H	2.621 ± 0.038	$f\sigma_8(0.61)$	0.4693 ± 0.0047
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.20	Age/Gyr	13.815 ± 0.031	$\sigma_8(0.61)$	0.5898 ± 0.0045
$\boldsymbol{A_{143}^{dust}}$	0.97 ± 0.18	z_*	1090.14 ± 0.33	$f\sigma_8(2.33)$	0.2973 ± 0.0023
$\boldsymbol{A_{217}^{dust}}$	0.97 ± 0.10	r_*	144.64 ± 0.34	$\sigma_8(2.33)$	0.3063 ± 0.0026
$\boldsymbol{A_{143\times217}^{dust}}$	1.03 ± 0.16	$100\theta_*$	1.04112 ± 0.00044	f_{2000}^{143}	30.7 ± 3.0
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	$D_M(z_*)$/Gpc	13.892 ± 0.032	f_{2000}^{217}	107.5 ± 2.0
$\boldsymbol{c_{217}}$	1.0012 ± 0.0015	z_{drag}	1059.49 ± 0.43	$f_{2000}^{143\times217}$	32.9 ± 2.1
H_0	67.29 ± 0.65	r_{drag}	147.36 ± 0.36	$\chi^2_{lensing}$	9.45 ± 0.84
Ω_Λ	0.6850 ± 0.0089	k_D	0.14044 ± 0.00044	χ^2_{simall}	397.0 ± 1.7
Ω_m	0.3150 ± 0.0089	$100\theta_D$	0.16103 ± 0.00025	χ^2_{lowl}	23.29 ± 0.95
$\Omega_m h^2$	0.1426 ± 0.0014	z_{eq}	3392 ± 33	$\chi^2_{CamSpec}$	7062.9 ± 5.2
$\Omega_m h^3$	0.09594 ± 0.00044	k_{eq}	0.01035 ± 0.00010	χ^2_{JLA}	1036.71 ± 0.65
σ_8	0.8098 ± 0.0064	$100\theta_{eq}$	0.8147 ± 0.0061	χ^2_{prior}	7.6 ± 3.5
S_8	0.830 ± 0.015	$100\theta_{s,eq}$	0.4502 ± 0.0032	χ^2_{CMB}	7492.6 ± 5.4
$\sigma_8\Omega_m^{0.5}$	0.4545 ± 0.0083	$H(0.15)$	72.60 ± 0.56		

$\bar{\chi}^2_{eff} = 8536.93$; $R - 1 = 0.00579$

2.118 base_CamSpecHM_TT_lowl_lowE_lensing_post_BAO_JLA_Riess18

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02234 ± 0.00019	$r_{\rm drag} h$	100.53 ± 0.79	$D_{\rm M}(0.51)$	1971.9 ± 9.5
$\boldsymbol{\Omega_c h^2}$	0.1181 ± 0.0010	$\langle d^2 \rangle^{1/2}$	2.421 ± 0.022	$H(0.61)$	95.48 ± 0.23
$\boldsymbol{100\theta_{\rm MC}}$	1.04120 ± 0.00041	$z_{\rm re}$	8.04 ± 0.75	$D_{\rm M}(0.61)$	2296 ± 10
$\boldsymbol{\tau}$	0.0583 ± 0.0076	$10^9 A_{\rm s}$	2.105 ± 0.032	$H(2.33)$	235.30 ± 0.66
$\boldsymbol{\ln(10^{10} A_{\rm s})}$	3.047 ± 0.015	$10^9 A_{\rm s} e^{-2\tau}$	1.874 ± 0.011	$D_{\rm M}(2.33)$	5757 ± 11
$\boldsymbol{n_{\rm s}}$	0.9692 ± 0.0039	D_{40}	1221 ± 12	$f\sigma_8(0.15)$	0.4506 ± 0.0060
$\boldsymbol{y_{\rm cal}}$	1.0008 ± 0.0026	D_{220}	5726 ± 40	$\sigma_8(0.15)$	0.7469 ± 0.0058
$\boldsymbol{A^{\rm PS}_{100}}$	242 ± 25	D_{810}	2535 ± 14	$f\sigma_8(0.38)$	0.4704 ± 0.0051
$\boldsymbol{A^{\rm PS}_{143}}$	40 ± 8	D_{1420}	816.6 ± 5.1	$\sigma_8(0.38)$	0.6628 ± 0.0051
$\boldsymbol{A^{\rm PS}_{217}}$	102 ± 10	D_{2000}	230.6 ± 1.7	$f\sigma_8(0.51)$	0.4699 ± 0.0046
$\boldsymbol{A^{\rm CIB}_{217}}$	40 ± 7	$n_{\rm s,0.002}$	0.9692 ± 0.0039	$\sigma_8(0.51)$	0.6206 ± 0.0048
$\boldsymbol{A^{\rm tSZ}_{143}}$	$3.7^{+1.7}_{-2.6}$	$Y_{\rm P}$	0.245381 ± 0.000076	$f\sigma_8(0.61)$	0.4655 ± 0.0043
$\boldsymbol{r^{\rm PS}_{143\times217}}$	0.66 ± 0.13	$Y_{\rm P}^{\rm BBN}$	0.246707 ± 0.000076	$\sigma_8(0.61)$	0.5908 ± 0.0046
$\boldsymbol{r^{\rm CIB}_{143\times217}}$	$0.56^{+0.39}_{-0.18}$	10^5D/H	2.592 ± 0.035	$f\sigma_8(2.33)$	0.2982 ± 0.0023
$\boldsymbol{\xi^{\rm tSZ\times CIB}}$	—	Age/Gyr	13.784 ± 0.026	$\sigma_8(2.33)$	0.3077 ± 0.0025
$\boldsymbol{A^{\rm kSZ}}$	—	z_*	1089.79 ± 0.27	f^{143}_{2000}	29.9 ± 2.9
$\boldsymbol{A^{\rm dust}_{100}}$	1.02 ± 0.19	r_*	144.95 ± 0.27	f^{217}_{2000}	107.0 ± 2.1
$\boldsymbol{A^{\rm dust}_{143}}$	0.96 ± 0.17	$100\theta_*$	1.04139 ± 0.00040	$f^{143\times217}_{2000}$	32.3 ± 2.1
$\boldsymbol{A^{\rm dust}_{217}}$	0.97 ± 0.10	$D_{\rm M}(z_*)$/Gpc	13.919 ± 0.027	$\chi^2_{\rm lensing}$	9.7 ± 1.2
$\boldsymbol{A^{\rm dust}_{143\times217}}$	1.02 ± 0.16	$z_{\rm drag}$	1059.73 ± 0.43	$\chi^2_{\rm simall}$	397.7 ± 2.3
$\boldsymbol{c_{100}}$	0.9976 ± 0.0010	$r_{\rm drag}$	147.63 ± 0.30	$\chi^2_{\rm lowl}$	22.66 ± 0.76
$\boldsymbol{c_{217}}$	$1.0012^{+0.0015}_{-0.0017}$	$k_{\rm D}$	0.14027 ± 0.00041	$\chi^2_{\rm CamSpec}$	7064.4 ± 5.4
H_0	68.10 ± 0.47	$100\theta_{\rm D}$	0.16091 ± 0.00025	$\chi^2_{\rm H073p45}$	10.5 ± 1.8
Ω_Λ	0.6957 ± 0.0060	$z_{\rm eq}$	3356 ± 24	$\chi^2_{\rm JLA}$	706.61 ± 0.11
$\Omega_{\rm m}$	0.3043 ± 0.0060	$k_{\rm eq}$	0.010243 ± 0.000072	$\chi^2_{\rm 6DF}$	0.026 ± 0.038
$\Omega_{\rm m} h^2$	0.14108 ± 0.00099	$100\theta_{\rm eq}$	0.8218 ± 0.0044	$\chi^2_{\rm MGS}$	1.79 ± 0.49
$\Omega_{\rm m} h^3$	0.09607 ± 0.00043	$100\theta_{\rm s,eq}$	0.4538 ± 0.0023	$\chi^2_{\rm DR12BAO}$	3.85 ± 0.72
σ_8	0.8075 ± 0.0065	$H(0.15)$	73.30 ± 0.41	$\chi^2_{\rm prior}$	7.5 ± 3.6
S_8	0.813 ± 0.012	$D_{\rm M}(0.15)$	637.2 ± 4.0	$\chi^2_{\rm CMB}$	7494.5 ± 5.7
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4454 ± 0.0063	$H(0.38)$	83.28 ± 0.31	$\chi^2_{\rm BAO}$	5.67 ± 0.69
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.5997 ± 0.0063	$D_{\rm M}(0.38)$	1521.4 ± 8.0		
$\sigma_8 / h^{0.5}$	0.9786 ± 0.0092	$H(0.51)$	89.92 ± 0.26		

$\bar{\chi}^2_{\rm eff} = 8224.73$; $R - 1 = 0.08459$

2.119 base_CamSpecHM_TT_lowl_lowE_lensing_post_BAO_Pantheon

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02224 ± 0.00019	$\sigma_8/h^{0.5}$	0.9834 ± 0.0089	$D_M(0.38)$	1529.1 ± 8.2
$\boldsymbol{\Omega_c h^2}$	0.1190 ± 0.0010	$r_{drag} h$	99.79 ± 0.81	$H(0.51)$	89.69 ± 0.26
$\boldsymbol{100\theta_{MC}}$	1.04104 ± 0.00041	$\langle d^2 \rangle^{1/2}$	2.431 ± 0.021	$D_M(0.51)$	1981.0 ± 9.7
$\boldsymbol{\tau}$	0.0559 ± 0.0075	z_{re}	7.84 ± 0.75	$H(0.61)$	95.29 ± 0.23
$\boldsymbol{\ln(10^{10} A_s)}$	3.044 ± 0.015	$10^9 A_s$	2.098 ± 0.031	$D_M(0.61)$	2305 ± 11
$\boldsymbol{n_s}$	0.9670 ± 0.0041	$10^9 A_s e^{-2\tau}$	1.876 ± 0.011	$H(2.33)$	235.76 ± 0.67
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0025	D_{40}	1224 ± 12	$D_M(2.33)$	5765 ± 12
$\boldsymbol{A_{100}^{PS}}$	242 ± 25	D_{220}	5716 ± 40	$f\sigma_8(0.15)$	0.4550 ± 0.0059
$\boldsymbol{A_{143}^{PS}}$	41 ± 8	D_{810}	2534 ± 13	$\sigma_8(0.15)$	0.7475 ± 0.0057
$\boldsymbol{A_{217}^{PS}}$	101 ± 10	D_{1420}	815.3 ± 5.0	$f\sigma_8(0.38)$	0.4736 ± 0.0050
$\boldsymbol{A_{217}^{CIB}}$	41 ± 7	D_{2000}	230.0 ± 1.8	$\sigma_8(0.38)$	0.6627 ± 0.0051
$\boldsymbol{A_{143}^{tSZ}}$	$3.8^{+1.7}_{-2.6}$	$n_{s,0.002}$	0.9670 ± 0.0041	$f\sigma_8(0.51)$	0.4724 ± 0.0045
$\boldsymbol{r_{143\times217}^{PS}}$	0.65 ± 0.13	Y_P	$0.245338^{+0.000085}_{-0.000071}$	$\sigma_8(0.51)$	0.6203 ± 0.0048
$\boldsymbol{r_{143\times217}^{CIB}}$	> 0.456	Y_P^{BBN}	$0.246664^{+0.000085}_{-0.000071}$	$f\sigma_8(0.61)$	0.4676 ± 0.0042
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	10^5D/H	2.611 ± 0.036	$\sigma_8(0.61)$	0.5903 ± 0.0045
$\boldsymbol{A^{kSZ}}$	—	Age/Gyr	13.803 ± 0.026	$f\sigma_8(2.33)$	0.2977 ± 0.0023
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.20	z_*	1090.00 ± 0.28	$\sigma_8(2.33)$	0.3070 ± 0.0025
$\boldsymbol{A_{143}^{dust}}$	0.97 ± 0.17	r_*	144.80 ± 0.28	f_{2000}^{143}	30.5 ± 3.0
$\boldsymbol{A_{217}^{dust}}$	0.97 ± 0.10	$100\theta_*$	1.04124 ± 0.00041	f_{2000}^{217}	107.3 ± 2.0
$\boldsymbol{A_{143\times217}^{dust}}$	1.03 ± 0.16	$D_M(z_*)$/Gpc	13.906 ± 0.027	$f_{2000}^{143\times217}$	32.7 ± 2.1
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	z_{drag}	1059.55 ± 0.43	$\chi^2_{lensing}$	9.41 ± 0.85
$\boldsymbol{c_{217}}$	1.0012 ± 0.0015	r_{drag}	147.51 ± 0.31	χ^2_{simall}	397.3 ± 2.0
H_0	67.65 ± 0.48	k_D	0.14032 ± 0.00041	χ^2_{lowl}	22.98 ± 0.83
Ω_Λ	0.6899 ± 0.0063	$100\theta_D$	0.16100 ± 0.00025	$\chi^2_{CamSpec}$	7063.2 ± 5.2
Ω_m	0.3101 ± 0.0063	z_{eq}	3375 ± 24	χ^2_{JLA}	1036.35 ± 0.33
$\Omega_m h^2$	0.1419 ± 0.0010	k_{eq}	0.010300 ± 0.000074	χ^2_{6DF}	0.047 ± 0.061
$\Omega_m h^3$	0.09596 ± 0.00044	$100\theta_{eq}$	0.8180 ± 0.0045	χ^2_{MGS}	1.35 ± 0.45
σ_8	0.8088 ± 0.0063	$100\theta_{s,eq}$	0.4519 ± 0.0023	$\chi^2_{DR12BAO}$	4.6 ± 1.3
S_8	0.822 ± 0.012	$H(0.15)$	72.91 ± 0.41	χ^2_{prior}	7.6 ± 3.5
$\sigma_8 \Omega_m^{0.5}$	0.4503 ± 0.0063	$D_M(0.15)$	641.0 ± 4.1	χ^2_{CMB}	7492.9 ± 5.4
$\sigma_8 \Omega_m^{0.25}$	0.6035 ± 0.0061	$H(0.38)$	82.99 ± 0.31	χ^2_{BAO}	6.0 ± 1.1

$\bar{\chi}^2_{eff} = 8542.78$; $R - 1 = 0.00932$

2.120 base_CamSpecHM_TT_lowl_lowE_lensing_post_BAO_Pantheon_Riess18

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02234 ± 0.00018	$r_{\rm drag} h$	100.51 ± 0.77	$D_{\rm M}(0.51)$	1972.2 ± 9.2
$\boldsymbol{\Omega_c h^2}$	0.1181 ± 0.0010	$\langle d^2 \rangle^{1/2}$	2.422 ± 0.021	$H(0.61)$	95.48 ± 0.22
$\boldsymbol{100\theta_{\rm MC}}$	1.04120 ± 0.00041	$z_{\rm re}$	8.06 ± 0.74	$D_{\rm M}(0.61)$	2296 ± 10
$\boldsymbol{\tau}$	0.0584 ± 0.0075	$10^9 A_{\rm s}$	2.106 ± 0.032	$H(2.33)$	235.32 ± 0.65
$\boldsymbol{\ln(10^{10} A_{\rm s})}$	3.047 ± 0.015	$10^9 A_{\rm s} e^{-2\tau}$	1.874 ± 0.011	$D_{\rm M}(2.33)$	5757 ± 11
$\boldsymbol{n_{\rm s}}$	0.9692 ± 0.0040	D_{40}	1221 ± 12	$f\sigma_8(0.15)$	0.4509 ± 0.0058
$\boldsymbol{y_{\rm cal}}$	1.0009 ± 0.0025	D_{220}	5726 ± 39	$\sigma_8(0.15)$	0.7471 ± 0.0058
$\boldsymbol{A^{\rm PS}_{100}}$	241 ± 25	D_{810}	2536 ± 13	$f\sigma_8(0.38)$	0.4707 ± 0.0050
$\boldsymbol{A^{\rm PS}_{143}}$	40 ± 8	D_{1420}	816.6 ± 5.0	$\sigma_8(0.38)$	0.6631 ± 0.0051
$\boldsymbol{A^{\rm PS}_{217}}$	102 ± 10	D_{2000}	230.6 ± 1.7	$f\sigma_8(0.51)$	0.4701 ± 0.0045
$\boldsymbol{A^{\rm CIB}_{217}}$	40 ± 7	$n_{\rm s,0.002}$	0.9692 ± 0.0040	$\sigma_8(0.51)$	0.6208 ± 0.0048
$\boldsymbol{A^{\rm tSZ}_{143}}$	$3.8^{+1.8}_{-2.6}$	$Y_{\rm P}$	$0.245380^{+0.000080}_{-0.000067}$	$f\sigma_8(0.61)$	0.4657 ± 0.0042
$\boldsymbol{r^{\rm PS}_{143\times217}}$	0.66 ± 0.13	$Y_{\rm P}^{\rm BBN}$	$0.246706^{+0.000080}_{-0.000067}$	$\sigma_8(0.61)$	0.5909 ± 0.0046
$\boldsymbol{r^{\rm CIB}_{143\times217}}$	$0.57^{+0.40}_{-0.17}$	10^5D/H	$2.592^{+0.033}_{-0.037}$	$f\sigma_8(2.33)$	0.2982 ± 0.0024
$\boldsymbol{\xi^{\rm tSZ\times CIB}}$	—	Age/Gyr	13.784 ± 0.026	$\sigma_8(2.33)$	0.3078 ± 0.0025
$\boldsymbol{A^{\rm kSZ}}$	—	z_*	1089.80 ± 0.26	f^{143}_{2000}	29.9 ± 2.9
$\boldsymbol{A^{\rm dust}_{100}}$	1.02 ± 0.19	r_*	144.94 ± 0.27	f^{217}_{2000}	107.0 ± 2.1
$\boldsymbol{A^{\rm dust}_{143}}$	0.97 ± 0.17	$100\theta_*$	1.04139 ± 0.00040	$f^{143\times217}_{2000}$	32.2 ± 2.1
$\boldsymbol{A^{\rm dust}_{217}}$	0.97 ± 0.10	$D_{\rm M}(z_*)$/Gpc	13.918 ± 0.027	$\chi^2_{\rm lensing}$	9.6 ± 1.1
$\boldsymbol{A^{\rm dust}_{143\times217}}$	1.02 ± 0.16	$z_{\rm drag}$	1059.73 ± 0.42	$\chi^2_{\rm simall}$	397.7 ± 2.3
$\boldsymbol{c_{100}}$	0.9976 ± 0.0010	$r_{\rm drag}$	147.62 ± 0.30	$\chi^2_{\rm lowl}$	22.66 ± 0.78
$\boldsymbol{c_{217}}$	1.0012 ± 0.0015	$k_{\rm D}$	0.14028 ± 0.00040	$\chi^2_{\rm CamSpec}$	7064.3 ± 5.4
H_0	68.08 ± 0.45	$100\theta_{\rm D}$	0.16091 ± 0.00024	$\chi^2_{\rm H073p45}$	10.5 ± 1.8
Ω_Λ	0.6955 ± 0.0059	$z_{\rm eq}$	3357 ± 23	$\chi^2_{\rm JLA}$	1036.13 ± 0.19
$\Omega_{\rm m}$	0.3045 ± 0.0059	$k_{\rm eq}$	0.010245 ± 0.000071	$\chi^2_{\rm 6DF}$	0.025 ± 0.035
$\Omega_{\rm m} h^2$	0.14112 ± 0.00098	$100\theta_{\rm eq}$	0.8217 ± 0.0043	$\chi^2_{\rm MGS}$	1.77 ± 0.47
$\Omega_{\rm m} h^3$	0.09607 ± 0.00043	$100\theta_{\rm s,eq}$	0.4538 ± 0.0022	$\chi^2_{\rm DR12BAO}$	3.85 ± 0.69
σ_8	0.8078 ± 0.0064	$H(0.15)$	73.29 ± 0.39	$\chi^2_{\rm prior}$	7.5 ± 3.5
S_8	0.814 ± 0.011	$D_{\rm M}(0.15)$	637.3 ± 3.8	$\chi^2_{\rm CMB}$	7494.3 ± 5.6
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4457 ± 0.0062	$H(0.38)$	83.27 ± 0.30	$\chi^2_{\rm BAO}$	5.64 ± 0.63
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.6000 ± 0.0061	$D_{\rm M}(0.38)$	1521.6 ± 7.8		
$\sigma_8 / h^{0.5}$	0.9790 ± 0.0090	$H(0.51)$	89.92 ± 0.25		

$\bar{\chi}^2_{\rm eff} = 8554.06$; $R - 1 = 0.03017$

2.121 base_CamSpecHM_TT_lowl_lowE_lensing_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02216 ± 0.00020	$\sigma_8\Omega_m^{0.25}$	0.6089 ± 0.0078	$D_M(0.15)$	645.6 ± 6.0
$\boldsymbol{\Omega_c h^2}$	0.1201 ± 0.0015	$\sigma_8/h^{0.5}$	0.990 ± 0.011	$H(0.38)$	82.66 ± 0.44
$\boldsymbol{100\theta_{MC}}$	1.04086 ± 0.00045	$r_{drag}h$	98.9 ± 1.2	$D_M(0.38)$	1538 ± 12
$\boldsymbol{\tau}$	$0.0541^{+0.0048}_{-0.0083}$	$\langle d^2\rangle^{1/2}$	2.447 ± 0.025	$H(0.51)$	89.43 ± 0.35
$\boldsymbol{\ln(10^{10}A_s)}$	$3.042^{+0.011}_{-0.015}$	z_{re}	$7.69^{+0.54}_{-0.80}$	$D_M(0.51)$	1992 ± 14
$\boldsymbol{n_s}$	0.9643 ± 0.0048	$10^9 A_s$	$2.095^{+0.022}_{-0.032}$	$H(0.61)$	95.09 ± 0.29
$\boldsymbol{y_{cal}}$	1.0004 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.880 ± 0.011	$D_M(0.61)$	2317 ± 15
$\boldsymbol{A_{100}^{PS}}$	243 ± 25	D_{40}	1229 ± 13	$H(2.33)$	236.44 ± 0.93
$\boldsymbol{A_{143}^{PS}}$	41 ± 8	D_{220}	5706 ± 41	$D_M(2.33)$	5774 ± 14
$\boldsymbol{A_{217}^{PS}}$	101 ± 10	D_{810}	2533 ± 14	$f\sigma_8(0.15)$	0.4612 ± 0.0082
$\boldsymbol{A_{217}^{CIB}}$	41 ± 7	D_{1420}	814.0 ± 5.2	$\sigma_8(0.15)$	$0.7490^{+0.0049}_{-0.0055}$
$\boldsymbol{A_{143}^{tSZ}}$	$3.7^{+1.7}_{-2.6}$	D_{2000}	229.5 ± 1.8	$f\sigma_8(0.38)$	0.4782 ± 0.0064
$\boldsymbol{r_{143\times217}^{PS}}$	0.65 ± 0.13	$n_{s,0.002}$	0.9643 ± 0.0048	$\sigma_8(0.38)$	$0.6633^{+0.0040}_{-0.0049}$
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.58^{+0.41}_{-0.13}$	Y_P	$0.245304^{+0.000096}_{-0.000077}$	$f\sigma_8(0.51)$	0.4760 ± 0.0054
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	$0.246630^{+0.000096}_{-0.000078}$	$\sigma_8(0.51)$	$0.6205^{+0.0037}_{-0.0046}$
$\boldsymbol{A^{kSZ}}$	—	10^5D/H	2.627 ± 0.038	$f\sigma_8(0.61)$	0.4706 ± 0.0048
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.20	Age/Gyr	13.821 ± 0.032	$\sigma_8(0.61)$	$0.5902^{+0.0035}_{-0.0045}$
$\boldsymbol{A_{143}^{dust}}$	0.98 ± 0.17	z_*	1090.21 ± 0.34	$f\sigma_8(2.33)$	$0.2974^{+0.0017}_{-0.0024}$
$\boldsymbol{A_{217}^{dust}}$	0.97 ± 0.10	r_*	144.56 ± 0.36	$\sigma_8(2.33)$	$0.3063^{+0.0019}_{-0.0026}$
$\boldsymbol{A_{143\times217}^{dust}}$	1.03 ± 0.16	$100\theta_*$	1.04107 ± 0.00045	f_{2000}^{143}	30.8 ± 3.0
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	$D_M(z_*)$/Gpc	13.886 ± 0.034	f_{2000}^{217}	107.6 ± 2.0
$\boldsymbol{c_{217}}$	1.0012 ± 0.0016	z_{drag}	1059.45 ± 0.44	$f_{2000}^{143\times217}$	33.0 ± 2.1
H_0	67.11 ± 0.69	r_{drag}	147.29 ± 0.37	$\chi^2_{lensing}$	9.49 ± 0.88
Ω_Λ	0.6825 ± 0.0095	k_D	0.14049 ± 0.00044	χ^2_{simall}	396.8 ± 1.6
Ω_m	0.3175 ± 0.0095	$100\theta_D$	0.16105 ± 0.00025	χ^2_{lowl}	23.5 ± 1.0
$\Omega_m h^2$	0.1429 ± 0.0014	z_{eq}	3401 ± 35	$\chi^2_{CamSpec}$	7062.6 ± 5.1
$\Omega_m h^3$	0.09593 ± 0.00044	k_{eq}	0.01038 ± 0.00011	χ^2_{prior}	7.6 ± 3.5
σ_8	0.8112 ± 0.0061	$100\theta_{eq}$	0.8130 ± 0.0065	χ^2_{CMB}	7492.4 ± 5.3
S_8	0.835 ± 0.016	$100\theta_{s,eq}$	0.4494 ± 0.0033		
$\sigma_8\Omega_m^{0.5}$	0.4571 ± 0.0089	$H(0.15)$	72.45 ± 0.59		

$\bar{\chi}^2_{eff} = 7500.01$; $R - 1 = 0.00502$

2.122 base_CamSpecHM_TT_lowl_lowE_lensing_post_BAO_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02223 ± 0.00019	$\sigma_8/h^{0.5}$	0.9846 ± 0.0089	$D_M(0.38)$	1530.2 ± 8.5
$\boldsymbol{\Omega_c h^2}$	0.1191 ± 0.0011	$r_{drag}h$	99.68 ± 0.84	$H(0.51)$	89.66 ± 0.27
$\boldsymbol{100\theta_{MC}}$	1.04102 ± 0.00042	$\langle d^2\rangle^{1/2}$	2.434 ± 0.021	$D_M(0.51)$	1982 ± 10
$\boldsymbol{\tau}$	$0.0562^{+0.0058}_{-0.0078}$	z_{re}	$7.87^{+0.63}_{-0.76}$	$H(0.61)$	95.27 ± 0.23
$\boldsymbol{\ln(10^{10}A_s)}$	$3.044^{+0.012}_{-0.015}$	$10^9 A_s$	$2.100^{+0.025}_{-0.033}$	$D_M(0.61)$	2307 ± 11
$\boldsymbol{n_s}$	0.9667 ± 0.0041	$10^9 A_s e^{-2\tau}$	1.877 ± 0.011	$H(2.33)$	235.84 ± 0.69
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0025	D_{40}	1225 ± 12	$D_M(2.33)$	5766 ± 12
$\boldsymbol{A^{PS}_{100}}$	242 ± 25	D_{220}	5714 ± 40	$f\sigma_8(0.15)$	0.4560 ± 0.0061
$\boldsymbol{A^{PS}_{143}}$	41 ± 8	D_{810}	2534 ± 14	$\sigma_8(0.15)$	0.7480 ± 0.0054
$\boldsymbol{A^{PS}_{217}}$	101 ± 10	D_{1420}	815.1 ± 5.1	$f\sigma_8(0.38)$	0.4744 ± 0.0051
$\boldsymbol{A^{CIB}_{217}}$	41 ± 7	D_{2000}	229.9 ± 1.8	$\sigma_8(0.38)$	$0.6631^{+0.0044}_{-0.0051}$
$\boldsymbol{A^{tSZ}_{143}}$	$3.8^{+1.7}_{-2.6}$	$n_{s,0.002}$	0.9667 ± 0.0041	$f\sigma_8(0.51)$	0.4731 ± 0.0045
$\boldsymbol{r^{PS}_{143\times217}}$	0.65 ± 0.13	Y_P	$0.245334^{+0.000085}_{-0.000071}$	$\sigma_8(0.51)$	$0.6206^{+0.0040}_{-0.0048}$
$\boldsymbol{r^{CIB}_{143\times217}}$	$0.58^{+0.42}_{-0.13}$	Y_P^{BBN}	$0.246660^{+0.000086}_{-0.000071}$	$f\sigma_8(0.61)$	0.4681 ± 0.0041
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	10^5D/H	2.613 ± 0.036	$\sigma_8(0.61)$	$0.5905^{+0.0038}_{-0.0046}$
$\boldsymbol{A^{kSZ}}$	—	Age/Gyr	13.805 ± 0.027	$f\sigma_8(2.33)$	$0.2978^{+0.0019}_{-0.0024}$
$\boldsymbol{A^{dust}_{100}}$	1.01 ± 0.20	z_*	1090.03 ± 0.28	$\sigma_8(2.33)$	$0.3070^{+0.0020}_{-0.0026}$
$\boldsymbol{A^{dust}_{143}}$	0.97 ± 0.17	r_*	144.77 ± 0.28	f^{143}_{2000}	30.5 ± 3.0
$\boldsymbol{A^{dust}_{217}}$	0.97 ± 0.10	$100\theta_*$	1.04122 ± 0.00041	f^{217}_{2000}	107.4 ± 2.0
$\boldsymbol{A^{dust}_{143\times217}}$	1.03 ± 0.16	$D_M(z_*)$/Gpc	13.904 ± 0.028	$f^{143\times217}_{2000}$	32.7 ± 2.1
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	z_{drag}	1059.54 ± 0.43	$\chi^2_{lensing}$	9.35 ± 0.77
$\boldsymbol{c_{217}}$	1.0012 ± 0.0015	r_{drag}	147.49 ± 0.31	χ^2_{simall}	397.2 ± 1.9
H_0	67.58 ± 0.49	k_D	0.14034 ± 0.00041	χ^2_{lowl}	23.04 ± 0.84
Ω_Λ	0.6891 ± 0.0065	$100\theta_D$	0.16101 ± 0.00025	$\chi^2_{CamSpec}$	7063.0 ± 5.2
Ω_m	0.3109 ± 0.0065	z_{eq}	3378 ± 25	χ^2_{6DF}	0.056 ± 0.070
$\Omega_m h^2$	0.1420 ± 0.0011	k_{eq}	0.010309 ± 0.000077	χ^2_{MGS}	1.29 ± 0.46
$\Omega_m h^3$	0.09595 ± 0.00044	$100\theta_{eq}$	0.8174 ± 0.0047	$\chi^2_{DR12BAO}$	4.8 ± 1.5
σ_8	0.8094 ± 0.0060	$100\theta_{s,eq}$	0.4516 ± 0.0024	χ^2_{prior}	7.6 ± 3.5
S_8	0.824 ± 0.012	$H(0.15)$	72.85 ± 0.43	χ^2_{CMB}	7492.6 ± 5.3
$\sigma_8\Omega_m^{0.5}$	0.4513 ± 0.0066	$D_M(0.15)$	641.5 ± 4.2	χ^2_{BAO}	6.1 ± 1.2
$\sigma_8\Omega_m^{0.25}$	0.6044 ± 0.0062	$H(0.38)$	82.95 ± 0.32		

$\bar{\chi}^2_{eff} = 7506.32$; $R - 1 = 0.00854$

2.123 base_CamSpecHM_TT_lowl_lowE_lensing_post_Riess18_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	$0.02234^{+0.00020}_{-0.00018}$	$\sigma_8\Omega_m^{0.25}$	0.6001 ± 0.0077	$D_M(0.15)$	637.3 ± 5.8
$\boldsymbol{\Omega_c h^2}$	0.1181 ± 0.0015	$\sigma_8/h^{0.5}$	0.979 ± 0.011	$H(0.38)$	83.28 ± 0.44
$\boldsymbol{100\theta_{MC}}$	1.04121 ± 0.00045	$r_{drag}h$	100.5 ± 1.2	$D_M(0.38)$	1521 ± 12
$\boldsymbol{\tau}$	$0.0588^{+0.0066}_{-0.0088}$	$\langle d^2\rangle^{1/2}$	2.422 ± 0.025	$H(0.51)$	89.92 ± 0.35
$\boldsymbol{\ln(10^{10}A_s)}$	$3.048^{+0.013}_{-0.016}$	z_{re}	$8.09^{+0.67}_{-0.85}$	$D_M(0.51)$	1972 ± 14
$\boldsymbol{n_s}$	0.9692 ± 0.0048	$10^9 A_s$	$2.107^{+0.028}_{-0.035}$	$H(0.61)$	95.48 ± 0.29
$\boldsymbol{y_{cal}}$	1.0008 ± 0.0025	$10^9 A_s e^{-2\tau}$	$1.873^{+0.012}_{-0.011}$	$D_M(0.61)$	2296 ± 15
$\boldsymbol{A_{100}^{PS}}$	241 ± 25	D_{40}	1221 ± 13	$H(2.33)$	235.32 ± 0.92
$\boldsymbol{A_{143}^{PS}}$	40 ± 8	D_{220}	5724 ± 40	$D_M(2.33)$	5757 ± 14
$\boldsymbol{A_{217}^{PS}}$	102 ± 10	D_{810}	2535 ± 14	$f\sigma_8(0.15)$	$0.4509^{+0.0082}_{-0.0074}$
$\boldsymbol{A_{217}^{CIB}}$	40 ± 7	D_{1420}	816.4 ± 5.0	$\sigma_8(0.15)$	0.7473 ± 0.0058
$\boldsymbol{A_{143}^{tSZ}}$	$3.9^{+1.7}_{-2.5}$	D_{2000}	230.5 ± 1.8	$f\sigma_8(0.38)$	$0.4708^{+0.0066}_{-0.0059}$
$\boldsymbol{r_{143\times217}^{PS}}$	0.66 ± 0.12	$n_{s,0.002}$	0.9692 ± 0.0048	$\sigma_8(0.38)$	0.6632 ± 0.0050
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.57^{+0.41}_{-0.15}$	Y_P	$0.245379^{+0.000086}_{-0.000068}$	$f\sigma_8(0.51)$	$0.4702^{+0.0057}_{-0.0052}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	$0.246705^{+0.000086}_{-0.000068}$	$\sigma_8(0.51)$	$0.6210^{+0.0044}_{-0.0051}$
$\boldsymbol{A^{kSZ}}$	—	10^5D/H	$2.593^{+0.033}_{-0.039}$	$f\sigma_8(0.61)$	0.4658 ± 0.0050
$\boldsymbol{A_{100}^{dust}}$	1.02 ± 0.20	Age/Gyr	13.784 ± 0.030	$\sigma_8(0.61)$	$0.5911^{+0.0041}_{-0.0049}$
$\boldsymbol{A_{143}^{dust}}$	0.97 ± 0.17	z_*	1089.80 ± 0.32	$f\sigma_8(2.33)$	$0.2983^{+0.0021}_{-0.0026}$
$\boldsymbol{A_{217}^{dust}}$	0.97 ± 0.10	r_*	144.95 ± 0.36	$\sigma_8(2.33)$	$0.3079^{+0.0023}_{-0.0028}$
$\boldsymbol{A_{143\times217}^{dust}}$	1.03 ± 0.16	$100\theta_*$	1.04140 ± 0.00045	f_{2000}^{143}	29.9 ± 2.9
$\boldsymbol{c_{100}}$	0.9976 ± 0.0010	$D_M(z_*)$/Gpc	13.918 ± 0.034	f_{2000}^{217}	107.0 ± 2.0
$\boldsymbol{c_{217}}$	1.0012 ± 0.0015	z_{drag}	1059.72 ± 0.42	$f_{2000}^{143\times217}$	32.3 ± 2.1
H_0	68.09 ± 0.69	r_{drag}	147.63 ± 0.38	$\chi^2_{lensing}$	9.8 ± 1.4
Ω_Λ	0.6955 ± 0.0090	k_D	$0.14027^{+0.00046}_{-0.00042}$	χ^2_{simall}	397.9 ± 2.6
Ω_m	0.3045 ± 0.0090	$100\theta_D$	0.16091 ± 0.00024	χ^2_{lowl}	22.67 ± 0.87
$\Omega_m h^2$	0.1411 ± 0.0014	z_{eq}	3357 ± 34	$\chi^2_{CamSpec}$	7064.4 ± 5.5
$\Omega_m h^3$	0.09607 ± 0.00042	k_{eq}	0.01024 ± 0.00010	$\chi^2_{H073p45}$	10.6 ± 2.6
σ_8	0.8079 ± 0.0066	$100\theta_{eq}$	0.8217 ± 0.0066	χ^2_{prior}	7.4 ± 3.4
S_8	$0.814^{+0.016}_{-0.014}$	$100\theta_{s,eq}$	0.4538 ± 0.0034	χ^2_{CMB}	7494.7 ± 6.3
$\sigma_8\Omega_m^{0.5}$	$0.4458^{+0.0088}_{-0.0079}$	$H(0.15)$	73.29 ± 0.59		

$\bar{\chi}^2_{eff} = 7512.76$; $R - 1 = 0.03489$

2.124 base_CamSpecHM_TT_lowl_lowE_lensing_post_BAO_Riess18_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02233 ± 0.00019	$\sigma_8/h^{0.5}$	0.9796 ± 0.0090	$D_M(0.38)$	1522.1 ± 8.0
$\boldsymbol{\Omega_c h^2}$	0.1182 ± 0.0010	$r_{drag}h$	100.46 ± 0.80	$H(0.51)$	89.90 ± 0.26
$\boldsymbol{100\theta_{MC}}$	1.04119 ± 0.00041	$\langle d^2\rangle^{1/2}$	2.423 ± 0.021	$D_M(0.51)$	1972.8 ± 9.5
$\boldsymbol{\tau}$	$0.0586^{+0.0066}_{-0.0078}$	z_{re}	8.07 ± 0.70	$H(0.61)$	95.47 ± 0.22
$\boldsymbol{\ln(10^{10}A_s)}$	$3.048^{+0.013}_{-0.016}$	$10^9 A_s$	$2.107^{+0.028}_{-0.033}$	$D_M(0.61)$	2296 ± 10
$\boldsymbol{n_s}$	0.9690 ± 0.0040	$10^9 A_s e^{-2\tau}$	1.874 ± 0.011	$H(2.33)$	235.36 ± 0.66
$\boldsymbol{y_{cal}}$	1.0008 ± 0.0025	D_{40}	1222 ± 12	$D_M(2.33)$	5757 ± 11
$\boldsymbol{A^{PS}_{100}}$	241 ± 25	D_{220}	5725 ± 40	$f\sigma_8(0.15)$	0.4513 ± 0.0060
$\boldsymbol{A^{PS}_{143}}$	40 ± 8	D_{810}	2535 ± 13	$\sigma_8(0.15)$	0.7474 ± 0.0057
$\boldsymbol{A^{PS}_{217}}$	102 ± 10	D_{1420}	816.5 ± 5.0	$f\sigma_8(0.38)$	0.4711 ± 0.0050
$\boldsymbol{A^{CIB}_{217}}$	40 ± 7	D_{2000}	230.5 ± 1.7	$\sigma_8(0.38)$	$0.6632^{+0.0047}_{-0.0053}$
$\boldsymbol{A^{tSZ}_{143}}$	$3.8^{+1.8}_{-2.6}$	$n_{s,0.002}$	0.9690 ± 0.0040	$f\sigma_8(0.51)$	0.4705 ± 0.0046
$\boldsymbol{r^{PS}_{143\times217}}$	0.66 ± 0.12	Y_P	$0.245378^{+0.000080}_{-0.000068}$	$\sigma_8(0.51)$	$0.6210^{+0.0044}_{-0.0050}$
$\boldsymbol{r^{CIB}_{143\times217}}$	$0.57^{+0.40}_{-0.16}$	Y_P^{BBN}	$0.246704^{+0.000081}_{-0.000068}$	$f\sigma_8(0.61)$	0.4660 ± 0.0042
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	10^5D/H	$2.593^{+0.033}_{-0.037}$	$\sigma_8(0.61)$	$0.5911^{+0.0042}_{-0.0048}$
$\boldsymbol{A^{kSZ}}$	—	Age/Gyr	13.785 ± 0.026	$f\sigma_8(2.33)$	$0.2983^{+0.0021}_{-0.0024}$
$\boldsymbol{A^{dust}_{100}}$	1.02 ± 0.19	z_*	1089.81 ± 0.27	$\sigma_8(2.33)$	$0.3078^{+0.0023}_{-0.0026}$
$\boldsymbol{A^{dust}_{143}}$	0.97 ± 0.17	r_*	144.93 ± 0.27	f^{143}_{2000}	29.9 ± 2.9
$\boldsymbol{A^{dust}_{217}}$	0.97 ± 0.10	$100\theta_*$	1.04138 ± 0.00040	f^{217}_{2000}	107.0 ± 2.1
$\boldsymbol{A^{dust}_{143\times217}}$	1.02 ± 0.16	$D_M(z_*)$/Gpc	13.917 ± 0.027	$f^{143\times217}_{2000}$	32.3 ± 2.1
$\boldsymbol{c_{100}}$	0.9976 ± 0.0010	z_{drag}	1059.72 ± 0.42	$\chi^2_{lensing}$	9.6 ± 1.1
$\boldsymbol{c_{217}}$	1.0012 ± 0.0015	r_{drag}	147.61 ± 0.30	χ^2_{simall}	397.7 ± 2.3
H_0	68.05 ± 0.47	k_D	0.14029 ± 0.00041	χ^2_{lowl}	22.69 ± 0.79
Ω_Λ	0.6951 ± 0.0061	$100\theta_D$	0.16091 ± 0.00024	$\chi^2_{CamSpec}$	7064.1 ± 5.4
Ω_m	0.3049 ± 0.0061	z_{eq}	3358 ± 24	$\chi^2_{H073p45}$	10.6 ± 1.8
$\Omega_m h^2$	0.1412 ± 0.0010	k_{eq}	0.010250 ± 0.000073	χ^2_{6DF}	0.027 ± 0.038
$\Omega_m h^3$	0.09607 ± 0.00043	$100\theta_{eq}$	0.8214 ± 0.0045	χ^2_{MGS}	1.74 ± 0.49
σ_8	0.8081 ± 0.0063	$100\theta_{s,eq}$	0.4536 ± 0.0023	$\chi^2_{DR12BAO}$	3.90 ± 0.76
S_8	0.815 ± 0.012	$H(0.15)$	73.26 ± 0.41	χ^2_{prior}	7.5 ± 3.5
$\sigma_8\Omega_m^{0.5}$	0.4462 ± 0.0063	$D_M(0.15)$	637.5 ± 4.0	χ^2_{CMB}	7494.1 ± 5.6
$\sigma_8\Omega_m^{0.25}$	0.6005 ± 0.0062	$H(0.38)$	83.25 ± 0.31	χ^2_{BAO}	5.67 ± 0.67

$\bar{\chi}^2_{eff} = 7517.92$; $R - 1 = 0.02825$

2.125 base_CamSpecHM_TT_lowl_lowE_lensing_post_Pantheon_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02219 ± 0.00020	$\sigma_8\Omega_m^{0.25}$	0.6069 ± 0.0074	$D_M(0.15)$	643.8 ± 5.5
$\boldsymbol{\Omega_c h^2}$	0.1197 ± 0.0014	$\sigma_8/h^{0.5}$	0.988 ± 0.010	$H(0.38)$	82.79 ± 0.41
$\boldsymbol{100\theta_{MC}}$	1.04093 ± 0.00044	$r_{drag}h$	99.2 ± 1.1	$D_M(0.38)$	1535 ± 11
$\boldsymbol{\tau}$	$0.0550^{+0.0053}_{-0.0082}$	$\langle d^2\rangle^{1/2}$	2.441 ± 0.024	$H(0.51)$	89.54 ± 0.33
$\boldsymbol{\ln(10^{10}A_s)}$	$3.043^{+0.011}_{-0.015}$	z_{re}	$7.77^{+0.59}_{-0.79}$	$D_M(0.51)$	1987 ± 13
$\boldsymbol{n_s}$	0.9653 ± 0.0046	$10^9 A_s$	$2.097^{+0.023}_{-0.032}$	$H(0.61)$	95.17 ± 0.28
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.878 ± 0.011	$D_M(0.61)$	2312 ± 14
$\boldsymbol{A_{100}^{PS}}$	242 ± 25	D_{40}	1227 ± 12	$H(2.33)$	236.17 ± 0.87
$\boldsymbol{A_{143}^{PS}}$	41 ± 8	D_{220}	5710 ± 41	$D_M(2.33)$	5770 ± 13
$\boldsymbol{A_{217}^{PS}}$	101 ± 10	D_{810}	2534 ± 14	$f\sigma_8(0.15)$	0.4588 ± 0.0077
$\boldsymbol{A_{217}^{CIB}}$	41 ± 7	D_{1420}	814.6 ± 5.1	$\sigma_8(0.15)$	0.7486 ± 0.0054
$\boldsymbol{A_{143}^{tSZ}}$	$3.8^{+1.7}_{-2.6}$	D_{2000}	229.7 ± 1.8	$f\sigma_8(0.38)$	0.4765 ± 0.0060
$\boldsymbol{r_{143\times217}^{PS}}$	0.65 ± 0.13	$n_{s,0.002}$	0.9653 ± 0.0046	$\sigma_8(0.38)$	$0.6632^{+0.0042}_{-0.0050}$
$\boldsymbol{r_{143\times217}^{CIB}}$	> 0.461	Y_P	$0.245319^{+0.000093}_{-0.000074}$	$f\sigma_8(0.51)$	0.4747 ± 0.0052
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	$0.246645^{+0.000093}_{-0.000074}$	$\sigma_8(0.51)$	$0.6205^{+0.0038}_{-0.0047}$
$\boldsymbol{A^{kSZ}}$	—	10^5D/H	2.620 ± 0.038	$f\sigma_8(0.61)$	0.4695 ± 0.0046
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.20	Age/Gyr	13.814 ± 0.030	$\sigma_8(0.61)$	$0.5904^{+0.0036}_{-0.0046}$
$\boldsymbol{A_{143}^{dust}}$	0.97 ± 0.18	z_*	1090.12 ± 0.32	$f\sigma_8(2.33)$	$0.2976^{+0.0018}_{-0.0024}$
$\boldsymbol{A_{217}^{dust}}$	0.97 ± 0.10	r_*	144.65 ± 0.34	$\sigma_8(2.33)$	$0.3066^{+0.0019}_{-0.0026}$
$\boldsymbol{A_{143\times217}^{dust}}$	1.03 ± 0.16	$100\theta_*$	1.04113 ± 0.00044	f_{2000}^{143}	30.7 ± 3.0
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	$D_M(z_*)$/Gpc	13.894 ± 0.032	f_{2000}^{217}	107.5 ± 2.0
$\boldsymbol{c_{217}}$	1.0012 ± 0.0015	z_{drag}	1059.50 ± 0.43	$f_{2000}^{143\times217}$	32.9 ± 2.1
H_0	67.33 ± 0.64	r_{drag}	147.38 ± 0.36	$\chi^2_{lensing}$	9.41 ± 0.82
Ω_Λ	0.6855 ± 0.0088	k_D	0.14043 ± 0.00043	χ^2_{simall}	397.0 ± 1.8
Ω_m	0.3145 ± 0.0088	$100\theta_D$	0.16102 ± 0.00025	χ^2_{lowl}	23.28 ± 0.95
$\Omega_m h^2$	0.1425 ± 0.0014	z_{eq}	3390 ± 32	$\chi^2_{CamSpec}$	7062.8 ± 5.2
$\Omega_m h^3$	0.09594 ± 0.00044	k_{eq}	0.010347 ± 0.000099	χ^2_{JLA}	1036.67 ± 0.62
σ_8	0.8104 ± 0.0061	$100\theta_{eq}$	0.8150 ± 0.0061	χ^2_{prior}	7.6 ± 3.5
S_8	0.830 ± 0.015	$100\theta_{s,eq}$	0.4504 ± 0.0031	χ^2_{CMB}	7492.5 ± 5.3
$\sigma_8\Omega_m^{0.5}$	0.4545 ± 0.0083	$H(0.15)$	72.63 ± 0.55		

$\bar{\chi}^2_{eff} = 8536.74$; $R - 1 = 0.00645$

2.126 base_CamSpecHM_TT_lowl_lowE_lensing_post_BAO_JLA_Riess18_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02234 ± 0.00019	$r_{\rm drag} h$	100.55 ± 0.79	$D_{\rm M}(0.51)$	1971.8 ± 9.5
$\boldsymbol{\Omega_c h^2}$	0.1181 ± 0.0010	$\langle d^2 \rangle^{1/2}$	2.422 ± 0.021	$H(0.61)$	95.48 ± 0.23
$\boldsymbol{100\theta_{\rm MC}}$	1.04120 ± 0.00041	$z_{\rm re}$	8.08 ± 0.70	$D_{\rm M}(0.61)$	2295 ± 10
$\boldsymbol{\tau}$	$0.0587^{+0.0067}_{-0.0078}$	$10^9 A_{\rm s}$	2.107 ± 0.030	$H(2.33)$	235.29 ± 0.65
$\boldsymbol{\ln(10^{10} A_{\rm s})}$	3.048 ± 0.014	$10^9 A_{\rm s} e^{-2\tau}$	1.874 ± 0.011	$D_{\rm M}(2.33)$	5757 ± 11
$\boldsymbol{n_{\rm s}}$	0.9692 ± 0.0039	D_{40}	1221 ± 12	$f\sigma_8(0.15)$	0.4507 ± 0.0060
$\boldsymbol{y_{\rm cal}}$	1.0008 ± 0.0026	D_{220}	5726 ± 40	$\sigma_8(0.15)$	0.7471 ± 0.0056
$\boldsymbol{A^{\rm PS}_{100}}$	242 ± 25	D_{810}	2535 ± 14	$f\sigma_8(0.38)$	0.4706 ± 0.0051
$\boldsymbol{A^{\rm PS}_{143}}$	40 ± 8	D_{1420}	816.6 ± 5.1	$\sigma_8(0.38)$	0.6631 ± 0.0049
$\boldsymbol{A^{\rm PS}_{217}}$	102 ± 10	D_{2000}	230.6 ± 1.7	$f\sigma_8(0.51)$	0.4700 ± 0.0046
$\boldsymbol{A^{\rm CIB}_{217}}$	40 ± 7	$n_{\rm s,0.002}$	0.9692 ± 0.0039	$\sigma_8(0.51)$	0.6209 ± 0.0046
$\boldsymbol{A^{\rm tSZ}_{143}}$	$3.8^{+1.7}_{-2.6}$	$Y_{\rm P}$	0.245381 ± 0.000075	$f\sigma_8(0.61)$	0.4657 ± 0.0042
$\boldsymbol{r^{\rm PS}_{143\times217}}$	0.66 ± 0.13	$Y_{\rm P}^{\rm BBN}$	0.246707 ± 0.000075	$\sigma_8(0.61)$	0.5910 ± 0.0044
$\boldsymbol{r^{\rm CIB}_{143\times217}}$	$0.57^{+0.39}_{-0.18}$	10^5D/H	2.592 ± 0.035	$f\sigma_8(2.33)$	0.2983 ± 0.0022
$\boldsymbol{\xi^{\rm tSZ\times CIB}}$	—	Age/Gyr	13.784 ± 0.026	$\sigma_8(2.33)$	0.3078 ± 0.0023
$\boldsymbol{A^{\rm kSZ}}$	—	z_*	1089.79 ± 0.27	f^{143}_{2000}	29.9 ± 2.9
$\boldsymbol{A^{\rm dust}_{100}}$	1.02 ± 0.19	r_*	144.95 ± 0.27	f^{217}_{2000}	107.0 ± 2.1
$\boldsymbol{A^{\rm dust}_{143}}$	0.96 ± 0.17	$100\theta_*$	1.04139 ± 0.00040	$f^{143\times217}_{2000}$	32.3 ± 2.1
$\boldsymbol{A^{\rm dust}_{217}}$	0.97 ± 0.10	$D_{\rm M}(z_*)$/Gpc	13.919 ± 0.027	$\chi^2_{\rm lensing}$	9.6 ± 1.1
$\boldsymbol{A^{\rm dust}_{143\times217}}$	1.02 ± 0.16	$z_{\rm drag}$	1059.73 ± 0.42	$\chi^2_{\rm simall}$	397.7 ± 2.3
$\boldsymbol{c_{100}}$	0.9976 ± 0.0010	$r_{\rm drag}$	147.64 ± 0.30	$\chi^2_{\rm lowl}$	22.66 ± 0.77
$\boldsymbol{c_{217}}$	$1.0012^{+0.0015}_{-0.0016}$	$k_{\rm D}$	0.14027 ± 0.00040	$\chi^2_{\rm CamSpec}$	7064.4 ± 5.4
H_0	68.10 ± 0.46	$100\theta_{\rm D}$	0.16091 ± 0.00025	$\chi^2_{\rm H073p45}$	10.4 ± 1.8
Ω_Λ	0.6958 ± 0.0060	$z_{\rm eq}$	3356 ± 24	$\chi^2_{\rm JLA}$	706.61 ± 0.11
$\Omega_{\rm m}$	0.3042 ± 0.0060	$k_{\rm eq}$	0.010242 ± 0.000072	$\chi^2_{\rm 6DF}$	0.026 ± 0.038
$\Omega_{\rm m} h^2$	0.14107 ± 0.00099	$100\theta_{\rm eq}$	0.8219 ± 0.0044	$\chi^2_{\rm MGS}$	1.80 ± 0.49
$\Omega_{\rm m} h^3$	0.09607 ± 0.00043	$100\theta_{\rm s,eq}$	0.4539 ± 0.0023	$\chi^2_{\rm DR12BAO}$	3.84 ± 0.70
σ_8	0.8077 ± 0.0063	$H(0.15)$	73.31 ± 0.40	$\chi^2_{\rm prior}$	7.5 ± 3.6
S_8	0.813 ± 0.012	$D_{\rm M}(0.15)$	637.1 ± 3.9	$\chi^2_{\rm CMB}$	7494.4 ± 5.7
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4455 ± 0.0063	$H(0.38)$	83.28 ± 0.31	$\chi^2_{\rm BAO}$	5.67 ± 0.68
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.5999 ± 0.0062	$D_{\rm M}(0.38)$	1521.2 ± 8.0		
$\sigma_8 / h^{0.5}$	0.9788 ± 0.0090	$H(0.51)$	89.92 ± 0.26		

$\bar{\chi}^2_{\rm eff} = 8224.63$; $R - 1 = 0.08788$

2.127 base_CamSpecHM_TT_lowl_lowE_lensing_post_BAO_Pantheon_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02224 ± 0.00019	$\sigma_8/h^{0.5}$	0.9837 ± 0.0088	$D_M(0.38)$	1528.9 ± 8.2
$\boldsymbol{\Omega_c h^2}$	0.1189 ± 0.0010	$r_{drag} h$	99.81 ± 0.80	$H(0.51)$	89.69 ± 0.26
$\boldsymbol{100\theta_{MC}}$	1.04104 ± 0.00041	$\langle d^2 \rangle^{1/2}$	2.432 ± 0.021	$D_M(0.51)$	1980.8 ± 9.7
$\boldsymbol{\tau}$	$0.0565^{+0.0060}_{-0.0078}$	z_{re}	$7.91^{+0.64}_{-0.76}$	$H(0.61)$	95.29 ± 0.23
$\boldsymbol{\ln(10^{10} A_s)}$	$3.045^{+0.012}_{-0.015}$	$10^9 A_s$	$2.101^{+0.025}_{-0.033}$	$D_M(0.61)$	2305 ± 10
$\boldsymbol{n_s}$	0.9671 ± 0.0041	$10^9 A_s e^{-2\tau}$	1.876 ± 0.011	$H(2.33)$	235.75 ± 0.67
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0025	D_{40}	1224 ± 12	$D_M(2.33)$	5765 ± 11
$\boldsymbol{A^{PS}_{100}}$	242 ± 25	D_{220}	5716 ± 40	$f\sigma_8(0.15)$	0.4551 ± 0.0059
$\boldsymbol{A^{PS}_{143}}$	41 ± 8	D_{810}	2534 ± 13	$\sigma_8(0.15)$	0.7479 ± 0.0055
$\boldsymbol{A^{PS}_{217}}$	101 ± 10	D_{1420}	815.3 ± 5.0	$f\sigma_8(0.38)$	0.4738 ± 0.0050
$\boldsymbol{A^{CIB}_{217}}$	41 ± 7	D_{2000}	230.0 ± 1.8	$\sigma_8(0.38)$	$0.6631^{+0.0044}_{-0.0052}$
$\boldsymbol{A^{tSZ}_{143}}$	$3.8^{+1.8}_{-2.6}$	$n_{s,0.002}$	0.9671 ± 0.0041	$f\sigma_8(0.51)$	0.4726 ± 0.0044
$\boldsymbol{r^{PS}_{143\times217}}$	0.65 ± 0.13	Y_P	$0.245339^{+0.000084}_{-0.000070}$	$\sigma_8(0.51)$	$0.6206^{+0.0041}_{-0.0049}$
$\boldsymbol{r^{CIB}_{143\times217}}$	$0.58^{+0.42}_{-0.13}$	Y_P^{BBN}	$0.246666^{+0.000084}_{-0.000070}$	$f\sigma_8(0.61)$	0.4678 ± 0.0041
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	10^5D/H	2.611 ± 0.035	$\sigma_8(0.61)$	$0.5906^{+0.0039}_{-0.0047}$
$\boldsymbol{A^{kSZ}}$	—	Age/Gyr	13.803 ± 0.026	$f\sigma_8(2.33)$	$0.2978^{+0.0020}_{-0.0024}$
$\boldsymbol{A^{dust}_{100}}$	1.01 ± 0.20	z_*	1090.00 ± 0.27	$\sigma_8(2.33)$	$0.3071^{+0.0021}_{-0.0026}$
$\boldsymbol{A^{dust}_{143}}$	0.97 ± 0.17	r_*	144.80 ± 0.28	f^{143}_{2000}	30.4 ± 3.0
$\boldsymbol{A^{dust}_{217}}$	0.97 ± 0.10	$100\theta_*$	1.04124 ± 0.00041	f^{217}_{2000}	107.3 ± 2.0
$\boldsymbol{A^{dust}_{143\times217}}$	1.03 ± 0.16	$D_M(z_*)$/Gpc	13.907 ± 0.027	$f^{143\times217}_{2000}$	32.7 ± 2.1
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	z_{drag}	1059.55 ± 0.42	$\chi^2_{lensing}$	9.37 ± 0.80
$\boldsymbol{c_{217}}$	1.0012 ± 0.0015	r_{drag}	147.52 ± 0.31	χ^2_{simall}	397.3 ± 2.0
H_0	67.66 ± 0.47	k_D	0.14032 ± 0.00041	χ^2_{lowl}	22.98 ± 0.83
Ω_Λ	0.6901 ± 0.0062	$100\theta_D$	0.16100 ± 0.00025	$\chi^2_{CamSpec}$	7063.2 ± 5.2
Ω_m	0.3099 ± 0.0062	z_{eq}	3374 ± 24	χ^2_{JLA}	1036.34 ± 0.32
$\Omega_m h^2$	0.1418 ± 0.0010	k_{eq}	0.010298 ± 0.000074	χ^2_{6DF}	0.046 ± 0.059
$\Omega_m h^3$	0.09596 ± 0.00044	$100\theta_{eq}$	0.8181 ± 0.0045	χ^2_{MGS}	1.36 ± 0.45
σ_8	0.8092 ± 0.0061	$100\theta_{s,eq}$	0.4520 ± 0.0023	$\chi^2_{DR12BAO}$	4.5 ± 1.3
S_8	0.822 ± 0.012	$H(0.15)$	72.92 ± 0.41	χ^2_{prior}	7.6 ± 3.5
$\sigma_8 \Omega_m^{0.5}$	0.4504 ± 0.0063	$D_M(0.15)$	640.9 ± 4.0	χ^2_{CMB}	7492.8 ± 5.4
$\sigma_8 \Omega_m^{0.25}$	0.6037 ± 0.0061	$H(0.38)$	83.00 ± 0.31	χ^2_{BAO}	6.0 ± 1.0

$\bar{\chi}^2_{eff} = 8542.63$; $R - 1 = 0.00995$

2.128 base_CamSpecHM_TT_lowl_lowE_lensing_post_BAO_Pantheon_Riess18_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02234 ± 0.00018	$r_{\rm drag} h$	100.52 ± 0.77	$D_{\rm M}(0.51)$	1972.0 ± 9.2
$\boldsymbol{\Omega_c h^2}$	0.11812 ± 0.00099	$\langle d^2 \rangle^{1/2}$	2.422 ± 0.021	$H(0.61)$	95.48 ± 0.22
$\boldsymbol{100\theta_{\rm MC}}$	1.04120 ± 0.00041	$z_{\rm re}$	8.09 ± 0.70	$D_{\rm M}(0.61)$	2296 ± 10
$\boldsymbol{\tau}$	$0.0588^{+0.0066}_{-0.0078}$	$10^9 A_{\rm s}$	$2.107^{+0.028}_{-0.033}$	$H(2.33)$	235.31 ± 0.65
$\boldsymbol{\ln(10^{10} A_{\rm s})}$	$3.048^{+0.014}_{-0.016}$	$10^9 A_{\rm s} e^{-2\tau}$	1.874 ± 0.011	$D_{\rm M}(2.33)$	5757 ± 11
$\boldsymbol{n_{\rm s}}$	0.9692 ± 0.0040	D_{40}	1221 ± 12	$f\sigma_8(0.15)$	0.4509 ± 0.0058
$\boldsymbol{y_{\rm cal}}$	1.0009 ± 0.0025	D_{220}	5726 ± 40	$\sigma_8(0.15)$	0.7473 ± 0.0057
$\boldsymbol{A^{\rm PS}_{100}}$	241 ± 25	D_{810}	2535 ± 13	$f\sigma_8(0.38)$	0.4708 ± 0.0050
$\boldsymbol{A^{\rm PS}_{143}}$	40 ± 8	D_{1420}	816.6 ± 5.0	$\sigma_8(0.38)$	$0.6632^{+0.0048}_{-0.0053}$
$\boldsymbol{A^{\rm PS}_{217}}$	102 ± 10	D_{2000}	230.6 ± 1.7	$f\sigma_8(0.51)$	0.4702 ± 0.0045
$\boldsymbol{A^{\rm CIB}_{217}}$	40 ± 7	$n_{\rm s,0.002}$	0.9692 ± 0.0040	$\sigma_8(0.51)$	$0.6210^{+0.0044}_{-0.0050}$
$\boldsymbol{A^{\rm tSZ}_{143}}$	$3.8^{+1.8}_{-2.6}$	$Y_{\rm P}$	$0.245380^{+0.000080}_{-0.000067}$	$f\sigma_8(0.61)$	0.4658 ± 0.0042
$\boldsymbol{r^{\rm PS}_{143\times217}}$	0.66 ± 0.12	$Y^{\rm BBN}_{\rm P}$	$0.246707^{+0.000080}_{-0.000067}$	$\sigma_8(0.61)$	$0.5911^{+0.0042}_{-0.0048}$
$\boldsymbol{r^{\rm CIB}_{143\times217}}$	$0.57^{+0.40}_{-0.17}$	10^5D/H	2.592 ± 0.034	$f\sigma_8(2.33)$	$0.2983^{+0.0021}_{-0.0024}$
$\boldsymbol{\xi^{\rm tSZ\times CIB}}$	—	Age/Gyr	13.784 ± 0.025	$\sigma_8(2.33)$	$0.3079^{+0.0023}_{-0.0026}$
$\boldsymbol{A^{\rm kSZ}}$	—	z_*	1089.80 ± 0.26	f^{143}_{2000}	29.9 ± 2.9
$\boldsymbol{A^{\rm dust}_{100}}$	1.02 ± 0.19	r_*	144.94 ± 0.27	f^{217}_{2000}	107.0 ± 2.1
$\boldsymbol{A^{\rm dust}_{143}}$	0.97 ± 0.17	$100\theta_*$	1.04139 ± 0.00040	$f^{143\times217}_{2000}$	32.2 ± 2.1
$\boldsymbol{A^{\rm dust}_{217}}$	0.97 ± 0.10	$D_{\rm M}(z_*)$/Gpc	13.918 ± 0.027	$\chi^2_{\rm lensing}$	9.6 ± 1.1
$\boldsymbol{A^{\rm dust}_{143\times217}}$	1.02 ± 0.16	$z_{\rm drag}$	1059.73 ± 0.42	$\chi^2_{\rm simall}$	397.7 ± 2.3
$\boldsymbol{c_{100}}$	0.9976 ± 0.0010	$r_{\rm drag}$	147.63 ± 0.30	$\chi^2_{\rm lowl}$	22.66 ± 0.78
$\boldsymbol{c_{217}}$	1.0012 ± 0.0015	$k_{\rm D}$	0.14028 ± 0.00040	$\chi^2_{\rm CamSpec}$	7064.2 ± 5.4
H_0	68.09 ± 0.45	$100\theta_{\rm D}$	0.16091 ± 0.00024	$\chi^2_{\rm H073p45}$	10.5 ± 1.8
Ω_Λ	0.6956 ± 0.0058	$z_{\rm eq}$	3356 ± 23	$\chi^2_{\rm JLA}$	1036.12 ± 0.19
$\Omega_{\rm m}$	0.3044 ± 0.0058	$k_{\rm eq}$	0.010244 ± 0.000071	$\chi^2_{\rm 6DF}$	0.025 ± 0.035
$\Omega_{\rm m} h^2$	0.14110 ± 0.00097	$100\theta_{\rm eq}$	0.8217 ± 0.0043	$\chi^2_{\rm MGS}$	1.78 ± 0.47
$\Omega_{\rm m} h^3$	0.09607 ± 0.00043	$100\theta_{\rm s,eq}$	0.4538 ± 0.0022	$\chi^2_{\rm DR12BAO}$	3.83 ± 0.67
σ_8	0.8080 ± 0.0063	$H(0.15)$	73.29 ± 0.39	$\chi^2_{\rm prior}$	7.5 ± 3.5
S_8	0.814 ± 0.011	$D_{\rm M}(0.15)$	637.2 ± 3.8	$\chi^2_{\rm CMB}$	7494.2 ± 5.6
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4458 ± 0.0062	$H(0.38)$	83.28 ± 0.30	$\chi^2_{\rm BAO}$	5.64 ± 0.62
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.6001 ± 0.0061	$D_{\rm M}(0.38)$	1521.4 ± 7.8		
$\sigma_8 / h^{0.5}$	0.9792 ± 0.0089	$H(0.51)$	89.92 ± 0.25		

$\bar{\chi}^2_{\rm eff} = 8553.98$; $R - 1 = 0.03128$

2.129 base_CamSpecHM_TTTEEE_lowl_lowE_lensing

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022277	0.02229 ± 0.00015	S_8	0.8292	0.828 ± 0.013	$100\theta_{s,eq}$	0.44992	0.4502 ± 0.0026
$\boldsymbol{\Omega_c h^2}$	0.11981	0.1197 ± 0.0012	$\sigma_8\Omega_m^{0.5}$	0.4542	0.4535 ± 0.0070	$H(0.15)$	72.638	72.70 ± 0.47
$\boldsymbol{100\theta_{MC}}$	1.040847	1.04087 ± 0.00031	$\sigma_8\Omega_m^{0.25}$	0.6063	0.6058 ± 0.0064	$D_M(0.15)$	643.73	643.2 ± 4.7
$\boldsymbol{\tau}$	0.0529	$0.0536^{+0.0069}_{-0.0077}$	$\sigma_8/h^{0.5}$	0.9864	0.9857 ± 0.0091	$H(0.38)$	82.808	82.85 ± 0.34
$\boldsymbol{\ln(10^{10}A_s)}$	3.0402	3.041 ± 0.015	$r_{drag}h$	99.13	99.24 ± 0.94	$D_M(0.38)$	1534.4	1533.3 ± 9.3
$\boldsymbol{n_s}$	0.96531	0.9656 ± 0.0042	$\langle d^2\rangle^{1/2}$	2.4388	2.438 ± 0.022	$H(0.51)$	89.559	89.60 ± 0.27
$\boldsymbol{y_{cal}}$	1.00062	1.0005 ± 0.0025	z_{re}	7.56	7.61 ± 0.75	$D_M(0.51)$	1987.1	1986 ± 11
$\boldsymbol{A_{100}^{PS}}$	234.9	239 ± 25	$10^9 A_s$	2.0910	$2.092^{+0.028}_{-0.031}$	$H(0.61)$	95.204	95.23 ± 0.22
$\boldsymbol{A_{143}^{PS}}$	46.5	39 ± 8	$10^9 A_s e^{-2\tau}$	1.8810	1.879 ± 0.011	$D_M(0.61)$	2311.9	2310 ± 12
$\boldsymbol{A_{217}^{PS}}$	103.1	102 ± 10	D_{40}	1228.3	1227 ± 12	$H(2.33)$	236.34	236.27 ± 0.73
$\boldsymbol{A_{217}^{CIB}}$	43.3	40 ± 7	D_{220}	5722.0	5720 ± 39	$D_M(2.33)$	5768.1	5767 ± 10
$\boldsymbol{A_{143}^{tSZ}}$	6.16	$3.9^{+1.9}_{-2.5}$	D_{810}	2537.0	2535 ± 13	$f\sigma_8(0.15)$	0.4585	0.4579 ± 0.0065
$\boldsymbol{r_{143\times217}^{PS}}$	0.667	0.66 ± 0.13	D_{1420}	816.14	815.7 ± 4.9	$\sigma_8(0.15)$	0.7475	0.7474 ± 0.0054
$\boldsymbol{r_{143\times217}^{CIB}}$	0.849	$0.55^{+0.39}_{-0.18}$	D_{2000}	230.34	230.3 ± 1.6	$f\sigma_8(0.38)$	0.4760	0.4756 ± 0.0053
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.52	—	$n_{s,0.002}$	0.96531	0.9656 ± 0.0042	$\sigma_8(0.38)$	0.66226	0.6622 ± 0.0048
$\boldsymbol{A^{kSZ}}$	0.78	$4.7^{+2.4}_{-3.8}$	Y_P	0.245358	$0.245363^{+0.000066}_{-0.000057}$	$f\sigma_8(0.51)$	0.47423	0.4738 ± 0.0046
$\boldsymbol{A_{100}^{dust}}$	1.003	1.01 ± 0.20	Y_P^{BBN}	0.246684	$0.246690^{+0.000066}_{-0.000058}$	$\sigma_8(0.51)$	0.61961	0.6196 ± 0.0045
$\boldsymbol{A_{143}^{dust}}$	0.978	0.96 ± 0.18	10^5D/H	2.6031	2.600 ± 0.029	$f\sigma_8(0.61)$	0.46899	0.4687 ± 0.0042
$\boldsymbol{A_{217}^{dust}}$	0.975	0.97 ± 0.11	Age/Gyr	13.8081	13.805 ± 0.023	$\sigma_8(0.61)$	0.58948	0.5895 ± 0.0043
$\boldsymbol{A_{143\times217}^{dust}}$	0.996	1.03 ± 0.16	z_*	1090.021	1089.99 ± 0.26	$f\sigma_8(2.33)$	0.29708	$0.2971^{+0.0021}_{-0.0023}$
$\boldsymbol{c_{100}}$	0.99777	0.9975 ± 0.0011	r_*	144.551	144.57 ± 0.28	$\sigma_8(2.33)$	0.30613	$0.3062^{+0.0022}_{-0.0025}$
$\boldsymbol{c_{217}}$	1.00133	1.0011 ± 0.0016	$100\theta_*$	1.041044	1.04106 ± 0.00031	f_{2000}^{143}	30.38	29.7 ± 2.8
$\boldsymbol{c_{TE}}$	0.99671	0.9966 ± 0.0049	$D_M(z_*)$/Gpc	13.8852	13.887 ± 0.026	f_{2000}^{217}	106.92	106.9 ± 1.9
$\boldsymbol{c_{EE}}$	0.99246	0.9921 ± 0.0049	z_{drag}	1059.704	1059.74 ± 0.32	$f_{2000}^{143\times217}$	32.31	32.2 ± 2.0
H_0	67.32	67.39 ± 0.54	r_{drag}	147.246	147.26 ± 0.28	$\chi^2_{lensing}$	8.831	9.30 ± 0.69
Ω_Λ	0.6851	0.6858 ± 0.0074	k_D	0.140634	0.14063 ± 0.00033	χ^2_{simall}	395.87	396.9 ± 1.6
Ω_m	0.3149	0.3142 ± 0.0074	$100\theta_D$	0.160882	0.16087 ± 0.00019	χ^2_{lowl}	23.22	23.22 ± 0.86
$\Omega_m h^2$	0.14273	0.1426 ± 0.0011	z_{eq}	3395.4	3393 ± 27	$\chi^2_{CamSpec}$	11499.6	11514.1 ± 5.5
$\Omega_m h^3$	0.096088	0.09610 ± 0.00031	k_{eq}	0.010363	0.010355 ± 0.000083	χ^2_{prior}	2.08	7.9 ± 3.5
σ_8	0.8093	0.8091 ± 0.0060	$100\theta_{eq}$	0.8142	0.8148 ± 0.0051	χ^2_{CMB}	11927.6	11943.6 ± 5.7

Best-fit $\chi^2_{eff} = 11929.66$; $\bar{\chi}^2_{eff} = 11951.44$; $R - 1 = 0.00801$

χ^2_{eff}: CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.83 simall_100x143_offlike5_EE_Aplanck_B: 395.87 commander_dx12_v3_2_29: 23.22 CamSpec like_10.7HM_1400_unified: 11499.65

2.130 base_CamSpecHM_TTTEEE_lowl_lowE_lensing_post_BAO

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02234 ± 0.00014	$\sigma_8\Omega_m^{0.25}$	0.6033 ± 0.0057	$D_M(0.38)$	1528.6 ± 7.3
$\boldsymbol{\Omega_c h^2}$	0.11907 ± 0.00094	$\sigma_8/h^{0.5}$	0.9827 ± 0.0083	$H(0.51)$	89.73 ± 0.22
$\boldsymbol{100\theta_{MC}}$	1.04095 ± 0.00030	$r_{drag}h$	99.72 ± 0.73	$D_M(0.51)$	1980.3 ± 8.6
$\boldsymbol{\tau}$	$0.0552^{+0.0067}_{-0.0076}$	$\langle d^2\rangle^{1/2}$	2.431 ± 0.020	$H(0.61)$	95.33 ± 0.19
$\boldsymbol{\ln(10^{10}A_s)}$	$3.043^{+0.013}_{-0.015}$	z_{re}	7.75 ± 0.73	$D_M(0.61)$	2304.5 ± 9.3
$\boldsymbol{n_s}$	0.9671 ± 0.0038	$10^9 A_s$	$2.097^{+0.028}_{-0.032}$	$H(2.33)$	235.92 ± 0.59
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.877 ± 0.011	$D_M(2.33)$	5762.5 ± 9.0
$\boldsymbol{A_{100}^{PS}}$	239 ± 25	D_{40}	1225 ± 11	$f\sigma_8(0.15)$	0.4549 ± 0.0054
$\boldsymbol{A_{143}^{PS}}$	39 ± 8	D_{220}	5725 ± 39	$\sigma_8(0.15)$	$0.7470^{+0.0051}_{-0.0057}$
$\boldsymbol{A_{217}^{PS}}$	103 ± 10	D_{810}	2536 ± 14	$f\sigma_8(0.38)$	0.4735 ± 0.0046
$\boldsymbol{A_{217}^{CIB}}$	40 ± 7	D_{1420}	816.3 ± 4.8	$\sigma_8(0.38)$	$0.6623^{+0.0044}_{-0.0050}$
$\boldsymbol{A_{143}^{tSZ}}$	$3.9^{+2.0}_{-2.5}$	D_{2000}	230.5 ± 1.6	$f\sigma_8(0.51)$	0.4722 ± 0.0042
$\boldsymbol{r_{143\times217}^{PS}}$	0.66 ± 0.13	$n_{s,0.002}$	0.9671 ± 0.0038	$\sigma_8(0.51)$	$0.6199^{+0.0042}_{-0.0047}$
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.55^{+0.39}_{-0.18}$	Y_P	$0.245380^{+0.000061}_{-0.000052}$	$f\sigma_8(0.61)$	0.4674 ± 0.0039
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	$0.246706^{+0.000061}_{-0.000052}$	$\sigma_8(0.61)$	$0.5899^{+0.0040}_{-0.0045}$
$\boldsymbol{A^{kSZ}}$	$4.6^{+1.8}_{-4.4}$	10^5D/H	$2.592^{+0.025}_{-0.028}$	$f\sigma_8(2.33)$	$0.2975^{+0.0020}_{-0.0023}$
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.19	Age/Gyr	13.796 ± 0.020	$\sigma_8(2.33)$	$0.3067^{+0.0022}_{-0.0025}$
$\boldsymbol{A_{143}^{dust}}$	0.96 ± 0.17	z_*	1089.88 ± 0.22	f_{2000}^{143}	29.5 ± 2.8
$\boldsymbol{A_{217}^{dust}}$	0.97 ± 0.11	r_*	144.70 ± 0.23	f_{2000}^{217}	106.8 ± 1.9
$\boldsymbol{A_{143\times217}^{dust}}$	1.03 ± 0.16	$100\theta_*$	1.04114 ± 0.00030	$f_{2000}^{143\times217}$	32.0 ± 2.0
$\boldsymbol{c_{100}}$	0.9976 ± 0.0010	$D_M(z_*)$/Gpc	13.898 ± 0.022	$\chi^2_{lensing}$	9.31 ± 0.76
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	z_{drag}	1059.79 ± 0.32	χ^2_{simall}	397.1 ± 1.8
$\boldsymbol{c_{TE}}$	0.9966 ± 0.0050	r_{drag}	147.38 ± 0.25	χ^2_{lowl}	22.98 ± 0.78
$\boldsymbol{c_{EE}}$	0.9923 ± 0.0049	k_D	0.14054 ± 0.00031	$\chi^2_{CamSpec}$	11514.2 ± 5.6
H_0	67.66 ± 0.42	$100\theta_D$	0.16084 ± 0.00019	χ^2_{6DF}	0.047 ± 0.057
Ω_Λ	0.6897 ± 0.0057	z_{eq}	3379 ± 22	χ^2_{MGS}	1.31 ± 0.40
Ω_m	0.3103 ± 0.0057	k_{eq}	0.010314 ± 0.000066	$\chi^2_{DR12BAO}$	4.6 ± 1.3
$\Omega_m h^2$	0.14205 ± 0.00090	$100\theta_{eq}$	0.8174 ± 0.0040	χ^2_{prior}	7.8 ± 3.5
$\Omega_m h^3$	0.09611 ± 0.00031	$100\theta_{s,eq}$	0.4515 ± 0.0021	χ^2_{CMB}	11943.6 ± 5.8
σ_8	0.8083 ± 0.0060	$H(0.15)$	72.93 ± 0.37	χ^2_{BAO}	6.00 ± 0.99
S_8	0.822 ± 0.011	$D_M(0.15)$	640.8 ± 3.6		
$\sigma_8\Omega_m^{0.5}$	0.4503 ± 0.0058	$H(0.38)$	83.02 ± 0.27		

$\bar{\chi}^2_{eff} = 11957.40$; $R - 1 = 0.01372$

2.131 base_CamSpecHM_TTTEEE_lowl_lowE_lensing_post_Riess18

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02240 ± 0.00014	$\sigma_8\Omega_m^{0.5}$	0.4471 ± 0.0066	$D_M(0.15)$	638.3 ± 4.3
$\boldsymbol{\Omega_c h^2}$	0.1185 ± 0.0011	$\sigma_8\Omega_m^{0.25}$	0.6009 ± 0.0061	$H(0.38)$	83.21 ± 0.32
$\boldsymbol{100\theta_{MC}}$	1.04105 ± 0.00032	$\sigma_8/h^{0.5}$	0.9798 ± 0.0088	$D_M(0.38)$	1523.5 ± 8.7
$\boldsymbol{\tau}$	$0.0571^{+0.0070}_{-0.0081}$	$r_{drag}h$	100.22 ± 0.89	$H(0.51)$	89.88 ± 0.26
$\boldsymbol{\ln(10^{10}A_s)}$	3.046 ± 0.015	$\langle d^2\rangle^{1/2}$	2.425 ± 0.021	$D_M(0.51)$	1974 ± 10
$\boldsymbol{n_s}$	0.9685 ± 0.0040	z_{re}	7.92 ± 0.75	$H(0.61)$	95.46 ± 0.21
$\boldsymbol{y_{cal}}$	1.0009 ± 0.0025	$10^9 A_s$	$2.103^{+0.029}_{-0.033}$	$D_M(0.61)$	2298 ± 11
$\boldsymbol{A^{PS}_{100}}$	238 ± 24	$10^9 A_s e^{-2\tau}$	1.876 ± 0.010	$H(2.33)$	235.59 ± 0.69
$\boldsymbol{A^{PS}_{143}}$	39 ± 8	D_{40}	1223 ± 11	$D_M(2.33)$	5757.1 ± 9.9
$\boldsymbol{A^{PS}_{217}}$	103 ± 10	D_{220}	5732 ± 39	$f\sigma_8(0.15)$	0.4521 ± 0.0061
$\boldsymbol{A^{CIB}_{217}}$	39 ± 7	D_{810}	2537 ± 13	$\sigma_8(0.15)$	$0.7469^{+0.0051}_{-0.0057}$
$\boldsymbol{A^{tSZ}_{143}}$	$4.0^{+2.0}_{-2.5}$	D_{1420}	817.2 ± 4.7	$f\sigma_8(0.38)$	0.4715 ± 0.0050
$\boldsymbol{r^{PS}_{143\times217}}$	0.67 ± 0.13	D_{2000}	230.9 ± 1.6	$\sigma_8(0.38)$	$0.6626^{+0.0045}_{-0.0050}$
$\boldsymbol{r^{CIB}_{143\times217}}$	$0.55^{+0.40}_{-0.19}$	$n_{s,0.002}$	0.9685 ± 0.0040	$f\sigma_8(0.51)$	0.4707 ± 0.0045
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P	$0.245405^{+0.000060}_{-0.000051}$	$\sigma_8(0.51)$	$0.6203^{+0.0043}_{-0.0048}$
$\boldsymbol{A^{kSZ}}$	< 6.13	Y_P^{BBN}	$0.246731^{+0.000060}_{-0.000051}$	$f\sigma_8(0.61)$	0.4661 ± 0.0041
$\boldsymbol{A^{dust}_{100}}$	1.01 ± 0.19	10^5D/H	$2.581^{+0.025}_{-0.028}$	$\sigma_8(0.61)$	0.5904 ± 0.0044
$\boldsymbol{A^{dust}_{143}}$	0.95 ± 0.17	Age/Gyr	13.784 ± 0.022	$f\sigma_8(2.33)$	0.2979 ± 0.0023
$\boldsymbol{A^{dust}_{217}}$	0.97 ± 0.11	z_*	1089.75 ± 0.24	$\sigma_8(2.33)$	$0.3073^{+0.0023}_{-0.0026}$
$\boldsymbol{A^{dust}_{143\times217}}$	1.02 ± 0.17	r_*	144.81 ± 0.27	f^{143}_{2000}	29.2 ± 2.8
$\boldsymbol{c_{100}}$	0.9976 ± 0.0010	$100\theta_*$	1.04123 ± 0.00032	f^{217}_{2000}	106.6 ± 1.9
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	$D_M(z_*)$/Gpc	13.907 ± 0.025	$f^{143\times217}_{2000}$	31.8 ± 2.0
$\boldsymbol{c_{TE}}$	0.9965 ± 0.0050	z_{drag}	1059.89 ± 0.31	$\chi^2_{lensing}$	9.46 ± 0.93
$\boldsymbol{c_{EE}}$	0.9922 ± 0.0049	r_{drag}	147.47 ± 0.28	χ^2_{simall}	397.4 ± 2.1
H_0	67.96 ± 0.51	k_D	0.14049 ± 0.00033	χ^2_{lowl}	22.78 ± 0.78
Ω_Λ	$0.6935^{+0.0069}_{-0.0062}$	$100\theta_D$	0.16079 ± 0.00018	$\chi^2_{CamSpec}$	11515.1 ± 5.8
Ω_m	0.3065 ± 0.0068	z_{eq}	3366 ± 26	$\chi^2_{H073p45}$	11.0 ± 2.0
$\Omega_m h^2$	0.1415 ± 0.0011	k_{eq}	0.010274 ± 0.000079	χ^2_{prior}	7.8 ± 3.4
$\Omega_m h^3$	0.09617 ± 0.00031	$100\theta_{eq}$	0.8200 ± 0.0049	χ^2_{CMB}	11944.8 ± 6.3
σ_8	0.8077 ± 0.0061	$100\theta_{s,eq}$	0.4529 ± 0.0025		
S_8	0.816 ± 0.012	$H(0.15)$	73.19 ± 0.44		

$\bar{\chi}^2_{eff} = 11963.63$; $R - 1 = 0.02452$

2.132 base_CamSpecHM_TTTEEE_lowl_lowE_lensing_post_BAO_Riess18

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02240 ± 0.00014	$\sigma_8\Omega_m^{0.25}$	0.6005 ± 0.0056	$D_M(0.38)$	1522.7 ± 6.8
$\boldsymbol{\Omega_c h^2}$	0.11836 ± 0.00089	$\sigma_8/h^{0.5}$	0.9792 ± 0.0082	$H(0.51)$	89.90 ± 0.21
$\boldsymbol{100\theta_{MC}}$	1.04106 ± 0.00030	$r_{drag}h$	100.30 ± 0.69	$D_M(0.51)$	1973.4 ± 8.0
$\boldsymbol{\tau}$	0.0573 ± 0.0074	$\langle d^2\rangle^{1/2}$	2.423 ± 0.020	$H(0.61)$	95.47 ± 0.18
$\boldsymbol{\ln(10^{10}A_s)}$	3.046 ± 0.015	z_{re}	7.93 ± 0.73	$D_M(0.61)$	2297.1 ± 8.6
$\boldsymbol{n_s}$	0.9688 ± 0.0037	$10^9 A_s$	$2.103^{+0.029}_{-0.032}$	$H(2.33)$	235.53 ± 0.56
$\boldsymbol{y_{cal}}$	1.0009 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.875 ± 0.010	$D_M(2.33)$	5756.4 ± 8.6
$\boldsymbol{A_{100}^{PS}}$	238 ± 24	D_{40}	1223 ± 11	$f\sigma_8(0.15)$	0.4516 ± 0.0052
$\boldsymbol{A_{143}^{PS}}$	39 ± 8	D_{220}	5733 ± 39	$\sigma_8(0.15)$	$0.7468^{+0.0052}_{-0.0057}$
$\boldsymbol{A_{217}^{PS}}$	103 ± 10	D_{810}	2537 ± 13	$f\sigma_8(0.38)$	0.4711 ± 0.0045
$\boldsymbol{A_{217}^{CIB}}$	39 ± 7	D_{1420}	817.3 ± 4.7	$\sigma_8(0.38)$	$0.6626^{+0.0046}_{-0.0051}$
$\boldsymbol{A_{143}^{tSZ}}$	$4.0^{+2.0}_{-2.5}$	D_{2000}	230.9 ± 1.6	$f\sigma_8(0.51)$	0.4704 ± 0.0041
$\boldsymbol{r_{143\times217}^{PS}}$	0.67 ± 0.13	$n_{s,0.002}$	0.9688 ± 0.0037	$\sigma_8(0.51)$	$0.6203^{+0.0043}_{-0.0048}$
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.55^{+0.40}_{-0.18}$	Y_P	$0.245407^{+0.000056}_{-0.000048}$	$f\sigma_8(0.61)$	0.4659 ± 0.0039
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	$0.246734^{+0.000056}_{-0.000049}$	$\sigma_8(0.61)$	$0.5904^{+0.0041}_{-0.0046}$
$\boldsymbol{A^{kSZ}}$	< 6.07	10^5D/H	2.580 ± 0.025	$f\sigma_8(2.33)$	$0.2979^{+0.0021}_{-0.0023}$
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.19	Age/Gyr	13.783 ± 0.019	$\sigma_8(2.33)$	$0.3074^{+0.0022}_{-0.0025}$
$\boldsymbol{A_{143}^{dust}}$	0.95 ± 0.17	z_*	1089.73 ± 0.21	f_{2000}^{143}	29.1 ± 2.8
$\boldsymbol{A_{217}^{dust}}$	0.98 ± 0.11	r_*	144.83 ± 0.22	f_{2000}^{217}	106.5 ± 1.9
$\boldsymbol{A_{143\times217}^{dust}}$	1.02 ± 0.17	$100\theta_*$	1.04124 ± 0.00030	$f_{2000}^{143\times217}$	31.7 ± 2.0
$\boldsymbol{c_{100}}$	0.9976 ± 0.0010	$D_M(z_*)$/Gpc	13.909 ± 0.021	$\chi^2_{lensing}$	9.45 ± 0.92
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	z_{drag}	1059.90 ± 0.30	χ^2_{simall}	397.4 ± 2.1
$\boldsymbol{c_{TE}}$	0.9965 ± 0.0050	r_{drag}	147.49 ± 0.24	χ^2_{lowl}	22.72 ± 0.74
$\boldsymbol{c_{EE}}$	0.9923 ± 0.0049	k_D	0.14048 ± 0.00030	$\chi^2_{CamSpec}$	11515.0 ± 5.7
H_0	68.01 ± 0.40	$100\theta_D$	0.16079 ± 0.00018	$\chi^2_{H073p45}$	10.8 ± 1.6
Ω_Λ	0.6942 ± 0.0053	z_{eq}	3364 ± 20	χ^2_{6DF}	0.021 ± 0.031
Ω_m	0.3058 ± 0.0053	k_{eq}	0.010267 ± 0.000062	χ^2_{MGS}	1.64 ± 0.41
$\Omega_m h^2$	0.14141 ± 0.00085	$100\theta_{eq}$	0.8204 ± 0.0038	$\chi^2_{DR12BAO}$	3.92 ± 0.73
$\Omega_m h^3$	0.09617 ± 0.00030	$100\theta_{s,eq}$	0.4531 ± 0.0020	χ^2_{prior}	7.8 ± 3.4
σ_8	0.8075 ± 0.0060	$H(0.15)$	73.23 ± 0.34	χ^2_{CMB}	11944.6 ± 6.0
S_8	0.815 ± 0.010	$D_M(0.15)$	637.9 ± 3.4	χ^2_{BAO}	5.58 ± 0.54
$\sigma_8\Omega_m^{0.5}$	0.4465 ± 0.0055	$H(0.38)$	83.24 ± 0.26		

$\bar{\chi}^2_{eff} = 11968.81$; $R - 1 = 0.02105$

2.133 base_CamSpecHM_TTTEEE_lowl_lowE_lensing_post_Pantheon

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02231 ± 0.00015	$\sigma_8\Omega_m^{0.5}$	0.4521 ± 0.0067	$D_M(0.15)$	642.2 ± 4.4
$\boldsymbol{\Omega_c h^2}$	0.1194 ± 0.0011	$\sigma_8\Omega_m^{0.25}$	0.6047 ± 0.0062	$H(0.38)$	82.92 ± 0.32
$\boldsymbol{100\theta_{MC}}$	1.04090 ± 0.00031	$\sigma_8/h^{0.5}$	0.9844 ± 0.0089	$D_M(0.38)$	1531.3 ± 8.8
$\boldsymbol{\tau}$	$0.0543^{+0.0068}_{-0.0077}$	$r_{drag}h$	99.44 ± 0.89	$H(0.51)$	89.65 ± 0.26
$\boldsymbol{\ln(10^{10}A_s)}$	$3.042^{+0.013}_{-0.015}$	$\langle d^2\rangle^{1/2}$	2.435 ± 0.021	$D_M(0.51)$	1984 ± 10
$\boldsymbol{n_s}$	0.9662 ± 0.0041	z_{re}	7.67 ± 0.74	$H(0.61)$	95.28 ± 0.21
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0025	$10^9 A_s$	$2.094^{+0.028}_{-0.032}$	$D_M(0.61)$	2308 ± 11
$\boldsymbol{A^{PS}_{100}}$	239 ± 24	$10^9 A_s e^{-2\tau}$	1.878 ± 0.011	$H(2.33)$	236.12 ± 0.69
$\boldsymbol{A^{PS}_{143}}$	39 ± 8	D_{40}	1226 ± 12	$D_M(2.33)$	5765 ± 10
$\boldsymbol{A^{PS}_{217}}$	103 ± 10	D_{220}	5722 ± 40	$f\sigma_8(0.15)$	0.4566 ± 0.0062
$\boldsymbol{A^{CIB}_{217}}$	40 ± 7	D_{810}	2536 ± 14	$\sigma_8(0.15)$	0.7472 ± 0.0054
$\boldsymbol{A^{tSZ}_{143}}$	$3.9^{+2.0}_{-2.5}$	D_{1420}	816.0 ± 4.9	$f\sigma_8(0.38)$	0.4747 ± 0.0051
$\boldsymbol{r^{PS}_{143\times217}}$	0.66 ± 0.13	D_{2000}	230.4 ± 1.6	$\sigma_8(0.38)$	$0.6623^{+0.0044}_{-0.0050}$
$\boldsymbol{r^{CIB}_{143\times217}}$	$0.55^{+0.39}_{-0.18}$	$n_{s,0.002}$	0.9662 ± 0.0041	$f\sigma_8(0.51)$	0.4732 ± 0.0045
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P	$0.245371^{+0.000065}_{-0.000055}$	$\sigma_8(0.51)$	$0.6197^{+0.0041}_{-0.0047}$
$\boldsymbol{A^{kSZ}}$	$4.7^{+2.0}_{-4.2}$	Y_P^{BBN}	$0.246697^{+0.000065}_{-0.000055}$	$f\sigma_8(0.61)$	0.4681 ± 0.0041
$\boldsymbol{A^{dust}_{100}}$	1.01 ± 0.20	10^5D/H	$2.597^{+0.027}_{-0.030}$	$\sigma_8(0.61)$	$0.5897^{+0.0040}_{-0.0045}$
$\boldsymbol{A^{dust}_{143}}$	0.96 ± 0.17	Age/Gyr	13.801 ± 0.023	$f\sigma_8(2.33)$	$0.2973^{+0.0020}_{-0.0023}$
$\boldsymbol{A^{dust}_{217}}$	0.97 ± 0.11	z_*	1089.94 ± 0.25	$\sigma_8(2.33)$	$0.3064^{+0.0022}_{-0.0025}$
$\boldsymbol{A^{dust}_{143\times217}}$	1.03 ± 0.16	r_*	144.62 ± 0.27	f^{143}_{2000}	29.6 ± 2.8
$\boldsymbol{c_{100}}$	0.9976 ± 0.0010	$100\theta_*$	1.04109 ± 0.00031	f^{217}_{2000}	106.8 ± 1.9
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	$D_M(z_*)$/Gpc	13.892 ± 0.025	$f^{143\times217}_{2000}$	32.1 ± 2.0
$\boldsymbol{c_{TE}}$	0.9966 ± 0.0049	z_{drag}	1059.76 ± 0.32	$\chi^2_{lensing}$	9.30 ± 0.72
$\boldsymbol{c_{EE}}$	0.9921 ± 0.0049	r_{drag}	147.31 ± 0.27	χ^2_{simall}	397.0 ± 1.7
H_0	67.50 ± 0.51	k_D	0.14059 ± 0.00032	χ^2_{lowl}	23.12 ± 0.83
Ω_Λ	0.6874 ± 0.0070	$100\theta_D$	0.16085 ± 0.00019	$\chi^2_{CamSpec}$	11514.2 ± 5.6
Ω_m	0.3126 ± 0.0070	z_{eq}	3387 ± 26	χ^2_{JLA}	1036.50 ± 0.44
$\Omega_m h^2$	0.1424 ± 0.0011	k_{eq}	0.010338 ± 0.000079	χ^2_{prior}	7.8 ± 3.5
$\Omega_m h^3$	0.09611 ± 0.00031	$100\theta_{eq}$	0.8159 ± 0.0049	χ^2_{CMB}	11943.6 ± 5.8
σ_8	0.8088 ± 0.0060	$100\theta_{s,eq}$	0.4508 ± 0.0025		
S_8	0.825 ± 0.012	$H(0.15)$	72.79 ± 0.44		

$\bar{\chi}^2_{eff} = 12987.95$; $R - 1 = 0.01289$

2.134 base_CamSpecHM_TTTEEE_lowl_lowE_lensing_post_BAO_JLA_Riess18

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02241 ± 0.00014	$\sigma_8\Omega_m^{0.25}$	0.6005 ± 0.0056	$D_M(0.38)$	1522.4 ± 6.7
$\boldsymbol{\Omega_c h^2}$	0.11833 ± 0.00089	$\sigma_8/h^{0.5}$	0.9792 ± 0.0083	$H(0.51)$	89.91 ± 0.21
$\boldsymbol{100\theta_{MC}}$	$1.04107^{+0.00031}_{-0.00028}$	$r_{drag}h$	100.34 ± 0.68	$D_M(0.51)$	1973.1 ± 7.9
$\boldsymbol{\tau}$	$0.0576^{+0.0069}_{-0.0078}$	$\langle d^2\rangle^{1/2}$	2.423 ± 0.020	$H(0.61)$	95.48 ± 0.18
$\boldsymbol{\ln(10^{10}A_s)}$	3.046 ± 0.015	z_{re}	7.96 ± 0.73	$D_M(0.61)$	2296.7 ± 8.6
$\boldsymbol{n_s}$	0.9690 ± 0.0037	$10^9 A_s$	2.104 ± 0.031	$H(2.33)$	235.51 ± 0.56
$\boldsymbol{y_{cal}}$	1.0009 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.875 ± 0.010	$D_M(2.33)$	5756.2 ± 8.6
$\boldsymbol{A_{100}^{PS}}$	237 ± 25	D_{40}	1222 ± 11	$f\sigma_8(0.15)$	0.4515 ± 0.0053
$\boldsymbol{A_{143}^{PS}}$	39 ± 8	D_{220}	5732 ± 38	$\sigma_8(0.15)$	$0.7469^{+0.0052}_{-0.0058}$
$\boldsymbol{A_{217}^{PS}}$	103 ± 10	D_{810}	2537 ± 13	$f\sigma_8(0.38)$	0.4711 ± 0.0045
$\boldsymbol{A_{217}^{CIB}}$	39 ± 7	D_{1420}	817.5 ± 4.7	$\sigma_8(0.38)$	0.6627 ± 0.0049
$\boldsymbol{A_{143}^{tSZ}}$	$4.0^{+2.1}_{-2.6}$	D_{2000}	231.0 ± 1.6	$f\sigma_8(0.51)$	0.4704 ± 0.0042
$\boldsymbol{r_{143\times217}^{PS}}$	0.67 ± 0.13	$n_{s,0.002}$	0.9690 ± 0.0037	$\sigma_8(0.51)$	0.6205 ± 0.0046
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.55^{+0.41}_{-0.18}$	Y_P	0.245407 ± 0.000054	$f\sigma_8(0.61)$	0.4659 ± 0.0039
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	0.246734 ± 0.000054	$\sigma_8(0.61)$	0.5906 ± 0.0044
$\boldsymbol{A^{kSZ}}$	< 5.91	10^5D/H	2.579 ± 0.026	$f\sigma_8(2.33)$	0.2980 ± 0.0023
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.19	Age/Gyr	13.782 ± 0.020	$\sigma_8(2.33)$	0.3075 ± 0.0024
$\boldsymbol{A_{143}^{dust}}$	0.95 ± 0.17	z_*	1089.73 ± 0.21	f_{2000}^{143}	29.1 ± 2.8
$\boldsymbol{A_{217}^{dust}}$	0.98 ± 0.10	r_*	144.84 ± 0.23	f_{2000}^{217}	106.5 ± 1.9
$\boldsymbol{A_{143\times217}^{dust}}$	1.02 ± 0.16	$100\theta_*$	$1.04125^{+0.00031}_{-0.00027}$	$f_{2000}^{143\times217}$	31.7 ± 1.9
$\boldsymbol{c_{100}}$	0.9976 ± 0.0010	$D_M(z_*)$/Gpc	13.910 ± 0.022	$\chi^2_{lensing}$	9.46 ± 0.91
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	z_{drag}	1059.90 ± 0.31	χ^2_{simall}	397.5 ± 2.1
$\boldsymbol{c_{TE}}$	0.9964 ± 0.0051	r_{drag}	147.50 ± 0.25	χ^2_{lowl}	22.68 ± 0.74
$\boldsymbol{c_{EE}}$	0.9923 ± 0.0050	k_D	0.14047 ± 0.00031	$\chi^2_{CamSpec}$	11515.3 ± 6.0
H_0	68.03 ± 0.39	$100\theta_D$	0.16079 ± 0.00018	$\chi^2_{H073p45}$	10.7 ± 1.6
Ω_Λ	0.6944 ± 0.0052	z_{eq}	3363 ± 21	χ^2_{JLA}	706.63 ± 0.11
Ω_m	0.3056 ± 0.0052	k_{eq}	0.010264 ± 0.000063	χ^2_{6DF}	0.021 ± 0.030
$\Omega_m h^2$	0.14138 ± 0.00086	$100\theta_{eq}$	0.8206 ± 0.0038	χ^2_{MGS}	1.66 ± 0.42
$\Omega_m h^3$	0.09617 ± 0.00032	$100\theta_{s,eq}$	0.4532 ± 0.0020	$\chi^2_{DR12BAO}$	3.89 ± 0.69
σ_8	0.8076 ± 0.0061	$H(0.15)$	73.24 ± 0.34	χ^2_{prior}	7.7 ± 3.4
S_8	0.815 ± 0.010	$D_M(0.15)$	637.7 ± 3.3	χ^2_{CMB}	11944.9 ± 6.3
$\sigma_8\Omega_m^{0.5}$	0.4464 ± 0.0055	$H(0.38)$	83.25 ± 0.26	χ^2_{BAO}	5.57 ± 0.52

$\bar{\chi}^2_{eff} = 12675.57$; $R - 1 = 0.05190$

2.135 base_CamSpecHM_TTTEEE_lowl_lowE_lensing_post_BAO_Pantheon

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02234 ± 0.00014	$\sigma_8\Omega_m^{0.25}$	0.6028 ± 0.0056	$D_M(0.38)$	1527.6 ± 7.0
$\boldsymbol{\Omega_c h^2}$	0.11895 ± 0.00091	$\sigma_8/h^{0.5}$	0.9820 ± 0.0083	$H(0.51)$	89.75 ± 0.22
$\boldsymbol{100\theta_{MC}}$	1.04096 ± 0.00030	$r_{drag}h$	99.82 ± 0.70	$D_M(0.51)$	1979.2 ± 8.3
$\boldsymbol{\tau}$	$0.0556^{+0.0067}_{-0.0076}$	$\langle d^2\rangle^{1/2}$	2.429 ± 0.020	$H(0.61)$	95.36 ± 0.18
$\boldsymbol{\ln(10^{10}A_s)}$	$3.043^{+0.013}_{-0.015}$	z_{re}	7.78 ± 0.72	$D_M(0.61)$	2303.3 ± 8.9
$\boldsymbol{n_s}$	0.9673 ± 0.0038	$10^9 A_s$	$2.098^{+0.028}_{-0.032}$	$H(2.33)$	235.84 ± 0.57
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.877 ± 0.011	$D_M(2.33)$	5761.6 ± 8.8
$\boldsymbol{A_{100}^{PS}}$	239 ± 25	D_{40}	1225 ± 11	$f\sigma_8(0.15)$	0.4543 ± 0.0053
$\boldsymbol{A_{143}^{PS}}$	39 ± 8	D_{220}	5726 ± 39	$\sigma_8(0.15)$	$0.7470^{+0.0051}_{-0.0057}$
$\boldsymbol{A_{217}^{PS}}$	103 ± 10	D_{810}	2536 ± 14	$f\sigma_8(0.38)$	0.4731 ± 0.0046
$\boldsymbol{A_{217}^{CIB}}$	40 ± 7	D_{1420}	816.5 ± 4.8	$\sigma_8(0.38)$	$0.6623^{+0.0045}_{-0.0050}$
$\boldsymbol{A_{143}^{tSZ}}$	$3.9^{+2.0}_{-2.5}$	D_{2000}	230.5 ± 1.6	$f\sigma_8(0.51)$	0.4719 ± 0.0041
$\boldsymbol{r_{143\times217}^{PS}}$	0.66 ± 0.13	$n_{s,0.002}$	0.9673 ± 0.0038	$\sigma_8(0.51)$	$0.6199^{+0.0042}_{-0.0047}$
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.55^{+0.39}_{-0.18}$	Y_P	$0.245384^{+0.000060}_{-0.000051}$	$f\sigma_8(0.61)$	0.4671 ± 0.0039
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	$0.246710^{+0.000060}_{-0.000051}$	$\sigma_8(0.61)$	$0.5899^{+0.0040}_{-0.0045}$
$\boldsymbol{A^{kSZ}}$	$4.6^{+1.6}_{-4.6}$	10^5D/H	$2.591^{+0.025}_{-0.028}$	$f\sigma_8(2.33)$	$0.2975^{+0.0020}_{-0.0023}$
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.19	Age/Gyr	13.794 ± 0.020	$\sigma_8(2.33)$	$0.3068^{+0.0022}_{-0.0025}$
$\boldsymbol{A_{143}^{dust}}$	0.95 ± 0.17	z_*	1089.86 ± 0.22	f_{2000}^{143}	29.4 ± 2.8
$\boldsymbol{A_{217}^{dust}}$	0.97 ± 0.11	r_*	144.72 ± 0.23	f_{2000}^{217}	106.7 ± 1.9
$\boldsymbol{A_{143\times217}^{dust}}$	1.02 ± 0.16	$100\theta_*$	1.04115 ± 0.00030	$f_{2000}^{143\times217}$	32.0 ± 2.0
$\boldsymbol{c_{100}}$	0.9976 ± 0.0010	$D_M(z_*)$/Gpc	13.900 ± 0.022	$\chi^2_{lensing}$	9.32 ± 0.78
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	z_{drag}	$1059.80^{+0.32}_{-0.29}$	χ^2_{simall}	397.1 ± 1.9
$\boldsymbol{c_{TE}}$	0.9966 ± 0.0050	r_{drag}	147.40 ± 0.24	χ^2_{lowl}	22.93 ± 0.77
$\boldsymbol{c_{EE}}$	0.9923 ± 0.0049	k_D	0.14052 ± 0.00031	$\chi^2_{CamSpec}$	11514.3 ± 5.6
H_0	67.72 ± 0.41	$100\theta_D$	0.16083 ± 0.00019	χ^2_{JLA}	1036.30 ± 0.28
Ω_Λ	0.6905 ± 0.0055	z_{eq}	3376 ± 21	χ^2_{6DF}	0.039 ± 0.050
Ω_m	0.3095 ± 0.0055	k_{eq}	0.010305 ± 0.000064	χ^2_{MGS}	1.36 ± 0.40
$\Omega_m h^2$	0.14194 ± 0.00088	$100\theta_{eq}$	0.8179 ± 0.0039	$\chi^2_{DR12BAO}$	4.5 ± 1.1
$\Omega_m h^3$	0.09612 ± 0.00031	$100\theta_{s,eq}$	0.4518 ± 0.0020	χ^2_{prior}	7.8 ± 3.4
σ_8	0.8081 ± 0.0060	$H(0.15)$	72.98 ± 0.35	χ^2_{CMB}	11943.7 ± 5.8
S_8	0.821 ± 0.010	$D_M(0.15)$	640.3 ± 3.5	χ^2_{BAO}	5.88 ± 0.86
$\sigma_8\Omega_m^{0.5}$	0.4496 ± 0.0057	$H(0.38)$	83.06 ± 0.26		

$\bar{\chi}^2_{eff} = 12993.67$; $R - 1 = 0.01443$

2.136 base_CamSpecHM_TTTEEE_lowl_lowE_lensing_post_BAO_Pantheon_Riess18

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02241 ± 0.00014	$\sigma_8\Omega_m^{0.25}$	0.6002 ± 0.0055	$D_M(0.38)$	1522.2 ± 6.6
$\boldsymbol{\Omega_c h^2}$	0.11829 ± 0.00086	$\sigma_8/h^{0.5}$	0.9789 ± 0.0082	$H(0.51)$	89.91 ± 0.20
$\boldsymbol{100\theta_{MC}}$	1.04107 ± 0.00030	$r_{drag}h$	100.36 ± 0.67	$D_M(0.51)$	1972.8 ± 7.8
$\boldsymbol{\tau}$	0.0575 ± 0.0074	$\langle d^2\rangle^{1/2}$	2.423 ± 0.020	$H(0.61)$	95.48 ± 0.17
$\boldsymbol{\ln(10^{10}A_s)}$	3.046 ± 0.015	z_{re}	7.95 ± 0.72	$D_M(0.61)$	2296.4 ± 8.4
$\boldsymbol{n_s}$	0.9690 ± 0.0037	$10^9 A_s$	$2.104^{+0.029}_{-0.032}$	$H(2.33)$	235.49 ± 0.54
$\boldsymbol{y_{cal}}$	1.0009 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.875 ± 0.010	$D_M(2.33)$	5756.0 ± 8.4
$\boldsymbol{A_{100}^{PS}}$	237 ± 24	D_{40}	1223 ± 11	$f\sigma_8(0.15)$	0.4512 ± 0.0051
$\boldsymbol{A_{143}^{PS}}$	39 ± 8	D_{220}	5734 ± 38	$\sigma_8(0.15)$	0.7467 ± 0.0055
$\boldsymbol{A_{217}^{PS}}$	103 ± 10	D_{810}	2537 ± 13	$f\sigma_8(0.38)$	0.4709 ± 0.0044
$\boldsymbol{A_{217}^{CIB}}$	39 ± 7	D_{1420}	817.4 ± 4.7	$\sigma_8(0.38)$	$0.6626^{+0.0046}_{-0.0051}$
$\boldsymbol{A_{143}^{tSZ}}$	$4.0^{+2.0}_{-2.5}$	D_{2000}	230.9 ± 1.6	$f\sigma_8(0.51)$	0.4702 ± 0.0041
$\boldsymbol{r_{143\times217}^{PS}}$	0.67 ± 0.13	$n_{s,0.002}$	0.9690 ± 0.0037	$\sigma_8(0.51)$	$0.6203^{+0.0043}_{-0.0048}$
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.55^{+0.40}_{-0.18}$	Y_P	$0.245409^{+0.000055}_{-0.000048}$	$f\sigma_8(0.61)$	0.4657 ± 0.0039
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	$0.246736^{+0.000056}_{-0.000048}$	$\sigma_8(0.61)$	$0.5904^{+0.0041}_{-0.0046}$
$\boldsymbol{A^{kSZ}}$	< 6.06	10^5D/H	2.579 ± 0.025	$f\sigma_8(2.33)$	$0.2980^{+0.0021}_{-0.0023}$
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.19	Age/Gyr	13.782 ± 0.019	$\sigma_8(2.33)$	$0.3075^{+0.0022}_{-0.0025}$
$\boldsymbol{A_{143}^{dust}}$	0.95 ± 0.17	z_*	1089.72 ± 0.20	f_{2000}^{143}	29.1 ± 2.8
$\boldsymbol{A_{217}^{dust}}$	0.98 ± 0.11	r_*	144.84 ± 0.22	f_{2000}^{217}	106.5 ± 1.9
$\boldsymbol{A_{143\times217}^{dust}}$	1.02 ± 0.17	$100\theta_*$	1.04125 ± 0.00030	$f_{2000}^{143\times217}$	31.7 ± 2.0
$\boldsymbol{c_{100}}$	0.9976 ± 0.0010	$D_M(z_*)$/Gpc	13.911 ± 0.021	$\chi^2_{lensing}$	9.47 ± 0.93
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	z_{drag}	1059.91 ± 0.30	χ^2_{simall}	397.5 ± 2.1
$\boldsymbol{c_{TE}}$	0.9965 ± 0.0050	r_{drag}	147.50 ± 0.24	χ^2_{lowl}	22.70 ± 0.73
$\boldsymbol{c_{EE}}$	0.9923 ± 0.0049	k_D	0.14047 ± 0.00030	$\chi^2_{CamSpec}$	11515.1 ± 5.7
H_0	68.04 ± 0.39	$100\theta_D$	0.16078 ± 0.00018	$\chi^2_{H073p45}$	10.7 ± 1.5
Ω_Λ	0.6946 ± 0.0051	z_{eq}	3362 ± 20	χ^2_{JLA}	1036.13 ± 0.18
Ω_m	0.3054 ± 0.0051	k_{eq}	0.010262 ± 0.000061	χ^2_{6DF}	0.019 ± 0.028
$\Omega_m h^2$	0.14135 ± 0.00083	$100\theta_{eq}$	0.8207 ± 0.0037	χ^2_{MGS}	1.67 ± 0.40
$\Omega_m h^3$	0.09617 ± 0.00030	$100\theta_{s,eq}$	0.4532 ± 0.0019	$\chi^2_{DR12BAO}$	3.86 ± 0.66
σ_8	0.8074 ± 0.0061	$H(0.15)$	73.26 ± 0.33	χ^2_{prior}	7.8 ± 3.4
S_8	0.8146 ± 0.0098	$D_M(0.15)$	637.6 ± 3.3	χ^2_{CMB}	11944.7 ± 6.0
$\sigma_8\Omega_m^{0.5}$	0.4462 ± 0.0054	$H(0.38)$	83.26 ± 0.25	χ^2_{BAO}	5.55 ± 0.49

$\bar{\chi}^2_{eff} = 13004.90$; $R - 1 = 0.02240$

2.137 base_CamSpecHM_TTTEEE_lowl_lowE_lensing_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02230 ± 0.00015	S_8	0.828 ± 0.013	$100\theta_{s,eq}$	0.4503 ± 0.0026
$\boldsymbol{\Omega_c h^2}$	0.1196 ± 0.0012	$\sigma_8\Omega_m^{0.5}$	0.4535 ± 0.0070	$H(0.15)$	72.72 ± 0.46
$\boldsymbol{100\theta_{MC}}$	1.04087 ± 0.00031	$\sigma_8\Omega_m^{0.25}$	0.6060 ± 0.0064	$D_M(0.15)$	642.9 ± 4.6
$\boldsymbol{\tau}$	$0.0547^{+0.0050}_{-0.0080}$	$\sigma_8/h^{0.5}$	0.9862 ± 0.0090	$H(0.38)$	82.87 ± 0.34
$\boldsymbol{\ln(10^{10}A_s)}$	$3.043^{+0.011}_{-0.015}$	$r_{drag}h$	99.29 ± 0.92	$D_M(0.38)$	1532.8 ± 9.2
$\boldsymbol{n_s}$	0.9658 ± 0.0042	$\langle d^2\rangle^{1/2}$	2.439 ± 0.021	$H(0.51)$	89.61 ± 0.27
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	z_{re}	$7.71^{+0.55}_{-0.78}$	$D_M(0.51)$	1985 ± 11
$\boldsymbol{A^{PS}_{100}}$	239 ± 24	$10^9 A_s$	$2.096^{+0.023}_{-0.031}$	$H(0.61)$	95.24 ± 0.22
$\boldsymbol{A^{PS}_{143}}$	39 ± 8	$10^9 A_s e^{-2\tau}$	1.879 ± 0.011	$D_M(0.61)$	2310 ± 12
$\boldsymbol{A^{PS}_{217}}$	102 ± 10	D_{40}	1227 ± 12	$H(2.33)$	236.23 ± 0.72
$\boldsymbol{A^{CIB}_{217}}$	40 ± 7	D_{220}	5720 ± 40	$D_M(2.33)$	5766 ± 10
$\boldsymbol{A^{tSZ}_{143}}$	$3.9^{+1.9}_{-2.5}$	D_{810}	2535 ± 13	$f\sigma_8(0.15)$	0.4579 ± 0.0065
$\boldsymbol{r^{PS}_{143\times217}}$	0.66 ± 0.13	D_{1420}	815.7 ± 4.9	$\sigma_8(0.15)$	$0.7480^{+0.0047}_{-0.0055}$
$\boldsymbol{r^{CIB}_{143\times217}}$	$0.55^{+0.39}_{-0.18}$	D_{2000}	230.3 ± 1.6	$f\sigma_8(0.38)$	0.4757 ± 0.0052
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$n_{s,0.002}$	0.9658 ± 0.0042	$\sigma_8(0.38)$	$0.6628^{+0.0039}_{-0.0049}$
$\boldsymbol{A^{kSZ}}$	$4.7^{+2.3}_{-3.9}$	Y_P	$0.245365^{+0.000066}_{-0.000057}$	$f\sigma_8(0.51)$	0.4741 ± 0.0046
$\boldsymbol{A^{dust}_{100}}$	1.01 ± 0.20	Y_P^{BBN}	$0.246691^{+0.000066}_{-0.000057}$	$\sigma_8(0.51)$	$0.6202^{+0.0036}_{-0.0046}$
$\boldsymbol{A^{dust}_{143}}$	0.96 ± 0.18	10^5D/H	2.599 ± 0.029	$f\sigma_8(0.61)$	0.4689 ± 0.0041
$\boldsymbol{A^{dust}_{217}}$	0.97 ± 0.11	Age/Gyr	13.804 ± 0.023	$\sigma_8(0.61)$	$0.5900^{+0.0034}_{-0.0044}$
$\boldsymbol{A^{dust}_{143\times217}}$	1.03 ± 0.16	z_*	1089.98 ± 0.26	$f\sigma_8(2.33)$	$0.2974^{+0.0017}_{-0.0023}$
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	r_*	144.58 ± 0.27	$\sigma_8(2.33)$	$0.3065^{+0.0018}_{-0.0025}$
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	$100\theta_*$	1.04107 ± 0.00031	f^{143}_{2000}	29.7 ± 2.8
$\boldsymbol{c_{TE}}$	0.9965 ± 0.0049	$D_M(z_*)$/Gpc	13.888 ± 0.026	f^{217}_{2000}	106.9 ± 1.9
$\boldsymbol{c_{EE}}$	0.9921 ± 0.0049	z_{drag}	1059.74 ± 0.32	$f^{143\times217}_{2000}$	32.1 ± 2.0
H_0	67.42 ± 0.53	r_{drag}	147.27 ± 0.28	$\chi^2_{lensing}$	9.26 ± 0.65
Ω_Λ	0.6862 ± 0.0073	k_D	0.14062 ± 0.00033	χ^2_{simall}	396.9 ± 1.7
Ω_m	0.3138 ± 0.0073	$100\theta_D$	0.16086 ± 0.00019	χ^2_{lowl}	23.21 ± 0.86
$\Omega_m h^2$	0.1426 ± 0.0011	z_{eq}	3391 ± 27	$\chi^2_{CamSpec}$	11514.0 ± 5.5
$\Omega_m h^3$	0.09611 ± 0.00031	k_{eq}	0.010351 ± 0.000082	χ^2_{prior}	7.9 ± 3.5
σ_8	$0.8097^{+0.0054}_{-0.0060}$	$100\theta_{eq}$	0.8150 ± 0.0051	χ^2_{CMB}	11943.4 ± 5.7

$\bar{\chi}^2_{eff} = 11951.25$; $R - 1 = 0.00847$

2.138 base_CamSpecHM_TTTEEE_lowl_lowE_lensing_post_BAO_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02234 ± 0.00014	$\sigma_8\Omega_m^{0.25}$	0.6035 ± 0.0056	$D_M(0.38)$	1528.4 ± 7.2
$\boldsymbol{\Omega_c h^2}$	0.11904 ± 0.00093	$\sigma_8/h^{0.5}$	0.9831 ± 0.0081	$H(0.51)$	89.73 ± 0.22
$\boldsymbol{100\theta_{MC}}$	1.04095 ± 0.00030	$r_{drag}h$	99.74 ± 0.72	$D_M(0.51)$	1980.1 ± 8.5
$\boldsymbol{\tau}$	$0.0559^{+0.0055}_{-0.0077}$	$\langle d^2\rangle^{1/2}$	2.432 ± 0.020	$H(0.61)$	95.34 ± 0.18
$\boldsymbol{\ln(10^{10}A_s)}$	$3.044^{+0.012}_{-0.015}$	z_{re}	$7.82^{+0.58}_{-0.76}$	$D_M(0.61)$	2304.3 ± 9.2
$\boldsymbol{n_s}$	0.9671 ± 0.0038	$10^9 A_s$	$2.099^{+0.024}_{-0.032}$	$H(2.33)$	235.90 ± 0.58
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.877 ± 0.011	$D_M(2.33)$	5762.4 ± 9.0
$\boldsymbol{A_{100}^{PS}}$	239 ± 24	D_{40}	1225 ± 11	$f\sigma_8(0.15)$	0.4551 ± 0.0054
$\boldsymbol{A_{143}^{PS}}$	39 ± 8	D_{220}	5725 ± 40	$\sigma_8(0.15)$	$0.7474^{+0.0046}_{-0.0056}$
$\boldsymbol{A_{217}^{PS}}$	103 ± 10	D_{810}	2536 ± 14	$f\sigma_8(0.38)$	0.4737 ± 0.0045
$\boldsymbol{A_{217}^{CIB}}$	40 ± 7	D_{1420}	816.3 ± 4.9	$\sigma_8(0.38)$	$0.6627^{+0.0039}_{-0.0050}$
$\boldsymbol{A_{143}^{tSZ}}$	$3.9^{+2.0}_{-2.5}$	D_{2000}	230.5 ± 1.6	$f\sigma_8(0.51)$	0.4724 ± 0.0041
$\boldsymbol{r_{143\times217}^{PS}}$	0.66 ± 0.13	$n_{s,0.002}$	0.9671 ± 0.0038	$\sigma_8(0.51)$	$0.6202^{+0.0037}_{-0.0047}$
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.55^{+0.39}_{-0.19}$	Y_P	$0.245381^{+0.000061}_{-0.000052}$	$f\sigma_8(0.61)$	0.4676 ± 0.0038
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	$0.246707^{+0.000061}_{-0.000052}$	$\sigma_8(0.61)$	$0.5902^{+0.0035}_{-0.0045}$
$\boldsymbol{A^{kSZ}}$	$4.6^{+1.7}_{-4.5}$	10^5D/H	$2.592^{+0.025}_{-0.028}$	$f\sigma_8(2.33)$	$0.2976^{+0.0018}_{-0.0023}$
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.19	Age/Gyr	13.796 ± 0.020	$\sigma_8(2.33)$	$0.3069^{+0.0019}_{-0.0025}$
$\boldsymbol{A_{143}^{dust}}$	0.96 ± 0.17	z_*	1089.88 ± 0.22	f_{2000}^{143}	29.5 ± 2.8
$\boldsymbol{A_{217}^{dust}}$	0.97 ± 0.11	r_*	144.70 ± 0.23	f_{2000}^{217}	106.7 ± 1.9
$\boldsymbol{A_{143\times217}^{dust}}$	1.03 ± 0.16	$100\theta_*$	1.04114 ± 0.00030	$f_{2000}^{143\times217}$	32.0 ± 2.0
$\boldsymbol{c_{100}}$	0.9976 ± 0.0010	$D_M(z_*)$/Gpc	13.899 ± 0.022	$\chi^2_{lensing}$	9.26 ± 0.68
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	z_{drag}	1059.79 ± 0.32	χ^2_{simall}	397.1 ± 1.8
$\boldsymbol{c_{TE}}$	0.9966 ± 0.0050	r_{drag}	147.38 ± 0.24	χ^2_{lowl}	22.98 ± 0.78
$\boldsymbol{c_{EE}}$	0.9923 ± 0.0049	k_D	0.14054 ± 0.00031	$\chi^2_{CamSpec}$	11514.2 ± 5.5
H_0	67.68 ± 0.42	$100\theta_D$	0.16084 ± 0.00019	χ^2_{6DF}	0.045 ± 0.055
Ω_Λ	0.6898 ± 0.0056	z_{eq}	3379 ± 21	χ^2_{MGS}	1.32 ± 0.40
Ω_m	0.3102 ± 0.0056	k_{eq}	0.010312 ± 0.000065	$\chi^2_{DR12BAO}$	4.6 ± 1.2
$\Omega_m h^2$	0.14203 ± 0.00089	$100\theta_{eq}$	0.8175 ± 0.0040	χ^2_{prior}	7.8 ± 3.5
$\Omega_m h^3$	0.09611 ± 0.00031	$100\theta_{s,eq}$	0.4516 ± 0.0021	χ^2_{CMB}	11943.5 ± 5.7
σ_8	$0.8087^{+0.0052}_{-0.0062}$	$H(0.15)$	72.94 ± 0.36	χ^2_{BAO}	5.97 ± 0.95
S_8	0.822 ± 0.010	$D_M(0.15)$	640.7 ± 3.6		
$\sigma_8\Omega_m^{0.5}$	0.4504 ± 0.0057	$H(0.38)$	83.03 ± 0.27		

$\bar{\chi}^2_{eff} = 11957.26$; $R - 1 = 0.01434$

2.139 base_CamSpecHM_TTTEEE_lowl_lowE_lensing_post_Riess18_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02240 ± 0.00014	$\sigma_8\Omega_m^{0.5}$	0.4472 ± 0.0065	$D_M(0.15)$	638.2 ± 4.3
$\boldsymbol{\Omega_c h^2}$	0.1184 ± 0.0011	$\sigma_8\Omega_m^{0.25}$	0.6011 ± 0.0061	$H(0.38)$	83.22 ± 0.32
$\boldsymbol{100\theta_{MC}}$	1.04105 ± 0.00032	$\sigma_8/h^{0.5}$	0.9801 ± 0.0086	$D_M(0.38)$	1523.3 ± 8.6
$\boldsymbol{\tau}$	$0.0576^{+0.0061}_{-0.0082}$	$r_{drag}h$	100.24 ± 0.88	$H(0.51)$	89.88 ± 0.26
$\boldsymbol{\ln(10^{10}A_s)}$	$3.047^{+0.013}_{-0.016}$	$\langle d^2\rangle^{1/2}$	$2.425^{+0.019}_{-0.022}$	$D_M(0.51)$	1974 ± 10
$\boldsymbol{n_s}$	0.9686 ± 0.0040	z_{re}	$7.97^{+0.63}_{-0.79}$	$H(0.61)$	95.46 ± 0.21
$\boldsymbol{y_{cal}}$	1.0009 ± 0.0025	10^9A_s	$2.105^{+0.026}_{-0.033}$	$D_M(0.61)$	2298 ± 11
$\boldsymbol{A_{100}^{PS}}$	238 ± 24	$10^9A_se^{-2\tau}$	1.876 ± 0.010	$H(2.33)$	235.58 ± 0.69
$\boldsymbol{A_{143}^{PS}}$	39 ± 8	D_{40}	1223 ± 11	$D_M(2.33)$	5756.9 ± 9.9
$\boldsymbol{A_{217}^{PS}}$	103 ± 10	D_{220}	5732 ± 39	$f\sigma_8(0.15)$	0.4522 ± 0.0061
$\boldsymbol{A_{217}^{CIB}}$	39 ± 7	D_{810}	2537 ± 13	$\sigma_8(0.15)$	$0.7472^{+0.0047}_{-0.0057}$
$\boldsymbol{A_{143}^{tSZ}}$	$4.0^{+2.0}_{-2.5}$	D_{1420}	817.2 ± 4.8	$f\sigma_8(0.38)$	0.4716 ± 0.0050
$\boldsymbol{r_{143\times217}^{PS}}$	0.66 ± 0.13	D_{2000}	230.9 ± 1.6	$\sigma_8(0.38)$	$0.6629^{+0.0041}_{-0.0051}$
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.55^{+0.40}_{-0.19}$	$n_{s,0.002}$	0.9686 ± 0.0040	$f\sigma_8(0.51)$	0.4708 ± 0.0044
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P	$0.245405^{+0.000059}_{-0.000050}$	$\sigma_8(0.51)$	$0.6206^{+0.0038}_{-0.0048}$
$\boldsymbol{A^{kSZ}}$	< 6.14	Y_P^{BBN}	$0.246732^{+0.000060}_{-0.000051}$	$f\sigma_8(0.61)$	0.4663 ± 0.0040
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.19	10^5D/H	$2.580^{+0.025}_{-0.028}$	$\sigma_8(0.61)$	$0.5906^{+0.0037}_{-0.0046}$
$\boldsymbol{A_{143}^{dust}}$	0.95 ± 0.17	Age/Gyr	13.784 ± 0.022	$f\sigma_8(2.33)$	$0.2980^{+0.0019}_{-0.0024}$
$\boldsymbol{A_{217}^{dust}}$	0.97 ± 0.11	z_*	1089.75 ± 0.24	$\sigma_8(2.33)$	$0.3075^{+0.0020}_{-0.0026}$
$\boldsymbol{A_{143\times217}^{dust}}$	1.02 ± 0.17	r_*	144.81 ± 0.27	f_{2000}^{143}	29.2 ± 2.8
$\boldsymbol{c_{100}}$	0.9976 ± 0.0010	$100\theta_*$	1.04123 ± 0.00032	f_{2000}^{217}	106.5 ± 1.9
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	$D_M(z_*)$/Gpc	13.908 ± 0.025	$f_{2000}^{143\times217}$	31.8 ± 2.0
$\boldsymbol{c_{TE}}$	0.9965 ± 0.0051	z_{drag}	1059.89 ± 0.31	$\chi^2_{lensing}$	9.41 ± 0.85
$\boldsymbol{c_{EE}}$	0.9922 ± 0.0049	r_{drag}	147.47 ± 0.28	χ^2_{simall}	397.5 ± 2.2
H_0	67.97 ± 0.51	k_D	0.14049 ± 0.00032	χ^2_{lowl}	22.78 ± 0.78
Ω_Λ	0.6937 ± 0.0067	$100\theta_D$	0.16079 ± 0.00018	$\chi^2_{CamSpec}$	11515.1 ± 5.8
Ω_m	0.3063 ± 0.0067	z_{eq}	3366 ± 26	$\chi^2_{H073p45}$	11.0 ± 2.0
$\Omega_m h^2$	0.1415 ± 0.0011	k_{eq}	0.010273 ± 0.000078	χ^2_{prior}	7.8 ± 3.4
$\Omega_m h^3$	0.09617 ± 0.00031	$100\theta_{eq}$	0.8201 ± 0.0049	χ^2_{CMB}	11944.7 ± 6.2
σ_8	$0.8080^{+0.0053}_{-0.0063}$	$100\theta_{s,eq}$	0.4529 ± 0.0025		
S_8	0.816 ± 0.012	$H(0.15)$	73.20 ± 0.44		

$\bar{\chi}^2_{eff} = 11963.51$; $R - 1 = 0.02593$

2.140 base_CamSpecHM_TTTEEE_lowl_lowE_lensing_post_BAO_Riess18_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02241 ± 0.00014	$\sigma_8\Omega_m^{0.25}$	$0.6007^{+0.0051}_{-0.0058}$	$D_M(0.38)$	1522.6 ± 6.8
$\boldsymbol{\Omega_c h^2}$	0.11835 ± 0.00088	$\sigma_8/h^{0.5}$	$0.9795^{+0.0075}_{-0.0085}$	$H(0.51)$	89.90 ± 0.21
$\boldsymbol{100\theta_{MC}}$	1.04106 ± 0.00030	$r_{drag}h$	100.31 ± 0.68	$D_M(0.51)$	1973.3 ± 8.0
$\boldsymbol{\tau}$	$0.0577^{+0.0060}_{-0.0078}$	$\langle d^2\rangle^{1/2}$	2.424 ± 0.019	$H(0.61)$	95.48 ± 0.18
$\boldsymbol{\ln(10^{10}A_s)}$	$3.047^{+0.012}_{-0.015}$	z_{re}	$7.98^{+0.63}_{-0.75}$	$D_M(0.61)$	2297.0 ± 8.6
$\boldsymbol{n_s}$	0.9688 ± 0.0037	$10^9 A_s$	$2.105^{+0.026}_{-0.032}$	$H(2.33)$	235.52 ± 0.55
$\boldsymbol{y_{cal}}$	1.0009 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.875 ± 0.010	$D_M(2.33)$	5756.3 ± 8.6
$\boldsymbol{A_{100}^{PS}}$	237 ± 24	D_{40}	1223 ± 11	$f\sigma_8(0.15)$	0.4517 ± 0.0051
$\boldsymbol{A_{143}^{PS}}$	39 ± 8	D_{220}	5733 ± 39	$\sigma_8(0.15)$	$0.7470^{+0.0047}_{-0.0058}$
$\boldsymbol{A_{217}^{PS}}$	103 ± 10	D_{810}	2537 ± 13	$f\sigma_8(0.38)$	$0.4712^{+0.0042}_{-0.0047}$
$\boldsymbol{A_{217}^{CIB}}$	39 ± 7	D_{1420}	817.3 ± 4.7	$\sigma_8(0.38)$	$0.6628^{+0.0042}_{-0.0051}$
$\boldsymbol{A_{143}^{tSZ}}$	$4.0^{+2.0}_{-2.5}$	D_{2000}	230.9 ± 1.6	$f\sigma_8(0.51)$	$0.4705^{+0.0038}_{-0.0043}$
$\boldsymbol{r_{143\times217}^{PS}}$	0.67 ± 0.13	$n_{s,0.002}$	0.9688 ± 0.0037	$\sigma_8(0.51)$	$0.6206^{+0.0039}_{-0.0048}$
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.55^{+0.40}_{-0.18}$	Y_P	$0.245408^{+0.000056}_{-0.000048}$	$f\sigma_8(0.61)$	$0.4660^{+0.0035}_{-0.0040}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	$0.246734^{+0.000056}_{-0.000048}$	$\sigma_8(0.61)$	$0.5906^{+0.0037}_{-0.0046}$
$\boldsymbol{A^{kSZ}}$	< 6.07	10^5D/H	2.579 ± 0.025	$f\sigma_8(2.33)$	$0.2980^{+0.0019}_{-0.0024}$
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.19	Age/Gyr	13.783 ± 0.019	$\sigma_8(2.33)$	$0.3075^{+0.0020}_{-0.0025}$
$\boldsymbol{A_{143}^{dust}}$	0.95 ± 0.17	z_*	$1089.73^{+0.19}_{-0.22}$	f_{2000}^{143}	29.1 ± 2.8
$\boldsymbol{A_{217}^{dust}}$	0.97 ± 0.11	r_*	144.83 ± 0.22	f_{2000}^{217}	106.5 ± 1.9
$\boldsymbol{A_{143\times217}^{dust}}$	1.02 ± 0.17	$100\theta_*$	1.04124 ± 0.00030	$f_{2000}^{143\times217}$	31.7 ± 2.0
$\boldsymbol{c_{100}}$	0.9976 ± 0.0010	$D_M(z_*)$/Gpc	13.909 ± 0.021	$\chi^2_{lensing}$	9.40 ± 0.83
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	z_{drag}	1059.90 ± 0.30	χ^2_{simall}	397.4 ± 2.1
$\boldsymbol{c_{TE}}$	0.9965 ± 0.0050	r_{drag}	147.49 ± 0.24	χ^2_{lowl}	22.73 ± 0.74
$\boldsymbol{c_{EE}}$	0.9922 ± 0.0049	k_D	0.14048 ± 0.00030	$\chi^2_{CamSpec}$	11515.0 ± 5.7
H_0	68.01 ± 0.40	$100\theta_D$	0.16078 ± 0.00018	$\chi^2_{H073p45}$	10.8 ± 1.6
Ω_Λ	0.6943 ± 0.0052	z_{eq}	3364 ± 20	χ^2_{6DF}	0.021 ± 0.030
Ω_m	0.3057 ± 0.0052	k_{eq}	0.010266 ± 0.000062	χ^2_{MGS}	1.65 ± 0.41
$\Omega_m h^2$	0.14140 ± 0.00085	$100\theta_{eq}$	0.8205 ± 0.0038	$\chi^2_{DR12BAO}$	3.91 ± 0.71
$\Omega_m h^3$	0.09617 ± 0.00030	$100\theta_{s,eq}$	0.4531 ± 0.0020	χ^2_{prior}	7.8 ± 3.4
σ_8	$0.8078^{+0.0053}_{-0.0063}$	$H(0.15)$	73.23 ± 0.34	χ^2_{CMB}	11944.5 ± 5.9
S_8	0.815 ± 0.010	$D_M(0.15)$	637.8 ± 3.3	χ^2_{BAO}	5.58 ± 0.53
$\sigma_8\Omega_m^{0.5}$	0.4466 ± 0.0055	$H(0.38)$	83.24 ± 0.26		

$\bar{\chi}^2_{eff} = 11968.71$; $R - 1 = 0.02252$

2.141 base_CamSpecHM_TTTEEE_lowl_lowE_lensing_post_Pantheon_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02232 ± 0.00015	$\sigma_8\Omega_m^{0.5}$	0.4522 ± 0.0067	$D_M(0.15)$	642.0 ± 4.3
$\boldsymbol{\Omega_c h^2}$	0.1194 ± 0.0011	$\sigma_8\Omega_m^{0.25}$	0.6049 ± 0.0062	$H(0.38)$	82.94 ± 0.32
$\boldsymbol{100\theta_{MC}}$	1.04090 ± 0.00031	$\sigma_8/h^{0.5}$	0.9849 ± 0.0087	$D_M(0.38)$	1531.0 ± 8.7
$\boldsymbol{\tau}$	$0.0552^{+0.0052}_{-0.0079}$	$r_{drag}h$	99.47 ± 0.88	$H(0.51)$	89.66 ± 0.26
$\boldsymbol{\ln(10^{10}A_s)}$	$3.043^{+0.011}_{-0.015}$	$\langle d^2\rangle^{1/2}$	2.436 ± 0.021	$D_M(0.51)$	1983 ± 10
$\boldsymbol{n_s}$	0.9663 ± 0.0041	z_{re}	$7.76^{+0.56}_{-0.78}$	$H(0.61)$	95.28 ± 0.21
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0025	$10^9 A_s$	$2.097^{+0.023}_{-0.032}$	$D_M(0.61)$	2308 ± 11
$\boldsymbol{A_{100}^{PS}}$	239 ± 24	$10^9 A_s e^{-2\tau}$	1.878 ± 0.011	$H(2.33)$	236.10 ± 0.68
$\boldsymbol{A_{143}^{PS}}$	39 ± 8	D_{40}	1226 ± 12	$D_M(2.33)$	5765 ± 10
$\boldsymbol{A_{217}^{PS}}$	102 ± 10	D_{220}	5722 ± 40	$f\sigma_8(0.15)$	0.4567 ± 0.0062
$\boldsymbol{A_{217}^{CIB}}$	40 ± 7	D_{810}	2535 ± 14	$\sigma_8(0.15)$	$0.7477^{+0.0046}_{-0.0055}$
$\boldsymbol{A_{143}^{tSZ}}$	$3.9^{+2.0}_{-2.5}$	D_{1420}	816.0 ± 4.9	$f\sigma_8(0.38)$	0.4749 ± 0.0050
$\boldsymbol{r_{143\times217}^{PS}}$	0.66 ± 0.13	D_{2000}	230.4 ± 1.6	$\sigma_8(0.38)$	$0.6627^{+0.0038}_{-0.0049}$
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.55^{+0.39}_{-0.18}$	$n_{s,0.002}$	0.9663 ± 0.0041	$f\sigma_8(0.51)$	0.4734 ± 0.0044
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P	$0.245372^{+0.000065}_{-0.000055}$	$\sigma_8(0.51)$	$0.6202^{+0.0036}_{-0.0046}$
$\boldsymbol{A^{kSZ}}$	$4.7^{+1.9}_{-4.3}$	Y_P^{BBN}	$0.246698^{+0.000065}_{-0.000055}$	$f\sigma_8(0.61)$	0.4683 ± 0.0040
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.20	10^5D/H	$2.596^{+0.027}_{-0.030}$	$\sigma_8(0.61)$	$0.5901^{+0.0034}_{-0.0044}$
$\boldsymbol{A_{143}^{dust}}$	0.96 ± 0.17	Age/Gyr	13.801 ± 0.023	$f\sigma_8(2.33)$	$0.2975^{+0.0017}_{-0.0023}$
$\boldsymbol{A_{217}^{dust}}$	0.97 ± 0.11	z_*	1089.93 ± 0.25	$\sigma_8(2.33)$	$0.3067^{+0.0018}_{-0.0025}$
$\boldsymbol{A_{143\times217}^{dust}}$	1.03 ± 0.16	r_*	144.63 ± 0.26	f_{2000}^{143}	29.6 ± 2.8
$\boldsymbol{c_{100}}$	0.9976 ± 0.0010	$100\theta_*$	1.04109 ± 0.00031	f_{2000}^{217}	106.8 ± 1.9
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	$D_M(z_*)$/Gpc	13.892 ± 0.025	$f_{2000}^{143\times217}$	32.1 ± 2.0
$\boldsymbol{c_{TE}}$	0.9966 ± 0.0050	z_{drag}	1059.77 ± 0.32	$\chi^2_{lensing}$	9.26 ± 0.66
$\boldsymbol{c_{EE}}$	0.9921 ± 0.0049	r_{drag}	147.32 ± 0.27	χ^2_{simall}	396.9 ± 1.8
H_0	67.52 ± 0.51	k_D	0.14059 ± 0.00032	χ^2_{lowl}	23.12 ± 0.84
Ω_Λ	0.6877 ± 0.0069	$100\theta_D$	0.16085 ± 0.00019	$\chi^2_{CamSpec}$	11514.2 ± 5.5
Ω_m	0.3123 ± 0.0069	z_{eq}	3386 ± 26	χ^2_{JLA}	1036.48 ± 0.42
$\Omega_m h^2$	0.1423 ± 0.0011	k_{eq}	0.010335 ± 0.000078	χ^2_{prior}	7.8 ± 3.5
$\Omega_m h^3$	0.09611 ± 0.00031	$100\theta_{eq}$	0.8161 ± 0.0048	χ^2_{CMB}	11943.5 ± 5.7
σ_8	$0.8093^{+0.0052}_{-0.0061}$	$100\theta_{s,eq}$	0.4509 ± 0.0025		
S_8	0.826 ± 0.012	$H(0.15)$	72.81 ± 0.44		

$\bar{\chi}^2_{eff} = 12987.78$; $R - 1 = 0.01338$

2.142 base_CamSpecHM_TTTEEE_lowl_lowE_lensing_post_BAO_JLA_Riess18_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02241 ± 0.00014	$\sigma_8\Omega_m^{0.25}$	0.6007 ± 0.0055	$D_M(0.38)$	1522.3 ± 6.7
$\boldsymbol{\Omega_c h^2}$	0.11832 ± 0.00088	$\sigma_8/h^{0.5}$	0.9796 ± 0.0081	$H(0.51)$	89.91 ± 0.21
$\boldsymbol{100\theta_{MC}}$	$1.04107^{+0.00031}_{-0.00028}$	$r_{drag}h$	100.34 ± 0.68	$D_M(0.51)$	1973.0 ± 7.9
$\boldsymbol{\tau}$	$0.0580^{+0.0062}_{-0.0079}$	$\langle d^2\rangle^{1/2}$	2.424 ± 0.019	$H(0.61)$	95.48 ± 0.18
$\boldsymbol{\ln(10^{10}A_s)}$	$3.047^{+0.013}_{-0.015}$	z_{re}	$8.00^{+0.63}_{-0.77}$	$D_M(0.61)$	2296.6 ± 8.6
$\boldsymbol{n_s}$	0.9691 ± 0.0037	$10^9 A_s$	$2.106^{+0.026}_{-0.032}$	$H(2.33)$	235.50 ± 0.56
$\boldsymbol{y_{cal}}$	1.0009 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.875 ± 0.010	$D_M(2.33)$	5756.1 ± 8.6
$\boldsymbol{A_{100}^{PS}}$	237 ± 25	D_{40}	1222 ± 11	$f\sigma_8(0.15)$	0.4516 ± 0.0052
$\boldsymbol{A_{143}^{PS}}$	39 ± 8	D_{220}	5732 ± 38	$\sigma_8(0.15)$	$0.7472^{+0.0048}_{-0.0059}$
$\boldsymbol{A_{217}^{PS}}$	103 ± 10	D_{810}	2537 ± 13	$f\sigma_8(0.38)$	0.4712 ± 0.0044
$\boldsymbol{A_{217}^{CIB}}$	39 ± 7	D_{1420}	817.5 ± 4.7	$\sigma_8(0.38)$	$0.6630^{+0.0042}_{-0.0052}$
$\boldsymbol{A_{143}^{tSZ}}$	$4.0^{+2.1}_{-2.6}$	D_{2000}	231.0 ± 1.6	$f\sigma_8(0.51)$	0.4705 ± 0.0041
$\boldsymbol{r_{143\times217}^{PS}}$	0.67 ± 0.13	$n_{s,0.002}$	0.9691 ± 0.0037	$\sigma_8(0.51)$	$0.6207^{+0.0040}_{-0.0049}$
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.55^{+0.42}_{-0.17}$	Y_P	0.245408 ± 0.000054	$f\sigma_8(0.61)$	0.4661 ± 0.0038
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	0.246734 ± 0.000054	$\sigma_8(0.61)$	$0.5908^{+0.0038}_{-0.0046}$
$\boldsymbol{A^{kSZ}}$	< 5.91	10^5D/H	2.579 ± 0.026	$f\sigma_8(2.33)$	$0.2981^{+0.0020}_{-0.0024}$
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.19	Age/Gyr	13.782 ± 0.020	$\sigma_8(2.33)$	$0.3076^{+0.0021}_{-0.0025}$
$\boldsymbol{A_{143}^{dust}}$	0.95 ± 0.17	z_*	1089.73 ± 0.21	f_{2000}^{143}	29.1 ± 2.8
$\boldsymbol{A_{217}^{dust}}$	0.97 ± 0.10	r_*	144.84 ± 0.23	f_{2000}^{217}	106.5 ± 1.9
$\boldsymbol{A_{143\times217}^{dust}}$	1.02 ± 0.16	$100\theta_*$	$1.04125^{+0.00031}_{-0.00028}$	$f_{2000}^{143\times217}$	31.7 ± 1.9
$\boldsymbol{c_{100}}$	0.9976 ± 0.0010	$D_M(z_*)$/Gpc	13.910 ± 0.022	$\chi^2_{lensing}$	9.41 ± 0.83
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	z_{drag}	1059.90 ± 0.31	χ^2_{simall}	397.5 ± 2.1
$\boldsymbol{c_{TE}}$	0.9964 ± 0.0051	r_{drag}	147.50 ± 0.25	χ^2_{lowl}	22.69 ± 0.74
$\boldsymbol{c_{EE}}$	0.9922 ± 0.0050	k_D	0.14047 ± 0.00031	$\chi^2_{CamSpec}$	11515.3 ± 6.0
H_0	68.03 ± 0.39	$100\theta_D$	0.16079 ± 0.00018	$\chi^2_{H073p45}$	10.7 ± 1.6
Ω_Λ	0.6945 ± 0.0052	z_{eq}	3363 ± 20	χ^2_{JLA}	706.63 ± 0.11
Ω_m	0.3055 ± 0.0052	k_{eq}	0.010264 ± 0.000062	χ^2_{6DF}	0.020 ± 0.029
$\Omega_m h^2$	0.14137 ± 0.00086	$100\theta_{eq}$	0.8206 ± 0.0038	χ^2_{MGS}	1.66 ± 0.41
$\Omega_m h^3$	0.09617 ± 0.00032	$100\theta_{s,eq}$	0.4532 ± 0.0020	$\chi^2_{DR12BAO}$	3.89 ± 0.67
σ_8	$0.8079^{+0.0053}_{-0.0065}$	$H(0.15)$	73.25 ± 0.34	χ^2_{prior}	7.7 ± 3.4
S_8	0.815 ± 0.010	$D_M(0.15)$	637.7 ± 3.3	χ^2_{CMB}	11944.9 ± 6.3
$\sigma_8\Omega_m^{0.5}$	0.4466 ± 0.0055	$H(0.38)$	83.25 ± 0.25	χ^2_{BAO}	5.57 ± 0.51

$\bar{\chi}^2_{eff} = 12675.50$; $R - 1 = 0.05354$

2.143 base_CamSpecHM_TTTEEE_lowl_lowE_lensing_post_BAO_Pantheon_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02235 ± 0.00014	$\sigma_8\Omega_m^{0.25}$	0.6030 ± 0.0055	$D_M(0.38)$	1527.5 ± 7.0
$\boldsymbol{\Omega_c h^2}$	0.11892 ± 0.00090	$\sigma_8/h^{0.5}$	0.9824 ± 0.0081	$H(0.51)$	89.76 ± 0.21
$\boldsymbol{100\theta_{MC}}$	1.04097 ± 0.00030	$r_{drag}h$	99.84 ± 0.70	$D_M(0.51)$	1979.0 ± 8.2
$\boldsymbol{\tau}$	$0.0562^{+0.0056}_{-0.0077}$	$\langle d^2\rangle^{1/2}$	2.430 ± 0.019	$H(0.61)$	95.36 ± 0.18
$\boldsymbol{\ln(10^{10}A_s)}$	$3.044^{+0.012}_{-0.015}$	z_{re}	$7.84^{+0.59}_{-0.76}$	$D_M(0.61)$	2303.1 ± 8.9
$\boldsymbol{n_s}$	0.9674 ± 0.0038	$10^9 A_s$	$2.100^{+0.024}_{-0.032}$	$H(2.33)$	235.83 ± 0.56
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.877 ± 0.010	$D_M(2.33)$	5761.5 ± 8.8
$\boldsymbol{A_{100}^{PS}}$	239 ± 24	D_{40}	1225 ± 11	$f\sigma_8(0.15)$	0.4545 ± 0.0053
$\boldsymbol{A_{143}^{PS}}$	39 ± 8	D_{220}	5726 ± 39	$\sigma_8(0.15)$	$0.7473^{+0.0046}_{-0.0057}$
$\boldsymbol{A_{217}^{PS}}$	103 ± 10	D_{810}	2536 ± 14	$f\sigma_8(0.38)$	0.4732 ± 0.0045
$\boldsymbol{A_{217}^{CIB}}$	40 ± 7	D_{1420}	816.5 ± 4.8	$\sigma_8(0.38)$	$0.6627^{+0.0040}_{-0.0050}$
$\boldsymbol{A_{143}^{tSZ}}$	$3.9^{+2.0}_{-2.5}$	D_{2000}	230.6 ± 1.6	$f\sigma_8(0.51)$	0.4721 ± 0.0040
$\boldsymbol{r_{143\times217}^{PS}}$	0.66 ± 0.13	$n_{s,0.002}$	0.9674 ± 0.0038	$\sigma_8(0.51)$	$0.6203^{+0.0037}_{-0.0047}$
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.55^{+0.39}_{-0.19}$	Y_P	$0.245384^{+0.000060}_{-0.000051}$	$f\sigma_8(0.61)$	$0.4673^{+0.0036}_{-0.0040}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	$0.246711^{+0.000060}_{-0.000051}$	$\sigma_8(0.61)$	$0.5902^{+0.0035}_{-0.0045}$
$\boldsymbol{A^{kSZ}}$	< 6.20	10^5D/H	$2.590^{+0.025}_{-0.028}$	$f\sigma_8(2.33)$	$0.2977^{+0.0018}_{-0.0023}$
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.19	Age/Gyr	13.794 ± 0.020	$\sigma_8(2.33)$	$0.3070^{+0.0019}_{-0.0025}$
$\boldsymbol{A_{143}^{dust}}$	0.96 ± 0.17	z_*	1089.86 ± 0.22	f_{2000}^{143}	29.4 ± 2.8
$\boldsymbol{A_{217}^{dust}}$	0.97 ± 0.11	r_*	144.73 ± 0.22	f_{2000}^{217}	106.7 ± 1.9
$\boldsymbol{A_{143\times217}^{dust}}$	1.02 ± 0.16	$100\theta_*$	1.04115 ± 0.00029	$f_{2000}^{143\times217}$	32.0 ± 2.0
$\boldsymbol{c_{100}}$	0.9976 ± 0.0010	$D_M(z_*)$/Gpc	13.901 ± 0.022	$\chi^2_{lensing}$	9.27 ± 0.70
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	z_{drag}	1059.80 ± 0.31	χ^2_{simall}	397.1 ± 1.9
$\boldsymbol{c_{TE}}$	0.9966 ± 0.0050	r_{drag}	147.40 ± 0.24	χ^2_{lowl}	22.94 ± 0.77
$\boldsymbol{c_{EE}}$	0.9923 ± 0.0049	k_D	0.14052 ± 0.00031	$\chi^2_{CamSpec}$	11514.3 ± 5.5
H_0	67.73 ± 0.41	$100\theta_D$	0.16083 ± 0.00019	χ^2_{JLA}	1036.29 ± 0.27
Ω_Λ	0.6906 ± 0.0054	z_{eq}	3376 ± 21	χ^2_{6DF}	0.038 ± 0.048
Ω_m	0.3094 ± 0.0054	k_{eq}	0.010304 ± 0.000063	χ^2_{MGS}	1.37 ± 0.39
$\Omega_m h^2$	0.14192 ± 0.00087	$100\theta_{eq}$	0.8180 ± 0.0039	$\chi^2_{DR12BAO}$	4.4 ± 1.1
$\Omega_m h^3$	0.09612 ± 0.00031	$100\theta_{s,eq}$	0.4519 ± 0.0020	χ^2_{prior}	7.8 ± 3.4
σ_8	$0.8085^{+0.0052}_{-0.0062}$	$H(0.15)$	72.99 ± 0.35	χ^2_{CMB}	11943.6 ± 5.7
S_8	0.821 ± 0.010	$D_M(0.15)$	640.3 ± 3.5	χ^2_{BAO}	5.85 ± 0.83
$\sigma_8\Omega_m^{0.5}$	0.4497 ± 0.0056	$H(0.38)$	83.06 ± 0.26		

$\bar{\chi}^2_{eff} = 12993.53$; $R - 1 = 0.01510$

2.144 base_CamSpecHM_TTTEEE_lowl_lowE_lensing_post_BAO_Pantheon_Riess18_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02241 ± 0.00014	$\sigma_8\Omega_m^{0.25}$	$0.6004^{+0.0050}_{-0.0057}$	$D_M(0.38)$	1522.1 ± 6.6
$\boldsymbol{\Omega_c h^2}$	0.11828 ± 0.00085	$\sigma_8/h^{0.5}$	$0.9792^{+0.0074}_{-0.0084}$	$H(0.51)$	89.92 ± 0.20
$\boldsymbol{100\theta_{MC}}$	1.04107 ± 0.00030	$r_{drag}h$	100.37 ± 0.66	$D_M(0.51)$	1972.7 ± 7.7
$\boldsymbol{\tau}$	$0.0579^{+0.0061}_{-0.0077}$	$\langle d^2\rangle^{1/2}$	$2.423^{+0.018}_{-0.020}$	$H(0.61)$	95.49 ± 0.17
$\boldsymbol{\ln(10^{10}A_s)}$	$3.047^{+0.013}_{-0.015}$	z_{re}	$7.99^{+0.63}_{-0.75}$	$D_M(0.61)$	2296.3 ± 8.4
$\boldsymbol{n_s}$	0.9690 ± 0.0037	$10^9 A_s$	$2.106^{+0.026}_{-0.032}$	$H(2.33)$	235.48 ± 0.54
$\boldsymbol{y_{cal}}$	1.0009 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.875 ± 0.010	$D_M(2.33)$	5755.9 ± 8.4
$\boldsymbol{A_{100}^{PS}}$	237 ± 24	D_{40}	1223 ± 11	$f\sigma_8(0.15)$	0.4514 ± 0.0050
$\boldsymbol{A_{143}^{PS}}$	38 ± 8	D_{220}	5734 ± 38	$\sigma_8(0.15)$	$0.7470^{+0.0048}_{-0.0058}$
$\boldsymbol{A_{217}^{PS}}$	103 ± 10	D_{810}	2537 ± 13	$f\sigma_8(0.38)$	$0.4710^{+0.0041}_{-0.0046}$
$\boldsymbol{A_{217}^{CIB}}$	39 ± 7	D_{1420}	817.4 ± 4.7	$\sigma_8(0.38)$	$0.6628^{+0.0042}_{-0.0051}$
$\boldsymbol{A_{143}^{tSZ}}$	$4.0^{+2.0}_{-2.5}$	D_{2000}	230.9 ± 1.6	$f\sigma_8(0.51)$	$0.4703^{+0.0037}_{-0.0042}$
$\boldsymbol{r_{143\times217}^{PS}}$	0.67 ± 0.13	$n_{s,0.002}$	0.9690 ± 0.0037	$\sigma_8(0.51)$	$0.6206^{+0.0039}_{-0.0048}$
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.55^{+0.41}_{-0.18}$	Y_P	$0.245410^{+0.000055}_{-0.000048}$	$f\sigma_8(0.61)$	$0.4659^{+0.0035}_{-0.0040}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	$0.246736^{+0.000055}_{-0.000048}$	$\sigma_8(0.61)$	$0.5907^{+0.0037}_{-0.0046}$
$\boldsymbol{A^{kSZ}}$	< 6.06	10^5D/H	2.578 ± 0.025	$f\sigma_8(2.33)$	$0.2981^{+0.0019}_{-0.0024}$
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.19	Age/Gyr	13.782 ± 0.019	$\sigma_8(2.33)$	$0.3076^{+0.0020}_{-0.0025}$
$\boldsymbol{A_{143}^{dust}}$	0.95 ± 0.17	z_*	1089.72 ± 0.20	f_{2000}^{143}	29.1 ± 2.8
$\boldsymbol{A_{217}^{dust}}$	0.98 ± 0.11	r_*	144.85 ± 0.22	f_{2000}^{217}	106.5 ± 1.9
$\boldsymbol{A_{143\times217}^{dust}}$	1.02 ± 0.17	$100\theta_*$	1.04125 ± 0.00030	$f_{2000}^{143\times217}$	31.7 ± 2.0
$\boldsymbol{c_{100}}$	0.9976 ± 0.0010	$D_M(z_*)$/Gpc	13.911 ± 0.021	$\chi^2_{lensing}$	9.42 ± 0.85
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	z_{drag}	1059.91 ± 0.30	χ^2_{simall}	397.5 ± 2.2
$\boldsymbol{c_{TE}}$	0.9965 ± 0.0050	r_{drag}	147.50 ± 0.24	χ^2_{lowl}	22.70 ± 0.74
$\boldsymbol{c_{EE}}$	0.9923 ± 0.0049	k_D	0.14047 ± 0.00030	$\chi^2_{CamSpec}$	11515.0 ± 5.7
H_0	68.04 ± 0.38	$100\theta_D$	0.16078 ± 0.00018	$\chi^2_{H073p45}$	10.7 ± 1.5
Ω_Λ	0.6947 ± 0.0051	z_{eq}	3362 ± 20	χ^2_{JLA}	1036.13 ± 0.17
Ω_m	0.3053 ± 0.0051	k_{eq}	0.010262 ± 0.000060	χ^2_{6DF}	0.019 ± 0.028
$\Omega_m h^2$	0.14134 ± 0.00083	$100\theta_{eq}$	0.8208 ± 0.0037	χ^2_{MGS}	1.68 ± 0.40
$\Omega_m h^3$	0.09617 ± 0.00030	$100\theta_{s,eq}$	0.4533 ± 0.0019	$\chi^2_{DR12BAO}$	3.85 ± 0.64
σ_8	$0.8077^{+0.0053}_{-0.0063}$	$H(0.15)$	73.26 ± 0.33	χ^2_{prior}	7.8 ± 3.4
S_8	0.8148 ± 0.0097	$D_M(0.15)$	637.6 ± 3.2	χ^2_{CMB}	11944.6 ± 5.9
$\sigma_8\Omega_m^{0.5}$	0.4463 ± 0.0053	$H(0.38)$	83.26 ± 0.25	χ^2_{BAO}	5.55 ± 0.48

$\bar{\chi}^2_{eff} = 13004.80$; $R - 1 = 0.02404$

2.145 base_CleanedCamSpecHM_TT_lowl_lowE

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02210 ± 0.00022	$\sigma_8/h^{0.5}$	0.990 ± 0.016	$H(0.15)$	72.31 ± 0.78
$\boldsymbol{\Omega_c h^2}$	0.1204 ± 0.0021	$r_{\rm drag} h$	98.6 ± 1.6	$D_{\rm M}(0.15)$	647.1 ± 7.9
$\boldsymbol{100\theta_{MC}}$	1.04079 ± 0.00047	$\langle d^2 \rangle^{1/2}$	2.449 ± 0.038	$H(0.38)$	82.55 ± 0.56
$\boldsymbol{\tau}$	0.0518 ± 0.0080	$z_{\rm re}$	7.47 ± 0.82	$D_{\rm M}(0.38)$	1541 ± 16
$\boldsymbol{\ln(10^{10} A_s)}$	3.038 ± 0.016	$10^9 A_{\rm s}$	2.086 ± 0.034	$H(0.51)$	89.34 ± 0.44
$\boldsymbol{n_s}$	0.9624 ± 0.0058	$10^9 A_{\rm s} e^{-2\tau}$	1.880 ± 0.014	$D_{\rm M}(0.51)$	1995 ± 18
$\boldsymbol{y_{cal}}$	1.0004 ± 0.0025	D_{40}	1232 ± 15	$H(0.61)$	95.02 ± 0.35
$\boldsymbol{A_{100}^{PS}}$	255 ± 27	D_{220}	5705 ± 40	$D_{\rm M}(0.61)$	2321 ± 20
$\boldsymbol{A_{143}^{tSZ}}$	$3.7^{+1.7}_{-2.7}$	D_{810}	2531 ± 14	$H(2.33)$	236.6 ± 1.3
$\boldsymbol{A^{kSZ}}$	$5.3^{+4.2}_{-1.9}$	D_{1420}	812.5 ± 5.2	$D_{\rm M}(2.33)$	5778 ± 16
$\boldsymbol{A_{100}^{dust}}$	1.00 ± 0.19	D_{2000}	228.9 ± 1.8	$f\sigma_8(0.15)$	0.462 ± 0.012
$\boldsymbol{A_{143}^{power}}$	$10.4^{+2.1}_{-2.5}$	$n_{\rm s,0.002}$	0.9624 ± 0.0058	$\sigma_8(0.15)$	0.7477 ± 0.0075
$\boldsymbol{A_{217}^{power}}$	$8.2^{+1.7}_{-2.9}$	$Y_{\rm P}$	$0.24528^{+0.00011}_{-0.000087}$	$f\sigma_8(0.38)$	0.4783 ± 0.0095
$\boldsymbol{A_{143\times217}^{power}}$	$4.3^{+1.7}_{-2.9}$	$Y_{\rm P}^{\rm BBN}$	$0.24660^{+0.00011}_{-0.000087}$	$\sigma_8(0.38)$	0.6619 ± 0.0061
$\boldsymbol{\gamma_{143}^{power}}$	$1.34^{+0.40}_{-0.55}$	10^5D/H	2.637 ± 0.042	$f\sigma_8(0.51)$	0.4759 ± 0.0082
$\boldsymbol{\gamma_{217}^{power}}$	$1.37^{+0.73}_{-0.61}$	Age/Gyr	13.830 ± 0.036	$\sigma_8(0.51)$	0.6190 ± 0.0055
$\boldsymbol{\gamma_{143\times217}^{power}}$	1.33 ± 0.59	z_*	1090.30 ± 0.40	$f\sigma_8(0.61)$	0.4703 ± 0.0073
$\boldsymbol{c_{100}}$	0.9978 ± 0.0011	r_*	144.53 ± 0.47	$\sigma_8(0.61)$	0.5888 ± 0.0051
$\boldsymbol{c_{217}}$	$0.9994^{+0.0013}_{-0.0017}$	$100\theta_*$	1.04100 ± 0.00046	$f\sigma_8(2.33)$	0.2966 ± 0.0025
H_0	66.95 ± 0.91	$D_{\rm M}(z_*)$/Gpc	13.884 ± 0.044	$\sigma_8(2.33)$	0.3054 ± 0.0027
Ω_Λ	$0.680^{+0.013}_{-0.012}$	$z_{\rm drag}$	1059.34 ± 0.45	f_{2000}^{143}	24 ± 3
$\Omega_{\rm m}$	$0.320^{+0.012}_{-0.013}$	$r_{\rm drag}$	147.28 ± 0.47	f_{2000}^{217}	16.9 ± 2.0
$\Omega_{\rm m} h^2$	0.1432 ± 0.0020	$k_{\rm D}$	0.14046 ± 0.00052	$f_{2000}^{143\times217}$	11.2 ± 2.2
$\Omega_{\rm m} h^3$	0.09584 ± 0.00045	$100\theta_{\rm D}$	0.16111 ± 0.00026	$\chi^2_{\rm simall}$	396.9 ± 1.7
σ_8	0.8100 ± 0.0090	$z_{\rm eq}$	3406 ± 47	$\chi^2_{\rm lowl}$	23.8 ± 1.3
S_8	0.836 ± 0.024	$k_{\rm eq}$	0.01040 ± 0.00014	$\chi^2_{\rm CamSpec}$	6716.2 ± 5.2
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.458 ± 0.013	$100\theta_{\rm eq}$	0.8119 ± 0.0088	$\chi^2_{\rm prior}$	5.3 ± 2.9
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.609 ± 0.012	$100\theta_{\rm s,eq}$	0.4488 ± 0.0045	$\chi^2_{\rm CMB}$	7137.0 ± 5.2

$\bar{\chi}^2_{\rm eff} = 7142.20$; $R - 1 = 0.00552$

2.146 base_lensing_lenspriors

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022210	0.02220 ± 0.00049	D_{810}	2788	2628^{+400}_{-500}	$H(0.38)$	107.7	84^{+10}_{-20}
$\boldsymbol{\Omega_c h^2}$	0.1163	$0.111^{+0.010}_{-0.013}$	D_{1420}	756	819^{+100}_{-200}	$D_{\rm M}(0.38)$	1121	1585^{+200}_{-500}
$\boldsymbol{100\theta_{MC}}$	1.118	$1.032^{+0.077}_{-0.055}$	D_{2000}	215	264^{+40}_{-60}	$H(0.51)$	112.9	$90.0^{+9.9}_{-20}$
$\boldsymbol{\ln(10^{10} A_s)}$	3.262	3.13 ± 0.13	$n_{\rm s,0.002}$	0.9607	0.960 ± 0.020	$D_{\rm M}(0.51)$	1475	2047^{+200}_{-600}
$\boldsymbol{n_s}$	0.9607	0.960 ± 0.020	$Y_{\rm P}$	0.245330	$0.24531^{+0.00022}_{-0.00019}$	$H(0.61)$	117.3	$95.4^{+9.8}_{-19}$
H_0	96.6	—	$Y_{\rm P}^{\rm BBN}$	0.246656	$0.24664^{+0.00022}_{-0.00020}$	$D_{\rm M}(0.61)$	1736	2378^{+300}_{-700}
Ω_Λ	0.851	$0.657^{+0.21}_{-0.063}$	10^5D/H	2.616	2.621 ± 0.093	$H(2.33)$	243.6	230^{+11}_{-13}
$\Omega_{\rm m}$	0.149	$0.343^{+0.063}_{-0.21}$	Age/Gyr	11.74	$14.2^{+1.2}_{-2.5}$	$D_{\rm M}(2.33)$	4847	5909^{+530}_{-1100}
$\Omega_{\rm m}h^2$	0.1391	$0.134^{+0.010}_{-0.013}$	z_*	1089.79	$1089.4^{+1.1}_{-1.3}$	$f\sigma_8(0.15)$	0.3739	$0.439^{+0.054}_{-0.041}$
$\Omega_{\rm m}h^3$	0.1344	$0.093^{+0.020}_{-0.039}$	r_*	145.53	147.0 ± 3.2	$\sigma_8(0.15)$	0.890	$0.741^{+0.15}_{-0.080}$
σ_8	0.939	$0.800^{+0.14}_{-0.077}$	$100\theta_*$	1.118	$1.032^{+0.077}_{-0.055}$	$f\sigma_8(0.38)$	0.4315	$0.453^{+0.020}_{-0.017}$
S_8	0.662	$0.804^{+0.088}_{-0.14}$	$D_{\rm M}(z_*)$/Gpc	13.01	$14.29^{+0.93}_{-1.2}$	$\sigma_8(0.38)$	0.817	$0.659^{+0.16}_{-0.082}$
$\sigma_8\Omega_{\rm m}^{0.5}$	0.362	$0.440^{+0.048}_{-0.075}$	$z_{\rm drag}$	1059.28	1058.9 ± 1.5	$f\sigma_8(0.51)$	0.4535	$0.453^{+0.025}_{-0.017}$
$\sigma_8\Omega_{\rm m}^{0.25}$	0.5834	0.589 ± 0.020	$r_{\rm drag}$	148.27	149.8 ± 3.3	$\sigma_8(0.51)$	0.777	$0.619^{+0.16}_{-0.082}$
$\sigma_8/h^{0.5}$	0.9553	$0.974^{+0.023}_{-0.020}$	$k_{\rm D}$	0.13951	$0.1380^{+0.0033}_{-0.0037}$	$f\sigma_8(0.61)$	0.4655	$0.449^{+0.035}_{-0.018}$
$r_{\rm drag}h$	143.3	103^{+20}_{-40}	$100\theta_{\rm D}$	0.1731	$0.160^{+0.012}_{-0.0081}$	$\sigma_8(0.61)$	0.748	$0.590^{+0.16}_{-0.082}$
$\langle d^2\rangle^{1/2}$	2.492	2.504 ± 0.054	$z_{\rm eq}$	3309	3189^{+240}_{-310}	$f\sigma_8(2.33)$	0.388	$0.299^{+0.087}_{-0.046}$
$z_{\rm re}$	7.890	7.63 ± 0.29	$k_{\rm eq}$	0.01010	$0.00973^{+0.00074}_{-0.00093}$	$\sigma_8(2.33)$	0.419	0.312 ± 0.069
$10^9 A_{\rm s}$	2.610	$2.32^{+0.27}_{-0.34}$	$100\theta_{\rm eq}$	0.8916	0.849 ± 0.048	$\chi^2_{\rm lensing}$	7.49	9.6 ± 2.0
$10^9 A_{\rm s} e^{-2\tau}$	2.338	$2.07^{+0.25}_{-0.31}$	$100\theta_{\rm s,eq}$	0.4922	0.468 ± 0.026	$\chi^2_{\rm prior}$	0.00	2.0 ± 2.0
D_{40}	1641	1400^{+200}_{-200}	$H(0.15)$	100.3	74 ± 20			
D_{220}	7133	6564^{+900}_{-1000}	$D_{\rm M}(0.15)$	457	670^{+90}_{-200}			

Best-fit $\chi^2_{\rm eff} = 7.49$; $\bar{\chi}^2_{\rm eff} = 11.58$; $R - 1 = 0.00149$
$\chi^2_{\rm eff}$: CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8_CMBmarged: 7.49

2.147 base_lensing_lenspriors_post_Pantheon

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\mathbf{\Omega_b h^2}$	0.02221 ± 0.00049	D_{810}	2750^{+300}_{-240}	$H(0.38)$	$82.0^{+3.7}_{-4.4}$
$\mathbf{\Omega_c h^2}$	$0.1116^{+0.0095}_{-0.013}$	D_{1420}	867^{+96}_{-67}	$D_{\rm M}(0.38)$	1545 ± 84
$\mathbf{100\theta_{MC}}$	1.031 ± 0.023	D_{2000}	253^{+25}_{-36}	$H(0.51)$	$88.5^{+3.9}_{-4.6}$
$\mathbf{ln(10^{10} A_s)}$	3.131 ± 0.098	$n_{\rm s,0.002}$	0.959 ± 0.021	$D_{\rm M}(0.51)$	2004 ± 110
$\mathbf{n_s}$	0.959 ± 0.021	$Y_{\rm P}$	$0.24532^{+0.00022}_{-0.00019}$	$H(0.61)$	$93.8^{+4.0}_{-4.8}$
H_0	$67.4^{+3.5}_{-4.2}$	$Y_{\rm P}^{\rm BBN}$	$0.24664^{+0.00022}_{-0.00019}$	$D_{\rm M}(0.61)$	2334 ± 120
Ω_Λ	0.703 ± 0.022	10^5D/H	2.619 ± 0.092	$H(2.33)$	$229.8^{+8.7}_{-11}$
$\Omega_{\rm m}$	0.297 ± 0.022	Age/Gyr	14.07 ± 0.65	$D_{\rm M}(2.33)$	5877 ± 270
$\Omega_{\rm m}h^2$	$0.1344^{+0.0096}_{-0.013}$	z_*	$1089.4^{+1.0}_{-1.3}$	$f\sigma_8(0.15)$	0.443 ± 0.015
$\Omega_{\rm m}h^3$	$0.0909^{+0.0098}_{-0.014}$	r_*	$146.9^{+3.3}_{-2.9}$	$\sigma_8(0.15)$	0.745 ± 0.028
σ_8	0.804 ± 0.030	$100\theta_*$	1.032 ± 0.023	$f\sigma_8(0.38)$	0.465 ± 0.015
S_8	0.799 ± 0.029	$D_{\rm M}(z_*)$/Gpc	14.26 ± 0.61	$\sigma_8(0.38)$	0.662 ± 0.027
$\sigma_8\Omega_{\rm m}^{0.5}$	0.437 ± 0.016	$z_{\rm drag}$	1058.9 ± 1.5	$f\sigma_8(0.51)$	0.465 ± 0.015
$\sigma_8\Omega_{\rm m}^{0.25}$	0.593 ± 0.019	$r_{\rm drag}$	$149.7^{+3.4}_{-3.0}$	$\sigma_8(0.51)$	0.620 ± 0.026
$\sigma_8/h^{0.5}$	0.980 ± 0.019	$k_{\rm D}$	$0.1381^{+0.0031}_{-0.0036}$	$f\sigma_8(0.61)$	0.461 ± 0.015
$r_{\rm drag}h$	$100.8^{+4.1}_{-4.6}$	$100\theta_{\rm D}$	$0.1598^{+0.0031}_{-0.0034}$	$\sigma_8(0.61)$	0.591 ± 0.025
$\langle d^2\rangle^{1/2}$	2.501 ± 0.054	$z_{\rm eq}$	3196^{+230}_{-300}	$f\sigma_8(2.33)$	0.298 ± 0.013
$z_{\rm re}$	$7.63^{+0.23}_{-0.27}$	$k_{\rm eq}$	$0.00976^{+0.00070}_{-0.00092}$	$\sigma_8(2.33)$	0.308 ± 0.014
$10^9 A_{\rm s}$	$2.30^{+0.21}_{-0.23}$	$100\theta_{\rm eq}$	0.847 ± 0.037	$\chi^2_{\rm lensing}$	9.6 ± 2.0
$10^9 A_{\rm s}e^{-2\tau}$	$2.06^{+0.19}_{-0.21}$	$100\theta_{\rm s,eq}$	0.467 ± 0.019	$\chi^2_{\rm JLA}$	1037.0 ± 1.4
D_{40}	1388^{+130}_{-140}	$H(0.15)$	$72.4^{+3.6}_{-4.2}$	$\chi^2_{\rm prior}$	2.0 ± 2.0
D_{220}	6568^{+800}_{-1000}	$D_{\rm M}(0.15)$	646 ± 36		

$\bar{\chi}^2_{\rm eff} = 1048.53$; $R - 1 = 0.00561$

2.148 base_lensing_lenspriors_post_agr2

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02219 ± 0.00049	D_{810}	2732^{+400}_{-500}	$H(0.38)$	84 ± 10
$\boldsymbol{\Omega_c h^2}$	$0.1070^{+0.0090}_{-0.011}$	D_{1420}	854^{+100}_{-100}	$D_{\rm M}(0.38)$	1572^{+200}_{-500}
$\boldsymbol{100\theta_{MC}}$	$1.030^{+0.080}_{-0.050}$	D_{2000}	276^{+40}_{-60}	$H(0.51)$	90 ± 10
$\boldsymbol{\ln(10^{10} A_s)}$	3.17 ± 0.13	$n_{\rm s,0.002}$	0.959 ± 0.020	$D_{\rm M}(0.51)$	2033^{+230}_{-590}
$\boldsymbol{n_s}$	0.959 ± 0.020	$Y_{\rm P}$	$0.24531^{+0.00023}_{-0.00020}$	$H(0.61)$	95 ± 10
H_0	—	$Y_{\rm P}^{\rm BBN}$	$0.24663^{+0.00023}_{-0.00020}$	$D_{\rm M}(0.61)$	2364^{+260}_{-670}
Ω_Λ	$0.678^{+0.19}_{-0.054}$	10^5D/H	$2.623^{+0.088}_{-0.097}$	$H(2.33)$	227^{+11}_{-12}
$\Omega_{\rm m}$	$0.322^{+0.054}_{-0.19}$	Age/Gyr	$14.2^{+1.2}_{-2.5}$	$D_{\rm M}(2.33)$	5925^{+520}_{-1100}
$\Omega_{\rm m}h^2$	$0.1298^{+0.0090}_{-0.011}$	z_*	$1089.0^{+1.0}_{-1.1}$	$f\sigma_8(0.15)$	$0.426^{+0.051}_{-0.043}$
$\Omega_{\rm m}h^3$	$0.091^{+0.021}_{-0.037}$	r_*	148.2 ± 2.9	$\sigma_8(0.15)$	$0.739^{+0.14}_{-0.073}$
σ_8	$0.796^{+0.13}_{-0.070}$	$100\theta_*$	$1.030^{+0.080}_{-0.050}$	$f\sigma_8(0.38)$	$0.444^{+0.019}_{-0.014}$
S_8	$0.777^{+0.076}_{-0.13}$	$D_{\rm M}(z_*)$/Gpc	$14.44^{+0.88}_{-1.3}$	$\sigma_8(0.38)$	$0.659^{+0.15}_{-0.076}$
$\sigma_8\Omega_{\rm m}^{0.5}$	$0.425^{+0.042}_{-0.072}$	$z_{\rm drag}$	1058.5 ± 1.4	$f\sigma_8(0.51)$	$0.445^{+0.022}_{-0.013}$
$\sigma_8\Omega_{\rm m}^{0.25}$	0.578 ± 0.016	$r_{\rm drag}$	151.0 ± 3.0	$\sigma_8(0.51)$	$0.619^{+0.15}_{-0.076}$
$\sigma_8/h^{0.5}$	$0.963^{+0.021}_{-0.018}$	$k_{\rm D}$	$0.1367^{+0.0029}_{-0.0033}$	$f\sigma_8(0.61)$	$0.443^{+0.031}_{-0.013}$
$r_{\rm drag}h$	105 ± 30	$100\theta_{\rm D}$	$0.160^{+0.012}_{-0.0074}$	$\sigma_8(0.61)$	$0.591^{+0.15}_{-0.076}$
$\langle d^2\rangle^{1/2}$	2.510 ± 0.053	$z_{\rm eq}$	3086^{+220}_{-260}	$f\sigma_8(2.33)$	$0.300^{+0.085}_{-0.043}$
$z_{\rm re}$	7.56 ± 0.28	$k_{\rm eq}$	$0.00942^{+0.00066}_{-0.00080}$	$\sigma_8(2.33)$	$0.314^{+0.10}_{-0.055}$
$10^9 A_{\rm s}$	$2.40^{+0.27}_{-0.33}$	$100\theta_{\rm eq}$	0.867 ± 0.044	$\chi^2_{\rm lensing}$	11.9 ± 2.0
$10^9 A_{\rm s}e^{-2\tau}$	$2.15^{+0.24}_{-0.30}$	$100\theta_{\rm s,eq}$	0.477 ± 0.024	$\chi^2_{\rm prior}$	2.0 ± 2.0
D_{40}	1464^{+200}_{-200}	$H(0.15)$	75 ± 20		
D_{220}	6917^{+900}_{-1000}	$D_{\rm M}(0.15)$	663^{+80}_{-200}		

$\bar{\chi}^2_{\rm eff} = 13.89$; $R - 1 = 0.00196$

2.149 base_lensing_lenspriors_post_conslmin40

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02219 ± 0.00049	D_{810}	2642^{+400}_{-600}	$H(0.38)$	84 ± 10
$\boldsymbol{\Omega_c h^2}$	$0.111^{+0.011}_{-0.015}$	D_{1420}	825^{+100}_{-200}	$D_{\rm M}(0.38)$	1584^{+200}_{-500}
$\boldsymbol{100\theta_{MC}}$	$1.032^{+0.075}_{-0.057}$	D_{2000}	267^{+40}_{-70}	$H(0.51)$	90 ± 10
$\boldsymbol{\ln(10^{10} A_s)}$	3.14 ± 0.15	$n_{\rm s,0.002}$	0.960 ± 0.020	$D_{\rm M}(0.51)$	2046^{+200}_{-600}
$\boldsymbol{n_s}$	0.960 ± 0.020	$Y_{\rm P}$	$0.24531^{+0.00022}_{-0.00019}$	$H(0.61)$	95 ± 10
H_0	—	$Y_{\rm P}^{\rm BBN}$	$0.24664^{+0.00022}_{-0.00020}$	$D_{\rm M}(0.61)$	2377^{+300}_{-700}
Ω_Λ	$0.659^{+0.21}_{-0.063}$	10^5D/H	2.622 ± 0.094	$H(2.33)$	230^{+13}_{-14}
$\Omega_{\rm m}$	$0.341^{+0.063}_{-0.21}$	Age/Gyr	$14.2^{+1.3}_{-2.6}$	$D_{\rm M}(2.33)$	5912^{+540}_{-1100}
$\Omega_{\rm m}h^2$	$0.134^{+0.011}_{-0.015}$	z_*	$1089.3^{+1.2}_{-1.4}$	$f\sigma_8(0.15)$	$0.438^{+0.053}_{-0.042}$
$\Omega_{\rm m}h^3$	$0.093^{+0.020}_{-0.039}$	r_*	147.1 ± 3.6	$\sigma_8(0.15)$	$0.741^{+0.15}_{-0.081}$
σ_8	$0.800^{+0.14}_{-0.078}$	$100\theta_*$	$1.032^{+0.075}_{-0.057}$	$f\sigma_8(0.38)$	$0.453^{+0.021}_{-0.019}$
S_8	$0.802^{+0.089}_{-0.14}$	$D_{\rm M}(z_*)$/Gpc	$14.31^{+0.97}_{-1.3}$	$\sigma_8(0.38)$	$0.659^{+0.16}_{-0.083}$
$\sigma_8\Omega_{\rm m}^{0.5}$	$0.439^{+0.049}_{-0.074}$	$z_{\rm drag}$	1058.8 ± 1.6	$f\sigma_8(0.51)$	$0.452^{+0.025}_{-0.019}$
$\sigma_8\Omega_{\rm m}^{0.25}$	0.588 ± 0.021	$r_{\rm drag}$	149.9 ± 3.8	$\sigma_8(0.51)$	$0.619^{+0.16}_{-0.083}$
$\sigma_8/h^{0.5}$	$0.973^{+0.023}_{-0.019}$	$k_{\rm D}$	$0.1379^{+0.0037}_{-0.0042}$	$f\sigma_8(0.61)$	$0.449^{+0.035}_{-0.020}$
$r_{\rm drag}h$	103^{+20}_{-40}	$100\theta_{\rm D}$	$0.160^{+0.012}_{-0.0083}$	$\sigma_8(0.61)$	$0.590^{+0.16}_{-0.084}$
$\langle d^2\rangle^{1/2}$	2.508 ± 0.066	$z_{\rm eq}$	3183^{+270}_{-350}	$f\sigma_8(2.33)$	$0.299^{+0.087}_{-0.049}$
$z_{\rm re}$	7.62 ± 0.32	$k_{\rm eq}$	$0.00971^{+0.00083}_{-0.0011}$	$\sigma_8(2.33)$	0.312 ± 0.069
$10^9 A_{\rm s}$	$2.33^{+0.30}_{-0.39}$	$100\theta_{\rm eq}$	0.851 ± 0.053	$\chi^2_{\rm lensing}$	9.6 ± 2.0
$10^9 A_{\rm s}e^{-2\tau}$	$2.09^{+0.26}_{-0.35}$	$100\theta_{\rm s,eq}$	0.469 ± 0.028	$\chi^2_{\rm prior}$	2.0 ± 2.0
D_{40}	1413^{+200}_{-300}	$H(0.15)$	74 ± 20		
D_{220}	6635^{+1000}_{-1000}	$D_{\rm M}(0.15)$	670^{+80}_{-200}		

$\bar{\chi}^2_{\rm eff} = 11.55$; $R - 1 = 0.00268$

2.150 base_lensing_lenspriors_post_agrlmax425

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02219 ± 0.00049	D_{810}	2593^{+400}_{-500}	$H(0.38)$	84 ± 10
$\boldsymbol{\Omega_c h^2}$	$0.113^{+0.010}_{-0.013}$	D_{1420}	806^{+100}_{-200}	$D_{\rm M}(0.38)$	1585^{+200}_{-500}
$\boldsymbol{100\theta_{MC}}$	$1.034^{+0.077}_{-0.063}$	D_{2000}	259^{+40}_{-60}	$H(0.51)$	90 ± 10
$\boldsymbol{\ln(10^{10} A_s)}$	3.12 ± 0.14	$n_{\rm s,0.002}$	0.959 ± 0.020	$D_{\rm M}(0.51)$	2047^{+200}_{-600}
$\boldsymbol{n_s}$	0.959 ± 0.020	$Y_{\rm P}$	$0.24531^{+0.00022}_{-0.00019}$	$H(0.61)$	96 ± 10
H_0	—	$Y_{\rm P}^{\rm BBN}$	$0.24664^{+0.00022}_{-0.00019}$	$D_{\rm M}(0.61)$	2377^{+300}_{-700}
Ω_Λ	$0.653^{+0.21}_{-0.063}$	10^5D/H	2.622 ± 0.094	$H(2.33)$	231^{+12}_{-13}
$\Omega_{\rm m}$	$0.347^{+0.063}_{-0.21}$	Age/Gyr	$14.1^{+1.2}_{-2.6}$	$D_{\rm M}(2.33)$	5896^{+520}_{-1100}
$\Omega_{\rm m}h^2$	$0.135^{+0.010}_{-0.013}$	z_*	$1089.5^{+1.1}_{-1.3}$	$f\sigma_8(0.15)$	$0.441^{+0.054}_{-0.040}$
$\Omega_{\rm m}h^3$	$0.094^{+0.020}_{-0.039}$	r_*	146.7 ± 3.2	$\sigma_8(0.15)$	$0.741^{+0.15}_{-0.079}$
σ_8	$0.801^{+0.14}_{-0.077}$	$100\theta_*$	$1.034^{+0.077}_{-0.063}$	$f\sigma_8(0.38)$	$0.455^{+0.020}_{-0.018}$
S_8	$0.810^{+0.088}_{-0.14}$	$D_{\rm M}(z_*)$/Gpc	$14.24^{+0.93}_{-1.2}$	$\sigma_8(0.38)$	$0.659^{+0.16}_{-0.081}$
$\sigma_8\Omega_{\rm m}^{0.5}$	$0.443^{+0.048}_{-0.075}$	$z_{\rm drag}$	1059.0 ± 1.5	$f\sigma_8(0.51)$	$0.454^{+0.026}_{-0.017}$
$\sigma_8\Omega_{\rm m}^{0.25}$	0.591 ± 0.019	$r_{\rm drag}$	149.4 ± 3.3	$\sigma_8(0.51)$	$0.619^{+0.16}_{-0.082}$
$\sigma_8/h^{0.5}$	$0.976^{+0.022}_{-0.019}$	$k_{\rm D}$	$0.1383^{+0.0033}_{-0.0038}$	$f\sigma_8(0.61)$	$0.451^{+0.036}_{-0.018}$
$r_{\rm drag}h$	102 ± 30	$100\theta_{\rm D}$	$0.160^{+0.012}_{-0.0081}$	$\sigma_8(0.61)$	$0.590^{+0.16}_{-0.081}$
$\langle d^2\rangle^{1/2}$	2.500 ± 0.055	$z_{\rm eq}$	3220^{+250}_{-310}	$f\sigma_8(2.33)$	$0.299^{+0.089}_{-0.046}$
$z_{\rm re}$	7.66 ± 0.30	$k_{\rm eq}$	$0.00983^{+0.00075}_{-0.00095}$	$\sigma_8(2.33)$	0.311 ± 0.069
$10^9 A_{\rm s}$	$2.29^{+0.28}_{-0.34}$	$100\theta_{\rm eq}$	0.844 ± 0.048	$\chi^2_{\rm lensing}$	7.5 ± 2.0
$10^9 A_{\rm s}e^{-2\tau}$	$2.05^{+0.25}_{-0.31}$	$100\theta_{\rm s,eq}$	0.465 ± 0.026	$\chi^2_{\rm prior}$	2.0 ± 2.0
D_{40}	1381^{+200}_{-200}	$H(0.15)$	74 ± 20		
D_{220}	6452^{+900}_{-1000}	$D_{\rm M}(0.15)$	671^{+80}_{-200}		

$\bar{\chi}^2_{\rm eff} = 9.48$; $R - 1 = 0.00229$

2.151 base_lensing_lenspriors_post_ptt

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02218 ± 0.00051	D_{810}	3025 ± 500	$H(0.38)$	82^{+10}_{-20}
$\boldsymbol{\Omega_c h^2}$	$0.099^{+0.010}_{-0.012}$	D_{1420}	964 ± 200	$D_{\rm M}(0.38)$	1600^{+300}_{-500}
$\boldsymbol{100\theta_{MC}}$	1.017 ± 0.058	D_{2000}	324^{+40}_{-90}	$H(0.51)$	88^{+10}_{-20}
$\boldsymbol{\ln(10^{10} A_s)}$	$3.27^{+0.16}_{-0.12}$	$n_{\rm s,0.002}$	0.960 ± 0.020	$D_{\rm M}(0.51)$	2071^{+400}_{-600}
$\boldsymbol{n_s}$	0.960 ± 0.020	$Y_{\rm P}$	$0.24530^{+0.00023}_{-0.00020}$	$H(0.61)$	93^{+10}_{-20}
H_0	—	$Y_{\rm P}^{\rm BBN}$	$0.24663^{+0.00023}_{-0.00021}$	$D_{\rm M}(0.61)$	2410^{+500}_{-600}
Ω_Λ	$0.689^{+0.18}_{-0.069}$	10^5D/H	2.625 ± 0.098	$H(2.33)$	221 ± 12
$\Omega_{\rm m}$	$0.311^{+0.069}_{-0.18}$	Age/Gyr	$14.6^{+2.0}_{-2.3}$	$D_{\rm M}(2.33)$	6070^{+900}_{-1000}
$\Omega_{\rm m}h^2$	$0.122^{+0.010}_{-0.012}$	z_*	1088.3 ± 1.2	$f\sigma_8(0.15)$	0.419 ± 0.044
$\Omega_{\rm m}h^3$	$0.084^{+0.020}_{-0.033}$	r_*	150.4 ± 3.4	$\sigma_8(0.15)$	$0.737^{+0.11}_{-0.098}$
σ_8	$0.794^{+0.11}_{-0.093}$	$100\theta_*$	1.017 ± 0.058	$f\sigma_8(0.38)$	$0.440^{+0.023}_{-0.018}$
S_8	$0.763^{+0.086}_{-0.12}$	$D_{\rm M}(z_*)$/Gpc	$14.8^{+1.1}_{-1.3}$	$\sigma_8(0.38)$	$0.66^{+0.12}_{-0.10}$
$\sigma_8\Omega_{\rm m}^{0.5}$	$0.418^{+0.047}_{-0.067}$	$z_{\rm drag}$	1057.9 ± 1.6	$f\sigma_8(0.51)$	0.442 ± 0.020
$\sigma_8\Omega_{\rm m}^{0.25}$	0.572 ± 0.022	$r_{\rm drag}$	153.3 ± 3.5	$\sigma_8(0.51)$	$0.62^{+0.12}_{-0.10}$
$\sigma_8/h^{0.5}$	$0.968^{+0.028}_{-0.022}$	$k_{\rm D}$	0.1344 ± 0.0036	$f\sigma_8(0.61)$	$0.440^{+0.028}_{-0.021}$
$r_{\rm drag}h$	105^{+20}_{-30}	$100\theta_{\rm D}$	0.1581 ± 0.0088	$\sigma_8(0.61)$	0.59 ± 0.10
$\langle d^2\rangle^{1/2}$	2.584 ± 0.066	$z_{\rm eq}$	2904^{+250}_{-290}	$f\sigma_8(2.33)$	0.301 ± 0.057
$z_{\rm re}$	7.40 ± 0.30	$k_{\rm eq}$	$0.00886^{+0.00076}_{-0.00088}$	$\sigma_8(2.33)$	0.315 ± 0.067
$10^9 A_{\rm s}$	2.65 ± 0.36	$100\theta_{\rm eq}$	0.898 ± 0.051	$\chi^2_{\rm lensing}$	11.0 ± 1.9
$10^9 A_{\rm s}e^{-2\tau}$	2.38 ± 0.32	$100\theta_{\rm s,eq}$	0.493 ± 0.027	$\chi^2_{\rm prior}$	2.0 ± 2.1
D_{40}	1645 ± 300	$H(0.15)$	73^{+10}_{-20}		
D_{220}	7958 ± 1000	$D_{\rm M}(0.15)$	673^{+200}_{-200}		

$\bar{\chi}^2_{\rm eff} = 13.04$; $R - 1 = 0.02912$

2.152 base_lensing_lenspriors_post_bfcl

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\mathbf{\Omega_b h^2}$	0.02219 ± 0.00049	D_{810}	2552^{+400}_{-500}	$H(0.38)$	84 ± 10
$\mathbf{\Omega_c h^2}$	$0.113^{+0.010}_{-0.013}$	D_{1420}	793^{+100}_{-100}	$D_{\rm M}(0.38)$	1582^{+200}_{-500}
$\mathbf{100\theta_{MC}}$	$1.034^{+0.076}_{-0.062}$	D_{2000}	254^{+40}_{-60}	$H(0.51)$	90 ± 10
$\mathbf{\ln(10^{10} A_s)}$	3.11 ± 0.13	$n_{\rm s,0.002}$	0.959 ± 0.020	$D_{\rm M}(0.51)$	2043^{+200}_{-600}
$\mathbf{n_s}$	0.959 ± 0.020	$Y_{\rm P}$	$0.24531^{+0.00022}_{-0.00019}$	$H(0.61)$	96 ± 10
H_0	—	$Y_{\rm P}^{\rm BBN}$	$0.24663^{+0.00023}_{-0.00019}$	$D_{\rm M}(0.61)$	2372^{+300}_{-700}
Ω_Λ	$0.655^{+0.21}_{-0.062}$	10^5D/H	$2.623^{+0.086}_{-0.097}$	$H(2.33)$	231^{+12}_{-13}
$\Omega_{\rm m}$	$0.345^{+0.062}_{-0.21}$	Age/Gyr	$14.1^{+1.2}_{-2.5}$	$D_{\rm M}(2.33)$	5890^{+530}_{-1100}
$\Omega_{\rm m}h^2$	$0.135^{+0.010}_{-0.013}$	z_*	$1089.5^{+1.1}_{-1.3}$	$f\sigma_8(0.15)$	$0.437^{+0.053}_{-0.041}$
$\Omega_{\rm m}h^3$	$0.094^{+0.021}_{-0.039}$	r_*	146.7 ± 3.3	$\sigma_8(0.15)$	$0.736^{+0.15}_{-0.079}$
σ_8	$0.795^{+0.14}_{-0.077}$	$100\theta_*$	$1.034^{+0.076}_{-0.062}$	$f\sigma_8(0.38)$	$0.451^{+0.020}_{-0.018}$
S_8	$0.801^{+0.086}_{-0.14}$	$D_{\rm M}(z_*)$/Gpc	$14.24^{+0.93}_{-1.2}$	$\sigma_8(0.38)$	$0.655^{+0.16}_{-0.081}$
$\sigma_8\Omega_{\rm m}^{0.5}$	$0.439^{+0.047}_{-0.075}$	$z_{\rm drag}$	1058.9 ± 1.5	$f\sigma_8(0.51)$	$0.450^{+0.025}_{-0.017}$
$\sigma_8\Omega_{\rm m}^{0.25}$	0.586 ± 0.020	$r_{\rm drag}$	149.5 ± 3.4	$\sigma_8(0.51)$	$0.614^{+0.16}_{-0.081}$
$\sigma_8/h^{0.5}$	$0.967^{+0.022}_{-0.019}$	$k_{\rm D}$	$0.1383^{+0.0033}_{-0.0038}$	$f\sigma_8(0.61)$	$0.447^{+0.035}_{-0.018}$
$r_{\rm drag}h$	103 ± 30	$100\theta_{\rm D}$	$0.160^{+0.012}_{-0.0089}$	$\sigma_8(0.61)$	$0.586^{+0.16}_{-0.081}$
$\langle d^2\rangle^{1/2}$	2.478 ± 0.052	$z_{\rm eq}$	3219^{+250}_{-310}	$f\sigma_8(2.33)$	$0.297^{+0.087}_{-0.046}$
$z_{\rm re}$	7.66 ± 0.30	$k_{\rm eq}$	$0.00982^{+0.00076}_{-0.00096}$	$\sigma_8(2.33)$	0.309 ± 0.068
$10^9 A_{\rm s}$	$2.25^{+0.27}_{-0.33}$	$100\theta_{\rm eq}$	0.844 ± 0.049	$\chi^2_{\rm lensing}$	9.8 ± 2.0
$10^9 A_{\rm s}e^{-2\tau}$	$2.02^{+0.24}_{-0.30}$	$100\theta_{\rm s,eq}$	0.465 ± 0.026	$\chi^2_{\rm prior}$	1.9 ± 1.9
D_{40}	1359^{+200}_{-200}	$H(0.15)$	74 ± 20		
D_{220}	6347^{+900}_{-1000}	$D_{\rm M}(0.15)$	669^{+80}_{-200}		

$\bar{\chi}^2_{\rm eff} = 11.76$; $R - 1 = 0.00271$

2.153 base_lensing_lenspriors_post_agr2bfcl

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\mathbf{\Omega_b h^2}$	0.02218 ± 0.00049	D_{810}	2653^{+400}_{-500}	$H(0.38)$	84 ± 10
$\mathbf{\Omega_c h^2}$	$0.1082^{+0.0091}_{-0.011}$	D_{1420}	828^{+100}_{-100}	$D_{\rm M}(0.38)$	1570^{+200}_{-500}
$\mathbf{100\theta_{MC}}$	$1.032^{+0.078}_{-0.050}$	D_{2000}	266^{+40}_{-60}	$H(0.51)$	90 ± 10
$\mathbf{\ln(10^{10} A_s)}$	3.14 ± 0.13	$n_{\rm s,0.002}$	0.959 ± 0.020	$D_{\rm M}(0.51)$	2030^{+230}_{-590}
$\mathbf{n_s}$	0.959 ± 0.020	$Y_{\rm P}$	$0.24530^{+0.00023}_{-0.00019}$	$H(0.61)$	96 ± 10
H_0	—	$Y_{\rm P}^{\rm BBN}$	$0.24663^{+0.00023}_{-0.00019}$	$D_{\rm M}(0.61)$	2360^{+260}_{-660}
Ω_Λ	$0.675^{+0.19}_{-0.078}$	10^5D/H	$2.625^{+0.086}_{-0.099}$	$H(2.33)$	228 ± 11
$\Omega_{\rm m}$	$0.325^{+0.055}_{-0.19}$	Age/Gyr	$14.2^{+1.2}_{-2.5}$	$D_{\rm M}(2.33)$	5907^{+520}_{-1100}
$\Omega_{\rm m}h^2$	$0.1311^{+0.0091}_{-0.011}$	z_*	$1089.1^{+1.0}_{-1.2}$	$f\sigma_8(0.15)$	$0.425^{+0.049}_{-0.042}$
$\Omega_{\rm m}h^3$	$0.092^{+0.022}_{-0.037}$	r_*	147.8 ± 2.9	$\sigma_8(0.15)$	$0.734^{+0.14}_{-0.074}$
σ_8	$0.791^{+0.13}_{-0.071}$	$100\theta_*$	$1.032^{+0.078}_{-0.050}$	$f\sigma_8(0.38)$	$0.442^{+0.019}_{-0.014}$
S_8	$0.775^{+0.077}_{-0.13}$	$D_{\rm M}(z_*)$/Gpc	$14.38^{+0.87}_{-1.2}$	$\sigma_8(0.38)$	$0.655^{+0.15}_{-0.076}$
$\sigma_8\Omega_{\rm m}^{0.5}$	$0.424^{+0.042}_{-0.071}$	$z_{\rm drag}$	1058.6 ± 1.4	$f\sigma_8(0.51)$	$0.443^{+0.022}_{-0.014}$
$\sigma_8\Omega_{\rm m}^{0.25}$	0.575 ± 0.016	$r_{\rm drag}$	150.6 ± 3.0	$\sigma_8(0.51)$	$0.615^{+0.15}_{-0.077}$
$\sigma_8/h^{0.5}$	$0.957^{+0.021}_{-0.017}$	$k_{\rm D}$	$0.1371^{+0.0029}_{-0.0033}$	$f\sigma_8(0.61)$	$0.441^{+0.031}_{-0.013}$
$r_{\rm drag}h$	105 ± 30	$100\theta_{\rm D}$	$0.160^{+0.012}_{-0.0075}$	$\sigma_8(0.61)$	$0.587^{+0.15}_{-0.077}$
$\langle d^2\rangle^{1/2}$	2.484 ± 0.050	$z_{\rm eq}$	3117^{+220}_{-270}	$f\sigma_8(2.33)$	$0.298^{+0.083}_{-0.043}$
$z_{\rm re}$	7.58 ± 0.28	$k_{\rm eq}$	$0.00951^{+0.00067}_{-0.00082}$	$\sigma_8(2.33)$	$0.311^{+0.096}_{-0.055}$
$10^9 A_{\rm s}$	$2.33^{+0.26}_{-0.32}$	$100\theta_{\rm eq}$	0.862 ± 0.044	$\chi^2_{\rm lensing}$	12.1 ± 2.0
$10^9 A_{\rm s}e^{-2\tau}$	$2.08^{+0.23}_{-0.29}$	$100\theta_{\rm s,eq}$	0.475 ± 0.024	$\chi^2_{\rm prior}$	2.0 ± 1.9
D_{40}	1420^{+200}_{-200}	$H(0.15)$	75 ± 20		
D_{220}	6682^{+800}_{-1000}	$D_{\rm M}(0.15)$	662^{+80}_{-200}		

$\bar{\chi}^2_{\rm eff} = 14.06$; $R - 1 = 0.00285$

2.154 base_lensing_lenspriors_post_linear

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\mathbf{\Omega_b h^2}$	0.02220 ± 0.00049	D_{810}	2557^{+400}_{-500}	$H(0.38)$	84 ± 10
$\mathbf{\Omega_c h^2}$	$0.115^{+0.011}_{-0.013}$	D_{1420}	793^{+100}_{-200}	$D_{\rm M}(0.38)$	1582^{+200}_{-500}
$\mathbf{100\theta_{MC}}$	$1.036^{+0.076}_{-0.054}$	D_{2000}	252^{+40}_{-60}	$H(0.51)$	91 ± 10
$\mathbf{\ln(10^{10} A_s)}$	3.11 ± 0.14	$n_{\rm s,0.002}$	0.960 ± 0.020	$D_{\rm M}(0.51)$	2041^{+200}_{-600}
$\mathbf{n_s}$	0.960 ± 0.020	$Y_{\rm P}$	$0.24531^{+0.00022}_{-0.00019}$	$H(0.61)$	96 ± 10
H_0	—	$Y_{\rm P}^{\rm BBN}$	$0.24664^{+0.00022}_{-0.00019}$	$D_{\rm M}(0.61)$	2370^{+300}_{-700}
Ω_Λ	$0.647^{+0.22}_{-0.065}$	10^5D/H	2.621 ± 0.094	$H(2.33)$	233^{+12}_{-13}
$\Omega_{\rm m}$	$0.353^{+0.065}_{-0.22}$	Age/Gyr	$14.1^{+1.2}_{-2.5}$	$D_{\rm M}(2.33)$	5866^{+520}_{-1100}
$\Omega_{\rm m}h^2$	$0.138^{+0.011}_{-0.013}$	z_*	$1089.7^{+1.1}_{-1.3}$	$f\sigma_8(0.15)$	$0.447^{+0.057}_{-0.041}$
$\Omega_{\rm m}h^3$	$0.095^{+0.021}_{-0.039}$	r_*	146.0 ± 3.3	$\sigma_8(0.15)$	$0.745^{+0.15}_{-0.080}$
σ_8	$0.806^{+0.14}_{-0.077}$	$100\theta_*$	$1.036^{+0.076}_{-0.056}$	$f\sigma_8(0.38)$	$0.460^{+0.021}_{-0.018}$
S_8	$0.821^{+0.093}_{-0.14}$	$D_{\rm M}(z_*)$/Gpc	$14.15^{+0.92}_{-1.2}$	$\sigma_8(0.38)$	$0.662^{+0.16}_{-0.082}$
$\sigma_8\Omega_{\rm m}^{0.5}$	$0.450^{+0.051}_{-0.077}$	$z_{\rm drag}$	1059.1 ± 1.5	$f\sigma_8(0.51)$	$0.458^{+0.026}_{-0.018}$
$\sigma_8\Omega_{\rm m}^{0.25}$	0.597 ± 0.020	$r_{\rm drag}$	148.8 ± 3.4	$\sigma_8(0.51)$	$0.621^{+0.16}_{-0.082}$
$\sigma_8/h^{0.5}$	$0.981^{+0.024}_{-0.020}$	$k_{\rm D}$	0.1390 ± 0.0036	$f\sigma_8(0.61)$	$0.454^{+0.036}_{-0.018}$
$r_{\rm drag}h$	102 ± 30	$100\theta_{\rm D}$	$0.160^{+0.012}_{-0.0080}$	$\sigma_8(0.61)$	$0.592^{+0.16}_{-0.081}$
$\langle d^2\rangle^{1/2}$	2.495 ± 0.055	$z_{\rm eq}$	3274^{+260}_{-320}	$f\sigma_8(2.33)$	$0.300^{+0.088}_{-0.046}$
$z_{\rm re}$	7.70 ± 0.29	$k_{\rm eq}$	$0.00999^{+0.00078}_{-0.00097}$	$\sigma_8(2.33)$	0.312 ± 0.069
$10^9 A_{\rm s}$	$2.26^{+0.27}_{-0.34}$	$100\theta_{\rm eq}$	0.836 ± 0.050	$\chi^2_{\rm lensing}$	10.1 ± 1.9
$10^9 A_{\rm s}e^{-2\tau}$	$2.02^{+0.24}_{-0.31}$	$100\theta_{\rm s,eq}$	0.461 ± 0.027	$\chi^2_{\rm prior}$	2.0 ± 2.0
D_{40}	1357^{+200}_{-200}	$H(0.15)$	74 ± 20		
D_{220}	6306^{+900}_{-1000}	$D_{\rm M}(0.15)$	670^{+80}_{-200}		

$\bar{\chi}^2_{\rm eff} = 12.03$; $R - 1 = 0.00429$

2.155 base_lensing_lenspriors_post_acc

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\mathbf{\Omega_b h^2}$	0.02219 ± 0.00050	D_{810}	2618^{+400}_{-500}	$H(0.38)$	83 ± 10
$\mathbf{\Omega_c h^2}$	$0.111^{+0.010}_{-0.013}$	D_{1420}	816^{+100}_{-200}	$D_{\rm M}(0.38)$	1592^{+200}_{-500}
$\mathbf{100\theta_{MC}}$	1.031 ± 0.059	D_{2000}	264^{+40}_{-60}	$H(0.51)$	90 ± 10
$\mathbf{\ln(10^{10} A_s)}$	3.13 ± 0.13	$n_{\rm s,0.002}$	0.959 ± 0.020	$D_{\rm M}(0.51)$	2055^{+200}_{-600}
$\mathbf{n_s}$	0.959 ± 0.020	$Y_{\rm P}$	$0.24531^{+0.00023}_{-0.00020}$	$H(0.61)$	95 ± 10
H_0	—	$Y_{\rm P}^{\rm BBN}$	$0.24664^{+0.00023}_{-0.00020}$	$D_{\rm M}(0.61)$	2387^{+300}_{-700}
Ω_Λ	$0.654^{+0.21}_{-0.063}$	10^5D/H	2.622 ± 0.094	$H(2.33)$	230^{+12}_{-13}
$\Omega_{\rm m}$	$0.346^{+0.063}_{-0.21}$	Age/Gyr	$14.2^{+1.3}_{-2.6}$	$D_{\rm M}(2.33)$	5923^{+600}_{-1100}
$\Omega_{\rm m}h^2$	$0.134^{+0.010}_{-0.013}$	z_*	$1089.4^{+1.1}_{-1.3}$	$f\sigma_8(0.15)$	$0.439^{+0.053}_{-0.041}$
$\Omega_{\rm m}h^3$	$0.092^{+0.020}_{-0.039}$	r_*	147.0 ± 3.2	$\sigma_8(0.15)$	$0.738^{+0.15}_{-0.081}$
σ_8	$0.798^{+0.14}_{-0.079}$	$100\theta_*$	1.031 ± 0.059	$f\sigma_8(0.38)$	$0.453^{+0.020}_{-0.017}$
S_8	$0.805^{+0.088}_{-0.14}$	$D_{\rm M}(z_*)$/Gpc	$14.31^{+0.95}_{-1.2}$	$\sigma_8(0.38)$	$0.657^{+0.16}_{-0.083}$
$\sigma_8\Omega_{\rm m}^{0.5}$	$0.441^{+0.048}_{-0.074}$	$z_{\rm drag}$	1058.8 ± 1.5	$f\sigma_8(0.51)$	$0.452^{+0.025}_{-0.017}$
$\sigma_8\Omega_{\rm m}^{0.25}$	0.589 ± 0.019	$r_{\rm drag}$	149.8 ± 3.3	$\sigma_8(0.51)$	$0.616^{+0.16}_{-0.083}$
$\sigma_8/h^{0.5}$	$0.973^{+0.022}_{-0.020}$	$k_{\rm D}$	$0.1379^{+0.0033}_{-0.0037}$	$f\sigma_8(0.61)$	$0.448^{+0.036}_{-0.018}$
$r_{\rm drag}h$	102 ± 30	$100\theta_{\rm D}$	0.1599 ± 0.0089	$\sigma_8(0.61)$	$0.587^{+0.16}_{-0.083}$
$\langle d^2\rangle^{1/2}$	2.504 ± 0.055	$z_{\rm eq}$	3187^{+250}_{-310}	$f\sigma_8(2.33)$	$0.298^{+0.088}_{-0.046}$
$z_{\rm re}$	7.63 ± 0.30	$k_{\rm eq}$	$0.00973^{+0.00075}_{-0.00094}$	$\sigma_8(2.33)$	0.310 ± 0.069
$10^9 A_{\rm s}$	$2.31^{+0.28}_{-0.34}$	$100\theta_{\rm eq}$	0.848 ± 0.048	$\chi^2_{\rm lensing}$	9.6 ± 2.0
$10^9 A_{\rm s}e^{-2\tau}$	$2.07^{+0.25}_{-0.31}$	$100\theta_{\rm s,eq}$	0.467 ± 0.026	$\chi^2_{\rm prior}$	2.0 ± 2.0
D_{40}	1396^{+200}_{-200}	$H(0.15)$	74 ± 20		
D_{220}	6548^{+900}_{-1000}	$D_{\rm M}(0.15)$	673^{+80}_{-200}		

$\bar{\chi}^2_{\rm eff} = 11.57$; $R - 1 = 0.00392$

2.156 base_lensing_lenspriors_post_agr2acc

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02218 ± 0.00050	D_{810}	2731^{+400}_{-500}	$H(0.38)$	84 ± 10
$\boldsymbol{\Omega_c h^2}$	$0.1066^{+0.0090}_{-0.011}$	D_{1420}	855^{+100}_{-100}	$D_{\rm M}(0.38)$	1579^{+200}_{-500}
$\boldsymbol{100\theta_{MC}}$	$1.029^{+0.078}_{-0.052}$	D_{2000}	277^{+40}_{-60}	$H(0.51)$	90 ± 10
$\boldsymbol{\ln(10^{10} A_s)}$	3.17 ± 0.13	$n_{\rm s,0.002}$	0.959 ± 0.020	$D_{\rm M}(0.51)$	2041^{+200}_{-600}
$\boldsymbol{n_s}$	0.959 ± 0.020	$Y_{\rm P}$	$0.24531^{+0.00023}_{-0.00020}$	$H(0.61)$	95 ± 10
H_0	—	$Y_{\rm P}^{\rm BBN}$	$0.24663^{+0.00023}_{-0.00020}$	$D_{\rm M}(0.61)$	2373^{+260}_{-670}
Ω_Λ	$0.676^{+0.19}_{-0.070}$	10^5D/H	2.624 ± 0.095	$H(2.33)$	227 ± 11
$\Omega_{\rm m}$	$0.324^{+0.069}_{-0.19}$	Age/Gyr	$14.3^{+1.2}_{-2.5}$	$D_{\rm M}(2.33)$	5943^{+530}_{-1100}
$\Omega_{\rm m}h^2$	$0.1294^{+0.0091}_{-0.011}$	z_*	$1088.9^{+1.0}_{-1.1}$	$f\sigma_8(0.15)$	$0.425^{+0.050}_{-0.041}$
$\Omega_{\rm m}h^3$	$0.090^{+0.021}_{-0.037}$	r_*	148.3 ± 2.9	$\sigma_8(0.15)$	$0.736^{+0.14}_{-0.075}$
σ_8	$0.793^{+0.13}_{-0.072}$	$100\theta_*$	$1.029^{+0.078}_{-0.051}$	$f\sigma_8(0.38)$	$0.443^{+0.018}_{-0.014}$
S_8	$0.776^{+0.076}_{-0.13}$	$D_{\rm M}(z_*)$/Gpc	$14.47^{+0.89}_{-1.3}$	$\sigma_8(0.38)$	$0.657^{+0.15}_{-0.077}$
$\sigma_8\Omega_{\rm m}^{0.5}$	$0.425^{+0.042}_{-0.072}$	$z_{\rm drag}$	1058.5 ± 1.4	$f\sigma_8(0.51)$	$0.445^{+0.022}_{-0.013}$
$\sigma_8\Omega_{\rm m}^{0.25}$	0.577 ± 0.016	$r_{\rm drag}$	151.1 ± 3.0	$\sigma_8(0.51)$	$0.617^{+0.15}_{-0.078}$
$\sigma_8/h^{0.5}$	$0.962^{+0.021}_{-0.018}$	$k_{\rm D}$	$0.1366^{+0.0029}_{-0.0033}$	$f\sigma_8(0.61)$	$0.442^{+0.031}_{-0.014}$
$r_{\rm drag}h$	104 ± 30	$100\theta_{\rm D}$	$0.160^{+0.012}_{-0.0079}$	$\sigma_8(0.61)$	$0.589^{+0.15}_{-0.078}$
$\langle d^2\rangle^{1/2}$	2.511 ± 0.053	$z_{\rm eq}$	3077^{+220}_{-260}	$f\sigma_8(2.33)$	$0.299^{+0.085}_{-0.044}$
$z_{\rm re}$	7.55 ± 0.28	$k_{\rm eq}$	$0.00939^{+0.00066}_{-0.00080}$	$\sigma_8(2.33)$	$0.313^{+0.099}_{-0.057}$
$10^9 A_{\rm s}$	$2.40^{+0.27}_{-0.33}$	$100\theta_{\rm eq}$	0.868 ± 0.044	$\chi^2_{\rm lensing}$	12.0 ± 2.1
$10^9 A_{\rm s}e^{-2\tau}$	$2.15^{+0.24}_{-0.30}$	$100\theta_{\rm s,eq}$	0.478 ± 0.023	$\chi^2_{\rm prior}$	2.0 ± 2.0
D_{40}	1466^{+200}_{-200}	$H(0.15)$	74 ± 20		
D_{220}	6931^{+800}_{-1000}	$D_{\rm M}(0.15)$	665^{+80}_{-200}		

$\bar{\chi}^2_{\rm eff} = 13.97$; $R - 1 = 0.00539$

2.157 base_lensing_lenspriors_post_takahashi

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02219 ± 0.00049	D_{810}	2645^{+400}_{-500}	$H(0.38)$	83 ± 10
$\boldsymbol{\Omega_c h^2}$	$0.1104^{+0.0099}_{-0.013}$	D_{1420}	825^{+100}_{-200}	$D_{\rm M}(0.38)$	1588^{+200}_{-500}
$\boldsymbol{100\theta_{MC}}$	$1.031^{+0.075}_{-0.056}$	D_{2000}	266^{+40}_{-60}	$H(0.51)$	90 ± 10
$\boldsymbol{\ln(10^{10} A_s)}$	3.14 ± 0.13	$n_{\rm s,0.002}$	0.960 ± 0.020	$D_{\rm M}(0.51)$	2051^{+200}_{-600}
$\boldsymbol{n_s}$	0.960 ± 0.020	$Y_{\rm P}$	$0.24531^{+0.00022}_{-0.00019}$	$H(0.61)$	95 ± 10
H_0	—	$Y_{\rm P}^{\rm BBN}$	$0.24664^{+0.00022}_{-0.00019}$	$D_{\rm M}(0.61)$	2382^{+300}_{-700}
Ω_Λ	$0.658^{+0.21}_{-0.063}$	10^5D/H	2.622 ± 0.094	$H(2.33)$	230^{+11}_{-13}
$\Omega_{\rm m}$	$0.342^{+0.062}_{-0.21}$	Age/Gyr	$14.2^{+1.2}_{-2.6}$	$D_{\rm M}(2.33)$	5923^{+530}_{-1100}
$\Omega_{\rm m}h^2$	$0.133^{+0.010}_{-0.013}$	z_*	$1089.3^{+1.1}_{-1.3}$	$f\sigma_8(0.15)$	$0.437^{+0.055}_{-0.042}$
$\Omega_{\rm m}h^3$	$0.092^{+0.020}_{-0.038}$	r_*	147.3 ± 3.2	$\sigma_8(0.15)$	$0.738^{+0.15}_{-0.079}$
σ_8	$0.797^{+0.14}_{-0.076}$	$100\theta_*$	$1.031^{+0.075}_{-0.057}$	$f\sigma_8(0.38)$	$0.452^{+0.021}_{-0.018}$
S_8	$0.800^{+0.089}_{-0.14}$	$D_{\rm M}(z_*)$/Gpc	$14.34^{+0.94}_{-1.2}$	$\sigma_8(0.38)$	$0.657^{+0.16}_{-0.081}$
$\sigma_8\Omega_{\rm m}^{0.5}$	$0.438^{+0.049}_{-0.076}$	$z_{\rm drag}$	1058.8 ± 1.5	$f\sigma_8(0.51)$	$0.451^{+0.024}_{-0.018}$
$\sigma_8\Omega_{\rm m}^{0.25}$	0.587 ± 0.020	$r_{\rm drag}$	150.0 ± 3.3	$\sigma_8(0.51)$	$0.617^{+0.16}_{-0.081}$
$\sigma_8/h^{0.5}$	$0.972^{+0.024}_{-0.020}$	$k_{\rm D}$	$0.1377^{+0.0032}_{-0.0037}$	$f\sigma_8(0.61)$	$0.448^{+0.034}_{-0.018}$
$r_{\rm drag}h$	103 ± 30	$100\theta_{\rm D}$	$0.160^{+0.012}_{-0.0082}$	$\sigma_8(0.61)$	$0.588^{+0.16}_{-0.081}$
$\langle d^2\rangle^{1/2}$	2.506 ± 0.054	$z_{\rm eq}$	3168^{+240}_{-300}	$f\sigma_8(2.33)$	$0.298^{+0.087}_{-0.046}$
$z_{\rm re}$	7.61 ± 0.29	$k_{\rm eq}$	$0.00967^{+0.00073}_{-0.00093}$	$\sigma_8(2.33)$	0.311 ± 0.069
$10^9 A_{\rm s}$	$2.33^{+0.28}_{-0.35}$	$100\theta_{\rm eq}$	0.852 ± 0.049	$\chi^2_{\rm lensing}$	9.6 ± 2.0
$10^9 A_{\rm s}e^{-2\tau}$	$2.09^{+0.25}_{-0.31}$	$100\theta_{\rm s,eq}$	0.469 ± 0.026	$\chi^2_{\rm prior}$	2.0 ± 2.0
D_{40}	1410^{+200}_{-300}	$H(0.15)$	74 ± 20		
D_{220}	6626^{+900}_{-1000}	$D_{\rm M}(0.15)$	671^{+80}_{-200}		

$\bar{\chi}^2_{\rm eff} = 11.52$; $R - 1 = 0.00192$

2.158 base_lensing_lenspriors_post_agr2takahashi

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02219 ± 0.00050	D_{810}	2761 ± 500	$H(0.38)$	84 ± 10
$\boldsymbol{\Omega_c h^2}$	$0.1057^{+0.0088}_{-0.011}$	D_{1420}	865^{+100}_{-100}	$D_{\rm M}(0.38)$	1572^{+200}_{-500}
$\boldsymbol{100\theta_{MC}}$	$1.029^{+0.079}_{-0.049}$	D_{2000}	280^{+40}_{-60}	$H(0.51)$	90 ± 10
$\boldsymbol{\ln(10^{10} A_s)}$	3.18 ± 0.13	$n_{\rm s,0.002}$	0.959 ± 0.020	$D_{\rm M}(0.51)$	2034^{+200}_{-600}
$\boldsymbol{n_s}$	0.959 ± 0.020	$Y_{\rm P}$	$0.24531^{+0.00023}_{-0.00020}$	$H(0.61)$	95 ± 10
H_0	—	$Y_{\rm P}^{\rm BBN}$	$0.24663^{+0.00023}_{-0.00020}$	$D_{\rm M}(0.61)$	2365^{+260}_{-660}
Ω_Λ	$0.681^{+0.19}_{-0.054}$	10^5D/H	$2.623^{+0.088}_{-0.098}$	$H(2.33)$	226 ± 11
$\Omega_{\rm m}$	$0.319^{+0.054}_{-0.19}$	Age/Gyr	$14.3^{+1.2}_{-2.5}$	$D_{\rm M}(2.33)$	5937^{+510}_{-1100}
$\Omega_{\rm m}h^2$	$0.1286^{+0.0088}_{-0.011}$	z_*	$1088.9^{+1.0}_{-1.1}$	$f\sigma_8(0.15)$	$0.422^{+0.050}_{-0.044}$
$\Omega_{\rm m}h^3$	$0.090^{+0.024}_{-0.037}$	r_*	148.5 ± 2.8	$\sigma_8(0.15)$	$0.737^{+0.14}_{-0.072}$
σ_8	$0.794^{+0.13}_{-0.070}$	$100\theta_*$	$1.029^{+0.079}_{-0.049}$	$f\sigma_8(0.38)$	$0.441^{+0.020}_{-0.014}$
S_8	$0.770^{+0.078}_{-0.13}$	$D_{\rm M}(z_*)$/Gpc	$14.49^{+0.87}_{-1.3}$	$\sigma_8(0.38)$	$0.658^{+0.15}_{-0.075}$
$\sigma_8\Omega_{\rm m}^{0.5}$	$0.422^{+0.043}_{-0.073}$	$z_{\rm drag}$	1058.4 ± 1.4	$f\sigma_8(0.51)$	$0.443^{+0.021}_{-0.014}$
$\sigma_8\Omega_{\rm m}^{0.25}$	0.574 ± 0.017	$r_{\rm drag}$	151.3 ± 3.0	$\sigma_8(0.51)$	$0.618^{+0.15}_{-0.076}$
$\sigma_8/h^{0.5}$	$0.960^{+0.023}_{-0.019}$	$k_{\rm D}$	0.1364 ± 0.0031	$f\sigma_8(0.61)$	$0.441^{+0.030}_{-0.014}$
$r_{\rm drag}h$	105 ± 30	$100\theta_{\rm D}$	$0.160^{+0.012}_{-0.0074}$	$\sigma_8(0.61)$	$0.590^{+0.15}_{-0.075}$
$\langle d^2\rangle^{1/2}$	2.512 ± 0.053	$z_{\rm eq}$	3057^{+210}_{-260}	$f\sigma_8(2.33)$	$0.300^{+0.084}_{-0.043}$
$z_{\rm re}$	7.53 ± 0.28	$k_{\rm eq}$	$0.00933^{+0.00064}_{-0.00078}$	$\sigma_8(2.33)$	$0.314^{+0.098}_{-0.057}$
$10^9 A_{\rm s}$	$2.42^{+0.27}_{-0.34}$	$100\theta_{\rm eq}$	0.873 ± 0.045	$\chi^2_{\rm lensing}$	11.9 ± 2.0
$10^9 A_{\rm s}e^{-2\tau}$	$2.16^{+0.24}_{-0.30}$	$100\theta_{\rm s,eq}$	0.480 ± 0.024	$\chi^2_{\rm prior}$	2.0 ± 2.0
D_{40}	1481^{+200}_{-200}	$H(0.15)$	75 ± 20		
D_{220}	7017^{+900}_{-1000}	$D_{\rm M}(0.15)$	662^{+80}_{-200}		

$\bar{\chi}^2_{\rm eff} = 13.92$; $R - 1 = 0.00257$

2.159 base_lensing_lenspriors_post_Apr6

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02219 ± 0.00049	D_{810}	2562^{+400}_{-500}	$H(0.38)$	84 ± 10
$\boldsymbol{\Omega_c h^2}$	$0.113^{+0.010}_{-0.013}$	D_{1420}	796^{+100}_{-100}	$D_{\rm M}(0.38)$	1586^{+200}_{-500}
$\boldsymbol{100\theta_{MC}}$	$1.034^{+0.076}_{-0.065}$	D_{2000}	255^{+40}_{-60}	$H(0.51)$	90 ± 10
$\boldsymbol{\ln(10^{10} A_s)}$	3.11 ± 0.13	$n_{\rm s,0.002}$	0.959 ± 0.020	$D_{\rm M}(0.51)$	2047^{+200}_{-600}
$\boldsymbol{n_s}$	0.959 ± 0.020	$Y_{\rm P}$	$0.24531^{+0.00022}_{-0.00019}$	$H(0.61)$	96 ± 10
H_0	—	$Y_{\rm P}^{\rm BBN}$	$0.24664^{+0.00022}_{-0.00019}$	$D_{\rm M}(0.61)$	2377^{+300}_{-700}
Ω_Λ	$0.650^{+0.21}_{-0.063}$	10^5D/H	$2.622^{+0.086}_{-0.096}$	$H(2.33)$	232^{+12}_{-13}
$\Omega_{\rm m}$	$0.350^{+0.064}_{-0.21}$	Age/Gyr	$14.1^{+1.2}_{-2.6}$	$D_{\rm M}(2.33)$	5891^{+530}_{-1100}
$\Omega_{\rm m}h^2$	$0.136^{+0.010}_{-0.013}$	z_*	$1089.5^{+1.1}_{-1.3}$	$f\sigma_8(0.15)$	$0.442^{+0.054}_{-0.040}$
$\Omega_{\rm m}h^3$	$0.094^{+0.020}_{-0.039}$	r_*	146.5 ± 3.2	$\sigma_8(0.15)$	$0.739^{+0.15}_{-0.080}$
σ_8	$0.799^{+0.14}_{-0.077}$	$100\theta_*$	$1.034^{+0.076}_{-0.065}$	$f\sigma_8(0.38)$	$0.455^{+0.020}_{-0.018}$
S_8	$0.811^{+0.088}_{-0.14}$	$D_{\rm M}(z_*)$/Gpc	$14.22^{+0.93}_{-1.2}$	$\sigma_8(0.38)$	$0.658^{+0.16}_{-0.082}$
$\sigma_8\Omega_{\rm m}^{0.5}$	$0.444^{+0.048}_{-0.075}$	$z_{\rm drag}$	1059.0 ± 1.5	$f\sigma_8(0.51)$	$0.454^{+0.026}_{-0.017}$
$\sigma_8\Omega_{\rm m}^{0.25}$	0.591 ± 0.020	$r_{\rm drag}$	149.3 ± 3.3	$\sigma_8(0.51)$	$0.617^{+0.16}_{-0.082}$
$\sigma_8/h^{0.5}$	$0.974^{+0.022}_{-0.019}$	$k_{\rm D}$	$0.1385^{+0.0033}_{-0.0038}$	$f\sigma_8(0.61)$	$0.450^{+0.036}_{-0.018}$
$r_{\rm drag}h$	102 ± 30	$100\theta_{\rm D}$	$0.160^{+0.012}_{-0.0086}$	$\sigma_8(0.61)$	$0.588^{+0.16}_{-0.082}$
$\langle d^2\rangle^{1/2}$	2.492 ± 0.054	$z_{\rm eq}$	3236^{+250}_{-310}	$f\sigma_8(2.33)$	0.298 ± 0.060
$z_{\rm re}$	7.67 ± 0.30	$k_{\rm eq}$	$0.00988^{+0.00076}_{-0.00096}$	$\sigma_8(2.33)$	0.310 ± 0.069
$10^9 A_{\rm s}$	$2.26^{+0.27}_{-0.34}$	$100\theta_{\rm eq}$	0.841 ± 0.048	$\chi^2_{\rm lensing}$	8.4 ± 2.0
$10^9 A_{\rm s}e^{-2\tau}$	$2.03^{+0.24}_{-0.30}$	$100\theta_{\rm s,eq}$	0.464 ± 0.026	$\chi^2_{\rm prior}$	2.0 ± 2.0
D_{40}	1364^{+200}_{-200}	$H(0.15)$	74 ± 20		
D_{220}	6361^{+900}_{-1000}	$D_{\rm M}(0.15)$	671^{+80}_{-200}		

$\bar{\chi}^2_{\rm eff} = 10.40$; $R - 1 = 0.00244$

2.160 base_lensing_lenspriors_theta

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022202	0.02221 ± 0.00050	D_{810}	2895	2857^{+400}_{-400}	$H(0.38)$	84.80	$84.6^{+2.0}_{-2.3}$
$\boldsymbol{\Omega_c h^2}$	0.1100	$0.1120^{+0.0085}_{-0.011}$	D_{1420}	921	909^{+100}_{-100}	$D_{\rm M}(0.38)$	1477	1487^{+55}_{-63}
$\boldsymbol{100\theta_{MC}}$	1.04090	1.04090 ± 0.00060	D_{2000}	258.3	255^{+30}_{-40}	$H(0.51)$	90.97	$90.9^{+1.4}_{-1.8}$
$\boldsymbol{\ln(10^{10} A_s)}$	3.168	3.15 ± 0.13	$n_{\rm s,0.002}$	0.9606	0.960 ± 0.020	$D_{\rm M}(0.51)$	1921	1932 ± 69
$\boldsymbol{n_s}$	0.9606	0.960 ± 0.020	$Y_{\rm P}$	0.245327	$0.24532^{+0.00022}_{-0.00020}$	$H(0.61)$	96.15	$96.14^{+0.86}_{-1.4}$
H_0	70.90	70.3 ± 3.7	$Y_{\rm P}^{\rm BBN}$	0.246653	$0.24664^{+0.00022}_{-0.00020}$	$D_{\rm M}(0.61)$	2242	2253 ± 73
Ω_Λ	0.7357	$0.723^{+0.059}_{-0.036}$	10^5D/H	2.618	2.619 ± 0.094	$H(2.33)$	229.8	$231.1^{+5.6}_{-7.3}$
$\Omega_{\rm m}$	0.2643	$0.277^{+0.036}_{-0.059}$	Age/Gyr	13.765	$13.767^{+0.077}_{-0.068}$	$D_{\rm M}(2.33)$	5742.2	5742^{+42}_{-32}
$\Omega_{\rm m} h^2$	0.1329	$0.1349^{+0.0085}_{-0.011}$	z_*	1089.24	$1089.41^{+0.96}_{-1.1}$	$f\sigma_8(0.15)$	0.4315	0.435 ± 0.029
$\Omega_{\rm m} h^3$	0.09420	0.0945 ± 0.0021	r_*	147.22	$146.8^{+2.9}_{-2.5}$	$\sigma_8(0.15)$	0.7662	$0.761^{+0.024}_{-0.021}$
σ_8	0.8237	$0.819^{+0.021}_{-0.019}$	$100\theta_*$	1.04112	1.04112 ± 0.00061	$f\sigma_8(0.38)$	0.4607	$0.462^{+0.021}_{-0.017}$
S_8	0.773	$0.783^{+0.055}_{-0.063}$	$D_{\rm M}(z_*)$/Gpc	14.141	$14.10^{+0.28}_{-0.24}$	$\sigma_8(0.38)$	0.6848	$0.679^{+0.028}_{-0.022}$
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4235	$0.429^{+0.030}_{-0.035}$	$z_{\rm drag}$	1058.83	1058.9 ± 1.4	$f\sigma_8(0.51)$	0.4652	$0.465^{+0.015}_{-0.012}$
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.5906	0.592 ± 0.020	$r_{\rm drag}$	150.00	$149.5^{+3.0}_{-2.7}$	$\sigma_8(0.51)$	0.6433	$0.638^{+0.028}_{-0.023}$
$\sigma_8/h^{0.5}$	0.9783	0.978 ± 0.021	$k_{\rm D}$	0.13771	$0.1382^{+0.0028}_{-0.0033}$	$f\sigma_8(0.61)$	0.4642	$0.463^{+0.012}_{-0.0096}$
$r_{\rm drag} h$	106.4	105.3 ± 7.5	$100\theta_{\rm D}$	0.16133	0.16129 ± 0.00081	$\sigma_8(0.61)$	0.6136	$0.608^{+0.029}_{-0.023}$
$\langle d^2 \rangle^{1/2}$	2.506	2.500 ± 0.051	$z_{\rm eq}$	3160	3207^{+200}_{-260}	$f\sigma_8(2.33)$	0.3115	$0.308^{+0.017}_{-0.014}$
$z_{\rm re}$	7.625	$7.66^{+0.17}_{-0.20}$	$k_{\rm eq}$	0.00964	$0.00979^{+0.00062}_{-0.00081}$	$\sigma_8(2.33)$	0.3237	$0.320^{+0.020}_{-0.018}$
$10^9 A_{\rm s}$	2.375	$2.35^{+0.27}_{-0.32}$	$100\theta_{\rm eq}$	0.8592	0.853 ± 0.047	$\chi^2_{\rm lensing}$	7.57	9.6 ± 2.0
$10^9 A_{\rm s} e^{-2\tau}$	2.128	$2.10^{+0.24}_{-0.28}$	$100\theta_{\rm s,eq}$	0.4734	0.470 ± 0.024	$\chi^2_{\rm prior}$	0.00	3.0 ± 2.5
D_{40}	1441	1422^{+200}_{-200}	$H(0.15)$	75.63	75.2 ± 3.2			
D_{220}	6780	6683^{+900}_{-1000}	$D_{\rm M}(0.15)$	614.7	620^{+27}_{-32}			

Best-fit $\chi^2_{\rm eff} = 7.57$; $\bar{\chi}^2_{\rm eff} = 12.61$; $R - 1 = 0.00164$
$\chi^2_{\rm eff}$: CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8_CMBmarged: 7.57

2.161 base_lensing_lenspriors_theta_post_Pantheon

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02221 ± 0.00050	D_{810}	2684^{+150}_{-180}	$H(0.38)$	$83.61^{+0.81}_{-0.91}$
$\boldsymbol{\Omega_c h^2}$	0.1157 ± 0.0040	D_{1420}	856^{+50}_{-58}	$D_{\rm M}(0.38)$	1511 ± 24
$\boldsymbol{100\theta_{MC}}$	1.04090 ± 0.00061	D_{2000}	240^{+15}_{-17}	$H(0.51)$	$90.12^{+0.61}_{-0.70}$
$\boldsymbol{\ln(10^{10} A_s)}$	3.097 ± 0.056	$n_{\rm s,0.002}$	0.956 ± 0.018	$D_{\rm M}(0.51)$	1960 ± 28
$\boldsymbol{n_s}$	0.956 ± 0.018	$Y_{\rm P}$	0.24532 ± 0.00022	$H(0.61)$	$95.57^{+0.48}_{-0.56}$
H_0	68.8 ± 1.5	$Y_{\rm P}^{\rm BBN}$	0.24665 ± 0.00022	$D_{\rm M}(0.61)$	2283 ± 30
Ω_Λ	0.707 ± 0.021	10^5D/H	2.618 ± 0.095	$H(2.33)$	233.5 ± 2.8
$\Omega_{\rm m}$	0.293 ± 0.021	Age/Gyr	13.793 ± 0.054	$D_{\rm M}(2.33)$	5759 ± 24
$\Omega_{\rm m} h^2$	0.1385 ± 0.0041	z_*	1089.75 ± 0.68	$f\sigma_8(0.15)$	0.447 ± 0.014
$\Omega_{\rm m} h^3$	0.0953 ± 0.0013	r_*	145.7 ± 1.2	$\sigma_8(0.15)$	0.755 ± 0.016
σ_8	0.815 ± 0.016	$100\theta_*$	1.04110 ± 0.00061	$f\sigma_8(0.38)$	0.470 ± 0.011
S_8	0.806 ± 0.027	$D_{\rm M}(z_*)$/Gpc	13.99 ± 0.11	$\sigma_8(0.38)$	0.672 ± 0.015
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.441 ± 0.015	$z_{\rm drag}$	1059.2 ± 1.2	$f\sigma_8(0.51)$	0.4705 ± 0.0094
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.600 ± 0.013	$r_{\rm drag}$	148.4 ± 1.3	$\sigma_8(0.51)$	0.629 ± 0.015
$\sigma_8 / h^{0.5}$	0.983 ± 0.019	$k_{\rm D}$	0.1393 ± 0.0016	$f\sigma_8(0.61)$	0.4670 ± 0.0088
$r_{\rm drag} h$	102.1 ± 2.9	$100\theta_{\rm D}$	0.16113 ± 0.00073	$\sigma_8(0.61)$	0.599 ± 0.015
$\langle d^2 \rangle^{1/2}$	2.486 ± 0.041	$z_{\rm eq}$	3295 ± 98	$f\sigma_8(2.33)$	0.3031 ± 0.0081
$z_{\rm re}$	7.72 ± 0.12	$k_{\rm eq}$	0.01006 ± 0.00030	$\sigma_8(2.33)$	0.3134 ± 0.0092
$10^9 A_{\rm s}$	$2.22^{+0.11}_{-0.13}$	$100\theta_{\rm eq}$	0.833 ± 0.018	$\chi^2_{\rm lensing}$	9.1 ± 1.6
$10^9 A_{\rm s} e^{-2\tau}$	$1.99^{+0.10}_{-0.12}$	$100\theta_{\rm s,eq}$	0.4598 ± 0.0096	$\chi^2_{\rm JLA}$	1036.9 ± 1.3
D_{40}	1338^{+80}_{-90}	$H(0.15)$	73.9 ± 1.2	$\chi^2_{\rm prior}$	2.9 ± 2.4
D_{220}	6204^{+380}_{-450}	$D_{\rm M}(0.15)$	632 ± 12		

$\bar{\chi}^2_{\rm eff} = 1048.99$; $R - 1 = 0.00302$

2.162 base_lensing_lenspriors_theta_post_agr2

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02220 ± 0.00050	D_{810}	2982^{+300}_{-400}	$H(0.38)$	85.5 ± 2.0
$\boldsymbol{\Omega_c h^2}$	$0.1077^{+0.0070}_{-0.0091}$	D_{1420}	945^{+100}_{-100}	$D_{\rm M}(0.38)$	1462^{+47}_{-54}
$\boldsymbol{100\theta_{MC}}$	1.04090 ± 0.00060	D_{2000}	265^{+30}_{-30}	$H(0.51)$	$91.5^{+1.4}_{-1.7}$
$\boldsymbol{\ln(10^{10} A_s)}$	$3.19^{+0.12}_{-0.11}$	$n_{\rm s,0.002}$	0.959 ± 0.020	$D_{\rm M}(0.51)$	1902^{+56}_{-63}
$\boldsymbol{n_s}$	0.959 ± 0.020	$Y_{\rm P}$	$0.24531^{+0.00022}_{-0.00020}$	$H(0.61)$	$96.62^{+0.94}_{-1.3}$
H_0	72.0 ± 3.3	$Y_{\rm P}^{\rm BBN}$	$0.24664^{+0.00022}_{-0.00020}$	$D_{\rm M}(0.61)$	2221 ± 64
Ω_Λ	$0.745^{+0.046}_{-0.030}$	10^5D/H	2.621 ± 0.094	$H(2.33)$	$228.3^{+4.7}_{-6.1}$
$\Omega_{\rm m}$	$0.255^{+0.030}_{-0.046}$	Age/Gyr	13.744 ± 0.071	$D_{\rm M}(2.33)$	5729^{+40}_{-34}
$\Omega_{\rm m} h^2$	$0.1305^{+0.0071}_{-0.0091}$	z_*	$1089.03^{+0.87}_{-0.99}$	$f\sigma_8(0.15)$	0.420 ± 0.024
$\Omega_{\rm m} h^3$	$0.0937^{+0.0018}_{-0.0020}$	r_*	$147.9^{+2.5}_{-2.2}$	$\sigma_8(0.15)$	$0.763^{+0.022}_{-0.020}$
σ_8	0.819 ± 0.020	$100\theta_*$	1.04113 ± 0.00061	$f\sigma_8(0.38)$	$0.451^{+0.018}_{-0.015}$
S_8	$0.752^{+0.045}_{-0.050}$	$D_{\rm M}(z_*)$/Gpc	$14.21^{+0.24}_{-0.21}$	$\sigma_8(0.38)$	$0.683^{+0.025}_{-0.021}$
$\sigma_8 \Omega_{\rm m}^{0.5}$	$0.412^{+0.025}_{-0.028}$	$z_{\rm drag}$	1058.6 ± 1.4	$f\sigma_8(0.51)$	$0.456^{+0.013}_{-0.011}$
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.580 ± 0.017	$r_{\rm drag}$	$150.7^{+2.6}_{-2.3}$	$\sigma_8(0.51)$	$0.643^{+0.025}_{-0.021}$
$\sigma_8/h^{0.5}$	0.965 ± 0.019	$k_{\rm D}$	$0.1370^{+0.0024}_{-0.0028}$	$f\sigma_8(0.61)$	$0.456^{+0.011}_{-0.0088}$
$r_{\rm drag} h$	108.6 ± 6.6	$100\theta_{\rm D}$	0.16146 ± 0.00079	$\sigma_8(0.61)$	$0.614^{+0.025}_{-0.022}$
$\langle d^2 \rangle^{1/2}$	2.506 ± 0.050	$z_{\rm eq}$	3104^{+170}_{-220}	$f\sigma_8(2.33)$	$0.312^{+0.015}_{-0.013}$
$z_{\rm re}$	$7.59^{+0.15}_{-0.18}$	$k_{\rm eq}$	$0.00947^{+0.00052}_{-0.00067}$	$\sigma_8(2.33)$	$0.326^{+0.018}_{-0.016}$
$10^9 A_{\rm s}$	2.44 ± 0.28	$100\theta_{\rm eq}$	0.873 ± 0.041	$\chi^2_{\rm lensing}$	11.9 ± 2.0
$10^9 A_{\rm s} e^{-2\tau}$	2.18 ± 0.25	$100\theta_{\rm s,eq}$	0.481 ± 0.022	$\chi^2_{\rm prior}$	3.0 ± 2.5
D_{40}	1497^{+200}_{-200}	$H(0.15)$	76.6 ± 2.8		
D_{220}	7076^{+900}_{-1000}	$D_{\rm M}(0.15)$	607^{+22}_{-27}		

$\bar{\chi}^2_{\rm eff} = 14.87$; $R - 1 = 0.00258$

2.163 base_lensing_lenspriors_theta_post_conslmin40

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\mathbf{\Omega_b h^2}$	0.02220 ± 0.00050	D_{810}	2872^{+400}_{-500}	$H(0.38)$	$84.7^{+2.2}_{-2.8}$
$\mathbf{\Omega_c h^2}$	$0.1120^{+0.0096}_{-0.013}$	D_{1420}	913^{+100}_{-200}	$D_{\rm M}(0.38)$	1487^{+64}_{-72}
$\mathbf{100\theta_{MC}}$	1.04090 ± 0.00061	D_{2000}	256^{+30}_{-40}	$H(0.51)$	$90.9^{+1.5}_{-2.1}$
$\mathbf{ln(10^{10} A_s)}$	3.15 ± 0.14	$n_{\rm s,0.002}$	0.960 ± 0.020	$D_{\rm M}(0.51)$	1931 ± 78
$\mathbf{n_s}$	0.960 ± 0.020	$Y_{\rm P}$	$0.24531^{+0.00022}_{-0.00020}$	$H(0.61)$	$96.21^{+0.90}_{-1.6}$
H_0	70.4 ± 4.3	$Y_{\rm P}^{\rm BBN}$	$0.24664^{+0.00022}_{-0.00020}$	$D_{\rm M}(0.61)$	2252 ± 83
Ω_Λ	$0.722^{+0.069}_{-0.040}$	10^5D/H	2.620 ± 0.094	$H(2.33)$	$231.1^{+6.4}_{-8.5}$
$\Omega_{\rm m}$	$0.278^{+0.040}_{-0.069}$	Age/Gyr	$13.764^{+0.086}_{-0.071}$	$D_{\rm M}(2.33)$	5741^{+48}_{-34}
$\Omega_{\rm m}h^2$	$0.1348^{+0.0096}_{-0.013}$	z_*	$1089.4^{+1.1}_{-1.2}$	$f\sigma_8(0.15)$	0.435 ± 0.033
$\Omega_{\rm m}h^3$	0.0945 ± 0.0023	r_*	$146.8^{+3.3}_{-2.9}$	$\sigma_8(0.15)$	$0.761^{+0.027}_{-0.022}$
σ_8	$0.819^{+0.023}_{-0.020}$	$100\theta_*$	1.04112 ± 0.00061	$f\sigma_8(0.38)$	$0.461^{+0.024}_{-0.017}$
S_8	$0.782^{+0.062}_{-0.072}$	$D_{\rm M}(z_*)$/Gpc	$14.10^{+0.32}_{-0.28}$	$\sigma_8(0.38)$	$0.679^{+0.031}_{-0.025}$
$\sigma_8\Omega_{\rm m}^{0.5}$	$0.428^{+0.034}_{-0.039}$	$z_{\rm drag}$	1058.9 ± 1.5	$f\sigma_8(0.51)$	$0.464^{+0.017}_{-0.012}$
$\sigma_8\Omega_{\rm m}^{0.25}$	$0.592^{+0.024}_{-0.021}$	$r_{\rm drag}$	$149.6^{+3.4}_{-3.0}$	$\sigma_8(0.51)$	$0.638^{+0.032}_{-0.026}$
$\sigma_8/h^{0.5}$	$0.977^{+0.023}_{-0.020}$	$k_{\rm D}$	$0.1382^{+0.0031}_{-0.0037}$	$f\sigma_8(0.61)$	$0.462^{+0.013}_{-0.0096}$
$r_{\rm drag}h$	105.5 ± 8.6	$100\theta_{\rm D}$	0.16131 ± 0.00083	$\sigma_8(0.61)$	$0.608^{+0.032}_{-0.026}$
$\langle d^2\rangle^{1/2}$	2.502 ± 0.062	$z_{\rm eq}$	3206^{+230}_{-300}	$f\sigma_8(2.33)$	$0.309^{+0.019}_{-0.016}$
$z_{\rm re}$	$7.66^{+0.19}_{-0.23}$	$k_{\rm eq}$	$0.00979^{+0.00070}_{-0.00093}$	$\sigma_8(2.33)$	$0.321^{+0.023}_{-0.020}$
$10^9 A_{\rm s}$	$2.36^{+0.30}_{-0.37}$	$100\theta_{\rm eq}$	0.854 ± 0.053	$\chi^2_{\rm lensing}$	9.5 ± 1.9
$10^9 A_{\rm s}e^{-2\tau}$	$2.11^{+0.27}_{-0.33}$	$100\theta_{\rm s,eq}$	0.471 ± 0.028	$\chi^2_{\rm prior}$	3.0 ± 2.5
D_{40}	1432^{+200}_{-300}	$H(0.15)$	75.3 ± 3.6		
D_{220}	6733^{+1000}_{-1000}	$D_{\rm M}(0.15)$	620^{+30}_{-37}		

$\bar{\chi}^2_{\rm eff} = 12.57$; $R - 1 = 0.00195$

2.164 base_lensing_lenspriors_theta_post_agrlmax425

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\mathbf{\Omega_b h^2}$	0.02220 ± 0.00050	D_{810}	2814^{+400}_{-400}	$H(0.38)$	$84.3^{+2.0}_{-2.4}$
$\mathbf{\Omega_c h^2}$	$0.1132^{+0.0089}_{-0.011}$	D_{1420}	896^{+100}_{-100}	$D_{\rm M}(0.38)$	1495 ± 60
$\mathbf{100\theta_{MC}}$	1.04090 ± 0.00061	D_{2000}	252^{+30}_{-40}	$H(0.51)$	$90.7^{+1.3}_{-1.8}$
$\mathbf{ln(10^{10} A_s)}$	3.13 ± 0.13	$n_{\rm s,0.002}$	0.959 ± 0.020	$D_{\rm M}(0.51)$	1941 ± 69
$\mathbf{n_s}$	0.959 ± 0.020	$Y_{\rm P}$	$0.24531^{+0.00022}_{-0.00020}$	$H(0.61)$	$96.01^{+0.82}_{-1.4}$
H_0	69.9 ± 3.8	$Y_{\rm P}^{\rm BBN}$	$0.24664^{+0.00022}_{-0.00020}$	$D_{\rm M}(0.61)$	2262 ± 74
Ω_Λ	$0.717^{+0.061}_{-0.038}$	10^5D/H	2.620 ± 0.094	$H(2.33)$	$231.9^{+5.9}_{-7.4}$
$\Omega_{\rm m}$	$0.283^{+0.038}_{-0.061}$	Age/Gyr	$13.774^{+0.077}_{-0.067}$	$D_{\rm M}(2.33)$	5746^{+42}_{-32}
$\Omega_{\rm m}h^2$	$0.1361^{+0.0089}_{-0.011}$	z_*	$1089.53^{+0.99}_{-1.1}$	$f\sigma_8(0.15)$	0.439 ± 0.029
$\Omega_{\rm m}h^3$	0.0947 ± 0.0021	r_*	$146.4^{+2.9}_{-2.6}$	$\sigma_8(0.15)$	$0.760^{+0.025}_{-0.021}$
σ_8	$0.818^{+0.022}_{-0.020}$	$100\theta_*$	1.04112 ± 0.00061	$f\sigma_8(0.38)$	$0.464^{+0.021}_{-0.016}$
S_8	$0.791^{+0.056}_{-0.063}$	$D_{\rm M}(z_*)$/Gpc	$14.07^{+0.28}_{-0.25}$	$\sigma_8(0.38)$	$0.677^{+0.028}_{-0.023}$
$\sigma_8\Omega_{\rm m}^{0.5}$	$0.433^{+0.031}_{-0.035}$	$z_{\rm drag}$	1059.0 ± 1.4	$f\sigma_8(0.51)$	$0.466^{+0.015}_{-0.011}$
$\sigma_8\Omega_{\rm m}^{0.25}$	$0.595^{+0.021}_{-0.019}$	$r_{\rm drag}$	149.2 ± 2.9	$\sigma_8(0.51)$	$0.635^{+0.029}_{-0.024}$
$\sigma_8/h^{0.5}$	0.980 ± 0.021	$k_{\rm D}$	$0.1386^{+0.0029}_{-0.0033}$	$f\sigma_8(0.61)$	$0.464^{+0.012}_{-0.0094}$
$r_{\rm drag}h$	104.4 ± 7.6	$100\theta_{\rm D}$	0.16126 ± 0.00081	$\sigma_8(0.61)$	$0.606^{+0.029}_{-0.024}$
$\langle d^2\rangle^{1/2}$	2.496 ± 0.052	$z_{\rm eq}$	3236^{+210}_{-270}	$f\sigma_8(2.33)$	$0.307^{+0.017}_{-0.014}$
$z_{\rm re}$	$7.68^{+0.18}_{-0.20}$	$k_{\rm eq}$	$0.00988^{+0.00065}_{-0.00082}$	$\sigma_8(2.33)$	$0.319^{+0.020}_{-0.018}$
$10^9 A_{\rm s}$	$2.31^{+0.26}_{-0.32}$	$100\theta_{\rm eq}$	0.847 ± 0.047	$\chi^2_{\rm lensing}$	7.5 ± 2.0
$10^9 A_{\rm s}e^{-2\tau}$	$2.07^{+0.24}_{-0.29}$	$100\theta_{\rm s,eq}$	0.467 ± 0.025	$\chi^2_{\rm prior}$	3.0 ± 2.5
D_{40}	1400^{+200}_{-200}	$H(0.15)$	74.8 ± 3.2		
D_{220}	6561^{+900}_{-1000}	$D_{\rm M}(0.15)$	624^{+28}_{-33}		

$\bar{\chi}^2_{\rm eff} = 10.53$; $R - 1 = 0.00161$

2.165 base_lensing_lenspriors_theta_post_ptt

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02219 ± 0.00051	D_{810}	3350^{+400}_{-500}	$H(0.38)$	87.2 ± 2.5
$\boldsymbol{\Omega_c h^2}$	$0.1017^{+0.0077}_{-0.010}$	D_{1420}	1056^{+100}_{-200}	$D_{\rm M}(0.38)$	1423^{+52}_{-64}
$\boldsymbol{100\theta_{MC}}$	1.04090 ± 0.00060	D_{2000}	295^{+30}_{-50}	$H(0.51)$	92.8 ± 1.9
$\boldsymbol{\ln(10^{10} A_s)}$	3.29 ± 0.13	$n_{\rm s,0.002}$	0.961 ± 0.021	$D_{\rm M}(0.51)$	1857^{+63}_{-76}
$\boldsymbol{n_s}$	0.961 ± 0.021	$Y_{\rm P}$	0.24531 ± 0.00022	$H(0.61)$	$97.6^{+1.4}_{-1.7}$
H_0	74.6 ± 3.9	$Y_{\rm P}^{\rm BBN}$	0.24664 ± 0.00022	$D_{\rm M}(0.61)$	2172^{+69}_{-81}
Ω_Λ	$0.772^{+0.048}_{-0.030}$	10^5D/H	2.622 ± 0.097	$H(2.33)$	$224.3^{+5.2}_{-6.7}$
$\Omega_{\rm m}$	$0.228^{+0.030}_{-0.048}$	Age/Gyr	13.699 ± 0.082	$D_{\rm M}(2.33)$	5701 ± 46
$\Omega_{\rm m} h^2$	$0.1245^{+0.0078}_{-0.010}$	z_*	$1088.48^{+0.88}_{-1.1}$	$f\sigma_8(0.15)$	$0.405^{+0.026}_{-0.033}$
$\Omega_{\rm m} h^3$	0.0925 ± 0.0022	r_*	$149.7^{+2.8}_{-2.5}$	$\sigma_8(0.15)$	0.781 ± 0.023
σ_8	$0.834^{+0.020}_{-0.022}$	$100\theta_*$	1.04114 ± 0.00061	$f\sigma_8(0.38)$	0.442 ± 0.022
S_8	$0.723^{+0.048}_{-0.065}$	$D_{\rm M}(z_*)$/Gpc	$14.38^{+0.27}_{-0.24}$	$\sigma_8(0.38)$	0.703 ± 0.025
$\sigma_8 \Omega_{\rm m}^{0.5}$	$0.396^{+0.026}_{-0.035}$	$z_{\rm drag}$	1058.1 ± 1.5	$f\sigma_8(0.51)$	0.452 ± 0.017
$\sigma_8 \Omega_{\rm m}^{0.25}$	$0.574^{+0.021}_{-0.023}$	$r_{\rm drag}$	152.5 ± 2.8	$\sigma_8(0.51)$	0.663 ± 0.026
$\sigma_8/h^{0.5}$	0.967 ± 0.025	$k_{\rm D}$	0.1352 ± 0.0030	$f\sigma_8(0.61)$	0.455 ± 0.014
$r_{\rm drag} h$	113.8 ± 7.9	$100\theta_{\rm D}$	0.16171 ± 0.00085	$\sigma_8(0.61)$	0.634 ± 0.026
$\langle d^2 \rangle^{1/2}$	$2.570^{+0.063}_{-0.055}$	$z_{\rm eq}$	2960^{+190}_{-240}	$f\sigma_8(2.33)$	0.324 ± 0.016
$z_{\rm re}$	$7.49^{+0.16}_{-0.20}$	$k_{\rm eq}$	$0.00903^{+0.00057}_{-0.00074}$	$\sigma_8(2.33)$	0.341 ± 0.019
$10^9 A_{\rm s}$	$2.72^{+0.31}_{-0.39}$	$100\theta_{\rm eq}$	0.906 ± 0.050	$\chi^2_{\rm lensing}$	10.7 ± 1.9
$10^9 A_{\rm s} e^{-2\tau}$	$2.44^{+0.28}_{-0.35}$	$100\theta_{\rm s,eq}$	0.498 ± 0.026	$\chi^2_{\rm prior}$	3.1 ± 2.5
D_{40}	1698 ± 200	$H(0.15)$	78.8 ± 3.4		
D_{220}	8124^{+1000}_{-1000}	$D_{\rm M}(0.15)$	588^{+25}_{-32}		

$\bar{\chi}^2_{\rm eff} = 13.85$; $R - 1 = 0.02914$

2.166 base_lensing_lenspriors_theta_post_bfcl

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02220 ± 0.00049	D_{810}	2768^{+300}_{-400}	$H(0.38)$	$84.3^{+2.0}_{-2.4}$
$\boldsymbol{\Omega_c h^2}$	$0.1132^{+0.0090}_{-0.011}$	D_{1420}	882^{+100}_{-100}	$D_{\rm M}(0.38)$	1494 ± 60
$\boldsymbol{100\theta_{MC}}$	1.04090 ± 0.00060	D_{2000}	247^{+30}_{-40}	$H(0.51)$	$90.7^{+1.3}_{-1.9}$
$\boldsymbol{\ln(10^{10} A_s)}$	3.12 ± 0.13	$n_{\rm s,0.002}$	0.960 ± 0.020	$D_{\rm M}(0.51)$	1940 ± 70
$\boldsymbol{n_s}$	0.960 ± 0.020	$Y_{\rm P}$	$0.24531^{+0.00022}_{-0.00020}$	$H(0.61)$	$96.02^{+0.81}_{-1.4}$
H_0	69.9 ± 3.8	$Y_{\rm P}^{\rm BBN}$	$0.24664^{+0.00022}_{-0.00020}$	$D_{\rm M}(0.61)$	2262 ± 75
Ω_Λ	$0.717^{+0.061}_{-0.039}$	10^5D/H	2.620 ± 0.094	$H(2.33)$	$231.9^{+6.0}_{-7.4}$
$\Omega_{\rm m}$	$0.283^{+0.039}_{-0.061}$	Age/Gyr	$13.773^{+0.078}_{-0.067}$	$D_{\rm M}(2.33)$	5746^{+42}_{-31}
$\Omega_{\rm m}h^2$	$0.1360^{+0.0091}_{-0.011}$	z_*	$1089.5^{+1.0}_{-1.1}$	$f\sigma_8(0.15)$	0.435 ± 0.029
$\Omega_{\rm m}h^3$	0.0947 ± 0.0021	r_*	146.5 ± 2.8	$\sigma_8(0.15)$	$0.753^{+0.024}_{-0.021}$
σ_8	$0.811^{+0.021}_{-0.019}$	$100\theta_*$	1.04112 ± 0.00061	$f\sigma_8(0.38)$	$0.460^{+0.021}_{-0.016}$
S_8	0.783 ± 0.060	$D_{\rm M}(z_*)$/Gpc	14.07 ± 0.27	$\sigma_8(0.38)$	$0.671^{+0.028}_{-0.023}$
$\sigma_8\Omega_{\rm m}^{0.5}$	0.429 ± 0.033	$z_{\rm drag}$	1059.0 ± 1.4	$f\sigma_8(0.51)$	$0.462^{+0.015}_{-0.011}$
$\sigma_8\Omega_{\rm m}^{0.25}$	$0.589^{+0.021}_{-0.019}$	$r_{\rm drag}$	149.2 ± 2.9	$\sigma_8(0.51)$	$0.630^{+0.028}_{-0.024}$
$\sigma_8/h^{0.5}$	$0.971^{+0.022}_{-0.019}$	$k_{\rm D}$	$0.1385^{+0.0029}_{-0.0033}$	$f\sigma_8(0.61)$	$0.460^{+0.012}_{-0.0092}$
$r_{\rm drag}h$	104.4 ± 7.6	$100\theta_{\rm D}$	0.16126 ± 0.00080	$\sigma_8(0.61)$	$0.601^{+0.029}_{-0.024}$
$\langle d^2\rangle^{1/2}$	2.474 ± 0.049	$z_{\rm eq}$	3235^{+220}_{-270}	$f\sigma_8(2.33)$	$0.304^{+0.017}_{-0.014}$
$z_{\rm re}$	$7.68^{+0.18}_{-0.20}$	$k_{\rm eq}$	$0.00987^{+0.00066}_{-0.00081}$	$\sigma_8(2.33)$	0.316 ± 0.019
$10^9 A_{\rm s}$	$2.27^{+0.25}_{-0.32}$	$100\theta_{\rm eq}$	0.847 ± 0.047	$\chi^2_{\rm lensing}$	9.8 ± 2.0
$10^9 A_{\rm s}e^{-2\tau}$	$2.04^{+0.23}_{-0.28}$	$100\theta_{\rm s,eq}$	0.467 ± 0.025	$\chi^2_{\rm prior}$	3.0 ± 2.5
D_{40}	1375^{+200}_{-200}	$H(0.15)$	74.8 ± 3.2		
D_{220}	6450^{+900}_{-1000}	$D_{\rm M}(0.15)$	624^{+28}_{-33}		

$\bar{\chi}^2_{\rm eff} = 12.85$; $R - 1 = 0.00230$

2.167 base_lensing_lenspriors_theta_post_agr2bfcl

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02220 ± 0.00050	D_{810}	2887^{+300}_{-400}	$H(0.38)$	$85.2^{+1.9}_{-2.2}$
$\boldsymbol{\Omega_c h^2}$	$0.1089^{+0.0075}_{-0.0092}$	D_{1420}	916^{+100}_{-100}	$D_{\rm M}(0.38)$	1469 ± 52
$\boldsymbol{100\theta_{MC}}$	1.04090 ± 0.00060	D_{2000}	256^{+30}_{-30}	$H(0.51)$	$91.3^{+1.3}_{-1.7}$
$\boldsymbol{\ln(10^{10} A_s)}$	3.16 ± 0.11	$n_{\rm s,0.002}$	0.959 ± 0.020	$D_{\rm M}(0.51)$	1911 ± 61
$\boldsymbol{n_s}$	0.959 ± 0.020	$Y_{\rm P}$	0.24531 ± 0.00021	$H(0.61)$	$96.47^{+0.91}_{-1.3}$
H_0	71.5 ± 3.3	$Y_{\rm P}^{\rm BBN}$	0.24664 ± 0.00021	$D_{\rm M}(0.61)$	2230 ± 65
Ω_Λ	$0.739^{+0.048}_{-0.032}$	10^5D/H	2.621 ± 0.094	$H(2.33)$	$229.0^{+5.0}_{-6.2}$
$\Omega_{\rm m}$	$0.261^{+0.032}_{-0.048}$	Age/Gyr	$13.751^{+0.075}_{-0.068}$	$D_{\rm M}(2.33)$	5733^{+41}_{-33}
$\Omega_{\rm m}h^2$	$0.1317^{+0.0075}_{-0.0093}$	z_*	1089.14 ± 0.94	$f\sigma_8(0.15)$	0.420 ± 0.024
$\Omega_{\rm m}h^3$	$0.0939^{+0.0018}_{-0.0020}$	r_*	$147.6^{+2.5}_{-2.2}$	$\sigma_8(0.15)$	$0.755^{+0.022}_{-0.019}$
σ_8	$0.811^{+0.020}_{-0.018}$	$100\theta_*$	1.04112 ± 0.00060	$f\sigma_8(0.38)$	$0.449^{+0.018}_{-0.014}$
S_8	0.753 ± 0.049	$D_{\rm M}(z_*)$/Gpc	$14.18^{+0.24}_{-0.22}$	$\sigma_8(0.38)$	$0.676^{+0.025}_{-0.021}$
$\sigma_8\Omega_{\rm m}^{0.5}$	0.412 ± 0.027	$z_{\rm drag}$	1058.7 ± 1.4	$f\sigma_8(0.51)$	$0.454^{+0.013}_{-0.010}$
$\sigma_8\Omega_{\rm m}^{0.25}$	$0.578^{+0.018}_{-0.016}$	$r_{\rm drag}$	$150.4^{+2.7}_{-2.3}$	$\sigma_8(0.51)$	$0.635^{+0.025}_{-0.022}$
$\sigma_8/h^{0.5}$	0.959 ± 0.018	$k_{\rm D}$	$0.1373^{+0.0024}_{-0.0029}$	$f\sigma_8(0.61)$	$0.454^{+0.011}_{-0.0084}$
$r_{\rm drag}h$	107.6 ± 6.7	$100\theta_{\rm D}$	0.16141 ± 0.00078	$\sigma_8(0.61)$	$0.606^{+0.026}_{-0.022}$
$\langle d^2\rangle^{1/2}$	2.479 ± 0.047	$z_{\rm eq}$	3132^{+180}_{-220}	$f\sigma_8(2.33)$	$0.308^{+0.015}_{-0.013}$
$z_{\rm re}$	$7.61^{+0.16}_{-0.18}$	$k_{\rm eq}$	$0.00956^{+0.00055}_{-0.00068}$	$\sigma_8(2.33)$	0.321 ± 0.017
$10^9 A_{\rm s}$	$2.36^{+0.25}_{-0.29}$	$100\theta_{\rm eq}$	0.867 ± 0.042	$\chi^2_{\rm lensing}$	12.1 ± 2.0
$10^9 A_{\rm s}e^{-2\tau}$	$2.12^{+0.22}_{-0.26}$	$100\theta_{\rm s,eq}$	0.478 ± 0.022	$\chi^2_{\rm prior}$	3.0 ± 2.5
D_{40}	1445^{+160}_{-190}	$H(0.15)$	76.2 ± 2.8		
D_{220}	6820^{+900}_{-1000}	$D_{\rm M}(0.15)$	611^{+24}_{-28}		

$\bar{\chi}^2_{\rm eff} = 15.12$; $R - 1 = 0.00542$

2.168 base_lensing_lenspriors_theta_post_linear

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02221 ± 0.00049	D_{810}	2761^{+300}_{-400}	$H(0.38)$	$83.9^{+1.9}_{-2.4}$
$\boldsymbol{\Omega_c h^2}$	$0.1154^{+0.0096}_{-0.012}$	D_{1420}	881^{+100}_{-100}	$D_{\rm M}(0.38)$	1507 ± 62
$\boldsymbol{100\theta_{MC}}$	1.04090 ± 0.00061	D_{2000}	247^{+30}_{-40}	$H(0.51)$	$90.4^{+1.2}_{-1.8}$
$\boldsymbol{\ln(10^{10} A_s)}$	3.12 ± 0.13	$n_{\rm s,0.002}$	0.960 ± 0.020	$D_{\rm M}(0.51)$	1955 ± 72
$\boldsymbol{n_s}$	0.960 ± 0.020	$Y_{\rm P}$	$0.24532^{+0.00022}_{-0.00020}$	$H(0.61)$	$95.80^{+0.75}_{-1.3}$
H_0	69.1 ± 3.9	$Y_{\rm P}^{\rm BBN}$	$0.24664^{+0.00022}_{-0.00020}$	$D_{\rm M}(0.61)$	2277 ± 76
Ω_Λ	$0.705^{+0.065}_{-0.043}$	10^5D/H	2.619 ± 0.093	$H(2.33)$	$233.3^{+6.4}_{-7.7}$
$\Omega_{\rm m}$	$0.295^{+0.043}_{-0.065}$	Age/Gyr	$13.783^{+0.078}_{-0.065}$	$D_{\rm M}(2.33)$	5752^{+41}_{-30}
$\Omega_{\rm m} h^2$	$0.1382^{+0.0097}_{-0.012}$	z_*	1089.7 ± 1.1	$f\sigma_8(0.15)$	0.447 ± 0.031
$\Omega_{\rm m} h^3$	0.0951 ± 0.0022	r_*	145.9 ± 2.9	$\sigma_8(0.15)$	$0.759^{+0.025}_{-0.022}$
σ_8	$0.819^{+0.022}_{-0.020}$	$100\theta_*$	1.04111 ± 0.00061	$f\sigma_8(0.38)$	$0.470^{+0.022}_{-0.017}$
S_8	0.807 ± 0.064	$D_{\rm M}(z_*)$/Gpc	14.01 ± 0.28	$\sigma_8(0.38)$	$0.675^{+0.029}_{-0.024}$
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.442 ± 0.035	$z_{\rm drag}$	1059.2 ± 1.4	$f\sigma_8(0.51)$	$0.470^{+0.015}_{-0.011}$
$\sigma_8 \Omega_{\rm m}^{0.25}$	$0.601^{+0.022}_{-0.020}$	$r_{\rm drag}$	148.6 ± 3.0	$\sigma_8(0.51)$	$0.633^{+0.029}_{-0.025}$
$\sigma_8/h^{0.5}$	0.986 ± 0.022	$k_{\rm D}$	0.1392 ± 0.0032	$f\sigma_8(0.61)$	$0.467^{+0.012}_{-0.0096}$
$r_{\rm drag} h$	102.8 ± 7.8	$100\theta_{\rm D}$	0.16118 ± 0.00081	$\sigma_8(0.61)$	$0.603^{+0.030}_{-0.025}$
$\langle d^2 \rangle^{1/2}$	2.492 ± 0.051	$z_{\rm eq}$	3287^{+230}_{-280}	$f\sigma_8(2.33)$	$0.305^{+0.017}_{-0.015}$
$z_{\rm re}$	7.71 ± 0.20	$k_{\rm eq}$	$0.01003^{+0.00071}_{-0.00085}$	$\sigma_8(2.33)$	0.316 ± 0.019
$10^9 A_{\rm s}$	$2.27^{+0.26}_{-0.32}$	$100\theta_{\rm eq}$	0.837 ± 0.048	$\chi^2_{\rm lensing}$	10.1 ± 2.0
$10^9 A_{\rm s} e^{-2\tau}$	$2.04^{+0.23}_{-0.29}$	$100\theta_{\rm s,eq}$	0.462 ± 0.025	$\chi^2_{\rm prior}$	3.0 ± 2.5
D_{40}	1367^{+200}_{-200}	$H(0.15)$	74.2 ± 3.2		
D_{220}	6389^{+900}_{-1000}	$D_{\rm M}(0.15)$	630^{+30}_{-34}		

$\bar{\chi}^2_{\rm eff} = 13.09$; $R - 1 = 0.00194$

2.169 base_lensing_lenspriors_theta_post_acc

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\mathbf{\Omega_b h^2}$	0.02220 ± 0.00050	D_{810}	2862^{+400}_{-400}	$H(0.38)$	$84.6^{+2.0}_{-2.4}$
$\mathbf{\Omega_c h^2}$	$0.1118^{+0.0085}_{-0.011}$	D_{1420}	910^{+100}_{-100}	$D_{\rm M}(0.38)$	1486^{+56}_{-63}
$\mathbf{100\theta_{MC}}$	1.04091 ± 0.00061	D_{2000}	256^{+30}_{-40}	$H(0.51)$	$90.9^{+1.4}_{-1.8}$
$\mathbf{\ln(10^{10} A_s)}$	3.15 ± 0.13	$n_{\rm s,0.002}$	0.960 ± 0.020	$D_{\rm M}(0.51)$	1931 ± 69
$\mathbf{n_s}$	0.960 ± 0.020	$Y_{\rm P}$	$0.24532^{+0.00022}_{-0.00020}$	$H(0.61)$	$96.16^{+0.87}_{-1.4}$
H_0	70.4 ± 3.7	$Y_{\rm P}^{\rm BBN}$	$0.24664^{+0.00022}_{-0.00020}$	$D_{\rm M}(0.61)$	2252 ± 73
Ω_Λ	$0.724^{+0.059}_{-0.036}$	10^5D/H	2.620 ± 0.094	$H(2.33)$	$231.0^{+5.7}_{-7.3}$
$\Omega_{\rm m}$	$0.276^{+0.036}_{-0.059}$	Age/Gyr	$13.766^{+0.078}_{-0.068}$	$D_{\rm M}(2.33)$	5742^{+43}_{-32}
$\Omega_{\rm m}h^2$	$0.1347^{+0.0086}_{-0.011}$	z_*	$1089.40^{+0.97}_{-1.1}$	$f\sigma_8(0.15)$	0.435 ± 0.029
$\Omega_{\rm m}h^3$	0.0945 ± 0.0021	r_*	$146.8^{+2.9}_{-2.6}$	$\sigma_8(0.15)$	$0.761^{+0.024}_{-0.021}$
σ_8	0.819 ± 0.021	$100\theta_*$	1.04113 ± 0.00061	$f\sigma_8(0.38)$	$0.461^{+0.021}_{-0.017}$
S_8	$0.782^{+0.055}_{-0.063}$	$D_{\rm M}(z_*)$/Gpc	$14.10^{+0.28}_{-0.25}$	$\sigma_8(0.38)$	$0.679^{+0.028}_{-0.023}$
$\sigma_8\Omega_{\rm m}^{0.5}$	$0.428^{+0.030}_{-0.035}$	$z_{\rm drag}$	1058.9 ± 1.4	$f\sigma_8(0.51)$	$0.464^{+0.016}_{-0.011}$
$\sigma_8\Omega_{\rm m}^{0.25}$	0.592 ± 0.020	$r_{\rm drag}$	$149.6^{+3.0}_{-2.7}$	$\sigma_8(0.51)$	$0.638^{+0.028}_{-0.024}$
$\sigma_8/h^{0.5}$	0.977 ± 0.021	$k_{\rm D}$	$0.1382^{+0.0028}_{-0.0033}$	$f\sigma_8(0.61)$	$0.463^{+0.012}_{-0.0096}$
$r_{\rm drag}h$	105.4 ± 7.5	$100\theta_{\rm D}$	0.16130 ± 0.00081	$\sigma_8(0.61)$	$0.608^{+0.029}_{-0.024}$
$\langle d^2\rangle^{1/2}$	2.501 ± 0.051	$z_{\rm eq}$	3203^{+210}_{-260}	$f\sigma_8(2.33)$	$0.309^{+0.017}_{-0.014}$
$z_{\rm re}$	$7.66^{+0.17}_{-0.20}$	$k_{\rm eq}$	$0.00978^{+0.00063}_{-0.00080}$	$\sigma_8(2.33)$	$0.321^{+0.020}_{-0.018}$
$10^9 A_{\rm s}$	$2.35^{+0.27}_{-0.32}$	$100\theta_{\rm eq}$	0.854 ± 0.047	$\chi^2_{\rm lensing}$	9.6 ± 2.0
$10^9 A_{\rm s}e^{-2\tau}$	$2.10^{+0.24}_{-0.28}$	$100\theta_{\rm s,eq}$	0.470 ± 0.024	$\chi^2_{\rm prior}$	3.0 ± 2.6
D_{40}	1425^{+200}_{-200}	$H(0.15)$	75.3 ± 3.2		
D_{220}	6697^{+900}_{-1000}	$D_{\rm M}(0.15)$	620^{+27}_{-32}		

$\bar{\chi}^2_{\rm eff} = 12.59$; $R - 1 = 0.00106$

2.170 base_lensing_lenspriors_theta_post_agr2acc

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02220 ± 0.00050	D_{810}	2998^{+300}_{-400}	$H(0.38)$	85.6 ± 2.0
$\boldsymbol{\Omega_c h^2}$	$0.1072^{+0.0070}_{-0.0090}$	D_{1420}	950^{+100}_{-100}	$D_{\rm M}(0.38)$	1459^{+46}_{-54}
$\boldsymbol{100\theta_{MC}}$	1.04091 ± 0.00060	D_{2000}	266^{+30}_{-30}	$H(0.51)$	$91.6^{+1.4}_{-1.7}$
$\boldsymbol{\ln(10^{10} A_s)}$	$3.19^{+0.12}_{-0.11}$	$n_{\rm s,0.002}$	0.959 ± 0.020	$D_{\rm M}(0.51)$	1899^{+55}_{-62}
$\boldsymbol{n_s}$	0.959 ± 0.020	$Y_{\rm P}$	$0.24531^{+0.00022}_{-0.00020}$	$H(0.61)$	$96.68^{+0.97}_{-1.3}$
H_0	72.2 ± 3.3	$Y_{\rm P}^{\rm BBN}$	$0.24664^{+0.00022}_{-0.00020}$	$D_{\rm M}(0.61)$	2218 ± 63
Ω_Λ	$0.747^{+0.045}_{-0.029}$	10^5D/H	2.621 ± 0.094	$H(2.33)$	$228.0^{+4.6}_{-6.0}$
$\Omega_{\rm m}$	$0.253^{+0.029}_{-0.045}$	Age/Gyr	13.741 ± 0.071	$D_{\rm M}(2.33)$	5727^{+41}_{-34}
$\Omega_{\rm m} h^2$	$0.1301^{+0.0070}_{-0.0090}$	z_*	$1088.99^{+0.86}_{-0.99}$	$f\sigma_8(0.15)$	0.418 ± 0.024
$\Omega_{\rm m} h^3$	0.0936 ± 0.0019	r_*	$148.1^{+2.5}_{-2.1}$	$\sigma_8(0.15)$	$0.763^{+0.022}_{-0.020}$
σ_8	0.819 ± 0.020	$100\theta_*$	1.04113 ± 0.00061	$f\sigma_8(0.38)$	$0.449^{+0.017}_{-0.015}$
S_8	$0.748^{+0.044}_{-0.050}$	$D_{\rm M}(z_*)$/Gpc	$14.22^{+0.24}_{-0.20}$	$\sigma_8(0.38)$	$0.684^{+0.024}_{-0.021}$
$\sigma_8 \Omega_{\rm m}^{0.5}$	$0.410^{+0.024}_{-0.027}$	$z_{\rm drag}$	1058.6 ± 1.4	$f\sigma_8(0.51)$	$0.455^{+0.013}_{-0.011}$
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.579 ± 0.016	$r_{\rm drag}$	$150.9^{+2.6}_{-2.2}$	$\sigma_8(0.51)$	$0.643^{+0.025}_{-0.022}$
$\sigma_8/h^{0.5}$	0.964 ± 0.018	$k_{\rm D}$	$0.1369^{+0.0024}_{-0.0028}$	$f\sigma_8(0.61)$	$0.456^{+0.011}_{-0.0089}$
$r_{\rm drag} h$	108.9 ± 6.6	$100\theta_{\rm D}$	0.16147 ± 0.00079	$\sigma_8(0.61)$	$0.614^{+0.025}_{-0.022}$
$\langle d^2 \rangle^{1/2}$	2.508 ± 0.049	$z_{\rm eq}$	3093^{+170}_{-220}	$f\sigma_8(2.33)$	$0.313^{+0.015}_{-0.013}$
$z_{\rm re}$	$7.58^{+0.15}_{-0.18}$	$k_{\rm eq}$	$0.00944^{+0.00051}_{-0.00066}$	$\sigma_8(2.33)$	$0.326^{+0.018}_{-0.016}$
$10^9 A_{\rm s}$	2.45 ± 0.28	$100\theta_{\rm eq}$	0.875 ± 0.041	$\chi^2_{\rm lensing}$	11.9 ± 2.0
$10^9 A_{\rm s} e^{-2\tau}$	2.19 ± 0.25	$100\theta_{\rm s,eq}$	0.482 ± 0.021	$\chi^2_{\rm prior}$	3.0 ± 2.6
D_{40}	1506^{+170}_{-190}	$H(0.15)$	76.7 ± 2.8		
D_{220}	7122^{+900}_{-1000}	$D_{\rm M}(0.15)$	606^{+22}_{-27}		

$\bar{\chi}^2_{\rm eff} = 14.92$; $R - 1 = 0.00317$

2.171 base_lensing_lenspriors_theta_post_takahashi

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02220 ± 0.00050	D_{810}	2878^{+400}_{-400}	$H(0.38)$	$84.8^{+2.0}_{-2.4}$
$\boldsymbol{\Omega_c h^2}$	$0.1112^{+0.0085}_{-0.011}$	D_{1420}	915^{+100}_{-100}	$D_{\rm M}(0.38)$	1483^{+56}_{-64}
$\boldsymbol{100\theta_{MC}}$	1.04090 ± 0.00061	D_{2000}	257^{+30}_{-40}	$H(0.51)$	$91.0^{+1.4}_{-1.9}$
$\boldsymbol{\ln(10^{10} A_s)}$	$3.15^{+0.13}_{-0.12}$	$n_{\rm s,0.002}$	0.960 ± 0.020	$D_{\rm M}(0.51)$	1927 ± 69
$\boldsymbol{n_s}$	0.960 ± 0.020	$Y_{\rm P}$	$0.24531^{+0.00022}_{-0.00020}$	$H(0.61)$	$96.24^{+0.89}_{-1.4}$
H_0	70.7 ± 3.8	$Y_{\rm P}^{\rm BBN}$	$0.24664^{+0.00022}_{-0.00020}$	$D_{\rm M}(0.61)$	2247 ± 74
Ω_Λ	$0.727^{+0.059}_{-0.036}$	10^5D/H	2.620 ± 0.094	$H(2.33)$	$230.6^{+5.6}_{-7.4}$
$\Omega_{\rm m}$	$0.273^{+0.036}_{-0.059}$	Age/Gyr	$13.762^{+0.079}_{-0.069}$	$D_{\rm M}(2.33)$	5740^{+44}_{-33}
$\Omega_{\rm m}h^2$	$0.1341^{+0.0085}_{-0.011}$	z_*	$1089.34^{+0.97}_{-1.1}$	$f\sigma_8(0.15)$	0.432 ± 0.030
$\Omega_{\rm m}h^3$	0.0943 ± 0.0021	r_*	$147.0^{+2.9}_{-2.6}$	$\sigma_8(0.15)$	$0.761^{+0.024}_{-0.021}$
σ_8	0.819 ± 0.021	$100\theta_*$	1.04112 ± 0.00061	$f\sigma_8(0.38)$	$0.459^{+0.022}_{-0.017}$
S_8	$0.777^{+0.056}_{-0.065}$	$D_{\rm M}(z_*)$/Gpc	$14.12^{+0.28}_{-0.25}$	$\sigma_8(0.38)$	$0.680^{+0.027}_{-0.022}$
$\sigma_8\Omega_{\rm m}^{0.5}$	$0.426^{+0.031}_{-0.035}$	$z_{\rm drag}$	1058.9 ± 1.4	$f\sigma_8(0.51)$	$0.463^{+0.017}_{-0.012}$
$\sigma_8\Omega_{\rm m}^{0.25}$	$0.590^{+0.022}_{-0.020}$	$r_{\rm drag}$	$149.8^{+3.1}_{-2.7}$	$\sigma_8(0.51)$	$0.638^{+0.028}_{-0.023}$
$\sigma_8/h^{0.5}$	$0.975^{+0.023}_{-0.021}$	$k_{\rm D}$	$0.1380^{+0.0028}_{-0.0033}$	$f\sigma_8(0.61)$	$0.461^{+0.013}_{-0.010}$
$r_{\rm drag}h$	105.9 ± 7.6	$100\theta_{\rm D}$	0.16133 ± 0.00081	$\sigma_8(0.61)$	$0.609^{+0.028}_{-0.023}$
$\langle d^2\rangle^{1/2}$	2.501 ± 0.051	$z_{\rm eq}$	3188^{+200}_{-270}	$f\sigma_8(2.33)$	$0.309^{+0.017}_{-0.014}$
$z_{\rm re}$	$7.65^{+0.17}_{-0.20}$	$k_{\rm eq}$	$0.00973^{+0.00062}_{-0.00082}$	$\sigma_8(2.33)$	$0.321^{+0.020}_{-0.017}$
$10^9 A_{\rm s}$	$2.36^{+0.27}_{-0.32}$	$100\theta_{\rm eq}$	0.857 ± 0.047	$\chi^2_{\rm lensing}$	9.5 ± 2.0
$10^9 A_{\rm s}e^{-2\tau}$	$2.12^{+0.24}_{-0.28}$	$100\theta_{\rm s,eq}$	0.472 ± 0.025	$\chi^2_{\rm prior}$	3.0 ± 2.5
D_{40}	1436^{+200}_{-200}	$H(0.15)$	75.5 ± 3.2		
D_{220}	6754^{+1000}_{-1000}	$D_{\rm M}(0.15)$	618^{+27}_{-33}		

$\bar{\chi}^2_{\rm eff} = 12.55$; $R - 1 = 0.00157$

2.172 base_lensing_lenspriors_theta_post_agr2takahashi

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02220 ± 0.00050	D_{810}	3015 ± 400	$H(0.38)$	85.8 ± 2.0
$\boldsymbol{\Omega_c h^2}$	$0.1066^{+0.0070}_{-0.0090}$	D_{1420}	955^{+100}_{-100}	$D_{\rm M}(0.38)$	1455^{+47}_{-54}
$\boldsymbol{100\theta_{MC}}$	1.04090 ± 0.00060	D_{2000}	267^{+30}_{-30}	$H(0.51)$	$91.8^{+1.4}_{-1.7}$
$\boldsymbol{\ln(10^{10} A_s)}$	$3.20^{+0.12}_{-0.11}$	$n_{\rm s,0.002}$	0.959 ± 0.020	$D_{\rm M}(0.51)$	1894^{+56}_{-63}
$\boldsymbol{n_s}$	0.959 ± 0.020	$Y_{\rm P}$	$0.24531^{+0.00022}_{-0.00020}$	$H(0.61)$	$96.8^{+1.0}_{-1.3}$
H_0	72.4 ± 3.3	$Y_{\rm P}^{\rm BBN}$	$0.24664^{+0.00022}_{-0.00020}$	$D_{\rm M}(0.61)$	2212 ± 64
Ω_Λ	$0.750^{+0.045}_{-0.029}$	10^5D/H	2.621 ± 0.094	$H(2.33)$	$227.5^{+4.6}_{-6.0}$
$\Omega_{\rm m}$	$0.250^{+0.029}_{-0.045}$	Age/Gyr	13.737 ± 0.072	$D_{\rm M}(2.33)$	5724^{+41}_{-35}
$\Omega_{\rm m}h^2$	$0.1294^{+0.0070}_{-0.0090}$	z_*	$1088.93^{+0.86}_{-0.99}$	$f\sigma_8(0.15)$	0.415 ± 0.024
$\Omega_{\rm m}h^3$	0.0935 ± 0.0019	r_*	$148.2^{+2.5}_{-2.2}$	$\sigma_8(0.15)$	$0.763^{+0.022}_{-0.019}$
σ_8	0.818 ± 0.019	$100\theta_*$	1.04113 ± 0.00061	$f\sigma_8(0.38)$	$0.447^{+0.018}_{-0.016}$
S_8	$0.743^{+0.045}_{-0.051}$	$D_{\rm M}(z_*)$/Gpc	$14.24^{+0.24}_{-0.21}$	$\sigma_8(0.38)$	$0.684^{+0.024}_{-0.021}$
$\sigma_8\Omega_{\rm m}^{0.5}$	$0.407^{+0.025}_{-0.028}$	$z_{\rm drag}$	1058.5 ± 1.4	$f\sigma_8(0.51)$	$0.454^{+0.014}_{-0.011}$
$\sigma_8\Omega_{\rm m}^{0.25}$	0.576 ± 0.017	$r_{\rm drag}$	$151.1^{+2.6}_{-2.3}$	$\sigma_8(0.51)$	$0.644^{+0.025}_{-0.021}$
$\sigma_8/h^{0.5}$	0.961 ± 0.020	$k_{\rm D}$	$0.1367^{+0.0024}_{-0.0028}$	$f\sigma_8(0.61)$	$0.454^{+0.011}_{-0.0094}$
$r_{\rm drag}h$	109.5 ± 6.7	$100\theta_{\rm D}$	0.16150 ± 0.00079	$\sigma_8(0.61)$	$0.615^{+0.025}_{-0.021}$
$\langle d^2\rangle^{1/2}$	2.508 ± 0.050	$z_{\rm eq}$	3077^{+170}_{-220}	$f\sigma_8(2.33)$	$0.313^{+0.015}_{-0.012}$
$z_{\rm re}$	$7.57^{+0.15}_{-0.18}$	$k_{\rm eq}$	$0.00939^{+0.00051}_{-0.00066}$	$\sigma_8(2.33)$	$0.327^{+0.018}_{-0.016}$
$10^9 A_{\rm s}$	2.46 ± 0.28	$100\theta_{\rm eq}$	0.879 ± 0.042	$\chi^2_{\rm lensing}$	11.9 ± 2.0
$10^9 A_{\rm s}e^{-2\tau}$	2.21 ± 0.25	$100\theta_{\rm s,eq}$	0.484 ± 0.022	$\chi^2_{\rm prior}$	3.0 ± 2.5
D_{40}	1517^{+200}_{-200}	$H(0.15)$	77.0 ± 2.8		
D_{220}	7184^{+900}_{-1000}	$D_{\rm M}(0.15)$	604^{+22}_{-27}		

$\bar{\chi}^2_{\rm eff} = 14.89$; $R - 1 = 0.00293$

2.173 base_lensing_lenspriors_theta_post_Apr6

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\mathbf{\Omega_b h^2}$	0.02220 ± 0.00050	D_{810}	2779^{+300}_{-400}	$H(0.38)$	$84.2^{+1.9}_{-2.4}$
$\mathbf{\Omega_c h^2}$	$0.1139^{+0.0090}_{-0.011}$	D_{1420}	886^{+100}_{-100}	$D_{\rm M}(0.38)$	1498 ± 60
$\mathbf{100\theta_{MC}}$	1.04090 ± 0.00061	D_{2000}	249^{+30}_{-40}	$H(0.51)$	$90.6^{+1.3}_{-1.8}$
$\mathbf{ln(10^{10} A_s)}$	3.12 ± 0.13	$n_{\rm s,0.002}$	0.959 ± 0.020	$D_{\rm M}(0.51)$	1945 ± 69
$\mathbf{n_s}$	0.959 ± 0.020	$Y_{\rm P}$	$0.24531^{+0.00022}_{-0.00020}$	$H(0.61)$	$95.94^{+0.80}_{-1.4}$
H_0	69.6 ± 3.8	$Y_{\rm P}^{\rm BBN}$	$0.24664^{+0.00022}_{-0.00020}$	$D_{\rm M}(0.61)$	2267 ± 74
Ω_Λ	$0.713^{+0.062}_{-0.039}$	10^5D/H	2.620 ± 0.094	$H(2.33)$	$232.3^{+6.0}_{-7.4}$
$\Omega_{\rm m}$	$0.287^{+0.039}_{-0.062}$	Age/Gyr	$13.777^{+0.077}_{-0.066}$	$D_{\rm M}(2.33)$	5748^{+41}_{-31}
$\Omega_{\rm m}h^2$	$0.1367^{+0.0090}_{-0.011}$	z_*	$1089.6^{+1.0}_{-1.1}$	$f\sigma_8(0.15)$	0.440 ± 0.029
$\Omega_{\rm m}h^3$	0.0948 ± 0.0021	r_*	146.3 ± 2.8	$\sigma_8(0.15)$	$0.757^{+0.025}_{-0.021}$
σ_8	$0.816^{+0.022}_{-0.020}$	$100\theta_*$	1.04111 ± 0.00061	$f\sigma_8(0.38)$	$0.464^{+0.021}_{-0.016}$
S_8	$0.793^{+0.057}_{-0.064}$	$D_{\rm M}(z_*)$/Gpc	14.05 ± 0.27	$\sigma_8(0.38)$	$0.675^{+0.028}_{-0.023}$
$\sigma_8\Omega_{\rm m}^{0.5}$	$0.434^{+0.031}_{-0.035}$	$z_{\rm drag}$	1059.1 ± 1.4	$f\sigma_8(0.51)$	$0.466^{+0.015}_{-0.011}$
$\sigma_8\Omega_{\rm m}^{0.25}$	$0.595^{+0.021}_{-0.019}$	$r_{\rm drag}$	149.0 ± 2.9	$\sigma_8(0.51)$	$0.633^{+0.029}_{-0.024}$
$\sigma_8/h^{0.5}$	0.979 ± 0.021	$k_{\rm D}$	$0.1388^{+0.0029}_{-0.0033}$	$f\sigma_8(0.61)$	$0.464^{+0.011}_{-0.0093}$
$r_{\rm drag}h$	103.9 ± 7.5	$100\theta_{\rm D}$	0.16123 ± 0.00081	$\sigma_8(0.61)$	$0.603^{+0.029}_{-0.024}$
$\langle d^2\rangle^{1/2}$	2.488 ± 0.051	$z_{\rm eq}$	3252^{+220}_{-270}	$f\sigma_8(2.33)$	$0.305^{+0.017}_{-0.014}$
$z_{\rm re}$	$7.69^{+0.18}_{-0.21}$	$k_{\rm eq}$	$0.00992^{+0.00066}_{-0.00082}$	$\sigma_8(2.33)$	0.317 ± 0.019
$10^9 A_{\rm s}$	$2.29^{+0.26}_{-0.32}$	$100\theta_{\rm eq}$	0.844 ± 0.047	$\chi^2_{\rm lensing}$	8.4 ± 2.0
$10^9 A_{\rm s}e^{-2\tau}$	$2.05^{+0.23}_{-0.28}$	$100\theta_{\rm s,eq}$	0.465 ± 0.024	$\chi^2_{\rm prior}$	3.0 ± 2.5
D_{40}	1380^{+200}_{-200}	$H(0.15)$	74.6 ± 3.2		
D_{220}	6464^{+900}_{-1000}	$D_{\rm M}(0.15)$	626^{+28}_{-33}		

$\bar{\chi}^2_{\rm eff} = 11.47$; $R - 1 = 0.00170$

2.174 base_lensing_lenspriors_BAO

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02218	0.02219 ± 0.00050	D_{1420}	847	835^{+100}_{-90}	$H(0.51)$	89.30	$89.6^{+2.2}_{-2.5}$
$\boldsymbol{\Omega_c h^2}$	0.1156	$0.117^{+0.010}_{-0.012}$	D_{2000}	237.8	237^{+25}_{-30}	$D_{\rm M}(0.51)$	1983.8	1978 ± 43
$\boldsymbol{100\theta_{MC}}$	1.0379	1.040 ± 0.015	$n_{\rm s,0.002}$	0.9554	0.956 ± 0.020	$H(0.61)$	94.80	$95.2^{+2.4}_{-2.8}$
$\boldsymbol{\ln(10^{10} A_s)}$	3.090	3.08 ± 0.10	$Y_{\rm P}$	0.245319	$0.24531^{+0.00023}_{-0.00020}$	$D_{\rm M}(0.61)$	2310	2303 ± 52
$\boldsymbol{n_s}$	0.9554	0.956 ± 0.020	$Y_{\rm P}^{\rm BBN}$	0.246645	$0.24663^{+0.00023}_{-0.00020}$	$H(2.33)$	233.2	$234.4^{+8.4}_{-9.4}$
H_0	67.75	$67.9^{+1.2}_{-1.3}$	10^5D/H	2.621	$2.623^{+0.088}_{-0.10}$	$D_{\rm M}(2.33)$	5800	5781 ± 170
Ω_Λ	0.6983	$0.697^{+0.018}_{-0.016}$	Age/Gyr	13.887	13.84 ± 0.41	$f\sigma_8(0.15)$	0.4501	0.452 ± 0.018
$\Omega_{\rm m}$	0.3017	$0.303^{+0.016}_{-0.018}$	z_*	1089.77	$1089.9^{+1.1}_{-1.2}$	$\sigma_8(0.15)$	0.7493	0.750 ± 0.017
$\Omega_{\rm m} h^2$	0.1385	$0.140^{+0.010}_{-0.012}$	r_*	145.72	145.4 ± 3.0	$f\sigma_8(0.38)$	0.4707	0.472 ± 0.016
$\Omega_{\rm m} h^3$	0.0938	$0.0953^{+0.0079}_{-0.010}$	$100\theta_*$	1.0381	1.040 ± 0.015	$\sigma_8(0.38)$	0.6653	0.666 ± 0.014
σ_8	0.8098	0.811 ± 0.019	$D_{\rm M}(z_*)$/Gpc	14.037	13.99 ± 0.49	$f\sigma_8(0.51)$	0.4704	0.471 ± 0.014
S_8	0.8120	0.815 ± 0.036	$z_{\rm drag}$	1059.17	1059.3 ± 1.5	$\sigma_8(0.51)$	0.6230	0.624 ± 0.013
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4448	0.447 ± 0.019	$r_{\rm drag}$	148.47	148.1 ± 3.1	$f\sigma_8(0.61)$	0.4663	0.467 ± 0.013
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.6001	0.602 ± 0.019	$k_{\rm D}$	0.13928	$0.1397^{+0.0031}_{-0.0036}$	$\sigma_8(0.61)$	0.5931	0.594 ± 0.013
$\sigma_8/h^{0.5}$	0.9838	0.984 ± 0.019	$100\theta_{\rm D}$	0.16069	0.1609 ± 0.0021	$f\sigma_8(2.33)$	0.2995	0.2997 ± 0.0063
$r_{\rm drag} h$	100.59	100.6 ± 1.3	$z_{\rm eq}$	3293	3333^{+240}_{-290}	$\sigma_8(2.33)$	0.3092	0.3094 ± 0.0065
$\langle d^2 \rangle^{1/2}$	2.487	2.483 ± 0.052	$k_{\rm eq}$	0.01005	$0.01017^{+0.00074}_{-0.00089}$	$\chi^2_{\rm lensing}$	7.88	9.9 ± 2.3
$z_{\rm re}$	7.716	$7.74^{+0.22}_{-0.25}$	$100\theta_{\rm eq}$	0.8303	0.827 ± 0.038	$\chi^2_{\rm 6DF}$	0.0003	0.062 ± 0.084
$10^9 A_{\rm s}$	2.198	$2.19^{+0.20}_{-0.24}$	$100\theta_{\rm s,eq}$	0.4583	0.457 ± 0.020	$\chi^2_{\rm MGS}$	1.75	1.85 ± 0.73
$10^9 A_{\rm s} e^{-2\tau}$	1.969	$1.96^{+0.18}_{-0.22}$	$H(0.15)$	72.88	$73.1^{+1.4}_{-1.6}$	$\chi^2_{\rm DR12BAO}$	3.62	4.5 ± 1.6
D_{40}	1325	1317^{+130}_{-150}	$D_{\rm M}(0.15)$	640.6	639 ± 12	$\chi^2_{\rm prior}$	0.05	2.0 ± 2.0
D_{220}	6146	6116^{+800}_{-1000}	$H(0.38)$	82.74	$83.0^{+1.9}_{-2.1}$	$\chi^2_{\rm BAO}$	5.37	6.4 ± 1.7
D_{810}	2656	2630 ± 300	$D_{\rm M}(0.38)$	1530.2	1526 ± 32			

Best-fit $\chi^2_{\rm eff} = 13.31$; $\bar{\chi}^2_{\rm eff} = 18.39$; $R - 1 = 0.00184$

$\chi^2_{\rm eff}$: BAO - 6DF: 0.00 MGS: 1.75 DR12BAO: 3.62 CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8_CMBmarged: 7.88

2.175 base_lensing_lenspriors_BAO_post_Pantheon

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02219 ± 0.00050	D_{1420}	845 ± 77	$H(0.51)$	89.4 ± 2.0
$\boldsymbol{\Omega_c h^2}$	$0.1159^{+0.0086}_{-0.0097}$	D_{2000}	240^{+21}_{-26}	$D_{\rm M}(0.51)$	1982 ± 39
$\boldsymbol{100\theta_{MC}}$	1.038 ± 0.013	$n_{\rm s,0.002}$	0.956 ± 0.019	$H(0.61)$	94.9 ± 2.3
$\boldsymbol{\ln(10^{10} A_s)}$	3.092 ± 0.086	$Y_{\rm P}$	$0.24531^{+0.00023}_{-0.00020}$	$D_{\rm M}(0.61)$	2308 ± 47
$\boldsymbol{n_s}$	0.956 ± 0.019	$Y_{\rm P}^{\rm BBN}$	$0.24663^{+0.00023}_{-0.00020}$	$H(2.33)$	233.3 ± 7.4
H_0	67.9 ± 1.2	10^5D/H	$2.623^{+0.088}_{-0.10}$	$D_{\rm M}(2.33)$	5798 ± 140
Ω_Λ	0.699 ± 0.013	Age/Gyr	13.88 ± 0.35	$f\sigma_8(0.15)$	0.450 ± 0.016
$\Omega_{\rm m}$	0.301 ± 0.013	z_*	1089.78 ± 0.98	$\sigma_8(0.15)$	0.750 ± 0.016
$\Omega_{\rm m}h^2$	$0.1387^{+0.0086}_{-0.0098}$	r_*	145.7 ± 2.5	$f\sigma_8(0.38)$	0.470 ± 0.014
$\Omega_{\rm m}h^3$	$0.0942^{+0.0069}_{-0.0082}$	$100\theta_*$	1.038 ± 0.013	$\sigma_8(0.38)$	0.666 ± 0.014
σ_8	0.810 ± 0.018	$D_{\rm M}(z_*)$/Gpc	14.04 ± 0.41	$f\sigma_8(0.51)$	0.470 ± 0.013
S_8	0.811 ± 0.030	$z_{\rm drag}$	1059.2 ± 1.4	$\sigma_8(0.51)$	0.624 ± 0.013
$\sigma_8\Omega_{\rm m}^{0.5}$	0.444 ± 0.016	$r_{\rm drag}$	148.5 ± 2.6	$f\sigma_8(0.61)$	0.466 ± 0.012
$\sigma_8\Omega_{\rm m}^{0.25}$	0.600 ± 0.017	$k_{\rm D}$	0.1393 ± 0.0029	$\sigma_8(0.61)$	0.594 ± 0.013
$\sigma_8/h^{0.5}$	0.984 ± 0.019	$100\theta_{\rm D}$	0.1607 ± 0.0018	$f\sigma_8(2.33)$	0.2998 ± 0.0063
$r_{\rm drag}h$	100.7 ± 1.1	$z_{\rm eq}$	3299^{+210}_{-230}	$\sigma_8(2.33)$	0.3096 ± 0.0065
$\langle d^2\rangle^{1/2}$	2.487 ± 0.049	$k_{\rm eq}$	$0.01007^{+0.00063}_{-0.00071}$	$\chi^2_{\rm lensing}$	9.6 ± 1.9
$z_{\rm re}$	7.72 ± 0.20	$100\theta_{\rm eq}$	0.832 ± 0.031	$\chi^2_{\rm JLA}$	1036.36 ± 0.55
$10^9 A_{\rm s}$	$2.21^{+0.17}_{-0.21}$	$100\theta_{\rm s,eq}$	0.459 ± 0.016	$\chi^2_{\rm 6DF}$	0.050 ± 0.069
$10^9 A_{\rm s}e^{-2\tau}$	$1.98^{+0.15}_{-0.19}$	$H(0.15)$	73.0 ± 1.4	$\chi^2_{\rm MGS}$	1.91 ± 0.67
D_{40}	1331^{+110}_{-130}	$D_{\rm M}(0.15)$	640 ± 12	$\chi^2_{\rm DR12BAO}$	4.5 ± 1.5
D_{220}	6197^{+620}_{-810}	$H(0.38)$	82.8 ± 1.8	$\chi^2_{\rm prior}$	2.0 ± 2.0
D_{810}	2662 ± 250	$D_{\rm M}(0.38)$	1529 ± 29	$\chi^2_{\rm BAO}$	6.4 ± 1.6

$\bar{\chi}^2_{\rm eff} = 1054.34$; $R - 1 = 0.00235$

2.176 base_lensing_lenspriors_BAO_post_agr2

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02219 ± 0.00050	D_{1420}	863 ± 83	$H(0.51)$	$88.5^{+1.9}_{-2.1}$
$\boldsymbol{\Omega_c h^2}$	$0.1113^{+0.0082}_{-0.010}$	D_{2000}	246^{+23}_{-31}	$D_{\rm M}(0.51)$	1998 ± 39
$\boldsymbol{100\theta_{MC}}$	1.032 ± 0.013	$n_{\rm s,0.002}$	0.954 ± 0.020	$H(0.61)$	$93.8^{+2.1}_{-2.4}$
$\boldsymbol{\ln(10^{10} A_s)}$	3.117 ± 0.095	$Y_{\rm P}$	$0.24531^{+0.00023}_{-0.00019}$	$D_{\rm M}(0.61)$	2328 ± 46
$\boldsymbol{n_s}$	0.954 ± 0.020	$Y_{\rm P}^{\rm BBN}$	$0.24663^{+0.00023}_{-0.00019}$	$H(2.33)$	$229.6^{+7.0}_{-8.2}$
H_0	67.4 ± 1.1	10^5D/H	$2.623^{+0.087}_{-0.099}$	$D_{\rm M}(2.33)$	5868 ± 150
Ω_Λ	$0.705^{+0.016}_{-0.014}$	Age/Gyr	14.05 ± 0.36	$f\sigma_8(0.15)$	0.439 ± 0.015
$\Omega_{\rm m}$	$0.295^{+0.014}_{-0.016}$	z_*	$1089.38^{+0.94}_{-1.1}$	$\sigma_8(0.15)$	0.739 ± 0.014
$\Omega_{\rm m}h^2$	$0.1341^{+0.0083}_{-0.010}$	r_*	147.0 ± 2.6	$f\sigma_8(0.38)$	0.460 ± 0.013
$\Omega_{\rm m}h^3$	$0.0906^{+0.0066}_{-0.0084}$	$100\theta_*$	1.032 ± 0.013	$\sigma_8(0.38)$	0.657 ± 0.013
σ_8	0.797 ± 0.016	$D_{\rm M}(z_*)$/Gpc	14.25 ± 0.43	$f\sigma_8(0.51)$	0.461 ± 0.011
S_8	0.790 ± 0.028	$z_{\rm drag}$	1058.9 ± 1.4	$\sigma_8(0.51)$	0.615 ± 0.012
$\sigma_8\Omega_{\rm m}^{0.5}$	0.433 ± 0.016	$r_{\rm drag}$	149.7 ± 2.7	$f\sigma_8(0.61)$	0.457 ± 0.011
$\sigma_8\Omega_{\rm m}^{0.25}$	0.587 ± 0.015	$k_{\rm D}$	$0.1380^{+0.0027}_{-0.0031}$	$\sigma_8(0.61)$	0.586 ± 0.011
$\sigma_8/h^{0.5}$	0.971 ± 0.017	$100\theta_{\rm D}$	0.1599 ± 0.0018	$f\sigma_8(2.33)$	0.2962 ± 0.0057
$r_{\rm drag}h$	101.0 ± 1.2	$z_{\rm eq}$	3190^{+200}_{-250}	$\sigma_8(2.33)$	0.3061 ± 0.0060
$\langle d^2\rangle^{1/2}$	2.492 ± 0.050	$k_{\rm eq}$	$0.00974^{+0.00060}_{-0.00076}$	$\chi^2_{\rm lensing}$	12.1 ± 2.2
$z_{\rm re}$	$7.63^{+0.19}_{-0.22}$	$100\theta_{\rm eq}$	0.848 ± 0.034	$\chi^2_{\rm 6DF}$	0.063 ± 0.086
$10^9 A_{\rm s}$	$2.27^{+0.20}_{-0.23}$	$100\theta_{\rm s,eq}$	0.467 ± 0.017	$\chi^2_{\rm MGS}$	2.02 ± 0.73
$10^9 A_{\rm s}e^{-2\tau}$	$2.03^{+0.18}_{-0.21}$	$H(0.15)$	72.4 ± 1.3	$\chi^2_{\rm DR12BAO}$	4.9 ± 1.6
D_{40}	1382 ± 130	$D_{\rm M}(0.15)$	644 ± 11	$\chi^2_{\rm prior}$	2.1 ± 2.1
D_{220}	6502^{+800}_{-900}	$H(0.38)$	82.1 ± 1.7	$\chi^2_{\rm BAO}$	6.9 ± 1.7
D_{810}	2733 ± 270	$D_{\rm M}(0.38)$	1541 ± 29		

$\bar{\chi}^2_{\rm eff} = 21.15$; $R - 1 = 0.00403$

2.177 base_lensing_lenspriors_BAO_post_conslmin40

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02219 ± 0.00050	D_{1420}	819^{+100}_{-100}	$H(0.51)$	$90.0^{+2.4}_{-3.0}$
$\boldsymbol{\Omega_c h^2}$	$0.119^{+0.011}_{-0.015}$	D_{2000}	233^{+30}_{-30}	$D_{\rm M}(0.51)$	1972 ± 49
$\boldsymbol{100\theta_{MC}}$	1.042 ± 0.018	$n_{\rm s,0.002}$	0.956 ± 0.020	$H(0.61)$	$95.6^{+2.7}_{-3.3}$
$\boldsymbol{\ln(10^{10} A_s)}$	3.06 ± 0.12	$Y_{\rm P}$	$0.24531^{+0.00023}_{-0.00020}$	$D_{\rm M}(0.61)$	2295 ± 60
$\boldsymbol{n_s}$	0.956 ± 0.020	$Y_{\rm P}^{\rm BBN}$	$0.24663^{+0.00023}_{-0.00020}$	$H(2.33)$	$235.9^{+9.3}_{-11}$
H_0	$68.1^{+1.3}_{-1.5}$	10^5D/H	$2.623^{+0.089}_{-0.10}$	$D_{\rm M}(2.33)$	5754 ± 190
Ω_Λ	$0.694^{+0.021}_{-0.017}$	Age/Gyr	13.78 ± 0.47	$f\sigma_8(0.15)$	0.454 ± 0.021
$\Omega_{\rm m}$	$0.306^{+0.017}_{-0.021}$	z_*	$1090.1^{+1.2}_{-1.4}$	$\sigma_8(0.15)$	0.751 ± 0.017
$\Omega_{\rm m}h^2$	$0.142^{+0.011}_{-0.015}$	r_*	$144.9^{+3.7}_{-3.2}$	$f\sigma_8(0.38)$	0.474 ± 0.017
$\Omega_{\rm m}h^3$	$0.0970^{+0.0087}_{-0.012}$	$100\theta_*$	1.042 ± 0.018	$\sigma_8(0.38)$	0.667 ± 0.015
σ_8	0.813 ± 0.020	$D_{\rm M}(z_*)$/Gpc	13.91 ± 0.57	$f\sigma_8(0.51)$	0.473 ± 0.015
S_8	0.821 ± 0.040	$z_{\rm drag}$	1059.4 ± 1.6	$\sigma_8(0.51)$	0.624 ± 0.013
$\sigma_8\Omega_{\rm m}^{0.5}$	0.449 ± 0.022	$r_{\rm drag}$	$147.6^{+3.8}_{-3.3}$	$f\sigma_8(0.61)$	0.469 ± 0.014
$\sigma_8\Omega_{\rm m}^{0.25}$	0.604 ± 0.021	$k_{\rm D}$	$0.1402^{+0.0034}_{-0.0042}$	$\sigma_8(0.61)$	0.594 ± 0.013
$\sigma_8/h^{0.5}$	0.985 ± 0.020	$100\theta_{\rm D}$	0.1613 ± 0.0024	$f\sigma_8(2.33)$	0.2998 ± 0.0063
$r_{\rm drag}h$	100.5 ± 1.3	$z_{\rm eq}$	3383^{+270}_{-350}	$\sigma_8(2.33)$	0.3094 ± 0.0065
$\langle d^2\rangle^{1/2}$	2.473 ± 0.063	$k_{\rm eq}$	$0.01033^{+0.00081}_{-0.0011}$	$\chi^2_{\rm lensing}$	10.1 ± 2.4
$z_{\rm re}$	$7.78^{+0.24}_{-0.29}$	$100\theta_{\rm eq}$	0.821 ± 0.044	$\chi^2_{\rm 6DF}$	0.064 ± 0.087
$10^9 A_{\rm s}$	$2.16^{+0.23}_{-0.28}$	$100\theta_{\rm s,eq}$	0.454 ± 0.023	$\chi^2_{\rm MGS}$	1.81 ± 0.73
$10^9 A_{\rm s}e^{-2\tau}$	$1.93^{+0.21}_{-0.25}$	$H(0.15)$	$73.3^{+1.5}_{-1.8}$	$\chi^2_{\rm DR12BAO}$	4.4 ± 1.6
D_{40}	1294^{+200}_{-200}	$D_{\rm M}(0.15)$	637 ± 14	$\chi^2_{\rm prior}$	2.0 ± 2.0
D_{220}	5984^{+900}_{-1000}	$H(0.38)$	$83.4^{+2.1}_{-2.5}$	$\chi^2_{\rm BAO}$	6.2 ± 1.8
D_{810}	2581 ± 300	$D_{\rm M}(0.38)$	1521 ± 36		

$\bar{\chi}^2_{\rm eff} = 18.35$; $R - 1 = 0.00540$

2.178 base_lensing_lenspriors_BAO_post_agrlmax425

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02219 ± 0.00050	D_{1420}	825^{+100}_{-90}	$H(0.51)$	$89.9^{+2.2}_{-2.5}$
$\boldsymbol{\Omega_c h^2}$	$0.119^{+0.010}_{-0.012}$	D_{2000}	234^{+25}_{-30}	$D_{\rm M}(0.51)$	1973 ± 44
$\boldsymbol{100\theta_{MC}}$	1.041 ± 0.015	$n_{\rm s,0.002}$	0.955 ± 0.020	$H(0.61)$	$95.5^{+2.5}_{-2.8}$
$\boldsymbol{\ln(10^{10} A_s)}$	3.07 ± 0.10	$Y_{\rm P}$	$0.24531^{+0.00023}_{-0.00020}$	$D_{\rm M}(0.61)$	2297 ± 53
$\boldsymbol{n_s}$	0.955 ± 0.020	$Y_{\rm P}^{\rm BBN}$	$0.24663^{+0.00023}_{-0.00020}$	$H(2.33)$	$235.5^{+8.4}_{-9.5}$
H_0	$68.1^{+1.2}_{-1.3}$	10^5D/H	$2.623^{+0.088}_{-0.10}$	$D_{\rm M}(2.33)$	5761 ± 170
Ω_Λ	$0.695^{+0.018}_{-0.016}$	Age/Gyr	13.79 ± 0.41	$f\sigma_8(0.15)$	0.454 ± 0.018
$\Omega_{\rm m}$	$0.305^{+0.016}_{-0.018}$	z_*	$1090.0^{+1.1}_{-1.2}$	$\sigma_8(0.15)$	0.752 ± 0.017
$\Omega_{\rm m}h^2$	$0.142^{+0.010}_{-0.012}$	r_*	145.0 ± 3.1	$f\sigma_8(0.38)$	0.474 ± 0.016
$\Omega_{\rm m}h^3$	$0.0964^{+0.0081}_{-0.010}$	$100\theta_*$	1.042 ± 0.015	$\sigma_8(0.38)$	0.667 ± 0.014
σ_8	0.813 ± 0.019	$D_{\rm M}(z_*)$/Gpc	13.93 ± 0.49	$f\sigma_8(0.51)$	0.473 ± 0.014
S_8	0.820 ± 0.036	$z_{\rm drag}$	1059.4 ± 1.5	$\sigma_8(0.51)$	0.625 ± 0.013
$\sigma_8\Omega_{\rm m}^{0.5}$	0.449 ± 0.020	$r_{\rm drag}$	147.8 ± 3.2	$f\sigma_8(0.61)$	0.469 ± 0.013
$\sigma_8\Omega_{\rm m}^{0.25}$	0.604 ± 0.019	$k_{\rm D}$	$0.1401^{+0.0032}_{-0.0036}$	$\sigma_8(0.61)$	0.595 ± 0.012
$\sigma_8/h^{0.5}$	0.986 ± 0.019	$100\theta_{\rm D}$	0.1612 ± 0.0021	$f\sigma_8(2.33)$	0.3001 ± 0.0062
$r_{\rm drag}h$	100.5 ± 1.2	$z_{\rm eq}$	3367^{+240}_{-300}	$\sigma_8(2.33)$	0.3098 ± 0.0065
$\langle d^2\rangle^{1/2}$	2.479 ± 0.053	$k_{\rm eq}$	$0.01028^{+0.00074}_{-0.00091}$	$\chi^2_{\rm lensing}$	7.8 ± 2.3
$z_{\rm re}$	$7.77^{+0.22}_{-0.25}$	$100\theta_{\rm eq}$	0.823 ± 0.038	$\chi^2_{\rm 6DF}$	0.061 ± 0.083
$10^9 A_{\rm s}$	$2.17^{+0.20}_{-0.24}$	$100\theta_{\rm s,eq}$	0.454 ± 0.020	$\chi^2_{\rm MGS}$	1.82 ± 0.72
$10^9 A_{\rm s}e^{-2\tau}$	$1.94^{+0.18}_{-0.22}$	$H(0.15)$	$73.3^{+1.4}_{-1.6}$	$\chi^2_{\rm DR12BAO}$	4.4 ± 1.6
D_{40}	1301^{+130}_{-150}	$D_{\rm M}(0.15)$	638 ± 12	$\chi^2_{\rm prior}$	2.0 ± 2.0
D_{220}	6015^{+700}_{-1000}	$H(0.38)$	$83.3^{+1.9}_{-2.2}$	$\chi^2_{\rm BAO}$	6.3 ± 1.7
D_{810}	2598 ± 300	$D_{\rm M}(0.38)$	1523 ± 32		

$\bar{\chi}^2_{\rm eff} = 16.15$; $R - 1 = 0.00217$

2.179 base_lensing_lenspriors_BAO_post_ptt

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02220 ± 0.00051	D_{1420}	918^{+97}_{-85}	$H(0.51)$	$87.6^{+2.0}_{-2.6}$
$\boldsymbol{\Omega_c h^2}$	$0.1070^{+0.0089}_{-0.012}$	D_{2000}	266^{+28}_{-39}	$D_{\rm M}(0.51)$	2015^{+47}_{-41}
$\boldsymbol{100\theta_{MC}}$	$1.025^{+0.015}_{-0.017}$	$n_{\rm s,0.002}$	0.955 ± 0.020	$H(0.61)$	$92.8^{+2.3}_{-2.9}$
$\boldsymbol{\ln(10^{10} A_s)}$	$3.19^{+0.12}_{-0.10}$	$Y_{\rm P}$	$0.24531^{+0.00023}_{-0.00021}$	$D_{\rm M}(0.61)$	2348^{+57}_{-49}
$\boldsymbol{n_s}$	0.955 ± 0.020	$Y_{\rm P}^{\rm BBN}$	$0.24664^{+0.00023}_{-0.00021}$	$H(2.33)$	$226.1^{+7.7}_{-9.7}$
H_0	$67.0^{+1.1}_{-1.3}$	10^5D/H	$2.621^{+0.091}_{-0.10}$	$D_{\rm M}(2.33)$	5937^{+180}_{-160}
Ω_Λ	$0.712^{+0.018}_{-0.015}$	Age/Gyr	$14.22^{+0.45}_{-0.40}$	$f\sigma_8(0.15)$	0.437 ± 0.019
$\Omega_{\rm m}$	$0.288^{+0.015}_{-0.018}$	z_*	$1089.0^{+1.0}_{-1.2}$	$\sigma_8(0.15)$	0.744 ± 0.019
$\Omega_{\rm m}h^2$	$0.1299^{+0.0089}_{-0.012}$	r_*	$148.2^{+3.3}_{-2.8}$	$f\sigma_8(0.38)$	0.460 ± 0.017
$\Omega_{\rm m}h^3$	$0.0872^{+0.0069}_{-0.0097}$	$100\theta_*$	$1.025^{+0.015}_{-0.017}$	$\sigma_8(0.38)$	0.662 ± 0.016
σ_8	0.803 ± 0.021	$D_{\rm M}(z_*)$/Gpc	$14.46^{+0.54}_{-0.49}$	$f\sigma_8(0.51)$	0.462 ± 0.015
S_8	0.787 ± 0.037	$z_{\rm drag}$	1058.5 ± 1.5	$\sigma_8(0.51)$	0.621 ± 0.015
$\sigma_8\Omega_{\rm m}^{0.5}$	0.431 ± 0.020	$r_{\rm drag}$	$151.0^{+3.4}_{-2.9}$	$f\sigma_8(0.61)$	0.459 ± 0.014
$\sigma_8\Omega_{\rm m}^{0.25}$	0.588 ± 0.020	$k_{\rm D}$	$0.1368^{+0.0029}_{-0.0036}$	$\sigma_8(0.61)$	0.591 ± 0.014
$\sigma_8/h^{0.5}$	0.980 ± 0.022	$100\theta_{\rm D}$	0.1591 ± 0.0021	$f\sigma_8(2.33)$	$0.2992^{+0.0072}_{-0.0066}$
$r_{\rm drag}h$	$101.2^{+1.3}_{-1.1}$	$z_{\rm eq}$	3088^{+210}_{-290}	$\sigma_8(2.33)$	0.3096 ± 0.0072
$\langle d^2\rangle^{1/2}$	$2.547^{+0.066}_{-0.058}$	$k_{\rm eq}$	$0.00942^{+0.00065}_{-0.00088}$	$\chi^2_{\rm lensing}$	11.5 ± 2.4
$z_{\rm re}$	$7.54^{+0.21}_{-0.24}$	$100\theta_{\rm eq}$	0.864 ± 0.040	$\chi^2_{\rm 6DF}$	0.071 ± 0.089
$10^9 A_{\rm s}$	2.43 ± 0.26	$100\theta_{\rm s,eq}$	0.476 ± 0.021	$\chi^2_{\rm MGS}$	2.12 ± 0.73
$10^9 A_{\rm s}e^{-2\tau}$	2.18 ± 0.24	$H(0.15)$	$71.9^{+1.3}_{-1.6}$	$\chi^2_{\rm DR12BAO}$	5.2 ± 1.7
D_{40}	1493 ± 200	$D_{\rm M}(0.15)$	648^{+13}_{-12}	$\chi^2_{\rm prior}$	2.1 ± 2.2
D_{220}	7122 ± 1000	$H(0.38)$	$81.3^{+1.7}_{-2.2}$	$\chi^2_{\rm BAO}$	7.4 ± 1.8
D_{810}	2923^{+300}_{-300}	$D_{\rm M}(0.38)$	1552^{+35}_{-30}		

$\bar{\chi}^2_{\rm eff} = 21.02$; $R - 1 = 0.01428$

2.180 base_lensing_lenspriors_BAO_post_bfcl

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02219 ± 0.00050	D_{1420}	812^{+100}_{-80}	$H(0.51)$	$89.9^{+2.2}_{-2.5}$
$\boldsymbol{\Omega_c h^2}$	$0.119^{+0.010}_{-0.012}$	D_{2000}	231^{+24}_{-29}	$D_{\rm M}(0.51)$	1974 ± 44
$\boldsymbol{100\theta_{MC}}$	1.041 ± 0.015	$n_{\rm s,0.002}$	0.956 ± 0.020	$H(0.61)$	$95.5^{+2.5}_{-2.8}$
$\boldsymbol{\ln(10^{10} A_s)}$	3.05 ± 0.10	$Y_{\rm P}$	$0.24531^{+0.00023}_{-0.00019}$	$D_{\rm M}(0.61)$	2298 ± 52
$\boldsymbol{n_s}$	0.956 ± 0.020	$Y_{\rm P}^{\rm BBN}$	$0.24663^{+0.00023}_{-0.00020}$	$H(2.33)$	$235.3^{+8.4}_{-9.5}$
H_0	$68.0^{+1.2}_{-1.3}$	10^5D/H	$2.623^{+0.088}_{-0.098}$	$D_{\rm M}(2.33)$	5763 ± 170
Ω_Λ	$0.695^{+0.018}_{-0.016}$	Age/Gyr	13.80 ± 0.41	$f\sigma_8(0.15)$	0.450 ± 0.019
$\Omega_{\rm m}$	$0.305^{+0.016}_{-0.018}$	z_*	$1090.0^{+1.1}_{-1.2}$	$\sigma_8(0.15)$	0.745 ± 0.017
$\Omega_{\rm m}h^2$	$0.141^{+0.010}_{-0.012}$	r_*	145.1 ± 3.1	$f\sigma_8(0.38)$	0.470 ± 0.016
$\Omega_{\rm m}h^3$	$0.0963^{+0.0081}_{-0.010}$	$100\theta_*$	1.041 ± 0.015	$\sigma_8(0.38)$	0.661 ± 0.014
σ_8	0.806 ± 0.019	$D_{\rm M}(z_*)$/Gpc	13.94 ± 0.49	$f\sigma_8(0.51)$	0.469 ± 0.014
S_8	0.812 ± 0.036	$z_{\rm drag}$	1059.4 ± 1.5	$\sigma_8(0.51)$	0.619 ± 0.013
$\sigma_8\Omega_{\rm m}^{0.5}$	0.445 ± 0.020	$r_{\rm drag}$	147.8 ± 3.2	$f\sigma_8(0.61)$	0.465 ± 0.013
$\sigma_8\Omega_{\rm m}^{0.25}$	0.599 ± 0.019	$k_{\rm D}$	$0.1400^{+0.0031}_{-0.0036}$	$\sigma_8(0.61)$	0.589 ± 0.012
$\sigma_8/h^{0.5}$	0.977 ± 0.019	$100\theta_{\rm D}$	0.1611 ± 0.0021	$f\sigma_8(2.33)$	0.2975 ± 0.0061
$r_{\rm drag}h$	100.5 ± 1.2	$z_{\rm eq}$	3363^{+240}_{-300}	$\sigma_8(2.33)$	0.3071 ± 0.0063
$\langle d^2\rangle^{1/2}$	2.457 ± 0.049	$k_{\rm eq}$	$0.01026^{+0.00074}_{-0.00091}$	$\chi^2_{\rm lensing}$	10.1 ± 2.3
$z_{\rm re}$	$7.77^{+0.22}_{-0.25}$	$100\theta_{\rm eq}$	0.823 ± 0.038	$\chi^2_{\rm 6DF}$	0.060 ± 0.083
$10^9 A_{\rm s}$	$2.13^{+0.19}_{-0.23}$	$100\theta_{\rm s,eq}$	0.455 ± 0.020	$\chi^2_{\rm MGS}$	1.83 ± 0.72
$10^9 A_{\rm s}e^{-2\tau}$	$1.91^{+0.17}_{-0.21}$	$H(0.15)$	$73.3^{+1.4}_{-1.6}$	$\chi^2_{\rm DR12BAO}$	4.4 ± 1.6
D_{40}	1280^{+120}_{-150}	$D_{\rm M}(0.15)$	638 ± 12	$\chi^2_{\rm prior}$	2.0 ± 2.0
D_{220}	5922^{+700}_{-900}	$H(0.38)$	$83.3^{+1.9}_{-2.1}$	$\chi^2_{\rm BAO}$	6.3 ± 1.7
D_{810}	2558 ± 300	$D_{\rm M}(0.38)$	1523 ± 32		

$\bar{\chi}^2_{\rm eff} = 18.42$; $R - 1 = 0.00341$

2.181 base_lensing_lenspriors_BAO_post_agr2bfcl

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02219 ± 0.00049	D_{1420}	842 ± 81	$H(0.51)$	88.7 ± 2.0
$\boldsymbol{\Omega_c h^2}$	$0.1125^{+0.0085}_{-0.010}$	D_{2000}	239^{+22}_{-29}	$D_{\rm M}(0.51)$	1994 ± 39
$\boldsymbol{100\theta_{MC}}$	1.033 ± 0.013	$n_{\rm s,0.002}$	0.954 ± 0.020	$H(0.61)$	94.1 ± 2.3
$\boldsymbol{\ln(10^{10} A_s)}$	3.091 ± 0.094	$Y_{\rm P}$	$0.24531^{+0.00023}_{-0.00019}$	$D_{\rm M}(0.61)$	2322 ± 46
$\boldsymbol{n_s}$	0.954 ± 0.020	$Y_{\rm P}^{\rm BBN}$	$0.24664^{+0.00023}_{-0.00019}$	$H(2.33)$	$230.6^{+7.2}_{-8.2}$
H_0	67.6 ± 1.1	10^5D/H	$2.622^{+0.087}_{-0.097}$	$D_{\rm M}(2.33)$	5849 ± 150
Ω_Λ	$0.704^{+0.016}_{-0.014}$	Age/Gyr	14.01 ± 0.36	$f\sigma_8(0.15)$	0.437 ± 0.015
$\Omega_{\rm m}$	$0.296^{+0.014}_{-0.016}$	z_*	$1089.48^{+0.96}_{-1.1}$	$\sigma_8(0.15)$	0.734 ± 0.014
$\Omega_{\rm m}h^2$	$0.1353^{+0.0085}_{-0.010}$	r_*	146.6 ± 2.6	$f\sigma_8(0.38)$	0.458 ± 0.013
$\Omega_{\rm m}h^3$	$0.0915^{+0.0068}_{-0.0084}$	$100\theta_*$	1.033 ± 0.013	$\sigma_8(0.38)$	0.652 ± 0.012
σ_8	0.793 ± 0.016	$D_{\rm M}(z_*)$/Gpc	14.19 ± 0.43	$f\sigma_8(0.51)$	0.459 ± 0.011
S_8	0.788 ± 0.029	$z_{\rm drag}$	1059.0 ± 1.4	$\sigma_8(0.51)$	0.611 ± 0.012
$\sigma_8\Omega_{\rm m}^{0.5}$	0.431 ± 0.016	$r_{\rm drag}$	149.4 ± 2.7	$f\sigma_8(0.61)$	0.455 ± 0.011
$\sigma_8\Omega_{\rm m}^{0.25}$	0.585 ± 0.016	$k_{\rm D}$	$0.1383^{+0.0027}_{-0.0031}$	$\sigma_8(0.61)$	0.582 ± 0.011
$\sigma_8/h^{0.5}$	0.964 ± 0.017	$100\theta_{\rm D}$	0.1601 ± 0.0018	$f\sigma_8(2.33)$	0.2941 ± 0.0056
$r_{\rm drag}h$	100.9 ± 1.2	$z_{\rm eq}$	3219^{+200}_{-250}	$\sigma_8(2.33)$	0.3039 ± 0.0059
$\langle d^2\rangle^{1/2}$	2.466 ± 0.047	$k_{\rm eq}$	$0.00982^{+0.00062}_{-0.00076}$	$\chi^2_{\rm lensing}$	12.3 ± 2.2
$z_{\rm re}$	7.65 ± 0.21	$100\theta_{\rm eq}$	0.843 ± 0.034	$\chi^2_{\rm 6DF}$	0.062 ± 0.084
$10^9 A_{\rm s}$	$2.21^{+0.19}_{-0.22}$	$100\theta_{\rm s,eq}$	0.465 ± 0.017	$\chi^2_{\rm MGS}$	1.99 ± 0.72
$10^9 A_{\rm s}e^{-2\tau}$	$1.98^{+0.17}_{-0.20}$	$H(0.15)$	72.6 ± 1.3	$\chi^2_{\rm DR12BAO}$	4.8 ± 1.6
D_{40}	1342^{+120}_{-130}	$D_{\rm M}(0.15)$	643 ± 11	$\chi^2_{\rm prior}$	2.1 ± 2.1
D_{220}	6298^{+700}_{-900}	$H(0.38)$	82.3 ± 1.8	$\chi^2_{\rm BAO}$	6.8 ± 1.7
D_{810}	2662 ± 260	$D_{\rm M}(0.38)$	1537 ± 29		

$\bar{\chi}^2_{\rm eff} = 21.20$; $R - 1 = 0.00647$

2.182 base_lensing_lenspriors_BAO_post_linear

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02219 ± 0.00050	D_{1420}	812^{+100}_{-90}	$H(0.51)$	$90.5^{+2.3}_{-2.7}$
$\boldsymbol{\Omega_c h^2}$	$0.122^{+0.010}_{-0.013}$	D_{2000}	230 ± 30	$D_{\rm M}(0.51)$	1964 ± 46
$\boldsymbol{100\theta_{MC}}$	1.045 ± 0.016	$n_{\rm s,0.002}$	0.956 ± 0.020	$H(0.61)$	$96.1^{+2.5}_{-3.0}$
$\boldsymbol{\ln(10^{10} A_s)}$	3.06 ± 0.11	$Y_{\rm P}$	$0.24531^{+0.00023}_{-0.00020}$	$D_{\rm M}(0.61)$	2286 ± 55
$\boldsymbol{n_s}$	0.956 ± 0.020	$Y_{\rm P}^{\rm BBN}$	$0.24664^{+0.00023}_{-0.00020}$	$H(2.33)$	$237.7^{+8.6}_{-10}$
H_0	$68.3^{+1.2}_{-1.4}$	10^5D/H	$2.622^{+0.089}_{-0.10}$	$D_{\rm M}(2.33)$	5720 ± 180
Ω_Λ	$0.691^{+0.020}_{-0.016}$	Age/Gyr	13.70 ± 0.43	$f\sigma_8(0.15)$	0.461 ± 0.020
$\Omega_{\rm m}$	$0.309^{+0.016}_{-0.020}$	z_*	$1090.3^{+1.1}_{-1.3}$	$\sigma_8(0.15)$	0.758 ± 0.017
$\Omega_{\rm m}h^2$	$0.144^{+0.010}_{-0.013}$	r_*	$144.3^{+3.3}_{-3.0}$	$f\sigma_8(0.38)$	0.480 ± 0.017
$\Omega_{\rm m}h^3$	$0.0988^{+0.0083}_{-0.011}$	$100\theta_*$	1.045 ± 0.016	$\sigma_8(0.38)$	0.672 ± 0.015
σ_8	0.820 ± 0.020	$D_{\rm M}(z_*)$/Gpc	13.81 ± 0.51	$f\sigma_8(0.51)$	0.479 ± 0.015
S_8	0.833 ± 0.038	$z_{\rm drag}$	1059.6 ± 1.5	$\sigma_8(0.51)$	0.629 ± 0.014
$\sigma_8\Omega_{\rm m}^{0.5}$	0.456 ± 0.021	$r_{\rm drag}$	$147.0^{+3.4}_{-3.1}$	$f\sigma_8(0.61)$	0.474 ± 0.014
$\sigma_8\Omega_{\rm m}^{0.25}$	0.612 ± 0.021	$k_{\rm D}$	$0.1409^{+0.0033}_{-0.0038}$	$\sigma_8(0.61)$	0.599 ± 0.013
$\sigma_8/h^{0.5}$	0.993 ± 0.020	$100\theta_{\rm D}$	0.1616 ± 0.0022	$f\sigma_8(2.33)$	0.3021 ± 0.0064
$r_{\rm drag}h$	100.3 ± 1.3	$z_{\rm eq}$	3437^{+250}_{-320}	$\sigma_8(2.33)$	0.3116 ± 0.0066
$\langle d^2\rangle^{1/2}$	2.473 ± 0.053	$k_{\rm eq}$	$0.01049^{+0.00076}_{-0.00098}$	$\chi^2_{\rm lensing}$	10.4 ± 2.3
$z_{\rm re}$	$7.82^{+0.23}_{-0.26}$	$100\theta_{\rm eq}$	0.813 ± 0.040	$\chi^2_{\rm 6DF}$	0.063 ± 0.086
$10^9 A_{\rm s}$	$2.13^{+0.20}_{-0.24}$	$100\theta_{\rm s,eq}$	0.450 ± 0.020	$\chi^2_{\rm MGS}$	1.74 ± 0.72
$10^9 A_{\rm s}e^{-2\tau}$	$1.91^{+0.18}_{-0.21}$	$H(0.15)$	$73.6^{+1.4}_{-1.7}$	$\chi^2_{\rm DR12BAO}$	4.2 ± 1.6
D_{40}	1274^{+130}_{-150}	$D_{\rm M}(0.15)$	635 ± 13	$\chi^2_{\rm prior}$	2.1 ± 2.0
D_{220}	5855^{+800}_{-900}	$H(0.38)$	$83.8^{+1.9}_{-2.3}$	$\chi^2_{\rm BAO}$	6.0 ± 1.7
D_{810}	2554 ± 300	$D_{\rm M}(0.38)$	1516 ± 34		

$\bar{\chi}^2_{\rm eff} = 18.54$; $R - 1 = 0.00374$

2.183 base_lensing_lenspriors_BAO_post_acc

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02219 ± 0.00050	D_{1420}	835^{+100}_{-90}	$H(0.51)$	$89.6^{+2.2}_{-2.5}$
$\boldsymbol{\Omega_c h^2}$	$0.117^{+0.010}_{-0.012}$	D_{2000}	238^{+25}_{-30}	$D_{\rm M}(0.51)$	1979 ± 43
$\boldsymbol{100\theta_{MC}}$	1.039 ± 0.015	$n_{\rm s,0.002}$	0.956 ± 0.020	$H(0.61)$	$95.1^{+2.4}_{-2.8}$
$\boldsymbol{\ln(10^{10} A_s)}$	3.08 ± 0.10	$Y_{\rm P}$	$0.24531^{+0.00023}_{-0.00020}$	$D_{\rm M}(0.61)$	2304 ± 52
$\boldsymbol{n_s}$	0.956 ± 0.020	$Y_{\rm P}^{\rm BBN}$	$0.24663^{+0.00023}_{-0.00020}$	$H(2.33)$	$234.2^{+8.3}_{-9.4}$
H_0	$67.9^{+1.2}_{-1.3}$	10^5D/H	$2.623^{+0.088}_{-0.10}$	$D_{\rm M}(2.33)$	5784 ± 170
Ω_Λ	$0.697^{+0.018}_{-0.016}$	Age/Gyr	13.85 ± 0.41	$f\sigma_8(0.15)$	0.451 ± 0.018
$\Omega_{\rm m}$	$0.303^{+0.016}_{-0.018}$	z_*	$1089.9^{+1.1}_{-1.2}$	$\sigma_8(0.15)$	0.750 ± 0.017
$\Omega_{\rm m}h^2$	$0.140^{+0.010}_{-0.012}$	r_*	145.4 ± 3.0	$f\sigma_8(0.38)$	0.471 ± 0.016
$\Omega_{\rm m}h^3$	$0.0952^{+0.0079}_{-0.010}$	$100\theta_*$	1.040 ± 0.015	$\sigma_8(0.38)$	0.666 ± 0.014
σ_8	0.811 ± 0.019	$D_{\rm M}(z_*)$/Gpc	14.00 ± 0.49	$f\sigma_8(0.51)$	0.471 ± 0.014
S_8	0.814 ± 0.035	$z_{\rm drag}$	1059.3 ± 1.5	$\sigma_8(0.51)$	0.623 ± 0.013
$\sigma_8\Omega_{\rm m}^{0.5}$	0.446 ± 0.019	$r_{\rm drag}$	148.2 ± 3.1	$f\sigma_8(0.61)$	0.467 ± 0.013
$\sigma_8\Omega_{\rm m}^{0.25}$	0.601 ± 0.019	$k_{\rm D}$	$0.1396^{+0.0031}_{-0.0036}$	$\sigma_8(0.61)$	0.593 ± 0.012
$\sigma_8/h^{0.5}$	0.984 ± 0.019	$100\theta_{\rm D}$	0.1609 ± 0.0021	$f\sigma_8(2.33)$	0.2996 ± 0.0062
$r_{\rm drag}h$	100.6 ± 1.2	$z_{\rm eq}$	3329^{+240}_{-290}	$\sigma_8(2.33)$	0.3093 ± 0.0065
$\langle d^2 \rangle^{1/2}$	2.483 ± 0.052	$k_{\rm eq}$	$0.01016^{+0.00073}_{-0.00089}$	$\chi^2_{\rm lensing}$	9.9 ± 2.3
$z_{\rm re}$	$7.74^{+0.22}_{-0.25}$	$100\theta_{\rm eq}$	0.828 ± 0.038	$\chi^2_{\rm 6DF}$	0.061 ± 0.083
$10^9 A_{\rm s}$	$2.19^{+0.20}_{-0.25}$	$100\theta_{\rm s,eq}$	0.457 ± 0.020	$\chi^2_{\rm MGS}$	1.86 ± 0.73
$10^9 A_{\rm s} e^{-2\tau}$	$1.96^{+0.18}_{-0.22}$	$H(0.15)$	$73.1^{+1.4}_{-1.6}$	$\chi^2_{\rm DR12BAO}$	4.5 ± 1.6
D_{40}	1319^{+130}_{-150}	$D_{\rm M}(0.15)$	639 ± 12	$\chi^2_{\rm prior}$	2.0 ± 2.0
D_{220}	6124^{+800}_{-1000}	$H(0.38)$	$83.0^{+1.9}_{-2.1}$	$\chi^2_{\rm BAO}$	6.4 ± 1.7
D_{810}	2633 ± 300	$D_{\rm M}(0.38)$	1526 ± 32		

$\bar{\chi}^2_{\rm eff} = 18.36$; $R - 1 = 0.00214$

2.184 base_lensing_lenspriors_BAO_post_agr2acc

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02219 ± 0.00050	D_{1420}	866 ± 82	$H(0.51)$	$88.4^{+1.9}_{-2.1}$
$\boldsymbol{\Omega_c h^2}$	$0.1108^{+0.0081}_{-0.010}$	D_{2000}	247^{+23}_{-31}	$D_{\rm M}(0.51)$	2000 ± 39
$\boldsymbol{100\theta_{MC}}$	1.031 ± 0.013	$n_{\rm s,0.002}$	0.954 ± 0.020	$H(0.61)$	$93.7^{+2.1}_{-2.4}$
$\boldsymbol{\ln(10^{10} A_s)}$	3.121 ± 0.095	$Y_{\rm P}$	$0.24531^{+0.00023}_{-0.00019}$	$D_{\rm M}(0.61)$	2330 ± 46
$\boldsymbol{n_s}$	0.954 ± 0.020	$Y_{\rm P}^{\rm BBN}$	$0.24663^{+0.00023}_{-0.00019}$	$H(2.33)$	$229.2^{+6.9}_{-8.1}$
H_0	67.4 ± 1.1	10^5D/H	$2.623^{+0.087}_{-0.099}$	$D_{\rm M}(2.33)$	5876 ± 150
Ω_Λ	$0.706^{+0.016}_{-0.013}$	Age/Gyr	14.07 ± 0.36	$f\sigma_8(0.15)$	0.437 ± 0.015
$\Omega_{\rm m}$	$0.294^{+0.013}_{-0.016}$	z_*	$1089.33^{+0.93}_{-1.1}$	$\sigma_8(0.15)$	0.738 ± 0.014
$\Omega_{\rm m}h^2$	$0.1336^{+0.0082}_{-0.010}$	r_*	147.1 ± 2.6	$f\sigma_8(0.38)$	0.459 ± 0.012
$\Omega_{\rm m}h^3$	$0.0901^{+0.0065}_{-0.0083}$	$100\theta_*$	1.031 ± 0.013	$\sigma_8(0.38)$	0.656 ± 0.012
σ_8	0.796 ± 0.016	$D_{\rm M}(z_*)$/Gpc	14.27 ± 0.43	$f\sigma_8(0.51)$	0.460 ± 0.011
S_8	0.788 ± 0.028	$z_{\rm drag}$	1058.8 ± 1.4	$\sigma_8(0.51)$	0.614 ± 0.012
$\sigma_8\Omega_{\rm m}^{0.5}$	0.432 ± 0.015	$r_{\rm drag}$	149.9 ± 2.7	$f\sigma_8(0.61)$	0.456 ± 0.011
$\sigma_8\Omega_{\rm m}^{0.25}$	0.586 ± 0.015	$k_{\rm D}$	$0.1379^{+0.0027}_{-0.0030}$	$\sigma_8(0.61)$	0.585 ± 0.011
$\sigma_8/h^{0.5}$	0.970 ± 0.017	$100\theta_{\rm D}$	0.1598 ± 0.0018	$f\sigma_8(2.33)$	0.2959 ± 0.0057
$r_{\rm drag}h$	101.0 ± 1.2	$z_{\rm eq}$	3178^{+200}_{-250}	$\sigma_8(2.33)$	0.3058 ± 0.0060
$\langle d^2\rangle^{1/2}$	2.493 ± 0.050	$k_{\rm eq}$	$0.00970^{+0.00060}_{-0.00075}$	$\chi^2_{\rm lensing}$	12.2 ± 2.2
$z_{\rm re}$	$7.62^{+0.19}_{-0.22}$	$100\theta_{\rm eq}$	0.850 ± 0.034	$\chi^2_{\rm 6DF}$	0.064 ± 0.087
$10^9 A_{\rm s}$	$2.28^{+0.20}_{-0.23}$	$100\theta_{\rm s,eq}$	0.468 ± 0.017	$\chi^2_{\rm MGS}$	2.03 ± 0.73
$10^9 A_{\rm s}e^{-2\tau}$	$2.04^{+0.18}_{-0.21}$	$H(0.15)$	72.4 ± 1.3	$\chi^2_{\rm DR12BAO}$	4.9 ± 1.6
D_{40}	1388 ± 130	$D_{\rm M}(0.15)$	645 ± 11	$\chi^2_{\rm prior}$	2.1 ± 2.1
D_{220}	6540^{+800}_{-900}	$H(0.38)$	82.0 ± 1.7	$\chi^2_{\rm BAO}$	7.0 ± 1.7
D_{810}	2744 ± 270	$D_{\rm M}(0.38)$	1542 ± 29		

$\bar{\chi}^2_{\rm eff} = 21.26$; $R - 1 = 0.00444$

2.185 base_lensing_lenspriors_BAO_post_takahashi

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02219 ± 0.00050	D_{1420}	838^{+100}_{-90}	$H(0.51)$	$89.5^{+2.2}_{-2.5}$
$\boldsymbol{\Omega_c h^2}$	$0.117^{+0.010}_{-0.012}$	D_{2000}	238^{+24}_{-30}	$D_{\rm M}(0.51)$	1981 ± 43
$\boldsymbol{100\theta_{MC}}$	1.039 ± 0.015	$n_{\rm s,0.002}$	0.956 ± 0.020	$H(0.61)$	$95.0^{+2.4}_{-2.8}$
$\boldsymbol{\ln(10^{10} A_s)}$	3.09 ± 0.10	$Y_{\rm P}$	$0.24531^{+0.00023}_{-0.00020}$	$D_{\rm M}(0.61)$	2306 ± 52
$\boldsymbol{n_s}$	0.956 ± 0.020	$Y_{\rm P}^{\rm BBN}$	$0.24663^{+0.00023}_{-0.00020}$	$H(2.33)$	$233.8^{+8.3}_{-9.5}$
H_0	$67.9^{+1.2}_{-1.3}$	10^5D/H	$2.623^{+0.088}_{-0.10}$	$D_{\rm M}(2.33)$	5792 ± 170
Ω_Λ	$0.698^{+0.018}_{-0.016}$	Age/Gyr	13.87 ± 0.41	$f\sigma_8(0.15)$	0.450 ± 0.019
$\Omega_{\rm m}$	$0.302^{+0.016}_{-0.018}$	z_*	$1089.8^{+1.1}_{-1.2}$	$\sigma_8(0.15)$	0.749 ± 0.017
$\Omega_{\rm m}h^2$	$0.139^{+0.010}_{-0.012}$	r_*	145.6 ± 3.0	$f\sigma_8(0.38)$	0.470 ± 0.016
$\Omega_{\rm m}h^3$	$0.0947^{+0.0079}_{-0.010}$	$100\theta_*$	1.039 ± 0.015	$\sigma_8(0.38)$	0.665 ± 0.015
σ_8	0.809 ± 0.020	$D_{\rm M}(z_*)$/Gpc	14.02 ± 0.49	$f\sigma_8(0.51)$	0.470 ± 0.015
S_8	0.812 ± 0.036	$z_{\rm drag}$	1059.2 ± 1.5	$\sigma_8(0.51)$	0.623 ± 0.014
$\sigma_8\Omega_{\rm m}^{0.5}$	0.445 ± 0.020	$r_{\rm drag}$	148.3 ± 3.1	$f\sigma_8(0.61)$	0.466 ± 0.014
$\sigma_8\Omega_{\rm m}^{0.25}$	0.600 ± 0.020	$k_{\rm D}$	$0.1395^{+0.0031}_{-0.0036}$	$\sigma_8(0.61)$	0.593 ± 0.013
$\sigma_8/h^{0.5}$	0.982 ± 0.020	$100\theta_{\rm D}$	0.1608 ± 0.0021	$f\sigma_8(2.33)$	0.2993 ± 0.0065
$r_{\rm drag}h$	100.6 ± 1.2	$z_{\rm eq}$	3316^{+240}_{-290}	$\sigma_8(2.33)$	0.3090 ± 0.0067
$\langle d^2 \rangle^{1/2}$	2.483 ± 0.052	$k_{\rm eq}$	$0.01012^{+0.00073}_{-0.00090}$	$\chi^2_{\rm lensing}$	9.9 ± 2.3
$z_{\rm re}$	$7.73^{+0.22}_{-0.25}$	$100\theta_{\rm eq}$	0.830 ± 0.038	$\chi^2_{\rm 6DF}$	0.061 ± 0.084
$10^9 A_{\rm s}$	$2.20^{+0.20}_{-0.24}$	$100\theta_{\rm s,eq}$	0.458 ± 0.020	$\chi^2_{\rm MGS}$	1.87 ± 0.73
$10^9 A_{\rm s} e^{-2\tau}$	$1.97^{+0.18}_{-0.22}$	$H(0.15)$	$73.0^{+1.4}_{-1.6}$	$\chi^2_{\rm DR12BAO}$	4.5 ± 1.6
D_{40}	1324^{+130}_{-150}	$D_{\rm M}(0.15)$	640 ± 12	$\chi^2_{\rm prior}$	2.0 ± 2.0
D_{220}	6160^{+800}_{-1000}	$H(0.38)$	$82.9^{+1.9}_{-2.1}$	$\chi^2_{\rm BAO}$	6.5 ± 1.7
D_{810}	2642 ± 300	$D_{\rm M}(0.38)$	1528 ± 32		

$\bar{\chi}^2_{\rm eff} = 18.40$; $R - 1 = 0.00240$

2.186 base_lensing_lenspriors_BAO_post_agr2takahashi

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02219 ± 0.00050	D_{1420}	868 ± 81	$H(0.51)$	$88.2^{+1.9}_{-2.1}$
$\boldsymbol{\Omega_c h^2}$	$0.1101^{+0.0080}_{-0.010}$	D_{2000}	248^{+23}_{-31}	$D_{\rm M}(0.51)$	2003 ± 39
$\boldsymbol{100\theta_{MC}}$	1.030 ± 0.013	$n_{\rm s,0.002}$	0.955 ± 0.020	$H(0.61)$	$93.6^{+2.1}_{-2.4}$
$\boldsymbol{\ln(10^{10} A_s)}$	3.124 ± 0.094	$Y_{\rm P}$	$0.24531^{+0.00023}_{-0.00020}$	$D_{\rm M}(0.61)$	2333 ± 46
$\boldsymbol{n_s}$	0.955 ± 0.020	$Y_{\rm P}^{\rm BBN}$	$0.24664^{+0.00023}_{-0.00020}$	$H(2.33)$	$228.7^{+6.9}_{-8.1}$
H_0	67.3 ± 1.1	10^5D/H	$2.622^{+0.088}_{-0.098}$	$D_{\rm M}(2.33)$	5885 ± 150
Ω_Λ	$0.707^{+0.016}_{-0.013}$	Age/Gyr	14.10 ± 0.36	$f\sigma_8(0.15)$	0.436 ± 0.015
$\Omega_{\rm m}$	$0.293^{+0.013}_{-0.016}$	z_*	$1089.27^{+0.92}_{-1.1}$	$\sigma_8(0.15)$	0.736 ± 0.015
$\Omega_{\rm m}h^2$	$0.1330^{+0.0081}_{-0.010}$	r_*	147.3 ± 2.6	$f\sigma_8(0.38)$	0.458 ± 0.013
$\Omega_{\rm m}h^3$	$0.0896^{+0.0064}_{-0.0082}$	$100\theta_*$	1.030 ± 0.013	$\sigma_8(0.38)$	0.655 ± 0.013
σ_8	0.795 ± 0.017	$D_{\rm M}(z_*)$/Gpc	14.30 ± 0.43	$f\sigma_8(0.51)$	0.459 ± 0.012
S_8	0.785 ± 0.029	$z_{\rm drag}$	1058.8 ± 1.4	$\sigma_8(0.51)$	0.613 ± 0.012
$\sigma_8\Omega_{\rm m}^{0.5}$	0.430 ± 0.016	$r_{\rm drag}$	150.1 ± 2.7	$f\sigma_8(0.61)$	0.455 ± 0.011
$\sigma_8\Omega_{\rm m}^{0.25}$	0.584 ± 0.016	$k_{\rm D}$	$0.1377^{+0.0027}_{-0.0030}$	$\sigma_8(0.61)$	0.584 ± 0.012
$\sigma_8/h^{0.5}$	0.968 ± 0.018	$100\theta_{\rm D}$	0.1597 ± 0.0018	$f\sigma_8(2.33)$	0.2954 ± 0.0059
$r_{\rm drag}h$	101.0 ± 1.2	$z_{\rm eq}$	3162^{+190}_{-240}	$\sigma_8(2.33)$	0.3054 ± 0.0062
$\langle d^2\rangle^{1/2}$	2.493 ± 0.050	$k_{\rm eq}$	$0.00965^{+0.00059}_{-0.00075}$	$\chi^2_{\rm lensing}$	12.2 ± 2.3
$z_{\rm re}$	$7.61^{+0.19}_{-0.22}$	$100\theta_{\rm eq}$	0.852 ± 0.034	$\chi^2_{\rm 6DF}$	0.065 ± 0.088
$10^9 A_{\rm s}$	$2.28^{+0.20}_{-0.23}$	$100\theta_{\rm s,eq}$	0.469 ± 0.017	$\chi^2_{\rm MGS}$	2.05 ± 0.73
$10^9 A_{\rm s}e^{-2\tau}$	$2.05^{+0.18}_{-0.20}$	$H(0.15)$	72.3 ± 1.3	$\chi^2_{\rm DR12BAO}$	5.0 ± 1.6
D_{40}	1394 ± 130	$D_{\rm M}(0.15)$	645 ± 11	$\chi^2_{\rm prior}$	2.1 ± 2.1
D_{220}	6581^{+800}_{-900}	$H(0.38)$	$81.9^{+1.6}_{-1.8}$	$\chi^2_{\rm BAO}$	7.1 ± 1.7
D_{810}	2752 ± 270	$D_{\rm M}(0.38)$	1544 ± 29		

$\bar{\chi}^2_{\rm eff} = 21.32$; $R - 1 = 0.00478$

2.187 base_lensing_lenspriors_BAO_post_Apr6

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02219 ± 0.00050	D_{1420}	817^{+100}_{-90}	$H(0.51)$	$90.1^{+2.2}_{-2.5}$
$\boldsymbol{\Omega_c h^2}$	$0.119^{+0.010}_{-0.012}$	D_{2000}	232^{+25}_{-29}	$D_{\rm M}(0.51)$	1971 ± 44
$\boldsymbol{100\theta_{MC}}$	1.042 ± 0.015	$n_{\rm s,0.002}$	0.956 ± 0.020	$H(0.61)$	$95.6^{+2.5}_{-2.8}$
$\boldsymbol{\ln(10^{10} A_s)}$	3.06 ± 0.10	$Y_{\rm P}$	$0.24531^{+0.00023}_{-0.00020}$	$D_{\rm M}(0.61)$	2294 ± 53
$\boldsymbol{n_s}$	0.956 ± 0.020	$Y_{\rm P}^{\rm BBN}$	$0.24663^{+0.00023}_{-0.00020}$	$H(2.33)$	$236.0^{+8.4}_{-9.6}$
H_0	$68.1^{+1.2}_{-1.3}$	10^5D/H	$2.623^{+0.088}_{-0.10}$	$D_{\rm M}(2.33)$	5751 ± 170
Ω_Λ	$0.694^{+0.019}_{-0.016}$	Age/Gyr	13.77 ± 0.41	$f\sigma_8(0.15)$	0.454 ± 0.019
$\Omega_{\rm m}$	$0.306^{+0.016}_{-0.019}$	z_*	$1090.1^{+1.1}_{-1.2}$	$\sigma_8(0.15)$	0.751 ± 0.017
$\Omega_{\rm m}h^2$	$0.142^{+0.010}_{-0.013}$	r_*	144.8 ± 3.1	$f\sigma_8(0.38)$	0.474 ± 0.016
$\Omega_{\rm m}h^3$	$0.0970^{+0.0081}_{-0.010}$	$100\theta_*$	1.042 ± 0.015	$\sigma_8(0.38)$	0.666 ± 0.014
σ_8	0.812 ± 0.019	$D_{\rm M}(z_*)$/Gpc	13.90 ± 0.49	$f\sigma_8(0.51)$	0.473 ± 0.014
S_8	0.820 ± 0.036	$z_{\rm drag}$	1059.4 ± 1.5	$\sigma_8(0.51)$	0.624 ± 0.013
$\sigma_8\Omega_{\rm m}^{0.5}$	0.449 ± 0.020	$r_{\rm drag}$	147.6 ± 3.2	$f\sigma_8(0.61)$	0.469 ± 0.013
$\sigma_8\Omega_{\rm m}^{0.25}$	0.604 ± 0.019	$k_{\rm D}$	$0.1403^{+0.0031}_{-0.0036}$	$\sigma_8(0.61)$	0.594 ± 0.013
$\sigma_8/h^{0.5}$	0.984 ± 0.019	$100\theta_{\rm D}$	0.1613 ± 0.0021	$f\sigma_8(2.33)$	0.2997 ± 0.0062
$r_{\rm drag}h$	100.5 ± 1.2	$z_{\rm eq}$	3383^{+240}_{-300}	$\sigma_8(2.33)$	0.3093 ± 0.0065
$\langle d^2\rangle^{1/2}$	2.471 ± 0.052	$k_{\rm eq}$	$0.01032^{+0.00075}_{-0.00091}$	$\chi^2_{\rm lensing}$	8.8 ± 2.3
$z_{\rm re}$	$7.78^{+0.22}_{-0.25}$	$100\theta_{\rm eq}$	0.820 ± 0.038	$\chi^2_{\rm 6DF}$	0.060 ± 0.083
$10^9 A_{\rm s}$	$2.15^{+0.20}_{-0.24}$	$100\theta_{\rm s,eq}$	0.453 ± 0.020	$\chi^2_{\rm MGS}$	1.80 ± 0.72
$10^9 A_{\rm s}e^{-2\tau}$	$1.92^{+0.18}_{-0.21}$	$H(0.15)$	$73.3^{+1.4}_{-1.6}$	$\chi^2_{\rm DR12BAO}$	4.3 ± 1.6
D_{40}	1287^{+130}_{-150}	$D_{\rm M}(0.15)$	637 ± 12	$\chi^2_{\rm prior}$	2.0 ± 2.0
D_{220}	5941^{+700}_{-900}	$H(0.38)$	$83.4^{+1.9}_{-2.2}$	$\chi^2_{\rm BAO}$	6.2 ± 1.7
D_{810}	2573 ± 300	$D_{\rm M}(0.38)$	1521 ± 32		

$\bar{\chi}^2_{\rm eff} = 17.02$; $R - 1 = 0.00221$

2.188 base_lensing_lenspriors_BAO_theta

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\mathbf{\Omega_b h^2}$	0.022208	0.02221 ± 0.00049	D_{1420}	831.4	831 ± 36	$H(0.51)$	89.787	89.80 ± 0.42
$\mathbf{\Omega_c h^2}$	0.11776	0.1178 ± 0.0017	D_{2000}	233.6	234^{+11}_{-12}	$D_{\rm M}(0.51)$	1974.6	1974 ± 14
$\mathbf{100\theta_{MC}}$	1.04090	1.04090 ± 0.00060	$n_{\rm s,0.002}$	0.9545	0.955 ± 0.019	$H(0.61)$	95.338	95.35 ± 0.39
$\mathbf{\ln(10^{10} A_s)}$	3.0723	3.071 ± 0.035	$Y_{\rm P}$	0.245329	$0.24532^{+0.00022}_{-0.00020}$	$D_{\rm M}(0.61)$	2298.7	2299 ± 15
$\mathbf{n_s}$	0.9545	0.955 ± 0.019	$Y_{\rm P}^{\rm BBN}$	0.246655	$0.24665^{+0.00023}_{-0.00020}$	$H(2.33)$	234.92	234.9 ± 1.3
H_0	68.01	68.01 ± 0.66	10^5D/H	2.616	2.618 ± 0.094	$D_{\rm M}(2.33)$	5765.5	5765 ± 22
Ω_Λ	0.6960	0.6959 ± 0.0087	Age/Gyr	13.805	13.804 ± 0.052	$f\sigma_8(0.15)$	0.4531	0.4530 ± 0.0095
$\Omega_{\rm m}$	0.3040	0.3041 ± 0.0087	z_*	1089.93	1089.93 ± 0.62	$\sigma_8(0.15)$	0.7514	0.751 ± 0.014
$\Omega_{\rm m}h^2$	0.14061	0.1406 ± 0.0018	r_*	145.14	145.13 ± 0.62	$f\sigma_8(0.38)$	0.4732	0.4731 ± 0.0091
$\Omega_{\rm m}h^3$	0.09563	0.0956 ± 0.0011	$100\theta_*$	1.04110	1.04111 ± 0.00060	$\sigma_8(0.38)$	0.6669	0.667 ± 0.013
σ_8	0.8124	0.812 ± 0.015	$D_{\rm M}(z_*)$/Gpc	13.941	13.940 ± 0.061	$f\sigma_8(0.51)$	0.4727	0.4725 ± 0.0089
S_8	0.8178	0.818 ± 0.018	$z_{\rm drag}$	1059.40	1059.4 ± 1.2	$\sigma_8(0.51)$	0.6245	0.624 ± 0.012
$\sigma_8\Omega_{\rm m}^{0.5}$	0.4479	0.4478 ± 0.0098	$r_{\rm drag}$	147.87	147.87 ± 0.76	$f\sigma_8(0.61)$	0.4683	0.4682 ± 0.0087
$\sigma_8\Omega_{\rm m}^{0.25}$	0.6032	0.603 ± 0.011	$k_{\rm D}$	0.13993	0.1399 ± 0.0011	$\sigma_8(0.61)$	0.5944	0.594 ± 0.012
$\sigma_8/h^{0.5}$	0.9851	0.985 ± 0.018	$100\theta_{\rm D}$	0.16105	0.16106 ± 0.00071	$f\sigma_8(2.33)$	0.3000	0.2999 ± 0.0060
$r_{\rm drag}h$	100.56	100.6 ± 1.1	$z_{\rm eq}$	3344.8	3345 ± 43	$\sigma_8(2.33)$	0.3096	0.3096 ± 0.0064
$\langle d^2\rangle^{1/2}$	2.4802	2.479 ± 0.040	$k_{\rm eq}$	0.010209	0.01021 ± 0.00013	$\chi^2_{\rm lensing}$	8.10	9.3 ± 1.5
$z_{\rm re}$	7.753	7.75 ± 0.11	$100\theta_{\rm eq}$	0.8232	0.8233 ± 0.0074	$\chi^2_{\rm 6DF}$	0.0002	0.055 ± 0.080
$10^9 A_{\rm s}$	2.159	2.158 ± 0.075	$100\theta_{\rm s,eq}$	0.45469	0.4547 ± 0.0040	$\chi^2_{\rm MGS}$	1.75	1.84 ± 0.70
$10^9 A_{\rm s}e^{-2\tau}$	1.934	1.933 ± 0.067	$H(0.15)$	73.20	73.21 ± 0.58	$\chi^2_{\rm DR12BAO}$	3.43	4.3 ± 1.3
D_{40}	1300	1299 ± 56	$D_{\rm M}(0.15)$	638.0	638.0 ± 5.6	$\chi^2_{\rm prior}$	0.08	2.9 ± 2.3
D_{220}	5991	5987 ± 220	$H(0.38)$	83.159	83.17 ± 0.46	$\chi^2_{\rm BAO}$	5.17	6.2 ± 1.4
D_{810}	2605	2605 ± 98	$D_{\rm M}(0.38)$	1523.4	1523 ± 12			

Best-fit $\chi^2_{\rm eff} = 13.35$; $\bar{\chi}^2_{\rm eff} = 18.35$; $R - 1 = 0.00243$

$\chi^2_{\rm eff}$: BAO - 6DF: 0.00 MGS: 1.75 DR12BAO: 3.43 CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8_CMBmarged: 8.10

2.189 base_lensing_lenspriors_BAO_theta_post_Pantheon

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02222 ± 0.00049	D_{1420}	833 ± 35	$H(0.51)$	89.82 ± 0.40
$\boldsymbol{\Omega_c h^2}$	0.1176 ± 0.0016	D_{2000}	234 ± 11	$D_{\rm M}(0.51)$	1973 ± 13
$\boldsymbol{100\theta_{MC}}$	1.04090 ± 0.00060	$n_{\rm s,0.002}$	0.955 ± 0.019	$H(0.61)$	95.37 ± 0.39
$\boldsymbol{\ln(10^{10} A_s)}$	3.073 ± 0.034	$Y_{\rm P}$	$0.24532^{+0.00022}_{-0.00020}$	$D_{\rm M}(0.61)$	2297 ± 14
$\boldsymbol{n_s}$	0.955 ± 0.019	$Y_{\rm P}^{\rm BBN}$	$0.24665^{+0.00022}_{-0.00020}$	$H(2.33)$	234.8 ± 1.2
H_0	68.07 ± 0.62	10^5D/H	2.617 ± 0.093	$D_{\rm M}(2.33)$	5764 ± 22
Ω_Λ	0.6967 ± 0.0081	Age/Gyr	13.803 ± 0.051	$f\sigma_8(0.15)$	0.4526 ± 0.0094
$\Omega_{\rm m}$	0.3033 ± 0.0081	z_*	1089.91 ± 0.62	$\sigma_8(0.15)$	0.752 ± 0.014
$\Omega_{\rm m}h^2$	0.1405 ± 0.0017	r_*	145.17 ± 0.61	$f\sigma_8(0.38)$	0.4729 ± 0.0091
$\Omega_{\rm m}h^3$	0.0956 ± 0.0010	$100\theta_*$	1.04110 ± 0.00060	$\sigma_8(0.38)$	0.667 ± 0.013
σ_8	0.813 ± 0.015	$D_{\rm M}(z_*)$/Gpc	13.944 ± 0.060	$f\sigma_8(0.51)$	0.4725 ± 0.0089
S_8	0.817 ± 0.018	$z_{\rm drag}$	1059.4 ± 1.2	$\sigma_8(0.51)$	0.625 ± 0.012
$\sigma_8\Omega_{\rm m}^{0.5}$	0.4474 ± 0.0096	$r_{\rm drag}$	147.90 ± 0.75	$f\sigma_8(0.61)$	0.4682 ± 0.0087
$\sigma_8\Omega_{\rm m}^{0.25}$	0.603 ± 0.011	$k_{\rm D}$	0.1399 ± 0.0011	$\sigma_8(0.61)$	0.595 ± 0.012
$\sigma_8/h^{0.5}$	0.985 ± 0.018	$100\theta_{\rm D}$	0.16106 ± 0.00070	$f\sigma_8(2.33)$	0.3002 ± 0.0060
$r_{\rm drag}h$	100.7 ± 1.1	$z_{\rm eq}$	3342 ± 41	$\sigma_8(2.33)$	0.3099 ± 0.0063
$\langle d^2\rangle^{1/2}$	2.479 ± 0.039	$k_{\rm eq}$	0.01020 ± 0.00013	$\chi^2_{\rm lensing}$	9.3 ± 1.5
$z_{\rm re}$	7.75 ± 0.11	$100\theta_{\rm eq}$	0.8239 ± 0.0070	$\chi^2_{\rm JLA}$	1036.16 ± 0.26
$10^9 A_{\rm s}$	2.162 ± 0.073	$100\theta_{\rm s,eq}$	0.4550 ± 0.0038	$\chi^2_{\rm 6DF}$	0.049 ± 0.071
$10^9 A_{\rm s}e^{-2\tau}$	1.937 ± 0.065	$H(0.15)$	73.26 ± 0.55	$\chi^2_{\rm MGS}$	1.90 ± 0.67
D_{40}	1301 ± 55	$D_{\rm M}(0.15)$	637.5 ± 5.3	$\chi^2_{\rm DR12BAO}$	4.1 ± 1.1
D_{220}	6002 ± 220	$H(0.38)$	83.20 ± 0.44	$\chi^2_{\rm prior}$	2.9 ± 2.3
D_{810}	2610 ± 96	$D_{\rm M}(0.38)$	1522 ± 11	$\chi^2_{\rm BAO}$	6.1 ± 1.3

$\bar{\chi}^2_{\rm eff} = 1054.39$; $R - 1 = 0.00215$

2.190 base_lensing_lenspriors_BAO_theta_post_agr2

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\mathbf{\Omega_b h^2}$	0.02223 ± 0.00049	D_{1420}	814 ± 33	$H(0.51)$	89.83 ± 0.41
$\mathbf{\Omega_c h^2}$	0.1176 ± 0.0017	D_{2000}	228 ± 11	$D_{\rm M}(0.51)$	1973 ± 14
$\mathbf{100\theta_{MC}}$	1.04089 ± 0.00060	$n_{\rm s,0.002}$	0.949 ± 0.018	$H(0.61)$	95.37 ± 0.39
$\mathbf{\ln(10^{10} A_s)}$	3.054 ± 0.033	$Y_{\rm P}$	$0.24533^{+0.00022}_{-0.00019}$	$D_{\rm M}(0.61)$	2297 ± 15
$\mathbf{n_s}$	0.949 ± 0.018	$Y_{\rm P}^{\rm BBN}$	$0.24665^{+0.00022}_{-0.00019}$	$H(2.33)$	234.8 ± 1.3
H_0	68.10 ± 0.65	10^5D/H	2.615 ± 0.092	$D_{\rm M}(2.33)$	5764 ± 22
Ω_Λ	0.6970 ± 0.0086	Age/Gyr	13.802 ± 0.051	$f\sigma_8(0.15)$	0.4469 ± 0.0087
$\Omega_{\rm m}$	0.3030 ± 0.0086	z_*	1089.90 ± 0.61	$\sigma_8(0.15)$	0.743 ± 0.013
$\Omega_{\rm m}h^2$	0.1404 ± 0.0018	r_*	145.18 ± 0.61	$f\sigma_8(0.38)$	0.4670 ± 0.0082
$\Omega_{\rm m}h^3$	0.0956 ± 0.0010	$100\theta_*$	1.04109 ± 0.00060	$\sigma_8(0.38)$	0.659 ± 0.012
σ_8	0.803 ± 0.014	$D_{\rm M}(z_*)$/Gpc	13.945 ± 0.061	$f\sigma_8(0.51)$	0.4666 ± 0.0080
S_8	0.807 ± 0.016	$z_{\rm drag}$	1059.4 ± 1.2	$\sigma_8(0.51)$	0.617 ± 0.011
$\sigma_8\Omega_{\rm m}^{0.5}$	0.4417 ± 0.0089	$r_{\rm drag}$	147.91 ± 0.75	$f\sigma_8(0.61)$	0.4624 ± 0.0079
$\sigma_8\Omega_{\rm m}^{0.25}$	0.595 ± 0.010	$k_{\rm D}$	0.1399 ± 0.0011	$\sigma_8(0.61)$	0.588 ± 0.011
$\sigma_8/h^{0.5}$	0.973 ± 0.017	$100\theta_{\rm D}$	0.16105 ± 0.00069	$f\sigma_8(2.33)$	0.2966 ± 0.0056
$r_{\rm drag}h$	100.7 ± 1.1	$z_{\rm eq}$	3341 ± 43	$\sigma_8(2.33)$	0.3062 ± 0.0060
$\langle d^2\rangle^{1/2}$	2.468 ± 0.039	$k_{\rm eq}$	0.01020 ± 0.00013	$\chi^2_{\rm lensing}$	12.5 ± 1.8
$z_{\rm re}$	7.75 ± 0.11	$100\theta_{\rm eq}$	0.8241 ± 0.0074	$\chi^2_{\rm 6DF}$	0.057 ± 0.081
$10^9 A_{\rm s}$	2.122 ± 0.070	$100\theta_{\rm s,eq}$	0.4552 ± 0.0040	$\chi^2_{\rm MGS}$	1.93 ± 0.71
$10^9 A_{\rm s}e^{-2\tau}$	1.901 ± 0.063	$H(0.15)$	73.28 ± 0.57	$\chi^2_{\rm DR12BAO}$	4.2 ± 1.2
D_{40}	1294 ± 55	$D_{\rm M}(0.15)$	637.3 ± 5.6	$\chi^2_{\rm prior}$	3.1 ± 2.4
D_{220}	5927 ± 220	$H(0.38)$	83.22 ± 0.46	$\chi^2_{\rm BAO}$	6.2 ± 1.4
D_{810}	2557 ± 92	$D_{\rm M}(0.38)$	1522 ± 11		

$\bar{\chi}^2_{\rm eff} = 21.73$; $R - 1 = 0.00232$

2.191 base_lensing_lenspriors_BAO_theta_post_conslmin40

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02221 ± 0.00049	D_{1420}	831 ± 36	$H(0.51)$	89.79 ± 0.42
$\boldsymbol{\Omega_c h^2}$	0.1178 ± 0.0017	D_{2000}	234 ± 11	$D_{\rm M}(0.51)$	1975 ± 14
$\boldsymbol{100\theta_{MC}}$	1.04091 ± 0.00060	$n_{\rm s,0.002}$	0.956 ± 0.019	$H(0.61)$	95.34 ± 0.39
$\boldsymbol{\ln(10^{10} A_s)}$	3.070 ± 0.035	$Y_{\rm P}$	$0.24532^{+0.00022}_{-0.00020}$	$D_{\rm M}(0.61)$	2299 ± 15
$\boldsymbol{n_s}$	0.956 ± 0.019	$Y_{\rm P}^{\rm BBN}$	$0.24664^{+0.00022}_{-0.00020}$	$H(2.33)$	234.9 ± 1.3
H_0	68.00 ± 0.66	10^5D/H	2.619 ± 0.094	$D_{\rm M}(2.33)$	5765 ± 22
Ω_Λ	0.6957 ± 0.0087	Age/Gyr	13.804 ± 0.052	$f\sigma_8(0.15)$	0.4531 ± 0.0095
$\Omega_{\rm m}$	0.3043 ± 0.0087	z_*	1089.94 ± 0.62	$\sigma_8(0.15)$	0.751 ± 0.014
$\Omega_{\rm m}h^2$	0.1407 ± 0.0018	r_*	145.13 ± 0.62	$f\sigma_8(0.38)$	0.4731 ± 0.0091
$\Omega_{\rm m}h^3$	0.0956 ± 0.0011	$100\theta_*$	1.04111 ± 0.00060	$\sigma_8(0.38)$	0.667 ± 0.013
σ_8	0.812 ± 0.015	$D_{\rm M}(z_*)$/Gpc	13.940 ± 0.061	$f\sigma_8(0.51)$	0.4726 ± 0.0089
S_8	0.818 ± 0.018	$z_{\rm drag}$	1059.4 ± 1.2	$\sigma_8(0.51)$	0.624 ± 0.012
$\sigma_8\Omega_{\rm m}^{0.5}$	0.4479 ± 0.0098	$r_{\rm drag}$	147.86 ± 0.76	$f\sigma_8(0.61)$	0.4682 ± 0.0087
$\sigma_8\Omega_{\rm m}^{0.25}$	0.603 ± 0.011	$k_{\rm D}$	0.1399 ± 0.0011	$\sigma_8(0.61)$	0.594 ± 0.012
$\sigma_8/h^{0.5}$	0.985 ± 0.018	$100\theta_{\rm D}$	0.16107 ± 0.00071	$f\sigma_8(2.33)$	0.2999 ± 0.0060
$r_{\rm drag}h$	100.6 ± 1.1	$z_{\rm eq}$	3346 ± 43	$\sigma_8(2.33)$	0.3095 ± 0.0064
$\langle d^2\rangle^{1/2}$	2.474 ± 0.042	$k_{\rm eq}$	0.01021 ± 0.00013	$\chi^2_{\rm lensing}$	9.2 ± 1.5
$z_{\rm re}$	7.75 ± 0.11	$100\theta_{\rm eq}$	0.8232 ± 0.0074	$\chi^2_{\rm 6DF}$	0.055 ± 0.079
$10^9 A_{\rm s}$	2.155 ± 0.075	$100\theta_{\rm s,eq}$	0.4546 ± 0.0040	$\chi^2_{\rm MGS}$	1.83 ± 0.70
$10^9 A_{\rm s}e^{-2\tau}$	1.931 ± 0.068	$H(0.15)$	73.20 ± 0.58	$\chi^2_{\rm DR12BAO}$	4.3 ± 1.3
D_{40}	1293 ± 59	$D_{\rm M}(0.15)$	638.1 ± 5.6	$\chi^2_{\rm prior}$	2.9 ± 2.3
D_{220}	5970 ± 230	$H(0.38)$	83.16 ± 0.46	$\chi^2_{\rm BAO}$	6.2 ± 1.4
D_{810}	2602 ± 99	$D_{\rm M}(0.38)$	1524 ± 12		

$\bar{\chi}^2_{\rm eff} = 18.27$; $R - 1 = 0.00270$

2.192 base_lensing_lenspriors_BAO_theta_post_agrlmax425

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02221 ± 0.00049	D_{1420}	833 ± 36	$H(0.51)$	89.79 ± 0.42
$\boldsymbol{\Omega_c h^2}$	0.1178 ± 0.0017	D_{2000}	234 ± 11	$D_{\rm M}(0.51)$	1975 ± 14
$\boldsymbol{100\theta_{MC}}$	1.04091 ± 0.00060	$n_{\rm s,0.002}$	0.956 ± 0.019	$H(0.61)$	95.34 ± 0.39
$\boldsymbol{\ln(10^{10} A_s)}$	3.072 ± 0.035	$Y_{\rm P}$	$0.24532^{+0.00022}_{-0.00020}$	$D_{\rm M}(0.61)$	2299 ± 15
$\boldsymbol{n_s}$	0.956 ± 0.019	$Y_{\rm P}^{\rm BBN}$	$0.24664^{+0.00022}_{-0.00020}$	$H(2.33)$	234.9 ± 1.3
H_0	68.00 ± 0.66	10^5D/H	2.619 ± 0.094	$D_{\rm M}(2.33)$	5765 ± 22
Ω_Λ	0.6957 ± 0.0087	Age/Gyr	13.805 ± 0.052	$f\sigma_8(0.15)$	0.4536 ± 0.0095
$\Omega_{\rm m}$	0.3043 ± 0.0087	z_*	1089.94 ± 0.62	$\sigma_8(0.15)$	0.752 ± 0.014
$\Omega_{\rm m}h^2$	0.1407 ± 0.0018	r_*	145.13 ± 0.62	$f\sigma_8(0.38)$	0.4736 ± 0.0091
$\Omega_{\rm m}h^3$	0.0956 ± 0.0011	$100\theta_*$	1.04111 ± 0.00060	$\sigma_8(0.38)$	0.667 ± 0.013
σ_8	0.813 ± 0.015	$D_{\rm M}(z_*)$/Gpc	13.940 ± 0.061	$f\sigma_8(0.51)$	0.4731 ± 0.0089
S_8	0.819 ± 0.018	$z_{\rm drag}$	1059.4 ± 1.2	$\sigma_8(0.51)$	0.625 ± 0.012
$\sigma_8\Omega_{\rm m}^{0.5}$	0.4484 ± 0.0098	$r_{\rm drag}$	147.86 ± 0.76	$f\sigma_8(0.61)$	0.4687 ± 0.0087
$\sigma_8\Omega_{\rm m}^{0.25}$	0.604 ± 0.011	$k_{\rm D}$	0.1399 ± 0.0011	$\sigma_8(0.61)$	0.595 ± 0.012
$\sigma_8/h^{0.5}$	0.986 ± 0.018	$100\theta_{\rm D}$	0.16107 ± 0.00071	$f\sigma_8(2.33)$	0.3002 ± 0.0060
$r_{\rm drag}h$	100.6 ± 1.1	$z_{\rm eq}$	3346 ± 43	$\sigma_8(2.33)$	0.3098 ± 0.0064
$\langle d^2\rangle^{1/2}$	2.479 ± 0.040	$k_{\rm eq}$	0.01021 ± 0.00013	$\chi^2_{\rm lensing}$	7.0 ± 1.5
$z_{\rm re}$	7.75 ± 0.11	$100\theta_{\rm eq}$	0.8232 ± 0.0074	$\chi^2_{\rm 6DF}$	0.055 ± 0.079
$10^9 A_{\rm s}$	2.161 ± 0.075	$100\theta_{\rm s,eq}$	0.4546 ± 0.0040	$\chi^2_{\rm MGS}$	1.82 ± 0.70
$10^9 A_{\rm s}e^{-2\tau}$	1.936 ± 0.067	$H(0.15)$	73.20 ± 0.58	$\chi^2_{\rm DR12BAO}$	4.3 ± 1.3
D_{40}	1298 ± 56	$D_{\rm M}(0.15)$	638.1 ± 5.6	$\chi^2_{\rm prior}$	2.9 ± 2.3
D_{220}	5988 ± 220	$H(0.38)$	83.16 ± 0.46	$\chi^2_{\rm BAO}$	6.2 ± 1.4
D_{810}	2608 ± 98	$D_{\rm M}(0.38)$	1524 ± 11		

$\bar{\chi}^2_{\rm eff} = 16.09$; $R - 1 = 0.00233$

2.193 base_lensing_lenspriors_BAO_theta_post_ptt

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\mathbf{\Omega_b h^2}$	0.02223 ± 0.00050	D_{1420}	837^{+35}_{-40}	$H(0.51)$	89.84 ± 0.42
$\mathbf{\Omega_c h^2}$	0.1176 ± 0.0017	D_{2000}	235^{+11}_{-13}	$D_{\rm M}(0.51)$	1973 ± 14
$\mathbf{100\theta_{MC}}$	1.04087 ± 0.00060	$n_{\rm s,0.002}$	0.948 ± 0.019	$H(0.61)$	95.38 ± 0.39
$\mathbf{\ln(10^{10} A_s)}$	3.083 ± 0.039	$Y_{\rm P}$	0.24533 ± 0.00022	$D_{\rm M}(0.61)$	2297 ± 15
$\mathbf{n_s}$	0.948 ± 0.019	$Y_{\rm P}^{\rm BBN}$	0.24665 ± 0.00022	$H(2.33)$	234.8 ± 1.3
H_0	68.10 ± 0.66	10^5D/H	2.614 ± 0.094	$D_{\rm M}(2.33)$	5764 ± 22
Ω_Λ	0.6970 ± 0.0087	Age/Gyr	13.802 ± 0.052	$f\sigma_8(0.15)$	0.453 ± 0.010
$\Omega_{\rm m}$	0.3030 ± 0.0087	z_*	1089.89 ± 0.63	$\sigma_8(0.15)$	0.753 ± 0.016
$\Omega_{\rm m}h^2$	0.1404 ± 0.0018	r_*	145.17 ± 0.63	$f\sigma_8(0.38)$	0.4736 ± 0.0099
$\Omega_{\rm m}h^3$	0.0956 ± 0.0011	$100\theta_*$	1.04107 ± 0.00060	$\sigma_8(0.38)$	0.669 ± 0.014
σ_8	0.814 ± 0.017	$D_{\rm M}(z_*)$/Gpc	13.945 ± 0.062	$f\sigma_8(0.51)$	0.4733 ± 0.0097
S_8	0.818 ± 0.019	$z_{\rm drag}$	1059.4 ± 1.2	$\sigma_8(0.51)$	0.626 ± 0.013
$\sigma_8\Omega_{\rm m}^{0.5}$	0.448 ± 0.010	$r_{\rm drag}$	147.90 ± 0.77	$f\sigma_8(0.61)$	0.4690 ± 0.0096
$\sigma_8\Omega_{\rm m}^{0.25}$	0.604 ± 0.013	$k_{\rm D}$	0.1399 ± 0.0011	$\sigma_8(0.61)$	0.596 ± 0.013
$\sigma_8/h^{0.5}$	0.987 ± 0.020	$100\theta_{\rm D}$	0.16104 ± 0.00071	$f\sigma_8(2.33)$	0.3008 ± 0.0066
$r_{\rm drag}h$	100.7 ± 1.1	$z_{\rm eq}$	3341 ± 44	$\sigma_8(2.33)$	0.3106 ± 0.0069
$\langle d^2\rangle^{1/2}$	2.505 ± 0.048	$k_{\rm eq}$	0.01020 ± 0.00013	$\chi^2_{\rm lensing}$	12.9 ± 1.9
$z_{\rm re}$	7.74 ± 0.11	$100\theta_{\rm eq}$	0.8242 ± 0.0075	$\chi^2_{\rm 6DF}$	0.057 ± 0.084
$10^9 A_{\rm s}$	2.184 ± 0.086	$100\theta_{\rm s,eq}$	0.4551 ± 0.0040	$\chi^2_{\rm MGS}$	1.93 ± 0.72
$10^9 A_{\rm s}e^{-2\tau}$	1.956 ± 0.077	$H(0.15)$	73.28 ± 0.58	$\chi^2_{\rm DR12BAO}$	4.2 ± 1.3
D_{40}	1334^{+61}_{-69}	$D_{\rm M}(0.15)$	637.3 ± 5.6	$\chi^2_{\rm prior}$	3.2 ± 2.5
D_{220}	6104 ± 260	$H(0.38)$	83.22 ± 0.47	$\chi^2_{\rm BAO}$	6.2 ± 1.5
D_{810}	2631 ± 110	$D_{\rm M}(0.38)$	1522 ± 11		

$\bar{\chi}^2_{\rm eff} = 22.40$; $R - 1 = 0.00650$

2.194 base_lensing_lenspriors_BAO_theta_post_bfcl

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\mathbf{\Omega_b h^2}$	0.02221 ± 0.00049	D_{1420}	819 ± 35	$H(0.51)$	89.80 ± 0.41
$\mathbf{\Omega_c h^2}$	0.1178 ± 0.0017	D_{2000}	230 ± 11	$D_{\rm M}(0.51)$	1975 ± 14
$\mathbf{100\theta_{MC}}$	1.04091 ± 0.00060	$n_{\rm s,0.002}$	0.956 ± 0.019	$H(0.61)$	95.35 ± 0.39
$\mathbf{\ln(10^{10} A_s)}$	3.055 ± 0.033	$Y_{\rm P}$	$0.24532^{+0.00022}_{-0.00019}$	$D_{\rm M}(0.61)$	2299 ± 15
$\mathbf{n_s}$	0.956 ± 0.019	$Y_{\rm P}^{\rm BBN}$	$0.24664^{+0.00022}_{-0.00019}$	$H(2.33)$	234.9 ± 1.3
H_0	68.01 ± 0.65	10^5D/H	2.619 ± 0.092	$D_{\rm M}(2.33)$	5765 ± 22
Ω_Λ	0.6958 ± 0.0087	Age/Gyr	13.804 ± 0.051	$f\sigma_8(0.15)$	0.4496 ± 0.0093
$\Omega_{\rm m}$	0.3042 ± 0.0087	z_*	1089.94 ± 0.62	$\sigma_8(0.15)$	0.746 ± 0.014
$\Omega_{\rm m}h^2$	0.1406 ± 0.0018	r_*	145.14 ± 0.62	$f\sigma_8(0.38)$	0.4695 ± 0.0089
$\Omega_{\rm m}h^3$	0.0956 ± 0.0010	$100\theta_*$	1.04111 ± 0.00060	$\sigma_8(0.38)$	0.662 ± 0.013
σ_8	0.806 ± 0.015	$D_{\rm M}(z_*)$/Gpc	13.940 ± 0.061	$f\sigma_8(0.51)$	0.4690 ± 0.0087
S_8	0.811 ± 0.018	$z_{\rm drag}$	1059.4 ± 1.2	$\sigma_8(0.51)$	0.620 ± 0.012
$\sigma_8\Omega_{\rm m}^{0.5}$	0.4445 ± 0.0096	$r_{\rm drag}$	147.87 ± 0.76	$f\sigma_8(0.61)$	0.4646 ± 0.0085
$\sigma_8\Omega_{\rm m}^{0.25}$	0.599 ± 0.011	$k_{\rm D}$	0.1399 ± 0.0011	$\sigma_8(0.61)$	0.590 ± 0.011
$\sigma_8/h^{0.5}$	0.977 ± 0.018	$100\theta_{\rm D}$	0.16107 ± 0.00070	$f\sigma_8(2.33)$	0.2977 ± 0.0059
$r_{\rm drag}h$	100.6 ± 1.1	$z_{\rm eq}$	3345 ± 43	$\sigma_8(2.33)$	0.3072 ± 0.0062
$\langle d^2\rangle^{1/2}$	2.457 ± 0.037	$k_{\rm eq}$	0.01021 ± 0.00013	$\chi^2_{\rm lensing}$	9.3 ± 1.5
$z_{\rm re}$	7.75 ± 0.11	$100\theta_{\rm eq}$	0.8232 ± 0.0074	$\chi^2_{\rm 6DF}$	0.055 ± 0.078
$10^9 A_{\rm s}$	2.124 ± 0.071	$100\theta_{\rm s,eq}$	0.4547 ± 0.0040	$\chi^2_{\rm MGS}$	1.84 ± 0.70
$10^9 A_{\rm s}e^{-2\tau}$	1.903 ± 0.063	$H(0.15)$	73.20 ± 0.57	$\chi^2_{\rm DR12BAO}$	4.3 ± 1.3
D_{40}	1275 ± 53	$D_{\rm M}(0.15)$	638.0 ± 5.6	$\chi^2_{\rm prior}$	2.8 ± 2.3
D_{220}	5886 ± 210	$H(0.38)$	83.17 ± 0.46	$\chi^2_{\rm BAO}$	6.2 ± 1.4
D_{810}	2565 ± 94	$D_{\rm M}(0.38)$	1523 ± 11		

$\bar{\chi}^2_{\rm eff} = 18.37$; $R - 1 = 0.00253$

2.195 base_lensing_lenspriors_BAO_theta_post_agr2bfcl

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02222 ± 0.00048	D_{1420}	803 ± 32	$H(0.51)$	89.83 ± 0.40
$\boldsymbol{\Omega_c h^2}$	0.1176 ± 0.0017	D_{2000}	225 ± 10	$D_{\rm M}(0.51)$	1973 ± 13
$\boldsymbol{100\theta_{MC}}$	1.04089 ± 0.00060	$n_{\rm s,0.002}$	0.950 ± 0.018	$H(0.61)$	95.37 ± 0.38
$\boldsymbol{\ln(10^{10} A_s)}$	3.040 ± 0.032	$Y_{\rm P}$	$0.24532^{+0.00022}_{-0.00019}$	$D_{\rm M}(0.61)$	2297 ± 15
$\boldsymbol{n_s}$	0.950 ± 0.018	$Y_{\rm P}^{\rm BBN}$	$0.24665^{+0.00022}_{-0.00019}$	$H(2.33)$	234.8 ± 1.3
H_0	68.08 ± 0.65	10^5D/H	2.617 ± 0.091	$D_{\rm M}(2.33)$	5764 ± 21
Ω_Λ	0.6969 ± 0.0086	Age/Gyr	13.803 ± 0.050	$f\sigma_8(0.15)$	0.4441 ± 0.0084
$\Omega_{\rm m}$	0.3031 ± 0.0086	z_*	1089.91 ± 0.61	$\sigma_8(0.15)$	0.738 ± 0.013
$\Omega_{\rm m}h^2$	0.1404 ± 0.0018	r_*	145.18 ± 0.61	$f\sigma_8(0.38)$	0.4639 ± 0.0080
$\Omega_{\rm m}h^3$	0.0956 ± 0.0010	$100\theta_*$	1.04110 ± 0.00060	$\sigma_8(0.38)$	0.655 ± 0.012
σ_8	0.797 ± 0.013	$D_{\rm M}(z_*)$/Gpc	13.945 ± 0.060	$f\sigma_8(0.51)$	0.4636 ± 0.0078
S_8	0.801 ± 0.016	$z_{\rm drag}$	1059.4 ± 1.1	$\sigma_8(0.51)$	0.613 ± 0.011
$\sigma_8\Omega_{\rm m}^{0.5}$	0.4389 ± 0.0087	$r_{\rm drag}$	147.91 ± 0.75	$f\sigma_8(0.61)$	0.4593 ± 0.0076
$\sigma_8\Omega_{\rm m}^{0.25}$	0.592 ± 0.010	$k_{\rm D}$	0.1399 ± 0.0011	$\sigma_8(0.61)$	0.584 ± 0.010
$\sigma_8/h^{0.5}$	0.966 ± 0.016	$100\theta_{\rm D}$	0.16106 ± 0.00069	$f\sigma_8(2.33)$	0.2946 ± 0.0054
$r_{\rm drag}h$	100.7 ± 1.1	$z_{\rm eq}$	3341 ± 43	$\sigma_8(2.33)$	0.3041 ± 0.0058
$\langle d^2\rangle^{1/2}$	2.448 ± 0.036	$k_{\rm eq}$	0.01020 ± 0.00013	$\chi^2_{\rm lensing}$	12.3 ± 1.7
$z_{\rm re}$	7.75 ± 0.11	$100\theta_{\rm eq}$	0.8241 ± 0.0074	$\chi^2_{\rm 6DF}$	0.056 ± 0.079
$10^9 A_{\rm s}$	2.091 ± 0.067	$100\theta_{\rm s,eq}$	0.4551 ± 0.0040	$\chi^2_{\rm MGS}$	1.92 ± 0.71
$10^9 A_{\rm s}e^{-2\tau}$	1.873 ± 0.060	$H(0.15)$	73.26 ± 0.57	$\chi^2_{\rm DR12BAO}$	4.2 ± 1.2
D_{40}	1273 ± 52	$D_{\rm M}(0.15)$	637.4 ± 5.5	$\chi^2_{\rm prior}$	3.0 ± 2.4
D_{220}	5834 ± 210	$H(0.38)$	83.21 ± 0.45	$\chi^2_{\rm BAO}$	6.2 ± 1.4
D_{810}	2522 ± 88	$D_{\rm M}(0.38)$	1522 ± 11		

$\bar{\chi}^2_{\rm eff} = 21.52$; $R - 1 = 0.00519$

2.196 base_lensing_lenspriors_BAO_theta_post_linear

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\mathbf{\Omega_b h^2}$	0.02220 ± 0.00050	D_{1420}	841 ± 36	$H(0.51)$	89.78 ± 0.42
$\mathbf{\Omega_c h^2}$	0.1179 ± 0.0017	D_{2000}	236^{+11}_{-12}	$D_{\rm M}(0.51)$	1975 ± 14
$\mathbf{100\theta_{MC}}$	1.04091 ± 0.00060	$n_{\rm s,0.002}$	0.958 ± 0.019	$H(0.61)$	95.33 ± 0.39
$\mathbf{\ln(10^{10} A_s)}$	3.080 ± 0.035	$Y_{\rm P}$	$0.24531^{+0.00022}_{-0.00020}$	$D_{\rm M}(0.61)$	2299 ± 15
$\mathbf{n_s}$	0.958 ± 0.019	$Y_{\rm P}^{\rm BBN}$	$0.24664^{+0.00023}_{-0.00020}$	$H(2.33)$	235.0 ± 1.3
H_0	67.98 ± 0.66	10^5D/H	2.620 ± 0.094	$D_{\rm M}(2.33)$	5766 ± 22
Ω_Λ	0.6954 ± 0.0087	Age/Gyr	13.805 ± 0.052	$f\sigma_8(0.15)$	0.4561 ± 0.0097
$\Omega_{\rm m}$	0.3046 ± 0.0087	z_*	1089.95 ± 0.63	$\sigma_8(0.15)$	0.756 ± 0.014
$\Omega_{\rm m}h^2$	0.1407 ± 0.0018	r_*	145.12 ± 0.62	$f\sigma_8(0.38)$	0.4762 ± 0.0093
$\Omega_{\rm m}h^3$	0.0956 ± 0.0011	$100\theta_*$	1.04111 ± 0.00060	$\sigma_8(0.38)$	0.671 ± 0.013
σ_8	0.817 ± 0.015	$D_{\rm M}(z_*)$/Gpc	13.939 ± 0.061	$f\sigma_8(0.51)$	0.4756 ± 0.0091
S_8	0.823 ± 0.018	$z_{\rm drag}$	1059.4 ± 1.2	$\sigma_8(0.51)$	0.628 ± 0.012
$\sigma_8\Omega_{\rm m}^{0.5}$	0.451 ± 0.010	$r_{\rm drag}$	147.85 ± 0.77	$f\sigma_8(0.61)$	0.4711 ± 0.0089
$\sigma_8\Omega_{\rm m}^{0.25}$	0.607 ± 0.012	$k_{\rm D}$	0.1399 ± 0.0011	$\sigma_8(0.61)$	0.598 ± 0.012
$\sigma_8/h^{0.5}$	0.991 ± 0.019	$100\theta_{\rm D}$	0.16107 ± 0.00071	$f\sigma_8(2.33)$	0.3017 ± 0.0061
$r_{\rm drag}h$	100.5 ± 1.1	$z_{\rm eq}$	3347 ± 43	$\sigma_8(2.33)$	0.3114 ± 0.0065
$\langle d^2\rangle^{1/2}$	2.482 ± 0.040	$k_{\rm eq}$	0.01022 ± 0.00013	$\chi^2_{\rm lensing}$	9.4 ± 1.5
$z_{\rm re}$	7.76 ± 0.11	$100\theta_{\rm eq}$	0.8229 ± 0.0074	$\chi^2_{\rm 6DF}$	0.055 ± 0.078
$10^9 A_{\rm s}$	2.178 ± 0.075	$100\theta_{\rm s,eq}$	0.4545 ± 0.0040	$\chi^2_{\rm MGS}$	1.80 ± 0.70
$10^9 A_{\rm s}e^{-2\tau}$	1.951 ± 0.068	$H(0.15)$	73.17 ± 0.58	$\chi^2_{\rm DR12BAO}$	4.3 ± 1.4
D_{40}	1303 ± 56	$D_{\rm M}(0.15)$	638.3 ± 5.6	$\chi^2_{\rm prior}$	2.9 ± 2.3
D_{220}	6024 ± 220	$H(0.38)$	83.15 ± 0.46	$\chi^2_{\rm BAO}$	6.2 ± 1.4
D_{810}	2631 ± 100	$D_{\rm M}(0.38)$	1524 ± 12		

$\bar{\chi}^2_{\rm eff} = 18.45$; $R - 1 = 0.00265$

2.197 base_lensing_lenspriors_BAO_theta_post_acc

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02222 ± 0.00050	D_{1420}	831 ± 36	$H(0.51)$	89.80 ± 0.41
$\boldsymbol{\Omega_c h^2}$	0.1178 ± 0.0017	D_{2000}	234 ± 11	$D_{\rm M}(0.51)$	1974 ± 14
$\boldsymbol{100\theta_{MC}}$	1.04090 ± 0.00060	$n_{\rm s,0.002}$	0.955 ± 0.019	$H(0.61)$	95.35 ± 0.39
$\boldsymbol{\ln(10^{10} A_s)}$	3.071 ± 0.034	$Y_{\rm P}$	$0.24532^{+0.00022}_{-0.00020}$	$D_{\rm M}(0.61)$	2298 ± 15
$\boldsymbol{n_s}$	0.955 ± 0.019	$Y_{\rm P}^{\rm BBN}$	$0.24665^{+0.00022}_{-0.00020}$	$H(2.33)$	234.9 ± 1.3
H_0	68.02 ± 0.66	10^5D/H	2.617 ± 0.094	$D_{\rm M}(2.33)$	5765 ± 22
Ω_Λ	0.6959 ± 0.0087	Age/Gyr	13.804 ± 0.052	$f\sigma_8(0.15)$	0.4528 ± 0.0095
$\Omega_{\rm m}$	0.3041 ± 0.0087	z_*	1089.93 ± 0.62	$\sigma_8(0.15)$	0.751 ± 0.014
$\Omega_{\rm m}h^2$	0.1406 ± 0.0018	r_*	145.13 ± 0.62	$f\sigma_8(0.38)$	0.4729 ± 0.0091
$\Omega_{\rm m}h^3$	0.0956 ± 0.0011	$100\theta_*$	1.04110 ± 0.00060	$\sigma_8(0.38)$	0.667 ± 0.013
σ_8	0.812 ± 0.015	$D_{\rm M}(z_*)$/Gpc	13.940 ± 0.061	$f\sigma_8(0.51)$	0.4724 ± 0.0088
S_8	0.817 ± 0.018	$z_{\rm drag}$	1059.4 ± 1.2	$\sigma_8(0.51)$	0.624 ± 0.012
$\sigma_8\Omega_{\rm m}^{0.5}$	0.4477 ± 0.0097	$r_{\rm drag}$	147.86 ± 0.76	$f\sigma_8(0.61)$	0.4680 ± 0.0087
$\sigma_8\Omega_{\rm m}^{0.25}$	0.603 ± 0.011	$k_{\rm D}$	0.1399 ± 0.0011	$\sigma_8(0.61)$	0.594 ± 0.012
$\sigma_8/h^{0.5}$	0.984 ± 0.018	$100\theta_{\rm D}$	0.16105 ± 0.00071	$f\sigma_8(2.33)$	0.2998 ± 0.0060
$r_{\rm drag}h$	100.6 ± 1.1	$z_{\rm eq}$	3345 ± 43	$\sigma_8(2.33)$	0.3095 ± 0.0063
$\langle d^2\rangle^{1/2}$	2.479 ± 0.040	$k_{\rm eq}$	0.01021 ± 0.00013	$\chi^2_{\rm lensing}$	9.3 ± 1.5
$z_{\rm re}$	7.75 ± 0.11	$100\theta_{\rm eq}$	0.8233 ± 0.0074	$\chi^2_{\rm 6DF}$	0.055 ± 0.079
$10^9 A_{\rm s}$	2.157 ± 0.074	$100\theta_{\rm s,eq}$	0.4547 ± 0.0040	$\chi^2_{\rm MGS}$	1.84 ± 0.70
$10^9 A_{\rm s}e^{-2\tau}$	1.932 ± 0.066	$H(0.15)$	73.21 ± 0.58	$\chi^2_{\rm DR12BAO}$	4.3 ± 1.3
D_{40}	1298 ± 56	$D_{\rm M}(0.15)$	637.9 ± 5.6	$\chi^2_{\rm prior}$	2.9 ± 2.3
D_{220}	5984 ± 220	$H(0.38)$	83.17 ± 0.46	$\chi^2_{\rm BAO}$	6.2 ± 1.4
D_{810}	2604 ± 98	$D_{\rm M}(0.38)$	1523 ± 12		

$\bar{\chi}^2_{\rm eff} = 18.35$; $R - 1 = 0.00361$

2.198 base_lensing_lenspriors_BAO_theta_post_agr2acc

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02223 ± 0.00049	D_{1420}	813 ± 33	$H(0.51)$	89.84 ± 0.41
$\boldsymbol{\Omega_c h^2}$	0.1175 ± 0.0017	D_{2000}	228 ± 10	$D_{\rm M}(0.51)$	1973 ± 14
$\boldsymbol{100\theta_{MC}}$	1.04088 ± 0.00060	$n_{\rm s,0.002}$	0.948 ± 0.018	$H(0.61)$	95.38 ± 0.39
$\boldsymbol{\ln(10^{10} A_s)}$	3.053 ± 0.033	$Y_{\rm P}$	$0.24533^{+0.00022}_{-0.00019}$	$D_{\rm M}(0.61)$	2297 ± 15
$\boldsymbol{n_s}$	0.948 ± 0.018	$Y_{\rm P}^{\rm BBN}$	$0.24665^{+0.00022}_{-0.00019}$	$H(2.33)$	234.8 ± 1.3
H_0	68.10 ± 0.66	10^5D/H	2.614 ± 0.092	$D_{\rm M}(2.33)$	5764 ± 22
Ω_Λ	0.6971 ± 0.0087	Age/Gyr	13.802 ± 0.051	$f\sigma_8(0.15)$	0.4465 ± 0.0086
$\Omega_{\rm m}$	0.3029 ± 0.0087	z_*	1089.89 ± 0.61	$\sigma_8(0.15)$	0.742 ± 0.013
$\Omega_{\rm m}h^2$	0.1404 ± 0.0018	r_*	145.18 ± 0.61	$f\sigma_8(0.38)$	0.4665 ± 0.0082
$\Omega_{\rm m}h^3$	0.0956 ± 0.0010	$100\theta_*$	1.04108 ± 0.00060	$\sigma_8(0.38)$	0.659 ± 0.012
σ_8	0.802 ± 0.014	$D_{\rm M}(z_*)$/Gpc	13.945 ± 0.060	$f\sigma_8(0.51)$	0.4661 ± 0.0080
S_8	0.806 ± 0.016	$z_{\rm drag}$	1059.4 ± 1.2	$\sigma_8(0.51)$	0.617 ± 0.011
$\sigma_8\Omega_{\rm m}^{0.5}$	0.4412 ± 0.0089	$r_{\rm drag}$	147.90 ± 0.75	$f\sigma_8(0.61)$	0.4619 ± 0.0078
$\sigma_8\Omega_{\rm m}^{0.25}$	0.595 ± 0.010	$k_{\rm D}$	0.1399 ± 0.0011	$\sigma_8(0.61)$	0.587 ± 0.011
$\sigma_8/h^{0.5}$	0.972 ± 0.017	$100\theta_{\rm D}$	0.16104 ± 0.00069	$f\sigma_8(2.33)$	0.2963 ± 0.0056
$r_{\rm drag}h$	100.7 ± 1.1	$z_{\rm eq}$	3340 ± 43	$\sigma_8(2.33)$	0.3059 ± 0.0059
$\langle d^2\rangle^{1/2}$	2.468 ± 0.039	$k_{\rm eq}$	0.01020 ± 0.00013	$\chi^2_{\rm lensing}$	12.6 ± 1.8
$z_{\rm re}$	7.74 ± 0.11	$100\theta_{\rm eq}$	0.8242 ± 0.0074	$\chi^2_{\rm 6DF}$	0.057 ± 0.081
$10^9 A_{\rm s}$	2.119 ± 0.070	$100\theta_{\rm s,eq}$	0.4552 ± 0.0040	$\chi^2_{\rm MGS}$	1.93 ± 0.71
$10^9 A_{\rm s}e^{-2\tau}$	1.898 ± 0.063	$H(0.15)$	73.28 ± 0.58	$\chi^2_{\rm DR12BAO}$	4.2 ± 1.2
D_{40}	1295 ± 56	$D_{\rm M}(0.15)$	637.2 ± 5.6	$\chi^2_{\rm prior}$	3.1 ± 2.5
D_{220}	5923 ± 220	$H(0.38)$	83.22 ± 0.46	$\chi^2_{\rm BAO}$	6.2 ± 1.4
D_{810}	2555 ± 92	$D_{\rm M}(0.38)$	1522 ± 11		

$\bar{\chi}^2_{\rm eff} = 21.94$; $R - 1 = 0.00291$

2.199 base_lensing_lenspriors_BAO_theta_post_takahashi

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02221 ± 0.00049	D_{1420}	830 ± 37	$H(0.51)$	89.80 ± 0.41
$\boldsymbol{\Omega_c h^2}$	0.1177 ± 0.0017	D_{2000}	233 ± 12	$D_{\rm M}(0.51)$	1974 ± 14
$\boldsymbol{100\theta_{MC}}$	1.04090 ± 0.00060	$n_{\rm s,0.002}$	0.955 ± 0.019	$H(0.61)$	95.35 ± 0.39
$\boldsymbol{\ln(10^{10} A_s)}$	3.070 ± 0.035	$Y_{\rm P}$	$0.24532^{+0.00022}_{-0.00020}$	$D_{\rm M}(0.61)$	2298 ± 15
$\boldsymbol{n_s}$	0.955 ± 0.019	$Y_{\rm P}^{\rm BBN}$	$0.24665^{+0.00022}_{-0.00020}$	$H(2.33)$	234.9 ± 1.3
H_0	68.02 ± 0.66	10^5D/H	2.618 ± 0.093	$D_{\rm M}(2.33)$	5765 ± 22
Ω_Λ	0.6960 ± 0.0087	Age/Gyr	13.804 ± 0.052	$f\sigma_8(0.15)$	0.4525 ± 0.0098
$\Omega_{\rm m}$	0.3040 ± 0.0087	z_*	1089.93 ± 0.62	$\sigma_8(0.15)$	0.751 ± 0.015
$\Omega_{\rm m}h^2$	0.1406 ± 0.0018	r_*	145.14 ± 0.62	$f\sigma_8(0.38)$	0.4725 ± 0.0094
$\Omega_{\rm m}h^3$	0.0956 ± 0.0011	$100\theta_*$	1.04110 ± 0.00060	$\sigma_8(0.38)$	0.666 ± 0.013
σ_8	0.811 ± 0.016	$D_{\rm M}(z_*)$/Gpc	13.941 ± 0.061	$f\sigma_8(0.51)$	0.4720 ± 0.0092
S_8	0.817 ± 0.018	$z_{\rm drag}$	1059.4 ± 1.2	$\sigma_8(0.51)$	0.624 ± 0.013
$\sigma_8\Omega_{\rm m}^{0.5}$	0.447 ± 0.010	$r_{\rm drag}$	147.87 ± 0.76	$f\sigma_8(0.61)$	0.4677 ± 0.0090
$\sigma_8\Omega_{\rm m}^{0.25}$	0.602 ± 0.012	$k_{\rm D}$	0.1399 ± 0.0011	$\sigma_8(0.61)$	0.594 ± 0.012
$\sigma_8/h^{0.5}$	0.984 ± 0.019	$100\theta_{\rm D}$	0.16106 ± 0.00071	$f\sigma_8(2.33)$	0.2997 ± 0.0062
$r_{\rm drag}h$	100.6 ± 1.1	$z_{\rm eq}$	3345 ± 43	$\sigma_8(2.33)$	0.3093 ± 0.0065
$\langle d^2\rangle^{1/2}$	2.477 ± 0.039	$k_{\rm eq}$	0.01021 ± 0.00013	$\chi^2_{\rm lensing}$	9.3 ± 1.5
$z_{\rm re}$	7.75 ± 0.11	$100\theta_{\rm eq}$	0.8234 ± 0.0074	$\chi^2_{\rm 6DF}$	0.055 ± 0.079
$10^9 A_{\rm s}$	2.154 ± 0.076	$100\theta_{\rm s,eq}$	0.4548 ± 0.0040	$\chi^2_{\rm MGS}$	1.85 ± 0.71
$10^9 A_{\rm s}e^{-2\tau}$	1.930 ± 0.068	$H(0.15)$	73.21 ± 0.58	$\chi^2_{\rm DR12BAO}$	4.3 ± 1.3
D_{40}	1297 ± 55	$D_{\rm M}(0.15)$	637.9 ± 5.6	$\chi^2_{\rm prior}$	2.9 ± 2.3
D_{220}	5978 ± 220	$H(0.38)$	83.17 ± 0.46	$\chi^2_{\rm BAO}$	6.2 ± 1.4
D_{810}	2600 ± 100	$D_{\rm M}(0.38)$	1523 ± 11		

$\bar{\chi}^2_{\rm eff} = 18.40$; $R - 1 = 0.00218$

2.200 base_lensing_lenspriors_BAO_theta_post_agr2takahashi

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02223 ± 0.00048	D_{1420}	811 ± 34	$H(0.51)$	89.84 ± 0.41
$\boldsymbol{\Omega_c h^2}$	0.1175 ± 0.0017	D_{2000}	227 ± 11	$D_{\rm M}(0.51)$	1973 ± 14
$\boldsymbol{100\theta_{MC}}$	1.04088 ± 0.00060	$n_{\rm s,0.002}$	0.948 ± 0.018	$H(0.61)$	95.38 ± 0.39
$\boldsymbol{\ln(10^{10} A_s)}$	3.051 ± 0.034	$Y_{\rm P}$	$0.24533^{+0.00022}_{-0.00019}$	$D_{\rm M}(0.61)$	2297 ± 15
$\boldsymbol{n_s}$	0.948 ± 0.018	$Y_{\rm P}^{\rm BBN}$	$0.24665^{+0.00022}_{-0.00019}$	$H(2.33)$	234.8 ± 1.3
H_0	68.11 ± 0.65	10^5D/H	2.615 ± 0.091	$D_{\rm M}(2.33)$	5764 ± 21
Ω_Λ	0.6972 ± 0.0086	Age/Gyr	13.802 ± 0.051	$f\sigma_8(0.15)$	0.4459 ± 0.0090
$\Omega_{\rm m}$	0.3028 ± 0.0086	z_*	1089.89 ± 0.61	$\sigma_8(0.15)$	0.741 ± 0.014
$\Omega_{\rm m}h^2$	0.1404 ± 0.0018	r_*	145.19 ± 0.61	$f\sigma_8(0.38)$	0.4659 ± 0.0086
$\Omega_{\rm m}h^3$	0.0956 ± 0.0010	$100\theta_*$	1.04109 ± 0.00060	$\sigma_8(0.38)$	0.658 ± 0.012
σ_8	0.801 ± 0.014	$D_{\rm M}(z_*)$/Gpc	13.946 ± 0.060	$f\sigma_8(0.51)$	0.4656 ± 0.0083
S_8	0.805 ± 0.017	$z_{\rm drag}$	1059.4 ± 1.2	$\sigma_8(0.51)$	0.616 ± 0.012
$\sigma_8\Omega_{\rm m}^{0.5}$	0.4407 ± 0.0092	$r_{\rm drag}$	147.91 ± 0.75	$f\sigma_8(0.61)$	0.4614 ± 0.0082
$\sigma_8\Omega_{\rm m}^{0.25}$	0.594 ± 0.011	$k_{\rm D}$	0.1399 ± 0.0011	$\sigma_8(0.61)$	0.586 ± 0.011
$\sigma_8/h^{0.5}$	0.971 ± 0.017	$100\theta_{\rm D}$	0.16104 ± 0.00069	$f\sigma_8(2.33)$	0.2960 ± 0.0058
$r_{\rm drag}h$	100.7 ± 1.1	$z_{\rm eq}$	3340 ± 43	$\sigma_8(2.33)$	0.3056 ± 0.0061
$\langle d^2\rangle^{1/2}$	2.465 ± 0.038	$k_{\rm eq}$	0.01019 ± 0.00013	$\chi^2_{\rm lensing}$	12.8 ± 1.8
$z_{\rm re}$	7.74 ± 0.11	$100\theta_{\rm eq}$	0.8243 ± 0.0074	$\chi^2_{\rm 6DF}$	0.057 ± 0.082
$10^9 A_{\rm s}$	2.114 ± 0.071	$100\theta_{\rm s,eq}$	0.4552 ± 0.0040	$\chi^2_{\rm MGS}$	1.95 ± 0.71
$10^9 A_{\rm s}e^{-2\tau}$	1.894 ± 0.064	$H(0.15)$	73.29 ± 0.57	$\chi^2_{\rm DR12BAO}$	4.2 ± 1.2
D_{40}	1291 ± 54	$D_{\rm M}(0.15)$	637.2 ± 5.5	$\chi^2_{\rm prior}$	3.1 ± 2.5
D_{220}	5911 ± 220	$H(0.38)$	83.23 ± 0.46	$\chi^2_{\rm BAO}$	6.2 ± 1.5
D_{810}	2548 ± 94	$D_{\rm M}(0.38)$	1522 ± 11		

$\bar{\chi}^2_{\rm eff} = 22.09$; $R - 1 = 0.00237$

2.201 base_lensing_lenspriors_BAO_theta_post_Apr6

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02221 ± 0.00049	D_{1420}	830 ± 36	$H(0.51)$	89.79 ± 0.41
$\boldsymbol{\Omega_c h^2}$	0.1178 ± 0.0017	D_{2000}	233 ± 11	$D_{\rm M}(0.51)$	1975 ± 14
$\boldsymbol{100\theta_{MC}}$	1.04091 ± 0.00060	$n_{\rm s,0.002}$	0.956 ± 0.019	$H(0.61)$	95.34 ± 0.39
$\boldsymbol{\ln(10^{10} A_s)}$	3.068 ± 0.034	$Y_{\rm P}$	$0.24532^{+0.00022}_{-0.00020}$	$D_{\rm M}(0.61)$	2299 ± 15
$\boldsymbol{n_s}$	0.956 ± 0.019	$Y_{\rm P}^{\rm BBN}$	$0.24664^{+0.00022}_{-0.00020}$	$H(2.33)$	234.9 ± 1.3
H_0	68.00 ± 0.66	10^5D/H	2.619 ± 0.093	$D_{\rm M}(2.33)$	5765 ± 22
Ω_Λ	0.6957 ± 0.0087	Age/Gyr	13.805 ± 0.052	$f\sigma_8(0.15)$	0.4529 ± 0.0095
$\Omega_{\rm m}$	0.3043 ± 0.0087	z_*	1089.95 ± 0.62	$\sigma_8(0.15)$	0.751 ± 0.014
$\Omega_{\rm m}h^2$	0.1407 ± 0.0018	r_*	145.13 ± 0.62	$f\sigma_8(0.38)$	0.4728 ± 0.0091
$\Omega_{\rm m}h^3$	0.0956 ± 0.0011	$100\theta_*$	1.04111 ± 0.00060	$\sigma_8(0.38)$	0.666 ± 0.013
σ_8	0.812 ± 0.015	$D_{\rm M}(z_*)$/Gpc	13.940 ± 0.061	$f\sigma_8(0.51)$	0.4723 ± 0.0089
S_8	0.817 ± 0.018	$z_{\rm drag}$	1059.4 ± 1.2	$\sigma_8(0.51)$	0.624 ± 0.012
$\sigma_8\Omega_{\rm m}^{0.5}$	0.4477 ± 0.0098	$r_{\rm drag}$	147.86 ± 0.76	$f\sigma_8(0.61)$	0.4679 ± 0.0087
$\sigma_8\Omega_{\rm m}^{0.25}$	0.603 ± 0.012	$k_{\rm D}$	0.1399 ± 0.0011	$\sigma_8(0.61)$	0.594 ± 0.012
$\sigma_8/h^{0.5}$	0.984 ± 0.018	$100\theta_{\rm D}$	0.16107 ± 0.00071	$f\sigma_8(2.33)$	0.2997 ± 0.0060
$r_{\rm drag}h$	100.5 ± 1.1	$z_{\rm eq}$	3346 ± 43	$\sigma_8(2.33)$	0.3093 ± 0.0064
$\langle d^2\rangle^{1/2}$	2.473 ± 0.039	$k_{\rm eq}$	0.01021 ± 0.00013	$\chi^2_{\rm lensing}$	7.9 ± 1.5
$z_{\rm re}$	7.75 ± 0.11	$100\theta_{\rm eq}$	0.8231 ± 0.0074	$\chi^2_{\rm 6DF}$	0.055 ± 0.078
$10^9 A_{\rm s}$	2.152 ± 0.074	$100\theta_{\rm s,eq}$	0.4546 ± 0.0040	$\chi^2_{\rm MGS}$	1.82 ± 0.70
$10^9 A_{\rm s}e^{-2\tau}$	1.928 ± 0.066	$H(0.15)$	73.19 ± 0.58	$\chi^2_{\rm DR12BAO}$	4.3 ± 1.3
D_{40}	1291 ± 55	$D_{\rm M}(0.15)$	638.1 ± 5.6	$\chi^2_{\rm prior}$	2.9 ± 2.3
D_{220}	5961 ± 220	$H(0.38)$	83.16 ± 0.46	$\chi^2_{\rm BAO}$	6.2 ± 1.4
D_{810}	2598 ± 98	$D_{\rm M}(0.38)$	1524 ± 11		

$\bar{\chi}^2_{\rm eff} = 16.94$; $R - 1 = 0.00237$

2.202 base_lensing_lenspriors_pttagr2

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\mathbf{\Omega_b h^2}$	0.02220 ± 0.00050	D_{810}	3282 ± 600	$H(0.38)$	84 ± 10
$\mathbf{\Omega_c h^2}$	$0.0941^{+0.0084}_{-0.0097}$	D_{1420}	1046^{+100}_{-200}	$D_{\rm M}(0.38)$	1556^{+160}_{-460}
$\mathbf{100\theta_{MC}}$	$1.018^{+0.078}_{-0.046}$	D_{2000}	344^{+40}_{-90}	$H(0.51)$	89 ± 10
$\mathbf{\ln(10^{10} A_s)}$	3.34 ± 0.14	$n_{\rm s,0.002}$	0.959 ± 0.020	$D_{\rm M}(0.51)$	2019^{+210}_{-570}
$\mathbf{n_s}$	0.959 ± 0.020	$Y_{\rm P}$	$0.24531^{+0.00023}_{-0.00020}$	$H(0.61)$	94 ± 10
H_0	—	$Y_{\rm P}^{\rm BBN}$	$0.24664^{+0.00023}_{-0.00020}$	$D_{\rm M}(0.61)$	2353^{+240}_{-650}
Ω_Λ	$0.723^{+0.16}_{-0.041}$	10^5D/H	$2.621^{+0.088}_{-0.10}$	$H(2.33)$	217 ± 11
$\Omega_{\rm m}$	$0.277^{+0.041}_{-0.16}$	Age/Gyr	$14.5^{+1.1}_{-2.5}$	$D_{\rm M}(2.33)$	6028^{+490}_{-1100}
$\Omega_{\rm m}h^2$	$0.1169^{+0.0084}_{-0.0097}$	z_*	1087.7 ± 1.0	$f\sigma_8(0.15)$	$0.399^{+0.044}_{-0.053}$
$\Omega_{\rm m}h^3$	$0.084^{+0.023}_{-0.029}$	r_*	151.9 ± 2.8	$\sigma_8(0.15)$	$0.743^{+0.13}_{-0.066}$
σ_8	$0.796^{+0.12}_{-0.064}$	$100\theta_*$	$1.018^{+0.078}_{-0.046}$	$f\sigma_8(0.38)$	$0.426^{+0.025}_{-0.016}$
S_8	$0.723^{+0.071}_{-0.13}$	$D_{\rm M}(z_*)$/Gpc	$14.98^{+0.83}_{-1.3}$	$\sigma_8(0.38)$	$0.668^{+0.14}_{-0.069}$
$\sigma_8\Omega_{\rm m}^{0.5}$	$0.396^{+0.039}_{-0.070}$	$z_{\rm drag}$	1057.6 ± 1.4	$f\sigma_8(0.51)$	$0.431^{+0.018}_{-0.015}$
$\sigma_8\Omega_{\rm m}^{0.25}$	$0.557^{+0.019}_{-0.016}$	$r_{\rm drag}$	154.9 ± 3.0	$\sigma_8(0.51)$	$0.629^{+0.14}_{-0.070}$
$\sigma_8/h^{0.5}$	$0.954^{+0.028}_{-0.022}$	$k_{\rm D}$	0.1329 ± 0.0030	$f\sigma_8(0.61)$	$0.432^{+0.023}_{-0.014}$
$r_{\rm drag}h$	110^{+40}_{-20}	$100\theta_{\rm D}$	$0.158^{+0.012}_{-0.0070}$	$\sigma_8(0.61)$	$0.602^{+0.14}_{-0.070}$
$\langle d^2\rangle^{1/2}$	2.606 ± 0.064	$z_{\rm eq}$	2778^{+200}_{-230}	$f\sigma_8(2.33)$	$0.307^{+0.079}_{-0.040}$
$z_{\rm re}$	7.31 ± 0.27	$k_{\rm eq}$	$0.00848^{+0.00062}_{-0.00071}$	$\sigma_8(2.33)$	$0.324^{+0.095}_{-0.052}$
$10^9 A_{\rm s}$	$2.84^{+0.35}_{-0.42}$	$100\theta_{\rm eq}$	0.929 ± 0.050	$\chi^2_{\rm lensing}$	18.0 ± 2.0
$10^9 A_{\rm s}e^{-2\tau}$	$2.55^{+0.31}_{-0.38}$	$100\theta_{\rm s,eq}$	0.509 ± 0.026	$\chi^2_{\rm prior}$	2.0 ± 2.0
D_{40}	1794^{+300}_{-300}	$H(0.15)$	75^{+30}_{-20}		
D_{220}	8741^{+1000}_{-2000}	$D_{\rm M}(0.15)$	651^{+68}_{-210}		

$\bar{\chi}^2_{\rm eff} = 20.05$; $R - 1 = 0.00735$

2.203 base_lensing_lenspriors_pttagr2_theta

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02222 ± 0.00050	D_{810}	3627^{+400}_{-500}	$H(0.38)$	88.9 ± 2.4
$\boldsymbol{\Omega_c h^2}$	$0.0957^{+0.0068}_{-0.0085}$	D_{1420}	1137^{+100}_{-200}	$D_{\rm M}(0.38)$	1384^{+48}_{-55}
$\boldsymbol{100\theta_{MC}}$	1.04089 ± 0.00061	D_{2000}	317^{+40}_{-50}	$H(0.51)$	$94.2^{+1.8}_{-2.1}$
$\boldsymbol{\ln(10^{10} A_s)}$	3.37 ± 0.13	$n_{\rm s,0.002}$	0.959 ± 0.020	$D_{\rm M}(0.51)$	1811^{+59}_{-65}
$\boldsymbol{n_s}$	0.959 ± 0.020	$Y_{\rm P}$	$0.24532^{+0.00023}_{-0.00020}$	$H(0.61)$	$98.7^{+1.4}_{-1.8}$
H_0	77.2 ± 3.6	$Y_{\rm P}^{\rm BBN}$	$0.24665^{+0.00023}_{-0.00020}$	$D_{\rm M}(0.61)$	2122 ± 68
Ω_Λ	$0.798^{+0.037}_{-0.024}$	10^5D/H	$2.617^{+0.088}_{-0.099}$	$H(2.33)$	$220.5^{+4.4}_{-5.6}$
$\Omega_{\rm m}$	$0.202^{+0.024}_{-0.037}$	Age/Gyr	13.648 ± 0.085	$D_{\rm M}(2.33)$	5670^{+53}_{-45}
$\Omega_{\rm m}h^2$	$0.1186^{+0.0069}_{-0.0085}$	z_*	$1087.89^{+0.84}_{-0.97}$	$f\sigma_8(0.15)$	0.383 ± 0.026
$\Omega_{\rm m}h^3$	0.0913 ± 0.0019	r_*	151.4 ± 2.4	$\sigma_8(0.15)$	0.784 ± 0.021
σ_8	0.834 ± 0.020	$100\theta_*$	1.04114 ± 0.00061	$f\sigma_8(0.38)$	$0.425^{+0.021}_{-0.019}$
S_8	$0.681^{+0.045}_{-0.051}$	$D_{\rm M}(z_*)$/Gpc	$14.54^{+0.24}_{-0.22}$	$\sigma_8(0.38)$	0.710 ± 0.023
$\sigma_8\Omega_{\rm m}^{0.5}$	$0.373^{+0.025}_{-0.028}$	$z_{\rm drag}$	1057.7 ± 1.4	$f\sigma_8(0.51)$	$0.438^{+0.018}_{-0.015}$
$\sigma_8\Omega_{\rm m}^{0.25}$	0.557 ± 0.019	$r_{\rm drag}$	154.3 ± 2.5	$\sigma_8(0.51)$	$0.671^{+0.024}_{-0.022}$
$\sigma_8/h^{0.5}$	$0.950^{+0.023}_{-0.021}$	$k_{\rm D}$	0.1335 ± 0.0026	$f\sigma_8(0.61)$	$0.443^{+0.015}_{-0.012}$
$r_{\rm drag}h$	119.2 ± 7.4	$100\theta_{\rm D}$	0.16193 ± 0.00080	$\sigma_8(0.61)$	$0.643^{+0.024}_{-0.022}$
$\langle d^2\rangle^{1/2}$	2.599 ± 0.063	$z_{\rm eq}$	2819^{+160}_{-200}	$f\sigma_8(2.33)$	$0.330^{+0.015}_{-0.013}$
$z_{\rm re}$	$7.38^{+0.15}_{-0.17}$	$k_{\rm eq}$	$0.00860^{+0.00050}_{-0.00062}$	$\sigma_8(2.33)$	0.350 ± 0.018
$10^9 A_{\rm s}$	$2.93^{+0.33}_{-0.39}$	$100\theta_{\rm eq}$	0.940 ± 0.047	$\chi^2_{\rm lensing}$	17.9 ± 2.1
$10^9 A_{\rm s}e^{-2\tau}$	$2.62^{+0.30}_{-0.35}$	$100\theta_{\rm s,eq}$	0.515 ± 0.024	$\chi^2_{\rm prior}$	3.0 ± 2.5
D_{40}	1868^{+200}_{-300}	$H(0.15)$	81.1 ± 3.2		
D_{220}	9009^{+1000}_{-1000}	$D_{\rm M}(0.15)$	570^{+22}_{-27}		

$\bar{\chi}^2_{\rm eff} = 20.91$; $R - 1 = 0.00715$

2.204 base_lensing_lenspriors_pttagr2_BAO

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02221 ± 0.00051	D_{1420}	967 ± 85	$H(0.51)$	85.9 ± 1.9
$\boldsymbol{\Omega_c h^2}$	$0.0987^{+0.0079}_{-0.0091}$	D_{2000}	290^{+27}_{-50}	$D_{\rm M}(0.51)$	2044 ± 39
$\boldsymbol{100\theta_{MC}}$	1.013 ± 0.014	$n_{\rm s,0.002}$	0.954 ± 0.020	$H(0.61)$	90.9 ± 2.2
$\boldsymbol{\ln(10^{10} A_s)}$	3.26 ± 0.10	$Y_{\rm P}$	$0.24532^{+0.00023}_{-0.00020}$	$D_{\rm M}(0.61)$	2383 ± 47
$\boldsymbol{n_s}$	0.954 ± 0.020	$Y_{\rm P}^{\rm BBN}$	$0.24664^{+0.00023}_{-0.00020}$	$H(2.33)$	219.2 ± 7.3
H_0	66.4 ± 1.1	10^5D/H	2.618 ± 0.096	$D_{\rm M}(2.33)$	6069 ± 150
Ω_Λ	0.725 ± 0.014	Age/Gyr	14.54 ± 0.37	$f\sigma_8(0.15)$	0.419 ± 0.016
$\Omega_{\rm m}$	0.275 ± 0.014	z_*	$1088.18^{+0.90}_{-1.0}$	$\sigma_8(0.15)$	0.730 ± 0.016
$\Omega_{\rm m}h^2$	$0.1215^{+0.0080}_{-0.0092}$	r_*	150.5 ± 2.6	$f\sigma_8(0.38)$	0.445 ± 0.014
$\Omega_{\rm m}h^3$	$0.0808^{+0.0062}_{-0.0073}$	$100\theta_*$	1.013 ± 0.014	$\sigma_8(0.38)$	0.651 ± 0.014
σ_8	0.786 ± 0.017	$D_{\rm M}(z_*)$/Gpc	14.86 ± 0.45	$f\sigma_8(0.51)$	0.448 ± 0.013
S_8	0.753 ± 0.030	$z_{\rm drag}$	1057.9 ± 1.4	$\sigma_8(0.51)$	0.611 ± 0.013
$\sigma_8\Omega_{\rm m}^{0.5}$	0.412 ± 0.016	$r_{\rm drag}$	153.4 ± 2.7	$f\sigma_8(0.61)$	0.446 ± 0.012
$\sigma_8\Omega_{\rm m}^{0.25}$	0.569 ± 0.017	$k_{\rm D}$	0.1343 ± 0.0028	$\sigma_8(0.61)$	0.583 ± 0.012
$\sigma_8/h^{0.5}$	0.965 ± 0.019	$100\theta_{\rm D}$	0.1575 ± 0.0018	$f\sigma_8(2.33)$	0.2954 ± 0.0061
$r_{\rm drag}h$	101.8 ± 1.2	$z_{\rm eq}$	2889^{+190}_{-220}	$\sigma_8(2.33)$	0.3063 ± 0.0064
$\langle d^2\rangle^{1/2}$	2.579 ± 0.062	$k_{\rm eq}$	$0.00882^{+0.00058}_{-0.00067}$	$\chi^2_{\rm lensing}$	18.4 ± 2.3
$z_{\rm re}$	$7.37^{+0.19}_{-0.21}$	$100\theta_{\rm eq}$	0.897 ± 0.037	$\chi^2_{\rm 6DF}$	0.11 ± 0.14
$10^9 A_{\rm s}$	$2.61^{+0.23}_{-0.29}$	$100\theta_{\rm s,eq}$	0.492 ± 0.019	$\chi^2_{\rm MGS}$	2.43 ± 0.78
$10^9 A_{\rm s}e^{-2\tau}$	$2.34^{+0.21}_{-0.26}$	$H(0.15)$	71.0 ± 1.3	$\chi^2_{\rm DR12BAO}$	6.0 ± 1.7
D_{40}	1633^{+150}_{-190}	$D_{\rm M}(0.15)$	656 ± 11	$\chi^2_{\rm prior}$	2.1 ± 2.1
D_{220}	7943^{+900}_{-1000}	$H(0.38)$	79.9 ± 1.7	$\chi^2_{\rm BAO}$	8.6 ± 1.8
D_{810}	3114 ± 290	$D_{\rm M}(0.38)$	1573 ± 29		

$\bar{\chi}^2_{\rm eff} = 29.10$; $R - 1 = 0.00706$

2.205 base_lensing_lenspriors_pttagr2_BAO_theta

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02228 ± 0.00051	D_{1420}	812 ± 36	$H(0.51)$	89.91 ± 0.43
$\boldsymbol{\Omega_c h^2}$	0.1173 ± 0.0017	D_{2000}	227 ± 11	$D_{\rm M}(0.51)$	1970 ± 14
$\boldsymbol{100\theta_{MC}}$	1.04086 ± 0.00059	$n_{\rm s,0.002}$	0.938 ± 0.018	$H(0.61)$	95.43 ± 0.40
$\boldsymbol{\ln(10^{10} A_s)}$	3.061 ± 0.038	$Y_{\rm P}$	$0.24535^{+0.00023}_{-0.00020}$	$D_{\rm M}(0.61)$	2294 ± 15
$\boldsymbol{n_s}$	0.938 ± 0.018	$Y_{\rm P}^{\rm BBN}$	$0.24667^{+0.00023}_{-0.00021}$	$H(2.33)$	234.6 ± 1.3
H_0	68.24 ± 0.67	10^5D/H	2.606 ± 0.097	$D_{\rm M}(2.33)$	5761 ± 22
Ω_Λ	0.6989 ± 0.0088	Age/Gyr	13.796 ± 0.053	$f\sigma_8(0.15)$	0.4447 ± 0.0094
$\Omega_{\rm m}$	0.3011 ± 0.0088	z_*	1089.81 ± 0.64	$\sigma_8(0.15)$	0.741 ± 0.014
$\Omega_{\rm m} h^2$	0.1402 ± 0.0019	r_*	145.22 ± 0.64	$f\sigma_8(0.38)$	0.4652 ± 0.0091
$\Omega_{\rm m} h^3$	0.0957 ± 0.0011	$100\theta_*$	1.04106 ± 0.00060	$\sigma_8(0.38)$	0.658 ± 0.013
σ_8	0.801 ± 0.015	$D_{\rm M}(z_*)$/Gpc	13.949 ± 0.063	$f\sigma_8(0.51)$	0.4650 ± 0.0089
S_8	0.802 ± 0.018	$z_{\rm drag}$	1059.5 ± 1.2	$\sigma_8(0.51)$	0.616 ± 0.012
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4394 ± 0.0097	$r_{\rm drag}$	147.93 ± 0.79	$f\sigma_8(0.61)$	0.4609 ± 0.0087
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.593 ± 0.011	$k_{\rm D}$	0.1399 ± 0.0012	$\sigma_8(0.61)$	0.587 ± 0.012
$\sigma_8 / h^{0.5}$	0.969 ± 0.018	$100\theta_{\rm D}$	0.16098 ± 0.00073	$f\sigma_8(2.33)$	0.2963 ± 0.0061
$r_{\rm drag} h$	$101.0^{+1.1}_{-1.2}$	$z_{\rm eq}$	3334 ± 44	$\sigma_8(2.33)$	0.3059 ± 0.0065
$\langle d^2 \rangle^{1/2}$	2.495 ± 0.047	$k_{\rm eq}$	0.01018 ± 0.00014	$\chi^2_{\rm lensing}$	23 ± 3
$z_{\rm re}$	7.73 ± 0.12	$100\theta_{\rm eq}$	0.8254 ± 0.0076	$\chi^2_{\rm 6DF}$	0.066 ± 0.096
$10^9 A_{\rm s}$	2.136 ± 0.080	$100\theta_{\rm s,eq}$	0.4558 ± 0.0041	$\chi^2_{\rm MGS}$	2.07 ± 0.75
$10^9 A_{\rm s} e^{-2\tau}$	1.914 ± 0.072	$H(0.15)$	73.40 ± 0.59	$\chi^2_{\rm DR12BAO}$	4.3 ± 1.3
D_{40}	1335 ± 65	$D_{\rm M}(0.15)$	636.1 ± 5.7	$\chi^2_{\rm prior}$	4.1 ± 3.1
D_{220}	6041^{+230}_{-260}	$H(0.38)$	83.31 ± 0.47	$\chi^2_{\rm BAO}$	6.4 ± 1.7
D_{810}	2567 ± 100	$D_{\rm M}(0.38)$	1519 ± 12		

$\bar{\chi}^2_{\rm eff} = 33.48$; $R - 1 = 0.01261$

2.206 base_lensing_DESpriors

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_m}$	0.259	$0.276^{+0.050}_{-0.061}$	$\Omega_{\rm b} h^2$	0.0276	$0.0257^{+0.0060}_{-0.011}$	S_8	0.779	0.780 ± 0.051
$\boldsymbol{\Omega_b}$	0.0541	—	$\Omega_{\rm c} h^2$	0.1041	$0.112^{+0.016}_{-0.025}$	$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4268	0.427 ± 0.028
$\boldsymbol{H_0}$	71.5	< 77.4	Ω_Λ	0.741	$0.724^{+0.061}_{-0.050}$	$\sigma_8 \Omega_{\rm m}^{0.25}$	0.5983	0.591 ± 0.020
$\boldsymbol{10^9 A_s}$	2.733	$2.47^{+0.38}_{-0.54}$	$\ln(10^{10} A_{\rm s})$	3.308	3.19 ± 0.18	$\chi^2_{\rm lensing}$	7.38	9.6 ± 2.0
$\boldsymbol{n_s}$	1.037	> 0.945	σ_8	0.8388	$0.820^{+0.041}_{-0.048}$			

Best-fit $\chi^2_{\rm eff} = 7.38$; $\bar{\chi}^2_{\rm eff} = 9.64$; $R - 1 = 0.01504$
$\chi^2_{\rm eff}$: CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8_CMBmarged: 7.38

2.207 base_lensing_DESpriors_BAO

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_m}$	0.3365	$0.302^{+0.021}_{-0.026}$	$\Omega_{\rm c} h^2$	0.1204	$0.122^{+0.019}_{-0.029}$	$\sigma_8 \Omega_{\rm m}^{0.25}$	0.5911	0.598 ± 0.020
$\boldsymbol{\Omega_b}$	0.0373	$0.048^{+0.010}_{-0.013}$	Ω_Λ	0.6635	$0.698^{+0.026}_{-0.021}$	$\chi^2_{\rm lensing}$	8.16	9.9 ± 2.1
$\boldsymbol{H_0}$	63.6	$69.5^{+4.9}_{-11}$	$\ln(10^{10} A_{\rm s})$	2.925	$3.07^{+0.13}_{-0.19}$	$\chi^2_{\rm 6DF}$	0.0470	0.08 ± 0.11
$\boldsymbol{10^9 A_s}$	1.863	$2.18^{+0.23}_{-0.45}$	σ_8	0.7762	$0.808^{+0.024}_{-0.028}$	$\chi^2_{\rm MGS}$	1.16	1.87 ± 0.79
$\boldsymbol{n_s}$	0.870	< 0.970	S_8	0.8220	0.810 ± 0.036	$\chi^2_{\rm DR12BAO}$	2.43	4.7 ± 1.7
$\Omega_{\rm b} h^2$	0.0151	$0.0247^{+0.0049}_{-0.014}$	$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4502	0.443 ± 0.020	$\chi^2_{\rm BAO}$	3.64	6.6 ± 2.0

Best-fit $\chi^2_{\rm eff} = 11.80$; $\bar{\chi}^2_{\rm eff} = 16.52$; $R - 1 = 0.00617$
$\chi^2_{\rm eff}$: BAO - 6DF: 0.05 MGS: 1.16 DR12BAO: 2.43 CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8_CMBmarged: 8.16

2.208 base_lensing_DESpriors_CookeDH

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_m}$	0.239	$0.300^{+0.066}_{-0.083}$	$\Omega_b h^2$	0.022239	0.02218 ± 0.00050	S_8	0.762	0.797 ± 0.060
$\boldsymbol{\Omega_b}$	0.0445	—	$\Omega_c h^2$	0.0966	$0.108^{+0.012}_{-0.018}$	$\sigma_8 \Omega_m^{0.5}$	0.4175	0.437 ± 0.033
$\boldsymbol{H_0}$	70.7	$67.2^{+4.0}_{-11}$	Ω_Λ	0.761	$0.700^{+0.083}_{-0.066}$	$\sigma_8 \Omega_m^{0.25}$	0.5972	0.593 ± 0.020
$\boldsymbol{10^9 A_s}$	2.890	$2.46^{+0.41}_{-0.52}$	$\ln(10^{10} A_s)$	3.364	$3.18^{+0.20}_{-0.18}$	$\chi^2_{\rm lensing}$	7.36	9.6 ± 2.0
$\boldsymbol{n_s}$	1.036	—	σ_8	0.854	$0.808^{+0.043}_{-0.063}$	$\chi^2_{\rm prior}$	0.006	1.0 ± 1.5

Best-fit $\chi^2_{\rm eff} = 7.37$; $\bar{\chi}^2_{\rm eff} = 10.57$; $R - 1 = 0.00800$
$\chi^2_{\rm eff}$: CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8_CMBmarged: 7.36

2.209 base_lensing_DESpriors_CookeDH_BAO

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_m}$	0.3280	0.306 ± 0.022	Ω_Λ	0.6720	0.694 ± 0.022	$\chi^2_{\rm 6DF}$	0.0281	0.070 ± 0.097
$\boldsymbol{\Omega_b}$	0.04619	$0.0480^{+0.0020}_{-0.0022}$	$\ln(10^{10} A_s)$	2.890	$3.06^{+0.12}_{-0.18}$	$\chi^2_{\rm MGS}$	1.28	1.79 ± 0.76
$\boldsymbol{H_0}$	69.24	68.0 ± 1.5	σ_8	0.7835	$0.807^{+0.022}_{-0.026}$	$\chi^2_{\rm DR12BAO}$	2.67	4.5 ± 1.8
$\boldsymbol{10^9 A_s}$	1.799	$2.17^{+0.22}_{-0.41}$	S_8	0.8192	0.813 ± 0.035	$\chi^2_{\rm prior}$	0.011	0.99 ± 1.4
$\boldsymbol{n_s}$	0.8703	< 0.968	$\sigma_8 \Omega_m^{0.5}$	0.4487	0.446 ± 0.019	$\chi^2_{\rm BAO}$	3.98	6.4 ± 2.0
$\Omega_b h^2$	0.022147	0.02219 ± 0.00050	$\sigma_8 \Omega_m^{0.25}$	0.5929	0.599 ± 0.019			
$\Omega_c h^2$	0.1345	0.119 ± 0.015	$\chi^2_{\rm lensing}$	8.00	9.8 ± 2.1			

Best-fit $\chi^2_{\rm eff} = 11.99$; $\bar{\chi}^2_{\rm eff} = 17.15$; $R - 1 = 0.00446$
$\chi^2_{\rm eff}$: BAO - 6DF: 0.03 MGS: 1.28 DR12BAO: 2.67 CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8_CMBmarged: 8.00

2.210 base_plikHM_TT

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022557	0.02242 ± 0.00028	$\sigma_8\Omega_m^{0.5}$	0.4799	0.478 ± 0.014	$100\theta_{eq}$	0.8255	0.821 ± 0.012
$\boldsymbol{\Omega_c h^2}$	0.11718	0.1182 ± 0.0027	$\sigma_8\Omega_m^{0.25}$	0.6495	0.643 ± 0.017	$100\theta_{s,eq}$	0.4556	0.4536 ± 0.0060
$\boldsymbol{100\theta_{MC}}$	1.04130	1.04114 ± 0.00054	$\sigma_8/h^{0.5}$	1.0612	1.049 ± 0.028	$H(0.15)$	73.77	73.3 ± 1.1
$\boldsymbol{\tau}$	0.1470	$0.127^{+0.039}_{-0.034}$	$r_{drag}h$	101.33	100.5 ± 2.2	$D_M(0.15)$	632.6	637 ± 11
$\boldsymbol{\ln(10^{10}A_s)}$	3.222	$3.185^{+0.073}_{-0.064}$	$\langle d^2\rangle^{1/2}$	2.618	$2.592^{+0.068}_{-0.062}$	$H(0.38)$	83.65	83.32 ± 0.80
$\boldsymbol{n_s}$	0.9756	0.9708 ± 0.0086	z_{re}	15.38	$13.8^{+3.2}_{-2.2}$	$D_M(0.38)$	1511.9	1521 ± 21
$\boldsymbol{A_{217}^{CIB}}$	42.9	46 ± 7	$10^9 A_s$	2.508	2.42 ± 0.17	$H(0.51)$	90.23	89.97 ± 0.63
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.999	> 0.400	$10^9 A_s e^{-2\tau}$	1.8692	1.873 ± 0.016	$D_M(0.51)$	1960.7	1971 ± 25
$\boldsymbol{A_{143}^{tSZ}}$	6.81	$5.5^{+2.1}_{-1.9}$	D_{40}	1254.8	1255 ± 18	$H(0.61)$	95.75	95.53 ± 0.51
$\boldsymbol{A_{100}^{PS}}$	239.6	254 ± 30	D_{220}	5725.4	5725 ± 41	$D_M(0.61)$	2283.3	2295 ± 27
$\boldsymbol{A_{143}^{PS}}$	49.8	44 ± 9	D_{810}	2530.1	2529 ± 14	$H(2.33)$	234.93	235.4 ± 1.6
$\boldsymbol{A_{143\times217}^{PS}}$	57.4	42 ± 9	D_{1420}	816.4	814.2 ± 5.1	$D_M(2.33)$	5743.9	5754 ± 22
$\boldsymbol{A_{217}^{PS}}$	123.1	115 ± 10	D_{2000}	232.90	231.5 ± 2.1	$f\sigma_8(0.15)$	0.4860	0.483 ± 0.014
$\boldsymbol{A^{kSZ}}$	0.01	< 3.67	$n_{s,0.002}$	0.9756	0.9708 ± 0.0086	$\sigma_8(0.15)$	0.8138	0.801 ± 0.024
$\boldsymbol{A_{100}^{dustTT}}$	8.63	8.7 ± 1.8	Y_P	0.245465	0.24541 ± 0.00012	$f\sigma_8(0.38)$	0.5092	0.504 ± 0.013
$\boldsymbol{A_{143}^{dustTT}}$	10.54	10.5 ± 1.8	Y_P^{BBN}	0.246791	0.24674 ± 0.00012	$\sigma_8(0.38)$	0.7230	0.711 ± 0.023
$\boldsymbol{A_{143\times217}^{dustTT}}$	19.77	18.0 ± 3.3	10^5D/H	2.552	2.579 ± 0.052	$f\sigma_8(0.51)$	0.5094	0.504 ± 0.013
$\boldsymbol{A_{217}^{dustTT}}$	95.9	93.7 ± 7.3	Age/Gyr	13.7551	13.778 ± 0.049	$\sigma_8(0.51)$	0.6773	0.665 ± 0.022
$\boldsymbol{c_{100}}$	0.99971	0.99961 ± 0.00062	z_*	1089.44	1089.71 ± 0.55	$f\sigma_8(0.61)$	0.5052	0.499 ± 0.013
$\boldsymbol{c_{217}}$	0.99817	0.99820 ± 0.00062	r_*	145.02	144.87 ± 0.58	$\sigma_8(0.61)$	0.6449	0.633 ± 0.021
$\boldsymbol{y_{cal}}$	1.00006	1.0002 ± 0.0025	$100\theta_*$	1.04147	1.04132 ± 0.00052	$f\sigma_8(2.33)$	0.3258	0.320 ± 0.011
H_0	68.64	68.1 ± 1.3	$D_M(z_*)$/Gpc	13.925	13.912 ± 0.052	$\sigma_8(2.33)$	0.3365	0.330 ± 0.012
Ω_Λ	0.7020	$0.695^{+0.018}_{-0.015}$	z_{drag}	1060.16	1059.91 ± 0.54	f_{2000}^{143}	25.65	28 ± 4
Ω_m	0.2980	$0.305^{+0.015}_{-0.018}$	r_{drag}	147.63	147.53 ± 0.55	$f_{2000}^{143\times217}$	29.71	30.9 ± 2.5
$\Omega_m h^2$	0.14039	0.1412 ± 0.0025	k_D	0.14044	0.14044 ± 0.00055	f_{2000}^{217}	104.31	105.8 ± 2.3
$\Omega_m h^3$	0.096355	0.09619 ± 0.00048	$100\theta_D$	0.160651	0.16080 ± 0.00030	χ^2_{plik}	752.7	767.4 ± 5.5
σ_8	0.8791	0.866 ± 0.026	z_{eq}	3339	3360 ± 60	χ^2_{prior}	0.98	7.1 ± 3.6
S_8	0.8762	0.872 ± 0.026	k_{eq}	0.010192	0.01025 ± 0.00018			

Best-fit $\chi^2_{eff} = 753.73$; $\bar{\chi}^2_{eff} = 774.46$; $R - 1 = 0.00674$
χ^2_{eff}: CMB - plik_rd12_HM_v22_TT: 752.75

2.211 base_plikHM_TT_lowl

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022496	0.02238 ± 0.00027	$\sigma_8\Omega_m^{0.25}$	0.6370	0.630 ± 0.016	$H(0.15)$	73.68	73.3 ± 1.0
$\boldsymbol{\Omega_c h^2}$	0.11728	0.1181 ± 0.0025	$\sigma_8/h^{0.5}$	1.0406	1.028 ± 0.026	$D_M(0.15)$	633.5	637.0 ± 9.8
$\boldsymbol{100\theta_{MC}}$	1.04124	1.04112 ± 0.00052	$r_{drag}h$	101.20	100.6 ± 2.0	$H(0.38)$	83.57	83.31 ± 0.74
$\boldsymbol{\tau}$	0.1259	$0.108^{+0.034}_{-0.031}$	$\langle d^2\rangle^{1/2}$	2.564	2.539 ± 0.061	$D_M(0.38)$	1513.9	1521 ± 20
$\boldsymbol{\ln(10^{10}A_s)}$	3.180	$3.145^{+0.065}_{-0.058}$	z_{re}	13.82	$12.3^{+3.0}_{-2.1}$	$H(0.51)$	90.16	89.95 ± 0.59
$\boldsymbol{n_s}$	0.9756	0.9713 ± 0.0077	$10^9 A_s$	2.405	2.33 ± 0.14	$D_M(0.51)$	1963.1	1971 ± 23
$\boldsymbol{y_{cal}}$	1.00013	1.0003 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.8693	1.872 ± 0.015	$H(0.61)$	95.679	$95.51^{+0.45}_{-0.50}$
$\boldsymbol{A_{217}^{CIB}}$	42.8	46 ± 7	D_{40}	1238.9	1240 ± 16	$D_M(0.61)$	2285.9	2295 ± 25
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.986	> 0.390	D_{220}	5715.5	5718 ± 42	$H(2.33)$	234.92	235.3 ± 1.5
$\boldsymbol{A_{143}^{tSZ}}$	6.86	$5.5^{+2.1}_{-1.9}$	D_{810}	2531.7	2531 ± 14	$D_M(2.33)$	5747.6	5755 ± 21
$\boldsymbol{A_{100}^{PS}}$	239.7	254 ± 30	D_{1420}	817.1	815.2 ± 5.1	$f\sigma_8(0.15)$	0.4770	0.473 ± 0.013
$\boldsymbol{A_{143}^{PS}}$	50.5	44 ± 9	D_{2000}	232.59	231.4 ± 2.1	$\sigma_8(0.15)$	0.7973	0.785 ± 0.022
$\boldsymbol{A_{143\times217}^{PS}}$	58.0	42 ± 9	$n_{s,0.002}$	0.9756	0.9713 ± 0.0077	$f\sigma_8(0.38)$	0.4994	0.494 ± 0.013
$\boldsymbol{A_{217}^{PS}}$	123.8	115 ± 10	Y_P	0.245443	0.24540 ± 0.00011	$\sigma_8(0.38)$	0.7082	0.697 ± 0.020
$\boldsymbol{A^{kSZ}}$	0.00	< 3.71	Y_P^{BBN}	0.246770	0.24672 ± 0.00011	$f\sigma_8(0.51)$	0.4995	0.494 ± 0.012
$\boldsymbol{A_{100}^{dustTT}}$	8.74	8.8 ± 1.8	10^5D/H	2.5627	2.584 ± 0.050	$\sigma_8(0.51)$	0.6634	0.652 ± 0.019
$\boldsymbol{A_{143}^{dustTT}}$	10.66	10.5 ± 1.8	Age/Gyr	13.7636	13.781 ± 0.046	$f\sigma_8(0.61)$	0.4953	0.489 ± 0.012
$\boldsymbol{A_{143\times217}^{dustTT}}$	19.94	18.1 ± 3.3	z_*	1089.53	1089.74 ± 0.51	$\sigma_8(0.61)$	0.6316	0.621 ± 0.019
$\boldsymbol{A_{217}^{dustTT}}$	96.2	93.7 ± 7.3	r_*	145.04	144.92 ± 0.54	$f\sigma_8(2.33)$	0.3190	0.3134 ± 0.0097
$\boldsymbol{c_{100}}$	0.99968	0.99960 ± 0.00061	$100\theta_*$	1.04141	1.04131 ± 0.00050	$\sigma_8(2.33)$	0.3295	0.323 ± 0.011
$\boldsymbol{c_{217}}$	0.99816	0.99820 ± 0.00062	$D_M(z_*)$/Gpc	13.9273	13.918 ± 0.049	f_{2000}^{143}	26.13	28 ± 3
H_0	68.53	68.1 ± 1.2	z_{drag}	1060.05	1059.83 ± 0.52	$f_{2000}^{143\times217}$	30.11	31.2 ± 2.5
Ω_Λ	0.7010	0.696 ± 0.015	r_{drag}	147.67	147.59 ± 0.52	f_{2000}^{217}	104.67	106.1 ± 2.2
Ω_m	0.2990	0.304 ± 0.015	k_D	0.14035	0.14035 ± 0.00053	χ^2_{lowl}	24.89	25.0 ± 1.7
$\Omega_m h^2$	0.14042	0.1411 ± 0.0023	$100\theta_D$	0.160722	0.16084 ± 0.00029	χ^2_{plik}	753.5	768.0 ± 5.7
$\Omega_m h^3$	0.096230	0.09610 ± 0.00048	z_{eq}	3340	3356 ± 56	χ^2_{prior}	1.05	7.2 ± 3.6
σ_8	0.8614	0.849 ± 0.023	k_{eq}	0.010195	0.01024 ± 0.00017	χ^2_{CMB}	778.4	793.0 ± 5.5
S_8	0.8600	0.854 ± 0.025	$100\theta_{eq}$	0.8251	0.822 ± 0.011			
$\sigma_8\Omega_m^{0.5}$	0.4710	0.468 ± 0.014	$100\theta_{s,eq}$	0.4555	0.4539 ± 0.0056			

Best-fit $\chi^2_{eff} = 779.48$; $\bar{\chi}^2_{eff} = 800.20$; $R - 1 = 0.00744$
χ^2_{eff}: CMB - commander_dx12_v3_2_29: 24.89 plik_rd12_HM_v22_TT: 753.54

2.212 base_plikHM_TT_lowl_post_BAO

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022429	0.02237 ± 0.00021	$\sigma_8/h^{0.5}$	1.0363	1.028 ± 0.026	$H(0.38)$	83.372	83.27 ± 0.39
$\boldsymbol{\Omega_c h^2}$	0.11792	0.1182 ± 0.0013	$r_{\rm drag}h$	100.68	100.5 ± 1.0	$D_{\rm M}(0.38)$	1519.1	1522 ± 10
$\boldsymbol{100\theta_{MC}}$	1.041173	1.04111 ± 0.00043	$\langle d^2\rangle^{1/2}$	2.554	$2.539^{+0.064}_{-0.057}$	$H(0.51)$	90.002	89.91 ± 0.32
$\boldsymbol{\tau}$	0.1163	$0.107^{+0.029}_{-0.025}$	$z_{\rm re}$	13.12	$12.3^{+2.5}_{-1.8}$	$D_{\rm M}(0.51)$	1969.2	1972 ± 12
$\boldsymbol{\ln(10^{10}A_s)}$	3.163	$3.143^{+0.056}_{-0.049}$	$10^9 A_{\rm s}$	2.363	2.32 ± 0.12	$H(0.61)$	95.555	95.48 ± 0.28
$\boldsymbol{n_s}$	0.97354	0.9709 ± 0.0049	$10^9 A_{\rm s}e^{-2\tau}$	1.8728	1.873 ± 0.012	$D_{\rm M}(0.61)$	2292.5	2296 ± 13
$\boldsymbol{y_{cal}}$	1.00027	1.0003 ± 0.0025	D_{40}	1238.1	1240 ± 16	$H(2.33)$	235.27	235.37 ± 0.79
$\boldsymbol{A_{217}^{CIB}}$	43.1	46 ± 7	D_{220}	5715.2	5718 ± 41	$D_{\rm M}(2.33)$	5752.9	5757 ± 13
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.999	> 0.387	D_{810}	2533.5	2531 ± 14	$f\sigma_8(0.15)$	0.4767	0.474 ± 0.012
$\boldsymbol{A_{143}^{tSZ}}$	6.73	$5.5^{+2.1}_{-1.9}$	D_{1420}	817.00	815.1 ± 4.9	$\sigma_8(0.15)$	0.7918	0.784 ± 0.020
$\boldsymbol{A_{100}^{PS}}$	242.2	254 ± 28	D_{2000}	232.25	231.3 ± 1.9	$f\sigma_8(0.38)$	0.4981	0.494 ± 0.013
$\boldsymbol{A_{143}^{PS}}$	52.4	45 ± 8	$n_{\rm s,0.002}$	0.97354	0.9709 ± 0.0049	$\sigma_8(0.38)$	0.7029	0.696 ± 0.018
$\boldsymbol{A_{143\times217}^{PS}}$	59.3	42 ± 9	$Y_{\rm P}$	0.245419	0.245392 ± 0.000084	$f\sigma_8(0.51)$	0.4977	0.494 ± 0.013
$\boldsymbol{A_{217}^{PS}}$	124.6	115 ± 10	$Y_{\rm P}^{\rm BBN}$	0.246745	0.246719 ± 0.000084	$\sigma_8(0.51)$	0.6582	0.652 ± 0.017
$\boldsymbol{A^{kSZ}}$	0.00	< 3.71	10^5D/H	2.5745	2.586 ± 0.039	$f\sigma_8(0.61)$	0.4931	0.489 ± 0.012
$\boldsymbol{A_{100}^{dust TT}}$	8.74	8.8 ± 1.8	Age/Gyr	13.7752	13.784 ± 0.031	$\sigma_8(0.61)$	0.6265	0.620 ± 0.017
$\boldsymbol{A_{143}^{dust TT}}$	10.65	10.5 ± 1.8	z_*	1089.664	1089.76 ± 0.32	$f\sigma_8(2.33)$	0.3163	0.3131 ± 0.0085
$\boldsymbol{A_{143\times217}^{dust TT}}$	19.82	18.1 ± 3.3	r_*	144.924	144.91 ± 0.32	$\sigma_8(2.33)$	0.3265	0.3231 ± 0.0089
$\boldsymbol{A_{217}^{dust TT}}$	95.8	93.8 ± 7.3	$100\theta_*$	1.041349	1.04130 ± 0.00043	f_{2000}^{143}	26.84	28.4 ± 3.1
$\boldsymbol{c_{100}}$	0.99967	0.99959 ± 0.00062	$D_{\rm M}(z_*)$/Gpc	13.9170	13.916 ± 0.031	$f_{2000}^{143\times217}$	30.66	31.3 ± 2.2
$\boldsymbol{c_{217}}$	0.99818	0.99821 ± 0.00062	$z_{\rm drag}$	1059.933	1059.81 ± 0.46	f_{2000}^{217}	105.17	106.2 ± 2.1
H_0	68.22	68.07 ± 0.60	$r_{\rm drag}$	147.576	147.58 ± 0.34	$\chi^2_{\rm lowl}$	24.68	24.9 ± 1.7
Ω_Λ	0.6970	0.6952 ± 0.0077	$k_{\rm D}$	0.140400	0.14036 ± 0.00044	$\chi^2_{\rm plik}$	753.8	767.3 ± 5.5
$\Omega_{\rm m}$	0.3030	0.3048 ± 0.0077	$100\theta_{\rm D}$	0.160782	0.16085 ± 0.00027	$\chi^2_{\rm 6DF}$	0.0015	0.043 ± 0.061
$\Omega_{\rm m}h^2$	0.14100	0.1412 ± 0.0012	$z_{\rm eq}$	3354.0	3359 ± 29	$\chi^2_{\rm MGS}$	1.82	1.75 ± 0.62
$\Omega_{\rm m}h^3$	0.096190	0.09610 ± 0.00047	$k_{\rm eq}$	0.010237	0.010251 ± 0.000089	$\chi^2_{\rm DR12BAO}$	3.40	4.2 ± 1.1
σ_8	0.8559	0.848 ± 0.022	$100\theta_{\rm eq}$	0.8224	0.8214 ± 0.0056	$\chi^2_{\rm prior}$	1.03	7.2 ± 3.6
S_8	0.8601	0.855 ± 0.023	$100\theta_{\rm s,eq}$	0.45408	0.4536 ± 0.0029	$\chi^2_{\rm BAO}$	5.222	6.0 ± 1.1
$\sigma_8\Omega_{\rm m}^{0.5}$	0.4711	0.468 ± 0.012	$H(0.15)$	73.41	73.28 ± 0.52	$\chi^2_{\rm CMB}$	778.53	792.3 ± 5.3
$\sigma_8\Omega_{\rm m}^{0.25}$	0.6350	0.630 ± 0.016	$D_{\rm M}(0.15)$	636.1	637.4 ± 5.0			

Best-fit $\chi^2_{\rm eff} = 784.78$; $\bar{\chi}^2_{\rm eff} = 805.42$; $R - 1 = 0.01210$

$\chi^2_{\rm eff}$: BAO - 6DF: 0.00 MGS: 1.82 DR12BAO: 3.40 CMB - commander_dx12_v3_2_29: 24.68 plik_rd12_HM_v22_TT: 753.84

2.213 base_plikHM_TT_lowl_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02239 ± 0.00026	$\sigma_8\Omega_m^{0.25}$	0.631 ± 0.015	$H(0.15)$	73.36 ± 0.99
$\boldsymbol{\Omega_c h^2}$	0.1180 ± 0.0025	$\sigma_8/h^{0.5}$	1.029 ± 0.025	$D_M(0.15)$	636.7 ± 9.6
$\boldsymbol{100\theta_{MC}}$	1.04113 ± 0.00051	$r_{drag}h$	100.6 ± 2.0	$H(0.38)$	83.34 ± 0.73
$\boldsymbol{\tau}$	0.110 ± 0.030	$\langle d^2\rangle^{1/2}$	2.542 ± 0.058	$D_M(0.38)$	1520 ± 19
$\boldsymbol{\ln(10^{10}A_s)}$	3.149 ± 0.058	z_{re}	$12.5^{+2.7}_{-2.2}$	$H(0.51)$	$89.97^{+0.55}_{-0.61}$
$\boldsymbol{n_s}$	0.9716 ± 0.0075	$10^9 A_s$	$2.34^{+0.13}_{-0.15}$	$D_M(0.51)$	1971 ± 23
$\boldsymbol{y_{cal}}$	1.0003 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.872 ± 0.015	$H(0.61)$	$95.53^{+0.44}_{-0.50}$
$\boldsymbol{A_{217}^{CIB}}$	46 ± 7	D_{40}	1240 ± 16	$D_M(0.61)$	2294 ± 25
$\boldsymbol{\xi^{tSZ\times CIB}}$	> 0.391	D_{220}	5718 ± 42	$H(2.33)$	235.3 ± 1.4
$\boldsymbol{A_{143}^{tSZ}}$	$5.5^{+2.1}_{-1.9}$	D_{810}	2531 ± 14	$D_M(2.33)$	5755 ± 21
$\boldsymbol{A_{100}^{PS}}$	254 ± 30	D_{1420}	815.2 ± 5.1	$f\sigma_8(0.15)$	0.474 ± 0.013
$\boldsymbol{A_{143}^{PS}}$	44 ± 8	D_{2000}	231.4 ± 2.1	$\sigma_8(0.15)$	0.786 ± 0.021
$\boldsymbol{A_{143\times217}^{PS}}$	42 ± 9	$n_{s,0.002}$	0.9716 ± 0.0075	$f\sigma_8(0.38)$	0.495 ± 0.012
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	Y_P	0.24540 ± 0.00011	$\sigma_8(0.38)$	0.698 ± 0.019
$\boldsymbol{A^{kSZ}}$	< 3.67	Y_P^{BBN}	0.24673 ± 0.00011	$f\sigma_8(0.51)$	0.494 ± 0.012
$\boldsymbol{A_{100}^{dustTT}}$	8.8 ± 1.8	10^5D/H	2.582 ± 0.049	$\sigma_8(0.51)$	0.653 ± 0.018
$\boldsymbol{A_{143}^{dustTT}}$	10.5 ± 1.8	Age/Gyr	13.780 ± 0.046	$f\sigma_8(0.61)$	0.490 ± 0.012
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.0 ± 3.3	z_*	1089.72 ± 0.50	$\sigma_8(0.61)$	0.622 ± 0.017
$\boldsymbol{A_{217}^{dustTT}}$	93.7 ± 7.3	r_*	144.94 ± 0.54	$f\sigma_8(2.33)$	0.3140 ± 0.0092
$\boldsymbol{c_{100}}$	0.99960 ± 0.00061	$100\theta_*$	1.04132 ± 0.00050	$\sigma_8(2.33)$	0.3241 ± 0.0099
$\boldsymbol{c_{217}}$	0.99820 ± 0.00062	$D_M(z_*)$/Gpc	13.919 ± 0.049	f_{2000}^{143}	28 ± 3
H_0	68.2 ± 1.1	z_{drag}	1059.84 ± 0.51	$f_{2000}^{143\times217}$	31.1 ± 2.4
Ω_Λ	0.696 ± 0.015	r_{drag}	147.60 ± 0.52	f_{2000}^{217}	106.0 ± 2.2
Ω_m	0.304 ± 0.015	k_D	0.14034 ± 0.00053	χ^2_{lowl}	25.0 ± 1.7
$\Omega_m h^2$	0.1410 ± 0.0023	$100\theta_D$	0.16083 ± 0.00029	χ^2_{plik}	767.9 ± 5.6
$\Omega_m h^3$	0.09611 ± 0.00047	z_{eq}	3355 ± 55	χ^2_{prior}	7.2 ± 3.6
σ_8	0.850 ± 0.022	k_{eq}	0.01024 ± 0.00017	χ^2_{CMB}	792.9 ± 5.4
S_8	0.855 ± 0.025	$100\theta_{eq}$	0.822 ± 0.011		
$\sigma_8\Omega_m^{0.5}$	0.468 ± 0.014	$100\theta_{s,eq}$	0.4540 ± 0.0055		

$\bar{\chi}^2_{eff} = 800.08$; $R - 1 = 0.00767$

2.214 base_plikHM_TT_lowl_post_BAO_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02237 ± 0.00021	$\sigma_8/h^{0.5}$	1.029 ± 0.025	$H(0.38)$	83.27 ± 0.39
$\boldsymbol{\Omega_c h^2}$	0.1182 ± 0.0013	$r_{\rm drag}h$	100.5 ± 1.0	$D_{\rm M}(0.38)$	1522 ± 10
$\boldsymbol{100\theta_{MC}}$	1.04112 ± 0.00043	$\langle d^2\rangle^{1/2}$	2.541 ± 0.058	$H(0.51)$	89.92 ± 0.32
$\boldsymbol{\tau}$	0.108 ± 0.026	$z_{\rm re}$	$12.4^{+2.3}_{-1.9}$	$D_{\rm M}(0.51)$	1972 ± 12
$\boldsymbol{\ln(10^{10}A_s)}$	3.146 ± 0.050	$10^9 A_{\rm s}$	2.33 ± 0.12	$H(0.61)$	95.48 ± 0.27
$\boldsymbol{n_s}$	0.9710 ± 0.0048	$10^9 A_{\rm s}e^{-2\tau}$	1.873 ± 0.012	$D_{\rm M}(0.61)$	2296 ± 13
$\boldsymbol{y_{cal}}$	1.0003 ± 0.0025	D_{40}	1240 ± 16	$H(2.33)$	235.37 ± 0.79
$\boldsymbol{A^{CIB}_{217}}$	46 ± 7	D_{220}	5718 ± 41	$D_{\rm M}(2.33)$	5756 ± 13
$\boldsymbol{\xi^{tSZ\times CIB}}$	> 0.388	D_{810}	2531 ± 14	$f\sigma_8(0.15)$	0.474 ± 0.012
$\boldsymbol{A^{tSZ}_{143}}$	$5.5^{+2.1}_{-1.9}$	D_{1420}	815.1 ± 4.9	$\sigma_8(0.15)$	0.785 ± 0.019
$\boldsymbol{A^{PS}_{100}}$	254 ± 28	D_{2000}	231.3 ± 1.8	$f\sigma_8(0.38)$	0.495 ± 0.012
$\boldsymbol{A^{PS}_{143}}$	45 ± 8	$n_{\rm s,0.002}$	0.9710 ± 0.0048	$\sigma_8(0.38)$	0.697 ± 0.018
$\boldsymbol{A^{PS}_{143\times217}}$	42 ± 9	$Y_{\rm P}$	0.245394 ± 0.000083	$f\sigma_8(0.51)$	0.494 ± 0.012
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	$Y^{\rm BBN}_{\rm P}$	0.246720 ± 0.000083	$\sigma_8(0.51)$	0.652 ± 0.016
$\boldsymbol{A^{kSZ}}$	< 3.69	10^5D/H	2.586 ± 0.039	$f\sigma_8(0.61)$	0.490 ± 0.012
$\boldsymbol{A^{dustTT}_{100}}$	8.8 ± 1.8	Age/Gyr	13.783 ± 0.030	$\sigma_8(0.61)$	0.621 ± 0.016
$\boldsymbol{A^{dustTT}_{143}}$	10.5 ± 1.8	z_*	1089.76 ± 0.32	$f\sigma_8(2.33)$	0.3134 ± 0.0081
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.1 ± 3.3	r_*	144.91 ± 0.32	$\sigma_8(2.33)$	0.3235 ± 0.0085
$\boldsymbol{A^{dustTT}_{217}}$	93.8 ± 7.3	$100\theta_*$	1.04130 ± 0.00043	f^{143}_{2000}	28.3 ± 3.1
$\boldsymbol{c_{100}}$	0.99959 ± 0.00062	$D_{\rm M}(z_*)$/Gpc	13.916 ± 0.031	$f^{143\times217}_{2000}$	31.3 ± 2.2
$\boldsymbol{c_{217}}$	0.99821 ± 0.00062	$z_{\rm drag}$	1059.81 ± 0.46	f^{217}_{2000}	106.2 ± 2.1
H_0	68.08 ± 0.59	$r_{\rm drag}$	147.58 ± 0.34	$\chi^2_{\rm lowl}$	25.0 ± 1.7
Ω_Λ	0.6953 ± 0.0077	$k_{\rm D}$	0.14036 ± 0.00044	$\chi^2_{\rm plik}$	767.2 ± 5.4
$\Omega_{\rm m}$	0.3047 ± 0.0077	$100\theta_{\rm D}$	0.16084 ± 0.00026	$\chi^2_{\rm 6DF}$	0.043 ± 0.060
$\Omega_{\rm m}h^2$	0.1412 ± 0.0012	$z_{\rm eq}$	3358 ± 29	$\chi^2_{\rm MGS}$	1.76 ± 0.62
$\Omega_{\rm m}h^3$	0.09610 ± 0.00046	$k_{\rm eq}$	0.010250 ± 0.000089	$\chi^2_{\rm DR12BAO}$	4.2 ± 1.1
σ_8	0.849 ± 0.021	$100\theta_{\rm eq}$	0.8214 ± 0.0056	$\chi^2_{\rm prior}$	7.2 ± 3.6
S_8	0.856 ± 0.022	$100\theta_{\rm s,eq}$	0.4536 ± 0.0029	$\chi^2_{\rm BAO}$	6.0 ± 1.1
$\sigma_8\Omega_{\rm m}^{0.5}$	0.469 ± 0.012	$H(0.15)$	73.28 ± 0.51	$\chi^2_{\rm CMB}$	792.2 ± 5.2
$\sigma_8\Omega_{\rm m}^{0.25}$	0.631 ± 0.015	$D_{\rm M}(0.15)$	637.3 ± 5.0		

$\bar{\chi}^2_{\rm eff} = 805.33$; $R - 1 = 0.01264$

2.215 base_plikHM_TT_lowE

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022073	0.02205 ± 0.00022	$\sigma_8\Omega_m^{0.25}$	0.6170	0.617 ± 0.012	$H(0.15)$	71.88	71.83 ± 0.79
$\boldsymbol{\Omega_c h^2}$	0.12172	0.1218 ± 0.0022	$\sigma_8/h^{0.5}$	1.0009	1.001 ± 0.016	$D_M(0.15)$	651.4	652.1 ± 8.2
$\boldsymbol{100\theta_{MC}}$	1.040676	1.04065 ± 0.00048	$r_{drag}h$	97.64	97.6 ± 1.6	$H(0.38)$	82.26	82.22 ± 0.56
$\boldsymbol{\tau}$	0.0520	0.0515 ± 0.0080	$\langle d^2\rangle^{1/2}$	2.4736	2.477 ± 0.039	$D_M(0.38)$	1549.8	1551 ± 16
$\boldsymbol{\ln(10^{10}A_s)}$	3.0431	3.042 ± 0.016	z_{re}	7.54	7.47 ± 0.83	$H(0.51)$	89.127	89.10 ± 0.44
$\boldsymbol{n_s}$	0.9600	0.9587 ± 0.0059	$10^9 A_s$	2.0971	2.096 ± 0.034	$D_M(0.51)$	2005.2	2007 ± 19
$\boldsymbol{y_{cal}}$	1.00023	1.0004 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.8898	1.891 ± 0.014	$H(0.61)$	94.863	94.84 ± 0.35
$\boldsymbol{A_{217}^{CIB}}$	49.7	48 ± 7	D_{40}	1239.9	1243 ± 16	$D_M(0.61)$	2331.3	2333 ± 20
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.22	—	D_{220}	5713.3	5718 ± 42	$H(2.33)$	237.38	237.4 ± 1.3
$\boldsymbol{A_{143}^{tSZ}}$	7.03	4.9 ± 2.0	D_{810}	2538.0	2537 ± 14	$D_M(2.33)$	5783.3	5785 ± 16
$\boldsymbol{A_{100}^{PS}}$	257.4	266 ± 28	D_{1420}	814.2	813.4 ± 5.3	$f\sigma_8(0.15)$	0.4700	0.470 ± 0.012
$\boldsymbol{A_{143}^{PS}}$	49.6	50 ± 8	D_{2000}	229.46	229.1 ± 1.8	$\sigma_8(0.15)$	0.7523	0.7518 ± 0.0075
$\boldsymbol{A_{143\times217}^{PS}}$	45.1	44^{+9}_{-10}	$n_{s,0.002}$	0.9600	0.9587 ± 0.0059	$f\sigma_8(0.38)$	0.4848	0.4849 ± 0.0097
$\boldsymbol{A_{217}^{PS}}$	118.5	115 ± 10	Y_P	0.245272	$0.24525^{+0.00011}_{-0.000090}$	$\sigma_8(0.38)$	0.6651	0.6646 ± 0.0060
$\boldsymbol{A^{kSZ}}$	0.01	< 5.20	Y_P^{BBN}	0.246598	$0.24658^{+0.00011}_{-0.000090}$	$f\sigma_8(0.51)$	0.4816	0.4815 ± 0.0082
$\boldsymbol{A_{100}^{dustTT}}$	8.79	8.8 ± 1.8	10^5D/H	2.6423	2.647 ± 0.042	$\sigma_8(0.51)$	0.6218	0.6212 ± 0.0054
$\boldsymbol{A_{143}^{dustTT}}$	10.79	10.7 ± 1.8	Age/Gyr	13.8417	13.845 ± 0.036	$f\sigma_8(0.61)$	0.4753	0.4752 ± 0.0073
$\boldsymbol{A_{143\times217}^{dustTT}}$	19.44	18.3 ± 3.3	z_*	1090.449	1090.49 ± 0.41	$\sigma_8(0.61)$	0.5912	0.5907 ± 0.0051
$\boldsymbol{A_{217}^{dustTT}}$	94.5	93.2 ± 7.3	r_*	144.217	144.21 ± 0.49	$f\sigma_8(2.33)$	0.29748	0.2972 ± 0.0025
$\boldsymbol{c_{100}}$	0.99964	0.99962 ± 0.00062	$100\theta_*$	1.040890	1.04086 ± 0.00047	$\sigma_8(2.33)$	0.30603	0.3057 ± 0.0027
$\boldsymbol{c_{217}}$	0.99828	0.99827 ± 0.00063	$D_M(z_*)$/Gpc	13.8551	13.855 ± 0.045	f_{2000}^{143}	31.16	31.9 ± 3.0
H_0	66.43	66.37 ± 0.93	z_{drag}	1059.361	1059.32 ± 0.45	$f_{2000}^{143\times217}$	33.79	34.1 ± 2.0
Ω_Λ	0.6727	$0.672^{+0.014}_{-0.013}$	r_{drag}	146.972	146.97 ± 0.49	f_{2000}^{217}	108.16	108.6 ± 1.9
Ω_m	0.3273	0.328 ± 0.014	k_D	0.14076	0.14074 ± 0.00053	χ^2_{simall}	395.90	397.0 ± 1.7
$\Omega_m h^2$	0.14443	0.1445 ± 0.0021	$100\theta_D$	0.161086	0.16112 ± 0.00026	χ^2_{plik}	758.3	771.1 ± 5.3
$\Omega_m h^3$	0.095952	0.09590 ± 0.00045	z_{eq}	3436.1	3438 ± 49	χ^2_{prior}	1.38	7.3 ± 3.7
σ_8	0.8158	0.8153 ± 0.0089	k_{eq}	0.010487	0.01049 ± 0.00015	χ^2_{CMB}	1154.2	1168.0 ± 5.5
S_8	0.8520	0.853 ± 0.025	$100\theta_{eq}$	0.8063	0.8060 ± 0.0090			
$\sigma_8\Omega_m^{0.5}$	0.4667	0.467 ± 0.014	$100\theta_{s,eq}$	0.44594	0.4458 ± 0.0047			

Best-fit $\chi^2_{eff} = 1155.55$; $\bar{\chi}^2_{eff} = 1175.37$; $R - 1 = 0.00555$
χ^2_{eff}: CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.90 plik_rd12_HM_v22_TT: 758.28

2.216 base_plikHM_TTTEEE

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022555	0.02253 ± 0.00017	$\Omega_m h^2$	0.14173	0.1418 ± 0.0015	z_{eq}	3371.5	3373 ± 36
$\boldsymbol{\Omega_c h^2}$	0.11853	0.1186 ± 0.0016	$\Omega_m h^3$	0.096489	0.09646 ± 0.00029	k_{eq}	0.010290	0.01030 ± 0.00011
$\boldsymbol{100\theta_{MC}}$	1.041086	1.04108 ± 0.00033	σ_8	0.8637	0.860 ± 0.019	$100\theta_{eq}$	0.8195	0.8191 ± 0.0069
$\boldsymbol{\tau}$	0.1235	0.120 ± 0.026	S_8	0.8720	0.870 ± 0.020	$100\theta_{s,eq}$	0.45246	0.4523 ± 0.0035
$\boldsymbol{\ln(10^{10} A_s)}$	3.1788	3.171 ± 0.049	$\sigma_8 \Omega_m^{0.5}$	0.4776	0.476 ± 0.011	$H(0.15)$	73.30	73.26 ± 0.63
$\boldsymbol{n_s}$	0.9715	0.9699 ± 0.0055	$\sigma_8 \Omega_m^{0.25}$	0.6423	0.640 ± 0.013	$D_M(0.15)$	637.2	637.7 ± 6.2
$\boldsymbol{A_{217}^{CIB}}$	42.8	45 ± 7	$\sigma_8/h^{0.5}$	1.0468	1.043 ± 0.022	$H(0.38)$	83.328	83.30 ± 0.46
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.9995	> 0.426	$r_{drag} h$	100.26	100.2 ± 1.3	$D_M(0.38)$	1521.1	1522 ± 12
$\boldsymbol{A_{143}^{tSZ}}$	6.83	5.7 ± 1.9	$\langle d^2 \rangle^{1/2}$	2.585	2.580 ± 0.053	$H(0.51)$	89.994	89.97 ± 0.36
$\boldsymbol{A_{100}^{PS}}$	240.7	251 ± 28	z_{re}	13.65	$13.3^{+2.2}_{-1.8}$	$D_M(0.51)$	1971.3	1972 ± 15
$\boldsymbol{A_{143}^{PS}}$	50.2	43 ± 8	$10^9 A_s$	2.402	2.39 ± 0.12	$H(0.61)$	95.575	95.55 ± 0.29
$\boldsymbol{A_{143\times217}^{PS}}$	57.9	42 ± 9	$10^9 A_s e^{-2\tau}$	1.8762	1.876 ± 0.012	$D_M(0.61)$	2294.6	2296 ± 16
$\boldsymbol{A_{217}^{PS}}$	124.0	115.7 ± 9.9	D_{40}	1249.1	1252 ± 15	$H(2.33)$	235.79	235.83 ± 0.94
$\boldsymbol{A^{kSZ}}$	0.00	< 3.25	D_{220}	5733.2	5737 ± 38	$D_M(2.33)$	5750.2	5751 ± 13
$\boldsymbol{A_{100}^{dust TT}}$	8.56	8.7 ± 1.8	D_{810}	2533.8	2532 ± 14	$f\sigma_8(0.15)$	0.4830	0.482 ± 0.011
$\boldsymbol{A_{143}^{dust TT}}$	10.70	10.5 ± 1.8	D_{1420}	816.97	815.7 ± 4.8	$\sigma_8(0.15)$	0.7987	0.796 ± 0.018
$\boldsymbol{A_{143\times217}^{dust TT}}$	19.76	18.1 ± 3.3	D_{2000}	232.62	232.0 ± 1.7	$f\sigma_8(0.38)$	0.5039	0.502 ± 0.011
$\boldsymbol{A_{217}^{dust TT}}$	95.3	93.5 ± 7.3	$n_{s,0.002}$	0.9715	0.9699 ± 0.0055	$\sigma_8(0.38)$	0.7087	0.706 ± 0.017
$\boldsymbol{A_{100}^{dust TE}}$	0.1122	0.113 ± 0.038	Y_P	0.245464	0.245455 ± 0.000065	$f\sigma_8(0.51)$	0.5031	0.501 ± 0.011
$\boldsymbol{A_{100\times143}^{dust TE}}$	0.1349	0.134 ± 0.029	Y_P^{BBN}	0.246791	0.246782 ± 0.000065	$\sigma_8(0.51)$	0.6635	0.661 ± 0.016
$\boldsymbol{A_{100\times217}^{dust TE}}$	0.480	0.481 ± 0.085	10^5D/H	2.5522	2.557 ± 0.031	$f\sigma_8(0.61)$	0.4983	0.497 ± 0.011
$\boldsymbol{A_{143}^{dust TE}}$	0.223	0.221 ± 0.054	Age/Gyr	13.7678	13.771 ± 0.028	$\sigma_8(0.61)$	0.6315	0.629 ± 0.015
$\boldsymbol{A_{143\times217}^{dust TE}}$	0.662	0.661 ± 0.080	z_*	1089.559	1089.60 ± 0.32	$f\sigma_8(2.33)$	0.3187	0.3173 ± 0.0079
$\boldsymbol{A_{217}^{dust TE}}$	2.065	2.06 ± 0.27	r_*	144.670	144.66 ± 0.34	$\sigma_8(2.33)$	0.3288	0.3274 ± 0.0084
$\boldsymbol{c_{100}}$	0.99976	0.99970 ± 0.00061	$100\theta_*$	1.041247	1.04124 ± 0.00032	f_{2000}^{143}	25.91	27.1 ± 3.0
$\boldsymbol{c_{217}}$	0.99812	0.99814 ± 0.00062	$D_M(z_*)$/Gpc	13.8939	13.893 ± 0.032	$f_{2000}^{143\times217}$	29.92	30.2 ± 2.1
$\boldsymbol{y_{cal}}$	0.99995	1.0001 ± 0.0025	z_{drag}	1060.276	1060.21 ± 0.32	f_{2000}^{217}	104.56	105.3 ± 1.9
H_0	68.08	68.03 ± 0.73	r_{drag}	147.273	147.28 ± 0.33	χ^2_{plik}	2337.1	2353.9 ± 5.7
Ω_Λ	0.6942	0.6934 ± 0.0097	k_D	0.140813	0.14079 ± 0.00033	χ^2_{prior}	1.31	11.2 ± 4.4
Ω_m	0.3058	0.3066 ± 0.0097	$100\theta_D$	0.160577	0.16061 ± 0.00018			

Best-fit $\chi^2_{eff} = 2338.36$; $\bar{\chi}^2_{eff} = 2365.14$; $R - 1 = 0.00675$
χ^2_{eff}: CMB - plik_rd12_HM_v22b_TTTEEE: 2337.05

2.217 base_plikHM_TTTEEE_lowl

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022555	0.02251 ± 0.00016	$\Omega_m h^3$	0.096458	0.09641 ± 0.00030	$100\theta_{eq}$	0.8205	0.8197 ± 0.0066
$\boldsymbol{\Omega_c h^2}$	0.11829	0.1185 ± 0.0015	σ_8	0.8551	0.848 ± 0.018	$100\theta_{s,eq}$	0.45301	0.4526 ± 0.0034
$\boldsymbol{100\theta_{MC}}$	1.041103	1.04108 ± 0.00033	S_8	0.8614	0.857 ± 0.019	$H(0.15)$	73.38	73.28 ± 0.60
$\boldsymbol{\tau}$	0.1141	0.106 ± 0.024	$\sigma_8\Omega_m^{0.5}$	0.4718	0.469 ± 0.010	$D_M(0.15)$	636.4	637.5 ± 5.9
$\boldsymbol{\ln(10^{10}A_s)}$	3.1595	3.143 ± 0.047	$\sigma_8\Omega_m^{0.25}$	0.6352	0.631 ± 0.013	$H(0.38)$	83.380	83.31 ± 0.44
$\boldsymbol{n_s}$	0.9730	0.9707 ± 0.0052	$\sigma_8/h^{0.5}$	1.0356	1.028 ± 0.021	$D_M(0.38)$	1519.6	1522 ± 12
$\boldsymbol{y_{cal}}$	1.00020	1.0003 ± 0.0025	$r_{drag}h$	100.44	100.3 ± 1.2	$H(0.51)$	90.032	89.97 ± 0.35
$\boldsymbol{A_{217}^{CIB}}$	42.5	45 ± 7	$\langle d^2\rangle^{1/2}$	2.5543	$2.541^{+0.051}_{-0.046}$	$D_M(0.51)$	1969.6	1972 ± 14
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.9996	> 0.420	z_{re}	12.90	$12.2^{+2.1}_{-1.7}$	$H(0.61)$	95.602	95.55 ± 0.28
$\boldsymbol{A_{143}^{tSZ}}$	6.85	$5.7^{+2.1}_{-1.8}$	10^9A_s	2.356	2.32 ± 0.11	$D_M(0.61)$	2292.8	2295 ± 15
$\boldsymbol{A_{100}^{PS}}$	239.0	251 ± 28	$10^9A_se^{-2\tau}$	1.8754	1.875 ± 0.012	$H(2.33)$	235.64	235.74 ± 0.91
$\boldsymbol{A_{143}^{PS}}$	49.7	43 ± 8	D_{40}	1239.7	1241 ± 14	$D_M(2.33)$	5749.3	5752 ± 12
$\boldsymbol{A_{143\times217}^{PS}}$	57.7	42 ± 9	D_{220}	5727.6	5731 ± 38	$f\sigma_8(0.15)$	0.4773	0.474 ± 0.010
$\boldsymbol{A_{217}^{PS}}$	124.3	116 ± 10	D_{810}	2535.6	2534 ± 14	$\sigma_8(0.15)$	0.7909	0.785 ± 0.017
$\boldsymbol{A^{kSZ}}$	0.00	< 3.24	D_{1420}	818.26	816.7 ± 4.7	$f\sigma_8(0.38)$	0.4983	0.495 ± 0.010
$\boldsymbol{A_{100}^{dust}TT}$	8.68	8.8 ± 1.9	D_{2000}	232.84	232.0 ± 1.7	$\sigma_8(0.38)$	0.7019	0.696 ± 0.016
$\boldsymbol{A_{143}^{dust}TT}$	10.72	10.6 ± 1.8	$n_{s,0.002}$	0.9730	0.9707 ± 0.0052	$f\sigma_8(0.51)$	0.4977	0.494 ± 0.010
$\boldsymbol{A_{143\times217}^{dust}TT}$	19.79	18.2 ± 3.3	Y_P	0.245464	0.245448 ± 0.000062	$\sigma_8(0.51)$	0.6572	0.652 ± 0.015
$\boldsymbol{A_{217}^{dust}TT}$	95.5	93.7 ± 7.3	Y_P^{BBN}	0.246791	0.246775 ± 0.000062	$f\sigma_8(0.61)$	0.4930	0.489 ± 0.010
$\boldsymbol{A_{100}^{dust}TE}$	0.1131	0.113 ± 0.038	10^5D/H	2.5522	2.560 ± 0.029	$\sigma_8(0.61)$	0.6255	0.620 ± 0.014
$\boldsymbol{A_{100\times143}^{dust}TE}$	0.1342	0.134 ± 0.029	Age/Gyr	13.7660	13.772 ± 0.027	$f\sigma_8(2.33)$	0.3157	0.3130 ± 0.0074
$\boldsymbol{A_{100\times217}^{dust}TE}$	0.477	0.483 ± 0.085	z_*	1089.539	1089.61 ± 0.31	$\sigma_8(2.33)$	0.3258	0.3230 ± 0.0078
$\boldsymbol{A_{143}^{dust}TE}$	0.221	0.222 ± 0.054	r_*	144.732	144.71 ± 0.33	f_{2000}^{143}	25.70	27.2 ± 2.9
$\boldsymbol{A_{143\times217}^{dust}TE}$	0.662	0.663 ± 0.080	$100\theta_*$	1.041272	1.04125 ± 0.00032	$f_{2000}^{143\times217}$	29.78	30.4 ± 2.0
$\boldsymbol{A_{217}^{dust}TE}$	2.057	2.07 ± 0.27	$D_M(z_*)$/Gpc	13.8995	13.897 ± 0.031	f_{2000}^{217}	104.53	105.4 ± 1.9
$\boldsymbol{c_{100}}$	0.99975	0.99967 ± 0.00061	z_{drag}	1060.238	1060.16 ± 0.31	χ^2_{lowl}	24.77	25.0 ± 1.4
$\boldsymbol{c_{217}}$	0.99812	0.99814 ± 0.00062	r_{drag}	147.338	147.33 ± 0.32	χ^2_{plik}	2337.6	2354.2 ± 5.9
H_0	68.17	68.06 ± 0.70	k_D	0.140745	0.14073 ± 0.00033	χ^2_{prior}	1.29	11.3 ± 4.5
Ω_Λ	0.6955	0.6940 ± 0.0093	$100\theta_D$	0.160589	0.16064 ± 0.00018	χ^2_{CMB}	2362.3	2379.2 ± 5.8
Ω_m	0.3045	0.3060 ± 0.0093	z_{eq}	3365.8	3370 ± 34			
$\Omega_m h^2$	0.14149	0.1417 ± 0.0014	k_{eq}	0.010273	0.01029 ± 0.00011			

Best-fit $\chi^2_{eff} = 2363.64$; $\bar{\chi}^2_{eff} = 2390.54$; $R - 1 = 0.00817$
χ^2_{eff}: CMB - commander_dx12_v3_2_29: 24.77 plik_rd12_HM_v22b_TTTEEE: 2337.58

2.218 base_plikHM_TTTEEE_lowl_post_BAO

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022555	0.02252 ± 0.00014	σ_8	0.8549	0.849 ± 0.017	$H(0.15)$	73.386	73.33 ± 0.42
$\boldsymbol{\Omega_c h^2}$	0.11828	0.1184 ± 0.0011	S_8	0.8611	0.856 ± 0.018	$D_{\rm M}(0.15)$	636.40	637.0 ± 4.1
$\boldsymbol{100\theta_{MC}}$	1.041105	1.04110 ± 0.00030	$\sigma_8\Omega_{\rm m}^{0.5}$	0.4716	0.4690 ± 0.0098	$H(0.38)$	83.383	83.34 ± 0.31
$\boldsymbol{\tau}$	0.1142	0.107 ± 0.022	$\sigma_8\Omega_{\rm m}^{0.25}$	0.6350	0.631 ± 0.013	$D_{\rm M}(0.38)$	1519.5	1520.7 ± 8.3
$\boldsymbol{\ln(10^{10}A_s)}$	3.1593	$3.145^{+0.044}_{-0.040}$	$\sigma_8/h^{0.5}$	1.0353	1.029 ± 0.021	$H(0.51)$	90.034	89.99 ± 0.25
$\boldsymbol{n_s}$	0.97278	0.9710 ± 0.0042	$r_{\rm drag}h$	100.45	100.36 ± 0.84	$D_{\rm M}(0.51)$	1969.5	1970.9 ± 9.7
$\boldsymbol{y_{cal}}$	0.99998	1.0003 ± 0.0025	$\langle d^2\rangle^{1/2}$	2.5543	$2.542^{+0.051}_{-0.045}$	$H(0.61)$	95.603	95.57 ± 0.21
$\boldsymbol{A_{217}^{CIB}}$	42.4	45 ± 7	$z_{\rm re}$	12.91	$12.3^{+1.9}_{-1.5}$	$D_{\rm M}(0.61)$	2292.7	2294 ± 11
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.9996	> 0.423	$10^9 A_{\rm s}$	2.355	2.324 ± 0.099	$H(2.33)$	235.63	235.67 ± 0.65
$\boldsymbol{A_{143}^{tSZ}}$	6.90	$5.7^{+2.1}_{-1.8}$	$10^9 A_{\rm s}e^{-2\tau}$	1.8744	1.875 ± 0.011	$D_{\rm M}(2.33)$	5749.3	5751.0 ± 9.6
$\boldsymbol{A_{100}^{PS}}$	238.4	251 ± 30	D_{40}	1239.8	1241 ± 14	$f\sigma_8(0.15)$	0.4771	0.4743 ± 0.0098
$\boldsymbol{A_{143}^{PS}}$	50.0	43 ± 8	D_{220}	5726.3	5731 ± 38	$\sigma_8(0.15)$	0.7907	0.785 ± 0.016
$\boldsymbol{A_{143\times217}^{PS}}$	57.8	42 ± 9	D_{810}	2534.3	2534 ± 13	$f\sigma_8(0.38)$	0.4981	0.4950 ± 0.0099
$\boldsymbol{A_{217}^{PS}}$	124.3	116.1 ± 9.9	D_{1420}	817.74	816.8 ± 4.7	$\sigma_8(0.38)$	0.7017	0.697 ± 0.015
$\boldsymbol{A^{kSZ}}$	0.00	< 3.23	D_{2000}	232.67	232.1 ± 1.6	$f\sigma_8(0.51)$	0.4975	0.4943 ± 0.0099
$\boldsymbol{A_{100}^{dust}}$	8.67	8.8 ± 1.8	$n_{\rm s,0.002}$	0.97278	0.9710 ± 0.0042	$\sigma_8(0.51)$	0.6570	0.652 ± 0.014
$\boldsymbol{A_{143}^{dust}}$	10.75	10.6 ± 1.8	$Y_{\rm P}$	0.245464	0.245451 ± 0.000053	$f\sigma_8(0.61)$	0.4929	0.4896 ± 0.0098
$\boldsymbol{A_{143\times217}^{dust}}$	19.98	18.2 ± 3.3	$Y_{\rm P}^{\rm BBN}$	0.246791	0.246778 ± 0.000053	$\sigma_8(0.61)$	0.6254	0.621 ± 0.013
$\boldsymbol{A_{217}^{dust}}$	95.9	93.6 ± 7.3	10^5D/H	2.5522	2.559 ± 0.025	$f\sigma_8(2.33)$	0.3156	0.3133 ± 0.0068
$\boldsymbol{A_{100}^{dust}}$	0.1131	0.114 ± 0.038	Age/Gyr	13.7660	13.770 ± 0.021	$\sigma_8(2.33)$	0.3257	0.3233 ± 0.0071
$\boldsymbol{A_{100\times143}^{dust}}$	0.1334	0.135 ± 0.030	z_*	1089.537	1089.59 ± 0.24	f_{2000}^{143}	25.85	27.1 ± 2.9
$\boldsymbol{A_{100\times217}^{dust}}$	0.487	0.483 ± 0.084	r_*	144.736	144.73 ± 0.25	$f_{2000}^{143\times217}$	29.84	30.3 ± 2.0
$\boldsymbol{A_{143}^{dust}}$	0.220	0.222 ± 0.054	$100\theta_*$	1.041270	1.04127 ± 0.00029	f_{2000}^{217}	104.50	105.4 ± 1.9
$\boldsymbol{A_{143\times217}^{dust}}$	0.661	0.663 ± 0.080	$D_{\rm M}(z_*)$/Gpc	13.8999	13.900 ± 0.024	$\chi^2_{\rm lowl}$	24.83	24.9 ± 1.4
$\boldsymbol{A_{217}^{dust}}$	2.066	2.07 ± 0.27	$z_{\rm drag}$	1060.238	1060.17 ± 0.30	$\chi^2_{\rm plik}$	2337.4	2353.9 ± 5.8
$\boldsymbol{c_{100}}$	0.99973	0.99968 ± 0.00062	$r_{\rm drag}$	147.342	147.35 ± 0.25	$\chi^2_{\rm 6DF}$	0.0001	0.030 ± 0.043
$\boldsymbol{c_{217}}$	0.99813	0.99814 ± 0.00061	$k_{\rm D}$	0.140742	0.14071 ± 0.00030	$\chi^2_{\rm MGS}$	1.68	1.68 ± 0.51
H_0	68.176	68.11 ± 0.49	$100\theta_{\rm D}$	0.160588	0.16063 ± 0.00017	$\chi^2_{\rm DR12BAO}$	3.528	4.05 ± 0.90
Ω_Λ	0.6956	0.6948 ± 0.0064	$z_{\rm eq}$	3365.5	3367 ± 24	$\chi^2_{\rm prior}$	1.40	11.3 ± 4.4
$\Omega_{\rm m}$	0.3044	0.3052 ± 0.0064	$k_{\rm eq}$	0.010272	0.010277 ± 0.000075	$\chi^2_{\rm BAO}$	5.205	5.77 ± 0.75
$\Omega_{\rm m}h^2$	0.14148	0.1416 ± 0.0010	$100\theta_{\rm eq}$	0.82058	0.8202 ± 0.0047	$\chi^2_{\rm CMB}$	2362.3	2378.8 ± 5.6
$\Omega_{\rm m}h^3$	0.096454	0.09641 ± 0.00030	$100\theta_{\rm s,eq}$	0.45305	0.4529 ± 0.0024			

Best-fit $\chi^2_{\rm eff} = 2368.86$; $\bar{\chi}^2_{\rm eff} = 2395.83$; $R - 1 = 0.01077$

$\chi^2_{\rm eff}$: BAO - 6DF: 0.00 MGS: 1.68 DR12BAO: 3.53 CMB - commander_dx12_v3_2_29: 24.83 plik_rd12_HM_v22b_TTTEEE: 2337.43

2.219 base_plikHM_TTTEEE_lowl_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02252 ± 0.00016	$\Omega_m h^3$	0.09641 ± 0.00030	$100\theta_{eq}$	0.8197 ± 0.0066
$\boldsymbol{\Omega_c h^2}$	0.1185 ± 0.0015	σ_8	0.849 ± 0.018	$100\theta_{s,eq}$	0.4526 ± 0.0034
$\boldsymbol{100\theta_{MC}}$	1.04109 ± 0.00033	S_8	0.857 ± 0.019	$H(0.15)$	73.29 ± 0.60
$\boldsymbol{\tau}$	0.106 ± 0.024	$\sigma_8\Omega_m^{0.5}$	0.469 ± 0.010	$D_M(0.15)$	637.4 ± 5.9
$\boldsymbol{\ln(10^{10}A_s)}$	3.144 ± 0.045	$\sigma_8\Omega_m^{0.25}$	0.631 ± 0.013	$H(0.38)$	83.31 ± 0.44
$\boldsymbol{n_s}$	0.9708 ± 0.0051	$\sigma_8/h^{0.5}$	1.029 ± 0.020	$D_M(0.38)$	1521 ± 12
$\boldsymbol{y_{cal}}$	1.0003 ± 0.0025	$r_{drag}h$	100.3 ± 1.2	$H(0.51)$	89.98 ± 0.35
$\boldsymbol{A_{217}^{CIB}}$	45 ± 7	$\langle d^2\rangle^{1/2}$	2.542 ± 0.048	$D_M(0.51)$	1972 ± 14
$\boldsymbol{\xi^{tSZ\times CIB}}$	> 0.420	z_{re}	$12.2^{+2.1}_{-1.7}$	$H(0.61)$	95.56 ± 0.28
$\boldsymbol{A_{143}^{tSZ}}$	$5.7^{+2.1}_{-1.8}$	10^9A_s	2.32 ± 0.11	$D_M(0.61)$	2295 ± 15
$\boldsymbol{A_{100}^{PS}}$	251 ± 28	$10^9A_se^{-2\tau}$	1.875 ± 0.012	$H(2.33)$	235.73 ± 0.90
$\boldsymbol{A_{143}^{PS}}$	43 ± 8	D_{40}	1241 ± 14	$D_M(2.33)$	5752 ± 12
$\boldsymbol{A_{143\times217}^{PS}}$	42 ± 9	D_{220}	5731 ± 38	$f\sigma_8(0.15)$	0.475 ± 0.010
$\boldsymbol{A_{217}^{PS}}$	116 ± 10	D_{810}	2534 ± 13	$\sigma_8(0.15)$	0.785 ± 0.017
$\boldsymbol{A^{kSZ}}$	< 3.24	D_{1420}	816.7 ± 4.7	$f\sigma_8(0.38)$	0.4952 ± 0.0099
$\boldsymbol{A_{100}^{dustTT}}$	8.8 ± 1.9	D_{2000}	232.1 ± 1.7	$\sigma_8(0.38)$	0.696 ± 0.015
$\boldsymbol{A_{143}^{dustTT}}$	10.6 ± 1.8	$n_{s,0.002}$	0.9708 ± 0.0051	$f\sigma_8(0.51)$	0.4944 ± 0.0098
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.2 ± 3.3	Y_P	0.245449 ± 0.000061	$\sigma_8(0.51)$	0.652 ± 0.014
$\boldsymbol{A_{217}^{dustTT}}$	93.7 ± 7.3	Y_P^{BBN}	0.246776 ± 0.000061	$f\sigma_8(0.61)$	0.4897 ± 0.0098
$\boldsymbol{A_{100}^{dustTE}}$	0.113 ± 0.038	10^5D/H	2.560 ± 0.029	$\sigma_8(0.61)$	0.621 ± 0.014
$\boldsymbol{A_{100\times143}^{dustTE}}$	0.134 ± 0.029	Age/Gyr	13.771 ± 0.027	$f\sigma_8(2.33)$	0.3132 ± 0.0072
$\boldsymbol{A_{100\times217}^{dustTE}}$	0.483 ± 0.085	z_*	1089.61 ± 0.30	$\sigma_8(2.33)$	0.3231 ± 0.0076
$\boldsymbol{A_{143}^{dustTE}}$	0.222 ± 0.054	r_*	144.71 ± 0.33	f_{2000}^{143}	27.2 ± 2.9
$\boldsymbol{A_{143\times217}^{dustTE}}$	0.663 ± 0.080	$100\theta_*$	1.04126 ± 0.00032	$f_{2000}^{143\times217}$	30.4 ± 2.0
$\boldsymbol{A_{217}^{dustTE}}$	2.07 ± 0.27	$D_M(z_*)$/Gpc	13.898 ± 0.031	f_{2000}^{217}	105.4 ± 1.9
$\boldsymbol{c_{100}}$	0.99967 ± 0.00061	z_{drag}	1060.16 ± 0.31	χ^2_{lowl}	25.0 ± 1.4
$\boldsymbol{c_{217}}$	0.99814 ± 0.00062	r_{drag}	147.33 ± 0.32	χ^2_{plik}	2354.2 ± 5.8
H_0	68.06 ± 0.70	k_D	0.14072 ± 0.00033	χ^2_{prior}	11.3 ± 4.5
Ω_Λ	0.6941 ± 0.0093	$100\theta_D$	0.16063 ± 0.00018	χ^2_{CMB}	2379.2 ± 5.7
Ω_m	0.3059 ± 0.0093	z_{eq}	3370 ± 34		
$\Omega_m h^2$	0.1417 ± 0.0014	k_{eq}	0.01028 ± 0.00010		

$\bar{\chi}^2_{eff} = 2390.49$; $R - 1 = 0.00813$

2.220 base_plikHM_TTTEEE_lowl_post_BAO_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02252 ± 0.00014	σ_8	0.849 ± 0.017	$H(0.15)$	73.33 ± 0.42
$\boldsymbol{\Omega_c h^2}$	0.1184 ± 0.0011	S_8	0.856 ± 0.018	$D_M(0.15)$	637.0 ± 4.1
$\boldsymbol{100\theta_{MC}}$	1.04110 ± 0.00030	$\sigma_8\Omega_m^{0.5}$	0.4691 ± 0.0097	$H(0.38)$	83.34 ± 0.31
$\boldsymbol{\tau}$	0.107 ± 0.022	$\sigma_8\Omega_m^{0.25}$	0.631 ± 0.012	$D_M(0.38)$	1520.7 ± 8.3
$\boldsymbol{\ln(10^{10}A_s)}$	3.146 ± 0.042	$\sigma_8/h^{0.5}$	1.029 ± 0.020	$H(0.51)$	90.00 ± 0.25
$\boldsymbol{n_s}$	0.9711 ± 0.0042	$r_{drag}h$	100.36 ± 0.84	$D_M(0.51)$	1970.9 ± 9.7
$\boldsymbol{y_{cal}}$	1.0003 ± 0.0025	$\langle d^2\rangle^{1/2}$	2.542 ± 0.048	$H(0.61)$	95.57 ± 0.21
$\boldsymbol{A_{217}^{CIB}}$	45 ± 7	z_{re}	$12.3^{+1.9}_{-1.5}$	$D_M(0.61)$	2294 ± 10
$\boldsymbol{\xi^{tSZ\times CIB}}$	> 0.423	10^9A_s	2.325 ± 0.097	$H(2.33)$	235.66 ± 0.65
$\boldsymbol{A_{143}^{tSZ}}$	$5.7^{+2.1}_{-1.8}$	$10^9A_se^{-2\tau}$	1.875 ± 0.011	$D_M(2.33)$	5751.0 ± 9.6
$\boldsymbol{A_{100}^{PS}}$	251 ± 30	D_{40}	1241 ± 14	$f\sigma_8(0.15)$	0.4744 ± 0.0096
$\boldsymbol{A_{143}^{PS}}$	43 ± 8	D_{220}	5731 ± 38	$\sigma_8(0.15)$	0.785 ± 0.016
$\boldsymbol{A_{143\times217}^{PS}}$	42 ± 9	D_{810}	2533 ± 13	$f\sigma_8(0.38)$	0.4951 ± 0.0098
$\boldsymbol{A_{217}^{PS}}$	116.1 ± 9.9	D_{1420}	816.8 ± 4.7	$\sigma_8(0.38)$	0.697 ± 0.014
$\boldsymbol{A^{kSZ}}$	< 3.23	D_{2000}	232.1 ± 1.6	$f\sigma_8(0.51)$	0.4944 ± 0.0097
$\boldsymbol{A_{100}^{dustTT}}$	8.8 ± 1.8	$n_{s,0.002}$	0.9711 ± 0.0042	$\sigma_8(0.51)$	0.652 ± 0.014
$\boldsymbol{A_{143}^{dustTT}}$	10.6 ± 1.8	Y_P	0.245451 ± 0.000053	$f\sigma_8(0.61)$	0.4897 ± 0.0097
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.2 ± 3.3	Y_P^{BBN}	0.246778 ± 0.000053	$\sigma_8(0.61)$	0.621 ± 0.013
$\boldsymbol{A_{217}^{dustTT}}$	93.6 ± 7.3	10^5D/H	2.558 ± 0.025	$f\sigma_8(2.33)$	0.3134 ± 0.0067
$\boldsymbol{A_{100}^{dustTE}}$	0.114 ± 0.038	Age/Gyr	13.770 ± 0.021	$\sigma_8(2.33)$	0.3234 ± 0.0070
$\boldsymbol{A_{100\times143}^{dustTE}}$	0.135 ± 0.030	z_*	1089.59 ± 0.23	f_{2000}^{143}	27.1 ± 2.9
$\boldsymbol{A_{100\times217}^{dustTE}}$	0.483 ± 0.084	r_*	144.73 ± 0.25	$f_{2000}^{143\times217}$	30.3 ± 2.0
$\boldsymbol{A_{143}^{dustTE}}$	0.222 ± 0.054	$100\theta_*$	1.04127 ± 0.00029	f_{2000}^{217}	105.4 ± 1.9
$\boldsymbol{A_{143\times217}^{dustTE}}$	0.663 ± 0.080	$D_M(z_*)$/Gpc	13.900 ± 0.024	χ^2_{lowl}	24.9 ± 1.4
$\boldsymbol{A_{217}^{dustTE}}$	2.07 ± 0.27	z_{drag}	1060.17 ± 0.30	χ^2_{plik}	2353.8 ± 5.7
$\boldsymbol{c_{100}}$	0.99968 ± 0.00062	r_{drag}	147.35 ± 0.25	χ^2_{6DF}	0.030 ± 0.042
$\boldsymbol{c_{217}}$	0.99814 ± 0.00061	k_D	0.14071 ± 0.00030	χ^2_{MGS}	1.69 ± 0.51
H_0	68.11 ± 0.49	$100\theta_D$	0.16063 ± 0.00017	$\chi^2_{DR12BAO}$	4.05 ± 0.89
Ω_Λ	0.6948 ± 0.0064	z_{eq}	3367 ± 24	χ^2_{prior}	11.3 ± 4.4
Ω_m	0.3052 ± 0.0064	k_{eq}	0.010277 ± 0.000074	χ^2_{BAO}	5.77 ± 0.74
$\Omega_m h^2$	0.1416 ± 0.0010	$100\theta_{eq}$	0.8202 ± 0.0046	χ^2_{CMB}	2378.8 ± 5.6
$\Omega_m h^3$	0.09641 ± 0.00030	$100\theta_{s,eq}$	0.4529 ± 0.0024		

$\bar{\chi}^2_{eff} = 2395.80$; $R - 1 = 0.01085$

2.221 base_plikHM_TTTEEE_lowE

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022348	0.02233 ± 0.00015	$\Omega_m h^3$	0.096359	0.09634 ± 0.00029	$100\theta_{eq}$	0.8107	0.8105 ± 0.0058
$\boldsymbol{\Omega_c h^2}$	0.12060	0.1207 ± 0.0014	σ_8	0.8136	0.8136 ± 0.0075	$100\theta_{s,eq}$	0.44807	0.4480 ± 0.0030
$\boldsymbol{100\theta_{MC}}$	1.040857	1.04086 ± 0.00031	S_8	0.8387	0.840 ± 0.016	$H(0.15)$	72.47	72.44 ± 0.52
$\boldsymbol{\tau}$	0.0540	$0.0545^{+0.0070}_{-0.0079}$	$\sigma_8\Omega_m^{0.5}$	0.4594	0.4598 ± 0.0089	$D_M(0.15)$	645.5	645.8 ± 5.2
$\boldsymbol{\ln(10^{10} A_s)}$	3.0460	3.047 ± 0.016	$\sigma_8\Omega_m^{0.25}$	0.6113	0.6117 ± 0.0083	$H(0.38)$	82.719	82.70 ± 0.37
$\boldsymbol{n_s}$	0.96384	0.9625 ± 0.0045	$\sigma_8/h^{0.5}$	0.9931	0.994 ± 0.012	$D_M(0.38)$	1537.7	1538 ± 10
$\boldsymbol{y_{cal}}$	1.00076	1.0006 ± 0.0025	$r_{drag}h$	98.62	98.6 ± 1.1	$H(0.51)$	89.516	89.50 ± 0.29
$\boldsymbol{A_{217}^{CIB}}$	47.5	47 ± 7	$\langle d^2\rangle^{1/2}$	2.4560	2.460 ± 0.029	$D_M(0.51)$	1990.8	1992 ± 12
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.43	—	z_{re}	7.66	7.70 ± 0.78	$H(0.61)$	95.196	95.18 ± 0.23
$\boldsymbol{A_{143}^{tSZ}}$	7.14	$5.3^{+2.2}_{-1.9}$	$10^9 A_s$	2.1031	2.105 ± 0.034	$D_M(0.61)$	2315.6	2316 ± 13
$\boldsymbol{A_{100}^{PS}}$	251.8	261 ± 28	$10^9 A_s e^{-2\tau}$	1.8879	1.887 ± 0.012	$H(2.33)$	236.93	236.96 ± 0.83
$\boldsymbol{A_{143}^{PS}}$	48.5	47 ± 8	D_{40}	1235.0	1238 ± 13	$D_M(2.33)$	5766.7	5767 ± 11
$\boldsymbol{A_{143\times217}^{PS}}$	48.0	42 ± 9	D_{220}	5738.1	5739 ± 39	$f\sigma_8(0.15)$	0.4634	0.4638 ± 0.0083
$\boldsymbol{A_{217}^{PS}}$	119.8	115 ± 10	D_{810}	2542.6	2540 ± 13	$\sigma_8(0.15)$	0.7510	0.7511 ± 0.0066
$\boldsymbol{A^{kSZ}}$	0.01	< 4.59	D_{1420}	818.01	816.5 ± 4.8	$f\sigma_8(0.38)$	0.4801	0.4804 ± 0.0068
$\boldsymbol{A_{100}^{dust TT}}$	8.79	8.8 ± 1.8	D_{2000}	231.10	230.6 ± 1.6	$\sigma_8(0.38)$	0.6649	0.6649 ± 0.0056
$\boldsymbol{A_{143}^{dust TT}}$	10.98	10.9 ± 1.8	$n_{s,0.002}$	0.96384	0.9625 ± 0.0045	$f\sigma_8(0.51)$	0.4779	0.4780 ± 0.0060
$\boldsymbol{A_{143\times217}^{dust TT}}$	19.84	18.6 ± 3.3	Y_P	0.245387	0.245378 ± 0.000060	$\sigma_8(0.51)$	0.6219	0.6219 ± 0.0052
$\boldsymbol{A_{217}^{dust TT}}$	95.0	93.5 ± 7.3	Y_P^{BBN}	0.246713	0.246705 ± 0.000060	$f\sigma_8(0.61)$	0.4723	0.4724 ± 0.0054
$\boldsymbol{A_{100}^{dust TE}}$	0.1147	0.115 ± 0.038	10^5D/H	2.5896	2.593 ± 0.028	$\sigma_8(0.61)$	0.59159	0.5915 ± 0.0049
$\boldsymbol{A_{100\times143}^{dust TE}}$	0.1345	0.135 ± 0.029	Age/Gyr	13.8040	13.806 ± 0.024	$f\sigma_8(2.33)$	0.29799	0.2979 ± 0.0025
$\boldsymbol{A_{100\times217}^{dust TE}}$	0.484	0.481 ± 0.084	z_*	1090.000	1090.03 ± 0.28	$\sigma_8(2.33)$	0.30690	0.3068 ± 0.0026
$\boldsymbol{A_{143}^{dust TE}}$	0.226	0.225 ± 0.054	r_*	144.294	144.29 ± 0.30	f_{2000}^{143}	29.27	30.1 ± 2.8
$\boldsymbol{A_{143\times217}^{dust TE}}$	0.664	0.667 ± 0.080	$100\theta_*$	1.041044	1.04104 ± 0.00031	$f_{2000}^{143\times217}$	32.33	32.6 ± 1.9
$\boldsymbol{A_{217}^{dust TE}}$	2.087	2.09 ± 0.27	$D_M(z_*)$/Gpc	13.8605	13.860 ± 0.028	f_{2000}^{217}	106.90	107.4 ± 1.8
$\boldsymbol{c_{100}}$	0.99973	0.99968 ± 0.00061	z_{drag}	1059.933	1059.90 ± 0.30	χ^2_{simall}	396.06	397.2 ± 2.0
$\boldsymbol{c_{217}}$	0.99820	0.99821 ± 0.00062	r_{drag}	146.958	146.96 ± 0.30	χ^2_{plik}	2344.5	2359.4 ± 5.8
H_0	67.11	67.07 ± 0.61	k_D	0.140990	0.14098 ± 0.00032	χ^2_{prior}	1.72	11.5 ± 4.5
Ω_Λ	0.6811	0.6806 ± 0.0086	$100\theta_D$	0.160761	0.16078 ± 0.00018	χ^2_{CMB}	2740.5	2756.7 ± 5.8
Ω_m	0.3189	0.3194 ± 0.0086	z_{eq}	3416.0	3417 ± 31			
$\Omega_m h^2$	0.14359	0.1436 ± 0.0013	k_{eq}	0.010426	0.010430 ± 0.000095			

Best-fit $\chi^2_{eff} = 2742.24$; $\bar{\chi}^2_{eff} = 2768.16$; $R - 1 = 0.00605$

χ^2_{eff}: CMB - simall_100x143_offlike5_EE_Aplanck_B: 396.06 plik_rd12_HM_v22b_TTTEEE: 2344.46

2.222 base_CamSpecHM_TT

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022571	0.02248 ± 0.00029	S_8	0.8750	0.871 ± 0.026	$k_{\rm eq}$	0.010181	0.01023 ± 0.00019
$\boldsymbol{\Omega_c h^2}$	0.11702	0.1178 ± 0.0027	$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4793	0.477 ± 0.014	$100\theta_{\rm eq}$	0.8263	0.823 ± 0.012
$\boldsymbol{100\theta_{\rm MC}}$	1.04136	1.04126 ± 0.00055	$\sigma_8 \Omega_{\rm m}^{0.25}$	0.6493	0.644 ± 0.017	$100\theta_{\rm s,eq}$	0.4560	0.4545 ± 0.0061
$\boldsymbol{\tau}$	0.1485	$0.134^{+0.040}_{-0.034}$	$\sigma_8/h^{0.5}$	1.0610	1.051 ± 0.028	$H(0.15)$	73.86	73.5 ± 1.1
$\boldsymbol{\ln(10^{10} A_s)}$	3.224	$3.196^{+0.074}_{-0.063}$	$r_{\rm drag} h$	101.48	100.9 ± 2.2	$D_{\rm M}(0.15)$	631.8	635 ± 11
$\boldsymbol{n_s}$	0.9767	0.9731 ± 0.0088	$\langle d^2 \rangle^{1/2}$	2.615	$2.596^{+0.069}_{-0.061}$	$H(0.38)$	83.71	83.48 ± 0.82
$\boldsymbol{A_{100}^{\rm PS}}$	218.3	232 ± 26	$z_{\rm re}$	15.47	$14.3^{+3.1}_{-2.1}$	$D_{\rm M}(0.38)$	1510.3	1517 ± 22
$\boldsymbol{A_{143}^{\rm PS}}$	45.5	35 ± 9	$10^9 A_s$	2.512	2.45 ± 0.17	$H(0.51)$	90.29	90.10 ± 0.65
$\boldsymbol{A_{217}^{\rm PS}}$	108.9	104 ± 10	$10^9 A_s e^{-2\tau}$	1.8666	1.869 ± 0.016	$D_{\rm M}(0.51)$	1958.8	1966 ± 26
$\boldsymbol{A_{217}^{\rm CIB}}$	37.5	37^{+7}_{-8}	D_{40}	1251.9	1253^{+17}_{-19}	$H(0.61)$	95.79	95.64 ± 0.53
$\boldsymbol{A_{143}^{\rm tSZ}}$	6.29	4.1 ± 2.1	D_{220}	5716.6	5717 ± 41	$D_{\rm M}(0.61)$	2281.2	2289 ± 28
$\boldsymbol{r_{143\times217}^{\rm PS}}$	0.787	0.68 ± 0.13	D_{810}	2527.8	2527 ± 14	$H(2.33)$	234.84	235.2 ± 1.6
$\boldsymbol{r_{143\times217}^{\rm CIB}}$	0.777	$0.51^{+0.33}_{-0.27}$	D_{1420}	816.1	814.4 ± 5.2	$D_{\rm M}(2.33)$	5742.0	5749 ± 23
$\boldsymbol{\xi^{\rm tSZ\times CIB}}$	0.99	—	D_{2000}	232.89	231.9 ± 2.2	$f\sigma_8(0.15)$	0.4855	0.483 ± 0.014
$\boldsymbol{A^{\rm kSZ}}$	0.01	< 5.46	$n_{\rm s,0.002}$	0.9767	0.9731 ± 0.0088	$\sigma_8(0.15)$	0.8144	$0.804^{+0.026}_{-0.023}$
$\boldsymbol{A_{100}^{\rm dust}}$	0.992	0.998 ± 0.20	$Y_{\rm P}$	0.245470	0.24543 ± 0.00012	$f\sigma_8(0.38)$	0.5089	0.505 ± 0.013
$\boldsymbol{A_{143}^{\rm dust}}$	0.958	0.95 ± 0.18	$Y_{\rm P}^{\rm BBN}$	0.246797	0.24676 ± 0.00012	$\sigma_8(0.38)$	0.7236	$0.714^{+0.024}_{-0.022}$
$\boldsymbol{A_{217}^{\rm dust}}$	0.992	0.98 ± 0.10	10^5D/H	2.549	2.567 ± 0.053	$f\sigma_8(0.51)$	0.5093	0.505 ± 0.013
$\boldsymbol{A_{143\times217}^{\rm dust}}$	1.017	1.02 ± 0.16	Age/Gyr	13.751	13.767 ± 0.051	$\sigma_8(0.51)$	0.6779	$0.669^{+0.023}_{-0.021}$
$\boldsymbol{y_{\rm cal}}$	1.00009	1.0002 ± 0.0025	z_*	1089.41	1089.60 ± 0.56	$f\sigma_8(0.61)$	0.5052	0.500 ± 0.013
$\boldsymbol{c_{100}}$	0.99785	0.9975 ± 0.0011	r_*	145.05	144.93 ± 0.58	$\sigma_8(0.61)$	0.6455	$0.637^{+0.022}_{-0.020}$
$\boldsymbol{c_{217}}$	1.00088	1.0009 ± 0.0016	$100\theta_*$	1.04153	1.04143 ± 0.00053	$f\sigma_8(2.33)$	0.3261	$0.322^{+0.012}_{-0.011}$
H_0	68.73	68.4 ± 1.3	$D_{\rm M}(z_*)$/Gpc	13.927	13.917 ± 0.052	$\sigma_8(2.33)$	0.3370	0.332 ± 0.012
Ω_Λ	0.7031	$0.698^{+0.018}_{-0.016}$	$z_{\rm drag}$	1060.20	1060.02 ± 0.55	f_{2000}^{143}	25.87	27 ± 4
$\Omega_{\rm m}$	0.2969	$0.302^{+0.016}_{-0.018}$	$r_{\rm drag}$	147.66	147.57 ± 0.55	f_{2000}^{217}	103.71	104.9 ± 2.5
$\Omega_{\rm m} h^2$	0.14024	0.1409 ± 0.0025	$k_{\rm D}$	0.14042	0.14044 ± 0.00054	$f_{2000}^{143\times217}$	28.96	29.9 ± 2.8
$\Omega_{\rm m} h^3$	0.096384	0.09628 ± 0.00049	$100\theta_{\rm D}$	0.160649	0.16074 ± 0.00030	$\chi^2_{\rm CamSpec}$	7045.25	7059.6 ± 5.3
σ_8	0.8796	$0.869^{+0.027}_{-0.024}$	$z_{\rm eq}$	3336	3351 ± 61	$\chi^2_{\rm prior}$	1.44	7.3 ± 3.4

Best-fit $\chi^2_{\rm eff} = 7046.70$; $\bar{\chi}^2_{\rm eff} = 7066.87$; $R - 1 = 0.00646$
$\chi^2_{\rm eff}$: CMB - CamSpec like_10.7HM: 7045.25

2.223 base_CamSpecHM_TT_lowl

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022525	0.02242 ± 0.00028	$\sigma_8\Omega_m^{0.5}$	0.4693	0.468 ± 0.014	$100\theta_{s,eq}$	0.4563	0.4547 ± 0.0058
$\boldsymbol{\Omega_c h^2}$	0.11691	0.1177 ± 0.0026	$\sigma_8\Omega_m^{0.25}$	0.6359	0.631 ± 0.016	$H(0.15)$	73.84	73.5 ± 1.0
$\boldsymbol{100\theta_{MC}}$	1.04132	1.04122 ± 0.00053	$\sigma_8/h^{0.5}$	1.0394	1.030 ± 0.026	$D_M(0.15)$	631.9	635 ± 10
$\boldsymbol{\tau}$	0.1282	$0.113^{+0.036}_{-0.032}$	$r_{drag}h$	101.52	100.9 ± 2.1	$H(0.38)$	83.69	83.44 ± 0.77
$\boldsymbol{\ln(10^{10}A_s)}$	3.183	$3.154^{+0.068}_{-0.060}$	$\langle d^2\rangle^{1/2}$	2.560	2.542 ± 0.061	$D_M(0.38)$	1510.7	1518 ± 20
$\boldsymbol{n_s}$	0.9775	0.9734 ± 0.0081	z_{re}	13.98	$12.7^{+3.0}_{-2.1}$	$H(0.51)$	90.26	90.05 ± 0.61
$\boldsymbol{y_{cal}}$	1.00018	1.0003 ± 0.0025	$10^9 A_s$	2.411	2.35 ± 0.15	$D_M(0.51)$	1959.3	1967 ± 24
$\boldsymbol{A_{100}^{PS}}$	219.3	233 ± 25	$10^9 A_s e^{-2\tau}$	1.8656	1.868 ± 0.015	$H(0.61)$	95.758	95.60 ± 0.49
$\boldsymbol{A_{143}^{PS}}$	45.0	36 ± 9	D_{40}	1234.6	1237 ± 16	$D_M(0.61)$	2281.8	2291 ± 26
$\boldsymbol{A_{217}^{PS}}$	109.7	104 ± 10	D_{220}	5706.2	5708 ± 41	$H(2.33)$	234.71	235.1 ± 1.5
$\boldsymbol{A_{217}^{CIB}}$	37.6	38^{+7}_{-8}	D_{810}	2529.3	2528 ± 14	$D_M(2.33)$	5744.2	5752 ± 22
$\boldsymbol{A_{143}^{tSZ}}$	6.20	$4.0^{+2.0}_{-2.4}$	D_{1420}	817.0	815.1 ± 5.2	$f\sigma_8(0.15)$	0.4754	0.473 ± 0.013
$\boldsymbol{r_{143\times217}^{PS}}$	0.807	0.67 ± 0.13	D_{2000}	232.68	231.6 ± 2.2	$\sigma_8(0.15)$	0.7978	0.788 ± 0.022
$\boldsymbol{r_{143\times217}^{CIB}}$	0.700	$0.52^{+0.35}_{-0.25}$	$n_{s,0.002}$	0.9775	0.9734 ± 0.0081	$f\sigma_8(0.38)$	0.4984	0.495 ± 0.013
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.96	—	Y_P	0.245453	0.24541 ± 0.00011	$\sigma_8(0.38)$	0.7089	0.700 ± 0.021
$\boldsymbol{A^{kSZ}}$	0.06	< 5.56	Y_P^{BBN}	0.246780	0.24674 ± 0.00011	$f\sigma_8(0.51)$	0.4988	0.495 ± 0.013
$\boldsymbol{A_{100}^{dust}}$	1.006	1.01 ± 0.20	10^5D/H	2.557	2.577 ± 0.051	$\sigma_8(0.51)$	0.6642	0.655 ± 0.020
$\boldsymbol{A_{143}^{dust}}$	0.962	0.96 ± 0.18	Age/Gyr	13.7563	13.773 ± 0.048	$f\sigma_8(0.61)$	0.4948	0.490 ± 0.013
$\boldsymbol{A_{217}^{dust}}$	0.978	0.98 ± 0.10	z_*	1089.46	1089.66 ± 0.52	$\sigma_8(0.61)$	0.6324	0.624 ± 0.019
$\boldsymbol{A_{143\times217}^{dust}}$	1.030	1.02 ± 0.16	r_*	145.12	144.99 ± 0.55	$f\sigma_8(2.33)$	0.3195	0.315 ± 0.010
$\boldsymbol{c_{100}}$	0.99783	0.9975 ± 0.0011	$100\theta_*$	1.04150	1.04140 ± 0.00051	$\sigma_8(2.33)$	0.3302	0.325 ± 0.011
$\boldsymbol{c_{217}}$	1.00070	1.0009 ± 0.0016	$D_M(z_*)$/Gpc	13.9335	13.922 ± 0.050	f_{2000}^{143}	25.95	27 ± 4
H_0	68.72	68.3 ± 1.2	z_{drag}	1060.09	1059.89 ± 0.53	f_{2000}^{217}	103.94	105.3 ± 2.4
Ω_Λ	0.7034	$0.698^{+0.016}_{-0.015}$	r_{drag}	147.74	147.65 ± 0.53	$f_{2000}^{143\times217}$	29.32	30.3 ± 2.6
Ω_m	0.2966	$0.302^{+0.015}_{-0.016}$	k_D	0.14030	0.14032 ± 0.00053	χ^2_{lowl}	24.50	24.8 ± 1.7
$\Omega_m h^2$	0.14008	0.1408 ± 0.0024	$100\theta_D$	0.160707	0.16081 ± 0.00029	$\chi^2_{CamSpec}$	7046.4	7060.1 ± 5.5
$\Omega_m h^3$	0.096258	0.09616 ± 0.00048	z_{eq}	3332	3349 ± 57	χ^2_{prior}	1.41	7.4 ± 3.3
σ_8	0.8616	0.851 ± 0.023	k_{eq}	0.010170	0.01022 ± 0.00018	χ^2_{CMB}	7070.9	7084.8 ± 5.4
S_8	0.8568	0.854 ± 0.025	$100\theta_{eq}$	0.8268	0.824 ± 0.011			

Best-fit $\chi^2_{eff} = 7072.29$; $\bar{\chi}^2_{eff} = 7092.24$; $R - 1 = 0.00797$
χ^2_{eff}: CMB - commander_dx12_v3_2_29: 24.50 CamSpec like_10.7HM: 7046.38

2.224 base_CamSpecHM_TT_lowl_post_BAO

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02239 ± 0.00022	$\sigma_8\Omega_m^{0.25}$	0.631 ± 0.016	$D_M(0.15)$	636.9 ± 5.1
$\boldsymbol{\Omega_c h^2}$	0.1181 ± 0.0013	$\sigma_8/h^{0.5}$	1.030 ± 0.026	$H(0.38)$	83.31 ± 0.40
$\boldsymbol{100\theta_{MC}}$	1.04117 ± 0.00043	$r_{drag}h$	100.6 ± 1.0	$D_M(0.38)$	1521 ± 10
$\boldsymbol{\tau}$	$0.109^{+0.029}_{-0.026}$	$\langle d^2\rangle^{1/2}$	2.540 ± 0.061	$H(0.51)$	89.96 ± 0.33
$\boldsymbol{\ln(10^{10}A_s)}$	$3.147^{+0.057}_{-0.051}$	z_{re}	$12.5^{+2.5}_{-1.8}$	$D_M(0.51)$	1971 ± 12
$\boldsymbol{n_s}$	0.9721 ± 0.0050	$10^9 A_s$	2.33 ± 0.12	$H(0.61)$	95.52 ± 0.28
$\boldsymbol{y_{cal}}$	1.0003 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.870 ± 0.012	$D_M(0.61)$	2294 ± 13
$\boldsymbol{A_{100}^{PS}}$	234 ± 25	D_{40}	1237 ± 16	$H(2.33)$	235.34 ± 0.80
$\boldsymbol{A_{143}^{PS}}$	36 ± 9	D_{220}	5707 ± 40	$D_M(2.33)$	5755 ± 14
$\boldsymbol{A_{217}^{PS}}$	104^{+10}_{-10}	D_{810}	2529 ± 14	$f\sigma_8(0.15)$	0.474 ± 0.012
$\boldsymbol{A_{217}^{CIB}}$	38^{+7}_{-8}	D_{1420}	814.9 ± 5.0	$\sigma_8(0.15)$	0.786 ± 0.021
$\boldsymbol{A_{143}^{tSZ}}$	$4.0^{+1.9}_{-2.5}$	D_{2000}	231.4 ± 1.9	$f\sigma_8(0.38)$	0.495 ± 0.013
$\boldsymbol{r_{143\times217}^{PS}}$	0.67 ± 0.13	$n_{s,0.002}$	0.9721 ± 0.0050	$\sigma_8(0.38)$	0.698 ± 0.019
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.53^{+0.37}_{-0.23}$	Y_P	0.245400 ± 0.000086	$f\sigma_8(0.51)$	0.494 ± 0.013
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	0.246726 ± 0.000086	$\sigma_8(0.51)$	0.653 ± 0.018
$\boldsymbol{A^{kSZ}}$	< 5.72	10^5D/H	2.583 ± 0.040	$f\sigma_8(0.61)$	0.490 ± 0.013
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.20	Age/Gyr	13.780 ± 0.031	$\sigma_8(0.61)$	0.622 ± 0.017
$\boldsymbol{A_{143}^{dust}}$	0.96 ± 0.18	z_*	1089.73 ± 0.33	$f\sigma_8(2.33)$	0.3139 ± 0.0086
$\boldsymbol{A_{217}^{dust}}$	0.98 ± 0.10	r_*	144.91 ± 0.32	$\sigma_8(2.33)$	0.3240 ± 0.0090
$\boldsymbol{A_{143\times217}^{dust}}$	1.02 ± 0.16	$100\theta_*$	1.04136 ± 0.00043	f_{2000}^{143}	28 ± 3
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	$D_M(z_*)$/Gpc	13.916 ± 0.031	f_{2000}^{217}	105.5 ± 2.2
$\boldsymbol{c_{217}}$	1.0010 ± 0.0015	z_{drag}	1059.84 ± 0.47	$f_{2000}^{143\times217}$	30.6 ± 2.4
H_0	68.13 ± 0.60	r_{drag}	147.58 ± 0.35	χ^2_{lowl}	24.7 ± 1.6
Ω_Λ	0.6959 ± 0.0077	k_D	0.14037 ± 0.00045	$\chi^2_{CamSpec}$	7059.6 ± 5.4
Ω_m	0.3041 ± 0.0077	$100\theta_D$	0.16083 ± 0.00027	χ^2_{6DF}	0.044 ± 0.061
$\Omega_m h^2$	0.1411 ± 0.0012	z_{eq}	3357 ± 30	χ^2_{MGS}	1.82 ± 0.63
$\Omega_m h^3$	0.09615 ± 0.00048	k_{eq}	0.010246 ± 0.000090	$\chi^2_{DR12BAO}$	4.1 ± 1.1
σ_8	0.850 ± 0.022	$100\theta_{eq}$	0.8218 ± 0.0056	χ^2_{prior}	7.4 ± 3.3
S_8	0.856 ± 0.023	$100\theta_{s,eq}$	0.4538 ± 0.0029	χ^2_{BAO}	6.0 ± 1.1
$\sigma_8\Omega_m^{0.5}$	0.469 ± 0.012	$H(0.15)$	73.34 ± 0.52	χ^2_{CMB}	7084.3 ± 5.3

$\bar{\chi}^2_{eff} = 7097.63$; $R - 1 = 0.01179$

2.225 base_CamSpecHM_TT_lowl_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02243 ± 0.00027	$\sigma_8\Omega_m^{0.5}$	0.468 ± 0.014	$100\theta_{s,eq}$	0.4549 ± 0.0057
$\boldsymbol{\Omega_c h^2}$	0.1176 ± 0.0025	$\sigma_8\Omega_m^{0.25}$	0.632 ± 0.016	$H(0.15)$	73.5 ± 1.0
$\boldsymbol{100\theta_{MC}}$	1.04123 ± 0.00052	$\sigma_8/h^{0.5}$	1.031 ± 0.025	$D_M(0.15)$	635.1 ± 9.9
$\boldsymbol{\tau}$	0.115 ± 0.032	$r_{drag}h$	100.9 ± 2.0	$H(0.38)$	83.46 ± 0.75
$\boldsymbol{\ln(10^{10}A_s)}$	3.157 ± 0.060	$\langle d^2\rangle^{1/2}$	2.544 ± 0.058	$D_M(0.38)$	1517 ± 20
$\boldsymbol{n_s}$	0.9737 ± 0.0079	z_{re}	$12.9^{+2.8}_{-2.2}$	$H(0.51)$	90.08 ± 0.60
$\boldsymbol{y_{cal}}$	1.0003 ± 0.0025	$10^9 A_s$	2.36 ± 0.14	$D_M(0.51)$	1967 ± 23
$\boldsymbol{A_{100}^{PS}}$	232 ± 25	$10^9 A_s e^{-2\tau}$	1.868 ± 0.015	$H(0.61)$	$95.61^{+0.45}_{-0.51}$
$\boldsymbol{A_{143}^{PS}}$	35 ± 9	D_{40}	1237 ± 16	$D_M(0.61)$	2290 ± 25
$\boldsymbol{A_{217}^{PS}}$	104 ± 10	D_{220}	5708 ± 41	$H(2.33)$	235.1 ± 1.5
$\boldsymbol{A_{217}^{CIB}}$	38 ± 7	D_{810}	2528 ± 14	$D_M(2.33)$	5751 ± 21
$\boldsymbol{A_{143}^{tSZ}}$	$4.0^{+2.0}_{-2.4}$	D_{1420}	815.2 ± 5.2	$f\sigma_8(0.15)$	0.474 ± 0.013
$\boldsymbol{r_{143\times217}^{PS}}$	0.67 ± 0.13	D_{2000}	231.6 ± 2.1	$\sigma_8(0.15)$	0.789 ± 0.021
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.52^{+0.35}_{-0.25}$	$n_{s,0.002}$	0.9737 ± 0.0079	$f\sigma_8(0.38)$	0.495 ± 0.012
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P	0.24542 ± 0.00011	$\sigma_8(0.38)$	0.701 ± 0.020
$\boldsymbol{A^{kSZ}}$	< 5.53	Y_P^{BBN}	0.24674 ± 0.00011	$f\sigma_8(0.51)$	0.495 ± 0.012
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.20	10^5D/H	2.576 ± 0.050	$\sigma_8(0.51)$	0.656 ± 0.019
$\boldsymbol{A_{143}^{dust}}$	0.96 ± 0.18	Age/Gyr	13.771 ± 0.047	$f\sigma_8(0.61)$	0.491 ± 0.012
$\boldsymbol{A_{217}^{dust}}$	0.98 ± 0.10	z_*	1089.64 ± 0.51	$\sigma_8(0.61)$	0.625 ± 0.018
$\boldsymbol{A_{143\times217}^{dust}}$	1.02 ± 0.16	r_*	145.00 ± 0.54	$f\sigma_8(2.33)$	0.3154 ± 0.0095
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	$100\theta_*$	1.04141 ± 0.00051	$\sigma_8(2.33)$	0.326 ± 0.010
$\boldsymbol{c_{217}}$	1.0009 ± 0.0016	$D_M(z_*)$/Gpc	13.924 ± 0.050	f_{2000}^{143}	27 ± 4
H_0	68.4 ± 1.2	z_{drag}	1059.90 ± 0.52	f_{2000}^{217}	105.2 ± 2.4
Ω_Λ	0.698 ± 0.015	r_{drag}	147.66 ± 0.53	$f_{2000}^{143\times217}$	30.2 ± 2.6
Ω_m	0.302 ± 0.015	k_D	0.14031 ± 0.00053	χ^2_{lowl}	24.8 ± 1.7
$\Omega_m h^2$	0.1407 ± 0.0024	$100\theta_D$	0.16081 ± 0.00029	$\chi^2_{CamSpec}$	7060.0 ± 5.4
$\Omega_m h^3$	0.09616 ± 0.00047	z_{eq}	3347 ± 56	χ^2_{prior}	7.4 ± 3.3
σ_8	0.853 ± 0.022	k_{eq}	0.01022 ± 0.00017	χ^2_{CMB}	7084.8 ± 5.3
S_8	0.854 ± 0.025	$100\theta_{eq}$	0.824 ± 0.011		

$\bar{\chi}^2_{eff} = 7092.14$; $R - 1 = 0.00760$

2.226 base_CamSpecHM_TT_lowl_post_BAO_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02239 ± 0.00021	$\sigma_8\Omega_m^{0.25}$	0.632 ± 0.016	$D_M(0.15)$	636.8 ± 5.1
$\boldsymbol{\Omega_c h^2}$	0.1181 ± 0.0013	$\sigma_8/h^{0.5}$	1.030 ± 0.025	$H(0.38)$	83.32 ± 0.39
$\boldsymbol{100\theta_{MC}}$	1.04117 ± 0.00043	$r_{drag}h$	100.6 ± 1.0	$D_M(0.38)$	1521 ± 10
$\boldsymbol{\tau}$	0.110 ± 0.026	$\langle d^2\rangle^{1/2}$	2.542 ± 0.059	$H(0.51)$	89.96 ± 0.33
$\boldsymbol{\ln(10^{10}A_s)}$	3.149 ± 0.052	z_{re}	$12.6^{+2.4}_{-1.9}$	$D_M(0.51)$	1971 ± 12
$\boldsymbol{n_s}$	0.9722 ± 0.0050	$10^9 A_s$	2.33 ± 0.12	$H(0.61)$	95.52 ± 0.28
$\boldsymbol{y_{cal}}$	1.0003 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.870 ± 0.012	$D_M(0.61)$	2294 ± 13
$\boldsymbol{A_{100}^{PS}}$	233 ± 25	D_{40}	1237 ± 15	$H(2.33)$	235.34 ± 0.80
$\boldsymbol{A_{143}^{PS}}$	36 ± 9	D_{220}	5707 ± 40	$D_M(2.33)$	5755 ± 14
$\boldsymbol{A_{217}^{PS}}$	104^{+10}_{-10}	D_{810}	2529 ± 14	$f\sigma_8(0.15)$	0.474 ± 0.012
$\boldsymbol{A_{217}^{CIB}}$	38^{+7}_{-8}	D_{1420}	814.9 ± 5.0	$\sigma_8(0.15)$	0.787 ± 0.020
$\boldsymbol{A_{143}^{tSZ}}$	$4.0^{+1.9}_{-2.5}$	D_{2000}	231.4 ± 1.9	$f\sigma_8(0.38)$	0.495 ± 0.012
$\boldsymbol{r_{143\times217}^{PS}}$	0.67 ± 0.13	$n_{s,0.002}$	0.9722 ± 0.0050	$\sigma_8(0.38)$	0.698 ± 0.018
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.52^{+0.37}_{-0.24}$	Y_P	0.245401 ± 0.000085	$f\sigma_8(0.51)$	0.495 ± 0.012
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	0.246727 ± 0.000085	$\sigma_8(0.51)$	0.654 ± 0.017
$\boldsymbol{A^{kSZ}}$	< 5.69	10^5D/H	2.582 ± 0.040	$f\sigma_8(0.61)$	0.490 ± 0.012
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.20	Age/Gyr	13.779 ± 0.031	$\sigma_8(0.61)$	0.622 ± 0.016
$\boldsymbol{A_{143}^{dust}}$	0.96 ± 0.18	z_*	1089.73 ± 0.32	$f\sigma_8(2.33)$	0.3141 ± 0.0083
$\boldsymbol{A_{217}^{dust}}$	0.98 ± 0.10	r_*	144.91 ± 0.32	$\sigma_8(2.33)$	0.3242 ± 0.0087
$\boldsymbol{A_{143\times217}^{dust}}$	1.02 ± 0.16	$100\theta_*$	1.04136 ± 0.00043	f_{2000}^{143}	28 ± 3
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	$D_M(z_*)$/Gpc	13.916 ± 0.031	f_{2000}^{217}	105.5 ± 2.2
$\boldsymbol{c_{217}}$	1.0010 ± 0.0016	z_{drag}	1059.85 ± 0.47	$f_{2000}^{143\times217}$	30.5 ± 2.4
H_0	68.14 ± 0.60	r_{drag}	147.58 ± 0.35	χ^2_{lowl}	24.7 ± 1.6
Ω_Λ	0.6960 ± 0.0077	k_D	0.14037 ± 0.00045	$\chi^2_{CamSpec}$	7059.5 ± 5.3
Ω_m	0.3040 ± 0.0077	$100\theta_D$	0.16083 ± 0.00027	χ^2_{6DF}	0.043 ± 0.061
$\Omega_m h^2$	0.1411 ± 0.0012	z_{eq}	3357 ± 29	χ^2_{MGS}	1.82 ± 0.63
$\Omega_m h^3$	0.09615 ± 0.00048	k_{eq}	0.010245 ± 0.000090	$\chi^2_{DR12BAO}$	4.1 ± 1.0
σ_8	0.851 ± 0.021	$100\theta_{eq}$	0.8218 ± 0.0056	χ^2_{prior}	7.4 ± 3.3
S_8	0.856 ± 0.022	$100\theta_{s,eq}$	0.4538 ± 0.0029	χ^2_{BAO}	6.0 ± 1.1
$\sigma_8\Omega_m^{0.5}$	0.469 ± 0.012	$H(0.15)$	73.34 ± 0.52	χ^2_{CMB}	7084.2 ± 5.3

$\bar{\chi}^2_{eff} = 7097.56$; $R - 1 = 0.01150$

2.227 base_CamSpecHM_TT_lowE

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022053	0.02207 ± 0.00021	$\sigma_8\Omega_m^{0.5}$	0.4653	0.465 ± 0.014	$100\theta_{s,eq}$	0.44618	0.4464 ± 0.0046
$\boldsymbol{\Omega_c h^2}$	0.12163	0.1216 ± 0.0022	$\sigma_8\Omega_m^{0.25}$	0.6154	0.615 ± 0.012	$H(0.15)$	71.90	71.95 ± 0.79
$\boldsymbol{100\theta_{MC}}$	1.040725	1.04073 ± 0.00048	$\sigma_8/h^{0.5}$	0.9985	0.998 ± 0.016	$D_M(0.15)$	651.2	650.8 ± 8.1
$\boldsymbol{\tau}$	0.0513	0.0517 ± 0.0080	$r_{drag}h$	97.71	97.8 ± 1.6	$H(0.38)$	82.27	82.31 ± 0.56
$\boldsymbol{\ln(10^{10}A_s)}$	3.0400	3.041 ± 0.016	$\langle d^2\rangle^{1/2}$	2.4710	2.469 ± 0.039	$D_M(0.38)$	1549.3	1549 ± 16
$\boldsymbol{n_s}$	0.9590	0.9599 ± 0.0060	z_{re}	7.47	7.48 ± 0.83	$H(0.51)$	89.134	89.17 ± 0.44
$\boldsymbol{y_{cal}}$	1.00029	1.0004 ± 0.0025	$10^9 A_s$	2.0905	2.092 ± 0.034	$D_M(0.51)$	2004.6	2004 ± 19
$\boldsymbol{A_{100}^{PS}}$	248.9	245 ± 25	$10^9 A_s e^{-2\tau}$	1.8866	1.887 ± 0.014	$H(0.61)$	94.866	94.90 ± 0.35
$\boldsymbol{A_{143}^{PS}}$	39.9	42 ± 8	D_{40}	1240.5	1239 ± 16	$D_M(0.61)$	2330.7	2330 ± 20
$\boldsymbol{A_{217}^{PS}}$	97.9	100 ± 10	D_{220}	5709.7	5709 ± 42	$H(2.33)$	237.30	237.3 ± 1.3
$\boldsymbol{A_{217}^{CIB}}$	44.6	42 ± 7	D_{810}	2533.3	2534 ± 14	$D_M(2.33)$	5783.3	5782 ± 16
$\boldsymbol{A_{143}^{tSZ}}$	4.22	$3.6^{+1.7}_{-2.6}$	D_{1420}	812.1	812.9 ± 5.2	$f\sigma_8(0.15)$	0.4686	0.468 ± 0.012
$\boldsymbol{r_{143\times217}^{PS}}$	0.539	0.64 ± 0.13	D_{2000}	228.72	229.0 ± 1.8	$\sigma_8(0.15)$	0.7507	0.7509 ± 0.0076
$\boldsymbol{r_{143\times217}^{CIB}}$	0.693	> 0.473	$n_{s,0.002}$	0.9590	0.9599 ± 0.0060	$f\sigma_8(0.38)$	0.4836	0.4834 ± 0.0097
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.01	—	Y_P	0.245264	$0.24526^{+0.00010}_{-0.000089}$	$\sigma_8(0.38)$	0.6638	0.6640 ± 0.0060
$\boldsymbol{A^{kSZ}}$	3.92	$5.2^{+4.0}_{-2.2}$	Y_P^{BBN}	0.246590	$0.24659^{+0.00011}_{-0.000089}$	$f\sigma_8(0.51)$	0.4804	0.4803 ± 0.0083
$\boldsymbol{A_{100}^{dust}}$	1.005	1.01 ± 0.20	10^5D/H	2.6461	2.643 ± 0.041	$\sigma_8(0.51)$	0.6206	0.6208 ± 0.0055
$\boldsymbol{A_{143}^{dust}}$	0.986	0.97 ± 0.18	Age/Gyr	13.8419	13.839 ± 0.036	$f\sigma_8(0.61)$	0.4742	0.4741 ± 0.0073
$\boldsymbol{A_{217}^{dust}}$	0.958	0.97 ± 0.10	z_*	1090.466	1090.44 ± 0.41	$\sigma_8(0.61)$	0.59006	0.5903 ± 0.0051
$\boldsymbol{A_{143\times217}^{dust}}$	1.001	1.03 ± 0.16	r_*	144.254	144.26 ± 0.49	$f\sigma_8(2.33)$	0.29692	0.2971 ± 0.0025
$\boldsymbol{c_{100}}$	0.99748	0.9975 ± 0.0011	$100\theta_*$	1.040937	1.04094 ± 0.00047	$\sigma_8(2.33)$	0.30548	0.3056 ± 0.0027
$\boldsymbol{c_{217}}$	1.00140	1.0013 ± 0.0016	$D_M(z_*)$/Gpc	13.8581	13.859 ± 0.045	f_{2000}^{143}	32.33	31.6 ± 3.0
H_0	66.46	66.51 ± 0.93	z_{drag}	1059.322	1059.35 ± 0.44	f_{2000}^{217}	108.39	108.0 ± 2.0
Ω_Λ	0.6733	$0.674^{+0.014}_{-0.013}$	r_{drag}	147.016	147.02 ± 0.49	$f_{2000}^{143\times217}$	33.80	33.6 ± 2.2
Ω_m	0.3267	$0.326^{+0.013}_{-0.014}$	k_D	0.14070	0.14071 ± 0.00052	χ^2_{simall}	395.83	397.0 ± 1.7
$\Omega_m h^2$	0.14433	0.1443 ± 0.0021	$100\theta_D$	0.161123	0.16111 ± 0.00026	$\chi^2_{CamSpec}$	7049.7	7062.9 ± 5.3
$\Omega_m h^3$	0.095922	0.09594 ± 0.00045	z_{eq}	3433.5	3432 ± 49	χ^2_{prior}	2.29	7.7 ± 3.5
σ_8	0.8140	0.8142 ± 0.0090	k_{eq}	0.010479	0.01048 ± 0.00015	χ^2_{CMB}	7445.5	7459.8 ± 5.5
S_8	0.8495	0.849 ± 0.025	$100\theta_{eq}$	0.8067	0.8071 ± 0.0090			

Best-fit $\chi^2_{eff} = 7447.83$; $\bar{\chi}^2_{eff} = 7467.49$; $R - 1 = 0.00861$
χ^2_{eff}: CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.83 CamSpec like_10.7HM: 7049.71

2.228 base_CamSpecHM_TTTEEE

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02246 ± 0.00019	σ_8	$0.850^{+0.021}_{-0.026}$	$k_{\rm eq}$	0.01027 ± 0.00011
$\boldsymbol{\Omega_c h^2}$	0.1183 ± 0.0017	S_8	0.858 ± 0.022	$100\theta_{\rm eq}$	0.8206 ± 0.0073
$\boldsymbol{100\theta_{MC}}$	1.04104 ± 0.00034	$\sigma_8\Omega_{\rm m}^{0.5}$	0.470 ± 0.012	$100\theta_{\rm s,eq}$	0.4531 ± 0.0037
$\boldsymbol{\tau}$	$0.110^{+0.029}_{-0.034}$	$\sigma_8\Omega_{\rm m}^{0.25}$	$0.632^{+0.015}_{-0.017}$	$H(0.15)$	73.29 ± 0.68
$\boldsymbol{\ln(10^{10}A_s)}$	$3.149^{+0.056}_{-0.065}$	$\sigma_8/h^{0.5}$	$1.031^{+0.025}_{-0.028}$	$D_{\rm M}(0.15)$	637.4 ± 6.6
$\boldsymbol{n_s}$	0.9705 ± 0.0060	$r_{\rm drag}h$	100.4 ± 1.3	$H(0.38)$	83.29 ± 0.50
$\boldsymbol{A_{100}^{PS}}$	233 ± 25	$\langle d^2\rangle^{1/2}$	$2.548^{+0.060}_{-0.066}$	$D_{\rm M}(0.38)$	1522 ± 13
$\boldsymbol{A_{143}^{PS}}$	36 ± 8	$z_{\rm re}$	12.4 ± 2.6	$H(0.51)$	89.95 ± 0.40
$\boldsymbol{A_{217}^{PS}}$	104 ± 10	$10^9A_{\rm s}$	$2.34^{+0.12}_{-0.16}$	$D_{\rm M}(0.51)$	1972 ± 16
$\boldsymbol{A_{217}^{CIB}}$	37 ± 7	$10^9A_{\rm s}e^{-2\tau}$	1.872 ± 0.013	$H(0.61)$	$95.52^{+0.30}_{-0.33}$
$\boldsymbol{A_{143}^{tSZ}}$	$4.0^{+2.0}_{-2.4}$	D_{40}	1243^{+14}_{-17}	$D_{\rm M}(0.61)$	2295 ± 17
$\boldsymbol{r_{143\times217}^{PS}}$	0.68 ± 0.13	D_{220}	5722 ± 39	$H(2.33)$	235.55 ± 0.98
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.51^{+0.34}_{-0.26}$	D_{810}	2529 ± 14	$D_{\rm M}(2.33)$	5754 ± 14
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{1420}	814.7 ± 4.8	$f\sigma_8(0.15)$	0.475 ± 0.012
$\boldsymbol{A^{kSZ}}$	< 5.48	D_{2000}	231.4 ± 1.8	$\sigma_8(0.15)$	$0.786^{+0.020}_{-0.024}$
$\boldsymbol{A_{100}^{dust}}$	1.00 ± 0.19	$n_{\rm s,0.002}$	0.9705 ± 0.0060	$f\sigma_8(0.38)$	0.496 ± 0.013
$\boldsymbol{A_{143}^{dust}}$	0.95 ± 0.17	$Y_{\rm P}$	0.245429 ± 0.000075	$\sigma_8(0.38)$	$0.698^{+0.018}_{-0.022}$
$\boldsymbol{A_{217}^{dust}}$	0.98 ± 0.10	$Y_{\rm P}^{\rm BBN}$	0.246756 ± 0.000075	$f\sigma_8(0.51)$	$0.495^{+0.012}_{-0.013}$
$\boldsymbol{A_{143\times217}^{dust}}$	1.02 ± 0.16	10^5D/H	2.569 ± 0.035	$\sigma_8(0.51)$	$0.653^{+0.017}_{-0.021}$
$\boldsymbol{y_{cal}}$	1.0001 ± 0.0025	Age/Gyr	13.777 ± 0.031	$f\sigma_8(0.61)$	$0.490^{+0.012}_{-0.014}$
$\boldsymbol{c_{100}}$	0.9976 ± 0.0011	z_*	1089.66 ± 0.36	$\sigma_8(0.61)$	$0.622^{+0.017}_{-0.020}$
$\boldsymbol{c_{217}}$	1.0009 ± 0.0016	r_*	144.80 ± 0.36	$f\sigma_8(2.33)$	$0.3138^{+0.0085}_{-0.011}$
$\boldsymbol{c_{TE}}$	0.9924 ± 0.0055	$100\theta_*$	1.04122 ± 0.00033	$\sigma_8(2.33)$	$0.3239^{+0.0091}_{-0.011}$
$\boldsymbol{c_{EE}}$	0.9903 ± 0.0050	$D_{\rm M}(z_*)$/Gpc	13.907 ± 0.033	f_{2000}^{143}	27 ± 3
H_0	68.07 ± 0.78	$z_{\rm drag}$	1060.03 ± 0.37	f_{2000}^{217}	105.3 ± 2.2
Ω_Λ	0.695 ± 0.010	$r_{\rm drag}$	147.44 ± 0.34	$f_{2000}^{143\times217}$	30.3 ± 2.4
$\Omega_{\rm m}$	0.305 ± 0.010	$k_{\rm D}$	0.14057 ± 0.00035	$\chi^2_{\rm CamSpec}$	11512.0 ± 5.6
$\Omega_{\rm m}h^2$	0.1414 ± 0.0016	$100\theta_{\rm D}$	0.16071 ± 0.00021	$\chi^2_{\rm prior}$	7.7 ± 3.3
$\Omega_{\rm m}h^3$	0.09626 ± 0.00032	$z_{\rm eq}$	3364 ± 38		

$\bar{\chi}^2_{\rm eff} = 11519.77$; $R - 1 = 0.00880$

2.229 base_CamSpecHM_TTTEEE_lowl

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022467	0.02243 ± 0.00018	S_8	0.8498	0.846 ± 0.020	$100\theta_{s,eq}$	0.45334	0.4530 ± 0.0034
$\boldsymbol{\Omega_c h^2}$	0.11820	0.1184 ± 0.0016	$\sigma_8\Omega_m^{0.5}$	0.4655	0.463 ± 0.011	$H(0.15)$	73.32	73.23 ± 0.62
$\boldsymbol{100\theta_{MC}}$	1.041045	1.04102 ± 0.00033	$\sigma_8\Omega_m^{0.25}$	0.6265	0.623 ± 0.015	$D_M(0.15)$	637.0	637.9 ± 6.1
$\boldsymbol{\tau}$	0.1012	0.094 ± 0.028	$\sigma_8/h^{0.5}$	1.0219	1.015 ± 0.024	$H(0.38)$	83.314	83.25 ± 0.46
$\boldsymbol{\ln(10^{10}A_s)}$	3.132	3.117 ± 0.054	$r_{drag}h$	100.44	100.3 ± 1.2	$D_M(0.38)$	1520.8	1523 ± 12
$\boldsymbol{n_s}$	0.9723	0.9707 ± 0.0055	$\langle d^2\rangle^{1/2}$	2.521	2.508 ± 0.056	$H(0.51)$	89.963	89.91 ± 0.37
$\boldsymbol{y_{cal}}$	1.00023	1.0002 ± 0.0024	z_{re}	11.89	$11.2^{+2.6}_{-2.0}$	$D_M(0.51)$	1971.2	1973 ± 14
$\boldsymbol{A_{100}^{PS}}$	221.6	234 ± 25	$10^9 A_s$	2.293	2.26 ± 0.12	$H(0.61)$	95.530	$95.48^{+0.28}_{-0.31}$
$\boldsymbol{A_{143}^{PS}}$	48.3	37 ± 9	$10^9 A_s e^{-2\tau}$	1.8726	1.872 ± 0.012	$D_M(0.61)$	2294.6	2297 ± 16
$\boldsymbol{A_{217}^{PS}}$	108.5	104 ± 10	D_{40}	1231.7	1233 ± 14	$H(2.33)$	235.48	235.56 ± 0.91
$\boldsymbol{A_{217}^{CIB}}$	38.8	38 ± 7	D_{220}	5716.2	5716 ± 38	$D_M(2.33)$	5753.6	5756 ± 13
$\boldsymbol{A_{143}^{tSZ}}$	6.38	$4.0^{+2.0}_{-2.4}$	D_{810}	2532.6	2531 ± 13	$f\sigma_8(0.15)$	0.4708	0.468 ± 0.011
$\boldsymbol{r_{143\times217}^{PS}}$	0.768	0.67 ± 0.13	D_{1420}	816.86	815.5 ± 4.7	$\sigma_8(0.15)$	0.7800	0.774 ± 0.020
$\boldsymbol{r_{143\times217}^{CIB}}$	0.842	$0.52^{+0.36}_{-0.24}$	D_{2000}	231.94	231.3 ± 1.8	$f\sigma_8(0.38)$	0.4915	0.489 ± 0.011
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.96	—	$n_{s,0.002}$	0.9723	0.9707 ± 0.0055	$\sigma_8(0.38)$	0.6922	0.687 ± 0.018
$\boldsymbol{A^{kSZ}}$	0.01	< 5.50	Y_P	0.245433	0.245416 ± 0.000071	$f\sigma_8(0.51)$	0.4909	0.488 ± 0.011
$\boldsymbol{A_{100}^{dust}}$	1.000	1.00 ± 0.20	Y_P^{BBN}	0.246759	0.246743 ± 0.000072	$\sigma_8(0.51)$	0.6481	0.643 ± 0.017
$\boldsymbol{A_{143}^{dust}}$	0.960	0.95 ± 0.18	10^5D/H	2.5677	2.575 ± 0.034	$f\sigma_8(0.61)$	0.4863	0.483 ± 0.011
$\boldsymbol{A_{217}^{dust}}$	0.993	0.98 ± 0.10	Age/Gyr	13.7762	13.781 ± 0.029	$\sigma_8(0.61)$	0.6169	0.612 ± 0.016
$\boldsymbol{A_{143\times217}^{dust}}$	1.008	1.01 ± 0.16	z_*	1089.641	1089.70 ± 0.33	$f\sigma_8(2.33)$	0.3114	0.3090 ± 0.0084
$\boldsymbol{c_{100}}$	0.99782	0.9975 ± 0.0011	r_*	144.824	144.81 ± 0.33	$\sigma_8(2.33)$	0.3213	0.3188 ± 0.0089
$\boldsymbol{c_{217}}$	1.00104	1.0009 ± 0.0016	$100\theta_*$	1.041222	1.04120 ± 0.00032	f_{2000}^{143}	27.38	28 ± 3
$\boldsymbol{c_{TE}}$	0.9932	0.9938 ± 0.0053	$D_M(z_*)$/Gpc	13.9091	13.908 ± 0.031	f_{2000}^{217}	104.79	105.5 ± 2.1
$\boldsymbol{c_{EE}}$	0.9906	0.9907 ± 0.0050	z_{drag}	1060.047	1059.96 ± 0.36	$f_{2000}^{143\times217}$	30.07	30.6 ± 2.3
H_0	68.11	68.01 ± 0.72	r_{drag}	147.460	147.46 ± 0.33	χ^2_{lowl}	23.92	24.1 ± 1.4
Ω_Λ	0.6954	0.6940 ± 0.0095	k_D	0.140550	0.14053 ± 0.00034	$\chi^2_{CamSpec}$	11496.2	11512.2 ± 5.7
Ω_m	0.3046	0.3060 ± 0.0095	$100\theta_D$	0.160702	0.16075 ± 0.00021	χ^2_{prior}	1.90	7.8 ± 3.4
$\Omega_m h^2$	0.14131	0.1415 ± 0.0015	z_{eq}	3361.4	3365 ± 35	χ^2_{CMB}	11520.1	11536.3 ± 5.6
$\Omega_m h^3$	0.096250	0.09620 ± 0.00032	k_{eq}	0.010259	0.01027 ± 0.00011			
σ_8	0.8434	0.837 ± 0.021	$100\theta_{eq}$	0.8210	0.8203 ± 0.0067			

Best-fit $\chi^2_{eff} = 11522.05$; $\bar{\chi}^2_{eff} = 11544.10$; $R - 1 = 0.00836$

χ^2_{eff}: CMB - commander_dx12_v3_2_29: 23.92 CamSpec like_10.7HM_1400_unified: 11496.23

2.230 base_CamSpecHM_TTTEEE_lowl_post_BAO

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02244 ± 0.00016	$\sigma_8\Omega_m^{0.5}$	0.463 ± 0.011	$D_M(0.15)$	637.4 ± 4.2
$\boldsymbol{\Omega_c h^2}$	0.1183 ± 0.0011	$\sigma_8\Omega_m^{0.25}$	0.623 ± 0.014	$H(0.38)$	83.28 ± 0.32
$\boldsymbol{100\theta_{MC}}$	1.04103 ± 0.00030	$\sigma_8/h^{0.5}$	1.015 ± 0.023	$D_M(0.38)$	1521.8 ± 8.5
$\boldsymbol{\tau}$	$0.095^{+0.026}_{-0.023}$	$r_{drag}h$	100.38 ± 0.85	$H(0.51)$	89.93 ± 0.26
$\boldsymbol{\ln(10^{10}A_s)}$	$3.119^{+0.051}_{-0.045}$	$\langle d^2\rangle^{1/2}$	$2.508^{+0.057}_{-0.052}$	$D_M(0.51)$	1972 ± 10
$\boldsymbol{n_s}$	0.9709 ± 0.0044	z_{re}	$11.3^{+2.4}_{-1.8}$	$H(0.61)$	95.50 ± 0.22
$\boldsymbol{y_{cal}}$	1.0002 ± 0.0024	10^9A_s	2.26 ± 0.11	$D_M(0.61)$	2296 ± 11
$\boldsymbol{A_{100}^{PS}}$	233 ± 25	$10^9A_se^{-2\tau}$	1.872 ± 0.011	$H(2.33)$	235.49 ± 0.64
$\boldsymbol{A_{143}^{PS}}$	36 ± 9	D_{40}	1232 ± 14	$D_M(2.33)$	5755 ± 10
$\boldsymbol{A_{217}^{PS}}$	104 ± 10	D_{220}	5717 ± 38	$f\sigma_8(0.15)$	0.468 ± 0.011
$\boldsymbol{A_{217}^{CIB}}$	38 ± 7	D_{810}	2530 ± 13	$\sigma_8(0.15)$	0.775 ± 0.019
$\boldsymbol{A_{143}^{tSZ}}$	$4.0^{+2.0}_{-2.4}$	D_{1420}	815.6 ± 4.7	$f\sigma_8(0.38)$	0.488 ± 0.011
$\boldsymbol{r_{143\times217}^{PS}}$	0.67 ± 0.13	D_{2000}	231.3 ± 1.7	$\sigma_8(0.38)$	0.688 ± 0.017
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.52^{+0.35}_{-0.25}$	$n_{s,0.002}$	0.9709 ± 0.0044	$f\sigma_8(0.51)$	0.488 ± 0.011
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P	0.245419 ± 0.000061	$\sigma_8(0.51)$	0.644 ± 0.016
$\boldsymbol{A^{kSZ}}$	< 5.54	Y_P^{BBN}	0.246746 ± 0.000061	$f\sigma_8(0.61)$	0.483 ± 0.011
$\boldsymbol{A_{100}^{dust}}$	1.00 ± 0.20	10^5D/H	2.574 ± 0.029	$\sigma_8(0.61)$	0.613 ± 0.015
$\boldsymbol{A_{143}^{dust}}$	0.95 ± 0.17	Age/Gyr	13.780 ± 0.023	$f\sigma_8(2.33)$	0.3092 ± 0.0077
$\boldsymbol{A_{217}^{dust}}$	0.98 ± 0.10	z_*	1089.68 ± 0.26	$\sigma_8(2.33)$	0.3191 ± 0.0081
$\boldsymbol{A_{143\times217}^{dust}}$	1.01 ± 0.16	r_*	144.83 ± 0.25	f_{2000}^{143}	27.7 ± 3.1
$\boldsymbol{c_{100}}$	0.9975 ± 0.0010	$100\theta_*$	1.04121 ± 0.00030	f_{2000}^{217}	105.5 ± 2.1
$\boldsymbol{c_{217}}$	1.0009 ± 0.0016	$D_M(z_*)$/Gpc	13.910 ± 0.024	$f_{2000}^{143\times217}$	30.6 ± 2.2
$\boldsymbol{c_{TE}}$	0.9937 ± 0.0052	z_{drag}	1059.97 ± 0.34	χ^2_{lowl}	24.1 ± 1.3
$\boldsymbol{c_{EE}}$	0.9907 ± 0.0049	r_{drag}	147.48 ± 0.26	$\chi^2_{CamSpec}$	11511.7 ± 5.5
H_0	68.06 ± 0.50	k_D	0.14051 ± 0.00031	χ^2_{6DF}	0.030 ± 0.043
Ω_Λ	0.6948 ± 0.0065	$100\theta_D$	0.16074 ± 0.00020	χ^2_{MGS}	1.69 ± 0.51
Ω_m	0.3052 ± 0.0065	z_{eq}	3362 ± 24	$\chi^2_{DR12BAO}$	4.03 ± 0.89
$\Omega_m h^2$	0.1413 ± 0.0010	k_{eq}	0.010262 ± 0.000074	χ^2_{prior}	7.7 ± 3.4
$\Omega_m h^3$	0.09620 ± 0.00032	$100\theta_{eq}$	0.8208 ± 0.0046	χ^2_{BAO}	5.76 ± 0.76
σ_8	0.838 ± 0.020	$100\theta_{s,eq}$	0.4532 ± 0.0024	χ^2_{CMB}	11535.7 ± 5.4
S_8	0.845 ± 0.020	$H(0.15)$	73.28 ± 0.43		

$\bar{\chi}^2_{eff} = 11549.23$; $R - 1 = 0.01419$

2.231 base_CamSpecHM_TTTEEE_lowl_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02244 ± 0.00018	S_8	0.847 ± 0.020	$100\theta_{s,eq}$	0.4532 ± 0.0034
$\boldsymbol{\Omega_c h^2}$	0.1183 ± 0.0015	$\sigma_8\Omega_m^{0.5}$	0.464 ± 0.011	$H(0.15)$	73.26 ± 0.61
$\boldsymbol{100\theta_{MC}}$	1.04102 ± 0.00033	$\sigma_8\Omega_m^{0.25}$	0.624 ± 0.013	$D_M(0.15)$	637.6 ± 6.0
$\boldsymbol{\tau}$	0.097 ± 0.025	$\sigma_8/h^{0.5}$	$1.018^{+0.021}_{-0.023}$	$H(0.38)$	83.27 ± 0.45
$\boldsymbol{\ln(10^{10}A_s)}$	3.122 ± 0.049	$r_{drag}h$	100.3 ± 1.2	$D_M(0.38)$	1522 ± 12
$\boldsymbol{n_s}$	0.9710 ± 0.0053	$\langle d^2\rangle^{1/2}$	$2.513^{+0.049}_{-0.055}$	$H(0.51)$	$89.93^{+0.33}_{-0.37}$
$\boldsymbol{y_{cal}}$	1.0002 ± 0.0024	z_{re}	11.4 ± 2.1	$D_M(0.51)$	1973 ± 14
$\boldsymbol{A^{PS}_{100}}$	233 ± 25	$10^9 A_s$	$2.273^{+0.099}_{-0.12}$	$H(0.61)$	$95.50^{+0.27}_{-0.31}$
$\boldsymbol{A^{PS}_{143}}$	36 ± 9	$10^9 A_s e^{-2\tau}$	1.872 ± 0.012	$D_M(0.61)$	2296 ± 15
$\boldsymbol{A^{PS}_{217}}$	104 ± 10	D_{40}	1233 ± 14	$H(2.33)$	235.52 ± 0.89
$\boldsymbol{A^{CIB}_{217}}$	38 ± 7	D_{220}	5716 ± 38	$D_M(2.33)$	5755^{+14}_{-12}
$\boldsymbol{A^{tSZ}_{143}}$	$4.0^{+2.0}_{-2.4}$	D_{810}	2530 ± 13	$f\sigma_8(0.15)$	0.469 ± 0.011
$\boldsymbol{r^{PS}_{143\times217}}$	0.68 ± 0.13	D_{1420}	815.5 ± 4.7	$\sigma_8(0.15)$	$0.776^{+0.017}_{-0.019}$
$\boldsymbol{r^{CIB}_{143\times217}}$	$0.52^{+0.36}_{-0.25}$	D_{2000}	231.3 ± 1.7	$f\sigma_8(0.38)$	0.489 ± 0.011
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$n_{s,0.002}$	0.9710 ± 0.0053	$\sigma_8(0.38)$	$0.689^{+0.015}_{-0.018}$
$\boldsymbol{A^{kSZ}}$	< 5.45	Y_P	0.245419 ± 0.000070	$f\sigma_8(0.51)$	$0.4888^{+0.0099}_{-0.011}$
$\boldsymbol{A^{dust}_{100}}$	1.00 ± 0.20	Y_P^{BBN}	0.246746 ± 0.000070	$\sigma_8(0.51)$	$0.645^{+0.014}_{-0.017}$
$\boldsymbol{A^{dust}_{143}}$	0.95 ± 0.18	10^5D/H	2.574 ± 0.033	$f\sigma_8(0.61)$	$0.4841^{+0.0098}_{-0.011}$
$\boldsymbol{A^{dust}_{217}}$	0.98 ± 0.10	Age/Gyr	13.780 ± 0.029	$\sigma_8(0.61)$	$0.614^{+0.014}_{-0.016}$
$\boldsymbol{A^{dust}_{143\times217}}$	1.01 ± 0.16	z_*	1089.69 ± 0.33	$f\sigma_8(2.33)$	$0.3098^{+0.0070}_{-0.0083}$
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	r_*	144.82 ± 0.33	$\sigma_8(2.33)$	$0.3196^{+0.0074}_{-0.0088}$
$\boldsymbol{c_{217}}$	1.0009 ± 0.0016	$100\theta_*$	1.04120 ± 0.00032	f^{143}_{2000}	28 ± 3
$\boldsymbol{c_{TE}}$	0.9936 ± 0.0052	$D_M(z_*)$/Gpc	13.909 ± 0.030	f^{217}_{2000}	105.4 ± 2.1
$\boldsymbol{c_{EE}}$	0.9906 ± 0.0050	z_{drag}	1059.97 ± 0.36	$f^{143\times217}_{2000}$	30.5 ± 2.3
H_0	68.05 ± 0.71	r_{drag}	147.47 ± 0.32	χ^2_{lowl}	24.2 ± 1.4
Ω_Λ	0.6945 ± 0.0093	k_D	0.14052 ± 0.00034	$\chi^2_{CamSpec}$	11512.0 ± 5.6
Ω_m	0.3055 ± 0.0093	$100\theta_D$	0.16074 ± 0.00021	χ^2_{prior}	7.7 ± 3.4
$\Omega_m h^2$	0.1414 ± 0.0014	z_{eq}	3363 ± 34	χ^2_{CMB}	11536.2 ± 5.6
$\Omega_m h^3$	0.09620 ± 0.00032	k_{eq}	0.01027 ± 0.00010		
σ_8	$0.839^{+0.018}_{-0.020}$	$100\theta_{eq}$	0.8206 ± 0.0066		

$\bar{\chi}^2_{eff} = 11543.93$; $R - 1 = 0.00900$

2.232 base_CamSpecHM_TTTEEE_lowl_post_BAO_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02244 ± 0.00016	$\sigma_8\Omega_m^{0.5}$	0.463 ± 0.010	$D_M(0.15)$	637.3 ± 4.2
$\boldsymbol{\Omega_c h^2}$	0.1182 ± 0.0011	$\sigma_8\Omega_m^{0.25}$	0.624 ± 0.013	$H(0.38)$	83.29 ± 0.32
$\boldsymbol{100\theta_{MC}}$	1.04104 ± 0.00030	$\sigma_8/h^{0.5}$	1.017 ± 0.022	$D_M(0.38)$	1521.5 ± 8.4
$\boldsymbol{\tau}$	0.097 ± 0.023	$r_{drag}h$	100.40 ± 0.84	$H(0.51)$	89.94 ± 0.26
$\boldsymbol{\ln(10^{10}A_s)}$	3.122 ± 0.046	$\langle d^2\rangle^{1/2}$	2.512 ± 0.052	$D_M(0.51)$	1972.0 ± 9.9
$\boldsymbol{n_s}$	0.9711 ± 0.0043	z_{re}	$11.4^{+2.1}_{-1.8}$	$H(0.61)$	95.51 ± 0.22
$\boldsymbol{y_{cal}}$	1.0002 ± 0.0024	$10^9 A_s$	2.27 ± 0.10	$D_M(0.61)$	2296 ± 11
$\boldsymbol{A_{100}^{PS}}$	233 ± 25	$10^9 A_s e^{-2\tau}$	1.871 ± 0.011	$H(2.33)$	235.48 ± 0.64
$\boldsymbol{A_{143}^{PS}}$	36 ± 8	D_{40}	1233 ± 14	$D_M(2.33)$	5755 ± 10
$\boldsymbol{A_{217}^{PS}}$	105 ± 10	D_{220}	5717 ± 38	$f\sigma_8(0.15)$	0.469 ± 0.010
$\boldsymbol{A_{217}^{CIB}}$	38 ± 7	D_{810}	2530 ± 13	$\sigma_8(0.15)$	0.776 ± 0.017
$\boldsymbol{A_{143}^{tSZ}}$	$4.0^{+2.0}_{-2.4}$	D_{1420}	815.5 ± 4.7	$f\sigma_8(0.38)$	0.489 ± 0.011
$\boldsymbol{r_{143\times217}^{PS}}$	0.67 ± 0.13	D_{2000}	231.3 ± 1.7	$\sigma_8(0.38)$	0.689 ± 0.016
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.52^{+0.35}_{-0.25}$	$n_{s,0.002}$	0.9711 ± 0.0043	$f\sigma_8(0.51)$	0.489 ± 0.011
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P	0.245421 ± 0.000060	$\sigma_8(0.51)$	0.645 ± 0.015
$\boldsymbol{A^{kSZ}}$	< 5.50	Y_P^{BBN}	0.246748 ± 0.000061	$f\sigma_8(0.61)$	0.484 ± 0.010
$\boldsymbol{A_{100}^{dust}}$	1.00 ± 0.19	10^5D/H	2.573 ± 0.029	$\sigma_8(0.61)$	0.614 ± 0.014
$\boldsymbol{A_{143}^{dust}}$	0.95 ± 0.17	Age/Gyr	13.779 ± 0.023	$f\sigma_8(2.33)$	0.3097 ± 0.0072
$\boldsymbol{A_{217}^{dust}}$	0.98 ± 0.10	z_*	1089.68 ± 0.25	$\sigma_8(2.33)$	0.3196 ± 0.0075
$\boldsymbol{A_{143\times217}^{dust}}$	1.01 ± 0.16	r_*	144.83 ± 0.25	f_{2000}^{143}	27.6 ± 3.0
$\boldsymbol{c_{100}}$	0.9975 ± 0.0010	$100\theta_*$	1.04121 ± 0.00030	f_{2000}^{217}	105.5 ± 2.0
$\boldsymbol{c_{217}}$	1.0009 ± 0.0016	$D_M(z_*)$/Gpc	13.910 ± 0.023	$f_{2000}^{143\times217}$	30.5 ± 2.2
$\boldsymbol{c_{TE}}$	0.9936 ± 0.0052	z_{drag}	1059.98 ± 0.33	χ^2_{lowl}	24.1 ± 1.3
$\boldsymbol{c_{EE}}$	0.9906 ± 0.0049	r_{drag}	147.48 ± 0.26	$\chi^2_{CamSpec}$	11511.5 ± 5.4
H_0	68.08 ± 0.49	k_D	0.14051 ± 0.00031	χ^2_{6DF}	0.030 ± 0.042
Ω_Λ	0.6950 ± 0.0064	$100\theta_D$	0.16073 ± 0.00019	χ^2_{MGS}	1.71 ± 0.51
Ω_m	0.3050 ± 0.0064	z_{eq}	3362 ± 24	$\chi^2_{DR12BAO}$	4.01 ± 0.86
$\Omega_m h^2$	0.1413 ± 0.0010	k_{eq}	0.010261 ± 0.000073	χ^2_{prior}	7.7 ± 3.4
$\Omega_m h^3$	0.09621 ± 0.00032	$100\theta_{eq}$	0.8209 ± 0.0046	χ^2_{BAO}	5.75 ± 0.74
σ_8	0.839 ± 0.018	$100\theta_{s,eq}$	0.4533 ± 0.0023	χ^2_{CMB}	11535.6 ± 5.3
S_8	0.846 ± 0.019	$H(0.15)$	73.29 ± 0.43		

$\bar{\chi}^2_{eff} = 11549.09$; $R - 1 = 0.01512$

2.233 base_CamSpecHM_TTTEEE_lowE

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022266	0.02227 ± 0.00016	S_8	0.8311	0.831 ± 0.016	$100\theta_{s,eq}$	0.44945	0.4495 ± 0.0030
$\boldsymbol{\Omega_c h^2}$	0.12002	0.1200 ± 0.0014	$\sigma_8\Omega_m^{0.5}$	0.4552	0.4552 ± 0.0090	$H(0.15)$	72.56	72.57 ± 0.53
$\boldsymbol{100\theta_{MC}}$	1.040829	1.04084 ± 0.00032	$\sigma_8\Omega_m^{0.25}$	0.6070	0.6069 ± 0.0084	$D_M(0.15)$	644.5	644.5 ± 5.3
$\boldsymbol{\tau}$	0.0527	0.0527 ± 0.0078	$\sigma_8/h^{0.5}$	0.9872	0.987 ± 0.012	$H(0.38)$	82.753	82.76 ± 0.38
$\boldsymbol{\ln(10^{10}A_s)}$	3.0397	3.040 ± 0.016	$r_{drag}h$	98.96	99.0 ± 1.1	$D_M(0.38)$	1536.0	1536 ± 11
$\boldsymbol{n_s}$	0.96396	0.9639 ± 0.0045	$\langle d^2\rangle^{1/2}$	2.4431	2.443 ± 0.029	$H(0.51)$	89.518	89.53 ± 0.30
$\boldsymbol{y_{cal}}$	1.00037	1.0005 ± 0.0025	z_{re}	7.54	7.52 ± 0.80	$D_M(0.51)$	1989.0	1989 ± 12
$\boldsymbol{A_{100}^{PS}}$	238.7	242 ± 25	$10^9 A_s$	2.0899	2.090 ± 0.033	$H(0.61)$	95.173	95.18 ± 0.24
$\boldsymbol{A_{143}^{PS}}$	43.9	40 ± 8	$10^9 A_s e^{-2\tau}$	1.8808	1.881 ± 0.012	$D_M(0.61)$	2313.8	2314 ± 13
$\boldsymbol{A_{217}^{PS}}$	101.4	102 ± 10	D_{40}	1230.7	1231 ± 13	$H(2.33)$	236.46	236.46 ± 0.84
$\boldsymbol{A_{217}^{CIB}}$	43.3	40 ± 7	D_{220}	5723.0	5724 ± 39	$D_M(2.33)$	5769.4	5769 ± 11
$\boldsymbol{A_{143}^{tSZ}}$	5.45	$3.8^{+1.9}_{-2.5}$	D_{810}	2535.1	2535 ± 14	$f\sigma_8(0.15)$	0.4594	0.4593 ± 0.0084
$\boldsymbol{r_{143\times217}^{PS}}$	0.637	0.65 ± 0.13	D_{1420}	815.02	815.0 ± 4.9	$\sigma_8(0.15)$	0.7475	0.7475 ± 0.0066
$\boldsymbol{r_{143\times217}^{CIB}}$	0.780	$0.57^{+0.39}_{-0.16}$	D_{2000}	229.94	229.9 ± 1.6	$f\sigma_8(0.38)$	0.4766	0.4766 ± 0.0069
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.39	—	$n_{s,0.002}$	0.96396	0.9639 ± 0.0045	$\sigma_8(0.38)$	0.6621	0.6621 ± 0.0056
$\boldsymbol{A^{kSZ}}$	1.92	$4.8^{+2.6}_{-3.7}$	Y_P	0.245353	$0.245352^{+0.000068}_{-0.000061}$	$f\sigma_8(0.51)$	0.4747	0.4746 ± 0.0060
$\boldsymbol{A_{100}^{dust}}$	1.006	1.01 ± 0.19	Y_P^{BBN}	0.246680	$0.246678^{+0.000068}_{-0.000061}$	$\sigma_8(0.51)$	0.6194	0.6194 ± 0.0051
$\boldsymbol{A_{143}^{dust}}$	0.977	0.96 ± 0.18	10^5D/H	2.6052	2.606 ± 0.030	$f\sigma_8(0.61)$	0.4693	0.4693 ± 0.0055
$\boldsymbol{A_{217}^{dust}}$	0.968	0.97 ± 0.10	Age/Gyr	13.8109	13.810 ± 0.025	$\sigma_8(0.61)$	0.58923	0.5892 ± 0.0048
$\boldsymbol{A_{143\times217}^{dust}}$	0.996	1.03 ± 0.16	z_*	1090.053	1090.05 ± 0.29	$f\sigma_8(2.33)$	0.29691	0.2969 ± 0.0024
$\boldsymbol{c_{100}}$	0.99769	0.9976 ± 0.0011	r_*	144.505	144.51 ± 0.32	$\sigma_8(2.33)$	0.30590	0.3059 ± 0.0025
$\boldsymbol{c_{217}}$	1.00131	1.0011 ± 0.0016	$100\theta_*$	1.041020	1.04103 ± 0.00031	f_{2000}^{143}	30.67	30.3 ± 2.8
$\boldsymbol{c_{TE}}$	0.99656	0.9966 ± 0.0049	$D_M(z_*)$/Gpc	13.8811	13.881 ± 0.029	f_{2000}^{217}	107.15	107.2 ± 1.9
$\boldsymbol{c_{EE}}$	0.99247	0.9924 ± 0.0049	z_{drag}	1059.704	1059.70 ± 0.33	$f_{2000}^{143\times217}$	32.59	32.5 ± 2.0
H_0	67.23	67.24 ± 0.62	r_{drag}	147.201	147.21 ± 0.32	χ^2_{simall}	395.86	396.9 ± 1.7
Ω_Λ	0.6838	0.6837 ± 0.0086	k_D	0.140671	0.14067 ± 0.00035	$\chi^2_{CamSpec}$	11499.5	11514.4 ± 5.6
Ω_m	0.3162	0.3163 ± 0.0086	$100\theta_D$	0.160888	0.16089 ± 0.00019	χ^2_{prior}	2.14	7.8 ± 3.4
$\Omega_m h^2$	0.14293	0.1429 ± 0.0013	z_{eq}	3400.2	3400 ± 32	χ^2_{CMB}	11895.4	11911.3 ± 5.7
$\Omega_m h^3$	0.096092	0.09609 ± 0.00032	k_{eq}	0.010378	0.010377 ± 0.000096			
σ_8	0.8094	0.8094 ± 0.0075	$100\theta_{eq}$	0.8133	0.8134 ± 0.0059			

Best-fit $\chi^2_{eff} = 11897.49$; $\bar{\chi}^2_{eff} = 11919.09$; $R - 1 = 0.00575$

χ^2_{eff}: CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.86 CamSpec like_10.7HM_1400_unified: 11499.49

2.234 base_WMAP

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022608	0.02265 ± 0.00049	D_{40}	1219.6	1219 ± 24	$H(0.15)$	74.44	74.6 ± 1.9
$\boldsymbol{\Omega_c h^2}$	0.11413	0.1136 ± 0.0045	D_{220}	5751.7	5748 ± 35	$D_M(0.15)$	626.0	625 ± 17
$\boldsymbol{100\theta_{MC}}$	1.04031	1.0401 ± 0.0022	D_{810}	2517.1	2507 ± 32	$H(0.38)$	84.04	84.2 ± 1.4
$\boldsymbol{\tau}$	0.0878	$0.089^{+0.012}_{-0.015}$	D_{1420}	811.2	808 ± 15	$D_M(0.38)$	1499.4	1496 ± 35
$\boldsymbol{\ln(10^{10} A_s)}$	3.0934	3.092 ± 0.030	D_{2000}	229.4	228.4 ± 5.9	$H(0.51)$	90.46	90.6 ± 1.2
$\boldsymbol{n_s}$	0.9737	0.973 ± 0.013	$n_{s,0.002}$	0.9737	0.973 ± 0.013	$D_M(0.51)$	1946.6	1943 ± 42
$\boldsymbol{A_{tSZ}}$	0.08	—	Y_P	0.245483	0.24550 ± 0.00021	$H(0.61)$	95.85	95.9 ± 1.0
H_0	69.46	69.7 ± 2.1	Y_P^{BBN}	0.246810	0.24683 ± 0.00021	$D_M(0.61)$	2268.6	2265 ± 46
Ω_Λ	0.7152	$0.717^{+0.028}_{-0.023}$	10^5D/H	2.543	2.538 ± 0.088	$H(2.33)$	232.87	232.5 ± 2.9
Ω_m	0.2848	$0.283^{+0.023}_{-0.028}$	Age/Gyr	13.765	13.76 ± 0.11	$D_M(2.33)$	5746.0	5744 ± 49
$\Omega_m h^2$	0.13739	0.1369 ± 0.0044	z_*	1089.11	1089.03 ± 0.80	$f\sigma_8(0.15)$	0.4396	0.436 ± 0.028
$\Omega_m h^3$	0.09543	0.0953 ± 0.0017	r_*	145.79	145.9 ± 1.2	$\sigma_8(0.15)$	0.7525	0.749 ± 0.020
σ_8	0.8114	0.808 ± 0.023	$100\theta_*$	1.04047	1.0403 ± 0.0022	$f\sigma_8(0.38)$	0.4639	0.461 ± 0.023
S_8	0.790	$0.785^{+0.050}_{-0.056}$	$D_M(z_*)$/Gpc	14.012	14.03 ± 0.12	$\sigma_8(0.38)$	0.6701	0.668 ± 0.016
$\sigma_8 \Omega_m^{0.5}$	0.4330	$0.430^{+0.027}_{-0.031}$	z_{drag}	1060.05	1060.1 ± 1.1	$f\sigma_8(0.51)$	0.4657	0.463 ± 0.020
$\sigma_8 \Omega_m^{0.25}$	0.5927	0.589 ± 0.028	r_{drag}	148.40	148.5 ± 1.2	$\sigma_8(0.51)$	0.6284	0.626 ± 0.014
$\sigma_8/h^{0.5}$	0.9735	0.968 ± 0.038	k_D	0.13967	0.1396 ± 0.0014	$f\sigma_8(0.61)$	0.4630	0.460 ± 0.018
$r_{drag} h$	103.08	103.5 ± 3.7	$100\theta_D$	0.16053	0.16050 ± 0.00050	$\sigma_8(0.61)$	0.5987	0.597 ± 0.013
$\langle d^2 \rangle^{1/2}$	2.429	2.423 ± 0.076	z_{eq}	3268	3256 ± 100	$f\sigma_8(2.33)$	0.3030	0.3021 ± 0.0064
z_{re}	10.61	10.7 ± 1.1	k_{eq}	0.009973	0.00994 ± 0.00032	$\sigma_8(2.33)$	0.3137	0.3129 ± 0.0064
$10^9 A_s$	2.205	$2.203^{+0.061}_{-0.070}$	$100\theta_{eq}$	0.8384	0.841 ± 0.021	χ^2_{WMAP}	7557.95	7564.0 ± 3.3
$10^9 A_s e^{-2\tau}$	1.8500	1.843 ± 0.030	$100\theta_{s,eq}$	0.4623	0.464 ± 0.011			

Best-fit $\chi^2_{eff} = 7557.95$; $\bar{\chi}^2_{eff} = 7563.97$; $R - 1 = 0.00844$
χ^2_{eff}: CMB - WMAP: 7557.95

2.235 base_WMAP_post_BAO

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022403	0.02246 ± 0.00043	D_{220}	5740.4	5739 ± 32	$H(0.38)$	83.14	83.20 ± 0.62
$\boldsymbol{\Omega_c h^2}$	0.11645	0.1167 ± 0.0021	D_{810}	2518.4	2516 ± 31	$D_{\rm M}(0.38)$	1522.4	1522 ± 14
$\boldsymbol{100\theta_{MC}}$	1.03933	1.0395 ± 0.0020	D_{1420}	809.4	809 ± 16	$H(0.51)$	89.72	89.79 ± 0.61
$\boldsymbol{\tau}$	0.0862	$0.086^{+0.012}_{-0.013}$	D_{2000}	228.7	228.7 ± 6.0	$D_{\rm M}(0.51)$	1973.9	1973 ± 17
$\boldsymbol{\ln(10^{10} A_s)}$	3.0958	$3.095^{+0.028}_{-0.031}$	$n_{\rm s,0.002}$	0.9678	0.967 ± 0.010	$H(0.61)$	95.23	95.31 ± 0.61
$\boldsymbol{n_s}$	0.9678	0.967 ± 0.010	$Y_{\rm P}$	0.245409	0.24543 ± 0.00018	$D_{\rm M}(0.61)$	2298.3	2297 ± 19
$\boldsymbol{A_{tSZ}}$	0.03	—	$Y_{\rm P}^{\rm BBN}$	0.246735	0.24675 ± 0.00018	$H(2.33)$	234.09	234.4 ± 1.7
H_0	68.11	68.14 ± 0.73	10^5D/H	2.579	2.571 ± 0.080	$D_{\rm M}(2.33)$	5773.9	5769 ± 36
Ω_Λ	0.6993	0.6988 ± 0.0084	Age/Gyr	13.826	13.815 ± 0.086	$f\sigma_8(0.15)$	0.4547	0.455 ± 0.013
$\Omega_{\rm m}$	0.3007	0.3012 ± 0.0084	z_*	1089.57	1089.53 ± 0.51	$\sigma_8(0.15)$	0.7580	0.759 ± 0.016
$\Omega_{\rm m}h^2$	0.13949	0.1398 ± 0.0023	r_*	145.33	145.22 ± 0.73	$f\sigma_8(0.38)$	0.4757	0.476 ± 0.012
$\Omega_{\rm m}h^3$	0.09501	0.0953 ± 0.0018	$100\theta_*$	1.03951	1.0397 ± 0.0020	$\sigma_8(0.38)$	0.6732	$0.674^{+0.013}_{-0.015}$
σ_8	0.8192	0.820 ± 0.018	$D_{\rm M}(z_*)$/Gpc	13.981	13.967 ± 0.092	$f\sigma_8(0.51)$	0.4756	0.476 ± 0.012
S_8	0.8201	0.821 ± 0.025	$z_{\rm drag}$	1059.74	1059.9 ± 1.1	$\sigma_8(0.51)$	0.6305	$0.631^{+0.012}_{-0.014}$
$\sigma_8\Omega_{\rm m}^{0.5}$	0.4492	0.450 ± 0.013	$r_{\rm drag}$	148.00	147.87 ± 0.86	$f\sigma_8(0.61)$	0.4714	0.472 ± 0.011
$\sigma_8\Omega_{\rm m}^{0.25}$	0.6066	0.607 ± 0.015	$k_{\rm D}$	0.13993	0.1401 ± 0.0012	$\sigma_8(0.61)$	0.6002	$0.600^{+0.012}_{-0.013}$
$\sigma_8/h^{0.5}$	0.9926	0.993 ± 0.022	$100\theta_{\rm D}$	0.16058	0.16054 ± 0.00051	$f\sigma_8(2.33)$	0.3031	$0.3032^{+0.0059}_{-0.0065}$
$r_{\rm drag}h$	100.81	100.8 ± 1.1	$z_{\rm eq}$	3318	3326 ± 54	$\sigma_8(2.33)$	0.3130	$0.3131^{+0.0060}_{-0.0067}$
$\langle d^2\rangle^{1/2}$	2.4717	2.474 ± 0.041	$k_{\rm eq}$	0.010127	0.01015 ± 0.00016	$\chi^2_{\rm WMAP}$	7558.29	7563.6 ± 3.2
$z_{\rm re}$	10.59	10.5 ± 1.1	$100\theta_{\rm eq}$	0.8275	0.8265 ± 0.0084	$\chi^2_{\rm 6DF}$	0.0040	0.055 ± 0.079
$10^9 A_{\rm s}$	2.210	$2.210^{+0.059}_{-0.070}$	$100\theta_{\rm s,eq}$	0.45672	0.4561 ± 0.0045	$\chi^2_{\rm MGS}$	1.89	1.94 ± 0.70
$10^9 A_{\rm s}e^{-2\tau}$	1.8604	1.859 ± 0.022	$H(0.15)$	73.26	73.30 ± 0.67	$\chi^2_{\rm DR12BAO}$	3.47	4.3 ± 1.2
D_{40}	1231.4	1233 ± 18	$D_{\rm M}(0.15)$	637.3	637.0 ± 6.3	$\chi^2_{\rm BAO}$	5.37	6.3 ± 1.4

Best-fit $\chi^2_{\rm eff} = 7563.66$; $\bar{\chi}^2_{\rm eff} = 7569.93$; $R - 1 = 0.00961$

$\chi^2_{\rm eff}$: BAO - 6DF: 0.00 MGS: 1.89 DR12BAO: 3.47 CMB - WMAP: 7558.29

2.236 base_DES_lenspriors

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022204	0.02221 ± 0.00049	$\Omega_m h^2$	0.1250	$0.1298^{+0.0090}_{-0.013}$	k_D	0.13540	$0.1367^{+0.0030}_{-0.0038}$
$\boldsymbol{\Omega_c h^2}$	0.1021	$0.1069^{+0.0089}_{-0.013}$	$\Omega_m h^3$	0.0875	$0.094^{+0.011}_{-0.020}$	$100\theta_D$	0.15977	$0.1613^{+0.0038}_{-0.0052}$
$\boldsymbol{100\theta_{MC}}$	1.0289	$1.039^{+0.027}_{-0.036}$	σ_8	0.866	$0.867^{+0.068}_{-0.087}$	z_{eq}	2970	3086^{+210}_{-300}
$\boldsymbol{\ln(10^{10} A_s)}$	3.372	$3.31^{+0.17}_{-0.14}$	S_8	0.7975	0.791 ± 0.025	k_{eq}	0.00907	$0.00942^{+0.00065}_{-0.00092}$
$\boldsymbol{n_s}$	0.9619	0.961 ± 0.020	$\sigma_8 \Omega_m^{0.5}$	0.4368	0.433 ± 0.014	$100\theta_{eq}$	0.8898	0.876 ± 0.033
$\boldsymbol{b^1_{DES}}$	1.351	$1.36^{+0.14}_{-0.16}$	$\sigma_8 \Omega_m^{0.25}$	0.6149	$0.612^{+0.033}_{-0.038}$	$100\theta_{s,eq}$	0.4889	$0.482^{+0.017}_{-0.016}$
$\boldsymbol{b^2_{DES}}$	1.547	1.56 ± 0.17	$\sigma_8/h^{0.5}$	1.034	1.021 ± 0.056	$H(0.15)$	74.6	$76.7^{+5.3}_{-8.1}$
$\boldsymbol{b^3_{DES}}$	1.532	$1.55^{+0.14}_{-0.16}$	$r_{drag} h$	106.7	$108.7^{+7.4}_{-10}$	$D_M(0.15)$	623	612 ± 63
$\boldsymbol{b^4_{DES}}$	1.849	1.87 ± 0.20	$\langle d^2 \rangle^{1/2}$	2.712	2.65 ± 0.16	$H(0.38)$	83.3	$85.6^{+5.2}_{-8.0}$
$\boldsymbol{b^5_{DES}}$	1.909	$1.93^{+0.18}_{-0.21}$	z_{re}	7.469	$7.57^{+0.23}_{-0.29}$	$D_M(0.38)$	1499	1472 ± 140
$\boldsymbol{m^1_{DES}}$	0.0135	0.012 ± 0.023	$10^9 A_s$	2.913	$2.76^{+0.39}_{-0.45}$	$H(0.51)$	89.2	$91.5^{+5.1}_{-8.0}$
$\boldsymbol{m^2_{DES}}$	0.0157	0.014 ± 0.022	$10^9 A_s e^{-2\tau}$	2.609	$2.47^{+0.35}_{-0.40}$	$D_M(0.51)$	1952	1916^{+170}_{-150}
$\boldsymbol{m^3_{DES}}$	0.0064	0.009 ± 0.021	D_{40}	1789	1689^{+200}_{-300}	$H(0.61)$	94.2	$96.6^{+5.1}_{-8.0}$
$\boldsymbol{m^4_{DES}}$	0.0083	0.011 ± 0.021	D_{220}	8614	8007^{+1000}_{-2000}	$D_M(0.61)$	2279	2236^{+200}_{-170}
$\boldsymbol{A_{IA,DES}}$	0.502	$0.49^{+0.18}_{-0.22}$	D_{810}	3549	3280 ± 500	$H(2.33)$	223.3	$227.6^{+8.8}_{-12}$
$\boldsymbol{\alpha_{IA,DES}}$	-1.27	$-0.2^{+2.3}_{-2.8}$	D_{1420}	1118	1021 ± 200	$D_M(2.33)$	5869	5762^{+400}_{-340}
$\boldsymbol{\Delta z^1_{l,DES}}$	0.0041	0.0044 ± 0.0075	D_{2000}	318	300^{+50}_{-60}	$f\sigma_8(0.15)$	0.4459	0.442 ± 0.016
$\boldsymbol{\Delta z^2_{l,DES}}$	0.0019	0.0020 ± 0.0067	$n_{s,0.002}$	0.9619	0.961 ± 0.020	$\sigma_8(0.15)$	0.806	$0.809^{+0.067}_{-0.086}$
$\boldsymbol{\Delta z^3_{l,DES}}$	0.0045	0.0044 ± 0.0066	Y_P	0.245328	$0.24532^{+0.00023}_{-0.00019}$	$f\sigma_8(0.38)$	0.4788	0.475 ± 0.026
$\boldsymbol{\Delta z^4_{l,DES}}$	0.0029	0.0026 ± 0.0091	Y_P^{BBN}	0.246654	$0.24664^{+0.00023}_{-0.00019}$	$\sigma_8(0.38)$	0.722	$0.725^{+0.064}_{-0.083}$
$\boldsymbol{\Delta z^5_{l,DES}}$	0.0010	0.0010 ± 0.0099	10^5D/H	2.617	$2.619^{+0.087}_{-0.098}$	$f\sigma_8(0.51)$	0.4847	0.482 ± 0.031
$\boldsymbol{\Delta z^1_{s,DES}}$	-0.0009	-0.003 ± 0.014	Age/Gyr	14.07	$13.82^{+0.95}_{-0.82}$	$\sigma_8(0.51)$	0.679	$0.682^{+0.061}_{-0.080}$
$\boldsymbol{\Delta z^2_{s,DES}}$	-0.0291	-0.029 ± 0.011	z_*	1088.51	$1088.9^{+1.0}_{-1.2}$	$f\sigma_8(0.61)$	0.4846	0.482 ± 0.034
$\boldsymbol{\Delta z^3_{s,DES}}$	0.0058	0.0067 ± 0.0098	r_*	149.46	$148.2^{+3.4}_{-2.8}$	$\sigma_8(0.61)$	0.648	$0.651^{+0.060}_{-0.078}$
$\boldsymbol{\Delta z^4_{s,DES}}$	-0.0265	-0.024 ± 0.019	$100\theta_*$	1.0291	$1.040^{+0.027}_{-0.036}$	$f\sigma_8(2.33)$	0.3295	$0.332^{+0.032}_{-0.042}$
H_0	70.0	$72.1^{+5.5}_{-8.2}$	$D_M(z_*)$/Gpc	14.52	$14.28^{+0.77}_{-0.67}$	$\sigma_8(2.33)$	0.3430	$0.346^{+0.035}_{-0.047}$
Ω_Λ	0.7453	$0.745^{+0.039}_{-0.032}$	z_{drag}	1058.22	1058.6 ± 1.5	χ^2_{DES}	500.44	512.7 ± 5.1
Ω_m	0.2547	$0.255^{+0.032}_{-0.039}$	r_{drag}	152.29	$151.0^{+3.5}_{-2.9}$	χ^2_{prior}	1.38	14.3 ± 5.3

Best-fit $\chi^2_{eff} = 501.81$; $\bar{\chi}^2_{eff} = 527.03$; $R - 1 = 0.01157$
χ^2_{eff}: WL - DES_1YR_final: 500.44

2.237 base_DESlens_lenspriors

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\mathbf{\Omega_b h^2}$	0.02221	0.02221 ± 0.00050	$r_{\rm drag} h$	110.9	112^{+20}_{-10}	$100\theta_{\rm eq}$	0.825	0.789 ± 0.095
$\mathbf{\Omega_c h^2}$	0.1222	$0.141^{+0.022}_{-0.044}$	$\langle d^2 \rangle^{1/2}$	2.526	$2.37^{+0.40}_{-0.46}$	$100\theta_{\rm s,eq}$	0.456	$0.437^{+0.055}_{-0.048}$
$\mathbf{100\theta_{MC}}$	1.068	$1.087^{+0.060}_{-0.052}$	$z_{\rm re}$	7.88	$8.17^{+0.52}_{-0.73}$	$H(0.15)$	80.5	84^{+10}_{-10}
$\mathbf{\ln(10^{10} A_s)}$	3.14	$2.91^{+0.62}_{-0.46}$	$10^9 A_{\rm s}$	2.31	$2.08^{+0.57}_{-1.3}$	$D_{\rm M}(0.15)$	577	568^{+40}_{-120}
$\mathbf{n_s}$	0.9604	0.959 ± 0.020	$10^9 A_{\rm s} e^{-2\tau}$	2.07	$1.87^{+0.51}_{-1.2}$	$H(0.38)$	89.9	94^{+10}_{-10}
$\mathbf{m^1_{DES}}$	0.0150	0.014 ± 0.023	D_{40}	1384	1256^{+300}_{-800}	$D_{\rm M}(0.38)$	1389	1360^{+100}_{-260}
$\mathbf{m^2_{DES}}$	0.0139	0.013 ± 0.022	D_{220}	6247	5596^{+1000}_{-4000}	$H(0.51)$	96.3	101 ± 10
$\mathbf{m^3_{DES}}$	0.0026	0.004 ± 0.022	D_{810}	2746	2291^{+700}_{-2000}	$D_{\rm M}(0.51)$	1808	1767^{+140}_{-330}
$\mathbf{m^4_{DES}}$	0.0167	0.017 ± 0.022	D_{1420}	862	684^{+200}_{-500}	$H(0.61)$	101.6	107 ± 10
$\mathbf{A_{IA,DES}}$	1.34	$0.72^{+0.92}_{-0.60}$	D_{2000}	247	201^{+60}_{-200}	$D_{\rm M}(0.61)$	2111	2060^{+160}_{-370}
$\mathbf{\alpha_{IA,DES}}$	3.43	> 1.06	$n_{\rm s,0.002}$	0.9604	0.959 ± 0.020	$H(2.33)$	240.6	254^{+21}_{-32}
$\mathbf{\Delta z^1_{s,DES}}$	0.0033	0.002 ± 0.015	$Y_{\rm P}$	0.245330	$0.24532^{+0.00023}_{-0.00020}$	$D_{\rm M}(2.33)$	5442	5259^{+490}_{-690}
$\mathbf{\Delta z^2_{s,DES}}$	−0.0200	-0.020 ± 0.012	$Y_{\rm P}^{\rm BBN}$	0.246656	$0.24664^{+0.00023}_{-0.00020}$	$f\sigma_8(0.15)$	0.4536	$0.440^{+0.029}_{-0.018}$
$\mathbf{\Delta z^3_{s,DES}}$	0.0083	0.008 ± 0.011	10^5D/H	2.616	2.619 ± 0.095	$\sigma_8(0.15)$	0.822	$0.80^{+0.16}_{-0.14}$
$\mathbf{\Delta z^4_{s,DES}}$	−0.0170	-0.016 ± 0.021	Age/Gyr	13.05	$12.6^{+1.2}_{-1.6}$	$f\sigma_8(0.38)$	0.4874	$0.470^{+0.052}_{-0.031}$
H_0	75.6	79^{+20}_{-10}	z_*	1090.32	$1091.7^{+2.3}_{-3.6}$	$\sigma_8(0.38)$	0.736	$0.71^{+0.15}_{-0.13}$
Ω_Λ	0.746	$0.721^{+0.11}_{-0.039}$	r_*	144.0	$140.4^{+9.4}_{-6.8}$	$f\sigma_8(0.51)$	0.494	$0.475^{+0.063}_{-0.039}$
$\Omega_{\rm m}$	0.254	$0.279^{+0.039}_{-0.11}$	$100\theta_*$	1.068	$1.087^{+0.060}_{-0.052}$	$\sigma_8(0.51)$	0.692	$0.67^{+0.14}_{-0.13}$
$\Omega_{\rm m} h^2$	0.1451	$0.164^{+0.022}_{-0.044}$	$D_{\rm M}(z_*)$/Gpc	13.48	13.0 ± 1.3	$f\sigma_8(0.61)$	0.494	$0.475^{+0.070}_{-0.045}$
$\Omega_{\rm m} h^3$	0.1097	$0.131^{+0.027}_{-0.051}$	$z_{\rm drag}$	1059.74	$1060.9^{+2.2}_{-3.1}$	$\sigma_8(0.61)$	0.661	0.64 ± 0.13
σ_8	0.882	$0.85^{+0.16}_{-0.14}$	$r_{\rm drag}$	146.7	$143.0^{+9.7}_{-7.0}$	$f\sigma_8(2.33)$	0.336	0.326 ± 0.070
S_8	0.8115	$0.792^{+0.040}_{-0.030}$	$k_{\rm D}$	0.1412	$0.1456^{+0.0069}_{-0.011}$	$\sigma_8(2.33)$	0.350	0.340 ± 0.078
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4445	$0.434^{+0.022}_{-0.016}$	$100\theta_{\rm D}$	0.1651	$0.1678^{+0.0087}_{-0.0074}$	$\chi^2_{\rm DES}$	228.73	233.9 ± 2.9
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.626	$0.607^{+0.071}_{-0.053}$	$z_{\rm eq}$	3452	3895^{+500}_{-1000}	$\chi^2_{\rm prior}$	0.32	9.5 ± 4.3
$\sigma_8 / h^{0.5}$	1.015	$0.96^{+0.13}_{-0.11}$	$k_{\rm eq}$	0.01054	$0.0119^{+0.0016}_{-0.0032}$			

Best-fit $\chi^2_{\rm eff} = 229.04$; $\bar{\chi}^2_{\rm eff} = 243.35$; $R - 1 = 0.01007$
$\chi^2_{\rm eff}$: WL - DES_1YR_final: 228.73

2.238 base_DES_lenspriors_lensing

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02222 ± 0.00050	$\Omega_m h^3$	$0.0919^{+0.0088}_{-0.012}$	z_{eq}	3125^{+170}_{-220}
$\boldsymbol{\Omega_c h^2}$	$0.1085^{+0.0070}_{-0.0090}$	σ_8	$0.817^{+0.030}_{-0.034}$	k_{eq}	$0.00954^{+0.00052}_{-0.00066}$
$\boldsymbol{100\theta_{MC}}$	$1.035^{+0.019}_{-0.023}$	S_8	0.777 ± 0.015	$100\theta_{eq}$	0.863 ± 0.025
$\boldsymbol{\ln(10^{10} A_s)}$	3.181 ± 0.073	$\sigma_8 \Omega_m^{0.5}$	0.4253 ± 0.0083	$100\theta_{s,eq}$	0.475 ± 0.012
$\boldsymbol{n_s}$	0.961 ± 0.020	$\sigma_8 \Omega_m^{0.25}$	0.589 ± 0.014	$H(0.15)$	$74.5^{+3.7}_{-4.7}$
$\boldsymbol{b^1_{DES}}$	1.439 ± 0.094	$\sigma_8/h^{0.5}$	0.979 ± 0.017	$D_M(0.15)$	627 ± 38
$\boldsymbol{b^2_{DES}}$	1.650 ± 0.082	$r_{drag} h$	$104.8^{+4.8}_{-5.7}$	$H(0.38)$	$83.7^{+3.7}_{-4.7}$
$\boldsymbol{b^3_{DES}}$	1.637 ± 0.074	$\langle d^2 \rangle^{1/2}$	2.519 ± 0.045	$D_M(0.38)$	1505 ± 86
$\boldsymbol{b^4_{DES}}$	1.980 ± 0.085	z_{re}	$7.58^{+0.18}_{-0.22}$	$H(0.51)$	$89.8^{+3.8}_{-4.7}$
$\boldsymbol{b^5_{DES}}$	2.056 ± 0.099	$10^9 A_s$	$2.41^{+0.16}_{-0.19}$	$D_M(0.51)$	1956 ± 110
$\boldsymbol{m^1_{DES}}$	0.012 ± 0.023	$10^9 A_s e^{-2\tau}$	$2.16^{+0.15}_{-0.17}$	$H(0.61)$	$95.0^{+3.8}_{-4.8}$
$\boldsymbol{m^2_{DES}}$	0.015 ± 0.022	D_{40}	1462 ± 93	$D_M(0.61)$	2281 ± 120
$\boldsymbol{m^3_{DES}}$	0.012 ± 0.021	D_{220}	6943 ± 660	$H(2.33)$	$228.2^{+6.8}_{-8.2}$
$\boldsymbol{m^4_{DES}}$	0.013 ± 0.021	D_{810}	2907 ± 230	$D_M(2.33)$	5818 ± 260
$\boldsymbol{A_{IA,DES}}$	$0.46^{+0.17}_{-0.21}$	D_{1420}	916^{+80}_{-70}	$f\sigma_8(0.15)$	0.4328 ± 0.0081
$\boldsymbol{\alpha_{IA,DES}}$	$-0.2^{+2.3}_{-2.7}$	D_{2000}	264^{+23}_{-29}	$\sigma_8(0.15)$	$0.760^{+0.030}_{-0.033}$
$\boldsymbol{\Delta z^1_{l,DES}}$	0.0043 ± 0.0074	$n_{s,0.002}$	0.961 ± 0.020	$f\sigma_8(0.38)$	0.4602 ± 0.0098
$\boldsymbol{\Delta z^2_{l,DES}}$	0.0018 ± 0.0067	Y_P	$0.24532^{+0.00023}_{-0.00019}$	$\sigma_8(0.38)$	$0.678^{+0.029}_{-0.033}$
$\boldsymbol{\Delta z^3_{l,DES}}$	0.0041 ± 0.0066	Y_P^{BBN}	$0.24665^{+0.00023}_{-0.00019}$	$f\sigma_8(0.51)$	0.464 ± 0.012
$\boldsymbol{\Delta z^4_{l,DES}}$	0.0021 ± 0.0091	10^5D/H	$2.617^{+0.087}_{-0.10}$	$\sigma_8(0.51)$	$0.637^{+0.028}_{-0.032}$
$\boldsymbol{\Delta z^5_{l,DES}}$	0.0004 ± 0.0099	Age/Gyr	13.94 ± 0.61	$f\sigma_8(0.61)$	0.462 ± 0.013
$\boldsymbol{\Delta z^1_{s,DES}}$	-0.004 ± 0.014	z_*	$1089.09^{+0.84}_{-0.99}$	$\sigma_8(0.61)$	$0.607^{+0.027}_{-0.031}$
$\boldsymbol{\Delta z^2_{s,DES}}$	-0.029 ± 0.011	r_*	$147.7^{+2.4}_{-2.2}$	$f\sigma_8(2.33)$	$0.308^{+0.015}_{-0.017}$
$\boldsymbol{\Delta z^3_{s,DES}}$	0.0079 ± 0.0096	$100\theta_*$	$1.035^{+0.019}_{-0.023}$	$\sigma_8(2.33)$	$0.320^{+0.016}_{-0.019}$
$\boldsymbol{\Delta z^4_{s,DES}}$	-0.021 ± 0.018	$D_M(z_*)$/Gpc	14.28 ± 0.51	$\chi^2_{lensing}$	9.1 ± 1.6
H_0	$69.7^{+3.8}_{-4.7}$	z_{drag}	1058.7 ± 1.4	χ^2_{DES}	512.9 ± 4.5
Ω_Λ	$0.728^{+0.023}_{-0.021}$	r_{drag}	$150.5^{+2.5}_{-2.3}$	χ^2_{prior}	14.1 ± 5.2
Ω_m	$0.272^{+0.021}_{-0.023}$	k_D	$0.1373^{+0.0024}_{-0.0027}$		
$\Omega_m h^2$	$0.1314^{+0.0071}_{-0.0090}$	$100\theta_D$	$0.1605^{+0.0028}_{-0.0033}$		

$\bar{\chi}^2_{eff} = 535.98$; $R - 1 = 0.00871$

2.239 base_DESlens_lenspriors_lensing

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\mathbf{\Omega_b h^2}$	0.02220	0.02221 ± 0.00051	$r_{\rm drag} h$	102.0	$108.0^{+6.4}_{-12}$	$100\theta_{\rm eq}$	0.8455	0.846 ± 0.033
$\mathbf{\Omega_c h^2}$	0.1119	$0.115^{+0.010}_{-0.013}$	$\langle d^2 \rangle^{1/2}$	2.499	2.490 ± 0.053	$100\theta_{\rm s,eq}$	0.4662	0.467 ± 0.017
$\mathbf{100\theta_{MC}}$	1.0352	$1.051^{+0.030}_{-0.036}$	$z_{\rm re}$	7.646	7.72 ± 0.27	$H(0.15)$	73.2	$77.6^{+5.4}_{-9.0}$
$\mathbf{\ln(10^{10} A_s)}$	3.134	3.136 ± 0.091	$10^9 A_{\rm s}$	2.296	$2.31^{+0.18}_{-0.23}$	$D_{\rm M}(0.15)$	637	606^{+65}_{-56}
$\mathbf{n_s}$	0.9609	0.960 ± 0.020	$10^9 A_{\rm s} e^{-2\tau}$	2.056	$2.07^{+0.16}_{-0.21}$	$H(0.38)$	82.8	$86.9^{+5.5}_{-8.7}$
$\mathbf{m^1_{DES}}$	0.0142	0.013 ± 0.023	D_{40}	1379	1394^{+110}_{-140}	$D_{\rm M}(0.38)$	1524	1454^{+150}_{-130}
$\mathbf{m^2_{DES}}$	0.0141	0.014 ± 0.022	D_{220}	6495	6472^{+700}_{-900}	$H(0.51)$	89.2	$93.1^{+5.6}_{-8.6}$
$\mathbf{m^3_{DES}}$	0.0023	0.005 ± 0.022	D_{810}	2787	2732^{+300}_{-300}	$D_{\rm M}(0.51)$	1978	1891^{+180}_{-160}
$\mathbf{m^4_{DES}}$	0.0179	0.018 ± 0.021	D_{1420}	888	851^{+100}_{-80}	$H(0.61)$	94.5	$98.4^{+5.7}_{-8.5}$
$\mathbf{A_{IA,DES}}$	1.28	$0.44^{+1.1}_{-0.43}$	D_{2000}	249.7	247 ± 40	$D_{\rm M}(0.61)$	2304	2206^{+210}_{-180}
$\mathbf{\alpha_{IA,DES}}$	3.28	> 1.23	$n_{\rm s,0.002}$	0.9609	0.960 ± 0.020	$H(2.33)$	230.4	234^{+10}_{-12}
$\mathbf{\Delta z^1_{s,DES}}$	0.0028	0.001 ± 0.015	$Y_{\rm P}$	0.245324	$0.24532^{+0.00023}_{-0.00020}$	$D_{\rm M}(2.33)$	5823	5645 ± 390
$\mathbf{\Delta z^2_{s,DES}}$	−0.0191	-0.020 ± 0.012	$Y_{\rm P}^{\rm BBN}$	0.246651	$0.24665^{+0.00023}_{-0.00020}$	$f\sigma_8(0.15)$	0.4435	$0.436^{+0.016}_{-0.0083}$
$\mathbf{\Delta z^3_{s,DES}}$	0.0081	0.009 ± 0.011	10^5D/H	2.619	2.618 ± 0.096	$\sigma_8(0.15)$	0.7535	$0.778^{+0.042}_{-0.057}$
$\mathbf{\Delta z^4_{s,DES}}$	−0.0168	-0.016 ± 0.020	Age/Gyr	13.95	13.54 ± 0.91	$f\sigma_8(0.38)$	0.4669	$0.465^{+0.014}_{-0.013}$
H_0	68.3	$72.8^{+5.5}_{-9.2}$	z_*	1089.42	$1089.7^{+1.1}_{-1.2}$	$\sigma_8(0.38)$	0.6704	$0.696^{+0.041}_{-0.057}$
Ω_Λ	0.7108	$0.734^{+0.033}_{-0.043}$	r_*	146.71	145.9 ± 3.1	$f\sigma_8(0.51)$	0.4682	0.470 ± 0.015
$\Omega_{\rm m}$	0.2892	$0.266^{+0.043}_{-0.033}$	$100\theta_*$	1.0354	$1.051^{+0.030}_{-0.036}$	$\sigma_8(0.51)$	0.6285	$0.654^{+0.039}_{-0.056}$
$\Omega_{\rm m} h^2$	0.1347	$0.138^{+0.010}_{-0.013}$	$D_{\rm M}(z_*)$/Gpc	14.17	13.91 ± 0.71	$f\sigma_8(0.61)$	0.4650	0.469 ± 0.017
$\Omega_{\rm m} h^3$	0.0920	$0.101^{+0.014}_{-0.021}$	$z_{\rm drag}$	1058.94	1059.2 ± 1.5	$\sigma_8(0.61)$	0.5987	$0.624^{+0.038}_{-0.055}$
σ_8	0.8129	$0.836^{+0.043}_{-0.055}$	$r_{\rm drag}$	149.49	148.7 ± 3.2	$f\sigma_8(2.33)$	0.3028	$0.317^{+0.020}_{-0.031}$
S_8	0.7982	$0.782^{+0.033}_{-0.016}$	$k_{\rm D}$	0.13824	0.1391 ± 0.0035	$\sigma_8(2.33)$	0.3132	$0.330^{+0.022}_{-0.035}$
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4372	$0.428^{+0.018}_{-0.0086}$	$100\theta_{\rm D}$	0.16039	$0.1627^{+0.0042}_{-0.0053}$	$\chi^2_{\rm lensing}$	7.65	9.6 ± 1.9
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.5961	0.598 ± 0.018	$z_{\rm eq}$	3204	3282^{+250}_{-300}	$\chi^2_{\rm DES}$	228.98	232.8 ± 2.6
$\sigma_8 / h^{0.5}$	0.9840	0.982 ± 0.018	$k_{\rm eq}$	0.00978	$0.01002^{+0.00075}_{-0.00092}$	$\chi^2_{\rm prior}$	0.33	9.4 ± 4.3

Best-fit $\chi^2_{\rm eff} = 236.96$; $\bar{\chi}^2_{\rm eff} = 251.77$; $R - 1 = 0.00904$

$\chi^2_{\rm eff}$: CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8_CMBmarged: 7.65 WL - DES_1YR_final: 228.98

2.240 base_DES_lenspriors_BAO

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02219	0.02221 ± 0.00051	σ_8	0.8186	0.801 ± 0.030	$100\theta_{\rm eq}$	0.8840	0.871 ± 0.030
$\boldsymbol{\Omega_c h^2}$	0.1015	$0.1050^{+0.0066}_{-0.0082}$	S_8	0.7897	0.780 ± 0.022	$100\theta_{\rm s,eq}$	0.4856	0.479 ± 0.015
$\boldsymbol{100\theta_{MC}}$	1.0182	1.023 ± 0.012	$\sigma_8\Omega_{\rm m}^{0.5}$	0.4325	0.427 ± 0.012	$H(0.15)$	71.42	71.8 ± 1.2
$\boldsymbol{\ln(10^{10} A_s)}$	3.288	3.20 ± 0.15	$\sigma_8\Omega_{\rm m}^{0.25}$	0.5950	0.585 ± 0.018	$D_{\rm M}(0.15)$	652.1	649 ± 10
$\boldsymbol{n_s}$	0.9594	0.957 ± 0.019	$\sigma_8/h^{0.5}$	1.0021	0.979 ± 0.039	$H(0.38)$	80.48	$81.1^{+1.4}_{-1.6}$
$\boldsymbol{b^1_{DES}}$	1.440	1.472 ± 0.092	$r_{\rm drag}h$	101.76	101.5 ± 1.1	$D_{\rm M}(0.38)$	1563.3	1555 ± 26
$\boldsymbol{b^2_{DES}}$	1.642	$1.681^{+0.079}_{-0.088}$	$\langle d^2\rangle^{1/2}$	2.629	2.55 ± 0.14	$H(0.51)$	86.55	$87.2^{+1.6}_{-1.8}$
$\boldsymbol{b^3_{DES}}$	1.626	$1.667^{+0.076}_{-0.087}$	$z_{\rm re}$	7.439	7.50 ± 0.18	$D_{\rm M}(0.51)$	2030.4	2019 ± 35
$\boldsymbol{b^4_{DES}}$	1.961	$2.013^{+0.093}_{-0.11}$	$10^9 A_s$	2.678	$2.49^{+0.33}_{-0.41}$	$H(0.61)$	91.65	$92.4^{+1.8}_{-2.0}$
$\boldsymbol{b^5_{DES}}$	2.027	$2.09^{+0.12}_{-0.13}$	$10^9 A_s e^{-2\tau}$	2.399	$2.23^{+0.29}_{-0.37}$	$D_{\rm M}(0.61)$	2367.1	2353 ± 42
$\boldsymbol{m^1_{DES}}$	0.0137	0.012 ± 0.022	D_{40}	1643	1528^{+200}_{-300}	$H(2.33)$	221.7	$224.6^{+5.7}_{-6.7}$
$\boldsymbol{m^2_{DES}}$	0.0151	0.015 ± 0.022	D_{220}	7957	7336^{+1000}_{-1000}	$D_{\rm M}(2.33)$	6013	5961 ± 130
$\boldsymbol{m^3_{DES}}$	0.0055	0.008 ± 0.021	D_{810}	3230	2997^{+400}_{-500}	$f\sigma_8(0.15)$	0.4397	0.434 ± 0.012
$\boldsymbol{m^4_{DES}}$	0.0089	0.011 ± 0.021	D_{1420}	1011	941^{+100}_{-100}	$\sigma_8(0.15)$	0.7598	0.743 ± 0.029
$\boldsymbol{A_{IA,DES}}$	0.466	$0.45^{+0.17}_{-0.20}$	D_{2000}	293.0	273^{+40}_{-50}	$f\sigma_8(0.38)$	0.4654	0.458 ± 0.014
$\boldsymbol{\alpha_{IA,DES}}$	-1.53	$-0.4^{+2.2}_{-2.8}$	$n_{\rm s,0.002}$	0.9594	0.957 ± 0.019	$\sigma_8(0.38)$	0.6772	0.662 ± 0.027
$\boldsymbol{\Delta z^1_{l,DES}}$	0.0039	0.0042 ± 0.0076	$Y_{\rm P}$	0.245321	$0.24532^{+0.00023}_{-0.00020}$	$f\sigma_8(0.51)$	0.4680	0.460 ± 0.015
$\boldsymbol{\Delta z^2_{l,DES}}$	0.0014	0.0015 ± 0.0067	$Y_{\rm P}^{\rm BBN}$	0.246647	$0.24664^{+0.00023}_{-0.00020}$	$\sigma_8(0.51)$	0.6354	0.621 ± 0.026
$\boldsymbol{\Delta z^3_{l,DES}}$	0.0040	0.0039 ± 0.0066	10^5D/H	2.620	$2.618^{+0.089}_{-0.10}$	$f\sigma_8(0.61)$	0.4657	0.457 ± 0.015
$\boldsymbol{\Delta z^4_{l,DES}}$	0.0019	0.0018 ± 0.0091	Age/Gyr	14.407	14.28 ± 0.32	$\sigma_8(0.61)$	0.6056	0.591 ± 0.025
$\boldsymbol{\Delta z^5_{l,DES}}$	0.0002	0.0000 ± 0.0097	z_*	1088.47	1088.77 ± 0.89	$f\sigma_8(2.33)$	0.3068	0.299 ± 0.013
$\boldsymbol{\Delta z^1_{s,DES}}$	-0.0014	-0.004 ± 0.014	r_*	149.65	$148.7^{+2.3}_{-2.1}$	$\sigma_8(2.33)$	0.3179	0.310 ± 0.014
$\boldsymbol{\Delta z^2_{s,DES}}$	-0.0289	-0.030 ± 0.011	$100\theta_*$	1.0184	1.023 ± 0.012	$\chi^2_{\rm 6DF}$	0.0496	0.08 ± 0.11
$\boldsymbol{\Delta z^3_{s,DES}}$	0.0061	0.0070 ± 0.0097	$D_{\rm M}(z_*)$/Gpc	14.695	14.54 ± 0.38	$\chi^2_{\rm MGS}$	2.35	2.27 ± 0.73
$\boldsymbol{\Delta z^4_{s,DES}}$	-0.0255	-0.023 ± 0.019	$z_{\rm drag}$	1058.14	1058.4 ± 1.4	$\chi^2_{\rm DR12BAO}$	4.64	5.3 ± 1.6
H_0	66.72	67.0 ± 1.1	$r_{\rm drag}$	152.50	$151.5^{+2.4}_{-2.2}$	$\chi^2_{\rm DES}$	501.36	512.9 ± 5.0
Ω_Λ	0.7208	$0.715^{+0.013}_{-0.011}$	$k_{\rm D}$	0.13518	$0.1362^{+0.0023}_{-0.0026}$	$\chi^2_{\rm prior}$	1.22	14.1 ± 5.2
$\Omega_{\rm m}$	0.2792	$0.285^{+0.011}_{-0.013}$	$100\theta_{\rm D}$	0.15815	0.1587 ± 0.0016	$\chi^2_{\rm BAO}$	7.04	7.7 ± 1.7
$\Omega_{\rm m}h^2$	0.1243	$0.1278^{+0.0067}_{-0.0083}$	$z_{\rm eq}$	2955	3040^{+160}_{-200}			
$\Omega_{\rm m}h^3$	0.0829	$0.0857^{+0.0053}_{-0.0067}$	$k_{\rm eq}$	0.00902	$0.00928^{+0.00049}_{-0.00060}$			

Best-fit $\chi^2_{\rm eff} = 509.62$; $\bar{\chi}^2_{\rm eff} = 534.71$; $R - 1 = 0.00773$

$\chi^2_{\rm eff}$: BAO - 6DF: 0.05 MGS: 2.35 DR12BAO: 4.64 WL - DES_1YR_final: 501.36

2.241 base_DESlens_lenspriors_BAO

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\mathbf{\Omega_b h^2}$	0.02221	0.02221 ± 0.00051	$\langle d^2\rangle^{1/2}$	2.117	$2.05^{+0.22}_{-0.30}$	$H(0.15)$	76.10	$76.9^{+2.8}_{-3.6}$
$\mathbf{\Omega_c h^2}$	0.1441	$0.153^{+0.024}_{-0.034}$	$z_{\rm re}$	8.22	$8.35^{+0.46}_{-0.54}$	$D_{\rm M}(0.15)$	616.1	611^{+24}_{-22}
$\mathbf{100\theta_{MC}}$	1.0722	1.078 ± 0.030	$10^9 A_{\rm s}$	1.399	$1.35^{+0.28}_{-0.61}$	$H(0.38)$	87.41	$88.6^{+4.0}_{-5.1}$
$\mathbf{\ln(10^{10} A_s)}$	2.639	2.53 ± 0.37	$10^9 A_{\rm s} e^{-2\tau}$	1.254	$1.21^{+0.25}_{-0.55}$	$D_{\rm M}(0.38)$	1463	1450 ± 61
$\mathbf{n_s}$	0.9579	0.959 ± 0.020	D_{40}	804	780^{+200}_{-400}	$H(0.51)$	94.9	$96.3^{+4.8}_{-6.1}$
$\mathbf{m^1_{DES}}$	0.0136	0.014 ± 0.023	D_{220}	3482	3422^{+700}_{-2000}	$D_{\rm M}(0.51)$	1891	1873 ± 84
$\mathbf{m^2_{DES}}$	0.0133	0.013 ± 0.022	D_{810}	1617	1540^{+400}_{-800}	$H(0.61)$	101.1	$102.7^{+5.4}_{-6.8}$
$\mathbf{m^3_{DES}}$	0.0013	0.002 ± 0.021	D_{1420}	513	480^{+100}_{-300}	$D_{\rm M}(0.61)$	2197	2175 ± 100
$\mathbf{m^4_{DES}}$	0.0176	0.019 ± 0.022	D_{2000}	148	138^{+40}_{-80}	$H(2.33)$	254.9	260^{+19}_{-23}
$\mathbf{A_{IA,DES}}$	1.39	1.00 ± 0.70	$n_{\rm s,0.002}$	0.9579	0.959 ± 0.020	$D_{\rm M}(2.33)$	5422	5356 ± 330
$\mathbf{\alpha_{IA,DES}}$	2.74	> 1.03	$Y_{\rm P}$	0.245330	$0.24532^{+0.00022}_{-0.00020}$	$f\sigma_8(0.15)$	0.4375	$0.428^{+0.017}_{-0.015}$
$\mathbf{\Delta z^1_{s,DES}}$	0.0046	0.003 ± 0.015	$Y_{\rm P}^{\rm BBN}$	0.246656	$0.24664^{+0.00023}_{-0.00020}$	$\sigma_8(0.15)$	0.688	0.669 ± 0.051
$\mathbf{\Delta z^2_{s,DES}}$	-0.0206	-0.021 ± 0.012	10^5D/H	2.616	2.619 ± 0.096	$f\sigma_8(0.38)$	0.4485	0.438 ± 0.022
$\mathbf{\Delta z^3_{s,DES}}$	0.0073	0.008 ± 0.011	Age/Gyr	12.97	12.82 ± 0.79	$\sigma_8(0.38)$	0.6075	0.590 ± 0.048
$\mathbf{\Delta z^4_{s,DES}}$	-0.0158	-0.016 ± 0.021	z_*	1092.16	$1092.8^{+2.2}_{-2.6}$	$f\sigma_8(0.51)$	0.4443	0.433 ± 0.024
H_0	70.14	$70.7^{+2.1}_{-2.7}$	r_*	138.7	137.3 ± 6.3	$\sigma_8(0.51)$	0.5674	0.551 ± 0.046
Ω_Λ	0.6606	$0.652^{+0.040}_{-0.034}$	$100\theta_*$	1.0724	1.078 ± 0.030	$f\sigma_8(0.61)$	0.4377	0.426 ± 0.026
$\Omega_{\rm m}$	0.3394	$0.348^{+0.034}_{-0.040}$	$D_{\rm M}(z_*)$/Gpc	12.94	12.76 ± 0.94	$\sigma_8(0.61)$	0.5392	0.523 ± 0.044
$\Omega_{\rm m} h^2$	0.1670	$0.176^{+0.024}_{-0.034}$	$z_{\rm drag}$	1061.23	1061.7 ± 2.3	$f\sigma_8(2.33)$	0.2708	$0.263^{+0.022}_{-0.025}$
$\Omega_{\rm m} h^3$	0.1171	$0.125^{+0.019}_{-0.030}$	$r_{\rm drag}$	141.3	139.9 ± 6.5	$\sigma_8(2.33)$	0.2782	$0.270^{+0.023}_{-0.027}$
σ_8	0.748	0.727 ± 0.052	$k_{\rm D}$	0.1470	$0.1489^{+0.0068}_{-0.0081}$	$\chi^2_{\rm 6DF}$	0.048	0.18 ± 0.22
S_8	0.7952	$0.780^{+0.029}_{-0.025}$	$100\theta_{\rm D}$	0.16518	0.1661 ± 0.0041	$\chi^2_{\rm MGS}$	1.16	1.18 ± 0.76
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4356	$0.427^{+0.016}_{-0.014}$	$z_{\rm eq}$	3975	4183^{+600}_{-800}	$\chi^2_{\rm DR12BAO}$	2.32	3.5 ± 1.5
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.5707	0.557 ± 0.028	$k_{\rm eq}$	0.01213	$0.0128^{+0.0017}_{-0.0025}$	$\chi^2_{\rm DES}$	229.43	233.7 ± 2.9
$\sigma_8/h^{0.5}$	0.893	0.866 ± 0.073	$100\theta_{\rm eq}$	0.746	$0.735^{+0.064}_{-0.076}$	$\chi^2_{\rm prior}$	0.46	9.6 ± 4.3
$r_{\rm drag} h$	99.13	98.8 ± 1.8	$100\theta_{\rm s,eq}$	0.4150	$0.409^{+0.034}_{-0.039}$	$\chi^2_{\rm BAO}$	3.52	4.9 ± 1.8

Best-fit $\chi^2_{\rm eff} = 233.41$; $\bar{\chi}^2_{\rm eff} = 248.12$; $R - 1 = 0.00914$

$\chi^2_{\rm eff}$: BAO - 6DF: 0.05 MGS: 1.16 DR12BAO: 2.32 WL - DES_1YR_final: 229.43

2.242 base_DES_lenspriors_lensing_BAO

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02219	0.02220 ± 0.00050	σ_8	0.8013	0.799 ± 0.014	$100\theta_{\rm eq}$	0.8651	0.866 ± 0.020
$\boldsymbol{\Omega_c h^2}$	0.1062	$0.1061^{+0.0048}_{-0.0055}$	S_8	0.7828	0.780 ± 0.015	$100\theta_{\rm s,eq}$	0.4761	0.477 ± 0.010
$\boldsymbol{100\theta_{MC}}$	1.0252	1.0249 ± 0.0082	$\sigma_8\Omega_{\rm m}^{0.5}$	0.4288	0.4273 ± 0.0080	$H(0.15)$	71.97	72.0 ± 1.0
$\boldsymbol{\ln(10^{10} A_s)}$	3.181	3.179 ± 0.065	$\sigma_8\Omega_{\rm m}^{0.25}$	0.5861	0.5843 ± 0.0095	$D_{\rm M}(0.15)$	647.6	647.8 ± 9.3
$\boldsymbol{n_s}$	0.9592	0.959 ± 0.019	$\sigma_8/h^{0.5}$	0.9780	0.975 ± 0.016	$H(0.38)$	81.29	81.3 ± 1.2
$\boldsymbol{b^1_{DES}}$	1.478	1.478 ± 0.074	$r_{\rm drag}h$	101.44	101.5 ± 1.0	$D_{\rm M}(0.38)$	1550.7	1551 ± 22
$\boldsymbol{b^2_{DES}}$	1.686	1.689 ± 0.055	$\langle d^2\rangle^{1/2}$	2.5281	2.523 ± 0.042	$H(0.51)$	87.53	87.5 ± 1.4
$\boldsymbol{b^3_{DES}}$	1.6714	1.674 ± 0.048	$z_{\rm re}$	7.533	7.53 ± 0.14	$D_{\rm M}(0.51)$	2013.0	2014 ± 29
$\boldsymbol{b^4_{DES}}$	2.020	2.023 ± 0.056	$10^9 A_s$	2.408	$2.41^{+0.15}_{-0.17}$	$H(0.61)$	92.76	92.7 ± 1.5
$\boldsymbol{b^5_{DES}}$	2.099	2.099 ± 0.079	$10^9 A_s e^{-2\tau}$	2.157	$2.16^{+0.13}_{-0.15}$	$D_{\rm M}(0.61)$	2345.7	2346 ± 34
$\boldsymbol{m^1_{DES}}$	0.0128	0.012 ± 0.023	D_{40}	1465	1464 ± 84	$H(2.33)$	225.63	225.5 ± 4.4
$\boldsymbol{m^2_{DES}}$	0.0158	0.014 ± 0.022	D_{220}	7002	7009 ± 540	$D_{\rm M}(2.33)$	5936	5939 ± 96
$\boldsymbol{m^3_{DES}}$	0.0086	0.009 ± 0.020	D_{810}	2917	2909 ± 190	$f\sigma_8(0.15)$	0.4352	0.4338 ± 0.0078
$\boldsymbol{m^4_{DES}}$	0.0102	0.011 ± 0.021	D_{1420}	920	917 ± 61	$\sigma_8(0.15)$	0.7430	0.741 ± 0.013
$\boldsymbol{A_{IA,DES}}$	0.460	$0.45^{+0.16}_{-0.20}$	D_{2000}	261.4	262^{+19}_{-25}	$f\sigma_8(0.38)$	0.4589	0.4574 ± 0.0075
$\boldsymbol{\alpha_{IA,DES}}$	-1.42	$-0.4^{+2.3}_{-2.7}$	$n_{\rm s,0.002}$	0.9592	0.959 ± 0.019	$\sigma_8(0.38)$	0.6614	0.660 ± 0.012
$\boldsymbol{\Delta z^1_{l,DES}}$	0.0037	0.0042 ± 0.0075	$Y_{\rm P}$	0.245321	$0.24531^{+0.00023}_{-0.00020}$	$f\sigma_8(0.51)$	0.4605	0.4590 ± 0.0074
$\boldsymbol{\Delta z^2_{l,DES}}$	0.0013	0.0016 ± 0.0066	$Y_{\rm P}^{\rm BBN}$	0.246647	$0.24664^{+0.00023}_{-0.00020}$	$\sigma_8(0.51)$	0.6202	0.618 ± 0.011
$\boldsymbol{\Delta z^3_{l,DES}}$	0.0038	0.0038 ± 0.0066	10^5D/H	2.620	$2.620^{+0.088}_{-0.099}$	$f\sigma_8(0.61)$	0.4577	0.4562 ± 0.0074
$\boldsymbol{\Delta z^4_{l,DES}}$	0.0018	0.0017 ± 0.0091	Age/Gyr	14.220	14.23 ± 0.23	$\sigma_8(0.61)$	0.5908	0.589 ± 0.011
$\boldsymbol{\Delta z^5_{l,DES}}$	0.0001	-0.0001 ± 0.0097	z_*	1088.91	1088.89 ± 0.72	$f\sigma_8(2.33)$	0.2990	0.2982 ± 0.0057
$\boldsymbol{\Delta z^1_{s,DES}}$	-0.0015	-0.004 ± 0.014	r_*	148.29	148.3 ± 1.6	$\sigma_8(2.33)$	0.3095	0.3087 ± 0.0061
$\boldsymbol{\Delta z^2_{s,DES}}$	-0.0289	-0.030 ± 0.011	$100\theta_*$	1.0255	1.0251 ± 0.0082	$\chi^2_{\rm lensing}$	7.74	8.8 ± 1.4
$\boldsymbol{\Delta z^3_{s,DES}}$	0.0067	0.0072 ± 0.0096	$D_{\rm M}(z_*)$/Gpc	14.461	14.47 ± 0.26	$\chi^2_{\rm 6DF}$	0.0288	0.074 ± 0.096
$\boldsymbol{\Delta z^4_{s,DES}}$	-0.0239	-0.023 ± 0.018	$z_{\rm drag}$	1058.48	1058.5 ± 1.3	$\chi^2_{\rm MGS}$	2.19	2.27 ± 0.69
H_0	67.13	67.13 ± 0.97	$r_{\rm drag}$	151.11	151.1 ± 1.7	$\chi^2_{\rm DR12BAO}$	4.20	5.1 ± 1.4
Ω_Λ	0.7137	0.7139 ± 0.0085	$k_{\rm D}$	0.13658	0.1366 ± 0.0019	$\chi^2_{\rm DES}$	502.64	512.3 ± 4.3
$\Omega_{\rm m}$	0.2863	0.2861 ± 0.0085	$100\theta_{\rm D}$	0.15906	0.1590 ± 0.0012	$\chi^2_{\rm prior}$	1.06	14.0 ± 5.1
$\Omega_{\rm m}h^2$	0.1290	$0.1290^{+0.0049}_{-0.0055}$	$z_{\rm eq}$	3068	3067^{+120}_{-130}	$\chi^2_{\rm BAO}$	6.43	7.5 ± 1.5
$\Omega_{\rm m}h^3$	0.08663	$0.0866^{+0.0041}_{-0.0048}$	$k_{\rm eq}$	0.009365	$0.00936^{+0.00036}_{-0.00040}$			

Best-fit $\chi^2_{\rm eff} = 517.86$; $\bar{\chi}^2_{\rm eff} = 542.57$; $R - 1 = 0.00536$

$\chi^2_{\rm eff}$: BAO - 6DF: 0.03 MGS: 2.19 DR12BAO: 4.20 CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8_CMBmarged: 7.74 WL - DES_1YR_final: 502.64

2.243 base_DESlens_lenspriors_lensing_BAO

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02219	0.02222 ± 0.00051	z_{re}	7.661	$7.64^{+0.15}_{-0.17}$	$H(0.38)$	82.40	82.3 ± 1.5
$\boldsymbol{\Omega_c h^2}$	0.1128	$0.1122^{+0.0065}_{-0.0072}$	$10^9 A_s$	2.255	$2.27^{+0.16}_{-0.18}$	$D_M(0.38)$	1534.2	1537 ± 25
$\boldsymbol{100\theta_{MC}}$	1.0345	1.033 ± 0.010	$10^9 A_s e^{-2\tau}$	2.020	$2.04^{+0.14}_{-0.17}$	$H(0.51)$	88.85	88.7 ± 1.7
$\boldsymbol{\ln(10^{10} A_s)}$	3.116	3.121 ± 0.078	D_{40}	1358	1372 ± 100	$D_M(0.51)$	1989.9	1993 ± 33
$\boldsymbol{n_s}$	0.9584	0.958 ± 0.020	D_{220}	6368	6460^{+570}_{-670}	$H(0.61)$	94.27	94.1 ± 1.8
$\boldsymbol{m^1_{DES}}$	0.0144	0.014 ± 0.023	D_{810}	2732	2747 ± 220	$D_M(0.61)$	2317.5	2321 ± 40
$\boldsymbol{m^2_{DES}}$	0.0141	0.013 ± 0.022	D_{1420}	870	872 ± 71	$H(2.33)$	231.0	230.4 ± 5.7
$\boldsymbol{m^3_{DES}}$	−0.0002	0.000 ± 0.021	D_{2000}	244.6	247^{+20}_{-25}	$D_M(2.33)$	5835	5849 ± 120
$\boldsymbol{m^4_{DES}}$	0.0162	0.015 ± 0.021	$n_{s,0.002}$	0.9584	0.958 ± 0.020	$f\sigma_8(0.15)$	0.4456	0.443 ± 0.010
$\boldsymbol{A_{IA,DES}}$	1.31	1.02 ± 0.59	Y_P	0.245323	$0.24532^{+0.00023}_{-0.00020}$	$\sigma_8(0.15)$	0.7482	0.746 ± 0.013
$\boldsymbol{\alpha_{IA,DES}}$	3.05	> 1.15	Y_P^{BBN}	0.246649	$0.24665^{+0.00023}_{-0.00020}$	$f\sigma_8(0.38)$	0.4673	0.4651 ± 0.0093
$\boldsymbol{\Delta z^1_{s,DES}}$	0.0031	0.003 ± 0.015	10^5D/H	2.619	2.617 ± 0.096	$\sigma_8(0.38)$	0.6649	0.663 ± 0.012
$\boldsymbol{\Delta z^2_{s,DES}}$	−0.0197	-0.020 ± 0.012	Age/Gyr	13.974	14.01 ± 0.28	$f\sigma_8(0.51)$	0.4677	0.4656 ± 0.0088
$\boldsymbol{\Delta z^3_{s,DES}}$	0.0074	0.007 ± 0.010	z_*	1089.51	$1089.42^{+0.77}_{-0.88}$	$\sigma_8(0.51)$	0.6229	0.621 ± 0.012
$\boldsymbol{\Delta z^4_{s,DES}}$	−0.0179	-0.018 ± 0.020	r_*	146.46	146.7 ± 2.0	$f\sigma_8(0.61)$	0.4640	0.4620 ± 0.0084
H_0	67.67	67.6 ± 1.1	$100\theta_*$	1.0347	1.033 ± 0.010	$\sigma_8(0.61)$	0.5932	0.591 ± 0.011
Ω_Λ	0.7037	0.705 ± 0.011	$D_M(z_*)$/Gpc	14.155	14.20 ± 0.33	$f\sigma_8(2.33)$	0.2997	0.2989 ± 0.0058
Ω_m	0.2963	0.295 ± 0.011	z_{drag}	1059.02	1059.0 ± 1.4	$\sigma_8(2.33)$	0.3097	0.3089 ± 0.0062
$\Omega_m h^2$	0.1357	$0.1350^{+0.0065}_{-0.0073}$	r_{drag}	149.23	149.4 ± 2.1	$\chi^2_{lensing}$	7.70	9.0 ± 1.5
$\Omega_m h^3$	0.0918	$0.0913^{+0.0054}_{-0.0062}$	k_D	0.13850	0.1383 ± 0.0023	χ^2_{6DF}	0.0084	0.057 ± 0.079
σ_8	0.8080	0.805 ± 0.014	$100\theta_D$	0.16025	0.1601 ± 0.0015	χ^2_{MGS}	1.97	2.04 ± 0.68
S_8	0.8029	0.799 ± 0.020	z_{eq}	3226	3211^{+160}_{-170}	$\chi^2_{DR12BAO}$	3.70	4.7 ± 1.5
$\sigma_8 \Omega_m^{0.5}$	0.4398	0.437 ± 0.011	k_{eq}	0.00985	$0.00980^{+0.00048}_{-0.00053}$	χ^2_{DES}	228.94	232.1 ± 2.3
$\sigma_8 \Omega_m^{0.25}$	0.5961	0.593 ± 0.012	$100\theta_{eq}$	0.8405	0.844 ± 0.025	χ^2_{prior}	0.43	9.4 ± 4.2
$\sigma_8/h^{0.5}$	0.9822	0.979 ± 0.016	$100\theta_{s,eq}$	0.4635	0.465 ± 0.013	χ^2_{BAO}	5.67	6.8 ± 1.5
$r_{drag} h$	100.98	101.0 ± 1.1	$H(0.15)$	72.71	72.6 ± 1.2			
$\langle d^2 \rangle^{1/2}$	2.4933	2.495 ± 0.047	$D_M(0.15)$	641.7	643 ± 10			

Best-fit $\chi^2_{eff} = 242.74$; $\bar{\chi}^2_{eff} = 257.26$; $R - 1 = 0.00856$

χ^2_{eff}: BAO - 6DF: 0.01 MGS: 1.97 DR12BAO: 3.70 CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8_CMBmarged: 7.70 WL - DES_1YR_final: 228.94

2.244 base_DES_DESpriors

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_m}$	0.2403	$0.257^{+0.023}_{-0.031}$	$\boldsymbol{m^3_{DES}}$	0.0077	0.009 ± 0.021	$\boldsymbol{\Delta z^4_{s,DES}}$	−0.0272	-0.024 ± 0.019
$\boldsymbol{\Omega_b}$	0.0649	$0.051^{+0.014}_{-0.010}$	$\boldsymbol{m^4_{DES}}$	0.0094	0.011 ± 0.021	$\Omega_b h^2$	0.0538	$0.0289^{+0.0080}_{-0.016}$
$\boldsymbol{H_0}$	91.0	74^{+10}_{-9}	$\boldsymbol{A_{IA,DES}}$	0.535	$0.49^{+0.18}_{-0.21}$	$\Omega_c h^2$	0.1445	$0.111^{+0.020}_{-0.027}$
$\boldsymbol{10^9 A_s}$	2.61	$2.86^{+0.48}_{-0.72}$	$\boldsymbol{\alpha_{IA,DES}}$	−0.94	$-0.2^{+2.3}_{-2.7}$	Ω_Λ	0.7597	$0.743^{+0.031}_{-0.023}$
$\boldsymbol{n_s}$	1.006	> 0.955	$\boldsymbol{\Delta z^1_{l,DES}}$	0.0042	0.0044 ± 0.0075	$\ln(10^{10} A_s)$	3.263	3.33 ± 0.21
$\boldsymbol{b^1_{DES}}$	1.314	$1.37^{+0.11}_{-0.13}$	$\boldsymbol{\Delta z^2_{l,DES}}$	0.0020	0.0020 ± 0.0066	σ_8	0.902	0.860 ± 0.063
$\boldsymbol{b^2_{DES}}$	1.509	$1.57^{+0.11}_{-0.13}$	$\boldsymbol{\Delta z^3_{l,DES}}$	0.0046	0.0044 ± 0.0066	S_8	0.8071	0.792 ± 0.024
$\boldsymbol{b^3_{DES}}$	1.498	$1.56^{+0.10}_{-0.13}$	$\boldsymbol{\Delta z^4_{l,DES}}$	0.0030	0.0026 ± 0.0091	$\sigma_8 \Omega_m^{0.5}$	0.4421	0.434 ± 0.013
$\boldsymbol{b^4_{DES}}$	1.812	$1.88^{+0.13}_{-0.16}$	$\boldsymbol{\Delta z^5_{l,DES}}$	0.0006	0.0006 ± 0.0098	$\sigma_8 \Omega_m^{0.25}$	0.6314	0.611 ± 0.030
$\boldsymbol{b^5_{DES}}$	1.874	$1.95^{+0.14}_{-0.17}$	$\boldsymbol{\Delta z^1_{s,DES}}$	−0.0016	-0.004 ± 0.014	χ^2_{DES}	498.67	511.7 ± 5.0
$\boldsymbol{m^1_{DES}}$	0.0130	0.012 ± 0.023	$\boldsymbol{\Delta z^2_{s,DES}}$	−0.0289	-0.029 ± 0.011	χ^2_{prior}	1.32	12.3 ± 4.8
$\boldsymbol{m^2_{DES}}$	0.0150	0.014 ± 0.022	$\boldsymbol{\Delta z^3_{s,DES}}$	0.0060	0.0068 ± 0.0098			

Best-fit $\chi^2_{\rm eff} = 499.99$; $\bar{\chi}^2_{\rm eff} = 524.05$; $R-1 = 0.00765$
$\chi^2_{\rm eff}$: WL - DES_1YR_final: 498.67

2.245 base_DESlens_DESpriors

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_{\rm m}}$	0.270	$0.274^{+0.038}_{-0.072}$	$\boldsymbol{A_{\rm IA,DES}}$	1.37	$0.72^{+0.86}_{-0.59}$	$\ln(10^{10}A_{\rm s})$	3.123	$3.17^{+0.58}_{-0.30}$
$\boldsymbol{\Omega_b}$	0.0414	< 0.0540	$\boldsymbol{\alpha_{\rm IA,DES}}$	3.34	> 1.09	σ_8	0.853	0.84 ± 0.10
$\boldsymbol{H_0}$	71.9	—	$\boldsymbol{\Delta z^1_{\rm s,DES}}$	0.0037	0.002 ± 0.015	S_8	0.8087	$0.791^{+0.035}_{-0.026}$
$\boldsymbol{10^9 A_{\rm s}}$	2.27	$2.61^{+0.85}_{-1.4}$	$\boldsymbol{\Delta z^2_{\rm s,DES}}$	−0.0193	-0.020 ± 0.012	$\sigma_8\Omega_{\rm m}^{0.5}$	0.4430	$0.433^{+0.019}_{-0.014}$
$\boldsymbol{n_{\rm s}}$	0.974	> 0.951	$\boldsymbol{\Delta z^3_{\rm s,DES}}$	0.0080	0.008 ± 0.011	$\sigma_8\Omega_{\rm m}^{0.25}$	0.6148	$0.603^{+0.048}_{-0.042}$
$\boldsymbol{m^1_{\rm DES}}$	0.0145	0.014 ± 0.023	$\boldsymbol{\Delta z^4_{\rm s,DES}}$	−0.0176	-0.017 ± 0.021	$\chi^2_{\rm DES}$	228.68	233.3 ± 2.8
$\boldsymbol{m^2_{\rm DES}}$	0.0140	0.013 ± 0.022	$\Omega_{\rm b}h^2$	0.0214	$0.0264^{+0.0061}_{-0.013}$	$\chi^2_{\rm prior}$	0.37	7.4 ± 3.7
$\boldsymbol{m^3_{\rm DES}}$	0.0015	0.003 ± 0.022	$\Omega_{\rm c}h^2$	0.1173	$0.120^{+0.018}_{-0.038}$			
$\boldsymbol{m^4_{\rm DES}}$	0.0171	0.017 ± 0.021	Ω_Λ	0.730	$0.726^{+0.072}_{-0.038}$			

Best-fit $\chi^2_{\rm eff} = 229.06$; $\bar{\chi}^2_{\rm eff} = 240.77$; $R-1 = 0.00741$
$\chi^2_{\rm eff}$: WL - DES_1YR_final: 228.68

2.246 base_DESwt_DESpriors

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_{\rm m}}$	0.2689	$0.275^{+0.027}_{-0.039}$	$\boldsymbol{m^3_{\rm DES}}$	0.0188	0.022 ± 0.022	$\boldsymbol{\Delta z^4_{\rm s,DES}}$	−0.0271	-0.024 ± 0.019
$\boldsymbol{\Omega_b}$	0.0611	$0.0517^{+0.016}_{-0.0081}$	$\boldsymbol{m^4_{\rm DES}}$	0.0049	0.007 ± 0.022	$\Omega_{\rm b}h^2$	0.0425	$0.0266^{+0.0062}_{-0.015}$
$\boldsymbol{H_0}$	83.4	< 75.3	$\boldsymbol{A_{\rm IA,DES}}$	0.389	$0.43^{+0.16}_{-0.20}$	$\Omega_{\rm c}h^2$	0.1439	$0.108^{+0.016}_{-0.028}$
$\boldsymbol{10^9 A_{\rm s}}$	2.28	$2.74^{+0.45}_{-0.72}$	$\boldsymbol{\alpha_{\rm IA,DES}}$	−2.71	$-0.6^{+2.0}_{-3.4}$	Ω_Λ	0.7311	$0.725^{+0.039}_{-0.027}$
$\boldsymbol{n_{\rm s}}$	0.896	< 0.988	$\boldsymbol{\Delta z^1_{\rm l,DES}}$	0.0028	0.0034 ± 0.0076	$\ln(10^{10}A_{\rm s})$	3.129	3.28 ± 0.22
$\boldsymbol{b^1_{\rm DES}}$	1.357	$1.39^{+0.12}_{-0.16}$	$\boldsymbol{\Delta z^2_{\rm l,DES}}$	0.0020	0.0020 ± 0.0068	σ_8	0.840	0.826 ± 0.073
$\boldsymbol{b^2_{\rm DES}}$	1.582	$1.63^{+0.13}_{-0.17}$	$\boldsymbol{\Delta z^3_{\rm l,DES}}$	0.0052	0.0051 ± 0.0067	S_8	0.7957	0.785 ± 0.036
$\boldsymbol{b^3_{\rm DES}}$	1.570	$1.62^{+0.12}_{-0.16}$	$\boldsymbol{\Delta z^4_{\rm l,DES}}$	0.0036	0.0030 ± 0.0091	$\sigma_8\Omega_{\rm m}^{0.5}$	0.4358	0.430 ± 0.020
$\boldsymbol{b^4_{\rm DES}}$	1.895	$1.95^{+0.15}_{-0.19}$	$\boldsymbol{\Delta z^5_{\rm l,DES}}$	0.0009	0.0004 ± 0.0098	$\sigma_8\Omega_{\rm m}^{0.25}$	0.6052	0.596 ± 0.038
$\boldsymbol{b^5_{\rm DES}}$	1.952	$2.01^{+0.17}_{-0.21}$	$\boldsymbol{\Delta z^1_{\rm s,DES}}$	0.0000	-0.004 ± 0.015	$\chi^2_{\rm DES}$	249.59	261.2 ± 4.8
$\boldsymbol{m^1_{\rm DES}}$	0.0123	0.011 ± 0.023	$\boldsymbol{\Delta z^2_{\rm s,DES}}$	−0.0301	-0.031 ± 0.011	$\chi^2_{\rm prior}$	1.56	13.0 ± 5.0
$\boldsymbol{m^2_{\rm DES}}$	0.0096	0.009 ± 0.023	$\boldsymbol{\Delta z^3_{\rm s,DES}}$	0.0065	0.0079 ± 0.0098			

Best-fit $\chi^2_{\rm eff} = 251.16$; $\bar{\chi}^2_{\rm eff} = 274.15$; $R-1 = 0.00740$
$\chi^2_{\rm eff}$: WL - DES_1YR_final: 249.59

2.247 base_DES_DESpriors_lensing

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_{\rm m}}$	0.2603	$0.270^{+0.018}_{-0.023}$	$\boldsymbol{m^3_{\rm DES}}$	0.0136	0.013 ± 0.021	$\boldsymbol{\Delta z^4_{\rm s,DES}}$	−0.0221	-0.021 ± 0.018
$\boldsymbol{\Omega_b}$	0.0636	$0.0520^{+0.014}_{-0.0082}$	$\boldsymbol{m^4_{\rm DES}}$	0.0143	0.014 ± 0.021	$\Omega_{\rm b}h^2$	0.0412	$0.0285^{+0.0080}_{-0.015}$
$\boldsymbol{H_0}$	80.5	72^{+10}_{-10}	$\boldsymbol{A_{\rm IA,DES}}$	0.491	$0.46^{+0.18}_{-0.21}$	$\Omega_{\rm c}h^2$	0.1269	$0.113^{+0.019}_{-0.029}$
$\boldsymbol{10^9 A_{\rm s}}$	2.435	$2.52^{+0.31}_{-0.50}$	$\boldsymbol{\alpha_{\rm IA,DES}}$	−0.88	$-0.2^{+2.4}_{-2.7}$	Ω_Λ	0.7397	$0.730^{+0.023}_{-0.018}$
$\boldsymbol{n_{\rm s}}$	1.020	> 0.960	$\boldsymbol{\Delta z^1_{\rm l,DES}}$	0.0041	0.0043 ± 0.0075	$\ln(10^{10}A_{\rm s})$	3.192	$3.21^{+0.16}_{-0.18}$
$\boldsymbol{b^1_{\rm DES}}$	1.415	1.436 ± 0.091	$\boldsymbol{\Delta z^2_{\rm l,DES}}$	0.0018	0.0018 ± 0.0067	σ_8	0.8401	0.822 ± 0.032
$\boldsymbol{b^2_{\rm DES}}$	1.627	1.648 ± 0.077	$\boldsymbol{\Delta z^3_{\rm l,DES}}$	0.0042	0.0041 ± 0.0066	S_8	0.7825	0.778 ± 0.015
$\boldsymbol{b^3_{\rm DES}}$	1.617	1.636 ± 0.069	$\boldsymbol{\Delta z^4_{\rm l,DES}}$	0.0021	0.0020 ± 0.0090	$\sigma_8\Omega_{\rm m}^{0.5}$	0.4286	0.4261 ± 0.0084
$\boldsymbol{b^4_{\rm DES}}$	1.958	1.979 ± 0.080	$\boldsymbol{\Delta z^5_{\rm l,DES}}$	0.0002	0.0001 ± 0.0098	$\sigma_8\Omega_{\rm m}^{0.25}$	0.6000	0.592 ± 0.014
$\boldsymbol{b^5_{\rm DES}}$	2.036	2.054 ± 0.095	$\boldsymbol{\Delta z^1_{\rm s,DES}}$	−0.0020	-0.004 ± 0.014	$\chi^2_{\rm lensing}$	7.77	9.0 ± 1.6
$\boldsymbol{m^1_{\rm DES}}$	0.0135	0.012 ± 0.023	$\boldsymbol{\Delta z^2_{\rm s,DES}}$	−0.0283	-0.029 ± 0.011	$\chi^2_{\rm DES}$	501.25	512.4 ± 4.5
$\boldsymbol{m^2_{\rm DES}}$	0.0161	0.015 ± 0.022	$\boldsymbol{\Delta z^3_{\rm s,DES}}$	0.0084	0.0080 ± 0.0098	$\chi^2_{\rm prior}$	0.97	12.0 ± 4.7

Best-fit $\chi^2_{\rm eff} = 510.00$; $\bar{\chi}^2_{\rm eff} = 533.40$; $R-1 = 0.00772$
$\chi^2_{\rm eff}$: CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8_CMBmarged: 7.77 WL - DES_1YR_final: 501.25

2.248 base_DESlens_DESpriors_lensing

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_{\rm m}}$	0.2836	0.278 ± 0.031	$\boldsymbol{A_{\rm IA,DES}}$	1.28	$0.74^{+0.75}_{-0.62}$	$\ln(10^{10} A_{\rm s})$	3.312	3.18 ± 0.17
$\boldsymbol{\Omega_b}$	0.0563	—	$\boldsymbol{\alpha_{\rm IA,DES}}$	3.24	> 1.01	σ_8	0.8268	$0.823^{+0.036}_{-0.041}$
$\boldsymbol{H_0}$	66.6	$71.1^{+6.6}_{-14}$	$\boldsymbol{\Delta z^1_{\rm s,DES}}$	0.0023	0.002 ± 0.015	S_8	0.8039	$0.789^{+0.025}_{-0.019}$
$\boldsymbol{10^9 A_{\rm s}}$	2.744	$2.43^{+0.34}_{-0.49}$	$\boldsymbol{\Delta z^2_{\rm s,DES}}$	−0.0190	-0.020 ± 0.012	$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4403	$0.432^{+0.013}_{-0.011}$
$\boldsymbol{n_{\rm s}}$	1.042	> 0.952	$\boldsymbol{\Delta z^3_{\rm s,DES}}$	0.0079	0.008 ± 0.011	$\sigma_8 \Omega_{\rm m}^{0.25}$	0.6033	0.596 ± 0.017
$\boldsymbol{m^1_{\rm DES}}$	0.0147	0.013 ± 0.023	$\boldsymbol{\Delta z^4_{\rm s,DES}}$	−0.0169	-0.016 ± 0.021	$\chi^2_{\rm lensing}$	7.46	9.3 ± 1.7
$\boldsymbol{m^2_{\rm DES}}$	0.0145	0.013 ± 0.022	$\Omega_{\rm b} h^2$	0.0250	$0.0260^{+0.0062}_{-0.013}$	$\chi^2_{\rm DES}$	228.85	232.6 ± 2.4
$\boldsymbol{m^3_{\rm DES}}$	0.0009	0.004 ± 0.021	$\Omega_{\rm c} h^2$	0.1003	$0.114^{+0.017}_{-0.029}$	$\chi^2_{\rm prior}$	0.37	7.4 ± 3.7
$\boldsymbol{m^4_{\rm DES}}$	0.0176	0.018 ± 0.021	Ω_Λ	0.7164	0.722 ± 0.031			

Best-fit $\chi^2_{\rm eff} = 236.68$; $\bar{\chi}^2_{\rm eff} = 249.25$; $R-1 = 0.01205$
$\chi^2_{\rm eff}$: CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8_CMBmarged: 7.46 WL - DES_1YR_final: 228.85

2.249 base_DESwt_DESpriors_lensing

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_{\rm m}}$	0.2738	$0.277^{+0.022}_{-0.031}$	$\boldsymbol{m^3_{\rm DES}}$	0.0230	0.023 ± 0.021	$\boldsymbol{\Delta z^4_{\rm s,DES}}$	−0.0225	-0.022 ± 0.019
$\boldsymbol{\Omega_b}$	0.0601	$0.0520^{+0.015}_{-0.0081}$	$\boldsymbol{m^4_{\rm DES}}$	0.0084	0.009 ± 0.022	$\Omega_{\rm b} h^2$	0.0382	$0.0277^{+0.0073}_{-0.015}$
$\boldsymbol{H_0}$	79.7	$71.4^{+7.1}_{-14}$	$\boldsymbol{A_{\rm IA,DES}}$	0.403	$0.43^{+0.17}_{-0.20}$	$\Omega_{\rm c} h^2$	0.1352	$0.113^{+0.017}_{-0.029}$
$\boldsymbol{10^9 A_{\rm s}}$	2.130	$2.44^{+0.28}_{-0.49}$	$\boldsymbol{\alpha_{\rm IA,DES}}$	−2.31	$-0.6^{+2.1}_{-3.4}$	Ω_Λ	0.7262	$0.723^{+0.031}_{-0.022}$
$\boldsymbol{n_{\rm s}}$	0.940	—	$\boldsymbol{\Delta z^1_{\rm l,DES}}$	0.0028	0.0033 ± 0.0077	$\ln(10^{10} A_{\rm s})$	3.059	$3.18^{+0.15}_{-0.18}$
$\boldsymbol{b^1_{\rm DES}}$	1.427	1.426 ± 0.096	$\boldsymbol{\Delta z^2_{\rm l,DES}}$	0.0013	0.0017 ± 0.0067	σ_8	0.8079	0.807 ± 0.036
$\boldsymbol{b^2_{\rm DES}}$	1.665	1.666 ± 0.084	$\boldsymbol{\Delta z^3_{\rm l,DES}}$	0.0042	0.0046 ± 0.0066	S_8	0.7718	0.772 ± 0.019
$\boldsymbol{b^3_{\rm DES}}$	1.654	1.659 ± 0.075	$\boldsymbol{\Delta z^4_{\rm l,DES}}$	0.0027	0.0026 ± 0.0092	$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4227	0.423 ± 0.011
$\boldsymbol{b^4_{\rm DES}}$	2.002	2.005 ± 0.089	$\boldsymbol{\Delta z^5_{\rm l,DES}}$	0.0003	0.0002 ± 0.0098	$\sigma_8 \Omega_{\rm m}^{0.25}$	0.5844	0.584 ± 0.015
$\boldsymbol{b^5_{\rm DES}}$	2.075	$2.075^{+0.096}_{-0.11}$	$\boldsymbol{\Delta z^1_{\rm s,DES}}$	−0.0008	-0.004 ± 0.015	$\chi^2_{\rm lensing}$	7.88	9.3 ± 1.7
$\boldsymbol{m^1_{\rm DES}}$	0.0123	0.011 ± 0.023	$\boldsymbol{\Delta z^2_{\rm s,DES}}$	−0.0298	-0.031 ± 0.011	$\chi^2_{\rm DES}$	251.25	261.3 ± 4.5
$\boldsymbol{m^2_{\rm DES}}$	0.0101	0.0097 ± 0.023	$\boldsymbol{\Delta z^3_{\rm s,DES}}$	0.0081	0.0088 ± 0.0098	$\chi^2_{\rm prior}$	1.28	12.8 ± 5.0

Best-fit $\chi^2_{\rm eff} = 260.41$; $\bar{\chi}^2_{\rm eff} = 283.41$; $R-1 = 0.01672$
$\chi^2_{\rm eff}$: CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8_CMBmarged: 7.88 WL - DES_1YR_final: 251.25

2.250 base_DES_DESpriors_BAO_CookeDH

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\mathbf{\Omega_m}$	0.2913	0.283 ± 0.016	$\boldsymbol{m^4_{DES}}$	0.0088	0.010 ± 0.021	$\Omega_c h^2$	0.1098	$0.1039^{+0.0098}_{-0.011}$
$\boldsymbol{\Omega_b}$	0.04876	0.0497 ± 0.0018	$\boldsymbol{A_{IA,DES}}$	0.450	$0.46^{+0.17}_{-0.20}$	Ω_Λ	0.7087	0.717 ± 0.016
$\boldsymbol{H_0}$	67.48	66.9 ± 1.2	$\boldsymbol{\alpha_{IA,DES}}$	-1.71	$-0.4^{+2.2}_{-2.8}$	$\ln(10^{10} A_s)$	3.159	3.23 ± 0.19
$\mathbf{10^9 A_s}$	2.355	$2.58^{+0.38}_{-0.57}$	$\boldsymbol{\Delta z^1_{l,DES}}$	0.0040	0.0042 ± 0.0074	σ_8	0.7964	0.807 ± 0.037
$\boldsymbol{n_s}$	0.909	< 0.985	$\boldsymbol{\Delta z^2_{l,DES}}$	0.0014	0.0017 ± 0.0065	S_8	0.7848	0.782 ± 0.023
$\boldsymbol{b^1_{DES}}$	1.476	1.461 ± 0.096	$\boldsymbol{\Delta z^3_{l,DES}}$	0.0038	0.0040 ± 0.0066	$\sigma_8 \Omega_m^{0.5}$	0.4299	0.428 ± 0.012
$\boldsymbol{b^2_{DES}}$	1.678	$1.669^{+0.084}_{-0.094}$	$\boldsymbol{\Delta z^4_{l,DES}}$	0.0017	0.0018 ± 0.0091	$\sigma_8 \Omega_m^{0.25}$	0.5851	0.588 ± 0.021
$\boldsymbol{b^3_{DES}}$	1.659	$1.654^{+0.082}_{-0.092}$	$\boldsymbol{\Delta z^5_{l,DES}}$	0.0001	0.0000 ± 0.0097	χ^2_{6DF}	0.0202	0.09 ± 0.12
$\boldsymbol{b^4_{DES}}$	2.000	$1.996^{+0.099}_{-0.11}$	$\boldsymbol{\Delta z^1_{s,DES}}$	-0.0009	-0.004 ± 0.014	χ^2_{MGS}	2.12	2.31 ± 0.78
$\boldsymbol{b^5_{DES}}$	2.068	2.07 ± 0.13	$\boldsymbol{\Delta z^2_{s,DES}}$	-0.0285	-0.029 ± 0.011	$\chi^2_{DR12BAO}$	3.89	5.5 ± 1.7
$\boldsymbol{m^1_{DES}}$	0.0128	0.012 ± 0.023	$\boldsymbol{\Delta z^3_{s,DES}}$	0.0061	0.0070 ± 0.0098	χ^2_{DES}	502.31	512.7 ± 5.0
$\boldsymbol{m^2_{DES}}$	0.0153	0.014 ± 0.022	$\boldsymbol{\Delta z^4_{s,DES}}$	-0.0248	-0.023 ± 0.019	χ^2_{prior}	1.16	13.2 ± 5.0
$\boldsymbol{m^3_{DES}}$	0.0053	0.008 ± 0.021	$\Omega_b h^2$	0.02220	0.02221 ± 0.00051	χ^2_{BAO}	6.03	7.9 ± 2.0

Best-fit $\chi^2_{eff} = 509.50$; $\bar{\chi}^2_{eff} = 533.83$; $R - 1 = 0.00568$
χ^2_{eff}: BAO - 6DF: 0.02 MGS: 2.12 DR12BAO: 3.89 WL - DES_1YR_final: 502.31

2.251 base_DESlens_DESpriors_BAO_CookeDH

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\mathbf{\Omega_m}$	0.3504	$0.329^{+0.033}_{-0.039}$	$\boldsymbol{\alpha_{IA,DES}}$	2.64	> 1.09	S_8	0.7899	$0.785^{+0.029}_{-0.024}$
$\boldsymbol{\Omega_b}$	0.04431	0.0460 ± 0.0031	$\boldsymbol{\Delta z^1_{s,DES}}$	0.0041	0.003 ± 0.015	$\sigma_8 \Omega_m^{0.5}$	0.4327	$0.430^{+0.016}_{-0.013}$
$\boldsymbol{H_0}$	70.76	$69.5^{+2.0}_{-2.6}$	$\boldsymbol{\Delta z^2_{s,DES}}$	-0.0202	-0.021 ± 0.012	$\sigma_8 \Omega_m^{0.25}$	0.5624	0.569 ± 0.029
$\mathbf{10^9 A_s}$	1.30	$1.66^{+0.35}_{-0.76}$	$\boldsymbol{\Delta z^3_{s,DES}}$	0.0074	0.008 ± 0.011	χ^2_{6DF}	0.088	0.12 ± 0.17
$\boldsymbol{n_s}$	0.907	—	$\boldsymbol{\Delta z^4_{s,DES}}$	-0.0164	-0.016 ± 0.021	χ^2_{MGS}	0.98	1.47 ± 0.83
$\boldsymbol{m^1_{DES}}$	0.0151	0.014 ± 0.023	$\Omega_b h^2$	0.02219	0.02219 ± 0.00051	$\chi^2_{DR12BAO}$	2.18	3.9 ± 1.7
$\boldsymbol{m^2_{DES}}$	0.0133	0.013 ± 0.022	$\Omega_c h^2$	0.1526	$0.138^{+0.022}_{-0.031}$	χ^2_{DES}	229.47	233.2 ± 2.7
$\boldsymbol{m^3_{DES}}$	0.0007	0.002 ± 0.021	Ω_Λ	0.6496	$0.671^{+0.039}_{-0.033}$	χ^2_{prior}	0.46	8.5 ± 4.0
$\boldsymbol{m^4_{DES}}$	0.0177	0.018 ± 0.021	$\ln(10^{10} A_s)$	2.563	2.74 ± 0.38	χ^2_{BAO}	3.25	5.5 ± 2.1
$\boldsymbol{A_{IA,DES}}$	1.32	0.97 ± 0.71	σ_8	0.731	0.753 ± 0.055			

Best-fit $\chi^2_{eff} = 233.17$; $\bar{\chi}^2_{eff} = 247.28$; $R - 1 = 0.00873$
χ^2_{eff}: BAO - 6DF: 0.09 MGS: 0.98 DR12BAO: 2.18 WL - DES_1YR_final: 229.47

2.252 base_DESwt_DESpriors_BAO_CookeDH

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_{\rm m}}$	0.287 ± 0.016	$\boldsymbol{m^4_{\rm DES}}$	0.007 ± 0.022	$\Omega_{\rm c}h^2$	0.106 ± 0.010
$\boldsymbol{\Omega_b}$	0.0495 ± 0.0018	$\boldsymbol{A_{\rm IA,DES}}$	$0.42^{+0.16}_{-0.19}$	Ω_Λ	0.713 ± 0.016
$\boldsymbol{H_0}$	67.0 ± 1.2	$\boldsymbol{\alpha_{\rm IA,DES}}$	$-0.7^{+2.0}_{-3.4}$	$\ln(10^{10}A_{\rm s})$	$3.19^{+0.19}_{-0.21}$
$\boldsymbol{10^9 A_{\rm s}}$	$2.49^{+0.36}_{-0.58}$	$\boldsymbol{\Delta z^1_{\rm l,DES}}$	0.0034 ± 0.0076	σ_8	$0.797^{+0.042}_{-0.048}$
$\boldsymbol{n_{\rm s}}$	< 0.949	$\boldsymbol{\Delta z^2_{\rm l,DES}}$	0.0020 ± 0.0067	S_8	0.779 ± 0.035
$\boldsymbol{b^1_{\rm DES}}$	1.44 ± 0.11	$\boldsymbol{\Delta z^3_{\rm l,DES}}$	0.0048 ± 0.0068	$\sigma_8\Omega_{\rm m}^{0.5}$	0.427 ± 0.019
$\boldsymbol{b^2_{\rm DES}}$	$1.68^{+0.10}_{-0.11}$	$\boldsymbol{\Delta z^4_{\rm l,DES}}$	0.0028 ± 0.0091	$\sigma_8\Omega_{\rm m}^{0.25}$	0.583 ± 0.029
$\boldsymbol{b^3_{\rm DES}}$	$1.665^{+0.096}_{-0.11}$	$\boldsymbol{\Delta z^5_{\rm l,DES}}$	0.0001 ± 0.0098	$\chi^2_{\rm 6DF}$	0.08 ± 0.11
$\boldsymbol{b^4_{\rm DES}}$	$2.01^{+0.12}_{-0.13}$	$\boldsymbol{\Delta z^1_{\rm s,DES}}$	-0.004 ± 0.015	$\chi^2_{\rm MGS}$	2.16 ± 0.75
$\boldsymbol{b^5_{\rm DES}}$	$2.08^{+0.14}_{-0.16}$	$\boldsymbol{\Delta z^2_{\rm s,DES}}$	-0.031 ± 0.011	$\chi^2_{\rm DR12BAO}$	5.3 ± 1.8
$\boldsymbol{m^1_{\rm DES}}$	0.011 ± 0.023	$\boldsymbol{\Delta z^3_{\rm s,DES}}$	0.008 ± 0.010	$\chi^2_{\rm DES}$	261.0 ± 4.9
$\boldsymbol{m^2_{\rm DES}}$	0.009 ± 0.023	$\boldsymbol{\Delta z^4_{\rm s,DES}}$	-0.024 ± 0.019	$\chi^2_{\rm prior}$	14.0 ± 5.2
$\boldsymbol{m^3_{\rm DES}}$	0.021 ± 0.022	$\Omega_{\rm b}h^2$	0.02219 ± 0.00050	$\chi^2_{\rm BAO}$	7.6 ± 1.9

$\bar{\chi}^2_{\rm eff} = 282.52$; $R - 1 = 0.00992$

2.253 base_DES_DESpriors_lensing_BAO_CookeDH

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_{\rm m}}$	0.2901	0.285 ± 0.014	$\boldsymbol{A_{\rm IA,DES}}$	0.452	$0.45^{+0.17}_{-0.20}$	$\ln(10^{10}A_{\rm s})$	3.144	$3.20^{+0.13}_{-0.15}$
$\boldsymbol{\Omega_b}$	0.04893	0.0495 ± 0.0017	$\boldsymbol{\alpha_{\rm IA,DES}}$	-1.58	$-0.4^{+2.2}_{-2.8}$	σ_8	0.7945	$0.802^{+0.022}_{-0.026}$
$\boldsymbol{H_0}$	67.36	67.0 ± 1.2	$\boldsymbol{\Delta z^1_{\rm l,DES}}$	0.0039	0.0043 ± 0.0076	S_8	0.7812	0.780 ± 0.015
$\boldsymbol{10^9 A_{\rm s}}$	2.320	$2.47^{+0.26}_{-0.41}$	$\boldsymbol{\Delta z^2_{\rm l,DES}}$	0.0012	0.0017 ± 0.0066	$\sigma_8\Omega_{\rm m}^{0.5}$	0.4279	0.4274 ± 0.0084
$\boldsymbol{n_{\rm s}}$	0.942	$0.966^{+0.050}_{-0.074}$	$\boldsymbol{\Delta z^3_{\rm l,DES}}$	0.0038	0.0039 ± 0.0066	$\sigma_8\Omega_{\rm m}^{0.25}$	0.5831	0.585 ± 0.013
$\boldsymbol{b^1_{\rm DES}}$	1.489	1.475 ± 0.080	$\boldsymbol{\Delta z^4_{\rm l,DES}}$	0.0017	0.0017 ± 0.0091	$\chi^2_{\rm lensing}$	7.84	8.9 ± 1.4
$\boldsymbol{b^2_{\rm DES}}$	1.696	1.685 ± 0.062	$\boldsymbol{\Delta z^5_{\rm l,DES}}$	0.0000	-0.0001 ± 0.0098	$\chi^2_{\rm 6DF}$	0.0205	0.08 ± 0.11
$\boldsymbol{b^3_{\rm DES}}$	1.681	1.671 ± 0.054	$\boldsymbol{\Delta z^1_{\rm s,DES}}$	-0.0017	-0.004 ± 0.014	$\chi^2_{\rm MGS}$	2.12	2.27 ± 0.72
$\boldsymbol{b^4_{\rm DES}}$	2.032	2.019 ± 0.064	$\boldsymbol{\Delta z^2_{\rm s,DES}}$	-0.0286	-0.030 ± 0.011	$\chi^2_{\rm DR12BAO}$	3.99	5.3 ± 1.6
$\boldsymbol{b^5_{\rm DES}}$	2.108	2.095 ± 0.084	$\boldsymbol{\Delta z^3_{\rm s,DES}}$	0.0068	0.0072 ± 0.0097	$\chi^2_{\rm DES}$	502.82	512.4 ± 4.4
$\boldsymbol{m^1_{\rm DES}}$	0.0134	0.012 ± 0.023	$\boldsymbol{\Delta z^4_{\rm s,DES}}$	-0.0238	-0.023 ± 0.018	$\chi^2_{\rm prior}$	1.06	13.1 ± 5.0
$\boldsymbol{m^2_{\rm DES}}$	0.0159	0.015 ± 0.022	$\Omega_{\rm b}h^2$	0.02220	0.02220 ± 0.00050	$\chi^2_{\rm BAO}$	6.13	7.6 ± 1.8
$\boldsymbol{m^3_{\rm DES}}$	0.0080	0.009 ± 0.020	$\Omega_{\rm c}h^2$	0.1088	$0.1051^{+0.0092}_{-0.010}$			
$\boldsymbol{m^4_{\rm DES}}$	0.0104	0.011 ± 0.021	Ω_Λ	0.7099	0.715 ± 0.014			

Best-fit $\chi^2_{\rm eff} = 517.85$; $\bar{\chi}^2_{\rm eff} = 542.11$; $R - 1 = 0.00808$

$\chi^2_{\rm eff}$: BAO - 6DF: 0.02 MGS: 2.12 DR12BAO: 3.99 CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8_CMBmarged: 7.84 WL - DES_1YR_final: 502.82

2.254 base_DESlens_DESpriors_lensing_BAO_CookeDH

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_{\rm m}}$	0.3141	0.295 ± 0.016	$\boldsymbol{\alpha_{\rm IA,DES}}$	2.79	> 1.04	S_8	0.8007	0.798 ± 0.020
$\boldsymbol{\Omega_b}$	0.04703	0.0487 ± 0.0019	$\boldsymbol{\Delta z^1_{\rm s,DES}}$	0.0033	0.003 ± 0.014	$\sigma_8\Omega_{\rm m}^{0.5}$	0.4385	0.437 ± 0.011
$\boldsymbol{H_0}$	68.65	67.5 ± 1.3	$\boldsymbol{\Delta z^2_{\rm s,DES}}$	-0.0197	-0.020 ± 0.012	$\sigma_8\Omega_{\rm m}^{0.25}$	0.5858	0.594 ± 0.014
$\boldsymbol{10^9 A_{\rm s}}$	1.938	$2.31^{+0.24}_{-0.40}$	$\boldsymbol{\Delta z^3_{\rm s,DES}}$	0.0065	0.007 ± 0.010	$\chi^2_{\rm lensing}$	7.83	9.0 ± 1.6
$\boldsymbol{n_{\rm s}}$	0.889	< 0.989	$\boldsymbol{\Delta z^4_{\rm s,DES}}$	-0.0190	-0.018 ± 0.020	$\chi^2_{\rm 6DF}$	0.0016	0.063 ± 0.087
$\boldsymbol{m^1_{\rm DES}}$	0.0139	0.014 ± 0.023	$\Omega_{\rm b}h^2$	0.022162	0.02218 ± 0.00049	$\chi^2_{\rm MGS}$	1.61	2.04 ± 0.72
$\boldsymbol{m^2_{\rm DES}}$	0.0134	0.013 ± 0.022	$\Omega_c h^2$	0.1252	0.112 ± 0.011	$\chi^2_{\rm DR12BAO}$	2.96	4.8 ± 1.6
$\boldsymbol{m^3_{\rm DES}}$	-0.0016	-0.001 ± 0.021	Ω_Λ	0.6859	0.705 ± 0.016	$\chi^2_{\rm DES}$	229.41	232.2 ± 2.3
$\boldsymbol{m^4_{\rm DES}}$	0.0157	0.016 ± 0.021	$\ln(10^{10}A_{\rm s})$	2.964	$3.13^{+0.13}_{-0.16}$	$\chi^2_{\rm prior}$	0.52	8.3 ± 3.9
$\boldsymbol{A_{\rm IA,DES}}$	1.30	0.99 ± 0.58	σ_8	0.7825	$0.806^{+0.022}_{-0.026}$	$\chi^2_{\rm BAO}$	4.57	6.9 ± 1.8

Best-fit $\chi^2_{\rm eff} = 242.34$; $\bar{\chi}^2_{\rm eff} = 256.50$; $R - 1 = 0.00642$
$\chi^2_{\rm eff}$: BAO - 6DF: 0.00 MGS: 1.61 DR12BAO: 2.96 CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8_CMBmarged: 7.83 WL - DES_1YR_final: 229.41

2.255 base_DESwt_DESpriors_lensing_BAO_CookeDH

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_{\rm m}}$	0.3072	$0.288^{+0.017}_{-0.014}$	$\boldsymbol{A_{\rm IA,DES}}$	0.345	$0.42^{+0.16}_{-0.19}$	$\ln(10^{10}A_{\rm s})$	2.991	$3.161^{+0.093}_{-0.16}$
$\boldsymbol{\Omega_b}$	0.04757	0.0493 ± 0.0017	$\boldsymbol{\alpha_{\rm IA,DES}}$	-3.21	$-0.7^{+1.9}_{-3.5}$	σ_8	0.7679	$0.792^{+0.019}_{-0.027}$
$\boldsymbol{H_0}$	68.30	67.2 ± 1.2	$\boldsymbol{\Delta z^1_{\rm l,DES}}$	0.0024	0.0034 ± 0.0077	S_8	0.7771	0.776 ± 0.018
$\boldsymbol{10^9 A_{\rm s}}$	1.990	$2.38^{+0.18}_{-0.40}$	$\boldsymbol{\Delta z^2_{\rm l,DES}}$	0.0016	0.0019 ± 0.0067	$\sigma_8\Omega_{\rm m}^{0.5}$	0.4256	0.4250 ± 0.0098
$\boldsymbol{n_{\rm s}}$	0.8704	< 0.969	$\boldsymbol{\Delta z^3_{\rm l,DES}}$	0.0046	0.0046 ± 0.0067	$\sigma_8\Omega_{\rm m}^{0.25}$	0.5717	0.580 ± 0.013
$\boldsymbol{b^1_{\rm DES}}$	1.491	1.452 ± 0.081	$\boldsymbol{\Delta z^4_{\rm l,DES}}$	0.0028	0.0023 ± 0.0091	$\chi^2_{\rm lensing}$	8.48	9.2 ± 1.6
$\boldsymbol{b^2_{\rm DES}}$	1.732	1.692 ± 0.062	$\boldsymbol{\Delta z^5_{\rm l,DES}}$	0.0004	0.0001 ± 0.0097	$\chi^2_{\rm 6DF}$	0.0002	0.07 ± 0.10
$\boldsymbol{b^3_{\rm DES}}$	1.720	1.682 ± 0.054	$\boldsymbol{\Delta z^1_{\rm s,DES}}$	0.0004	-0.004 ± 0.015	$\chi^2_{\rm MGS}$	1.75	2.18 ± 0.73
$\boldsymbol{b^4_{\rm DES}}$	2.077	2.032 ± 0.063	$\boldsymbol{\Delta z^2_{\rm s,DES}}$	-0.0300	-0.031 ± 0.011	$\chi^2_{\rm DR12BAO}$	3.21	5.1 ± 1.6
$\boldsymbol{b^5_{\rm DES}}$	2.153	2.106 ± 0.083	$\boldsymbol{\Delta z^3_{\rm s,DES}}$	0.0073	0.0083 ± 0.0097	$\chi^2_{\rm DES}$	251.59	260.9 ± 4.5
$\boldsymbol{m^1_{\rm DES}}$	0.0121	0.011 ± 0.023	$\boldsymbol{\Delta z^4_{\rm s,DES}}$	-0.0239	-0.023 ± 0.019	$\chi^2_{\rm prior}$	1.33	13.8 ± 5.2
$\boldsymbol{m^2_{\rm DES}}$	0.0095	0.009 ± 0.023	$\Omega_{\rm b}h^2$	0.022189	0.02220 ± 0.00050	$\chi^2_{\rm BAO}$	4.95	7.4 ± 1.8
$\boldsymbol{m^3_{\rm DES}}$	0.0200	0.022 ± 0.021	$\Omega_{\rm c}h^2$	0.1205	$0.107^{+0.011}_{-0.0088}$			
$\boldsymbol{m^4_{\rm DES}}$	0.0056	0.008 ± 0.022	Ω_Λ	0.6928	$0.712^{+0.014}_{-0.017}$			

Best-fit $\chi^2_{\rm eff} = 266.35$; $\bar{\chi}^2_{\rm eff} = 291.25$; $R - 1 = 0.00659$
$\chi^2_{\rm eff}$: BAO - 6DF: 0.00 MGS: 1.75 DR12BAO: 3.21 CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8_CMBmarged: 8.48 WL - DES_1YR_final: 251.59

2.256 base_plikHM_TTTEEE_lowl_lowE_DES

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022522	0.02252 ± 0.00014	$\boldsymbol{A_{217}^{dustTT}}$	95.2	93.7 ± 7.3	z_{drag}	1060.162	1060.13 ± 0.30
$\boldsymbol{\Omega_c h^2}$	0.11809	0.1179 ± 0.0011	$\boldsymbol{A_{100}^{dustTE}}$	0.1135	0.114 ± 0.038	r_{drag}	147.429	147.48 ± 0.26
$\boldsymbol{100\theta_{MC}}$	1.041121	1.04114 ± 0.00031	$\boldsymbol{A_{100\times143}^{dustTE}}$	0.1348	0.135 ± 0.029	k_D	0.140625	0.14057 ± 0.00030
$\boldsymbol{\tau}$	0.0552	0.0543 ± 0.0079	$\boldsymbol{A_{100\times217}^{dustTE}}$	0.479	0.481 ± 0.085	$100\theta_D$	0.160641	0.16066 ± 0.00017
$\boldsymbol{\ln(10^{10}A_s)}$	3.0421	3.039 ± 0.016	$\boldsymbol{A_{143}^{dustTE}}$	0.224	0.223 ± 0.053	z_{eq}	3360.1	3356 ± 24
$\boldsymbol{n_s}$	0.97030	0.9694 ± 0.0039	$\boldsymbol{A_{143\times217}^{dustTE}}$	0.662	0.662 ± 0.080	k_{eq}	0.010255	0.010242 ± 0.000074
$\boldsymbol{b_{DES}^1}$	1.510	1.509 ± 0.072	$\boldsymbol{A_{217}^{dustTE}}$	2.062	2.06 ± 0.27	$100\theta_{eq}$	0.82148	0.8223 ± 0.0047
$\boldsymbol{b_{DES}^2}$	1.708	1.710 ± 0.053	$\boldsymbol{c_{100}}$	0.99972	0.99968 ± 0.00061	$100\theta_{s,eq}$	0.45354	0.4540 ± 0.0024
$\boldsymbol{b_{DES}^3}$	1.6983	1.699 ± 0.044	$\boldsymbol{c_{217}}$	0.99819	0.99819 ± 0.00062	$H(0.15)$	73.421	73.48 ± 0.42
$\boldsymbol{b_{DES}^4}$	2.059	2.059 ± 0.051	H_0	68.222	68.29 ± 0.49	$D_M(0.15)$	636.03	635.5 ± 4.1
$\boldsymbol{b_{DES}^5}$	2.165	2.160 ± 0.076	Ω_Λ	0.6965	0.6974 ± 0.0064	$H(0.38)$	83.398	83.44 ± 0.32
$\boldsymbol{m_{DES}^1}$	0.0138	0.012 ± 0.023	Ω_m	0.3035	0.3026 ± 0.0064	$D_M(0.38)$	1518.8	1517.8 ± 8.3
$\boldsymbol{m_{DES}^2}$	0.0139	0.012 ± 0.022	$\Omega_m h^2$	0.14125	0.1411 ± 0.0010	$H(0.51)$	90.038	90.07 ± 0.25
$\boldsymbol{m_{DES}^3}$	−0.0031	-0.002 ± 0.020	$\Omega_m h^3$	0.096365	0.09633 ± 0.00030	$D_M(0.51)$	1968.8	1967.5 ± 9.8
$\boldsymbol{m_{DES}^4}$	0.0021	0.003 ± 0.020	σ_8	0.8050	0.8029 ± 0.0065	$H(0.61)$	95.598	95.62 ± 0.21
$\boldsymbol{A_{IA,DES}}$	0.443	$0.47^{+0.15}_{-0.18}$	S_8	0.8097	0.806 ± 0.012	$D_M(0.61)$	2292.0	2291 ± 11
$\boldsymbol{\alpha_{IA,DES}}$	−2.49	$-1.0^{+1.8}_{-2.9}$	$\sigma_8\Omega_m^{0.5}$	0.4435	0.4416 ± 0.0066	$H(2.33)$	235.47	235.35 ± 0.65
$\boldsymbol{\Delta z_{l,DES}^1}$	0.0032	0.0036 ± 0.0075	$\sigma_8\Omega_m^{0.25}$	0.5975	0.5955 ± 0.0064	$D_M(2.33)$	5750.0	5749.5 ± 9.7
$\boldsymbol{\Delta z_{l,DES}^2}$	0.0006	0.0009 ± 0.0066	$\sigma_8/h^{0.5}$	0.9746	0.9716 ± 0.0094	$f\sigma_8(0.15)$	0.4487	0.4469 ± 0.0062
$\boldsymbol{\Delta z_{l,DES}^3}$	0.0035	0.0035 ± 0.0066	$r_{drag}h$	100.58	100.71 ± 0.85	$\sigma_8(0.15)$	0.7446	0.7428 ± 0.0059
$\boldsymbol{\Delta z_{l,DES}^4}$	0.0009	0.0006 ± 0.0091	$\langle d^2\rangle^{1/2}$	2.4118	2.408 ± 0.023	$f\sigma_8(0.38)$	0.4687	0.4670 ± 0.0052
$\boldsymbol{\Delta z_{l,DES}^5}$	−0.0005	-0.0007 ± 0.0098	z_{re}	7.71	7.59 ± 0.79	$\sigma_8(0.38)$	0.6609	0.6594 ± 0.0052
$\boldsymbol{\Delta z_{s,DES}^1}$	0.0004	-0.004 ± 0.014	$10^9 A_s$	2.0949	2.089 ± 0.033	$f\sigma_8(0.51)$	0.46821	0.4667 ± 0.0047
$\boldsymbol{\Delta z_{s,DES}^2}$	−0.0300	-0.031 ± 0.011	$10^9 A_s e^{-2\tau}$	1.8758	1.874 ± 0.011	$\sigma_8(0.51)$	0.61890	0.6175 ± 0.0049
$\boldsymbol{\Delta z_{s,DES}^3}$	0.0033	0.0042 ± 0.0096	D_{40}	1220.1	1221 ± 12	$f\sigma_8(0.61)$	0.46391	0.4625 ± 0.0044
$\boldsymbol{\Delta z_{s,DES}^4}$	−0.0301	-0.029 ± 0.018	D_{220}	5742.7	5745 ± 39	$\sigma_8(0.61)$	0.58913	0.5878 ± 0.0046
$\boldsymbol{y_{cal}}$	1.00056	1.0005 ± 0.0025	D_{810}	2539.8	2537 ± 13	$f\sigma_8(2.33)$	0.29736	0.2968 ± 0.0024
$\boldsymbol{A_{217}^{CIB}}$	46.5	47 ± 7	D_{1420}	819.38	817.9 ± 4.7	$\sigma_8(2.33)$	0.30693	0.3063 ± 0.0025
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.57	—	D_{2000}	231.71	231.2 ± 1.6	f_{2000}^{143}	28.29	29.3 ± 2.7
$\boldsymbol{A_{143}^{tSZ}}$	7.22	$5.5^{+2.2}_{-1.9}$	$n_{s,0.002}$	0.97030	0.9694 ± 0.0039	$f_{2000}^{143\times217}$	31.64	32.0 ± 1.9
$\boldsymbol{A_{100}^{PS}}$	248.1	259 ± 28	Y_P	0.245452	0.245450 ± 0.000053	f_{2000}^{217}	106.21	106.8 ± 1.8
$\boldsymbol{A_{143}^{PS}}$	48.5	45 ± 8	Y_P^{BBN}	0.246779	0.246777 ± 0.000053	χ^2_{simall}	396.08	396.9 ± 1.7
$\boldsymbol{A_{143\times217}^{PS}}$	50.5	41 ± 9	10^5D/H	2.5580	2.559 ± 0.025	χ^2_{lowl}	22.45	22.61 ± 0.76
$\boldsymbol{A_{217}^{PS}}$	120.3	114 ± 10	Age/Gyr	13.7681	13.767 ± 0.022	χ^2_{plik}	2348.0	2363.3 ± 6.3
$\boldsymbol{A^{kSZ}}$	0.00	< 4.41	z_*	1089.563	1089.56 ± 0.23	χ^2_{DES}	509.18	518.0 ± 4.8
$\boldsymbol{A_{100}^{dustTT}}$	8.88	8.9 ± 1.8	r_*	144.811	144.86 ± 0.25	χ^2_{prior}	4.0	25 ± 7
$\boldsymbol{A_{143}^{dustTT}}$	11.12	11.0 ± 1.8	$100\theta_*$	1.041286	1.04131 ± 0.00030	χ^2_{CMB}	2766.6	2782.8 ± 6.3
$\boldsymbol{A_{143\times217}^{dustTT}}$	20.10	18.7 ± 3.3	$D_M(z_*)$/Gpc	13.9069	13.911 ± 0.024			

Best-fit $\chi^2_{eff} = 3279.70$; $\bar{\chi}^2_{eff} = 3325.49$; $R - 1 = 0.01436$

χ^2_{eff}: CMB - simall_100x143_offlike5_EE_Aplanck_B: 396.08 commander_dx12_v3_2_29: 22.45 plik_rd12_HM_v22b_TTTEEE: 2348.04 WL - DES_1YR_final: 509.18

2.257 base_plikHM_TTTEEE_lowl_lowE_DES_post_BAO

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022513	0.02251 ± 0.00013	$\boldsymbol{\Delta z^2_{l,DES}}$	0.0006	0.0009 ± 0.0065	k_D	0.140613	0.14058 ± 0.00029
$\boldsymbol{\Omega_c h^2}$	0.11810	0.11802 ± 0.00088	$\boldsymbol{\Delta z^3_{l,DES}}$	0.0036	0.0035 ± 0.0066	$100\theta_D$	0.160652	0.16066 ± 0.00017
$\boldsymbol{100\theta_{MC}}$	1.041109	1.04112 ± 0.00029	$\boldsymbol{\Delta z^4_{l,DES}}$	0.0009	0.0005 ± 0.0091	z_{eq}	3360.3	3358 ± 20
$\boldsymbol{\tau}$	0.0542	0.0540 ± 0.0077	$\boldsymbol{\Delta z^5_{l,DES}}$	−0.0008	-0.0008 ± 0.0099	k_{eq}	0.010256	0.010250 ± 0.000061
$\boldsymbol{\ln(10^{10} A_s)}$	3.0400	3.039 ± 0.016	$\boldsymbol{\Delta z^1_{s,DES}}$	0.0003	-0.004 ± 0.014	$100\theta_{eq}$	0.82141	0.8218 ± 0.0038
$\boldsymbol{n_s}$	0.96978	0.9691 ± 0.0036	$\boldsymbol{\Delta z^2_{s,DES}}$	−0.0303	-0.031 ± 0.011	$100\theta_{s,eq}$	0.45351	0.4537 ± 0.0020
$\boldsymbol{y_{cal}}$	1.00056	1.0004 ± 0.0025	$\boldsymbol{\Delta z^3_{s,DES}}$	0.0032	0.0039 ± 0.0095	$H(0.15)$	73.408	73.43 ± 0.35
$\boldsymbol{A^{CIB}_{217}}$	47.5	47 ± 7	$\boldsymbol{\Delta z^4_{s,DES}}$	−0.0307	-0.030 ± 0.018	$D_M(0.15)$	636.16	635.9 ± 3.4
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.44	—	H_0	68.207	68.24 ± 0.40	$H(0.38)$	83.387	83.40 ± 0.26
$\boldsymbol{A^{tSZ}_{143}}$	7.30	$5.6^{+2.2}_{-1.9}$	Ω_Λ	0.6964	0.6968 ± 0.0052	$D_M(0.38)$	1519.1	1518.6 ± 6.8
$\boldsymbol{A^{PS}_{100}}$	250.0	258 ± 28	Ω_m	0.3036	0.3032 ± 0.0052	$H(0.51)$	90.028	90.04 ± 0.21
$\boldsymbol{A^{PS}_{143}}$	47.4	45 ± 8	$\Omega_m h^2$	0.14126	0.14118 ± 0.00084	$D_M(0.51)$	1969.1	1968.5 ± 8.0
$\boldsymbol{A^{PS}_{143\times217}}$	47.4	42 ± 9	$\Omega_m h^3$	0.096351	0.09633 ± 0.00030	$H(0.61)$	95.589	95.60 ± 0.18
$\boldsymbol{A^{PS}_{217}}$	118.8	114 ± 10	σ_8	0.8041	0.8031 ± 0.0065	$D_M(0.61)$	2292.3	2291.7 ± 8.7
$\boldsymbol{A^{kSZ}}$	0.00	< 4.35	S_8	0.8090	0.807 ± 0.010	$H(2.33)$	235.47	235.41 ± 0.55
$\boldsymbol{A^{dustTT}_{100}}$	8.80	8.9 ± 1.8	$\sigma_8\Omega_m^{0.5}$	0.4431	0.4422 ± 0.0057	$D_M(2.33)$	5750.5	5750.3 ± 8.6
$\boldsymbol{A^{dustTT}_{143}}$	11.04	11.0 ± 1.8	$\sigma_8\Omega_m^{0.25}$	0.5969	0.5959 ± 0.0059	$f\sigma_8(0.15)$	0.4483	0.4474 ± 0.0055
$\boldsymbol{A^{dustTT}_{143\times217}}$	19.99	18.7 ± 3.2	$\sigma_8/h^{0.5}$	0.9736	0.9722 ± 0.0088	$\sigma_8(0.15)$	0.7438	0.7429 ± 0.0059
$\boldsymbol{A^{dustTT}_{217}}$	95.1	93.6 ± 7.3	$r_{drag}h$	100.56	100.63 ± 0.69	$f\sigma_8(0.38)$	0.46821	0.4674 ± 0.0048
$\boldsymbol{A^{dustTE}_{100}}$	0.1129	0.114 ± 0.038	$\langle d^2\rangle^{1/2}$	2.4106	2.409 ± 0.022	$\sigma_8(0.38)$	0.6602	0.6594 ± 0.0052
$\boldsymbol{A^{dustTE}_{100\times143}}$	0.1339	0.134 ± 0.029	z_{re}	7.61	7.57 ± 0.77	$f\sigma_8(0.51)$	0.46774	0.4670 ± 0.0044
$\boldsymbol{A^{dustTE}_{100\times217}}$	0.480	0.481 ± 0.086	$10^9 A_s$	2.0906	2.088 ± 0.033	$\sigma_8(0.51)$	0.61819	0.6175 ± 0.0049
$\boldsymbol{A^{dustTE}_{143}}$	0.222	0.222 ± 0.053	$10^9 A_s e^{-2\tau}$	1.8757	1.874 ± 0.011	$f\sigma_8(0.61)$	0.46344	0.4627 ± 0.0042
$\boldsymbol{A^{dustTE}_{143\times217}}$	0.662	0.661 ± 0.080	D_{40}	1221.0	1222 ± 11	$\sigma_8(0.61)$	0.58844	0.5878 ± 0.0046
$\boldsymbol{A^{dustTE}_{217}}$	2.063	2.07 ± 0.27	D_{220}	5743.9	5744 ± 39	$f\sigma_8(2.33)$	0.29701	0.2967 ± 0.0024
$\boldsymbol{c_{100}}$	0.99972	0.99968 ± 0.00061	D_{810}	2539.2	2537 ± 13	$\sigma_8(2.33)$	0.30656	0.3063 ± 0.0025
$\boldsymbol{c_{217}}$	0.99819	0.99818 ± 0.00062	D_{1420}	818.95	817.8 ± 4.7	f^{143}_{2000}	28.75	29.3 ± 2.7
$\boldsymbol{b^1_{DES}}$	1.509	1.510 ± 0.071	D_{2000}	231.52	231.1 ± 1.6	$f^{143\times217}_{2000}$	31.87	32.0 ± 1.8
$\boldsymbol{b^2_{DES}}$	1.711	1.710 ± 0.053	$n_{s,0.002}$	0.96978	0.9691 ± 0.0036	f^{217}_{2000}	106.42	106.8 ± 1.8
$\boldsymbol{b^3_{DES}}$	1.6988	1.699 ± 0.043	Y_P	0.2454492	0.245447 ± 0.000050	χ^2_{small}	395.92	396.9 ± 1.6
$\boldsymbol{b^4_{DES}}$	2.061	2.059 ± 0.051	Y_P^{BBN}	0.2467760	0.246773 ± 0.000050	χ^2_{lowl}	22.51	22.65 ± 0.72
$\boldsymbol{b^5_{DES}}$	2.162	2.160 ± 0.075	10^5D/H	2.5596	2.561 ± 0.024	χ^2_{plik}	2348.2	2362.9 ± 6.1
$\boldsymbol{m^1_{DES}}$	0.0133	0.012 ± 0.023	Age/Gyr	13.7691	13.769 ± 0.020	χ^2_{6DF}	0.0002	0.021 ± 0.029
$\boldsymbol{m^2_{DES}}$	0.0137	0.013 ± 0.022	z_*	1089.576	1089.58 ± 0.21	χ^2_{MGS}	1.748	1.84 ± 0.43
$\boldsymbol{m^3_{DES}}$	−0.0028	-0.003 ± 0.020	r_*	144.813	144.84 ± 0.22	$\chi^2_{DR12BAO}$	3.460	3.74 ± 0.52
$\boldsymbol{m^4_{DES}}$	0.0028	0.002 ± 0.020	$100\theta_*$	1.041285	1.04130 ± 0.00029	χ^2_{DES}	509.06	518.1 ± 4.7
$\boldsymbol{A_{IA,DES}}$	0.436	$0.47^{+0.15}_{-0.19}$	$D_M(z_*)$/Gpc	13.9072	13.909 ± 0.021	χ^2_{prior}	4.0	25 ± 7
$\boldsymbol{\alpha_{IA,DES}}$	−2.52	$-1.0^{+1.7}_{-3.0}$	z_{drag}	1060.123	1060.11 ± 0.29	χ^2_{BAO}	5.208	5.60 ± 0.53
$\boldsymbol{\Delta z^1_{l,DES}}$	0.0032	0.0036 ± 0.0075	r_{drag}	147.436	147.46 ± 0.23	χ^2_{CMB}	2766.6	2782.5 ± 6.1

Best-fit $\chi^2_{eff} = 3284.91$; $\bar{\chi}^2_{eff} = 3330.82$; $R - 1 = 0.01755$

χ^2_{eff}: BAO - 6DF: 0.00 MGS: 1.75 DR12BAO: 3.46 CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.92 commander_dx12_v3_2_29: 22.51 plik_rd12_HM_v22b_TTTEEE: 2348.17 WL - DES_1YR_final: 509.06

2.258 base_plikHM_TTTEEE_lowl_lowE_DES_post_lensing

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022509	0.02251 ± 0.00014	$\boldsymbol{\alpha_{IA,DES}}$	-2.71	$-1.2^{+1.6}_{-2.9}$	$100\theta_*$	1.041253	1.04128 ± 0.00030
$\boldsymbol{\Omega_c h^2}$	0.11839	0.1182 ± 0.0010	$\boldsymbol{\Delta z^1_{l,DES}}$	0.0029	0.0036 ± 0.0075	$D_M(z_*)$/Gpc	13.9006	13.905 ± 0.023
$\boldsymbol{100\theta_{MC}}$	1.041085	1.04111 ± 0.00031	$\boldsymbol{\Delta z^2_{l,DES}}$	0.0005	0.0008 ± 0.0065	z_{drag}	1060.162	1060.14 ± 0.30
$\boldsymbol{\tau}$	0.0558	0.0565 ± 0.0076	$\boldsymbol{\Delta z^3_{l,DES}}$	0.0034	0.0035 ± 0.0066	r_{drag}	147.360	147.42 ± 0.25
$\boldsymbol{\ln(10^{10} A_s)}$	3.0445	3.045 ± 0.015	$\boldsymbol{\Delta z^4_{l,DES}}$	0.0009	0.0004 ± 0.0090	k_D	0.140688	0.14063 ± 0.00029
$\boldsymbol{n_s}$	0.96923	0.9687 ± 0.0039	$\boldsymbol{\Delta z^5_{l,DES}}$	-0.0007	-0.001 ± 0.010	$100\theta_D$	0.160642	0.16065 ± 0.00017
$\boldsymbol{y_{cal}}$	1.00076	1.0007 ± 0.0025	$\boldsymbol{\Delta z^1_{s,DES}}$	0.0009	-0.004 ± 0.014	z_{eq}	3367.1	3362 ± 23
$\boldsymbol{A^{CIB}_{217}}$	47.1	47 ± 7	$\boldsymbol{\Delta z^2_{s,DES}}$	-0.0303	-0.031 ± 0.011	k_{eq}	0.010277	0.010262 ± 0.000071
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.45	—	$\boldsymbol{\Delta z^3_{s,DES}}$	0.0027	0.0034 ± 0.0095	$100\theta_{eq}$	0.82013	0.8211 ± 0.0045
$\boldsymbol{A^{tSZ}_{143}}$	7.20	$5.6^{+2.2}_{-1.9}$	$\boldsymbol{\Delta z^4_{s,DES}}$	-0.0320	-0.031 ± 0.018	$100\theta_{s,eq}$	0.45285	0.4534 ± 0.0023
$\boldsymbol{A^{PS}_{100}}$	250.1	258 ± 28	H_0	68.090	68.18 ± 0.48	$H(0.15)$	73.309	73.39 ± 0.41
$\boldsymbol{A^{PS}_{143}}$	47.1	45 ± 8	Ω_Λ	0.6947	0.6959 ± 0.0062	$D_M(0.15)$	637.14	636.4 ± 4.0
$\boldsymbol{A^{PS}_{143\times217}}$	47.4	42 ± 9	Ω_m	0.3053	0.3041 ± 0.0062	$H(0.38)$	83.319	83.37 ± 0.31
$\boldsymbol{A^{PS}_{217}}$	119.6	114.8 ± 9.9	$\Omega_m h^2$	0.14155	0.14134 ± 0.00098	$D_M(0.38)$	1521.0	1519.5 ± 8.1
$\boldsymbol{A^{kSZ}}$	0.01	< 4.19	$\Omega_m h^3$	0.096381	0.09636 ± 0.00030	$H(0.51)$	89.978	90.02 ± 0.25
$\boldsymbol{A^{dust TT}_{100}}$	8.79	8.9 ± 1.8	σ_8	0.8067	0.8060 ± 0.0057	$D_M(0.51)$	1971.3	1969.6 ± 9.6
$\boldsymbol{A^{dust TT}_{143}}$	10.97	10.9 ± 1.8	S_8	0.8138	0.811 ± 0.011	$H(0.61)$	95.553	95.58 ± 0.21
$\boldsymbol{A^{dust TT}_{143\times217}}$	19.72	18.6 ± 3.2	$\sigma_8\Omega_m^{0.5}$	0.4458	0.4444 ± 0.0058	$D_M(0.61)$	2294.7	2293 ± 10
$\boldsymbol{A^{dust TT}_{217}}$	94.8	93.7 ± 7.3	$\sigma_8\Omega_m^{0.25}$	0.5997	0.5985 ± 0.0055	$H(2.33)$	235.66	235.52 ± 0.62
$\boldsymbol{A^{dust TE}_{100}}$	0.1151	0.114 ± 0.038	$\sigma_8/h^{0.5}$	0.9777	0.9761 ± 0.0080	$D_M(2.33)$	5751.8	5750.7 ± 9.7
$\boldsymbol{A^{dust TE}_{100\times143}}$	0.1343	0.134 ± 0.029	$r_{drag}h$	100.34	100.51 ± 0.82	$f\sigma_8(0.15)$	0.4508	0.4496 ± 0.0054
$\boldsymbol{A^{dust TE}_{100\times217}}$	0.481	0.480 ± 0.086	$\langle d^2\rangle^{1/2}$	2.4201	2.419 ± 0.019	$\sigma_8(0.15)$	0.7461	0.7455 ± 0.0052
$\boldsymbol{A^{dust TE}_{143}}$	0.222	0.222 ± 0.053	z_{re}	7.78	7.82 ± 0.75	$f\sigma_8(0.38)$	0.47046	0.4695 ± 0.0045
$\boldsymbol{A^{dust TE}_{143\times217}}$	0.663	0.660 ± 0.080	$10^9 A_s$	2.1000	2.101 ± 0.031	$\sigma_8(0.38)$	0.66202	0.6616 ± 0.0047
$\boldsymbol{A^{dust TE}_{217}}$	2.072	2.07 ± 0.27	$10^9 A_s e^{-2\tau}$	1.8782	1.876 ± 0.011	$f\sigma_8(0.51)$	0.46980	0.4689 ± 0.0040
$\boldsymbol{c_{100}}$	0.99973	0.99970 ± 0.00061	D_{40}	1223.6	1225 ± 11	$\sigma_8(0.51)$	0.61983	0.6195 ± 0.0044
$\boldsymbol{c_{217}}$	0.99817	0.99818 ± 0.00062	D_{220}	5747.1	5750 ± 39	$f\sigma_8(0.61)$	0.46534	0.4646 ± 0.0037
$\boldsymbol{b^1_{DES}}$	1.505	1.506 ± 0.071	D_{810}	2541.1	2539 ± 13	$\sigma_8(0.61)$	0.58995	0.5897 ± 0.0042
$\boldsymbol{b^2_{DES}}$	1.705	1.705 ± 0.053	D_{1420}	819.42	818.3 ± 4.7	$f\sigma_8(2.33)$	0.29771	0.2976 ± 0.0022
$\boldsymbol{b^3_{DES}}$	1.6943	1.692 ± 0.042	D_{2000}	231.71	231.3 ± 1.6	$\sigma_8(2.33)$	0.30720	0.3072 ± 0.0024
$\boldsymbol{b^4_{DES}}$	2.0547	2.052 ± 0.050	$n_{s,0.002}$	0.96923	0.9687 ± 0.0039	$\chi^2_{lensing}$	8.98	9.45 ± 0.97
$\boldsymbol{b^5_{DES}}$	2.158	2.152 ± 0.075	Y_P	0.245448	0.245449 ± 0.000053	χ^2_{simall}	396.21	397.3 ± 2.0
$\boldsymbol{m^1_{DES}}$	0.0139	0.011 ± 0.023	Y_P^{BBN}	0.246775	0.246775 ± 0.000053	χ^2_{lowl}	22.69	22.84 ± 0.75
$\boldsymbol{m^2_{DES}}$	0.0134	0.012 ± 0.022	10^5D/H	2.5603	2.560 ± 0.025	χ^2_{plik}	2347.1	2362.0 ± 6.0
$\boldsymbol{m^3_{DES}}$	-0.0054	-0.005 ± 0.020	Age/Gyr	13.7717	13.770 ± 0.022	χ^2_{DES}	509.64	518.4 ± 4.9
$\boldsymbol{m^4_{DES}}$	0.0015	0.001 ± 0.020	z_*	1089.608	1089.58 ± 0.23	χ^2_{prior}	4.3	25 ± 7
$\boldsymbol{A_{IA,DES}}$	0.435	$0.47^{+0.15}_{-0.19}$	r_*	144.740	144.79 ± 0.24	χ^2_{CMB}	2774.9	2791.5 ± 6.3

Best-fit $\chi^2_{eff} = 3288.84$; $\bar{\chi}^2_{eff} = 3334.76$; $R - 1 = 0.02120$

χ^2_{eff}: CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.98 simall_100x143_offlike5_EE_Aplanck_B: 396.21 commander_dx12_v3_2_29: 22.68 plik_rd12_HM_v22b_TTTEEE: 2347.07 WL - DES_1YR_final: 509.64

2.259 base_plikHM_TTTEEE_lowl_lowE_DES_post_BAO_lensing

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02251 ± 0.00014	$\boldsymbol{\Delta z^3_{l,DES}}$	0.0035 ± 0.0066	z_{eq}	3362 ± 19
$\boldsymbol{\Omega_c h^2}$	0.11820 ± 0.00085	$\boldsymbol{\Delta z^4_{l,DES}}$	0.0004 ± 0.0091	k_{eq}	0.010263 ± 0.000059
$\boldsymbol{100\theta_{MC}}$	1.04111 ± 0.00030	$\boldsymbol{\Delta z^5_{l,DES}}$	-0.001 ± 0.010	$100\theta_{eq}$	0.8210 ± 0.0037
$\boldsymbol{\tau}$	0.0564 ± 0.0073	$\boldsymbol{\Delta z^1_{s,DES}}$	-0.004 ± 0.014	$100\theta_{s,eq}$	0.4533 ± 0.0019
$\boldsymbol{\ln(10^{10} A_s)}$	3.045 ± 0.014	$\boldsymbol{\Delta z^2_{s,DES}}$	-0.031 ± 0.011	$H(0.15)$	73.38 ± 0.34
$\boldsymbol{n_s}$	0.9687 ± 0.0036	$\boldsymbol{\Delta z^3_{s,DES}}$	0.0034 ± 0.0094	$D_M(0.15)$	636.5 ± 3.3
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0024	$\boldsymbol{\Delta z^4_{s,DES}}$	-0.031 ± 0.018	$H(0.38)$	83.37 ± 0.26
$\boldsymbol{A^{CIB}_{217}}$	47 ± 6	H_0	68.17 ± 0.39	$D_M(0.38)$	1519.7 ± 6.7
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Ω_Λ	0.6958 ± 0.0051	$H(0.51)$	90.02 ± 0.21
$\boldsymbol{A^{tSZ}_{143}}$	$5.6^{+2.2}_{-1.9}$	Ω_m	0.3042 ± 0.0051	$D_M(0.51)$	1969.7 ± 7.9
$\boldsymbol{A^{PS}_{100}}$	258 ± 28	$\Omega_m h^2$	0.14135 ± 0.00081	$H(0.61)$	95.58 ± 0.18
$\boldsymbol{A^{PS}_{143}}$	45 ± 8	$\Omega_m h^3$	0.09636 ± 0.00030	$D_M(0.61)$	2293.0 ± 8.6
$\boldsymbol{A^{PS}_{143\times217}}$	42 ± 9	σ_8	0.8060 ± 0.0056	$H(2.33)$	235.53 ± 0.53
$\boldsymbol{A^{PS}_{217}}$	114.8 ± 9.9	S_8	0.8115 ± 0.0093	$D_M(2.33)$	5750.8 ± 8.7
$\boldsymbol{A^{kSZ}}$	< 4.20	$\sigma_8\Omega_m^{0.5}$	0.4445 ± 0.0051	$f\sigma_8(0.15)$	0.4496 ± 0.0048
$\boldsymbol{A^{dust TT}_{100}}$	8.9 ± 1.8	$\sigma_8\Omega_m^{0.25}$	0.5985 ± 0.0051	$\sigma_8(0.15)$	0.7455 ± 0.0052
$\boldsymbol{A^{dust TT}_{143}}$	10.9 ± 1.8	$\sigma_8/h^{0.5}$	0.9761 ± 0.0076	$f\sigma_8(0.38)$	0.4695 ± 0.0041
$\boldsymbol{A^{dust TT}_{143\times217}}$	18.6 ± 3.2	$r_{drag}h$	100.50 ± 0.67	$\sigma_8(0.38)$	0.6616 ± 0.0046
$\boldsymbol{A^{dust TT}_{217}}$	93.7 ± 7.2	$\langle d^2\rangle^{1/2}$	2.419 ± 0.019	$f\sigma_8(0.51)$	0.4690 ± 0.0038
$\boldsymbol{A^{dust TE}_{100}}$	0.114 ± 0.038	z_{re}	7.82 ± 0.72	$\sigma_8(0.51)$	0.6195 ± 0.0044
$\boldsymbol{A^{dust TE}_{100\times143}}$	0.134 ± 0.029	$10^9 A_s$	2.101 ± 0.030	$f\sigma_8(0.61)$	0.4646 ± 0.0036
$\boldsymbol{A^{dust TE}_{100\times217}}$	0.481 ± 0.086	$10^9 A_s e^{-2\tau}$	1.876 ± 0.010	$\sigma_8(0.61)$	0.5897 ± 0.0042
$\boldsymbol{A^{dust TE}_{143}}$	0.222 ± 0.053	D_{40}	1225 ± 11	$f\sigma_8(2.33)$	0.2976 ± 0.0022
$\boldsymbol{A^{dust TE}_{143\times217}}$	0.661 ± 0.080	D_{220}	5750 ± 39	$\sigma_8(2.33)$	0.3072 ± 0.0023
$\boldsymbol{A^{dust TE}_{217}}$	2.07 ± 0.27	D_{810}	2539 ± 13	f^{143}_{2000}	29.1 ± 2.7
$\boldsymbol{c_{100}}$	0.99969 ± 0.00060	D_{1420}	818.3 ± 4.7	$f^{143\times217}_{2000}$	31.9 ± 1.8
$\boldsymbol{c_{217}}$	0.99818 ± 0.00062	D_{2000}	231.3 ± 1.5	f^{217}_{2000}	106.7 ± 1.8
$\boldsymbol{b^1_{DES}}$	1.506 ± 0.071	$n_{s,0.002}$	0.9687 ± 0.0036	$\chi^2_{lensing}$	9.43 ± 0.93
$\boldsymbol{b^2_{DES}}$	1.704 ± 0.053	Y_P	0.245448 ± 0.000051	χ^2_{simall}	397.2 ± 1.9
$\boldsymbol{b^3_{DES}}$	1.693 ± 0.043	Y_P^{BBN}	0.246774 ± 0.000051	χ^2_{lowl}	22.84 ± 0.72
$\boldsymbol{b^4_{DES}}$	2.052 ± 0.050	10^5D/H	2.560 ± 0.024	χ^2_{plik}	2361.7 ± 5.8
$\boldsymbol{b^5_{DES}}$	2.153 ± 0.075	Age/Gyr	13.770 ± 0.020	χ^2_{6DF}	0.019 ± 0.027
$\boldsymbol{m^1_{DES}}$	0.011 ± 0.023	z_*	1089.59 ± 0.21	χ^2_{MGS}	1.76 ± 0.41
$\boldsymbol{m^2_{DES}}$	0.012 ± 0.022	r_*	144.79 ± 0.21	$\chi^2_{DR12BAO}$	3.79 ± 0.57
$\boldsymbol{m^3_{DES}}$	-0.005 ± 0.019	$100\theta_*$	1.04128 ± 0.00029	χ^2_{DES}	518.4 ± 4.8
$\boldsymbol{m^4_{DES}}$	0.001 ± 0.020	$D_M(z_*)$/Gpc	13.905 ± 0.020	χ^2_{prior}	25 ± 7
$\boldsymbol{A_{IA,DES}}$	$0.47^{+0.15}_{-0.19}$	z_{drag}	1060.13 ± 0.29	χ^2_{CMB}	2791.2 ± 6.1
$\boldsymbol{\alpha_{IA,DES}}$	$-1.2^{+1.6}_{-2.9}$	r_{drag}	147.41 ± 0.22	χ^2_{BAO}	5.57 ± 0.48
$\boldsymbol{\Delta z^1_{l,DES}}$	0.0035 ± 0.0075	k_D	0.14063 ± 0.00028		
$\boldsymbol{\Delta z^2_{l,DES}}$	0.0008 ± 0.0065	$100\theta_D$	0.16065 ± 0.00017		

$\bar{\chi}^2_{eff} = 3339.95$; $R - 1 = 0.02244$

2.260 base_plikHM_TTTEEE_lowl_lowE_DES_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02252 ± 0.00014	$\boldsymbol{A_{217}^{dust TT}}$	93.6 ± 7.2	$z_{\rm drag}$	1060.13 ± 0.30
$\boldsymbol{\Omega_c h^2}$	0.1179 ± 0.0011	$\boldsymbol{A_{100}^{dust TE}}$	0.114 ± 0.038	$r_{\rm drag}$	147.49 ± 0.25
$\boldsymbol{100\theta_{MC}}$	1.04114 ± 0.00031	$\boldsymbol{A_{100\times143}^{dust TE}}$	0.135 ± 0.029	$k_{\rm D}$	0.14056 ± 0.00030
$\boldsymbol{\tau}$	$0.0555^{+0.0053}_{-0.0081}$	$\boldsymbol{A_{100\times217}^{dust TE}}$	0.480 ± 0.085	$100\theta_{\rm D}$	0.16066 ± 0.00017
$\boldsymbol{\ln(10^{10} A_s)}$	$3.041^{+0.012}_{-0.016}$	$\boldsymbol{A_{143}^{dust TE}}$	0.222 ± 0.053	$z_{\rm eq}$	3355 ± 24
$\boldsymbol{n_s}$	0.9696 ± 0.0039	$\boldsymbol{A_{143\times217}^{dust TE}}$	0.662 ± 0.080	$k_{\rm eq}$	0.010239 ± 0.000073
$\boldsymbol{b_{DES}^1}$	1.507 ± 0.072	$\boldsymbol{A_{217}^{dust TE}}$	2.06 ± 0.27	$100\theta_{\rm eq}$	0.8225 ± 0.0046
$\boldsymbol{b_{DES}^2}$	1.708 ± 0.052	$\boldsymbol{c_{100}}$	0.99968 ± 0.00061	$100\theta_{\rm s,eq}$	0.4541 ± 0.0024
$\boldsymbol{b_{DES}^3}$	1.697 ± 0.043	$\boldsymbol{c_{217}}$	0.99819 ± 0.00062	$H(0.15)$	73.50 ± 0.42
$\boldsymbol{b_{DES}^4}$	2.057 ± 0.050	H_0	68.31 ± 0.49	$D_{\rm M}(0.15)$	635.3 ± 4.1
$\boldsymbol{b_{DES}^5}$	2.158 ± 0.075	Ω_Λ	0.6977 ± 0.0063	$H(0.38)$	83.45 ± 0.31
$\boldsymbol{m_{DES}^1}$	0.012 ± 0.023	$\Omega_{\rm m}$	0.3023 ± 0.0063	$D_{\rm M}(0.38)$	1517.4 ± 8.2
$\boldsymbol{m_{DES}^2}$	0.012 ± 0.022	$\Omega_{\rm m} h^2$	0.1410 ± 0.0010	$H(0.51)$	90.08 ± 0.25
$\boldsymbol{m_{DES}^3}$	-0.003 ± 0.020	$\Omega_{\rm m} h^3$	0.09634 ± 0.00030	$D_{\rm M}(0.51)$	1967.1 ± 9.7
$\boldsymbol{m_{DES}^4}$	0.003 ± 0.021	σ_8	$0.8037^{+0.0055}_{-0.0065}$	$H(0.61)$	95.63 ± 0.21
$\boldsymbol{A_{IA,DES}}$	$0.47^{+0.15}_{-0.18}$	S_8	0.807 ± 0.012	$D_{\rm M}(0.61)$	2290 ± 10
$\boldsymbol{\alpha_{IA,DES}}$	$-1.0^{+1.8}_{-2.9}$	$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4419 ± 0.0065	$H(2.33)$	235.32 ± 0.64
$\boldsymbol{\Delta z_{l,DES}^1}$	0.0036 ± 0.0075	$\sigma_8 \Omega_{\rm m}^{0.25}$	0.5959 ± 0.0063	$D_{\rm M}(2.33)$	5749.1 ± 9.7
$\boldsymbol{\Delta z_{l,DES}^2}$	0.0009 ± 0.0066	$\sigma_8/h^{0.5}$	0.9724 ± 0.0090	$f\sigma_8(0.15)$	0.4471 ± 0.0062
$\boldsymbol{\Delta z_{l,DES}^3}$	0.0035 ± 0.0066	$r_{\rm drag} h$	100.76 ± 0.84	$\sigma_8(0.15)$	$0.7436^{+0.0048}_{-0.0059}$
$\boldsymbol{\Delta z_{l,DES}^4}$	0.0006 ± 0.0091	$\langle d^2 \rangle^{1/2}$	2.410 ± 0.022	$f\sigma_8(0.38)$	0.4674 ± 0.0051
$\boldsymbol{\Delta z_{l,DES}^5}$	-0.0007 ± 0.0098	$z_{\rm re}$	$7.72^{+0.57}_{-0.79}$	$\sigma_8(0.38)$	$0.6601^{+0.0041}_{-0.0052}$
$\boldsymbol{\Delta z_{s,DES}^1}$	-0.004 ± 0.014	$10^9 A_{\rm s}$	$2.094^{+0.024}_{-0.033}$	$f\sigma_8(0.51)$	0.4671 ± 0.0046
$\boldsymbol{\Delta z_{s,DES}^2}$	-0.031 ± 0.011	$10^9 A_{\rm s} e^{-2\tau}$	1.873 ± 0.011	$\sigma_8(0.51)$	$0.6182^{+0.0038}_{-0.0049}$
$\boldsymbol{\Delta z_{s,DES}^3}$	0.0041 ± 0.0096	D_{40}	1221 ± 12	$f\sigma_8(0.61)$	0.4629 ± 0.0042
$\boldsymbol{\Delta z_{s,DES}^4}$	-0.029 ± 0.018	D_{220}	5744 ± 39	$\sigma_8(0.61)$	$0.5885^{+0.0036}_{-0.0047}$
$\boldsymbol{y_{cal}}$	1.0004 ± 0.0025	D_{810}	2537 ± 13	$f\sigma_8(2.33)$	$0.2971^{+0.0018}_{-0.0024}$
$\boldsymbol{A_{217}^{CIB}}$	47 ± 7	D_{1420}	817.9 ± 4.7	$\sigma_8(2.33)$	$0.3067^{+0.0019}_{-0.0026}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{2000}	231.2 ± 1.6	f_{2000}^{143}	29.2 ± 2.7
$\boldsymbol{A_{143}^{tSZ}}$	$5.5^{+2.2}_{-1.9}$	$n_{\rm s,0.002}$	0.9696 ± 0.0039	$f_{2000}^{143\times217}$	31.9 ± 1.8
$\boldsymbol{A_{100}^{PS}}$	259 ± 28	$Y_{\rm P}$	0.245451 ± 0.000053	f_{2000}^{217}	106.7 ± 1.8
$\boldsymbol{A_{143}^{PS}}$	45 ± 8	$Y_{\rm P}^{\rm BBN}$	0.246778 ± 0.000053	$\chi^2_{\rm simall}$	396.9 ± 1.7
$\boldsymbol{A_{143\times217}^{PS}}$	41 ± 9	10^5D/H	2.558 ± 0.025	$\chi^2_{\rm lowl}$	22.62 ± 0.76
$\boldsymbol{A_{217}^{PS}}$	114 ± 10	Age/Gyr	13.766 ± 0.022	$\chi^2_{\rm plik}$	2363.1 ± 6.3
$\boldsymbol{A^{kSZ}}$	< 4.38	z_*	1089.55 ± 0.23	$\chi^2_{\rm DES}$	517.9 ± 4.9
$\boldsymbol{A_{100}^{dust TT}}$	8.9 ± 1.8	r_*	144.87 ± 0.25	$\chi^2_{\rm prior}$	25 ± 7
$\boldsymbol{A_{143}^{dust TT}}$	11.0 ± 1.8	$100\theta_*$	1.04131 ± 0.00030	$\chi^2_{\rm CMB}$	2782.6 ± 6.2
$\boldsymbol{A_{143\times217}^{dust TT}}$	18.7 ± 3.2	$D_{\rm M}(z_*)$/Gpc	13.912 ± 0.023		

$\bar{\chi}^2_{\rm eff} = 3325.23$; $R - 1 = 0.01416$

2.261 base_plikHM_TTTEEE_lowl_lowE_DES_post_BAO_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02251 ± 0.00013	$\boldsymbol{\Delta z^2_{l,DES}}$	0.0009 ± 0.0065	k_D	0.14058 ± 0.00029
$\boldsymbol{\Omega_c h^2}$	0.11799 ± 0.00087	$\boldsymbol{\Delta z^3_{l,DES}}$	0.0035 ± 0.0066	$100\theta_D$	0.16066 ± 0.00017
$\boldsymbol{100\theta_{MC}}$	1.04113 ± 0.00029	$\boldsymbol{\Delta z^4_{l,DES}}$	0.0005 ± 0.0091	z_{eq}	3357 ± 20
$\boldsymbol{\tau}$	$0.0552^{+0.0052}_{-0.0079}$	$\boldsymbol{\Delta z^5_{l,DES}}$	-0.0008 ± 0.0099	k_{eq}	0.010247 ± 0.000061
$\boldsymbol{\ln(10^{10} A_s)}$	$3.041^{+0.012}_{-0.016}$	$\boldsymbol{\Delta z^1_{s,DES}}$	-0.004 ± 0.014	$100\theta_{eq}$	0.8220 ± 0.0038
$\boldsymbol{n_s}$	0.9693 ± 0.0036	$\boldsymbol{\Delta z^2_{s,DES}}$	-0.031 ± 0.011	$100\theta_{s,eq}$	0.4538 ± 0.0019
$\boldsymbol{y_{cal}}$	1.0004 ± 0.0025	$\boldsymbol{\Delta z^3_{s,DES}}$	0.0038 ± 0.0095	$H(0.15)$	73.45 ± 0.34
$\boldsymbol{A^{CIB}_{217}}$	47 ± 7	$\boldsymbol{\Delta z^4_{s,DES}}$	-0.030 ± 0.018	$D_M(0.15)$	635.8 ± 3.3
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	H_0	68.25 ± 0.40	$H(0.38)$	83.41 ± 0.26
$\boldsymbol{A^{tSZ}_{143}}$	$5.6^{+2.2}_{-1.9}$	Ω_Λ	0.6970 ± 0.0052	$D_M(0.38)$	1518.3 ± 6.8
$\boldsymbol{A^{PS}_{100}}$	258 ± 28	Ω_m	0.3030 ± 0.0052	$H(0.51)$	90.05 ± 0.21
$\boldsymbol{A^{PS}_{143}}$	45 ± 8	$\Omega_m h^2$	0.14114 ± 0.00084	$D_M(0.51)$	1968.2 ± 8.0
$\boldsymbol{A^{PS}_{143\times217}}$	42 ± 9	$\Omega_m h^3$	0.09633 ± 0.00030	$H(0.61)$	95.60 ± 0.18
$\boldsymbol{A^{PS}_{217}}$	114 ± 10	σ_8	$0.8039^{+0.0054}_{-0.0065}$	$D_M(0.61)$	2291.4 ± 8.6
$\boldsymbol{A^{kSZ}}$	< 4.34	S_8	0.808 ± 0.010	$H(2.33)$	235.39 ± 0.54
$\boldsymbol{A^{dustTT}_{100}}$	8.9 ± 1.8	$\sigma_8\Omega_m^{0.5}$	0.4425 ± 0.0057	$D_M(2.33)$	5750.0 ± 8.6
$\boldsymbol{A^{dustTT}_{143}}$	11.0 ± 1.8	$\sigma_8\Omega_m^{0.25}$	0.5965 ± 0.0057	$f\sigma_8(0.15)$	0.4477 ± 0.0054
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.7 ± 3.2	$\sigma_8/h^{0.5}$	0.9731 ± 0.0083	$\sigma_8(0.15)$	$0.7437^{+0.0048}_{-0.0059}$
$\boldsymbol{A^{dustTT}_{217}}$	93.6 ± 7.2	$r_{drag}h$	100.65 ± 0.68	$f\sigma_8(0.38)$	0.4678 ± 0.0046
$\boldsymbol{A^{dustTE}_{100}}$	0.115 ± 0.038	$\langle d^2\rangle^{1/2}$	2.412 ± 0.020	$\sigma_8(0.38)$	$0.6602^{+0.0041}_{-0.0052}$
$\boldsymbol{A^{dustTE}_{100\times143}}$	0.134 ± 0.029	z_{re}	$7.70^{+0.56}_{-0.78}$	$f\sigma_8(0.51)$	0.4674 ± 0.0042
$\boldsymbol{A^{dustTE}_{100\times217}}$	0.481 ± 0.087	$10^9 A_s$	$2.093^{+0.024}_{-0.033}$	$\sigma_8(0.51)$	$0.6182^{+0.0038}_{-0.0049}$
$\boldsymbol{A^{dustTE}_{143}}$	0.222 ± 0.053	$10^9 A_s e^{-2\tau}$	1.874 ± 0.011	$f\sigma_8(0.61)$	0.4632 ± 0.0039
$\boldsymbol{A^{dustTE}_{143\times217}}$	0.661 ± 0.080	D_{40}	1222 ± 11	$\sigma_8(0.61)$	$0.5885^{+0.0036}_{-0.0047}$
$\boldsymbol{A^{dustTE}_{217}}$	2.07 ± 0.27	D_{220}	5744 ± 39	$f\sigma_8(2.33)$	$0.2971^{+0.0018}_{-0.0024}$
$\boldsymbol{c_{100}}$	0.99968 ± 0.00061	D_{810}	2536 ± 13	$\sigma_8(2.33)$	$0.3066^{+0.0019}_{-0.0025}$
$\boldsymbol{c_{217}}$	0.99817 ± 0.00062	D_{1420}	817.7 ± 4.7	f^{143}_{2000}	29.3 ± 2.7
$\boldsymbol{b^1_{DES}}$	1.508 ± 0.071	D_{2000}	231.1 ± 1.6	$f^{143\times217}_{2000}$	31.9 ± 1.8
$\boldsymbol{b^2_{DES}}$	1.708 ± 0.052	$n_{s,0.002}$	0.9693 ± 0.0036	f^{217}_{2000}	106.8 ± 1.8
$\boldsymbol{b^3_{DES}}$	1.697 ± 0.043	Y_P	0.245448 ± 0.000050	χ^2_{simall}	396.8 ± 1.6
$\boldsymbol{b^4_{DES}}$	2.057 ± 0.050	Y_P^{BBN}	0.246774 ± 0.000050	χ^2_{lowl}	22.66 ± 0.72
$\boldsymbol{b^5_{DES}}$	2.158 ± 0.075	10^5D/H	2.560 ± 0.024	χ^2_{plik}	2362.7 ± 6.0
$\boldsymbol{m^1_{DES}}$	0.012 ± 0.023	Age/Gyr	13.768 ± 0.019	χ^2_{6DF}	0.021 ± 0.029
$\boldsymbol{m^2_{DES}}$	0.013 ± 0.022	z_*	1089.57 ± 0.21	χ^2_{MGS}	1.86 ± 0.43
$\boldsymbol{m^3_{DES}}$	-0.003 ± 0.020	r_*	144.85 ± 0.22	$\chi^2_{DR12BAO}$	3.73 ± 0.51
$\boldsymbol{m^4_{DES}}$	0.002 ± 0.020	$100\theta_*$	1.04130 ± 0.00029	χ^2_{DES}	518.0 ± 4.7
$\boldsymbol{A_{IA,DES}}$	$0.47^{+0.15}_{-0.19}$	$D_M(z_*)$/Gpc	13.910 ± 0.021	χ^2_{prior}	25 ± 7
$\boldsymbol{\alpha_{IA,DES}}$	$-1.0^{+1.7}_{-3.0}$	z_{drag}	1060.12 ± 0.29	χ^2_{BAO}	5.61 ± 0.53
$\boldsymbol{\Delta z^1_{l,DES}}$	0.0036 ± 0.0076	r_{drag}	147.47 ± 0.23	χ^2_{CMB}	2782.1 ± 6.0

$\bar{\chi}^2_{eff} = 3330.54$; $R - 1 = 0.01897$

2.262 base_plikHM_TTTEEE_lowl_lowE_DES_post_lensing_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02252 ± 0.00014	$\boldsymbol{\Delta z^1_{l,DES}}$	0.0036 ± 0.0075	$z_{\rm drag}$	1060.14 ± 0.30
$\boldsymbol{\Omega_c h^2}$	0.1181 ± 0.0010	$\boldsymbol{\Delta z^2_{l,DES}}$	0.0009 ± 0.0065	$r_{\rm drag}$	147.42 ± 0.24
$\boldsymbol{100\theta_{MC}}$	1.04111 ± 0.00031	$\boldsymbol{\Delta z^3_{l,DES}}$	0.0035 ± 0.0066	$k_{\rm D}$	0.14063 ± 0.00029
$\boldsymbol{\tau}$	$0.0572^{+0.0061}_{-0.0079}$	$\boldsymbol{\Delta z^4_{l,DES}}$	0.0004 ± 0.0090	$100\theta_{\rm D}$	0.16065 ± 0.00017
$\boldsymbol{\ln(10^{10} A_s)}$	$3.046^{+0.012}_{-0.015}$	$\boldsymbol{\Delta z^5_{l,DES}}$	-0.0007 ± 0.0099	$z_{\rm eq}$	3361 ± 23
$\boldsymbol{n_s}$	0.9688 ± 0.0039	$\boldsymbol{\Delta z^1_{s,DES}}$	-0.003 ± 0.014	$k_{\rm eq}$	0.010259 ± 0.000070
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0025	$\boldsymbol{\Delta z^2_{s,DES}}$	-0.031 ± 0.011	$100\theta_{\rm eq}$	0.8213 ± 0.0044
$\boldsymbol{A^{CIB}_{217}}$	47 ± 6	$\boldsymbol{\Delta z^3_{s,DES}}$	0.0034 ± 0.0095	$100\theta_{\rm s,eq}$	0.4534 ± 0.0023
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$\boldsymbol{\Delta z^4_{s,DES}}$	-0.031 ± 0.018	$H(0.15)$	73.40 ± 0.41
$\boldsymbol{A^{tSZ}_{143}}$	$5.6^{+2.2}_{-1.9}$	H_0	68.20 ± 0.47	$D_{\rm M}(0.15)$	636.2 ± 4.0
$\boldsymbol{A^{PS}_{100}}$	258 ± 28	Ω_Λ	0.6961 ± 0.0061	$H(0.38)$	83.38 ± 0.30
$\boldsymbol{A^{PS}_{143}}$	45 ± 8	$\Omega_{\rm m}$	0.3039 ± 0.0061	$D_{\rm M}(0.38)$	1519.2 ± 8.0
$\boldsymbol{A^{PS}_{143\times217}}$	42 ± 9	$\Omega_{\rm m}h^2$	0.14130 ± 0.00096	$H(0.51)$	90.03 ± 0.25
$\boldsymbol{A^{PS}_{217}}$	114.8 ± 9.9	$\Omega_{\rm m}h^3$	0.09636 ± 0.00030	$D_{\rm M}(0.51)$	1969.2 ± 9.4
$\boldsymbol{A^{kSZ}}$	< 4.20	σ_8	0.8063 ± 0.0054	$H(0.61)$	95.59 ± 0.20
$\boldsymbol{A^{dust}_{100}}$	8.9 ± 1.8	S_8	0.811 ± 0.011	$D_{\rm M}(0.61)$	2292 ± 10
$\boldsymbol{A^{dust}_{143}}$	10.9 ± 1.8	$\sigma_8\Omega_{\rm m}^{0.5}$	0.4445 ± 0.0058	$H(2.33)$	235.50 ± 0.61
$\boldsymbol{A^{dust}_{143\times217}}$	18.6 ± 3.2	$\sigma_8\Omega_{\rm m}^{0.25}$	0.5986 ± 0.0054	$D_{\rm M}(2.33)$	5750.4 ± 9.6
$\boldsymbol{A^{dust}_{217}}$	93.7 ± 7.2	$\sigma_8/h^{0.5}$	0.9764 ± 0.0078	$f\sigma_8(0.15)$	0.4496 ± 0.0054
$\boldsymbol{A^{dust}_{100}}$	0.114 ± 0.038	$r_{\rm drag}h$	100.54 ± 0.81	$\sigma_8(0.15)$	0.7458 ± 0.0049
$\boldsymbol{A^{dust}_{100\times143}}$	0.134 ± 0.029	$\langle d^2\rangle^{1/2}$	2.420 ± 0.019	$f\sigma_8(0.38)$	0.4696 ± 0.0045
$\boldsymbol{A^{dust}_{100\times217}}$	0.480 ± 0.087	$z_{\rm re}$	$7.89^{+0.64}_{-0.75}$	$\sigma_8(0.38)$	$0.6620^{+0.0041}_{-0.0047}$
$\boldsymbol{A^{dust}_{143}}$	0.222 ± 0.053	$10^9 A_{\rm s}$	$2.103^{+0.026}_{-0.032}$	$f\sigma_8(0.51)$	0.4691 ± 0.0040
$\boldsymbol{A^{dust}_{143\times217}}$	0.660 ± 0.080	$10^9 A_{\rm s}e^{-2\tau}$	1.876 ± 0.011	$\sigma_8(0.51)$	$0.6198^{+0.0039}_{-0.0045}$
$\boldsymbol{A^{dust}_{217}}$	2.07 ± 0.27	D_{40}	1225 ± 11	$f\sigma_8(0.61)$	0.4647 ± 0.0036
$\boldsymbol{c_{100}}$	0.99970 ± 0.00061	D_{220}	5750 ± 39	$\sigma_8(0.61)$	$0.5900^{+0.0037}_{-0.0043}$
$\boldsymbol{c_{217}}$	0.99817 ± 0.00062	D_{810}	2539 ± 13	$f\sigma_8(2.33)$	$0.2978^{+0.0019}_{-0.0023}$
$\boldsymbol{b^1_{DES}}$	1.505 ± 0.071	D_{1420}	818.3 ± 4.7	$\sigma_8(2.33)$	$0.3074^{+0.0020}_{-0.0025}$
$\boldsymbol{b^2_{DES}}$	1.704 ± 0.053	D_{2000}	231.3 ± 1.6	f^{143}_{2000}	29.1 ± 2.7
$\boldsymbol{b^3_{DES}}$	1.692 ± 0.042	$n_{\rm s,0.002}$	0.9688 ± 0.0039	$f^{143\times217}_{2000}$	31.8 ± 1.8
$\boldsymbol{b^4_{DES}}$	2.051 ± 0.050	$Y_{\rm P}$	0.245450 ± 0.000053	f^{217}_{2000}	106.7 ± 1.8
$\boldsymbol{b^5_{DES}}$	2.151 ± 0.075	$Y_{\rm P}^{\rm BBN}$	0.246776 ± 0.000053	$\chi^2_{\rm lensing}$	9.41 ± 0.92
$\boldsymbol{m^1_{DES}}$	0.011 ± 0.023	$10^5{\rm D/H}$	2.559 ± 0.025	$\chi^2_{\rm simall}$	397.3 ± 2.0
$\boldsymbol{m^2_{DES}}$	0.012 ± 0.022	Age/Gyr	13.769 ± 0.022	$\chi^2_{\rm lowl}$	22.84 ± 0.75
$\boldsymbol{m^3_{DES}}$	-0.005 ± 0.020	z_*	1089.58 ± 0.23	$\chi^2_{\rm plik}$	2361.9 ± 6.0
$\boldsymbol{m^4_{DES}}$	0.001 ± 0.020	r_*	144.80 ± 0.24	$\chi^2_{\rm DES}$	518.4 ± 4.9
$\boldsymbol{A_{IA,DES}}$	$0.47^{+0.15}_{-0.19}$	$100\theta_*$	1.04128 ± 0.00030	$\chi^2_{\rm prior}$	25 ± 7
$\boldsymbol{\alpha_{IA,DES}}$	$-1.2^{+1.6}_{-2.9}$	$D_{\rm M}(z_*)/{\rm Gpc}$	13.906 ± 0.022	$\chi^2_{\rm CMB}$	2791.4 ± 6.3

$\bar{\chi}^2_{\rm eff} = 3334.58$; $R - 1 = 0.02314$

2.263 base_plikHM_TTTEEE_lowl_lowE_DES_post_BAO_lensing_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02251 ± 0.00013	$\boldsymbol{\Delta z^3_{l,DES}}$	0.0035 ± 0.0066	z_{eq}	3362 ± 19
$\boldsymbol{\Omega_c h^2}$	0.11817 ± 0.00084	$\boldsymbol{\Delta z^4_{l,DES}}$	0.0004 ± 0.0091	k_{eq}	0.010261 ± 0.000059
$\boldsymbol{100\theta_{MC}}$	1.04111 ± 0.00030	$\boldsymbol{\Delta z^5_{l,DES}}$	-0.0008 ± 0.0099	$100\theta_{eq}$	0.8211 ± 0.0036
$\boldsymbol{\tau}$	$0.0570^{+0.0060}_{-0.0075}$	$\boldsymbol{\Delta z^1_{s,DES}}$	-0.003 ± 0.014	$100\theta_{s,eq}$	0.4534 ± 0.0019
$\boldsymbol{\ln(10^{10} A_s)}$	$3.046^{+0.012}_{-0.015}$	$\boldsymbol{\Delta z^2_{s,DES}}$	-0.031 ± 0.011	$H(0.15)$	73.39 ± 0.34
$\boldsymbol{n_s}$	0.9687 ± 0.0036	$\boldsymbol{\Delta z^3_{s,DES}}$	0.0034 ± 0.0094	$D_M(0.15)$	636.4 ± 3.3
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0024	$\boldsymbol{\Delta z^4_{s,DES}}$	-0.031 ± 0.018	$H(0.38)$	83.38 ± 0.25
$\boldsymbol{A^{CIB}_{217}}$	47 ± 6	H_0	68.18 ± 0.39	$D_M(0.38)$	1519.5 ± 6.6
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Ω_Λ	0.6960 ± 0.0050	$H(0.51)$	90.02 ± 0.21
$\boldsymbol{A^{tSZ}_{143}}$	$5.6^{+2.2}_{-1.9}$	Ω_m	0.3040 ± 0.0050	$D_M(0.51)$	1969.5 ± 7.8
$\boldsymbol{A^{PS}_{100}}$	258 ± 28	$\Omega_m h^2$	0.14133 ± 0.00080	$H(0.61)$	95.59 ± 0.18
$\boldsymbol{A^{PS}_{143}}$	45 ± 8	$\Omega_m h^3$	0.09636 ± 0.00030	$D_M(0.61)$	2292.8 ± 8.5
$\boldsymbol{A^{PS}_{143\times217}}$	42 ± 9	σ_8	0.8063 ± 0.0054	$H(2.33)$	235.52 ± 0.52
$\boldsymbol{A^{PS}_{217}}$	114.8 ± 9.9	S_8	0.8117 ± 0.0092	$D_M(2.33)$	5750.6 ± 8.6
$\boldsymbol{A^{kSZ}}$	< 4.21	$\sigma_8\Omega_m^{0.5}$	0.4446 ± 0.0051	$f\sigma_8(0.15)$	0.4497 ± 0.0048
$\boldsymbol{A^{dust TT}_{100}}$	8.9 ± 1.8	$\sigma_8\Omega_m^{0.25}$	0.5987 ± 0.0050	$\sigma_8(0.15)$	$0.7458^{+0.0047}_{-0.0052}$
$\boldsymbol{A^{dust TT}_{143}}$	10.9 ± 1.8	$\sigma_8/h^{0.5}$	0.9765 ± 0.0074	$f\sigma_8(0.38)$	0.4696 ± 0.0041
$\boldsymbol{A^{dust TT}_{143\times217}}$	18.6 ± 3.2	$r_{drag}h$	100.52 ± 0.66	$\sigma_8(0.38)$	$0.6619^{+0.0041}_{-0.0047}$
$\boldsymbol{A^{dust TT}_{217}}$	93.6 ± 7.2	$\langle d^2\rangle^{1/2}$	2.420 ± 0.018	$f\sigma_8(0.51)$	0.4691 ± 0.0037
$\boldsymbol{A^{dust TE}_{100}}$	0.114 ± 0.038	z_{re}	$7.87^{+0.63}_{-0.73}$	$\sigma_8(0.51)$	$0.6198^{+0.0039}_{-0.0045}$
$\boldsymbol{A^{dust TE}_{100\times143}}$	0.134 ± 0.029	$10^9 A_s$	$2.103^{+0.025}_{-0.031}$	$f\sigma_8(0.61)$	0.4648 ± 0.0035
$\boldsymbol{A^{dust TE}_{100\times217}}$	0.480 ± 0.086	$10^9 A_s e^{-2\tau}$	1.876 ± 0.010	$\sigma_8(0.61)$	$0.5900^{+0.0037}_{-0.0043}$
$\boldsymbol{A^{dust TE}_{143}}$	0.222 ± 0.053	D_{40}	1225 ± 11	$f\sigma_8(2.33)$	$0.2978^{+0.0019}_{-0.0022}$
$\boldsymbol{A^{dust TE}_{143\times217}}$	0.661 ± 0.080	D_{220}	5750 ± 39	$\sigma_8(2.33)$	$0.3073^{+0.0020}_{-0.0024}$
$\boldsymbol{A^{dust TE}_{217}}$	2.06 ± 0.27	D_{810}	2539 ± 13	f^{143}_{2000}	29.1 ± 2.7
$\boldsymbol{c_{100}}$	0.99969 ± 0.00060	D_{1420}	818.3 ± 4.7	$f^{143\times217}_{2000}$	31.8 ± 1.8
$\boldsymbol{c_{217}}$	0.99817 ± 0.00061	D_{2000}	231.3 ± 1.5	f^{217}_{2000}	106.7 ± 1.8
$\boldsymbol{b^1_{DES}}$	1.506 ± 0.071	$n_{s,0.002}$	0.9687 ± 0.0036	$\chi^2_{lensing}$	9.38 ± 0.88
$\boldsymbol{b^2_{DES}}$	1.704 ± 0.053	Y_P	0.245448 ± 0.000050	χ^2_{simall}	397.2 ± 1.9
$\boldsymbol{b^3_{DES}}$	1.692 ± 0.042	Y_P^{BBN}	0.246775 ± 0.000051	χ^2_{lowl}	22.84 ± 0.72
$\boldsymbol{b^4_{DES}}$	2.052 ± 0.050	10^5D/H	2.560 ± 0.024	χ^2_{plik}	2361.6 ± 5.8
$\boldsymbol{b^5_{DES}}$	2.152 ± 0.075	Age/Gyr	13.769 ± 0.020	χ^2_{6DF}	0.018 ± 0.026
$\boldsymbol{m^1_{DES}}$	0.011 ± 0.023	z_*	1089.58 ± 0.21	χ^2_{MGS}	1.77 ± 0.41
$\boldsymbol{m^2_{DES}}$	0.012 ± 0.022	r_*	144.80 ± 0.21	$\chi^2_{DR12BAO}$	3.77 ± 0.55
$\boldsymbol{m^3_{DES}}$	-0.005 ± 0.020	$100\theta_*$	1.04128 ± 0.00029	χ^2_{DES}	518.4 ± 4.8
$\boldsymbol{m^4_{DES}}$	0.001 ± 0.020	$D_M(z_*)$/Gpc	13.906 ± 0.020	χ^2_{prior}	25 ± 7
$\boldsymbol{A_{IA,DES}}$	$0.47^{+0.15}_{-0.19}$	z_{drag}	1060.14 ± 0.29	χ^2_{CMB}	2791.0 ± 6.0
$\boldsymbol{\alpha_{IA,DES}}$	$-1.2^{+1.6}_{-2.9}$	r_{drag}	147.42 ± 0.22	χ^2_{BAO}	5.56 ± 0.47
$\boldsymbol{\Delta z^1_{l,DES}}$	0.0036 ± 0.0075	k_D	0.14063 ± 0.00028		
$\boldsymbol{\Delta z^2_{l,DES}}$	0.0008 ± 0.0065	$100\theta_D$	0.16065 ± 0.00017		

$\bar{\chi}^2_{eff} = 3339.77$; $R - 1 = 0.02472$

2.264 base_plikHM_TTTEEE_lowl_lowE_DESlens

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022440	0.02243 ± 0.00014	$\boldsymbol{\Delta z^3_{s,DES}}$	0.0046	0.004 ± 0.010	z_{eq}	3384.8	3382 ± 25
$\boldsymbol{\Omega_c h^2}$	0.11920	0.1191 ± 0.0011	$\boldsymbol{\Delta z^4_{s,DES}}$	-0.0222	-0.023 ± 0.020	k_{eq}	0.010331	0.010321 ± 0.000077
$\boldsymbol{100\theta_{MC}}$	1.041003	1.04103 ± 0.00030	H_0	67.720	67.77 ± 0.50	$100\theta_{eq}$	0.81668	0.8173 ± 0.0048
$\boldsymbol{\tau}$	0.0535	0.0538 ± 0.0077	Ω_Λ	0.6897	0.6904 ± 0.0067	$100\theta_{s,eq}$	0.45110	0.4514 ± 0.0024
$\boldsymbol{\ln(10^{10} A_s)}$	3.0407	3.041 ± 0.016	Ω_m	0.3103	0.3096 ± 0.0067	$H(0.15)$	72.992	73.04 ± 0.43
$\boldsymbol{n_s}$	0.96824	0.9673 ± 0.0039	$\Omega_m h^2$	0.14229	0.1422 ± 0.0011	$D_M(0.15)$	640.26	639.8 ± 4.3
$\boldsymbol{y_{cal}}$	1.00038	1.0005 ± 0.0024	$\Omega_m h^3$	0.096356	0.09634 ± 0.00029	$H(0.38)$	83.089	83.12 ± 0.32
$\boldsymbol{A^{CIB}_{217}}$	46.0	47 ± 7	σ_8	0.8078	0.8072 ± 0.0065	$D_M(0.38)$	1527.3	1526.4 ± 8.6
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.62	—	S_8	0.8215	0.820 ± 0.013	$H(0.51)$	89.799	89.82 ± 0.25
$\boldsymbol{A^{tSZ}_{143}}$	7.14	$5.5^{+2.2}_{-1.9}$	$\sigma_8 \Omega_m^{0.5}$	0.4500	0.4491 ± 0.0069	$D_M(0.51)$	1978.7	1978 ± 10
$\boldsymbol{A^{PS}_{100}}$	248.5	258 ± 28	$\sigma_8 \Omega_m^{0.25}$	0.6029	0.6021 ± 0.0066	$H(0.61)$	95.413	95.43 ± 0.21
$\boldsymbol{A^{PS}_{143}}$	49.6	45 ± 8	$\sigma_8 / h^{0.5}$	0.9817	0.9806 ± 0.0095	$D_M(0.61)$	2302.6	2302 ± 11
$\boldsymbol{A^{PS}_{143\times217}}$	52.0	42 ± 9	$r_{drag} h$	99.70	99.81 ± 0.87	$H(2.33)$	236.11	236.02 ± 0.67
$\boldsymbol{A^{PS}_{217}}$	121.4	115 ± 10	$\langle d^2 \rangle^{1/2}$	2.4260	2.427 ± 0.023	$D_M(2.33)$	5757.7	5757.2 ± 9.6
$\boldsymbol{A^{kSZ}}$	0.01	< 4.24	z_{re}	7.57	7.58 ± 0.78	$f\sigma_8(0.15)$	0.4546	0.4538 ± 0.0064
$\boldsymbol{A^{dust TT}_{100}}$	8.84	8.9 ± 1.8	$10^9 A_s$	2.0920	2.093 ± 0.032	$\sigma_8(0.15)$	0.7466	0.7461 ± 0.0059
$\boldsymbol{A^{dust TT}_{143}}$	11.06	10.9 ± 1.8	$10^9 A_s e^{-2\tau}$	1.8799	1.879 ± 0.011	$f\sigma_8(0.38)$	0.4732	0.4725 ± 0.0054
$\boldsymbol{A^{dust TT}_{143\times217}}$	20.12	18.7 ± 3.3	D_{40}	1223.4	1226 ± 12	$\sigma_8(0.38)$	0.6619	0.6616 ± 0.0052
$\boldsymbol{A^{dust TT}_{217}}$	95.4	93.9 ± 7.4	D_{220}	5731.7	5736 ± 38	$f\sigma_8(0.51)$	0.47196	0.4714 ± 0.0048
$\boldsymbol{A^{dust TE}_{100}}$	0.1130	0.114 ± 0.038	D_{810}	2540.0	2538 ± 13	$\sigma_8(0.51)$	0.61953	0.6192 ± 0.0048
$\boldsymbol{A^{dust TE}_{100\times143}}$	0.1341	0.135 ± 0.030	D_{1420}	818.81	817.7 ± 4.7	$f\sigma_8(0.61)$	0.46710	0.4666 ± 0.0044
$\boldsymbol{A^{dust TE}_{100\times217}}$	0.479	0.480 ± 0.085	D_{2000}	231.47	231.1 ± 1.5	$\sigma_8(0.61)$	0.58953	0.5893 ± 0.0046
$\boldsymbol{A^{dust TE}_{143}}$	0.224	0.224 ± 0.054	$n_{s,0.002}$	0.96824	0.9673 ± 0.0039	$f\sigma_8(2.33)$	0.29729	0.2972 ± 0.0024
$\boldsymbol{A^{dust TE}_{143\times217}}$	0.663	0.664 ± 0.080	Y_P	0.245423	$0.245419^{+0.000056}_{-0.000049}$	$\sigma_8(2.33)$	0.30655	0.3065 ± 0.0025
$\boldsymbol{A^{dust TE}_{217}}$	2.079	2.08 ± 0.26	Y_P^{BBN}	0.246749	$0.246745^{+0.000056}_{-0.000049}$	f^{143}_{2000}	28.42	29.3 ± 2.7
$\boldsymbol{c_{100}}$	0.99974	0.99967 ± 0.00061	10^5D/H	2.5726	2.574 ± 0.025	$f^{143\times217}_{2000}$	31.77	32.0 ± 1.8
$\boldsymbol{c_{217}}$	0.99818	0.99820 ± 0.00061	Age/Gyr	13.7846	13.784 ± 0.022	f^{217}_{2000}	106.33	106.8 ± 1.8
$\boldsymbol{m^1_{DES}}$	0.0153	0.014 ± 0.023	z_*	1089.761	1089.76 ± 0.24	χ^2_{simall}	395.88	396.9 ± 1.6
$\boldsymbol{m^2_{DES}}$	0.0125	0.012 ± 0.022	r_*	144.585	144.62 ± 0.25	χ^2_{lowl}	22.77	23.00 ± 0.81
$\boldsymbol{m^3_{DES}}$	-0.0075	-0.009 ± 0.020	$100\theta_*$	1.041181	1.04121 ± 0.00030	χ^2_{plik}	2346.2	2360.5 ± 5.9
$\boldsymbol{m^4_{DES}}$	0.0120	0.011 ± 0.021	$D_M(z_*)$/Gpc	13.8866	13.890 ± 0.024	χ^2_{DES}	229.17	232.0 ± 2.5
$\boldsymbol{A_{IA,DES}}$	1.46	1.25 ± 0.50	z_{drag}	1060.047	1060.02 ± 0.29	χ^2_{prior}	2.7	19.6 ± 5.9
$\boldsymbol{\alpha_{IA,DES}}$	2.49	$1.9^{+2.7}_{-1.1}$	r_{drag}	147.225	147.27 ± 0.26	χ^2_{CMB}	2764.8	2780.5 ± 5.9
$\boldsymbol{\Delta z^1_{s,DES}}$	0.0049	0.005 ± 0.014	k_D	0.140778	0.14073 ± 0.00030			
$\boldsymbol{\Delta z^2_{s,DES}}$	-0.0205	-0.021 ± 0.012	$100\theta_D$	0.160701	0.16072 ± 0.00017			

Best-fit $\chi^2_{eff} = 2996.66$; $\bar{\chi}^2_{eff} = 3032.05$; $R - 1 = 0.01734$

χ^2_{eff}: CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.88 commander_dx12_v3_2_29: 22.77 plik_rd12_HM_v22b_TTTEEE: 2346.15 WL - DES_1YR_final: 229.17

2.265 base_plikHM_TTTEEE_lowl_lowE_DESlens_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02244 ± 0.00014	$\boldsymbol{\Delta z^3_{s,DES}}$	0.004 ± 0.010	z_{eq}	3380 ± 25
$\boldsymbol{\Omega_c h^2}$	0.1190 ± 0.0011	$\boldsymbol{\Delta z^4_{s,DES}}$	-0.023 ± 0.020	k_{eq}	0.010317 ± 0.000076
$\boldsymbol{100\theta_{MC}}$	1.04104 ± 0.00030	H_0	67.80 ± 0.50	$100\theta_{eq}$	0.8175 ± 0.0047
$\boldsymbol{\tau}$	$0.0551^{+0.0053}_{-0.0082}$	Ω_Λ	0.6908 ± 0.0067	$100\theta_{s,eq}$	0.4515 ± 0.0024
$\boldsymbol{\ln(10^{10} A_s)}$	$3.043^{+0.012}_{-0.015}$	Ω_m	0.3092 ± 0.0067	$H(0.15)$	73.06 ± 0.43
$\boldsymbol{n_s}$	0.9675 ± 0.0039	$\Omega_m h^2$	0.1421 ± 0.0010	$D_M(0.15)$	639.6 ± 4.2
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0024	$\Omega_m h^3$	0.09634 ± 0.00029	$H(0.38)$	83.14 ± 0.31
$\boldsymbol{A^{CIB}_{217}}$	47 ± 7	σ_8	0.8080 ± 0.0060	$D_M(0.38)$	1526.0 ± 8.4
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	S_8	0.820 ± 0.013	$H(0.51)$	89.83 ± 0.25
$\boldsymbol{A^{tSZ}_{143}}$	$5.5^{+2.2}_{-1.9}$	$\sigma_8\Omega_m^{0.5}$	0.4493 ± 0.0068	$D_M(0.51)$	1977.2 ± 9.9
$\boldsymbol{A^{PS}_{100}}$	258 ± 28	$\sigma_8\Omega_m^{0.25}$	0.6025 ± 0.0065	$H(0.61)$	95.44 ± 0.21
$\boldsymbol{A^{PS}_{143}}$	45 ± 8	$\sigma_8/h^{0.5}$	0.9813 ± 0.0092	$D_M(0.61)$	2301 ± 11
$\boldsymbol{A^{PS}_{143\times217}}$	42 ± 9	$r_{drag}h$	99.85 ± 0.86	$H(2.33)$	235.99 ± 0.66
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	$\langle d^2\rangle^{1/2}$	2.429 ± 0.022	$D_M(2.33)$	5756.8 ± 9.5
$\boldsymbol{A^{kSZ}}$	< 4.22	z_{re}	$7.71^{+0.58}_{-0.79}$	$f\sigma_8(0.15)$	0.4541 ± 0.0064
$\boldsymbol{A^{dustTT}_{100}}$	9.0 ± 1.8	$10^9 A_s$	$2.097^{+0.025}_{-0.032}$	$\sigma_8(0.15)$	0.7469 ± 0.0054
$\boldsymbol{A^{dustTT}_{143}}$	10.9 ± 1.8	$10^9 A_s e^{-2\tau}$	1.879 ± 0.011	$f\sigma_8(0.38)$	0.4728 ± 0.0053
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.7 ± 3.3	D_{40}	1226 ± 12	$\sigma_8(0.38)$	$0.6623^{+0.0043}_{-0.0050}$
$\boldsymbol{A^{dustTT}_{217}}$	93.9 ± 7.3	D_{220}	5736 ± 38	$f\sigma_8(0.51)$	0.4717 ± 0.0047
$\boldsymbol{A^{dustTE}_{100}}$	0.114 ± 0.038	D_{810}	2538 ± 13	$\sigma_8(0.51)$	$0.6199^{+0.0040}_{-0.0047}$
$\boldsymbol{A^{dustTE}_{100\times143}}$	0.135 ± 0.030	D_{1420}	817.8 ± 4.6	$f\sigma_8(0.61)$	0.4669 ± 0.0043
$\boldsymbol{A^{dustTE}_{100\times217}}$	0.480 ± 0.085	D_{2000}	231.1 ± 1.5	$\sigma_8(0.61)$	$0.5899^{+0.0038}_{-0.0045}$
$\boldsymbol{A^{dustTE}_{143}}$	0.224 ± 0.054	$n_{s,0.002}$	0.9675 ± 0.0039	$f\sigma_8(2.33)$	$0.2975^{+0.0019}_{-0.0023}$
$\boldsymbol{A^{dustTE}_{143\times217}}$	0.663 ± 0.080	Y_P	$0.245420^{+0.000055}_{-0.000048}$	$\sigma_8(2.33)$	$0.3069^{+0.0020}_{-0.0025}$
$\boldsymbol{A^{dustTE}_{217}}$	2.07 ± 0.26	Y_P^{BBN}	$0.246747^{+0.000055}_{-0.000049}$	f^{143}_{2000}	29.3 ± 2.7
$\boldsymbol{c_{100}}$	0.99967 ± 0.00061	10^5D/H	2.573 ± 0.025	$f^{143\times217}_{2000}$	32.0 ± 1.8
$\boldsymbol{c_{217}}$	0.99820 ± 0.00061	Age/Gyr	13.783 ± 0.021	f^{217}_{2000}	106.8 ± 1.8
$\boldsymbol{m^1_{DES}}$	0.014 ± 0.023	z_*	1089.75 ± 0.23	χ^2_{simall}	396.9 ± 1.6
$\boldsymbol{m^2_{DES}}$	0.012 ± 0.022	r_*	144.63 ± 0.25	χ^2_{lowl}	23.00 ± 0.81
$\boldsymbol{m^3_{DES}}$	-0.009 ± 0.020	$100\theta_*$	1.04122 ± 0.00029	χ^2_{plik}	2360.3 ± 5.9
$\boldsymbol{m^4_{DES}}$	0.011 ± 0.021	$D_M(z_*)$/Gpc	13.891 ± 0.024	χ^2_{DES}	232.1 ± 2.6
$\boldsymbol{A_{IA,DES}}$	1.26 ± 0.50	z_{drag}	1060.02 ± 0.29	χ^2_{prior}	19.6 ± 5.9
$\boldsymbol{\alpha_{IA,DES}}$	$1.9^{+2.7}_{-1.1}$	r_{drag}	147.28 ± 0.26	χ^2_{CMB}	2780.2 ± 5.8
$\boldsymbol{\Delta z^1_{s,DES}}$	0.005 ± 0.014	k_D	0.14072 ± 0.00030		
$\boldsymbol{\Delta z^2_{s,DES}}$	-0.021 ± 0.012	$100\theta_D$	0.16071 ± 0.00017		

$\bar{\chi}^2_{eff} = 3031.82$; $R - 1 = 0.01885$

2.266 base_BAO_Cooke17

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02225 ± 0.00050	r_*	129.8 ± 8.3	$D_M(0.38)$	1378 ± 81
$\boldsymbol{\Omega_c h^2}$	$0.194^{+0.036}_{-0.056}$	$100\theta_*$	$1.112^{+0.039}_{-0.036}$	$H(0.51)$	$103.3^{+6.9}_{-9.0}$
$\boldsymbol{100\theta_{MC}}$	$1.112^{+0.039}_{-0.035}$	$D_M(z_*)$/Gpc	$11.7^{+1.1}_{-1.2}$	$D_M(0.51)$	1774 ± 110
H_0	$73.7^{+3.0}_{-3.9}$	z_{drag}	$1064.2^{+2.8}_{-3.3}$	$H(0.61)$	$110.6^{+7.8}_{-10}$
Ω_Λ	$0.607^{+0.054}_{-0.048}$	r_{drag}	132.2 ± 8.5	$D_M(0.61)$	2057 ± 130
Ω_m	$0.393^{+0.048}_{-0.054}$	k_D	$0.1583^{+0.0096}_{-0.012}$	$H(2.33)$	287^{+27}_{-34}
$\Omega_m h^2$	$0.217^{+0.036}_{-0.056}$	$100\theta_D$	0.1707 ± 0.0053	$D_M(2.33)$	4980 ± 410
$\Omega_m h^3$	$0.161^{+0.029}_{-0.051}$	z_{eq}	5159^{+900}_{-1000}	$\chi^2_{Cooke17}$	1.0 ± 1.4
$r_{drag}h$	97.2 ± 2.1	k_{eq}	$0.0157^{+0.0026}_{-0.0041}$	χ^2_{6DF}	0.42 ± 0.42
Y_P	0.24533 ± 0.00021	$100\theta_{eq}$	$0.659^{+0.071}_{-0.091}$	χ^2_{MGS}	0.70 ± 0.65
Y_P^{BBN}	0.24666 ± 0.00021	$100\theta_{s,eq}$	$0.369^{+0.038}_{-0.048}$	$\chi^2_{DR12BAO}$	3.8 ± 1.7
10^5D/H	2.611 ± 0.094	$H(0.15)$	$80.9^{+4.0}_{-5.3}$	χ^2_{BAO}	5.0 ± 1.9
Age/Gyr	11.91 ± 0.99	$D_M(0.15)$	584 ± 30		
z_*	$1095.7^{+3.0}_{-3.7}$	$H(0.38)$	$94.5^{+5.8}_{-7.6}$		

$\bar{\chi}^2_{eff} = 5.96$; $R - 1 = 0.00985$

2.267 base_BAO_Cooke17_Pantheon

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	$0.02225^{+0.00047}_{-0.00052}$	r_*	143.0 ± 3.8	$D_M(0.38)$	1501 ± 41
$\boldsymbol{\Omega_c h^2}$	$0.127^{+0.014}_{-0.016}$	$100\theta_*$	1.051 ± 0.019	$H(0.51)$	$91.6^{+3.0}_{-3.3}$
$\boldsymbol{100\theta_{MC}}$	1.051 ± 0.019	$D_M(z_*)$/Gpc	13.62 ± 0.61	$D_M(0.51)$	1944 ± 56
H_0	$68.9^{+1.5}_{-1.7}$	z_{drag}	1060.1 ± 1.6	$H(0.61)$	$97.4^{+3.3}_{-3.7}$
Ω_Λ	0.686 ± 0.020	r_{drag}	145.7 ± 3.9	$D_M(0.61)$	2262 ± 67
Ω_m	0.314 ± 0.020	k_D	$0.1423^{+0.0040}_{-0.0045}$	$H(2.33)$	242 ± 12
$\Omega_m h^2$	$0.149^{+0.014}_{-0.017}$	$100\theta_D$	0.1624 ± 0.0027	$D_M(2.33)$	5649 ± 210
$\Omega_m h^3$	$0.103^{+0.011}_{-0.014}$	z_{eq}	3555^{+330}_{-390}	$\chi^2_{Cooke17}$	0.98 ± 1.3
$r_{drag}h$	100.3 ± 1.2	k_{eq}	$0.01085^{+0.00099}_{-0.0012}$	χ^2_{JLA}	1037.3 ± 1.6
Y_P	0.24534 ± 0.00021	$100\theta_{eq}$	0.799 ± 0.046	χ^2_{6DF}	0.051 ± 0.071
Y_P^{BBN}	0.24666 ± 0.00021	$100\theta_{s,eq}$	0.442 ± 0.024	χ^2_{MGS}	1.77 ± 0.66
10^5D/H	2.611 ± 0.093	$H(0.15)$	$74.3^{+1.9}_{-2.1}$	$\chi^2_{DR12BAO}$	4.0 ± 1.6
Age/Gyr	13.52 ± 0.52	$D_M(0.15)$	629 ± 16	χ^2_{BAO}	5.8 ± 1.8
z_*	1090.6 ± 1.4	$H(0.38)$	$84.7^{+2.5}_{-2.8}$		

$\bar{\chi}^2_{eff} = 1044.02$; $R - 1 = 0.00494$

2.268 base_BAO_Cooke17_JLA

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02227 ± 0.00050	z_*	$1091.4^{+1.7}_{-1.9}$	$D_M(0.38)$	1481 ± 50
$\boldsymbol{\Omega_c h^2}$	$0.136^{+0.018}_{-0.024}$	r_*	140.8 ± 4.9	$H(0.51)$	$93.4^{+3.7}_{-4.5}$
$\boldsymbol{100\theta_{MC}}$	1.062 ± 0.024	$100\theta_*$	1.062 ± 0.024	$D_M(0.51)$	1916 ± 68
$\boldsymbol{\alpha_{JLA}}$	0.1410 ± 0.0066	$D_M(z_*)$/Gpc	13.28 ± 0.76	$H(0.61)$	$99.4^{+4.2}_{-5.1}$
$\boldsymbol{\beta_{JLA}}$	3.097 ± 0.081	z_{drag}	1060.8 ± 1.9	$D_M(0.61)$	2228 ± 82
H_0	$69.6^{+1.8}_{-2.2}$	r_{drag}	143.5 ± 5.0	$H(2.33)$	249^{+14}_{-17}
Ω_Λ	$0.673^{+0.028}_{-0.026}$	k_D	$0.1448^{+0.0052}_{-0.0061}$	$D_M(2.33)$	5535 ± 260
Ω_m	$0.327^{+0.026}_{-0.028}$	$100\theta_D$	0.1638 ± 0.0032	$\chi^2_{Cooke17}$	1.0 ± 1.4
$\Omega_m h^2$	$0.159^{+0.018}_{-0.024}$	z_{eq}	3784^{+400}_{-600}	χ^2_{JLA}	698.5 ± 2.7
$\Omega_m h^3$	$0.111^{+0.014}_{-0.020}$	k_{eq}	$0.0115^{+0.0013}_{-0.0017}$	χ^2_{6DF}	0.08 ± 0.11
$r_{drag}h$	99.8 ± 1.4	$100\theta_{eq}$	$0.774^{+0.054}_{-0.061}$	χ^2_{MGS}	1.54 ± 0.71
Y_P	$0.24534^{+0.00023}_{-0.00020}$	$100\theta_{s,eq}$	$0.429^{+0.028}_{-0.032}$	$\chi^2_{DR12BAO}$	3.7 ± 1.5
Y_P^{BBN}	$0.24667^{+0.00023}_{-0.00020}$	$H(0.15)$	$75.3^{+2.3}_{-2.7}$	χ^2_{BAO}	5.3 ± 1.8
10^5D/H	2.608 ± 0.094	$D_M(0.15)$	622 ± 19		
Age/Gyr	13.25 ± 0.64	$H(0.38)$	$86.2^{+3.1}_{-3.8}$		

$\bar{\chi}^2_{eff} = 704.85$; $R - 1 = 0.01324$

2.269 base_BAO_Cooke17_Pantheon_theta

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02224 ± 0.00049	r_*	145.10 ± 0.60	$D_M(0.38)$	1523 ± 11
$\boldsymbol{\Omega_c h^2}$	0.1178 ± 0.0016	$100\theta_*$	1.04112 ± 0.00060	$H(0.51)$	89.81 ± 0.41
$\boldsymbol{100\theta_{MC}}$	1.04091 ± 0.00060	$D_M(z_*)$/Gpc	13.937 ± 0.059	$D_M(0.51)$	1974 ± 13
H_0	68.02 ± 0.63	z_{drag}	1059.5 ± 1.2	$H(0.61)$	95.36 ± 0.39
Ω_Λ	0.6958 ± 0.0082	r_{drag}	147.83 ± 0.74	$D_M(0.61)$	2298^{+15}_{-14}
Ω_m	0.3042 ± 0.0082	k_D	0.1400 ± 0.0011	$H(2.33)$	235.0 ± 1.2
$\Omega_m h^2$	0.1407 ± 0.0017	$100\theta_D$	0.16103 ± 0.00070	$D_M(2.33)$	5764 ± 22
$\Omega_m h^3$	0.0957 ± 0.0010	z_{eq}	3347 ± 41	$\chi^2_{Cooke17}$	0.97 ± 1.4
$r_{drag}h$	100.6 ± 1.1	k_{eq}	0.01021 ± 0.00013	χ^2_{JLA}	1036.19 ± 0.28
Y_P	$0.24533^{+0.00022}_{-0.00019}$	$100\theta_{eq}$	0.8230 ± 0.0070	χ^2_{6DF}	0.049 ± 0.069
Y_P^{BBN}	$0.24666^{+0.00022}_{-0.00019}$	$100\theta_{s,eq}$	0.4546 ± 0.0038	χ^2_{MGS}	1.82 ± 0.67
10^5D/H	2.614 ± 0.092	$H(0.15)$	73.22 ± 0.56	$\chi^2_{DR12BAO}$	4.2 ± 1.2
Age/Gyr	13.801 ± 0.051	$D_M(0.15)$	637.9 ± 5.4	χ^2_{prior}	1.0 ± 1.5
z_*	1089.91 ± 0.62	$H(0.38)$	$83.18^{+0.42}_{-0.48}$	χ^2_{BAO}	6.1 ± 1.2

$\bar{\chi}^2_{eff} = 1044.23$; $R - 1 = 0.00418$

2.270 base_BAO_Cooke17_theta

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	$0.02224^{+0.00047}_{-0.00053}$	r_*	145.04 ± 0.63	$D_M(0.38)$	1524 ± 12
$\boldsymbol{\Omega_c h^2}$	0.1180 ± 0.0017	$100\theta_*$	1.04111 ± 0.00059	$H(0.51)$	89.79 ± 0.42
$\boldsymbol{100\theta_{MC}}$	1.04091 ± 0.00059	$D_M(z_*)$/Gpc	13.932 ± 0.062	$D_M(0.51)$	1976 ± 14
H_0	67.95 ± 0.67	z_{drag}	1059.5 ± 1.2	$H(0.61)$	95.35 ± 0.40
Ω_Λ	0.6946 ± 0.0089	r_{drag}	147.77 ± 0.78	$D_M(0.61)$	2300 ± 15
Ω_m	0.3054 ± 0.0089	k_D	0.1401 ± 0.0011	$H(2.33)$	235.1 ± 1.3
$\Omega_m h^2$	0.1409 ± 0.0019	$100\theta_D$	0.16102 ± 0.00072	$D_M(2.33)$	5764 ± 22
$\Omega_m h^3$	$0.0957^{+0.0010}_{-0.0011}$	z_{eq}	3352 ± 44	$\chi^2_{Cooke17}$	1.0 ± 1.5
$r_{drag}h$	100.4 ± 1.2	k_{eq}	0.01023 ± 0.00014	χ^2_{6DF}	0.057 ± 0.079
Y_P	0.24533 ± 0.00022	$100\theta_{eq}$	0.8221 ± 0.0076	χ^2_{MGS}	1.74 ± 0.70
Y_P^{BBN}	0.24666 ± 0.00022	$100\theta_{s,eq}$	0.4541 ± 0.0040	$\chi^2_{DR12BAO}$	4.4 ± 1.5
10^5D/H	2.613 ± 0.095	$H(0.15)$	73.16 ± 0.59	χ^2_{prior}	0.97 ± 1.3
Age/Gyr	$13.802^{+0.055}_{-0.050}$	$D_M(0.15)$	638.5 ± 5.7	χ^2_{BAO}	6.2 ± 1.4
z_*	1089.92 ± 0.64	$H(0.38)$	83.14 ± 0.47		

$\bar{\chi}^2_{eff} = 8.20$; $R - 1 = 0.00680$

3 Alens

3.1 base_Alens_plikHM_TT_lowl_lowE

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022700	0.02260 ± 0.00029	$\sigma_8\Omega_m^{0.5}$	0.4291	0.432 ± 0.016	$100\theta_{s,eq}$	0.4579	0.4569 ± 0.0055
$\boldsymbol{\Omega_c h^2}$	0.11613	0.1166 ± 0.0025	$\sigma_8\Omega_m^{0.25}$	0.5840	0.586 ± 0.015	$H(0.15)$	74.25	74.0 ± 1.0
$\boldsymbol{100\theta_{MC}}$	1.04143	1.04139 ± 0.00053	$\sigma_8/h^{0.5}$	0.9556	0.958 ± 0.020	$D_M(0.15)$	628.1	630.4 ± 9.8
$\boldsymbol{\tau}$	0.0519	$0.0500^{+0.0087}_{-0.0074}$	$r_{drag}h$	102.21	101.8 ± 2.0	$H(0.38)$	84.01	$83.84^{+0.72}_{-0.80}$
$\boldsymbol{A_L}$	1.263	1.243 ± 0.096	$\langle d^2\rangle^{1/2}$	2.656	2.640 ± 0.077	$D_M(0.38)$	1502.8	1507 ± 20
$\boldsymbol{\ln(10^{10}A_s)}$	3.0300	$3.027^{+0.018}_{-0.016}$	z_{re}	7.30	$7.11^{+0.93}_{-0.71}$	$H(0.51)$	90.52	$90.39^{+0.57}_{-0.65}$
$\boldsymbol{n_s}$	0.9769	0.9741 ± 0.0071	$10^9 A_s$	2.0697	$2.064^{+0.038}_{-0.033}$	$D_M(0.51)$	1949.9	1955 ± 23
$\boldsymbol{y_{cal}}$	0.99986	1.0000 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.8656	1.867 ± 0.014	$H(0.61)$	95.99	$95.88^{+0.46}_{-0.54}$
$\boldsymbol{A_{217}^{CIB}}$	42.5	45 ± 7	D_{40}	1203.3	1209 ± 17	$D_M(0.61)$	2271.5	2277 ± 25
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.999	> 0.417	D_{220}	5737.0	5736 ± 42	$H(2.33)$	234.39	234.6 ± 1.4
$\boldsymbol{A_{143}^{tSZ}}$	6.83	$5.6^{+2.1}_{-1.8}$	D_{810}	2527.7	2527 ± 14	$D_M(2.33)$	5733.4	5739^{+23}_{-21}
$\boldsymbol{A_{100}^{PS}}$	238.2	250 ± 30	D_{1420}	815.8	814.3 ± 5.1	$f\sigma_8(0.15)$	0.4351	0.437 ± 0.015
$\boldsymbol{A_{143}^{PS}}$	48.5	42 ± 8	D_{2000}	233.15	232.3 ± 2.0	$\sigma_8(0.15)$	0.7364	$0.7361^{+0.0096}_{-0.0086}$
$\boldsymbol{A_{143\times217}^{PS}}$	56.6	41 ± 9	$n_{s,0.002}$	0.9769	0.9741 ± 0.0071	$f\sigma_8(0.38)$	0.4575	0.459 ± 0.012
$\boldsymbol{A_{217}^{PS}}$	123.0	115 ± 10	Y_P	0.245516	$0.24549^{+0.00010}_{-0.00012}$	$\sigma_8(0.38)$	0.6550	$0.6543^{+0.0075}_{-0.0066}$
$\boldsymbol{A^{kSZ}}$	0.00	< 3.28	Y_P^{BBN}	0.246843	$0.24681^{+0.00010}_{-0.00012}$	$f\sigma_8(0.51)$	0.4584	0.459 ± 0.011
$\boldsymbol{A_{100}^{dust TT}}$	8.91	8.9 ± 1.8	10^5D/H	2.527	2.544 ± 0.052	$\sigma_8(0.51)$	0.6139	$0.6131^{+0.0067}_{-0.0058}$
$\boldsymbol{A_{143}^{dust TT}}$	10.60	10.5 ± 1.8	Age/Gyr	13.7323	$13.745^{+0.051}_{-0.046}$	$f\sigma_8(0.61)$	0.4552	0.4559 ± 0.0094
$\boldsymbol{A_{143\times217}^{dust TT}}$	19.58	17.9 ± 3.3	z_*	1089.18	1089.34 ± 0.52	$\sigma_8(0.61)$	0.5847	$0.5838^{+0.0062}_{-0.0053}$
$\boldsymbol{A_{217}^{dust TT}}$	95.6	93.6 ± 7.3	r_*	145.19	145.13 ± 0.52	$f\sigma_8(2.33)$	0.29562	$0.2951^{+0.0029}_{-0.0025}$
$\boldsymbol{c_{100}}$	0.99973	0.99962 ± 0.00062	$100\theta_*$	1.04157	1.04156 ± 0.00051	$\sigma_8(2.33)$	0.30570	$0.3050^{+0.0029}_{-0.0025}$
$\boldsymbol{c_{217}}$	0.99813	0.99817 ± 0.00063	$D_M(z_*)$/Gpc	13.9391	13.934 ± 0.048	f_{2000}^{143}	25.13	27 ± 3
H_0	69.18	68.9 ± 1.2	z_{drag}	1060.43	1060.23 ± 0.56	$f_{2000}^{143\times217}$	29.23	30.0 ± 2.4
Ω_Λ	0.7085	0.705 ± 0.015	r_{drag}	147.75	147.73 ± 0.50	f_{2000}^{217}	103.90	105.0 ± 2.2
Ω_m	0.2915	0.295 ± 0.015	k_D	0.14041	0.14037 ± 0.00052	χ^2_{simall}	395.66	396.8 ± 1.6
$\Omega_m h^2$	0.13947	0.1399 ± 0.0023	$100\theta_D$	0.160513	0.16063 ± 0.00030	χ^2_{lowl}	21.34	21.8 ± 1.1
$\Omega_m h^3$	0.09648	0.09638 ± 0.00050	z_{eq}	3318	3328 ± 55	χ^2_{plik}	752.9	767.3 ± 5.6
σ_8	0.7948	0.795 ± 0.011	k_{eq}	0.010126	0.01016 ± 0.00017	χ^2_{prior}	0.97	7.1 ± 3.5
S_8	0.7834	0.788 ± 0.029	$100\theta_{eq}$	0.8301	0.828 ± 0.011	χ^2_{CMB}	1169.9	1186.0 ± 5.8

Best-fit $\chi^2_{eff} = 1170.89$; $\Delta\chi^2_{eff} = -8.69$; $\bar{\chi}^2_{eff} = 1193.04$; $\Delta\bar{\chi}^2_{eff} = -6.54$; $R - 1 = 0.00760$

χ^2_{eff}: CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.66 (Δ -0.21) commander_dx12_v3_2_29: 21.34 (Δ -2.26) plik_rd12_HM_v22_TT: 752.92 (Δ -5.83)

3.2 base_Alens_plikHM_TT_lowl_lowE_post_BAO

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022567	0.02249 ± 0.00022	$\sigma_8/h^{0.5}$	0.9675	0.967 ± 0.013	$D_M(0.38)$	1515.3	1517 ± 10
$\boldsymbol{\Omega_c h^2}$	0.11772	0.1179 ± 0.0013	$r_{drag}h$	100.91	100.8 ± 1.0	$H(0.51)$	90.149	90.08 ± 0.33
$\boldsymbol{100\theta_{MC}}$	1.041226	1.04122 ± 0.00043	$\langle d^2\rangle^{1/2}$	2.652	2.630 ± 0.076	$D_M(0.51)$	1964.6	1967 ± 12
$\boldsymbol{\tau}$	0.0507	$0.0492^{+0.0086}_{-0.0072}$	z_{re}	7.24	$7.07^{+0.93}_{-0.71}$	$H(0.61)$	95.690	95.62 ± 0.28
$\boldsymbol{A_L}$	1.231	1.211 ± 0.078	$10^9 A_s$	2.0732	$2.066^{+0.037}_{-0.032}$	$D_M(0.61)$	2287.5	2290 ± 13
$\boldsymbol{\ln(10^{10} A_s)}$	3.0317	$3.028^{+0.018}_{-0.015}$	$10^9 A_s e^{-2\tau}$	1.8731	1.872 ± 0.011	$H(2.33)$	235.28	235.31 ± 0.79
$\boldsymbol{n_s}$	0.97299	0.9709 ± 0.0044	D_{40}	1211.7	1215 ± 13	$D_M(2.33)$	5745.9	5749 ± 14
$\boldsymbol{y_{cal}}$	0.999996	0.99998 ± 0.0025	D_{220}	5730.6	5730 ± 40	$f\sigma_8(0.15)$	0.4444	0.4445 ± 0.0084
$\boldsymbol{A^{CIB}_{217}}$	42.8	45 ± 7	D_{810}	2530.5	2528 ± 14	$\sigma_8(0.15)$	0.7405	$0.7392^{+0.0078}_{-0.0067}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.999	> 0.406	D_{1420}	815.53	813.8 ± 5.0	$f\sigma_8(0.38)$	0.4648	0.4646 ± 0.0072
$\boldsymbol{A^{tSZ}_{143}}$	6.67	$5.6^{+2.1}_{-1.8}$	D_{2000}	232.70	231.7 ± 1.8	$\sigma_8(0.38)$	0.6576	$0.6563^{+0.0065}_{-0.0055}$
$\boldsymbol{A^{PS}_{100}}$	239.7	251 ± 30	$n_{s,0.002}$	0.97299	0.9709 ± 0.0044	$f\sigma_8(0.51)$	0.4647	0.4643 ± 0.0065
$\boldsymbol{A^{PS}_{143}}$	50.3	43 ± 8	Y_P	0.245468	0.245441 ± 0.000086	$\sigma_8(0.51)$	0.6159	$0.6146^{+0.0060}_{-0.0051}$
$\boldsymbol{A^{PS}_{143\times 217}}$	57.4	42 ± 9	Y_P^{BBN}	0.246795	0.246767 ± 0.000087	$f\sigma_8(0.61)$	0.4606	0.4602 ± 0.0060
$\boldsymbol{A^{PS}_{217}}$	123.5	115 ± 10	10^5D/H	2.5502	2.564 ± 0.040	$\sigma_8(0.61)$	0.5863	$0.5851^{+0.0057}_{-0.0048}$
$\boldsymbol{A^{kSZ}}$	0.00	< 3.44	Age/Gyr	13.7589	13.767 ± 0.031	$f\sigma_8(2.33)$	0.29604	$0.2954^{+0.0028}_{-0.0024}$
$\boldsymbol{A^{dustTT}_{100}}$	8.85	8.9 ± 1.8	z_*	1089.476	1089.58 ± 0.33	$\sigma_8(2.33)$	0.30567	$0.3049^{+0.0028}_{-0.0024}$
$\boldsymbol{A^{dustTT}_{143}}$	10.67	10.5 ± 1.8	r_*	144.872	144.89 ± 0.32	f^{143}_{2000}	25.87	27 ± 3
$\boldsymbol{A^{dustTT}_{143\times 217}}$	19.73	18.0 ± 3.2	$100\theta_*$	1.041387	1.04139 ± 0.00042	$f^{143\times 217}_{2000}$	29.80	30.5 ± 2.2
$\boldsymbol{A^{dustTT}_{217}}$	95.9	93.7 ± 7.2	$D_M(z_*)$/Gpc	13.9115	13.913 ± 0.031	f^{217}_{2000}	104.42	105.5 ± 2.0
$\boldsymbol{c_{100}}$	0.99966	0.99961 ± 0.00061	z_{drag}	1060.238	1060.07 ± 0.48	χ^2_{simall}	395.68	396.8 ± 1.6
$\boldsymbol{c_{217}}$	0.99814	0.99819 ± 0.00064	r_{drag}	147.477	147.52 ± 0.34	χ^2_{lowl}	21.89	22.23 ± 0.80
H_0	68.43	68.31 ± 0.60	k_D	0.140607	0.14051 ± 0.00045	χ^2_{plik}	752.7	766.3 ± 5.3
Ω_Λ	0.6990	0.6977 ± 0.0076	$100\theta_D$	0.160609	0.16071 ± 0.00027	χ^2_{6DF}	0.0076	0.046 ± 0.066
Ω_m	0.3010	0.3023 ± 0.0076	z_{eq}	3352.4	3354 ± 29	χ^2_{MGS}	1.97	1.95 ± 0.64
$\Omega_m h^2$	0.14093	0.1410 ± 0.0012	k_{eq}	0.010232	0.010238 ± 0.000089	$\chi^2_{DR12BAO}$	3.382	4.05 ± 0.96
$\Omega_m h^3$	0.096432	0.09632 ± 0.00049	$100\theta_{eq}$	0.8231	0.8226 ± 0.0055	χ^2_{prior}	1.02	7.1 ± 3.5
σ_8	0.8003	$0.7990^{+0.0088}_{-0.0076}$	$100\theta_{s,eq}$	0.45435	0.4541 ± 0.0028	χ^2_{BAO}	5.35	6.0 ± 1.2
S_8	0.8016	0.802 ± 0.016	$H(0.15)$	73.60	73.50 ± 0.52	χ^2_{CMB}	1170.2	1185.3 ± 5.6
$\sigma_8\Omega_m^{0.5}$	0.4391	0.4393 ± 0.0088	$D_M(0.15)$	634.32	635.3 ± 5.0			
$\sigma_8\Omega_m^{0.25}$	0.5928	0.5924 ± 0.0088	$H(0.38)$	83.533	83.45 ± 0.40			

Best-fit $\chi^2_{eff} = 1176.61$; $\Delta\chi^2_{eff} = -9.14$; $\bar{\chi}^2_{eff} = 1198.50$; $\Delta\bar{\chi}^2_{eff} = -7.53$; $R - 1 = 0.01593$

χ^2_{eff}: BAO - 6DF: 0.01 (Δ -0.01) MGS: 1.97 (Δ 0.69) DR12BAO: 3.38 (Δ -0.80) CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.68 (Δ -0.21) commander_dx12_v3_2_29: 21.89 (Δ -0.93) plik_rd12_HM_v22_TT: 752.66 (Δ -7.44)

3.3 base_Alens_plikHM_TT_lowl_lowE_post_Riess18

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.023009	0.02292 ± 0.00027	$\sigma_8\Omega_m^{0.25}$	0.5656	0.568 ± 0.012	$D_M(0.15)$	615.3	617.4 ± 8.1
$\boldsymbol{\Omega_c h^2}$	0.11302	0.1135 ± 0.0020	$\sigma_8/h^{0.5}$	0.9302	0.933 ± 0.018	$H(0.38)$	85.05	84.88 ± 0.68
$\boldsymbol{100\theta_{MC}}$	1.04193	1.04189 ± 0.00051	$r_{drag}h$	104.90	104.5 ± 1.7	$D_M(0.38)$	1476.7	1481 ± 17
$\boldsymbol{\tau}$	0.0520	0.0520 ± 0.0087	$\langle d^2\rangle^{1/2}$	2.680	2.668 ± 0.075	$H(0.51)$	91.37	91.23 ± 0.56
$\boldsymbol{A_L}$	1.351	1.329 ± 0.093	z_{re}	7.21	$7.20^{+0.88}_{-0.73}$	$D_M(0.51)$	1919.0	1924 ± 20
$\boldsymbol{\ln(10^{10}A_s)}$	3.0238	3.024 ± 0.018	$10^9 A_s$	2.0568	2.058 ± 0.037	$H(0.61)$	96.677	96.56 ± 0.47
$\boldsymbol{n_s}$	0.9852	0.9826 ± 0.0063	$10^9 A_s e^{-2\tau}$	1.8537	1.854 ± 0.013	$D_M(0.61)$	2238.0	2243 ± 21
$\boldsymbol{y_{cal}}$	0.99995	1.0000 ± 0.0026	D_{40}	1187.1	1192 ± 15	$H(2.33)$	232.71	232.9 ± 1.2
$\boldsymbol{A_{217}^{CIB}}$	41.8	44 ± 7	D_{220}	5758.1	5755 ± 41	$D_M(2.33)$	5704.7	5710 ± 20
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.999	> 0.442	D_{810}	2525.0	2523 ± 14	$f\sigma_8(0.15)$	0.4159	0.419 ± 0.012
$\boldsymbol{A_{143}^{tSZ}}$	6.87	5.8 ± 1.9	D_{1420}	817.4	815.7 ± 5.2	$\sigma_8(0.15)$	0.7269	0.7278 ± 0.0088
$\boldsymbol{A_{100}^{PS}}$	233.7	245 ± 30	D_{2000}	234.60	233.7 ± 2.0	$f\sigma_8(0.38)$	0.4419	0.444 ± 0.011
$\boldsymbol{A_{143}^{PS}}$	44.0	38 ± 8	$n_{s,0.002}$	0.9852	0.9826 ± 0.0063	$\sigma_8(0.38)$	0.6486	0.6491 ± 0.0071
$\boldsymbol{A_{143\times217}^{PS}}$	53.2	39 ± 9	Y_P	0.245654	$0.24562^{+0.00011}_{-0.00013}$	$f\sigma_8(0.51)$	0.4450	0.4467 ± 0.0093
$\boldsymbol{A_{217}^{PS}}$	121.0	114.3 ± 9.8	Y_P^{BBN}	0.246982	$0.24694^{+0.00011}_{-0.00013}$	$\sigma_8(0.51)$	0.6088	0.6091 ± 0.0064
$\boldsymbol{A^{kSZ}}$	0.00	< 2.80	10^5D/H	2.4714	2.488 ± 0.047	$f\sigma_8(0.61)$	0.4433	0.4448 ± 0.0084
$\boldsymbol{A_{100}^{dustTT}}$	8.96	8.9 ± 1.8	Age/Gyr	13.6707	13.683 ± 0.044	$\sigma_8(0.61)$	0.5805	0.5807 ± 0.0059
$\boldsymbol{A_{143}^{dustTT}}$	10.61	10.4 ± 1.8	z_*	1088.536	1088.69 ± 0.44	$f\sigma_8(2.33)$	0.29429	0.2943 ± 0.0028
$\boldsymbol{A_{143\times217}^{dustTT}}$	19.33	17.8 ± 3.3	r_*	145.770	145.73 ± 0.46	$\sigma_8(2.33)$	0.30530	0.3051 ± 0.0028
$\boldsymbol{A_{217}^{dustTT}}$	95.4	93.7 ± 7.5	$100\theta_*$	1.04205	1.04203 ± 0.00050	f_{2000}^{143}	23.14	25 ± 3
$\boldsymbol{c_{100}}$	0.99973	0.99964 ± 0.00061	$D_M(z_*)$/Gpc	13.9887	13.985 ± 0.042	$f_{2000}^{143\times217}$	27.59	28.4 ± 2.3
$\boldsymbol{c_{217}}$	0.99813	0.99813 ± 0.00063	z_{drag}	1060.89	1060.72 ± 0.54	f_{2000}^{217}	102.52	103.7 ± 2.1
H_0	70.76	70.5 ± 1.0	r_{drag}	148.252	148.24 ± 0.45	χ^2_{simall}	395.66	396.8 ± 1.6
Ω_Λ	0.7270	0.724 ± 0.012	k_D	0.14010	0.14005 ± 0.00050	χ^2_{lowl}	20.46	20.80 ± 0.67
Ω_m	0.2730	0.276 ± 0.012	$100\theta_D$	0.160297	0.16040 ± 0.00028	χ^2_{plik}	755.6	769.6 ± 6.0
$\Omega_m h^2$	0.13668	0.1370 ± 0.0019	z_{eq}	3250.7	3259 ± 46	$\chi^2_{H073p45}$	2.63	3.5 ± 2.2
$\Omega_m h^3$	0.09671	0.09661 ± 0.00051	k_{eq}	0.009922	0.00995 ± 0.00014	χ^2_{prior}	1.01	7.1 ± 3.5
σ_8	0.7825	0.784 ± 0.010	$100\theta_{eq}$	0.8441	0.8423 ± 0.0094	χ^2_{CMB}	1171.7	1187.2 ± 6.0
S_8	0.7464	0.752 ± 0.024	$100\theta_{s,eq}$	0.46497	0.4641 ± 0.0048			
$\sigma_8\Omega_m^{0.5}$	0.4088	0.412 ± 0.013	$H(0.15)$	75.63	75.41 ± 0.89			

Best-fit $\chi^2_{eff} = 1175.32$; $\Delta\chi^2_{eff} = -16.25$; $\bar{\chi}^2_{eff} = 1197.77$; $\Delta\bar{\chi}^2_{eff} = -14.31$; $R - 1 = 0.01750$

χ^2_{eff}: CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.66 (Δ -0.42) commander_dx12_v3_2_29: 20.46 (Δ -1.62) plik_rd12_HM_v22_TT: 755.56 (Δ -7.46) Hubble - H073p45: 2.63 (Δ -6.36)

3.4 base_Alens_plikHM_TT_lowl_lowE_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02261 ± 0.00029	$\sigma_8\Omega_m^{0.5}$	0.433 ± 0.016	$100\theta_{s,eq}$	0.4571 ± 0.0056
$\boldsymbol{\Omega_c h^2}$	0.1166 ± 0.0025	$\sigma_8\Omega_m^{0.25}$	0.587 ± 0.014	$H(0.15)$	74.1 ± 1.0
$\boldsymbol{100\theta_{MC}}$	1.04141 ± 0.00053	$\sigma_8/h^{0.5}$	0.960 ± 0.020	$D_M(0.15)$	630.1 ± 9.9
$\boldsymbol{\tau}$	$0.0533^{+0.0038}_{-0.0077}$	$r_{drag}h$	101.9 ± 2.0	$H(0.38)$	$83.86^{+0.72}_{-0.81}$
$\boldsymbol{A_L}$	$1.236^{+0.089}_{-0.10}$	$\langle d^2\rangle^{1/2}$	2.640 ± 0.077	$D_M(0.38)$	1507 ± 20
$\boldsymbol{\ln(10^{10}A_s)}$	$3.033^{+0.011}_{-0.015}$	z_{re}	$7.46^{+0.38}_{-0.81}$	$H(0.51)$	$90.40^{+0.58}_{-0.66}$
$\boldsymbol{n_s}$	0.9744 ± 0.0071	$10^9 A_s$	$2.077^{+0.023}_{-0.032}$	$D_M(0.51)$	1955 ± 24
$\boldsymbol{y_{cal}}$	1.0000 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.867 ± 0.014	$H(0.61)$	$95.89^{+0.46}_{-0.54}$
$\boldsymbol{A^{CIB}_{217}}$	45 ± 7	D_{40}	1209 ± 17	$D_M(0.61)$	2277 ± 26
$\boldsymbol{\xi^{tSZ\times CIB}}$	> 0.418	D_{220}	5736 ± 42	$H(2.33)$	234.6 ± 1.4
$\boldsymbol{A^{tSZ}_{143}}$	$5.6^{+2.1}_{-1.8}$	D_{810}	2527 ± 14	$D_M(2.33)$	5738^{+24}_{-21}
$\boldsymbol{A^{PS}_{100}}$	250 ± 30	D_{1420}	814.4 ± 5.0	$f\sigma_8(0.15)$	0.438 ± 0.015
$\boldsymbol{A^{PS}_{143}}$	42 ± 8	D_{2000}	232.3 ± 2.0	$\sigma_8(0.15)$	0.7383 ± 0.0083
$\boldsymbol{A^{PS}_{143\times217}}$	41 ± 9	$n_{s,0.002}$	0.9744 ± 0.0071	$f\sigma_8(0.38)$	0.460 ± 0.012
$\boldsymbol{A^{PS}_{217}}$	114.9 ± 9.9	Y_P	$0.24549^{+0.00010}_{-0.00012}$	$\sigma_8(0.38)$	0.6563 ± 0.0061
$\boldsymbol{A^{kSZ}}$	< 3.26	Y_P^{BBN}	$0.24681^{+0.00010}_{-0.00012}$	$f\sigma_8(0.51)$	0.461 ± 0.010
$\boldsymbol{A^{dustTT}_{100}}$	8.9 ± 1.8	10^5D/H	2.543 ± 0.052	$\sigma_8(0.51)$	0.6150 ± 0.0053
$\boldsymbol{A^{dustTT}_{143}}$	10.5 ± 1.8	Age/Gyr	$13.743^{+0.052}_{-0.046}$	$f\sigma_8(0.61)$	0.4571 ± 0.0092
$\boldsymbol{A^{dustTT}_{143\times217}}$	17.9 ± 3.3	z_*	1089.33 ± 0.53	$\sigma_8(0.61)$	0.5857 ± 0.0048
$\boldsymbol{A^{dustTT}_{217}}$	93.7 ± 7.3	r_*	145.14 ± 0.53	$f\sigma_8(2.33)$	$0.2960^{+0.0019}_{-0.0023}$
$\boldsymbol{c_{100}}$	0.99962 ± 0.00061	$100\theta_*$	1.04157 ± 0.00051	$\sigma_8(2.33)$	$0.3060^{+0.0017}_{-0.0024}$
$\boldsymbol{c_{217}}$	0.99818 ± 0.00063	$D_M(z_*)$/Gpc	13.935 ± 0.048	f^{143}_{2000}	27 ± 3
H_0	69.0 ± 1.2	z_{drag}	1060.24 ± 0.56	$f^{143\times217}_{2000}$	29.9 ± 2.4
Ω_Λ	0.705 ± 0.015	r_{drag}	147.74 ± 0.51	f^{217}_{2000}	105.0 ± 2.2
Ω_m	0.295 ± 0.015	k_D	0.14036 ± 0.00052	χ^2_{simall}	396.4 ± 1.1
$\Omega_m h^2$	0.1398 ± 0.0023	$100\theta_D$	0.16063 ± 0.00030	χ^2_{lowl}	21.9 ± 1.1
$\Omega_m h^3$	0.09638 ± 0.00050	z_{eq}	3326 ± 55	χ^2_{plik}	767.3 ± 5.6
σ_8	0.797 ± 0.010	k_{eq}	0.01015 ± 0.00017	χ^2_{prior}	7.1 ± 3.5
S_8	0.790 ± 0.029	$100\theta_{eq}$	0.828 ± 0.011	χ^2_{CMB}	1185.5 ± 5.7

$\bar{\chi}^2_{eff} = 1192.62$; $\Delta\bar{\chi}^2_{eff} = -6.69$; $R - 1 = 0.00588$

3.5 base_Alens_plikHM_TT_lowl_lowE_post_BAO_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02249 ± 0.00022	$\sigma_8/h^{0.5}$	0.970 ± 0.011	$D_M(0.38)$	1517 ± 10
$\boldsymbol{\Omega_c h^2}$	0.1179 ± 0.0013	$r_{drag}h$	100.8 ± 1.0	$H(0.51)$	90.08 ± 0.33
$\boldsymbol{100\theta_{MC}}$	1.04122 ± 0.00043	$\langle d^2\rangle^{1/2}$	2.629 ± 0.076	$D_M(0.51)$	1967 ± 12
$\boldsymbol{\tau}$	$0.0526^{+0.0038}_{-0.0072}$	z_{re}	$7.44^{+0.36}_{-0.80}$	$H(0.61)$	95.63 ± 0.28
$\boldsymbol{A_L}$	1.202 ± 0.076	$10^9 A_s$	$2.080^{+0.021}_{-0.030}$	$D_M(0.61)$	2290 ± 13
$\boldsymbol{\ln(10^{10} A_s)}$	$3.035^{+0.010}_{-0.015}$	$10^9 A_s e^{-2\tau}$	1.872 ± 0.011	$H(2.33)$	235.30 ± 0.79
$\boldsymbol{n_s}$	0.9710 ± 0.0044	D_{40}	1216 ± 13	$D_M(2.33)$	5749 ± 14
$\boldsymbol{y_{cal}}$	0.99999 ± 0.0025	D_{220}	5729 ± 40	$f\sigma_8(0.15)$	0.4460 ± 0.0079
$\boldsymbol{A_{217}^{CIB}}$	45 ± 7	D_{810}	2528 ± 14	$\sigma_8(0.15)$	$0.7418^{+0.0054}_{-0.0063}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	> 0.408	D_{1420}	813.9 ± 4.9	$f\sigma_8(0.38)$	0.4662 ± 0.0066
$\boldsymbol{A_{143}^{tSZ}}$	$5.6^{+2.1}_{-1.8}$	D_{2000}	231.8 ± 1.8	$\sigma_8(0.38)$	$0.6585^{+0.0043}_{-0.0053}$
$\boldsymbol{A_{100}^{PS}}$	251 ± 30	$n_{s,0.002}$	0.9710 ± 0.0044	$f\sigma_8(0.51)$	0.4659 ± 0.0058
$\boldsymbol{A_{143}^{PS}}$	43 ± 8	Y_P	0.245440 ± 0.000086	$\sigma_8(0.51)$	$0.6167^{+0.0038}_{-0.0048}$
$\boldsymbol{A_{143\times217}^{PS}}$	42 ± 9	Y_P^{BBN}	0.246767 ± 0.000086	$f\sigma_8(0.61)$	0.4617 ± 0.0052
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	10^5D/H	2.564 ± 0.040	$\sigma_8(0.61)$	$0.5871^{+0.0035}_{-0.0045}$
$\boldsymbol{A^{kSZ}}$	< 3.40	Age/Gyr	13.767 ± 0.031	$f\sigma_8(2.33)$	$0.2964^{+0.0017}_{-0.0023}$
$\boldsymbol{A_{100}^{dustTT}}$	8.9 ± 1.8	z_*	1089.58 ± 0.33	$\sigma_8(2.33)$	$0.3060^{+0.0017}_{-0.0023}$
$\boldsymbol{A_{143}^{dustTT}}$	10.5 ± 1.8	r_*	144.89 ± 0.32	f_{2000}^{143}	27 ± 3
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.0 ± 3.2	$100\theta_*$	1.04140 ± 0.00042	$f_{2000}^{143\times217}$	30.5 ± 2.2
$\boldsymbol{A_{217}^{dustTT}}$	93.8 ± 7.2	$D_M(z_*)$/Gpc	13.913 ± 0.031	f_{2000}^{217}	105.4 ± 2.0
$\boldsymbol{c_{100}}$	0.99960 ± 0.00061	z_{drag}	1060.07 ± 0.48	χ^2_{simall}	396.4 ± 1.1
$\boldsymbol{c_{217}}$	0.99819 ± 0.00064	r_{drag}	147.52 ± 0.34	χ^2_{lowl}	22.29 ± 0.80
H_0	68.32 ± 0.60	k_D	0.14050 ± 0.00045	χ^2_{plik}	766.2 ± 5.3
Ω_Λ	0.6978 ± 0.0076	$100\theta_D$	0.16071 ± 0.00027	χ^2_{6DF}	0.046 ± 0.067
Ω_m	0.3022 ± 0.0076	z_{eq}	3354 ± 29	χ^2_{MGS}	1.96 ± 0.64
$\Omega_m h^2$	0.1410 ± 0.0012	k_{eq}	0.010237 ± 0.000089	$\chi^2_{DR12BAO}$	4.04 ± 0.96
$\Omega_m h^3$	0.09632 ± 0.00048	$100\theta_{eq}$	0.8226 ± 0.0055	χ^2_{prior}	7.2 ± 3.6
σ_8	0.8017 ± 0.0069	$100\theta_{s,eq}$	0.4542 ± 0.0028	χ^2_{BAO}	6.0 ± 1.2
S_8	0.805 ± 0.015	$H(0.15)$	73.50 ± 0.52	χ^2_{CMB}	1184.9 ± 5.5
$\sigma_8\Omega_m^{0.5}$	0.4407 ± 0.0084	$D_M(0.15)$	635.3 ± 5.0		
$\sigma_8\Omega_m^{0.25}$	0.5944 ± 0.0080	$H(0.38)$	83.45 ± 0.39		

$\bar{\chi}^2_{eff} = 1198.08$; $\Delta\bar{\chi}^2_{eff} = -7.68$; $R - 1 = 0.01471$

3.6 base_Alens_plikHM_TT_lowl_lowE_post_Riess18_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02292 ± 0.00027	$\sigma_8\Omega_m^{0.25}$	0.569 ± 0.012	$D_M(0.15)$	617.2 ± 8.1
$\boldsymbol{\Omega_c h^2}$	0.1134 ± 0.0020	$\sigma_8/h^{0.5}$	0.936 ± 0.017	$H(0.38)$	84.90 ± 0.68
$\boldsymbol{100\theta_{MC}}$	1.04190 ± 0.00051	$r_{drag}h$	104.6 ± 1.7	$D_M(0.38)$	1480 ± 17
$\boldsymbol{\tau}$	$0.0548^{+0.0043}_{-0.0077}$	$\langle d^2\rangle^{1/2}$	2.670 ± 0.075	$H(0.51)$	91.24 ± 0.56
$\boldsymbol{A_L}$	1.325 ± 0.093	z_{re}	$7.50^{+0.39}_{-0.83}$	$D_M(0.51)$	1923 ± 20
$\boldsymbol{\ln(10^{10}A_s)}$	$3.030^{+0.011}_{-0.016}$	$10^9 A_s$	$2.069^{+0.023}_{-0.034}$	$H(0.61)$	96.57 ± 0.46
$\boldsymbol{n_s}$	0.9829 ± 0.0064	$10^9 A_s e^{-2\tau}$	1.854 ± 0.013	$D_M(0.61)$	2243 ± 21
$\boldsymbol{y_{cal}}$	1.0001 ± 0.0026	D_{40}	1192 ± 16	$H(2.33)$	232.9 ± 1.2
$\boldsymbol{A_{217}^{CIB}}$	44 ± 7	D_{220}	5755 ± 41	$D_M(2.33)$	5710 ± 20
$\boldsymbol{\xi^{tSZ\times CIB}}$	> 0.442	D_{810}	2523 ± 14	$f\sigma_8(0.15)$	0.419 ± 0.012
$\boldsymbol{A_{143}^{tSZ}}$	5.8 ± 1.9	D_{1420}	815.7 ± 5.1	$\sigma_8(0.15)$	0.7296 ± 0.0080
$\boldsymbol{A_{100}^{PS}}$	245 ± 30	D_{2000}	233.7 ± 2.0	$f\sigma_8(0.38)$	0.445 ± 0.010
$\boldsymbol{A_{143}^{PS}}$	38 ± 8	$n_{s,0.002}$	0.9829 ± 0.0064	$\sigma_8(0.38)$	0.6508 ± 0.0061
$\boldsymbol{A_{143\times217}^{PS}}$	39 ± 9	Y_P	0.24562 ± 0.00012	$f\sigma_8(0.51)$	0.4477 ± 0.0091
$\boldsymbol{A_{217}^{PS}}$	114.2 ± 9.8	Y_P^{BBN}	0.24694 ± 0.00012	$\sigma_8(0.51)$	$0.6108^{+0.0051}_{-0.0058}$
$\boldsymbol{A^{kSZ}}$	< 2.78	10^5D/H	2.488 ± 0.047	$f\sigma_8(0.61)$	0.4458 ± 0.0082
$\boldsymbol{A_{100}^{dustTT}}$	9.0 ± 1.8	Age/Gyr	13.682 ± 0.044	$\sigma_8(0.61)$	$0.5822^{+0.0046}_{-0.0053}$
$\boldsymbol{A_{143}^{dustTT}}$	10.4 ± 1.8	z_*	1088.68 ± 0.44	$f\sigma_8(2.33)$	$0.2951^{+0.0020}_{-0.0025}$
$\boldsymbol{A_{143\times217}^{dustTT}}$	17.8 ± 3.3	r_*	145.74 ± 0.46	$\sigma_8(2.33)$	$0.3060^{+0.0018}_{-0.0025}$
$\boldsymbol{A_{217}^{dustTT}}$	93.8 ± 7.5	$100\theta_*$	1.04203 ± 0.00049	f_{2000}^{143}	25 ± 3
$\boldsymbol{c_{100}}$	0.99963 ± 0.00062	$D_M(z_*)$/Gpc	13.986 ± 0.042	$f_{2000}^{143\times217}$	28.4 ± 2.3
$\boldsymbol{c_{217}}$	0.99813 ± 0.00063	z_{drag}	1060.72 ± 0.54	f_{2000}^{217}	103.6 ± 2.1
H_0	70.5 ± 1.0	r_{drag}	148.25 ± 0.45	χ^2_{simall}	396.4 ± 1.2
Ω_Λ	0.724 ± 0.012	k_D	0.14004 ± 0.00050	χ^2_{lowl}	20.81 ± 0.68
Ω_m	0.276 ± 0.012	$100\theta_D$	0.16040 ± 0.00029	χ^2_{plik}	769.7 ± 6.0
$\Omega_m h^2$	0.1370 ± 0.0019	z_{eq}	3258 ± 45	$\chi^2_{H073p45}$	3.4 ± 2.2
$\Omega_m h^3$	0.09660 ± 0.00051	k_{eq}	0.00994 ± 0.00014	χ^2_{prior}	7.1 ± 3.5
σ_8	0.7857 ± 0.0096	$100\theta_{eq}$	0.8426 ± 0.0094	χ^2_{CMB}	1186.9 ± 6.0
S_8	0.753 ± 0.024	$100\theta_{s,eq}$	0.4643 ± 0.0048		
$\sigma_8\Omega_m^{0.5}$	0.412 ± 0.013	$H(0.15)$	75.44 ± 0.89		

$\bar{\chi}^2_{eff} = 1197.44$; $\Delta\bar{\chi}^2_{eff} = -14.36$; $R - 1 = 0.01845$

3.7 base_Alens_plikHM_TTTEEE_lowl_lowE

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022631	0.02259 ± 0.00017	$\Omega_m h^2$	0.14113	0.1413 ± 0.0014	k_{eq}	0.010247	0.01026 ± 0.00011
$\boldsymbol{\Omega_c h^2}$	0.11786	0.1181 ± 0.0016	$\Omega_m h^3$	0.096556	0.09650 ± 0.00030	$100\theta_{eq}$	0.8224	0.8214 ± 0.0067
$\boldsymbol{100\theta_{MC}}$	1.041184	1.04114 ± 0.00032	σ_8	0.8010	0.7997 ± 0.0090	$100\theta_{s,eq}$	0.45392	0.4534 ± 0.0034
$\boldsymbol{\tau}$	0.0511	$0.0492^{+0.0088}_{-0.0073}$	S_8	0.8030	0.804 ± 0.019	$H(0.15)$	73.60	73.48 ± 0.62
$\boldsymbol{A_L}$	1.191	1.180 ± 0.065	$\sigma_8 \Omega_m^{0.5}$	0.4398	0.440 ± 0.011	$D_M(0.15)$	634.4	635.6 ± 6.0
$\boldsymbol{\ln(10^{10} A_s)}$	3.0331	$3.029^{+0.018}_{-0.015}$	$\sigma_8 \Omega_m^{0.25}$	0.5935	0.593 ± 0.010	$H(0.38)$	83.545	83.46 ± 0.45
$\boldsymbol{n_s}$	0.97286	0.9708 ± 0.0048	$\sigma_8/h^{0.5}$	0.9683	0.968 ± 0.014	$D_M(0.38)$	1515.3	1518 ± 12
$\boldsymbol{y_{cal}}$	0.99999	1.0000 ± 0.0024	$r_{drag} h$	100.82	100.6 ± 1.2	$H(0.51)$	90.168	90.10 ± 0.36
$\boldsymbol{A_{217}^{CIB}}$	42.2	45 ± 7	$\langle d^2 \rangle^{1/2}$	2.612	2.600 ± 0.058	$D_M(0.51)$	1964.6	1967 ± 14
$\boldsymbol{\xi^{tSZ \times CIB}}$	0.999	> 0.436	z_{re}	7.27	$7.05^{+0.95}_{-0.71}$	$H(0.61)$	95.716	95.66 ± 0.29
$\boldsymbol{A_{143}^{tSZ}}$	6.93	$5.8^{+2.0}_{-1.8}$	$10^9 A_s$	2.0761	$2.068^{+0.037}_{-0.032}$	$D_M(0.61)$	2287.3	2290 ± 15
$\boldsymbol{A_{100}^{PS}}$	237.2	249 ± 30	$10^9 A_s e^{-2\tau}$	1.8743	1.874 ± 0.012	$H(2.33)$	235.43	235.55 ± 0.91
$\boldsymbol{A_{143}^{PS}}$	49.1	42 ± 8	D_{40}	1212.9	1217 ± 13	$D_M(2.33)$	5744.0	5747 ± 13
$\boldsymbol{A_{143\times217}^{PS}}$	57.2	42^{+10}_{-9}	D_{220}	5737.3	5739 ± 38	$f\sigma_8(0.15)$	0.4451	0.4456 ± 0.0099
$\boldsymbol{A_{217}^{PS}}$	124.1	116.2 ± 9.9	D_{810}	2533.2	2531 ± 13	$\sigma_8(0.15)$	0.7411	0.7398 ± 0.0078
$\boldsymbol{A^{kSZ}}$	0.00	< 3.04	D_{1420}	817.03	815.6 ± 4.7	$f\sigma_8(0.38)$	0.4655	0.4654 ± 0.0083
$\boldsymbol{A_{100}^{dust TT}}$	8.72	8.8 ± 1.8	D_{2000}	232.94	232.2 ± 1.6	$\sigma_8(0.38)$	0.6580	0.6566 ± 0.0064
$\boldsymbol{A_{143}^{dust TT}}$	10.68	10.6 ± 1.8	$n_{s,0.002}$	0.97286	0.9708 ± 0.0048	$f\sigma_8(0.51)$	0.4652	0.4650 ± 0.0073
$\boldsymbol{A_{143\times217}^{dust TT}}$	19.80	18.1 ± 3.2	Y_P	0.245491	0.245477 ± 0.000066	$\sigma_8(0.51)$	0.6163	$0.6149^{+0.0060}_{-0.0052}$
$\boldsymbol{A_{217}^{dust TT}}$	95.7	93.7 ± 7.2	Y_P^{BBN}	0.246818	0.246804 ± 0.000067	$f\sigma_8(0.61)$	0.4611	0.4608 ± 0.0067
$\boldsymbol{A_{100}^{dust TE}}$	0.1125	0.114 ± 0.038	10^5D/H	2.5389	2.546 ± 0.031	$\sigma_8(0.61)$	0.5867	$0.5853^{+0.0056}_{-0.0049}$
$\boldsymbol{A_{100\times143}^{dust TE}}$	0.1348	0.134 ± 0.030	Age/Gyr	13.7542	13.761 ± 0.028	$f\sigma_8(2.33)$	0.29620	$0.2954^{+0.0027}_{-0.0024}$
$\boldsymbol{A_{100\times217}^{dust TE}}$	0.480	0.479 ± 0.085	z_*	1089.410	1089.48 ± 0.32	$\sigma_8(2.33)$	0.30582	$0.3050^{+0.0028}_{-0.0024}$
$\boldsymbol{A_{143}^{dust TE}}$	0.224	0.222 ± 0.054	r_*	144.787	144.76 ± 0.33	f_{2000}^{143}	25.45	26.7 ± 2.9
$\boldsymbol{A_{143\times217}^{dust TE}}$	0.659	0.661 ± 0.080	$100\theta_*$	1.041338	1.04130 ± 0.00032	$f_{2000}^{143\times217}$	29.48	29.9 ± 2.0
$\boldsymbol{A_{217}^{dust TE}}$	2.051	2.05 ± 0.27	$D_M(z_*)$/Gpc	13.9039	13.902 ± 0.031	f_{2000}^{217}	104.23	105.0 ± 1.9
$\boldsymbol{c_{100}}$	0.99976	0.99969 ± 0.00061	z_{drag}	1060.390	1060.30 ± 0.33	χ^2_{simall}	395.67	396.9 ± 1.6
$\boldsymbol{c_{217}}$	0.99810	0.99812 ± 0.00062	r_{drag}	147.369	147.35 ± 0.32	χ^2_{lowl}	21.96	22.32 ± 0.89
H_0	68.42	68.28 ± 0.72	k_D	0.140770	0.14076 ± 0.00033	χ^2_{plik}	2337.1	2353.8 ± 5.7
Ω_Λ	0.6985	0.6967 ± 0.0094	$100\theta_D$	0.160510	0.16056 ± 0.00019	χ^2_{prior}	1.38	11.3 ± 4.4
Ω_m	0.3015	0.3033 ± 0.0094	z_{eq}	3357.2	3362 ± 35	χ^2_{CMB}	2754.7	2773.0 ± 6.0

Best-fit $\chi^2_{eff} = 2756.11$; $\Delta\chi^2_{eff} = -9.66$; $\bar{\chi}^2_{eff} = 2784.27$; $\Delta\bar{\chi}^2_{eff} = -7.49$; $R - 1 = 0.01070$

χ^2_{eff}: CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.67 (Δ -0.38) commander_dx12_v3_2_29: 21.96 (Δ -1.30) plik_rd12_HM_v22b_TTTEEE: 2337.11 (Δ -7.54)

3.8 base_Alens_plikHM_TTTEEE_lowl_lowE_post_BAO

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022617	0.02258 ± 0.00015	σ_8	0.8011	0.8000 ± 0.0081	$D_M(0.15)$	635.07	635.9 ± 4.1
$\boldsymbol{\Omega_c h^2}$	0.11802	0.1182 ± 0.0011	S_8	0.8046	0.805 ± 0.014	$H(0.38)$	83.492	83.43 ± 0.32
$\boldsymbol{100\theta_{MC}}$	1.041150	1.04113 ± 0.00029	$\sigma_8\Omega_m^{0.5}$	0.4407	0.4410 ± 0.0078	$D_M(0.38)$	1516.7	1518.5 ± 8.4
$\boldsymbol{\tau}$	0.0507	$0.0491^{+0.0089}_{-0.0074}$	$\sigma_8\Omega_m^{0.25}$	0.5942	0.5940 ± 0.0079	$H(0.51)$	90.126	90.07 ± 0.26
$\boldsymbol{A_L}$	1.185	1.177 ± 0.060	$\sigma_8/h^{0.5}$	0.9691	0.969 ± 0.012	$D_M(0.51)$	1966.2	1968.3 ± 9.9
$\boldsymbol{\ln(10^{10}A_s)}$	3.0325	$3.029^{+0.018}_{-0.016}$	$r_{drag}h$	100.68	100.53 ± 0.84	$H(0.61)$	95.682	95.64 ± 0.21
$\boldsymbol{n_s}$	0.97216	0.9705 ± 0.0039	$\langle d^2\rangle^{1/2}$	2.607	2.599 ± 0.058	$D_M(0.61)$	2289.1	2291 ± 11
$\boldsymbol{y_{cal}}$	0.99994	1.0000 ± 0.0025	z_{re}	7.23	$7.04^{+0.96}_{-0.72}$	$H(2.33)$	235.52	235.60 ± 0.64
$\boldsymbol{A_{217}^{CIB}}$	42.4	45 ± 7	$10^9 A_s$	2.0749	$2.068^{+0.038}_{-0.033}$	$D_M(2.33)$	5745.5	5747.7 ± 9.9
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.997	> 0.440	$10^9 A_s e^{-2\tau}$	1.8747	1.875 ± 0.011	$f\sigma_8(0.15)$	0.4459	0.4461 ± 0.0074
$\boldsymbol{A_{143}^{tSZ}}$	6.86	$5.8^{+2.1}_{-1.8}$	D_{40}	1214.3	1217 ± 12	$\sigma_8(0.15)$	0.7412	0.7400 ± 0.0073
$\boldsymbol{A_{100}^{PS}}$	237.9	249 ± 30	D_{220}	5737.3	5738 ± 38	$f\sigma_8(0.38)$	0.4660	0.4659 ± 0.0064
$\boldsymbol{A_{143}^{PS}}$	49.8	42 ± 8	D_{810}	2533.0	2531 ± 13	$\sigma_8(0.38)$	0.6580	$0.6568^{+0.0063}_{-0.0056}$
$\boldsymbol{A_{143\times217}^{PS}}$	57.6	42^{+10}_{-9}	D_{1420}	816.75	815.5 ± 4.7	$f\sigma_8(0.51)$	0.4657	0.4654 ± 0.0059
$\boldsymbol{A_{217}^{PS}}$	124.3	116.3 ± 9.9	D_{2000}	232.76	232.2 ± 1.6	$\sigma_8(0.51)$	0.6161	$0.6150^{+0.0059}_{-0.0051}$
$\boldsymbol{A^{kSZ}}$	0.00	< 3.11	$n_{s,0.002}$	0.97216	0.9705 ± 0.0039	$f\sigma_8(0.61)$	0.4615	0.4611 ± 0.0055
$\boldsymbol{A_{100}^{dustTT}}$	8.76	8.8 ± 1.8	Y_P	0.245486	0.245473 ± 0.000056	$\sigma_8(0.61)$	0.5865	$0.5854^{+0.0055}_{-0.0048}$
$\boldsymbol{A_{143}^{dustTT}}$	10.62	10.6 ± 1.8	Y_P^{BBN}	0.246813	0.246800 ± 0.000057	$f\sigma_8(2.33)$	0.29608	$0.2955^{+0.0028}_{-0.0024}$
$\boldsymbol{A_{143\times217}^{dustTT}}$	19.71	18.1 ± 3.2	10^5D/H	2.5414	2.548 ± 0.027	$\sigma_8(2.33)$	0.30565	$0.3050^{+0.0028}_{-0.0024}$
$\boldsymbol{A_{217}^{dustTT}}$	95.4	93.7 ± 7.2	Age/Gyr	13.7574	13.763 ± 0.022	f_{2000}^{143}	25.75	26.7 ± 2.8
$\boldsymbol{A_{100}^{dustTE}}$	0.1146	0.114 ± 0.039	z_*	1089.441	1089.50 ± 0.24	$f_{2000}^{143\times217}$	29.74	30.0 ± 2.0
$\boldsymbol{A_{100\times143}^{dustTE}}$	0.1336	0.135 ± 0.030	r_*	144.755	144.74 ± 0.24	f_{2000}^{217}	104.44	105.1 ± 1.8
$\boldsymbol{A_{100\times217}^{dustTE}}$	0.480	0.479 ± 0.086	$100\theta_*$	1.041305	1.04129 ± 0.00029	χ^2_{simall}	395.67	396.9 ± 1.7
$\boldsymbol{A_{143}^{dustTE}}$	0.220	0.222 ± 0.054	$D_M(z_*)$/Gpc	13.9013	13.900 ± 0.023	χ^2_{lowl}	22.06	22.34 ± 0.75
$\boldsymbol{A_{143\times217}^{dustTE}}$	0.659	0.660 ± 0.080	z_{drag}	1060.352	1060.29 ± 0.31	χ^2_{plik}	2337.1	2353.2 ± 5.6
$\boldsymbol{A_{217}^{dustTE}}$	2.048	2.06 ± 0.27	r_{drag}	147.342	147.34 ± 0.25	χ^2_{6DF}	0.0016	0.030 ± 0.043
$\boldsymbol{c_{100}}$	0.99975	0.99969 ± 0.00060	k_D	0.140789	0.14076 ± 0.00029	χ^2_{MGS}	1.82	1.79 ± 0.52
$\boldsymbol{c_{217}}$	0.99814	0.99813 ± 0.00063	$100\theta_D$	0.160519	0.16056 ± 0.00018	$\chi^2_{DR12BAO}$	3.428	3.95 ± 0.79
H_0	68.333	68.23 ± 0.49	z_{eq}	3360.8	3364 ± 24	χ^2_{prior}	1.30	11.3 ± 4.4
Ω_Λ	0.6974	0.6962 ± 0.0064	k_{eq}	0.010258	0.010268 ± 0.000073	χ^2_{BAO}	5.249	5.77 ± 0.76
Ω_m	0.3026	0.3038 ± 0.0064	$100\theta_{eq}$	0.82163	0.8209 ± 0.0046	χ^2_{CMB}	2754.9	2772.4 ± 5.8
$\Omega_m h^2$	0.14128	0.1414 ± 0.0010	$100\theta_{s,eq}$	0.45355	0.4532 ± 0.0024			
$\Omega_m h^3$	0.096543	0.09649 ± 0.00030	$H(0.15)$	73.525	73.44 ± 0.43			

Best-fit $\chi^2_{eff} = 2761.40$; $\Delta\chi^2_{eff} = -10.51$; $\bar{\chi}^2_{eff} = 2789.54$; $\Delta\bar{\chi}^2_{eff} = -8.37$; $R - 1 = 0.01310$

χ^2_{eff}: BAO - 6DF: 0.00 (Δ -0.03) MGS: 1.82 (Δ 0.60) DR12BAO: 3.43 (Δ -0.99) CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.67 (Δ -0.54) commander_dx12_v3_2_29: 22.06 (Δ -0.81) plik_rd12_HM_v22b_TTTEEE: 2337.12 (Δ -8.38)

3.9 base_Alens_plikHM_TTTEEE_lowl_lowE_post_Riess18

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022780	0.02274 ± 0.00016	$\Omega_m h^3$	0.096631	0.09658 ± 0.00031	$100\theta_{s,eq}$	0.45736	$0.4571^{+0.0033}_{-0.0029}$
$\boldsymbol{\Omega_c h^2}$	0.11629	$0.1164^{+0.0013}_{-0.0015}$	σ_8	0.7953	0.7938 ± 0.0086	$H(0.15)$	74.24	74.17 ± 0.56
$\boldsymbol{100\theta_{MC}}$	1.041348	$1.04135^{+0.00030}_{-0.00033}$	S_8	0.7848	$0.785^{+0.016}_{-0.018}$	$D_M(0.15)$	628.2	$628.9^{+4.9}_{-5.6}$
$\boldsymbol{\tau}$	0.0519	$0.0501^{+0.0087}_{-0.0071}$	$\sigma_8\Omega_m^{0.5}$	0.4298	$0.4297^{+0.0088}_{-0.0098}$	$H(0.38)$	84.021	83.97 ± 0.42
$\boldsymbol{A_L}$	1.229	1.220 ± 0.064	$\sigma_8\Omega_m^{0.25}$	0.5847	0.5841 ± 0.0092	$D_M(0.38)$	1502.8	1504^{+10}_{-11}
$\boldsymbol{\ln(10^{10}A_s)}$	3.0310	$3.027^{+0.018}_{-0.015}$	$\sigma_8/h^{0.5}$	0.9564	0.955 ± 0.013	$H(0.51)$	90.546	90.50 ± 0.33
$\boldsymbol{n_s}$	0.97691	0.9750 ± 0.0044	$r_{drag}h$	102.10	$102.0^{+1.2}_{-1.0}$	$D_M(0.51)$	1949.8	1951^{+12}_{-13}
$\boldsymbol{y_{cal}}$	0.99991	0.99996 ± 0.0024	$\langle d^2\rangle^{1/2}$	2.622	2.612 ± 0.057	$H(0.61)$	96.018	95.98 ± 0.27
$\boldsymbol{A_{217}^{CIB}}$	41.8	44 ± 7	z_{re}	7.29	$7.09^{+0.92}_{-0.69}$	$D_M(0.61)$	2271.4	2273 ± 14
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.9998	> 0.451	$10^9 A_s$	2.0717	2.064 ± 0.036	$H(2.33)$	234.57	$234.62^{+0.75}_{-0.86}$
$\boldsymbol{A_{143}^{tSZ}}$	7.03	$5.9^{+2.0}_{-1.8}$	$10^9 A_s e^{-2\tau}$	1.8675	1.867 ± 0.012	$D_M(2.33)$	5731.3	5733 ± 12
$\boldsymbol{A_{100}^{PS}}$	233.8	246 ± 30	D_{40}	1204.5	1208 ± 13	$f\sigma_8(0.15)$	0.4358	0.4356 ± 0.0088
$\boldsymbol{A_{143}^{PS}}$	46.5	40 ± 8	D_{220}	5745.4	5748 ± 37	$\sigma_8(0.15)$	0.7369	0.7354 ± 0.0075
$\boldsymbol{A_{143\times217}^{PS}}$	55.7	41 ± 9	D_{810}	2530.9	2529 ± 13	$f\sigma_8(0.38)$	0.4581	0.4576 ± 0.0075
$\boldsymbol{A_{217}^{PS}}$	123.3	115.8 ± 9.9	D_{1420}	817.54	816.1 ± 4.6	$\sigma_8(0.38)$	0.6553	$0.6539^{+0.0063}_{-0.0057}$
$\boldsymbol{A^{kSZ}}$	0.00	< 2.76	D_{2000}	233.55	232.8 ± 1.6	$f\sigma_8(0.51)$	0.4590	0.4584 ± 0.0068
$\boldsymbol{A_{100}^{dust TT}}$	8.60	8.9 ± 1.8	$n_{s,0.002}$	0.97691	0.9750 ± 0.0044	$\sigma_8(0.51)$	0.6142	$0.6128^{+0.0058}_{-0.0052}$
$\boldsymbol{A_{143}^{dust TT}}$	10.61	10.5 ± 1.8	Y_P	0.245548	$0.245537^{+0.000061}_{-0.000071}$	$f\sigma_8(0.61)$	0.4557	0.4550 ± 0.0062
$\boldsymbol{A_{143\times217}^{dust TT}}$	19.57	18.0 ± 3.2	Y_P^{BBN}	0.246875	$0.246864^{+0.000061}_{-0.000072}$	$\sigma_8(0.61)$	0.5850	$0.5836^{+0.0054}_{-0.0049}$
$\boldsymbol{A_{217}^{dust TT}}$	95.3	93.5 ± 7.3	10^5D/H	2.5125	2.519 ± 0.029	$f\sigma_8(2.33)$	0.29573	$0.2950^{+0.0027}_{-0.0023}$
$\boldsymbol{A_{100}^{dust TE}}$	0.1126	0.115 ± 0.039	Age/Gyr	13.7269	13.731 ± 0.027	$\sigma_8(2.33)$	0.30578	$0.3050^{+0.0027}_{-0.0024}$
$\boldsymbol{A_{100\times143}^{dust TE}}$	0.1334	0.136 ± 0.030	z_*	1089.093	$1089.15^{+0.27}_{-0.30}$	f_{2000}^{143}	24.33	26 ± 3
$\boldsymbol{A_{100\times217}^{dust TE}}$	0.484	0.479 ± 0.086	r_*	145.082	145.08 ± 0.30	$f_{2000}^{143\times217}$	28.64	29.1 ± 2.0
$\boldsymbol{A_{143}^{dust TE}}$	0.215	0.219 ± 0.054	$100\theta_*$	1.041500	$1.04150^{+0.00029}_{-0.00033}$	f_{2000}^{217}	103.54	104.3 ± 1.9
$\boldsymbol{A_{143\times217}^{dust TE}}$	0.657	0.658 ± 0.081	$D_M(z_*)$/Gpc	13.9301	13.930 ± 0.028	χ^2_{simall}	395.65	396.8 ± 1.6
$\boldsymbol{A_{217}^{dust TE}}$	2.030	2.04 ± 0.27	z_{drag}	1060.619	1060.53 ± 0.32	χ^2_{lowl}	21.38	21.66 ± 0.71
$\boldsymbol{c_{100}}$	0.99974	0.99970 ± 0.00062	r_{drag}	147.622	147.63 ± 0.29	χ^2_{plik}	2338.7	2355.3 ± 6.1
$\boldsymbol{c_{217}}$	0.99809	0.99809 ± 0.00063	k_D	0.140609	0.14057 ± 0.00032	$\chi^2_{H073p45}$	6.67	7.1 ± 2.1
H_0	69.16	$69.08^{+0.68}_{-0.61}$	$100\theta_D$	0.160391	0.16044 ± 0.00018	χ^2_{prior}	1.44	11.3 ± 4.3
Ω_Λ	0.7079	$0.7069^{+0.0087}_{-0.0073}$	z_{eq}	3323.3	3326^{+28}_{-33}	χ^2_{CMB}	2755.8	2773.8 ± 6.1
Ω_m	0.2921	$0.2931^{+0.0073}_{-0.0087}$	k_{eq}	0.010143	$0.010150^{+0.000087}_{-0.00010}$			
$\Omega_m h^2$	0.13972	$0.1398^{+0.0012}_{-0.0014}$	$100\theta_{eq}$	0.8292	$0.8287^{+0.0064}_{-0.0057}$			

Best-fit $\chi^2_{eff} = 2763.88$; $\Delta\chi^2_{eff} = -14.05$; $\bar{\chi}^2_{eff} = 2792.09$; $\Delta\bar{\chi}^2_{eff} = -12.07$; $R - 1 = 0.02684$

χ^2_{eff}: CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.65 (Δ -0.82) commander_dx12_v3_2_29: 21.38 (Δ -1.16) plik_rd12_HM_v22b_TTTEEE: 2338.75 (Δ -8.01) Hubble - H073p45: 6.67 (Δ -3.91)

3.10 base_Alens_plikHM_TTTEEE_lowl_lowE_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02259 ± 0.00017	$\Omega_m h^2$	0.1413 ± 0.0014	k_{eq}	0.01026 ± 0.00011
$\boldsymbol{\Omega_c h^2}$	0.1181 ± 0.0016	$\Omega_m h^3$	0.09650 ± 0.00030	$100\theta_{eq}$	0.8215 ± 0.0067
$\boldsymbol{100\theta_{MC}}$	1.04114 ± 0.00032	σ_8	$0.8023^{+0.0071}_{-0.0079}$	$100\theta_{s,eq}$	0.4535 ± 0.0034
$\boldsymbol{\tau}$	$0.0527^{+0.0034}_{-0.0076}$	S_8	0.806 ± 0.019	$H(0.15)$	73.49 ± 0.62
$\boldsymbol{A_L}$	1.173 ± 0.064	$\sigma_8\Omega_m^{0.5}$	0.442 ± 0.010	$D_M(0.15)$	635.5 ± 6.0
$\boldsymbol{\ln(10^{10} A_s)}$	$3.036^{+0.010}_{-0.015}$	$\sigma_8\Omega_m^{0.25}$	0.5953 ± 0.0095	$H(0.38)$	83.46 ± 0.46
$\boldsymbol{n_s}$	0.9709 ± 0.0048	$\sigma_8/h^{0.5}$	0.971 ± 0.013	$D_M(0.38)$	1518 ± 12
$\boldsymbol{y_{cal}}$	1.0000 ± 0.0024	$r_{drag}h$	100.6 ± 1.2	$H(0.51)$	90.10 ± 0.36
$\boldsymbol{A^{CIB}_{217}}$	45 ± 7	$\langle d^2\rangle^{1/2}$	2.601 ± 0.059	$D_M(0.51)$	1967 ± 14
$\boldsymbol{\xi^{tSZ\times CIB}}$	> 0.432	z_{re}	$7.43^{+0.31}_{-0.84}$	$H(0.61)$	95.66 ± 0.29
$\boldsymbol{A^{tSZ}_{143}}$	$5.8^{+2.0}_{-1.8}$	$10^9 A_s$	$2.082^{+0.021}_{-0.032}$	$D_M(0.61)$	2290 ± 15
$\boldsymbol{A^{PS}_{100}}$	249 ± 28	$10^9 A_s e^{-2\tau}$	1.874 ± 0.012	$H(2.33)$	235.53 ± 0.91
$\boldsymbol{A^{PS}_{143}}$	42 ± 8	D_{40}	1217 ± 13	$D_M(2.33)$	5747 ± 13
$\boldsymbol{A^{PS}_{143\times217}}$	42^{+10}_{-9}	D_{220}	5739 ± 38	$f\sigma_8(0.15)$	0.4469 ± 0.0096
$\boldsymbol{A^{PS}_{217}}$	116.1 ± 9.9	D_{810}	2531 ± 13	$\sigma_8(0.15)$	$0.7422^{+0.0059}_{-0.0068}$
$\boldsymbol{A^{kSZ}}$	< 3.03	D_{1420}	815.5 ± 4.7	$f\sigma_8(0.38)$	0.4669 ± 0.0078
$\boldsymbol{A^{dustTT}_{100}}$	8.8 ± 1.8	D_{2000}	232.2 ± 1.6	$\sigma_8(0.38)$	$0.6588^{+0.0044}_{-0.0055}$
$\boldsymbol{A^{dustTT}_{143}}$	10.6 ± 1.8	$n_{s,0.002}$	0.9709 ± 0.0048	$f\sigma_8(0.51)$	0.4665 ± 0.0068
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.1 ± 3.3	Y_P	0.245477 ± 0.000067	$\sigma_8(0.51)$	$0.6170^{+0.0039}_{-0.0050}$
$\boldsymbol{A^{dustTT}_{217}}$	93.7 ± 7.3	Y_P^{BBN}	0.246804 ± 0.000067	$f\sigma_8(0.61)$	0.4622 ± 0.0061
$\boldsymbol{A^{dustTE}_{100}}$	0.114 ± 0.038	10^5D/H	2.546 ± 0.031	$\sigma_8(0.61)$	$0.5873^{+0.0035}_{-0.0047}$
$\boldsymbol{A^{dustTE}_{100\times143}}$	0.134 ± 0.030	Age/Gyr	13.760 ± 0.029	$f\sigma_8(2.33)$	$0.2965^{+0.0016}_{-0.0023}$
$\boldsymbol{A^{dustTE}_{100\times217}}$	0.480 ± 0.086	z_*	1089.48 ± 0.32	$\sigma_8(2.33)$	$0.3060^{+0.0016}_{-0.0023}$
$\boldsymbol{A^{dustTE}_{143}}$	0.221 ± 0.054	r_*	144.76 ± 0.33	f^{143}_{2000}	26.7 ± 2.9
$\boldsymbol{A^{dustTE}_{143\times217}}$	0.660 ± 0.080	$100\theta_*$	1.04130 ± 0.00032	$f^{143\times217}_{2000}$	29.9 ± 2.0
$\boldsymbol{A^{dustTE}_{217}}$	2.05 ± 0.27	$D_M(z_*)$/Gpc	13.902 ± 0.031	f^{217}_{2000}	105.0 ± 1.9
$\boldsymbol{c_{100}}$	0.99968 ± 0.00061	z_{drag}	1060.30 ± 0.33	χ^2_{simall}	396.4 ± 1.1
$\boldsymbol{c_{217}}$	0.99812 ± 0.00063	r_{drag}	147.36 ± 0.32	χ^2_{lowl}	22.38 ± 0.90
H_0	68.29 ± 0.72	k_D	0.14075 ± 0.00033	χ^2_{plik}	2353.8 ± 5.7
Ω_Λ	0.6969 ± 0.0094	$100\theta_D$	0.16056 ± 0.00019	χ^2_{prior}	11.3 ± 4.4
Ω_m	0.3031 ± 0.0094	z_{eq}	3361 ± 35	χ^2_{CMB}	2772.6 ± 5.8

$\bar{\chi}^2_{eff} = 2783.87$; $\Delta\bar{\chi}^2_{eff} = -7.66$; $R - 1 = 0.01066$

3.11 base_Alens_plikHM_TTTEEE_lowl_lowE_post_BAO_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02258 ± 0.00015	σ_8	$0.8028^{+0.0059}_{-0.0069}$	$D_M(0.15)$	635.9 ± 4.2
$\boldsymbol{\Omega_c h^2}$	0.1182 ± 0.0011	S_8	0.808 ± 0.013	$H(0.38)$	83.43 ± 0.32
$\boldsymbol{100\theta_{MC}}$	1.04113 ± 0.00029	$\sigma_8\Omega_m^{0.5}$	0.4425 ± 0.0073	$D_M(0.38)$	1518.4 ± 8.4
$\boldsymbol{\tau}$	$0.0527^{+0.0035}_{-0.0076}$	$\sigma_8\Omega_m^{0.25}$	0.5960 ± 0.0071	$H(0.51)$	90.07 ± 0.26
$\boldsymbol{A_L}$	1.170 ± 0.058	$\sigma_8/h^{0.5}$	0.972 ± 0.010	$D_M(0.51)$	1968.2 ± 9.9
$\boldsymbol{\ln(10^{10}A_s)}$	$3.036^{+0.010}_{-0.015}$	$r_{drag}h$	100.54 ± 0.85	$H(0.61)$	95.64 ± 0.21
$\boldsymbol{n_s}$	0.9706 ± 0.0039	$\langle d^2\rangle^{1/2}$	2.600 ± 0.058	$D_M(0.61)$	2291 ± 11
$\boldsymbol{y_{cal}}$	1.0000 ± 0.0025	z_{re}	$7.43^{+0.29}_{-0.87}$	$H(2.33)$	235.60 ± 0.64
$\boldsymbol{A^{CIB}_{217}}$	44 ± 7	$10^9 A_s$	$2.083^{+0.021}_{-0.031}$	$D_M(2.33)$	5747.6 ± 9.9
$\boldsymbol{\xi^{tSZ\times CIB}}$	> 0.434	$10^9 A_s e^{-2\tau}$	1.874 ± 0.011	$f\sigma_8(0.15)$	0.4476 ± 0.0069
$\boldsymbol{A^{tSZ}_{143}}$	$5.8^{+2.1}_{-1.7}$	D_{40}	1218 ± 12	$\sigma_8(0.15)$	$0.7426^{+0.0050}_{-0.0061}$
$\boldsymbol{A^{PS}_{100}}$	250 ± 28	D_{220}	5738 ± 38	$f\sigma_8(0.38)$	0.4675 ± 0.0058
$\boldsymbol{A^{PS}_{143}}$	42 ± 8	D_{810}	2531 ± 13	$\sigma_8(0.38)$	$0.6591^{+0.0040}_{-0.0052}$
$\boldsymbol{A^{PS}_{143\times217}}$	42^{+10}_{-9}	D_{1420}	815.5 ± 4.7	$f\sigma_8(0.51)$	0.4670 ± 0.0052
$\boldsymbol{A^{PS}_{217}}$	116.4 ± 9.9	D_{2000}	232.2 ± 1.6	$\sigma_8(0.51)$	$0.6172^{+0.0036}_{-0.0048}$
$\boldsymbol{A^{kSZ}}$	< 3.06	$n_{s,0.002}$	0.9706 ± 0.0039	$f\sigma_8(0.61)$	0.4627 ± 0.0047
$\boldsymbol{A^{dustTT}_{100}}$	8.8 ± 1.9	Y_P	0.245473 ± 0.000056	$\sigma_8(0.61)$	$0.5875^{+0.0033}_{-0.0046}$
$\boldsymbol{A^{dustTT}_{143}}$	10.6 ± 1.8	Y_P^{BBN}	0.246800 ± 0.000056	$f\sigma_8(2.33)$	$0.2965^{+0.0016}_{-0.0023}$
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.2 ± 3.3	10^5D/H	2.548 ± 0.026	$\sigma_8(2.33)$	$0.3060^{+0.0016}_{-0.0023}$
$\boldsymbol{A^{dustTT}_{217}}$	93.8 ± 7.3	Age/Gyr	13.762 ± 0.022	f^{143}_{2000}	26.7 ± 2.9
$\boldsymbol{A^{dustTE}_{100}}$	0.114 ± 0.039	z_*	1089.50 ± 0.24	$f^{143\times217}_{2000}$	30.0 ± 2.0
$\boldsymbol{A^{dustTE}_{100\times143}}$	0.135 ± 0.030	r_*	144.74 ± 0.24	f^{217}_{2000}	105.1 ± 1.8
$\boldsymbol{A^{dustTE}_{100\times217}}$	0.479 ± 0.086	$100\theta_*$	1.04129 ± 0.00029	χ^2_{simall}	396.4 ± 1.1
$\boldsymbol{A^{dustTE}_{143}}$	0.221 ± 0.053	$D_M(z_*)$/Gpc	13.900 ± 0.023	χ^2_{lowl}	22.40 ± 0.75
$\boldsymbol{A^{dustTE}_{143\times217}}$	0.659 ± 0.080	z_{drag}	1060.29 ± 0.31	χ^2_{plik}	2353.2 ± 5.5
$\boldsymbol{A^{dustTE}_{217}}$	2.06 ± 0.27	r_{drag}	147.34 ± 0.25	χ^2_{6DF}	0.030 ± 0.043
$\boldsymbol{c_{100}}$	0.99969 ± 0.00061	k_D	0.14076 ± 0.00029	χ^2_{MGS}	1.79 ± 0.52
$\boldsymbol{c_{217}}$	0.99812 ± 0.00063	$100\theta_D$	0.16056 ± 0.00018	$\chi^2_{DR12BAO}$	3.95 ± 0.79
H_0	68.24 ± 0.50	z_{eq}	3364 ± 24	χ^2_{prior}	11.3 ± 4.4
Ω_Λ	0.6962 ± 0.0064	k_{eq}	0.010267 ± 0.000073	χ^2_{BAO}	5.78 ± 0.76
Ω_m	0.3038 ± 0.0064	$100\theta_{eq}$	0.8210 ± 0.0046	χ^2_{CMB}	2772.0 ± 5.7
$\Omega_m h^2$	0.1414 ± 0.0010	$100\theta_{s,eq}$	0.4532 ± 0.0024		
$\Omega_m h^3$	0.09649 ± 0.00030	$H(0.15)$	73.44 ± 0.43		

$\bar{\chi}^2_{eff} = 2789.13$; $\Delta\bar{\chi}^2_{eff} = -8.59$; $R - 1 = 0.01550$

3.12 base_Alens_plikHM_TTTEEE_lowl_lowE_post_Riess18_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02274 ± 0.00016	$\Omega_m h^3$	0.09658 ± 0.00030	$100\theta_{s,eq}$	0.4572 ± 0.0031
$\boldsymbol{\Omega_c h^2}$	$0.1164^{+0.0013}_{-0.0015}$	σ_8	$0.7962^{+0.0065}_{-0.0076}$	$H(0.15)$	74.19 ± 0.56
$\boldsymbol{100\theta_{MC}}$	$1.04136^{+0.00030}_{-0.00034}$	S_8	$0.787^{+0.015}_{-0.018}$	$D_M(0.15)$	628.7 ± 5.3
$\boldsymbol{\tau}$	$0.0534^{+0.0040}_{-0.0071}$	$\sigma_8\Omega_m^{0.5}$	$0.4309^{+0.0084}_{-0.0096}$	$H(0.38)$	83.98 ± 0.42
$\boldsymbol{A_L}$	1.214 ± 0.065	$\sigma_8\Omega_m^{0.25}$	$0.5857^{+0.0080}_{-0.0091}$	$D_M(0.38)$	1504 ± 11
$\boldsymbol{\ln(10^{10}A_s)}$	$3.033^{+0.011}_{-0.015}$	$\sigma_8/h^{0.5}$	$0.958^{+0.011}_{-0.013}$	$H(0.51)$	90.51 ± 0.34
$\boldsymbol{n_s}$	0.9751 ± 0.0044	$r_{drag}h$	102.0 ± 1.1	$D_M(0.51)$	1951 ± 13
$\boldsymbol{y_{cal}}$	0.9999 ± 0.0024	$\langle d^2\rangle^{1/2}$	2.614 ± 0.058	$H(0.61)$	95.99 ± 0.28
$\boldsymbol{A^{CIB}_{217}}$	44 ± 7	z_{re}	$7.44^{+0.35}_{-0.80}$	$D_M(0.61)$	2273 ± 14
$\boldsymbol{\xi^{tSZ\times CIB}}$	> 0.446	10^9A_s	$2.077^{+0.022}_{-0.030}$	$H(2.33)$	$234.60^{+0.76}_{-0.86}$
$\boldsymbol{A^{tSZ}_{143}}$	$5.9^{+2.0}_{-1.7}$	$10^9A_se^{-2\tau}$	1.867 ± 0.012	$D_M(2.33)$	5733 ± 12
$\boldsymbol{A^{PS}_{100}}$	246 ± 30	D_{40}	1208 ± 13	$f\sigma_8(0.15)$	$0.4368^{+0.0080}_{-0.0091}$
$\boldsymbol{A^{PS}_{143}}$	40 ± 8	D_{220}	5747^{+39}_{-35}	$\sigma_8(0.15)$	$0.7376^{+0.0055}_{-0.0065}$
$\boldsymbol{A^{PS}_{143\times217}}$	41 ± 9	D_{810}	2528 ± 13	$f\sigma_8(0.38)$	$0.4589^{+0.0066}_{-0.0075}$
$\boldsymbol{A^{PS}_{217}}$	116 ± 10	D_{1420}	816.0 ± 4.6	$\sigma_8(0.38)$	$0.6559^{+0.0043}_{-0.0053}$
$\boldsymbol{A^{kSZ}}$	< 2.75	D_{2000}	232.8 ± 1.5	$f\sigma_8(0.51)$	$0.4597^{+0.0058}_{-0.0066}$
$\boldsymbol{A^{dustTT}_{100}}$	8.8 ± 1.8	$n_{s,0.002}$	0.9751 ± 0.0044	$\sigma_8(0.51)$	$0.6147^{+0.0038}_{-0.0048}$
$\boldsymbol{A^{dustTT}_{143}}$	10.6 ± 1.8	Y_P	$0.245537^{+0.000059}_{-0.000071}$	$f\sigma_8(0.61)$	$0.4563^{+0.0053}_{-0.0060}$
$\boldsymbol{A^{dustTT}_{143\times217}}$	17.9 ± 3.3	Y_P^{BBN}	$0.246864^{+0.000059}_{-0.000072}$	$\sigma_8(0.61)$	$0.5854^{+0.0035}_{-0.0045}$
$\boldsymbol{A^{dustTT}_{217}}$	93.5 ± 7.4	10^5D/H	2.519 ± 0.029	$f\sigma_8(2.33)$	$0.2959^{+0.0017}_{-0.0022}$
$\boldsymbol{A^{dustTE}_{100}}$	0.115 ± 0.039	Age/Gyr	13.731 ± 0.027	$\sigma_8(2.33)$	$0.3060^{+0.0016}_{-0.0022}$
$\boldsymbol{A^{dustTE}_{100\times143}}$	0.135 ± 0.030	z_*	1089.15 ± 0.29	f^{143}_{2000}	26 ± 3
$\boldsymbol{A^{dustTE}_{100\times217}}$	0.480 ± 0.087	r_*	145.09 ± 0.30	$f^{143\times217}_{2000}$	29.1 ± 2.0
$\boldsymbol{A^{dustTE}_{143}}$	0.219 ± 0.054	$100\theta_*$	$1.04151^{+0.00029}_{-0.00033}$	f^{217}_{2000}	104.3 ± 1.9
$\boldsymbol{A^{dustTE}_{143\times217}}$	0.659 ± 0.081	$D_M(z_*)$/Gpc	13.930 ± 0.028	χ^2_{simall}	396.3 ± 1.0
$\boldsymbol{A^{dustTE}_{217}}$	2.04 ± 0.27	z_{drag}	1060.53 ± 0.32	χ^2_{lowl}	21.71 ± 0.72
$\boldsymbol{c_{100}}$	0.99970 ± 0.00062	r_{drag}	147.64 ± 0.29	χ^2_{plik}	2355.4 ± 6.1
$\boldsymbol{c_{217}}$	0.99808 ± 0.00062	k_D	0.14056 ± 0.00031	$\chi^2_{H073p45}$	7.0 ± 2.1
H_0	69.10 ± 0.65	$100\theta_D$	0.16044 ± 0.00018	χ^2_{prior}	11.3 ± 4.4
Ω_Λ	$0.7072^{+0.0086}_{-0.0075}$	z_{eq}	3325^{+29}_{-33}	χ^2_{CMB}	2773.4 ± 6.1
Ω_m	$0.2928^{+0.0075}_{-0.0086}$	k_{eq}	$0.010148^{+0.000088}_{-0.00010}$		
$\Omega_m h^2$	$0.1398^{+0.0012}_{-0.0014}$	$100\theta_{eq}$	0.8289 ± 0.0061		

$\bar{\chi}^2_{eff} = 2791.77$; $\Delta\bar{\chi}^2_{eff} = -12.12$; $R - 1 = 0.03556$

3.13 base_Alens_CamSpecHM_TT_lowl_lowE

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022700	0.02263 ± 0.00029	$\sigma_8\Omega_m^{0.5}$	0.4286	0.430 ± 0.016	$H(0.15)$	74.25	74.1 ± 1.1
$\boldsymbol{\Omega_c h^2}$	0.11620	0.1164 ± 0.0025	$\sigma_8\Omega_m^{0.25}$	0.5833	0.584 ± 0.015	$D_M(0.15)$	628.1	629 ± 10
$\boldsymbol{100\theta_{MC}}$	1.04149	1.04144 ± 0.00054	$\sigma_8/h^{0.5}$	0.9543	0.956 ± 0.021	$H(0.38)$	84.02	83.92 ± 0.79
$\boldsymbol{\tau}$	0.0502	$0.0503^{+0.0087}_{-0.0076}$	$r_{drag}h$	102.20	102.0 ± 2.1	$D_M(0.38)$	1502.7	1505 ± 20
$\boldsymbol{A_L}$	1.270	$1.246^{+0.092}_{-0.10}$	$\langle d^2\rangle^{1/2}$	2.656	2.636 ± 0.079	$H(0.51)$	90.53	90.45 ± 0.64
$\boldsymbol{\ln(10^{10}A_s)}$	3.0260	$3.026^{+0.019}_{-0.016}$	z_{re}	7.14	$7.13^{+0.93}_{-0.72}$	$D_M(0.51)$	1949.8	1953 ± 24
$\boldsymbol{n_s}$	0.9776	0.9756 ± 0.0073	$10^9 A_s$	2.0614	$2.062^{+0.038}_{-0.034}$	$H(0.61)$	96.00	95.93 ± 0.52
$\boldsymbol{y_{cal}}$	0.99990	1.0001 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.8643	1.864 ± 0.014	$D_M(0.61)$	2271.4	2275 ± 26
$\boldsymbol{A_{100}^{PS}}$	217.0	229 ± 25	D_{40}	1200.1	1204 ± 17	$H(2.33)$	234.44	234.5 ± 1.4
$\boldsymbol{A_{143}^{PS}}$	44.2	33 ± 9	D_{220}	5727.4	5728 ± 43	$D_M(2.33)$	5732.6	5737 ± 23
$\boldsymbol{A_{217}^{PS}}$	109.9	104 ± 10	D_{810}	2526.2	2525 ± 14	$f\sigma_8(0.15)$	0.4346	0.436 ± 0.015
$\boldsymbol{A_{217}^{CIB}}$	36.7	37 ± 7	D_{1420}	815.6	814.3 ± 5.2	$\sigma_8(0.15)$	0.7354	0.7354 ± 0.0093
$\boldsymbol{A_{143}^{tSZ}}$	6.24	4.2 ± 2.1	D_{2000}	233.18	232.3 ± 2.1	$f\sigma_8(0.38)$	0.4569	0.458 ± 0.012
$\boldsymbol{r_{143\times217}^{PS}}$	0.796	0.68 ± 0.14	$n_{s,0.002}$	0.9776	0.9756 ± 0.0073	$\sigma_8(0.38)$	0.6541	0.6539 ± 0.0072
$\boldsymbol{r_{143\times217}^{CIB}}$	0.739	0.50 ± 0.27	Y_P	0.245516	$0.24549^{+0.00011}_{-0.00012}$	$f\sigma_8(0.51)$	0.4579	0.458 ± 0.011
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.996	—	Y_P^{BBN}	0.246843	$0.24682^{+0.00011}_{-0.00013}$	$\sigma_8(0.51)$	0.6130	0.6128 ± 0.0064
$\boldsymbol{A^{kSZ}}$	0.00	< 5.18	10^5D/H	2.527	2.540 ± 0.053	$f\sigma_8(0.61)$	0.4546	0.4550 ± 0.0095
$\boldsymbol{A_{100}^{dust}}$	1.010	1.01 ± 0.19	Age/Gyr	13.730	13.740 ± 0.050	$\sigma_8(0.61)$	0.5839	$0.5836^{+0.0060}_{-0.0055}$
$\boldsymbol{A_{143}^{dust}}$	0.948	0.95 ± 0.18	z_*	1089.18	1089.29 ± 0.53	$f\sigma_8(2.33)$	0.29521	$0.2950^{+0.0028}_{-0.0025}$
$\boldsymbol{A_{217}^{dust}}$	0.990	0.98 ± 0.10	r_*	145.17	145.18 ± 0.53	$\sigma_8(2.33)$	0.30527	0.3050 ± 0.0028
$\boldsymbol{A_{143\times217}^{dust}}$	1.016	1.02 ± 0.16	$100\theta_*$	1.04165	1.04161 ± 0.00052	f_{2000}^{143}	25.22	26 ± 3
$\boldsymbol{c_{100}}$	0.99788	0.9975 ± 0.0010	$D_M(z_*)$/Gpc	13.9362	13.938 ± 0.048	f_{2000}^{217}	103.32	104.3 ± 2.4
$\boldsymbol{c_{217}}$	1.00076	1.0008 ± 0.0016	z_{drag}	1060.43	1060.27 ± 0.56	$f_{2000}^{143\times217}$	28.50	29.2 ± 2.6
H_0	69.18	69.0 ± 1.2	r_{drag}	147.74	147.77 ± 0.50	χ^2_{simall}	395.71	396.8 ± 1.6
Ω_Λ	0.7084	$0.707^{+0.016}_{-0.014}$	k_D	0.14043	0.14034 ± 0.00051	χ^2_{lowl}	21.18	21.6 ± 1.0
Ω_m	0.2916	$0.293^{+0.014}_{-0.016}$	$100\theta_D$	0.160522	0.16061 ± 0.00030	$\chi^2_{CamSpec}$	7046.0	7059.9 ± 5.3
$\Omega_m h^2$	0.13955	0.1397 ± 0.0023	z_{eq}	3319	3322 ± 55	χ^2_{prior}	1.37	7.2 ± 3.3
$\Omega_m h^3$	0.09654	0.09640 ± 0.00050	k_{eq}	0.010131	0.01014 ± 0.00017	χ^2_{CMB}	7462.8	7478.3 ± 5.5
σ_8	0.7937	0.794 ± 0.011	$100\theta_{eq}$	0.8298	0.829 ± 0.011			
S_8	0.7825	0.785 ± 0.029	$100\theta_{s,eq}$	0.4578	0.4575 ± 0.0056			

Best-fit $\chi^2_{eff} = 7464.21$; $\Delta\chi^2_{eff} = -7.53$; $\bar{\chi}^2_{eff} = 7485.53$; $\Delta\bar{\chi}^2_{eff} = -6.01$; $R - 1 = 0.00653$

χ^2_{eff}: CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.71 (Δ -0.12) commander_dx12_v3_2_29: 21.18 (Δ -2.22) CamSpec like_10.7HM: 7045.95 (Δ -4.38)

3.14 base_Alens_CamSpecHM_TT_lowl_lowE_post_BAO

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02250 ± 0.00022	$\sigma_8\Omega_m^{0.25}$	0.5921 ± 0.0088	$H(0.38)$	83.47 ± 0.41
$\boldsymbol{\Omega_c h^2}$	0.1178 ± 0.0013	$\sigma_8/h^{0.5}$	0.966 ± 0.013	$D_M(0.38)$	1517 ± 10
$\boldsymbol{100\theta_{MC}}$	1.04124 ± 0.00043	$r_{drag}h$	100.8 ± 1.0	$H(0.51)$	90.10 ± 0.34
$\boldsymbol{\tau}$	$0.0495^{+0.0089}_{-0.0072}$	$\langle d^2\rangle^{1/2}$	2.624 ± 0.077	$D_M(0.51)$	1966 ± 12
$\boldsymbol{A_L}$	1.209 ± 0.079	z_{re}	$7.10^{+0.96}_{-0.70}$	$H(0.61)$	95.64 ± 0.29
$\boldsymbol{\ln(10^{10}A_s)}$	$3.028^{+0.019}_{-0.016}$	$10^9 A_s$	$2.065^{+0.039}_{-0.033}$	$D_M(0.61)$	2289 ± 13
$\boldsymbol{n_s}$	0.9719 ± 0.0047	$10^9 A_s e^{-2\tau}$	1.870 ± 0.012	$H(2.33)$	235.27 ± 0.79
$\boldsymbol{y_{cal}}$	1.0001 ± 0.0026	D_{40}	1212 ± 13	$D_M(2.33)$	5749 ± 14
$\boldsymbol{A^{PS}_{100}}$	230 ± 25	D_{220}	5720 ± 42	$f\sigma_8(0.15)$	0.4441 ± 0.0085
$\boldsymbol{A^{PS}_{143}}$	35 ± 8	D_{810}	2526 ± 14	$\sigma_8(0.15)$	$0.7392^{+0.0078}_{-0.0069}$
$\boldsymbol{A^{PS}_{217}}$	104 ± 10	D_{1420}	813.7 ± 5.2	$f\sigma_8(0.38)$	0.4643 ± 0.0072
$\boldsymbol{A^{CIB}_{217}}$	37 ± 7	D_{2000}	231.8 ± 2.0	$\sigma_8(0.38)$	$0.6563^{+0.0066}_{-0.0058}$
$\boldsymbol{A^{tSZ}_{143}}$	4.1 ± 2.0	$n_{s,0.002}$	0.9719 ± 0.0047	$f\sigma_8(0.51)$	0.4641 ± 0.0065
$\boldsymbol{r^{PS}_{143\times217}}$	0.68 ± 0.13	Y_P	0.245443 ± 0.000088	$\sigma_8(0.51)$	$0.6146^{+0.0061}_{-0.0053}$
$\boldsymbol{r^{CIB}_{143\times217}}$	$0.52^{+0.35}_{-0.27}$	Y_P^{BBN}	0.246770 ± 0.000088	$f\sigma_8(0.61)$	0.4600 ± 0.0060
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	10^5D/H	2.563 ± 0.041	$\sigma_8(0.61)$	$0.5851^{+0.0057}_{-0.0050}$
$\boldsymbol{A^{kSZ}}$	< 5.21	Age/Gyr	13.765 ± 0.032	$f\sigma_8(2.33)$	$0.2954^{+0.0028}_{-0.0025}$
$\boldsymbol{A^{dust}_{100}}$	1.01 ± 0.20	z_*	1089.57 ± 0.34	$\sigma_8(2.33)$	$0.3050^{+0.0029}_{-0.0025}$
$\boldsymbol{A^{dust}_{143}}$	0.96 ± 0.18	r_*	144.90 ± 0.32	f^{143}_{2000}	27 ± 3
$\boldsymbol{A^{dust}_{217}}$	0.98 ± 0.10	$100\theta_*$	1.04141 ± 0.00043	f^{217}_{2000}	104.8 ± 2.2
$\boldsymbol{A^{dust}_{143\times217}}$	1.02 ± 0.16	$D_M(z_*)$/Gpc	13.914 ± 0.031	$f^{143\times217}_{2000}$	29.9 ± 2.4
$\boldsymbol{c_{100}}$	0.9975 ± 0.0010	z_{drag}	1060.08 ± 0.49	χ^2_{simall}	396.9 ± 1.6
$\boldsymbol{c_{217}}$	1.0008 ± 0.0016	r_{drag}	147.53 ± 0.34	χ^2_{lowl}	22.00 ± 0.80
H_0	68.35 ± 0.61	k_D	0.14050 ± 0.00045	$\chi^2_{CamSpec}$	7058.9 ± 5.2
Ω_Λ	0.6982 ± 0.0077	$100\theta_D$	0.16070 ± 0.00027	χ^2_{6DF}	0.049 ± 0.069
Ω_m	0.3018 ± 0.0077	z_{eq}	3353 ± 29	χ^2_{MGS}	1.99 ± 0.65
$\Omega_m h^2$	0.1409 ± 0.0012	k_{eq}	0.010233 ± 0.000089	$\chi^2_{DR12BAO}$	4.06 ± 0.98
$\Omega_m h^3$	0.09633 ± 0.00050	$100\theta_{eq}$	0.8229 ± 0.0056	χ^2_{prior}	7.3 ± 3.4
σ_8	$0.7989^{+0.0088}_{-0.0079}$	$100\theta_{s,eq}$	0.4543 ± 0.0029	χ^2_{BAO}	6.1 ± 1.2
S_8	0.801 ± 0.016	$H(0.15)$	73.53 ± 0.53	χ^2_{CMB}	7477.8 ± 5.4
$\sigma_8\Omega_m^{0.5}$	0.4389 ± 0.0089	$D_M(0.15)$	635.0 ± 5.2		

$\bar{\chi}^2_{eff} = 7491.23$; $\Delta\bar{\chi}^2_{eff} = -6.32$; $R - 1 = 0.01433$

3.15 base_Alens_CamSpecHM_TT_lowl_lowE_post_Riess18

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02293 ± 0.00025	$\sigma_8\Omega_m^{0.5}$	$0.411^{+0.012}_{-0.013}$	$H(0.15)$	75.48 ± 0.85
$\boldsymbol{\Omega_c h^2}$	0.1133 ± 0.0020	$\sigma_8\Omega_m^{0.25}$	0.567 ± 0.012	$D_M(0.15)$	$616.7^{+7.4}_{-8.3}$
$\boldsymbol{100\theta_{MC}}$	1.04192 ± 0.00048	$\sigma_8/h^{0.5}$	0.932 ± 0.017	$H(0.38)$	84.94 ± 0.65
$\boldsymbol{\tau}$	0.0524 ± 0.0089	$r_{drag}h$	104.7 ± 1.7	$D_M(0.38)$	1480 ± 16
$\boldsymbol{A_L}$	1.334 ± 0.097	$\langle d^2\rangle^{1/2}$	2.667 ± 0.077	$H(0.51)$	91.27 ± 0.53
$\boldsymbol{\ln(10^{10}A_s)}$	3.023 ± 0.018	z_{re}	$7.24^{+0.91}_{-0.81}$	$D_M(0.51)$	1922 ± 19
$\boldsymbol{n_s}$	0.9839 ± 0.0061	$10^9 A_s$	2.056 ± 0.037	$H(0.61)$	96.60 ± 0.44
$\boldsymbol{y_{cal}}$	1.0001 ± 0.0024	$10^9 A_s e^{-2\tau}$	1.852 ± 0.013	$D_M(0.61)$	2242 ± 20
$\boldsymbol{A^{PS}_{100}}$	225 ± 25	D_{40}	1188^{+14}_{-16}	$H(2.33)$	232.8 ± 1.1
$\boldsymbol{A^{PS}_{143}}$	30 ± 8	D_{220}	5746 ± 41	$D_M(2.33)$	5709 ± 19
$\boldsymbol{A^{PS}_{217}}$	105 ± 10	D_{810}	2521 ± 14	$f\sigma_8(0.15)$	0.418 ± 0.012
$\boldsymbol{A^{CIB}_{217}}$	35^{+7}_{-7}	D_{1420}	815.5 ± 5.0	$\sigma_8(0.15)$	0.7274 ± 0.0084
$\boldsymbol{A^{tSZ}_{143}}$	4.4 ± 2.1	D_{2000}	233.8 ± 2.0	$f\sigma_8(0.38)$	0.443 ± 0.010
$\boldsymbol{r^{PS}_{143\times217}}$	0.69 ± 0.14	$n_{s,0.002}$	0.9839 ± 0.0061	$\sigma_8(0.38)$	0.6489 ± 0.0068
$\boldsymbol{r^{CIB}_{143\times217}}$	$0.47^{+0.26}_{-0.35}$	Y_P	0.24562 ± 0.00011	$f\sigma_8(0.51)$	0.4461 ± 0.0088
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	0.24695 ± 0.00011	$\sigma_8(0.51)$	0.6090 ± 0.0061
$\boldsymbol{A^{kSZ}}$	< 4.70	10^5D/H	2.486 ± 0.044	$f\sigma_8(0.61)$	0.4442 ± 0.0080
$\boldsymbol{A^{dust}_{100}}$	1.01 ± 0.19	Age/Gyr	13.680 ± 0.041	$\sigma_8(0.61)$	0.5805 ± 0.0057
$\boldsymbol{A^{dust}_{143}}$	0.95 ± 0.17	z_*	$1088.65^{+0.40}_{-0.45}$	$f\sigma_8(2.33)$	0.2943 ± 0.0027
$\boldsymbol{A^{dust}_{217}}$	0.98 ± 0.10	r_*	145.76 ± 0.44	$\sigma_8(2.33)$	0.3052 ± 0.0028
$\boldsymbol{A^{dust}_{143\times217}}$	1.01 ± 0.16	$100\theta_*$	1.04206 ± 0.00047	f^{143}_{2000}	24 ± 3
$\boldsymbol{c_{100}}$	0.9976 ± 0.0011	$D_M(z_*)$/Gpc	13.987 ± 0.041	f^{217}_{2000}	102.9 ± 2.3
$\boldsymbol{c_{217}}$	1.0006 ± 0.0016	z_{drag}	1060.74 ± 0.51	$f^{143\times217}_{2000}$	27.6 ± 2.4
H_0	70.60 ± 0.97	r_{drag}	148.26 ± 0.44	χ^2_{simall}	396.8 ± 1.5
Ω_Λ	$0.725^{+0.012}_{-0.010}$	k_D	0.14004 ± 0.00048	χ^2_{lowl}	20.64 ± 0.59
Ω_m	$0.275^{+0.010}_{-0.012}$	$100\theta_D$	0.16039 ± 0.00027	$\chi^2_{CamSpec}$	7062.5 ± 5.7
$\Omega_m h^2$	0.1369 ± 0.0018	z_{eq}	3256 ± 44	$\chi^2_{H073p45}$	3.3 ± 2.1
$\Omega_m h^3$	0.09662 ± 0.00048	k_{eq}	0.00994 ± 0.00013	χ^2_{prior}	6.9 ± 3.1
σ_8	0.7832 ± 0.0098	$100\theta_{eq}$	0.8430 ± 0.0091	χ^2_{CMB}	7479.9 ± 5.8
S_8	$0.750^{+0.021}_{-0.024}$	$100\theta_{s,eq}$	0.4645 ± 0.0046		

$\bar{\chi}^2_{eff} = 7490.17$; $\Delta\bar{\chi}^2_{eff} = -12.71$; $R - 1 = 0.03353$

3.16 base_Alens_CamSpecHM_TT_lowl_lowE_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02263 ± 0.00029	$\sigma_8\Omega_m^{0.5}$	0.431 ± 0.016	$H(0.15)$	74.1 ± 1.1
$\boldsymbol{\Omega_c h^2}$	0.1164 ± 0.0025	$\sigma_8\Omega_m^{0.25}$	0.586 ± 0.015	$D_M(0.15)$	629 ± 10
$\boldsymbol{100\theta_{MC}}$	1.04144 ± 0.00053	$\sigma_8/h^{0.5}$	0.958 ± 0.020	$H(0.38)$	83.93 ± 0.79
$\boldsymbol{\tau}$	$0.0535^{+0.0039}_{-0.0079}$	$r_{drag}h$	102.1 ± 2.1	$D_M(0.38)$	1505 ± 20
$\boldsymbol{A_L}$	1.239 ± 0.097	$\langle d^2\rangle^{1/2}$	2.635 ± 0.078	$H(0.51)$	90.46 ± 0.64
$\boldsymbol{\ln(10^{10}A_s)}$	$3.032^{+0.012}_{-0.015}$	z_{re}	$7.47^{+0.37}_{-0.83}$	$D_M(0.51)$	1953 ± 24
$\boldsymbol{n_s}$	0.9758 ± 0.0073	$10^9 A_s$	$2.075^{+0.024}_{-0.032}$	$H(0.61)$	95.93 ± 0.52
$\boldsymbol{y_{cal}}$	1.0001 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.864 ± 0.015	$D_M(0.61)$	2274 ± 26
$\boldsymbol{A^{PS}_{100}}$	228 ± 25	D_{40}	1205 ± 17	$H(2.33)$	234.5 ± 1.4
$\boldsymbol{A^{PS}_{143}}$	33 ± 9	D_{220}	5727 ± 43	$D_M(2.33)$	5736 ± 23
$\boldsymbol{A^{PS}_{217}}$	104 ± 10	D_{810}	2525 ± 14	$f\sigma_8(0.15)$	0.437 ± 0.015
$\boldsymbol{A^{CIB}_{217}}$	37 ± 7	D_{1420}	814.3 ± 5.2	$\sigma_8(0.15)$	0.7376 ± 0.0083
$\boldsymbol{A^{tSZ}_{143}}$	4.2 ± 2.1	D_{2000}	232.4 ± 2.1	$f\sigma_8(0.38)$	0.459 ± 0.012
$\boldsymbol{r^{PS}_{143\times217}}$	0.68 ± 0.14	$n_{s,0.002}$	0.9758 ± 0.0073	$\sigma_8(0.38)$	0.6559 ± 0.0061
$\boldsymbol{r^{CIB}_{143\times217}}$	0.50 ± 0.27	Y_P	$0.24549^{+0.00011}_{-0.00012}$	$f\sigma_8(0.51)$	0.460 ± 0.010
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	$0.24682^{+0.00011}_{-0.00012}$	$\sigma_8(0.51)$	0.6147 ± 0.0053
$\boldsymbol{A^{kSZ}}$	< 5.15	10^5D/H	2.540 ± 0.053	$f\sigma_8(0.61)$	0.4563 ± 0.0092
$\boldsymbol{A^{dust}_{100}}$	1.01 ± 0.19	Age/Gyr	13.739 ± 0.050	$\sigma_8(0.61)$	$0.5854^{+0.0045}_{-0.0051}$
$\boldsymbol{A^{dust}_{143}}$	0.95 ± 0.17	z_*	1089.29 ± 0.53	$f\sigma_8(2.33)$	$0.2959^{+0.0019}_{-0.0024}$
$\boldsymbol{A^{dust}_{217}}$	0.98 ± 0.10	r_*	145.19 ± 0.53	$\sigma_8(2.33)$	$0.3060^{+0.0018}_{-0.0024}$
$\boldsymbol{A^{dust}_{143\times217}}$	1.02 ± 0.16	$100\theta_*$	1.04161 ± 0.00052	f^{143}_{2000}	26 ± 3
$\boldsymbol{c_{100}}$	0.9975 ± 0.0010	$D_M(z_*)$/Gpc	13.939 ± 0.048	f^{217}_{2000}	104.3 ± 2.4
$\boldsymbol{c_{217}}$	1.0008 ± 0.0016	z_{drag}	1060.27 ± 0.56	$f^{143\times217}_{2000}$	29.1 ± 2.6
H_0	69.1 ± 1.2	r_{drag}	147.78 ± 0.50	χ^2_{simall}	396.4 ± 1.1
Ω_Λ	$0.707^{+0.016}_{-0.014}$	k_D	0.14033 ± 0.00051	χ^2_{lowl}	21.6 ± 1.1
Ω_m	$0.293^{+0.014}_{-0.016}$	$100\theta_D$	0.16061 ± 0.00030	$\chi^2_{CamSpec}$	7059.9 ± 5.3
$\Omega_m h^2$	0.1396 ± 0.0023	z_{eq}	3321 ± 55	χ^2_{prior}	7.2 ± 3.3
$\Omega_m h^3$	0.09640 ± 0.00050	k_{eq}	0.01014 ± 0.00017	χ^2_{CMB}	7477.9 ± 5.4
σ_8	0.796 ± 0.010	$100\theta_{eq}$	0.829 ± 0.011		
S_8	0.787 ± 0.029	$100\theta_{s,eq}$	0.4576 ± 0.0056		

$\bar{\chi}^2_{eff} = 7485.10$; $\Delta\bar{\chi}^2_{eff} = -6.16$; $R - 1 = 0.00928$

3.17 base_Alens_CamSpecHM_TT_lowl_lowE_post_BAO_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02250 ± 0.00022	$\sigma_8\Omega_m^{0.25}$	0.5940 ± 0.0081	$H(0.38)$	83.48 ± 0.41
$\boldsymbol{\Omega_c h^2}$	0.1178 ± 0.0013	$\sigma_8/h^{0.5}$	0.969 ± 0.011	$D_M(0.38)$	1517 ± 10
$\boldsymbol{100\theta_{MC}}$	1.04123 ± 0.00043	$r_{drag}h$	100.8 ± 1.0	$H(0.51)$	90.10 ± 0.34
$\boldsymbol{\tau}$	$0.0528^{+0.0040}_{-0.0074}$	$\langle d^2\rangle^{1/2}$	2.624 ± 0.076	$D_M(0.51)$	1966 ± 12
$\boldsymbol{A_L}$	1.201 ± 0.077	z_{re}	$7.45^{+0.34}_{-0.86}$	$H(0.61)$	95.64 ± 0.29
$\boldsymbol{\ln(10^{10}A_s)}$	$3.034^{+0.011}_{-0.015}$	$10^9 A_s$	$2.078^{+0.023}_{-0.031}$	$D_M(0.61)$	2289 ± 13
$\boldsymbol{n_s}$	0.9721 ± 0.0046	$10^9 A_s e^{-2\tau}$	1.870 ± 0.012	$H(2.33)$	235.26 ± 0.79
$\boldsymbol{y_{cal}}$	1.0001 ± 0.0026	D_{40}	1212 ± 13	$D_M(2.33)$	5749 ± 14
$\boldsymbol{A_{100}^{PS}}$	230 ± 25	D_{220}	5719 ± 42	$f\sigma_8(0.15)$	0.4455 ± 0.0080
$\boldsymbol{A_{143}^{PS}}$	35 ± 8	D_{810}	2526 ± 14	$\sigma_8(0.15)$	$0.7416^{+0.0057}_{-0.0064}$
$\boldsymbol{A_{217}^{PS}}$	104 ± 10	D_{1420}	813.8 ± 5.2	$f\sigma_8(0.38)$	0.4658 ± 0.0066
$\boldsymbol{A_{217}^{CIB}}$	37 ± 7	D_{2000}	231.8 ± 2.0	$\sigma_8(0.38)$	$0.6584^{+0.0046}_{-0.0053}$
$\boldsymbol{A_{143}^{tSZ}}$	4.1 ± 2.0	$n_{s,0.002}$	0.9721 ± 0.0046	$f\sigma_8(0.51)$	0.4656 ± 0.0059
$\boldsymbol{r_{143\times217}^{PS}}$	0.68 ± 0.13	Y_P	0.245442 ± 0.000087	$\sigma_8(0.51)$	$0.6166^{+0.0041}_{-0.0049}$
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.51^{+0.34}_{-0.27}$	Y_P^{BBN}	0.246769 ± 0.000088	$f\sigma_8(0.61)$	0.4614 ± 0.0053
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	10^5D/H	2.563 ± 0.041	$\sigma_8(0.61)$	$0.5870^{+0.0038}_{-0.0046}$
$\boldsymbol{A^{kSZ}}$	< 5.20	Age/Gyr	13.765 ± 0.032	$f\sigma_8(2.33)$	$0.2964^{+0.0018}_{-0.0023}$
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.19	z_*	1089.57 ± 0.33	$\sigma_8(2.33)$	$0.3060^{+0.0018}_{-0.0024}$
$\boldsymbol{A_{143}^{dust}}$	0.96 ± 0.18	r_*	144.91 ± 0.32	f_{2000}^{143}	27 ± 3
$\boldsymbol{A_{217}^{dust}}$	0.98 ± 0.10	$100\theta_*$	1.04141 ± 0.00042	f_{2000}^{217}	104.8 ± 2.2
$\boldsymbol{A_{143\times217}^{dust}}$	1.02 ± 0.16	$D_M(z_*)$/Gpc	13.915 ± 0.031	$f_{2000}^{143\times217}$	29.9 ± 2.4
$\boldsymbol{c_{100}}$	0.9975 ± 0.0010	z_{drag}	1060.07 ± 0.49	χ^2_{simall}	396.4 ± 1.1
$\boldsymbol{c_{217}}$	1.0008 ± 0.0016	r_{drag}	147.54 ± 0.34	χ^2_{lowl}	22.05 ± 0.80
H_0	68.35 ± 0.61	k_D	0.14049 ± 0.00045	$\chi^2_{CamSpec}$	7058.9 ± 5.2
Ω_Λ	0.6983 ± 0.0077	$100\theta_D$	0.16071 ± 0.00027	χ^2_{6DF}	0.049 ± 0.070
Ω_m	0.3017 ± 0.0077	z_{eq}	3352 ± 29	χ^2_{MGS}	2.00 ± 0.65
$\Omega_m h^2$	0.1409 ± 0.0012	k_{eq}	0.010232 ± 0.000089	$\chi^2_{DR12BAO}$	4.06 ± 0.98
$\Omega_m h^3$	0.09632 ± 0.00049	$100\theta_{eq}$	0.8230 ± 0.0056	χ^2_{prior}	7.3 ± 3.4
σ_8	0.8015 ± 0.0070	$100\theta_{s,eq}$	0.4543 ± 0.0028	χ^2_{BAO}	6.1 ± 1.2
S_8	0.804 ± 0.016	$H(0.15)$	73.53 ± 0.53	χ^2_{CMB}	7477.4 ± 5.3
$\sigma_8\Omega_m^{0.5}$	0.4402 ± 0.0085	$D_M(0.15)$	635.0 ± 5.1		

$\bar{\chi}^2_{eff} = 7490.78$; $\Delta\bar{\chi}^2_{eff} = -6.53$; $R - 1 = 0.01851$

3.18 base_Alens_CamSpecHM_TT_lowl_lowE_post_Riess18_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02293 ± 0.00025	$\sigma_8\Omega_m^{0.5}$	$0.412^{+0.011}_{-0.013}$	$H(0.15)$	75.49 ± 0.84
$\boldsymbol{\Omega_c h^2}$	0.1133 ± 0.0020	$\sigma_8\Omega_m^{0.25}$	0.569 ± 0.011	$D_M(0.15)$	$616.6^{+7.2}_{-8.2}$
$\boldsymbol{100\theta_{MC}}$	1.04192 ± 0.00048	$\sigma_8/h^{0.5}$	0.935 ± 0.016	$H(0.38)$	84.94 ± 0.64
$\boldsymbol{\tau}$	$0.0553^{+0.0045}_{-0.0083}$	$r_{drag}h$	104.7 ± 1.7	$D_M(0.38)$	1479^{+15}_{-17}
$\boldsymbol{A_L}$	1.326 ± 0.095	$\langle d^2\rangle^{1/2}$	2.666 ± 0.077	$H(0.51)$	91.27 ± 0.52
$\boldsymbol{\ln(10^{10}A_s)}$	$3.029^{+0.012}_{-0.016}$	z_{re}	$7.54^{+0.37}_{-0.92}$	$D_M(0.51)$	1922^{+18}_{-20}
$\boldsymbol{n_s}$	$0.9840^{+0.0064}_{-0.0058}$	10^9A_s	$2.068^{+0.024}_{-0.034}$	$H(0.61)$	96.60 ± 0.44
$\boldsymbol{y_{cal}}$	1.0000 ± 0.0024	$10^9A_se^{-2\tau}$	1.851 ± 0.013	$D_M(0.61)$	2242 ± 20
$\boldsymbol{A^{PS}_{100}}$	225 ± 25	D_{40}	1188^{+14}_{-16}	$H(2.33)$	232.8 ± 1.1
$\boldsymbol{A^{PS}_{143}}$	30 ± 8	D_{220}	5744 ± 41	$D_M(2.33)$	5709 ± 19
$\boldsymbol{A^{PS}_{217}}$	105 ± 10	D_{810}	2520 ± 14	$f\sigma_8(0.15)$	$0.419^{+0.011}_{-0.012}$
$\boldsymbol{A^{CIB}_{217}}$	35^{+6}_{-7}	D_{1420}	$815.4^{+5.3}_{-4.8}$	$\sigma_8(0.15)$	0.7294 ± 0.0075
$\boldsymbol{A^{tSZ}_{143}}$	4.4 ± 2.1	D_{2000}	$233.7^{+2.0}_{-1.9}$	$f\sigma_8(0.38)$	0.4443 ± 0.0097
$\boldsymbol{r^{PS}_{143\times217}}$	0.69 ± 0.14	$n_{s,0.002}$	$0.9840^{+0.0064}_{-0.0058}$	$\sigma_8(0.38)$	$0.6507^{+0.0054}_{-0.0062}$
$\boldsymbol{r^{CIB}_{143\times217}}$	0.48 ± 0.27	Y_P	0.24562 ± 0.00011	$f\sigma_8(0.51)$	0.4472 ± 0.0085
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	0.24695 ± 0.00011	$\sigma_8(0.51)$	$0.6107^{+0.0048}_{-0.0055}$
$\boldsymbol{A^{kSZ}}$	< 4.62	10^5D/H	2.486 ± 0.044	$f\sigma_8(0.61)$	0.4454 ± 0.0076
$\boldsymbol{A^{dust}_{100}}$	1.01 ± 0.19	Age/Gyr	13.680 ± 0.041	$\sigma_8(0.61)$	$0.5822^{+0.0043}_{-0.0051}$
$\boldsymbol{A^{dust}_{143}}$	0.95 ± 0.17	z_*	$1088.65^{+0.39}_{-0.45}$	$f\sigma_8(2.33)$	$0.2951^{+0.0020}_{-0.0025}$
$\boldsymbol{A^{dust}_{217}}$	0.98 ± 0.10	r_*	145.77 ± 0.44	$\sigma_8(2.33)$	$0.3060^{+0.0019}_{-0.0025}$
$\boldsymbol{A^{dust}_{143\times217}}$	1.00 ± 0.17	$100\theta_*$	1.04206 ± 0.00047	f^{143}_{2000}	24 ± 3
$\boldsymbol{c_{100}}$	0.9976 ± 0.0010	$D_M(z_*)$/Gpc	13.988 ± 0.041	f^{217}_{2000}	102.9 ± 2.3
$\boldsymbol{c_{217}}$	1.0005 ± 0.0016	z_{drag}	1060.74 ± 0.51	$f^{143\times217}_{2000}$	27.5 ± 2.4
H_0	70.61 ± 0.96	r_{drag}	148.27 ± 0.44	χ^2_{simall}	396.5 ± 1.3
Ω_Λ	$0.725^{+0.012}_{-0.010}$	k_D	0.14003 ± 0.00048	χ^2_{lowl}	20.65 ± 0.61
Ω_m	$0.275^{+0.010}_{-0.012}$	$100\theta_D$	0.16039 ± 0.00027	$\chi^2_{CamSpec}$	7062.6 ± 5.8
$\Omega_m h^2$	0.1369 ± 0.0018	z_{eq}	3255 ± 44	$\chi^2_{H073p45}$	3.3 ± 2.1
$\Omega_m h^3$	0.09661 ± 0.00048	k_{eq}	0.00993 ± 0.00013	χ^2_{prior}	6.9 ± 3.1
σ_8	0.7854 ± 0.0090	$100\theta_{eq}$	0.8432 ± 0.0090	χ^2_{CMB}	7479.7 ± 5.9
S_8	$0.752^{+0.021}_{-0.024}$	$100\theta_{s,eq}$	0.4645 ± 0.0046		

$\bar{\chi}^2_{eff} = 7489.90$; $\Delta\bar{\chi}^2_{eff} = -12.74$; $R - 1 = 0.05184$

3.19 base_Alens_CamSpecHM_TTTEEE_lowl_lowE

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022542	0.02251 ± 0.00019	σ_8	0.8000	0.7988 ± 0.0085	$100\theta_{\rm eq}$	0.8228	0.8224 ± 0.0067
$\boldsymbol{\Omega_c h^2}$	0.11776	0.1179 ± 0.0016	S_8	0.8023	0.802 ± 0.019	$100\theta_{\rm s,eq}$	0.45424	0.4540 ± 0.0034
$\boldsymbol{100\theta_{MC}}$	1.041089	1.04108 ± 0.00033	$\sigma_8\Omega_{\rm m}^{0.5}$	0.4394	0.439 ± 0.010	$H(0.15)$	73.53	73.46 ± 0.63
$\boldsymbol{\tau}$	0.0508	$0.0496^{+0.0083}_{-0.0073}$	$\sigma_8\Omega_{\rm m}^{0.25}$	0.5929	0.5925 ± 0.0098	$D_{\rm M}(0.15)$	635.0	635.6 ± 6.2
$\boldsymbol{A_L}$	1.155	1.149 ± 0.072	$\sigma_8/h^{0.5}$	0.9676	0.967 ± 0.014	$H(0.38)$	83.471	83.42 ± 0.47
$\boldsymbol{\ln(10^{10}A_s)}$	3.0309	$3.028^{+0.017}_{-0.015}$	$r_{\rm drag}h$	100.81	100.7 ± 1.2	$D_{\rm M}(0.38)$	1516.8	1518 ± 12
$\boldsymbol{n_s}$	0.9725	0.9713 ± 0.0051	$\langle d^2\rangle^{1/2}$	2.570	2.561 ± 0.065	$H(0.51)$	90.092	90.05 ± 0.38
$\boldsymbol{y_{cal}}$	1.00007	1.0000 ± 0.0025	$z_{\rm re}$	7.25	$7.11^{+0.89}_{-0.71}$	$D_{\rm M}(0.51)$	1966.4	1968 ± 15
$\boldsymbol{A^{PS}_{100}}$	223.5	232 ± 25	$10^9 A_{\rm s}$	2.0716	2.065 ± 0.035	$H(0.61)$	95.637	95.60 ± 0.31
$\boldsymbol{A^{PS}_{143}}$	46.5	36 ± 8	$10^9 A_{\rm s}e^{-2\tau}$	1.8715	1.870 ± 0.012	$D_{\rm M}(0.61)$	2289.4	2291 ± 16
$\boldsymbol{A^{PS}_{217}}$	109.5	105^{+10}_{-10}	D_{40}	1211.5	1213 ± 14	$H(2.33)$	235.27	235.32 ± 0.90
$\boldsymbol{A^{CIB}_{217}}$	37.8	37^{+7}_{-8}	D_{220}	5726.1	5723 ± 39	$D_{\rm M}(2.33)$	5748.6	5750 ± 14
$\boldsymbol{A^{tSZ}_{143}}$	6.07	$4.1^{+2.0}_{-2.4}$	D_{810}	2531.0	2528 ± 14	$f\sigma_8(0.15)$	0.4447	0.4447 ± 0.0097
$\boldsymbol{r^{PS}_{143\times217}}$	0.792	0.68 ± 0.13	D_{1420}	816.09	814.6 ± 4.8	$\sigma_8(0.15)$	0.7402	0.7390 ± 0.0074
$\boldsymbol{r^{CIB}_{143\times217}}$	0.703	$0.51^{+0.34}_{-0.27}$	D_{2000}	232.14	231.5 ± 1.7	$f\sigma_8(0.38)$	0.4650	0.4647 ± 0.0080
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.94	—	$n_{\rm s,0.002}$	0.9725	0.9713 ± 0.0051	$\sigma_8(0.38)$	0.6572	0.6560 ± 0.0061
$\boldsymbol{A^{kSZ}}$	0.17	< 5.28	$Y_{\rm P}$	0.245459	0.245447 ± 0.000075	$f\sigma_8(0.51)$	0.4647	0.4643 ± 0.0071
$\boldsymbol{A^{dust}_{100}}$	1.021	1.01 ± 0.20	$Y_{\rm P}^{\rm BBN}$	0.246786	0.246773 ± 0.000075	$\sigma_8(0.51)$	0.6155	0.6143 ± 0.0056
$\boldsymbol{A^{dust}_{143}}$	0.946	0.95 ± 0.17	10^5D/H	2.5545	2.561 ± 0.035	$f\sigma_8(0.61)$	0.4606	0.4601 ± 0.0064
$\boldsymbol{A^{dust}_{217}}$	0.993	0.98 ± 0.10	Age/Gyr	13.7653	13.769 ± 0.031	$\sigma_8(0.61)$	0.5859	0.5848 ± 0.0052
$\boldsymbol{A^{dust}_{143\times217}}$	1.050	1.02 ± 0.16	z_*	1089.509	1089.56 ± 0.34	$f\sigma_8(2.33)$	0.29580	0.2952 ± 0.0026
$\boldsymbol{c_{100}}$	0.99794	0.9975 ± 0.0011	r_*	144.881	144.88 ± 0.33	$\sigma_8(2.33)$	0.30540	0.3048 ± 0.0026
$\boldsymbol{c_{217}}$	1.00093	1.0009 ± 0.0016	$100\theta_*$	1.041265	1.04125 ± 0.00033	f^{143}_{2000}	26.72	27 ± 3
$\boldsymbol{c_{TE}}$	0.9917	0.9924 ± 0.0053	$D_{\rm M}(z_*)$/Gpc	13.9139	13.914 ± 0.030	f^{217}_{2000}	104.43	105.1 ± 2.1
$\boldsymbol{c_{EE}}$	0.99020	0.9903 ± 0.0049	$z_{\rm drag}$	1060.162	1060.10 ± 0.38	$f^{143\times217}_{2000}$	29.81	30.0 ± 2.2
H_0	68.35	68.28 ± 0.73	$r_{\rm drag}$	147.495	147.50 ± 0.32	$\chi^2_{\rm simall}$	395.68	396.8 ± 1.5
Ω_Λ	0.6983	0.6973 ± 0.0095	$k_{\rm D}$	0.140571	0.14054 ± 0.00034	$\chi^2_{\rm lowl}$	21.90	22.12 ± 0.89
$\Omega_{\rm m}$	0.3017	0.3027 ± 0.0095	$100\theta_{\rm D}$	0.160623	0.16066 ± 0.00022	$\chi^2_{\rm CamSpec}$	11496.5	11512.3 ± 5.7
$\Omega_{\rm m}h^2$	0.14095	0.1410 ± 0.0014	$z_{\rm eq}$	3352.8	3355 ± 34	$\chi^2_{\rm prior}$	1.85	7.7 ± 3.3
$\Omega_{\rm m}h^3$	0.096334	0.09629 ± 0.00034	$k_{\rm eq}$	0.010233	0.01024 ± 0.00010	$\chi^2_{\rm CMB}$	11914.1	11931.2 ± 5.8

Best-fit $\chi^2_{\rm eff} = 11915.94$; $\Delta\chi^2_{\rm eff} = -4.82$; $\bar{\chi}^2_{\rm eff} = 11938.97$; $\Delta\bar{\chi}^2_{\rm eff} = -3.49$; $R - 1 = 0.01096$

$\chi^2_{\rm eff}$: CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.68 (Δ -0.22) commander_dx12_v3_2_29: 21.90 (Δ -1.10) CamSpec like_10.7HM_1400_unified: 11496.51 (Δ -3.14)

3.20 base_Alens_CamSpecHM_TTTEEE_lowl_lowE_post_BAO

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02249 ± 0.00017	$\sigma_8\Omega_m^{0.5}$	0.4405 ± 0.0076	$H(0.38)$	83.37 ± 0.33
$\boldsymbol{\Omega_c h^2}$	0.1181 ± 0.0011	$\sigma_8\Omega_m^{0.25}$	0.5934 ± 0.0077	$D_M(0.38)$	1519.5 ± 8.5
$\boldsymbol{100\theta_{MC}}$	1.04106 ± 0.00030	$\sigma_8/h^{0.5}$	0.968 ± 0.011	$H(0.51)$	90.01 ± 0.27
$\boldsymbol{\tau}$	$0.0494^{+0.0084}_{-0.0073}$	$r_{drag}h$	100.56 ± 0.85	$D_M(0.51)$	1970 ± 10
$\boldsymbol{A_L}$	1.145 ± 0.065	$\langle d^2\rangle^{1/2}$	2.560 ± 0.064	$H(0.61)$	95.57 ± 0.22
$\boldsymbol{\ln(10^{10}A_s)}$	$3.028^{+0.017}_{-0.016}$	z_{re}	$7.09^{+0.91}_{-0.71}$	$D_M(0.61)$	2293 ± 11
$\boldsymbol{n_s}$	0.9708 ± 0.0042	10^9A_s	2.065 ± 0.036	$H(2.33)$	235.42 ± 0.64
$\boldsymbol{y_{cal}}$	1.0000 ± 0.0025	$10^9A_se^{-2\tau}$	1.871 ± 0.011	$D_M(2.33)$	5752 ± 11
$\boldsymbol{A^{PS}_{100}}$	232 ± 25	D_{40}	1214 ± 12	$f\sigma_8(0.15)$	0.4456 ± 0.0072
$\boldsymbol{A^{PS}_{143}}$	36 ± 8	D_{220}	5722 ± 38	$\sigma_8(0.15)$	0.7394 ± 0.0069
$\boldsymbol{A^{PS}_{217}}$	105^{+10}_{-10}	D_{810}	2528 ± 14	$f\sigma_8(0.38)$	0.4655 ± 0.0062
$\boldsymbol{A^{CIB}_{217}}$	37 ± 7	D_{1420}	814.6 ± 4.8	$\sigma_8(0.38)$	0.6563 ± 0.0060
$\boldsymbol{A^{tSZ}_{143}}$	$4.1^{+2.0}_{-2.4}$	D_{2000}	231.4 ± 1.7	$f\sigma_8(0.51)$	0.4650 ± 0.0057
$\boldsymbol{r^{PS}_{143\times217}}$	0.68 ± 0.13	$n_{s,0.002}$	0.9708 ± 0.0042	$\sigma_8(0.51)$	0.6145 ± 0.0055
$\boldsymbol{r^{CIB}_{143\times217}}$	$0.52^{+0.35}_{-0.27}$	Y_P	$0.245441^{+0.000063}_{-0.000057}$	$f\sigma_8(0.61)$	0.4607 ± 0.0053
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	$0.246768^{+0.000063}_{-0.000057}$	$\sigma_8(0.61)$	0.5850 ± 0.0052
$\boldsymbol{A^{kSZ}}$	< 5.37	10^5D/H	2.563 ± 0.030	$f\sigma_8(2.33)$	0.2953 ± 0.0026
$\boldsymbol{A^{dust}_{100}}$	1.00 ± 0.20	Age/Gyr	13.772 ± 0.024	$\sigma_8(2.33)$	$0.3047^{+0.0027}_{-0.0024}$
$\boldsymbol{A^{dust}_{143}}$	0.95 ± 0.17	z_*	1089.60 ± 0.26	f^{143}_{2000}	27.2 ± 2.9
$\boldsymbol{A^{dust}_{217}}$	0.98 ± 0.10	r_*	144.84 ± 0.25	f^{217}_{2000}	105.1 ± 2.0
$\boldsymbol{A^{dust}_{143\times217}}$	1.02 ± 0.16	$100\theta_*$	1.04123 ± 0.00030	$f^{143\times217}_{2000}$	30.1 ± 2.1
$\boldsymbol{c_{100}}$	0.9975 ± 0.0010	$D_M(z_*)$/Gpc	13.910 ± 0.024	χ^2_{simall}	396.8 ± 1.5
$\boldsymbol{c_{217}}$	1.0009 ± 0.0016	z_{drag}	1060.08 ± 0.35	χ^2_{lowl}	22.17 ± 0.76
$\boldsymbol{c_{TE}}$	0.9925 ± 0.0053	r_{drag}	147.47 ± 0.26	$\chi^2_{CamSpec}$	11511.8 ± 5.5
$\boldsymbol{c_{EE}}$	0.9903 ± 0.0050	k_D	0.14056 ± 0.00032	χ^2_{6DF}	0.030 ± 0.044
H_0	68.19 ± 0.50	$100\theta_D$	0.16067 ± 0.00020	χ^2_{MGS}	1.81 ± 0.53
Ω_Λ	0.6963 ± 0.0065	z_{eq}	3359 ± 24	$\chi^2_{DR12BAO}$	3.93 ± 0.78
Ω_m	0.3037 ± 0.0065	k_{eq}	0.010251 ± 0.000073	χ^2_{prior}	7.8 ± 3.4
$\Omega_m h^2$	0.1412 ± 0.0010	$100\theta_{eq}$	0.8216 ± 0.0046	χ^2_{BAO}	5.77 ± 0.77
$\Omega_m h^3$	0.09628 ± 0.00033	$100\theta_{s,eq}$	0.4536 ± 0.0024	χ^2_{CMB}	11930.7 ± 5.7
σ_8	0.7994 ± 0.0078	$H(0.15)$	73.39 ± 0.43		
S_8	0.804 ± 0.014	$D_M(0.15)$	636.3 ± 4.2		

$\bar{\chi}^2_{eff} = 11944.29$; $\Delta\bar{\chi}^2_{eff} = -3.99$; $R - 1 = 0.01598$

3.21 base_Alens_CamSpecHM_TTTEEE_lowl_lowE_post_Riess18

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02268 ± 0.00018	S_8	0.783 ± 0.017	$H(0.15)$	74.20 ± 0.59
$\boldsymbol{\Omega_c h^2}$	0.1161 ± 0.0014	$\sigma_8 \Omega_m^{0.5}$	0.4286 ± 0.0094	$D_M(0.15)$	628.6 ± 5.6
$\boldsymbol{100\theta_{MC}}$	1.04132 ± 0.00034	$\sigma_8 \Omega_m^{0.25}$	0.5830 ± 0.0091	$H(0.38)$	83.97 ± 0.44
$\boldsymbol{\tau}$	0.0508 ± 0.0081	$\sigma_8/h^{0.5}$	0.954 ± 0.013	$D_M(0.38)$	1504 ± 11
$\boldsymbol{A_L}$	1.195 ± 0.074	$r_{drag} h$	102.1 ± 1.2	$H(0.51)$	90.49 ± 0.36
$\boldsymbol{\ln(10^{10} A_s)}$	$3.026^{+0.017}_{-0.015}$	$\langle d^2 \rangle^{1/2}$	2.579 ± 0.067	$D_M(0.51)$	1951 ± 13
$\boldsymbol{n_s}$	0.9760 ± 0.0048	z_{re}	$7.18^{+0.85}_{-0.74}$	$H(0.61)$	95.95 ± 0.30
$\boldsymbol{y_{cal}}$	1.0000 ± 0.0025	$10^9 A_s$	2.063 ± 0.035	$D_M(0.61)$	2273 ± 15
$\boldsymbol{A_{100}^{PS}}$	228 ± 24	$10^9 A_s e^{-2\tau}$	1.863 ± 0.011	$H(2.33)$	234.37 ± 0.83
$\boldsymbol{A_{143}^{PS}}$	33 ± 8	D_{40}	1204 ± 13	$D_M(2.33)$	5735 ± 13
$\boldsymbol{A_{217}^{PS}}$	105^{+10}_{-10}	D_{220}	5733 ± 39	$f\sigma_8(0.15)$	0.4345 ± 0.0089
$\boldsymbol{A_{217}^{CIB}}$	36^{+7}_{-8}	D_{810}	2526 ± 13	$\sigma_8(0.15)$	$0.7348^{+0.0073}_{-0.0066}$
$\boldsymbol{A_{143}^{tSZ}}$	4.2 ± 2.1	D_{1420}	815.5 ± 4.7	$f\sigma_8(0.38)$	0.4567 ± 0.0075
$\boldsymbol{r_{143\times217}^{PS}}$	0.68 ± 0.13	D_{2000}	232.4 ± 1.6	$\sigma_8(0.38)$	$0.6535^{+0.0061}_{-0.0055}$
$\boldsymbol{r_{143\times217}^{CIB}}$	0.50 ± 0.27	$n_{s,0.002}$	0.9760 ± 0.0048	$f\sigma_8(0.51)$	0.4576 ± 0.0067
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P	$0.245513^{+0.000063}_{-0.000076}$	$\sigma_8(0.51)$	$0.6125^{+0.0056}_{-0.0050}$
$\boldsymbol{A^{kSZ}}$	< 4.89	Y_P^{BBN}	$0.246840^{+0.000063}_{-0.000077}$	$f\sigma_8(0.61)$	0.4543 ± 0.0061
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.20	10^5D/H	2.530 ± 0.032	$\sigma_8(0.61)$	$0.5834^{+0.0053}_{-0.0047}$
$\boldsymbol{A_{143}^{dust}}$	0.94 ± 0.18	Age/Gyr	13.737 ± 0.029	$f\sigma_8(2.33)$	$0.2949^{+0.0026}_{-0.0023}$
$\boldsymbol{A_{217}^{dust}}$	0.99 ± 0.10	z_*	1089.20 ± 0.31	$\sigma_8(2.33)$	$0.3050^{+0.0027}_{-0.0024}$
$\boldsymbol{A_{143\times217}^{dust}}$	1.01 ± 0.16	r_*	145.20 ± 0.31	f_{2000}^{143}	25.9 ± 2.8
$\boldsymbol{c_{100}}$	0.9976 ± 0.0011	$100\theta_*$	1.04147 ± 0.00033	f_{2000}^{217}	104.2 ± 2.0
$\boldsymbol{c_{217}}$	1.0009 ± 0.0016	$D_M(z_*)$/Gpc	13.941 ± 0.029	$f_{2000}^{143\times217}$	29.0 ± 2.1
$\boldsymbol{c_{TE}}$	0.9913 ± 0.0052	z_{drag}	1060.38 ± 0.37	χ^2_{simall}	396.7 ± 1.5
$\boldsymbol{c_{EE}}$	0.9899 ± 0.0050	r_{drag}	147.77 ± 0.31	χ^2_{lowl}	21.45 ± 0.71
H_0	69.13 ± 0.68	k_D	0.14038 ± 0.00034	$\chi^2_{CamSpec}$	11514.4 ± 6.3
Ω_Λ	0.7080 ± 0.0084	$100\theta_D$	0.16053 ± 0.00020	$\chi^2_{H073p45}$	7.0 ± 2.1
Ω_m	0.2920 ± 0.0084	z_{eq}	3318 ± 32	χ^2_{prior}	7.8 ± 3.4
$\Omega_m h^2$	0.1395 ± 0.0013	k_{eq}	0.010126 ± 0.000096	χ^2_{CMB}	11932.6 ± 6.3
$\Omega_m h^3$	0.09640 ± 0.00034	$100\theta_{eq}$	0.8300 ± 0.0063		
σ_8	0.7931 ± 0.0083	$100\theta_{s,eq}$	0.4579 ± 0.0032		

$\bar{\chi}^2_{eff} = 11947.36$; $\Delta\bar{\chi}^2_{eff} = -6.91$; $R - 1 = 0.04484$

3.22 base_Alens_CamSpecHM_TTTEEE_lowl_lowE_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02251 ± 0.00019	σ_8	$0.8011^{+0.0069}_{-0.0077}$	$100\theta_{\rm eq}$	0.8226 ± 0.0068
$\boldsymbol{\Omega_c h^2}$	0.1178 ± 0.0016	S_8	0.804 ± 0.019	$100\theta_{\rm s,eq}$	0.4541 ± 0.0034
$\boldsymbol{100\theta_{MC}}$	1.04108 ± 0.00034	$\sigma_8\Omega_{\rm m}^{0.5}$	0.441 ± 0.010	$H(0.15)$	73.48 ± 0.64
$\boldsymbol{\tau}$	$0.0526^{+0.0035}_{-0.0076}$	$\sigma_8\Omega_{\rm m}^{0.25}$	0.5941 ± 0.0094	$D_{\rm M}(0.15)$	635.5 ± 6.2
$\boldsymbol{A_L}$	1.144 ± 0.070	$\sigma_8/h^{0.5}$	0.970 ± 0.013	$H(0.38)$	83.43 ± 0.47
$\boldsymbol{\ln(10^{10}A_s)}$	$3.034^{+0.010}_{-0.015}$	$r_{\rm drag}h$	100.7 ± 1.3	$D_{\rm M}(0.38)$	1518 ± 13
$\boldsymbol{n_s}$	0.9715 ± 0.0052	$\langle d^2\rangle^{1/2}$	2.562 ± 0.065	$H(0.51)$	90.06 ± 0.38
$\boldsymbol{y_{cal}}$	1.0000 ± 0.0025	$z_{\rm re}$	$7.43^{+0.34}_{-0.82}$	$D_{\rm M}(0.51)$	1968 ± 15
$\boldsymbol{A_{100}^{PS}}$	231 ± 25	$10^9 A_{\rm s}$	$2.078^{+0.020}_{-0.031}$	$H(0.61)$	95.61 ± 0.31
$\boldsymbol{A_{143}^{PS}}$	35 ± 8	$10^9 A_{\rm s}e^{-2\tau}$	1.870 ± 0.012	$D_{\rm M}(0.61)$	2291 ± 16
$\boldsymbol{A_{217}^{PS}}$	105^{+10}_{-10}	D_{40}	1213 ± 14	$H(2.33)$	235.29 ± 0.90
$\boldsymbol{A_{217}^{CIB}}$	37^{+7}_{-8}	D_{220}	5723 ± 39	$D_{\rm M}(2.33)$	5750 ± 14
$\boldsymbol{A_{143}^{tSZ}}$	$4.1^{+2.0}_{-2.4}$	D_{810}	2528 ± 14	$f\sigma_8(0.15)$	0.4458 ± 0.0095
$\boldsymbol{r_{143\times217}^{PS}}$	0.68 ± 0.13	D_{1420}	814.7 ± 4.9	$\sigma_8(0.15)$	$0.7412^{+0.0056}_{-0.0066}$
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.51^{+0.33}_{-0.28}$	D_{2000}	231.5 ± 1.8	$f\sigma_8(0.38)$	0.4659 ± 0.0077
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$n_{\rm s,0.002}$	0.9715 ± 0.0052	$\sigma_8(0.38)$	$0.6580^{+0.0042}_{-0.0054}$
$\boldsymbol{A^{kSZ}}$	< 5.25	$Y_{\rm P}$	0.245447 ± 0.000075	$f\sigma_8(0.51)$	0.4656 ± 0.0067
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.19	$Y_{\rm P}^{\rm BBN}$	0.246773 ± 0.000075	$\sigma_8(0.51)$	$0.6162^{+0.0037}_{-0.0049}$
$\boldsymbol{A_{143}^{dust}}$	0.95 ± 0.18	10^5D/H	2.561 ± 0.035	$f\sigma_8(0.61)$	0.4614 ± 0.0060
$\boldsymbol{A_{217}^{dust}}$	0.98 ± 0.10	Age/Gyr	13.769 ± 0.031	$\sigma_8(0.61)$	$0.5866^{+0.0034}_{-0.0046}$
$\boldsymbol{A_{143\times217}^{dust}}$	1.02 ± 0.16	z_*	1089.56 ± 0.35	$f\sigma_8(2.33)$	$0.2961^{+0.0015}_{-0.0023}$
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	r_*	144.89 ± 0.33	$\sigma_8(2.33)$	$0.3057^{+0.0016}_{-0.0023}$
$\boldsymbol{c_{217}}$	1.0009 ± 0.0016	$100\theta_*$	1.04125 ± 0.00033	f_{2000}^{143}	27 ± 3
$\boldsymbol{c_{TE}}$	0.9924 ± 0.0053	$D_{\rm M}(z_*)$/Gpc	13.914 ± 0.030	f_{2000}^{217}	105.0 ± 2.1
$\boldsymbol{c_{EE}}$	0.9903 ± 0.0049	$z_{\rm drag}$	1060.10 ± 0.38	$f_{2000}^{143\times217}$	30.0 ± 2.2
H_0	68.29 ± 0.74	$r_{\rm drag}$	147.51 ± 0.32	$\chi^2_{\rm simall}$	396.4 ± 1.1
Ω_Λ	0.6975 ± 0.0095	$k_{\rm D}$	0.14053 ± 0.00034	$\chi^2_{\rm lowl}$	22.16 ± 0.90
$\Omega_{\rm m}$	0.3025 ± 0.0095	$100\theta_{\rm D}$	0.16066 ± 0.00022	$\chi^2_{\rm CamSpec}$	11512.3 ± 5.7
$\Omega_{\rm m}h^2$	0.1410 ± 0.0014	$z_{\rm eq}$	3354 ± 35	$\chi^2_{\rm prior}$	7.7 ± 3.4
$\Omega_{\rm m}h^3$	0.09628 ± 0.00034	$k_{\rm eq}$	0.01024 ± 0.00011	$\chi^2_{\rm CMB}$	11930.9 ± 5.7

$\bar{\chi}^2_{\rm eff} = 11938.62$; $\Delta\bar{\chi}^2_{\rm eff} = -3.57$; $R - 1 = 0.01153$

3.23 base_Alens_CamSpecHM_TTTEEE_lowl_lowE_post_BAO_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02249 ± 0.00017	$\sigma_8\Omega_m^{0.5}$	0.4418 ± 0.0073	$H(0.38)$	83.37 ± 0.33
$\boldsymbol{\Omega_c h^2}$	0.1180 ± 0.0011	$\sigma_8\Omega_m^{0.25}$	0.5952 ± 0.0070	$D_M(0.38)$	1519.3 ± 8.6
$\boldsymbol{100\theta_{MC}}$	1.04106 ± 0.00030	$\sigma_8/h^{0.5}$	0.971 ± 0.010	$H(0.51)$	90.01 ± 0.27
$\boldsymbol{\tau}$	$0.0526^{+0.0036}_{-0.0074}$	$r_{drag}h$	100.58 ± 0.85	$D_M(0.51)$	1969 ± 10
$\boldsymbol{A_L}$	1.138 ± 0.063	$\langle d^2\rangle^{1/2}$	2.560 ± 0.064	$H(0.61)$	95.57 ± 0.23
$\boldsymbol{\ln(10^{10}A_s)}$	$3.0341^{+0.0098}_{-0.015}$	z_{re}	$7.44^{+0.34}_{-0.81}$	$D_M(0.61)$	2293 ± 11
$\boldsymbol{n_s}$	0.9710 ± 0.0042	$10^9 A_s$	$2.078^{+0.020}_{-0.031}$	$H(2.33)$	235.40 ± 0.64
$\boldsymbol{y_{cal}}$	1.0000 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.871 ± 0.011	$D_M(2.33)$	5752 ± 11
$\boldsymbol{A_{100}^{PS}}$	232 ± 24	D_{40}	1214 ± 12	$f\sigma_8(0.15)$	0.4470 ± 0.0069
$\boldsymbol{A_{143}^{PS}}$	36 ± 8	D_{220}	5722 ± 38	$\sigma_8(0.15)$	$0.7418^{+0.0047}_{-0.0061}$
$\boldsymbol{A_{217}^{PS}}$	105^{+10}_{-10}	D_{810}	2528 ± 14	$f\sigma_8(0.38)$	0.4669 ± 0.0058
$\boldsymbol{A_{217}^{CIB}}$	37^{+7}_{-8}	D_{1420}	814.6 ± 4.8	$\sigma_8(0.38)$	$0.6584^{+0.0037}_{-0.0052}$
$\boldsymbol{A_{143}^{tSZ}}$	$4.1^{+2.0}_{-2.4}$	D_{2000}	231.5 ± 1.7	$f\sigma_8(0.51)$	0.4664 ± 0.0051
$\boldsymbol{r_{143\times217}^{PS}}$	0.68 ± 0.13	$n_{s,0.002}$	0.9710 ± 0.0042	$\sigma_8(0.51)$	$0.6165^{+0.0034}_{-0.0048}$
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.52^{+0.35}_{-0.27}$	Y_P	$0.245441^{+0.000064}_{-0.000057}$	$f\sigma_8(0.61)$	0.4621 ± 0.0047
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	$0.246767^{+0.000064}_{-0.000057}$	$\sigma_8(0.61)$	$0.5868^{+0.0031}_{-0.0045}$
$\boldsymbol{A^{kSZ}}$	< 5.35	10^5D/H	2.564 ± 0.030	$f\sigma_8(2.33)$	$0.2962^{+0.0015}_{-0.0022}$
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.19	Age/Gyr	13.772 ± 0.024	$\sigma_8(2.33)$	$0.3057^{+0.0015}_{-0.0023}$
$\boldsymbol{A_{143}^{dust}}$	0.95 ± 0.18	z_*	1089.60 ± 0.26	f_{2000}^{143}	27.2 ± 2.9
$\boldsymbol{A_{217}^{dust}}$	0.98 ± 0.10	r_*	144.85 ± 0.25	f_{2000}^{217}	105.1 ± 2.0
$\boldsymbol{A_{143\times217}^{dust}}$	1.02 ± 0.16	$100\theta_*$	1.04124 ± 0.00029	$f_{2000}^{143\times217}$	30.1 ± 2.1
$\boldsymbol{c_{100}}$	0.9975 ± 0.0010	$D_M(z_*)$/Gpc	13.911 ± 0.024	χ^2_{simall}	396.4 ± 1.1
$\boldsymbol{c_{217}}$	1.0009 ± 0.0016	z_{drag}	1060.08 ± 0.35	χ^2_{lowl}	22.22 ± 0.77
$\boldsymbol{c_{TE}}$	0.9925 ± 0.0052	r_{drag}	147.48 ± 0.26	$\chi^2_{CamSpec}$	11511.7 ± 5.5
$\boldsymbol{c_{EE}}$	0.9904 ± 0.0049	k_D	0.14055 ± 0.00032	χ^2_{6DF}	0.031 ± 0.044
H_0	68.20 ± 0.51	$100\theta_D$	0.16068 ± 0.00020	χ^2_{MGS}	1.82 ± 0.53
Ω_Λ	0.6964 ± 0.0065	z_{eq}	3358 ± 24	$\chi^2_{DR12BAO}$	3.93 ± 0.78
Ω_m	0.3036 ± 0.0065	k_{eq}	0.010249 ± 0.000074	χ^2_{prior}	7.8 ± 3.4
$\Omega_m h^2$	0.1412 ± 0.0010	$100\theta_{eq}$	0.8217 ± 0.0047	χ^2_{BAO}	5.78 ± 0.79
$\Omega_m h^3$	0.09628 ± 0.00033	$100\theta_{s,eq}$	0.4537 ± 0.0024	χ^2_{CMB}	11930.3 ± 5.6
σ_8	$0.8019^{+0.0055}_{-0.0069}$	$H(0.15)$	73.40 ± 0.44		
S_8	0.807 ± 0.013	$D_M(0.15)$	636.3 ± 4.3		

$\bar{\chi}^2_{eff} = 11943.89$; $\Delta\bar{\chi}^2_{eff} = -4.10$; $R - 1 = 0.01823$

3.24 base_Alens_CamSpecHM_TTTEEE_lowl_lowE_post_Riess18_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02268 ± 0.00018	S_8	$0.785^{+0.015}_{-0.018}$	$H(0.15)$	$74.20^{+0.60}_{-0.54}$
$\boldsymbol{\Omega_c h^2}$	0.1161 ± 0.0014	$\sigma_8\Omega_m^{0.5}$	$0.4297^{+0.0083}_{-0.0096}$	$D_M(0.15)$	$628.6^{+5.1}_{-5.8}$
$\boldsymbol{100\theta_{MC}}$	1.04132 ± 0.00033	$\sigma_8\Omega_m^{0.25}$	$0.5846^{+0.0078}_{-0.0090}$	$H(0.38)$	83.97 ± 0.42
$\boldsymbol{\tau}$	$0.0536^{+0.0042}_{-0.0073}$	$\sigma_8/h^{0.5}$	$0.957^{+0.011}_{-0.013}$	$D_M(0.38)$	1504^{+10}_{-12}
$\boldsymbol{A_L}$	1.188 ± 0.071	$r_{drag}h$	102.2 ± 1.1	$H(0.51)$	90.49 ± 0.34
$\boldsymbol{\ln(10^{10}A_s)}$	$3.032^{+0.011}_{-0.014}$	$\langle d^2\rangle^{1/2}$	2.579 ± 0.066	$D_M(0.51)$	1951^{+12}_{-14}
$\boldsymbol{n_s}$	0.9761 ± 0.0048	z_{re}	$7.47^{+0.37}_{-0.82}$	$H(0.61)$	95.95 ± 0.28
$\boldsymbol{y_{cal}}$	1.0000 ± 0.0025	$10^9 A_s$	$2.074^{+0.022}_{-0.030}$	$D_M(0.61)$	2273^{+13}_{-15}
$\boldsymbol{A_{100}^{PS}}$	228 ± 24	$10^9 A_s e^{-2\tau}$	1.863 ± 0.011	$H(2.33)$	234.36 ± 0.81
$\boldsymbol{A_{143}^{PS}}$	33 ± 8	D_{40}	1204 ± 13	$D_M(2.33)$	5736 ± 13
$\boldsymbol{A_{217}^{PS}}$	105^{+10}_{-10}	D_{220}	5733 ± 39	$f\sigma_8(0.15)$	$0.4357^{+0.0078}_{-0.0090}$
$\boldsymbol{A_{217}^{CIB}}$	36 ± 7	D_{810}	2526 ± 13	$\sigma_8(0.15)$	$0.7369^{+0.0053}_{-0.0064}$
$\boldsymbol{A_{143}^{tSZ}}$	$4.2^{+2.1}_{-2.3}$	D_{1420}	815.6 ± 4.7	$f\sigma_8(0.38)$	$0.4580^{+0.0065}_{-0.0074}$
$\boldsymbol{r_{143\times217}^{PS}}$	0.68 ± 0.13	D_{2000}	232.4 ± 1.6	$\sigma_8(0.38)$	$0.6553^{+0.0042}_{-0.0052}$
$\boldsymbol{r_{143\times217}^{CIB}}$	0.49 ± 0.27	$n_{s,0.002}$	0.9761 ± 0.0048	$f\sigma_8(0.51)$	$0.4589^{+0.0057}_{-0.0065}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P	$0.245512^{+0.000064}_{-0.000072}$	$\sigma_8(0.51)$	$0.6142^{+0.0038}_{-0.0047}$
$\boldsymbol{A^{kSZ}}$	< 4.93	Y_P^{BBN}	$0.246839^{+0.000064}_{-0.000072}$	$f\sigma_8(0.61)$	$0.4556^{+0.0052}_{-0.0058}$
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.20	10^5D/H	2.530 ± 0.031	$\sigma_8(0.61)$	$0.5850^{+0.0035}_{-0.0044}$
$\boldsymbol{A_{143}^{dust}}$	0.94 ± 0.18	Age/Gyr	13.737 ± 0.028	$f\sigma_8(2.33)$	$0.2958^{+0.0017}_{-0.0022}$
$\boldsymbol{A_{217}^{dust}}$	0.98 ± 0.10	z_*	$1089.20^{+0.28}_{-0.32}$	$\sigma_8(2.33)$	$0.3058^{+0.0017}_{-0.0022}$
$\boldsymbol{A_{143\times217}^{dust}}$	1.01 ± 0.16	r_*	145.20 ± 0.31	f_{2000}^{143}	25.8 ± 2.8
$\boldsymbol{c_{100}}$	0.9976 ± 0.0011	$100\theta_*$	1.04147 ± 0.00032	f_{2000}^{217}	104.2 ± 2.0
$\boldsymbol{c_{217}}$	1.0008 ± 0.0016	$D_M(z_*)$/Gpc	13.942 ± 0.028	$f_{2000}^{143\times217}$	29.0 ± 2.1
$\boldsymbol{c_{TE}}$	0.9913 ± 0.0052	z_{drag}	1060.37 ± 0.36	χ^2_{simall}	396.4 ± 1.2
$\boldsymbol{c_{EE}}$	0.9900 ± 0.0049	r_{drag}	147.78 ± 0.30	χ^2_{lowl}	21.48 ± 0.72
H_0	$69.13^{+0.69}_{-0.62}$	k_D	0.14037 ± 0.00034	$\chi^2_{CamSpec}$	11514.2 ± 5.9
Ω_Λ	$0.7080^{+0.0087}_{-0.0075}$	$100\theta_D$	0.16053 ± 0.00020	$\chi^2_{H073p45}$	6.9 ± 2.1
Ω_m	$0.2920^{+0.0075}_{-0.0087}$	z_{eq}	3317 ± 31	χ^2_{prior}	7.8 ± 3.4
$\Omega_m h^2$	0.1395 ± 0.0013	k_{eq}	0.010125 ± 0.000094	χ^2_{CMB}	11932.1 ± 5.9
$\Omega_m h^3$	0.09640 ± 0.00033	$100\theta_{eq}$	0.8301 ± 0.0061		
σ_8	$0.7953^{+0.0063}_{-0.0074}$	$100\theta_{s,eq}$	0.4579 ± 0.0031		

$\bar{\chi}^2_{eff} = 11946.84$; $\Delta\bar{\chi}^2_{eff} = -7.17$; $R - 1 = 0.04629$

3.25 base_Alens_plikHM_TE_lowE

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022146	0.02219 ± 0.00037	$r_{\rm drag} h$	99.57	99.7 ± 2.0	$100\theta_{\rm s,eq}$	0.4514	0.4514 ± 0.0055
$\boldsymbol{\Omega_c h^2}$	0.11933	0.1193 ± 0.0026	$\langle d^2 \rangle^{1/2}$	2.089	$2.09^{+0.31}_{-0.23}$	$H(0.15)$	72.78	72.8 ± 1.1
$\boldsymbol{100\theta_{\rm MC}}$	1.04120	1.04124 ± 0.00052	$z_{\rm re}$	7.14	$7.04^{+0.94}_{-0.74}$	$D_{\rm M}(0.15)$	642.3	642 ± 10
$\boldsymbol{\tau}$	0.0487	$0.0482^{+0.0085}_{-0.0077}$	$10^9 A_{\rm s}$	2.0217	2.021 ± 0.045	$H(0.38)$	82.89	82.96 ± 0.79
$\boldsymbol{A_{\rm L}}$	0.740	0.76 ± 0.22	$10^9 A_{\rm s} e^{-2\tau}$	1.8340	1.835 ± 0.024	$D_{\rm M}(0.38)$	1531.6	1530 ± 21
$\boldsymbol{\ln(10^{10} A_{\rm s})}$	3.0065	3.006 ± 0.022	D_{40}	1244.6	1242 ± 38	$H(0.51)$	89.61	89.67 ± 0.63
$\boldsymbol{n_{\rm s}}$	0.9471	0.949 ± 0.020	D_{220}	5679	5677 ± 59	$D_{\rm M}(0.51)$	1984.0	1983 ± 25
$\boldsymbol{A_{100}^{{\rm dust}TE}}$	0.1114	0.115 ± 0.038	D_{810}	2473.1	2475 ± 38	$H(0.61)$	95.23	$95.29^{+0.49}_{-0.54}$
$\boldsymbol{A_{100\times143}^{{\rm dust}TE}}$	0.1373	0.137 ± 0.029	D_{1420}	789.8	791 ± 18	$D_{\rm M}(0.61)$	2308.6	2307 ± 27
$\boldsymbol{A_{100\times217}^{{\rm dust}TE}}$	0.474	0.476 ± 0.084	D_{2000}	218.8	219.7 ± 8.3	$H(2.33)$	235.92	236.0 ± 1.5
$\boldsymbol{A_{143}^{{\rm dust}TE}}$	0.228	0.224 ± 0.054	$n_{\rm s,0.002}$	0.9471	0.949 ± 0.020	$D_{\rm M}(2.33)$	5768.1	5765 ± 24
$\boldsymbol{A_{143\times217}^{{\rm dust}TE}}$	0.654	0.656 ± 0.080	$Y_{\rm P}$	0.245303	$0.24531^{+0.00018}_{-0.00014}$	$f\sigma_8(0.15)$	0.4455	0.445 ± 0.013
$\boldsymbol{A_{217}^{{\rm dust}TE}}$	2.028	2.03 ± 0.27	$Y_{\rm P}^{\rm BBN}$	0.246630	$0.24664^{+0.00018}_{-0.00014}$	$\sigma_8(0.15)$	0.7297	0.730 ± 0.010
$\boldsymbol{c_{100}}$	1.00015	1.00017 ± 0.00070	10^5D/H	2.628	2.622 ± 0.070	$f\sigma_8(0.38)$	0.4633	0.463 ± 0.011
$\boldsymbol{c_{217}}$	0.99802	0.99800 ± 0.00065	Age/Gyr	13.809	13.803 ± 0.054	$\sigma_8(0.38)$	0.6468	0.6468 ± 0.0091
$\boldsymbol{y_{\rm cal}}$	1.00017	1.0001 ± 0.0025	z_*	1090.15	1090.10 ± 0.65	$f\sigma_8(0.51)$	0.4619	0.4616 ± 0.0091
H_0	67.50	67.6 ± 1.2	r_*	144.78	144.75 ± 0.52	$\sigma_8(0.51)$	0.6052	0.6053 ± 0.0086
Ω_Λ	0.6881	$0.688^{+0.017}_{-0.015}$	$100\theta_*$	1.04140	1.04145 ± 0.00051	$f\sigma_8(0.61)$	0.4570	0.4568 ± 0.0082
$\Omega_{\rm m}$	0.3119	$0.312^{+0.015}_{-0.017}$	$D_{\rm M}(z_*)$/Gpc	13.9020	13.899 ± 0.049	$\sigma_8(0.61)$	0.5759	0.5760 ± 0.0082
$\Omega_{\rm m} h^2$	0.14212	0.1421 ± 0.0023	$z_{\rm drag}$	1059.36	1059.46 ± 0.75	$f\sigma_8(2.33)$	0.29034	0.2904 ± 0.0043
$\Omega_{\rm m} h^3$	0.09593	0.09602 ± 0.00060	$r_{\rm drag}$	147.52	147.48 ± 0.51	$\sigma_8(2.33)$	0.29931	0.2994 ± 0.0047
σ_8	0.7897	0.790 ± 0.011	$k_{\rm D}$	0.14024	0.14031 ± 0.00059	$\chi^2_{\rm simall}$	395.64	396.9 ± 1.7
S_8	0.8053	0.805 ± 0.026	$100\theta_{\rm D}$	0.161135	0.16109 ± 0.00045	$\chi^2_{\rm plikTE}$	851.43	859.6 ± 4.0
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4411	0.441 ± 0.015	$z_{\rm eq}$	3381	3381 ± 56	$\chi^2_{\rm prior}$	0.54	7.4 ± 3.7
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.5902	0.590 ± 0.013	$k_{\rm eq}$	0.010318	0.01032 ± 0.00017	$\chi^2_{\rm CMB}$	1247.07	1256.5 ± 4.4
$\sigma_8 / h^{0.5}$	0.9612	0.961 ± 0.018	$100\theta_{\rm eq}$	0.8167	0.817 ± 0.011			

Best-fit $\chi^2_{\rm eff} = 1247.61$; $\Delta\chi^2_{\rm eff} = -1.38$; $\bar{\chi}^2_{\rm eff} = 1263.86$; $\Delta\bar{\chi}^2_{\rm eff} = -0.15$; $R - 1 = 0.00958$
$\chi^2_{\rm eff}$: CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.64 (Δ -0.05) plik_rd12_HM_v22_TE: 851.43 (Δ -1.42)

3.26 base_Alens_plikHM_TE_lowE_post_BAO

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022242	0.02226 ± 0.00029	$\langle d^2\rangle^{1/2}$	2.141	$2.13^{+0.28}_{-0.22}$	$D_M(0.15)$	639.0	638.8 ± 5.3
$\boldsymbol{\Omega_c h^2}$	0.11854	0.1186 ± 0.0013	z_{re}	7.17	$7.05^{+0.94}_{-0.73}$	$H(0.38)$	83.139	83.16 ± 0.42
$\boldsymbol{100\theta_{MC}}$	1.041285	1.04132 ± 0.00046	$10^9 A_s$	2.0265	2.023 ± 0.044	$D_M(0.38)$	1525.0	1525 ± 11
$\boldsymbol{\tau}$	0.0493	$0.0485^{+0.0085}_{-0.0074}$	$10^9 A_s e^{-2\tau}$	1.8362	1.836 ± 0.024	$H(0.51)$	89.806	89.83 ± 0.36
$\boldsymbol{A_L}$	0.787	0.79 ± 0.19	D_{40}	1235.5	1234 ± 30	$D_M(0.51)$	1976.2	1976 ± 13
$\boldsymbol{\ln(10^{10} A_s)}$	3.0089	3.007 ± 0.022	D_{220}	5684	5681 ± 58	$H(0.61)$	95.386	95.41 ± 0.31
$\boldsymbol{n_s}$	0.9524	0.953 ± 0.015	D_{810}	2480.6	2480 ± 35	$D_M(0.61)$	2300.2	2300 ± 14
$\boldsymbol{y_{cal}}$	1.00025	1.0001 ± 0.0025	D_{1420}	794.0	794 ± 16	$H(2.33)$	235.50	235.54 ± 0.81
$\boldsymbol{A_{100}^{dustTE}}$	0.1153	0.115 ± 0.038	D_{2000}	220.8	221.0 ± 7.2	$D_M(2.33)$	5761.0	5760 ± 16
$\boldsymbol{A_{100\times143}^{dustTE}}$	0.1358	0.137 ± 0.030	$n_{s,0.002}$	0.9524	0.953 ± 0.015	$f\sigma_8(0.15)$	0.4421	0.4417 ± 0.0084
$\boldsymbol{A_{100\times217}^{dustTE}}$	0.476	0.476 ± 0.085	Y_P	0.245343	$0.24534^{+0.00013}_{-0.00011}$	$\sigma_8(0.15)$	0.7298	0.729 ± 0.010
$\boldsymbol{A_{143}^{dustTE}}$	0.223	0.223 ± 0.055	Y_P^{BBN}	0.246670	$0.24667^{+0.00014}_{-0.00011}$	$f\sigma_8(0.38)$	0.4609	0.4606 ± 0.0075
$\boldsymbol{A_{143\times217}^{dustTE}}$	0.651	0.656 ± 0.080	10^5D/H	2.610	2.608 ± 0.055	$\sigma_8(0.38)$	0.6474	0.6469 ± 0.0090
$\boldsymbol{A_{217}^{dustTE}}$	2.017	2.03 ± 0.27	Age/Gyr	13.7934	13.790 ± 0.037	$f\sigma_8(0.51)$	0.4601	0.4597 ± 0.0071
$\boldsymbol{c_{100}}$	1.00015	1.00019 ± 0.00070	z_*	1089.953	1089.94 ± 0.42	$\sigma_8(0.51)$	0.6060	0.6056 ± 0.0084
$\boldsymbol{c_{217}}$	0.99802	0.99800 ± 0.00065	r_*	144.907	144.89 ± 0.34	$f\sigma_8(0.61)$	0.4556	0.4552 ± 0.0068
H_0	67.88	67.91 ± 0.63	$100\theta_*$	1.041482	1.04152 ± 0.00046	$\sigma_8(0.61)$	0.5768	0.5764 ± 0.0080
Ω_Λ	0.6931	0.6931 ± 0.0079	$D_M(z_*)$/Gpc	13.9136	13.911 ± 0.033	$f\sigma_8(2.33)$	0.29099	0.2908 ± 0.0041
Ω_m	0.3069	0.3069 ± 0.0079	z_{drag}	1059.55	1059.57 ± 0.66	$\sigma_8(2.33)$	0.30020	0.3000 ± 0.0043
$\Omega_m h^2$	0.14143	0.1415 ± 0.0012	r_{drag}	147.620	147.60 ± 0.39	χ^2_{simall}	395.63	396.8 ± 1.7
$\Omega_m h^3$	0.09601	0.09606 ± 0.00058	k_D	0.14021	0.14025 ± 0.00056	χ^2_{plikTE}	851.63	858.9 ± 3.8
σ_8	0.7893	0.789 ± 0.011	$100\theta_D$	0.161040	0.16103 ± 0.00039	χ^2_{6DF}	0.0031	0.046 ± 0.064
S_8	0.7983	0.798 ± 0.016	z_{eq}	3364.3	3365 ± 29	χ^2_{MGS}	1.54	1.62 ± 0.60
$\sigma_8\Omega_m^{0.5}$	0.4372	0.4369 ± 0.0088	k_{eq}	0.010268	0.010271 ± 0.000090	$\chi^2_{DR12BAO}$	3.63	4.3 ± 1.3
$\sigma_8\Omega_m^{0.25}$	0.5874	0.5870 ± 0.0094	$100\theta_{eq}$	0.8201	0.8200 ± 0.0056	χ^2_{prior}	0.46	7.4 ± 3.7
$\sigma_8/h^{0.5}$	0.9579	0.957 ± 0.014	$100\theta_{s,eq}$	0.45302	0.4530 ± 0.0028	χ^2_{BAO}	5.176	6.0 ± 1.1
$r_{drag}h$	100.21	100.2 ± 1.0	$H(0.15)$	73.11	73.14 ± 0.55	χ^2_{CMB}	1247.26	1255.8 ± 4.1

Best-fit $\chi^2_{eff} = 1252.89$; $\Delta\chi^2_{eff} = -1.34$; $\bar{\chi}^2_{eff} = 1269.15$; $\Delta\bar{\chi}^2_{eff} = -0.27$; $R - 1 = 0.01278$

χ^2_{eff}: BAO - 6DF: 0.00 (Δ 0.00) MGS: 1.54 (Δ -0.21) DR12BAO: 3.63 (Δ 0.19) CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.63 (Δ -0.03) plik_rd12_HM_v22_TE: 851.63 (Δ -1.31)

3.27 base_Alens_plikHM_TE_lowE_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02220 ± 0.00037	$r_{\rm drag} h$	99.7 ± 2.1	$100\theta_{\rm s,eq}$	0.4517 ± 0.0056
$\boldsymbol{\Omega_c h^2}$	0.1192 ± 0.0026	$\langle d^2 \rangle^{1/2}$	$2.10^{+0.31}_{-0.24}$	$H(0.15)$	72.9 ± 1.1
$\boldsymbol{100\theta_{MC}}$	1.04126 ± 0.00052	$z_{\rm re}$	$7.43^{+0.32}_{-0.84}$	$D_{\rm M}(0.15)$	641 ± 10
$\boldsymbol{\tau}$	$0.0518^{+0.0036}_{-0.0076}$	$10^9 A_{\rm s}$	$2.036^{+0.033}_{-0.040}$	$H(0.38)$	82.99 ± 0.79
$\boldsymbol{A_L}$	0.76 ± 0.22	$10^9 A_{\rm s} e^{-2\tau}$	1.836 ± 0.024	$D_{\rm M}(0.38)$	1530 ± 21
$\boldsymbol{\ln(10^{10} A_s)}$	$3.014^{+0.017}_{-0.019}$	D_{40}	1241 ± 37	$H(0.51)$	$89.70^{+0.59}_{-0.66}$
$\boldsymbol{n_s}$	0.950 ± 0.020	D_{220}	5677 ± 59	$D_{\rm M}(0.51)$	1981 ± 25
$\boldsymbol{A^{\rm dust}_{100}}$	0.115 ± 0.038	D_{810}	2477 ± 38	$H(0.61)$	$95.31^{+0.48}_{-0.55}$
$\boldsymbol{A^{\rm dust}_{100\times143}}$	0.137 ± 0.030	D_{1420}	792 ± 18	$D_{\rm M}(0.61)$	2306 ± 27
$\boldsymbol{A^{\rm dust}_{100\times217}}$	0.476 ± 0.084	D_{2000}	220.1 ± 8.3	$H(2.33)$	235.9 ± 1.5
$\boldsymbol{A^{\rm dust}_{143}}$	0.224 ± 0.055	$n_{\rm s,0.002}$	0.950 ± 0.020	$D_{\rm M}(2.33)$	5764 ± 24
$\boldsymbol{A^{\rm dust}_{143\times217}}$	0.656 ± 0.080	$Y_{\rm P}$	$0.24532^{+0.00018}_{-0.00014}$	$f\sigma_8(0.15)$	0.446 ± 0.013
$\boldsymbol{A^{\rm dust}_{217}}$	2.03 ± 0.27	$Y_{\rm P}^{\rm BBN}$	$0.24664^{+0.00018}_{-0.00014}$	$\sigma_8(0.15)$	0.7324 ± 0.0092
$\boldsymbol{c_{100}}$	1.00017 ± 0.00070	10^5D/H	2.619 ± 0.070	$f\sigma_8(0.38)$	0.464 ± 0.010
$\boldsymbol{c_{217}}$	0.99800 ± 0.00065	Age/Gyr	13.800 ± 0.054	$\sigma_8(0.38)$	0.6493 ± 0.0081
$\boldsymbol{y_{\rm cal}}$	1.0001 ± 0.0025	z_*	1090.07 ± 0.65	$f\sigma_8(0.51)$	0.4631 ± 0.0089
H_0	67.6 ± 1.2	r_*	144.77 ± 0.53	$\sigma_8(0.51)$	0.6077 ± 0.0076
Ω_Λ	0.689 ± 0.016	$100\theta_*$	1.04146 ± 0.00051	$f\sigma_8(0.61)$	0.4582 ± 0.0079
$\Omega_{\rm m}$	0.311 ± 0.016	$D_{\rm M}(z_*)$/Gpc	13.901 ± 0.049	$\sigma_8(0.61)$	$0.5782^{+0.0068}_{-0.0076}$
$\Omega_{\rm m} h^2$	0.1420 ± 0.0024	$z_{\rm drag}$	1059.49 ± 0.75	$f\sigma_8(2.33)$	$0.2916^{+0.0036}_{-0.0040}$
$\Omega_{\rm m} h^3$	0.09603 ± 0.00060	$r_{\rm drag}$	147.49 ± 0.52	$\sigma_8(2.33)$	0.3007 ± 0.0043
σ_8	0.793 ± 0.010	$k_{\rm D}$	0.14031 ± 0.00059	$\chi^2_{\rm simall}$	396.4 ± 1.2
S_8	0.807 ± 0.026	$100\theta_{\rm D}$	0.16108 ± 0.00045	$\chi^2_{\rm plikTE}$	859.6 ± 4.1
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.442 ± 0.014	$z_{\rm eq}$	3379 ± 56	$\chi^2_{\rm prior}$	7.4 ± 3.7
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.592 ± 0.013	$k_{\rm eq}$	0.01031 ± 0.00017	$\chi^2_{\rm CMB}$	1256.1 ± 4.3
$\sigma_8 / h^{0.5}$	0.964 ± 0.017	$100\theta_{\rm eq}$	0.817 ± 0.011		

$\bar{\chi}^2_{\rm eff} = 1263.45$; $\Delta\bar{\chi}^2_{\rm eff} = -0.20$; $R - 1 = 0.01017$

3.28 base_Alens_plikHM_TE_lowE_post_BAO_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02226 ± 0.00029	$\langle d^2 \rangle^{1/2}$	$2.13^{+0.27}_{-0.22}$	$D_M(0.15)$	638.7 ± 5.3
$\boldsymbol{\Omega_c h^2}$	0.1186 ± 0.0013	z_{re}	$7.44^{+0.34}_{-0.81}$	$H(0.38)$	83.17 ± 0.42
$\boldsymbol{100\theta_{MC}}$	1.04133 ± 0.00045	$10^9 A_s$	$2.037^{+0.032}_{-0.039}$	$D_M(0.38)$	1524 ± 11
$\boldsymbol{\tau}$	$0.0520^{+0.0036}_{-0.0073}$	$10^9 A_s e^{-2\tau}$	1.836 ± 0.024	$H(0.51)$	89.83 ± 0.36
$\boldsymbol{A_L}$	0.79 ± 0.19	D_{40}	1235 ± 30	$D_M(0.51)$	1976 ± 13
$\boldsymbol{\ln(10^{10} A_s)}$	$3.014^{+0.016}_{-0.019}$	D_{220}	5680 ± 59	$H(0.61)$	95.41 ± 0.32
$\boldsymbol{n_s}$	0.953 ± 0.016	D_{810}	2481 ± 35	$D_M(0.61)$	2299 ± 14
$\boldsymbol{y_{cal}}$	1.0001 ± 0.0025	D_{1420}	794 ± 16	$H(2.33)$	235.54 ± 0.81
$\boldsymbol{A_{100}^{dustTE}}$	0.115 ± 0.038	D_{2000}	221.1 ± 7.3	$D_M(2.33)$	5760 ± 16
$\boldsymbol{A_{100\times143}^{dustTE}}$	0.137 ± 0.030	$n_{s,0.002}$	0.953 ± 0.016	$f\sigma_8(0.15)$	0.4433 ± 0.0079
$\boldsymbol{A_{100\times217}^{dustTE}}$	0.477 ± 0.085	Y_P	$0.24534^{+0.00013}_{-0.00011}$	$\sigma_8(0.15)$	$0.7319^{+0.0084}_{-0.0094}$
$\boldsymbol{A_{143}^{dustTE}}$	0.223 ± 0.055	Y_P^{BBN}	$0.24667^{+0.00013}_{-0.00011}$	$f\sigma_8(0.38)$	$0.4622^{+0.0065}_{-0.0073}$
$\boldsymbol{A_{143\times217}^{dustTE}}$	0.656 ± 0.080	10^5D/H	2.607 ± 0.055	$\sigma_8(0.38)$	0.6493 ± 0.0080
$\boldsymbol{A_{217}^{dustTE}}$	2.03 ± 0.27	Age/Gyr	13.790 ± 0.037	$f\sigma_8(0.51)$	$0.4614^{+0.0060}_{-0.0068}$
$\boldsymbol{c_{100}}$	1.00019 ± 0.00069	z_*	1089.94 ± 0.43	$\sigma_8(0.51)$	0.6078 ± 0.0076
$\boldsymbol{c_{217}}$	0.99801 ± 0.00063	r_*	144.89 ± 0.34	$f\sigma_8(0.61)$	$0.4569^{+0.0057}_{-0.0064}$
H_0	67.91 ± 0.63	$100\theta_*$	1.04153 ± 0.00045	$\sigma_8(0.61)$	0.5785 ± 0.0072
Ω_Λ	0.6932 ± 0.0079	$D_M(z_*)$/Gpc	13.911 ± 0.033	$f\sigma_8(2.33)$	0.2919 ± 0.0037
Ω_m	0.3068 ± 0.0079	z_{drag}	1059.57 ± 0.66	$\sigma_8(2.33)$	0.3011 ± 0.0039
$\Omega_m h^2$	0.1415 ± 0.0012	r_{drag}	147.60 ± 0.39	χ^2_{simall}	396.4 ± 1.2
$\Omega_m h^3$	0.09607 ± 0.00059	k_D	0.14025 ± 0.00057	χ^2_{plikTE}	859.0 ± 3.8
σ_8	$0.7916^{+0.0091}_{-0.010}$	$100\theta_D$	0.16103 ± 0.00039	χ^2_{6DF}	0.045 ± 0.064
S_8	0.800 ± 0.015	z_{eq}	3365 ± 30	χ^2_{MGS}	1.63 ± 0.60
$\sigma_8\Omega_m^{0.5}$	0.4384 ± 0.0083	k_{eq}	0.010271 ± 0.000090	$\chi^2_{DR12BAO}$	4.3 ± 1.3
$\sigma_8\Omega_m^{0.25}$	$0.5891^{+0.0081}_{-0.0091}$	$100\theta_{eq}$	0.8200 ± 0.0056	χ^2_{prior}	7.3 ± 3.6
$\sigma_8/h^{0.5}$	$0.961^{+0.012}_{-0.013}$	$100\theta_{s,eq}$	0.4530 ± 0.0029	χ^2_{BAO}	6.0 ± 1.1
$r_{drag}h$	100.2 ± 1.0	$H(0.15)$	73.14 ± 0.55	χ^2_{CMB}	1255.4 ± 4.0

$\bar{\chi}^2_{eff} = 1268.67$; $\Delta\bar{\chi}^2_{eff} = -0.32$; $R - 1 = 0.01556$

3.29 base_Alens_plikHM_EE_lowE

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02434	0.0245 ± 0.0013	D_{40}	1224.7	1222 ± 31	$D_{\rm M}(0.15)$	614.1	612^{+22}_{-25}
$\boldsymbol{\Omega_c h^2}$	0.11397	$0.1135^{+0.0045}_{-0.0051}$	D_{220}	6006	6026 ± 200	$H(0.38)$	85.36	85.7 ± 2.1
$\boldsymbol{100\theta_{MC}}$	1.04001	1.04006 ± 0.00090	D_{810}	2590.4	2595 ± 39	$D_{\rm M}(0.38)$	1472.9	1467 ± 49
$\boldsymbol{\tau}$	0.0541	0.0531 ± 0.0093	D_{1420}	844.3	847 ± 19	$H(0.51)$	91.75	$92.1^{+1.7}_{-1.9}$
$\boldsymbol{A_L}$	1.307	$1.32^{+0.24}_{-0.27}$	D_{2000}	244.7	245.8 ± 7.9	$D_{\rm M}(0.51)$	1913	1907 ± 58
$\boldsymbol{\ln(10^{10} A_s)}$	3.0553	3.054 ± 0.023	$n_{\rm s,0.002}$	0.9858	0.989 ± 0.016	$H(0.61)$	97.13	$97.4^{+1.5}_{-1.7}$
$\boldsymbol{n_s}$	0.9858	0.989 ± 0.016	$Y_{\rm P}$	0.246154	$0.24625^{+0.00055}_{-0.00044}$	$D_{\rm M}(0.61)$	2231	2223 ± 64
$\boldsymbol{y_{cal}}$	0.99985	0.9999 ± 0.0025	$Y_{\rm P}^{\rm BBN}$	0.24748	$0.24758^{+0.00055}_{-0.00045}$	$H(2.33)$	234.50	$234.4^{+1.9}_{-2.2}$
H_0	70.87	71.3 ± 2.9	10^5D/H	2.255	$2.24^{+0.18}_{-0.21}$	$D_{\rm M}(2.33)$	5676	5664 ± 73
Ω_Λ	0.7233	$0.725^{+0.033}_{-0.025}$	Age/Gyr	13.599	13.58 ± 0.16	$f\sigma_8(0.15)$	0.4231	$0.420^{+0.028}_{-0.032}$
$\Omega_{\rm m}$	0.2767	$0.275^{+0.025}_{-0.033}$	z_*	1087.14	$1087.0^{+1.6}_{-1.8}$	$\sigma_8(0.15)$	0.7346	$0.732^{+0.016}_{-0.014}$
$\Omega_{\rm m}h^2$	0.13896	$0.1387^{+0.0035}_{-0.0040}$	r_*	144.49	144.45 ± 0.65	$f\sigma_8(0.38)$	0.4486	0.446 ± 0.024
$\Omega_{\rm m}h^3$	0.09847	0.0988 ± 0.0019	$100\theta_*$	1.03999	1.04003 ± 0.00087	$\sigma_8(0.38)$	0.6551	$0.653^{+0.012}_{-0.010}$
σ_8	0.7912	0.788 ± 0.019	$D_{\rm M}(z_*)$/Gpc	13.893	13.889 ± 0.061	$f\sigma_8(0.51)$	0.4513	0.448 ± 0.021
S_8	0.760	$0.755^{+0.053}_{-0.062}$	$z_{\rm drag}$	1063.94	1064.3 ± 2.5	$\sigma_8(0.51)$	0.6147	$0.6130^{+0.0098}_{-0.0085}$
$\sigma_8\Omega_{\rm m}^{0.5}$	0.4162	$0.413^{+0.029}_{-0.034}$	$r_{\rm drag}$	146.53	146.45 ± 0.72	$f\sigma_8(0.61)$	0.4493	0.447 ± 0.018
$\sigma_8\Omega_{\rm m}^{0.25}$	0.5738	0.571 ± 0.028	$k_{\rm D}$	0.14280	0.1429 ± 0.0013	$\sigma_8(0.61)$	0.5859	$0.5844^{+0.0087}_{-0.0076}$
$\sigma_8/h^{0.5}$	0.9399	0.935 ± 0.041	$100\theta_{\rm D}$	0.15836	$0.1583^{+0.0011}_{-0.0014}$	$f\sigma_8(2.33)$	0.29688	0.2963 ± 0.0037
$r_{\rm drag}h$	103.84	104.4 ± 4.3	$z_{\rm eq}$	3305	3300^{+83}_{-95}	$\sigma_8(2.33)$	0.30778	0.3074 ± 0.0037
$\langle d^2\rangle^{1/2}$	2.684	$2.67^{+0.25}_{-0.22}$	$k_{\rm eq}$	0.010088	$0.01007^{+0.00025}_{-0.00029}$	$\chi^2_{\rm simall}$	395.57	396.7 ± 1.6
$z_{\rm re}$	7.16	$7.00^{+0.91}_{-0.73}$	$100\theta_{\rm eq}$	0.8360	0.838 ± 0.020	$\chi^2_{\rm plikEE}$	737.57	743.5 ± 3.4
$10^9 A_{\rm s}$	2.1229	2.122 ± 0.049	$100\theta_{\rm s,eq}$	0.4596	0.4606 ± 0.0097	$\chi^2_{\rm prior}$	0.004	0.99 ± 1.4
$10^9 A_{\rm s}e^{-2\tau}$	1.9051	1.907 ± 0.025	$H(0.15)$	75.81	76.2 ± 2.6	$\chi^2_{\rm CMB}$	1133.14	1140.3 ± 3.8

Best-fit $\chi^2_{\rm eff} = 1133.14$; $\Delta\chi^2_{\rm eff} = -1.41$; $\bar{\chi}^2_{\rm eff} = 1141.29$; $\Delta\bar{\chi}^2_{\rm eff} = -0.32$; $R - 1 = 0.00947$

$\chi^2_{\rm eff}$: CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.57 (Δ -0.02) plik_rd12_HM_v22_EE: 737.57 (Δ -1.39)

3.30 base_Alens_plikHM_EE_lowE_post_BAO

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02352	0.02355 ± 0.00065	D_{810}	2576.8	2577 ± 33	$D_M(0.51)$	1954.5	1954 ± 18
$\boldsymbol{\Omega_c h^2}$	0.11747	0.1174 ± 0.0015	D_{1420}	836.5	836 ± 15	$H(0.61)$	96.10	96.12 ± 0.55
$\boldsymbol{100\theta_{MC}}$	1.03980	1.03976 ± 0.00081	D_{2000}	240.9	240.9 ± 5.6	$D_M(0.61)$	2275.9	2275 ± 20
$\boldsymbol{\tau}$	0.0521	$0.0510^{+0.0087}_{-0.0078}$	$n_{s,0.002}$	0.9786	0.978 ± 0.010	$H(2.33)$	235.93	235.92 ± 0.97
$\boldsymbol{A_L}$	1.234	1.24 ± 0.23	Y_P	0.245872	$0.24587^{+0.00026}_{-0.00023}$	$D_M(2.33)$	5722.7	5722 ± 29
$\boldsymbol{\ln(10^{10} A_s)}$	3.0511	$3.049^{+0.022}_{-0.019}$	Y_P^{BBN}	0.247200	$0.24720^{+0.00026}_{-0.00024}$	$f\sigma_8(0.15)$	0.4449	0.4440 ± 0.0097
$\boldsymbol{n_s}$	0.9786	0.978 ± 0.010	10^5D/H	2.386	2.38 ± 0.11	$\sigma_8(0.15)$	0.7438	0.7427 ± 0.0090
$\boldsymbol{y_{cal}}$	0.99977	0.9999 ± 0.0025	Age/Gyr	13.704	13.703 ± 0.067	$f\sigma_8(0.38)$	0.4659	0.4650 ± 0.0083
H_0	68.83	68.86 ± 0.85	z_*	1088.33	1088.31 ± 0.79	$\sigma_8(0.38)$	0.6607	0.6597 ± 0.0077
Ω_Λ	0.7011	0.7012 ± 0.0091	r_*	144.21	144.20 ± 0.51	$f\sigma_8(0.51)$	0.4660	0.4651 ± 0.0075
Ω_m	0.2989	0.2988 ± 0.0091	$100\theta_*$	1.03988	1.03982 ± 0.00082	$\sigma_8(0.51)$	0.6189	0.6180 ± 0.0071
$\Omega_m h^2$	0.14163	0.1416 ± 0.0014	$D_M(z_*)$/Gpc	13.8679	13.868 ± 0.049	$f\sigma_8(0.61)$	0.4620	0.4612 ± 0.0069
$\Omega_m h^3$	0.09748	0.0975 ± 0.0012	z_{drag}	1062.37	1062.4 ± 1.4	$\sigma_8(0.61)$	0.5893	0.5884 ± 0.0068
σ_8	0.8036	0.802 ± 0.010	r_{drag}	146.50	146.49 ± 0.68	$f\sigma_8(2.33)$	0.29761	0.2972 ± 0.0034
S_8	0.8022	0.801 ± 0.019	k_D	0.14232	0.1423 ± 0.0011	$\sigma_8(2.33)$	0.30739	0.3070 ± 0.0035
$\sigma_8 \Omega_m^{0.5}$	0.4394	0.439 ± 0.010	$100\theta_D$	0.15917	0.15916 ± 0.00082	χ^2_{simall}	395.62	396.8 ± 1.6
$\sigma_8 \Omega_m^{0.25}$	0.5942	0.593 ± 0.010	z_{eq}	3369.1	3368 ± 33	χ^2_{plikEE}	738.06	743.1 ± 3.4
$\sigma_8/h^{0.5}$	0.9686	0.967 ± 0.015	k_{eq}	0.010283	0.01028 ± 0.00010	χ^2_{6DF}	0.0042	0.060 ± 0.084
$r_{drag} h$	100.83	100.9 ± 1.1	$100\theta_{eq}$	0.8216	0.8218 ± 0.0060	χ^2_{MGS}	1.89	2.00 ± 0.72
$\langle d^2 \rangle^{1/2}$	2.662	$2.66^{+0.25}_{-0.23}$	$100\theta_{s,eq}$	0.45282	0.4529 ± 0.0031	$\chi^2_{DR12BAO}$	3.60	4.4 ± 1.2
z_{re}	7.18	$7.04^{+0.89}_{-0.75}$	$H(0.15)$	74.00	74.03 ± 0.77	χ^2_{prior}	0.01	1.0 ± 1.4
$10^9 A_s$	2.1139	$2.111^{+0.046}_{-0.042}$	$D_M(0.15)$	630.7	630.5 ± 7.2	χ^2_{BAO}	5.50	6.5 ± 1.4
$10^9 A_s e^{-2\tau}$	1.9046	1.906 ± 0.024	$H(0.38)$	83.93	83.96 ± 0.65	χ^2_{CMB}	1133.68	1139.9 ± 3.7
D_{40}	1225.0	1227 ± 31	$D_M(0.38)$	1507.3	1507 ± 15			
D_{220}	5885	5895 ± 130	$H(0.51)$	90.55	90.57 ± 0.59			

Best-fit $\chi^2_{eff} = 1139.18$; $\Delta\chi^2_{eff} = -0.98$; $\bar{\chi}^2_{eff} = 1147.38$; $\Delta\bar{\chi}^2_{eff} = 0.02$; $R - 1 = 0.01879$

χ^2_{eff}: BAO - 6DF: 0.00 (Δ 0.00) MGS: 1.89 (Δ 0.00) DR12BAO: 3.60 (Δ 0.00) CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.62 (Δ 0.01) plik_rd12_HM_v22_EE: 738.06 (Δ -0.98)

3.31 base_Alens_plikHM_EE_lowE_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.0245 ± 0.0013	D_{40}	1221 ± 31	$D_{\rm M}(0.15)$	612^{+22}_{-24}
$\boldsymbol{\Omega_c h^2}$	$0.1136^{+0.0045}_{-0.0051}$	D_{220}	6020 ± 200	$H(0.38)$	85.7 ± 2.1
$\boldsymbol{100\theta_{MC}}$	1.04006 ± 0.00090	D_{810}	2594 ± 38	$D_{\rm M}(0.38)$	1468 ± 48
$\boldsymbol{\tau}$	$0.0570^{+0.0051}_{-0.0080}$	D_{1420}	847 ± 19	$H(0.51)$	$92.0^{+1.7}_{-1.9}$
$\boldsymbol{A_L}$	$1.31^{+0.23}_{-0.26}$	D_{2000}	245.7 ± 7.9	$D_{\rm M}(0.51)$	1907 ± 58
$\boldsymbol{\ln(10^{10} A_s)}$	$3.062^{+0.018}_{-0.020}$	$n_{\rm s,0.002}$	0.989 ± 0.016	$H(0.61)$	$97.4^{+1.5}_{-1.7}$
$\boldsymbol{n_s}$	0.989 ± 0.016	$Y_{\rm P}$	$0.24623^{+0.00055}_{-0.00044}$	$D_{\rm M}(0.61)$	2224 ± 64
$\boldsymbol{y_{cal}}$	0.9999 ± 0.0025	$Y_{\rm P}^{\rm BBN}$	$0.24756^{+0.00055}_{-0.00044}$	$H(2.33)$	$234.4^{+1.9}_{-2.2}$
H_0	71.2 ± 2.9	10^5D/H	$2.24^{+0.18}_{-0.21}$	$D_{\rm M}(2.33)$	5665 ± 72
Ω_Λ	$0.725^{+0.033}_{-0.025}$	Age/Gyr	13.58 ± 0.16	$f\sigma_8(0.15)$	$0.422^{+0.028}_{-0.032}$
$\Omega_{\rm m}$	$0.275^{+0.025}_{-0.033}$	z_*	$1087.0^{+1.6}_{-1.8}$	$\sigma_8(0.15)$	0.735 ± 0.015
$\Omega_{\rm m}h^2$	$0.1387^{+0.0035}_{-0.0040}$	r_*	144.47 ± 0.65	$f\sigma_8(0.38)$	0.447 ± 0.024
$\Omega_{\rm m}h^3$	$0.0987^{+0.0017}_{-0.0020}$	$100\theta_*$	1.04003 ± 0.00087	$\sigma_8(0.38)$	$0.656^{+0.010}_{-0.0095}$
σ_8	0.791 ± 0.019	$D_{\rm M}(z_*)$/Gpc	13.891 ± 0.061	$f\sigma_8(0.51)$	0.450 ± 0.021
S_8	$0.758^{+0.052}_{-0.062}$	$z_{\rm drag}$	1064.2 ± 2.5	$\sigma_8(0.51)$	0.6154 ± 0.0084
$\sigma_8\Omega_{\rm m}^{0.5}$	$0.415^{+0.029}_{-0.034}$	$r_{\rm drag}$	146.48 ± 0.72	$f\sigma_8(0.61)$	0.448 ± 0.018
$\sigma_8\Omega_{\rm m}^{0.25}$	0.573 ± 0.028	$k_{\rm D}$	0.1429 ± 0.0013	$\sigma_8(0.61)$	0.5867 ± 0.0075
$\sigma_8/h^{0.5}$	0.939 ± 0.040	$100\theta_{\rm D}$	$0.1583^{+0.0011}_{-0.0014}$	$f\sigma_8(2.33)$	0.2974 ± 0.0032
$r_{\rm drag}h$	104.3 ± 4.3	$z_{\rm eq}$	3299^{+83}_{-96}	$\sigma_8(2.33)$	0.3086 ± 0.0032
$\langle d^2\rangle^{1/2}$	$2.67^{+0.25}_{-0.22}$	$k_{\rm eq}$	$0.01007^{+0.00025}_{-0.00029}$	$\chi^2_{\rm simall}$	396.4 ± 1.3
$z_{\rm re}$	$7.39^{+0.27}_{-0.84}$	$100\theta_{\rm eq}$	0.838 ± 0.020	$\chi^2_{\rm plikEE}$	743.5 ± 3.4
$10^9 A_{\rm s}$	$2.137^{+0.038}_{-0.044}$	$100\theta_{\rm s,eq}$	0.4606 ± 0.0097	$\chi^2_{\rm prior}$	0.99 ± 1.4
$10^9 A_{\rm s}e^{-2\tau}$	1.906 ± 0.025	$H(0.15)$	76.2 ± 2.6	$\chi^2_{\rm CMB}$	1139.9 ± 3.6

$\bar{\chi}^2_{\rm eff} = 1140.89$; $\Delta\bar{\chi}^2_{\rm eff} = -0.42$; $R - 1 = 0.00557$

3.32 base_Alens_plikHM_EE_lowE_post_BAO_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02354 ± 0.00064	D_{810}	2577 ± 33	$D_{\rm M}(0.51)$	1954 ± 18
$\boldsymbol{\Omega_c h^2}$	0.1174 ± 0.0015	D_{1420}	836 ± 14	$H(0.61)$	96.11 ± 0.55
$\boldsymbol{100\theta_{MC}}$	1.03975 ± 0.00081	D_{2000}	240.9 ± 5.6	$D_{\rm M}(0.61)$	2275 ± 20
$\boldsymbol{\tau}$	$0.0546^{+0.0042}_{-0.0072}$	$n_{\rm s,0.002}$	0.978 ± 0.010	$H(2.33)$	235.90 ± 0.98
$\boldsymbol{A_L}$	1.23 ± 0.22	$Y_{\rm P}$	$0.24587^{+0.00026}_{-0.00023}$	$D_{\rm M}(2.33)$	5722 ± 29
$\boldsymbol{\ln(10^{10} A_s)}$	3.056 ± 0.018	$Y_{\rm P}^{\rm BBN}$	$0.24719^{+0.00026}_{-0.00024}$	$f\sigma_8(0.15)$	0.4455 ± 0.0094
$\boldsymbol{n_s}$	0.978 ± 0.010	10^5D/H	2.39 ± 0.11	$\sigma_8(0.15)$	0.7453 ± 0.0078
$\boldsymbol{y_{cal}}$	0.9999 ± 0.0025	Age/Gyr	13.703 ± 0.067	$f\sigma_8(0.38)$	0.4666 ± 0.0079
H_0	68.86 ± 0.85	z_*	1088.32 ± 0.78	$\sigma_8(0.38)$	0.6620 ± 0.0067
Ω_Λ	0.7013 ± 0.0090	r_*	144.21 ± 0.51	$f\sigma_8(0.51)$	0.4667 ± 0.0070
$\Omega_{\rm m}$	0.2987 ± 0.0090	$100\theta_*$	1.03981 ± 0.00082	$\sigma_8(0.51)$	0.6202 ± 0.0061
$\Omega_{\rm m}h^2$	0.1416 ± 0.0014	$D_{\rm M}(z_*)$/Gpc	13.869 ± 0.050	$f\sigma_8(0.61)$	0.4628 ± 0.0064
$\Omega_{\rm m}h^3$	0.0975 ± 0.0012	$z_{\rm drag}$	1062.4 ± 1.4	$\sigma_8(0.61)$	0.5905 ± 0.0058
σ_8	0.8051 ± 0.0089	$r_{\rm drag}$	146.50 ± 0.67	$f\sigma_8(2.33)$	0.2982 ± 0.0029
S_8	0.803 ± 0.018	$k_{\rm D}$	0.1423 ± 0.0011	$\sigma_8(2.33)$	$0.3081^{+0.0028}_{-0.0031}$
$\sigma_8\Omega_{\rm m}^{0.5}$	0.4400 ± 0.0099	$100\theta_{\rm D}$	0.15916 ± 0.00081	$\chi^2_{\rm simall}$	396.4 ± 1.3
$\sigma_8\Omega_{\rm m}^{0.25}$	0.5952 ± 0.0096	$z_{\rm eq}$	3368 ± 33	$\chi^2_{\rm plikEE}$	743.1 ± 3.4
$\sigma_8/h^{0.5}$	0.970 ± 0.014	$k_{\rm eq}$	0.01028 ± 0.00010	$\chi^2_{\rm 6DF}$	0.060 ± 0.084
$r_{\rm drag}h$	100.9 ± 1.1	$100\theta_{\rm eq}$	0.8219 ± 0.0060	$\chi^2_{\rm MGS}$	2.00 ± 0.72
$\langle d^2\rangle^{1/2}$	$2.66^{+0.25}_{-0.22}$	$100\theta_{\rm s,eq}$	0.4530 ± 0.0031	$\chi^2_{\rm DR12BAO}$	4.4 ± 1.2
$z_{\rm re}$	$7.41^{+0.29}_{-0.85}$	$H(0.15)$	74.03 ± 0.77	$\chi^2_{\rm prior}$	1.0 ± 1.5
$10^9 A_{\rm s}$	2.125 ± 0.038	$D_{\rm M}(0.15)$	630.5 ± 7.2	$\chi^2_{\rm BAO}$	6.5 ± 1.4
$10^9 A_{\rm s}e^{-2\tau}$	1.905 ± 0.024	$H(0.38)$	83.96 ± 0.65	$\chi^2_{\rm CMB}$	1139.5 ± 3.6
D_{40}	1227 ± 31	$D_{\rm M}(0.38)$	1507 ± 15		
D_{220}	5892 ± 130	$H(0.51)$	90.57 ± 0.59		

$\bar{\chi}^2_{\rm eff} = 1146.99$; $\Delta\bar{\chi}^2_{\rm eff} = -0.07$; $R - 1 = 0.01334$

3.33 base_Alens_CamSpecHM_TE_lowE

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022329	0.02238 ± 0.00039	D_{40}	1216.0	1209 ± 38	$D_M(0.15)$	635.9	634 ± 11
$\boldsymbol{\Omega_c h^2}$	0.11774	0.1174 ± 0.0026	D_{220}	5715	5710 ± 63	$H(0.38)$	83.37	83.51 ± 0.82
$\boldsymbol{100\theta_{MC}}$	1.04130	1.04137 ± 0.00053	D_{810}	2532.4	2536 ± 40	$D_M(0.38)$	1518.8	1516 ± 21
$\boldsymbol{\tau}$	0.0504	0.0500 ± 0.0090	D_{1420}	816.5	819 ± 20	$H(0.51)$	89.99	90.10 ± 0.67
$\boldsymbol{A_L}$	0.890	$0.93^{+0.21}_{-0.24}$	D_{2000}	229.3	230.7 ± 9.1	$D_M(0.51)$	1968.9	1965 ± 25
$\boldsymbol{\ln(10^{10} A_s)}$	3.0276	3.027 ± 0.023	$n_{s,0.002}$	0.9689	0.973 ± 0.021	$H(0.61)$	95.53	95.63 ± 0.56
$\boldsymbol{n_s}$	0.9689	0.973 ± 0.021	Y_P	0.245379	0.24539 ± 0.00017	$D_M(0.61)$	2292.3	2288 ± 27
$\boldsymbol{y_{cal}}$	1.00006	0.99997 ± 0.0025	Y_P^{BBN}	0.246705	0.24672 ± 0.00017	$H(2.33)$	235.07	234.9 ± 1.4
H_0	68.25	68.4 ± 1.3	10^5D/H	2.593	2.586 ± 0.073	$D_M(2.33)$	5755.0	5751 ± 25
Ω_Λ	0.6979	$0.700^{+0.016}_{-0.015}$	Age/Gyr	13.780	13.771 ± 0.057	$f\sigma_8(0.15)$	0.4442	0.443 ± 0.014
Ω_m	0.3021	0.300 ± 0.016	z_*	1089.77	1089.69 ± 0.66	$\sigma_8(0.15)$	0.7388	0.739 ± 0.011
$\Omega_m h^2$	0.14072	0.1404 ± 0.0023	r_*	145.05	145.10 ± 0.52	$f\sigma_8(0.38)$	0.4643	0.463 ± 0.011
$\Omega_m h^3$	0.09604	0.09610 ± 0.00064	$100\theta_*$	1.04150	1.04155 ± 0.00052	$\sigma_8(0.38)$	0.6560	0.6559 ± 0.0095
σ_8	0.7986	0.798 ± 0.012	$D_M(z_*)$/Gpc	13.9269	13.931 ± 0.049	$f\sigma_8(0.51)$	0.4640	0.4630 ± 0.0096
S_8	0.8013	0.798 ± 0.027	z_{drag}	1059.67	1059.77 ± 0.80	$\sigma_8(0.51)$	0.6143	0.6144 ± 0.0090
$\sigma_8 \Omega_m^{0.5}$	0.4389	0.437 ± 0.015	r_{drag}	147.74	147.77 ± 0.52	$f\sigma_8(0.61)$	0.4599	0.4590 ± 0.0087
$\sigma_8 \Omega_m^{0.25}$	0.5920	0.591 ± 0.013	k_D	0.14016	0.14015 ± 0.00061	$\sigma_8(0.61)$	0.5848	0.5849 ± 0.0086
$\sigma_8/h^{0.5}$	0.9666	0.965 ± 0.018	$100\theta_D$	0.160947	0.16091 ± 0.00047	$f\sigma_8(2.33)$	0.29522	0.2954 ± 0.0045
$r_{drag} h$	100.83	101.1 ± 2.1	z_{eq}	3347	3341 ± 56	$\sigma_8(2.33)$	0.30478	0.3051 ± 0.0050
$\langle d^2 \rangle^{1/2}$	2.259	$2.28^{+0.27}_{-0.22}$	k_{eq}	0.010216	0.01020 ± 0.00017	χ^2_{simall}	395.66	396.9 ± 1.7
z_{re}	7.25	$7.17^{+0.94}_{-0.78}$	$100\theta_{eq}$	0.8234	0.825 ± 0.011	$\chi^2_{CamSpec}$	2575.80	2581.9 ± 3.5
$10^9 A_s$	2.0647	2.064 ± 0.048	$100\theta_{s,eq}$	0.4547	0.4555 ± 0.0056	χ^2_{prior}	10.03	11.0 ± 1.4
$10^9 A_s e^{-2\tau}$	1.8667	1.867 ± 0.025	$H(0.15)$	73.43	73.6 ± 1.1	χ^2_{CMB}	2971.46	2978.8 ± 3.9

Best-fit $\chi^2_{eff} = 2981.49$; $\Delta\chi^2_{eff} = -0.15$; $\bar{\chi}^2_{eff} = 2989.81$; $\Delta\bar{\chi}^2_{eff} = 0.90$; $R - 1 = 0.00461$

χ^2_{eff}: CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.66 (Δ -0.01) CamSpec like_10.7HM_1400_unified: 2575.80 (Δ -0.15)

3.34 base_Alens_CamSpecHM_TE_lowE_post_BAO

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02230 ± 0.00031	D_{810}	2530 ± 37	$D_{\rm M}(0.51)$	1972 ± 13
$\boldsymbol{\Omega_c h^2}$	0.1181 ± 0.0013	D_{1420}	816 ± 17	$H(0.61)$	95.48 ± 0.33
$\boldsymbol{100\theta_{MC}}$	1.04130 ± 0.00048	D_{2000}	$229.0^{+7.3}_{-8.2}$	$D_{\rm M}(0.61)$	2295 ± 14
$\boldsymbol{\tau}$	0.0496 ± 0.0087	$n_{\rm s,0.002}$	0.968 ± 0.016	$H(2.33)$	235.25 ± 0.82
$\boldsymbol{A_L}$	0.89 ± 0.19	$Y_{\rm P}$	$0.24536^{+0.00013}_{-0.00011}$	$D_{\rm M}(2.33)$	5757 ± 17
$\boldsymbol{\ln(10^{10} A_s)}$	3.026 ± 0.023	$Y_{\rm P}^{\rm BBN}$	$0.24669^{+0.00013}_{-0.00011}$	$f\sigma_8(0.15)$	0.4456 ± 0.0086
$\boldsymbol{n_s}$	0.968 ± 0.016	10^5D/H	2.600 ± 0.058	$\sigma_8(0.15)$	0.739 ± 0.011
$\boldsymbol{y_{cal}}$	1.0000 ± 0.0025	Age/Gyr	13.785 ± 0.038	$f\sigma_8(0.38)$	0.4653 ± 0.0078
H_0	68.11 ± 0.64	z_*	1089.85 ± 0.44	$\sigma_8(0.38)$	0.6558 ± 0.0095
Ω_Λ	0.6959 ± 0.0079	r_*	144.99 ± 0.35	$f\sigma_8(0.51)$	0.4648 ± 0.0074
$\Omega_{\rm m}$	0.3041 ± 0.0079	$100\theta_*$	1.04149 ± 0.00047	$\sigma_8(0.51)$	0.6141 ± 0.0089
$\Omega_{\rm m}h^2$	0.1410 ± 0.0012	$D_{\rm M}(z_*)$/Gpc	13.921 ± 0.034	$f\sigma_8(0.61)$	0.4605 ± 0.0071
$\Omega_{\rm m}h^3$	0.09604 ± 0.00062	$z_{\rm drag}$	1059.63 ± 0.69	$\sigma_8(0.61)$	0.5845 ± 0.0085
σ_8	0.799 ± 0.012	$r_{\rm drag}$	147.69 ± 0.40	$f\sigma_8(2.33)$	0.2950 ± 0.0043
S_8	0.804 ± 0.016	$k_{\rm D}$	0.14018 ± 0.00059	$\sigma_8(2.33)$	0.3045 ± 0.0046
$\sigma_8\Omega_{\rm m}^{0.5}$	0.4405 ± 0.0089	$100\theta_{\rm D}$	0.16098 ± 0.00041	$\chi^2_{\rm simall}$	396.9 ± 1.7
$\sigma_8\Omega_{\rm m}^{0.25}$	0.5932 ± 0.0097	$z_{\rm eq}$	3354 ± 30	$\chi^2_{\rm CamSpec}$	2581.1 ± 3.3
$\sigma_8/h^{0.5}$	0.968 ± 0.015	$k_{\rm eq}$	0.010238 ± 0.000091	$\chi^2_{\rm 6DF}$	0.044 ± 0.063
$r_{\rm drag}h$	100.6 ± 1.0	$100\theta_{\rm eq}$	0.8221 ± 0.0056	$\chi^2_{\rm MGS}$	1.84 ± 0.63
$\langle d^2\rangle^{1/2}$	$2.24^{+0.25}_{-0.20}$	$100\theta_{\rm s,eq}$	0.4540 ± 0.0029	$\chi^2_{\rm DR12BAO}$	4.1 ± 1.0
$z_{\rm re}$	$7.16^{+0.90}_{-0.81}$	$H(0.15)$	73.31 ± 0.56	$\chi^2_{\rm prior}$	11.0 ± 1.4
$10^9 A_{\rm s}$	2.061 ± 0.047	$D_{\rm M}(0.15)$	637.1 ± 5.4	$\chi^2_{\rm BAO}$	6.0 ± 1.1
$10^9 A_{\rm s}e^{-2\tau}$	1.866 ± 0.025	$H(0.38)$	83.28 ± 0.44	$\chi^2_{\rm CMB}$	2978.0 ± 3.7
D_{40}	1217 ± 31	$D_{\rm M}(0.38)$	1521 ± 11		
D_{220}	5707 ± 62	$H(0.51)$	89.92 ± 0.37		

$\bar{\chi}^2_{\rm eff} = 2995.04$; $\Delta\bar{\chi}^2_{\rm eff} = 0.94$; $R-1 = 0.00758$

3.35 base_Alens_CamSpecHM_TE_lowE_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02239 ± 0.00040	D_{40}	1209 ± 38	$D_{\rm M}(0.15)$	634 ± 10
$\boldsymbol{\Omega_c h^2}$	0.1173 ± 0.0026	D_{220}	5709 ± 63	$H(0.38)$	83.52 ± 0.82
$\boldsymbol{100\theta_{MC}}$	1.04137 ± 0.00053	D_{810}	2536 ± 40	$D_{\rm M}(0.38)$	1515 ± 21
$\boldsymbol{\tau}$	$0.0533^{+0.0041}_{-0.0081}$	D_{1420}	819 ± 20	$H(0.51)$	90.12 ± 0.67
$\boldsymbol{A_L}$	$0.93^{+0.21}_{-0.24}$	D_{2000}	230.9 ± 9.2	$D_{\rm M}(0.51)$	1965 ± 25
$\boldsymbol{\ln(10^{10} A_s)}$	$3.034^{+0.018}_{-0.021}$	$n_{\rm s,0.002}$	0.973 ± 0.021	$H(0.61)$	95.64 ± 0.56
$\boldsymbol{n_s}$	0.973 ± 0.021	$Y_{\rm P}$	0.24539 ± 0.00017	$D_{\rm M}(0.61)$	2288 ± 27
$\boldsymbol{y_{cal}}$	0.99995 ± 0.0025	$Y_{\rm P}^{\rm BBN}$	0.24672 ± 0.00017	$H(2.33)$	234.9 ± 1.4
H_0	68.5 ± 1.3	10^5D/H	2.585 ± 0.073	$D_{\rm M}(2.33)$	5750 ± 26
Ω_Λ	$0.700^{+0.016}_{-0.015}$	Age/Gyr	13.770 ± 0.057	$f\sigma_8(0.15)$	0.444 ± 0.013
$\Omega_{\rm m}$	$0.300^{+0.015}_{-0.016}$	z_*	1089.68 ± 0.66	$\sigma_8(0.15)$	0.7409 ± 0.0099
$\Omega_{\rm m}h^2$	0.1404 ± 0.0023	r_*	145.11 ± 0.52	$f\sigma_8(0.38)$	0.464 ± 0.011
$\Omega_{\rm m}h^3$	0.09610 ± 0.00064	$100\theta_*$	1.04156 ± 0.00052	$\sigma_8(0.38)$	$0.6581^{+0.0082}_{-0.0092}$
σ_8	0.801 ± 0.011	$D_{\rm M}(z_*)$/Gpc	13.932 ± 0.049	$f\sigma_8(0.51)$	0.4643 ± 0.0092
S_8	0.800 ± 0.026	$z_{\rm drag}$	1059.78 ± 0.80	$\sigma_8(0.51)$	$0.6164^{+0.0078}_{-0.0087}$
$\sigma_8\Omega_{\rm m}^{0.5}$	0.438 ± 0.014	$r_{\rm drag}$	147.78 ± 0.51	$f\sigma_8(0.61)$	0.4604 ± 0.0083
$\sigma_8\Omega_{\rm m}^{0.25}$	0.592 ± 0.013	$k_{\rm D}$	0.14014 ± 0.00061	$\sigma_8(0.61)$	$0.5869^{+0.0075}_{-0.0084}$
$\sigma_8/h^{0.5}$	0.968 ± 0.018	$100\theta_{\rm D}$	0.16090 ± 0.00047	$f\sigma_8(2.33)$	$0.2964^{+0.0040}_{-0.0044}$
$r_{\rm drag}h$	101.2 ± 2.1	$z_{\rm eq}$	3339 ± 55	$\sigma_8(2.33)$	$0.3061^{+0.0044}_{-0.0049}$
$\langle d^2\rangle^{1/2}$	$2.28^{+0.27}_{-0.22}$	$k_{\rm eq}$	0.01019 ± 0.00017	$\chi^2_{\rm simall}$	396.5 ± 1.3
$z_{\rm re}$	$7.52^{+0.38}_{-0.87}$	$100\theta_{\rm eq}$	0.825 ± 0.011	$\chi^2_{\rm CamSpec}$	2581.9 ± 3.5
$10^9 A_{\rm s}$	$2.078^{+0.036}_{-0.045}$	$100\theta_{\rm s,eq}$	0.4556 ± 0.0056	$\chi^2_{\rm prior}$	11.0 ± 1.4
$10^9 A_{\rm s}e^{-2\tau}$	1.868 ± 0.025	$H(0.15)$	73.6 ± 1.1	$\chi^2_{\rm CMB}$	2978.4 ± 3.8

$\bar{\chi}^2_{\rm eff} = 2989.43$; $\Delta\bar{\chi}^2_{\rm eff} = 0.91$; $R - 1 = 0.00501$

3.36 base_Alens_CamSpecHM_TE_lowE_post_BAO_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02230 ± 0.00031	D_{810}	2531 ± 37	$D_M(0.51)$	1972 ± 13
$\boldsymbol{\Omega_c h^2}$	0.1180 ± 0.0013	D_{1420}	816 ± 18	$H(0.61)$	95.48 ± 0.33
$\boldsymbol{100\theta_{MC}}$	1.04130 ± 0.00048	D_{2000}	229.2 ± 7.9	$D_M(0.61)$	2295 ± 14
$\boldsymbol{\tau}$	$0.0528^{+0.0038}_{-0.0079}$	$n_{s,0.002}$	0.969 ± 0.016	$H(2.33)$	235.24 ± 0.82
$\boldsymbol{A_L}$	0.88 ± 0.19	Y_P	$0.24536^{+0.00014}_{-0.00011}$	$D_M(2.33)$	5757 ± 17
$\boldsymbol{\ln(10^{10} A_s)}$	$3.032^{+0.018}_{-0.021}$	Y_P^{BBN}	$0.24669^{+0.00014}_{-0.00011}$	$f\sigma_8(0.15)$	0.4470 ± 0.0082
$\boldsymbol{n_s}$	0.969 ± 0.016	10^5D/H	2.600 ± 0.058	$\sigma_8(0.15)$	0.7414 ± 0.0098
$\boldsymbol{y_{cal}}$	1.0000 ± 0.0025	Age/Gyr	13.785 ± 0.039	$f\sigma_8(0.38)$	0.4668 ± 0.0074
H_0	68.12 ± 0.64	z_*	1089.84 ± 0.45	$\sigma_8(0.38)$	$0.6580^{+0.0083}_{-0.0092}$
Ω_Λ	0.6960 ± 0.0079	r_*	144.99 ± 0.34	$f\sigma_8(0.51)$	0.4663 ± 0.0069
Ω_m	0.3040 ± 0.0079	$100\theta_*$	1.04149 ± 0.00048	$\sigma_8(0.51)$	0.6161 ± 0.0082
$\Omega_m h^2$	0.1410 ± 0.0012	$D_M(z_*)$/Gpc	13.922 ± 0.034	$f\sigma_8(0.61)$	0.4620 ± 0.0066
$\Omega_m h^3$	0.09603 ± 0.00062	z_{drag}	1059.63 ± 0.70	$\sigma_8(0.61)$	$0.5865^{+0.0074}_{-0.0083}$
σ_8	0.802 ± 0.011	r_{drag}	147.69 ± 0.40	$f\sigma_8(2.33)$	0.2960 ± 0.0040
S_8	0.807 ± 0.016	k_D	0.14018 ± 0.00059	$\sigma_8(2.33)$	0.3055 ± 0.0043
$\sigma_8 \Omega_m^{0.5}$	0.4419 ± 0.0086	$100\theta_D$	0.16098 ± 0.00042	χ^2_{simall}	396.5 ± 1.4
$\sigma_8 \Omega_m^{0.25}$	0.5951 ± 0.0092	z_{eq}	3354 ± 30	$\chi^2_{CamSpec}$	2581.2 ± 3.3
$\sigma_8/h^{0.5}$	0.971 ± 0.014	k_{eq}	0.010236 ± 0.000090	χ^2_{6DF}	0.044 ± 0.063
$r_{drag} h$	100.6 ± 1.0	$100\theta_{eq}$	0.8222 ± 0.0056	χ^2_{MGS}	1.85 ± 0.63
$\langle d^2 \rangle^{1/2}$	$2.24^{+0.25}_{-0.20}$	$100\theta_{s,eq}$	0.4541 ± 0.0029	$\chi^2_{DR12BAO}$	4.1 ± 1.0
z_{re}	$7.50^{+0.34}_{-0.89}$	$H(0.15)$	73.31 ± 0.56	χ^2_{prior}	11.0 ± 1.5
$10^9 A_s$	$2.075^{+0.036}_{-0.044}$	$D_M(0.15)$	637.0 ± 5.4	χ^2_{BAO}	6.0 ± 1.1
$10^9 A_s e^{-2\tau}$	1.866 ± 0.025	$H(0.38)$	83.29 ± 0.44	χ^2_{CMB}	2977.7 ± 3.6
D_{40}	1217 ± 31	$D_M(0.38)$	1521 ± 11		
D_{220}	5707 ± 62	$H(0.51)$	89.92 ± 0.37		

$\bar{\chi}^2_{eff} = 2994.70$; $\Delta\bar{\chi}^2_{eff} = 1.00$; $R - 1 = 0.00997$

3.37 base_Alens_CamSpecHM_EE_lowE

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02349	0.0236 ± 0.0013	D_{40}	1258.1	1257 ± 31	$D_{\rm M}(0.15)$	633.9	632^{+22}_{-25}
$\boldsymbol{\Omega_c h^2}$	0.11795	$0.1177^{+0.0046}_{-0.0052}$	D_{220}	5982	5998 ± 200	$H(0.38)$	83.67	83.9 ± 2.0
$\boldsymbol{100\theta_{MC}}$	1.03926	1.03932 ± 0.00086	D_{810}	2599.9	2601 ± 39	$D_{\rm M}(0.38)$	1513.9	1510 ± 49
$\boldsymbol{\tau}$	0.0509	0.0505 ± 0.0089	D_{1420}	841.1	842 ± 19	$H(0.51)$	90.32	$90.6^{+1.6}_{-1.8}$
$\boldsymbol{A_L}$	1.136	$1.16^{+0.22}_{-0.25}$	D_{2000}	240.9	241.6 ± 8.0	$D_{\rm M}(0.51)$	1962	1957 ± 59
$\boldsymbol{\ln(10^{10} A_s)}$	3.0595	3.059 ± 0.022	$n_{\rm s,0.002}$	0.9702	0.972 ± 0.015	$H(0.61)$	95.90	$96.1^{+1.3}_{-1.6}$
$\boldsymbol{n_s}$	0.9702	0.972 ± 0.015	$Y_{\rm P}$	0.245862	$0.24589^{+0.00045}_{-0.00054}$	$D_{\rm M}(0.61)$	2285	2279 ± 64
$\boldsymbol{y_{cal}}$	1.00002	0.9999 ± 0.0025	$Y_{\rm P}^{\rm BBN}$	0.247190	$0.24722^{+0.00045}_{-0.00054}$	$H(2.33)$	236.17	$236.2^{+2.0}_{-2.4}$
H_0	68.45	68.7 ± 2.9	10^5D/H	2.390	$2.38^{+0.18}_{-0.22}$	$D_{\rm M}(2.33)$	5732	5723 ± 69
Ω_Λ	0.6967	$0.697^{+0.037}_{-0.028}$	Age/Gyr	13.725	13.71 ± 0.16	$f\sigma_8(0.15)$	0.4489	$0.447^{+0.029}_{-0.032}$
$\Omega_{\rm m}$	0.3033	$0.303^{+0.028}_{-0.037}$	z_*	1088.40	$1088.3^{+1.6}_{-2.0}$	$\sigma_8(0.15)$	0.7453	$0.743^{+0.015}_{-0.014}$
$\Omega_{\rm m}h^2$	0.14209	$0.1420^{+0.0036}_{-0.0042}$	r_*	144.10	144.06 ± 0.67	$f\sigma_8(0.38)$	0.4690	0.467 ± 0.024
$\Omega_{\rm m}h^3$	0.09726	$0.0975^{+0.0017}_{-0.0019}$	$100\theta_*$	1.03933	1.03938 ± 0.00083	$\sigma_8(0.38)$	0.6616	$0.660^{+0.011}_{-0.0094}$
σ_8	0.8057	0.804 ± 0.019	$D_{\rm M}(z_*)$/Gpc	13.865	13.861 ± 0.064	$f\sigma_8(0.51)$	0.4685	0.466 ± 0.021
S_8	0.810	$0.807^{+0.056}_{-0.065}$	$z_{\rm drag}$	1062.34	1062.6 ± 2.5	$\sigma_8(0.51)$	0.6195	$0.6182^{+0.0091}_{-0.0080}$
$\sigma_8\Omega_{\rm m}^{0.5}$	0.4437	$0.442^{+0.031}_{-0.036}$	$r_{\rm drag}$	146.40	146.32 ± 0.71	$f\sigma_8(0.61)$	0.4643	0.462 ± 0.018
$\sigma_8\Omega_{\rm m}^{0.25}$	0.5979	0.596 ± 0.029	$k_{\rm D}$	0.14241	0.1425 ± 0.0013	$\sigma_8(0.61)$	0.5897	$0.5886^{+0.0081}_{-0.0073}$
$\sigma_8/h^{0.5}$	0.9738	0.970 ± 0.041	$100\theta_{\rm D}$	0.15911	$0.1590^{+0.0012}_{-0.0015}$	$f\sigma_8(2.33)$	0.29765	0.2972 ± 0.0035
$r_{\rm drag}h$	100.21	100.6 ± 4.2	$z_{\rm eq}$	3380	3377^{+86}_{-100}	$\sigma_8(2.33)$	0.30724	0.3070 ± 0.0038
$\langle d^2 \rangle^{1/2}$	2.590	$2.60^{+0.26}_{-0.23}$	$k_{\rm eq}$	0.010316	$0.01031^{+0.00026}_{-0.00031}$	$\chi^2_{\rm simall}$	395.60	396.8 ± 1.6
$z_{\rm re}$	7.07	6.97 ± 0.88	$100\theta_{\rm eq}$	0.8191	0.821 ± 0.020	$\chi^2_{\rm CamSpec}$	1886.12	1892.2 ± 3.5
$10^9 A_{\rm s}$	2.1316	2.132 ± 0.047	$100\theta_{\rm s,eq}$	0.4515	0.4521 ± 0.0097	$\chi^2_{\rm prior}$	10.03	11.0 ± 1.4
$10^9 A_{\rm s} e^{-2\tau}$	1.9254	1.927 ± 0.025	$H(0.15)$	73.66	73.9 ± 2.5	$\chi^2_{\rm CMB}$	2281.72	2289.0 ± 3.9

Best-fit $\chi^2_{\rm eff} = 2291.75$; $\Delta\chi^2_{\rm eff} = -0.42$; $\bar{\chi}^2_{\rm eff} = 2300.05$; $\Delta\bar{\chi}^2_{\rm eff} = 0.70$; $R - 1 = 0.00814$

$\chi^2_{\rm eff}$: CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.60 (Δ -0.02) CamSpec like_10.7HM_1400_unified: 1886.12 (Δ -0.39)

3.38 base_Alens_CamSpecHM_EE_lowE_post_BAO

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02361 ± 0.00066	D_{810}	2601 ± 34	$D_{\rm M}(0.51)$	1956 ± 18
$\boldsymbol{\Omega_c h^2}$	0.1175 ± 0.0015	D_{1420}	842 ± 14	$H(0.61)$	96.06 ± 0.56
$\boldsymbol{100\theta_{MC}}$	1.03935 ± 0.00078	D_{2000}	241.6 ± 5.8	$D_{\rm M}(0.61)$	2278 ± 20
$\boldsymbol{\tau}$	0.0507 ± 0.0087	$n_{\rm s,0.002}$	0.972 ± 0.010	$H(2.33)$	236.0 ± 1.0
$\boldsymbol{A_L}$	$1.16^{+0.21}_{-0.24}$	$Y_{\rm P}$	$0.24589^{+0.00027}_{-0.00023}$	$D_{\rm M}(2.33)$	5725 ± 30
$\boldsymbol{\ln(10^{10} A_s)}$	3.059 ± 0.022	$Y_{\rm P}^{\rm BBN}$	$0.24722^{+0.00027}_{-0.00023}$	$f\sigma_8(0.15)$	0.4457 ± 0.0099
$\boldsymbol{n_s}$	0.972 ± 0.010	10^5D/H	2.37 ± 0.11	$\sigma_8(0.15)$	0.7440 ± 0.0092
$\boldsymbol{y_{cal}}$	0.99996 ± 0.0025	Age/Gyr	13.709 ± 0.069	$f\sigma_8(0.38)$	0.4664 ± 0.0085
H_0	68.75 ± 0.86	z_*	1088.25 ± 0.79	$\sigma_8(0.38)$	0.6607 ± 0.0079
Ω_Λ	0.7000 ± 0.0092	r_*	144.14 ± 0.54	$f\sigma_8(0.51)$	0.4664 ± 0.0077
$\Omega_{\rm m}$	0.3000 ± 0.0092	$100\theta_*$	1.03941 ± 0.00079	$\sigma_8(0.51)$	0.6189 ± 0.0073
$\Omega_{\rm m}h^2$	0.1417 ± 0.0015	$D_{\rm M}(z_*)$/Gpc	13.867 ± 0.053	$f\sigma_8(0.61)$	0.4624 ± 0.0071
$\Omega_{\rm m}h^3$	0.0974 ± 0.0012	$z_{\rm drag}$	1062.5 ± 1.4	$\sigma_8(0.61)$	0.5892 ± 0.0069
σ_8	0.804 ± 0.010	$r_{\rm drag}$	146.40 ± 0.71	$f\sigma_8(2.33)$	0.2975 ± 0.0035
S_8	0.804 ± 0.019	$k_{\rm D}$	0.1425 ± 0.0012	$\sigma_8(2.33)$	0.3073 ± 0.0036
$\sigma_8\Omega_{\rm m}^{0.5}$	0.440 ± 0.010	$100\theta_{\rm D}$	0.15902 ± 0.00081	$\chi^2_{\rm simall}$	396.8 ± 1.7
$\sigma_8\Omega_{\rm m}^{0.25}$	0.595 ± 0.010	$z_{\rm eq}$	3371 ± 35	$\chi^2_{\rm CamSpec}$	1891.3 ± 3.2
$\sigma_8/h^{0.5}$	0.970 ± 0.015	$k_{\rm eq}$	0.01029 ± 0.00011	$\chi^2_{\rm 6DF}$	0.057 ± 0.079
$r_{\rm drag}h$	100.7 ± 1.2	$100\theta_{\rm eq}$	0.8211 ± 0.0062	$\chi^2_{\rm MGS}$	1.85 ± 0.71
$\langle d^2\rangle^{1/2}$	2.59 ± 0.25	$100\theta_{\rm s,eq}$	0.4525 ± 0.0032	$\chi^2_{\rm DR12BAO}$	4.6 ± 1.4
$z_{\rm re}$	$6.99^{+0.89}_{-0.76}$	$H(0.15)$	73.93 ± 0.78	$\chi^2_{\rm prior}$	11.0 ± 1.4
$10^9 A_{\rm s}$	2.131 ± 0.046	$D_{\rm M}(0.15)$	631.5 ± 7.3	$\chi^2_{\rm BAO}$	6.5 ± 1.3
$10^9 A_{\rm s}e^{-2\tau}$	1.925 ± 0.025	$H(0.38)$	83.88 ± 0.66	$\chi^2_{\rm CMB}$	2288.1 ± 3.6
D_{40}	1256 ± 31	$D_{\rm M}(0.38)$	1509 ± 15		
D_{220}	5995 ± 140	$H(0.51)$	90.51 ± 0.60		

$\bar{\chi}^2_{\rm eff} = 2305.61$; $\Delta\bar{\chi}^2_{\rm eff} = 0.72$; $R - 1 = 0.01338$

3.39 base_Alens_CamSpecHM_EE_lowE_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.0236 ± 0.0013	D_{40}	1256 ± 31	$D_{\rm M}(0.15)$	633^{+22}_{-26}
$\boldsymbol{\Omega_c h^2}$	$0.1177^{+0.0046}_{-0.0053}$	D_{220}	5990 ± 200	$H(0.38)$	83.9 ± 2.0
$\boldsymbol{100\theta_{MC}}$	1.03932 ± 0.00086	D_{810}	2600 ± 39	$D_{\rm M}(0.38)$	1511^{+46}_{-52}
$\boldsymbol{\tau}$	$0.0543^{+0.0047}_{-0.0077}$	D_{1420}	842 ± 19	$H(0.51)$	90.5 ± 1.7
$\boldsymbol{A_L}$	$1.16^{+0.22}_{-0.25}$	D_{2000}	241.5 ± 8.0	$D_{\rm M}(0.51)$	1958 ± 59
$\boldsymbol{\ln(10^{10} A_s)}$	3.066 ± 0.019	$n_{\rm s,0.002}$	0.972 ± 0.015	$H(0.61)$	$96.1^{+1.3}_{-1.5}$
$\boldsymbol{n_s}$	0.972 ± 0.015	$Y_{\rm P}$	$0.24588^{+0.00046}_{-0.00052}$	$D_{\rm M}(0.61)$	2280 ± 64
$\boldsymbol{y_{cal}}$	0.99996 ± 0.0025	$Y_{\rm P}^{\rm BBN}$	$0.24721^{+0.00047}_{-0.00052}$	$H(2.33)$	$236.2^{+2.0}_{-2.4}$
H_0	68.7 ± 2.8	10^5D/H	$2.38^{+0.18}_{-0.23}$	$D_{\rm M}(2.33)$	5725 ± 69
Ω_Λ	$0.697^{+0.037}_{-0.027}$	Age/Gyr	13.71 ± 0.16	$f\sigma_8(0.15)$	$0.449^{+0.029}_{-0.033}$
$\Omega_{\rm m}$	$0.303^{+0.027}_{-0.037}$	z_*	$1088.3^{+1.6}_{-2.0}$	$\sigma_8(0.15)$	$0.746^{+0.014}_{-0.013}$
$\Omega_{\rm m}h^2$	$0.1420^{+0.0036}_{-0.0042}$	r_*	144.09 ± 0.67	$f\sigma_8(0.38)$	0.469 ± 0.024
$\Omega_{\rm m}h^3$	0.0974 ± 0.0018	$100\theta_*$	1.03938 ± 0.00083	$\sigma_8(0.38)$	$0.6627^{+0.0099}_{-0.0088}$
σ_8	0.807 ± 0.018	$D_{\rm M}(z_*)$/Gpc	13.863 ± 0.064	$f\sigma_8(0.51)$	0.468 ± 0.020
S_8	$0.810^{+0.055}_{-0.066}$	$z_{\rm drag}$	1062.5 ± 2.5	$\sigma_8(0.51)$	0.6206 ± 0.0079
$\sigma_8\Omega_{\rm m}^{0.5}$	$0.444^{+0.030}_{-0.036}$	$r_{\rm drag}$	146.36 ± 0.71	$f\sigma_8(0.61)$	0.464 ± 0.018
$\sigma_8\Omega_{\rm m}^{0.25}$	0.598 ± 0.029	$k_{\rm D}$	0.1425 ± 0.0013	$\sigma_8(0.61)$	0.5908 ± 0.0070
$\sigma_8/h^{0.5}$	0.974 ± 0.041	$100\theta_{\rm D}$	$0.1591^{+0.0012}_{-0.0015}$	$f\sigma_8(2.33)$	0.2983 ± 0.0031
$r_{\rm drag}h$	100.6 ± 4.2	$z_{\rm eq}$	3377^{+85}_{-100}	$\sigma_8(2.33)$	0.3081 ± 0.0033
$\langle d^2\rangle^{1/2}$	$2.60^{+0.26}_{-0.22}$	$k_{\rm eq}$	$0.01031^{+0.00026}_{-0.00031}$	$\chi^2_{\rm simall}$	396.5 ± 1.4
$z_{\rm re}$	< 7.59	$100\theta_{\rm eq}$	0.821 ± 0.020	$\chi^2_{\rm CamSpec}$	1892.2 ± 3.5
$10^9 A_{\rm s}$	$2.147^{+0.038}_{-0.043}$	$100\theta_{\rm s,eq}$	0.4522 ± 0.0098	$\chi^2_{\rm prior}$	11.0 ± 1.4
$10^9 A_{\rm s}e^{-2\tau}$	1.926 ± 0.025	$H(0.15)$	73.9 ± 2.5	$\chi^2_{\rm CMB}$	2288.7 ± 3.8

$\bar{\chi}^2_{\rm eff} = 2299.69$; $\Delta\bar{\chi}^2_{\rm eff} = 0.72$; $R - 1 = 0.00845$

3.40 base_Alens_CamSpecHM_EE_lowE_post_BAO_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02357 ± 0.00065	D_{810}	2601 ± 33	$D_{\rm M}(0.51)$	1957 ± 18
$\boldsymbol{\Omega_c h^2}$	0.1175 ± 0.0015	D_{1420}	842 ± 14	$H(0.61)$	96.03 ± 0.55
$\boldsymbol{100\theta_{MC}}$	1.03934 ± 0.00077	D_{2000}	241.5 ± 5.7	$D_{\rm M}(0.61)$	2279 ± 20
$\boldsymbol{\tau}$	$0.0544^{+0.0039}_{-0.0074}$	$n_{\rm s,0.002}$	0.972 ± 0.010	$H(2.33)$	235.9 ± 1.0
$\boldsymbol{A_L}$	$1.15^{+0.20}_{-0.23}$	$Y_{\rm P}$	$0.24588^{+0.00027}_{-0.00023}$	$D_{\rm M}(2.33)$	5726 ± 29
$\boldsymbol{\ln(10^{10} A_s)}$	3.066 ± 0.019	$Y_{\rm P}^{\rm BBN}$	$0.24721^{+0.00027}_{-0.00023}$	$f\sigma_8(0.15)$	0.4475 ± 0.0094
$\boldsymbol{n_s}$	0.972 ± 0.010	10^5D/H	2.38 ± 0.11	$\sigma_8(0.15)$	$0.7467^{+0.0073}_{-0.0083}$
$\boldsymbol{y_{cal}}$	0.99997 ± 0.0025	Age/Gyr	13.712 ± 0.068	$f\sigma_8(0.38)$	0.4682 ± 0.0079
H_0	68.73 ± 0.85	z_*	1088.29 ± 0.79	$\sigma_8(0.38)$	$0.6632^{+0.0062}_{-0.0071}$
Ω_Λ	0.6999 ± 0.0091	r_*	144.17 ± 0.53	$f\sigma_8(0.51)$	0.4682 ± 0.0070
$\Omega_{\rm m}$	0.3001 ± 0.0091	$100\theta_*$	1.03940 ± 0.00079	$\sigma_8(0.51)$	$0.6212^{+0.0057}_{-0.0065}$
$\Omega_{\rm m}h^2$	0.1417 ± 0.0014	$D_{\rm M}(z_*)$/Gpc	13.870 ± 0.052	$f\sigma_8(0.61)$	0.4642 ± 0.0065
$\Omega_{\rm m}h^3$	0.0974 ± 0.0012	$z_{\rm drag}$	1062.5 ± 1.4	$\sigma_8(0.61)$	$0.5914^{+0.0054}_{-0.0062}$
σ_8	$0.8069^{+0.0084}_{-0.0094}$	$r_{\rm drag}$	146.44 ± 0.70	$f\sigma_8(2.33)$	$0.2986^{+0.0027}_{-0.0031}$
S_8	0.807 ± 0.018	$k_{\rm D}$	0.1424 ± 0.0012	$\sigma_8(2.33)$	$0.3084^{+0.0028}_{-0.0032}$
$\sigma_8\Omega_{\rm m}^{0.5}$	0.442 ± 0.010	$100\theta_{\rm D}$	0.15906 ± 0.00081	$\chi^2_{\rm simall}$	396.5 ± 1.4
$\sigma_8\Omega_{\rm m}^{0.25}$	0.5972 ± 0.0096	$z_{\rm eq}$	3370 ± 34	$\chi^2_{\rm CamSpec}$	1891.3 ± 3.2
$\sigma_8/h^{0.5}$	0.973 ± 0.014	$k_{\rm eq}$	0.01029 ± 0.00011	$\chi^2_{\rm 6DF}$	0.055 ± 0.078
$r_{\rm drag}h$	100.6 ± 1.1	$100\theta_{\rm eq}$	0.8212 ± 0.0061	$\chi^2_{\rm MGS}$	1.85 ± 0.71
$\langle d^2\rangle^{1/2}$	2.59 ± 0.25	$100\theta_{\rm s,eq}$	0.4526 ± 0.0032	$\chi^2_{\rm DR12BAO}$	4.6 ± 1.3
$z_{\rm re}$	$7.38^{+0.21}_{-0.88}$	$H(0.15)$	73.91 ± 0.77	$\chi^2_{\rm prior}$	11.0 ± 1.4
$10^9 A_{\rm s}$	$2.146^{+0.037}_{-0.042}$	$D_{\rm M}(0.15)$	631.7 ± 7.2	$\chi^2_{\rm BAO}$	6.5 ± 1.3
$10^9 A_{\rm s}e^{-2\tau}$	1.924 ± 0.025	$H(0.38)$	83.86 ± 0.65	$\chi^2_{\rm CMB}$	2287.7 ± 3.5
D_{40}	1255^{+33}_{-30}	$D_{\rm M}(0.38)$	1509 ± 15		
D_{220}	5988 ± 140	$H(0.51)$	90.48 ± 0.59		

$\bar{\chi}^2_{\rm eff} = 2305.22$; $\Delta\bar{\chi}^2_{\rm eff} = 0.71$; $R - 1 = 0.01446$

3.41 base_Alens_plikHM_TT_lowl_lensing

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02239 ± 0.00026	$\sigma_8\Omega_m^{0.5}$	$0.438^{+0.017}_{-0.020}$	$100\theta_{s,eq}$	0.4562 ± 0.0055
$\boldsymbol{\Omega_c h^2}$	0.1171 ± 0.0024	$\sigma_8\Omega_m^{0.25}$	$0.592^{+0.018}_{-0.025}$	$H(0.15)$	73.66 ± 0.99
$\boldsymbol{100\theta_{MC}}$	1.04120 ± 0.00051	$\sigma_8/h^{0.5}$	$0.967^{+0.026}_{-0.040}$	$D_M(0.15)$	633.8 ± 9.6
$\boldsymbol{\tau}$	< 0.0669	$r_{drag}h$	101.3 ± 2.0	$H(0.38)$	83.54 ± 0.73
$\boldsymbol{A_L}$	$1.075^{+0.085}_{-0.074}$	$\langle d^2\rangle^{1/2}$	2.478 ± 0.031	$D_M(0.38)$	1514 ± 19
$\boldsymbol{\ln(10^{10}A_s)}$	$3.037^{+0.033}_{-0.085}$	z_{re}	$7.4^{+2.0}_{-4.7}$	$H(0.51)$	90.12 ± 0.59
$\boldsymbol{n_s}$	0.9717 ± 0.0071	$10^9 A_s$	$2.089^{+0.063}_{-0.18}$	$D_M(0.51)$	1964 ± 23
$\boldsymbol{y_{cal}}$	1.0000 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.867 ± 0.015	$H(0.61)$	$95.63^{+0.45}_{-0.50}$
$\boldsymbol{A^{CIB}_{217}}$	47 ± 7	D_{40}	1216 ± 18	$D_M(0.61)$	2287 ± 25
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{220}	5722 ± 41	$H(2.33)$	234.7 ± 1.4
$\boldsymbol{A^{tSZ}_{143}}$	5.3 ± 2.0	D_{810}	2529 ± 14	$D_M(2.33)$	5751 ± 21
$\boldsymbol{A^{PS}_{100}}$	259 ± 28	D_{1420}	814.7 ± 5.1	$f\sigma_8(0.15)$	$0.443^{+0.016}_{-0.020}$
$\boldsymbol{A^{PS}_{143}}$	46 ± 8	D_{2000}	230.6 ± 1.9	$\sigma_8(0.15)$	$0.741^{+0.015}_{-0.031}$
$\boldsymbol{A^{PS}_{143\times217}}$	42 ± 9	$n_{s,0.002}$	0.9717 ± 0.0071	$f\sigma_8(0.38)$	$0.464^{+0.015}_{-0.019}$
$\boldsymbol{A^{PS}_{217}}$	114 ± 10	Y_P	0.24540 ± 0.00011	$\sigma_8(0.38)$	$0.658^{+0.012}_{-0.027}$
$\boldsymbol{A^{kSZ}}$	< 4.43	Y_P^{BBN}	0.24673 ± 0.00011	$f\sigma_8(0.51)$	$0.464^{+0.013}_{-0.019}$
$\boldsymbol{A^{dustTT}_{100}}$	9.0 ± 1.8	10^5D/H	2.582 ± 0.049	$\sigma_8(0.51)$	$0.617^{+0.011}_{-0.026}$
$\boldsymbol{A^{dustTT}_{143}}$	10.7 ± 1.8	Age/Gyr	13.773 ± 0.046	$f\sigma_8(0.61)$	$0.460^{+0.012}_{-0.019}$
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.3 ± 3.4	z_*	1089.64 ± 0.50	$\sigma_8(0.61)$	$0.587^{+0.010}_{-0.025}$
$\boldsymbol{A^{dustTT}_{217}}$	93.6 ± 7.4	r_*	145.18 ± 0.52	$f\sigma_8(2.33)$	$0.2966^{+0.0049}_{-0.013}$
$\boldsymbol{c_{100}}$	0.99960 ± 0.00061	$100\theta_*$	1.04139 ± 0.00050	$\sigma_8(2.33)$	$0.3064^{+0.0048}_{-0.013}$
$\boldsymbol{c_{217}}$	0.99824 ± 0.00062	$D_M(z_*)$/Gpc	13.941 ± 0.048	f^{143}_{2000}	29.5 ± 3.1
H_0	68.5 ± 1.1	z_{drag}	1059.78 ± 0.51	$f^{143\times217}_{2000}$	32.1 ± 2.2
Ω_Λ	0.701 ± 0.015	r_{drag}	147.85 ± 0.50	f^{217}_{2000}	106.8 ± 2.1
Ω_m	0.299 ± 0.015	k_D	0.14009 ± 0.00051	$\chi^2_{lensing}$	10.1 ± 2.0
$\Omega_m h^2$	0.1401 ± 0.0023	$100\theta_D$	0.16087 ± 0.00029	χ^2_{lowl}	22.5 ± 1.5
$\Omega_m h^3$	0.09598 ± 0.00046	z_{eq}	3333 ± 54	χ^2_{plik}	770.6 ± 5.6
σ_8	$0.801^{+0.017}_{-0.033}$	k_{eq}	0.01017 ± 0.00017	χ^2_{prior}	7.3 ± 3.7
S_8	$0.799^{+0.031}_{-0.037}$	$100\theta_{eq}$	0.826 ± 0.011	χ^2_{CMB}	803.1 ± 5.7

$\bar{\chi}^2_{eff} = 810.42$; $\Delta\bar{\chi}^2_{eff} = -0.64$; $R - 1 = 0.00995$

3.42 base_Alens_plikHM_TT_lowl_lensing_post_BAO

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02233 ± 0.00021	$\sigma_8/h^{0.5}$	$0.970^{+0.019}_{-0.038}$	$D_M(0.38)$	1521 ± 10
$\boldsymbol{\Omega_c h^2}$	0.1179 ± 0.0013	$r_{drag}h$	100.6 ± 1.0	$H(0.51)$	89.92 ± 0.32
$\boldsymbol{100\theta_{MC}}$	1.04110 ± 0.00043	$\langle d^2\rangle^{1/2}$	2.476 ± 0.031	$D_M(0.51)$	1971 ± 12
$\boldsymbol{\tau}$	< 0.0615	z_{re}	$7.0^{+1.9}_{-4.3}$	$H(0.61)$	95.47 ± 0.27
$\boldsymbol{A_L}$	$1.067^{+0.083}_{-0.057}$	$10^9 A_s$	$2.076^{+0.056}_{-0.16}$	$D_M(0.61)$	2295 ± 13
$\boldsymbol{\ln(10^{10} A_s)}$	$3.031^{+0.030}_{-0.078}$	$10^9 A_s e^{-2\tau}$	1.871 ± 0.012	$H(2.33)$	235.13 ± 0.78
$\boldsymbol{n_s}$	0.9696 ± 0.0045	D_{40}	1219^{+14}_{-16}	$D_M(2.33)$	5758 ± 13
$\boldsymbol{y_{cal}}$	1.0001 ± 0.0025	D_{220}	5719 ± 41	$f\sigma_8(0.15)$	$0.446^{+0.011}_{-0.018}$
$\boldsymbol{A_{217}^{CIB}}$	47 ± 7	D_{810}	2530 ± 14	$\sigma_8(0.15)$	$0.741^{+0.012}_{-0.029}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{1420}	814.5 ± 5.0	$f\sigma_8(0.38)$	$0.4662^{+0.0099}_{-0.018}$
$\boldsymbol{A_{143}^{tSZ}}$	5.3 ± 1.9	D_{2000}	230.4 ± 1.7	$\sigma_8(0.38)$	$0.658^{+0.010}_{-0.026}$
$\boldsymbol{A_{100}^{PS}}$	260 ± 28	$n_{s,0.002}$	0.9696 ± 0.0045	$f\sigma_8(0.51)$	$0.4657^{+0.0093}_{-0.018}$
$\boldsymbol{A_{143}^{PS}}$	47 ± 8	Y_P	$0.245375^{+0.000085}_{-0.000077}$	$\sigma_8(0.51)$	$0.6157^{+0.0093}_{-0.024}$
$\boldsymbol{A_{143\times217}^{PS}}$	42 ± 9	Y_P^{BBN}	$0.246702^{+0.000086}_{-0.000077}$	$f\sigma_8(0.61)$	$0.4615^{+0.0088}_{-0.018}$
$\boldsymbol{A_{217}^{PS}}$	114 ± 10	10^5D/H	2.594 ± 0.038	$\sigma_8(0.61)$	$0.5861^{+0.0088}_{-0.023}$
$\boldsymbol{A^{kSZ}}$	< 4.48	Age/Gyr	13.787 ± 0.030	$f\sigma_8(2.33)$	$0.2958^{+0.0043}_{-0.012}$
$\boldsymbol{A_{100}^{dustTT}}$	8.9 ± 1.8	z_*	1089.79 ± 0.32	$\sigma_8(2.33)$	$0.3054^{+0.0044}_{-0.012}$
$\boldsymbol{A_{143}^{dustTT}}$	10.7 ± 1.8	r_*	145.02 ± 0.31	f_{2000}^{143}	29.9 ± 3.0
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.4 ± 3.4	$100\theta_*$	1.04129 ± 0.00042	$f_{2000}^{143\times217}$	32.5 ± 2.0
$\boldsymbol{A_{217}^{dustTT}}$	93.6 ± 7.4	$D_M(z_*)$/Gpc	13.927 ± 0.030	f_{2000}^{217}	107.1 ± 1.9
$\boldsymbol{c_{100}}$	0.99962 ± 0.00061	z_{drag}	1059.68 ± 0.45	$\chi^2_{lensing}$	10.1 ± 1.9
$\boldsymbol{c_{217}}$	0.99825 ± 0.00061	r_{drag}	147.71 ± 0.33	χ^2_{lowl}	22.6 ± 1.3
H_0	68.14 ± 0.59	k_D	0.14019 ± 0.00043	χ^2_{plik}	769.7 ± 5.2
Ω_Λ	0.6965 ± 0.0076	$100\theta_D$	0.16092 ± 0.00026	χ^2_{6DF}	0.043 ± 0.062
Ω_m	0.3035 ± 0.0076	z_{eq}	3350 ± 29	χ^2_{MGS}	1.87 ± 0.63
$\Omega_m h^2$	0.1408 ± 0.0012	k_{eq}	0.010225 ± 0.000088	$\chi^2_{DR12BAO}$	4.06 ± 0.99
$\Omega_m h^3$	0.09596 ± 0.00045	$100\theta_{eq}$	0.8228 ± 0.0055	χ^2_{prior}	7.3 ± 3.7
σ_8	$0.801^{+0.013}_{-0.031}$	$100\theta_{s,eq}$	0.4544 ± 0.0028	χ^2_{CMB}	802.4 ± 5.4
S_8	$0.805^{+0.020}_{-0.032}$	$H(0.15)$	73.33 ± 0.51	χ^2_{BAO}	6.0 ± 1.1
$\sigma_8\Omega_m^{0.5}$	$0.441^{+0.011}_{-0.018}$	$D_M(0.15)$	636.9 ± 5.0		
$\sigma_8\Omega_m^{0.25}$	$0.594^{+0.012}_{-0.023}$	$H(0.38)$	83.29 ± 0.39		

$\bar{\chi}^2_{eff} = 815.62$; $\Delta\bar{\chi}^2_{eff} = -0.69$; $R - 1 = 0.01089$

3.43 base_Alens_plikHM_TT_lowl_lensing_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02241 ± 0.00027	$\sigma_8\Omega_m^{0.5}$	$0.445^{+0.017}_{-0.019}$	$100\theta_{s,eq}$	0.4570 ± 0.0055
$\boldsymbol{\Omega_c h^2}$	0.1167 ± 0.0024	$\sigma_8\Omega_m^{0.25}$	$0.603^{+0.017}_{-0.021}$	$H(0.15)$	73.8 ± 1.0
$\boldsymbol{100\theta_{MC}}$	1.04124 ± 0.00052	$\sigma_8/h^{0.5}$	$0.987^{+0.025}_{-0.033}$	$D_M(0.15)$	632.5 ± 9.6
$\boldsymbol{\tau}$	$0.078^{+0.011}_{-0.034}$	$r_{drag}h$	101.6 ± 2.0	$H(0.38)$	83.63 ± 0.74
$\boldsymbol{A_L}$	1.032 ± 0.066	$\langle d^2\rangle^{1/2}$	2.477 ± 0.032	$D_M(0.38)$	1512 ± 19
$\boldsymbol{\ln(10^{10}A_s)}$	$3.082^{+0.026}_{-0.066}$	z_{re}	< 10.7	$H(0.51)$	90.19 ± 0.59
$\boldsymbol{n_s}$	0.9730 ± 0.0072	$10^9 A_s$	$2.182^{+0.052}_{-0.14}$	$D_M(0.51)$	1961 ± 23
$\boldsymbol{y_{cal}}$	1.0000 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.865 ± 0.015	$H(0.61)$	95.68 ± 0.48
$\boldsymbol{A_{217}^{CIB}}$	47 ± 7	D_{40}	1220 ± 19	$D_M(0.61)$	2284 ± 25
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{220}	5720 ± 42	$H(2.33)$	234.5 ± 1.4
$\boldsymbol{A_{143}^{tSZ}}$	$5.3^{+2.1}_{-1.9}$	D_{810}	2528 ± 14	$D_M(2.33)$	5749 ± 21
$\boldsymbol{A_{100}^{PS}}$	258 ± 28	D_{1420}	814.9 ± 5.1	$f\sigma_8(0.15)$	$0.451^{+0.016}_{-0.018}$
$\boldsymbol{A_{143}^{PS}}$	45 ± 8	D_{2000}	230.8 ± 1.9	$\sigma_8(0.15)$	$0.757^{+0.013}_{-0.025}$
$\boldsymbol{A_{143\times217}^{PS}}$	42 ± 9	$n_{s,0.002}$	0.9730 ± 0.0072	$f\sigma_8(0.38)$	$0.473^{+0.014}_{-0.017}$
$\boldsymbol{A_{217}^{PS}}$	114 ± 10	Y_P	0.24541 ± 0.00011	$\sigma_8(0.38)$	$0.673^{+0.010}_{-0.022}$
$\boldsymbol{A^{kSZ}}$	< 4.27	Y_P^{BBN}	0.24673 ± 0.00011	$f\sigma_8(0.51)$	$0.473^{+0.013}_{-0.016}$
$\boldsymbol{A_{100}^{dustTT}}$	9.0 ± 1.8	10^5D/H	2.579 ± 0.049	$\sigma_8(0.51)$	$0.6303^{+0.0091}_{-0.021}$
$\boldsymbol{A_{143}^{dustTT}}$	10.8 ± 1.8	Age/Gyr	13.769 ± 0.046	$f\sigma_8(0.61)$	$0.469^{+0.011}_{-0.016}$
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.3 ± 3.3	z_*	1089.58 ± 0.50	$\sigma_8(0.61)$	$0.6002^{+0.0083}_{-0.020}$
$\boldsymbol{A_{217}^{dustTT}}$	93.6 ± 7.3	r_*	145.25 ± 0.53	$f\sigma_8(2.33)$	$0.3033^{+0.0039}_{-0.010}$
$\boldsymbol{c_{100}}$	0.99960 ± 0.00062	$100\theta_*$	1.04142 ± 0.00050	$\sigma_8(2.33)$	$0.3134^{+0.0038}_{-0.011}$
$\boldsymbol{c_{217}}$	0.99822 ± 0.00063	$D_M(z_*)$/Gpc	13.948 ± 0.048	f_{2000}^{143}	29.2 ± 3.2
H_0	68.7 ± 1.2	z_{drag}	1059.80 ± 0.52	$f_{2000}^{143\times217}$	31.9 ± 2.2
Ω_Λ	$0.703^{+0.016}_{-0.014}$	r_{drag}	147.92 ± 0.51	f_{2000}^{217}	106.6 ± 2.1
Ω_m	$0.297^{+0.014}_{-0.016}$	k_D	0.14003 ± 0.00051	$\chi^2_{lensing}$	10.0 ± 2.0
$\Omega_m h^2$	0.1398 ± 0.0023	$100\theta_D$	0.16086 ± 0.00029	χ^2_{lowl}	22.9 ± 1.6
$\Omega_m h^3$	0.09597 ± 0.00046	z_{eq}	3325 ± 54	χ^2_{plik}	770.8 ± 5.7
σ_8	$0.818^{+0.015}_{-0.027}$	k_{eq}	0.01015 ± 0.00017	χ^2_{prior}	7.3 ± 3.7
S_8	$0.813^{+0.031}_{-0.034}$	$100\theta_{eq}$	0.828 ± 0.011	χ^2_{CMB}	803.8 ± 5.7

$\bar{\chi}^2_{eff} = 811.07$; $\Delta\bar{\chi}^2_{eff} = 0.21$; $R - 1 = 0.01320$

3.44 base_Alens_plikHM_TT_lowl_lensing_post_BAO_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02233 ± 0.00021	$\sigma_8/h^{0.5}$	$0.992^{+0.016}_{-0.031}$	$D_M(0.38)$	1520 ± 10
$\boldsymbol{\Omega_c h^2}$	0.1177 ± 0.0013	$r_{drag}h$	100.7 ± 1.0	$H(0.51)$	89.94 ± 0.32
$\boldsymbol{100\theta_{MC}}$	1.04111 ± 0.00043	$\langle d^2\rangle^{1/2}$	2.475 ± 0.032	$D_M(0.51)$	1970 ± 12
$\boldsymbol{\tau}$	$0.074^{+0.010}_{-0.030}$	z_{re}	< 10.3	$H(0.61)$	95.49 ± 0.27
$\boldsymbol{A_L}$	$1.020^{+0.065}_{-0.049}$	$10^9 A_s$	$2.172^{+0.050}_{-0.13}$	$D_M(0.61)$	2294 ± 13
$\boldsymbol{\ln(10^{10} A_s)}$	$3.077^{+0.025}_{-0.060}$	$10^9 A_s e^{-2\tau}$	1.870 ± 0.012	$H(2.33)$	235.05 ± 0.79
$\boldsymbol{n_s}$	0.9703 ± 0.0046	D_{40}	1224^{+14}_{-16}	$D_M(2.33)$	5757 ± 13
$\boldsymbol{y_{cal}}$	1.0001 ± 0.0026	D_{220}	5716 ± 41	$f\sigma_8(0.15)$	$0.456^{+0.010}_{-0.015}$
$\boldsymbol{A_{217}^{CIB}}$	47 ± 7	D_{810}	2530 ± 14	$\sigma_8(0.15)$	$0.758^{+0.010}_{-0.023}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{1420}	814.6 ± 4.9	$f\sigma_8(0.38)$	$0.4764^{+0.0088}_{-0.015}$
$\boldsymbol{A_{143}^{tSZ}}$	5.3 ± 1.9	D_{2000}	230.4 ± 1.7	$\sigma_8(0.38)$	$0.6726^{+0.0087}_{-0.020}$
$\boldsymbol{A_{100}^{PS}}$	259 ± 29	$n_{s,0.002}$	0.9703 ± 0.0046	$f\sigma_8(0.51)$	$0.4761^{+0.0080}_{-0.015}$
$\boldsymbol{A_{143}^{PS}}$	46 ± 8	Y_P	$0.245376^{+0.000089}_{-0.000076}$	$\sigma_8(0.51)$	$0.6299^{+0.0080}_{-0.019}$
$\boldsymbol{A_{143\times217}^{PS}}$	42 ± 9	Y_P^{BBN}	$0.246702^{+0.000089}_{-0.000076}$	$f\sigma_8(0.61)$	$0.4718^{+0.0075}_{-0.015}$
$\boldsymbol{A_{217}^{PS}}$	114 ± 10	10^5D/H	2.594 ± 0.039	$\sigma_8(0.61)$	$0.5996^{+0.0075}_{-0.018}$
$\boldsymbol{A^{kSZ}}$	< 4.40	Age/Gyr	13.786 ± 0.030	$f\sigma_8(2.33)$	$0.3027^{+0.0037}_{-0.0092}$
$\boldsymbol{A_{100}^{dustTT}}$	9.0 ± 1.8	z_*	1089.77 ± 0.32	$\sigma_8(2.33)$	$0.3125^{+0.0038}_{-0.0095}$
$\boldsymbol{A_{143}^{dustTT}}$	10.8 ± 1.8	r_*	145.05 ± 0.32	f_{2000}^{143}	29.7 ± 3.0
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.4 ± 3.3	$100\theta_*$	1.04130 ± 0.00043	$f_{2000}^{143\times217}$	32.3 ± 2.1
$\boldsymbol{A_{217}^{dustTT}}$	93.6 ± 7.3	$D_M(z_*)$/Gpc	13.930 ± 0.031	f_{2000}^{217}	107.0 ± 2.0
$\boldsymbol{c_{100}}$	0.99960 ± 0.00062	z_{drag}	1059.68 ± 0.46	$\chi^2_{lensing}$	10.1 ± 2.0
$\boldsymbol{c_{217}}$	0.99823 ± 0.00062	r_{drag}	147.74 ± 0.34	χ^2_{lowl}	23.2 ± 1.4
H_0	68.19 ± 0.60	k_D	0.14015 ± 0.00043	χ^2_{plik}	769.8 ± 5.4
Ω_Λ	$0.6972^{+0.0080}_{-0.0072}$	$100\theta_D$	0.16092 ± 0.00027	χ^2_{6DF}	0.046 ± 0.065
Ω_m	0.3028 ± 0.0077	z_{eq}	3347 ± 29	χ^2_{MGS}	1.93 ± 0.64
$\Omega_m h^2$	0.1407 ± 0.0012	k_{eq}	0.010216 ± 0.000089	$\chi^2_{DR12BAO}$	4.05 ± 0.99
$\Omega_m h^3$	0.09594 ± 0.00045	$100\theta_{eq}$	0.8233 ± 0.0056	χ^2_{prior}	7.3 ± 3.8
σ_8	$0.819^{+0.011}_{-0.025}$	$100\theta_{s,eq}$	0.4546 ± 0.0029	χ^2_{CMB}	803.1 ± 5.5
S_8	$0.823^{+0.019}_{-0.028}$	$H(0.15)$	73.37 ± 0.52	χ^2_{BAO}	6.0 ± 1.2
$\sigma_8\Omega_m^{0.5}$	$0.451^{+0.010}_{-0.015}$	$D_M(0.15)$	636.5 ± 5.0		
$\sigma_8\Omega_m^{0.25}$	$0.607^{+0.011}_{-0.019}$	$H(0.38)$	83.32 ± 0.39		

$\bar{\chi}^2_{eff} = 816.39$; $\Delta\bar{\chi}^2_{eff} = 0.16$; $R - 1 = 0.01678$

3.45 base_Alens_plikHM_TTTEEE_lowl_lensing

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02251 ± 0.00016	$\Omega_m h^2$	0.1414 ± 0.0014	k_{eq}	0.01027 ± 0.00011
$\boldsymbol{\Omega_c h^2}$	0.1183 ± 0.0015	$\Omega_m h^3$	0.09636 ± 0.00029	$100\theta_{eq}$	0.8207 ± 0.0067
$\boldsymbol{100\theta_{MC}}$	1.04109 ± 0.00031	σ_8	$0.803^{+0.014}_{-0.032}$	$100\theta_{s,eq}$	0.4531 ± 0.0034
$\boldsymbol{\tau}$	< 0.0633	S_8	$0.809^{+0.024}_{-0.034}$	$H(0.15)$	73.35 ± 0.60
$\boldsymbol{A_L}$	$1.068^{+0.084}_{-0.062}$	$\sigma_8\Omega_m^{0.5}$	$0.443^{+0.013}_{-0.019}$	$D_M(0.15)$	636.8 ± 5.9
$\boldsymbol{\ln(10^{10} A_s)}$	$3.034^{+0.032}_{-0.079}$	$\sigma_8\Omega_m^{0.25}$	$0.596^{+0.014}_{-0.024}$	$H(0.38)$	83.35 ± 0.44
$\boldsymbol{n_s}$	0.9697 ± 0.0049	$\sigma_8/h^{0.5}$	$0.973^{+0.021}_{-0.039}$	$D_M(0.38)$	1520 ± 12
$\boldsymbol{y_{cal}}$	0.99995 ± 0.0025	$r_{drag}h$	100.4 ± 1.2	$H(0.51)$	90.00 ± 0.35
$\boldsymbol{A_{217}^{CIB}}$	46 ± 7	$\langle d^2\rangle^{1/2}$	2.483 ± 0.030	$D_M(0.51)$	1971 ± 14
$\boldsymbol{\xi^{tSZ\times CIB}}$	> 0.376	z_{re}	$7.1^{+2.0}_{-4.3}$	$H(0.61)$	95.57 ± 0.28
$\boldsymbol{A_{143}^{tSZ}}$	$5.6^{+2.2}_{-1.8}$	$10^9 A_s$	$2.083^{+0.060}_{-0.17}$	$D_M(0.61)$	2294 ± 15
$\boldsymbol{A_{100}^{PS}}$	255 ± 28	$10^9 A_s e^{-2\tau}$	1.873 ± 0.012	$H(2.33)$	235.58 ± 0.91
$\boldsymbol{A_{143}^{PS}}$	44 ± 8	D_{40}	1221^{+15}_{-17}	$D_M(2.33)$	5751 ± 12
$\boldsymbol{A_{143\times217}^{PS}}$	41 ± 9	D_{220}	5731 ± 39	$f\sigma_8(0.15)$	$0.448^{+0.013}_{-0.019}$
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	D_{810}	2532 ± 14	$\sigma_8(0.15)$	$0.742^{+0.013}_{-0.029}$
$\boldsymbol{A^{kSZ}}$	< 3.95	D_{1420}	816.2 ± 4.6	$f\sigma_8(0.38)$	$0.468^{+0.011}_{-0.019}$
$\boldsymbol{A_{100}^{dustTT}}$	8.9 ± 1.8	D_{2000}	231.3 ± 1.5	$\sigma_8(0.38)$	$0.659^{+0.011}_{-0.026}$
$\boldsymbol{A_{143}^{dustTT}}$	10.9 ± 1.8	$n_{s,0.002}$	0.9697 ± 0.0049	$f\sigma_8(0.51)$	$0.467^{+0.010}_{-0.019}$
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.5 ± 3.3	Y_P	0.245446 ± 0.000062	$\sigma_8(0.51)$	$0.617^{+0.010}_{-0.024}$
$\boldsymbol{A_{217}^{dustTT}}$	93.7 ± 7.4	Y_P^{BBN}	0.246772 ± 0.000063	$f\sigma_8(0.61)$	$0.4629^{+0.0097}_{-0.018}$
$\boldsymbol{A_{100}^{dustTE}}$	0.114 ± 0.038	10^5D/H	2.561 ± 0.030	$\sigma_8(0.61)$	$0.5872^{+0.0094}_{-0.023}$
$\boldsymbol{A_{100\times143}^{dustTE}}$	0.134 ± 0.029	Age/Gyr	13.771 ± 0.027	$f\sigma_8(2.33)$	$0.2963^{+0.0045}_{-0.012}$
$\boldsymbol{A_{100\times217}^{dustTE}}$	0.482 ± 0.084	z_*	1089.60 ± 0.31	$\sigma_8(2.33)$	$0.3058^{+0.0046}_{-0.012}$
$\boldsymbol{A_{143}^{dustTE}}$	0.222 ± 0.054	r_*	144.77 ± 0.33	f_{2000}^{143}	28.4 ± 2.8
$\boldsymbol{A_{143\times217}^{dustTE}}$	0.661 ± 0.080	$100\theta_*$	1.04126 ± 0.00031	$f_{2000}^{143\times217}$	31.3 ± 1.9
$\boldsymbol{A_{217}^{dustTE}}$	2.07 ± 0.27	$D_M(z_*)$/Gpc	13.904 ± 0.031	f_{2000}^{217}	106.1 ± 1.9
$\boldsymbol{c_{100}}$	0.99966 ± 0.00061	z_{drag}	1060.13 ± 0.32	$\chi^2_{lensing}$	10.6 ± 2.3
$\boldsymbol{c_{217}}$	0.99817 ± 0.00062	r_{drag}	147.40 ± 0.32	χ^2_{lowl}	22.8 ± 1.4
H_0	68.13 ± 0.70	k_D	0.14065 ± 0.00033	χ^2_{plik}	2357.0 ± 5.9
Ω_Λ	0.6952 ± 0.0093	$100\theta_D$	0.16065 ± 0.00018	χ^2_{prior}	11.5 ± 4.4
Ω_m	0.3048 ± 0.0093	z_{eq}	3365 ± 34	χ^2_{CMB}	2390.4 ± 5.9

$\bar{\chi}^2_{eff} = 2401.86$; $\Delta\bar{\chi}^2_{eff} = -0.63$; $R - 1 = 0.02631$

3.46 base_Alens_plikHM_TTTEEE_lowl_lensing_post_BAO

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02251 ± 0.00014	σ_8	$0.802^{+0.014}_{-0.031}$	$D_M(0.15)$	636.8 ± 4.1
$\boldsymbol{\Omega_c h^2}$	0.1183 ± 0.0011	S_8	$0.809^{+0.020}_{-0.032}$	$H(0.38)$	83.34 ± 0.31
$\boldsymbol{100\theta_{MC}}$	1.04109 ± 0.00029	$\sigma_8\Omega_m^{0.5}$	$0.443^{+0.011}_{-0.017}$	$D_M(0.38)$	1520.4 ± 8.3
$\boldsymbol{\tau}$	< 0.0626	$\sigma_8\Omega_m^{0.25}$	$0.596^{+0.012}_{-0.023}$	$H(0.51)$	90.00 ± 0.25
$\boldsymbol{A_L}$	$1.069^{+0.082}_{-0.060}$	$\sigma_8/h^{0.5}$	$0.972^{+0.019}_{-0.038}$	$D_M(0.51)$	1970.6 ± 9.7
$\boldsymbol{\ln(10^{10}A_s)}$	$3.033^{+0.032}_{-0.078}$	$r_{drag}h$	100.43 ± 0.84	$H(0.61)$	95.57 ± 0.21
$\boldsymbol{n_s}$	0.9697 ± 0.0040	$\langle d^2\rangle^{1/2}$	2.483 ± 0.030	$D_M(0.61)$	2294 ± 11
$\boldsymbol{y_{cal}}$	0.99996 ± 0.0025	z_{re}	$7.1^{+2.1}_{-4.1}$	$H(2.33)$	235.58 ± 0.64
$\boldsymbol{A_{217}^{CIB}}$	46 ± 7	$10^9 A_s$	$2.081^{+0.060}_{-0.16}$	$D_M(2.33)$	5751.5 ± 9.7
$\boldsymbol{\xi^{tSZ\times CIB}}$	> 0.379	$10^9 A_s e^{-2\tau}$	1.873 ± 0.011	$f\sigma_8(0.15)$	$0.448^{+0.011}_{-0.018}$
$\boldsymbol{A_{143}^{tSZ}}$	$5.7^{+2.2}_{-1.8}$	D_{40}	1221^{+13}_{-16}	$\sigma_8(0.15)$	$0.742^{+0.012}_{-0.029}$
$\boldsymbol{A_{100}^{PS}}$	256 ± 28	D_{220}	5731 ± 39	$f\sigma_8(0.38)$	$0.4676^{+0.0099}_{-0.018}$
$\boldsymbol{A_{143}^{PS}}$	44 ± 8	D_{810}	2532 ± 13	$\sigma_8(0.38)$	$0.659^{+0.011}_{-0.026}$
$\boldsymbol{A_{143\times217}^{PS}}$	42 ± 9	D_{1420}	816.2 ± 4.6	$f\sigma_8(0.51)$	$0.4670^{+0.0094}_{-0.018}$
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	D_{2000}	231.3 ± 1.5	$\sigma_8(0.51)$	$0.6166^{+0.0098}_{-0.024}$
$\boldsymbol{A^{kSZ}}$	< 3.94	$n_{s,0.002}$	0.9697 ± 0.0040	$f\sigma_8(0.61)$	$0.4626^{+0.0090}_{-0.018}$
$\boldsymbol{A_{100}^{dustTT}}$	9.0 ± 1.8	Y_P	0.245445 ± 0.000053	$\sigma_8(0.61)$	$0.5869^{+0.0093}_{-0.023}$
$\boldsymbol{A_{143}^{dustTT}}$	10.9 ± 1.7	Y_P^{BBN}	0.246772 ± 0.000053	$f\sigma_8(2.33)$	$0.2962^{+0.0046}_{-0.012}$
$\boldsymbol{A_{143\times217}^{dustTT}}$	$18.6^{+3.4}_{-3.0}$	10^5D/H	2.561 ± 0.025	$\sigma_8(2.33)$	$0.3057^{+0.0047}_{-0.012}$
$\boldsymbol{A_{217}^{dustTT}}$	93.6 ± 7.3	Age/Gyr	13.771 ± 0.022	f_{2000}^{143}	28.5 ± 2.8
$\boldsymbol{A_{100}^{dustTE}}$	0.113 ± 0.037	z_*	1089.60 ± 0.24	$f_{2000}^{143\times217}$	31.3 ± 1.9
$\boldsymbol{A_{100\times143}^{dustTE}}$	0.135 ± 0.029	r_*	144.77 ± 0.24	f_{2000}^{217}	106.1 ± 1.8
$\boldsymbol{A_{100\times217}^{dustTE}}$	0.484 ± 0.084	$100\theta_*$	1.04126 ± 0.00029	$\chi^2_{lensing}$	10.6 ± 2.3
$\boldsymbol{A_{143}^{dustTE}}$	0.223 ± 0.053	$D_M(z_*)$/Gpc	13.904 ± 0.023	χ^2_{lowl}	22.7 ± 1.3
$\boldsymbol{A_{143\times217}^{dustTE}}$	0.660 ± 0.080	z_{drag}	1060.13 ± 0.30	χ^2_{plik}	2356.4 ± 5.8
$\boldsymbol{A_{217}^{dustTE}}$	2.06 ± 0.27	r_{drag}	147.40 ± 0.25	χ^2_{6DF}	0.030 ± 0.042
$\boldsymbol{c_{100}}$	0.99967 ± 0.00061	k_D	0.14065 ± 0.00029	χ^2_{MGS}	1.72 ± 0.51
$\boldsymbol{c_{217}}$	0.99816 ± 0.00062	$100\theta_D$	0.16066 ± 0.00017	$\chi^2_{DR12BAO}$	4.00 ± 0.83
H_0	68.13 ± 0.49	z_{eq}	3364 ± 24	χ^2_{prior}	11.5 ± 4.4
Ω_Λ	0.6953 ± 0.0064	k_{eq}	0.010268 ± 0.000074	χ^2_{CMB}	2389.8 ± 5.7
Ω_m	0.3047 ± 0.0064	$100\theta_{eq}$	0.8207 ± 0.0046	χ^2_{BAO}	5.75 ± 0.74
$\Omega_m h^2$	0.1414 ± 0.0010	$100\theta_{s,eq}$	0.4531 ± 0.0024		
$\Omega_m h^3$	0.09636 ± 0.00030	$H(0.15)$	73.34 ± 0.42		

$\bar{\chi}^2_{eff} = 2406.97$; $\Delta\bar{\chi}^2_{eff} = -0.67$; $R - 1 = 0.02917$

3.47 base_Alens_plikHM_TTTEEE_lowl_lensing_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02251 ± 0.00016	$\Omega_m h^2$	0.1413 ± 0.0014	k_{eq}	0.01026 ± 0.00011
$\boldsymbol{\Omega_c h^2}$	0.1181 ± 0.0015	$\Omega_m h^3$	0.09634 ± 0.00029	$100\theta_{eq}$	0.8213 ± 0.0067
$\boldsymbol{100\theta_{MC}}$	1.04110 ± 0.00031	σ_8	$0.821^{+0.012}_{-0.026}$	$100\theta_{s,eq}$	0.4535 ± 0.0034
$\boldsymbol{\tau}$	$0.075^{+0.010}_{-0.031}$	S_8	$0.826^{+0.023}_{-0.029}$	$H(0.15)$	73.40 ± 0.60
$\boldsymbol{A_L}$	$1.021^{+0.065}_{-0.053}$	$\sigma_8\Omega_m^{0.5}$	$0.452^{+0.013}_{-0.016}$	$D_M(0.15)$	636.3 ± 5.9
$\boldsymbol{\ln(10^{10} A_s)}$	$3.080^{+0.024}_{-0.061}$	$\sigma_8\Omega_m^{0.25}$	$0.609^{+0.013}_{-0.020}$	$H(0.38)$	83.38 ± 0.44
$\boldsymbol{n_s}$	0.9705 ± 0.0050	$\sigma_8/h^{0.5}$	$0.994^{+0.019}_{-0.032}$	$D_M(0.38)$	1519 ± 12
$\boldsymbol{y_{cal}}$	0.99996 ± 0.0025	$r_{drag}h$	100.5 ± 1.2	$H(0.51)$	90.02 ± 0.35
$\boldsymbol{A_{217}^{CIB}}$	46 ± 7	$\langle d^2\rangle^{1/2}$	2.482 ± 0.030	$D_M(0.51)$	1969 ± 14
$\boldsymbol{\xi^{tSZ\times CIB}}$	> 0.383	z_{re}	< 10.3	$H(0.61)$	95.59 ± 0.28
$\boldsymbol{A_{143}^{tSZ}}$	$5.7^{+2.2}_{-1.8}$	$10^9 A_s$	$2.178^{+0.048}_{-0.13}$	$D_M(0.61)$	2293 ± 15
$\boldsymbol{A_{100}^{PS}}$	255 ± 28	$10^9 A_s e^{-2\tau}$	1.872 ± 0.013	$H(2.33)$	235.49 ± 0.91
$\boldsymbol{A_{143}^{PS}}$	44 ± 8	D_{40}	1226 ± 16	$D_M(2.33)$	5751 ± 12
$\boldsymbol{A_{143\times217}^{PS}}$	41 ± 9	D_{220}	5729 ± 39	$f\sigma_8(0.15)$	$0.458^{+0.012}_{-0.015}$
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	D_{810}	2532 ± 14	$\sigma_8(0.15)$	$0.759^{+0.011}_{-0.024}$
$\boldsymbol{A^{kSZ}}$	< 3.83	D_{1420}	816.4 ± 4.7	$f\sigma_8(0.38)$	$0.478^{+0.011}_{-0.015}$
$\boldsymbol{A_{100}^{dustTT}}$	8.9 ± 1.8	D_{2000}	231.4 ± 1.5	$\sigma_8(0.38)$	$0.6738^{+0.0087}_{-0.021}$
$\boldsymbol{A_{143}^{dustTT}}$	10.9 ± 1.8	$n_{s,0.002}$	0.9705 ± 0.0050	$f\sigma_8(0.51)$	$0.4775^{+0.0096}_{-0.015}$
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.5 ± 3.3	Y_P	0.245448 ± 0.000062	$\sigma_8(0.51)$	$0.6309^{+0.0079}_{-0.020}$
$\boldsymbol{A_{217}^{dustTT}}$	93.7 ± 7.4	Y_P^{BBN}	0.246774 ± 0.000062	$f\sigma_8(0.61)$	$0.4730^{+0.0088}_{-0.015}$
$\boldsymbol{A_{100}^{dustTE}}$	0.113 ± 0.038	10^5D/H	2.560 ± 0.029	$\sigma_8(0.61)$	$0.6005^{+0.0074}_{-0.019}$
$\boldsymbol{A_{100\times143}^{dustTE}}$	0.134 ± 0.029	Age/Gyr	13.770 ± 0.027	$f\sigma_8(2.33)$	$0.3031^{+0.0035}_{-0.0093}$
$\boldsymbol{A_{100\times217}^{dustTE}}$	0.482 ± 0.084	z_*	1089.58 ± 0.31	$\sigma_8(2.33)$	$0.3128^{+0.0036}_{-0.0096}$
$\boldsymbol{A_{143}^{dustTE}}$	0.223 ± 0.054	r_*	144.81 ± 0.33	f_{2000}^{143}	28.2 ± 2.8
$\boldsymbol{A_{143\times217}^{dustTE}}$	0.661 ± 0.080	$100\theta_*$	1.04127 ± 0.00030	$f_{2000}^{143\times217}$	31.1 ± 1.9
$\boldsymbol{A_{217}^{dustTE}}$	2.06 ± 0.27	$D_M(z_*)$/Gpc	13.907 ± 0.031	f_{2000}^{217}	106.0 ± 1.9
$\boldsymbol{c_{100}}$	0.99965 ± 0.00061	z_{drag}	1060.13 ± 0.31	$\chi^2_{lensing}$	10.6 ± 2.3
$\boldsymbol{c_{217}}$	0.99816 ± 0.00062	r_{drag}	147.43 ± 0.32	χ^2_{lowl}	23.3 ± 1.5
H_0	68.19 ± 0.70	k_D	0.14062 ± 0.00033	χ^2_{plik}	2356.9 ± 6.0
Ω_Λ	0.6960 ± 0.0093	$100\theta_D$	0.16065 ± 0.00018	χ^2_{prior}	11.5 ± 4.5
Ω_m	0.3040 ± 0.0093	z_{eq}	3361 ± 35	χ^2_{CMB}	2390.9 ± 5.9

$\bar{\chi}^2_{eff} = 2402.39$; $\Delta\bar{\chi}^2_{eff} = 0.03$; $R - 1 = 0.02911$

3.48 base_Alens_plikHM_TTTEEE_lowl_lensing_post_BAO_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02251 ± 0.00014	σ_8	$0.820^{+0.011}_{-0.025}$	$D_M(0.15)$	636.6 ± 4.1
$\boldsymbol{\Omega_c h^2}$	0.1182 ± 0.0011	S_8	$0.826^{+0.018}_{-0.026}$	$H(0.38)$	83.36 ± 0.31
$\boldsymbol{100\theta_{MC}}$	1.04110 ± 0.00029	$\sigma_8\Omega_m^{0.5}$	$0.4526^{+0.0096}_{-0.014}$	$D_M(0.38)$	1519.9 ± 8.3
$\boldsymbol{\tau}$	$0.074^{+0.011}_{-0.030}$	$\sigma_8\Omega_m^{0.25}$	$0.609^{+0.010}_{-0.019}$	$H(0.51)$	90.01 ± 0.25
$\boldsymbol{A_L}$	$1.022^{+0.062}_{-0.048}$	$\sigma_8/h^{0.5}$	$0.994^{+0.016}_{-0.030}$	$D_M(0.51)$	1970.0 ± 9.8
$\boldsymbol{\ln(10^{10}A_s)}$	$3.078^{+0.025}_{-0.059}$	$r_{drag}h$	100.48 ± 0.84	$H(0.61)$	95.57 ± 0.21
$\boldsymbol{n_s}$	0.9703 ± 0.0041	$\langle d^2\rangle^{1/2}$	2.482 ± 0.030	$D_M(0.61)$	2293 ± 11
$\boldsymbol{y_{cal}}$	0.99997 ± 0.0025	z_{re}	< 10.3	$H(2.33)$	235.53 ± 0.64
$\boldsymbol{A_{217}^{CIB}}$	46 ± 7	$10^9 A_s$	$2.175^{+0.051}_{-0.13}$	$D_M(2.33)$	5751.2 ± 9.7
$\boldsymbol{\xi^{tSZ\times CIB}}$	> 0.387	$10^9 A_s e^{-2\tau}$	1.872 ± 0.011	$f\sigma_8(0.15)$	$0.4578^{+0.0093}_{-0.014}$
$\boldsymbol{A_{143}^{tSZ}}$	$5.7^{+2.2}_{-1.8}$	D_{40}	1226^{+14}_{-16}	$\sigma_8(0.15)$	$0.759^{+0.010}_{-0.023}$
$\boldsymbol{A_{100}^{PS}}$	255 ± 28	D_{220}	5729 ± 39	$f\sigma_8(0.38)$	$0.4780^{+0.0085}_{-0.015}$
$\boldsymbol{A_{143}^{PS}}$	44 ± 8	D_{810}	2532 ± 13	$\sigma_8(0.38)$	$0.6734^{+0.0086}_{-0.020}$
$\boldsymbol{A_{143\times217}^{PS}}$	42 ± 9	D_{1420}	816.4 ± 4.6	$f\sigma_8(0.51)$	$0.4774^{+0.0079}_{-0.015}$
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	D_{2000}	231.4 ± 1.5	$\sigma_8(0.51)$	$0.6305^{+0.0079}_{-0.019}$
$\boldsymbol{A^{kSZ}}$	< 3.83	$n_{s,0.002}$	0.9703 ± 0.0041	$f\sigma_8(0.61)$	$0.4730^{+0.0074}_{-0.014}$
$\boldsymbol{A_{100}^{dustTT}}$	8.9 ± 1.8	Y_P	0.245446 ± 0.000053	$\sigma_8(0.61)$	$0.6002^{+0.0075}_{-0.018}$
$\boldsymbol{A_{143}^{dustTT}}$	10.9 ± 1.7	Y_P^{BBN}	0.246772 ± 0.000053	$f\sigma_8(2.33)$	$0.3029^{+0.0037}_{-0.0090}$
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.6 ± 3.3	10^5D/H	2.561 ± 0.025	$\sigma_8(2.33)$	$0.3126^{+0.0038}_{-0.0093}$
$\boldsymbol{A_{217}^{dustTT}}$	93.7 ± 7.3	Age/Gyr	13.771 ± 0.022	f_{2000}^{143}	28.2 ± 2.8
$\boldsymbol{A_{100}^{dustTE}}$	0.112 ± 0.038	z_*	1089.59 ± 0.24	$f_{2000}^{143\times217}$	31.1 ± 1.9
$\boldsymbol{A_{100\times143}^{dustTE}}$	0.135 ± 0.029	r_*	144.79 ± 0.24	f_{2000}^{217}	106.0 ± 1.8
$\boldsymbol{A_{100\times217}^{dustTE}}$	0.484 ± 0.085	$100\theta_*$	1.04127 ± 0.00029	$\chi^2_{lensing}$	10.6 ± 2.3
$\boldsymbol{A_{143}^{dustTE}}$	0.224 ± 0.053	$D_M(z_*)$/Gpc	13.905 ± 0.023	χ^2_{lowl}	23.3 ± 1.4
$\boldsymbol{A_{143\times217}^{dustTE}}$	0.660 ± 0.080	z_{drag}	1060.12 ± 0.29	χ^2_{plik}	2356.3 ± 5.7
$\boldsymbol{A_{217}^{dustTE}}$	2.06 ± 0.27	r_{drag}	147.42 ± 0.25	χ^2_{6DF}	0.030 ± 0.042
$\boldsymbol{c_{100}}$	0.99966 ± 0.00062	k_D	0.14063 ± 0.00029	χ^2_{MGS}	1.76 ± 0.52
$\boldsymbol{c_{217}}$	0.99816 ± 0.00061	$100\theta_D$	0.16066 ± 0.00017	$\chi^2_{DR12BAO}$	3.97 ± 0.80
H_0	68.16 ± 0.49	z_{eq}	3363 ± 24	χ^2_{prior}	11.5 ± 4.4
Ω_Λ	0.6957 ± 0.0064	k_{eq}	0.010263 ± 0.000074	χ^2_{CMB}	2390.2 ± 5.7
Ω_m	0.3043 ± 0.0064	$100\theta_{eq}$	0.8210 ± 0.0046	χ^2_{BAO}	5.76 ± 0.75
$\Omega_m h^2$	0.1414 ± 0.0010	$100\theta_{s,eq}$	0.4533 ± 0.0024		
$\Omega_m h^3$	0.09635 ± 0.00029	$H(0.15)$	73.37 ± 0.42		

$\bar{\chi}^2_{eff} = 2407.51$; $\Delta\bar{\chi}^2_{eff} = -0.07$; $R - 1 = 0.04162$

3.49 base_Alens_plikHM_TT_lowl_lowE_lensing

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022431	0.02239 ± 0.00026	$\sigma_8\Omega_m^{0.25}$	0.5884	0.589 ± 0.014	$D_M(0.15)$	632.9	634.2 ± 9.3
$\boldsymbol{\Omega_c h^2}$	0.11690	0.1172 ± 0.0024	$\sigma_8/h^{0.5}$	0.9620	0.963 ± 0.019	$H(0.38)$	83.59	83.50 ± 0.71
$\boldsymbol{100\theta_{MC}}$	1.04121	1.04119 ± 0.00051	$r_{drag}h$	101.43	101.2 ± 1.9	$D_M(0.38)$	1512.8	1515 ± 19
$\boldsymbol{\tau}$	0.0509	$0.0496^{+0.0086}_{-0.0075}$	$\langle d^2\rangle^{1/2}$	2.4768	2.479 ± 0.031	$H(0.51)$	90.16	90.09 ± 0.57
$\boldsymbol{A_L}$	1.084	1.082 ± 0.052	z_{re}	7.27	$7.13^{+0.92}_{-0.73}$	$D_M(0.51)$	1962.0	1965 ± 22
$\boldsymbol{\ln(10^{10}A_s)}$	3.0285	$3.027^{+0.018}_{-0.016}$	$10^9 A_s$	2.0665	$2.063^{+0.037}_{-0.033}$	$H(0.61)$	95.661	95.61 ± 0.46
$\boldsymbol{n_s}$	0.9733	0.9710 ± 0.0068	$10^9 A_s e^{-2\tau}$	1.8666	1.868 ± 0.015	$D_M(0.61)$	2284.8	2288 ± 24
$\boldsymbol{y_{cal}}$	0.99984	1.0001 ± 0.0025	D_{40}	1208.2	1214 ± 17	$H(2.33)$	234.60	234.8 ± 1.4
$\boldsymbol{A_{217}^{CIB}}$	46.7	47 ± 7	D_{220}	5719.1	5725 ± 41	$D_M(2.33)$	5749.6	5752 ± 20
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.54	—	D_{810}	2530.3	2530 ± 14	$f\sigma_8(0.15)$	0.4401	0.441 ± 0.014
$\boldsymbol{A_{143}^{tSZ}}$	7.01	5.3 ± 2.0	D_{1420}	815.9	814.6 ± 5.1	$\sigma_8(0.15)$	0.7377	0.7371 ± 0.0089
$\boldsymbol{A_{100}^{PS}}$	248.8	260 ± 28	D_{2000}	231.12	230.5 ± 1.9	$f\sigma_8(0.38)$	0.4613	0.462 ± 0.012
$\boldsymbol{A_{143}^{PS}}$	48.8	46 ± 8	$n_{s,0.002}$	0.9733	0.9710 ± 0.0068	$\sigma_8(0.38)$	0.6554	0.6547 ± 0.0069
$\boldsymbol{A_{143\times217}^{PS}}$	50.1	42 ± 9	Y_P	0.245419	0.24540 ± 0.00010	$f\sigma_8(0.51)$	0.4615	0.462 ± 0.010
$\boldsymbol{A_{217}^{PS}}$	120.0	114 ± 10	Y_P^{BBN}	0.246746	0.24672 ± 0.00010	$\sigma_8(0.51)$	0.6140	0.6133 ± 0.0061
$\boldsymbol{A^{kSZ}}$	0.01	< 4.50	10^5D/H	2.5742	2.583 ± 0.047	$f\sigma_8(0.61)$	0.4578	0.4580 ± 0.0089
$\boldsymbol{A_{100}^{dustTT}}$	8.94	9.0 ± 1.8	Age/Gyr	13.7690	13.775 ± 0.045	$\sigma_8(0.61)$	0.5847	0.5839 ± 0.0057
$\boldsymbol{A_{143}^{dustTT}}$	10.81	10.8 ± 1.8	z_*	1089.571	1089.65 ± 0.48	$f\sigma_8(2.33)$	0.29536	$0.2949^{+0.0027}_{-0.0025}$
$\boldsymbol{A_{143\times217}^{dustTT}}$	19.52	18.3 ± 3.3	r_*	145.19	145.15 ± 0.51	$\sigma_8(2.33)$	0.30515	0.3046 ± 0.0027
$\boldsymbol{A_{217}^{dustTT}}$	94.9	93.4 ± 7.4	$100\theta_*$	1.04140	1.04138 ± 0.00050	f_{2000}^{143}	28.45	29.7 ± 3.0
$\boldsymbol{c_{100}}$	0.99966	0.99960 ± 0.00062	$D_M(z_*)$/Gpc	13.9421	13.938 ± 0.047	$f_{2000}^{143\times217}$	31.77	32.3 ± 2.2
$\boldsymbol{c_{217}}$	0.99823	0.99823 ± 0.00062	z_{drag}	1059.856	1059.78 ± 0.50	f_{2000}^{217}	106.17	106.9 ± 2.0
H_0	68.61	68.5 ± 1.1	r_{drag}	147.850	147.82 ± 0.50	$\chi^2_{lensing}$	9.31	10.1 ± 2.0
Ω_Λ	0.7026	$0.700^{+0.015}_{-0.014}$	k_D	0.14011	0.14011 ± 0.00051	χ^2_{simall}	395.67	396.8 ± 1.5
Ω_m	0.2974	$0.300^{+0.014}_{-0.015}$	$100\theta_D$	0.160821	0.16087 ± 0.00028	χ^2_{lowl}	21.74	22.2 ± 1.2
$\Omega_m h^2$	0.13997	0.1402 ± 0.0022	z_{eq}	3329	3336 ± 53	χ^2_{plik}	757.8	770.4 ± 5.5
$\Omega_m h^3$	0.096030	0.09599 ± 0.00046	k_{eq}	0.010162	0.01018 ± 0.00016	χ^2_{prior}	1.29	7.3 ± 3.7
σ_8	0.7968	0.796 ± 0.011	$100\theta_{eq}$	0.8269	0.826 ± 0.010	χ^2_{CMB}	1184.5	1199.5 ± 5.6
S_8	0.7933	0.796 ± 0.028	$100\theta_{s,eq}$	0.4565	0.4559 ± 0.0053			
$\sigma_8\Omega_m^{0.5}$	0.4345	0.436 ± 0.015	$H(0.15)$	73.73	73.61 ± 0.96			

Best-fit $\chi^2_{eff} = 1185.80$; $\Delta\chi^2_{eff} = -2.77$; $\bar{\chi}^2_{eff} = 1206.83$; $\Delta\bar{\chi}^2_{eff} = -1.59$; $R - 1 = 0.00595$

χ^2_{eff}: CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 9.31 (Δ 0.41) simall_100x143_offlike5_EE_Aplanck_B: 395.67 (Δ -0.20) commander_dx12_v3_2_29: 21.74 (Δ -1.49) plik_rd12_HM_v22_TT: 757.79 (Δ -1.53)

3.50 base_Alens_plikHM_TT_lowl_lowE_lensing_post_BAO

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022366	0.02233 ± 0.00021	$\sigma_8/h^{0.5}$	0.9689	0.968 ± 0.013	$D_M(0.38)$	1520.0	1521 ± 10
$\boldsymbol{\Omega_c h^2}$	0.11787	0.1179 ± 0.0013	$r_{drag}h$	100.67	100.6 ± 1.0	$H(0.51)$	89.954	89.92 ± 0.32
$\boldsymbol{100\theta_{MC}}$	1.041140	1.04110 ± 0.00043	$\langle d^2\rangle^{1/2}$	2.4776	2.478 ± 0.031	$D_M(0.51)$	1970.3	1971 ± 12
$\boldsymbol{\tau}$	0.0504	$0.0492^{+0.0086}_{-0.0075}$	z_{re}	7.24	$7.11^{+0.94}_{-0.74}$	$H(0.61)$	95.505	95.48 ± 0.27
$\boldsymbol{A_L}$	1.0696	1.070 ± 0.040	$10^9 A_s$	2.0692	2.065 ± 0.036	$D_M(0.61)$	2293.8	2295 ± 13
$\boldsymbol{\ln(10^{10} A_s)}$	3.0297	$3.027^{+0.018}_{-0.016}$	$10^9 A_s e^{-2\tau}$	1.8709	1.871 ± 0.012	$H(2.33)$	235.17	235.14 ± 0.79
$\boldsymbol{n_s}$	0.97035	0.9692 ± 0.0045	D_{40}	1214.8	1217 ± 13	$D_M(2.33)$	5755.9	5758 ± 13
$\boldsymbol{y_{cal}}$	0.99995	1.0001 ± 0.0025	D_{220}	5718.8	5722 ± 41	$f\sigma_8(0.15)$	0.4456	0.4452 ± 0.0083
$\boldsymbol{A^{CIB}_{217}}$	48.4	47 ± 7	D_{810}	2531.3	2530 ± 14	$\sigma_8(0.15)$	0.7401	0.7390 ± 0.0074
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.28	—	D_{1420}	815.29	814.3 ± 5.0	$f\sigma_8(0.38)$	0.4656	0.4650 ± 0.0071
$\boldsymbol{A^{tSZ}_{143}}$	7.11	5.2 ± 2.0	D_{2000}	230.72	230.3 ± 1.7	$\sigma_8(0.38)$	0.6569	0.6559 ± 0.0062
$\boldsymbol{A^{PS}_{100}}$	252.3	261 ± 28	$n_{s,0.002}$	0.97035	0.9692 ± 0.0045	$f\sigma_8(0.51)$	0.4652	0.4646 ± 0.0064
$\boldsymbol{A^{PS}_{143}}$	46.0	47 ± 8	Y_P	0.245394	$0.245377^{+0.000086}_{-0.000076}$	$\sigma_8(0.51)$	0.6152	0.6142 ± 0.0057
$\boldsymbol{A^{PS}_{143\times217}}$	43.9	42 ± 9	Y_P^{BBN}	0.246721	$0.246704^{+0.000086}_{-0.000077}$	$f\sigma_8(0.61)$	0.4609	0.4603 ± 0.0059
$\boldsymbol{A^{PS}_{217}}$	117.6	114 ± 10	10^5D/H	2.5862	2.593 ± 0.039	$\sigma_8(0.61)$	0.5856	0.5846 ± 0.0054
$\boldsymbol{A^{kSZ}}$	0.00	< 4.61	Age/Gyr	13.7822	13.786 ± 0.030	$f\sigma_8(2.33)$	0.29559	0.2951 ± 0.0027
$\boldsymbol{A^{dustTT}_{100}}$	8.98	9.0 ± 1.9	z_*	1089.739	1089.78 ± 0.32	$\sigma_8(2.33)$	0.30511	0.3046 ± 0.0028
$\boldsymbol{A^{dustTT}_{143}}$	10.86	10.8 ± 1.8	r_*	144.988	145.01 ± 0.32	f^{143}_{2000}	29.14	30.1 ± 2.9
$\boldsymbol{A^{dustTT}_{143\times217}}$	19.27	18.3 ± 3.3	$100\theta_*$	1.041322	1.04129 ± 0.00043	$f^{143\times217}_{2000}$	32.18	32.6 ± 2.0
$\boldsymbol{A^{dustTT}_{217}}$	94.5	93.4 ± 7.4	$D_M(z_*)$/Gpc	13.9235	13.926 ± 0.031	f^{217}_{2000}	106.71	107.2 ± 1.9
$\boldsymbol{c_{100}}$	0.99963	0.99959 ± 0.00062	z_{drag}	1059.780	1059.70 ± 0.46	$\chi^2_{lensing}$	9.42	10.1 ± 2.0
$\boldsymbol{c_{217}}$	0.99825	0.99824 ± 0.00062	r_{drag}	147.662	147.70 ± 0.34	χ^2_{simall}	395.68	396.8 ± 1.6
H_0	68.18	68.14 ± 0.60	k_D	0.140263	0.14020 ± 0.00043	χ^2_{lowl}	22.20	22.43 ± 0.87
Ω_Λ	0.6969	0.6965 ± 0.0077	$100\theta_D$	0.160865	0.16091 ± 0.00026	χ^2_{plik}	757.2	769.6 ± 5.4
Ω_m	0.3031	0.3035 ± 0.0077	z_{eq}	3351.1	3350 ± 29	χ^2_{6DF}	0.0015	0.044 ± 0.062
$\Omega_m h^2$	0.14088	0.1409 ± 0.0012	k_{eq}	0.010228	0.010226 ± 0.000089	χ^2_{MGS}	1.82	1.87 ± 0.63
$\Omega_m h^3$	0.096047	0.09597 ± 0.00046	$100\theta_{eq}$	0.8227	0.8227 ± 0.0056	$\chi^2_{DR12BAO}$	3.395	4.1 ± 1.0
σ_8	0.8000	0.7988 ± 0.0083	$100\theta_{s,eq}$	0.45430	0.4543 ± 0.0029	χ^2_{prior}	1.47	7.4 ± 3.7
S_8	0.8041	0.803 ± 0.016	$H(0.15)$	73.37	73.33 ± 0.52	χ^2_{CMB}	1184.5	1199.0 ± 5.5
$\sigma_8\Omega_m^{0.5}$	0.4404	0.4400 ± 0.0088	$D_M(0.15)$	636.5	636.8 ± 5.0	χ^2_{BAO}	5.22	6.0 ± 1.1
$\sigma_8\Omega_m^{0.25}$	0.5936	0.5929 ± 0.0087	$H(0.38)$	83.326	83.29 ± 0.39			

Best-fit $\chi^2_{eff} = 1191.14$; $\Delta\chi^2_{eff} = -3.55$; $\bar{\chi}^2_{eff} = 1212.35$; $\Delta\bar{\chi}^2_{eff} = -2.38$; $R - 1 = 0.01232$

χ^2_{eff}: BAO - 6DF: 0.00 (Δ -0.03) MGS: 1.82 (Δ 0.60) DR12BAO: 3.40 (Δ -0.98) CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 9.42 (Δ 0.54) simall_100x143_offlike5_EE_Aplanck 395.68 (Δ -0.42) commander_dx12_v3_2_29: 22.20 (Δ -0.76) plik_rd12_HM_v22_TT: 757.15 (Δ -2.65)

3.51 base_Alens_plikHM_TT_lowl_lowE_lensing_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02239 ± 0.00026	$\sigma_8\Omega_m^{0.25}$	0.591 ± 0.014	$D_M(0.15)$	633.9 ± 9.3
$\boldsymbol{\Omega_c h^2}$	0.1171 ± 0.0024	$\sigma_8/h^{0.5}$	0.965 ± 0.019	$H(0.38)$	83.52 ± 0.71
$\boldsymbol{100\theta_{MC}}$	1.04120 ± 0.00052	$r_{drag}h$	101.3 ± 1.9	$D_M(0.38)$	1515 ± 19
$\boldsymbol{\tau}$	$0.0528^{+0.0039}_{-0.0076}$	$\langle d^2\rangle^{1/2}$	2.479 ± 0.032	$H(0.51)$	90.11 ± 0.57
$\boldsymbol{A_L}$	1.076 ± 0.051	z_{re}	$7.47^{+0.39}_{-0.81}$	$D_M(0.51)$	1964 ± 22
$\boldsymbol{\ln(10^{10}A_s)}$	$3.033^{+0.011}_{-0.015}$	$10^9 A_s$	$2.076^{+0.023}_{-0.031}$	$H(0.61)$	95.62 ± 0.46
$\boldsymbol{n_s}$	0.9712 ± 0.0068	$10^9 A_s e^{-2\tau}$	1.868 ± 0.015	$D_M(0.61)$	2287 ± 24
$\boldsymbol{y_{cal}}$	1.0001 ± 0.0025	D_{40}	1214 ± 17	$H(2.33)$	234.7 ± 1.4
$\boldsymbol{A^{CIB}_{217}}$	47 ± 7	D_{220}	5725 ± 41	$D_M(2.33)$	5752 ± 20
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{810}	2529 ± 14	$f\sigma_8(0.15)$	0.442 ± 0.014
$\boldsymbol{A^{tSZ}_{143}}$	5.3 ± 2.0	D_{1420}	814.6 ± 5.1	$\sigma_8(0.15)$	0.7393 ± 0.0080
$\boldsymbol{A^{PS}_{100}}$	259 ± 28	D_{2000}	230.6 ± 1.9	$f\sigma_8(0.38)$	0.463 ± 0.011
$\boldsymbol{A^{PS}_{143}}$	46 ± 8	$n_{s,0.002}$	0.9712 ± 0.0068	$\sigma_8(0.38)$	0.6567 ± 0.0059
$\boldsymbol{A^{PS}_{143\times217}}$	42 ± 9	Y_P	0.24540 ± 0.00010	$f\sigma_8(0.51)$	0.4631 ± 0.0098
$\boldsymbol{A^{PS}_{217}}$	114 ± 10	Y_P^{BBN}	0.24673 ± 0.00010	$\sigma_8(0.51)$	$0.6151^{+0.0048}_{-0.0054}$
$\boldsymbol{A^{kSZ}}$	< 4.49	10^5D/H	2.582 ± 0.048	$f\sigma_8(0.61)$	0.4592 ± 0.0087
$\boldsymbol{A^{dustTT}_{100}}$	9.0 ± 1.8	Age/Gyr	13.774 ± 0.045	$\sigma_8(0.61)$	$0.5857^{+0.0043}_{-0.0049}$
$\boldsymbol{A^{dustTT}_{143}}$	10.8 ± 1.8	z_*	1089.64 ± 0.49	$f\sigma_8(2.33)$	$0.2958^{+0.0018}_{-0.0023}$
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.3 ± 3.3	r_*	145.16 ± 0.51	$\sigma_8(2.33)$	$0.3056^{+0.0017}_{-0.0024}$
$\boldsymbol{A^{dustTT}_{217}}$	93.4 ± 7.4	$100\theta_*$	1.04139 ± 0.00050	f^{143}_{2000}	29.7 ± 3.1
$\boldsymbol{c_{100}}$	0.99960 ± 0.00062	$D_M(z_*)$/Gpc	13.939 ± 0.047	$f^{143\times217}_{2000}$	32.3 ± 2.2
$\boldsymbol{c_{217}}$	0.99823 ± 0.00062	z_{drag}	1059.78 ± 0.50	f^{217}_{2000}	106.9 ± 2.0
H_0	68.5 ± 1.1	r_{drag}	147.83 ± 0.49	$\chi^2_{lensing}$	10.1 ± 2.0
Ω_Λ	$0.701^{+0.015}_{-0.013}$	k_D	0.14010 ± 0.00050	χ^2_{simall}	396.4 ± 1.1
Ω_m	$0.299^{+0.013}_{-0.015}$	$100\theta_D$	0.16087 ± 0.00028	χ^2_{lowl}	22.3 ± 1.2
$\Omega_m h^2$	0.1402 ± 0.0022	z_{eq}	3334 ± 53	χ^2_{plik}	770.4 ± 5.6
$\Omega_m h^3$	0.09599 ± 0.00046	k_{eq}	0.01018 ± 0.00016	χ^2_{prior}	7.3 ± 3.7
σ_8	0.7987 ± 0.0099	$100\theta_{eq}$	0.826 ± 0.010	χ^2_{CMB}	1199.2 ± 5.6
S_8	0.798 ± 0.028	$100\theta_{s,eq}$	0.4560 ± 0.0053		
$\sigma_8\Omega_m^{0.5}$	0.437 ± 0.015	$H(0.15)$	73.64 ± 0.97		

$\bar{\chi}^2_{eff} = 1206.48$; $\Delta\bar{\chi}^2_{eff} = -1.68$; $R - 1 = 0.00707$

3.52 base_Alens_plikHM_TT_lowl_lowE_lensing_post_BAO_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02233 ± 0.00021	$\sigma_8/h^{0.5}$	0.971 ± 0.011	$D_M(0.38)$	1521 ± 10
$\boldsymbol{\Omega_c h^2}$	0.1178 ± 0.0013	$r_{drag}h$	100.7 ± 1.0	$H(0.51)$	89.93 ± 0.32
$\boldsymbol{100\theta_{MC}}$	1.04110 ± 0.00043	$\langle d^2\rangle^{1/2}$	2.477 ± 0.032	$D_M(0.51)$	1971 ± 12
$\boldsymbol{\tau}$	$0.0526^{+0.0038}_{-0.0074}$	z_{re}	$7.47^{+0.37}_{-0.81}$	$H(0.61)$	95.48 ± 0.27
$\boldsymbol{A_L}$	1.063 ± 0.037	$10^9 A_s$	$2.078^{+0.021}_{-0.031}$	$D_M(0.61)$	2295 ± 13
$\boldsymbol{\ln(10^{10} A_s)}$	$3.034^{+0.010}_{-0.015}$	$10^9 A_s e^{-2\tau}$	1.871 ± 0.012	$H(2.33)$	235.12 ± 0.79
$\boldsymbol{n_s}$	0.9693 ± 0.0045	D_{40}	1218 ± 13	$D_M(2.33)$	5758 ± 13
$\boldsymbol{y_{cal}}$	1.0001 ± 0.0025	D_{220}	5722 ± 41	$f\sigma_8(0.15)$	0.4465 ± 0.0080
$\boldsymbol{A_{217}^{CIB}}$	47 ± 7	D_{810}	2530 ± 14	$\sigma_8(0.15)$	$0.7414^{+0.0054}_{-0.0065}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{1420}	814.3 ± 5.0	$f\sigma_8(0.38)$	0.4665 ± 0.0066
$\boldsymbol{A_{143}^{tSZ}}$	5.2 ± 2.0	D_{2000}	230.3 ± 1.7	$\sigma_8(0.38)$	$0.6581^{+0.0043}_{-0.0054}$
$\boldsymbol{A_{100}^{PS}}$	261 ± 28	$n_{s,0.002}$	0.9693 ± 0.0045	$f\sigma_8(0.51)$	0.4661 ± 0.0058
$\boldsymbol{A_{143}^{PS}}$	47 ± 8	Y_P	$0.245377^{+0.000085}_{-0.000077}$	$\sigma_8(0.51)$	$0.6162^{+0.0038}_{-0.0049}$
$\boldsymbol{A_{143\times217}^{PS}}$	42 ± 9	Y_P^{BBN}	$0.246703^{+0.000086}_{-0.000077}$	$f\sigma_8(0.61)$	0.4618 ± 0.0053
$\boldsymbol{A_{217}^{PS}}$	114 ± 10	10^5D/H	2.593 ± 0.038	$\sigma_8(0.61)$	$0.5866^{+0.0035}_{-0.0047}$
$\boldsymbol{A^{kSZ}}$	< 4.54	Age/Gyr	13.786 ± 0.030	$f\sigma_8(2.33)$	$0.2961^{+0.0017}_{-0.0023}$
$\boldsymbol{A_{100}^{dustTT}}$	9.0 ± 1.9	z_*	1089.78 ± 0.32	$\sigma_8(2.33)$	$0.3056^{+0.0017}_{-0.0023}$
$\boldsymbol{A_{143}^{dustTT}}$	10.8 ± 1.8	r_*	145.02 ± 0.31	f_{2000}^{143}	30.1 ± 3.0
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.3 ± 3.4	$100\theta_*$	1.04129 ± 0.00043	$f_{2000}^{143\times217}$	32.5 ± 2.0
$\boldsymbol{A_{217}^{dustTT}}$	$93.5^{+7.8}_{-7.1}$	$D_M(z_*)$/Gpc	13.927 ± 0.030	f_{2000}^{217}	107.2 ± 1.9
$\boldsymbol{c_{100}}$	0.99959 ± 0.00062	z_{drag}	1059.69 ± 0.45	$\chi^2_{lensing}$	10.1 ± 2.0
$\boldsymbol{c_{217}}$	0.99824 ± 0.00062	r_{drag}	147.71 ± 0.33	χ^2_{simall}	396.4 ± 1.1
H_0	68.15 ± 0.60	k_D	0.14019 ± 0.00043	χ^2_{lowl}	22.50 ± 0.88
Ω_Λ	0.6967 ± 0.0077	$100\theta_D$	0.16091 ± 0.00026	χ^2_{plik}	769.6 ± 5.4
Ω_m	0.3033 ± 0.0077	z_{eq}	3350 ± 29	χ^2_{6DF}	0.045 ± 0.062
$\Omega_m h^2$	0.1408 ± 0.0012	k_{eq}	0.010224 ± 0.000089	χ^2_{MGS}	1.88 ± 0.63
$\Omega_m h^3$	0.09596 ± 0.00045	$100\theta_{eq}$	0.8228 ± 0.0056	$\chi^2_{DR12BAO}$	4.07 ± 0.99
σ_8	$0.8014^{+0.0064}_{-0.0074}$	$100\theta_{s,eq}$	0.4544 ± 0.0029	χ^2_{prior}	7.3 ± 3.8
S_8	0.806 ± 0.016	$H(0.15)$	73.34 ± 0.52	χ^2_{CMB}	1198.7 ± 5.5
$\sigma_8\Omega_m^{0.5}$	0.4414 ± 0.0085	$D_M(0.15)$	636.8 ± 5.0	χ^2_{BAO}	6.0 ± 1.1
$\sigma_8\Omega_m^{0.25}$	0.5947 ± 0.0081	$H(0.38)$	83.30 ± 0.39		

$\bar{\chi}^2_{eff} = 1212.01$; $\Delta\bar{\chi}^2_{eff} = -2.57$; $R - 1 = 0.01863$

3.53 base_Alens_plikHM_TTTEEE_lowl_lowE_lensing

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022553	0.02251 ± 0.00017	$\Omega_m h^3$	0.096413	0.09637 ± 0.00029	$100\theta_{s,eq}$	0.45361	0.4532 ± 0.0033
$\boldsymbol{\Omega_c h^2}$	0.11803	0.1182 ± 0.0015	σ_8	0.8008	0.7999 ± 0.0086	$H(0.15)$	73.46	73.37 ± 0.60
$\boldsymbol{100\theta_{MC}}$	1.041111	1.04110 ± 0.00032	S_8	0.8049	0.806 ± 0.019	$D_M(0.15)$	635.7	636.6 ± 5.9
$\boldsymbol{\tau}$	0.0506	$0.0491^{+0.0086}_{-0.0076}$	$\sigma_8\Omega_m^{0.5}$	0.4409	0.441 ± 0.010	$H(0.38)$	83.432	83.36 ± 0.44
$\boldsymbol{A_L}$	1.0747	$1.071^{+0.038}_{-0.042}$	$\sigma_8\Omega_m^{0.25}$	0.5942	0.5941 ± 0.0097	$D_M(0.38)$	1518.0	1520 ± 12
$\boldsymbol{\ln(10^{10}A_s)}$	3.0314	$3.029^{+0.018}_{-0.016}$	$\sigma_8/h^{0.5}$	0.9692	0.969 ± 0.014	$H(0.51)$	90.068	90.01 ± 0.35
$\boldsymbol{n_s}$	0.97176	0.9696 ± 0.0048	$r_{drag}h$	100.63	100.5 ± 1.2	$D_M(0.51)$	1967.8	1970 ± 14
$\boldsymbol{y_{cal}}$	0.99996	1.0001 ± 0.0025	$\langle d^2\rangle^{1/2}$	2.4832	2.482 ± 0.030	$H(0.61)$	95.626	95.58 ± 0.28
$\boldsymbol{A_{217}^{CIB}}$	44.2	46 ± 7	z_{re}	7.23	$7.06^{+0.93}_{-0.74}$	$D_M(0.61)$	2290.9	2293 ± 15
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.83	—	$10^9 A_s$	2.0726	2.067 ± 0.036	$H(2.33)$	235.46	235.56 ± 0.88
$\boldsymbol{A_{143}^{tSZ}}$	7.00	$5.6^{+2.1}_{-1.8}$	$10^9 A_s e^{-2\tau}$	1.8733	1.874 ± 0.012	$D_M(2.33)$	5748.6	5751 ± 13
$\boldsymbol{A_{100}^{PS}}$	244.3	255 ± 28	D_{40}	1213.7	1219 ± 14	$f\sigma_8(0.15)$	0.4461	0.4464 ± 0.0095
$\boldsymbol{A_{143}^{PS}}$	50.3	44 ± 8	D_{220}	5730.1	5735 ± 39	$\sigma_8(0.15)$	0.7408	0.7398 ± 0.0075
$\boldsymbol{A_{143\times217}^{PS}}$	55.3	42 ± 9	D_{810}	2535.0	2533 ± 14	$f\sigma_8(0.38)$	0.4661	0.4661 ± 0.0079
$\boldsymbol{A_{217}^{PS}}$	122.8	115 ± 10	D_{1420}	817.98	816.5 ± 4.8	$\sigma_8(0.38)$	0.6576	0.6566 ± 0.0062
$\boldsymbol{A^{kSZ}}$	0.01	< 3.94	D_{2000}	232.01	231.3 ± 1.6	$f\sigma_8(0.51)$	0.4657	0.4655 ± 0.0070
$\boldsymbol{A_{100}^{dustTT}}$	8.82	8.9 ± 1.8	$n_{s,0.002}$	0.97176	0.9696 ± 0.0048	$\sigma_8(0.51)$	0.6158	0.6147 ± 0.0057
$\boldsymbol{A_{143}^{dustTT}}$	11.02	10.9 ± 1.8	Y_P	0.245463	0.245449 ± 0.000064	$f\sigma_8(0.61)$	0.4614	0.4611 ± 0.0064
$\boldsymbol{A_{143\times217}^{dustTT}}$	20.19	18.5 ± 3.3	Y_P^{BBN}	0.246790	0.246776 ± 0.000064	$\sigma_8(0.61)$	0.5862	0.5851 ± 0.0053
$\boldsymbol{A_{217}^{dustTT}}$	95.7	93.6 ± 7.3	10^5D/H	2.5526	2.560 ± 0.030	$f\sigma_8(2.33)$	0.29590	0.2953 ± 0.0026
$\boldsymbol{A_{100}^{dustTE}}$	0.1138	0.114 ± 0.038	Age/Gyr	13.7648	13.770 ± 0.028	$\sigma_8(2.33)$	0.30543	$0.3048^{+0.0027}_{-0.0025}$
$\boldsymbol{A_{100\times143}^{dustTE}}$	0.1343	0.135 ± 0.029	z_*	1089.519	1089.59 ± 0.31	f_{2000}^{143}	27.21	28.5 ± 2.8
$\boldsymbol{A_{100\times217}^{dustTE}}$	0.480	0.480 ± 0.085	r_*	144.801	144.78 ± 0.32	$f_{2000}^{143\times217}$	30.80	31.3 ± 1.9
$\boldsymbol{A_{143}^{dustTE}}$	0.224	0.223 ± 0.053	$100\theta_*$	1.041283	1.04128 ± 0.00031	f_{2000}^{217}	105.36	106.2 ± 1.8
$\boldsymbol{A_{143\times217}^{dustTE}}$	0.661	0.663 ± 0.080	$D_M(z_*)$/Gpc	13.9060	13.904 ± 0.030	$\chi^2_{lensing}$	10.18	10.5 ± 2.2
$\boldsymbol{A_{217}^{dustTE}}$	2.059	2.06 ± 0.27	z_{drag}	1060.200	1060.14 ± 0.32	χ^2_{simall}	395.66	396.8 ± 1.5
$\boldsymbol{c_{100}}$	0.99974	0.99966 ± 0.00061	r_{drag}	147.411	147.40 ± 0.31	χ^2_{lowl}	22.06	22.46 ± 0.91
$\boldsymbol{c_{217}}$	0.99815	0.99817 ± 0.00062	k_D	0.140669	0.14065 ± 0.00031	χ^2_{plik}	2341.8	2357.1 ± 6.0
H_0	68.27	68.16 ± 0.70	$100\theta_D$	0.160601	0.16065 ± 0.00018	χ^2_{prior}	1.45	11.5 ± 4.5
Ω_Λ	0.6969	0.6955 ± 0.0092	z_{eq}	3359.6	3364 ± 34	χ^2_{CMB}	2769.7	2786.9 ± 6.0
Ω_m	0.3031	0.3045 ± 0.0092	k_{eq}	0.010254	0.01027 ± 0.00010			
$\Omega_m h^2$	0.14123	0.1414 ± 0.0014	$100\theta_{eq}$	0.8217	0.8209 ± 0.0065			

Best-fit $\chi^2_{eff} = 2771.20$; $\Delta\chi^2_{eff} = -3.44$; $\bar{\chi}^2_{eff} = 2798.40$; $\Delta\bar{\chi}^2_{eff} = -2.29$; $R - 1 = 0.01801$

χ^2_{eff}: CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 10.18 (Δ 1.31) simall_100x143_offlike5_EE_Aplanck_B: 395.66 (Δ -0.39) commander_dx12_v3_2_29: 22.06 (Δ -1.20) plik_rd12_HM_v22b_TTTEEE: 2341.85 (Δ -3.08)

3.54 base_Alens_plikHM_TTTEEE_lowl_lowE_lensing_post_BAO

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022543	0.02251 ± 0.00014	σ_8	0.8002	0.8001 ± 0.0079	$D_M(0.15)$	636.48	636.7 ± 4.1
$\boldsymbol{\Omega_c h^2}$	0.11826	0.1183 ± 0.0011	S_8	0.8060	0.806 ± 0.014	$H(0.38)$	83.372	83.36 ± 0.31
$\boldsymbol{100\theta_{MC}}$	1.041093	1.04111 ± 0.00029	$\sigma_8\Omega_m^{0.5}$	0.4415	0.4415 ± 0.0076	$D_M(0.38)$	1519.7	1520.1 ± 8.3
$\boldsymbol{\tau}$	0.0492	$0.0491^{+0.0086}_{-0.0076}$	$\sigma_8\Omega_m^{0.25}$	0.5943	0.5943 ± 0.0077	$H(0.51)$	90.023	90.01 ± 0.25
$\boldsymbol{A_L}$	1.0723	$1.071^{+0.033}_{-0.038}$	$\sigma_8/h^{0.5}$	0.9692	0.969 ± 0.011	$D_M(0.51)$	1969.7	1970.2 ± 9.8
$\boldsymbol{\ln(10^{10}A_s)}$	3.0288	$3.029^{+0.018}_{-0.016}$	$r_{drag}h$	100.45	100.45 ± 0.84	$H(0.61)$	95.591	95.57 ± 0.21
$\boldsymbol{n_s}$	0.97040	0.9695 ± 0.0040	$\langle d^2\rangle^{1/2}$	2.4824	2.482 ± 0.030	$D_M(0.61)$	2293.0	2294 ± 11
$\boldsymbol{y_{cal}}$	0.99980	1.0001 ± 0.0025	z_{re}	7.09	$7.06^{+0.94}_{-0.74}$	$H(2.33)$	235.60	235.57 ± 0.63
$\boldsymbol{A_{217}^{CIB}}$	45.8	46 ± 7	$10^9 A_s$	2.0672	2.068 ± 0.036	$D_M(2.33)$	5750.0	5751.0 ± 9.7
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.625	> 0.382	$10^9 A_s e^{-2\tau}$	1.8735	1.874 ± 0.011	$f\sigma_8(0.15)$	0.4466	0.4466 ± 0.0072
$\boldsymbol{A_{143}^{tSZ}}$	7.17	$5.6^{+2.1}_{-1.8}$	D_{40}	1216.2	1219 ± 12	$\sigma_8(0.15)$	0.7401	0.7400 ± 0.0070
$\boldsymbol{A_{100}^{PS}}$	245.9	255 ± 28	D_{220}	5731.8	5735 ± 38	$f\sigma_8(0.38)$	0.4662	0.4662 ± 0.0063
$\boldsymbol{A_{143}^{PS}}$	48.0	44 ± 8	D_{810}	2533.8	2534 ± 14	$\sigma_8(0.38)$	0.6568	0.6567 ± 0.0060
$\boldsymbol{A_{143\times217}^{PS}}$	50.9	42 ± 9	D_{1420}	817.12	816.5 ± 4.8	$f\sigma_8(0.51)$	0.4657	0.4657 ± 0.0057
$\boldsymbol{A_{217}^{PS}}$	120.4	115 ± 10	D_{2000}	231.65	231.3 ± 1.6	$\sigma_8(0.51)$	0.6150	0.6149 ± 0.0056
$\boldsymbol{A^{kSZ}}$	0.01	< 3.97	$n_{s,0.002}$	0.97040	0.9695 ± 0.0040	$f\sigma_8(0.61)$	0.4613	0.4613 ± 0.0053
$\boldsymbol{A_{100}^{dustTT}}$	8.88	8.9 ± 1.9	Y_P	0.245460	0.245448 ± 0.000054	$\sigma_8(0.61)$	0.5854	0.5853 ± 0.0053
$\boldsymbol{A_{143}^{dustTT}}$	11.03	10.9 ± 1.8	Y_P^{BBN}	0.246786	0.246774 ± 0.000054	$f\sigma_8(2.33)$	0.29543	$0.2954^{+0.0027}_{-0.0024}$
$\boldsymbol{A_{143\times217}^{dustTT}}$	19.93	18.5 ± 3.3	10^5D/H	2.5544	2.560 ± 0.026	$\sigma_8(2.33)$	0.30489	$0.3048^{+0.0027}_{-0.0025}$
$\boldsymbol{A_{217}^{dustTT}}$	95.2	93.5 ± 7.3	Age/Gyr	13.7677	13.770 ± 0.022	f_{2000}^{143}	27.68	28.5 ± 2.7
$\boldsymbol{A_{100}^{dustTE}}$	0.1140	0.113 ± 0.038	z_*	1089.551	1089.59 ± 0.24	$f_{2000}^{143\times217}$	31.14	31.4 ± 1.9
$\boldsymbol{A_{100\times143}^{dustTE}}$	0.1346	0.134 ± 0.030	r_*	144.750	144.77 ± 0.24	f_{2000}^{217}	105.65	106.2 ± 1.8
$\boldsymbol{A_{100\times217}^{dustTE}}$	0.479	0.480 ± 0.085	$100\theta_*$	1.041256	1.04128 ± 0.00029	$\chi^2_{lensing}$	9.99	10.5 ± 2.2
$\boldsymbol{A_{143}^{dustTE}}$	0.222	0.222 ± 0.054	$D_M(z_*)$/Gpc	13.9015	13.904 ± 0.023	χ^2_{simall}	395.70	396.8 ± 1.5
$\boldsymbol{A_{143\times217}^{dustTE}}$	0.662	0.662 ± 0.080	z_{drag}	1060.200	1060.14 ± 0.30	χ^2_{lowl}	22.25	22.46 ± 0.78
$\boldsymbol{A_{217}^{dustTE}}$	2.069	2.06 ± 0.27	r_{drag}	147.362	147.40 ± 0.24	χ^2_{plik}	2341.7	2356.5 ± 5.8
$\boldsymbol{c_{100}}$	0.99971	0.99966 ± 0.00062	k_D	0.140712	0.14065 ± 0.00028	χ^2_{6DF}	0.0001	0.029 ± 0.041
$\boldsymbol{c_{217}}$	0.99818	0.99817 ± 0.00062	$100\theta_D$	0.160604	0.16065 ± 0.00017	χ^2_{MGS}	1.68	1.74 ± 0.51
H_0	68.167	68.15 ± 0.49	z_{eq}	3364.7	3364 ± 24	$\chi^2_{DR12BAO}$	3.526	3.98 ± 0.82
Ω_Λ	0.6956	0.6954 ± 0.0064	k_{eq}	0.010270	0.010267 ± 0.000073	χ^2_{prior}	1.64	11.6 ± 4.5
Ω_m	0.3044	0.3046 ± 0.0064	$100\theta_{eq}$	0.82067	0.8207 ± 0.0046	χ^2_{CMB}	2769.6	2786.3 ± 5.8
$\Omega_m h^2$	0.14145	0.1414 ± 0.0010	$100\theta_{s,eq}$	0.45310	0.4532 ± 0.0023	χ^2_{BAO}	5.204	5.75 ± 0.73
$\Omega_m h^3$	0.096420	0.09637 ± 0.00029	$H(0.15)$	73.377	73.36 ± 0.42			

Best-fit $\chi^2_{eff} = 2776.44$; $\Delta\chi^2_{eff} = -4.26$; $\bar{\chi}^2_{eff} = 2803.67$; $\Delta\bar{\chi}^2_{eff} = -3.17$; $R - 1 = 0.02408$

χ^2_{eff}: BAO - 6DF: 0.00 (Δ -0.03) MGS: 1.68 (Δ 0.46) DR12BAO: 3.53 (Δ -0.89) CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 9.99 (Δ 1.26) simall_100x143_offlike5_EE_Aplanck 395.70 (Δ -0.83) commander_dx12_v3_2_29: 22.25 (Δ -0.64) plik_rd12_HM_v22b_TTTEEE: 2341.65 (Δ -3.67)

3.55 base_Alens_plikHM_TTTEEE_lowl_lowE_lensing_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02252 ± 0.00017	$\Omega_m h^3$	0.09637 ± 0.00029	$100\theta_{s,eq}$	0.4533 ± 0.0033
$\boldsymbol{\Omega_c h^2}$	0.1182 ± 0.0015	σ_8	0.8024 ± 0.0074	$H(0.15)$	73.39 ± 0.60
$\boldsymbol{100\theta_{MC}}$	1.04111 ± 0.00032	S_8	0.808 ± 0.018	$D_M(0.15)$	636.4 ± 5.9
$\boldsymbol{\tau}$	$0.0526^{+0.0035}_{-0.0076}$	$\sigma_8\Omega_m^{0.5}$	0.4426 ± 0.0099	$H(0.38)$	83.38 ± 0.44
$\boldsymbol{A_L}$	1.065 ± 0.039	$\sigma_8\Omega_m^{0.25}$	0.5959 ± 0.0092	$D_M(0.38)$	1520 ± 12
$\boldsymbol{\ln(10^{10}A_s)}$	$3.035^{+0.010}_{-0.015}$	$\sigma_8/h^{0.5}$	0.972 ± 0.013	$H(0.51)$	90.02 ± 0.35
$\boldsymbol{n_s}$	0.9698 ± 0.0048	$r_{drag}h$	100.5 ± 1.2	$D_M(0.51)$	1970 ± 14
$\boldsymbol{y_{cal}}$	1.0001 ± 0.0025	$\langle d^2\rangle^{1/2}$	2.482 ± 0.029	$H(0.61)$	95.59 ± 0.28
$\boldsymbol{A_{217}^{CIB}}$	46 ± 7	z_{re}	$7.43^{+0.32}_{-0.84}$	$D_M(0.61)$	2293 ± 15
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	10^9A_s	$2.081^{+0.021}_{-0.031}$	$H(2.33)$	235.53 ± 0.88
$\boldsymbol{A_{143}^{tSZ}}$	$5.6^{+2.1}_{-1.8}$	$10^9A_se^{-2\tau}$	1.873 ± 0.012	$D_M(2.33)$	5750 ± 13
$\boldsymbol{A_{100}^{PS}}$	255 ± 28	D_{40}	1219 ± 14	$f\sigma_8(0.15)$	0.4477 ± 0.0093
$\boldsymbol{A_{143}^{PS}}$	44 ± 8	D_{220}	5734 ± 39	$\sigma_8(0.15)$	0.7422 ± 0.0062
$\boldsymbol{A_{143\times217}^{PS}}$	41 ± 9	D_{810}	2533 ± 14	$f\sigma_8(0.38)$	0.4674 ± 0.0076
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	D_{1420}	816.5 ± 4.8	$\sigma_8(0.38)$	$0.6587^{+0.0045}_{-0.0053}$
$\boldsymbol{A^{kSZ}}$	< 3.93	D_{2000}	231.4 ± 1.6	$f\sigma_8(0.51)$	0.4669 ± 0.0066
$\boldsymbol{A_{100}^{dustTT}}$	9.0 ± 1.8	$n_{s,0.002}$	0.9698 ± 0.0048	$\sigma_8(0.51)$	$0.6168^{+0.0040}_{-0.0048}$
$\boldsymbol{A_{143}^{dustTT}}$	10.9 ± 1.8	Y_P	0.245450 ± 0.000064	$f\sigma_8(0.61)$	0.4626 ± 0.0059
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.5 ± 3.3	Y_P^{BBN}	0.246777 ± 0.000065	$\sigma_8(0.61)$	$0.5871^{+0.0036}_{-0.0045}$
$\boldsymbol{A_{217}^{dustTT}}$	93.6 ± 7.3	10^5D/H	2.559 ± 0.030	$f\sigma_8(2.33)$	$0.2963^{+0.0016}_{-0.0022}$
$\boldsymbol{A_{100}^{dustTE}}$	0.113 ± 0.039	Age/Gyr	13.769 ± 0.028	$\sigma_8(2.33)$	$0.3058^{+0.0016}_{-0.0023}$
$\boldsymbol{A_{100\times143}^{dustTE}}$	0.134 ± 0.029	z_*	1089.58 ± 0.31	f_{2000}^{143}	28.4 ± 2.8
$\boldsymbol{A_{100\times217}^{dustTE}}$	0.480 ± 0.085	r_*	144.79 ± 0.32	$f_{2000}^{143\times217}$	31.3 ± 1.9
$\boldsymbol{A_{143}^{dustTE}}$	0.222 ± 0.053	$100\theta_*$	1.04128 ± 0.00031	f_{2000}^{217}	106.1 ± 1.8
$\boldsymbol{A_{143\times217}^{dustTE}}$	0.662 ± 0.080	$D_M(z_*)$/Gpc	13.905 ± 0.030	$\chi^2_{lensing}$	10.5 ± 2.2
$\boldsymbol{A_{217}^{dustTE}}$	2.06 ± 0.27	z_{drag}	1060.15 ± 0.33	χ^2_{simall}	396.4 ± 1.1
$\boldsymbol{c_{100}}$	0.99965 ± 0.00061	r_{drag}	147.41 ± 0.31	χ^2_{lowl}	22.51 ± 0.92
$\boldsymbol{c_{217}}$	0.99817 ± 0.00062	k_D	0.14064 ± 0.00031	χ^2_{plik}	2357.1 ± 6.0
H_0	68.18 ± 0.70	$100\theta_D$	0.16064 ± 0.00019	χ^2_{prior}	11.5 ± 4.5
Ω_Λ	0.6958 ± 0.0091	z_{eq}	3362 ± 33	χ^2_{CMB}	2786.4 ± 5.9
Ω_m	0.3042 ± 0.0091	k_{eq}	0.01026 ± 0.00010		
$\Omega_m h^2$	0.1414 ± 0.0014	$100\theta_{eq}$	0.8211 ± 0.0065		

$\bar{\chi}^2_{eff} = 2797.97$; $\Delta\bar{\chi}^2_{eff} = -2.54$; $R - 1 = 0.02423$

3.56 base_Alens_plikHM_TTTEEE_lowl_lowE_lensing_post_BAO_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02251 ± 0.00014	σ_8	$0.8027^{+0.0060}_{-0.0068}$	$D_M(0.15)$	636.6 ± 4.1
$\boldsymbol{\Omega_c h^2}$	0.1182 ± 0.0011	S_8	0.809 ± 0.013	$H(0.38)$	83.36 ± 0.31
$\boldsymbol{100\theta_{MC}}$	1.04110 ± 0.00029	$\sigma_8\Omega_m^{0.5}$	0.4429 ± 0.0073	$D_M(0.38)$	1519.9 ± 8.3
$\boldsymbol{\tau}$	$0.0526^{+0.0036}_{-0.0075}$	$\sigma_8\Omega_m^{0.25}$	0.5962 ± 0.0071	$H(0.51)$	90.01 ± 0.25
$\boldsymbol{A_L}$	1.064 ± 0.033	$\sigma_8/h^{0.5}$	0.972 ± 0.010	$D_M(0.51)$	1970.0 ± 9.8
$\boldsymbol{\ln(10^{10}A_s)}$	$3.036^{+0.010}_{-0.015}$	$r_{drag}h$	100.47 ± 0.84	$H(0.61)$	95.58 ± 0.21
$\boldsymbol{n_s}$	0.9696 ± 0.0040	$\langle d^2\rangle^{1/2}$	2.482 ± 0.029	$D_M(0.61)$	2293 ± 11
$\boldsymbol{y_{cal}}$	1.0001 ± 0.0025	z_{re}	$7.44^{+0.32}_{-0.84}$	$H(2.33)$	235.56 ± 0.64
$\boldsymbol{A^{CIB}_{217}}$	46 ± 7	$10^9 A_s$	$2.082^{+0.021}_{-0.031}$	$D_M(2.33)$	5750.9 ± 9.8
$\boldsymbol{\xi^{tSZ\times CIB}}$	> 0.386	$10^9 A_s e^{-2\tau}$	1.874 ± 0.011	$f\sigma_8(0.15)$	0.4480 ± 0.0069
$\boldsymbol{A^{tSZ}_{143}}$	$5.6^{+2.1}_{-1.8}$	D_{40}	1219 ± 12	$\sigma_8(0.15)$	$0.7424^{+0.0051}_{-0.0060}$
$\boldsymbol{A^{PS}_{100}}$	255 ± 28	D_{220}	5735 ± 38	$f\sigma_8(0.38)$	0.4677 ± 0.0058
$\boldsymbol{A^{PS}_{143}}$	44 ± 8	D_{810}	2533 ± 14	$\sigma_8(0.38)$	$0.6589^{+0.0041}_{-0.0051}$
$\boldsymbol{A^{PS}_{143\times217}}$	42 ± 9	D_{1420}	816.5 ± 4.8	$f\sigma_8(0.51)$	0.4671 ± 0.0051
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	D_{2000}	231.4 ± 1.6	$\sigma_8(0.51)$	$0.6169^{+0.0036}_{-0.0047}$
$\boldsymbol{A^{kSZ}}$	< 3.98	$n_{s,0.002}$	0.9696 ± 0.0040	$f\sigma_8(0.61)$	0.4628 ± 0.0047
$\boldsymbol{A^{dustTT}_{100}}$	9.0 ± 1.9	Y_P	0.245448 ± 0.000054	$\sigma_8(0.61)$	$0.5872^{+0.0034}_{-0.0045}$
$\boldsymbol{A^{dustTT}_{143}}$	10.9 ± 1.8	Y_P^{BBN}	0.246775 ± 0.000054	$f\sigma_8(2.33)$	$0.2964^{+0.0016}_{-0.0022}$
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.5 ± 3.3	10^5D/H	2.560 ± 0.026	$\sigma_8(2.33)$	$0.3059^{+0.0016}_{-0.0023}$
$\boldsymbol{A^{dustTT}_{217}}$	93.6 ± 7.4	Age/Gyr	13.770 ± 0.022	f^{143}_{2000}	28.4 ± 2.7
$\boldsymbol{A^{dustTE}_{100}}$	0.113 ± 0.038	z_*	1089.59 ± 0.24	$f^{143\times217}_{2000}$	31.3 ± 1.8
$\boldsymbol{A^{dustTE}_{100\times143}}$	0.134 ± 0.030	r_*	144.78 ± 0.24	f^{217}_{2000}	106.2 ± 1.8
$\boldsymbol{A^{dustTE}_{100\times217}}$	0.480 ± 0.085	$100\theta_*$	1.04128 ± 0.00029	$\chi^2_{lensing}$	10.5 ± 2.2
$\boldsymbol{A^{dustTE}_{143}}$	0.223 ± 0.054	$D_M(z_*)$/Gpc	13.904 ± 0.023	χ^2_{simall}	396.4 ± 1.1
$\boldsymbol{A^{dustTE}_{143\times217}}$	0.662 ± 0.080	z_{drag}	1060.14 ± 0.30	χ^2_{lowl}	22.52 ± 0.78
$\boldsymbol{A^{dustTE}_{217}}$	2.06 ± 0.27	r_{drag}	147.40 ± 0.24	χ^2_{plik}	2356.5 ± 5.8
$\boldsymbol{c_{100}}$	0.99965 ± 0.00061	k_D	0.14065 ± 0.00028	χ^2_{6DF}	0.030 ± 0.042
$\boldsymbol{c_{217}}$	0.99817 ± 0.00063	$100\theta_D$	0.16065 ± 0.00017	χ^2_{MGS}	1.75 ± 0.52
H_0	68.16 ± 0.49	z_{eq}	3363 ± 24	$\chi^2_{DR12BAO}$	3.98 ± 0.81
Ω_Λ	0.6956 ± 0.0064	k_{eq}	0.010265 ± 0.000073	χ^2_{prior}	11.6 ± 4.5
Ω_m	0.3044 ± 0.0064	$100\theta_{eq}$	0.8209 ± 0.0046	χ^2_{CMB}	2785.9 ± 5.7
$\Omega_m h^2$	0.1414 ± 0.0010	$100\theta_{s,eq}$	0.4532 ± 0.0023	χ^2_{BAO}	5.75 ± 0.74
$\Omega_m h^3$	0.09637 ± 0.00029	$H(0.15)$	73.37 ± 0.42		

$\bar{\chi}^2_{eff} = 2803.19$; $\Delta\bar{\chi}^2_{eff} = -3.53$; $R - 1 = 0.03248$

3.57 base_Alens_CamSpecHM_TTTEEE_lowl_lowE_lensing

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022439	0.02243 ± 0.00018	S_8	0.8055	0.805 ± 0.019	$H(0.15)$	73.34	73.30 ± 0.62
$\boldsymbol{\Omega_c h^2}$	0.11807	0.1182 ± 0.0016	$\sigma_8 \Omega_m^{0.5}$	0.4412	0.441 ± 0.010	$D_M(0.15)$	636.8	637.2 ± 6.1
$\boldsymbol{100\theta_{MC}}$	1.041051	1.04104 ± 0.00032	$\sigma_8 \Omega_m^{0.25}$	0.5941	0.5937 ± 0.0099	$H(0.38)$	83.319	83.29 ± 0.46
$\boldsymbol{\tau}$	0.0504	$0.0490^{+0.0082}_{-0.0072}$	$\sigma_8/h^{0.5}$	0.9693	0.969 ± 0.014	$D_M(0.38)$	1520.5	1521 ± 12
$\boldsymbol{A_L}$	1.0624	1.064 ± 0.042	$r_{drag} h$	100.52	100.5 ± 1.2	$H(0.51)$	89.961	89.94 ± 0.36
$\boldsymbol{\ln(10^{10} A_s)}$	3.0296	$3.027^{+0.017}_{-0.015}$	$\langle d^2 \rangle^{1/2}$	2.4717	2.471 ± 0.031	$D_M(0.51)$	1970.8	1972 ± 14
$\boldsymbol{n_s}$	0.9700	0.9695 ± 0.0051	z_{re}	7.24	$7.07^{+0.90}_{-0.70}$	$H(0.61)$	95.521	95.51 ± 0.29
$\boldsymbol{y_{cal}}$	1.00004	1.0000 ± 0.0024	$10^9 A_s$	2.0690	$2.063^{+0.035}_{-0.031}$	$D_M(0.61)$	2294.3	2295 ± 16
$\boldsymbol{A_{100}^{PS}}$	240.0	237 ± 25	$10^9 A_s e^{-2\tau}$	1.8704	1.871 ± 0.012	$H(2.33)$	235.37	235.42 ± 0.92
$\boldsymbol{A_{143}^{PS}}$	36.7	38 ± 8	D_{40}	1215.4	1216 ± 14	$D_M(2.33)$	5754.4	5755 ± 13
$\boldsymbol{A_{217}^{PS}}$	105.3	103 ± 10	D_{220}	5720.6	5721 ± 39	$f\sigma_8(0.15)$	0.4463	0.4462 ± 0.0099
$\boldsymbol{A_{217}^{CIB}}$	37.5	39^{+7}_{-7}	D_{810}	2530.1	2530 ± 14	$\sigma_8(0.15)$	0.7401	0.7391 ± 0.0074
$\boldsymbol{A_{143}^{tSZ}}$	3.47	$3.9^{+1.9}_{-2.5}$	D_{1420}	815.25	815.0 ± 4.8	$f\sigma_8(0.38)$	0.4661	0.4657 ± 0.0082
$\boldsymbol{r_{143\times217}^{PS}}$	0.676	0.66 ± 0.13	D_{2000}	230.79	230.6 ± 1.6	$\sigma_8(0.38)$	0.6569	$0.6559^{+0.0062}_{-0.0056}$
$\boldsymbol{r_{143\times217}^{CIB}}$	0.410	$0.54^{+0.36}_{-0.22}$	$n_{s,0.002}$	0.9700	0.9695 ± 0.0051	$f\sigma_8(0.51)$	0.4656	0.4652 ± 0.0072
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.36	—	Y_P	0.245422	0.245415 ± 0.000070	$\sigma_8(0.51)$	0.6150	$0.6141^{+0.0057}_{-0.0050}$
$\boldsymbol{A^{kSZ}}$	4.66	$4.6^{+1.8}_{-4.2}$	Y_P^{BBN}	0.246749	0.246742 ± 0.000070	$f\sigma_8(0.61)$	0.4612	0.4608 ± 0.0065
$\boldsymbol{A_{100}^{dust}}$	1.019	1.02 ± 0.19	10^5D/H	2.5727	2.576 ± 0.033	$\sigma_8(0.61)$	0.5854	$0.5846^{+0.0053}_{-0.0047}$
$\boldsymbol{A_{143}^{dust}}$	0.957	0.96 ± 0.18	Age/Gyr	13.7783	13.780 ± 0.029	$f\sigma_8(2.33)$	0.29548	$0.2950^{+0.0026}_{-0.0023}$
$\boldsymbol{A_{217}^{dust}}$	0.971	0.98 ± 0.10	z_*	1089.664	1089.69 ± 0.33	$\sigma_8(2.33)$	0.30496	$0.3045^{+0.0026}_{-0.0023}$
$\boldsymbol{A_{143\times217}^{dust}}$	1.052	1.02 ± 0.16	r_*	144.879	144.87 ± 0.34	f_{2000}^{143}	28.53	28.7 ± 2.9
$\boldsymbol{c_{100}}$	0.99749	0.9975 ± 0.0010	$100\theta_*$	1.041230	1.04122 ± 0.00032	f_{2000}^{217}	105.95	106.1 ± 2.0
$\boldsymbol{c_{217}}$	1.00069	1.0010 ± 0.0016	$D_M(z_*)$/Gpc	13.9142	13.913 ± 0.031	$f_{2000}^{143\times217}$	31.29	31.3 ± 2.1
$\boldsymbol{c_{TE}}$	0.9949	0.9951 ± 0.0050	z_{drag}	1059.971	1059.94 ± 0.35	$\chi^2_{lensing}$	9.02	9.8 ± 1.7
$\boldsymbol{c_{EE}}$	0.99147	0.9917 ± 0.0049	r_{drag}	147.526	147.52 ± 0.33	χ^2_{simall}	395.66	396.8 ± 1.5
H_0	68.14	68.10 ± 0.72	k_D	0.140460	0.14046 ± 0.00035	χ^2_{lowl}	22.23	22.37 ± 0.94
Ω_Λ	0.6960	0.6953 ± 0.0095	$100\theta_D$	0.160745	0.16076 ± 0.00020	$\chi^2_{CamSpec}$	11498.6	11513.3 ± 5.7
Ω_m	0.3040	0.3047 ± 0.0095	z_{eq}	3357.7	3360 ± 35	χ^2_{prior}	2.14	7.7 ± 3.3
$\Omega_m h^2$	0.14115	0.1412 ± 0.0015	k_{eq}	0.010248	0.01025 ± 0.00011	χ^2_{CMB}	11925.5	11942.2 ± 5.8
$\Omega_m h^3$	0.096178	0.09616 ± 0.00032	$100\theta_{eq}$	0.8216	0.8213 ± 0.0068			
σ_8	0.8001	0.7991 ± 0.0086	$100\theta_{s,eq}$	0.45368	0.4535 ± 0.0035			

Best-fit $\chi^2_{eff} = 11927.65$; $\Delta\chi^2_{eff} = -2.01$; $\bar{\chi}^2_{eff} = 11949.88$; $\Delta\bar{\chi}^2_{eff} = -1.56$; $R - 1 = 0.01480$

χ^2_{eff}: CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 9.02 (Δ 0.19) simall_100x143_offlike5_EE_Aplanck_B: 395.66 (Δ -0.21) commander_dx12_v3_2_29: 22.23 (Δ -0.99) CamSpec like_10.7HM_1400_unified: 11498.60 (Δ -1.05)

3.58 base_Alens_CamSpecHM_TTTEEE_lowl_lowE_lensing_post_BAO

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02242 ± 0.00016	$\sigma_8\Omega_m^{0.5}$	0.4411 ± 0.0078	$H(0.38)$	83.29 ± 0.32
$\boldsymbol{\Omega_c h^2}$	0.1182 ± 0.0011	$\sigma_8\Omega_m^{0.25}$	0.5937 ± 0.0078	$D_M(0.38)$	1521.4 ± 8.5
$\boldsymbol{100\theta_{MC}}$	1.04104 ± 0.00029	$\sigma_8/h^{0.5}$	0.969 ± 0.012	$H(0.51)$	$89.94^{+0.24}_{-0.27}$
$\boldsymbol{\tau}$	$0.0489^{+0.0081}_{-0.0072}$	$r_{drag}h$	100.44 ± 0.85	$D_M(0.51)$	1972 ± 10
$\boldsymbol{A_L}$	1.064 ± 0.037	$\langle d^2\rangle^{1/2}$	2.471 ± 0.031	$H(0.61)$	$95.50^{+0.20}_{-0.23}$
$\boldsymbol{\ln(10^{10}A_s)}$	$3.027^{+0.017}_{-0.015}$	z_{re}	$7.06^{+0.88}_{-0.71}$	$D_M(0.61)$	2295 ± 11
$\boldsymbol{n_s}$	0.9695 ± 0.0042	$10^9 A_s$	2.063 ± 0.035	$H(2.33)$	235.42 ± 0.66
$\boldsymbol{y_{cal}}$	1.0000 ± 0.0024	$10^9 A_s e^{-2\tau}$	1.871 ± 0.011	$D_M(2.33)$	$5755^{+11}_{-9.6}$
$\boldsymbol{A_{100}^{PS}}$	237 ± 24	D_{40}	1216 ± 13	$f\sigma_8(0.15)$	0.4462 ± 0.0074
$\boldsymbol{A_{143}^{PS}}$	38 ± 8	D_{220}	5720 ± 39	$\sigma_8(0.15)$	0.7391 ± 0.0069
$\boldsymbol{A_{217}^{PS}}$	103 ± 10	D_{810}	2530 ± 14	$f\sigma_8(0.38)$	0.4658 ± 0.0064
$\boldsymbol{A_{217}^{CIB}}$	39 ± 7	D_{1420}	814.9 ± 4.8	$\sigma_8(0.38)$	0.6559 ± 0.0059
$\boldsymbol{A_{143}^{tSZ}}$	$3.9^{+2.0}_{-2.5}$	D_{2000}	230.6 ± 1.6	$f\sigma_8(0.51)$	0.4652 ± 0.0058
$\boldsymbol{r_{143\times217}^{PS}}$	0.66 ± 0.13	$n_{s,0.002}$	0.9695 ± 0.0042	$\sigma_8(0.51)$	0.6141 ± 0.0054
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.54^{+0.38}_{-0.20}$	Y_P	0.245414 ± 0.000060	$f\sigma_8(0.61)$	0.4608 ± 0.0054
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	0.246741 ± 0.000060	$\sigma_8(0.61)$	0.5846 ± 0.0051
$\boldsymbol{A^{kSZ}}$	$4.6^{+2.0}_{-4.1}$	10^5D/H	2.576 ± 0.028	$f\sigma_8(2.33)$	0.2950 ± 0.0025
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.20	Age/Gyr	13.781 ± 0.023	$\sigma_8(2.33)$	0.3045 ± 0.0026
$\boldsymbol{A_{143}^{dust}}$	0.96 ± 0.17	z_*	1089.69 ± 0.25	f_{2000}^{143}	28.8 ± 2.8
$\boldsymbol{A_{217}^{dust}}$	0.98 ± 0.10	r_*	144.87 ± 0.25	f_{2000}^{217}	106.1 ± 2.0
$\boldsymbol{A_{143\times217}^{dust}}$	1.02 ± 0.16	$100\theta_*$	1.04122 ± 0.00029	$f_{2000}^{143\times217}$	31.3 ± 2.0
$\boldsymbol{c_{100}}$	0.9975 ± 0.0010	$D_M(z_*)$/Gpc	13.913 ± 0.024	$\chi^2_{lensing}$	9.8 ± 1.7
$\boldsymbol{c_{217}}$	1.0010 ± 0.0015	z_{drag}	1059.93 ± 0.33	χ^2_{simall}	396.8 ± 1.5
$\boldsymbol{c_{TE}}$	0.9952 ± 0.0050	r_{drag}	147.52 ± 0.26	χ^2_{lowl}	22.35 ± 0.81
$\boldsymbol{c_{EE}}$	0.9917 ± 0.0049	k_D	0.14046 ± 0.00031	$\chi^2_{CamSpec}$	11512.7 ± 5.5
H_0	68.09 ± 0.50	$100\theta_D$	0.16076 ± 0.00019	χ^2_{6DF}	0.031 ± 0.043
Ω_Λ	0.6953 ± 0.0065	z_{eq}	3360 ± 25	χ^2_{MGS}	1.74 ± 0.52
Ω_m	0.3047 ± 0.0065	k_{eq}	0.010254 ± 0.000075	$\chi^2_{DR12BAO}$	3.99 ± 0.85
$\Omega_m h^2$	0.1412 ± 0.0010	$100\theta_{eq}$	0.8213 ± 0.0047	χ^2_{prior}	7.7 ± 3.3
$\Omega_m h^3$	0.09616 ± 0.00031	$100\theta_{s,eq}$	0.4535 ± 0.0024	χ^2_{CMB}	11941.7 ± 5.8
σ_8	0.7992 ± 0.0078	$H(0.15)$	73.30 ± 0.43	χ^2_{BAO}	5.76 ± 0.76
S_8	0.805 ± 0.014	$D_M(0.15)$	637.2 ± 4.2		

$\bar{\chi}^2_{eff} = 11955.09$; $\Delta\bar{\chi}^2_{eff} = -2.31$; $R - 1 = 0.01872$

3.59 base_Alens_CamSpecHM_TTTEEE_lowl_lowE_lensing_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02243 ± 0.00018	S_8	0.808 ± 0.019	$H(0.15)$	73.31 ± 0.62
$\boldsymbol{\Omega_c h^2}$	0.1181 ± 0.0016	$\sigma_8\Omega_m^{0.5}$	0.442 ± 0.010	$D_M(0.15)$	637.1 ± 6.1
$\boldsymbol{100\theta_{MC}}$	1.04104 ± 0.00033	$\sigma_8\Omega_m^{0.25}$	0.5955 ± 0.0094	$H(0.38)$	83.30 ± 0.46
$\boldsymbol{\tau}$	$0.0522^{+0.0035}_{-0.0073}$	$\sigma_8/h^{0.5}$	0.971 ± 0.013	$D_M(0.38)$	1521 ± 12
$\boldsymbol{A_L}$	1.058 ± 0.040	$r_{drag}h$	100.5 ± 1.3	$H(0.51)$	89.95 ± 0.37
$\boldsymbol{\ln(10^{10}A_s)}$	$3.033^{+0.010}_{-0.014}$	$\langle d^2\rangle^{1/2}$	2.471 ± 0.031	$D_M(0.51)$	1972 ± 14
$\boldsymbol{n_s}$	0.9697 ± 0.0051	z_{re}	$7.41^{+0.32}_{-0.81}$	$H(0.61)$	95.51 ± 0.30
$\boldsymbol{y_{cal}}$	0.99998 ± 0.0024	$10^9 A_s$	$2.076^{+0.021}_{-0.029}$	$D_M(0.61)$	2295 ± 16
$\boldsymbol{A^{PS}_{100}}$	237 ± 25	$10^9 A_s e^{-2\tau}$	1.870 ± 0.012	$H(2.33)$	235.40 ± 0.92
$\boldsymbol{A^{PS}_{143}}$	38 ± 8	D_{40}	1217 ± 14	$D_M(2.33)$	5755 ± 13
$\boldsymbol{A^{PS}_{217}}$	103 ± 10	D_{220}	5720 ± 39	$f\sigma_8(0.15)$	0.4474 ± 0.0096
$\boldsymbol{A^{CIB}_{217}}$	39^{+7}_{-7}	D_{810}	2530 ± 14	$\sigma_8(0.15)$	0.7414 ± 0.0062
$\boldsymbol{A^{tSZ}_{143}}$	$3.9^{+1.9}_{-2.5}$	D_{1420}	814.9 ± 4.8	$f\sigma_8(0.38)$	0.4671 ± 0.0078
$\boldsymbol{r^{PS}_{143\times217}}$	0.66 ± 0.13	D_{2000}	230.7 ± 1.6	$\sigma_8(0.38)$	$0.6579^{+0.0044}_{-0.0052}$
$\boldsymbol{r^{CIB}_{143\times217}}$	$0.54^{+0.36}_{-0.22}$	$n_{s,0.002}$	0.9697 ± 0.0051	$f\sigma_8(0.51)$	0.4665 ± 0.0068
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P	0.245415 ± 0.000070	$\sigma_8(0.51)$	$0.6160^{+0.0038}_{-0.0047}$
$\boldsymbol{A^{kSZ}}$	$4.6^{+1.7}_{-4.2}$	Y_P^{BBN}	0.246742 ± 0.000071	$f\sigma_8(0.61)$	0.4622 ± 0.0060
$\boldsymbol{A^{dust}_{100}}$	1.02 ± 0.19	10^5D/H	2.576 ± 0.033	$\sigma_8(0.61)$	$0.5864^{+0.0035}_{-0.0044}$
$\boldsymbol{A^{dust}_{143}}$	0.96 ± 0.17	Age/Gyr	13.780 ± 0.029	$f\sigma_8(2.33)$	$0.2959^{+0.0016}_{-0.0021}$
$\boldsymbol{A^{dust}_{217}}$	0.98 ± 0.10	z_*	1089.69 ± 0.33	$\sigma_8(2.33)$	$0.3054^{+0.0016}_{-0.0022}$
$\boldsymbol{A^{dust}_{143\times217}}$	1.02 ± 0.16	r_*	144.87 ± 0.34	f^{143}_{2000}	28.7 ± 2.9
$\boldsymbol{c_{100}}$	0.9975 ± 0.0010	$100\theta_*$	1.04122 ± 0.00032	f^{217}_{2000}	106.1 ± 2.0
$\boldsymbol{c_{217}}$	1.0010 ± 0.0016	$D_M(z_*)$/Gpc	13.914 ± 0.031	$f^{143\times217}_{2000}$	31.3 ± 2.1
$\boldsymbol{c_{TE}}$	0.9951 ± 0.0050	z_{drag}	1059.93 ± 0.36	$\chi^2_{lensing}$	9.8 ± 1.7
$\boldsymbol{c_{EE}}$	0.9917 ± 0.0049	r_{drag}	147.52 ± 0.33	χ^2_{simall}	396.31 ± 0.98
H_0	68.11 ± 0.73	k_D	0.14045 ± 0.00035	χ^2_{lowl}	22.43 ± 0.95
Ω_Λ	0.6954 ± 0.0095	$100\theta_D$	0.16076 ± 0.00020	$\chi^2_{CamSpec}$	11513.3 ± 5.7
Ω_m	0.3046 ± 0.0095	z_{eq}	3359 ± 35	χ^2_{prior}	7.7 ± 3.3
$\Omega_m h^2$	0.1412 ± 0.0015	k_{eq}	0.01025 ± 0.00011	χ^2_{CMB}	11941.9 ± 5.8
$\Omega_m h^3$	0.09616 ± 0.00032	$100\theta_{eq}$	0.8214 ± 0.0068		
σ_8	0.8016 ± 0.0074	$100\theta_{s,eq}$	0.4536 ± 0.0035		

$\bar{\chi}^2_{eff} = 11949.57$; $\Delta\bar{\chi}^2_{eff} = -1.67$; $R - 1 = 0.01602$

3.60 base_Alens_CamSpecHM_TTTEEE_lowl_lowE_lensing_post_BAO_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02242 ± 0.00016	$\sigma_8\Omega_m^{0.5}$	0.4425 ± 0.0074	$H(0.38)$	83.29 ± 0.32
$\boldsymbol{\Omega_c h^2}$	0.1182 ± 0.0011	$\sigma_8\Omega_m^{0.25}$	0.5956 ± 0.0071	$D_M(0.38)$	1521.3 ± 8.5
$\boldsymbol{100\theta_{MC}}$	1.04104 ± 0.00030	$\sigma_8/h^{0.5}$	$0.9715^{+0.0095}_{-0.011}$	$H(0.51)$	89.94 ± 0.26
$\boldsymbol{\tau}$	$0.0521^{+0.0035}_{-0.0071}$	$r_{drag}h$	100.45 ± 0.85	$D_M(0.51)$	1972 ± 10
$\boldsymbol{A_L}$	1.057 ± 0.035	$\langle d^2\rangle^{1/2}$	2.471 ± 0.031	$H(0.61)$	$95.50^{+0.20}_{-0.23}$
$\boldsymbol{\ln(10^{10}A_s)}$	$3.0329^{+0.0098}_{-0.014}$	z_{re}	$7.40^{+0.31}_{-0.81}$	$D_M(0.61)$	2295 ± 11
$\boldsymbol{n_s}$	0.9696 ± 0.0042	$10^9 A_s$	$2.076^{+0.020}_{-0.030}$	$H(2.33)$	235.41 ± 0.66
$\boldsymbol{y_{cal}}$	1.0000 ± 0.0024	$10^9 A_s e^{-2\tau}$	1.871 ± 0.011	$D_M(2.33)$	5755 ± 10
$\boldsymbol{A_{100}^{PS}}$	237 ± 25	D_{40}	1217 ± 13	$f\sigma_8(0.15)$	0.4476 ± 0.0069
$\boldsymbol{A_{143}^{PS}}$	38 ± 8	D_{220}	5720 ± 39	$\sigma_8(0.15)$	$0.7415^{+0.0048}_{-0.0061}$
$\boldsymbol{A_{217}^{PS}}$	103 ± 10	D_{810}	2530 ± 14	$f\sigma_8(0.38)$	0.4672 ± 0.0058
$\boldsymbol{A_{217}^{CIB}}$	39^{+7}_{-7}	D_{1420}	814.9 ± 4.8	$\sigma_8(0.38)$	$0.6580^{+0.0039}_{-0.0051}$
$\boldsymbol{A_{143}^{tSZ}}$	$3.9^{+2.0}_{-2.5}$	D_{2000}	230.6 ± 1.6	$f\sigma_8(0.51)$	$0.4666^{+0.0049}_{-0.0054}$
$\boldsymbol{r_{143\times217}^{PS}}$	0.66 ± 0.13	$n_{s,0.002}$	0.9696 ± 0.0042	$\sigma_8(0.51)$	$0.6161^{+0.0035}_{-0.0047}$
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.54^{+0.38}_{-0.20}$	Y_P	0.245414 ± 0.000060	$f\sigma_8(0.61)$	$0.4623^{+0.0044}_{-0.0050}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	0.246741 ± 0.000060	$\sigma_8(0.61)$	$0.5864^{+0.0032}_{-0.0044}$
$\boldsymbol{A^{kSZ}}$	$4.6^{+1.9}_{-4.1}$	10^5D/H	2.576 ± 0.029	$f\sigma_8(2.33)$	$0.2959^{+0.0015}_{-0.0022}$
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.20	Age/Gyr	13.781 ± 0.023	$\sigma_8(2.33)$	$0.3054^{+0.0015}_{-0.0023}$
$\boldsymbol{A_{143}^{dust}}$	0.96 ± 0.17	z_*	1089.69 ± 0.25	f_{2000}^{143}	28.7 ± 2.8
$\boldsymbol{A_{217}^{dust}}$	0.98 ± 0.10	r_*	144.87 ± 0.25	f_{2000}^{217}	106.1 ± 2.0
$\boldsymbol{A_{143\times217}^{dust}}$	1.02 ± 0.16	$100\theta_*$	1.04122 ± 0.00029	$f_{2000}^{143\times217}$	31.3 ± 2.0
$\boldsymbol{c_{100}}$	0.9975 ± 0.0010	$D_M(z_*)$/Gpc	13.913 ± 0.024	$\chi^2_{lensing}$	9.8 ± 1.7
$\boldsymbol{c_{217}}$	1.0011 ± 0.0015	z_{drag}	1059.93 ± 0.33	χ^2_{simall}	396.31 ± 0.99
$\boldsymbol{c_{TE}}$	0.9951 ± 0.0050	r_{drag}	147.52 ± 0.26	χ^2_{lowl}	22.41 ± 0.82
$\boldsymbol{c_{EE}}$	0.9917 ± 0.0050	k_D	0.14045 ± 0.00032	$\chi^2_{CamSpec}$	11512.7 ± 5.6
H_0	68.09 ± 0.50	$100\theta_D$	0.16076 ± 0.00019	χ^2_{6DF}	0.031 ± 0.043
Ω_Λ	0.6953 ± 0.0065	z_{eq}	3359 ± 24	χ^2_{MGS}	1.74 ± 0.52
Ω_m	0.3047 ± 0.0065	k_{eq}	0.010253 ± 0.000075	$\chi^2_{DR12BAO}$	3.99 ± 0.84
$\Omega_m h^2$	0.1412 ± 0.0010	$100\theta_{eq}$	0.8213 ± 0.0047	χ^2_{prior}	7.7 ± 3.3
$\Omega_m h^3$	0.09616 ± 0.00032	$100\theta_{s,eq}$	0.4535 ± 0.0024	χ^2_{CMB}	11941.3 ± 5.7
σ_8	$0.8017^{+0.0056}_{-0.0070}$	$H(0.15)$	73.30 ± 0.43	χ^2_{BAO}	5.76 ± 0.76
S_8	0.808 ± 0.013	$D_M(0.15)$	637.2 ± 4.2		

$\bar{\chi}^2_{eff} = 11954.75$; $\Delta\bar{\chi}^2_{eff} = -2.51$; $R - 1 = 0.02132$

3.61 base_Alens_CleanedCamSpecHM_TT_lowl_lowE

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02259 ± 0.00029	$\sigma_8/h^{0.5}$	0.956 ± 0.021	$D_M(0.15)$	630 ± 10
$\boldsymbol{\Omega_c h^2}$	0.1165 ± 0.0025	$r_{drag}h$	101.9 ± 2.1	$H(0.38)$	83.85 ± 0.78
$\boldsymbol{100\theta_{MC}}$	1.04139 ± 0.00053	$\langle d^2\rangle^{1/2}$	2.630 ± 0.079	$D_M(0.38)$	1507 ± 20
$\boldsymbol{\tau}$	$0.0500^{+0.0087}_{-0.0077}$	z_{re}	$7.12^{+0.93}_{-0.73}$	$H(0.51)$	90.39 ± 0.63
$\boldsymbol{A_L}$	1.236 ± 0.098	$10^9 A_s$	$2.061^{+0.038}_{-0.034}$	$D_M(0.51)$	1955 ± 24
$\boldsymbol{\ln(10^{10} A_s)}$	$3.025^{+0.019}_{-0.016}$	$10^9 A_s e^{-2\tau}$	1.864 ± 0.015	$H(0.61)$	95.87 ± 0.51
$\boldsymbol{n_s}$	0.9737 ± 0.0073	D_{40}	1208 ± 18	$D_M(0.61)$	2277 ± 26
$\boldsymbol{y_{cal}}$	1.0000 ± 0.0025	D_{220}	5730 ± 42	$H(2.33)$	234.5 ± 1.4
$\boldsymbol{A^{PS}_{100}}$	240 ± 30	D_{810}	2523 ± 14	$D_M(2.33)$	5739 ± 23
$\boldsymbol{A^{tSZ}_{143}}$	4.5 ± 2.1	D_{1420}	812.8 ± 5.2	$f\sigma_8(0.15)$	0.436 ± 0.015
$\boldsymbol{A^{kSZ}}$	< 5.02	D_{2000}	231.7 ± 2.1	$\sigma_8(0.15)$	0.7351 ± 0.0094
$\boldsymbol{A^{dust}_{100}}$	1.01 ± 0.19	$n_{s,0.002}$	0.9737 ± 0.0073	$f\sigma_8(0.38)$	0.458 ± 0.012
$\boldsymbol{A^{power}_{143}}$	$8.0^{+2.1}_{-2.4}$	Y_P	$0.24548^{+0.00011}_{-0.00012}$	$\sigma_8(0.38)$	0.6535 ± 0.0073
$\boldsymbol{A^{power}_{217}}$	$6.6^{+1.3}_{-2.1}$	Y_P^{BBN}	$0.24681^{+0.00011}_{-0.00012}$	$f\sigma_8(0.51)$	0.459 ± 0.011
$\boldsymbol{A^{power}_{143\times217}}$	$2.67^{+0.79}_{-2.5}$	10^5D/H	2.547 ± 0.052	$\sigma_8(0.51)$	0.6124 ± 0.0065
$\boldsymbol{\gamma^{power}_{143}}$	$1.34^{+0.50}_{-0.60}$	Age/Gyr	13.746 ± 0.049	$f\sigma_8(0.61)$	0.4552 ± 0.0096
$\boldsymbol{\gamma^{power}_{217}}$	> 1.29	z_*	1089.35 ± 0.53	$\sigma_8(0.61)$	0.5832 ± 0.0060
$\boldsymbol{\gamma^{power}_{143\times217}}$	$1.42^{+0.82}_{-0.53}$	r_*	145.17 ± 0.53	$f\sigma_8(2.33)$	$0.2947^{+0.0029}_{-0.0026}$
$\boldsymbol{c_{100}}$	0.9979 ± 0.0011	$100\theta_*$	1.04155 ± 0.00051	$\sigma_8(2.33)$	$0.3047^{+0.0029}_{-0.0026}$
$\boldsymbol{c_{217}}$	$0.9992^{+0.0011}_{-0.0015}$	$D_M(z_*)$/Gpc	13.938 ± 0.048	f^{143}_{2000}	19.4 ± 3.3
H_0	68.9 ± 1.2	z_{drag}	1060.19 ± 0.56	f^{217}_{2000}	13.8 ± 2.3
Ω_Λ	$0.705^{+0.016}_{-0.014}$	r_{drag}	147.78 ± 0.51	$f^{143\times217}_{2000}$	7.6 ± 2.4
Ω_m	$0.295^{+0.014}_{-0.016}$	k_D	0.14031 ± 0.00052	χ^2_{simall}	396.8 ± 1.6
$\Omega_m h^2$	0.1398 ± 0.0023	$100\theta_D$	0.16065 ± 0.00030	χ^2_{lowl}	21.8 ± 1.1
$\Omega_m h^3$	0.09633 ± 0.00049	z_{eq}	3325 ± 55	$\chi^2_{CamSpec}$	6713.2 ± 5.2
σ_8	0.794 ± 0.011	k_{eq}	0.01015 ± 0.00017	χ^2_{prior}	5.1 ± 2.8
S_8	0.786 ± 0.030	$100\theta_{eq}$	0.829 ± 0.011	χ^2_{CMB}	7131.9 ± 5.4
$\sigma_8\Omega_m^{0.5}$	0.431 ± 0.016	$100\theta_{s,eq}$	0.4572 ± 0.0056		
$\sigma_8\Omega_m^{0.25}$	0.585 ± 0.015	$H(0.15)$	74.0 ± 1.0		

$\bar{\chi}^2_{eff} = 7136.94$; $\Delta\bar{\chi}^2_{eff} = -5.26$; $R - 1 = 0.00677$

3.62 base_Alens_plikHM_TT

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022622	0.02251 ± 0.00030	σ_8	0.8476	$0.832^{+0.032}_{-0.053}$	$100\theta_{\rm D}$	0.160585	0.16070 ± 0.00031
$\boldsymbol{\Omega_c h^2}$	0.11688	0.1176 ± 0.0027	S_8	0.8418	$0.833^{+0.044}_{-0.053}$	$z_{\rm eq}$	3334	3348 ± 60
$\boldsymbol{100\theta_{MC}}$	1.04136	1.04126 ± 0.00054	$\sigma_8\Omega_{\rm m}^{0.5}$	0.4611	$0.456^{+0.024}_{-0.029}$	$k_{\rm eq}$	0.010174	0.01022 ± 0.00018
$\boldsymbol{\tau}$	0.112	< 0.114	$\sigma_8\Omega_{\rm m}^{0.25}$	0.6251	$0.616^{+0.028}_{-0.037}$	$100\theta_{\rm eq}$	0.8268	0.824 ± 0.012
$\boldsymbol{A_L}$	1.100	$1.13^{+0.13}_{-0.15}$	$\sigma_8/h^{0.5}$	1.022	$1.006^{+0.043}_{-0.061}$	$100\theta_{\rm s,eq}$	0.4563	0.4548 ± 0.0060
$\boldsymbol{\ln(10^{10}A_s)}$	3.152	$3.109^{+0.068}_{-0.14}$	$r_{\rm drag}h$	101.61	101.0 ± 2.2	$H(0.15)$	73.94	73.6 ± 1.1
$\boldsymbol{n_s}$	0.9755	0.9718 ± 0.0082	$\langle d^2\rangle^{1/2}$	2.648	2.629 ± 0.076	$D_{\rm M}(0.15)$	631.0	634 ± 11
$\boldsymbol{A_{217}^{CIB}}$	42.7	45 ± 7	$z_{\rm re}$	12.71	10.5 ± 4.4	$H(0.38)$	83.78	83.54 ± 0.82
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.999	> 0.403	$10^9 A_{\rm s}$	2.339	$2.25^{+0.13}_{-0.31}$	$D_{\rm M}(0.38)$	1508.7	1515 ± 22
$\boldsymbol{A_{143}^{tSZ}}$	6.71	$5.5^{+2.1}_{-1.8}$	$10^9 A_{\rm s}e^{-2\tau}$	1.8686	1.871 ± 0.016	$H(0.51)$	90.34	90.15 ± 0.65
$\boldsymbol{A_{100}^{PS}}$	238.7	252 ± 30	D_{40}	1232.6	1235^{+22}_{-30}	$D_{\rm M}(0.51)$	1956.9	1965 ± 25
$\boldsymbol{A_{143}^{PS}}$	49.6	43 ± 9	D_{220}	5732.7	5733 ± 42	$H(0.61)$	95.84	$95.69^{+0.50}_{-0.56}$
$\boldsymbol{A_{143\times217}^{PS}}$	56.8	41 ± 9	D_{810}	2528.8	2528 ± 14	$D_{\rm M}(0.61)$	2279.1	2287 ± 28
$\boldsymbol{A_{217}^{PS}}$	122.9	115 ± 10	D_{1420}	815.7	814.0 ± 5.1	$H(2.33)$	234.79	235.2 ± 1.6
$\boldsymbol{A^{kSZ}}$	0.00	< 3.48	D_{2000}	232.97	231.9 ± 2.1	$D_{\rm M}(2.33)$	5739.6	5747 ± 23
$\boldsymbol{A_{100}^{dust TT}}$	8.73	8.8 ± 1.8	$n_{\rm s,0.002}$	0.9755	0.9718 ± 0.0082	$f\sigma_8(0.15)$	0.4671	$0.462^{+0.023}_{-0.029}$
$\boldsymbol{A_{143}^{dust TT}}$	10.53	10.5 ± 1.8	$Y_{\rm P}$	0.245488	0.24545 ± 0.00012	$\sigma_8(0.15)$	0.7849	$0.770^{+0.028}_{-0.050}$
$\boldsymbol{A_{143\times217}^{dust TT}}$	19.56	17.9 ± 3.3	$Y_{\rm P}^{\rm BBN}$	0.246814	0.24677 ± 0.00012	$f\sigma_8(0.38)$	0.4900	$0.483^{+0.022}_{-0.029}$
$\boldsymbol{A_{217}^{dust TT}}$	95.5	93.6 ± 7.3	10^5D/H	2.541	2.561 ± 0.054	$\sigma_8(0.38)$	0.6976	$0.684^{+0.024}_{-0.045}$
$\boldsymbol{c_{100}}$	0.99970	0.99963 ± 0.00061	Age/Gyr	13.745	13.762 ± 0.051	$f\sigma_8(0.51)$	0.4905	$0.483^{+0.021}_{-0.029}$
$\boldsymbol{c_{217}}$	0.99816	0.99818 ± 0.00062	z_*	1089.33	1089.54 ± 0.56	$\sigma_8(0.51)$	0.6536	$0.640^{+0.022}_{-0.043}$
$\boldsymbol{y_{cal}}$	0.99987	1.0001 ± 0.0025	r_*	145.05	144.95 ± 0.57	$f\sigma_8(0.61)$	0.4866	$0.479^{+0.020}_{-0.029}$
H_0	68.82	68.5 ± 1.3	$100\theta_*$	1.04152	1.04144 ± 0.00053	$\sigma_8(0.61)$	0.6224	$0.610^{+0.020}_{-0.041}$
Ω_Λ	0.7041	$0.699^{+0.017}_{-0.015}$	$D_{\rm M}(z_*)$/Gpc	13.927	13.919 ± 0.052	$f\sigma_8(2.33)$	0.3145	$0.3078^{+0.0098}_{-0.021}$
$\Omega_{\rm m}$	0.2959	$0.301^{+0.015}_{-0.017}$	$z_{\rm drag}$	1060.28	1060.08 ± 0.56	$\sigma_8(2.33)$	0.3250	$0.3179^{+0.0099}_{-0.022}$
$\Omega_{\rm m}h^2$	0.14014	0.1408 ± 0.0025	$r_{\rm drag}$	147.64	147.58 ± 0.54	$\chi^2_{\rm plik}$	752.3	767.2 ± 5.5
$\Omega_{\rm m}h^3$	0.096447	0.09632 ± 0.00049	$k_{\rm D}$	0.14047	0.14045 ± 0.00054	$\chi^2_{\rm prior}$	0.97	7.0 ± 3.5

Best-fit $\chi^2_{\rm eff} = 753.23$; $\Delta\chi^2_{\rm eff} = -0.49$; $\bar{\chi}^2_{\rm eff} = 774.27$; $\Delta\bar{\chi}^2_{\rm eff} = -0.20$; $R - 1 = 0.00661$
$\chi^2_{\rm eff}$: CMB - plik_rd12_HM_v22_TT: 752.27 (Δ -0.48)

3.63 base_Alens_plikHM_TT_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02252 ± 0.00030	S_8	$0.846^{+0.040}_{-0.048}$	$k_{\rm eq}$	0.01021 ± 0.00019
$\boldsymbol{\Omega_c h^2}$	0.1175 ± 0.0027	$\sigma_8\Omega_{\rm m}^{0.5}$	$0.463^{+0.022}_{-0.026}$	$100\theta_{\rm eq}$	0.825 ± 0.012
$\boldsymbol{100\theta_{MC}}$	1.04128 ± 0.00054	$\sigma_8\Omega_{\rm m}^{0.25}$	$0.626^{+0.024}_{-0.033}$	$100\theta_{\rm s,eq}$	0.4552 ± 0.0061
$\boldsymbol{\tau}$	$0.107^{+0.023}_{-0.060}$	$\sigma_8/h^{0.5}$	$1.022^{+0.037}_{-0.053}$	$H(0.15)$	73.7 ± 1.1
$\boldsymbol{A_L}$	1.09 ± 0.12	$r_{\rm drag}h$	101.1 ± 2.2	$D_{\rm M}(0.15)$	634 ± 11
$\boldsymbol{\ln(10^{10}A_s)}$	$3.143^{+0.052}_{-0.11}$	$\langle d^2\rangle^{1/2}$	2.628 ± 0.077	$H(0.38)$	83.58 ± 0.83
$\boldsymbol{n_s}$	0.9725 ± 0.0082	$z_{\rm re}$	$12.1^{+2.4}_{-4.8}$	$D_{\rm M}(0.38)$	1514 ± 22
$\boldsymbol{A_{217}^{CIB}}$	45 ± 7	$10^9 A_{\rm s}$	$2.33^{+0.11}_{-0.26}$	$H(0.51)$	90.18 ± 0.66
$\boldsymbol{\xi^{tSZ\times CIB}}$	> 0.406	$10^9 A_{\rm s}e^{-2\tau}$	1.870 ± 0.016	$D_{\rm M}(0.51)$	1963 ± 26
$\boldsymbol{A_{143}^{tSZ}}$	$5.6^{+2.1}_{-1.8}$	D_{40}	1241^{+22}_{-29}	$H(0.61)$	$95.71^{+0.50}_{-0.56}$
$\boldsymbol{A_{100}^{PS}}$	252 ± 30	D_{220}	5732 ± 42	$D_{\rm M}(0.61)$	2286 ± 28
$\boldsymbol{A_{143}^{PS}}$	42 ± 9	D_{810}	2528 ± 14	$H(2.33)$	235.1 ± 1.6
$\boldsymbol{A_{143\times217}^{PS}}$	41 ± 9	D_{1420}	814.2 ± 5.1	$D_{\rm M}(2.33)$	5746 ± 23
$\boldsymbol{A_{217}^{PS}}$	114.9 ± 9.9	D_{2000}	232.0 ± 2.1	$f\sigma_8(0.15)$	$0.469^{+0.021}_{-0.026}$
$\boldsymbol{A^{kSZ}}$	< 3.42	$n_{\rm s,0.002}$	0.9725 ± 0.0082	$\sigma_8(0.15)$	$0.783^{+0.023}_{-0.042}$
$\boldsymbol{A_{100}^{dust TT}}$	8.8 ± 1.8	$Y_{\rm P}$	0.24545 ± 0.00012	$f\sigma_8(0.38)$	$0.491^{+0.019}_{-0.026}$
$\boldsymbol{A_{143}^{dust TT}}$	10.4 ± 1.8	$Y_{\rm P}^{\rm BBN}$	0.24678 ± 0.00012	$\sigma_8(0.38)$	$0.695^{+0.019}_{-0.038}$
$\boldsymbol{A_{143\times217}^{dust TT}}$	17.9 ± 3.3	10^5D/H	2.560 ± 0.054	$f\sigma_8(0.51)$	$0.491^{+0.018}_{-0.025}$
$\boldsymbol{A_{217}^{dust TT}}$	93.6 ± 7.3	Age/Gyr	13.760 ± 0.051	$\sigma_8(0.51)$	$0.651^{+0.018}_{-0.036}$
$\boldsymbol{c_{100}}$	0.99963 ± 0.00061	z_*	1089.52 ± 0.56	$f\sigma_8(0.61)$	$0.486^{+0.017}_{-0.025}$
$\boldsymbol{c_{217}}$	0.99818 ± 0.00062	r_*	144.98 ± 0.58	$\sigma_8(0.61)$	$0.620^{+0.016}_{-0.034}$
$\boldsymbol{y_{cal}}$	1.0001 ± 0.0025	$100\theta_*$	1.04145 ± 0.00053	$f\sigma_8(2.33)$	$0.3131^{+0.0079}_{-0.018}$
H_0	68.5 ± 1.3	$D_{\rm M}(z_*)$/Gpc	13.921 ± 0.052	$\sigma_8(2.33)$	$0.3234^{+0.0078}_{-0.019}$
Ω_Λ	$0.700^{+0.017}_{-0.016}$	$z_{\rm drag}$	1060.09 ± 0.56	f_{2000}^{143}	27 ± 3
$\Omega_{\rm m}$	$0.300^{+0.016}_{-0.017}$	$r_{\rm drag}$	147.61 ± 0.55	$f_{2000}^{143\times217}$	30.3 ± 2.5
$\Omega_{\rm m}h^2$	0.1406 ± 0.0025	$k_{\rm D}$	0.14043 ± 0.00054	f_{2000}^{217}	105.3 ± 2.3
$\Omega_{\rm m}h^3$	0.09631 ± 0.00049	$100\theta_{\rm D}$	0.16070 ± 0.00031	$\chi^2_{\rm plik}$	767.3 ± 5.5
σ_8	$0.846^{+0.026}_{-0.044}$	$z_{\rm eq}$	3345 ± 61	$\chi^2_{\rm prior}$	7.0 ± 3.5

$\bar{\chi}^2_{\rm eff} = 774.31$; $R - 1 = 0.00620$

3.64 base_Alens_plikHM_TT_lowl

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022662	0.02261 ± 0.00029	S_8	0.7570	$0.792^{+0.033}_{-0.039}$	$k_{\rm eq}$	0.010159	0.01014 ± 0.00017
$\boldsymbol{\Omega_c h^2}$	0.11662	0.1165 ± 0.0025	$\sigma_8\Omega_{\rm m}^{0.5}$	0.4146	$0.434^{+0.018}_{-0.021}$	$100\theta_{\rm eq}$	0.8279	0.829 ± 0.011
$\boldsymbol{100\theta_{MC}}$	1.04140	1.04139 ± 0.00053	$\sigma_8\Omega_{\rm m}^{0.25}$	0.5629	$0.589^{+0.019}_{-0.026}$	$100\theta_{\rm s,eq}$	0.4568	0.4573 ± 0.0057
$\boldsymbol{\tau}$	0.0102	< 0.0705	$\sigma_8/h^{0.5}$	0.9204	$0.964^{+0.028}_{-0.041}$	$H(0.15)$	74.06	74.1 ± 1.1
$\boldsymbol{A_L}$	1.360	1.23 ± 0.12	$r_{\rm drag}h$	101.83	101.9 ± 2.1	$D_{\rm M}(0.15)$	629.9	630 ± 10
$\boldsymbol{\ln(10^{10}A_s)}$	2.948	$3.042^{+0.036}_{-0.090}$	$\langle d^2\rangle^{1/2}$	2.654	2.639 ± 0.076	$H(0.38)$	83.87	83.88 ± 0.79
$\boldsymbol{n_s}$	0.9753	0.9748 ± 0.0074	$z_{\rm re}$	2.12	$7.5^{+2.1}_{-4.8}$	$D_{\rm M}(0.38)$	1506.4	1506 ± 20
$\boldsymbol{y_{cal}}$	0.99995	1.0001 ± 0.0025	$10^9 A_{\rm s}$	1.907	$2.099^{+0.068}_{-0.19}$	$H(0.51)$	90.42	90.42 ± 0.64
$\boldsymbol{A^{CIB}_{217}}$	42.8	45 ± 7	$10^9 A_{\rm s}e^{-2\tau}$	1.8686	1.866 ± 0.015	$D_{\rm M}(0.51)$	1954.1	1954 ± 24
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.935	> 0.424	D_{40}	1200.3	1212^{+17}_{-20}	$H(0.61)$	95.91	95.90 ± 0.52
$\boldsymbol{A^{tSZ}_{143}}$	6.79	$5.6^{+2.1}_{-1.8}$	D_{220}	5739.2	5736 ± 42	$D_{\rm M}(0.61)$	2276.1	2276 ± 26
$\boldsymbol{A^{PS}_{100}}$	239.1	249 ± 30	D_{810}	2529.2	2527 ± 14	$H(2.33)$	234.67	234.5 ± 1.4
$\boldsymbol{A^{PS}_{143}}$	48.4	41 ± 9	D_{1420}	815.8	814.5 ± 5.0	$D_{\rm M}(2.33)$	5736.7	5738 ± 23
$\boldsymbol{A^{PS}_{143\times217}}$	55.5	41 ± 9	D_{2000}	232.96	232.4 ± 2.1	$f\sigma_8(0.15)$	0.4202	$0.440^{+0.017}_{-0.021}$
$\boldsymbol{A^{PS}_{217}}$	123.0	114.8 ± 9.9	$n_{\rm s,0.002}$	0.9753	0.9748 ± 0.0074	$\sigma_8(0.15)$	0.7079	$0.741^{+0.016}_{-0.032}$
$\boldsymbol{A^{kSZ}}$	0.00	< 3.27	$Y_{\rm P}$	0.245502	$0.24549^{+0.00010}_{-0.00012}$	$f\sigma_8(0.38)$	0.4411	$0.462^{+0.016}_{-0.020}$
$\boldsymbol{A^{dustTT}_{100}}$	8.88	9.0 ± 1.8	$Y_{\rm P}^{\rm BBN}$	0.246829	$0.24682^{+0.00011}_{-0.00012}$	$\sigma_8(0.38)$	0.6293	$0.659^{+0.013}_{-0.029}$
$\boldsymbol{A^{dustTT}_{143}}$	10.64	10.5 ± 1.8	10^5D/H	2.534	2.543 ± 0.053	$f\sigma_8(0.51)$	0.4417	$0.462^{+0.014}_{-0.020}$
$\boldsymbol{A^{dustTT}_{143\times217}}$	19.47	17.9 ± 3.3	Age/Gyr	13.7392	13.743 ± 0.050	$\sigma_8(0.51)$	0.5897	$0.618^{+0.012}_{-0.027}$
$\boldsymbol{A^{dustTT}_{217}}$	95.5	93.6 ± 7.3	z_*	1089.26	1089.32 ± 0.54	$f\sigma_8(0.61)$	0.4384	$0.459^{+0.013}_{-0.020}$
$\boldsymbol{c_{100}}$	0.99968	0.99961 ± 0.00061	r_*	145.09	145.17 ± 0.53	$\sigma_8(0.61)$	0.5616	$0.588^{+0.011}_{-0.026}$
$\boldsymbol{c_{217}}$	0.99815	0.99818 ± 0.00062	$100\theta_*$	1.04155	1.04156 ± 0.00051	$f\sigma_8(2.33)$	0.2838	$0.2974^{+0.0052}_{-0.013}$
H_0	68.96	69.0 ± 1.2	$D_{\rm M}(z_*)$/Gpc	13.9299	13.938 ± 0.048	$\sigma_8(2.33)$	0.2934	$0.3074^{+0.0052}_{-0.014}$
Ω_Λ	0.7057	$0.706^{+0.016}_{-0.014}$	$z_{\rm drag}$	1060.35	1060.24 ± 0.56	$\chi^2_{\rm lowl}$	20.98	22.2 ± 1.5
$\Omega_{\rm m}$	0.2943	0.294 ± 0.015	$r_{\rm drag}$	147.67	147.77 ± 0.51	$\chi^2_{\rm plik}$	753.0	767.1 ± 5.4
$\Omega_{\rm m}h^2$	0.13993	0.1397 ± 0.0023	$k_{\rm D}$	0.14048	0.14033 ± 0.00051	$\chi^2_{\rm prior}$	1.06	7.1 ± 3.6
$\Omega_{\rm m}h^3$	0.096491	0.09637 ± 0.00050	$100\theta_{\rm D}$	0.160544	0.16062 ± 0.00030	$\chi^2_{\rm CMB}$	773.9	789.3 ± 5.5
σ_8	0.7643	$0.800^{+0.018}_{-0.034}$	$z_{\rm eq}$	3328	3324 ± 56			

Best-fit $\chi^2_{\rm eff} = 775.00$; $\Delta\chi^2_{\rm eff} = -4.48$; $\bar{\chi}^2_{\rm eff} = 796.44$; $\Delta\bar{\chi}^2_{\rm eff} = -3.76$; $R - 1 = 0.00820$
$\chi^2_{\rm eff}$: CMB - commander_dx12_v3_2_29: 20.98 (Δ -3.91) plik_rd12_HM_v22_TT: 752.97 (Δ -0.57)

3.65 base_Alens_plikHM_TT_lowl_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02263 ± 0.00029	$\sigma_8\Omega_m^{0.5}$	$0.442^{+0.017}_{-0.020}$	$100\theta_{s,eq}$	0.4580 ± 0.0057
$\boldsymbol{\Omega_c h^2}$	0.1162 ± 0.0025	$\sigma_8\Omega_m^{0.25}$	$0.601^{+0.017}_{-0.022}$	$H(0.15)$	74.2 ± 1.1
$\boldsymbol{100\theta_{MC}}$	1.04143 ± 0.00053	$\sigma_8/h^{0.5}$	$0.984^{+0.025}_{-0.034}$	$D_M(0.15)$	629 ± 10
$\boldsymbol{\tau}$	$0.080^{+0.012}_{-0.036}$	$r_{drag}h$	102.2 ± 2.1	$H(0.38)$	83.97 ± 0.79
$\boldsymbol{A_L}$	1.18 ± 0.10	$\langle d^2\rangle^{1/2}$	2.640 ± 0.077	$D_M(0.38)$	1504 ± 20
$\boldsymbol{\ln(10^{10}A_s)}$	$3.087^{+0.027}_{-0.069}$	z_{re}	< 10.8	$H(0.51)$	90.49 ± 0.64
$\boldsymbol{n_s}$	0.9760 ± 0.0074	$10^9 A_s$	$2.193^{+0.054}_{-0.15}$	$D_M(0.51)$	1951 ± 24
$\boldsymbol{y_{cal}}$	1.0001 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.865 ± 0.015	$H(0.61)$	$95.95^{+0.49}_{-0.55}$
$\boldsymbol{A^{CIB}_{217}}$	45 ± 7	D_{40}	1217^{+18}_{-20}	$D_M(0.61)$	2273 ± 26
$\boldsymbol{\xi^{tSZ\times CIB}}$	> 0.427	D_{220}	5735 ± 42	$H(2.33)$	234.3 ± 1.4
$\boldsymbol{A^{tSZ}_{143}}$	$5.7^{+2.1}_{-1.8}$	D_{810}	2526 ± 14	$D_M(2.33)$	5736 ± 23
$\boldsymbol{A^{PS}_{100}}$	248 ± 30	D_{1420}	814.7 ± 5.0	$f\sigma_8(0.15)$	$0.448^{+0.016}_{-0.019}$
$\boldsymbol{A^{PS}_{143}}$	41 ± 9	D_{2000}	232.6 ± 2.1	$\sigma_8(0.15)$	$0.758^{+0.013}_{-0.026}$
$\boldsymbol{A^{PS}_{143\times217}}$	41 ± 9	$n_{s,0.002}$	0.9760 ± 0.0074	$f\sigma_8(0.38)$	$0.471^{+0.014}_{-0.017}$
$\boldsymbol{A^{PS}_{217}}$	114.7 ± 9.8	Y_P	$0.24550^{+0.00011}_{-0.00012}$	$\sigma_8(0.38)$	$0.674^{+0.011}_{-0.023}$
$\boldsymbol{A^{kSZ}}$	< 3.16	Y_P^{BBN}	$0.24682^{+0.00011}_{-0.00012}$	$f\sigma_8(0.51)$	$0.472^{+0.013}_{-0.017}$
$\boldsymbol{A^{dustTT}_{100}}$	8.9 ± 1.8	10^5D/H	2.539 ± 0.053	$\sigma_8(0.51)$	$0.6315^{+0.0095}_{-0.022}$
$\boldsymbol{A^{dustTT}_{143}}$	10.4 ± 1.8	Age/Gyr	13.738 ± 0.050	$f\sigma_8(0.61)$	$0.468^{+0.012}_{-0.016}$
$\boldsymbol{A^{dustTT}_{143\times217}}$	17.9 ± 3.3	z_*	1089.26 ± 0.53	$\sigma_8(0.61)$	$0.6015^{+0.0088}_{-0.021}$
$\boldsymbol{A^{dustTT}_{217}}$	93.7 ± 7.3	r_*	145.23 ± 0.53	$f\sigma_8(2.33)$	$0.3041^{+0.0041}_{-0.010}$
$\boldsymbol{c_{100}}$	0.99961 ± 0.00062	$100\theta_*$	1.04159 ± 0.00051	$\sigma_8(2.33)$	$0.3145^{+0.0040}_{-0.011}$
$\boldsymbol{c_{217}}$	0.99818 ± 0.00062	$D_M(z_*)$/Gpc	13.943 ± 0.048	f^{143}_{2000}	26 ± 3
H_0	69.1 ± 1.2	z_{drag}	1060.26 ± 0.56	$f^{143\times217}_{2000}$	29.6 ± 2.5
Ω_Λ	$0.708^{+0.016}_{-0.014}$	r_{drag}	147.83 ± 0.51	f^{217}_{2000}	104.7 ± 2.2
Ω_m	0.292 ± 0.015	k_D	0.14028 ± 0.00052	χ^2_{lowl}	22.6 ± 1.6
$\Omega_m h^2$	0.1394 ± 0.0023	$100\theta_D$	0.16061 ± 0.00030	χ^2_{plik}	767.1 ± 5.5
$\Omega_m h^3$	0.09636 ± 0.00050	z_{eq}	3317 ± 56	χ^2_{prior}	7.2 ± 3.6
σ_8	$0.818^{+0.016}_{-0.028}$	k_{eq}	0.01012 ± 0.00017	χ^2_{CMB}	789.8 ± 5.6
S_8	$0.807^{+0.031}_{-0.036}$	$100\theta_{eq}$	0.830 ± 0.011		

$\bar{\chi}^2_{eff} = 796.93$; $\Delta\bar{\chi}^2_{eff} = -3.15$; $R - 1 = 0.00997$

3.66 base_Alens_plikHM_TT_lowE

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02249 ± 0.00030	$\sigma_8\Omega_m^{0.5}$	0.440 ± 0.018	$100\theta_{s,eq}$	0.4539 ± 0.0060
$\boldsymbol{\Omega_c h^2}$	0.1180 ± 0.0027	$\sigma_8\Omega_m^{0.25}$	0.593 ± 0.016	$H(0.15)$	73.5 ± 1.1
$\boldsymbol{100\theta_{MC}}$	1.04120 ± 0.00055	$\sigma_8/h^{0.5}$	0.968 ± 0.022	$D_M(0.15)$	636 ± 11
$\boldsymbol{\tau}$	$0.0499^{+0.0085}_{-0.0076}$	$r_{drag}h$	100.7 ± 2.2	$H(0.38)$	83.44 ± 0.82
$\boldsymbol{A_L}$	1.205 ± 0.099	$\langle d^2\rangle^{1/2}$	2.629 ± 0.079	$D_M(0.38)$	1518 ± 22
$\boldsymbol{\ln(10^{10}A_s)}$	$3.030^{+0.018}_{-0.016}$	z_{re}	$7.15^{+0.91}_{-0.73}$	$H(0.51)$	90.07 ± 0.66
$\boldsymbol{n_s}$	0.9697 ± 0.0079	$10^9 A_s$	$2.071^{+0.037}_{-0.034}$	$D_M(0.51)$	1968 ± 26
$\boldsymbol{y_{cal}}$	1.0000 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.874 ± 0.016	$H(0.61)$	$95.62^{+0.50}_{-0.55}$
$\boldsymbol{A^{CIB}_{217}}$	46 ± 7	D_{40}	1219 ± 19	$D_M(0.61)$	2291 ± 28
$\boldsymbol{\xi^{tSZ\times CIB}}$	> 0.398	D_{220}	5738 ± 42	$H(2.33)$	235.4 ± 1.6
$\boldsymbol{A^{tSZ}_{143}}$	$5.4^{+2.1}_{-1.9}$	D_{810}	2529 ± 14	$D_M(2.33)$	5750 ± 24
$\boldsymbol{A^{PS}_{100}}$	254 ± 30	D_{1420}	813.5 ± 5.1	$f\sigma_8(0.15)$	0.445 ± 0.017
$\boldsymbol{A^{PS}_{143}}$	44 ± 9	D_{2000}	231.5 ± 2.1	$\sigma_8(0.15)$	0.7398 ± 0.0096
$\boldsymbol{A^{PS}_{143\times217}}$	41 ± 9	$n_{s,0.002}$	0.9697 ± 0.0079	$f\sigma_8(0.38)$	0.465 ± 0.013
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	Y_P	0.24544 ± 0.00012	$\sigma_8(0.38)$	0.6567 ± 0.0073
$\boldsymbol{A^{kSZ}}$	< 3.69	Y_P^{BBN}	0.24677 ± 0.00012	$f\sigma_8(0.51)$	0.465 ± 0.011
$\boldsymbol{A^{dustTT}_{100}}$	8.9 ± 1.8	10^5D/H	2.564 ± 0.055	$\sigma_8(0.51)$	0.6149 ± 0.0065
$\boldsymbol{A^{dustTT}_{143}}$	10.5 ± 1.8	Age/Gyr	13.768 ± 0.052	$f\sigma_8(0.61)$	0.461 ± 0.010
$\boldsymbol{A^{dustTT}_{143\times217}}$	17.9 ± 3.3	z_*	1089.60 ± 0.57	$\sigma_8(0.61)$	0.5854 ± 0.0059
$\boldsymbol{A^{dustTT}_{217}}$	93.4 ± 7.3	r_*	144.86 ± 0.57	$f\sigma_8(2.33)$	0.2955 ± 0.0028
$\boldsymbol{c_{100}}$	0.99964 ± 0.00061	$100\theta_*$	1.04137 ± 0.00053	$\sigma_8(2.33)$	0.3050 ± 0.0028
$\boldsymbol{c_{217}}$	0.99818 ± 0.00062	$D_M(z_*)$/Gpc	13.911 ± 0.052	f^{143}_{2000}	28 ± 3
H_0	68.3 ± 1.3	z_{drag}	1060.07 ± 0.57	$f^{143\times217}_{2000}$	30.8 ± 2.5
Ω_Λ	$0.697^{+0.018}_{-0.016}$	r_{drag}	147.49 ± 0.54	f^{217}_{2000}	105.7 ± 2.3
Ω_m	$0.303^{+0.016}_{-0.018}$	k_D	0.14053 ± 0.00054	χ^2_{simall}	396.8 ± 1.6
$\Omega_m h^2$	0.1411 ± 0.0025	$100\theta_D$	0.16071 ± 0.00031	χ^2_{plik}	767.3 ± 5.5
$\Omega_m h^3$	0.09632 ± 0.00050	z_{eq}	3357 ± 60	χ^2_{prior}	7.0 ± 3.5
σ_8	0.800 ± 0.012	k_{eq}	0.01025 ± 0.00018	χ^2_{CMB}	1164.1 ± 5.8
S_8	0.804 ± 0.032	$100\theta_{eq}$	0.822 ± 0.012		

$\bar{\chi}^2_{eff} = 1171.08$; $\Delta\bar{\chi}^2_{eff} = -4.29$; $R - 1 = 0.00738$

3.67 base_Alens_plikHM_TTTEEE

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022605	0.02256 ± 0.00018	Ω_Λ	0.6966	0.6946 ± 0.0096	$r_{\rm drag}$	147.318	147.30 ± 0.32
$\boldsymbol{\Omega_c h^2}$	0.11816	0.1184 ± 0.0016	$\Omega_{\rm m}$	0.3034	0.3054 ± 0.0096	$k_{\rm D}$	0.140803	0.14079 ± 0.00033
$\boldsymbol{100\theta_{MC}}$	1.041128	1.04110 ± 0.00033	$\Omega_{\rm m} h^2$	0.14141	0.1416 ± 0.0015	$100\theta_{\rm D}$	0.160530	0.16058 ± 0.00019
$\boldsymbol{\tau}$	0.108	$0.088^{+0.031}_{-0.069}$	$\Omega_{\rm m} h^3$	0.096539	0.09649 ± 0.00031	$z_{\rm eq}$	3363.8	3369 ± 35
$\boldsymbol{A_L}$	1.056	1.09 ± 0.12	σ_8	0.8489	$0.833^{+0.029}_{-0.052}$	$k_{\rm eq}$	0.010267	0.01028 ± 0.00011
$\boldsymbol{\ln(10^{10} A_s)}$	3.147	$3.107^{+0.067}_{-0.13}$	S_8	0.8537	$0.840^{+0.037}_{-0.049}$	$100\theta_{\rm eq}$	0.8210	0.8199 ± 0.0068
$\boldsymbol{n_s}$	0.9723	0.9699 ± 0.0052	$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4676	$0.460^{+0.021}_{-0.027}$	$100\theta_{\rm s,eq}$	0.45325	0.4527 ± 0.0035
$\boldsymbol{A_{217}^{CIB}}$	42.2	45 ± 7	$\sigma_8 \Omega_{\rm m}^{0.25}$	0.6300	$0.619^{+0.025}_{-0.036}$	$H(0.15)$	73.47	73.35 ± 0.62
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.997	> 0.424	$\sigma_8/h^{0.5}$	1.0274	$1.009^{+0.039}_{-0.060}$	$D_{\rm M}(0.15)$	635.6	636.9 ± 6.1
$\boldsymbol{A_{143}^{tSZ}}$	6.93	$5.7^{+2.1}_{-1.8}$	$r_{\rm drag} h$	100.57	100.3 ± 1.2	$H(0.38)$	83.452	83.36 ± 0.46
$\boldsymbol{A_{100}^{PS}}$	237.8	251 ± 30	$\langle d^2 \rangle^{1/2}$	2.609	2.597 ± 0.059	$D_{\rm M}(0.38)$	1517.8	1520 ± 12
$\boldsymbol{A_{143}^{PS}}$	49.3	42 ± 8	$z_{\rm re}$	12.40	$10.3^{+4.9}_{-4.1}$	$H(0.51)$	90.095	90.02 ± 0.36
$\boldsymbol{A_{143\times217}^{PS}}$	57.2	41 ± 9	$10^9 A_{\rm s}$	2.327	$2.24^{+0.13}_{-0.30}$	$D_{\rm M}(0.51)$	1967.5	1970 ± 14
$\boldsymbol{A_{217}^{PS}}$	124.0	115.7 ± 9.9	$10^9 A_{\rm s} e^{-2\tau}$	1.8747	1.875 ± 0.012	$H(0.61)$	95.658	95.60 ± 0.29
$\boldsymbol{A^{kSZ}}$	0.00	< 3.25	D_{40}	1238.2	1238^{+18}_{-29}	$D_{\rm M}(0.61)$	2290.5	2294 ± 16
$\boldsymbol{A_{100}^{dust TT}}$	8.60	8.7 ± 1.8	D_{220}	5735.7	5738 ± 39	$H(2.33)$	235.60	235.74 ± 0.92
$\boldsymbol{A_{143}^{dust TT}}$	10.62	10.5 ± 1.8	D_{810}	2532.6	2531 ± 14	$D_{\rm M}(2.33)$	5746.5	5749 ± 13
$\boldsymbol{A_{143\times217}^{dust TT}}$	19.84	18.1 ± 3.3	D_{1420}	816.70	815.2 ± 4.7	$f\sigma_8(0.15)$	0.4731	$0.466^{+0.020}_{-0.027}$
$\boldsymbol{A_{217}^{dust TT}}$	95.8	93.7 ± 7.3	D_{2000}	232.82	232.0 ± 1.6	$\sigma_8(0.15)$	0.7853	$0.770^{+0.026}_{-0.049}$
$\boldsymbol{A_{100}^{dust TE}}$	0.1113	0.113 ± 0.038	$n_{\rm s,0.002}$	0.9723	0.9699 ± 0.0052	$f\sigma_8(0.38)$	0.4942	$0.486^{+0.020}_{-0.028}$
$\boldsymbol{A_{100\times143}^{dust TE}}$	0.1339	0.134 ± 0.029	$Y_{\rm P}$	0.245482	0.245465 ± 0.000067	$\sigma_8(0.38)$	0.6970	$0.684^{+0.022}_{-0.044}$
$\boldsymbol{A_{100\times217}^{dust TE}}$	0.482	0.480 ± 0.085	$Y_{\rm P}^{\rm BBN}$	0.246808	0.246792 ± 0.000067	$f\sigma_8(0.51)$	0.4937	$0.485^{+0.019}_{-0.029}$
$\boldsymbol{A_{143}^{dust TE}}$	0.223	0.222 ± 0.054	10^5D/H	2.5436	2.552 ± 0.032	$\sigma_8(0.51)$	0.6527	$0.640^{+0.021}_{-0.042}$
$\boldsymbol{A_{143\times217}^{dust TE}}$	0.660	0.660 ± 0.081	Age/Gyr	13.7596	13.766 ± 0.029	$f\sigma_8(0.61)$	0.4892	$0.481^{+0.018}_{-0.029}$
$\boldsymbol{A_{217}^{dust TE}}$	2.056	2.06 ± 0.27	z_*	1089.467	1089.55 ± 0.33	$\sigma_8(0.61)$	0.6213	$0.609^{+0.019}_{-0.040}$
$\boldsymbol{c_{100}}$	0.99977	0.99969 ± 0.00061	r_*	144.729	144.69 ± 0.33	$f\sigma_8(2.33)$	0.3136	$0.3075^{+0.0095}_{-0.020}$
$\boldsymbol{c_{217}}$	0.99813	0.99814 ± 0.00062	$100\theta_*$	1.041295	1.04127 ± 0.00032	$\sigma_8(2.33)$	0.3237	$0.3173^{+0.0096}_{-0.021}$
$\boldsymbol{y_{cal}}$	0.99985	0.9999 ± 0.0025	$D_{\rm M}(z_*)$/Gpc	13.8989	13.896 ± 0.031	$\chi^2_{\rm plik}$	2336.5	2354.1 ± 5.9
H_0	68.27	68.13 ± 0.73	$z_{\rm drag}$	1060.352	1060.26 ± 0.34	$\chi^2_{\rm prior}$	1.37	11.3 ± 4.4

Best-fit $\chi^2_{\rm eff} = 2337.89$; $\Delta\chi^2_{\rm eff} = -0.47$; $\bar{\chi}^2_{\rm eff} = 2365.39$; $\Delta\bar{\chi}^2_{\rm eff} = 0.26$; $R - 1 = 0.00672$
$\chi^2_{\rm eff}$: CMB - plik_rd12_HM_v22b_TTTEEE: 2336.52 (Δ -0.53)

3.68 base_Alens_plikHM_TTTEEE_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02256 ± 0.00018	Ω_m	0.3051 ± 0.0096	$100\theta_D$	0.16058 ± 0.00019
$\boldsymbol{\Omega_c h^2}$	0.1184 ± 0.0016	$\Omega_m h^2$	0.1416 ± 0.0015	z_{eq}	3368 ± 35
$\boldsymbol{100\theta_{MC}}$	1.04111 ± 0.00033	$\Omega_m h^3$	0.09648 ± 0.00031	k_{eq}	0.01028 ± 0.00011
$\boldsymbol{\tau}$	$0.104^{+0.021}_{-0.057}$	σ_8	$0.846^{+0.022}_{-0.044}$	$100\theta_{eq}$	0.8201 ± 0.0068
$\boldsymbol{A_L}$	1.054 ± 0.098	S_8	$0.853^{+0.031}_{-0.042}$	$100\theta_{s,eq}$	0.4528 ± 0.0035
$\boldsymbol{\ln(10^{10} A_s)}$	$3.139^{+0.047}_{-0.11}$	$\sigma_8\Omega_m^{0.5}$	$0.467^{+0.017}_{-0.023}$	$H(0.15)$	73.36 ± 0.63
$\boldsymbol{n_s}$	0.9703 ± 0.0053	$\sigma_8\Omega_m^{0.25}$	$0.629^{+0.020}_{-0.031}$	$D_M(0.15)$	636.7 ± 6.1
$\boldsymbol{A_{217}^{CIB}}$	45 ± 7	$\sigma_8/h^{0.5}$	$1.025^{+0.031}_{-0.051}$	$H(0.38)$	83.37 ± 0.46
$\boldsymbol{\xi^{tSZ\times CIB}}$	> 0.430	$r_{drag}h$	100.4 ± 1.3	$D_M(0.38)$	1520 ± 12
$\boldsymbol{A_{143}^{tSZ}}$	$5.7^{+2.0}_{-1.8}$	$\langle d^2\rangle^{1/2}$	2.596 ± 0.060	$H(0.51)$	90.03 ± 0.37
$\boldsymbol{A_{100}^{PS}}$	250 ± 30	z_{re}	$11.9^{+2.5}_{-4.3}$	$D_M(0.51)$	1970 ± 14
$\boldsymbol{A_{143}^{PS}}$	42 ± 8	$10^9 A_s$	$2.314^{+0.097}_{-0.25}$	$H(0.61)$	95.60 ± 0.30
$\boldsymbol{A_{143\times217}^{PS}}$	41 ± 9	$10^9 A_s e^{-2\tau}$	1.875 ± 0.012	$D_M(0.61)$	2293 ± 16
$\boldsymbol{A_{217}^{PS}}$	115.8 ± 9.9	D_{40}	1244^{+18}_{-27}	$H(2.33)$	235.71 ± 0.92
$\boldsymbol{A^{kSZ}}$	< 3.22	D_{220}	5737 ± 40	$D_M(2.33)$	5749 ± 13
$\boldsymbol{A_{100}^{dust TT}}$	8.7 ± 1.8	D_{810}	2531 ± 14	$f\sigma_8(0.15)$	$0.473^{+0.017}_{-0.023}$
$\boldsymbol{A_{143}^{dust TT}}$	10.5 ± 1.8	D_{1420}	815.3 ± 4.8	$\sigma_8(0.15)$	$0.783^{+0.020}_{-0.041}$
$\boldsymbol{A_{143\times217}^{dust TT}}$	18.1 ± 3.3	D_{2000}	232.1 ± 1.6	$f\sigma_8(0.38)$	$0.493^{+0.016}_{-0.024}$
$\boldsymbol{A_{217}^{dust TT}}$	93.6 ± 7.3	$n_{s,0.002}$	0.9703 ± 0.0053	$\sigma_8(0.38)$	$0.695^{+0.017}_{-0.037}$
$\boldsymbol{A_{100}^{dust TE}}$	0.113 ± 0.038	Y_P	0.245465 ± 0.000067	$f\sigma_8(0.51)$	$0.493^{+0.015}_{-0.024}$
$\boldsymbol{A_{100\times143}^{dust TE}}$	0.134 ± 0.030	Y_P^{BBN}	0.246792 ± 0.000067	$\sigma_8(0.51)$	$0.650^{+0.015}_{-0.035}$
$\boldsymbol{A_{100\times217}^{dust TE}}$	0.481 ± 0.085	10^5D/H	2.552 ± 0.032	$f\sigma_8(0.61)$	$0.488^{+0.015}_{-0.024}$
$\boldsymbol{A_{143}^{dust TE}}$	0.221 ± 0.054	Age/Gyr	13.766 ± 0.029	$\sigma_8(0.61)$	$0.619^{+0.014}_{-0.033}$
$\boldsymbol{A_{143\times217}^{dust TE}}$	0.660 ± 0.081	z_*	1089.55 ± 0.33	$f\sigma_8(2.33)$	$0.3124^{+0.0071}_{-0.017}$
$\boldsymbol{A_{217}^{dust TE}}$	2.06 ± 0.27	r_*	144.70 ± 0.34	$\sigma_8(2.33)$	$0.3223^{+0.0072}_{-0.018}$
$\boldsymbol{c_{100}}$	0.99969 ± 0.00061	$100\theta_*$	1.04127 ± 0.00032	f_{2000}^{143}	26.8 ± 2.9
$\boldsymbol{c_{217}}$	0.99814 ± 0.00062	$D_M(z_*)$/Gpc	13.897 ± 0.031	$f_{2000}^{143\times217}$	30.0 ± 2.0
$\boldsymbol{y_{cal}}$	0.9999 ± 0.0025	z_{drag}	1060.25 ± 0.34	f_{2000}^{217}	105.1 ± 1.9
H_0	68.14 ± 0.73	r_{drag}	147.31 ± 0.32	χ^2_{plik}	2354.1 ± 5.9
Ω_Λ	0.6949 ± 0.0096	k_D	0.14078 ± 0.00033	χ^2_{prior}	11.3 ± 4.4

$\bar{\chi}^2_{eff} = 2365.44$; $R - 1 = 0.00596$

3.69 base_Alens_plikHM_TTTEEE_lowl

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022624	0.02260 ± 0.00017	Ω_m	0.3028	0.3026 ± 0.0092	$100\theta_D$	0.160509	0.16055 ± 0.00019
$\boldsymbol{\Omega_c h^2}$	0.11807	0.1180 ± 0.0015	$\Omega_m h^2$	0.14134	0.1412 ± 0.0014	z_{eq}	3362.1	3359 ± 34
$\boldsymbol{100\theta_{MC}}$	1.041141	1.04114 ± 0.00033	$\Omega_m h^3$	0.096564	0.09649 ± 0.00031	k_{eq}	0.010261	0.01025 ± 0.00010
$\boldsymbol{\tau}$	0.0101	< 0.0673	σ_8	0.7693	$0.804^{+0.015}_{-0.034}$	$100\theta_{eq}$	0.8214	0.8219 ± 0.0066
$\boldsymbol{A_L}$	1.289	$1.17^{+0.10}_{-0.092}$	S_8	0.7728	$0.807^{+0.025}_{-0.035}$	$100\theta_{s,eq}$	0.45344	0.4537 ± 0.0034
$\boldsymbol{\ln(10^{10} A_s)}$	2.951	$3.040^{+0.034}_{-0.085}$	$\sigma_8\Omega_m^{0.5}$	0.4233	$0.442^{+0.014}_{-0.019}$	$H(0.15)$	73.52	73.52 ± 0.61
$\boldsymbol{n_s}$	0.97180	0.9713 ± 0.0050	$\sigma_8\Omega_m^{0.25}$	0.5706	$0.596^{+0.015}_{-0.025}$	$D_M(0.15)$	635.1	635.1 ± 5.9
$\boldsymbol{y_{cal}}$	0.99982	0.99999 ± 0.0025	$\sigma_8/h^{0.5}$	0.9307	$0.973^{+0.022}_{-0.040}$	$H(0.38)$	83.489	83.49 ± 0.45
$\boldsymbol{A_{217}^{CIB}}$	42.4	45 ± 7	$r_{drag} h$	100.65	100.7 ± 1.2	$D_M(0.38)$	1516.9	1517 ± 12
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.998	> 0.435	$\langle d^2 \rangle^{1/2}$	2.612	2.602 ± 0.059	$H(0.51)$	90.126	90.12 ± 0.36
$\boldsymbol{A_{143}^{tSZ}}$	6.87	$5.8^{+2.0}_{-1.8}$	z_{re}	2.10	$7.3^{+2.1}_{-4.6}$	$D_M(0.51)$	1966.4	1966 ± 14
$\boldsymbol{A_{100}^{PS}}$	238.6	249 ± 30	$10^9 A_s$	1.913	$2.094^{+0.065}_{-0.18}$	$H(0.61)$	95.684	95.68 ± 0.29
$\boldsymbol{A_{143}^{PS}}$	49.5	42 ± 8	$10^9 A_s e^{-2\tau}$	1.8749	1.873 ± 0.012	$D_M(0.61)$	2289.2	2289 ± 15
$\boldsymbol{A_{143\times217}^{PS}}$	57.5	42 ± 9	D_{40}	1208.3	1220^{+15}_{-17}	$H(2.33)$	235.56	235.48 ± 0.90
$\boldsymbol{A_{217}^{PS}}$	124.2	116.0 ± 9.8	D_{220}	5738.8	5737 ± 39	$D_M(2.33)$	5745.3	5746 ± 13
$\boldsymbol{A^{kSZ}}$	0.00	< 3.05	D_{810}	2532.6	2531 ± 14	$f\sigma_8(0.15)$	0.4283	$0.448^{+0.013}_{-0.019}$
$\boldsymbol{A_{100}^{dustTT}}$	8.83	8.8 ± 1.8	D_{1420}	816.52	815.5 ± 4.7	$\sigma_8(0.15)$	0.7117	$0.744^{+0.014}_{-0.031}$
$\boldsymbol{A_{143}^{dustTT}}$	10.73	10.6 ± 1.8	D_{2000}	232.68	232.3 ± 1.6	$f\sigma_8(0.38)$	0.4476	$0.468^{+0.012}_{-0.020}$
$\boldsymbol{A_{143\times217}^{dustTT}}$	19.74	18.1 ± 3.3	$n_{s,0.002}$	0.97180	0.9713 ± 0.0050	$\sigma_8(0.38)$	0.6318	$0.660^{+0.012}_{-0.028}$
$\boldsymbol{A_{217}^{dustTT}}$	95.6	93.6 ± 7.3	Y_P	0.245488	0.245480 ± 0.000066	$f\sigma_8(0.51)$	0.4472	$0.467^{+0.011}_{-0.019}$
$\boldsymbol{A_{100}^{dustTE}}$	0.1127	0.114 ± 0.038	Y_P^{BBN}	0.246815	0.246807 ± 0.000066	$\sigma_8(0.51)$	0.5916	$0.618^{+0.011}_{-0.026}$
$\boldsymbol{A_{100\times143}^{dustTE}}$	0.1344	0.134 ± 0.030	10^5D/H	2.5403	2.545 ± 0.031	$f\sigma_8(0.61)$	0.4432	$0.463^{+0.010}_{-0.019}$
$\boldsymbol{A_{100\times217}^{dustTE}}$	0.482	0.480 ± 0.084	Age/Gyr	13.7569	13.759 ± 0.028	$\sigma_8(0.61)$	0.5632	$0.5887^{+0.0099}_{-0.025}$
$\boldsymbol{A_{143}^{dustTE}}$	0.221	0.221 ± 0.054	z_*	1089.436	1089.46 ± 0.31	$f\sigma_8(2.33)$	0.2843	$0.2972^{+0.0049}_{-0.013}$
$\boldsymbol{A_{143\times217}^{dustTE}}$	0.657	0.660 ± 0.079	r_*	144.738	144.78 ± 0.33	$\sigma_8(2.33)$	0.2935	$0.3068^{+0.0049}_{-0.013}$
$\boldsymbol{A_{217}^{dustTE}}$	2.048	2.05 ± 0.27	$100\theta_*$	1.041307	1.04131 ± 0.00032	χ^2_{lowl}	21.43	22.6 ± 1.4
$\boldsymbol{c_{100}}$	0.99976	0.99969 ± 0.00061	$D_M(z_*)$/Gpc	13.8997	13.904 ± 0.030	χ^2_{plik}	2337.2	2353.9 ± 5.8
$\boldsymbol{c_{217}}$	0.99815	0.99812 ± 0.00062	z_{drag}	1060.390	1060.31 ± 0.33	χ^2_{prior}	1.37	11.2 ± 4.4
H_0	68.32	68.33 ± 0.71	r_{drag}	147.321	147.38 ± 0.32	χ^2_{CMB}	2358.7	2376.5 ± 5.9
Ω_Λ	0.6972	0.6974 ± 0.0092	k_D	0.140814	0.14074 ± 0.00033			

Best-fit $\chi^2_{eff} = 2360.02$; $\Delta\chi^2_{eff} = -3.62$; $\bar{\chi}^2_{eff} = 2387.73$; $\Delta\bar{\chi}^2_{eff} = -2.81$; $R - 1 = 0.00854$
χ^2_{eff}: CMB - commander_dx12_v3_2_29: 21.43 (Δ -3.34) plik_rd12_HM_v22b_TTTEEE: 2337.22 (Δ -0.36)

3.70 base_Alens_plikHM_TTTEEE_lowl_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02260 ± 0.00017	$\Omega_m h^2$	0.1411 ± 0.0014	k_{eq}	0.01025 ± 0.00010
$\boldsymbol{\Omega_c h^2}$	0.1179 ± 0.0015	$\Omega_m h^3$	0.09649 ± 0.00031	$100\theta_{eq}$	0.8223 ± 0.0067
$\boldsymbol{100\theta_{MC}}$	1.04115 ± 0.00033	σ_8	$0.822^{+0.013}_{-0.026}$	$100\theta_{s,eq}$	0.4539 ± 0.0034
$\boldsymbol{\tau}$	$0.077^{+0.011}_{-0.033}$	S_8	$0.824^{+0.023}_{-0.029}$	$H(0.15)$	73.56 ± 0.61
$\boldsymbol{A_L}$	1.123 ± 0.080	$\sigma_8\Omega_m^{0.5}$	$0.452^{+0.012}_{-0.016}$	$D_M(0.15)$	634.8 ± 5.9
$\boldsymbol{\ln(10^{10} A_s)}$	$3.084^{+0.025}_{-0.064}$	$\sigma_8\Omega_m^{0.25}$	$0.609^{+0.013}_{-0.020}$	$H(0.38)$	83.51 ± 0.45
$\boldsymbol{n_s}$	0.9719 ± 0.0050	$\sigma_8/h^{0.5}$	$0.994^{+0.019}_{-0.032}$	$D_M(0.38)$	1516 ± 12
$\boldsymbol{y_{cal}}$	0.99999 ± 0.0025	$r_{drag}h$	100.8 ± 1.2	$H(0.51)$	90.14 ± 0.36
$\boldsymbol{A^{CIB}_{217}}$	44 ± 7	$\langle d^2\rangle^{1/2}$	2.601 ± 0.059	$D_M(0.51)$	1966 ± 14
$\boldsymbol{\xi^{tSZ\times CIB}}$	> 0.438	z_{re}	< 10.6	$H(0.61)$	95.69 ± 0.29
$\boldsymbol{A^{tSZ}_{143}}$	$5.8^{+2.0}_{-1.8}$	$10^9 A_s$	$2.188^{+0.051}_{-0.14}$	$D_M(0.61)$	2288 ± 15
$\boldsymbol{A^{PS}_{100}}$	248 ± 30	$10^9 A_s e^{-2\tau}$	1.873 ± 0.012	$H(2.33)$	235.42 ± 0.90
$\boldsymbol{A^{PS}_{143}}$	41 ± 8	D_{40}	1225^{+15}_{-17}	$D_M(2.33)$	5746 ± 13
$\boldsymbol{A^{PS}_{143\times217}}$	41 ± 9	D_{220}	5736 ± 39	$f\sigma_8(0.15)$	$0.457^{+0.012}_{-0.016}$
$\boldsymbol{A^{PS}_{217}}$	116.1 ± 9.8	D_{810}	2530 ± 14	$\sigma_8(0.15)$	$0.760^{+0.011}_{-0.024}$
$\boldsymbol{A^{kSZ}}$	< 2.98	D_{1420}	815.7 ± 4.7	$f\sigma_8(0.38)$	$0.478^{+0.010}_{-0.016}$
$\boldsymbol{A^{dustTT}_{100}}$	8.8 ± 1.8	D_{2000}	232.4 ± 1.6	$\sigma_8(0.38)$	$0.6750^{+0.0092}_{-0.021}$
$\boldsymbol{A^{dustTT}_{143}}$	10.5 ± 1.8	$n_{s,0.002}$	0.9719 ± 0.0050	$f\sigma_8(0.51)$	$0.4774^{+0.0095}_{-0.016}$
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.0 ± 3.3	Y_P	0.245482 ± 0.000067	$\sigma_8(0.51)$	$0.6321^{+0.0084}_{-0.020}$
$\boldsymbol{A^{dustTT}_{217}}$	93.6 ± 7.3	Y_P^{BBN}	0.246808 ± 0.000067	$f\sigma_8(0.61)$	$0.4731^{+0.0089}_{-0.015}$
$\boldsymbol{A^{dustTE}_{100}}$	0.113 ± 0.038	10^5D/H	2.544 ± 0.031	$\sigma_8(0.61)$	$0.6018^{+0.0079}_{-0.019}$
$\boldsymbol{A^{dustTE}_{100\times143}}$	0.134 ± 0.029	Age/Gyr	13.758 ± 0.028	$f\sigma_8(2.33)$	$0.3038^{+0.0038}_{-0.0097}$
$\boldsymbol{A^{dustTE}_{100\times217}}$	0.480 ± 0.084	z_*	1089.45 ± 0.32	$\sigma_8(2.33)$	$0.3137^{+0.0038}_{-0.010}$
$\boldsymbol{A^{dustTE}_{143}}$	0.221 ± 0.054	r_*	144.81 ± 0.33	f^{143}_{2000}	26.4 ± 2.9
$\boldsymbol{A^{dustTE}_{143\times217}}$	0.661 ± 0.079	$100\theta_*$	1.04132 ± 0.00032	$f^{143\times217}_{2000}$	29.7 ± 2.0
$\boldsymbol{A^{dustTE}_{217}}$	2.05 ± 0.27	$D_M(z_*)$/Gpc	13.906 ± 0.030	f^{217}_{2000}	104.8 ± 1.9
$\boldsymbol{c_{100}}$	0.99969 ± 0.00061	z_{drag}	1060.31 ± 0.34	χ^2_{lowl}	23.2 ± 1.5
$\boldsymbol{c_{217}}$	0.99812 ± 0.00063	r_{drag}	147.40 ± 0.32	χ^2_{plik}	2353.8 ± 5.8
H_0	68.38 ± 0.71	k_D	0.14071 ± 0.00033	χ^2_{prior}	11.2 ± 4.4
Ω_Λ	0.6980 ± 0.0092	$100\theta_D$	0.16055 ± 0.00019	χ^2_{CMB}	2377.1 ± 6.0
Ω_m	0.3020 ± 0.0092	z_{eq}	3357 ± 34		

$\bar{\chi}^2_{eff} = 2388.28$; $\Delta\bar{\chi}^2_{eff} = -2.20$; $R - 1 = 0.01143$

3.71 base_Alens_plikHM_TTTEEE_lowE

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022613	0.02256 ± 0.00017	$\Omega_m h^2$	0.14147	0.1418 ± 0.0014	k_{eq}	0.010271	0.01029 ± 0.00011
$\boldsymbol{\Omega_c h^2}$	0.11821	0.1186 ± 0.0016	$\Omega_m h^3$	0.096558	0.09650 ± 0.00030	$100\theta_{eq}$	0.8208	0.8193 ± 0.0067
$\boldsymbol{100\theta_{MC}}$	1.041116	1.04109 ± 0.00033	σ_8	0.8025	0.8015 ± 0.0090	$100\theta_{s,eq}$	0.45312	0.4524 ± 0.0034
$\boldsymbol{\tau}$	0.0518	0.0495 ± 0.0086	S_8	0.8074	0.810 ± 0.019	$H(0.15)$	73.46	73.30 ± 0.62
$\boldsymbol{A_L}$	1.183	1.168 ± 0.066	$\sigma_8 \Omega_m^{0.5}$	0.4422	0.443 ± 0.011	$D_M(0.15)$	635.7	637.3 ± 6.1
$\boldsymbol{\ln(10^{10} A_s)}$	3.0349	3.031 ± 0.018	$\sigma_8 \Omega_m^{0.25}$	0.5957	0.596 ± 0.010	$H(0.38)$	83.446	83.33 ± 0.46
$\boldsymbol{n_s}$	0.9714	0.9687 ± 0.0050	$\sigma_8/h^{0.5}$	0.9714	0.972 ± 0.015	$D_M(0.38)$	1518.0	1521 ± 12
$\boldsymbol{y_{cal}}$	0.99970	1.0000 ± 0.0025	$r_{drag} h$	100.54	100.2 ± 1.2	$H(0.51)$	90.092	90.00 ± 0.36
$\boldsymbol{A_{217}^{CIB}}$	42.4	45 ± 7	$\langle d^2 \rangle^{1/2}$	2.612	2.599 ± 0.059	$D_M(0.51)$	1967.7	1972 ± 14
$\boldsymbol{\xi^{tSZ \times CIB}}$	0.9998	> 0.409	z_{re}	7.35	$7.09^{+0.92}_{-0.75}$	$H(0.61)$	95.657	95.58 ± 0.29
$\boldsymbol{A_{143}^{tSZ}}$	6.81	$5.6^{+2.1}_{-1.8}$	$10^9 A_s$	2.0800	2.072 ± 0.037	$D_M(0.61)$	2290.7	2295 ± 16
$\boldsymbol{A_{100}^{PS}}$	240.1	252 ± 28	$10^9 A_s e^{-2\tau}$	1.8752	1.877 ± 0.012	$H(2.33)$	235.64	235.83 ± 0.90
$\boldsymbol{A_{143}^{PS}}$	49.6	43 ± 8	D_{40}	1216.0	1222 ± 14	$D_M(2.33)$	5746.4	5750 ± 13
$\boldsymbol{A_{143\times217}^{PS}}$	57.4	42 ± 9	D_{220}	5737.9	5743 ± 39	$f\sigma_8(0.15)$	0.4474	0.448 ± 0.010
$\boldsymbol{A_{217}^{PS}}$	124.1	116 ± 10	D_{810}	2532.4	2532 ± 14	$\sigma_8(0.15)$	0.7423	0.7412 ± 0.0078
$\boldsymbol{A^{kSZ}}$	0.00	< 3.33	D_{1420}	816.31	815.1 ± 4.7	$f\sigma_8(0.38)$	0.4673	0.4677 ± 0.0083
$\boldsymbol{A_{100}^{dust TT}}$	8.69	8.8 ± 1.8	D_{2000}	232.62	231.9 ± 1.6	$\sigma_8(0.38)$	0.6589	0.6576 ± 0.0065
$\boldsymbol{A_{143}^{dust TT}}$	10.73	10.6 ± 1.8	$n_{s,0.002}$	0.9714	0.9687 ± 0.0050	$f\sigma_8(0.51)$	0.4668	0.4670 ± 0.0074
$\boldsymbol{A_{143\times217}^{dust TT}}$	19.71	18.1 ± 3.3	Y_P	0.245484	0.245465 ± 0.000067	$\sigma_8(0.51)$	0.6170	0.6156 ± 0.0059
$\boldsymbol{A_{217}^{dust TT}}$	95.4	93.5 ± 7.4	Y_P^{BBN}	0.246811	0.246791 ± 0.000067	$f\sigma_8(0.61)$	0.4625	0.4625 ± 0.0067
$\boldsymbol{A_{100}^{dust TE}}$	0.1130	0.114 ± 0.038	10^5D/H	2.5422	2.552 ± 0.031	$\sigma_8(0.61)$	0.5873	0.5860 ± 0.0056
$\boldsymbol{A_{100\times143}^{dust TE}}$	0.1343	0.134 ± 0.029	Age/Gyr	13.7593	13.767 ± 0.029	$f\sigma_8(2.33)$	0.29642	0.2957 ± 0.0027
$\boldsymbol{A_{100\times217}^{dust TE}}$	0.483	0.480 ± 0.085	z_*	1089.462	1089.57 ± 0.32	$\sigma_8(2.33)$	0.30594	0.3051 ± 0.0028
$\boldsymbol{A_{143}^{dust TE}}$	0.224	0.222 ± 0.054	r_*	144.709	144.66 ± 0.33	f_{2000}^{143}	25.64	27.3 ± 2.9
$\boldsymbol{A_{143\times217}^{dust TE}}$	0.659	0.661 ± 0.080	$100\theta_*$	1.041284	1.04126 ± 0.00032	$f_{2000}^{143\times217}$	29.65	30.4 ± 2.0
$\boldsymbol{A_{217}^{dust TE}}$	2.071	2.06 ± 0.27	$D_M(z_*)$/Gpc	13.8972	13.893 ± 0.030	f_{2000}^{217}	104.32	105.4 ± 1.9
$\boldsymbol{c_{100}}$	0.99976	0.99971 ± 0.00061	z_{drag}	1060.352	1060.26 ± 0.34	χ^2_{simall}	395.71	396.9 ± 1.7
$\boldsymbol{c_{217}}$	0.99810	0.99813 ± 0.00062	r_{drag}	147.297	147.26 ± 0.32	χ^2_{plik}	2337.0	2353.9 ± 5.7
H_0	68.25	68.07 ± 0.72	k_D	0.140833	0.14083 ± 0.00032	χ^2_{prior}	1.35	11.3 ± 4.4
Ω_Λ	0.6963	0.6938 ± 0.0095	$100\theta_D$	0.160516	0.16058 ± 0.00019	χ^2_{CMB}	2732.7	2750.8 ± 6.0
Ω_m	0.3037	0.3062 ± 0.0095	z_{eq}	3365.2	3373 ± 35			

Best-fit $\chi^2_{eff} = 2734.06$; $\Delta\chi^2_{eff} = -8.18$; $\bar{\chi}^2_{eff} = 2762.07$; $\Delta\bar{\chi}^2_{eff} = -6.08$; $R - 1 = 0.00592$
χ^2_{eff}: CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.71 (Δ -0.35) plik_rd12_HM_v22b_TTTEEE: 2337.00 (Δ -7.46)

3.72 base_Alens_CamSpecHM_TT

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022619	0.02256 ± 0.00031	S_8	0.848	$0.834^{+0.048}_{-0.055}$	$100\theta_{\rm eq}$	0.8273	0.826 ± 0.012
$\boldsymbol{\Omega_c h^2}$	0.11677	0.1172 ± 0.0028	$\sigma_8\Omega_{\rm m}^{0.5}$	0.4643	$0.457^{+0.026}_{-0.030}$	$100\theta_{\rm s,eq}$	0.4565	0.4556 ± 0.0062
$\boldsymbol{100\theta_{MC}}$	1.04141	1.04135 ± 0.00056	$\sigma_8\Omega_{\rm m}^{0.25}$	0.6299	$0.618^{+0.031}_{-0.039}$	$H(0.15)$	73.98	73.8 ± 1.1
$\boldsymbol{\tau}$	0.121	< 0.124	$\sigma_8/h^{0.5}$	1.030	$1.010^{+0.049}_{-0.063}$	$D_{\rm M}(0.15)$	630.6	633 ± 11
$\boldsymbol{A_L}$	1.080	$1.12^{+0.13}_{-0.16}$	$r_{\rm drag}h$	101.71	101.3 ± 2.3	$H(0.38)$	83.81	83.68 ± 0.85
$\boldsymbol{\ln(10^{10}A_s)}$	3.169	$3.121^{+0.076}_{-0.15}$	$\langle d^2\rangle^{1/2}$	2.642	2.630 ± 0.079	$D_{\rm M}(0.38)$	1507.8	1512 ± 22
$\boldsymbol{n_s}$	0.9764	0.9740 ± 0.0086	$z_{\rm re}$	13.40	$11.0^{+5.5}_{-4.3}$	$H(0.51)$	90.37	90.26 ± 0.68
$\boldsymbol{A_{100}^{PS}}$	219.7	230 ± 25	$10^9 A_{\rm s}$	2.378	$2.28^{+0.14}_{-0.34}$	$D_{\rm M}(0.51)$	1955.8	1961 ± 26
$\boldsymbol{A_{143}^{PS}}$	43.7	34 ± 9	$10^9 A_{\rm s}e^{-2\tau}$	1.8663	1.867 ± 0.016	$H(0.61)$	95.86	$95.78^{+0.52}_{-0.59}$
$\boldsymbol{A_{217}^{PS}}$	108.4	104 ± 10	D_{40}	1234.5	1233^{+23}_{-33}	$D_{\rm M}(0.61)$	2278.0	2283 ± 28
$\boldsymbol{A_{217}^{CIB}}$	37.8	37 ± 7	D_{220}	5724.4	5723 ± 42	$H(2.33)$	234.73	235.0 ± 1.6
$\boldsymbol{A_{143}^{tSZ}}$	6.31	$4.2^{+2.0}_{-2.3}$	D_{810}	2526.9	2525 ± 14	$D_{\rm M}(2.33)$	5738.7	5743 ± 24
$\boldsymbol{r_{143\times217}^{PS}}$	0.764	0.68 ± 0.14	D_{1420}	815.5	814.0 ± 5.2	$f\sigma_8(0.15)$	0.4705	$0.463^{+0.026}_{-0.030}$
$\boldsymbol{r_{143\times217}^{CIB}}$	0.784	$0.51^{+0.32}_{-0.28}$	D_{2000}	232.91	232.1 ± 2.2	$\sigma_8(0.15)$	0.7914	$0.774^{+0.032}_{-0.053}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.89	—	$n_{\rm s,0.002}$	0.9764	0.9740 ± 0.0086	$f\sigma_8(0.38)$	0.4937	$0.484^{+0.025}_{-0.030}$
$\boldsymbol{A^{kSZ}}$	0.00	< 5.23	$Y_{\rm P}$	0.245487	$0.24547^{+0.00011}_{-0.00013}$	$\sigma_8(0.38)$	0.7034	$0.688^{+0.027}_{-0.048}$
$\boldsymbol{A_{100}^{dust}}$	0.995	1.00 ± 0.19	$Y_{\rm P}^{\rm BBN}$	0.246814	$0.24679^{+0.00011}_{-0.00013}$	$f\sigma_8(0.51)$	0.4942	$0.485^{+0.024}_{-0.030}$
$\boldsymbol{A_{143}^{dust}}$	0.965	0.95 ± 0.18	10^5D/H	2.541	2.552 ± 0.056	$\sigma_8(0.51)$	0.6591	$0.644^{+0.024}_{-0.046}$
$\boldsymbol{A_{217}^{dust}}$	0.989	0.98 ± 0.10	Age/Gyr	13.744	13.753 ± 0.054	$f\sigma_8(0.61)$	0.4904	$0.481^{+0.023}_{-0.030}$
$\boldsymbol{A_{143\times217}^{dust}}$	1.007	1.01 ± 0.16	z_*	1089.33	1089.45 ± 0.58	$\sigma_8(0.61)$	0.6277	$0.614^{+0.023}_{-0.044}$
$\boldsymbol{y_{cal}}$	1.00007	1.0000 ± 0.0025	r_*	145.08	145.01 ± 0.58	$f\sigma_8(2.33)$	0.3172	$0.310^{+0.011}_{-0.023}$
$\boldsymbol{c_{100}}$	0.99783	0.9976 ± 0.0011	$100\theta_*$	1.04157	1.04152 ± 0.00054	$\sigma_8(2.33)$	0.3278	$0.320^{+0.011}_{-0.025}$
$\boldsymbol{c_{217}}$	1.00083	1.0008 ± 0.0016	$D_{\rm M}(z_*)$/Gpc	13.929	13.923 ± 0.052	f_{2000}^{143}	25.76	26 ± 4
H_0	68.87	68.7 ± 1.3	$z_{\rm drag}$	1060.28	1060.17 ± 0.58	f_{2000}^{217}	103.72	104.5 ± 2.5
Ω_Λ	0.7048	0.701 ± 0.017	$r_{\rm drag}$	147.67	147.62 ± 0.55	$f_{2000}^{143\times217}$	28.79	29.4 ± 2.7
$\Omega_{\rm m}$	0.2952	0.299 ± 0.017	$k_{\rm D}$	0.14044	0.14045 ± 0.00054	$\chi^2_{\rm CamSpec}$	7045.0	7059.9 ± 5.4
$\Omega_{\rm m}h^2$	0.14003	0.1404 ± 0.0026	$100\theta_{\rm D}$	0.160599	0.16066 ± 0.00032	$\chi^2_{\rm prior}$	1.43	7.2 ± 3.3
$\Omega_{\rm m}h^3$	0.09645	0.09639 ± 0.00051	$z_{\rm eq}$	3331	3341 ± 61			
σ_8	0.8546	$0.836^{+0.036}_{-0.055}$	$k_{\rm eq}$	0.010167	0.01020 ± 0.00019			

Best-fit $\chi^2_{\rm eff} = 7046.45$; $\Delta\chi^2_{\rm eff} = -0.25$; $\bar{\chi}^2_{\rm eff} = 7067.10$; $\Delta\bar{\chi}^2_{\rm eff} = 0.23$; $R - 1 = 0.00805$
$\chi^2_{\rm eff}$: CMB - CamSpec like_10.7HM: 7045.02 (Δ -0.23)

3.73 base_Alens_CamSpecHM_TT_post_BAO

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02248 ± 0.00022	$\sigma_8\Omega_m^{0.5}$	$0.461^{+0.021}_{-0.030}$	$H(0.15)$	73.43 ± 0.53
$\boldsymbol{\Omega_c h^2}$	0.1181 ± 0.0013	$\sigma_8\Omega_m^{0.25}$	$0.621^{+0.027}_{-0.040}$	$D_M(0.15)$	636.0 ± 5.2
$\boldsymbol{100\theta_{MC}}$	1.04123 ± 0.00044	$\sigma_8/h^{0.5}$	$1.013^{+0.042}_{-0.066}$	$H(0.38)$	83.40 ± 0.41
$\boldsymbol{\tau}$	$0.094^{+0.028}_{-0.080}$	$r_{drag}h$	100.6 ± 1.0	$D_M(0.38)$	1519 ± 11
$\boldsymbol{A_L}$	1.11 ± 0.13	$\langle d^2\rangle^{1/2}$	2.622 ± 0.076	$H(0.51)$	90.04 ± 0.34
$\boldsymbol{\ln(10^{10}A_s)}$	$3.116^{+0.074}_{-0.14}$	z_{re}	$10.8^{+5.3}_{-4.3}$	$D_M(0.51)$	1969 ± 12
$\boldsymbol{n_s}$	0.9715 ± 0.0051	10^9A_s	$2.27^{+0.14}_{-0.33}$	$H(0.61)$	95.60 ± 0.29
$\boldsymbol{A_{100}^{PS}}$	231 ± 25	$10^9A_se^{-2\tau}$	1.871 ± 0.012	$D_M(0.61)$	2292 ± 13
$\boldsymbol{A_{143}^{PS}}$	35 ± 8	D_{40}	1236^{+18}_{-32}	$H(2.33)$	235.44 ± 0.81
$\boldsymbol{A_{217}^{PS}}$	104 ± 10	D_{220}	5719 ± 41	$D_M(2.33)$	5750 ± 14
$\boldsymbol{A_{217}^{CIB}}$	37 ± 7	D_{810}	2526 ± 14	$f\sigma_8(0.15)$	$0.466^{+0.021}_{-0.030}$
$\boldsymbol{A_{143}^{tSZ}}$	$4.1^{+2.0}_{-2.4}$	D_{1420}	813.6 ± 5.1	$\sigma_8(0.15)$	$0.774^{+0.029}_{-0.053}$
$\boldsymbol{r_{143\times217}^{PS}}$	0.68 ± 0.14	D_{2000}	231.7 ± 1.9	$f\sigma_8(0.38)$	$0.487^{+0.021}_{-0.031}$
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.51^{+0.34}_{-0.27}$	$n_{s,0.002}$	0.9715 ± 0.0051	$\sigma_8(0.38)$	$0.687^{+0.025}_{-0.048}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P	0.245436 ± 0.000088	$f\sigma_8(0.51)$	$0.487^{+0.020}_{-0.032}$
$\boldsymbol{A^{kSZ}}$	< 5.38	Y_P^{BBN}	0.246763 ± 0.000088	$\sigma_8(0.51)$	$0.644^{+0.023}_{-0.045}$
$\boldsymbol{A_{100}^{dust}}$	1.00 ± 0.19	10^5D/H	2.566 ± 0.041	$f\sigma_8(0.61)$	$0.482^{+0.020}_{-0.032}$
$\boldsymbol{A_{143}^{dust}}$	0.95 ± 0.18	Age/Gyr	13.768 ± 0.032	$\sigma_8(0.61)$	$0.613^{+0.021}_{-0.043}$
$\boldsymbol{A_{217}^{dust}}$	0.98 ± 0.10	z_*	1089.61 ± 0.33	$f\sigma_8(2.33)$	$0.309^{+0.011}_{-0.022}$
$\boldsymbol{A_{143\times217}^{dust}}$	1.02 ± 0.16	r_*	144.84 ± 0.32	$\sigma_8(2.33)$	$0.319^{+0.011}_{-0.023}$
$\boldsymbol{y_{cal}}$	1.0000 ± 0.0025	$100\theta_*$	1.04141 ± 0.00043	f_{2000}^{143}	27 ± 3
$\boldsymbol{c_{100}}$	0.9976 ± 0.0011	$D_M(z_*)$/Gpc	13.908 ± 0.032	f_{2000}^{217}	104.9 ± 2.2
$\boldsymbol{c_{217}}$	1.0008 ± 0.0016	z_{drag}	1060.06 ± 0.49	$f_{2000}^{143\times217}$	29.9 ± 2.4
H_0	68.23 ± 0.61	r_{drag}	147.48 ± 0.35	$\chi^2_{CamSpec}$	7059.1 ± 5.3
Ω_Λ	0.6966 ± 0.0078	k_D	0.14055 ± 0.00046	χ^2_{6DF}	0.046 ± 0.065
Ω_m	0.3034 ± 0.0078	$100\theta_D$	0.16072 ± 0.00028	χ^2_{MGS}	1.86 ± 0.64
$\Omega_m h^2$	0.1412 ± 0.0012	z_{eq}	3359 ± 30	$\chi^2_{DR12BAO}$	4.1 ± 1.0
$\Omega_m h^3$	0.09635 ± 0.00050	k_{eq}	0.010252 ± 0.000091	χ^2_{prior}	7.2 ± 3.3
σ_8	$0.837^{+0.032}_{-0.057}$	$100\theta_{eq}$	0.8217 ± 0.0057	χ^2_{BAO}	6.0 ± 1.1
S_8	$0.842^{+0.039}_{-0.054}$	$100\theta_{s,eq}$	0.4537 ± 0.0029		

$\bar{\chi}^2_{eff} = 7072.33$; $R - 1 = 0.01128$

3.74 base_Alens_CamSpecHM_TT_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02256 ± 0.00031	S_8	$0.847^{+0.042}_{-0.050}$	$100\theta_{\rm eq}$	0.826 ± 0.012
$\boldsymbol{\Omega_c h^2}$	0.1171 ± 0.0028	$\sigma_8\Omega_{\rm m}^{0.5}$	$0.464^{+0.023}_{-0.027}$	$100\theta_{\rm s,eq}$	0.4559 ± 0.0062
$\boldsymbol{100\theta_{MC}}$	1.04136 ± 0.00056	$\sigma_8\Omega_{\rm m}^{0.25}$	$0.628^{+0.026}_{-0.034}$	$H(0.15)$	73.8 ± 1.1
$\boldsymbol{\tau}$	$0.114^{+0.026}_{-0.065}$	$\sigma_8/h^{0.5}$	$1.026^{+0.040}_{-0.055}$	$D_{\rm M}(0.15)$	632 ± 11
$\boldsymbol{A_L}$	$1.08^{+0.11}_{-0.13}$	$r_{\rm drag}h$	101.4 ± 2.3	$H(0.38)$	83.71 ± 0.85
$\boldsymbol{\ln(10^{10}A_s)}$	$3.155^{+0.058}_{-0.12}$	$\langle d^2\rangle^{1/2}$	2.630 ± 0.079	$D_{\rm M}(0.38)$	1511 ± 22
$\boldsymbol{n_s}$	0.9746 ± 0.0085	$z_{\rm re}$	$12.7^{+3.2}_{-4.3}$	$H(0.51)$	$90.29^{+0.64}_{-0.72}$
$\boldsymbol{A_{100}^{PS}}$	229 ± 25	$10^9 A_{\rm s}$	$2.35^{+0.12}_{-0.29}$	$D_{\rm M}(0.51)$	1959 ± 26
$\boldsymbol{A_{143}^{PS}}$	34 ± 9	$10^9 A_{\rm s}e^{-2\tau}$	1.866 ± 0.016	$H(0.61)$	$95.80^{+0.51}_{-0.59}$
$\boldsymbol{A_{217}^{PS}}$	104 ± 10	D_{40}	1238^{+23}_{-33}	$D_{\rm M}(0.61)$	2282 ± 28
$\boldsymbol{A_{217}^{CIB}}$	37 ± 7	D_{220}	5721 ± 42	$H(2.33)$	234.9 ± 1.6
$\boldsymbol{A_{143}^{tSZ}}$	$4.2^{+2.0}_{-2.3}$	D_{810}	2525 ± 14	$D_{\rm M}(2.33)$	5742 ± 24
$\boldsymbol{r_{143\times217}^{PS}}$	0.68 ± 0.14	D_{1420}	814.1 ± 5.2	$f\sigma_8(0.15)$	$0.470^{+0.023}_{-0.027}$
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.51^{+0.32}_{-0.29}$	D_{2000}	232.2 ± 2.2	$\sigma_8(0.15)$	$0.787^{+0.025}_{-0.044}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$n_{\rm s,0.002}$	0.9746 ± 0.0085	$f\sigma_8(0.38)$	$0.492^{+0.021}_{-0.027}$
$\boldsymbol{A^{kSZ}}$	< 5.17	$Y_{\rm P}$	$0.24547^{+0.00011}_{-0.00013}$	$\sigma_8(0.38)$	$0.699^{+0.021}_{-0.041}$
$\boldsymbol{A_{100}^{dust}}$	1.00 ± 0.20	$Y_{\rm P}^{\rm BBN}$	$0.24680^{+0.00011}_{-0.00013}$	$f\sigma_8(0.51)$	$0.492^{+0.020}_{-0.027}$
$\boldsymbol{A_{143}^{dust}}$	0.95 ± 0.18	10^5D/H	2.551 ± 0.056	$\sigma_8(0.51)$	$0.655^{+0.019}_{-0.038}$
$\boldsymbol{A_{217}^{dust}}$	0.98 ± 0.10	Age/Gyr	13.752 ± 0.054	$f\sigma_8(0.61)$	$0.488^{+0.019}_{-0.026}$
$\boldsymbol{A_{143\times217}^{dust}}$	1.01 ± 0.16	z_*	1089.43 ± 0.58	$\sigma_8(0.61)$	$0.624^{+0.018}_{-0.037}$
$\boldsymbol{y_{cal}}$	1.0000 ± 0.0025	r_*	145.04 ± 0.58	$f\sigma_8(2.33)$	$0.3151^{+0.0088}_{-0.019}$
$\boldsymbol{c_{100}}$	0.9976 ± 0.0011	$100\theta_*$	1.04153 ± 0.00054	$\sigma_8(2.33)$	$0.3255^{+0.0088}_{-0.020}$
$\boldsymbol{c_{217}}$	1.0008 ± 0.0016	$D_{\rm M}(z_*)$/Gpc	13.925 ± 0.052	f_{2000}^{143}	26 ± 4
H_0	68.7 ± 1.3	$z_{\rm drag}$	1060.17 ± 0.59	f_{2000}^{217}	104.4 ± 2.5
Ω_Λ	0.702 ± 0.017	$r_{\rm drag}$	147.65 ± 0.55	$f_{2000}^{143\times217}$	29.3 ± 2.7
$\Omega_{\rm m}$	0.298 ± 0.017	$k_{\rm D}$	0.14042 ± 0.00054	$\chi^2_{\rm CamSpec}$	7059.9 ± 5.4
$\Omega_{\rm m}h^2$	0.1403 ± 0.0026	$100\theta_{\rm D}$	0.16066 ± 0.00032	$\chi^2_{\rm prior}$	7.2 ± 3.3
$\Omega_{\rm m}h^3$	0.09638 ± 0.00051	$z_{\rm eq}$	3338 ± 61		
σ_8	$0.850^{+0.029}_{-0.047}$	$k_{\rm eq}$	0.01019 ± 0.00019		

$\bar{\chi}^2_{\rm eff} = 7067.05$; $R - 1 = 0.01053$

3.75 base_Alens_CamSpecHM_TT_post_BAO_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02248 ± 0.00022	$\sigma_8\Omega_m^{0.5}$	$0.469^{+0.017}_{-0.026}$	$H(0.15)$	73.43 ± 0.53
$\boldsymbol{\Omega_c h^2}$	0.1181 ± 0.0013	$\sigma_8\Omega_m^{0.25}$	$0.631^{+0.021}_{-0.035}$	$D_M(0.15)$	635.9 ± 5.2
$\boldsymbol{100\theta_{MC}}$	1.04123 ± 0.00044	$\sigma_8/h^{0.5}$	$1.030^{+0.032}_{-0.057}$	$H(0.38)$	83.41 ± 0.41
$\boldsymbol{\tau}$	$0.110^{+0.026}_{-0.060}$	$r_{drag}h$	100.6 ± 1.0	$D_M(0.38)$	1519 ± 10
$\boldsymbol{A_L}$	1.07 ± 0.11	$\langle d^2\rangle^{1/2}$	2.621 ± 0.076	$H(0.51)$	90.04 ± 0.34
$\boldsymbol{\ln(10^{10}A_s)}$	$3.149^{+0.056}_{-0.12}$	z_{re}	$12.4^{+2.9}_{-4.5}$	$D_M(0.51)$	1969 ± 12
$\boldsymbol{n_s}$	0.9719 ± 0.0050	10^9A_s	$2.34^{+0.11}_{-0.27}$	$H(0.61)$	95.60 ± 0.29
$\boldsymbol{A^{PS}_{100}}$	231 ± 25	$10^9A_se^{-2\tau}$	1.870 ± 0.012	$D_M(0.61)$	2292 ± 13
$\boldsymbol{A^{PS}_{143}}$	35 ± 8	D_{40}	1242^{+19}_{-31}	$H(2.33)$	235.42 ± 0.81
$\boldsymbol{A^{PS}_{217}}$	104 ± 10	D_{220}	5717 ± 41	$D_M(2.33)$	5750 ± 14
$\boldsymbol{A^{CIB}_{217}}$	37 ± 7	D_{810}	2526 ± 14	$f\sigma_8(0.15)$	$0.474^{+0.017}_{-0.026}$
$\boldsymbol{A^{tSZ}_{143}}$	$4.1^{+2.0}_{-2.4}$	D_{1420}	813.7 ± 5.1	$\sigma_8(0.15)$	$0.787^{+0.022}_{-0.045}$
$\boldsymbol{r^{PS}_{143\times217}}$	0.68 ± 0.14	D_{2000}	231.8 ± 1.9	$f\sigma_8(0.38)$	$0.495^{+0.017}_{-0.027}$
$\boldsymbol{r^{CIB}_{143\times217}}$	$0.51^{+0.33}_{-0.28}$	$n_{s,0.002}$	0.9719 ± 0.0050	$\sigma_8(0.38)$	$0.699^{+0.019}_{-0.040}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P	0.245435 ± 0.000088	$f\sigma_8(0.51)$	$0.495^{+0.016}_{-0.027}$
$\boldsymbol{A^{kSZ}}$	< 5.33	Y_P^{BBN}	0.246762 ± 0.000088	$\sigma_8(0.51)$	$0.654^{+0.018}_{-0.038}$
$\boldsymbol{A^{dust}_{100}}$	0.999 ± 0.20	10^5D/H	2.566 ± 0.041	$f\sigma_8(0.61)$	$0.490^{+0.015}_{-0.027}$
$\boldsymbol{A^{dust}_{143}}$	0.95 ± 0.18	Age/Gyr	13.769 ± 0.032	$\sigma_8(0.61)$	$0.623^{+0.017}_{-0.036}$
$\boldsymbol{A^{dust}_{217}}$	0.98 ± 0.10	z_*	1089.62 ± 0.33	$f\sigma_8(2.33)$	$0.3143^{+0.0083}_{-0.018}$
$\boldsymbol{A^{dust}_{143\times217}}$	1.02 ± 0.16	r_*	144.85 ± 0.33	$\sigma_8(2.33)$	$0.3245^{+0.0086}_{-0.019}$
$\boldsymbol{y_{cal}}$	0.99999 ± 0.0025	$100\theta_*$	1.04141 ± 0.00043	f^{143}_{2000}	27 ± 3
$\boldsymbol{c_{100}}$	0.9976 ± 0.0011	$D_M(z_*)$/Gpc	13.909 ± 0.032	f^{217}_{2000}	104.8 ± 2.2
$\boldsymbol{c_{217}}$	1.0008 ± 0.0016	z_{drag}	1060.05 ± 0.49	$f^{143\times217}_{2000}$	29.8 ± 2.4
H_0	68.24 ± 0.61	r_{drag}	147.49 ± 0.35	$\chi^2_{CamSpec}$	7059.1 ± 5.3
Ω_Λ	0.6967 ± 0.0078	k_D	0.14053 ± 0.00046	χ^2_{6DF}	0.046 ± 0.065
Ω_m	0.3033 ± 0.0078	$100\theta_D$	0.16072 ± 0.00028	χ^2_{MGS}	1.87 ± 0.64
$\Omega_m h^2$	0.1412 ± 0.0013	z_{eq}	3358 ± 30	$\chi^2_{DR12BAO}$	4.1 ± 1.0
$\Omega_m h^3$	0.09634 ± 0.00050	k_{eq}	0.010250 ± 0.000091	χ^2_{prior}	7.2 ± 3.3
σ_8	$0.851^{+0.024}_{-0.048}$	$100\theta_{eq}$	0.8218 ± 0.0057	χ^2_{BAO}	6.0 ± 1.1
S_8	$0.855^{+0.032}_{-0.047}$	$100\theta_{s,eq}$	0.4537 ± 0.0029		

$\bar{\chi}^2_{eff} = 7072.34$; $R - 1 = 0.01270$

3.76 base_Alens_CamSpecHM_TT_lowl

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022672	0.02266 ± 0.00030	S_8	0.7557	$0.793^{+0.034}_{-0.040}$	$100\theta_{\rm eq}$	0.8283	0.830 ± 0.011
$\boldsymbol{\Omega_c h^2}$	0.11654	0.1162 ± 0.0026	$\sigma_8\Omega_{\rm m}^{0.5}$	0.4139	$0.434^{+0.019}_{-0.022}$	$100\theta_{\rm s,eq}$	0.4570	0.4580 ± 0.0058
$\boldsymbol{100\theta_{MC}}$	1.04148	1.04150 ± 0.00053	$\sigma_8\Omega_{\rm m}^{0.25}$	0.5623	$0.591^{+0.020}_{-0.027}$	$H(0.15)$	74.11	74.2 ± 1.1
$\boldsymbol{\tau}$	0.0102	< 0.0783	$\sigma_8/h^{0.5}$	0.9195	$0.967^{+0.030}_{-0.043}$	$D_{\rm M}(0.15)$	629.4	628 ± 10
$\boldsymbol{A_L}$	1.362	1.22 ± 0.12	$r_{\rm drag}h$	101.93	102.2 ± 2.1	$H(0.38)$	83.92	84.01 ± 0.81
$\boldsymbol{\ln(10^{10}A_s)}$	2.947	$3.051^{+0.041}_{-0.097}$	$\langle d^2\rangle^{1/2}$	2.652	2.638 ± 0.077	$D_{\rm M}(0.38)$	1505.3	1503 ± 21
$\boldsymbol{n_s}$	0.9760	0.9768 ± 0.0077	$z_{\rm re}$	2.12	$8.1^{+2.6}_{-4.8}$	$H(0.51)$	90.46	90.53 ± 0.65
$\boldsymbol{y_{cal}}$	1.00006	1.0000 ± 0.0025	$10^9 A_{\rm s}$	1.905	$2.120^{+0.079}_{-0.21}$	$D_{\rm M}(0.51)$	1952.8	1950 ± 24
$\boldsymbol{A_{100}^{PS}}$	218.4	228 ± 30	$10^9 A_{\rm s}e^{-2\tau}$	1.8667	1.863 ± 0.015	$H(0.61)$	95.94	$95.99^{+0.50}_{-0.56}$
$\boldsymbol{A_{143}^{PS}}$	45.1	33 ± 9	D_{40}	1197.5	1209 ± 20	$D_{\rm M}(0.61)$	2274.7	2272 ± 26
$\boldsymbol{A_{217}^{PS}}$	108.8	105 ± 10	D_{220}	5732.1	5726 ± 42	$H(2.33)$	234.64	234.4 ± 1.5
$\boldsymbol{A_{217}^{CIB}}$	37.6	36^{+7}_{-7}	D_{810}	2527.5	2524 ± 14	$D_{\rm M}(2.33)$	5735.1	5734 ± 23
$\boldsymbol{A_{143}^{tSZ}}$	6.32	$4.2^{+2.0}_{-2.3}$	D_{1420}	815.5	814.5 ± 5.1	$f\sigma_8(0.15)$	0.4195	$0.440^{+0.018}_{-0.021}$
$\boldsymbol{r_{143\times217}^{PS}}$	0.793	0.68 ± 0.14	D_{2000}	232.95	232.6 ± 2.1	$\sigma_8(0.15)$	0.7076	$0.745^{+0.018}_{-0.034}$
$\boldsymbol{r_{143\times217}^{CIB}}$	0.772	0.50 ± 0.27	$n_{\rm s,0.002}$	0.9760	0.9768 ± 0.0077	$f\sigma_8(0.38)$	0.4406	$0.463^{+0.016}_{-0.021}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.999	—	$Y_{\rm P}$	0.245506	$0.24551^{+0.00011}_{-0.00013}$	$\sigma_8(0.38)$	0.6291	$0.662^{+0.015}_{-0.031}$
$\boldsymbol{A^{kSZ}}$	0.00	< 5.05	$Y_{\rm P}^{\rm BBN}$	0.246833	$0.24684^{+0.00011}_{-0.00013}$	$f\sigma_8(0.51)$	0.4413	$0.464^{+0.015}_{-0.021}$
$\boldsymbol{A_{100}^{dust}}$	1.008	1.01 ± 0.20	10^5D/H	2.532	2.534 ± 0.054	$\sigma_8(0.51)$	0.5895	$0.621^{+0.014}_{-0.029}$
$\boldsymbol{A_{143}^{dust}}$	0.962	0.95 ± 0.18	Age/Gyr	13.735	13.733 ± 0.051	$f\sigma_8(0.61)$	0.4380	$0.460^{+0.014}_{-0.021}$
$\boldsymbol{A_{217}^{dust}}$	0.988	0.98 ± 0.10	z_*	1089.24	1089.23 ± 0.54	$\sigma_8(0.61)$	0.5614	$0.591^{+0.013}_{-0.028}$
$\boldsymbol{A_{143\times217}^{dust}}$	1.016	1.01 ± 0.16	r_*	145.10	145.21 ± 0.54	$f\sigma_8(2.33)$	0.2838	$0.2990^{+0.0061}_{-0.015}$
$\boldsymbol{c_{100}}$	0.99790	0.9976 ± 0.0011	$100\theta_*$	1.04163	1.04166 ± 0.00052	$\sigma_8(2.33)$	0.2934	$0.3092^{+0.0060}_{-0.015}$
$\boldsymbol{c_{217}}$	1.00088	1.0007 ± 0.0016	$D_{\rm M}(z_*)$/Gpc	13.9300	13.940 ± 0.049	f_{2000}^{143}	25.68	26 ± 3
H_0	69.02	69.2 ± 1.2	$z_{\rm drag}$	1060.39	1060.33 ± 0.57	f_{2000}^{217}	103.69	104.0 ± 2.4
Ω_Λ	0.7064	$0.708^{+0.016}_{-0.014}$	$r_{\rm drag}$	147.67	147.79 ± 0.51	$f_{2000}^{143\times217}$	28.89	28.8 ± 2.7
$\Omega_{\rm m}$	0.2936	0.292 ± 0.015	$k_{\rm D}$	0.14048	0.14034 ± 0.00052	$\chi^2_{\rm lowl}$	20.86	22.0 ± 1.5
$\Omega_{\rm m}h^2$	0.13986	0.1395 ± 0.0024	$100\theta_{\rm D}$	0.160545	0.16059 ± 0.00031	$\chi^2_{\rm CamSpec}$	7046.1	7060.0 ± 5.3
$\Omega_{\rm m}h^3$	0.09653	0.09645 ± 0.00050	$z_{\rm eq}$	3327	3318 ± 56	$\chi^2_{\rm prior}$	1.38	7.2 ± 3.3
σ_8	0.7639	$0.804^{+0.020}_{-0.037}$	$k_{\rm eq}$	0.010154	0.01013 ± 0.00017	$\chi^2_{\rm CMB}$	7066.9	7082.0 ± 5.3

Best-fit $\chi^2_{\rm eff} = 7068.30$; $\Delta\chi^2_{\rm eff} = -3.99$; $\bar{\chi}^2_{\rm eff} = 7089.14$; $\Delta\bar{\chi}^2_{\rm eff} = -3.10$; $R - 1 = 0.00730$
$\chi^2_{\rm eff}$: CMB - commander_dx12_v3_2_29: 20.86 (Δ -3.64) CamSpec like_10.7HM: 7046.06 (Δ -0.32)

3.77 base_Alens_CamSpecHM_TT_lowl_post_BAO

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02251 ± 0.00022	$\sigma_8\Omega_m^{0.25}$	$0.597^{+0.014}_{-0.026}$	$H(0.38)$	83.49 ± 0.40
$\boldsymbol{\Omega_c h^2}$	0.1178 ± 0.0013	$\sigma_8/h^{0.5}$	$0.974^{+0.022}_{-0.042}$	$D_M(0.38)$	1516 ± 10
$\boldsymbol{100\theta_{MC}}$	1.04128 ± 0.00042	$r_{drag}h$	100.9 ± 1.0	$H(0.51)$	90.12 ± 0.34
$\boldsymbol{\tau}$	< 0.0706	$\langle d^2\rangle^{1/2}$	2.626 ± 0.076	$D_M(0.51)$	1966 ± 12
$\boldsymbol{A_L}$	1.20 ± 0.11	z_{re}	$7.6^{+2.3}_{-4.6}$	$H(0.61)$	95.66 ± 0.29
$\boldsymbol{\ln(10^{10}A_s)}$	$3.043^{+0.037}_{-0.087}$	$10^9 A_s$	$2.102^{+0.071}_{-0.18}$	$D_M(0.61)$	2289 ± 13
$\boldsymbol{n_s}$	0.9723 ± 0.0048	$10^9 A_s e^{-2\tau}$	1.870 ± 0.012	$H(2.33)$	235.30 ± 0.80
$\boldsymbol{y_{cal}}$	1.0000 ± 0.0025	D_{40}	1216^{+14}_{-17}	$D_M(2.33)$	5747 ± 14
$\boldsymbol{A^{PS}_{100}}$	230 ± 25	D_{220}	5718 ± 40	$f\sigma_8(0.15)$	$0.448^{+0.012}_{-0.019}$
$\boldsymbol{A^{PS}_{143}}$	34 ± 9	D_{810}	2526 ± 14	$\sigma_8(0.15)$	$0.745^{+0.014}_{-0.032}$
$\boldsymbol{A^{PS}_{217}}$	104 ± 10	D_{1420}	813.8 ± 5.0	$f\sigma_8(0.38)$	$0.468^{+0.012}_{-0.020}$
$\boldsymbol{A^{CIB}_{217}}$	37 ± 7	D_{2000}	231.9 ± 1.9	$\sigma_8(0.38)$	$0.662^{+0.012}_{-0.029}$
$\boldsymbol{A^{tSZ}_{143}}$	$4.1^{+2.0}_{-2.3}$	$n_{s,0.002}$	0.9723 ± 0.0048	$f\sigma_8(0.51)$	$0.468^{+0.011}_{-0.020}$
$\boldsymbol{r^{PS}_{143\times217}}$	0.68 ± 0.13	Y_P	0.245448 ± 0.000088	$\sigma_8(0.51)$	$0.620^{+0.011}_{-0.027}$
$\boldsymbol{r^{CIB}_{143\times217}}$	$0.51^{+0.34}_{-0.26}$	Y_P^{BBN}	0.246775 ± 0.000089	$f\sigma_8(0.61)$	$0.464^{+0.010}_{-0.020}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	10^5D/H	2.560 ± 0.041	$\sigma_8(0.61)$	$0.590^{+0.011}_{-0.026}$
$\boldsymbol{A^{kSZ}}$	< 5.25	Age/Gyr	13.763 ± 0.032	$f\sigma_8(2.33)$	$0.2979^{+0.0054}_{-0.013}$
$\boldsymbol{A^{dust}_{100}}$	1.01 ± 0.19	z_*	1089.55 ± 0.34	$\sigma_8(2.33)$	$0.3076^{+0.0055}_{-0.014}$
$\boldsymbol{A^{dust}_{143}}$	0.95 ± 0.18	r_*	144.89 ± 0.32	f^{143}_{2000}	27 ± 3
$\boldsymbol{A^{dust}_{217}}$	0.98 ± 0.10	$100\theta_*$	1.04145 ± 0.00042	f^{217}_{2000}	104.7 ± 2.2
$\boldsymbol{A^{dust}_{143\times217}}$	1.01 ± 0.16	$D_M(z_*)$/Gpc	13.912 ± 0.031	$f^{143\times217}_{2000}$	29.6 ± 2.4
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	z_{drag}	1060.11 ± 0.49	χ^2_{lowl}	22.4 ± 1.4
$\boldsymbol{c_{217}}$	1.0009 ± 0.0016	r_{drag}	147.51 ± 0.35	$\chi^2_{CamSpec}$	7058.9 ± 5.1
H_0	68.37 ± 0.61	k_D	0.14053 ± 0.00045	χ^2_{6DF}	0.049 ± 0.071
Ω_Λ	0.6983 ± 0.0077	$100\theta_D$	0.16069 ± 0.00028	χ^2_{MGS}	2.00 ± 0.65
Ω_m	0.3017 ± 0.0077	z_{eq}	3353 ± 29	$\chi^2_{DR12BAO}$	4.05 ± 0.97
$\Omega_m h^2$	0.1410 ± 0.0012	k_{eq}	0.010235 ± 0.000089	χ^2_{prior}	7.2 ± 3.3
$\Omega_m h^3$	0.09638 ± 0.00049	$100\theta_{eq}$	0.8229 ± 0.0056	χ^2_{BAO}	6.1 ± 1.3
σ_8	$0.806^{+0.016}_{-0.035}$	$100\theta_{s,eq}$	0.4543 ± 0.0029	χ^2_{CMB}	7081.3 ± 5.2
S_8	$0.808^{+0.023}_{-0.035}$	$H(0.15)$	73.55 ± 0.53		
$\sigma_8\Omega_m^{0.5}$	$0.442^{+0.013}_{-0.019}$	$D_M(0.15)$	634.8 ± 5.1		

$\bar{\chi}^2_{eff} = 7094.64$; $\Delta\bar{\chi}^2_{eff} = -2.98$; $R - 1 = 0.01645$

3.78 base_Alens_CamSpecHM_TT_lowl_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02268 ± 0.00030	S_8	$0.806^{+0.032}_{-0.037}$	$100\theta_{\rm eq}$	0.832 ± 0.011
$\boldsymbol{\Omega_c h^2}$	0.1159 ± 0.0025	$\sigma_8\Omega_{\rm m}^{0.5}$	$0.441^{+0.018}_{-0.020}$	$100\theta_{\rm s,eq}$	0.4587 ± 0.0058
$\boldsymbol{100\theta_{MC}}$	1.04154 ± 0.00053	$\sigma_8\Omega_{\rm m}^{0.25}$	$0.601^{+0.018}_{-0.023}$	$H(0.15)$	74.4 ± 1.1
$\boldsymbol{\tau}$	$0.084^{+0.014}_{-0.039}$	$\sigma_8/h^{0.5}$	$0.985^{+0.027}_{-0.037}$	$D_{\rm M}(0.15)$	627 ± 10
$\boldsymbol{A_L}$	1.18 ± 0.11	$r_{\rm drag}h$	102.5 ± 2.1	$H(0.38)$	84.10 ± 0.81
$\boldsymbol{\ln(10^{10}A_s)}$	$3.093^{+0.031}_{-0.076}$	$\langle d^2\rangle^{1/2}$	2.640 ± 0.078	$D_{\rm M}(0.38)$	1501 ± 21
$\boldsymbol{n_s}$	0.9781 ± 0.0077	$z_{\rm re}$	< 11.3	$H(0.51)$	90.60 ± 0.66
$\boldsymbol{y_{cal}}$	1.0000 ± 0.0025	$10^9 A_{\rm s}$	$2.207^{+0.063}_{-0.17}$	$D_{\rm M}(0.51)$	1947 ± 24
$\boldsymbol{A^{PS}_{100}}$	227 ± 30	$10^9 A_{\rm s}e^{-2\tau}$	1.861 ± 0.015	$H(0.61)$	96.05 ± 0.54
$\boldsymbol{A^{PS}_{143}}$	32 ± 9	D_{40}	1213 ± 20	$D_{\rm M}(0.61)$	2269 ± 27
$\boldsymbol{A^{PS}_{217}}$	105 ± 10	D_{220}	5725 ± 42	$H(2.33)$	234.2 ± 1.4
$\boldsymbol{A^{CIB}_{217}}$	36^{+7}_{-7}	D_{810}	2524 ± 14	$D_{\rm M}(2.33)$	5731 ± 23
$\boldsymbol{A^{tSZ}_{143}}$	4.2 ± 2.1	D_{1420}	814.8 ± 5.2	$f\sigma_8(0.15)$	$0.448^{+0.017}_{-0.019}$
$\boldsymbol{r^{PS}_{143\times217}}$	0.69 ± 0.14	D_{2000}	232.8 ± 2.2	$\sigma_8(0.15)$	$0.760^{+0.015}_{-0.028}$
$\boldsymbol{r^{CIB}_{143\times217}}$	0.49 ± 0.27	$n_{\rm s,0.002}$	0.9781 ± 0.0077	$f\sigma_8(0.38)$	$0.471^{+0.015}_{-0.018}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$Y_{\rm P}$	$0.24552^{+0.00011}_{-0.00013}$	$\sigma_8(0.38)$	$0.676^{+0.012}_{-0.025}$
$\boldsymbol{A^{kSZ}}$	< 4.95	$Y_{\rm P}^{\rm BBN}$	$0.24684^{+0.00011}_{-0.00013}$	$f\sigma_8(0.51)$	$0.472^{+0.014}_{-0.018}$
$\boldsymbol{A^{dust}_{100}}$	1.01 ± 0.20	10^5D/H	2.530 ± 0.054	$\sigma_8(0.51)$	$0.634^{+0.011}_{-0.024}$
$\boldsymbol{A^{dust}_{143}}$	0.95 ± 0.18	Age/Gyr	13.728 ± 0.051	$f\sigma_8(0.61)$	$0.469^{+0.013}_{-0.017}$
$\boldsymbol{A^{dust}_{217}}$	0.99 ± 0.10	z_*	1089.18 ± 0.55	$\sigma_8(0.61)$	$0.603^{+0.010}_{-0.023}$
$\boldsymbol{A^{dust}_{143\times217}}$	1.01 ± 0.16	r_*	145.27 ± 0.53	$f\sigma_8(2.33)$	$0.3052^{+0.0047}_{-0.012}$
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	$100\theta_*$	1.04170 ± 0.00052	$\sigma_8(2.33)$	$0.3157^{+0.0046}_{-0.012}$
$\boldsymbol{c_{217}}$	1.0007 ± 0.0016	$D_{\rm M}(z_*)$/Gpc	13.946 ± 0.048	f^{143}_{2000}	25 ± 3
H_0	69.3 ± 1.2	$z_{\rm drag}$	1060.36 ± 0.57	f^{217}_{2000}	103.8 ± 2.4
Ω_Λ	0.710 ± 0.015	$r_{\rm drag}$	147.85 ± 0.51	$f^{143\times217}_{2000}$	28.5 ± 2.6
$\Omega_{\rm m}$	0.290 ± 0.015	$k_{\rm D}$	0.14030 ± 0.00051	$\chi^2_{\rm lowl}$	22.4 ± 1.6
$\Omega_{\rm m}h^2$	0.1392 ± 0.0023	$100\theta_{\rm D}$	0.16057 ± 0.00031	$\chi^2_{\rm CamSpec}$	7059.9 ± 5.4
$\Omega_{\rm m}h^3$	0.09646 ± 0.00050	$z_{\rm eq}$	3311 ± 56	$\chi^2_{\rm prior}$	7.2 ± 3.3
σ_8	$0.820^{+0.017}_{-0.030}$	$k_{\rm eq}$	0.01011 ± 0.00017	$\chi^2_{\rm CMB}$	7082.3 ± 5.4

$\bar{\chi}^2_{\rm eff} = 7089.50$; $\Delta\bar{\chi}^2_{\rm eff} = -2.64$; $R - 1 = 0.00995$

3.79 base_Alens_CamSpecHM_TT_lowl_post_BAO_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02252 ± 0.00022	$\sigma_8\Omega_m^{0.25}$	$0.610^{+0.012}_{-0.021}$	$H(0.38)$	83.51 ± 0.40
$\boldsymbol{\Omega_c h^2}$	0.1177 ± 0.0013	$\sigma_8/h^{0.5}$	$0.995^{+0.019}_{-0.034}$	$D_M(0.38)$	1516 ± 10
$\boldsymbol{100\theta_{MC}}$	1.04128 ± 0.00042	$r_{drag}h$	100.9 ± 1.0	$H(0.51)$	90.13 ± 0.33
$\boldsymbol{\tau}$	$0.079^{+0.020}_{-0.035}$	$\langle d^2\rangle^{1/2}$	2.627 ± 0.077	$D_M(0.51)$	1965 ± 12
$\boldsymbol{A_L}$	1.146 ± 0.093	z_{re}	< 10.9	$H(0.61)$	95.67 ± 0.28
$\boldsymbol{\ln(10^{10}A_s)}$	$3.086^{+0.028}_{-0.067}$	$10^9 A_s$	$2.193^{+0.060}_{-0.15}$	$D_M(0.61)$	2288 ± 13
$\boldsymbol{n_s}$	0.9730 ± 0.0047	$10^9 A_s e^{-2\tau}$	1.869 ± 0.012	$H(2.33)$	235.23 ± 0.78
$\boldsymbol{y_{cal}}$	0.99998 ± 0.0025	D_{40}	1221^{+14}_{-17}	$D_M(2.33)$	5747 ± 14
$\boldsymbol{A^{PS}_{100}}$	229 ± 25	D_{220}	5715 ± 41	$f\sigma_8(0.15)$	$0.457^{+0.011}_{-0.016}$
$\boldsymbol{A^{PS}_{143}}$	34 ± 9	D_{810}	2526 ± 14	$\sigma_8(0.15)$	$0.761^{+0.012}_{-0.025}$
$\boldsymbol{A^{PS}_{217}}$	105 ± 10	D_{1420}	813.9 ± 5.0	$f\sigma_8(0.38)$	$0.4780^{+0.0099}_{-0.016}$
$\boldsymbol{A^{CIB}_{217}}$	37 ± 7	D_{2000}	232.0 ± 1.9	$\sigma_8(0.38)$	$0.6761^{+0.0099}_{-0.023}$
$\boldsymbol{A^{tSZ}_{143}}$	$4.1^{+2.0}_{-2.3}$	$n_{s,0.002}$	0.9730 ± 0.0047	$f\sigma_8(0.51)$	$0.4778^{+0.0093}_{-0.016}$
$\boldsymbol{r^{PS}_{143\times217}}$	0.68 ± 0.13	Y_P	0.245449 ± 0.000087	$\sigma_8(0.51)$	$0.6332^{+0.0091}_{-0.021}$
$\boldsymbol{r^{CIB}_{143\times217}}$	$0.51^{+0.34}_{-0.26}$	Y_P^{BBN}	0.246776 ± 0.000088	$f\sigma_8(0.61)$	$0.4736^{+0.0088}_{-0.016}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	10^5D/H	2.560 ± 0.040	$\sigma_8(0.61)$	$0.6028^{+0.0086}_{-0.020}$
$\boldsymbol{A^{kSZ}}$	< 5.14	Age/Gyr	13.762 ± 0.032	$f\sigma_8(2.33)$	$0.3044^{+0.0042}_{-0.010}$
$\boldsymbol{A^{dust}_{100}}$	1.01 ± 0.19	z_*	1089.54 ± 0.33	$\sigma_8(2.33)$	$0.3143^{+0.0043}_{-0.011}$
$\boldsymbol{A^{dust}_{143}}$	0.95 ± 0.18	r_*	144.91 ± 0.31	f^{143}_{2000}	26 ± 3
$\boldsymbol{A^{dust}_{217}}$	0.98 ± 0.10	$100\theta_*$	1.04145 ± 0.00041	f^{217}_{2000}	104.6 ± 2.2
$\boldsymbol{A^{dust}_{143\times217}}$	1.01 ± 0.16	$D_M(z_*)$/Gpc	13.915 ± 0.031	$f^{143\times217}_{2000}$	29.5 ± 2.4
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	z_{drag}	1060.10 ± 0.49	χ^2_{lowl}	23.0 ± 1.5
$\boldsymbol{c_{217}}$	1.0008 ± 0.0015	r_{drag}	147.54 ± 0.34	$\chi^2_{CamSpec}$	7058.7 ± 5.2
H_0	68.41 ± 0.60	k_D	0.14050 ± 0.00045	χ^2_{6DF}	0.051 ± 0.073
Ω_Λ	0.6989 ± 0.0076	$100\theta_D$	0.16069 ± 0.00028	χ^2_{MGS}	2.05 ± 0.65
Ω_m	0.3011 ± 0.0076	z_{eq}	3351 ± 29	$\chi^2_{DR12BAO}$	4.04 ± 0.96
$\Omega_m h^2$	0.1409 ± 0.0012	k_{eq}	0.010228 ± 0.000088	χ^2_{prior}	7.3 ± 3.3
$\Omega_m h^3$	0.09636 ± 0.00048	$100\theta_{eq}$	0.8233 ± 0.0055	χ^2_{BAO}	6.1 ± 1.3
σ_8	$0.823^{+0.013}_{-0.027}$	$100\theta_{s,eq}$	0.4545 ± 0.0028	χ^2_{CMB}	7081.7 ± 5.3
S_8	$0.824^{+0.020}_{-0.030}$	$H(0.15)$	73.58 ± 0.52		
$\sigma_8\Omega_m^{0.5}$	$0.452^{+0.011}_{-0.016}$	$D_M(0.15)$	634.5 ± 5.0		

$\bar{\chi}^2_{eff} = 7095.11$; $\Delta\bar{\chi}^2_{eff} = -2.46$; $R - 1 = 0.02149$

3.80 base_Alens_CamSpecHM_TT_lowE

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022554	0.02253 ± 0.00031	S_8	0.7979	0.800 ± 0.032	$100\theta_{\rm eq}$	0.8245	0.823 ± 0.012
$\boldsymbol{\Omega_c h^2}$	0.11743	0.1177 ± 0.0027	$\sigma_8\Omega_{\rm m}^{0.5}$	0.4370	0.438 ± 0.018	$100\theta_{\rm s,eq}$	0.4551	0.4546 ± 0.0060
$\boldsymbol{100\theta_{MC}}$	1.04132	1.04130 ± 0.00055	$\sigma_8\Omega_{\rm m}^{0.25}$	0.5909	0.592 ± 0.016	$H(0.15)$	73.71	73.6 ± 1.1
$\boldsymbol{\tau}$	0.0509	0.0504 ± 0.0085	$\sigma_8/h^{0.5}$	0.9649	0.966 ± 0.022	$D_{\rm M}(0.15)$	633.3	634 ± 11
$\boldsymbol{A_L}$	1.222	$1.213^{+0.091}_{-0.10}$	$r_{\rm drag}h$	101.16	101.0 ± 2.2	$H(0.38)$	83.61	83.55 ± 0.83
$\boldsymbol{\ln(10^{10}A_s)}$	3.0305	3.030 ± 0.018	$\langle d^2\rangle^{1/2}$	2.638	2.629 ± 0.077	$D_{\rm M}(0.38)$	1513.2	1515 ± 22
$\boldsymbol{n_s}$	0.9728	0.9713 ± 0.0080	$z_{\rm re}$	7.25	$7.19^{+0.89}_{-0.75}$	$H(0.51)$	90.20	$90.16^{+0.62}_{-0.70}$
$\boldsymbol{y_{cal}}$	0.99998	1.0001 ± 0.0025	$10^9 A_{\rm s}$	2.0707	2.069 ± 0.037	$D_{\rm M}(0.51)$	1962.2	1965 ± 26
$\boldsymbol{A_{100}^{PS}}$	221.1	232 ± 26	$10^9 A_{\rm s}e^{-2\tau}$	1.8702	1.870 ± 0.015	$H(0.61)$	95.73	$95.70^{+0.50}_{-0.58}$
$\boldsymbol{A_{143}^{PS}}$	47.8	35 ± 9	D_{40}	1210.9	1214 ± 19	$D_{\rm M}(0.61)$	2284.9	2287 ± 28
$\boldsymbol{A_{217}^{PS}}$	107.6	103 ± 10	D_{220}	5729.0	5729 ± 42	$H(2.33)$	235.09	235.2 ± 1.6
$\boldsymbol{A_{217}^{CIB}}$	38.9	38 ± 7	D_{810}	2528.0	2526 ± 14	$D_{\rm M}(2.33)$	5744.3	5746 ± 24
$\boldsymbol{A_{143}^{tSZ}}$	6.40	$4.1^{+2.0}_{-2.4}$	D_{1420}	814.5	813.4 ± 5.2	$f\sigma_8(0.15)$	0.4425	0.444 ± 0.016
$\boldsymbol{r_{143\times217}^{PS}}$	0.773	0.67 ± 0.14	D_{2000}	232.22	231.7 ± 2.2	$\sigma_8(0.15)$	0.7394	0.7392 ± 0.0096
$\boldsymbol{r_{143\times217}^{CIB}}$	0.849	$0.52^{+0.35}_{-0.25}$	$n_{\rm s,0.002}$	0.9728	0.9713 ± 0.0080	$f\sigma_8(0.38)$	0.4633	0.464 ± 0.013
$\boldsymbol{\xi^{tSZ\times CIB}}$	1.00	—	$Y_{\rm P}$	0.245464	$0.24546^{+0.00011}_{-0.00012}$	$\sigma_8(0.38)$	0.6568	0.6564 ± 0.0073
$\boldsymbol{A^{kSZ}}$	0.01	< 5.55	$Y_{\rm P}^{\rm BBN}$	0.246791	$0.24678^{+0.00011}_{-0.00012}$	$f\sigma_8(0.51)$	0.4633	0.464 ± 0.011
$\boldsymbol{A_{100}^{dust}}$	1.003	1.01 ± 0.20	10^5D/H	2.552	2.557 ± 0.056	$\sigma_8(0.51)$	0.6152	0.6147 ± 0.0064
$\boldsymbol{A_{143}^{dust}}$	0.969	0.96 ± 0.18	Age/Gyr	13.756	13.759 ± 0.053	$f\sigma_8(0.61)$	0.4594	0.460 ± 0.010
$\boldsymbol{A_{217}^{dust}}$	0.985	0.98 ± 0.10	z_*	1089.47	1089.52 ± 0.57	$\sigma_8(0.61)$	0.5857	0.5852 ± 0.0059
$\boldsymbol{A_{143\times217}^{dust}}$	1.003	1.02 ± 0.16	r_*	144.96	144.91 ± 0.56	$f\sigma_8(2.33)$	0.29582	0.2955 ± 0.0028
$\boldsymbol{c_{100}}$	0.99793	0.9976 ± 0.0010	$100\theta_*$	1.04149	1.04147 ± 0.00054	$\sigma_8(2.33)$	0.30553	0.3052 ± 0.0028
$\boldsymbol{c_{217}}$	1.00095	1.0009 ± 0.0016	$D_{\rm M}(z_*)$/Gpc	13.918	13.914 ± 0.051	f_{2000}^{143}	26.96	27 ± 4
H_0	68.55	68.4 ± 1.3	$z_{\rm drag}$	1060.16	1060.14 ± 0.58	f_{2000}^{217}	104.33	105.0 ± 2.4
Ω_Λ	0.7007	$0.699^{+0.017}_{-0.016}$	$r_{\rm drag}$	147.57	147.53 ± 0.53	$f_{2000}^{143\times217}$	29.67	30.0 ± 2.7
$\Omega_{\rm m}$	0.2993	$0.301^{+0.016}_{-0.017}$	$k_{\rm D}$	0.14050	0.14052 ± 0.00053	$\chi^2_{\rm simall}$	395.67	396.8 ± 1.6
$\Omega_{\rm m}h^2$	0.14063	0.1409 ± 0.0025	$100\theta_{\rm D}$	0.160650	0.16068 ± 0.00032	$\chi^2_{\rm CamSpec}$	7045.6	7059.8 ± 5.3
$\Omega_{\rm m}h^3$	0.09641	0.09639 ± 0.00050	$z_{\rm eq}$	3345	3351 ± 60	$\chi^2_{\rm prior}$	1.39	7.2 ± 3.3
σ_8	0.7989	0.799 ± 0.012	$k_{\rm eq}$	0.010210	0.01023 ± 0.00018	$\chi^2_{\rm CMB}$	7441.3	7456.6 ± 5.6

Best-fit $\chi^2_{\rm eff} = 7442.68$; $\Delta\chi^2_{\rm eff} = -5.15$; $\bar{\chi}^2_{\rm eff} = 7463.85$; $\Delta\bar{\chi}^2_{\rm eff} = -3.64$; $R - 1 = 0.00741$
$\chi^2_{\rm eff}$: CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.67 (Δ -0.16) CamSpec like_10.7HM: 7045.62 (Δ -4.09)

3.81 base_Alens_CamSpecHM_TTTEEE

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022503	0.02247 ± 0.00020	$\Omega_m h^3$	0.096311	0.09626 ± 0.00033	z_{eq}	3361.2	3362 ± 37
$\boldsymbol{\Omega_c h^2}$	0.11815	0.1182 ± 0.0017	σ_8	0.843	0.850 ± 0.051	k_{eq}	0.010259	0.01026 ± 0.00011
$\boldsymbol{100\theta_{MC}}$	1.041047	1.04105 ± 0.00033	S_8	0.849	$0.857^{+0.045}_{-0.065}$	$100\theta_{eq}$	0.8212	0.8211 ± 0.0071
$\boldsymbol{\tau}$	0.101	< 0.141	$\sigma_8\Omega_m^{0.5}$	0.4649	$0.469^{+0.025}_{-0.036}$	$100\theta_{s,eq}$	0.45340	0.4534 ± 0.0036
$\boldsymbol{A_L}$	1.035	$1.02^{+0.12}_{-0.15}$	$\sigma_8\Omega_m^{0.25}$	0.6260	$0.632^{+0.044}_{-0.052}$	$H(0.15)$	73.37	73.33 ± 0.66
$\boldsymbol{\ln(10^{10}A_s)}$	3.133	3.15 ± 0.12	$\sigma_8/h^{0.5}$	1.021	1.030 ± 0.061	$D_M(0.15)$	636.6	636.9 ± 6.5
$\boldsymbol{n_s}$	0.9716	$0.9713^{+0.0058}_{-0.0064}$	$r_{drag}h$	100.49	100.5 ± 1.3	$H(0.38)$	83.353	83.33 ± 0.49
$\boldsymbol{A_{100}^{PS}}$	222.2	232 ± 25	$\langle d^2\rangle^{1/2}$	2.566	2.555 ± 0.066	$D_M(0.38)$	1519.9	1521 ± 13
$\boldsymbol{A_{143}^{PS}}$	48.5	35 ± 8	z_{re}	11.9	$12.0^{+7.6}_{-4.6}$	$H(0.51)$	89.998	89.97 ± 0.39
$\boldsymbol{A_{217}^{PS}}$	108.5	105 ± 10	$10^9 A_s$	2.294	2.34 ± 0.28	$D_M(0.51)$	1970.1	1971 ± 15
$\boldsymbol{A_{217}^{CIB}}$	38.8	37 ± 7	$10^9 A_s e^{-2\tau}$	1.8725	1.871 ± 0.013	$H(0.61)$	95.563	95.54 ± 0.31
$\boldsymbol{A_{143}^{tSZ}}$	6.30	4.1 ± 2.0	D_{40}	1234.0	1247^{+21}_{-43}	$D_M(0.61)$	2293.4	2294 ± 17
$\boldsymbol{r_{143\times217}^{PS}}$	0.775	0.68 ± 0.13	D_{220}	5724.1	5720 ± 41	$H(2.33)$	235.49	235.49 ± 0.96
$\boldsymbol{r_{143\times217}^{CIB}}$	0.839	$0.51^{+0.32}_{-0.28}$	D_{810}	2530.6	2529 ± 14	$D_M(2.33)$	5751.8	5753 ± 14
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.996	—	D_{1420}	815.66	814.8 ± 4.9	$f\sigma_8(0.15)$	0.4703	$0.475^{+0.024}_{-0.037}$
$\boldsymbol{A^{kSZ}}$	0.00	< 5.33	D_{2000}	231.94	231.6 ± 1.9	$\sigma_8(0.15)$	0.780	0.787 ± 0.047
$\boldsymbol{A_{100}^{dust}}$	1.003	0.998 ± 0.19	$n_{s,0.002}$	0.9716	$0.9713^{+0.0058}_{-0.0064}$	$f\sigma_8(0.38)$	0.4911	$0.496^{+0.033}_{-0.040}$
$\boldsymbol{A_{143}^{dust}}$	0.960	0.94 ± 0.18	Y_P	0.245446	0.245433 ± 0.000076	$\sigma_8(0.38)$	0.692	0.698 ± 0.042
$\boldsymbol{A_{217}^{dust}}$	0.987	0.98 ± 0.10	Y_P^{BBN}	0.246772	0.246759 ± 0.000076	$f\sigma_8(0.51)$	0.4905	$0.495^{+0.037}_{-0.041}$
$\boldsymbol{A_{143\times217}^{dust}}$	1.001	1.02 ± 0.16	10^5D/H	2.5614	2.567 ± 0.036	$\sigma_8(0.51)$	0.648	0.654 ± 0.039
$\boldsymbol{y_{cal}}$	1.00001	1.0001 ± 0.0025	Age/Gyr	13.7722	13.775 ± 0.031	$f\sigma_8(0.61)$	0.4860	0.490 ± 0.029
$\boldsymbol{c_{100}}$	0.99791	0.9976 ± 0.0011	z_*	1089.591	1089.64 ± 0.36	$\sigma_8(0.61)$	0.617	0.622 ± 0.037
$\boldsymbol{c_{217}}$	1.00098	1.0009 ± 0.0016	r_*	144.809	144.82 ± 0.35	$f\sigma_8(2.33)$	0.3113	0.314 ± 0.019
$\boldsymbol{c_{TE}}$	0.9919	0.9919 ± 0.0055	$100\theta_*$	1.041225	1.04122 ± 0.00032	$\sigma_8(2.33)$	0.3213	0.324 ± 0.020
$\boldsymbol{c_{EE}}$	0.9905	0.9900 ± 0.0051	$D_M(z_*)$/Gpc	13.9076	13.909 ± 0.032	f_{2000}^{143}	27.20	27 ± 3
H_0	68.16	68.12 ± 0.77	z_{drag}	1060.123	1060.04 ± 0.38	f_{2000}^{217}	104.59	105.1 ± 2.2
Ω_Λ	0.6959	0.695 ± 0.010	r_{drag}	147.433	147.46 ± 0.34	$f_{2000}^{143\times217}$	29.95	30.1 ± 2.4
Ω_m	0.3041	0.305 ± 0.010	k_D	0.140605	0.14056 ± 0.00035	$\chi^2_{CamSpec}$	11495.7	11512.3 ± 5.7
$\Omega_m h^2$	0.14130	0.1413 ± 0.0015	$100\theta_D$	0.160656	0.16070 ± 0.00022	χ^2_{prior}	1.80	7.8 ± 3.4

Best-fit $\chi^2_{eff} = 11497.50$; $\bar{\chi}^2_{eff} = 11520.05$; $\Delta\bar{\chi}^2_{eff} = 0.29$; $R - 1 = 0.00760$
χ^2_{eff}: CMB - CamSpec like_10.7HM_1400_unified: 11495.71

3.82 base_Alens_CamSpecHM_TTTEEE_post_BAO

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02247 ± 0.00017	S_8	$0.857^{+0.053}_{-0.070}$	$H(0.15)$	73.33 ± 0.44
$\boldsymbol{\Omega_c h^2}$	0.1182 ± 0.0011	$\sigma_8\Omega_m^{0.5}$	$0.469^{+0.029}_{-0.038}$	$D_M(0.15)$	636.9 ± 4.3
$\boldsymbol{100\theta_{MC}}$	1.04105 ± 0.00030	$\sigma_8\Omega_m^{0.25}$	0.632 ± 0.038	$H(0.38)$	83.32 ± 0.33
$\boldsymbol{\tau}$	< 0.140	$\sigma_8/h^{0.5}$	1.030 ± 0.062	$D_M(0.38)$	1520.7 ± 8.8
$\boldsymbol{A_L}$	$1.02^{+0.12}_{-0.15}$	$r_{drag}h$	100.45 ± 0.87	$H(0.51)$	89.97 ± 0.27
$\boldsymbol{\ln(10^{10}A_s)}$	3.15 ± 0.12	$\langle d^2\rangle^{1/2}$	2.554 ± 0.065	$D_M(0.51)$	1971 ± 10
$\boldsymbol{n_s}$	$0.9713^{+0.0047}_{-0.0052}$	z_{re}	$12.0^{+7.5}_{-4.6}$	$H(0.61)$	95.54 ± 0.22
$\boldsymbol{A_{100}^{PS}}$	232 ± 25	$10^9 A_s$	2.34 ± 0.28	$D_M(0.61)$	2294 ± 11
$\boldsymbol{A_{143}^{PS}}$	35 ± 8	$10^9 A_s e^{-2\tau}$	1.871 ± 0.012	$H(2.33)$	235.49 ± 0.66
$\boldsymbol{A_{217}^{PS}}$	105 ± 10	D_{40}	1247^{+20}_{-43}	$D_M(2.33)$	5753 ± 11
$\boldsymbol{A_{217}^{CIB}}$	37 ± 7	D_{220}	5721 ± 40	$f\sigma_8(0.15)$	$0.475^{+0.032}_{-0.039}$
$\boldsymbol{A_{143}^{tSZ}}$	4.1 ± 2.0	D_{810}	2529 ± 14	$\sigma_8(0.15)$	0.786 ± 0.047
$\boldsymbol{r_{143\times217}^{PS}}$	0.68 ± 0.13	D_{1420}	814.8 ± 4.9	$f\sigma_8(0.38)$	0.495 ± 0.030
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.51^{+0.32}_{-0.28}$	D_{2000}	231.5 ± 1.8	$\sigma_8(0.38)$	0.698 ± 0.042
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$n_{s,0.002}$	$0.9713^{+0.0047}_{-0.0052}$	$f\sigma_8(0.51)$	0.495 ± 0.030
$\boldsymbol{A^{kSZ}}$	< 5.33	Y_P	0.245432 ± 0.000064	$\sigma_8(0.51)$	0.653 ± 0.039
$\boldsymbol{A_{100}^{dust}}$	0.998 ± 0.20	Y_P^{BBN}	0.246759 ± 0.000064	$f\sigma_8(0.61)$	0.490 ± 0.029
$\boldsymbol{A_{143}^{dust}}$	0.94 ± 0.18	10^5D/H	2.568 ± 0.030	$\sigma_8(0.61)$	0.622 ± 0.037
$\boldsymbol{A_{217}^{dust}}$	0.98 ± 0.10	Age/Gyr	13.776 ± 0.024	$f\sigma_8(2.33)$	0.314 ± 0.019
$\boldsymbol{A_{143\times217}^{dust}}$	1.01 ± 0.16	z_*	1089.64 ± 0.27	$\sigma_8(2.33)$	0.324 ± 0.020
$\boldsymbol{y_{cal}}$	1.0001 ± 0.0025	r_*	144.82 ± 0.25	f_{2000}^{143}	27 ± 3
$\boldsymbol{c_{100}}$	0.9976 ± 0.0011	$100\theta_*$	1.04122 ± 0.00029	f_{2000}^{217}	105.1 ± 2.1
$\boldsymbol{c_{217}}$	1.0009 ± 0.0016	$D_M(z_*)$/Gpc	13.909 ± 0.024	$f_{2000}^{143\times217}$	30.1 ± 2.3
$\boldsymbol{c_{TE}}$	0.9920 ± 0.0054	z_{drag}	1060.04 ± 0.35	$\chi^2_{CamSpec}$	11511.8 ± 5.6
$\boldsymbol{c_{EE}}$	0.9901 ± 0.0051	r_{drag}	147.46 ± 0.26	χ^2_{6DF}	0.032 ± 0.045
H_0	68.12 ± 0.51	k_D	0.14056 ± 0.00032	χ^2_{MGS}	1.74 ± 0.53
Ω_Λ	0.6954 ± 0.0067	$100\theta_D$	0.16070 ± 0.00021	$\chi^2_{DR12BAO}$	4.02 ± 0.88
Ω_m	0.3046 ± 0.0067	z_{eq}	3362 ± 25	χ^2_{prior}	7.8 ± 3.4
$\Omega_m h^2$	0.1413 ± 0.0010	k_{eq}	0.010260 ± 0.000076	χ^2_{BAO}	5.79 ± 0.80
$\Omega_m h^3$	0.09626 ± 0.00033	$100\theta_{eq}$	0.8210 ± 0.0048		
σ_8	0.850 ± 0.051	$100\theta_{s,eq}$	0.4533 ± 0.0024		

$\bar{\chi}^2_{eff} = 11525.37$; $R - 1 = 0.00886$

3.83 base_Alens_CamSpecHM_TTTEEE_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02248 ± 0.00019	$\Omega_m h^3$	0.09626 ± 0.00033	z_{eq}	3360 ± 37
$\boldsymbol{\Omega_c h^2}$	0.1181 ± 0.0017	σ_8	0.864 ± 0.044	k_{eq}	0.01025 ± 0.00011
$\boldsymbol{100\theta_{MC}}$	1.04105 ± 0.00033	S_8	$0.870^{+0.042}_{-0.056}$	$100\theta_{eq}$	0.8214 ± 0.0072
$\boldsymbol{\tau}$	0.126 ± 0.052	$\sigma_8\Omega_m^{0.5}$	$0.477^{+0.023}_{-0.031}$	$100\theta_{s,eq}$	0.4535 ± 0.0037
$\boldsymbol{A_L}$	$0.98^{+0.11}_{-0.12}$	$\sigma_8\Omega_m^{0.25}$	$0.642^{+0.037}_{-0.043}$	$H(0.15)$	73.36 ± 0.66
$\boldsymbol{\ln(10^{10}A_s)}$	3.18 ± 0.10	$\sigma_8/h^{0.5}$	1.047 ± 0.054	$D_M(0.15)$	636.7 ± 6.5
$\boldsymbol{n_s}$	0.9719 ± 0.0061	$r_{drag}h$	100.5 ± 1.3	$H(0.38)$	83.35 ± 0.49
$\boldsymbol{A^{PS}_{100}}$	231 ± 25	$\langle d^2\rangle^{1/2}$	2.555 ± 0.066	$D_M(0.38)$	1520 ± 13
$\boldsymbol{A^{PS}_{143}}$	35 ± 8	z_{re}	$13.6^{+5.9}_{-5.3}$	$H(0.51)$	89.99 ± 0.39
$\boldsymbol{A^{PS}_{217}}$	105 ± 10	10^9A_s	2.42 ± 0.25	$D_M(0.51)$	1970 ± 15
$\boldsymbol{A^{CIB}_{217}}$	37 ± 7	$10^9A_se^{-2\tau}$	1.870 ± 0.013	$H(0.61)$	95.55 ± 0.32
$\boldsymbol{A^{tSZ}_{143}}$	4.1 ± 2.0	D_{40}	1253^{+23}_{-41}	$D_M(0.61)$	2294 ± 17
$\boldsymbol{r^{PS}_{143\times217}}$	0.68 ± 0.13	D_{220}	5718 ± 40	$H(2.33)$	235.44 ± 0.96
$\boldsymbol{r^{CIB}_{143\times217}}$	$0.50^{+0.32}_{-0.28}$	D_{810}	2528 ± 14	$D_M(2.33)$	5753 ± 14
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{1420}	814.9 ± 4.9	$f\sigma_8(0.15)$	$0.482^{+0.023}_{-0.031}$
$\boldsymbol{A^{kSZ}}$	< 5.28	D_{2000}	231.7 ± 1.8	$\sigma_8(0.15)$	0.799 ± 0.041
$\boldsymbol{A^{dust}_{100}}$	0.995 ± 0.19	$n_{s,0.002}$	0.9719 ± 0.0061	$f\sigma_8(0.38)$	$0.503^{+0.027}_{-0.034}$
$\boldsymbol{A^{dust}_{143}}$	0.94 ± 0.18	Y_P	0.245435 ± 0.000075	$\sigma_8(0.38)$	0.709 ± 0.037
$\boldsymbol{A^{dust}_{217}}$	0.98 ± 0.10	Y_P^{BBN}	0.246761 ± 0.000076	$f\sigma_8(0.51)$	0.503 ± 0.026
$\boldsymbol{A^{dust}_{143\times217}}$	1.01 ± 0.16	10^5D/H	2.566 ± 0.035	$\sigma_8(0.51)$	0.664 ± 0.034
$\boldsymbol{y_{cal}}$	1.0001 ± 0.0025	Age/Gyr	13.774 ± 0.031	$f\sigma_8(0.61)$	0.498 ± 0.025
$\boldsymbol{c_{100}}$	0.9976 ± 0.0011	z_*	1089.62 ± 0.36	$\sigma_8(0.61)$	0.632 ± 0.033
$\boldsymbol{c_{217}}$	1.0009 ± 0.0016	r_*	144.84 ± 0.35	$f\sigma_8(2.33)$	0.319 ± 0.017
$\boldsymbol{c_{TE}}$	0.9917 ± 0.0055	$100\theta_*$	1.04123 ± 0.00032	$\sigma_8(2.33)$	0.329 ± 0.017
$\boldsymbol{c_{EE}}$	0.9898 ± 0.0051	$D_M(z_*)$/Gpc	13.910 ± 0.032	f^{143}_{2000}	27 ± 3
H_0	68.16 ± 0.77	z_{drag}	1060.05 ± 0.38	f^{217}_{2000}	104.9 ± 2.2
Ω_Λ	0.696 ± 0.010	r_{drag}	147.47 ± 0.34	$f^{143\times217}_{2000}$	29.9 ± 2.4
Ω_m	0.304 ± 0.010	k_D	0.14055 ± 0.00035	$\chi^2_{CamSpec}$	11512.2 ± 5.7
$\Omega_m h^2$	0.1412 ± 0.0015	$100\theta_D$	0.16069 ± 0.00022	χ^2_{prior}	7.8 ± 3.4

$\bar{\chi}^2_{eff} = 11520.01$; $R - 1 = 0.00786$

3.84 base_Alens_CamSpecHM_TTTEEE_post_BAO_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02247 ± 0.00017	S_8	$0.870^{+0.046}_{-0.059}$	$H(0.15)$	73.34 ± 0.44
$\boldsymbol{\Omega_c h^2}$	0.1182 ± 0.0011	$\sigma_8 \Omega_m^{0.5}$	$0.477^{+0.025}_{-0.032}$	$D_M(0.15)$	636.8 ± 4.3
$\boldsymbol{100\theta_{MC}}$	1.04105 ± 0.00030	$\sigma_8 \Omega_m^{0.25}$	0.642 ± 0.033	$H(0.38)$	83.33 ± 0.33
$\boldsymbol{\tau}$	0.125 ± 0.051	$\sigma_8/h^{0.5}$	1.047 ± 0.054	$D_M(0.38)$	1520.5 ± 8.7
$\boldsymbol{A_L}$	0.98 ± 0.11	$r_{drag} h$	100.47 ± 0.87	$H(0.51)$	89.98 ± 0.27
$\boldsymbol{\ln(10^{10} A_s)}$	3.18 ± 0.10	$\langle d^2 \rangle^{1/2}$	2.554 ± 0.065	$D_M(0.51)$	1971 ± 10
$\boldsymbol{n_s}$	0.9718 ± 0.0049	z_{re}	13.5 ± 4.0	$H(0.61)$	95.54 ± 0.22
$\boldsymbol{A^{PS}_{100}}$	232 ± 25	$10^9 A_s$	2.41 ± 0.25	$D_M(0.61)$	2294 ± 11
$\boldsymbol{A^{PS}_{143}}$	35 ± 8	$10^9 A_s e^{-2\tau}$	1.870 ± 0.011	$H(2.33)$	235.47 ± 0.66
$\boldsymbol{A^{PS}_{217}}$	105 ± 10	D_{40}	1253^{+22}_{-42}	$D_M(2.33)$	5753 ± 11
$\boldsymbol{A^{CIB}_{217}}$	37 ± 7	D_{220}	5719 ± 40	$f\sigma_8(0.15)$	$0.482^{+0.027}_{-0.033}$
$\boldsymbol{A^{tSZ}_{143}}$	4.1 ± 2.0	D_{810}	2528 ± 14	$\sigma_8(0.15)$	0.799 ± 0.041
$\boldsymbol{r^{PS}_{143\times217}}$	0.68 ± 0.13	D_{1420}	814.9 ± 4.9	$f\sigma_8(0.38)$	0.503 ± 0.026
$\boldsymbol{r^{CIB}_{143\times217}}$	0.51 ± 0.26	D_{2000}	231.6 ± 1.8	$\sigma_8(0.38)$	0.709 ± 0.037
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$n_{s,0.002}$	0.9718 ± 0.0049	$f\sigma_8(0.51)$	0.503 ± 0.026
$\boldsymbol{A^{kSZ}}$	< 5.30	Y_P	$0.245433^{+0.000065}_{-0.000058}$	$\sigma_8(0.51)$	0.664 ± 0.034
$\boldsymbol{A^{dust}_{100}}$	0.995 ± 0.20	Y_P^{BBN}	$0.246759^{+0.000066}_{-0.000059}$	$f\sigma_8(0.61)$	0.498 ± 0.026
$\boldsymbol{A^{dust}_{143}}$	0.94 ± 0.18	10^5D/H	2.567 ± 0.030	$\sigma_8(0.61)$	0.632 ± 0.033
$\boldsymbol{A^{dust}_{217}}$	0.98 ± 0.10	Age/Gyr	13.775 ± 0.024	$f\sigma_8(2.33)$	0.319 ± 0.017
$\boldsymbol{A^{dust}_{143\times217}}$	1.01 ± 0.16	z_*	1089.63 ± 0.27	$\sigma_8(2.33)$	0.329 ± 0.017
$\boldsymbol{y_{cal}}$	1.0001 ± 0.0025	r_*	144.83 ± 0.25	f^{143}_{2000}	27 ± 3
$\boldsymbol{c_{100}}$	0.9976 ± 0.0011	$100\theta_*$	1.04123 ± 0.00029	f^{217}_{2000}	105.0 ± 2.1
$\boldsymbol{c_{217}}$	1.0009 ± 0.0016	$D_M(z_*)$/Gpc	13.909 ± 0.024	$f^{143\times217}_{2000}$	30.0 ± 2.3
$\boldsymbol{c_{TE}}$	0.9918 ± 0.0054	z_{drag}	1060.04 ± 0.35	$\chi^2_{CamSpec}$	11511.7 ± 5.6
$\boldsymbol{c_{EE}}$	0.9899 ± 0.0051	r_{drag}	147.46 ± 0.26	χ^2_{6DF}	0.032 ± 0.045
H_0	68.13 ± 0.51	k_D	0.14055 ± 0.00032	χ^2_{MGS}	1.75 ± 0.53
Ω_Λ	0.6956 ± 0.0067	$100\theta_D$	0.16070 ± 0.00021	$\chi^2_{DR12BAO}$	4.00 ± 0.87
Ω_m	0.3044 ± 0.0067	z_{eq}	3361 ± 25	χ^2_{prior}	7.8 ± 3.4
$\Omega_m h^2$	0.1413 ± 0.0010	k_{eq}	0.010258 ± 0.000076	χ^2_{BAO}	5.79 ± 0.80
$\Omega_m h^3$	0.09626 ± 0.00032	$100\theta_{eq}$	0.8212 ± 0.0048		
σ_8	0.864 ± 0.045	$100\theta_{s,eq}$	0.4534 ± 0.0024		

$\bar{\chi}^2_{eff} = 11525.31$; $R - 1 = 0.00906$

3.85 base_Alens_CamSpecHM_TTTEEE_lowl

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022524	0.02251 ± 0.00019	σ_8	0.7686	$0.805^{+0.016}_{-0.035}$	$100\theta_{\rm eq}$	0.8220	0.8226 ± 0.0069
$\boldsymbol{\Omega_c h^2}$	0.11795	0.1179 ± 0.0016	S_8	0.7723	$0.808^{+0.025}_{-0.036}$	$100\theta_{\rm s,eq}$	0.45384	0.4541 ± 0.0035
$\boldsymbol{100\theta_{MC}}$	1.041083	1.04108 ± 0.00033	$\sigma_8\Omega_{\rm m}^{0.5}$	0.4230	$0.443^{+0.014}_{-0.020}$	$H(0.15)$	73.45	73.48 ± 0.64
$\boldsymbol{\tau}$	0.0101	< 0.0694	$\sigma_8\Omega_{\rm m}^{0.25}$	0.5702	$0.597^{+0.015}_{-0.026}$	$D_{\rm M}(0.15)$	635.7	635.5 ± 6.2
$\boldsymbol{A_L}$	1.248	1.136 ± 0.096	$\sigma_8/h^{0.5}$	0.9303	$0.974^{+0.023}_{-0.042}$	$H(0.38)$	83.415	83.43 ± 0.47
$\boldsymbol{\ln(10^{10}A_s)}$	2.950	$3.041^{+0.035}_{-0.088}$	$r_{\rm drag}h$	100.66	100.7 ± 1.3	$D_{\rm M}(0.38)$	1518.2	1518 ± 13
$\boldsymbol{n_s}$	0.9717	0.9716 ± 0.0053	$\langle d^2\rangle^{1/2}$	2.568	2.560 ± 0.065	$H(0.51)$	90.048	90.06 ± 0.38
$\boldsymbol{y_{cal}}$	0.99998	1.0001 ± 0.0025	$z_{\rm re}$	2.11	$7.5^{+2.2}_{-4.7}$	$D_{\rm M}(0.51)$	1968.1	1968 ± 15
$\boldsymbol{A_{100}^{PS}}$	222.3	232 ± 25	$10^9 A_{\rm s}$	1.910	$2.098^{+0.067}_{-0.18}$	$H(0.61)$	95.602	95.61 ± 0.31
$\boldsymbol{A_{143}^{PS}}$	48.5	35 ± 8	$10^9 A_{\rm s}e^{-2\tau}$	1.8720	1.870 ± 0.012	$D_{\rm M}(0.61)$	2291.3	2291 ± 16
$\boldsymbol{A_{217}^{PS}}$	108.5	105 ± 10	D_{40}	1206.1	1217^{+14}_{-18}	$H(2.33)$	235.38	235.30 ± 0.92
$\boldsymbol{A_{217}^{CIB}}$	38.7	37 ± 7	D_{220}	5725.1	5722 ± 39	$D_{\rm M}(2.33)$	5750.1	5750 ± 14
$\boldsymbol{A_{143}^{tSZ}}$	6.30	$4.1^{+2.0}_{-2.4}$	D_{810}	2530.4	2528 ± 14	$f\sigma_8(0.15)$	0.4280	$0.448^{+0.013}_{-0.020}$
$\boldsymbol{r_{143\times217}^{PS}}$	0.779	0.68 ± 0.13	D_{1420}	815.63	814.8 ± 4.8	$\sigma_8(0.15)$	0.7111	$0.744^{+0.015}_{-0.032}$
$\boldsymbol{r_{143\times217}^{CIB}}$	0.826	$0.51^{+0.32}_{-0.28}$	D_{2000}	231.89	231.6 ± 1.7	$f\sigma_8(0.38)$	0.4472	$0.468^{+0.012}_{-0.020}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.998	—	$n_{\rm s,0.002}$	0.9717	0.9716 ± 0.0053	$\sigma_8(0.38)$	0.6312	$0.661^{+0.012}_{-0.029}$
$\boldsymbol{A^{kSZ}}$	0.01	< 5.25	$Y_{\rm P}$	0.245453	0.245447 ± 0.000073	$f\sigma_8(0.51)$	0.4469	$0.468^{+0.012}_{-0.020}$
$\boldsymbol{A_{100}^{dust}}$	1.010	1.01 ± 0.19	$Y_{\rm P}^{\rm BBN}$	0.246780	0.246774 ± 0.000073	$\sigma_8(0.51)$	0.5911	$0.619^{+0.011}_{-0.027}$
$\boldsymbol{A_{143}^{dust}}$	0.971	0.95 ± 0.17	10^5D/H	2.5578	2.561 ± 0.034	$f\sigma_8(0.61)$	0.4428	$0.463^{+0.011}_{-0.020}$
$\boldsymbol{A_{217}^{dust}}$	0.993	0.98 ± 0.10	Age/Gyr	13.7685	13.769 ± 0.030	$\sigma_8(0.61)$	0.5627	$0.589^{+0.010}_{-0.026}$
$\boldsymbol{A_{143\times217}^{dust}}$	1.016	1.01 ± 0.16	z_*	1089.548	1089.56 ± 0.34	$f\sigma_8(2.33)$	0.2840	$0.2974^{+0.0051}_{-0.013}$
$\boldsymbol{c_{100}}$	0.99788	0.9975 ± 0.0010	r_*	144.846	144.88 ± 0.34	$\sigma_8(2.33)$	0.2932	$0.3070^{+0.0052}_{-0.014}$
$\boldsymbol{c_{217}}$	1.00107	1.0009 ± 0.0016	$100\theta_*$	1.041249	1.04125 ± 0.00033	f_{2000}^{143}	27.23	27 ± 3
$\boldsymbol{c_{TE}}$	0.9922	0.9924 ± 0.0053	$D_{\rm M}(z_*)$/Gpc	13.9108	13.914 ± 0.031	f_{2000}^{217}	104.66	105.0 ± 2.1
$\boldsymbol{c_{EE}}$	0.99045	0.9903 ± 0.0050	$z_{\rm drag}$	1060.162	1060.10 ± 0.37	$f_{2000}^{143\times217}$	30.03	30.0 ± 2.2
H_0	68.26	68.29 ± 0.74	$r_{\rm drag}$	147.463	147.51 ± 0.33	$\chi^2_{\rm lowl}$	21.34	22.5 ± 1.4
Ω_Λ	0.6971	0.6975 ± 0.0096	$k_{\rm D}$	0.140588	0.14053 ± 0.00035	$\chi^2_{\rm CamSpec}$	11496.5	11512.4 ± 5.7
$\Omega_{\rm m}$	0.3029	0.3025 ± 0.0096	$100\theta_{\rm D}$	0.160639	0.16066 ± 0.00021	$\chi^2_{\rm prior}$	1.87	7.7 ± 3.3
$\Omega_{\rm m}h^2$	0.14112	0.1410 ± 0.0015	$z_{\rm eq}$	3356.8	3354 ± 35	$\chi^2_{\rm CMB}$	11517.8	11534.9 ± 5.8
$\Omega_{\rm m}h^3$	0.096325	0.09628 ± 0.00033	$k_{\rm eq}$	0.010245	0.01024 ± 0.00011			

Best-fit $\chi^2_{\rm eff} = 11519.71$; $\Delta\chi^2_{\rm eff} = -2.34$; $\bar{\chi}^2_{\rm eff} = 11542.67$; $\Delta\bar{\chi}^2_{\rm eff} = -1.43$; $R - 1 = 0.01017$
$\chi^2_{\rm eff}$: CMB - commander_dx12_v3_2_29: 21.34 (Δ -2.58) CamSpec like_10.7HM_1400_unified: 11496.50 (Δ 0.28)

3.86 base_Alens_CamSpecHM_TTTEEE_lowl_post_BAO

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02249 ± 0.00016	S_8	$0.809^{+0.021}_{-0.035}$	$H(0.15)$	73.40 ± 0.44
$\boldsymbol{\Omega_c h^2}$	0.1180 ± 0.0011	$\sigma_8 \Omega_m^{0.5}$	$0.443^{+0.012}_{-0.019}$	$D_M(0.15)$	636.3 ± 4.2
$\boldsymbol{100\theta_{MC}}$	1.04106 ± 0.00030	$\sigma_8 \Omega_m^{0.25}$	$0.597^{+0.013}_{-0.025}$	$H(0.38)$	83.37 ± 0.33
$\boldsymbol{\tau}$	< 0.0679	$\sigma_8/h^{0.5}$	$0.974^{+0.020}_{-0.042}$	$D_M(0.38)$	1519.4 ± 8.6
$\boldsymbol{A_L}$	$1.133^{+0.098}_{-0.087}$	$r_{drag} h$	100.58 ± 0.85	$H(0.51)$	90.01 ± 0.27
$\boldsymbol{\ln(10^{10} A_s)}$	$3.039^{+0.034}_{-0.086}$	$\langle d^2 \rangle^{1/2}$	2.558 ± 0.064	$D_M(0.51)$	1969 ± 10
$\boldsymbol{n_s}$	0.9711 ± 0.0043	z_{re}	$7.4^{+2.2}_{-4.6}$	$H(0.61)$	95.57 ± 0.22
$\boldsymbol{y_{cal}}$	1.0000 ± 0.0025	$10^9 A_s$	$2.093^{+0.065}_{-0.18}$	$D_M(0.61)$	2293 ± 11
$\boldsymbol{A_{100}^{PS}}$	232 ± 25	$10^9 A_s e^{-2\tau}$	1.871 ± 0.011	$H(2.33)$	235.40 ± 0.65
$\boldsymbol{A_{143}^{PS}}$	35 ± 8	D_{40}	1218^{+13}_{-17}	$D_M(2.33)$	5752 ± 10
$\boldsymbol{A_{217}^{PS}}$	105 ± 10	D_{220}	5721 ± 39	$f\sigma_8(0.15)$	$0.448^{+0.011}_{-0.019}$
$\boldsymbol{A_{217}^{CIB}}$	37 ± 7	D_{810}	2528 ± 14	$\sigma_8(0.15)$	$0.744^{+0.013}_{-0.032}$
$\boldsymbol{A_{143}^{tSZ}}$	$4.1^{+2.0}_{-2.4}$	D_{1420}	814.7 ± 4.8	$f\sigma_8(0.38)$	$0.468^{+0.011}_{-0.020}$
$\boldsymbol{r_{143\times217}^{PS}}$	0.68 ± 0.13	D_{2000}	231.5 ± 1.7	$\sigma_8(0.38)$	$0.660^{+0.012}_{-0.028}$
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.51^{+0.33}_{-0.28}$	$n_{s,0.002}$	0.9711 ± 0.0043	$f\sigma_8(0.51)$	$0.468^{+0.010}_{-0.020}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P	0.245440 ± 0.000062	$\sigma_8(0.51)$	$0.618^{+0.011}_{-0.027}$
$\boldsymbol{A^{kSZ}}$	< 5.24	Y_P^{BBN}	0.246767 ± 0.000062	$f\sigma_8(0.61)$	$0.4635^{+0.0096}_{-0.020}$
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.19	10^5D/H	2.564 ± 0.029	$\sigma_8(0.61)$	$0.589^{+0.010}_{-0.025}$
$\boldsymbol{A_{143}^{dust}}$	0.95 ± 0.18	Age/Gyr	13.773 ± 0.024	$f\sigma_8(2.33)$	$0.2971^{+0.0050}_{-0.013}$
$\boldsymbol{A_{217}^{dust}}$	0.98 ± 0.10	z_*	1089.60 ± 0.26	$\sigma_8(2.33)$	$0.3067^{+0.0051}_{-0.013}$
$\boldsymbol{A_{143\times217}^{dust}}$	1.02 ± 0.16	r_*	144.85 ± 0.25	f_{2000}^{143}	27.1 ± 3.0
$\boldsymbol{c_{100}}$	0.9976 ± 0.0010	$100\theta_*$	1.04123 ± 0.00030	f_{2000}^{217}	105.1 ± 2.0
$\boldsymbol{c_{217}}$	1.0009 ± 0.0016	$D_M(z_*)$/Gpc	13.911 ± 0.024	$f_{2000}^{143\times217}$	30.1 ± 2.1
$\boldsymbol{c_{TE}}$	0.9925 ± 0.0053	z_{drag}	1060.08 ± 0.35	χ^2_{lowl}	22.5 ± 1.4
$\boldsymbol{c_{EE}}$	0.9903 ± 0.0049	r_{drag}	147.48 ± 0.26	$\chi^2_{CamSpec}$	11511.8 ± 5.5
H_0	68.20 ± 0.50	k_D	0.14055 ± 0.00032	χ^2_{6DF}	0.031 ± 0.044
Ω_Λ	0.6964 ± 0.0065	$100\theta_D$	0.16068 ± 0.00020	χ^2_{MGS}	1.82 ± 0.53
Ω_m	0.3036 ± 0.0065	z_{eq}	3358 ± 24	$\chi^2_{DR12BAO}$	3.94 ± 0.78
$\Omega_m h^2$	0.1412 ± 0.0010	k_{eq}	0.010250 ± 0.000074	χ^2_{prior}	7.7 ± 3.3
$\Omega_m h^3$	0.09627 ± 0.00033	$100\theta_{eq}$	0.8217 ± 0.0047	χ^2_{BAO}	5.78 ± 0.79
σ_8	$0.804^{+0.015}_{-0.034}$	$100\theta_{s,eq}$	0.4537 ± 0.0024	χ^2_{CMB}	11534.3 ± 5.6

$\bar{\chi}^2_{eff} = 11547.85$; $\Delta\bar{\chi}^2_{eff} = -1.38$; $R - 1 = 0.01201$

3.87 base_Alens_CamSpecHM_TTTEEE_lowl_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02252 ± 0.00019	σ_8	$0.823^{+0.013}_{-0.027}$	$100\theta_{\rm eq}$	0.8231 ± 0.0070
$\boldsymbol{\Omega_c h^2}$	0.1177 ± 0.0016	S_8	$0.825^{+0.023}_{-0.030}$	$100\theta_{\rm s,eq}$	0.4544 ± 0.0036
$\boldsymbol{100\theta_{MC}}$	1.04110 ± 0.00033	$\sigma_8\Omega_{\rm m}^{0.5}$	$0.452^{+0.012}_{-0.017}$	$H(0.15)$	73.52 ± 0.65
$\boldsymbol{\tau}$	$0.079^{+0.011}_{-0.035}$	$\sigma_8\Omega_{\rm m}^{0.25}$	$0.610^{+0.013}_{-0.021}$	$D_{\rm M}(0.15)$	635.1 ± 6.3
$\boldsymbol{A_L}$	1.088 ± 0.083	$\sigma_8/h^{0.5}$	$0.995^{+0.019}_{-0.033}$	$H(0.38)$	83.47 ± 0.48
$\boldsymbol{\ln(10^{10}A_s)}$	$3.087^{+0.027}_{-0.067}$	$r_{\rm drag}h$	100.8 ± 1.3	$D_{\rm M}(0.38)$	1517 ± 13
$\boldsymbol{n_s}$	0.9724 ± 0.0053	$\langle d^2\rangle^{1/2}$	2.561 ± 0.066	$H(0.51)$	90.09 ± 0.38
$\boldsymbol{y_{cal}}$	1.0001 ± 0.0025	$z_{\rm re}$	< 10.8	$D_{\rm M}(0.51)$	1967 ± 15
$\boldsymbol{A_{100}^{PS}}$	231 ± 25	$10^9 A_{\rm s}$	$2.193^{+0.054}_{-0.15}$	$H(0.61)$	95.63 ± 0.31
$\boldsymbol{A_{143}^{PS}}$	35 ± 8	$10^9 A_{\rm s}e^{-2\tau}$	1.869 ± 0.012	$D_{\rm M}(0.61)$	2290 ± 16
$\boldsymbol{A_{217}^{PS}}$	105 ± 10	D_{40}	1222^{+14}_{-18}	$H(2.33)$	235.23 ± 0.94
$\boldsymbol{A_{217}^{CIB}}$	37 ± 7	D_{220}	5720 ± 39	$D_{\rm M}(2.33)$	5749 ± 14
$\boldsymbol{A_{143}^{tSZ}}$	$4.1^{+2.0}_{-2.4}$	D_{810}	2528 ± 14	$f\sigma_8(0.15)$	$0.457^{+0.012}_{-0.016}$
$\boldsymbol{r_{143\times217}^{PS}}$	0.68 ± 0.13	D_{1420}	815.1 ± 4.8	$\sigma_8(0.15)$	$0.761^{+0.012}_{-0.025}$
$\boldsymbol{r_{143\times217}^{CIB}}$	0.50 ± 0.27	D_{2000}	231.8 ± 1.7	$f\sigma_8(0.38)$	$0.478^{+0.011}_{-0.016}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$n_{\rm s,0.002}$	0.9724 ± 0.0053	$\sigma_8(0.38)$	$0.6758^{+0.0096}_{-0.022}$
$\boldsymbol{A^{kSZ}}$	< 5.09	$Y_{\rm P}$	0.245451 ± 0.000073	$f\sigma_8(0.51)$	$0.4779^{+0.0097}_{-0.016}$
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.20	$Y_{\rm P}^{\rm BBN}$	0.246777 ± 0.000074	$\sigma_8(0.51)$	$0.6329^{+0.0088}_{-0.021}$
$\boldsymbol{A_{143}^{dust}}$	0.95 ± 0.17	10^5D/H	2.559 ± 0.034	$f\sigma_8(0.61)$	$0.4736^{+0.0091}_{-0.016}$
$\boldsymbol{A_{217}^{dust}}$	0.98 ± 0.10	Age/Gyr	13.767 ± 0.031	$\sigma_8(0.61)$	$0.6025^{+0.0082}_{-0.020}$
$\boldsymbol{A_{143\times217}^{dust}}$	1.02 ± 0.16	z_*	1089.54 ± 0.34	$f\sigma_8(2.33)$	$0.3042^{+0.0040}_{-0.010}$
$\boldsymbol{c_{100}}$	0.9975 ± 0.0010	r_*	144.91 ± 0.34	$\sigma_8(2.33)$	$0.3141^{+0.0040}_{-0.011}$
$\boldsymbol{c_{217}}$	1.0008 ± 0.0016	$100\theta_*$	1.04127 ± 0.00033	f_{2000}^{143}	27 ± 3
$\boldsymbol{c_{TE}}$	0.9922 ± 0.0053	$D_{\rm M}(z_*)$/Gpc	13.916 ± 0.032	f_{2000}^{217}	104.8 ± 2.1
$\boldsymbol{c_{EE}}$	0.9901 ± 0.0049	$z_{\rm drag}$	1060.12 ± 0.37	$f_{2000}^{143\times217}$	29.7 ± 2.2
H_0	68.35 ± 0.75	$r_{\rm drag}$	147.53 ± 0.33	$\chi^2_{\rm lowl}$	23.1 ± 1.6
Ω_Λ	0.6982 ± 0.0097	$k_{\rm D}$	0.14052 ± 0.00035	$\chi^2_{\rm CamSpec}$	11512.4 ± 5.8
$\Omega_{\rm m}$	0.3018 ± 0.0097	$100\theta_{\rm D}$	0.16066 ± 0.00021	$\chi^2_{\rm prior}$	7.8 ± 3.3
$\Omega_{\rm m}h^2$	0.1409 ± 0.0015	$z_{\rm eq}$	3351 ± 36	$\chi^2_{\rm CMB}$	11535.5 ± 5.9
$\Omega_{\rm m}h^3$	0.09628 ± 0.00033	$k_{\rm eq}$	0.01023 ± 0.00011		

$\bar{\chi}^2_{\rm eff} = 11543.27$; $\Delta\bar{\chi}^2_{\rm eff} = -0.66$; $R - 1 = 0.01232$

3.88 base_Alens_CamSpecHM_TTTEEE_lowl_post_BAO_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02250 ± 0.00016	S_8	$0.827^{+0.018}_{-0.028}$	$H(0.15)$	73.41 ± 0.44
$\boldsymbol{\Omega_c h^2}$	0.1180 ± 0.0011	$\sigma_8 \Omega_m^{0.5}$	$0.453^{+0.010}_{-0.015}$	$D_M(0.15)$	636.1 ± 4.3
$\boldsymbol{100\theta_{MC}}$	1.04106 ± 0.00030	$\sigma_8 \Omega_m^{0.25}$	$0.611^{+0.011}_{-0.020}$	$H(0.38)$	83.38 ± 0.33
$\boldsymbol{\tau}$	$0.078^{+0.011}_{-0.033}$	$\sigma_8/h^{0.5}$	$0.996^{+0.017}_{-0.032}$	$D_M(0.38)$	1519.1 ± 8.7
$\boldsymbol{A_L}$	1.084 ± 0.080	$r_{drag} h$	100.61 ± 0.87	$H(0.51)$	90.02 ± 0.27
$\boldsymbol{\ln(10^{10} A_s)}$	$3.085^{+0.027}_{-0.065}$	$\langle d^2 \rangle^{1/2}$	2.559 ± 0.065	$D_M(0.51)$	1969 ± 10
$\boldsymbol{n_s}$	0.9717 ± 0.0043	z_{re}	< 10.7	$H(0.61)$	95.58 ± 0.23
$\boldsymbol{y_{cal}}$	1.0001 ± 0.0025	$10^9 A_s$	$2.189^{+0.054}_{-0.14}$	$D_M(0.61)$	2292 ± 11
$\boldsymbol{A_{100}^{PS}}$	231 ± 25	$10^9 A_s e^{-2\tau}$	1.870 ± 0.011	$H(2.33)$	235.38 ± 0.66
$\boldsymbol{A_{143}^{PS}}$	35 ± 8	D_{40}	1223^{+14}_{-17}	$D_M(2.33)$	5752 ± 11
$\boldsymbol{A_{217}^{PS}}$	105 ± 10	D_{220}	5719 ± 39	$f\sigma_8(0.15)$	$0.4584^{+0.0096}_{-0.015}$
$\boldsymbol{A_{217}^{CIB}}$	37^{+6}_{-7}	D_{810}	2528 ± 14	$\sigma_8(0.15)$	$0.761^{+0.011}_{-0.025}$
$\boldsymbol{A_{143}^{tSZ}}$	$4.1^{+1.9}_{-2.5}$	D_{1420}	814.9 ± 4.9	$f\sigma_8(0.38)$	$0.4789^{+0.0089}_{-0.016}$
$\boldsymbol{r_{143\times217}^{PS}}$	0.68 ± 0.13	D_{2000}	231.6 ± 1.7	$\sigma_8(0.38)$	$0.6755^{+0.0092}_{-0.022}$
$\boldsymbol{r_{143\times217}^{CIB}}$	0.50 ± 0.27	$n_{s,0.002}$	0.9717 ± 0.0043	$f\sigma_8(0.51)$	$0.4784^{+0.0084}_{-0.015}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P	0.245442 ± 0.000062	$\sigma_8(0.51)$	$0.6325^{+0.0085}_{-0.021}$
$\boldsymbol{A^{kSZ}}$	< 5.12	Y_P^{BBN}	0.246768 ± 0.000063	$f\sigma_8(0.61)$	$0.4741^{+0.0079}_{-0.015}$
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.20	10^5D/H	2.563 ± 0.030	$\sigma_8(0.61)$	$0.6021^{+0.0080}_{-0.020}$
$\boldsymbol{A_{143}^{dust}}$	0.94 ± 0.17	Age/Gyr	13.772 ± 0.024	$f\sigma_8(2.33)$	$0.3039^{+0.0040}_{-0.0099}$
$\boldsymbol{A_{217}^{dust}}$	0.98 ± 0.10	z_*	1089.59 ± 0.26	$\sigma_8(2.33)$	$0.3137^{+0.0041}_{-0.010}$
$\boldsymbol{A_{143\times217}^{dust}}$	1.02 ± 0.16	r_*	144.86 ± 0.25	f_{2000}^{143}	27 ± 3
$\boldsymbol{c_{100}}$	0.9975 ± 0.0010	$100\theta_*$	1.04124 ± 0.00030	f_{2000}^{217}	105.0 ± 2.1
$\boldsymbol{c_{217}}$	1.0009 ± 0.0016	$D_M(z_*)$/Gpc	13.912 ± 0.024	$f_{2000}^{143\times217}$	29.9 ± 2.1
$\boldsymbol{c_{TE}}$	0.9923 ± 0.0053	z_{drag}	1060.08 ± 0.35	χ^2_{lowl}	23.2 ± 1.5
$\boldsymbol{c_{EE}}$	0.9901 ± 0.0049	r_{drag}	147.48 ± 0.26	$\chi^2_{CamSpec}$	11511.7 ± 5.5
H_0	68.22 ± 0.51	k_D	0.14055 ± 0.00032	χ^2_{6DF}	0.032 ± 0.046
Ω_Λ	0.6966 ± 0.0066	$100\theta_D$	0.16067 ± 0.00020	χ^2_{MGS}	1.84 ± 0.54
Ω_m	0.3034 ± 0.0066	z_{eq}	3357 ± 25	$\chi^2_{DR12BAO}$	3.93 ± 0.77
$\Omega_m h^2$	0.1411 ± 0.0010	k_{eq}	0.010247 ± 0.000075	χ^2_{prior}	7.8 ± 3.3
$\Omega_m h^3$	0.09627 ± 0.00033	$100\theta_{eq}$	0.8219 ± 0.0047	χ^2_{BAO}	5.80 ± 0.81
σ_8	$0.823^{+0.012}_{-0.027}$	$100\theta_{s,eq}$	0.4538 ± 0.0024	χ^2_{CMB}	11534.9 ± 5.7

$\bar{\chi}^2_{eff} = 11548.48$; $\Delta\bar{\chi}^2_{eff} = -0.61$; $R - 1 = 0.01389$

3.89 base_Alens_CamSpecHM_TTTEEE_lowE

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022483	0.02246 ± 0.00019	σ_8	0.8015	0.8012 ± 0.0090	$100\theta_{\rm eq}$	0.8203	0.8199 ± 0.0070
$\boldsymbol{\Omega_c h^2}$	0.11835	0.1185 ± 0.0016	S_8	0.8086	0.810 ± 0.020	$100\theta_{\rm s,eq}$	0.45297	0.4528 ± 0.0036
$\boldsymbol{100\theta_{MC}}$	1.041013	1.04102 ± 0.00033	$\sigma_8\Omega_{\rm m}^{0.5}$	0.4429	0.443 ± 0.011	$H(0.15)$	73.28	73.23 ± 0.65
$\boldsymbol{\tau}$	0.0505	$0.0498^{+0.0083}_{-0.0073}$	$\sigma_8\Omega_{\rm m}^{0.25}$	0.5958	0.596 ± 0.010	$D_{\rm M}(0.15)$	637.4	637.9 ± 6.4
$\boldsymbol{A_L}$	1.137	1.130 ± 0.071	$\sigma_8/h^{0.5}$	0.9714	0.972 ± 0.015	$H(0.38)$	83.291	83.26 ± 0.48
$\boldsymbol{\ln(10^{10}A_s)}$	3.0311	$3.030^{+0.017}_{-0.016}$	$r_{\rm drag}h$	100.33	100.2 ± 1.3	$D_{\rm M}(0.38)$	1521.6	1523 ± 13
$\boldsymbol{n_s}$	0.9699	0.9689 ± 0.0053	$\langle d^2\rangle^{1/2}$	2.562	2.554 ± 0.064	$H(0.51)$	89.949	89.92 ± 0.38
$\boldsymbol{y_{cal}}$	0.99982	1.0001 ± 0.0025	$z_{\rm re}$	7.23	$7.15^{+0.90}_{-0.71}$	$D_{\rm M}(0.51)$	1972.0	1973 ± 15
$\boldsymbol{A_{100}^{PS}}$	224.2	234 ± 25	$10^9 A_{\rm s}$	2.0720	2.070 ± 0.036	$H(0.61)$	95.522	95.50 ± 0.31
$\boldsymbol{A_{143}^{PS}}$	49.0	36 ± 8	$10^9 A_{\rm s}e^{-2\tau}$	1.8732	1.874 ± 0.013	$D_{\rm M}(0.61)$	2295.5	2297 ± 16
$\boldsymbol{A_{217}^{PS}}$	107.3	104 ± 10	D_{40}	1216.5	1219 ± 15	$H(2.33)$	235.59	235.65 ± 0.95
$\boldsymbol{A_{217}^{CIB}}$	39.7	38^{+7}_{-7}	D_{220}	5725.7	5728 ± 39	$D_{\rm M}(2.33)$	5753.6	5755 ± 14
$\boldsymbol{A_{143}^{tSZ}}$	6.41	$4.0^{+2.0}_{-2.4}$	D_{810}	2529.8	2530 ± 14	$f\sigma_8(0.15)$	0.4479	0.448 ± 0.010
$\boldsymbol{r_{143\times217}^{PS}}$	0.758	0.67 ± 0.13	D_{1420}	814.82	814.3 ± 4.9	$\sigma_8(0.15)$	0.7412	0.7409 ± 0.0077
$\boldsymbol{r_{143\times217}^{CIB}}$	0.874	$0.52^{+0.35}_{-0.26}$	D_{2000}	231.47	231.1 ± 1.7	$f\sigma_8(0.38)$	0.4674	0.4676 ± 0.0085
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.95	—	$n_{\rm s,0.002}$	0.9699	0.9689 ± 0.0053	$\sigma_8(0.38)$	0.6577	0.6573 ± 0.0064
$\boldsymbol{A^{kSZ}}$	0.01	< 5.55	$Y_{\rm P}$	0.245438	$0.245428^{+0.000075}_{-0.000068}$	$f\sigma_8(0.51)$	0.4667	0.4668 ± 0.0075
$\boldsymbol{A_{100}^{dust}}$	1.003	1.01 ± 0.20	$Y_{\rm P}^{\rm BBN}$	0.246765	$0.246754^{+0.000075}_{-0.000068}$	$\sigma_8(0.51)$	0.6157	0.6154 ± 0.0058
$\boldsymbol{A_{143}^{dust}}$	0.968	0.95 ± 0.18	10^5D/H	2.5649	2.570 ± 0.035	$f\sigma_8(0.61)$	0.4623	0.4623 ± 0.0068
$\boldsymbol{A_{217}^{dust}}$	0.986	0.98 ± 0.10	Age/Gyr	13.7760	13.779 ± 0.031	$\sigma_8(0.61)$	0.5861	0.5857 ± 0.0054
$\boldsymbol{A_{143\times217}^{dust}}$	0.996	1.02 ± 0.16	z_*	1089.634	1089.68 ± 0.35	$f\sigma_8(2.33)$	0.29574	0.2955 ± 0.0027
$\boldsymbol{c_{100}}$	0.99790	0.9976 ± 0.0010	r_*	144.773	144.76 ± 0.34	$\sigma_8(2.33)$	0.30517	0.3049 ± 0.0027
$\boldsymbol{c_{217}}$	1.00108	1.0009 ± 0.0016	$100\theta_*$	1.041194	1.04120 ± 0.00033	f_{2000}^{143}	27.85	28 ± 3
$\boldsymbol{c_{TE}}$	0.9926	0.9929 ± 0.0053	$D_{\rm M}(z_*)$/Gpc	13.9045	13.903 ± 0.032	f_{2000}^{217}	104.96	105.5 ± 2.1
$\boldsymbol{c_{EE}}$	0.9908	0.9908 ± 0.0050	$z_{\rm drag}$	1060.085	1060.03 ± 0.38	$f_{2000}^{143\times217}$	30.36	30.6 ± 2.3
H_0	68.06	68.01 ± 0.75	$r_{\rm drag}$	147.403	147.40 ± 0.33	$\chi^2_{\rm simall}$	395.68	396.8 ± 1.6
Ω_Λ	0.6946	0.694 ± 0.010	$k_{\rm D}$	0.140623	0.14061 ± 0.00035	$\chi^2_{\rm CamSpec}$	11496.2	11512.2 ± 5.6
$\Omega_{\rm m}$	0.3054	0.306 ± 0.010	$100\theta_{\rm D}$	0.160671	0.16070 ± 0.00021	$\chi^2_{\rm prior}$	1.84	7.8 ± 3.4
$\Omega_{\rm m}h^2$	0.14148	0.1416 ± 0.0015	$z_{\rm eq}$	3365.4	3368 ± 36	$\chi^2_{\rm CMB}$	11891.9	11909.0 ± 5.8
$\Omega_{\rm m}h^3$	0.096294	0.09627 ± 0.00033	$k_{\rm eq}$	0.010272	0.01028 ± 0.00011			

Best-fit $\chi^2_{\rm eff} = 11893.69$; $\Delta\chi^2_{\rm eff} = -3.79$; $\bar{\chi}^2_{\rm eff} = 11916.80$; $\Delta\bar{\chi}^2_{\rm eff} = -2.29$; $R - 1 = 0.00486$
$\chi^2_{\rm eff}$: CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.68 (Δ -0.18) CamSpec like_10.7HM_1400_unified: 11496.17 (Δ -3.31)

4 Aphiphi

4.1 base_Aphiphi_plikHM_TT_lowl_lowE_lensing

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022161	0.02214 ± 0.00022	$\sigma_8 \Omega_m^{0.25}$	0.6089	0.608 ± 0.011	$D_M(0.15)$	646.0	645.9 ± 7.8
$\boldsymbol{\Omega_c h^2}$	0.12020	0.1201 ± 0.0020	$\sigma_8/h^{0.5}$	0.9902	0.989 ± 0.016	$H(0.38)$	82.63	82.64 ± 0.55
$\boldsymbol{100\theta_{MC}}$	1.040781	1.04082 ± 0.00048	$r_{drag} h$	98.77	98.8 ± 1.6	$D_M(0.38)$	1539.0	1539 ± 15
$\boldsymbol{\tau}$	0.0525	0.0519 ± 0.0080	$\langle d^2 \rangle^{1/2}$	2.4460	2.445 ± 0.037	$H(0.51)$	89.405	89.42 ± 0.43
$\boldsymbol{\ln(10^{10} A_s)}$	3.0406	3.039 ± 0.016	z_{re}	7.55	$7.46^{+0.83}_{-0.75}$	$D_M(0.51)$	1992.6	1992 ± 18
$\boldsymbol{n_s}$	0.9644	0.9635 ± 0.0057	$10^9 A_s$	2.0917	2.088 ± 0.034	$H(0.61)$	95.070	95.08 ± 0.35
$\boldsymbol{A_L^{\phi\phi}}$	0.9996	1.001 ± 0.036	$10^9 A_s e^{-2\tau}$	1.8831	1.882 ± 0.014	$D_M(0.61)$	2317.9	2318 ± 19
$\boldsymbol{y_{cal}}$	1.00046	1.0005 ± 0.0025	D_{40}	1229.8	1232 ± 15	$H(2.33)$	236.47	236.4 ± 1.2
$\boldsymbol{A_{217}^{CIB}}$	49.2	48 ± 7	D_{220}	5713.8	5716 ± 41	$D_M(2.33)$	5774.8	5775 ± 16
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.28	—	D_{810}	2537.7	2536 ± 14	$f\sigma_8(0.15)$	0.4613	0.460 ± 0.012
$\boldsymbol{A_{143}^{tSZ}}$	7.14	5.1 ± 2.0	D_{1420}	815.6	814.5 ± 5.2	$\sigma_8(0.15)$	0.7487	0.7476 ± 0.0075
$\boldsymbol{A_{100}^{PS}}$	254.9	264 ± 28	D_{2000}	230.00	229.6 ± 1.8	$f\sigma_8(0.38)$	0.4782	0.4774 ± 0.0094
$\boldsymbol{A_{143}^{PS}}$	48.7	49 ± 8	$n_{s,0.002}$	0.9644	0.9635 ± 0.0057	$\sigma_8(0.38)$	0.6630	0.6620 ± 0.0060
$\boldsymbol{A_{143\times217}^{PS}}$	45.8	43 ± 9	Y_P	0.245310	$0.24530^{+0.00010}_{-0.000083}$	$f\sigma_8(0.51)$	0.4761	0.4752 ± 0.0081
$\boldsymbol{A_{217}^{PS}}$	118.5	115 ± 10	Y_P^{BBN}	0.246636	$0.24662^{+0.00010}_{-0.000083}$	$\sigma_8(0.51)$	0.6201	0.6193 ± 0.0055
$\boldsymbol{A^{kSZ}}$	0.01	< 4.95	10^5D/H	2.6254	2.630 ± 0.041	$f\sigma_8(0.61)$	0.4706	0.4698 ± 0.0072
$\boldsymbol{A_{100}^{dust TT}}$	8.85	8.9 ± 1.8	Age/Gyr	13.8235	13.824 ± 0.036	$\sigma_8(0.61)$	0.58990	0.5891 ± 0.0051
$\boldsymbol{A_{143}^{dust TT}}$	10.80	10.7 ± 1.8	z_*	1090.203	1090.23 ± 0.39	$f\sigma_8(2.33)$	0.29718	0.2968 ± 0.0025
$\boldsymbol{A_{143\times217}^{dust TT}}$	19.43	18.3 ± 3.3	r_*	144.538	144.57 ± 0.47	$\sigma_8(2.33)$	0.30610	0.3057 ± 0.0027
$\boldsymbol{A_{217}^{dust TT}}$	94.5	93.4 ± 7.4	$100\theta_*$	1.040990	1.04102 ± 0.00047	f_{2000}^{143}	30.43	31.3 ± 2.9
$\boldsymbol{c_{100}}$	0.99965	0.99961 ± 0.00062	$D_M(z_*)$/Gpc	13.8847	13.887 ± 0.044	$f_{2000}^{143\times217}$	33.28	33.6 ± 2.0
$\boldsymbol{c_{217}}$	0.99826	0.99826 ± 0.00062	z_{drag}	1059.475	1059.41 ± 0.45	f_{2000}^{217}	107.69	108.2 ± 1.9
H_0	67.06	67.09 ± 0.90	r_{drag}	147.270	147.31 ± 0.48	$\chi^2_{lensing}$	8.89	9.9 ± 1.4
Ω_Λ	0.6820	$0.682^{+0.013}_{-0.012}$	k_D	0.14052	0.14046 ± 0.00052	χ^2_{simall}	395.87	396.9 ± 1.6
Ω_m	0.3180	0.318 ± 0.013	$100\theta_D$	0.161023	0.16106 ± 0.00026	χ^2_{lowl}	23.41	23.7 ± 1.3
$\Omega_m h^2$	0.14301	0.1429 ± 0.0020	z_{eq}	3402.1	3400 ± 47	χ^2_{plik}	758.9	771.7 ± 5.6
$\Omega_m h^3$	0.095910	0.09587 ± 0.00045	k_{eq}	0.010384	0.01038 ± 0.00014	χ^2_{prior}	1.44	7.3 ± 3.7
σ_8	0.8109	0.8097 ± 0.0089	$100\theta_{eq}$	0.8126	0.8131 ± 0.0087	χ^2_{CMB}	1187.1	1202.1 ± 5.7
S_8	0.8349	0.833 ± 0.023	$100\theta_{s,eq}$	0.44919	0.4494 ± 0.0045			
$\sigma_8 \Omega_m^{0.5}$	0.4573	0.456 ± 0.013	$H(0.15)$	72.41	72.43 ± 0.77			

Best-fit $\chi^2_{eff} = 1188.51$; $\Delta\chi^2_{eff} = -0.05$; $\bar{\chi}^2_{eff} = 1209.46$; $\Delta\bar{\chi}^2_{eff} = 1.05$; $R - 1 = 0.00514$

χ^2_{eff}: CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.89 (Δ -0.01) simall_100x143_offlike5_EE_Aplanck_B: 395.87 (Δ 0.01) commander_dx12_v3_2_29: 23.41 (Δ 0.18) plik_rd12_HM_v22_TT: 758.90 (Δ -0.42)

4.2 base_Aphiphi_plikHM_TT_lowl_lowE_lensing_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02215 ± 0.00021	$\sigma_8\Omega_m^{0.25}$	0.608 ± 0.011	$D_M(0.15)$	645.5 ± 7.7
$\boldsymbol{\Omega_c h^2}$	0.1201 ± 0.0020	$\sigma_8/h^{0.5}$	0.990 ± 0.015	$H(0.38)$	82.67 ± 0.55
$\boldsymbol{100\theta_{MC}}$	1.04083 ± 0.00047	$r_{drag}h$	98.9 ± 1.6	$D_M(0.38)$	1538 ± 15
$\boldsymbol{\tau}$	$0.0536^{+0.0045}_{-0.0083}$	$\langle d^2\rangle^{1/2}$	2.448 ± 0.037	$H(0.51)$	89.44 ± 0.43
$\boldsymbol{\ln(10^{10}A_s)}$	$3.042^{+0.012}_{-0.015}$	z_{re}	$7.65^{+0.52}_{-0.82}$	$D_M(0.51)$	1992 ± 18
$\boldsymbol{n_s}$	0.9637 ± 0.0057	$10^9 A_s$	$2.095^{+0.024}_{-0.032}$	$H(0.61)$	95.09 ± 0.35
$\boldsymbol{A_L^{\phi\phi}}$	0.999 ± 0.036	$10^9 A_s e^{-2\tau}$	1.882 ± 0.014	$D_M(0.61)$	2317 ± 19
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	D_{40}	1232 ± 15	$H(2.33)$	236.4 ± 1.2
$\boldsymbol{A_{217}^{CIB}}$	48 ± 7	D_{220}	5717 ± 41	$D_M(2.33)$	5774 ± 16
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{810}	2536 ± 14	$f\sigma_8(0.15)$	0.461 ± 0.012
$\boldsymbol{A_{143}^{tSZ}}$	5.1 ± 2.0	D_{1420}	814.6 ± 5.2	$\sigma_8(0.15)$	0.7487 ± 0.0069
$\boldsymbol{A_{100}^{PS}}$	264 ± 28	D_{2000}	229.6 ± 1.8	$f\sigma_8(0.38)$	0.4778 ± 0.0093
$\boldsymbol{A_{143}^{PS}}$	49 ± 8	$n_{s,0.002}$	0.9637 ± 0.0057	$\sigma_8(0.38)$	0.6630 ± 0.0054
$\boldsymbol{A_{143\times217}^{PS}}$	43 ± 9	Y_P	$0.24530^{+0.00010}_{-0.000083}$	$f\sigma_8(0.51)$	0.4757 ± 0.0080
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	Y_P^{BBN}	$0.24663^{+0.00010}_{-0.000083}$	$\sigma_8(0.51)$	$0.6202^{+0.0045}_{-0.0051}$
$\boldsymbol{A^{kSZ}}$	< 4.92	10^5D/H	2.628 ± 0.041	$f\sigma_8(0.61)$	0.4703 ± 0.0070
$\boldsymbol{A_{100}^{dustTT}}$	8.9 ± 1.8	Age/Gyr	13.822 ± 0.036	$\sigma_8(0.61)$	$0.5900^{+0.0041}_{-0.0048}$
$\boldsymbol{A_{143}^{dustTT}}$	10.7 ± 1.8	z_*	1090.21 ± 0.39	$f\sigma_8(2.33)$	$0.2973^{+0.0019}_{-0.0024}$
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.3 ± 3.3	r_*	144.59 ± 0.47	$\sigma_8(2.33)$	$0.3063^{+0.0019}_{-0.0026}$
$\boldsymbol{A_{217}^{dustTT}}$	93.3 ± 7.4	$100\theta_*$	1.04104 ± 0.00047	f_{2000}^{143}	31.2 ± 2.9
$\boldsymbol{c_{100}}$	0.99961 ± 0.00062	$D_M(z_*)$/Gpc	13.889 ± 0.044	$f_{2000}^{143\times217}$	33.6 ± 2.0
$\boldsymbol{c_{217}}$	0.99826 ± 0.00062	z_{drag}	1059.43 ± 0.45	f_{2000}^{217}	108.2 ± 1.9
H_0	67.13 ± 0.90	r_{drag}	147.32 ± 0.47	$\chi^2_{lensing}$	9.8 ± 1.4
Ω_Λ	0.683 ± 0.013	k_D	0.14045 ± 0.00052	χ^2_{simall}	396.8 ± 1.6
Ω_m	0.317 ± 0.013	$100\theta_D$	0.16105 ± 0.00026	χ^2_{lowl}	23.7 ± 1.3
$\Omega_m h^2$	0.1429 ± 0.0019	z_{eq}	3398 ± 46	χ^2_{plik}	771.5 ± 5.5
$\Omega_m h^3$	0.09588 ± 0.00045	k_{eq}	0.01037 ± 0.00014	χ^2_{prior}	7.3 ± 3.7
σ_8	0.8108 ± 0.0084	$100\theta_{eq}$	0.8134 ± 0.0087	χ^2_{CMB}	1201.8 ± 5.6
S_8	0.834 ± 0.023	$100\theta_{s,eq}$	0.4496 ± 0.0045		
$\sigma_8\Omega_m^{0.5}$	0.457 ± 0.013	$H(0.15)$	72.47 ± 0.76		

$\bar{\chi}^2_{eff} = 1209.13$; $\Delta\bar{\chi}^2_{eff} = 0.97$; $R - 1 = 0.00594$

4.3 base_Aphiphi_plikHM_TTTEEE_lowl_lowE_lensing

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022385	0.02237 ± 0.00015	$\Omega_m h^3$	0.096362	0.09633 ± 0.00030	$100\theta_{s,eq}$	0.44924	0.4493 ± 0.0029
$\boldsymbol{\Omega_c h^2}$	0.12005	0.1201 ± 0.0013	σ_8	0.8118	0.8114 ± 0.0073	$H(0.15)$	72.67	72.66 ± 0.51
$\boldsymbol{100\theta_{MC}}$	1.040915	1.04092 ± 0.00031	S_8	0.8325	0.832 ± 0.016	$D_M(0.15)$	643.4	643.6 ± 5.1
$\boldsymbol{\tau}$	0.0543	0.0543 ± 0.0077	$\sigma_8\Omega_m^{0.5}$	0.4560	0.4559 ± 0.0086	$H(0.38)$	82.864	82.85 ± 0.37
$\boldsymbol{\ln(10^{10}A_s)}$	3.0448	3.044 ± 0.016	$\sigma_8\Omega_m^{0.25}$	0.6084	0.6082 ± 0.0081	$D_M(0.38)$	1533.6	1534 ± 10
$\boldsymbol{n_s}$	0.96604	0.9650 ± 0.0043	$\sigma_8/h^{0.5}$	0.9893	0.989 ± 0.011	$H(0.51)$	89.627	89.62 ± 0.29
$\boldsymbol{A_L^{\phi\phi}}$	0.9990	0.998 ± 0.031	$r_{drag}h$	99.04	99.0 ± 1.0	$D_M(0.51)$	1986.0	1986 ± 12
$\boldsymbol{y_{cal}}$	1.00060	1.0006 ± 0.0025	$\langle d^2\rangle^{1/2}$	2.4444	2.446 ± 0.028	$H(0.61)$	95.281	95.27 ± 0.23
$\boldsymbol{A_{217}^{CIB}}$	46.9	47 ± 7	z_{re}	7.68	7.66 ± 0.78	$D_M(0.61)$	2310.5	2311 ± 13
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.48	—	$10^9 A_s$	2.1006	2.100 ± 0.033	$H(2.33)$	236.61	236.60 ± 0.81
$\boldsymbol{A_{143}^{tSZ}}$	7.15	$5.4^{+2.1}_{-1.9}$	$10^9 A_s e^{-2\tau}$	1.8843	1.884 ± 0.012	$D_M(2.33)$	5763.2	5764 ± 11
$\boldsymbol{A_{100}^{PS}}$	249.6	259 ± 28	D_{40}	1229.2	1232 ± 13	$f\sigma_8(0.15)$	0.4602	0.4602 ± 0.0081
$\boldsymbol{A_{143}^{PS}}$	48.2	46 ± 8	D_{220}	5731.8	5734 ± 39	$\sigma_8(0.15)$	0.7498	0.7494 ± 0.0064
$\boldsymbol{A_{143\times217}^{PS}}$	48.8	42 ± 9	D_{810}	2541.4	2540 ± 14	$f\sigma_8(0.38)$	0.4777	0.4776 ± 0.0066
$\boldsymbol{A_{217}^{PS}}$	120.3	115 ± 10	D_{1420}	818.47	817.4 ± 4.8	$\sigma_8(0.38)$	0.6642	0.6638 ± 0.0054
$\boldsymbol{A^{kSZ}}$	0.00	< 4.26	D_{2000}	231.33	230.9 ± 1.6	$f\sigma_8(0.51)$	0.4759	0.4756 ± 0.0058
$\boldsymbol{A_{100}^{dustTT}}$	8.83	8.9 ± 1.8	$n_{s,0.002}$	0.96604	0.9650 ± 0.0043	$\sigma_8(0.51)$	0.62140	0.6210 ± 0.0050
$\boldsymbol{A_{143}^{dustTT}}$	11.04	10.9 ± 1.8	Y_P	0.245402	$0.245392^{+0.000062}_{-0.000055}$	$f\sigma_8(0.61)$	0.4706	0.4703 ± 0.0053
$\boldsymbol{A_{143\times217}^{dustTT}}$	19.90	18.6 ± 3.3	Y_P^{BBN}	0.246728	$0.246719^{+0.000062}_{-0.000055}$	$\sigma_8(0.61)$	0.59116	0.5908 ± 0.0048
$\boldsymbol{A_{217}^{dustTT}}$	95.2	93.7 ± 7.4	10^5D/H	2.5826	2.587 ± 0.028	$f\sigma_8(2.33)$	0.29791	0.2977 ± 0.0024
$\boldsymbol{A_{100}^{dustTE}}$	0.1137	0.114 ± 0.038	Age/Gyr	13.7962	13.798 ± 0.024	$\sigma_8(2.33)$	0.30696	0.3068 ± 0.0025
$\boldsymbol{A_{100\times143}^{dustTE}}$	0.1347	0.135 ± 0.029	z_*	1089.905	1089.93 ± 0.27	f_{2000}^{143}	28.75	29.5 ± 2.7
$\boldsymbol{A_{100\times217}^{dustTE}}$	0.484	0.480 ± 0.084	r_*	144.406	144.42 ± 0.30	$f_{2000}^{143\times217}$	31.97	32.2 ± 1.9
$\boldsymbol{A_{143}^{dustTE}}$	0.226	0.226 ± 0.054	$100\theta_*$	1.041098	1.04110 ± 0.00031	f_{2000}^{217}	106.60	107.0 ± 1.8
$\boldsymbol{A_{143\times217}^{dustTE}}$	0.666	0.667 ± 0.081	$D_M(z_*)$/Gpc	13.8705	13.872 ± 0.028	$\chi^2_{lensing}$	8.83	9.8 ± 1.4
$\boldsymbol{A_{217}^{dustTE}}$	2.083	2.08 ± 0.27	z_{drag}	1059.971	1059.93 ± 0.30	χ^2_{simall}	396.05	397.1 ± 1.8
$\boldsymbol{c_{100}}$	0.99971	0.99966 ± 0.00061	r_{drag}	147.061	147.08 ± 0.30	χ^2_{lowl}	23.24	23.52 ± 0.96
$\boldsymbol{c_{217}}$	0.99820	0.99819 ± 0.00062	k_D	0.140912	0.14088 ± 0.00032	χ^2_{plik}	2344.7	2359.7 ± 5.8
H_0	67.35	67.33 ± 0.60	$100\theta_D$	0.160735	0.16076 ± 0.00017	χ^2_{prior}	1.75	11.6 ± 4.5
Ω_Λ	0.6845	0.6843 ± 0.0083	z_{eq}	3403.8	3404 ± 30	χ^2_{CMB}	2772.8	2790.1 ± 6.0
Ω_m	0.3155	0.3157 ± 0.0083	k_{eq}	0.010389	0.010389 ± 0.000093			
$\Omega_m h^2$	0.14308	0.1431 ± 0.0013	$100\theta_{eq}$	0.8130	0.8131 ± 0.0057			

Best-fit $\chi^2_{eff} = 2774.59$; $\Delta\chi^2_{eff} = -0.04$; $\bar{\chi}^2_{eff} = 2801.64$; $\Delta\bar{\chi}^2_{eff} = 0.95$; $R - 1 = 0.01120$

χ^2_{eff}: CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.83 (Δ -0.04) simall_100x143_offlike5_EE_Aplanck_B: 396.05 (Δ 0.00) commander_dx12_v3_2_29: 23.24 (Δ -0.01) plik_rd12_HM_v22b_TTTEEE: 2344.72 (Δ -0.21)

4.4 base_Aphiphi_plikHM_TTTEEE_lowl_lowE_lensing_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02237 ± 0.00015	$\Omega_m h^3$	0.09633 ± 0.00029	$100\theta_{s,eq}$	0.4493 ± 0.0029
$\boldsymbol{\Omega_c h^2}$	0.1200 ± 0.0013	σ_8	0.8121 ± 0.0069	$H(0.15)$	72.67 ± 0.51
$\boldsymbol{100\theta_{MC}}$	1.04092 ± 0.00031	S_8	0.833 ± 0.016	$D_M(0.15)$	643.5 ± 5.1
$\boldsymbol{\tau}$	$0.0553^{+0.0053}_{-0.0081}$	$\sigma_8\Omega_m^{0.5}$	0.4562 ± 0.0086	$H(0.38)$	82.86 ± 0.37
$\boldsymbol{\ln(10^{10}A_s)}$	$3.046^{+0.012}_{-0.016}$	$\sigma_8\Omega_m^{0.25}$	0.6087 ± 0.0079	$D_M(0.38)$	1534 ± 10
$\boldsymbol{n_s}$	0.9651 ± 0.0043	$\sigma_8/h^{0.5}$	0.990 ± 0.011	$H(0.51)$	89.62 ± 0.29
$\boldsymbol{A_L^{\phi\phi}}$	0.997 ± 0.031	$r_{drag}h$	99.1 ± 1.0	$D_M(0.51)$	1986 ± 12
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0025	$\langle d^2\rangle^{1/2}$	2.448 ± 0.027	$H(0.61)$	95.27 ± 0.23
$\boldsymbol{A_{217}^{CIB}}$	47 ± 7	z_{re}	$7.77^{+0.58}_{-0.81}$	$D_M(0.61)$	2311 ± 13
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	10^9A_s	$2.104^{+0.025}_{-0.034}$	$H(2.33)$	236.58 ± 0.80
$\boldsymbol{A_{143}^{tSZ}}$	$5.4^{+2.1}_{-1.9}$	$10^9A_se^{-2\tau}$	1.884 ± 0.012	$D_M(2.33)$	5764 ± 11
$\boldsymbol{A_{100}^{PS}}$	258 ± 28	D_{40}	1232 ± 13	$f\sigma_8(0.15)$	0.4605 ± 0.0080
$\boldsymbol{A_{143}^{PS}}$	46 ± 8	D_{220}	5734 ± 39	$\sigma_8(0.15)$	$0.7501^{+0.0055}_{-0.0063}$
$\boldsymbol{A_{143\times217}^{PS}}$	42 ± 9	D_{810}	2540 ± 14	$f\sigma_8(0.38)$	0.4779 ± 0.0065
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	D_{1420}	817.3 ± 4.8	$\sigma_8(0.38)$	$0.6644^{+0.0045}_{-0.0054}$
$\boldsymbol{A^{kSZ}}$	< 4.25	D_{2000}	230.9 ± 1.6	$f\sigma_8(0.51)$	0.4760 ± 0.0057
$\boldsymbol{A_{100}^{dustTT}}$	8.9 ± 1.8	$n_{s,0.002}$	0.9651 ± 0.0043	$\sigma_8(0.51)$	$0.6216^{+0.0040}_{-0.0050}$
$\boldsymbol{A_{143}^{dustTT}}$	10.9 ± 1.8	Y_P	$0.245393^{+0.000061}_{-0.000055}$	$f\sigma_8(0.61)$	0.4707 ± 0.0051
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.6 ± 3.3	Y_P^{BBN}	$0.246720^{+0.000061}_{-0.000055}$	$\sigma_8(0.61)$	$0.5914^{+0.0038}_{-0.0048}$
$\boldsymbol{A_{217}^{dustTT}}$	93.6 ± 7.4	10^5D/H	2.586 ± 0.028	$f\sigma_8(2.33)$	$0.2980^{+0.0018}_{-0.0024}$
$\boldsymbol{A_{100}^{dustTE}}$	0.114 ± 0.038	Age/Gyr	13.798 ± 0.024	$\sigma_8(2.33)$	$0.3071^{+0.0019}_{-0.0025}$
$\boldsymbol{A_{100\times143}^{dustTE}}$	0.135 ± 0.029	z_*	1089.92 ± 0.27	f_{2000}^{143}	29.5 ± 2.7
$\boldsymbol{A_{100\times217}^{dustTE}}$	0.481 ± 0.084	r_*	144.42 ± 0.30	$f_{2000}^{143\times217}$	32.2 ± 1.9
$\boldsymbol{A_{143}^{dustTE}}$	0.226 ± 0.054	$100\theta_*$	1.04110 ± 0.00031	f_{2000}^{217}	107.0 ± 1.8
$\boldsymbol{A_{143\times217}^{dustTE}}$	0.667 ± 0.081	$D_M(z_*)$/Gpc	13.872 ± 0.028	$\chi^2_{lensing}$	9.8 ± 1.4
$\boldsymbol{A_{217}^{dustTE}}$	2.08 ± 0.27	z_{drag}	1059.94 ± 0.30	χ^2_{simall}	397.1 ± 1.9
$\boldsymbol{c_{100}}$	0.99966 ± 0.00061	r_{drag}	147.08 ± 0.29	χ^2_{lowl}	23.53 ± 0.96
$\boldsymbol{c_{217}}$	0.99819 ± 0.00062	k_D	0.14088 ± 0.00032	χ^2_{plik}	2359.5 ± 5.8
H_0	67.34 ± 0.59	$100\theta_D$	0.16076 ± 0.00017	χ^2_{prior}	11.6 ± 4.5
Ω_Λ	0.6844 ± 0.0083	z_{eq}	3403 ± 30	χ^2_{CMB}	2789.8 ± 5.9
Ω_m	0.3156 ± 0.0083	k_{eq}	0.010387 ± 0.000092		
$\Omega_m h^2$	0.1431 ± 0.0013	$100\theta_{eq}$	0.8132 ± 0.0057		

$\bar{\chi}^2_{eff} = 2801.40$; $\Delta\bar{\chi}^2_{eff} = 0.90$; $R - 1 = 0.01121$

5 alpha1

5.1 base_alpha1_plikHM_TT_lowl_lowE

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022181	0.02219 ± 0.00023	$\sigma_8\Omega_m^{0.5}$	0.4622	0.464 ± 0.014	$100\theta_{s,eq}$	0.44706	0.4464 ± 0.0049
$\boldsymbol{\Omega_c h^2}$	0.12112	0.1214 ± 0.0022	$\sigma_8\Omega_m^{0.25}$	0.6128	0.614 ± 0.012	$H(0.15)$	72.11	72.01 ± 0.82
$\boldsymbol{100\theta_{MC}}$	1.04062	1.04048 ± 0.00055	$\sigma_8/h^{0.5}$	0.9949	0.996 ± 0.016	$D_M(0.15)$	649.0	650.3 ± 8.4
$\boldsymbol{\tau}$	0.0526	0.0537 ± 0.0083	$r_{drag}h$	98.06	97.8 ± 1.7	$H(0.38)$	82.43	82.36 ± 0.58
$\boldsymbol{\alpha_{-1}}$	−0.00030	$-0.0015^{+0.0017}_{-0.0010}$	$\langle d^2\rangle^{1/2}$	2.4583	2.465 ± 0.040	$D_M(0.38)$	1545.0	1547 ± 17
$\boldsymbol{\ln(10^{10}A_s)}$	3.0442	3.047 ± 0.018	z_{re}	7.57	7.66 ± 0.84	$H(0.51)$	89.265	89.22 ± 0.45
$\boldsymbol{n_s}$	0.9607	$0.9575^{+0.0067}_{-0.0079}$	10^9A_s	2.0994	2.106 ± 0.038	$D_M(0.51)$	1999.5	2002 ± 19
$\boldsymbol{y_{cal}}$	1.00050	1.0005 ± 0.0025	$10^9A_se^{-2\tau}$	1.8895	1.892 ± 0.015	$H(0.61)$	94.974	94.94 ± 0.36
$\boldsymbol{A_{217}^{CIB}}$	49.1	48 ± 7	D_{40}	1222.0	1218^{+18}_{-22}	$D_M(0.61)$	2325.2	2328 ± 21
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.28	—	D_{220}	5714.5	5719 ± 42	$H(2.33)$	237.08	237.3 ± 1.4
$\boldsymbol{A_{143}^{tSZ}}$	7.02	5.0 ± 2.0	D_{810}	2540.2	2539 ± 14	$D_M(2.33)$	5778.1	5780 ± 16
$\boldsymbol{A_{100}^{PS}}$	255.4	265 ± 28	D_{1420}	815.6	814.1 ± 5.2	$f\sigma_8(0.15)$	0.4657	0.467 ± 0.013
$\boldsymbol{A_{143}^{PS}}$	49.1	49 ± 8	D_{2000}	229.95	229.4 ± 1.8	$\sigma_8(0.15)$	0.7497	0.7493 ± 0.0076
$\boldsymbol{A_{143\times217}^{PS}}$	46.1	43 ± 9	$n_{s,0.002}$	0.9607	$0.9575^{+0.0067}_{-0.0079}$	$f\sigma_8(0.38)$	0.4814	0.4821 ± 0.0099
$\boldsymbol{A_{217}^{PS}}$	118.8	115 ± 10	Y_P	0.245318	$0.24532^{+0.00011}_{-0.000085}$	$\sigma_8(0.38)$	0.6632	0.6627 ± 0.0061
$\boldsymbol{A^{kSZ}}$	0.01	< 5.17	Y_P^{BBN}	0.246644	$0.24664^{+0.00011}_{-0.000086}$	$f\sigma_8(0.51)$	0.4786	0.4791 ± 0.0084
$\boldsymbol{A_{100}^{dustTT}}$	8.90	9.0 ± 1.8	10^5D/H	2.6215	2.620 ± 0.043	$\sigma_8(0.51)$	0.6201	0.6196 ± 0.0056
$\boldsymbol{A_{143}^{dustTT}}$	10.83	10.7 ± 1.8	Age/Gyr	13.8302	13.834 ± 0.037	$f\sigma_8(0.61)$	0.4727	0.4729 ± 0.0074
$\boldsymbol{A_{143\times217}^{dustTT}}$	19.29	18.3 ± 3.3	z_*	1090.260	1090.27 ± 0.41	$\sigma_8(0.61)$	0.5898	0.5891 ± 0.0052
$\boldsymbol{A_{217}^{dustTT}}$	94.4	93.3 ± 7.3	r_*	144.29	144.21 ± 0.54	$f\sigma_8(2.33)$	0.29689	0.2965 ± 0.0026
$\boldsymbol{c_{100}}$	0.99964	0.99961 ± 0.00062	$100\theta_*$	1.04082	1.04068 ± 0.00055	$\sigma_8(2.33)$	0.30558	0.3051 ± 0.0028
$\boldsymbol{c_{217}}$	0.99827	0.99827 ± 0.00062	$D_M(z_*)$/Gpc	13.8628	13.857 ± 0.048	f_{2000}^{143}	30.47	31.4 ± 2.9
H_0	66.71	66.58 ± 0.97	z_{drag}	1059.589	1059.62 ± 0.50	$f_{2000}^{143\times217}$	33.36	33.7 ± 2.0
Ω_Λ	0.6765	0.674 ± 0.014	r_{drag}	147.01	146.92 ± 0.55	f_{2000}^{217}	107.77	108.3 ± 1.9
Ω_m	0.3235	0.326 ± 0.014	k_D	0.14081	0.14091 ± 0.00062	χ^2_{simall}	395.88	397.1 ± 1.7
$\Omega_m h^2$	0.14395	0.1443 ± 0.0022	$100\theta_D$	0.160939	0.16090 ± 0.00031	χ^2_{lowl}	22.18	22.1 ± 2.1
$\Omega_m h^3$	0.096023	0.09602 ± 0.00047	z_{eq}	3425	3432 ± 52	χ^2_{plik}	759.7	774.0 ± 5.8
σ_8	0.8126	0.8124 ± 0.0090	k_{eq}	0.010452	0.01047 ± 0.00016	χ^2_{prior}	1.43	7.3 ± 3.7
S_8	0.8438	0.847 ± 0.025	$100\theta_{eq}$	0.8086	0.8074 ± 0.0095	χ^2_{CMB}	1177.7	1193.2 ± 5.8

Best-fit $\chi^2_{eff} = 1179.15$; $\Delta\chi^2_{eff} = -0.43$; $\bar{\chi}^2_{eff} = 1200.56$; $\Delta\bar{\chi}^2_{eff} = 0.98$; $R - 1 = 0.00658$

χ^2_{eff}: CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.88 (Δ 0.01) commander_dx12_v3_2_29: 22.18 (Δ -1.42) plik_rd12_HM_v22_TT: 759.66 (Δ 0.91)

5.2 base_alpha1_plikHM_TT_lowl_lowE_post_BAO

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022252	0.02228 ± 0.00023	$\sigma_8/h^{0.5}$	0.9814	0.981 ± 0.012	$D_M(0.38)$	1529.4	1529.9 ± 9.4
$\boldsymbol{\Omega_c h^2}$	0.11894	0.1191 ± 0.0012	$r_{drag}h$	99.76	99.66 ± 0.96	$H(0.51)$	89.669	89.67 ± 0.29
$\boldsymbol{100\theta_{MC}}$	1.040919	1.04087 ± 0.00047	$\langle d^2\rangle^{1/2}$	2.4269	2.429 ± 0.028	$D_M(0.51)$	1981.4	1982 ± 11
$\boldsymbol{\tau}$	0.0547	0.0552 ± 0.0084	z_{re}	7.73	7.75 ± 0.84	$H(0.61)$	95.273	95.28 ± 0.24
$\boldsymbol{\alpha_{-1}}$	-0.00005	$-0.0008^{+0.0015}_{-0.0011}$	$10^9 A_s$	2.0951	2.100 ± 0.038	$D_M(0.61)$	2305.8	2306 ± 12
$\boldsymbol{\ln(10^{10}A_s)}$	3.0422	3.044 ± 0.018	$10^9 A_s e^{-2\tau}$	1.8781	1.880 ± 0.013	$H(2.33)$	235.74	235.85 ± 0.81
$\boldsymbol{n_s}$	0.9664	$0.9642^{+0.0053}_{-0.0061}$	D_{40}	1218.9	1215^{+19}_{-26}	$D_M(2.33)$	5766.2	5766 ± 12
$\boldsymbol{y_{cal}}$	1.00039	1.0006 ± 0.0026	D_{220}	5719.2	5725 ± 41	$f\sigma_8(0.15)$	0.4541	0.4543 ± 0.0077
$\boldsymbol{A^{CIB}_{217}}$	48.7	48 ± 7	D_{810}	2536.6	2537 ± 14	$\sigma_8(0.15)$	0.7460	0.7453 ± 0.0069
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.34	—	D_{1420}	816.0	815.3 ± 5.1	$f\sigma_8(0.38)$	0.4727	0.4727 ± 0.0065
$\boldsymbol{A^{tSZ}_{143}}$	6.85	$5.0^{+2.2}_{-2.0}$	D_{2000}	230.14	229.9 ± 1.8	$\sigma_8(0.38)$	0.6614	0.6608 ± 0.0059
$\boldsymbol{A^{PS}_{100}}$	255.5	264 ± 28	$n_{s,0.002}$	0.9664	$0.9642^{+0.0053}_{-0.0061}$	$f\sigma_8(0.51)$	0.4715	0.4713 ± 0.0058
$\boldsymbol{A^{PS}_{143}}$	49.9	48 ± 8	Y_P	0.245347	$0.245355^{+0.000099}_{-0.000083}$	$\sigma_8(0.51)$	0.6190	0.6184 ± 0.0055
$\boldsymbol{A^{PS}_{143\times217}}$	47.0	43^{+9}_{-10}	Y_P^{BBN}	0.246674	$0.246682^{+0.000099}_{-0.000083}$	$f\sigma_8(0.61)$	0.4666	0.4664 ± 0.0054
$\boldsymbol{A^{PS}_{217}}$	119.0	114 ± 10	10^5D/H	2.6079	2.603 ± 0.042	$\sigma_8(0.61)$	0.5890	0.5884 ± 0.0052
$\boldsymbol{A^{kSZ}}$	0.20	< 5.05	Age/Gyr	13.8050	13.804 ± 0.028	$f\sigma_8(2.33)$	0.29705	0.2967 ± 0.0026
$\boldsymbol{A^{dustTT}_{100}}$	8.89	9.0 ± 1.8	z_*	1089.976	1089.95 ± 0.32	$\sigma_8(2.33)$	0.30631	0.3059 ± 0.0027
$\boldsymbol{A^{dustTT}_{143}}$	10.74	10.8 ± 1.8	r_*	144.796	144.74 ± 0.34	f^{143}_{2000}	30.40	31.0 ± 3.0
$\boldsymbol{A^{dustTT}_{143\times217}}$	19.38	18.3 ± 3.4	$100\theta_*$	1.041114	1.04107 ± 0.00047	$f^{143\times217}_{2000}$	33.18	33.4 ± 2.0
$\boldsymbol{A^{dustTT}_{217}}$	94.5	93.5 ± 7.5	$D_M(z_*)$/Gpc	13.9078	13.903 ± 0.032	f^{217}_{2000}	107.58	108.0 ± 1.9
$\boldsymbol{c_{100}}$	0.99970	0.99963 ± 0.00061	z_{drag}	1059.59	1059.66 ± 0.52	χ^2_{simall}	396.06	397.2 ± 1.8
$\boldsymbol{c_{217}}$	0.99823	0.99829 ± 0.00061	r_{drag}	147.504	147.44 ± 0.39	χ^2_{lowl}	22.26	22 ± 2
H_0	67.63	67.60 ± 0.54	k_D	0.14034	0.14043 ± 0.00052	χ^2_{plik}	760.7	774.1 ± 5.8
Ω_Λ	0.6899	0.6891 ± 0.0074	$100\theta_D$	0.160955	0.16091 ± 0.00033	χ^2_{6DF}	0.0222	0.067 ± 0.086
Ω_m	0.3101	0.3109 ± 0.0074	z_{eq}	3374.0	3378 ± 29	χ^2_{MGS}	1.28	1.30 ± 0.52
$\Omega_m h^2$	0.14183	0.1420 ± 0.0012	k_{eq}	0.010298	0.010309 ± 0.000090	$\chi^2_{DR12BAO}$	4.22	5.0 ± 1.8
$\Omega_m h^3$	0.095922	0.09598 ± 0.00047	$100\theta_{eq}$	0.8180	0.8174 ± 0.0054	χ^2_{prior}	1.20	7.3 ± 3.7
σ_8	0.8071	0.8065 ± 0.0078	$100\theta_{s,eq}$	0.45195	0.4516 ± 0.0028	χ^2_{BAO}	5.52	6.4 ± 1.5
S_8	0.8206	0.821 ± 0.015	$H(0.15)$	72.891	72.87 ± 0.47	χ^2_{CMB}	1179.0	1193.6 ± 5.7
$\sigma_8\Omega_m^{0.5}$	0.4495	0.4497 ± 0.0082	$D_M(0.15)$	641.13	641.4 ± 4.7			
$\sigma_8\Omega_m^{0.25}$	0.6023	0.6022 ± 0.0080	$H(0.38)$	82.971	82.96 ± 0.35			

Best-fit $\chi^2_{eff} = 1185.69$; $\Delta\chi^2_{eff} = -0.06$; $\bar{\chi}^2_{eff} = 1207.24$; $\Delta\bar{\chi}^2_{eff} = 1.22$; $R - 1 = 0.02382$

χ^2_{eff}: BAO - 6DF: 0.02 (Δ 0.00) MGS: 1.28 (Δ 0.00) DR12BAO: 4.22 (Δ 0.03) CMB - simall_100x143_offlike5_EE_Aplanck_B: 396.06 (Δ 0.17) commander_dx12_v3_2_29: 22.26 (Δ -0.57) plik_rd12_HM_v22_TT: 760.65 (Δ 0.55)

5.3 base_alpha1_plikHM_TT_lowl_lowE_post_lensing

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022207	0.02223 ± 0.00022	$\sigma_8\Omega_m^{0.25}$	0.6095	0.6094 ± 0.0077	$D_M(0.15)$	646.8	647.5 ± 6.4
$\boldsymbol{\Omega_c h^2}$	0.12051	0.1207 ± 0.0016	$\sigma_8/h^{0.5}$	0.9905	0.990 ± 0.010	$H(0.38)$	82.579	82.54 ± 0.46
$\boldsymbol{100\theta_{MC}}$	1.04069	1.04057 ± 0.00051	$r_{drag}h$	98.53	98.4 ± 1.3	$D_M(0.38)$	1540.7	1542 ± 13
$\boldsymbol{\tau}$	0.0528	0.0536 ± 0.0081	$\langle d^2\rangle^{1/2}$	2.4491	2.452 ± 0.025	$H(0.51)$	89.377	89.35 ± 0.36
$\boldsymbol{\alpha_{-1}}$	-0.00018	$-0.0013^{+0.0017}_{-0.0010}$	z_{re}	7.58	$7.62^{+0.84}_{-0.75}$	$D_M(0.51)$	1994.5	1996 ± 15
$\boldsymbol{\ln(10^{10}A_s)}$	3.0425	3.045 ± 0.016	$10^9 A_s$	2.0957	2.101 ± 0.033	$H(0.61)$	95.057	95.04 ± 0.30
$\boldsymbol{n_s}$	0.9621	$0.9592^{+0.0057}_{-0.0069}$	$10^9 A_s e^{-2\tau}$	1.8855	1.888 ± 0.013	$D_M(0.61)$	2319.8	2321 ± 16
$\boldsymbol{y_{cal}}$	1.00018	1.0004 ± 0.0025	D_{40}	1222.2	1216^{+16}_{-23}	$H(2.33)$	236.72	236.8 ± 1.0
$\boldsymbol{A_{217}^{CIB}}$	49.4	48 ± 7	D_{220}	5715.9	5721 ± 42	$D_M(2.33)$	5774.8	5776 ± 14
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.26	—	D_{810}	2537.9	2538 ± 14	$f\sigma_8(0.15)$	0.4622	0.4624 ± 0.0083
$\boldsymbol{A_{143}^{tSZ}}$	6.99	5.0 ± 2.0	D_{1420}	815.2	814.2 ± 5.2	$\sigma_8(0.15)$	0.7482	0.7473 ± 0.0056
$\boldsymbol{A_{100}^{PS}}$	256.6	265 ± 28	D_{2000}	229.84	229.4 ± 1.8	$f\sigma_8(0.38)$	0.4787	0.4786 ± 0.0063
$\boldsymbol{A_{143}^{PS}}$	48.9	49 ± 8	$n_{s,0.002}$	0.9621	$0.9592^{+0.0057}_{-0.0069}$	$\sigma_8(0.38)$	0.66233	0.6614 ± 0.0050
$\boldsymbol{A_{143\times217}^{PS}}$	45.3	43^{+9}_{-10}	Y_P	0.245329	$0.24533^{+0.00010}_{-0.000083}$	$f\sigma_8(0.51)$	0.4764	$0.4761^{+0.0056}_{-0.0050}$
$\boldsymbol{A_{217}^{PS}}$	118.1	114 ± 10	Y_P^{BBN}	0.246655	$0.24666^{+0.00010}_{-0.000083}$	$\sigma_8(0.51)$	0.61946	0.6185 ± 0.0047
$\boldsymbol{A^{kSZ}}$	0.00	< 5.26	10^5D/H	2.6166	2.613 ± 0.042	$f\sigma_8(0.61)$	0.47073	$0.4704^{+0.0050}_{-0.0045}$
$\boldsymbol{A_{100}^{dustTT}}$	8.88	8.9 ± 1.8	Age/Gyr	13.8230	13.825 ± 0.032	$\sigma_8(0.61)$	0.58921	0.5883 ± 0.0046
$\boldsymbol{A_{143}^{dustTT}}$	10.80	10.8 ± 1.8	z_*	1090.171	1090.16 ± 0.35	$f\sigma_8(2.33)$	0.29676	0.2963 ± 0.0024
$\boldsymbol{A_{143\times217}^{dustTT}}$	19.27	18.4 ± 3.3	r_*	144.423	144.37 ± 0.41	$\sigma_8(2.33)$	0.30560	0.3051 ± 0.0027
$\boldsymbol{A_{217}^{dustTT}}$	94.2	93.4 ± 7.4	$100\theta_*$	1.04089	1.04076 ± 0.00051	f_{2000}^{143}	30.53	31.4 ± 3.0
$\boldsymbol{c_{100}}$	0.99968	0.99962 ± 0.00061	$D_M(z_*)$/Gpc	13.8750	13.872 ± 0.037	$f_{2000}^{143\times217}$	33.29	33.6 ± 2.0
$\boldsymbol{c_{217}}$	0.99827	0.99828 ± 0.00061	z_{drag}	1059.589	1059.65 ± 0.50	f_{2000}^{217}	107.62	108.2 ± 1.9
H_0	66.96	66.89 ± 0.74	r_{drag}	147.138	147.08 ± 0.43	$\chi^2_{lensing}$	8.93	9.52 ± 0.98
Ω_Λ	0.6803	0.679 ± 0.010	k_D	0.14069	0.14077 ± 0.00053	χ^2_{simall}	395.89	397.0 ± 1.5
Ω_m	0.3197	0.321 ± 0.010	$100\theta_D$	0.160934	0.16089 ± 0.00031	χ^2_{lowl}	22.35	22.1 ± 2.2
$\Omega_m h^2$	0.14337	0.1435 ± 0.0016	z_{eq}	3410.6	3415 ± 38	χ^2_{plik}	759.7	773.7 ± 5.7
$\Omega_m h^3$	0.096001	0.09600 ± 0.00046	k_{eq}	0.010409	0.01042 ± 0.00012	χ^2_{prior}	1.27	7.3 ± 3.7
σ_8	0.8106	0.8097 ± 0.0063	$100\theta_{eq}$	0.8112	0.8105 ± 0.0071	χ^2_{CMB}	1186.9	1202.2 ± 5.7
S_8	0.8368	0.837 ± 0.017	$100\theta_{s,eq}$	0.44839	0.4480 ± 0.0037			
$\sigma_8\Omega_m^{0.5}$	0.4583	0.4587 ± 0.0091	$H(0.15)$	72.33	72.27 ± 0.63			

Best-fit $\chi^2_{eff} = 1188.17$; $\Delta\chi^2_{eff} = -0.40$; $\bar{\chi}^2_{eff} = 1209.53$; $\Delta\bar{\chi}^2_{eff} = 1.12$; $R - 1 = 0.01166$

χ^2_{eff}: CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.93 (Δ 0.03) simall_100x143_offlike5_EE_Aplanck_B: 395.89 (Δ 0.02) commander_dx12_v3_2_29: 22.35 (Δ -0.88) plik_rd12_HM_v22_TT: 759.73 (Δ 0.41)

5.4 base_alpha1_plikHM_TT_lowl_lowE_post_BAO_lensing

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022281	0.02229 ± 0.00022	$\sigma_8/h^{0.5}$	0.9842	0.9834 ± 0.0090	$D_M(0.38)$	1529.9	1530.8 ± 8.7
$\boldsymbol{\Omega_c h^2}$	0.11911	0.1192 ± 0.0011	$r_{drag}h$	99.65	99.56 ± 0.87	$H(0.51)$	89.669	89.65 ± 0.27
$\boldsymbol{100\theta_{MC}}$	1.040919	1.04085 ± 0.00047	$\langle d^2\rangle^{1/2}$	2.4356	2.436 ± 0.021	$D_M(0.51)$	1982.0	1983 ± 10
$\boldsymbol{\tau}$	0.0565	0.0566 ± 0.0078	z_{re}	7.91	7.90 ± 0.77	$H(0.61)$	95.281	95.26 ± 0.24
$\boldsymbol{\alpha_{-1}}$	-0.00008	$-0.0009^{+0.0015}_{-0.0011}$	$10^9 A_s$	2.1057	2.107 ± 0.034	$D_M(0.61)$	2306.4	2307 ± 11
$\boldsymbol{\ln(10^{10}A_s)}$	3.0472	3.048 ± 0.016	$10^9 A_s e^{-2\tau}$	1.8806	1.881 ± 0.012	$H(2.33)$	235.89	235.95 ± 0.73
$\boldsymbol{n_s}$	0.9654	$0.9637^{+0.0051}_{-0.0060}$	D_{40}	1221.4	1216^{+17}_{-26}	$D_M(2.33)$	5765.4	5766 ± 12
$\boldsymbol{y_{cal}}$	1.00074	1.0007 ± 0.0025	D_{220}	5728.5	5728 ± 41	$f\sigma_8(0.15)$	0.4558	0.4557 ± 0.0061
$\boldsymbol{A^{CIB}_{217}}$	50.3	48 ± 7	D_{810}	2538.5	2538 ± 14	$\sigma_8(0.15)$	0.7478	0.7468 ± 0.0057
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.099	—	D_{1420}	816.35	815.5 ± 5.0	$f\sigma_8(0.38)$	0.4743	0.4740 ± 0.0051
$\boldsymbol{A^{tSZ}_{143}}$	7.14	$5.0^{+2.2}_{-2.0}$	D_{2000}	230.31	230.0 ± 1.7	$\sigma_8(0.38)$	0.6629	0.6620 ± 0.0050
$\boldsymbol{A^{PS}_{100}}$	256.9	264 ± 28	$n_{s,0.002}$	0.9654	$0.9637^{+0.0051}_{-0.0060}$	$f\sigma_8(0.51)$	0.47293	0.4725 ± 0.0046
$\boldsymbol{A^{PS}_{143}}$	45.7	48 ± 8	Y_P	0.245360	$0.245359^{+0.000097}_{-0.000083}$	$\sigma_8(0.51)$	0.62040	0.6195 ± 0.0047
$\boldsymbol{A^{PS}_{143\times217}}$	40.6	43^{+9}_{-10}	Y_P^{BBN}	0.246686	$0.246685^{+0.000097}_{-0.000083}$	$f\sigma_8(0.61)$	0.46801	0.4676 ± 0.0042
$\boldsymbol{A^{PS}_{217}}$	116.4	115 ± 10	10^5D/H	2.6023	2.602 ± 0.042	$\sigma_8(0.61)$	0.59034	0.5895 ± 0.0045
$\boldsymbol{A^{kSZ}}$	0.01	< 4.96	Age/Gyr	13.8027	13.804 ± 0.028	$f\sigma_8(2.33)$	0.29768	0.2972 ± 0.0023
$\boldsymbol{A^{dustTT}_{100}}$	8.89	8.9 ± 1.8	z_*	1089.954	1089.96 ± 0.31	$\sigma_8(2.33)$	0.30692	0.3064 ± 0.0025
$\boldsymbol{A^{dustTT}_{143}}$	10.75	10.7 ± 1.7	r_*	144.728	144.70 ± 0.31	f^{143}_{2000}	30.38	31.0 ± 2.9
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.93	18.3 ± 3.3	$100\theta_*$	1.041115	1.04104 ± 0.00047	$f^{143\times217}_{2000}$	33.10	33.3 ± 2.0
$\boldsymbol{A^{dustTT}_{217}}$	93.9	93.6 ± 7.5	$D_M(z_*)$/Gpc	13.9013	13.899 ± 0.030	f^{217}_{2000}	107.70	108.0 ± 1.9
$\boldsymbol{c_{100}}$	0.99965	0.99963 ± 0.00061	z_{drag}	1059.67	1059.69 ± 0.51	$\chi^2_{lensing}$	8.783	9.25 ± 0.72
$\boldsymbol{c_{217}}$	0.99827	0.99829 ± 0.00061	r_{drag}	147.425	147.39 ± 0.36	χ^2_{simall}	396.43	397.3 ± 1.8
H_0	67.592	67.54 ± 0.50	k_D	0.140447	0.14048 ± 0.00050	χ^2_{lowl}	22.31	22 ± 3
Ω_Λ	0.6891	0.6884 ± 0.0067	$100\theta_D$	0.160910	0.16089 ± 0.00032	χ^2_{plik}	759.8	773.6 ± 5.7
Ω_m	0.3109	0.3116 ± 0.0067	z_{eq}	3378.9	3381 ± 26	χ^2_{6DF}	0.0294	0.068 ± 0.080
$\Omega_m h^2$	0.14204	0.1421 ± 0.0011	k_{eq}	0.010313	0.010320 ± 0.000081	χ^2_{MGS}	1.217	1.23 ± 0.47
$\Omega_m h^3$	0.096008	0.09600 ± 0.00046	$100\theta_{eq}$	0.81723	0.8168 ± 0.0048	$\chi^2_{DR12BAO}$	4.40	5.1 ± 1.7
σ_8	0.8092	0.8082 ± 0.0063	$100\theta_{s,eq}$	0.45150	0.4513 ± 0.0025	χ^2_{prior}	1.57	7.2 ± 3.7
S_8	0.8237	0.824 ± 0.012	$H(0.15)$	72.864	72.82 ± 0.43	χ^2_{CMB}	1187.3	1202.5 ± 5.7
$\sigma_8\Omega_m^{0.5}$	0.4512	0.4511 ± 0.0066	$D_M(0.15)$	641.43	641.9 ± 4.3	χ^2_{BAO}	5.64	6.4 ± 1.4
$\sigma_8\Omega_m^{0.25}$	0.6042	0.6038 ± 0.0063	$H(0.38)$	82.961	82.93 ± 0.33			

Best-fit $\chi^2_{eff} = 1194.56$; $\Delta\chi^2_{eff} = -0.13$; $\bar{\chi}^2_{eff} = 1216.09$; $\Delta\bar{\chi}^2_{eff} = 1.36$; $R - 1 = 0.02745$

χ^2_{eff}: BAO - 6DF: 0.03 (Δ 0.00) MGS: 1.22 (Δ 0.00) DR12BAO: 4.40 (Δ 0.02) CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.78 (Δ -0.09) simall_100x143_offlike5_EE_Aplanck_ 396.43 (Δ 0.34) commander_dx12_v3_2_29: 22.31 (Δ -0.65) plik_rd12_HM_v22_TT: 759.82 (Δ 0.02)

5.5 base_alpha1_plikHM_TT_lowl_lowE_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02220 ± 0.00023	$\sigma_8\Omega_m^{0.5}$	0.464 ± 0.014	$100\theta_{s,eq}$	0.4465 ± 0.0049
$\boldsymbol{\Omega_c h^2}$	0.1214 ± 0.0022	$\sigma_8\Omega_m^{0.25}$	0.614 ± 0.012	$H(0.15)$	72.03 ± 0.81
$\boldsymbol{100\theta_{MC}}$	1.04048 ± 0.00055	$\sigma_8/h^{0.5}$	0.997 ± 0.016	$D_M(0.15)$	650.1 ± 8.4
$\boldsymbol{\tau}$	$0.0551^{+0.0054}_{-0.0086}$	$r_{drag}h$	97.9 ± 1.7	$H(0.38)$	82.37 ± 0.58
$\boldsymbol{\alpha_{-1}}$	$-0.0015^{+0.0017}_{-0.0010}$	$\langle d^2\rangle^{1/2}$	2.468 ± 0.039	$D_M(0.38)$	1547 ± 17
$\boldsymbol{\ln(10^{10}A_s)}$	$3.050^{+0.014}_{-0.017}$	z_{re}	$7.81^{+0.61}_{-0.84}$	$H(0.51)$	89.23 ± 0.45
$\boldsymbol{n_s}$	$0.9576^{+0.0067}_{-0.0078}$	$10^9 A_s$	$2.112^{+0.029}_{-0.037}$	$D_M(0.51)$	2002 ± 19
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.892 ± 0.015	$H(0.61)$	$94.95^{+0.33}_{-0.37}$
$\boldsymbol{A^{CIB}_{217}}$	48 ± 7	D_{40}	1217^{+18}_{-22}	$D_M(0.61)$	2328 ± 21
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{220}	5719 ± 42	$H(2.33)$	237.3 ± 1.4
$\boldsymbol{A^{tSZ}_{143}}$	5.0 ± 2.0	D_{810}	2539 ± 14	$D_M(2.33)$	5779 ± 16
$\boldsymbol{A^{PS}_{100}}$	264 ± 28	D_{1420}	814.2 ± 5.2	$f\sigma_8(0.15)$	0.467 ± 0.013
$\boldsymbol{A^{PS}_{143}}$	49 ± 8	D_{2000}	229.4 ± 1.8	$\sigma_8(0.15)$	0.7502 ± 0.0071
$\boldsymbol{A^{PS}_{143\times217}}$	43 ± 9	$n_{s,0.002}$	$0.9576^{+0.0067}_{-0.0078}$	$f\sigma_8(0.38)$	0.4825 ± 0.0098
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	Y_P	$0.24532^{+0.00010}_{-0.000085}$	$\sigma_8(0.38)$	0.6635 ± 0.0056
$\boldsymbol{A^{kSZ}}$	< 5.14	Y_P^{BBN}	$0.24665^{+0.00011}_{-0.000085}$	$f\sigma_8(0.51)$	0.4795 ± 0.0082
$\boldsymbol{A^{dustTT}_{100}}$	9.0 ± 1.8	10^5D/H	2.618 ± 0.043	$\sigma_8(0.51)$	$0.6203^{+0.0047}_{-0.0053}$
$\boldsymbol{A^{dustTT}_{143}}$	10.7 ± 1.8	Age/Gyr	13.833 ± 0.037	$f\sigma_8(0.61)$	0.4734 ± 0.0072
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.3 ± 3.3	z_*	1090.26 ± 0.40	$\sigma_8(0.61)$	$0.5899^{+0.0044}_{-0.0050}$
$\boldsymbol{A^{dustTT}_{217}}$	93.4 ± 7.3	r_*	144.21 ± 0.53	$f\sigma_8(2.33)$	$0.2969^{+0.0021}_{-0.0025}$
$\boldsymbol{c_{100}}$	0.99961 ± 0.00062	$100\theta_*$	1.04068 ± 0.00055	$\sigma_8(2.33)$	$0.3055^{+0.0022}_{-0.0027}$
$\boldsymbol{c_{217}}$	0.99827 ± 0.00062	$D_M(z_*)$/Gpc	13.857 ± 0.048	f^{143}_{2000}	31.4 ± 2.9
H_0	66.60 ± 0.96	z_{drag}	1059.64 ± 0.49	$f^{143\times217}_{2000}$	33.7 ± 2.0
Ω_Λ	0.675 ± 0.014	r_{drag}	146.92 ± 0.54	f^{217}_{2000}	108.2 ± 1.9
Ω_m	0.325 ± 0.014	k_D	0.14092 ± 0.00061	χ^2_{simall}	397.0 ± 1.7
$\Omega_m h^2$	0.1442 ± 0.0022	$100\theta_D$	0.16089 ± 0.00030	χ^2_{lowl}	22.1 ± 2.1
$\Omega_m h^3$	0.09603 ± 0.00047	z_{eq}	3431 ± 51	χ^2_{plik}	773.9 ± 5.8
σ_8	0.8133 ± 0.0086	k_{eq}	0.01047 ± 0.00016	χ^2_{prior}	7.3 ± 3.7
S_8	0.847 ± 0.025	$100\theta_{eq}$	0.8075 ± 0.0094	χ^2_{CMB}	1193.0 ± 5.7

$\bar{\chi}^2_{eff} = 1200.29$; $\Delta\bar{\chi}^2_{eff} = 0.97$; $R - 1 = 0.00693$

5.6 base_alpha1_plikHM_TT_lowl_lowE_post_BAO_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02229 ± 0.00022	$\sigma_8/h^{0.5}$	0.982 ± 0.011	$D_M(0.38)$	1529.8 ± 9.3
$\boldsymbol{\Omega_c h^2}$	0.1191 ± 0.0012	$r_{drag}h$	99.67 ± 0.96	$H(0.51)$	89.67 ± 0.29
$\boldsymbol{100\theta_{MC}}$	1.04087 ± 0.00047	$\langle d^2\rangle^{1/2}$	2.432 ± 0.026	$D_M(0.51)$	1982 ± 11
$\boldsymbol{\tau}$	$0.0563^{+0.0061}_{-0.0087}$	z_{re}	$7.87^{+0.65}_{-0.86}$	$H(0.61)$	95.28 ± 0.24
$\boldsymbol{\alpha_{-1}}$	$-0.0009^{+0.0015}_{-0.0011}$	$10^9 A_s$	$2.104^{+0.030}_{-0.038}$	$D_M(0.61)$	2306 ± 12
$\boldsymbol{\ln(10^{10} A_s)}$	$3.046^{+0.015}_{-0.018}$	$10^9 A_s e^{-2\tau}$	1.880 ± 0.012	$H(2.33)$	235.85 ± 0.81
$\boldsymbol{n_s}$	$0.9642^{+0.0053}_{-0.0061}$	D_{40}	1214^{+18}_{-26}	$D_M(2.33)$	5766 ± 12
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0025	D_{220}	5725 ± 41	$f\sigma_8(0.15)$	0.4547 ± 0.0075
$\boldsymbol{A_{217}^{CIB}}$	48 ± 7	D_{810}	2537 ± 14	$\sigma_8(0.15)$	0.7461 ± 0.0064
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{1420}	815.3 ± 5.0	$f\sigma_8(0.38)$	0.4731 ± 0.0063
$\boldsymbol{A_{143}^{tSZ}}$	5.0 ± 2.0	D_{2000}	229.9 ± 1.8	$\sigma_8(0.38)$	0.6614 ± 0.0055
$\boldsymbol{A_{100}^{PS}}$	264 ± 28	$n_{s,0.002}$	$0.9642^{+0.0053}_{-0.0061}$	$f\sigma_8(0.51)$	0.4718 ± 0.0056
$\boldsymbol{A_{143}^{PS}}$	48 ± 8	Y_P	$0.245358^{+0.000097}_{-0.000083}$	$\sigma_8(0.51)$	0.6190 ± 0.0051
$\boldsymbol{A_{143\times217}^{PS}}$	43^{+9}_{-10}	Y_P^{BBN}	$0.246685^{+0.000098}_{-0.000083}$	$f\sigma_8(0.61)$	0.4669 ± 0.0052
$\boldsymbol{A_{217}^{PS}}$	114 ± 10	10^5D/H	2.602 ± 0.042	$\sigma_8(0.61)$	$0.5890^{+0.0046}_{-0.0051}$
$\boldsymbol{A^{kSZ}}$	< 5.03	Age/Gyr	13.803 ± 0.028	$f\sigma_8(2.33)$	$0.2970^{+0.0023}_{-0.0026}$
$\boldsymbol{A_{100}^{dustTT}}$	9.0 ± 1.8	z_*	1089.94 ± 0.32	$\sigma_8(2.33)$	$0.3063^{+0.0023}_{-0.0027}$
$\boldsymbol{A_{143}^{dustTT}}$	10.8 ± 1.8	r_*	144.74 ± 0.34	f_{2000}^{143}	31.0 ± 3.0
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.3 ± 3.4	$100\theta_*$	1.04106 ± 0.00048	$f_{2000}^{143\times217}$	33.3 ± 2.0
$\boldsymbol{A_{217}^{dustTT}}$	93.5 ± 7.5	$D_M(z_*)$/Gpc	13.903 ± 0.032	f_{2000}^{217}	107.9 ± 1.9
$\boldsymbol{c_{100}}$	0.99962 ± 0.00061	z_{drag}	1059.68 ± 0.52	χ^2_{simall}	397.1 ± 1.9
$\boldsymbol{c_{217}}$	0.99829 ± 0.00061	r_{drag}	147.43 ± 0.39	χ^2_{lowl}	22 ± 2
H_0	67.60 ± 0.54	k_D	0.14044 ± 0.00052	χ^2_{plik}	774.0 ± 5.8
Ω_Λ	0.6892 ± 0.0074	$100\theta_D$	0.16090 ± 0.00032	χ^2_{6DF}	0.066 ± 0.085
Ω_m	0.3108 ± 0.0074	z_{eq}	3378 ± 29	χ^2_{MGS}	1.30 ± 0.52
$\Omega_m h^2$	0.1420 ± 0.0012	k_{eq}	0.010309 ± 0.000090	$\chi^2_{DR12BAO}$	5.0 ± 1.8
$\Omega_m h^3$	0.09599 ± 0.00047	$100\theta_{eq}$	0.8175 ± 0.0054	χ^2_{prior}	7.3 ± 3.7
σ_8	0.8073 ± 0.0073	$100\theta_{s,eq}$	0.4516 ± 0.0028	χ^2_{BAO}	6.4 ± 1.5
S_8	0.822 ± 0.015	$H(0.15)$	72.87 ± 0.47	χ^2_{CMB}	1193.4 ± 5.6
$\sigma_8\Omega_m^{0.5}$	0.4500 ± 0.0080	$D_M(0.15)$	641.4 ± 4.6		
$\sigma_8\Omega_m^{0.25}$	0.6028 ± 0.0077	$H(0.38)$	82.97 ± 0.35		

$\bar{\chi}^2_{eff} = 1207.05$; $\Delta\bar{\chi}^2_{eff} = 1.29$; $R - 1 = 0.02346$

5.7 base_alpha1_plikHM_TT_lowl_lowE_post_lensing_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02224 ± 0.00022	$\sigma_8\Omega_m^{0.25}$	0.6095 ± 0.0077	$D_M(0.15)$	647.0 ± 6.2
$\boldsymbol{\Omega_c h^2}$	0.1205 ± 0.0016	$\sigma_8/h^{0.5}$	$0.990^{+0.011}_{-0.0099}$	$H(0.38)$	82.57 ± 0.45
$\boldsymbol{100\theta_{MC}}$	1.04058 ± 0.00051	$r_{drag}h$	98.5 ± 1.3	$D_M(0.38)$	1541 ± 12
$\boldsymbol{\tau}$	$0.0549^{+0.0055}_{-0.0084}$	$\langle d^2\rangle^{1/2}$	2.453 ± 0.025	$H(0.51)$	89.37 ± 0.36
$\boldsymbol{\alpha_{-1}}$	$-0.0014^{+0.0017}_{-0.0010}$	z_{re}	$7.77^{+0.61}_{-0.80}$	$D_M(0.51)$	1995 ± 15
$\boldsymbol{\ln(10^{10}A_s)}$	$3.047^{+0.013}_{-0.015}$	$10^9 A_s$	$2.106^{+0.026}_{-0.033}$	$H(0.61)$	95.06 ± 0.29
$\boldsymbol{n_s}$	$0.9595^{+0.0056}_{-0.0069}$	$10^9 A_s e^{-2\tau}$	1.887 ± 0.013	$D_M(0.61)$	2320 ± 16
$\boldsymbol{y_{cal}}$	1.0004 ± 0.0025	D_{40}	1215^{+16}_{-22}	$H(2.33)$	236.8 ± 1.0
$\boldsymbol{A_{217}^{CIB}}$	48 ± 7	D_{220}	5721 ± 41	$D_M(2.33)$	5775 ± 14
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{810}	2538 ± 14	$f\sigma_8(0.15)$	0.4623 ± 0.0083
$\boldsymbol{A_{143}^{tSZ}}$	5.0 ± 2.0	D_{1420}	814.2 ± 5.2	$\sigma_8(0.15)$	0.7479 ± 0.0053
$\boldsymbol{A_{100}^{PS}}$	265 ± 28	D_{2000}	229.5 ± 1.8	$f\sigma_8(0.38)$	$0.4787^{+0.0066}_{-0.0060}$
$\boldsymbol{A_{143}^{PS}}$	49 ± 8	$n_{s,0.002}$	$0.9595^{+0.0056}_{-0.0069}$	$\sigma_8(0.38)$	0.6620 ± 0.0046
$\boldsymbol{A_{143\times217}^{PS}}$	43^{+9}_{-10}	Y_P	$0.245337^{+0.000099}_{-0.000082}$	$f\sigma_8(0.51)$	$0.4763^{+0.0056}_{-0.0050}$
$\boldsymbol{A_{217}^{PS}}$	114 ± 10	Y_P^{BBN}	$0.246664^{+0.000099}_{-0.000082}$	$\sigma_8(0.51)$	$0.6192^{+0.0041}_{-0.0046}$
$\boldsymbol{A^{kSZ}}$	< 5.25	10^5D/H	2.611 ± 0.042	$f\sigma_8(0.61)$	$0.4706^{+0.0050}_{-0.0044}$
$\boldsymbol{A_{100}^{dustTT}}$	9.0 ± 1.8	Age/Gyr	13.823 ± 0.032	$\sigma_8(0.61)$	$0.5889^{+0.0039}_{-0.0044}$
$\boldsymbol{A_{143}^{dustTT}}$	10.8 ± 1.8	z_*	1090.14 ± 0.35	$f\sigma_8(2.33)$	$0.2966^{+0.0021}_{-0.0024}$
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.4 ± 3.3	r_*	144.39 ± 0.40	$\sigma_8(2.33)$	$0.3054^{+0.0023}_{-0.0027}$
$\boldsymbol{A_{217}^{dustTT}}$	93.4 ± 7.4	$100\theta_*$	1.04078 ± 0.00051	f_{2000}^{143}	31.4 ± 3.0
$\boldsymbol{c_{100}}$	0.99962 ± 0.00061	$D_M(z_*)$/Gpc	13.874 ± 0.036	$f_{2000}^{143\times217}$	33.6 ± 2.0
$\boldsymbol{c_{217}}$	0.99828 ± 0.00061	z_{drag}	1059.67 ± 0.49	f_{2000}^{217}	108.2 ± 1.9
H_0	66.95 ± 0.72	r_{drag}	147.10 ± 0.43	$\chi^2_{lensing}$	9.50 ± 0.98
Ω_Λ	0.680 ± 0.010	k_D	0.14076 ± 0.00053	χ^2_{simall}	396.9 ± 1.5
Ω_m	0.320 ± 0.010	$100\theta_D$	0.16088 ± 0.00030	χ^2_{lowl}	22.0 ± 2.2
$\Omega_m h^2$	0.1434 ± 0.0016	z_{eq}	3412 ± 37	χ^2_{plik}	773.6 ± 5.7
$\Omega_m h^3$	0.09601 ± 0.00046	k_{eq}	0.01041 ± 0.00011	χ^2_{prior}	7.3 ± 3.6
σ_8	0.8103 ± 0.0060	$100\theta_{eq}$	0.8110 ± 0.0069	χ^2_{CMB}	1202.0 ± 5.6
S_8	0.837 ± 0.017	$100\theta_{s,eq}$	0.4483 ± 0.0036		
$\sigma_8\Omega_m^{0.5}$	0.4585 ± 0.0090	$H(0.15)$	72.32 ± 0.61		

$\bar{\chi}^2_{eff} = 1209.29$; $\Delta\bar{\chi}^2_{eff} = 1.13$; $R - 1 = 0.01342$

5.8 base_alpha1_plikHM_TT_lowl_lowE_post_BAO_lensing_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02229 ± 0.00022	$\sigma_8/h^{0.5}$	0.9837 ± 0.0089	$D_M(0.38)$	1530.6 ± 8.6
$\boldsymbol{\Omega_c h^2}$	0.1192 ± 0.0011	$r_{drag}h$	99.58 ± 0.86	$H(0.51)$	89.65 ± 0.27
$\boldsymbol{100\theta_{MC}}$	1.04085 ± 0.00047	$\langle d^2\rangle^{1/2}$	2.436 ± 0.021	$D_M(0.51)$	1983 ± 10
$\boldsymbol{\tau}$	$0.0572^{+0.0066}_{-0.0080}$	z_{re}	7.97 ± 0.70	$H(0.61)$	95.27 ± 0.23
$\boldsymbol{\alpha_{-1}}$	$-0.0009^{+0.0015}_{-0.0011}$	$10^9 A_s$	$2.110^{+0.029}_{-0.034}$	$D_M(0.61)$	2307 ± 11
$\boldsymbol{\ln(10^{10}A_s)}$	$3.049^{+0.014}_{-0.016}$	$10^9 A_s e^{-2\tau}$	1.881 ± 0.012	$H(2.33)$	235.94 ± 0.73
$\boldsymbol{n_s}$	$0.9637^{+0.0051}_{-0.0060}$	D_{40}	1216^{+17}_{-26}	$D_M(2.33)$	5766 ± 12
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0025	D_{220}	5728 ± 40	$f\sigma_8(0.15)$	0.4558 ± 0.0061
$\boldsymbol{A_{217}^{CIB}}$	48 ± 7	D_{810}	2538 ± 14	$\sigma_8(0.15)$	0.7471 ± 0.0055
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{1420}	815.5 ± 5.0	$f\sigma_8(0.38)$	0.4741 ± 0.0051
$\boldsymbol{A_{143}^{tSZ}}$	5.0 ± 2.0	D_{2000}	230.0 ± 1.7	$\sigma_8(0.38)$	0.6623 ± 0.0048
$\boldsymbol{A_{100}^{PS}}$	264 ± 28	$n_{s,0.002}$	$0.9637^{+0.0051}_{-0.0060}$	$f\sigma_8(0.51)$	0.4727 ± 0.0045
$\boldsymbol{A_{143}^{PS}}$	48 ± 8	Y_P	$0.245361^{+0.000095}_{-0.000083}$	$\sigma_8(0.51)$	0.6198 ± 0.0045
$\boldsymbol{A_{143\times217}^{PS}}$	43^{+9}_{-10}	Y_P^{BBN}	$0.246687^{+0.000096}_{-0.000083}$	$f\sigma_8(0.61)$	0.4677 ± 0.0041
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	10^5D/H	2.601 ± 0.042	$\sigma_8(0.61)$	0.5897 ± 0.0043
$\boldsymbol{A^{kSZ}}$	< 4.97	Age/Gyr	13.804 ± 0.027	$f\sigma_8(2.33)$	0.2973 ± 0.0022
$\boldsymbol{A_{100}^{dustTT}}$	8.9 ± 1.8	z_*	1089.95 ± 0.31	$\sigma_8(2.33)$	0.3066 ± 0.0024
$\boldsymbol{A_{143}^{dustTT}}$	10.7 ± 1.7	r_*	144.70 ± 0.31	f_{2000}^{143}	30.9 ± 2.9
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.4 ± 3.3	$100\theta_*$	1.04104 ± 0.00047	$f_{2000}^{143\times217}$	33.3 ± 2.0
$\boldsymbol{A_{217}^{dustTT}}$	93.6 ± 7.5	$D_M(z_*)$/Gpc	13.900 ± 0.030	f_{2000}^{217}	107.9 ± 1.9
$\boldsymbol{c_{100}}$	0.99963 ± 0.00061	z_{drag}	1059.70 ± 0.51	$\chi^2_{lensing}$	9.21 ± 0.67
$\boldsymbol{c_{217}}$	0.99829 ± 0.00061	r_{drag}	147.39 ± 0.36	χ^2_{simall}	397.3 ± 1.8
H_0	67.56 ± 0.50	k_D	0.14049 ± 0.00050	χ^2_{lowl}	22 ± 2
Ω_Λ	0.6885 ± 0.0067	$100\theta_D$	0.16088 ± 0.00032	χ^2_{plik}	773.6 ± 5.7
Ω_m	0.3115 ± 0.0067	z_{eq}	3381 ± 26	χ^2_{6DF}	0.066 ± 0.079
$\Omega_m h^2$	0.1421 ± 0.0011	k_{eq}	0.010319 ± 0.000080	χ^2_{MGS}	1.24 ± 0.47
$\Omega_m h^3$	0.09601 ± 0.00046	$100\theta_{eq}$	0.8169 ± 0.0048	$\chi^2_{DR12BAO}$	5.0 ± 1.7
σ_8	0.8085 ± 0.0061	$100\theta_{s,eq}$	0.4513 ± 0.0025	χ^2_{prior}	7.2 ± 3.7
S_8	0.824 ± 0.012	$H(0.15)$	72.83 ± 0.43	χ^2_{CMB}	1202.4 ± 5.6
$\sigma_8\Omega_m^{0.5}$	0.4512 ± 0.0066	$D_M(0.15)$	641.8 ± 4.3	χ^2_{BAO}	6.3 ± 1.4
$\sigma_8\Omega_m^{0.25}$	0.6040 ± 0.0062	$H(0.38)$	82.94 ± 0.33		

$\bar{\chi}^2_{eff} = 1215.96$; $\Delta\bar{\chi}^2_{eff} = 1.39$; $R - 1 = 0.02803$

5.9 base_alpha1_plikHM_TTTEEE_lowl_lowE

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022381	0.02236 ± 0.00015	$\Omega_m h^2$	0.14328	0.1435 ± 0.0018	k_{eq}	0.010403	0.01042 ± 0.00013
$\boldsymbol{\Omega_c h^2}$	0.12025	0.1205 ± 0.0018	$\Omega_m h^3$	0.096366	0.09634 ± 0.00030	$100\theta_{eq}$	0.8122	0.8113 ± 0.0079
$\boldsymbol{100\theta_{MC}}$	1.040863	1.04082 ± 0.00046	σ_8	0.8123	0.8126 ± 0.0077	$100\theta_{s,eq}$	0.44879	0.4483 ± 0.0041
$\boldsymbol{\tau}$	0.0543	0.0546 ± 0.0077	S_8	0.8347	0.837 ± 0.020	$H(0.15)$	72.60	72.51 ± 0.68
$\boldsymbol{\alpha_{-1}}$	-0.000006	-0.00012 ± 0.00055	$\sigma_8\Omega_m^{0.5}$	0.4572	0.459 ± 0.011	$D_M(0.15)$	644.2	645.2 ± 6.9
$\boldsymbol{\ln(10^{10} A_s)}$	3.0459	3.046 ± 0.016	$\sigma_8\Omega_m^{0.25}$	0.6094	0.6104 ± 0.0098	$H(0.38)$	82.811	82.75 ± 0.48
$\boldsymbol{n_s}$	0.9649	$0.9635^{+0.0066}_{-0.0075}$	$\sigma_8/h^{0.5}$	0.9905	0.992 ± 0.013	$D_M(0.38)$	1535.1	1537 ± 14
$\boldsymbol{y_{cal}}$	1.00076	1.0006 ± 0.0025	$r_{drag}h$	98.88	98.7 ± 1.4	$H(0.51)$	89.587	89.54 ± 0.37
$\boldsymbol{A_{217}^{CIB}}$	46.8	47 ± 7	$\langle d^2\rangle^{1/2}$	2.4490	2.454 ± 0.034	$D_M(0.51)$	1987.8	1990 ± 16
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.51	—	z_{re}	7.68	7.70 ± 0.78	$H(0.61)$	95.251	95.21 ± 0.29
$\boldsymbol{A_{143}^{tSZ}}$	7.20	$5.4^{+2.2}_{-1.9}$	$10^9 A_s$	2.1029	2.104 ± 0.034	$D_M(0.61)$	2312.4	2315 ± 17
$\boldsymbol{A_{100}^{PS}}$	249.6	259 ± 28	$10^9 A_s e^{-2\tau}$	1.8866	1.886 ± 0.014	$H(2.33)$	236.73	236.9 ± 1.1
$\boldsymbol{A_{143}^{PS}}$	49.1	46 ± 8	D_{40}	1230.5	1231 ± 14	$D_M(2.33)$	5764.4	5766 ± 13
$\boldsymbol{A_{143\times217}^{PS}}$	50.0	42 ± 9	D_{220}	5737.2	5733 ± 39	$f\sigma_8(0.15)$	0.4613	0.463 ± 0.010
$\boldsymbol{A_{217}^{PS}}$	120.7	115 ± 10	D_{810}	2542.8	2540 ± 13	$\sigma_8(0.15)$	0.7501	0.7502 ± 0.0066
$\boldsymbol{A^{kSZ}}$	0.00	< 4.26	D_{1420}	818.49	817.1 ± 4.8	$f\sigma_8(0.38)$	0.4785	0.4793 ± 0.0080
$\boldsymbol{A_{100}^{dustTT}}$	8.78	8.9 ± 1.8	D_{2000}	231.29	230.8 ± 1.6	$\sigma_8(0.38)$	0.6644	0.6643 ± 0.0055
$\boldsymbol{A_{143}^{dustTT}}$	11.01	10.9 ± 1.8	$n_{s,0.002}$	0.9649	$0.9635^{+0.0066}_{-0.0075}$	$f\sigma_8(0.51)$	0.4765	0.4771 ± 0.0068
$\boldsymbol{A_{143\times217}^{dustTT}}$	20.02	18.6 ± 3.3	Y_P	0.245400	$0.245389^{+0.000062}_{-0.000055}$	$\sigma_8(0.51)$	0.62150	0.6214 ± 0.0051
$\boldsymbol{A_{217}^{dustTT}}$	95.3	93.7 ± 7.4	Y_P^{BBN}	0.246726	$0.246716^{+0.000063}_{-0.000055}$	$f\sigma_8(0.61)$	0.4711	0.4716 ± 0.0061
$\boldsymbol{A_{100}^{dustTE}}$	0.1141	0.115 ± 0.038	10^5D/H	2.5834	2.588 ± 0.028	$\sigma_8(0.61)$	0.59123	0.5910 ± 0.0048
$\boldsymbol{A_{100\times143}^{dustTE}}$	0.1356	0.135 ± 0.030	Age/Gyr	13.7989	13.803 ± 0.028	$f\sigma_8(2.33)$	0.29789	0.2977 ± 0.0025
$\boldsymbol{A_{100\times217}^{dustTE}}$	0.482	0.480 ± 0.085	z_*	1089.929	1089.98 ± 0.29	$\sigma_8(2.33)$	0.30689	0.3067 ± 0.0027
$\boldsymbol{A_{143}^{dustTE}}$	0.226	0.227 ± 0.054	r_*	144.358	144.32 ± 0.43	f_{2000}^{143}	28.92	29.6 ± 2.8
$\boldsymbol{A_{143\times217}^{dustTE}}$	0.666	0.666 ± 0.079	$100\theta_*$	1.041050	1.04100 ± 0.00046	$f_{2000}^{143\times217}$	32.11	32.2 ± 1.9
$\boldsymbol{A_{217}^{dustTE}}$	2.077	2.09 ± 0.27	$D_M(z_*)$/Gpc	13.8666	13.863 ± 0.038	f_{2000}^{217}	106.71	107.1 ± 1.8
$\boldsymbol{c_{100}}$	0.99974	0.99967 ± 0.00061	z_{drag}	1059.971	1059.95 ± 0.32	χ^2_{simall}	396.06	397.1 ± 1.9
$\boldsymbol{c_{217}}$	0.99820	0.99819 ± 0.00062	r_{drag}	147.014	146.98 ± 0.44	χ^2_{lowl}	23.22	23.4 ± 1.6
H_0	67.26	67.15 ± 0.80	k_D	0.140959	0.14098 ± 0.00047	χ^2_{plik}	2344.8	2361.5 ± 6.1
Ω_Λ	0.6833	0.682 ± 0.011	$100\theta_D$	0.160726	0.16074 ± 0.00020	χ^2_{prior}	1.72	11.5 ± 4.5
Ω_m	0.3167	0.318 ± 0.011	z_{eq}	3408.5	3414 ± 42	χ^2_{CMB}	2764.1	2782.1 ± 6.0

Best-fit $\chi^2_{eff} = 2765.78$; $\Delta\chi^2_{eff} = 0.01$; $\bar{\chi}^2_{eff} = 2793.61$; $\Delta\bar{\chi}^2_{eff} = 1.84$; $R - 1 = 0.01294$

χ^2_{eff}: CMB - simall_100x143_offlike5_EE_Aplanck_B: 396.06 (Δ 0.01) commander_dx12_v3_2_29: 23.22 (Δ -0.04) plik_rd12_HM_v22b_TTTEEE: 2344.78 (Δ 0.14)

5.10 base_alpha1_plikHM_TTTEEE_lowl_lowE_post_BAO

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022431	0.02240 ± 0.00014	σ_8	0.8109	0.8097 ± 0.0071	$D_M(0.15)$	640.04	640.0 ± 4.4
$\boldsymbol{\Omega_c h^2}$	0.11917	0.1191 ± 0.0012	S_8	0.8242	0.823 ± 0.014	$H(0.38)$	83.107	83.10 ± 0.32
$\boldsymbol{100\theta_{MC}}$	1.041066	1.04109 ± 0.00038	$\sigma_8\Omega_m^{0.5}$	0.4515	0.4506 ± 0.0075	$D_M(0.38)$	1526.8	1526.9 ± 8.7
$\boldsymbol{\tau}$	0.0561	$0.0555^{+0.0071}_{-0.0079}$	$\sigma_8\Omega_m^{0.25}$	0.6051	0.6040 ± 0.0073	$H(0.51)$	89.813	$89.81^{+0.24}_{-0.27}$
$\boldsymbol{\alpha_{-1}}$	0.000022	$0.00015^{+0.00035}_{-0.00041}$	$\sigma_8/h^{0.5}$	0.9852	0.984 ± 0.011	$D_M(0.51)$	1978.1	1978 ± 10
$\boldsymbol{\ln(10^{10}A_s)}$	3.0466	3.044 ± 0.016	$r_{drag}h$	99.75	99.79 ± 0.92	$H(0.61)$	95.424	$95.41^{+0.19}_{-0.22}$
$\boldsymbol{n_s}$	0.9693	0.9681 ± 0.0052	$\langle d^2\rangle^{1/2}$	2.4330	2.433 ± 0.026	$D_M(0.61)$	2302.0	2302 ± 11
$\boldsymbol{y_{cal}}$	1.00082	1.0007 ± 0.0024	z_{re}	7.83	7.76 ± 0.77	$H(2.33)$	236.09	236.03 ± 0.73
$\boldsymbol{A_{217}^{CIB}}$	45.1	47 ± 7	$10^9 A_s$	2.1043	2.100 ± 0.034	$D_M(2.33)$	5757.2	5758.0 ± 9.4
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.76	—	$10^9 A_s e^{-2\tau}$	1.8811	1.879 ± 0.012	$f\sigma_8(0.15)$	0.4562	0.4554 ± 0.0071
$\boldsymbol{A_{143}^{tSZ}}$	7.05	$5.5^{+2.3}_{-1.9}$	D_{40}	1227.3	1230 ± 14	$\sigma_8(0.15)$	0.7495	0.7483 ± 0.0063
$\boldsymbol{A_{100}^{PS}}$	246.4	258 ± 28	D_{220}	5734.5	5734 ± 38	$f\sigma_8(0.38)$	0.4749	0.4740 ± 0.0059
$\boldsymbol{A_{143}^{PS}}$	51.3	45 ± 8	D_{810}	2542.5	2539 ± 13	$\sigma_8(0.38)$	0.6645	0.6635 ± 0.0055
$\boldsymbol{A_{143\times217}^{PS}}$	55.4	42 ± 9	D_{1420}	819.89	818.0 ± 4.6	$f\sigma_8(0.51)$	0.4737	0.4728 ± 0.0053
$\boldsymbol{A_{217}^{PS}}$	122.9	115 ± 10	D_{2000}	231.90	231.2 ± 1.5	$\sigma_8(0.51)$	0.6220	0.6210 ± 0.0051
$\boldsymbol{A^{kSZ}}$	0.00	< 4.16	$n_{s,0.002}$	0.9693	0.9681 ± 0.0052	$f\sigma_8(0.61)$	0.46881	0.4680 ± 0.0049
$\boldsymbol{A_{100}^{dustTT}}$	8.87	9.0 ± 1.8	Y_P	0.245419	$0.245406^{+0.000058}_{-0.000053}$	$\sigma_8(0.61)$	0.59187	0.5910 ± 0.0048
$\boldsymbol{A_{143}^{dustTT}}$	11.03	10.9 ± 1.8	Y_P^{BBN}	0.246746	$0.246733^{+0.000058}_{-0.000053}$	$f\sigma_8(2.33)$	0.29849	0.2980 ± 0.0024
$\boldsymbol{A_{143\times217}^{dustTT}}$	20.24	18.7 ± 3.3	10^5D/H	2.5742	2.580 ± 0.026	$\sigma_8(2.33)$	0.30779	0.3074 ± 0.0026
$\boldsymbol{A_{217}^{dustTT}}$	95.8	93.9 ± 7.3	Age/Gyr	13.7834	13.785 ± 0.021	f_{2000}^{143}	28.14	29.2 ± 2.7
$\boldsymbol{A_{100}^{dustTE}}$	0.1136	0.115 ± 0.038	z_*	1089.771	1089.80 ± 0.23	$f_{2000}^{143\times217}$	31.63	32.0 ± 1.9
$\boldsymbol{A_{100\times143}^{dustTE}}$	0.1344	0.136 ± 0.030	r_*	144.600	144.64 ± 0.30	f_{2000}^{217}	106.17	106.9 ± 1.8
$\boldsymbol{A_{100\times217}^{dustTE}}$	0.481	0.480 ± 0.085	$100\theta_*$	1.041248	1.04127 ± 0.00039	χ^2_{simall}	396.37	397.2 ± 2.0
$\boldsymbol{A_{143}^{dustTE}}$	0.225	0.227 ± 0.054	$D_M(z_*)$/Gpc	13.8872	13.890 ± 0.027	χ^2_{lowl}	23.20	23.8 ± 1.7
$\boldsymbol{A_{143\times217}^{dustTE}}$	0.664	0.666 ± 0.079	z_{drag}	1060.009	1059.95 ± 0.32	χ^2_{plik}	2345.2	2360.9 ± 6.0
$\boldsymbol{A_{217}^{dustTE}}$	2.080	2.08 ± 0.27	r_{drag}	147.245	147.29 ± 0.31	χ^2_{6DF}	0.0225	0.056 ± 0.072
$\boldsymbol{c_{100}}$	0.99974	0.99965 ± 0.00061	k_D	0.140752	0.14068 ± 0.00038	χ^2_{MGS}	1.28	1.36 ± 0.52
$\boldsymbol{c_{217}}$	0.99815	0.99820 ± 0.00062	$100\theta_D$	0.160724	0.16077 ± 0.00021	$\chi^2_{DR12BAO}$	4.25	4.8 ± 1.6
H_0	67.75	67.75 ± 0.51	z_{eq}	3383.8	3382 ± 27	χ^2_{prior}	1.60	11.7 ± 4.4
Ω_Λ	0.6901	0.6902 ± 0.0070	k_{eq}	0.010328	0.010322 ± 0.000083	χ^2_{BAO}	5.55	6.2 ± 1.3
Ω_m	0.3099	0.3098 ± 0.0070	$100\theta_{eq}$	0.8169	0.8172 ± 0.0051	χ^2_{CMB}	2764.7	2781.9 ± 5.9
$\Omega_m h^2$	0.14224	0.1422 ± 0.0011	$100\theta_{s,eq}$	0.45122	0.4514 ± 0.0026			
$\Omega_m h^3$	0.096365	0.09631 ± 0.00030	$H(0.15)$	73.015	73.02 ± 0.44			

Best-fit $\chi^2_{eff} = 2771.88$; $\Delta\chi^2_{eff} = -0.04$; $\bar{\chi}^2_{eff} = 2799.77$; $\Delta\bar{\chi}^2_{eff} = 1.87$; $R - 1 = 0.02417$

χ^2_{eff}: BAO - 6DF: 0.02 (Δ -0.01) MGS: 1.28 (Δ 0.06) DR12BAO: 4.25 (Δ -0.16) CMB - simall_100x143_offlike5_EE_Aplanck_B: 396.37 (Δ 0.17) commander_dx12_v3_2_29: 23.20 (Δ 0.32) plik_rd12_HM_v22b_TTTEEE: 2345.16 (Δ -0.35)

5.11 base_alpha1_plikHM_TTTEEE_lowl_lowE_post_lensing

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022410	0.02238 ± 0.00015	$\Omega_m h^3$	0.096407	0.09633 ± 0.00030	$100\theta_{s,eq}$	0.44914	0.4491 ± 0.0034
$\boldsymbol{\Omega_c h^2}$	0.12008	0.1201 ± 0.0015	σ_8	0.8115	0.8113 ± 0.0059	$H(0.15)$	72.68	72.64 ± 0.57
$\boldsymbol{100\theta_{MC}}$	1.040904	1.04087 ± 0.00043	S_8	0.8322	0.833 ± 0.015	$D_M(0.15)$	643.4	643.9 ± 5.7
$\boldsymbol{\tau}$	0.0543	0.0544 ± 0.0075	$\sigma_8\Omega_m^{0.5}$	0.4558	0.4561 ± 0.0081	$H(0.38)$	82.875	82.84 ± 0.41
$\boldsymbol{\alpha_{-1}}$	-0.000003	-0.00006 ± 0.00051	$\sigma_8\Omega_m^{0.25}$	0.6082	0.6083 ± 0.0070	$D_M(0.38)$	1533.4	1534 ± 11
$\boldsymbol{\ln(10^{10} A_s)}$	3.0446	3.045 ± 0.014	$\sigma_8/h^{0.5}$	0.9888	0.9889 ± 0.0095	$H(0.51)$	89.639	89.60 ± 0.32
$\boldsymbol{n_s}$	0.9657	0.9645 ± 0.0061	$r_{drag}h$	99.03	99.0 ± 1.2	$D_M(0.51)$	1985.8	1987 ± 13
$\boldsymbol{y_{cal}}$	1.00022	1.0006 ± 0.0024	$\langle d^2\rangle^{1/2}$	2.4441	2.447 ± 0.024	$H(0.61)$	95.295	95.26 ± 0.25
$\boldsymbol{A_{217}^{CIB}}$	46.1	47 ± 7	z_{re}	7.68	7.67 ± 0.75	$D_M(0.61)$	2310.2	2312 ± 14
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.60	—	$10^9 A_s$	2.1002	2.101 ± 0.030	$H(2.33)$	236.65	236.64 ± 0.92
$\boldsymbol{A_{143}^{tSZ}}$	7.11	$5.5^{+2.2}_{-1.9}$	$10^9 A_s e^{-2\tau}$	1.8840	1.884 ± 0.012	$D_M(2.33)$	5762.3	5764 ± 11
$\boldsymbol{A_{100}^{PS}}$	248.0	259 ± 28	D_{40}	1228.1	1230 ± 14	$f\sigma_8(0.15)$	0.4601	0.4603 ± 0.0074
$\boldsymbol{A_{143}^{PS}}$	49.7	46^{+8}_{-7}	D_{220}	5732.0	5734 ± 38	$\sigma_8(0.15)$	0.7495	0.7492 ± 0.0053
$\boldsymbol{A_{143\times217}^{PS}}$	51.7	42 ± 9	D_{810}	2540.6	2540 ± 13	$f\sigma_8(0.38)$	0.4776	0.4776 ± 0.0057
$\boldsymbol{A_{217}^{PS}}$	121.3	115 ± 10	D_{1420}	818.21	817.2 ± 4.8	$\sigma_8(0.38)$	0.66392	0.6636 ± 0.0048
$\boldsymbol{A^{kSZ}}$	0.00	< 4.28	D_{2000}	231.28	230.8 ± 1.6	$f\sigma_8(0.51)$	0.47568	0.4757 ± 0.0049
$\boldsymbol{A_{100}^{dust TT}}$	8.79	8.9 ± 1.8	$n_{s,0.002}$	0.9657	0.9645 ± 0.0061	$\sigma_8(0.51)$	0.62114	0.6208 ± 0.0045
$\boldsymbol{A_{143}^{dust TT}}$	11.00	10.9 ± 1.8	Y_P	0.245411	$0.245396^{+0.000061}_{-0.000054}$	$f\sigma_8(0.61)$	0.47037	0.4703 ± 0.0043
$\boldsymbol{A_{143\times217}^{dust TT}}$	20.14	18.7 ± 3.3	Y_P^{BBN}	0.246738	$0.246722^{+0.000061}_{-0.000054}$	$\sigma_8(0.61)$	0.59092	0.5906 ± 0.0044
$\boldsymbol{A_{217}^{dust TT}}$	95.5	93.8 ± 7.3	10^5D/H	2.5781	2.585 ± 0.027	$f\sigma_8(2.33)$	0.29778	0.2976 ± 0.0024
$\boldsymbol{A_{100}^{dust TE}}$	0.1139	0.116 ± 0.038	Age/Gyr	13.7942	13.799 ± 0.025	$\sigma_8(2.33)$	0.30683	0.3066 ± 0.0026
$\boldsymbol{A_{100\times143}^{dust TE}}$	0.1354	0.136 ± 0.030	z_*	1089.877	1089.92 ± 0.26	f_{2000}^{143}	28.56	29.6 ± 2.8
$\boldsymbol{A_{100\times217}^{dust TE}}$	0.482	0.481 ± 0.086	r_*	144.380	144.40 ± 0.36	$f_{2000}^{143\times217}$	31.86	$32.2^{+1.7}_{-2.0}$
$\boldsymbol{A_{143}^{dust TE}}$	0.226	0.226 ± 0.055	$100\theta_*$	1.041087	1.04105 ± 0.00043	f_{2000}^{217}	106.36	107.0 ± 1.8
$\boldsymbol{A_{143\times217}^{dust TE}}$	0.667	0.666 ± 0.079	$D_M(z_*)$/Gpc	13.8682	13.870 ± 0.032	$\chi^2_{lensing}$	8.835	9.35 ± 0.81
$\boldsymbol{A_{217}^{dust TE}}$	2.081	2.08 ± 0.27	z_{drag}	1060.047	1059.96 ± 0.32	χ^2_{smallI}	396.04	397.0 ± 1.8
$\boldsymbol{c_{100}}$	0.99972	0.99966 ± 0.00061	r_{drag}	147.025	147.06 ± 0.37	χ^2_{lowl}	23.15	23.4 ± 1.7
$\boldsymbol{c_{217}}$	0.99817	0.99820 ± 0.00063	k_D	0.140966	0.14091 ± 0.00041	χ^2_{plik}	2345.1	2361.2 ± 6.0
H_0	67.35	67.30 ± 0.67	$100\theta_D$	0.160699	0.16074 ± 0.00020	χ^2_{prior}	1.58	11.6 ± 4.5
Ω_Λ	0.6845	0.6838 ± 0.0093	z_{eq}	3405.1	3405 ± 35	χ^2_{CMB}	2773.1	2791.0 ± 6.1
Ω_m	0.3155	0.3162 ± 0.0093	k_{eq}	0.010393	0.01039 ± 0.00011			
$\Omega_m h^2$	0.14314	0.1431 ± 0.0014	$100\theta_{eq}$	0.8129	0.8128 ± 0.0065			

Best-fit $\chi^2_{eff} = 2774.65$; $\Delta\chi^2_{eff} = 0.02$; $\bar{\chi}^2_{eff} = 2802.58$; $\Delta\bar{\chi}^2_{eff} = 1.89$; $R - 1 = 0.01462$

χ^2_{eff}: CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.84 (Δ -0.03) simall_100x143_offlike5_EE_Aplanck_B: 396.04 (Δ -0.01) commander_dx12_v3_2_29: 23.15 (Δ -0.10) plik_rd12_HM_v22b_TTTEEE: 2345.06 (Δ 0.13)

5.12 base_alpha1_plikHM_TTTEEE_lowl_lowE_post_BAO_lensing

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022420	0.02241 ± 0.00014	σ_8	0.8109	0.8105 ± 0.0059	$D_M(0.15)$	640.55	640.2 ± 4.0
$\boldsymbol{\Omega_c h^2}$	0.11927	0.1192 ± 0.0011	S_8	0.8252	0.824 ± 0.011	$H(0.38)$	83.067	$83.09^{+0.27}_{-0.31}$
$\boldsymbol{100\theta_{MC}}$	1.041024	1.04107 ± 0.00038	$\sigma_8\Omega_m^{0.5}$	0.4520	0.4513 ± 0.0062	$D_M(0.38)$	1527.9	$1527.2^{+8.4}_{-7.6}$
$\boldsymbol{\tau}$	0.0560	$0.0563^{+0.0066}_{-0.0075}$	$\sigma_8\Omega_m^{0.25}$	0.6054	0.6048 ± 0.0058	$H(0.51)$	89.781	$89.80^{+0.22}_{-0.25}$
$\boldsymbol{\alpha_{-1}}$	0.000013	$0.00013^{+0.00035}_{-0.00039}$	$\sigma_8/h^{0.5}$	0.9857	0.9848 ± 0.0084	$D_M(0.51)$	1979.3	$1978.6^{+9.9}_{-8.9}$
$\boldsymbol{\ln(10^{10}A_s)}$	3.0467	3.046 ± 0.014	$r_{drag}h$	99.66	99.74 ± 0.84	$H(0.61)$	95.397	$95.41^{+0.18}_{-0.20}$
$\boldsymbol{n_s}$	0.9684	0.9678 ± 0.0050	$\langle d^2\rangle^{1/2}$	2.4355	2.436 ± 0.021	$D_M(0.61)$	2303.3	$2303^{+11}_{-9.6}$
$\boldsymbol{y_{cal}}$	1.00086	1.0008 ± 0.0024	z_{re}	7.83	7.84 ± 0.72	$H(2.33)$	236.14	236.07 ± 0.67
$\boldsymbol{A_{217}^{CIB}}$	46.4	47 ± 7	$10^9 A_s$	2.1045	$2.104^{+0.028}_{-0.031}$	$D_M(2.33)$	5758.5	5758.2 ± 9.1
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.54	—	$10^9 A_s e^{-2\tau}$	1.8815	1.880 ± 0.011	$f\sigma_8(0.15)$	0.4567	0.4560 ± 0.0058
$\boldsymbol{A_{143}^{tSZ}}$	7.12	$5.5^{+2.2}_{-1.9}$	D_{40}	1228.3	1231 ± 14	$\sigma_8(0.15)$	0.7494	0.7491 ± 0.0054
$\boldsymbol{A_{100}^{PS}}$	249.0	258 ± 28	D_{220}	5736.3	5737 ± 38	$f\sigma_8(0.38)$	0.47520	0.4747 ± 0.0048
$\boldsymbol{A_{143}^{PS}}$	48.6	45 ± 8	D_{810}	2542.0	2539 ± 13	$\sigma_8(0.38)$	0.66441	0.6641 ± 0.0048
$\boldsymbol{A_{143\times217}^{PS}}$	49.9	42 ± 9	D_{1420}	819.36	818.1 ± 4.6	$f\sigma_8(0.51)$	0.47389	0.4734 ± 0.0043
$\boldsymbol{A_{217}^{PS}}$	120.7	115 ± 10	D_{2000}	231.68	231.2 ± 1.5	$\sigma_8(0.51)$	0.62181	0.6216 ± 0.0045
$\boldsymbol{A^{kSZ}}$	0.00	< 4.08	$n_{s,0.002}$	0.9684	0.9678 ± 0.0050	$f\sigma_8(0.61)$	0.46898	0.4686 ± 0.0039
$\boldsymbol{A_{100}^{dustTT}}$	8.92	8.9 ± 1.8	Y_P	0.245415	$0.245408^{+0.000058}_{-0.000052}$	$\sigma_8(0.61)$	0.59169	0.5915 ± 0.0043
$\boldsymbol{A_{143}^{dustTT}}$	11.07	10.9 ± 1.8	Y_P^{BBN}	0.246742	$0.246734^{+0.000058}_{-0.000052}$	$f\sigma_8(2.33)$	0.29837	0.2983 ± 0.0022
$\boldsymbol{A_{143\times217}^{dustTT}}$	19.99	18.7 ± 3.3	10^5D/H	2.5762	2.579 ± 0.026	$\sigma_8(2.33)$	0.30764	0.3076 ± 0.0024
$\boldsymbol{A_{217}^{dustTT}}$	95.4	93.9 ± 7.4	Age/Gyr	13.7862	13.786 ± 0.020	f_{2000}^{143}	28.49	29.2 ± 2.7
$\boldsymbol{A_{100}^{dustTE}}$	0.1142	0.115 ± 0.038	z_*	1089.792	1089.80 ± 0.22	$f_{2000}^{143\times217}$	31.78	32.0 ± 1.9
$\boldsymbol{A_{100\times143}^{dustTE}}$	0.1341	0.136 ± 0.030	r_*	144.582	144.62 ± 0.27	f_{2000}^{217}	106.43	106.9 ± 1.8
$\boldsymbol{A_{100\times217}^{dustTE}}$	0.482	0.480 ± 0.085	$100\theta_*$	1.041204	1.04125 ± 0.00038	$\chi^2_{lensing}$	8.742	9.14 ± 0.62
$\boldsymbol{A_{143}^{dustTE}}$	0.225	0.226 ± 0.054	$D_M(z_*)$/Gpc	13.8861	13.889 ± 0.024	χ^2_{simall}	396.38	397.3 ± 2.0
$\boldsymbol{A_{143\times217}^{dustTE}}$	0.667	0.665 ± 0.078	z_{drag}	1060.009	1059.96 ± 0.32	χ^2_{lowl}	23.24	23.8 ± 1.7
$\boldsymbol{A_{217}^{dustTE}}$	2.086	2.08 ± 0.27	r_{drag}	147.229	147.27 ± 0.29	χ^2_{plik}	2344.9	2360.6 ± 5.9
$\boldsymbol{c_{100}}$	0.99974	0.99965 ± 0.00061	k_D	0.140759	0.14071 ± 0.00036	χ^2_{6DF}	0.0290	0.053 ± 0.065
$\boldsymbol{c_{217}}$	0.99817	0.99820 ± 0.00062	$100\theta_D$	0.160729	0.16076 ± 0.00021	χ^2_{MGS}	1.217	1.33 ± 0.47
H_0	67.687	$67.73^{+0.44}_{-0.50}$	z_{eq}	3385.9	3383 ± 25	$\chi^2_{DR12BAO}$	4.41	4.7 ± 1.5
Ω_Λ	0.6893	0.6899 ± 0.0064	k_{eq}	0.010334	0.010326 ± 0.000075	χ^2_{prior}	1.69	11.6 ± 4.4
Ω_m	0.3107	0.3101 ± 0.0064	$100\theta_{eq}$	0.81644	0.8169 ± 0.0046	χ^2_{CMB}	2773.3	2790.9 ± 6.0
$\Omega_m h^2$	0.14233	0.1422 ± 0.0010	$100\theta_{s,eq}$	0.45099	0.4513 ± 0.0024	χ^2_{BAO}	5.66	6.1 ± 1.2
$\Omega_m h^3$	0.096341	0.09632 ± 0.00030	$H(0.15)$	72.963	$73.00^{+0.38}_{-0.43}$			

Best-fit $\chi^2_{eff} = 2780.63$; $\Delta\chi^2_{eff} = -0.07$; $\bar{\chi}^2_{eff} = 2808.59$; $\Delta\bar{\chi}^2_{eff} = 1.75$; $R - 1 = 0.02748$

χ^2_{eff}: BAO - 6DF: 0.03 (Δ 0.00) MGS: 1.22 (Δ 0.00) DR12BAO: 4.41 (Δ -0.01) CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.74 (Δ 0.01) simall_100x143_offlike5_EE_Aplanck_
396.38 (Δ -0.14) commander_dx12_v3_2_29: 23.24 (Δ 0.34) plik_rd12_HM_v22b_TTTEEE: 2344.91 (Δ -0.41)

5.13 base_alpha1_plikHM_TTTEEE_lowl_lowE_post_Riess18

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022493	$0.02247^{+0.00015}_{-0.00014}$	$\Omega_m h^3$	0.096396	0.09633 ± 0.00029	$100\theta_{s,eq}$	0.45328	$0.4543^{+0.0038}_{-0.0034}$
$\boldsymbol{\Omega_c h^2}$	0.11824	$0.1178^{+0.0015}_{-0.0017}$	σ_8	0.8078	0.8068 ± 0.0076	$H(0.15)$	73.39	$73.53^{+0.64}_{-0.57}$
$\boldsymbol{100\theta_{MC}}$	1.041238	$1.04134^{+0.00046}_{-0.00038}$	S_8	0.8133	$0.809^{+0.016}_{-0.018}$	$D_M(0.15)$	636.4	$635.0^{+5.5}_{-6.3}$
$\boldsymbol{\tau}$	0.0564	$0.0568^{+0.0073}_{-0.0084}$	$\sigma_8\Omega_m^{0.5}$	0.4455	$0.4432^{+0.0088}_{-0.010}$	$H(0.38)$	83.377	83.48 ± 0.44
$\boldsymbol{\alpha_{-1}}$	0.000061	$0.00041^{+0.00035}_{-0.00063}$	$\sigma_8\Omega_m^{0.25}$	0.5999	0.5980 ± 0.0089	$D_M(0.38)$	1519.5	1517^{+11}_{-13}
$\boldsymbol{\ln(10^{10}A_s)}$	3.0446	3.043 ± 0.017	$\sigma_8/h^{0.5}$	0.9783	0.976 ± 0.012	$H(0.51)$	90.025	90.10 ± 0.34
$\boldsymbol{n_s}$	0.9714	$0.9723^{+0.0067}_{-0.0055}$	$r_{drag}h$	100.51	$100.9^{+1.3}_{-1.2}$	$D_M(0.51)$	1969.5	1966^{+13}_{-15}
$\boldsymbol{y_{cal}}$	1.00075	1.0007 ± 0.0024	$\langle d^2\rangle^{1/2}$	2.4179	2.414 ± 0.030	$H(0.61)$	95.591	95.64 ± 0.27
$\boldsymbol{A_{217}^{CIB}}$	46.3	47 ± 6	z_{re}	7.83	7.86 ± 0.80	$D_M(0.61)$	2292.7	2289^{+14}_{-16}
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.59	—	$10^9 A_s$	2.1002	2.098 ± 0.035	$H(2.33)$	235.56	$235.27^{+0.90}_{-1.0}$
$\boldsymbol{A_{143}^{tSZ}}$	7.14	$5.7^{+2.3}_{-2.0}$	$10^9 A_s e^{-2\tau}$	1.8763	1.872 ± 0.013	$D_M(2.33)$	5750.1	5748 ± 12
$\boldsymbol{A_{100}^{PS}}$	248.0	255^{+26}_{-30}	D_{40}	1225.4	1229 ± 14	$f\sigma_8(0.15)$	0.4506	$0.4485^{+0.0083}_{-0.0092}$
$\boldsymbol{A_{143}^{PS}}$	48.5	44 ± 8	D_{220}	5739.6	5738 ± 38	$\sigma_8(0.15)$	0.7472	0.7465 ± 0.0067
$\boldsymbol{A_{143\times217}^{PS}}$	50.7	41 ± 9	D_{810}	2540.8	2537 ± 13	$f\sigma_8(0.38)$	0.4706	0.4689 ± 0.0073
$\boldsymbol{A_{217}^{PS}}$	120.6	114.7 ± 9.8	D_{1420}	820.04	818.9 ± 4.7	$\sigma_8(0.38)$	0.6631	0.6628 ± 0.0056
$\boldsymbol{A^{kSZ}}$	0.00	< 4.03	D_{2000}	232.00	231.6 ± 1.5	$f\sigma_8(0.51)$	0.4700	0.4687 ± 0.0064
$\boldsymbol{A_{100}^{dust TT}}$	8.86	8.9 ± 1.9	$n_{s,0.002}$	0.9714	$0.9723^{+0.0067}_{-0.0055}$	$\sigma_8(0.51)$	0.6209	0.6207 ± 0.0052
$\boldsymbol{A_{143}^{dust TT}}$	11.05	11.1 ± 1.8	Y_P	0.245442	$0.245433^{+0.000059}_{-0.000048}$	$f\sigma_8(0.61)$	0.4657	0.4645 ± 0.0058
$\boldsymbol{A_{143\times217}^{dust TT}}$	20.00	18.8 ± 3.4	Y_P^{BBN}	0.246769	$0.246760^{+0.000059}_{-0.000048}$	$\sigma_8(0.61)$	0.59101	0.5909 ± 0.0049
$\boldsymbol{A_{217}^{dust TT}}$	95.3	93.9 ± 7.4	10^5D/H	2.5631	$2.567^{+0.024}_{-0.028}$	$f\sigma_8(2.33)$	0.29829	0.2983 ± 0.0025
$\boldsymbol{A_{100}^{dust TE}}$	0.1129	0.115 ± 0.037	Age/Gyr	13.7682	13.765 ± 0.026	$\sigma_8(2.33)$	0.30785	0.3080 ± 0.0027
$\boldsymbol{A_{100\times143}^{dust TE}}$	0.1330	0.134 ± 0.029	z_*	1089.612	$1089.60^{+0.25}_{-0.28}$	f_{2000}^{143}	28.12	28.7 ± 2.8
$\boldsymbol{A_{100\times217}^{dust TE}}$	0.480	0.481 ± 0.082	r_*	144.792	$144.92^{+0.41}_{-0.36}$	$f_{2000}^{143\times217}$	31.51	31.6 ± 1.9
$\boldsymbol{A_{143}^{dust TE}}$	0.222	0.223 ± 0.055	$100\theta_*$	1.041410	$1.04151^{+0.00046}_{-0.00038}$	f_{2000}^{217}	106.13	106.6 ± 1.8
$\boldsymbol{A_{143\times217}^{dust TE}}$	0.663	0.666 ± 0.077	$D_M(z_*)$/Gpc	13.9035	$13.914^{+0.036}_{-0.032}$	χ^2_{simall}	396.35	397.5 ± 2.5
$\boldsymbol{A_{217}^{dust TE}}$	2.068	2.08 ± 0.26	z_{drag}	1060.085	1060.02 ± 0.31	χ^2_{lowl}	23.14	23.9 ± 1.6
$\boldsymbol{c_{100}}$	0.99972	0.99964 ± 0.00062	r_{drag}	147.421	$147.55^{+0.42}_{-0.36}$	χ^2_{plik}	2346.3	2362.6 ± 6.3
$\boldsymbol{c_{217}}$	0.99817	0.99817 ± 0.00063	k_D	0.140613	$0.14046^{+0.00040}_{-0.00047}$	$\chi^2_{H073p45}$	10.07	9.6 ± 2.6
H_0	68.18	$68.35^{+0.75}_{-0.67}$	$100\theta_D$	0.160695	0.16075 ± 0.00019	χ^2_{prior}	1.69	11.7 ± 4.4
Ω_Λ	0.6959	$0.698^{+0.010}_{-0.0085}$	z_{eq}	3363.2	3353^{+34}_{-39}	χ^2_{CMB}	2765.8	2784.0 ± 6.5
Ω_m	0.3041	$0.3018^{+0.0085}_{-0.010}$	k_{eq}	0.010265	$0.01023^{+0.00010}_{-0.00012}$			
$\Omega_m h^2$	0.14138	$0.1409^{+0.0014}_{-0.0016}$	$100\theta_{eq}$	0.8209	$0.8229^{+0.0074}_{-0.0066}$			

Best-fit $\chi^2_{eff} = 2777.60$; $\Delta\chi^2_{eff} = -0.34$; $\bar{\chi}^2_{eff} = 2805.32$; $\Delta\bar{\chi}^2_{eff} = 1.15$; $R - 1 = 0.05553$

χ^2_{eff}: CMB - simall_100x143_offlike5_EE_Aplanck_B: 396.36 (Δ -0.12) commander_dx12_v3_2_29: 23.14 (Δ 0.59) plik_rd12_HM_v22b_TTTEEE: 2346.34 (Δ -0.42) Hubble - H073p45: 10.07 (Δ -0.51)

5.14 base_alpha1_plikHM_TTTEEE_lowl_lowE_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02236 ± 0.00015	$\Omega_m h^2$	0.1435 ± 0.0018	k_{eq}	0.01042 ± 0.00013
$\boldsymbol{\Omega_c h^2}$	0.1205 ± 0.0018	$\Omega_m h^3$	0.09634 ± 0.00030	$100\theta_{eq}$	0.8114 ± 0.0078
$\boldsymbol{100\theta_{MC}}$	1.04082 ± 0.00046	σ_8	0.8133 ± 0.0073	$100\theta_{s,eq}$	0.4484 ± 0.0041
$\boldsymbol{\tau}$	$0.0556^{+0.0054}_{-0.0080}$	S_8	0.838 ± 0.020	$H(0.15)$	72.52 ± 0.68
$\boldsymbol{\alpha_{-1}}$	-0.00012 ± 0.00055	$\sigma_8\Omega_m^{0.5}$	0.459 ± 0.011	$D_M(0.15)$	645.1 ± 6.8
$\boldsymbol{\ln(10^{10} A_s)}$	$3.048^{+0.013}_{-0.016}$	$\sigma_8\Omega_m^{0.25}$	0.6108 ± 0.0096	$H(0.38)$	82.75 ± 0.48
$\boldsymbol{n_s}$	$0.9636^{+0.0066}_{-0.0074}$	$\sigma_8/h^{0.5}$	0.992 ± 0.013	$D_M(0.38)$	1537 ± 14
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0025	$r_{drag}h$	98.7 ± 1.4	$H(0.51)$	89.54 ± 0.37
$\boldsymbol{A_{217}^{CIB}}$	47 ± 7	$\langle d^2\rangle^{1/2}$	2.455 ± 0.033	$D_M(0.51)$	1990 ± 16
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	z_{re}	$7.81^{+0.59}_{-0.79}$	$H(0.61)$	95.22 ± 0.29
$\boldsymbol{A_{143}^{tSZ}}$	$5.4^{+2.2}_{-1.9}$	$10^9 A_s$	$2.108^{+0.026}_{-0.035}$	$D_M(0.61)$	2315 ± 17
$\boldsymbol{A_{100}^{PS}}$	259 ± 28	$10^9 A_s e^{-2\tau}$	1.886 ± 0.014	$H(2.33)$	236.8 ± 1.1
$\boldsymbol{A_{143}^{PS}}$	46 ± 8	D_{40}	1231 ± 14	$D_M(2.33)$	5766 ± 13
$\boldsymbol{A_{143\times217}^{PS}}$	42 ± 9	D_{220}	5733 ± 39	$f\sigma_8(0.15)$	0.463 ± 0.010
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	D_{810}	2540 ± 13	$\sigma_8(0.15)$	$0.7509^{+0.0057}_{-0.0065}$
$\boldsymbol{A^{kSZ}}$	< 4.23	D_{1420}	817.1 ± 4.8	$f\sigma_8(0.38)$	0.4797 ± 0.0079
$\boldsymbol{A_{100}^{dust TT}}$	8.9 ± 1.8	D_{2000}	230.8 ± 1.6	$\sigma_8(0.38)$	$0.6649^{+0.0045}_{-0.0054}$
$\boldsymbol{A_{143}^{dust TT}}$	10.9 ± 1.8	$n_{s,0.002}$	$0.9636^{+0.0066}_{-0.0074}$	$f\sigma_8(0.51)$	0.4775 ± 0.0067
$\boldsymbol{A_{143\times217}^{dust TT}}$	18.6 ± 3.3	Y_P	$0.245390^{+0.000062}_{-0.000055}$	$\sigma_8(0.51)$	$0.6219^{+0.0041}_{-0.0051}$
$\boldsymbol{A_{217}^{dust TT}}$	93.7 ± 7.3	Y_P^{BBN}	$0.246717^{+0.000062}_{-0.000055}$	$f\sigma_8(0.61)$	0.4719 ± 0.0059
$\boldsymbol{A_{100}^{dust TE}}$	0.115 ± 0.038	10^5D/H	2.587 ± 0.028	$\sigma_8(0.61)$	$0.5916^{+0.0039}_{-0.0048}$
$\boldsymbol{A_{100\times143}^{dust TE}}$	0.135 ± 0.030	Age/Gyr	13.803 ± 0.028	$f\sigma_8(2.33)$	$0.2980^{+0.0020}_{-0.0024}$
$\boldsymbol{A_{100\times217}^{dust TE}}$	0.480 ± 0.085	z_*	1089.97 ± 0.29	$\sigma_8(2.33)$	$0.3070^{+0.0022}_{-0.0026}$
$\boldsymbol{A_{143}^{dust TE}}$	0.227 ± 0.054	r_*	144.32 ± 0.43	f_{2000}^{143}	29.5 ± 2.8
$\boldsymbol{A_{143\times217}^{dust TE}}$	0.666 ± 0.079	$100\theta_*$	1.04101 ± 0.00046	$f_{2000}^{143\times217}$	32.2 ± 1.9
$\boldsymbol{A_{217}^{dust TE}}$	2.09 ± 0.27	$D_M(z_*)$/Gpc	13.864 ± 0.038	f_{2000}^{217}	107.0 ± 1.8
$\boldsymbol{c_{100}}$	0.99967 ± 0.00061	z_{drag}	1059.95 ± 0.32	χ^2_{simall}	397.1 ± 1.9
$\boldsymbol{c_{217}}$	0.99819 ± 0.00062	r_{drag}	146.98 ± 0.44	χ^2_{lowl}	23.4 ± 1.6
H_0	67.16 ± 0.80	k_D	$0.14098^{+0.00050}_{-0.00045}$	χ^2_{plik}	2361.4 ± 6.1
Ω_Λ	0.682 ± 0.011	$100\theta_D$	0.16074 ± 0.00020	χ^2_{prior}	11.5 ± 4.5
Ω_m	0.318 ± 0.011	z_{eq}	3413 ± 42	χ^2_{CMB}	2781.9 ± 6.0

$\bar{\chi}^2_{eff} = 2793.42$; $\Delta\bar{\chi}^2_{eff} = 1.88$; $R - 1 = 0.01296$

5.15 base_alpha1_plikHM_TTTEEE_lowl_lowE_post_BAO_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02240 ± 0.00014	σ_8	$0.8103^{+0.0063}_{-0.0071}$	$D_M(0.15)$	640.0 ± 4.4
$\boldsymbol{\Omega_c h^2}$	0.1191 ± 0.0012	S_8	0.823 ± 0.014	$H(0.38)$	$83.11^{+0.30}_{-0.34}$
$\boldsymbol{100\theta_{MC}}$	1.04109 ± 0.00039	$\sigma_8\Omega_m^{0.5}$	0.4509 ± 0.0074	$D_M(0.38)$	1526.8 ± 8.7
$\boldsymbol{\tau}$	$0.0563^{+0.0056}_{-0.0080}$	$\sigma_8\Omega_m^{0.25}$	0.6045 ± 0.0071	$H(0.51)$	$89.81^{+0.24}_{-0.27}$
$\boldsymbol{\alpha_{-1}}$	$0.00015^{+0.00035}_{-0.00040}$	$\sigma_8/h^{0.5}$	0.984 ± 0.010	$D_M(0.51)$	1978 ± 10
$\boldsymbol{\ln(10^{10} A_s)}$	$3.046^{+0.013}_{-0.016}$	$r_{drag}h$	99.80 ± 0.92	$H(0.61)$	$95.42^{+0.19}_{-0.22}$
$\boldsymbol{n_s}$	0.9682 ± 0.0052	$\langle d^2\rangle^{1/2}$	2.434 ± 0.025	$D_M(0.61)$	2302 ± 11
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0024	z_{re}	$7.85^{+0.60}_{-0.80}$	$H(2.33)$	236.02 ± 0.73
$\boldsymbol{A^{CIB}_{217}}$	47 ± 7	$10^9 A_s$	$2.103^{+0.026}_{-0.035}$	$D_M(2.33)$	5757.9 ± 9.4
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$10^9 A_s e^{-2\tau}$	1.879 ± 0.012	$f\sigma_8(0.15)$	0.4557 ± 0.0070
$\boldsymbol{A^{tSZ}_{143}}$	$5.5^{+2.3}_{-1.9}$	D_{40}	1230 ± 14	$\sigma_8(0.15)$	$0.7489^{+0.0055}_{-0.0063}$
$\boldsymbol{A^{PS}_{100}}$	258 ± 28	D_{220}	5734 ± 38	$f\sigma_8(0.38)$	0.4744 ± 0.0058
$\boldsymbol{A^{PS}_{143}}$	45 ± 8	D_{810}	2539 ± 13	$\sigma_8(0.38)$	$0.6641^{+0.0047}_{-0.0055}$
$\boldsymbol{A^{PS}_{143\times217}}$	42 ± 9	D_{1420}	818.0 ± 4.6	$f\sigma_8(0.51)$	0.4732 ± 0.0051
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	D_{2000}	231.2 ± 1.5	$\sigma_8(0.51)$	$0.6215^{+0.0043}_{-0.0051}$
$\boldsymbol{A^{kSZ}}$	< 4.14	$n_{s,0.002}$	0.9682 ± 0.0052	$f\sigma_8(0.61)$	0.4684 ± 0.0047
$\boldsymbol{A^{dustTT}_{100}}$	9.0 ± 1.9	Y_P	$0.245407^{+0.000058}_{-0.000052}$	$\sigma_8(0.61)$	$0.5914^{+0.0041}_{-0.0048}$
$\boldsymbol{A^{dustTT}_{143}}$	10.9 ± 1.8	Y_P^{BBN}	$0.246733^{+0.000058}_{-0.000052}$	$f\sigma_8(2.33)$	$0.2983^{+0.0020}_{-0.0024}$
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.7 ± 3.3	10^5D/H	2.580 ± 0.026	$\sigma_8(2.33)$	$0.3076^{+0.0022}_{-0.0026}$
$\boldsymbol{A^{dustTT}_{217}}$	93.9 ± 7.3	Age/Gyr	13.785 ± 0.021	f^{143}_{2000}	29.2 ± 2.7
$\boldsymbol{A^{dustTE}_{100}}$	0.115 ± 0.038	z_*	1089.80 ± 0.23	$f^{143\times217}_{2000}$	32.0 ± 1.9
$\boldsymbol{A^{dustTE}_{100\times143}}$	0.136 ± 0.030	r_*	144.64 ± 0.30	f^{217}_{2000}	106.8 ± 1.8
$\boldsymbol{A^{dustTE}_{100\times217}}$	0.479 ± 0.085	$100\theta_*$	1.04127 ± 0.00039	χ^2_{simall}	397.2 ± 2.1
$\boldsymbol{A^{dustTE}_{143}}$	0.226 ± 0.054	$D_M(z_*)$/Gpc	13.890 ± 0.027	χ^2_{lowl}	23.8 ± 1.7
$\boldsymbol{A^{dustTE}_{143\times217}}$	0.666 ± 0.079	z_{drag}	1059.95 ± 0.32	χ^2_{plik}	2360.8 ± 6.0
$\boldsymbol{A^{dustTE}_{217}}$	2.08 ± 0.27	r_{drag}	147.29 ± 0.31	χ^2_{6DF}	0.056 ± 0.071
$\boldsymbol{c_{100}}$	0.99965 ± 0.00061	k_D	0.14068 ± 0.00038	χ^2_{MGS}	1.36 ± 0.52
$\boldsymbol{c_{217}}$	0.99820 ± 0.00062	$100\theta_D$	0.16077 ± 0.00021	$\chi^2_{DR12BAO}$	4.8 ± 1.6
H_0	67.75 ± 0.51	z_{eq}	3382 ± 27	χ^2_{prior}	11.7 ± 4.4
Ω_Λ	0.6903 ± 0.0070	k_{eq}	0.010321 ± 0.000083	χ^2_{BAO}	6.2 ± 1.3
Ω_m	0.3097 ± 0.0070	$100\theta_{eq}$	0.8172 ± 0.0051	χ^2_{CMB}	2781.8 ± 5.9
$\Omega_m h^2$	0.1422 ± 0.0011	$100\theta_{s,eq}$	0.4514 ± 0.0026		
$\Omega_m h^3$	0.09631 ± 0.00030	$H(0.15)$	73.02 ± 0.44		

$\bar{\chi}^2_{eff} = 2799.63$; $\Delta\bar{\chi}^2_{eff} = 1.91$; $R - 1 = 0.02644$

5.16 base_alpha1_plikHM_TTTEEE_lowl_lowE_post_lensing_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02238 ± 0.00015	$\Omega_m h^3$	0.09633 ± 0.00030	$100\theta_{s,eq}$	0.4493 ± 0.0033
$\boldsymbol{\Omega_c h^2}$	0.1200 ± 0.0015	σ_8	0.8118 ± 0.0056	$H(0.15)$	72.67 ± 0.56
$\boldsymbol{100\theta_{MC}}$	1.04088 ± 0.00043	S_8	0.833 ± 0.015	$D_M(0.15)$	643.6 ± 5.6
$\boldsymbol{\tau}$	$0.0553^{+0.0052}_{-0.0077}$	$\sigma_8\Omega_m^{0.5}$	0.4561 ± 0.0081	$H(0.38)$	82.86 ± 0.40
$\boldsymbol{\alpha_{-1}}$	-0.00006 ± 0.00051	$\sigma_8\Omega_m^{0.25}$	0.6084 ± 0.0069	$D_M(0.38)$	1534 ± 11
$\boldsymbol{\ln(10^{10}A_s)}$	$3.046^{+0.011}_{-0.014}$	$\sigma_8/h^{0.5}$	0.9893 ± 0.0094	$H(0.51)$	89.62 ± 0.31
$\boldsymbol{n_s}$	0.9647 ± 0.0060	$r_{drag}h$	99.0 ± 1.2	$D_M(0.51)$	1986 ± 13
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0024	$\langle d^2\rangle^{1/2}$	2.448 ± 0.024	$H(0.61)$	95.27 ± 0.25
$\boldsymbol{A_{217}^{CIB}}$	47 ± 7	z_{re}	$7.77^{+0.57}_{-0.75}$	$D_M(0.61)$	2311 ± 14
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	10^9A_s	$2.104^{+0.023}_{-0.030}$	$H(2.33)$	236.59 ± 0.90
$\boldsymbol{A_{143}^{tSZ}}$	$5.5^{+2.2}_{-1.9}$	$10^9A_se^{-2\tau}$	1.884 ± 0.012	$D_M(2.33)$	5764 ± 11
$\boldsymbol{A_{100}^{PS}}$	259 ± 28	D_{40}	1230 ± 14	$f\sigma_8(0.15)$	0.4603 ± 0.0074
$\boldsymbol{A_{143}^{PS}}$	46 ± 8	D_{220}	5734 ± 38	$\sigma_8(0.15)$	$0.7497^{+0.0047}_{-0.0052}$
$\boldsymbol{A_{143\times217}^{PS}}$	42 ± 9	D_{810}	2539 ± 13	$f\sigma_8(0.38)$	0.4777 ± 0.0057
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	D_{1420}	817.2 ± 4.7	$\sigma_8(0.38)$	$0.6641^{+0.0040}_{-0.0048}$
$\boldsymbol{A^{kSZ}}$	< 4.28	D_{2000}	230.9 ± 1.6	$f\sigma_8(0.51)$	0.4758 ± 0.0048
$\boldsymbol{A_{100}^{dustTT}}$	8.9 ± 1.8	$n_{s,0.002}$	0.9647 ± 0.0060	$\sigma_8(0.51)$	$0.6213^{+0.0038}_{-0.0045}$
$\boldsymbol{A_{143}^{dustTT}}$	10.9 ± 1.8	Y_P	$0.245397^{+0.000060}_{-0.000053}$	$f\sigma_8(0.61)$	0.4705 ± 0.0043
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.7 ± 3.3	Y_P^{BBN}	$0.246724^{+0.000060}_{-0.000053}$	$\sigma_8(0.61)$	$0.5911^{+0.0036}_{-0.0044}$
$\boldsymbol{A_{217}^{dustTT}}$	93.8 ± 7.3	10^5D/H	2.584 ± 0.027	$f\sigma_8(2.33)$	$0.2979^{+0.0019}_{-0.0023}$
$\boldsymbol{A_{100}^{dustTE}}$	0.115 ± 0.038	Age/Gyr	13.798 ± 0.025	$\sigma_8(2.33)$	$0.3069^{+0.0022}_{-0.0026}$
$\boldsymbol{A_{100\times143}^{dustTE}}$	0.135 ± 0.030	z_*	1089.91 ± 0.26	f_{2000}^{143}	29.5 ± 2.7
$\boldsymbol{A_{100\times217}^{dustTE}}$	0.481 ± 0.086	r_*	144.41 ± 0.35	$f_{2000}^{143\times217}$	$32.2^{+1.7}_{-2.0}$
$\boldsymbol{A_{143}^{dustTE}}$	0.226 ± 0.054	$100\theta_*$	1.04106 ± 0.00043	f_{2000}^{217}	107.0 ± 1.8
$\boldsymbol{A_{143\times217}^{dustTE}}$	0.666 ± 0.079	$D_M(z_*)$/Gpc	13.872 ± 0.031	$\chi^2_{lensing}$	9.34 ± 0.82
$\boldsymbol{A_{217}^{dustTE}}$	2.08 ± 0.27	z_{drag}	1059.96 ± 0.32	χ^2_{simall}	397.0 ± 1.8
$\boldsymbol{c_{100}}$	0.99966 ± 0.00060	r_{drag}	147.07 ± 0.36	χ^2_{lowl}	23.4 ± 1.7
$\boldsymbol{c_{217}}$	0.99820 ± 0.00063	k_D	0.14090 ± 0.00041	χ^2_{plik}	2361.0 ± 6.0
H_0	67.34 ± 0.65	$100\theta_D$	0.16074 ± 0.00020	χ^2_{prior}	11.6 ± 4.4
Ω_Λ	0.6843 ± 0.0091	z_{eq}	3403 ± 34	χ^2_{CMB}	2790.8 ± 6.0
Ω_m	0.3157 ± 0.0091	k_{eq}	0.01039 ± 0.00010		
$\Omega_m h^2$	0.1431 ± 0.0014	$100\theta_{eq}$	0.8131 ± 0.0064		

$\bar{\chi}^2_{eff} = 2802.36$; $\Delta\bar{\chi}^2_{eff} = 1.86$; $R - 1 = 0.01801$

5.17 base_alpha1_plikHM_TTTEEE_lowl_lowE_post_BAO_lensing_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02241 ± 0.00014	σ_8	0.8108 ± 0.0057	$D_M(0.15)$	$640.2^{+4.2}_{-3.8}$
$\boldsymbol{\Omega_c h^2}$	0.1192 ± 0.0011	S_8	0.824 ± 0.011	$H(0.38)$	$83.10^{+0.27}_{-0.31}$
$\boldsymbol{100\theta_{MC}}$	1.04107 ± 0.00038	$\sigma_8\Omega_m^{0.5}$	0.4514 ± 0.0062	$D_M(0.38)$	$1527.1^{+8.4}_{-7.6}$
$\boldsymbol{\tau}$	$0.0568^{+0.0056}_{-0.0077}$	$\sigma_8\Omega_m^{0.25}$	0.6050 ± 0.0058	$H(0.51)$	$89.80^{+0.22}_{-0.25}$
$\boldsymbol{\alpha_{-1}}$	$0.00013^{+0.00035}_{-0.00039}$	$\sigma_8/h^{0.5}$	0.9852 ± 0.0083	$D_M(0.51)$	$1978.4^{+9.9}_{-8.8}$
$\boldsymbol{\ln(10^{10}A_s)}$	$3.047^{+0.012}_{-0.015}$	$r_{drag}h$	99.76 ± 0.84	$H(0.61)$	$95.41^{+0.18}_{-0.21}$
$\boldsymbol{n_s}$	0.9679 ± 0.0050	$\langle d^2\rangle^{1/2}$	2.437 ± 0.021	$D_M(0.61)$	$2302^{+11}_{-9.5}$
$\boldsymbol{y_{cal}}$	1.0008 ± 0.0024	z_{re}	$7.89^{+0.60}_{-0.75}$	$H(2.33)$	236.05 ± 0.66
$\boldsymbol{A^{CIB}_{217}}$	47 ± 7	$10^9 A_s$	$2.106^{+0.025}_{-0.031}$	$D_M(2.33)$	5758.0 ± 9.1
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$10^9 A_s e^{-2\tau}$	1.879 ± 0.011	$f\sigma_8(0.15)$	0.4561 ± 0.0057
$\boldsymbol{A^{tSZ}_{143}}$	$5.5^{+2.2}_{-1.9}$	D_{40}	1231 ± 14	$\sigma_8(0.15)$	0.7494 ± 0.0051
$\boldsymbol{A^{PS}_{100}}$	258 ± 28	D_{220}	5737 ± 38	$f\sigma_8(0.38)$	0.4748 ± 0.0047
$\boldsymbol{A^{PS}_{143}}$	45 ± 8	D_{810}	2539 ± 13	$\sigma_8(0.38)$	0.6644 ± 0.0045
$\boldsymbol{A^{PS}_{143\times217}}$	42 ± 9	D_{1420}	818.0 ± 4.6	$f\sigma_8(0.51)$	0.4736 ± 0.0042
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	D_{2000}	231.2 ± 1.5	$\sigma_8(0.51)$	0.6219 ± 0.0043
$\boldsymbol{A^{kSZ}}$	< 4.08	$n_{s,0.002}$	0.9679 ± 0.0050	$f\sigma_8(0.61)$	0.4687 ± 0.0039
$\boldsymbol{A^{dustTT}_{100}}$	8.9 ± 1.8	Y_P	$0.245408^{+0.000058}_{-0.000051}$	$\sigma_8(0.61)$	0.5918 ± 0.0041
$\boldsymbol{A^{dustTT}_{143}}$	10.9 ± 1.8	Y_P^{BBN}	$0.246735^{+0.000058}_{-0.000052}$	$f\sigma_8(2.33)$	$0.2984^{+0.0020}_{-0.0023}$
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.6 ± 3.3	10^5D/H	2.579 ± 0.026	$\sigma_8(2.33)$	$0.3077^{+0.0021}_{-0.0024}$
$\boldsymbol{A^{dustTT}_{217}}$	93.8 ± 7.3	Age/Gyr	13.785 ± 0.020	f^{143}_{2000}	29.2 ± 2.7
$\boldsymbol{A^{dustTE}_{100}}$	0.115 ± 0.038	z_*	1089.80 ± 0.22	$f^{143\times217}_{2000}$	31.9 ± 1.9
$\boldsymbol{A^{dustTE}_{100\times143}}$	0.136 ± 0.030	r_*	144.62 ± 0.27	f^{217}_{2000}	106.9 ± 1.8
$\boldsymbol{A^{dustTE}_{100\times217}}$	0.479 ± 0.085	$100\theta_*$	1.04125 ± 0.00038	$\chi^2_{lensing}$	9.12 ± 0.58
$\boldsymbol{A^{dustTE}_{143}}$	0.226 ± 0.054	$D_M(z_*)$/Gpc	13.889 ± 0.024	χ^2_{simall}	397.3 ± 2.0
$\boldsymbol{A^{dustTE}_{143\times217}}$	0.665 ± 0.078	z_{drag}	1059.96 ± 0.32	χ^2_{lowl}	23.8 ± 1.7
$\boldsymbol{A^{dustTE}_{217}}$	2.08 ± 0.27	r_{drag}	147.27 ± 0.29	χ^2_{plik}	2360.6 ± 5.9
$\boldsymbol{c_{100}}$	0.99965 ± 0.00061	k_D	0.14070 ± 0.00036	χ^2_{6DF}	0.052 ± 0.064
$\boldsymbol{c_{217}}$	0.99820 ± 0.00062	$100\theta_D$	0.16076 ± 0.00021	χ^2_{MGS}	1.34 ± 0.47
H_0	$67.74^{+0.44}_{-0.50}$	z_{eq}	3383 ± 25	$\chi^2_{DR12BAO}$	4.7 ± 1.4
Ω_Λ	0.6900 ± 0.0064	k_{eq}	0.010325 ± 0.000075	χ^2_{prior}	11.6 ± 4.4
Ω_m	0.3100 ± 0.0064	$100\theta_{eq}$	0.8170 ± 0.0046	χ^2_{CMB}	2790.8 ± 6.0
$\Omega_m h^2$	0.1422 ± 0.0010	$100\theta_{s,eq}$	0.4513 ± 0.0024	χ^2_{BAO}	6.1 ± 1.1
$\Omega_m h^3$	0.09632 ± 0.00030	$H(0.15)$	$73.00^{+0.38}_{-0.43}$		

$\bar{\chi}^2_{eff} = 2808.47$; $\Delta\bar{\chi}^2_{eff} = 1.75$; $R - 1 = 0.02935$

5.18 base_alpha1_plikHM_TTTEEE_lowl_lowE_post_Riess18_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	$0.02247^{+0.00015}_{-0.00014}$	$\Omega_m h^3$	0.09633 ± 0.00029	$100\theta_{s,eq}$	$0.4543^{+0.0038}_{-0.0033}$
$\boldsymbol{\Omega_c h^2}$	$0.1178^{+0.0014}_{-0.0017}$	σ_8	$0.8074^{+0.0066}_{-0.0074}$	$H(0.15)$	$73.53^{+0.63}_{-0.56}$
$\boldsymbol{100\theta_{MC}}$	$1.04133^{+0.00046}_{-0.00037}$	S_8	$0.810^{+0.015}_{-0.018}$	$D_M(0.15)$	$635.0^{+5.3}_{-6.3}$
$\boldsymbol{\tau}$	$0.0576^{+0.0059}_{-0.0084}$	$\sigma_8\Omega_m^{0.5}$	$0.4436^{+0.0083}_{-0.010}$	$H(0.38)$	$83.48^{+0.46}_{-0.41}$
$\boldsymbol{\alpha_{-1}}$	$0.00040^{+0.00034}_{-0.00061}$	$\sigma_8\Omega_m^{0.25}$	$0.5985^{+0.0077}_{-0.0090}$	$D_M(0.38)$	1517^{+11}_{-13}
$\boldsymbol{\ln(10^{10}A_s)}$	$3.045^{+0.013}_{-0.016}$	$\sigma_8/h^{0.5}$	$0.977^{+0.011}_{-0.012}$	$H(0.51)$	90.10 ± 0.34
$\boldsymbol{n_s}$	$0.9723^{+0.0067}_{-0.0053}$	$r_{drag}h$	$100.9^{+1.3}_{-1.2}$	$D_M(0.51)$	1966^{+13}_{-15}
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0024	$\langle d^2\rangle^{1/2}$	$2.416^{+0.026}_{-0.031}$	$H(0.61)$	95.64 ± 0.27
$\boldsymbol{A_{217}^{CIB}}$	47 ± 6	z_{re}	$7.94^{+0.61}_{-0.84}$	$D_M(0.61)$	2289^{+14}_{-16}
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$10^9 A_s$	$2.101^{+0.028}_{-0.035}$	$H(2.33)$	$235.28^{+0.86}_{-1.0}$
$\boldsymbol{A_{143}^{tSZ}}$	$5.7^{+2.3}_{-2.0}$	$10^9 A_s e^{-2\tau}$	1.872 ± 0.013	$D_M(2.33)$	5749 ± 12
$\boldsymbol{A_{100}^{PS}}$	255^{+26}_{-30}	D_{40}	1229 ± 14	$f\sigma_8(0.15)$	$0.4489^{+0.0078}_{-0.0093}$
$\boldsymbol{A_{143}^{PS}}$	44 ± 8	D_{220}	5738 ± 38	$\sigma_8(0.15)$	$0.7471^{+0.0056}_{-0.0065}$
$\boldsymbol{A_{143\times217}^{PS}}$	41 ± 9	D_{810}	2537 ± 13	$f\sigma_8(0.38)$	$0.4693^{+0.0064}_{-0.0074}$
$\boldsymbol{A_{217}^{PS}}$	114.7 ± 9.8	D_{1420}	818.9 ± 4.7	$\sigma_8(0.38)$	$0.6633^{+0.0047}_{-0.0055}$
$\boldsymbol{A^{kSZ}}$	< 3.97	D_{2000}	231.6 ± 1.5	$f\sigma_8(0.51)$	$0.4691^{+0.0056}_{-0.0064}$
$\boldsymbol{A_{100}^{dust TT}}$	8.9 ± 1.9	$n_{s,0.002}$	$0.9723^{+0.0067}_{-0.0053}$	$\sigma_8(0.51)$	$0.6212^{+0.0042}_{-0.0051}$
$\boldsymbol{A_{143}^{dust TT}}$	11.1 ± 1.8	Y_P	$0.245434^{+0.000058}_{-0.000048}$	$f\sigma_8(0.61)$	$0.4649^{+0.0051}_{-0.0057}$
$\boldsymbol{A_{143\times217}^{dust TT}}$	18.8 ± 3.4	Y_P^{BBN}	$0.246760^{+0.000058}_{-0.000048}$	$\sigma_8(0.61)$	$0.5913^{+0.0040}_{-0.0049}$
$\boldsymbol{A_{217}^{dust TT}}$	94.0 ± 7.3	10^5D/H	$2.567^{+0.024}_{-0.028}$	$f\sigma_8(2.33)$	$0.2986^{+0.0021}_{-0.0024}$
$\boldsymbol{A_{100}^{dust TE}}$	0.114 ± 0.038	Age/Gyr	13.765 ± 0.025	$\sigma_8(2.33)$	$0.3082^{+0.0022}_{-0.0026}$
$\boldsymbol{A_{100\times143}^{dust TE}}$	0.134 ± 0.029	z_*	$1089.60^{+0.24}_{-0.28}$	f_{2000}^{143}	28.6 ± 2.8
$\boldsymbol{A_{100\times217}^{dust TE}}$	0.481 ± 0.082	r_*	$144.91^{+0.41}_{-0.34}$	$f_{2000}^{143\times217}$	31.6 ± 1.9
$\boldsymbol{A_{143}^{dust TE}}$	0.223 ± 0.055	$100\theta_*$	$1.04151^{+0.00046}_{-0.00037}$	f_{2000}^{217}	106.6 ± 1.8
$\boldsymbol{A_{143\times217}^{dust TE}}$	0.667 ± 0.077	$D_M(z_*)$/Gpc	$13.914^{+0.036}_{-0.031}$	χ^2_{simall}	397.6 ± 2.5
$\boldsymbol{A_{217}^{dust TE}}$	2.08 ± 0.26	z_{drag}	1060.02 ± 0.30	χ^2_{lowl}	23.9 ± 1.6
$\boldsymbol{c_{100}}$	0.99964 ± 0.00062	r_{drag}	$147.55^{+0.42}_{-0.35}$	χ^2_{plik}	2362.3 ± 6.2
$\boldsymbol{c_{217}}$	0.99818 ± 0.00062	k_D	$0.14046^{+0.00039}_{-0.00046}$	$\chi^2_{H073p45}$	9.6 ± 2.6
H_0	$68.35^{+0.74}_{-0.65}$	$100\theta_D$	0.16075 ± 0.00019	χ^2_{prior}	11.7 ± 4.4
Ω_Λ	$0.698^{+0.010}_{-0.0082}$	z_{eq}	3353^{+32}_{-39}	χ^2_{CMB}	2783.8 ± 6.4
Ω_m	$0.3019^{+0.0082}_{-0.010}$	k_{eq}	$0.010234^{+0.000099}_{-0.00012}$		
$\Omega_m h^2$	$0.1410^{+0.0014}_{-0.0016}$	$100\theta_{eq}$	$0.8229^{+0.0074}_{-0.0064}$		

$\bar{\chi}^2_{eff} = 2805.11$; $\Delta\bar{\chi}^2_{eff} = 1.22$; $R - 1 = 0.05749$

5.19 base_alpha1_CamSpecHM_TT_lowl_lowE

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02220 ± 0.00023	$\sigma_8\Omega_m^{0.5}$	0.461 ± 0.013	$H(0.15)$	72.16 ± 0.81
$\boldsymbol{\Omega_c h^2}$	0.1210 ± 0.0022	$\sigma_8\Omega_m^{0.25}$	0.612 ± 0.012	$D_M(0.15)$	648.7 ± 8.3
$\boldsymbol{100\theta_{MC}}$	1.04059 ± 0.00056	$\sigma_8/h^{0.5}$	0.993 ± 0.016	$H(0.38)$	82.47 ± 0.58
$\boldsymbol{\tau}$	0.0537 ± 0.0084	$r_{drag}h$	98.2 ± 1.7	$D_M(0.38)$	1544 ± 16
$\boldsymbol{\alpha_{-1}}$	$-0.0012^{+0.0017}_{-0.0012}$	$\langle d^2\rangle^{1/2}$	2.457 ± 0.039	$H(0.51)$	89.29 ± 0.45
$\boldsymbol{\ln(10^{10}A_s)}$	3.045 ± 0.018	z_{re}	7.65 ± 0.85	$D_M(0.51)$	1999 ± 19
$\boldsymbol{n_s}$	$0.9596^{+0.0071}_{-0.0083}$	10^9A_s	2.101 ± 0.038	$H(0.61)$	$95.00^{+0.33}_{-0.37}$
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	$10^9A_se^{-2\tau}$	1.887 ± 0.015	$D_M(0.61)$	2324 ± 21
$\boldsymbol{A^{PS}_{100}}$	244 ± 25	D_{40}	1216^{+18}_{-24}	$H(2.33)$	237.0 ± 1.4
$\boldsymbol{A^{PS}_{143}}$	41 ± 8	D_{220}	5709 ± 42	$D_M(2.33)$	5777 ± 16
$\boldsymbol{A^{PS}_{217}}$	100 ± 10	D_{810}	2536 ± 14	$f\sigma_8(0.15)$	0.465 ± 0.012
$\boldsymbol{A^{CIB}_{217}}$	41 ± 7	D_{1420}	813.8 ± 5.3	$\sigma_8(0.15)$	0.7485 ± 0.0075
$\boldsymbol{A^{tSZ}_{143}}$	$3.7^{+1.7}_{-2.6}$	D_{2000}	229.4 ± 1.9	$f\sigma_8(0.38)$	0.4804 ± 0.0096
$\boldsymbol{r^{PS}_{143\times217}}$	0.64 ± 0.13	$n_{s,0.002}$	$0.9596^{+0.0071}_{-0.0083}$	$\sigma_8(0.38)$	0.6623 ± 0.0061
$\boldsymbol{r^{CIB}_{143\times217}}$	$0.59^{+0.40}_{-0.12}$	Y_P	$0.24532^{+0.00011}_{-0.000085}$	$f\sigma_8(0.51)$	0.4776 ± 0.0082
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	$0.24665^{+0.00011}_{-0.000085}$	$\sigma_8(0.51)$	0.6193 ± 0.0055
$\boldsymbol{A^{kSZ}}$	—	10^5D/H	2.619 ± 0.044	$f\sigma_8(0.61)$	0.4717 ± 0.0072
$\boldsymbol{A^{dust}_{100}}$	1.02 ± 0.19	Age/Gyr	13.829 ± 0.037	$\sigma_8(0.61)$	0.5889 ± 0.0052
$\boldsymbol{A^{dust}_{143}}$	0.98 ± 0.18	z_*	1090.23 ± 0.40	$f\sigma_8(2.33)$	0.2965 ± 0.0026
$\boldsymbol{A^{dust}_{217}}$	0.97 ± 0.10	r_*	144.31 ± 0.53	$\sigma_8(2.33)$	0.3052 ± 0.0028
$\boldsymbol{A^{dust}_{143\times217}}$	1.03 ± 0.16	$100\theta_*$	1.04079 ± 0.00056	f^{143}_{2000}	31.1 ± 3.0
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	$D_M(z_*)$/Gpc	13.865 ± 0.048	f^{217}_{2000}	107.7 ± 2.0
$\boldsymbol{c_{217}}$	1.0012 ± 0.0016	z_{drag}	1059.60 ± 0.51	$f^{143\times217}_{2000}$	33.2 ± 2.1
H_0	66.76 ± 0.95	r_{drag}	147.02 ± 0.55	χ^2_{simall}	397.1 ± 1.8
Ω_Λ	0.677 ± 0.014	k_D	$0.14080^{+0.00065}_{-0.00059}$	χ^2_{lowl}	22.2 ± 2.4
Ω_m	0.323 ± 0.014	$100\theta_D$	$0.16092^{+0.00029}_{-0.00034}$	$\chi^2_{CamSpec}$	7065.8 ± 5.8
$\Omega_m h^2$	0.1438 ± 0.0021	z_{eq}	3422 ± 51	χ^2_{prior}	7.6 ± 3.5
$\Omega_m h^3$	0.09601 ± 0.00047	k_{eq}	0.01044 ± 0.00016	χ^2_{CMB}	7485.1 ± 5.8
σ_8	0.8112 ± 0.0089	$100\theta_{eq}$	0.8092 ± 0.0094		
S_8	0.842 ± 0.025	$100\theta_{s,eq}$	0.4473 ± 0.0049		

$\bar{\chi}^2_{eff} = 7492.71$; $\Delta\bar{\chi}^2_{eff} = 1.18$; $R - 1 = 0.00444$

5.20 base_alpha1_CamSpecHM_TT_lowl_lowE_post_BAO

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02228 ± 0.00023	$\sigma_8\Omega_m^{0.25}$	0.6017 ± 0.0080	$H(0.38)$	82.99 ± 0.35
$\boldsymbol{\Omega_c h^2}$	0.1190 ± 0.0012	$\sigma_8/h^{0.5}$	0.980 ± 0.011	$D_M(0.38)$	1529.1 ± 9.4
$\boldsymbol{100\theta_{MC}}$	1.04094 ± 0.00048	$r_{drag}h$	99.76 ± 0.96	$H(0.51)$	89.69 ± 0.29
$\boldsymbol{\tau}$	0.0550 ± 0.0084	$\langle d^2\rangle^{1/2}$	2.425 ± 0.028	$D_M(0.51)$	1981 ± 11
$\boldsymbol{\alpha_{-1}}$	$-0.0007^{+0.0015}_{-0.0012}$	z_{re}	7.73 ± 0.83	$H(0.61)$	95.30 ± 0.25
$\boldsymbol{\ln(10^{10}A_s)}$	3.042 ± 0.018	$10^9 A_s$	$2.096^{+0.035}_{-0.039}$	$D_M(0.61)$	2305 ± 12
$\boldsymbol{n_s}$	$0.9656^{+0.0057}_{-0.0065}$	$10^9 A_s e^{-2\tau}$	1.877 ± 0.013	$H(2.33)$	235.79 ± 0.81
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0025	D_{40}	1214^{+21}_{-27}	$D_M(2.33)$	5765 ± 12
$\boldsymbol{A_{100}^{PS}}$	243 ± 25	D_{220}	5716 ± 42	$f\sigma_8(0.15)$	0.4537 ± 0.0076
$\boldsymbol{A_{143}^{PS}}$	40 ± 8	D_{810}	2535 ± 14	$\sigma_8(0.15)$	0.7452 ± 0.0069
$\boldsymbol{A_{217}^{PS}}$	100 ± 10	D_{1420}	815.1 ± 5.2	$f\sigma_8(0.38)$	0.4723 ± 0.0065
$\boldsymbol{A_{217}^{CIB}}$	41 ± 7	D_{2000}	229.9 ± 1.8	$\sigma_8(0.38)$	0.6607 ± 0.0059
$\boldsymbol{A_{143}^{tSZ}}$	$3.7^{+1.7}_{-2.7}$	$n_{s,0.002}$	$0.9656^{+0.0057}_{-0.0065}$	$f\sigma_8(0.51)$	0.4710 ± 0.0058
$\boldsymbol{r_{143\times217}^{PS}}$	0.64 ± 0.13	Y_P	$0.24535^{+0.00010}_{-0.000081}$	$\sigma_8(0.51)$	0.6184 ± 0.0055
$\boldsymbol{r_{143\times217}^{CIB}}$	> 0.465	Y_P^{BBN}	$0.24668^{+0.00011}_{-0.000082}$	$f\sigma_8(0.61)$	0.4662 ± 0.0054
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	10^5D/H	$2.604^{+0.040}_{-0.046}$	$\sigma_8(0.61)$	0.5885 ± 0.0052
$\boldsymbol{A^{kSZ}}$	—	Age/Gyr	13.802 ± 0.028	$f\sigma_8(2.33)$	0.2968 ± 0.0026
$\boldsymbol{A_{100}^{dust}}$	1.02 ± 0.20	z_*	1089.95 ± 0.32	$\sigma_8(2.33)$	0.3060 ± 0.0027
$\boldsymbol{A_{143}^{dust}}$	0.99 ± 0.18	r_*	144.77 ± 0.35	f_{2000}^{143}	30.6 ± 3.0
$\boldsymbol{A_{217}^{dust}}$	0.97 ± 0.10	$100\theta_*$	1.04113 ± 0.00048	f_{2000}^{217}	107.4 ± 2.0
$\boldsymbol{A_{143\times217}^{dust}}$	1.03 ± 0.16	$D_M(z_*)$/Gpc	13.905 ± 0.032	$f_{2000}^{143\times217}$	32.8 ± 2.1
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	z_{drag}	$1059.64^{+0.56}_{-0.50}$	χ^2_{simall}	397.1 ± 1.9
$\boldsymbol{c_{217}}$	1.0012 ± 0.0016	r_{drag}	147.47 ± 0.39	χ^2_{lowl}	22 ± 3
H_0	67.65 ± 0.55	k_D	$0.14039^{+0.00056}_{-0.00050}$	$\chi^2_{CamSpec}$	7065.8 ± 5.9
Ω_Λ	0.6898 ± 0.0074	$100\theta_D$	$0.16093^{+0.00031}_{-0.00036}$	χ^2_{6DF}	0.061 ± 0.079
Ω_m	0.3102 ± 0.0074	z_{eq}	3375 ± 29	χ^2_{MGS}	1.35 ± 0.53
$\Omega_m h^2$	0.1419 ± 0.0012	k_{eq}	0.010302 ± 0.000090	$\chi^2_{DR12BAO}$	4.8 ± 1.7
$\Omega_m h^3$	0.09598 ± 0.00048	$100\theta_{eq}$	0.8179 ± 0.0054	χ^2_{prior}	7.7 ± 3.5
σ_8	0.8063 ± 0.0078	$100\theta_{s,eq}$	0.4519 ± 0.0028	χ^2_{BAO}	6.3 ± 1.4
S_8	0.820 ± 0.015	$H(0.15)$	72.91 ± 0.47	χ^2_{CMB}	7485.4 ± 5.8
$\sigma_8\Omega_m^{0.5}$	0.4491 ± 0.0081	$D_M(0.15)$	641.0 ± 4.7		

$\bar{\chi}^2_{eff} = 7499.33$; $\Delta\bar{\chi}^2_{eff} = 1.77$; $R - 1 = 0.01534$

5.21 base_alpha1_CamSpecHM_TT_lowl_lowE_post_lensing

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02222 ± 0.00023	$\sigma_8\Omega_m^{0.5}$	0.4583 ± 0.0091	$H(0.15)$	72.31 ± 0.63
$\boldsymbol{\Omega_c h^2}$	0.1206 ± 0.0016	$\sigma_8\Omega_m^{0.25}$	0.6093 ± 0.0077	$D_M(0.15)$	647.1 ± 6.4
$\boldsymbol{100\theta_{MC}}$	1.04063 ± 0.00052	$\sigma_8/h^{0.5}$	0.990 ± 0.010	$H(0.38)$	82.57 ± 0.46
$\boldsymbol{\tau}$	0.0539 ± 0.0081	$r_{drag}h$	98.5 ± 1.3	$D_M(0.38)$	1541 ± 13
$\boldsymbol{\alpha_{-1}}$	$-0.0012^{+0.0017}_{-0.0011}$	$\langle d^2\rangle^{1/2}$	2.450 ± 0.026	$H(0.51)$	89.37 ± 0.37
$\boldsymbol{\ln(10^{10}A_s)}$	3.044 ± 0.016	z_{re}	7.66 ± 0.81	$D_M(0.51)$	1995 ± 15
$\boldsymbol{n_s}$	$0.9604^{+0.0061}_{-0.0071}$	10^9A_s	$2.100^{+0.031}_{-0.035}$	$H(0.61)$	95.05 ± 0.30
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0025	$10^9A_se^{-2\tau}$	1.885 ± 0.013	$D_M(0.61)$	2320 ± 16
$\boldsymbol{A_{100}^{PS}}$	244 ± 25	D_{40}	1216^{+17}_{-25}	$H(2.33)$	236.8 ± 1.0
$\boldsymbol{A_{143}^{PS}}$	41 ± 8	D_{220}	5712 ± 42	$D_M(2.33)$	5775 ± 15
$\boldsymbol{A_{217}^{PS}}$	100 ± 10	D_{810}	2536 ± 14	$f\sigma_8(0.15)$	0.4622 ± 0.0083
$\boldsymbol{A_{217}^{CIB}}$	41 ± 7	D_{1420}	814.0 ± 5.3	$\sigma_8(0.15)$	0.7475 ± 0.0056
$\boldsymbol{A_{143}^{tSZ}}$	$3.6^{+1.7}_{-2.6}$	D_{2000}	229.4 ± 1.9	$f\sigma_8(0.38)$	0.4785 ± 0.0063
$\boldsymbol{r_{143\times217}^{PS}}$	0.64 ± 0.13	$n_{s,0.002}$	$0.9604^{+0.0061}_{-0.0071}$	$\sigma_8(0.38)$	0.6617 ± 0.0050
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.59^{+0.40}_{-0.13}$	Y_P	$0.24533^{+0.00011}_{-0.000083}$	$f\sigma_8(0.51)$	0.4761 ± 0.0054
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	$0.24666^{+0.00011}_{-0.000083}$	$\sigma_8(0.51)$	0.6189 ± 0.0048
$\boldsymbol{A^{kSZ}}$	$5.2^{+3.8}_{-2.4}$	10^5D/H	2.615 ± 0.043	$f\sigma_8(0.61)$	0.4704 ± 0.0047
$\boldsymbol{A_{100}^{dust}}$	1.02 ± 0.19	Age/Gyr	13.823 ± 0.033	$\sigma_8(0.61)$	0.5886 ± 0.0046
$\boldsymbol{A_{143}^{dust}}$	0.98 ± 0.18	z_*	1090.16 ± 0.36	$f\sigma_8(2.33)$	0.2965 ± 0.0025
$\boldsymbol{A_{217}^{dust}}$	0.97 ± 0.10	r_*	144.40 ± 0.41	$\sigma_8(2.33)$	0.3053 ± 0.0027
$\boldsymbol{A_{143\times217}^{dust}}$	1.03 ± 0.16	$100\theta_*$	1.04083 ± 0.00052	f_{2000}^{143}	31.1 ± 3.0
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	$D_M(z_*)$/Gpc	13.873 ± 0.037	f_{2000}^{217}	107.7 ± 2.0
$\boldsymbol{c_{217}}$	1.0012 ± 0.0016	z_{drag}	1059.63 ± 0.51	$f_{2000}^{143\times217}$	33.1 ± 2.1
H_0	66.94 ± 0.74	r_{drag}	147.11 ± 0.44	$\chi^2_{lensing}$	9.52 ± 0.91
Ω_Λ	0.680 ± 0.010	k_D	0.14073 ± 0.00054	χ^2_{simall}	397.0 ± 1.7
Ω_m	0.320 ± 0.010	$100\theta_D$	$0.16091^{+0.00030}_{-0.00033}$	χ^2_{lowl}	22.2 ± 2.4
$\Omega_m h^2$	0.1434 ± 0.0016	z_{eq}	3412 ± 38	$\chi^2_{CamSpec}$	7065.3 ± 5.8
$\Omega_m h^3$	0.09601 ± 0.00047	k_{eq}	0.01042 ± 0.00012	χ^2_{prior}	7.6 ± 3.4
σ_8	0.8099 ± 0.0063	$100\theta_{eq}$	0.8109 ± 0.0071	χ^2_{CMB}	7494.0 ± 5.9
S_8	0.837 ± 0.017	$100\theta_{s,eq}$	0.4482 ± 0.0037		

$\bar{\chi}^2_{eff} = 7501.64$; $\Delta\bar{\chi}^2_{eff} = 1.40$; $R - 1 = 0.00636$

5.22 base_alpha1_CamSpecHM_TT_lowl_lowE_post_BAO_lensing

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02228 ± 0.00023	$\sigma_8\Omega_m^{0.25}$	0.6040 ± 0.0062	$H(0.38)$	82.95 ± 0.33
$\boldsymbol{\Omega_c h^2}$	0.1192 ± 0.0011	$\sigma_8/h^{0.5}$	0.9836 ± 0.0090	$D_M(0.38)$	1530.4 ± 8.7
$\boldsymbol{100\theta_{MC}}$	1.04091 ± 0.00047	$r_{drag}h$	99.59 ± 0.86	$H(0.51)$	89.66 ± 0.27
$\boldsymbol{\tau}$	$0.0566^{+0.0072}_{-0.0081}$	$\langle d^2\rangle^{1/2}$	2.434 ± 0.022	$D_M(0.51)$	1983 ± 10
$\boldsymbol{\alpha_{-1}}$	$-0.0007^{+0.0015}_{-0.0012}$	z_{re}	7.90 ± 0.77	$H(0.61)$	95.28 ± 0.24
$\boldsymbol{\ln(10^{10}A_s)}$	3.047 ± 0.016	$10^9 A_s$	$2.105^{+0.032}_{-0.036}$	$D_M(0.61)$	2307 ± 11
$\boldsymbol{n_s}$	$0.9648^{+0.0054}_{-0.0064}$	$10^9 A_s e^{-2\tau}$	1.880 ± 0.012	$H(2.33)$	235.94 ± 0.72
$\boldsymbol{y_{cal}}$	1.0009 ± 0.0025	D_{40}	1216^{+19}_{-27}	$D_M(2.33)$	5766 ± 12
$\boldsymbol{A_{100}^{PS}}$	243 ± 25	D_{220}	5721 ± 42	$f\sigma_8(0.15)$	0.4557 ± 0.0061
$\boldsymbol{A_{143}^{PS}}$	40 ± 8	D_{810}	2536 ± 14	$\sigma_8(0.15)$	0.7471 ± 0.0057
$\boldsymbol{A_{217}^{PS}}$	101 ± 10	D_{1420}	815.5 ± 5.1	$f\sigma_8(0.38)$	0.4741 ± 0.0051
$\boldsymbol{A_{217}^{CIB}}$	41 ± 7	D_{2000}	230.0 ± 1.8	$\sigma_8(0.38)$	0.6623 ± 0.0051
$\boldsymbol{A_{143}^{tSZ}}$	$3.7^{+1.7}_{-2.7}$	$n_{s,0.002}$	$0.9648^{+0.0054}_{-0.0064}$	$f\sigma_8(0.51)$	0.4727 ± 0.0045
$\boldsymbol{r_{143\times217}^{PS}}$	0.64 ± 0.13	Y_P	$0.24536^{+0.00010}_{-0.000082}$	$\sigma_8(0.51)$	0.6198 ± 0.0048
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.58^{+0.41}_{-0.13}$	Y_P^{BBN}	$0.24668^{+0.00010}_{-0.000082}$	$f\sigma_8(0.61)$	0.4677 ± 0.0042
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	10^5D/H	$2.603^{+0.041}_{-0.046}$	$\sigma_8(0.61)$	0.5897 ± 0.0045
$\boldsymbol{A^{kSZ}}$	—	Age/Gyr	13.803 ± 0.028	$f\sigma_8(2.33)$	0.2974 ± 0.0024
$\boldsymbol{A_{100}^{dust}}$	1.02 ± 0.20	z_*	1089.96 ± 0.32	$\sigma_8(2.33)$	0.3066 ± 0.0025
$\boldsymbol{A_{143}^{dust}}$	0.98 ± 0.18	r_*	144.71 ± 0.31	f_{2000}^{143}	30.5 ± 3.0
$\boldsymbol{A_{217}^{dust}}$	0.97 ± 0.10	$100\theta_*$	1.04110 ± 0.00047	f_{2000}^{217}	107.4 ± 2.0
$\boldsymbol{A_{143\times217}^{dust}}$	1.03 ± 0.16	$D_M(z_*)$/Gpc	13.899 ± 0.029	$f_{2000}^{143\times217}$	32.7 ± 2.1
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	z_{drag}	1059.67 ± 0.53	$\chi^2_{lensing}$	9.35 ± 0.80
$\boldsymbol{c_{217}}$	1.0012 ± 0.0016	r_{drag}	147.40 ± 0.36	χ^2_{smallI}	397.3 ± 2.0
H_0	67.56 ± 0.50	k_D	$0.14047^{+0.00053}_{-0.00048}$	χ^2_{lowl}	23 ± 3
Ω_Λ	0.6886 ± 0.0067	$100\theta_D$	$0.16091^{+0.00031}_{-0.00035}$	$\chi^2_{CamSpec}$	7065.2 ± 5.7
Ω_m	0.3114 ± 0.0067	z_{eq}	3381 ± 26	χ^2_{6DF}	0.065 ± 0.077
$\Omega_m h^2$	0.1421 ± 0.0011	k_{eq}	0.010319 ± 0.000080	χ^2_{MGS}	1.25 ± 0.47
$\Omega_m h^3$	0.09602 ± 0.00047	$100\theta_{eq}$	0.8169 ± 0.0048	$\chi^2_{DR12BAO}$	5.0 ± 1.7
σ_8	0.8085 ± 0.0063	$100\theta_{s,eq}$	0.4513 ± 0.0025	χ^2_{prior}	7.6 ± 3.4
S_8	0.824 ± 0.012	$H(0.15)$	72.84 ± 0.43	χ^2_{CMB}	7494.3 ± 5.9
$\sigma_8\Omega_m^{0.5}$	0.4512 ± 0.0065	$D_M(0.15)$	641.7 ± 4.3	χ^2_{BAO}	6.3 ± 1.4

$\bar{\chi}^2_{eff} = 7508.28$; $\Delta\bar{\chi}^2_{eff} = 1.80$; $R - 1 = 0.01595$

5.23 base_alpha1_CamSpecHM_TT_lowl_lowE_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02221 ± 0.00023	$\sigma_8\Omega_m^{0.5}$	0.461 ± 0.013	$H(0.15)$	72.18 ± 0.81
$\boldsymbol{\Omega_c h^2}$	0.1210 ± 0.0022	$\sigma_8\Omega_m^{0.25}$	0.612 ± 0.012	$D_M(0.15)$	648.5 ± 8.2
$\boldsymbol{100\theta_{MC}}$	1.04059 ± 0.00056	$\sigma_8/h^{0.5}$	0.994 ± 0.016	$H(0.38)$	82.48 ± 0.58
$\boldsymbol{\tau}$	$0.0551^{+0.0052}_{-0.0087}$	$r_{drag}h$	98.2 ± 1.7	$D_M(0.38)$	1544 ± 16
$\boldsymbol{\alpha_{-1}}$	$-0.0013^{+0.0017}_{-0.0011}$	$\langle d^2\rangle^{1/2}$	2.459 ± 0.039	$H(0.51)$	$89.31^{+0.42}_{-0.47}$
$\boldsymbol{\ln(10^{10}A_s)}$	$3.048^{+0.014}_{-0.018}$	z_{re}	$7.80^{+0.58}_{-0.85}$	$D_M(0.51)$	1998 ± 19
$\boldsymbol{n_s}$	$0.9596^{+0.0070}_{-0.0083}$	10^9A_s	$2.107^{+0.028}_{-0.038}$	$H(0.61)$	$95.01^{+0.33}_{-0.37}$
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	$10^9A_se^{-2\tau}$	1.887 ± 0.015	$D_M(0.61)$	2324 ± 20
$\boldsymbol{A^{PS}_{100}}$	244 ± 25	D_{40}	1216^{+18}_{-24}	$H(2.33)$	237.0 ± 1.4
$\boldsymbol{A^{PS}_{143}}$	41 ± 8	D_{220}	5710 ± 42	$D_M(2.33)$	5777 ± 16
$\boldsymbol{A^{PS}_{217}}$	100 ± 10	D_{810}	2536 ± 14	$f\sigma_8(0.15)$	0.465 ± 0.012
$\boldsymbol{A^{CIB}_{217}}$	41 ± 7	D_{1420}	813.8 ± 5.2	$\sigma_8(0.15)$	0.7493 ± 0.0071
$\boldsymbol{A^{tSZ}_{143}}$	$3.7^{+1.7}_{-2.6}$	D_{2000}	229.4 ± 1.8	$f\sigma_8(0.38)$	0.4807 ± 0.0096
$\boldsymbol{r^{PS}_{143\times217}}$	0.64 ± 0.13	$n_{s,0.002}$	$0.9596^{+0.0070}_{-0.0083}$	$\sigma_8(0.38)$	$0.6630^{+0.0052}_{-0.0059}$
$\boldsymbol{r^{CIB}_{143\times217}}$	$0.59^{+0.41}_{-0.12}$	Y_P	$0.24532^{+0.00011}_{-0.000084}$	$f\sigma_8(0.51)$	0.4780 ± 0.0081
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	$0.24665^{+0.00011}_{-0.000084}$	$\sigma_8(0.51)$	$0.6200^{+0.0047}_{-0.0054}$
$\boldsymbol{A^{kSZ}}$	—	10^5D/H	2.617 ± 0.043	$f\sigma_8(0.61)$	0.4721 ± 0.0071
$\boldsymbol{A^{dust}_{100}}$	1.02 ± 0.19	Age/Gyr	13.827 ± 0.036	$\sigma_8(0.61)$	$0.5896^{+0.0043}_{-0.0051}$
$\boldsymbol{A^{dust}_{143}}$	0.98 ± 0.18	z_*	1090.21 ± 0.40	$f\sigma_8(2.33)$	$0.2969^{+0.0021}_{-0.0026}$
$\boldsymbol{A^{dust}_{217}}$	0.97 ± 0.10	r_*	144.31 ± 0.53	$\sigma_8(2.33)$	$0.3056^{+0.0023}_{-0.0028}$
$\boldsymbol{A^{dust}_{143\times217}}$	1.03 ± 0.16	$100\theta_*$	1.04079 ± 0.00055	f^{143}_{2000}	31.0 ± 3.0
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	$D_M(z_*)$/Gpc	13.865 ± 0.048	f^{217}_{2000}	107.7 ± 2.0
$\boldsymbol{c_{217}}$	1.0012 ± 0.0016	z_{drag}	1059.62 ± 0.50	$f^{143\times217}_{2000}$	33.1 ± 2.1
H_0	66.78 ± 0.95	r_{drag}	147.02 ± 0.55	χ^2_{simall}	397.0 ± 1.8
Ω_Λ	0.677 ± 0.014	k_D	$0.14081^{+0.00065}_{-0.00059}$	χ^2_{lowl}	22.2 ± 2.3
Ω_m	0.323 ± 0.014	$100\theta_D$	$0.16091^{+0.00029}_{-0.00033}$	$\chi^2_{CamSpec}$	7065.7 ± 5.8
$\Omega_m h^2$	0.1438 ± 0.0021	z_{eq}	3421 ± 51	χ^2_{prior}	7.6 ± 3.5
$\Omega_m h^3$	0.09603 ± 0.00047	k_{eq}	0.01044 ± 0.00016	χ^2_{CMB}	7484.8 ± 5.7
σ_8	0.8121 ± 0.0085	$100\theta_{eq}$	0.8093 ± 0.0094		
S_8	0.842 ± 0.025	$100\theta_{s,eq}$	0.4474 ± 0.0049		

$\bar{\chi}^2_{eff} = 7492.46$; $\Delta\bar{\chi}^2_{eff} = 1.20$; $R - 1 = 0.00453$

5.24 base_alpha1_CamSpecHM_TT_lowl_lowE_post_BAO_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02228 ± 0.00023	$\sigma_8\Omega_m^{0.25}$	0.6022 ± 0.0078	$H(0.38)$	83.00 ± 0.35
$\boldsymbol{\Omega_c h^2}$	0.1190 ± 0.0012	$\sigma_8/h^{0.5}$	0.981 ± 0.011	$D_M(0.38)$	1528.9 ± 9.4
$\boldsymbol{100\theta_{MC}}$	1.04093 ± 0.00047	$r_{drag}h$	99.77 ± 0.96	$H(0.51)$	89.70 ± 0.29
$\boldsymbol{\tau}$	$0.0562^{+0.0055}_{-0.0086}$	$\langle d^2\rangle^{1/2}$	2.428 ± 0.027	$D_M(0.51)$	1981 ± 11
$\boldsymbol{\alpha_{-1}}$	$-0.0007^{+0.0015}_{-0.0012}$	z_{re}	$7.86^{+0.59}_{-0.85}$	$H(0.61)$	95.30 ± 0.25
$\boldsymbol{\ln(10^{10}A_s)}$	$3.045^{+0.013}_{-0.018}$	$10^9 A_s$	$2.101^{+0.027}_{-0.039}$	$D_M(0.61)$	2305 ± 12
$\boldsymbol{n_s}$	$0.9655^{+0.0056}_{-0.0065}$	$10^9 A_s e^{-2\tau}$	1.877 ± 0.013	$H(2.33)$	235.79 ± 0.81
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0025	D_{40}	1214^{+20}_{-27}	$D_M(2.33)$	5765 ± 12
$\boldsymbol{A^{PS}_{100}}$	243 ± 25	D_{220}	5716 ± 42	$f\sigma_8(0.15)$	0.4541 ± 0.0076
$\boldsymbol{A^{PS}_{143}}$	40 ± 8	D_{810}	2535 ± 14	$\sigma_8(0.15)$	$0.7459^{+0.0061}_{-0.0068}$
$\boldsymbol{A^{PS}_{217}}$	100 ± 10	D_{1420}	815.1 ± 5.1	$f\sigma_8(0.38)$	0.4727 ± 0.0064
$\boldsymbol{A^{CIB}_{217}}$	41 ± 7	D_{2000}	229.9 ± 1.8	$\sigma_8(0.38)$	$0.6614^{+0.0051}_{-0.0058}$
$\boldsymbol{A^{tSZ}_{143}}$	$3.7^{+1.7}_{-2.7}$	$n_{s,0.002}$	$0.9655^{+0.0056}_{-0.0065}$	$f\sigma_8(0.51)$	0.4714 ± 0.0057
$\boldsymbol{r^{PS}_{143\times217}}$	0.64 ± 0.13	Y_P	$0.24536^{+0.00010}_{-0.000080}$	$\sigma_8(0.51)$	$0.6190^{+0.0047}_{-0.0054}$
$\boldsymbol{r^{CIB}_{143\times217}}$	$0.59^{+0.41}_{-0.12}$	Y_P^{BBN}	$0.24668^{+0.00010}_{-0.000081}$	$f\sigma_8(0.61)$	0.4666 ± 0.0052
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	10^5D/H	$2.602^{+0.040}_{-0.046}$	$\sigma_8(0.61)$	$0.5890^{+0.0044}_{-0.0051}$
$\boldsymbol{A^{kSZ}}$	—	Age/Gyr	13.801 ± 0.028	$f\sigma_8(2.33)$	$0.2971^{+0.0022}_{-0.0026}$
$\boldsymbol{A^{dust}_{100}}$	1.02 ± 0.20	z_*	1089.94 ± 0.32	$\sigma_8(2.33)$	$0.3063^{+0.0023}_{-0.0027}$
$\boldsymbol{A^{dust}_{143}}$	0.99 ± 0.18	r_*	144.77 ± 0.35	f^{143}_{2000}	30.5 ± 3.0
$\boldsymbol{A^{dust}_{217}}$	0.97 ± 0.10	$100\theta_*$	1.04112 ± 0.00048	f^{217}_{2000}	107.4 ± 2.0
$\boldsymbol{A^{dust}_{143\times217}}$	1.03 ± 0.16	$D_M(z_*)$/Gpc	13.905 ± 0.032	$f^{143\times217}_{2000}$	32.7 ± 2.1
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	z_{drag}	$1059.66^{+0.55}_{-0.50}$	χ^2_{simall}	397.1 ± 2.0
$\boldsymbol{c_{217}}$	1.0012 ± 0.0016	r_{drag}	147.46 ± 0.39	χ^2_{lowl}	22 ± 3
H_0	67.66 ± 0.55	k_D	$0.14041^{+0.00056}_{-0.00050}$	$\chi^2_{CamSpec}$	7065.7 ± 5.9
Ω_Λ	0.6899 ± 0.0074	$100\theta_D$	$0.16092^{+0.00031}_{-0.00035}$	χ^2_{6DF}	0.060 ± 0.079
Ω_m	0.3101 ± 0.0074	z_{eq}	3375 ± 29	χ^2_{MGS}	1.35 ± 0.53
$\Omega_m h^2$	0.1419 ± 0.0012	k_{eq}	0.010302 ± 0.000090	$\chi^2_{DR12BAO}$	4.8 ± 1.7
$\Omega_m h^3$	0.09599 ± 0.00048	$100\theta_{eq}$	0.8179 ± 0.0054	χ^2_{prior}	7.7 ± 3.5
σ_8	0.8071 ± 0.0074	$100\theta_{s,eq}$	0.4519 ± 0.0028	χ^2_{BAO}	6.2 ± 1.4
S_8	0.820 ± 0.015	$H(0.15)$	72.92 ± 0.47	χ^2_{CMB}	7485.2 ± 5.7
$\sigma_8\Omega_m^{0.5}$	0.4494 ± 0.0081	$D_M(0.15)$	640.9 ± 4.7		

$\bar{\chi}^2_{eff} = 7499.10$; $\Delta\bar{\chi}^2_{eff} = 1.79$; $R - 1 = 0.01710$

5.25 base_alpha1_CamSpecHM_TT_lowl_lowE_post_lensing_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02223 ± 0.00023	$\sigma_8\Omega_m^{0.5}$	0.4582 ± 0.0091	$H(0.15)$	72.35 ± 0.62
$\boldsymbol{\Omega_c h^2}$	0.1205 ± 0.0016	$\sigma_8\Omega_m^{0.25}$	0.6094 ± 0.0077	$D_M(0.15)$	646.7 ± 6.3
$\boldsymbol{100\theta_{MC}}$	1.04064 ± 0.00052	$\sigma_8/h^{0.5}$	0.990 ± 0.010	$H(0.38)$	82.60 ± 0.45
$\boldsymbol{\tau}$	$0.0551^{+0.0052}_{-0.0086}$	$r_{drag}h$	98.5 ± 1.3	$D_M(0.38)$	1540 ± 13
$\boldsymbol{\alpha_{-1}}$	$-0.0012^{+0.0017}_{-0.0011}$	$\langle d^2\rangle^{1/2}$	2.451 ± 0.025	$H(0.51)$	89.39 ± 0.36
$\boldsymbol{\ln(10^{10}A_s)}$	$3.047^{+0.012}_{-0.016}$	z_{re}	$7.78^{+0.58}_{-0.83}$	$D_M(0.51)$	1994 ± 15
$\boldsymbol{n_s}$	$0.9606^{+0.0060}_{-0.0071}$	10^9A_s	$2.104^{+0.025}_{-0.035}$	$H(0.61)$	95.07 ± 0.30
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	$10^9A_se^{-2\tau}$	1.885 ± 0.012	$D_M(0.61)$	2319 ± 16
$\boldsymbol{A^{PS}_{100}}$	244 ± 25	D_{40}	1215^{+16}_{-24}	$H(2.33)$	236.7 ± 1.0
$\boldsymbol{A^{PS}_{143}}$	41 ± 8	D_{220}	5713 ± 42	$D_M(2.33)$	5774 ± 14
$\boldsymbol{A^{PS}_{217}}$	100 ± 10	D_{810}	2536 ± 14	$f\sigma_8(0.15)$	0.4621 ± 0.0083
$\boldsymbol{A^{CIB}_{217}}$	41 ± 7	D_{1420}	814.0 ± 5.2	$\sigma_8(0.15)$	0.7481 ± 0.0053
$\boldsymbol{A^{tSZ}_{143}}$	$3.7^{+1.7}_{-2.6}$	D_{2000}	229.4 ± 1.8	$f\sigma_8(0.38)$	0.4786 ± 0.0063
$\boldsymbol{r^{PS}_{143\times217}}$	0.64 ± 0.13	$n_{s,0.002}$	$0.9606^{+0.0060}_{-0.0071}$	$\sigma_8(0.38)$	$0.6623^{+0.0043}_{-0.0049}$
$\boldsymbol{r^{CIB}_{143\times217}}$	$0.59^{+0.40}_{-0.12}$	Y_P	$0.24533^{+0.00010}_{-0.000082}$	$f\sigma_8(0.51)$	0.4762 ± 0.0053
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	$0.24666^{+0.00010}_{-0.000082}$	$\sigma_8(0.51)$	$0.6194^{+0.0040}_{-0.0047}$
$\boldsymbol{A^{kSZ}}$	$5.2^{+3.8}_{-2.4}$	10^5D/H	2.613 ± 0.043	$f\sigma_8(0.61)$	0.4706 ± 0.0047
$\boldsymbol{A^{dust}_{100}}$	1.02 ± 0.20	Age/Gyr	13.822 ± 0.032	$\sigma_8(0.61)$	$0.5892^{+0.0039}_{-0.0045}$
$\boldsymbol{A^{dust}_{143}}$	0.98 ± 0.17	z_*	1090.14 ± 0.35	$f\sigma_8(2.33)$	$0.2967^{+0.0020}_{-0.0024}$
$\boldsymbol{A^{dust}_{217}}$	0.97 ± 0.10	r_*	144.41 ± 0.40	$\sigma_8(2.33)$	$0.3056^{+0.0023}_{-0.0027}$
$\boldsymbol{A^{dust}_{143\times217}}$	1.03 ± 0.16	$100\theta_*$	1.04084 ± 0.00052	f^{143}_{2000}	31.0 ± 3.0
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	$D_M(z_*)$/Gpc	13.875 ± 0.037	f^{217}_{2000}	107.6 ± 2.0
$\boldsymbol{c_{217}}$	1.0012 ± 0.0016	z_{drag}	1059.65 ± 0.51	$f^{143\times217}_{2000}$	33.1 ± 2.1
H_0	66.98 ± 0.73	r_{drag}	147.12 ± 0.43	$\chi^2_{lensing}$	9.50 ± 0.91
Ω_Λ	0.680 ± 0.010	k_D	$0.14073^{+0.00056}_{-0.00051}$	χ^2_{simall}	396.9 ± 1.7
Ω_m	0.320 ± 0.010	$100\theta_D$	$0.16090^{+0.00029}_{-0.00033}$	χ^2_{lowl}	22.1 ± 2.3
$\Omega_m h^2$	0.1434 ± 0.0016	z_{eq}	3410 ± 37	$\chi^2_{CamSpec}$	7065.2 ± 5.7
$\Omega_m h^3$	0.09601 ± 0.00046	k_{eq}	0.01041 ± 0.00011	χ^2_{prior}	7.6 ± 3.4
σ_8	0.8105 ± 0.0061	$100\theta_{eq}$	0.8113 ± 0.0069	χ^2_{CMB}	7493.7 ± 5.8
S_8	0.837 ± 0.017	$100\theta_{s,eq}$	0.4484 ± 0.0036		

$\bar{\chi}^2_{eff} = 7501.39$; $\Delta\bar{\chi}^2_{eff} = 1.38$; $R - 1 = 0.00867$

5.26 base_alpha1_CamSpecHM_TT_lowl_lowE_post_BAO_lensing_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02229 ± 0.00023	$\sigma_8\Omega_m^{0.25}$	0.6041 ± 0.0062	$H(0.38)$	82.95 ± 0.33
$\boldsymbol{\Omega_c h^2}$	0.1192 ± 0.0011	$\sigma_8/h^{0.5}$	0.9840 ± 0.0089	$D_M(0.38)$	1530.2 ± 8.6
$\boldsymbol{100\theta_{MC}}$	1.04090 ± 0.00047	$r_{drag}h$	99.61 ± 0.86	$H(0.51)$	89.67 ± 0.27
$\boldsymbol{\tau}$	$0.0573^{+0.0060}_{-0.0083}$	$\langle d^2\rangle^{1/2}$	2.435 ± 0.021	$D_M(0.51)$	1982 ± 10
$\boldsymbol{\alpha_{-1}}$	$-0.0008^{+0.0015}_{-0.0011}$	z_{re}	$7.97^{+0.63}_{-0.80}$	$H(0.61)$	95.28 ± 0.24
$\boldsymbol{\ln(10^{10}A_s)}$	$3.048^{+0.013}_{-0.017}$	$10^9 A_s$	$2.108^{+0.028}_{-0.036}$	$D_M(0.61)$	2307 ± 11
$\boldsymbol{n_s}$	$0.9647^{+0.0054}_{-0.0064}$	$10^9 A_s e^{-2\tau}$	1.880 ± 0.012	$H(2.33)$	235.93 ± 0.72
$\boldsymbol{y_{cal}}$	1.0008 ± 0.0025	D_{40}	1216^{+19}_{-27}	$D_M(2.33)$	5765 ± 12
$\boldsymbol{A_{100}^{PS}}$	243 ± 25	D_{220}	5721 ± 42	$f\sigma_8(0.15)$	0.4558 ± 0.0061
$\boldsymbol{A_{143}^{PS}}$	40 ± 8	D_{810}	2536 ± 14	$\sigma_8(0.15)$	0.7474 ± 0.0055
$\boldsymbol{A_{217}^{PS}}$	101 ± 10	D_{1420}	815.4 ± 5.1	$f\sigma_8(0.38)$	0.4742 ± 0.0050
$\boldsymbol{A_{217}^{CIB}}$	41 ± 7	D_{2000}	230.0 ± 1.8	$\sigma_8(0.38)$	0.6626 ± 0.0049
$\boldsymbol{A_{143}^{tSZ}}$	$3.7^{+1.7}_{-2.7}$	$n_{s,0.002}$	$0.9647^{+0.0054}_{-0.0064}$	$f\sigma_8(0.51)$	0.4728 ± 0.0045
$\boldsymbol{r_{143\times217}^{PS}}$	0.64 ± 0.13	Y_P	$0.24536^{+0.00010}_{-0.000081}$	$\sigma_8(0.51)$	0.6201 ± 0.0046
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.58^{+0.41}_{-0.13}$	Y_P^{BBN}	$0.24668^{+0.00010}_{-0.000082}$	$f\sigma_8(0.61)$	0.4679 ± 0.0041
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	10^5D/H	$2.602^{+0.040}_{-0.045}$	$\sigma_8(0.61)$	0.5900 ± 0.0044
$\boldsymbol{A^{kSZ}}$	—	Age/Gyr	13.803 ± 0.028	$f\sigma_8(2.33)$	0.2975 ± 0.0023
$\boldsymbol{A_{100}^{dust}}$	1.02 ± 0.20	z_*	1089.95 ± 0.31	$\sigma_8(2.33)$	$0.3067^{+0.0022}_{-0.0025}$
$\boldsymbol{A_{143}^{dust}}$	0.98 ± 0.18	r_*	144.71 ± 0.31	f_{2000}^{143}	30.5 ± 3.0
$\boldsymbol{A_{217}^{dust}}$	0.97 ± 0.10	$100\theta_*$	1.04110 ± 0.00047	f_{2000}^{217}	107.4 ± 2.0
$\boldsymbol{A_{143\times217}^{dust}}$	1.03 ± 0.16	$D_M(z_*)$/Gpc	13.900 ± 0.029	$f_{2000}^{143\times217}$	32.7 ± 2.1
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	z_{drag}	1059.68 ± 0.52	$\chi^2_{lensing}$	9.32 ± 0.76
$\boldsymbol{c_{217}}$	1.0012 ± 0.0016	r_{drag}	147.40 ± 0.36	χ^2_{simall}	397.3 ± 2.0
H_0	67.57 ± 0.50	k_D	$0.14047^{+0.00053}_{-0.00048}$	χ^2_{lowl}	22 ± 3
Ω_Λ	0.6887 ± 0.0066	$100\theta_D$	$0.16090^{+0.00031}_{-0.00035}$	$\chi^2_{CamSpec}$	7065.2 ± 5.7
Ω_m	0.3113 ± 0.0066	z_{eq}	3380 ± 26	χ^2_{6DF}	0.063 ± 0.076
$\Omega_m h^2$	0.1421 ± 0.0011	k_{eq}	0.010317 ± 0.000080	χ^2_{MGS}	1.26 ± 0.47
$\Omega_m h^3$	0.09602 ± 0.00047	$100\theta_{eq}$	0.8170 ± 0.0048	$\chi^2_{DR12BAO}$	5.0 ± 1.6
σ_8	0.8088 ± 0.0061	$100\theta_{s,eq}$	0.4514 ± 0.0025	χ^2_{prior}	7.6 ± 3.4
S_8	0.824 ± 0.012	$H(0.15)$	72.85 ± 0.43	χ^2_{CMB}	7494.2 ± 5.8
$\sigma_8\Omega_m^{0.5}$	0.4512 ± 0.0065	$D_M(0.15)$	641.6 ± 4.3	χ^2_{BAO}	6.3 ± 1.3

$\bar{\chi}^2_{eff} = 7508.12$; $\Delta\bar{\chi}^2_{eff} = 1.79$; $R - 1 = 0.01736$

6 mnu

6.1 base_mnu_plikHM_TT_lowl_lowE

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022161	0.02205 ± 0.00024	$\sigma_8\Omega_m^{0.5}$	0.4615	0.457 ± 0.014	$H(0.15)$	72.80	$71.2^{+2.0}_{-0.91}$
$\boldsymbol{\Omega_c h^2}$	0.12044	0.1210 ± 0.0022	$\sigma_8\Omega_m^{0.25}$	0.6170	$0.600^{+0.022}_{-0.012}$	$D_M(0.15)$	642.2	$658.5^{+8.6}_{-21}$
$\boldsymbol{100\theta_{MC}}$	1.04081	1.04064 ± 0.00051	$\sigma_8/h^{0.5}$	1.0040	$0.973^{+0.039}_{-0.017}$	$H(0.38)$	82.94	$81.7^{+1.5}_{-0.68}$
$\boldsymbol{\tau}$	0.0525	0.0517 ± 0.0079	$r_{drag}h$	99.37	$96.7^{+3.6}_{-1.8}$	$D_M(0.38)$	1531.2	1564^{+17}_{-43}
$\boldsymbol{\Sigma m_\nu}$ [eV]	0.001	< 0.195	$\langle d^2\rangle^{1/2}$	2.4593	2.448 ± 0.038	$H(0.51)$	89.68	$88.7^{+1.3}_{-0.55}$
$\boldsymbol{\ln(10^{10}A_s)}$	3.0413	3.040 ± 0.016	z_{re}	7.55	7.49 ± 0.82	$D_M(0.51)$	1983.3	2022^{+21}_{-50}
$\boldsymbol{n_s}$	0.9640	0.9613 ± 0.0062	$10^9 A_s$	2.0933	2.091 ± 0.034	$H(0.61)$	95.31	$94.5^{+1.1}_{-0.45}$
$\boldsymbol{y_{cal}}$	1.00038	1.0005 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.8845	1.886 ± 0.014	$D_M(0.61)$	2307.6	2350^{+22}_{-55}
$\boldsymbol{A_{217}^{CIB}}$	48.6	48 ± 7	D_{40}	1231.4	1234 ± 15	$H(2.33)$	236.30	$237.6^{+1.3}_{-2.0}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.35	—	D_{220}	5713.3	5712 ± 41	$D_M(2.33)$	5762.6	5806^{+19}_{-54}
$\boldsymbol{A_{143}^{tSZ}}$	6.96	5.0 ± 2.0	D_{810}	2537.6	2537 ± 14	$f\sigma_8(0.15)$	0.4653	0.460 ± 0.013
$\boldsymbol{A_{100}^{PS}}$	253.9	265 ± 29	D_{1420}	815.4	814.4 ± 5.1	$\sigma_8(0.15)$	0.7619	$0.727^{+0.039}_{-0.010}$
$\boldsymbol{A_{143}^{PS}}$	49.8	50 ± 8	D_{2000}	230.08	229.2 ± 1.9	$f\sigma_8(0.38)$	0.4834	$0.473^{+0.016}_{-0.0096}$
$\boldsymbol{A_{143\times217}^{PS}}$	47.7	44 ± 9	$n_{s,0.002}$	0.9640	0.9613 ± 0.0062	$\sigma_8(0.38)$	0.6750	$0.642^{+0.036}_{-0.0089}$
$\boldsymbol{A_{217}^{PS}}$	119.6	115 ± 10	Y_P	0.245310	$0.24525^{+0.00012}_{-0.000093}$	$f\sigma_8(0.51)$	0.4817	$0.469^{+0.017}_{-0.0081}$
$\boldsymbol{A^{kSZ}}$	0.01	< 5.10	Y_P^{BBN}	0.246636	$0.24658^{+0.00012}_{-0.000093}$	$\sigma_8(0.51)$	0.6315	$0.600^{+0.034}_{-0.0083}$
$\boldsymbol{A_{100}^{dustTT}}$	8.88	8.9 ± 1.8	10^5D/H	2.6254	2.648 ± 0.047	$f\sigma_8(0.61)$	0.4765	$0.463^{+0.018}_{-0.0071}$
$\boldsymbol{A_{143}^{dustTT}}$	10.82	10.7 ± 1.8	Age/Gyr	13.795	$13.896^{+0.043}_{-0.12}$	$\sigma_8(0.61)$	0.6008	$0.571^{+0.033}_{-0.0079}$
$\boldsymbol{A_{143\times217}^{dustTT}}$	19.45	18.3 ± 3.3	z_*	1090.219	$1090.45^{+0.42}_{-0.50}$	$f\sigma_8(2.33)$	0.3019	$0.288^{+0.015}_{-0.0034}$
$\boldsymbol{A_{217}^{dustTT}}$	94.7	93.4 ± 7.3	r_*	144.484	144.38 ± 0.50	$\sigma_8(2.33)$	0.3116	$0.296^{+0.018}_{-0.0041}$
$\boldsymbol{c_{100}}$	0.99965	0.99961 ± 0.00062	$100\theta_*$	1.040989	1.04091 ± 0.00047	f_{2000}^{143}	30.23	31.8 ± 3.0
$\boldsymbol{c_{217}}$	0.99826	0.99827 ± 0.00062	$D_M(z_*)$/Gpc	13.8795	13.871 ± 0.046	$f_{2000}^{143\times217}$	33.18	34.1 ± 2.1
H_0	67.50	$65.7^{+2.3}_{-1.1}$	z_{drag}	1059.475	1059.28 ± 0.48	f_{2000}^{217}	107.60	108.6 ± 2.0
Ω_Λ	0.6870	$0.663^{+0.033}_{-0.013}$	r_{drag}	147.216	147.15 ± 0.49	χ^2_{simall}	395.87	396.9 ± 1.7
Ω_m	0.3130	$0.337^{+0.013}_{-0.033}$	k_D	0.14057	0.14057 ± 0.00052	χ^2_{lowl}	23.66	23.9 ± 1.3
$\Omega_m h^2$	0.14261	$0.1450^{+0.0021}_{-0.0035}$	$100\theta_D$	0.161022	0.16112 ± 0.00027	χ^2_{plik}	758.1	772.5 ± 5.7
$\Omega_\nu h^2$	0.00001	< 0.00210	z_{eq}	3407.7	3419 ± 50	χ^2_{prior}	1.33	7.3 ± 3.7
$\Omega_m h^3$	0.09626	$0.0952^{+0.0014}_{-0.00050}$	k_{eq}	0.010401	0.01044 ± 0.00015	χ^2_{CMB}	1177.6	1193.4 ± 5.8
σ_8	0.8249	$0.789^{+0.041}_{-0.011}$	$100\theta_{eq}$	0.8116	0.8095 ± 0.0092			
S_8	0.8426	0.834 ± 0.025	$100\theta_{s,eq}$	0.44865	0.4476 ± 0.0047			

Best-fit $\chi^2_{eff} = 1178.95$; $\Delta\chi^2_{eff} = -0.62$; $\bar{\chi}^2_{eff} = 1200.74$; $\Delta\bar{\chi}^2_{eff} = 1.16$; $R - 1 = 0.00818$
χ^2_{eff}: CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.87 (Δ -0.00) commander_dx12_v3_2_29: 23.66 (Δ 0.06) plik_rd12_HM_v22_TT: 758.09 (Δ -0.66)

6.2 base_mnu_plikHM_TT_lowl_lowE_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02206 ± 0.00024	$\sigma_8\Omega_m^{0.5}$	0.457 ± 0.014	$H(0.15)$	$71.3^{+2.0}_{-0.92}$
$\boldsymbol{\Omega_c h^2}$	0.1209 ± 0.0022	$\sigma_8\Omega_m^{0.25}$	$0.601^{+0.022}_{-0.012}$	$D_M(0.15)$	$658.1^{+8.6}_{-21}$
$\boldsymbol{100\theta_{MC}}$	1.04065 ± 0.00051	$\sigma_8/h^{0.5}$	$0.974^{+0.039}_{-0.017}$	$H(0.38)$	$81.8^{+1.5}_{-0.68}$
$\boldsymbol{\tau}$	$0.0533^{+0.0047}_{-0.0080}$	$r_{drag}h$	$96.8^{+3.6}_{-1.8}$	$D_M(0.38)$	1563^{+18}_{-43}
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 0.196	$\langle d^2\rangle^{1/2}$	2.451 ± 0.037	$H(0.51)$	$88.7^{+1.3}_{-0.55}$
$\boldsymbol{\ln(10^{10}A_s)}$	$3.043^{+0.012}_{-0.016}$	z_{re}	$7.67^{+0.52}_{-0.82}$	$D_M(0.51)$	2021^{+21}_{-50}
$\boldsymbol{n_s}$	0.9615 ± 0.0062	10^9A_s	$2.098^{+0.024}_{-0.033}$	$H(0.61)$	$94.5^{+1.1}_{-0.45}$
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	$10^9A_se^{-2\tau}$	1.885 ± 0.014	$D_M(0.61)$	2349^{+22}_{-55}
$\boldsymbol{A^{CIB}_{217}}$	48 ± 7	D_{40}	1234 ± 15	$H(2.33)$	$237.5^{+1.3}_{-2.0}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{220}	5712 ± 41	$D_M(2.33)$	5805^{+20}_{-54}
$\boldsymbol{A^{tSZ}_{143}}$	5.0 ± 2.0	D_{810}	2537 ± 14	$f\sigma_8(0.15)$	0.461 ± 0.013
$\boldsymbol{A^{PS}_{100}}$	265 ± 29	D_{1420}	814.4 ± 5.1	$\sigma_8(0.15)$	$0.728^{+0.039}_{-0.010}$
$\boldsymbol{A^{PS}_{143}}$	50 ± 8	D_{2000}	229.2 ± 1.9	$f\sigma_8(0.38)$	$0.473^{+0.016}_{-0.0097}$
$\boldsymbol{A^{PS}_{143\times217}}$	44 ± 9	$n_{s,0.002}$	0.9615 ± 0.0062	$\sigma_8(0.38)$	$0.643^{+0.036}_{-0.0088}$
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	Y_P	$0.24526^{+0.00012}_{-0.000092}$	$f\sigma_8(0.51)$	$0.470^{+0.017}_{-0.0081}$
$\boldsymbol{A^{kSZ}}$	< 5.06	Y_P^{BBN}	$0.24658^{+0.00012}_{-0.000092}$	$\sigma_8(0.51)$	$0.601^{+0.034}_{-0.0082}$
$\boldsymbol{A^{dustTT}_{100}}$	8.9 ± 1.8	10^5D/H	2.646 ± 0.047	$f\sigma_8(0.61)$	$0.463^{+0.018}_{-0.0071}$
$\boldsymbol{A^{dustTT}_{143}}$	10.7 ± 1.8	Age/Gyr	$13.894^{+0.043}_{-0.12}$	$\sigma_8(0.61)$	$0.571^{+0.033}_{-0.0079}$
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.3 ± 3.3	z_*	$1090.43^{+0.42}_{-0.50}$	$f\sigma_8(2.33)$	$0.289^{+0.015}_{-0.0034}$
$\boldsymbol{A^{dustTT}_{217}}$	93.4 ± 7.3	r_*	144.40 ± 0.50	$\sigma_8(2.33)$	$0.296^{+0.017}_{-0.0041}$
$\boldsymbol{c_{100}}$	0.99961 ± 0.00062	$100\theta_*$	1.04092 ± 0.00047	f^{143}_{2000}	31.7 ± 3.0
$\boldsymbol{c_{217}}$	0.99827 ± 0.00062	$D_M(z_*)$/Gpc	13.872 ± 0.046	$f^{143\times217}_{2000}$	34.0 ± 2.1
H_0	$65.8^{+2.3}_{-1.1}$	z_{drag}	1059.29 ± 0.48	f^{217}_{2000}	108.5 ± 2.0
Ω_Λ	$0.663^{+0.033}_{-0.013}$	r_{drag}	147.17 ± 0.49	χ^2_{simall}	396.8 ± 1.7
Ω_m	$0.337^{+0.013}_{-0.033}$	k_D	0.14056 ± 0.00052	χ^2_{lowl}	23.9 ± 1.3
$\Omega_m h^2$	$0.1449^{+0.0021}_{-0.0035}$	$100\theta_D$	0.16112 ± 0.00027	χ^2_{plik}	772.4 ± 5.7
$\Omega_\nu h^2$	< 0.00211	z_{eq}	3417 ± 50	χ^2_{prior}	7.3 ± 3.7
$\Omega_m h^3$	$0.0952^{+0.0014}_{-0.00051}$	k_{eq}	0.01043 ± 0.00015	χ^2_{CMB}	1193.1 ± 5.7
σ_8	$0.790^{+0.040}_{-0.011}$	$100\theta_{eq}$	0.8099 ± 0.0092		
S_8	0.835 ± 0.025	$100\theta_{s,eq}$	0.4478 ± 0.0047		

$\bar{\chi}^2_{eff} = 1200.49$; $\Delta\bar{\chi}^2_{eff} = 1.17$; $R - 1 = 0.01089$

6.3 base_mnu_plikHM_TTTEEE_lowl_lowE

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022395	0.02235 ± 0.00015	$\Omega_\nu h^2$	0.00001	< 0.00115	$100\theta_{\rm eq}$	0.8131	0.8123 ± 0.0059
$\boldsymbol{\Omega_c h^2}$	0.12003	0.1202 ± 0.0014	$\Omega_{\rm m} h^3$	0.09669	$0.09622^{+0.00067}_{-0.00034}$	$100\theta_{\rm s,eq}$	0.44925	0.4489 ± 0.0030
$\boldsymbol{100\theta_{MC}}$	1.040945	1.04089 ± 0.00032	σ_8	0.8258	$0.807^{+0.021}_{-0.0092}$	$H(0.15)$	73.14	$72.4^{+1.0}_{-0.62}$
$\boldsymbol{\tau}$	0.0552	0.0545 ± 0.0079	S_8	0.8383	0.833 ± 0.017	$D_{\rm M}(0.15)$	638.9	$646.3^{+6.0}_{-10}$
$\boldsymbol{\Sigma m_\nu}$ [eV]	0.001	< 0.107	$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4592	0.4561 ± 0.0091	$H(0.38)$	83.23	$82.66^{+0.78}_{-0.46}$
$\boldsymbol{\ln(10^{10} A_s)}$	3.0469	3.045 ± 0.016	$\sigma_8 \Omega_{\rm m}^{0.25}$	0.6158	$0.607^{+0.012}_{-0.0089}$	$D_{\rm M}(0.38)$	1524.2	1539^{+12}_{-21}
$\boldsymbol{n_s}$	0.96684	0.9646 ± 0.0044	$\sigma_8/h^{0.5}$	1.0024	$0.986^{+0.021}_{-0.013}$	$H(0.51)$	89.94	$89.46^{+0.65}_{-0.37}$
$\boldsymbol{y_{cal}}$	1.00064	1.0006 ± 0.0025	$r_{\rm drag} h$	99.82	$98.6^{+1.9}_{-1.2}$	$D_{\rm M}(0.51)$	1974.8	1993^{+14}_{-25}
$\boldsymbol{A_{217}^{CIB}}$	44.8	47 ± 7	$\langle d^2 \rangle^{1/2}$	2.4543	2.446 ± 0.029	$H(0.61)$	95.551	$95.14^{+0.54}_{-0.30}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.79	—	$z_{\rm re}$	7.76	7.69 ± 0.80	$D_{\rm M}(0.61)$	2298.3	2318^{+15}_{-27}
$\boldsymbol{A_{143}^{tSZ}}$	6.98	$5.5^{+2.1}_{-1.9}$	$10^9 A_{\rm s}$	2.1050	2.102 ± 0.034	$H(2.33)$	236.28	$236.87^{+0.88}_{-1.1}$
$\boldsymbol{A_{100}^{PS}}$	246.4	259 ± 28	$10^9 A_{\rm s} e^{-2\tau}$	1.8851	1.884 ± 0.012	$D_{\rm M}(2.33)$	5749.9	5770^{+13}_{-27}
$\boldsymbol{A_{143}^{PS}}$	51.9	46 ± 8	D_{40}	1228.3	1232 ± 13	$f\sigma_8(0.15)$	0.4633	0.4604 ± 0.0085
$\boldsymbol{A_{143\times217}^{PS}}$	56.3	43 ± 9	D_{220}	5729.6	5732 ± 39	$\sigma_8(0.15)$	0.7632	$0.745^{+0.021}_{-0.0083}$
$\boldsymbol{A_{217}^{PS}}$	123.6	115 ± 10	D_{810}	2542.2	2540 ± 13	$f\sigma_8(0.38)$	0.4823	$0.4769^{+0.0086}_{-0.0071}$
$\boldsymbol{A^{kSZ}}$	0.01	< 4.23	D_{1420}	818.92	817.4 ± 4.7	$\sigma_8(0.38)$	0.6766	$0.660^{+0.019}_{-0.0073}$
$\boldsymbol{A_{100}^{dust TT}}$	8.82	8.9 ± 1.8	D_{2000}	231.68	230.9 ± 1.6	$f\sigma_8(0.51)$	0.4811	$0.4746^{+0.0089}_{-0.0063}$
$\boldsymbol{A_{143}^{dust TT}}$	11.02	10.9 ± 1.8	$n_{\rm s,0.002}$	0.96684	0.9646 ± 0.0044	$\sigma_8(0.51)$	0.6332	$0.617^{+0.018}_{-0.0068}$
$\boldsymbol{A_{143\times217}^{dust TT}}$	20.19	18.6 ± 3.3	$Y_{\rm P}$	0.245405	$0.245385^{+0.000064}_{-0.000056}$	$f\sigma_8(0.61)$	0.4761	$0.4691^{+0.0092}_{-0.0058}$
$\boldsymbol{A_{217}^{dust TT}}$	95.7	93.7 ± 7.4	$Y_{\rm P}^{\rm BBN}$	0.246732	$0.246712^{+0.000065}_{-0.000056}$	$\sigma_8(0.61)$	0.6025	$0.587^{+0.017}_{-0.0065}$
$\boldsymbol{A_{100}^{dust TE}}$	0.1140	0.114 ± 0.038	10^5D/H	2.5809	2.590 ± 0.028	$f\sigma_8(2.33)$	0.3029	$0.2961^{+0.0078}_{-0.0030}$
$\boldsymbol{A_{100\times143}^{dust TE}}$	0.1348	0.135 ± 0.029	Age/Gyr	13.7660	$13.813^{+0.030}_{-0.061}$	$\sigma_8(2.33)$	0.3128	$0.3046^{+0.0092}_{-0.0034}$
$\boldsymbol{A_{100\times217}^{dust TE}}$	0.480	0.481 ± 0.085	z_*	1089.887	1089.97 ± 0.29	f_{2000}^{143}	28.17	29.6 ± 2.7
$\boldsymbol{A_{143}^{dust TE}}$	0.225	0.226 ± 0.054	r_*	144.411	144.38 ± 0.31	$f_{2000}^{143\times217}$	31.68	32.3 ± 1.8
$\boldsymbol{A_{143\times217}^{dust TE}}$	0.666	0.667 ± 0.080	$100\theta_*$	1.041097	1.04110 ± 0.00031	f_{2000}^{217}	106.25	107.1 ± 1.8
$\boldsymbol{A_{217}^{dust TE}}$	2.085	2.09 ± 0.27	$D_{\rm M}(z_*)$/Gpc	13.8710	13.868 ± 0.029	$\chi^2_{\rm simall}$	396.20	397.2 ± 2.0
$\boldsymbol{c_{100}}$	0.99975	0.99968 ± 0.00061	$z_{\rm drag}$	1060.009	1059.91 ± 0.30	$\chi^2_{\rm lowl}$	23.24	23.56 ± 0.97
$\boldsymbol{c_{217}}$	0.99817	0.99820 ± 0.00062	$r_{\rm drag}$	147.061	147.05 ± 0.31	$\chi^2_{\rm plik}$	2343.8	2360.2 ± 6.0
H_0	67.88	$67.0^{+1.2}_{-0.72}$	$k_{\rm D}$	0.140911	0.14090 ± 0.00033	$\chi^2_{\rm prior}$	1.49	11.5 ± 4.5
Ω_Λ	0.6909	$0.680^{+0.016}_{-0.0093}$	$100\theta_{\rm D}$	0.160729	0.16078 ± 0.00017	$\chi^2_{\rm CMB}$	2763.2	2780.9 ± 6.1
$\Omega_{\rm m}$	0.3091	$0.3199^{+0.0093}_{-0.016}$	$z_{\rm eq}$	3403.6	3408 ± 32			
$\Omega_{\rm m} h^2$	0.14244	$0.1436^{+0.0014}_{-0.0018}$	$k_{\rm eq}$	0.010388	0.010400 ± 0.000097			

Best-fit $\chi^2_{\rm eff} = 2764.74$; $\Delta\chi^2_{\rm eff} = -1.03$; $\bar{\chi}^2_{\rm eff} = 2792.41$; $\Delta\bar{\chi}^2_{\rm eff} = 0.65$; $R - 1 = 0.01278$

$\chi^2_{\rm eff}$: CMB - simall_100x143_offlike5_EE_Aplanck_B: 396.20 (Δ 0.15) commander_dx12_v3_2_29: 23.24 (Δ -0.01) plik_rd12_HM_v22b_TTTEEE: 2343.80 (Δ -0.85)

6.4 base_mnu_plikHM_TTTEEE_lowl_lowE_post_Riess18

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022502	0.02250 ± 0.00014	$\Omega_\nu h^2$	0.000009	< 0.000423	$100\theta_{\rm eq}$	0.8194	$0.8193^{+0.0056}_{-0.0049}$
$\boldsymbol{\Omega_c h^2}$	0.11856	$0.1186^{+0.0011}_{-0.0013}$	$\Omega_{\rm m} h^3$	0.096708	$0.09662^{+0.00036}_{-0.00031}$	$100\theta_{\rm s,eq}$	0.45247	$0.4524^{+0.0029}_{-0.0025}$
$\boldsymbol{100\theta_{MC}}$	1.041120	1.04114 ± 0.00030	σ_8	0.8207	$0.8154^{+0.0098}_{-0.0080}$	$H(0.15)$	73.72	$73.50^{+0.58}_{-0.47}$
$\boldsymbol{\tau}$	0.0561	0.0571 ± 0.0079	S_8	0.8209	0.820 ± 0.014	$D_{\rm M}(0.15)$	633.2	$635.4^{+4.5}_{-5.7}$
$\boldsymbol{\Sigma m_\nu}$ [eV]	0.0009	< 0.0394	$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4496	0.4491 ± 0.0079	$H(0.38)$	83.651	$83.48^{+0.44}_{-0.35}$
$\boldsymbol{\ln(10^{10} A_s)}$	3.0451	$3.047^{+0.015}_{-0.017}$	$\sigma_8 \Omega_{\rm m}^{0.25}$	0.6075	0.6051 ± 0.0082	$D_{\rm M}(0.38)$	1512.9	$1517.2^{+9.1}_{-12}$
$\boldsymbol{n_s}$	0.96955	0.9686 ± 0.0040	$\sigma_8/h^{0.5}$	0.9912	0.987 ± 0.012	$H(0.51)$	90.264	$90.13^{+0.35}_{-0.28}$
$\boldsymbol{y_{cal}}$	1.00057	1.0006 ± 0.0024	$r_{\rm drag} h$	101.00	$100.6^{+1.1}_{-0.94}$	$D_{\rm M}(0.51)$	1961.6	1967^{+11}_{-14}
$\boldsymbol{A_{217}^{CIB}}$	45.7	47 ± 7	$\langle d^2 \rangle^{1/2}$	2.4309	2.431 ± 0.027	$H(0.61)$	95.805	$95.69^{+0.29}_{-0.23}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.654	> 0.389	$z_{\rm re}$	7.80	7.89 ± 0.78	$D_{\rm M}(0.61)$	2284.0	2290^{+12}_{-15}
$\boldsymbol{A_{143}^{tSZ}}$	7.17	5.5 ± 2.0	$10^9 A_{\rm s}$	2.1012	$2.105^{+0.031}_{-0.036}$	$H(2.33)$	235.43	$235.63^{+0.71}_{-0.80}$
$\boldsymbol{A_{100}^{PS}}$	247.1	257 ± 27	$10^9 A_{\rm s} e^{-2\tau}$	1.8782	1.878 ± 0.011	$D_{\rm M}(2.33)$	5739.4	5745^{+10}_{-14}
$\boldsymbol{A_{143}^{PS}}$	49.5	45 ± 8	D_{40}	1222.5	1225 ± 12	$f\sigma_8(0.15)$	0.4544	0.4540 ± 0.0075
$\boldsymbol{A_{143\times217}^{PS}}$	52.6	42 ± 9	D_{220}	5739.5	5742 ± 38	$\sigma_8(0.15)$	0.7593	$0.7542^{+0.0092}_{-0.0071}$
$\boldsymbol{A_{217}^{PS}}$	121.7	115 ± 10	D_{810}	2540.1	2539 ± 13	$f\sigma_8(0.38)$	0.4754	0.4742 ± 0.0065
$\boldsymbol{A^{kSZ}}$	0.00	< 4.09	D_{1420}	819.12	818.3 ± 4.7	$\sigma_8(0.38)$	0.6741	$0.6694^{+0.0082}_{-0.0061}$
$\boldsymbol{A_{100}^{dustTT}}$	8.84	8.9 ± 1.8	D_{2000}	231.79	231.5 ± 1.6	$f\sigma_8(0.51)$	0.4752	0.4737 ± 0.0060
$\boldsymbol{A_{143}^{dustTT}}$	11.08	10.9 ± 1.7	$n_{\rm s,0.002}$	0.96955	0.9686 ± 0.0040	$\sigma_8(0.51)$	0.6313	$0.6268^{+0.0078}_{-0.0057}$
$\boldsymbol{A_{143\times217}^{dustTT}}$	20.16	18.4 ± 3.4	$Y_{\rm P}$	0.245445	$0.245442^{+0.000056}_{-0.000050}$	$f\sigma_8(0.61)$	0.4711	0.4694 ± 0.0056
$\boldsymbol{A_{217}^{dustTT}}$	95.6	93.3 ± 7.6	$Y_{\rm P}^{\rm BBN}$	0.246772	$0.246768^{+0.000056}_{-0.000050}$	$\sigma_8(0.61)$	0.6010	$0.5966^{+0.0074}_{-0.0054}$
$\boldsymbol{A_{100}^{dustTE}}$	0.1134	0.114 ± 0.036	10^5D/H	2.5615	2.563 ± 0.026	$f\sigma_8(2.33)$	0.30248	$0.3008^{+0.0034}_{-0.0027}$
$\boldsymbol{A_{100\times143}^{dustTE}}$	0.1343	0.134 ± 0.029	Age/Gyr	13.7433	$13.756^{+0.023}_{-0.030}$	$\sigma_8(2.33)$	0.31282	$0.3106^{+0.0039}_{-0.0028}$
$\boldsymbol{A_{100\times217}^{dustTE}}$	0.484	0.483 ± 0.087	z_*	1089.624	$1089.64^{+0.23}_{-0.27}$	f_{2000}^{143}	28.15	28.9 ± 2.6
$\boldsymbol{A_{143}^{dustTE}}$	0.223	0.224 ± 0.055	r_*	144.710	144.70 ± 0.28	$f_{2000}^{143\times217}$	31.58	$31.7^{+1.6}_{-1.8}$
$\boldsymbol{A_{143\times217}^{dustTE}}$	0.664	0.666 ± 0.079	$100\theta_*$	1.041267	1.04130 ± 0.00029	f_{2000}^{217}	106.14	106.6 ± 1.7
$\boldsymbol{A_{217}^{dustTE}}$	2.071	2.08 ± 0.27	$D_{\rm M}(z_*)$/Gpc	13.8975	13.896 ± 0.026	$\chi^2_{\rm simall}$	396.23	397.5 ± 2.2
$\boldsymbol{c_{100}}$	0.99974	0.99969 ± 0.00061	$z_{\rm drag}$	1060.123	1060.12 ± 0.29	$\chi^2_{\rm lowl}$	22.73	22.98 ± 0.85
$\boldsymbol{c_{217}}$	0.99817	0.99819 ± 0.00060	$r_{\rm drag}$	147.334	147.33 ± 0.28	$\chi^2_{\rm plik}$	2345.3	2360.3 ± 5.9
H_0	68.55	$68.30^{+0.67}_{-0.55}$	$k_{\rm D}$	0.140707	0.14071 ± 0.00031	$\chi^2_{\rm H073p45}$	8.71	9.8 ± 2.4
Ω_Λ	0.6998	$0.6966^{+0.0088}_{-0.0069}$	$100\theta_{\rm D}$	0.160656	0.16067 ± 0.00017	$\chi^2_{\rm prior}$	1.65	11.3 ± 4.5
$\Omega_{\rm m}$	0.3002	$0.3034^{+0.0069}_{-0.0088}$	$z_{\rm eq}$	3371.0	3372^{+26}_{-30}	$\chi^2_{\rm CMB}$	2764.2	2780.7 ± 5.9
$\Omega_{\rm m} h^2$	0.14107	$0.1415^{+0.0011}_{-0.0013}$	$k_{\rm eq}$	0.010288	$0.010291^{+0.000078}_{-0.000090}$			

Best-fit $\chi^2_{\rm eff} = 2774.59$; $\Delta\chi^2_{\rm eff} = -3.35$; $\bar{\chi}^2_{\rm eff} = 2801.83$; $\Delta\bar{\chi}^2_{\rm eff} = -2.33$; $R - 1 = 0.06998$

$\chi^2_{\rm eff}$: CMB - simall_100x143_offlike5_EE_Aplanck_B: 396.23 (Δ -0.24) commander_dx12_v3_2_29: 22.73 (Δ 0.19) plik_rd12_HM_v22b_TTTEEE: 2345.26 (Δ -1.50) Hubble - H073p45: 8.71 (Δ -1.88)

6.5 base_mnu_plikHM_TTTEEE_lowl_lowE_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02235 ± 0.00015	$\Omega_\nu h^2$	< 0.00116	$100\theta_{\rm eq}$	0.8125 ± 0.0059
$\boldsymbol{\Omega_c h^2}$	0.1202 ± 0.0014	$\Omega_{\rm m} h^3$	$0.09622^{+0.00067}_{-0.00035}$	$100\theta_{\rm s,eq}$	0.4490 ± 0.0030
$\boldsymbol{100\theta_{MC}}$	1.04090 ± 0.00032	σ_8	$0.808^{+0.021}_{-0.0089}$	$H(0.15)$	$72.4^{+1.0}_{-0.62}$
$\boldsymbol{\tau}$	$0.0556^{+0.0055}_{-0.0082}$	S_8	0.833 ± 0.017	$D_{\rm M}(0.15)$	$646.2^{+6.0}_{-10}$
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 0.108	$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4564 ± 0.0091	$H(0.38)$	$82.67^{+0.79}_{-0.46}$
$\boldsymbol{\ln(10^{10} A_s)}$	$3.047^{+0.012}_{-0.016}$	$\sigma_8 \Omega_{\rm m}^{0.25}$	$0.607^{+0.012}_{-0.0089}$	$D_{\rm M}(0.38)$	1539^{+12}_{-21}
$\boldsymbol{n_s}$	0.9647 ± 0.0044	$\sigma_8/h^{0.5}$	$0.986^{+0.021}_{-0.013}$	$H(0.51)$	$89.46^{+0.65}_{-0.37}$
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0025	$r_{\rm drag} h$	$98.6^{+1.9}_{-1.2}$	$D_{\rm M}(0.51)$	1993^{+14}_{-25}
$\boldsymbol{A^{CIB}_{217}}$	47 ± 7	$\langle d^2 \rangle^{1/2}$	2.448 ± 0.028	$H(0.61)$	$95.15^{+0.55}_{-0.30}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$z_{\rm re}$	$7.81^{+0.59}_{-0.81}$	$D_{\rm M}(0.61)$	2318^{+15}_{-27}
$\boldsymbol{A^{tSZ}_{143}}$	$5.5^{+2.1}_{-1.9}$	$10^9 A_{\rm s}$	$2.106^{+0.025}_{-0.035}$	$H(2.33)$	$236.85^{+0.88}_{-1.1}$
$\boldsymbol{A^{PS}_{100}}$	258 ± 27	$10^9 A_{\rm s} e^{-2\tau}$	1.884 ± 0.012	$D_{\rm M}(2.33)$	5770^{+14}_{-27}
$\boldsymbol{A^{PS}_{143}}$	46 ± 8	D_{40}	1232 ± 13	$f\sigma_8(0.15)$	0.4607 ± 0.0085
$\boldsymbol{A^{PS}_{143\times217}}$	43 ± 9	D_{220}	5732 ± 39	$\sigma_8(0.15)$	$0.746^{+0.020}_{-0.0080}$
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	D_{810}	2540 ± 13	$f\sigma_8(0.38)$	$0.4772^{+0.0085}_{-0.0070}$
$\boldsymbol{A^{kSZ}}$	< 4.21	D_{1420}	817.3 ± 4.7	$\sigma_8(0.38)$	$0.660^{+0.019}_{-0.0071}$
$\boldsymbol{A^{dustTT}_{100}}$	8.9 ± 1.8	D_{2000}	230.9 ± 1.6	$f\sigma_8(0.51)$	$0.4750^{+0.0089}_{-0.0062}$
$\boldsymbol{A^{dustTT}_{143}}$	10.9 ± 1.8	$n_{\rm s,0.002}$	0.9647 ± 0.0044	$\sigma_8(0.51)$	$0.617^{+0.018}_{-0.0066}$
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.6 ± 3.3	$Y_{\rm P}$	$0.245387^{+0.000064}_{-0.000056}$	$f\sigma_8(0.61)$	$0.4694^{+0.0091}_{-0.0057}$
$\boldsymbol{A^{dustTT}_{217}}$	93.8 ± 7.3	$Y_{\rm P}^{\rm BBN}$	$0.246713^{+0.000065}_{-0.000056}$	$\sigma_8(0.61)$	$0.587^{+0.017}_{-0.0063}$
$\boldsymbol{A^{dustTE}_{100}}$	0.114 ± 0.038	10^5D/H	2.589 ± 0.028	$f\sigma_8(2.33)$	$0.2964^{+0.0077}_{-0.0029}$
$\boldsymbol{A^{dustTE}_{100\times143}}$	0.135 ± 0.029	Age/Gyr	$13.812^{+0.030}_{-0.061}$	$\sigma_8(2.33)$	$0.3049^{+0.0091}_{-0.0033}$
$\boldsymbol{A^{dustTE}_{100\times217}}$	0.481 ± 0.085	z_*	1089.96 ± 0.29	f^{143}_{2000}	29.5 ± 2.7
$\boldsymbol{A^{dustTE}_{143}}$	0.226 ± 0.054	r_*	144.39 ± 0.31	$f^{143\times217}_{2000}$	32.2 ± 1.8
$\boldsymbol{A^{dustTE}_{143\times217}}$	0.666 ± 0.079	$100\theta_*$	1.04110 ± 0.00031	f^{217}_{2000}	107.1 ± 1.8
$\boldsymbol{A^{dustTE}_{217}}$	2.09 ± 0.27	$D_{\rm M}(z_*)$/Gpc	13.869 ± 0.029	$\chi^2_{\rm simall}$	397.2 ± 2.0
$\boldsymbol{c_{100}}$	0.99967 ± 0.00061	$z_{\rm drag}$	1059.91 ± 0.30	$\chi^2_{\rm lowl}$	23.57 ± 0.97
$\boldsymbol{c_{217}}$	0.99820 ± 0.00062	$r_{\rm drag}$	147.05 ± 0.31	$\chi^2_{\rm plik}$	2360.0 ± 6.0
H_0	$67.0^{+1.2}_{-0.72}$	$k_{\rm D}$	0.14090 ± 0.00032	$\chi^2_{\rm prior}$	11.5 ± 4.5
Ω_Λ	$0.680^{+0.016}_{-0.0092}$	$100\theta_{\rm D}$	0.16077 ± 0.00017	$\chi^2_{\rm CMB}$	2780.7 ± 6.0
$\Omega_{\rm m}$	$0.3197^{+0.0092}_{-0.016}$	$z_{\rm eq}$	3407 ± 32		
$\Omega_{\rm m} h^2$	$0.1435^{+0.0014}_{-0.0019}$	$k_{\rm eq}$	0.010398 ± 0.000097		

$\bar{\chi}^2_{\rm eff} = 2792.20$; $\Delta\bar{\chi}^2_{\rm eff} = 0.67$; $R - 1 = 0.01347$

6.6 base_mnu_plikHM_TTTEEE_lowl_lowE_post_Riess18_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02250 ± 0.00014	$\Omega_\nu h^2$	< 0.000424	$100\theta_{\rm eq}$	$0.8194^{+0.0056}_{-0.0048}$
$\boldsymbol{\Omega_c h^2}$	$0.1186^{+0.0011}_{-0.0013}$	$\Omega_{\rm m} h^3$	$0.09662^{+0.00036}_{-0.00030}$	$100\theta_{\rm s,eq}$	$0.4525^{+0.0028}_{-0.0025}$
$\boldsymbol{100\theta_{MC}}$	1.04114 ± 0.00029	σ_8	$0.8158^{+0.0095}_{-0.0078}$	$H(0.15)$	$73.51^{+0.58}_{-0.47}$
$\boldsymbol{\tau}$	$0.0579^{+0.0063}_{-0.0080}$	S_8	$0.820^{+0.014}_{-0.015}$	$D_{\rm M}(0.15)$	$635.2^{+4.4}_{-5.7}$
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 0.0394	$\sigma_8 \Omega_{\rm m}^{0.5}$	$0.4492^{+0.0074}_{-0.0083}$	$H(0.38)$	$83.49^{+0.43}_{-0.35}$
$\boldsymbol{\ln(10^{10} A_s)}$	$3.048^{+0.013}_{-0.017}$	$\sigma_8 \Omega_{\rm m}^{0.25}$	0.6053 ± 0.0081	$D_{\rm M}(0.38)$	$1517.0^{+9.0}_{-11}$
$\boldsymbol{n_s}$	0.9687 ± 0.0040	$\sigma_8/h^{0.5}$	0.987 ± 0.012	$H(0.51)$	$90.13^{+0.35}_{-0.28}$
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0024	$r_{\rm drag} h$	$100.7^{+1.1}_{-0.93}$	$D_{\rm M}(0.51)$	1966^{+11}_{-14}
$\boldsymbol{A_{217}^{CIB}}$	47 ± 7	$\langle d^2 \rangle^{1/2}$	2.432 ± 0.026	$H(0.61)$	$95.69^{+0.29}_{-0.23}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	> 0.389	$z_{\rm re}$	$7.97^{+0.64}_{-0.79}$	$D_{\rm M}(0.61)$	2289^{+11}_{-15}
$\boldsymbol{A_{143}^{tSZ}}$	5.5 ± 1.9	$10^9 A_{\rm s}$	$2.108^{+0.027}_{-0.036}$	$H(2.33)$	$235.62^{+0.70}_{-0.80}$
$\boldsymbol{A_{100}^{PS}}$	257 ± 27	$10^9 A_{\rm s} e^{-2\tau}$	1.878 ± 0.011	$D_{\rm M}(2.33)$	5745^{+10}_{-13}
$\boldsymbol{A_{143}^{PS}}$	45 ± 8	D_{40}	1225 ± 12	$f\sigma_8(0.15)$	0.4541 ± 0.0074
$\boldsymbol{A_{143\times217}^{PS}}$	42 ± 9	D_{220}	5742 ± 38	$\sigma_8(0.15)$	$0.7547^{+0.0088}_{-0.0069}$
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	D_{810}	2539 ± 13	$f\sigma_8(0.38)$	0.4744 ± 0.0064
$\boldsymbol{A^{kSZ}}$	< 4.06	D_{1420}	818.3 ± 4.7	$\sigma_8(0.38)$	$0.6698^{+0.0079}_{-0.0059}$
$\boldsymbol{A_{100}^{dust TT}}$	8.9 ± 1.8	D_{2000}	231.5 ± 1.6	$f\sigma_8(0.51)$	0.4740 ± 0.0059
$\boldsymbol{A_{143}^{dust TT}}$	10.9 ± 1.7	$n_{\rm s,0.002}$	0.9687 ± 0.0040	$\sigma_8(0.51)$	$0.6272^{+0.0074}_{-0.0055}$
$\boldsymbol{A_{143\times217}^{dust TT}}$	18.4 ± 3.4	$Y_{\rm P}$	$0.245443^{+0.000056}_{-0.000050}$	$f\sigma_8(0.61)$	0.4696 ± 0.0055
$\boldsymbol{A_{217}^{dust TT}}$	93.4 ± 7.5	$Y_{\rm P}^{\rm BBN}$	$0.246770^{+0.000056}_{-0.000050}$	$\sigma_8(0.61)$	$0.5970^{+0.0071}_{-0.0052}$
$\boldsymbol{A_{100}^{dust TE}}$	0.114 ± 0.036	10^5D/H	2.562 ± 0.025	$f\sigma_8(2.33)$	$0.3009^{+0.0032}_{-0.0026}$
$\boldsymbol{A_{100\times143}^{dust TE}}$	0.134 ± 0.029	Age/Gyr	$13.756^{+0.023}_{-0.030}$	$\sigma_8(2.33)$	$0.3108^{+0.0037}_{-0.0027}$
$\boldsymbol{A_{100\times217}^{dust TE}}$	0.483 ± 0.087	z_*	$1089.63^{+0.23}_{-0.27}$	f_{2000}^{143}	28.8 ± 2.5
$\boldsymbol{A_{143}^{dust TE}}$	0.224 ± 0.055	r_*	144.71 ± 0.28	$f_{2000}^{143\times217}$	31.7 ± 1.7
$\boldsymbol{A_{143\times217}^{dust TE}}$	0.665 ± 0.079	$100\theta_*$	1.04130 ± 0.00029	f_{2000}^{217}	106.5 ± 1.7
$\boldsymbol{A_{217}^{dust TE}}$	2.07 ± 0.27	$D_{\rm M}(z_*)$/Gpc	13.897 ± 0.026	$\chi^2_{\rm simall}$	397.5 ± 2.2
$\boldsymbol{c_{100}}$	0.99969 ± 0.00060	$z_{\rm drag}$	1060.13 ± 0.29	$\chi^2_{\rm lowl}$	22.98 ± 0.85
$\boldsymbol{c_{217}}$	0.99819 ± 0.00060	$r_{\rm drag}$	147.33 ± 0.28	$\chi^2_{\rm plik}$	2360.1 ± 5.9
H_0	$68.31^{+0.67}_{-0.54}$	$k_{\rm D}$	0.14071 ± 0.00031	$\chi^2_{\rm H073p45}$	9.7 ± 2.3
Ω_Λ	$0.6968^{+0.0088}_{-0.0068}$	$100\theta_{\rm D}$	0.16067 ± 0.00017	$\chi^2_{\rm prior}$	11.3 ± 4.5
$\Omega_{\rm m}$	$0.3032^{+0.0068}_{-0.0088}$	$z_{\rm eq}$	3371^{+25}_{-29}	$\chi^2_{\rm CMB}$	2780.6 ± 5.9
$\Omega_{\rm m} h^2$	$0.1414^{+0.0011}_{-0.0013}$	$k_{\rm eq}$	$0.010289^{+0.000077}_{-0.000089}$		

$\bar{\chi}^2_{\rm eff} = 2801.63$; $\Delta\bar{\chi}^2_{\rm eff} = -2.26$; $R - 1 = 0.07310$

6.7 base_mnu_CamSpecHM_TT_lowl_lowE

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02205 ± 0.00025	S_8	0.833 ± 0.025	$100\theta_{s,eq}$	0.4477 ± 0.0047
$\boldsymbol{\Omega_c h^2}$	0.1210 ± 0.0022	$\sigma_8\Omega_m^{0.5}$	0.456 ± 0.014	$H(0.15)$	$71.2^{+2.1}_{-0.88}$
$\boldsymbol{100\theta_{MC}}$	1.04070 ± 0.00051	$\sigma_8\Omega_m^{0.25}$	$0.599^{+0.024}_{-0.012}$	$D_M(0.15)$	$658.6^{+8.2}_{-23}$
$\boldsymbol{\tau}$	0.0517 ± 0.0081	$\sigma_8/h^{0.5}$	$0.971^{+0.041}_{-0.017}$	$H(0.38)$	$81.7^{+1.6}_{-0.66}$
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 0.201	$r_{drag}h$	$96.7^{+3.8}_{-1.8}$	$D_M(0.38)$	1564^{+17}_{-45}
$\boldsymbol{\ln(10^{10}A_s)}$	3.039 ± 0.016	$\langle d^2\rangle^{1/2}$	2.444 ± 0.038	$H(0.51)$	$88.7^{+1.3}_{-0.53}$
$\boldsymbol{n_s}$	0.9621 ± 0.0063	z_{re}	7.49 ± 0.83	$D_M(0.51)$	2022^{+20}_{-53}
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	$10^9 A_s$	2.088 ± 0.034	$H(0.61)$	$94.5^{+1.1}_{-0.44}$
$\boldsymbol{A^{PS}_{100}}$	244 ± 25	$10^9 A_s e^{-2\tau}$	1.883 ± 0.014	$D_M(0.61)$	2350^{+21}_{-58}
$\boldsymbol{A^{PS}_{143}}$	42 ± 9	D_{40}	1230 ± 15	$H(2.33)$	$237.6^{+1.3}_{-2.1}$
$\boldsymbol{A^{PS}_{217}}$	101 ± 10	D_{220}	5701 ± 42	$D_M(2.33)$	5806^{+19}_{-57}
$\boldsymbol{A^{CIB}_{217}}$	41 ± 7	D_{810}	2535 ± 14	$f\sigma_8(0.15)$	0.460 ± 0.013
$\boldsymbol{A^{tSZ}_{143}}$	$3.7^{+1.7}_{-2.6}$	D_{1420}	814.0 ± 5.3	$\sigma_8(0.15)$	$0.725^{+0.041}_{-0.010}$
$\boldsymbol{r^{PS}_{143\times217}}$	0.65 ± 0.13	D_{2000}	229.1 ± 2.0	$f\sigma_8(0.38)$	$0.472^{+0.016}_{-0.0096}$
$\boldsymbol{r^{CIB}_{143\times217}}$	> 0.474	$n_{s,0.002}$	0.9621 ± 0.0063	$\sigma_8(0.38)$	$0.641^{+0.037}_{-0.0089}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P	$0.24526^{+0.00013}_{-0.000095}$	$f\sigma_8(0.51)$	$0.468^{+0.018}_{-0.0082}$
$\boldsymbol{A^{kSZ}}$	—	Y_P^{BBN}	$0.24658^{+0.00013}_{-0.000096}$	$\sigma_8(0.51)$	$0.599^{+0.036}_{-0.0084}$
$\boldsymbol{A^{dust}_{100}}$	1.01 ± 0.19	10^5D/H	$2.646^{+0.045}_{-0.051}$	$f\sigma_8(0.61)$	$0.462^{+0.019}_{-0.0073}$
$\boldsymbol{A^{dust}_{143}}$	0.98 ± 0.18	Age/Gyr	$13.896^{+0.042}_{-0.13}$	$\sigma_8(0.61)$	$0.569^{+0.034}_{-0.0080}$
$\boldsymbol{A^{dust}_{217}}$	0.97 ± 0.10	z_*	$1090.44^{+0.43}_{-0.52}$	$f\sigma_8(2.33)$	$0.288^{+0.016}_{-0.0034}$
$\boldsymbol{A^{dust}_{143\times217}}$	1.03 ± 0.16	r_*	144.39 ± 0.50	$\sigma_8(2.33)$	$0.295^{+0.018}_{-0.0042}$
$\boldsymbol{c_{100}}$	0.9975 ± 0.0010	$100\theta_*$	1.04097 ± 0.00047	f^{143}_{2000}	31.5 ± 3.2
$\boldsymbol{c_{217}}$	1.0013 ± 0.0016	$D_M(z_*)$/Gpc	13.871 ± 0.046	f^{217}_{2000}	108.0 ± 2.2
H_0	$65.7^{+2.5}_{-1.0}$	z_{drag}	1059.29 ± 0.49	$f^{143\times217}_{2000}$	33.5 ± 2.3
Ω_Λ	$0.662^{+0.034}_{-0.012}$	r_{drag}	147.15 ± 0.49	χ^2_{simall}	397.0 ± 1.8
Ω_m	$0.338^{+0.012}_{-0.034}$	k_D	0.14057 ± 0.00053	χ^2_{lowl}	23.6 ± 1.3
$\Omega_m h^2$	$0.1450^{+0.0021}_{-0.0036}$	$100\theta_D$	0.16112 ± 0.00028	$\chi^2_{CamSpec}$	7064.5 ± 5.7
$\Omega_\nu h^2$	< 0.00216	z_{eq}	3418 ± 50	χ^2_{prior}	7.7 ± 3.5
$\Omega_m h^3$	$0.0952^{+0.0014}_{-0.00050}$	k_{eq}	0.01043 ± 0.00015	χ^2_{CMB}	7485.1 ± 5.8
σ_8	$0.787^{+0.042}_{-0.011}$	$100\theta_{eq}$	0.8097 ± 0.0092		

$\bar{\chi}^2_{eff} = 7492.77$; $\Delta\bar{\chi}^2_{eff} = 1.23$; $R - 1 = 0.00611$

6.8 base_mnu_CamSpecHM_TT_lowl_lowE_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02206 ± 0.00025	S_8	0.833 ± 0.025	$100\theta_{s,eq}$	0.4479 ± 0.0047
$\boldsymbol{\Omega_c h^2}$	0.1209 ± 0.0022	$\sigma_8\Omega_m^{0.5}$	0.456 ± 0.014	$H(0.15)$	$71.3^{+2.1}_{-0.89}$
$\boldsymbol{100\theta_{MC}}$	1.04071 ± 0.00051	$\sigma_8\Omega_m^{0.25}$	$0.599^{+0.024}_{-0.012}$	$D_M(0.15)$	$658.3^{+8.2}_{-23}$
$\boldsymbol{\tau}$	$0.0534^{+0.0046}_{-0.0082}$	$\sigma_8/h^{0.5}$	$0.972^{+0.041}_{-0.017}$	$H(0.38)$	$81.8^{+1.6}_{-0.66}$
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 0.202	$r_{drag}h$	$96.7^{+3.9}_{-1.8}$	$D_M(0.38)$	1564^{+17}_{-46}
$\boldsymbol{\ln(10^{10}A_s)}$	$3.042^{+0.011}_{-0.016}$	$\langle d^2\rangle^{1/2}$	2.446 ± 0.037	$H(0.51)$	$88.7^{+1.3}_{-0.53}$
$\boldsymbol{n_s}$	0.9624 ± 0.0063	z_{re}	$7.67^{+0.51}_{-0.85}$	$D_M(0.51)$	2022^{+20}_{-54}
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	$10^9 A_s$	$2.095^{+0.023}_{-0.034}$	$H(0.61)$	$94.5^{+1.1}_{-0.44}$
$\boldsymbol{A_{100}^{PS}}$	244 ± 25	$10^9 A_s e^{-2\tau}$	1.882 ± 0.014	$D_M(0.61)$	2349^{+21}_{-58}
$\boldsymbol{A_{143}^{PS}}$	42 ± 9	D_{40}	1230 ± 15	$H(2.33)$	$237.5^{+1.3}_{-2.1}$
$\boldsymbol{A_{217}^{PS}}$	101 ± 10	D_{220}	5701 ± 42	$D_M(2.33)$	5806^{+19}_{-57}
$\boldsymbol{A_{217}^{CIB}}$	41 ± 7	D_{810}	2535 ± 14	$f\sigma_8(0.15)$	0.460 ± 0.013
$\boldsymbol{A_{143}^{tSZ}}$	$3.7^{+1.7}_{-2.6}$	D_{1420}	814.0 ± 5.3	$\sigma_8(0.15)$	$0.726^{+0.041}_{-0.010}$
$\boldsymbol{r_{143\times217}^{PS}}$	0.65 ± 0.13	D_{2000}	229.2 ± 2.0	$f\sigma_8(0.38)$	$0.473^{+0.016}_{-0.0097}$
$\boldsymbol{r_{143\times217}^{CIB}}$	> 0.473	$n_{s,0.002}$	0.9624 ± 0.0063	$\sigma_8(0.38)$	$0.642^{+0.037}_{-0.0088}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P	$0.24526^{+0.00013}_{-0.000095}$	$f\sigma_8(0.51)$	$0.469^{+0.018}_{-0.0082}$
$\boldsymbol{A^{kSZ}}$	—	Y_P^{BBN}	$0.24659^{+0.00013}_{-0.000095}$	$\sigma_8(0.51)$	$0.600^{+0.035}_{-0.0082}$
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.19	10^5D/H	$2.645^{+0.045}_{-0.051}$	$f\sigma_8(0.61)$	$0.462^{+0.019}_{-0.0072}$
$\boldsymbol{A_{143}^{dust}}$	0.98 ± 0.18	Age/Gyr	$13.895^{+0.042}_{-0.13}$	$\sigma_8(0.61)$	$0.570^{+0.034}_{-0.0078}$
$\boldsymbol{A_{217}^{dust}}$	0.97 ± 0.10	z_*	$1090.42^{+0.43}_{-0.53}$	$f\sigma_8(2.33)$	$0.288^{+0.016}_{-0.0033}$
$\boldsymbol{A_{143\times217}^{dust}}$	1.03 ± 0.16	r_*	144.40 ± 0.50	$\sigma_8(2.33)$	$0.295^{+0.018}_{-0.0041}$
$\boldsymbol{c_{100}}$	0.9974 ± 0.0010	$100\theta_*$	1.04098 ± 0.00047	f_{2000}^{143}	31.4 ± 3.2
$\boldsymbol{c_{217}}$	1.0013 ± 0.0016	$D_M(z_*)$/Gpc	13.872 ± 0.046	f_{2000}^{217}	108.0 ± 2.2
H_0	$65.7^{+2.5}_{-1.0}$	z_{drag}	1059.30 ± 0.50	$f_{2000}^{143\times217}$	33.4 ± 2.3
Ω_Λ	$0.663^{+0.035}_{-0.012}$	r_{drag}	147.17 ± 0.49	χ^2_{simall}	396.9 ± 1.8
Ω_m	$0.337^{+0.012}_{-0.035}$	k_D	0.14056 ± 0.00053	χ^2_{lowl}	23.6 ± 1.3
$\Omega_m h^2$	$0.1449^{+0.0021}_{-0.0037}$	$100\theta_D$	0.16112 ± 0.00028	$\chi^2_{CamSpec}$	7064.4 ± 5.7
$\Omega_\nu h^2$	< 0.00217	z_{eq}	3416 ± 50	χ^2_{prior}	7.7 ± 3.5
$\Omega_m h^3$	$0.0952^{+0.0014}_{-0.00050}$	k_{eq}	0.01043 ± 0.00015	χ^2_{CMB}	7484.8 ± 5.7
σ_8	$0.788^{+0.042}_{-0.011}$	$100\theta_{eq}$	0.8101 ± 0.0092		

$\bar{\chi}^2_{eff} = 7492.51$; $\Delta\bar{\chi}^2_{eff} = 1.25$; $R - 1 = 0.00841$

6.9 base_mnu_CamSpecHM_TTTEEE_lowl_lowE

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02227 ± 0.00017	σ_8	$0.795^{+0.030}_{-0.010}$	$100\theta_{\rm s,eq}$	0.4502 ± 0.0030
$\boldsymbol{\Omega_c h^2}$	0.1197 ± 0.0014	S_8	0.822 ± 0.018	$H(0.15)$	$72.2^{+1.4}_{-0.62}$
$\boldsymbol{100\theta_{MC}}$	1.04082 ± 0.00034	$\sigma_8\Omega_{\rm m}^{0.5}$	0.4504 ± 0.0096	$D_{\rm M}(0.15)$	$648.7^{+5.8}_{-14}$
$\boldsymbol{\tau}$	0.0528 ± 0.0079	$\sigma_8\Omega_{\rm m}^{0.25}$	$0.598^{+0.017}_{-0.0092}$	$H(0.38)$	$82.4^{+1.1}_{-0.46}$
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 0.149	$\sigma_8/h^{0.5}$	$0.972^{+0.029}_{-0.013}$	$D_{\rm M}(0.38)$	1544^{+12}_{-28}
$\boldsymbol{\ln(10^{10}A_s)}$	3.039 ± 0.016	$r_{\rm drag}h$	$98.4^{+2.4}_{-1.2}$	$H(0.51)$	$89.25^{+0.88}_{-0.37}$
$\boldsymbol{n_s}$	0.9652 ± 0.0047	$\langle d^2\rangle^{1/2}$	2.428 ± 0.029	$D_{\rm M}(0.51)$	1999^{+14}_{-34}
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0024	$z_{\rm re}$	7.53 ± 0.81	$H(0.61)$	$94.94^{+0.75}_{-0.31}$
$\boldsymbol{A^{PS}_{100}}$	241 ± 25	$10^9 A_{\rm s}$	2.088 ± 0.034	$D_{\rm M}(0.61)$	2325^{+15}_{-37}
$\boldsymbol{A^{PS}_{143}}$	40 ± 8	$10^9 A_{\rm s}e^{-2\tau}$	1.879 ± 0.011	$H(2.33)$	$236.65^{+0.89}_{-1.3}$
$\boldsymbol{A^{PS}_{217}}$	102 ± 10	D_{40}	1227 ± 13	$D_{\rm M}(2.33)$	5782^{+14}_{-37}
$\boldsymbol{A^{CIB}_{217}}$	40 ± 7	D_{220}	5720 ± 38	$f\sigma_8(0.15)$	$0.4549^{+0.0094}_{-0.0085}$
$\boldsymbol{A^{tSZ}_{143}}$	$3.8^{+1.8}_{-2.6}$	D_{810}	2536 ± 13	$\sigma_8(0.15)$	$0.733^{+0.029}_{-0.0091}$
$\boldsymbol{r^{PS}_{143\times217}}$	0.65 ± 0.13	D_{1420}	815.7 ± 4.8	$f\sigma_8(0.38)$	$0.471^{+0.011}_{-0.0071}$
$\boldsymbol{r^{CIB}_{143\times217}}$	$0.57^{+0.40}_{-0.16}$	D_{2000}	230.1 ± 1.7	$\sigma_8(0.38)$	$0.649^{+0.027}_{-0.0081}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$n_{\rm s,0.002}$	0.9652 ± 0.0047	$f\sigma_8(0.51)$	$0.468^{+0.012}_{-0.0063}$
$\boldsymbol{A^{kSZ}}$	$4.8^{+2.6}_{-3.7}$	$Y_{\rm P}$	$0.245351^{+0.000072}_{-0.000063}$	$\sigma_8(0.51)$	$0.607^{+0.026}_{-0.0076}$
$\boldsymbol{A^{dust}_{100}}$	1.01 ± 0.20	$Y_{\rm P}^{\rm BBN}$	$0.246677^{+0.000072}_{-0.000063}$	$f\sigma_8(0.61)$	$0.463^{+0.013}_{-0.0058}$
$\boldsymbol{A^{dust}_{143}}$	0.97 ± 0.18	10^5D/H	2.606 ± 0.032	$\sigma_8(0.61)$	$0.578^{+0.025}_{-0.0072}$
$\boldsymbol{A^{dust}_{217}}$	0.97 ± 0.10	Age/Gyr	$13.841^{+0.031}_{-0.085}$	$f\sigma_8(2.33)$	$0.292^{+0.011}_{-0.0032}$
$\boldsymbol{A^{dust}_{143\times217}}$	1.03 ± 0.16	z_*	1090.04 ± 0.31	$\sigma_8(2.33)$	$0.300^{+0.013}_{-0.0038}$
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	r_*	144.57 ± 0.32	f^{143}_{2000}	30.2 ± 2.9
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	$100\theta_*$	1.04105 ± 0.00032	f^{217}_{2000}	107.2 ± 2.0
$\boldsymbol{c_{TE}}$	0.9971 ± 0.0050	$D_{\rm M}(z_*)$/Gpc	13.887 ± 0.029	$f^{143\times217}_{2000}$	32.5 ± 2.1
$\boldsymbol{c_{EE}}$	0.9924 ± 0.0049	$z_{\rm drag}$	1059.68 ± 0.34	$\chi^2_{\rm simall}$	396.9 ± 1.7
H_0	$66.8^{+1.6}_{-0.71}$	$r_{\rm drag}$	147.27 ± 0.32	$\chi^2_{\rm lowl}$	23.13 ± 0.94
Ω_Λ	$0.678^{+0.021}_{-0.0087}$	$k_{\rm D}$	0.14061 ± 0.00035	$\chi^2_{\rm CamSpec}$	11515.5 ± 6.0
$\Omega_{\rm m}$	$0.3221^{+0.0087}_{-0.021}$	$100\theta_{\rm D}$	0.16089 ± 0.00020	$\chi^2_{\rm prior}$	7.8 ± 3.4
$\Omega_{\rm m}h^2$	$0.1434^{+0.0014}_{-0.0023}$	$z_{\rm eq}$	3393 ± 31	$\chi^2_{\rm CMB}$	11935.6 ± 6.1
$\Omega_\nu h^2$	< 0.00160	$k_{\rm eq}$	0.010356 ± 0.000096		
$\Omega_{\rm m}h^3$	$0.09572^{+0.00094}_{-0.00037}$	$100\theta_{\rm eq}$	0.8147 ± 0.0059		

$\bar{\chi}^2_{\rm eff} = 11943.39$; $\Delta\bar{\chi}^2_{\rm eff} = 0.93$; $R - 1 = 0.01661$

6.10 base_mnu_CamSpecHM_TTTEEE_lowl_lowE_post_Riess18

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	$0.02243^{+0.00015}_{-0.00017}$	σ_8	$0.810^{+0.011}_{-0.0085}$	$100\theta_{\rm s,eq}$	0.4539 ± 0.0028
$\boldsymbol{\Omega_c h^2}$	0.1180 ± 0.0013	S_8	0.811 ± 0.015	$H(0.15)$	$73.59^{+0.61}_{-0.55}$
$\boldsymbol{100\theta_{MC}}$	1.04110 ± 0.00032	$\sigma_8\Omega_{\rm m}^{0.5}$	0.4444 ± 0.0084	$D_{\rm M}(0.15)$	$634.4^{+5.2}_{-6.0}$
$\boldsymbol{\tau}$	0.0549 ± 0.0080	$\sigma_8\Omega_{\rm m}^{0.25}$	0.6000 ± 0.0087	$H(0.38)$	$83.52^{+0.46}_{-0.41}$
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 0.0450	$\sigma_8/h^{0.5}$	0.979 ± 0.013	$D_{\rm M}(0.38)$	1516^{+11}_{-12}
$\boldsymbol{\ln(10^{10}A_s)}$	3.040 ± 0.016	$r_{\rm drag}h$	101.0 ± 1.1	$H(0.51)$	$90.13^{+0.37}_{-0.33}$
$\boldsymbol{n_s}$	0.9697 ± 0.0044	$\langle d^2\rangle^{1/2}$	2.414 ± 0.028	$D_{\rm M}(0.51)$	1965^{+12}_{-14}
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0024	$z_{\rm re}$	7.68 ± 0.81	$H(0.61)$	$95.67^{+0.31}_{-0.27}$
$\boldsymbol{A^{PS}_{100}}$	239 ± 24	$10^9 A_{\rm s}$	2.091 ± 0.034	$D_{\rm M}(0.61)$	2288^{+13}_{-15}
$\boldsymbol{A^{PS}_{143}}$	38 ± 8	$10^9 A_{\rm s}e^{-2\tau}$	1.873 ± 0.011	$H(2.33)$	235.18 ± 0.80
$\boldsymbol{A^{PS}_{217}}$	102 ± 10	D_{40}	1220 ± 13	$D_{\rm M}(2.33)$	5747^{+12}_{-14}
$\boldsymbol{A^{CIB}_{217}}$	39 ± 7	D_{220}	5730 ± 40	$f\sigma_8(0.15)$	0.4495 ± 0.0079
$\boldsymbol{A^{tSZ}_{143}}$	$3.9^{+1.9}_{-2.4}$	D_{810}	2535 ± 13	$\sigma_8(0.15)$	$0.750^{+0.010}_{-0.0076}$
$\boldsymbol{r^{PS}_{143\times217}}$	0.66 ± 0.13	D_{1420}	817.0 ± 4.9	$f\sigma_8(0.38)$	0.4701 ± 0.0068
$\boldsymbol{r^{CIB}_{143\times217}}$	$0.56^{+0.43}_{-0.15}$	D_{2000}	230.9 ± 1.7	$\sigma_8(0.38)$	$0.6656^{+0.0092}_{-0.0064}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	$0.48^{+0.36}_{-0.44}$	$n_{\rm s,0.002}$	0.9697 ± 0.0044	$f\sigma_8(0.51)$	0.4700 ± 0.0063
$\boldsymbol{A^{kSZ}}$	$4.7^{+1.7}_{-4.5}$	$Y_{\rm P}$	0.245417 ± 0.000061	$\sigma_8(0.51)$	$0.6233^{+0.0087}_{-0.0060}$
$\boldsymbol{A^{dust}_{100}}$	1.01 ± 0.19	$Y_{\rm P}^{\rm BBN}$	0.246743 ± 0.000062	$f\sigma_8(0.61)$	0.4658 ± 0.0060
$\boldsymbol{A^{dust}_{143}}$	0.97 ± 0.18	10^5D/H	2.575 ± 0.029	$\sigma_8(0.61)$	$0.5934^{+0.0083}_{-0.0056}$
$\boldsymbol{A^{dust}_{217}}$	$0.977^{+0.093}_{-0.10}$	Age/Gyr	$13.763^{+0.028}_{-0.032}$	$f\sigma_8(2.33)$	$0.2993^{+0.0038}_{-0.0028}$
$\boldsymbol{A^{dust}_{143\times217}}$	1.02 ± 0.15	z_*	1089.67 ± 0.27	$\sigma_8(2.33)$	$0.3092^{+0.0044}_{-0.0030}$
$\boldsymbol{c_{100}}$	0.9976 ± 0.0010	r_*	144.91 ± 0.29	f^{143}_{2000}	29.2 ± 2.9
$\boldsymbol{c_{217}}$	1.0011 ± 0.0015	$100\theta_*$	1.04127 ± 0.00032	f^{217}_{2000}	106.5 ± 1.9
$\boldsymbol{c_{TE}}$	0.9966 ± 0.0049	$D_{\rm M}(z_*)$/Gpc	13.917 ± 0.028	$f^{143\times217}_{2000}$	31.7 ± 2.1
$\boldsymbol{c_{EE}}$	0.9923 ± 0.0049	$z_{\rm drag}$	$1059.93^{+0.31}_{-0.36}$	$\chi^2_{\rm simall}$	397.1 ± 1.8
H_0	$68.42^{+0.71}_{-0.63}$	$r_{\rm drag}$	147.57 ± 0.30	$\chi^2_{\rm lowl}$	22.56 ± 0.85
Ω_Λ	$0.6991^{+0.0091}_{-0.0078}$	$k_{\rm D}$	0.14041 ± 0.00034	$\chi^2_{\rm CamSpec}$	11516.2 ± 6.0
$\Omega_{\rm m}$	$0.3009^{+0.0078}_{-0.0091}$	$100\theta_{\rm D}$	0.16077 ± 0.00019	$\chi^2_{\rm H073p45}$	9.3 ± 2.5
$\Omega_{\rm m}h^2$	0.1408 ± 0.0013	$z_{\rm eq}$	3355 ± 29	$\chi^2_{\rm prior}$	7.5 ± 3.3
$\Omega_\nu h^2$	< 0.000484	$k_{\rm eq}$	0.010241 ± 0.000088	$\chi^2_{\rm CMB}$	11935.8 ± 6.0
$\Omega_{\rm m}h^3$	0.09635 ± 0.00038	$100\theta_{\rm eq}$	0.8221 ± 0.0056		

$\bar{\chi}^2_{\rm eff} = 11952.66$; $\Delta\bar{\chi}^2_{\rm eff} = -1.61$; $R - 1 = 0.05737$

6.11 base_mnu_CamSpecHM_TTTEEE_lowl_lowE_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02227 ± 0.00017	σ_8	$0.795^{+0.030}_{-0.0097}$	$100\theta_{\rm s,eq}$	0.4503 ± 0.0030
$\boldsymbol{\Omega_c h^2}$	0.1197 ± 0.0014	S_8	0.823 ± 0.018	$H(0.15)$	$72.2^{+1.4}_{-0.62}$
$\boldsymbol{100\theta_{MC}}$	1.04083 ± 0.00034	$\sigma_8\Omega_{\rm m}^{0.5}$	0.4507 ± 0.0096	$D_{\rm M}(0.15)$	$648.5^{+5.8}_{-14}$
$\boldsymbol{\tau}$	$0.0543^{+0.0047}_{-0.0081}$	$\sigma_8\Omega_{\rm m}^{0.25}$	$0.599^{+0.016}_{-0.0091}$	$H(0.38)$	$82.4^{+1.1}_{-0.46}$
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 0.150	$\sigma_8/h^{0.5}$	$0.973^{+0.029}_{-0.013}$	$D_{\rm M}(0.38)$	1544^{+12}_{-29}
$\boldsymbol{\ln(10^{10}A_s)}$	$3.042^{+0.012}_{-0.016}$	$r_{\rm drag}h$	$98.4^{+2.4}_{-1.2}$	$H(0.51)$	$89.26^{+0.89}_{-0.38}$
$\boldsymbol{n_s}$	0.9654 ± 0.0046	$\langle d^2\rangle^{1/2}$	2.431 ± 0.028	$D_{\rm M}(0.51)$	1999^{+14}_{-34}
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0024	$z_{\rm re}$	$7.69^{+0.53}_{-0.80}$	$H(0.61)$	$94.94^{+0.75}_{-0.31}$
$\boldsymbol{A^{PS}_{100}}$	241 ± 25	$10^9 A_{\rm s}$	$2.094^{+0.024}_{-0.033}$	$D_{\rm M}(0.61)$	2324^{+15}_{-37}
$\boldsymbol{A^{PS}_{143}}$	40 ± 8	$10^9 A_{\rm s}e^{-2\tau}$	1.879 ± 0.011	$H(2.33)$	$236.63^{+0.89}_{-1.3}$
$\boldsymbol{A^{PS}_{217}}$	102 ± 10	D_{40}	1227 ± 13	$D_{\rm M}(2.33)$	5782^{+14}_{-37}
$\boldsymbol{A^{CIB}_{217}}$	40 ± 7	D_{220}	5719 ± 38	$f\sigma_8(0.15)$	$0.4552^{+0.0094}_{-0.0084}$
$\boldsymbol{A^{tSZ}_{143}}$	$3.8^{+1.8}_{-2.6}$	D_{810}	2535 ± 13	$\sigma_8(0.15)$	$0.734^{+0.029}_{-0.0088}$
$\boldsymbol{r^{PS}_{143\times217}}$	0.66 ± 0.13	D_{1420}	815.7 ± 4.8	$f\sigma_8(0.38)$	$0.471^{+0.011}_{-0.0071}$
$\boldsymbol{r^{CIB}_{143\times217}}$	$0.57^{+0.41}_{-0.16}$	D_{2000}	230.1 ± 1.7	$\sigma_8(0.38)$	$0.650^{+0.027}_{-0.0078}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$n_{\rm s,0.002}$	0.9654 ± 0.0046	$f\sigma_8(0.51)$	$0.469^{+0.012}_{-0.0062}$
$\boldsymbol{A^{kSZ}}$	$4.8^{+2.6}_{-3.8}$	$Y_{\rm P}$	$0.245353^{+0.000072}_{-0.000063}$	$\sigma_8(0.51)$	$0.608^{+0.025}_{-0.0072}$
$\boldsymbol{A^{dust}_{100}}$	1.01 ± 0.19	$Y_{\rm P}^{\rm BBN}$	$0.246679^{+0.000072}_{-0.000063}$	$f\sigma_8(0.61)$	$0.463^{+0.013}_{-0.0057}$
$\boldsymbol{A^{dust}_{143}}$	0.97 ± 0.18	10^5D/H	2.605 ± 0.032	$\sigma_8(0.61)$	$0.578^{+0.024}_{-0.0069}$
$\boldsymbol{A^{dust}_{217}}$	0.97 ± 0.10	Age/Gyr	$13.840^{+0.031}_{-0.086}$	$f\sigma_8(2.33)$	$0.292^{+0.011}_{-0.0031}$
$\boldsymbol{A^{dust}_{143\times217}}$	1.03 ± 0.16	z_*	1090.03 ± 0.31	$\sigma_8(2.33)$	$0.300^{+0.013}_{-0.0036}$
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	r_*	144.58 ± 0.31	f^{143}_{2000}	30.1 ± 2.9
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	$100\theta_*$	1.04106 ± 0.00032	f^{217}_{2000}	107.1 ± 2.0
$\boldsymbol{c_{TE}}$	0.9970 ± 0.0050	$D_{\rm M}(z_*)$/Gpc	13.888 ± 0.029	$f^{143\times217}_{2000}$	32.4 ± 2.0
$\boldsymbol{c_{EE}}$	0.9923 ± 0.0049	$z_{\rm drag}$	1059.69 ± 0.34	$\chi^2_{\rm simall}$	396.9 ± 1.7
H_0	$66.8^{+1.6}_{-0.71}$	$r_{\rm drag}$	147.28 ± 0.31	$\chi^2_{\rm lowl}$	23.14 ± 0.94
Ω_Λ	$0.678^{+0.021}_{-0.0087}$	$k_{\rm D}$	0.14060 ± 0.00035	$\chi^2_{\rm CamSpec}$	11515.4 ± 6.0
$\Omega_{\rm m}$	$0.3219^{+0.0087}_{-0.021}$	$100\theta_{\rm D}$	0.16089 ± 0.00019	$\chi^2_{\rm prior}$	7.8 ± 3.4
$\Omega_{\rm m}h^2$	$0.1433^{+0.0014}_{-0.0023}$	$z_{\rm eq}$	3392 ± 31	$\chi^2_{\rm CMB}$	11935.4 ± 6.1
$\Omega_\nu h^2$	< 0.00161	$k_{\rm eq}$	0.010353 ± 0.000095		
$\Omega_{\rm m}h^3$	$0.09572^{+0.00095}_{-0.00037}$	$100\theta_{\rm eq}$	0.8149 ± 0.0059		

$\bar{\chi}^2_{\rm eff} = 11943.12$; $\Delta\bar{\chi}^2_{\rm eff} = 0.93$; $R - 1 = 0.01799$

6.12 base_mnu_CamSpecHM_TTTEEE_lowl_lowE_post_Riess18_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	$0.02243^{+0.00015}_{-0.00017}$	σ_8	$0.811^{+0.010}_{-0.0083}$	$100\theta_{\rm s,eq}$	0.4540 ± 0.0028
$\boldsymbol{\Omega_c h^2}$	0.1180 ± 0.0013	S_8	0.812 ± 0.015	$H(0.15)$	$73.60^{+0.61}_{-0.55}$
$\boldsymbol{100\theta_{MC}}$	1.04111 ± 0.00032	$\sigma_8\Omega_{\rm m}^{0.5}$	0.4446 ± 0.0083	$D_{\rm M}(0.15)$	$634.3^{+5.2}_{-6.0}$
$\boldsymbol{\tau}$	$0.0561^{+0.0059}_{-0.0079}$	$\sigma_8\Omega_{\rm m}^{0.25}$	0.6004 ± 0.0085	$H(0.38)$	$83.53^{+0.46}_{-0.41}$
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 0.0453	$\sigma_8/h^{0.5}$	0.980 ± 0.013	$D_{\rm M}(0.38)$	1515^{+11}_{-12}
$\boldsymbol{\ln(10^{10} A_s)}$	$3.042^{+0.013}_{-0.016}$	$r_{\rm drag}h$	101.0 ± 1.1	$H(0.51)$	$90.14^{+0.37}_{-0.33}$
$\boldsymbol{n_s}$	0.9698 ± 0.0044	$\langle d^2\rangle^{1/2}$	2.416 ± 0.027	$D_{\rm M}(0.51)$	1965^{+13}_{-14}
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0024	$z_{\rm re}$	$7.80^{+0.60}_{-0.81}$	$H(0.61)$	$95.68^{+0.31}_{-0.28}$
$\boldsymbol{A^{PS}_{100}}$	239 ± 24	$10^9 A_{\rm s}$	$2.095^{+0.027}_{-0.034}$	$D_{\rm M}(0.61)$	2288^{+14}_{-15}
$\boldsymbol{A^{PS}_{143}}$	38 ± 8	$10^9 A_{\rm s} e^{-2\tau}$	1.873 ± 0.011	$H(2.33)$	235.16 ± 0.80
$\boldsymbol{A^{PS}_{217}}$	102 ± 10	D_{40}	1220 ± 13	$D_{\rm M}(2.33)$	5747^{+13}_{-14}
$\boldsymbol{A^{CIB}_{217}}$	39 ± 7	D_{220}	5730 ± 41	$f\sigma_8(0.15)$	0.4498 ± 0.0078
$\boldsymbol{A^{tSZ}_{143}}$	$3.9^{+1.9}_{-2.4}$	D_{810}	2535 ± 13	$\sigma_8(0.15)$	$0.7503^{+0.0097}_{-0.0073}$
$\boldsymbol{r^{PS}_{143\times217}}$	0.66 ± 0.13	D_{1420}	816.9 ± 4.9	$f\sigma_8(0.38)$	0.4705 ± 0.0067
$\boldsymbol{r^{CIB}_{143\times217}}$	$0.55^{+0.43}_{-0.16}$	D_{2000}	230.9 ± 1.7	$\sigma_8(0.38)$	$0.6662^{+0.0087}_{-0.0061}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	$0.48^{+0.34}_{-0.44}$	$n_{\rm s,0.002}$	0.9698 ± 0.0044	$f\sigma_8(0.51)$	0.4704 ± 0.0061
$\boldsymbol{A^{kSZ}}$	$4.7^{+1.6}_{-4.6}$	$Y_{\rm P}$	0.245418 ± 0.000061	$\sigma_8(0.51)$	$0.6239^{+0.0082}_{-0.0056}$
$\boldsymbol{A^{dust}_{100}}$	1.02 ± 0.19	$Y_{\rm P}^{\rm BBN}$	0.246745 ± 0.000061	$f\sigma_8(0.61)$	0.4663 ± 0.0058
$\boldsymbol{A^{dust}_{143}}$	0.97 ± 0.18	10^5D/H	2.574 ± 0.029	$\sigma_8(0.61)$	$0.5940^{+0.0079}_{-0.0053}$
$\boldsymbol{A^{dust}_{217}}$	$0.977^{+0.091}_{-0.10}$	Age/Gyr	$13.762^{+0.028}_{-0.032}$	$f\sigma_8(2.33)$	$0.2996^{+0.0035}_{-0.0026}$
$\boldsymbol{A^{dust}_{143\times217}}$	1.02 ± 0.15	z_*	1089.66 ± 0.27	$\sigma_8(2.33)$	$0.3095^{+0.0041}_{-0.0028}$
$\boldsymbol{c_{100}}$	0.9976 ± 0.0010	r_*	144.92 ± 0.29	f^{143}_{2000}	29.1 ± 2.9
$\boldsymbol{c_{217}}$	1.0011 ± 0.0015	$100\theta_*$	1.04128 ± 0.00032	f^{217}_{2000}	106.5 ± 1.9
$\boldsymbol{c_{TE}}$	0.9966 ± 0.0049	$D_{\rm M}(z_*)$/Gpc	13.917 ± 0.028	$f^{143\times217}_{2000}$	31.7 ± 2.1
$\boldsymbol{c_{EE}}$	0.9923 ± 0.0049	$z_{\rm drag}$	$1059.93^{+0.32}_{-0.36}$	$\chi^2_{\rm simall}$	397.0 ± 1.8
H_0	68.44 ± 0.67	$r_{\rm drag}$	147.57 ± 0.30	$\chi^2_{\rm lowl}$	22.57 ± 0.86
Ω_Λ	$0.6992^{+0.0091}_{-0.0078}$	$k_{\rm D}$	0.14041 ± 0.00034	$\chi^2_{\rm CamSpec}$	11516.1 ± 6.0
$\Omega_{\rm m}$	$0.3008^{+0.0078}_{-0.0091}$	$100\theta_{\rm D}$	0.16077 ± 0.00019	$\chi^2_{\rm H073p45}$	9.3 ± 2.5
$\Omega_{\rm m}h^2$	0.1408 ± 0.0013	$z_{\rm eq}$	3355 ± 29	$\chi^2_{\rm prior}$	7.5 ± 3.2
$\Omega_\nu h^2$	< 0.000487	$k_{\rm eq}$	0.010239 ± 0.000088	$\chi^2_{\rm CMB}$	11935.7 ± 6.0
$\Omega_{\rm m}h^3$	$0.09635^{+0.00038}_{-0.00034}$	$100\theta_{\rm eq}$	0.8222 ± 0.0055		

$\bar{\chi}^2_{\rm eff} = 11952.44$; $\Delta\bar{\chi}^2_{\rm eff} = -1.57$; $R - 1 = 0.06967$

6.13 base_mnu_plikHM_TE_lowE

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022386	0.02232 ± 0.00028	$\sigma_8/h^{0.5}$	0.907	$0.861^{+0.090}_{-0.056}$	$100\theta_{\rm eq}$	0.8228	0.8231 ± 0.0090
$\boldsymbol{\Omega_c h^2}$	0.11793	0.1181 ± 0.0021	$r_{\rm drag}h$	97.4	$94.0^{+6.5}_{-4.0}$	$100\theta_{\rm s,eq}$	0.45436	0.4546 ± 0.0046
$\boldsymbol{100\theta_{\rm MC}}$	1.04122	1.04113 ± 0.00053	$\langle d^2\rangle^{1/2}$	2.3618	2.364 ± 0.045	$H(0.15)$	71.44	$69.5^{+3.7}_{-2.3}$
$\boldsymbol{\tau}$	0.0493	0.0481 ± 0.0085	$z_{\rm re}$	7.16	$7.06^{+0.92}_{-0.75}$	$D_{\rm M}(0.15)$	655.6	678^{+22}_{-43}
$\boldsymbol{\Sigma m_\nu}$ [eV]	0.312	< 0.717	$10^9 A_{\rm s}$	2.0371	2.028 ± 0.042	$H(0.38)$	81.82	$80.4^{+2.8}_{-1.8}$
$\boldsymbol{\ln(10^{10} A_{\rm s})}$	3.0141	3.009 ± 0.021	$10^9 A_{\rm s} e^{-2\tau}$	1.8458	1.841 ± 0.020	$D_{\rm M}(0.38)$	1559	1603^{+45}_{-85}
$\boldsymbol{n_{\rm s}}$	0.9623	0.958 ± 0.013	D_{40}	1215.0	1210 ± 27	$H(0.51)$	88.69	$87.5^{+2.3}_{-1.6}$
$\boldsymbol{A_{100}^{{\rm dust}TE}}$	0.1132	0.113 ± 0.038	D_{220}	5694	5705 ± 59	$D_{\rm M}(0.51)$	2017	2068^{+54}_{-99}
$\boldsymbol{A_{100\times143}^{{\rm dust}TE}}$	0.1350	0.135 ± 0.029	D_{810}	2498.4	2494 ± 26	$H(0.61)$	94.42	$93.4^{+1.9}_{-1.4}$
$\boldsymbol{A_{100\times217}^{{\rm dust}TE}}$	0.477	0.478 ± 0.085	D_{1420}	802.9	801 ± 12	$D_{\rm M}(0.61)$	2344	2399^{+59}_{-110}
$\boldsymbol{A_{143}^{{\rm dust}TE}}$	0.219	0.219 ± 0.055	D_{2000}	225.52	224.4 ± 4.7	$H(2.33)$	236.64	$238.3^{+1.9}_{-3.2}$
$\boldsymbol{A_{143\times217}^{{\rm dust}TE}}$	0.654	0.658 ± 0.080	$n_{\rm s,0.002}$	0.9623	0.958 ± 0.013	$D_{\rm M}(2.33)$	5809	5864^{+64}_{-110}
$\boldsymbol{A_{217}^{{\rm dust}TE}}$	2.016	2.04 ± 0.27	$Y_{\rm P}$	0.245402	$0.24537^{+0.00012}_{-0.000099}$	$f\sigma_8(0.15)$	0.4289	$0.416^{+0.026}_{-0.019}$
$\boldsymbol{c_{100}}$	1.00018	1.00017 ± 0.00070	$Y_{\rm P}^{\rm BBN}$	0.246729	$0.24670^{+0.00012}_{-0.00010}$	$\sigma_8(0.15)$	0.680	$0.633^{+0.094}_{-0.052}$
$\boldsymbol{c_{217}}$	0.99800	0.99800 ± 0.00065	10^5D/H	2.582	$2.596^{+0.049}_{-0.055}$	$f\sigma_8(0.38)$	0.4425	$0.423^{+0.037}_{-0.023}$
$\boldsymbol{y_{\rm cal}}$	1.00001	1.0000 ± 0.0025	Age/Gyr	13.904	$14.03^{+0.14}_{-0.26}$	$\sigma_8(0.38)$	0.601	$0.558^{+0.088}_{-0.048}$
H_0	65.99	$63.8^{+4.3}_{-2.6}$	z_*	1089.76	$1089.99^{+0.48}_{-0.61}$	$f\sigma_8(0.51)$	0.4395	$0.418^{+0.042}_{-0.024}$
Ω_Λ	0.6701	$0.635^{+0.066}_{-0.029}$	r_*	144.90	$144.71^{+0.56}_{-0.50}$	$\sigma_8(0.51)$	0.562	$0.521^{+0.084}_{-0.045}$
$\Omega_{\rm m}$	0.3299	$0.365^{+0.029}_{-0.066}$	$100\theta_*$	1.041533	1.04152 ± 0.00049	$f\sigma_8(0.61)$	0.4339	$0.411^{+0.045}_{-0.025}$
$\Omega_{\rm m}h^2$	0.14366	$0.1466^{+0.0035}_{-0.0057}$	$D_{\rm M}(z_*)$/Gpc	13.9125	$13.894^{+0.052}_{-0.047}$	$\sigma_8(0.61)$	0.535	$0.495^{+0.081}_{-0.044}$
$\Omega_\nu h^2$	0.00335	< 0.00771	$z_{\rm drag}$	1059.86	1059.82 ± 0.56	$f\sigma_8(2.33)$	0.2727	$0.253^{+0.040}_{-0.019}$
$\Omega_{\rm m}h^3$	0.09481	$0.0934^{+0.0029}_{-0.0017}$	$r_{\rm drag}$	147.57	$147.39^{+0.55}_{-0.50}$	$\sigma_8(2.33)$	0.2785	$0.257^{+0.044}_{-0.023}$
σ_8	0.737	$0.689^{+0.097}_{-0.055}$	$k_{\rm D}$	0.14041	$0.14066^{+0.00058}_{-0.00067}$	$\chi^2_{\rm simall}$	395.65	396.9 ± 1.6
S_8	0.7728	$0.753^{+0.041}_{-0.036}$	$100\theta_{\rm D}$	0.160819	0.16075 ± 0.00032	$\chi^2_{\rm plikTE}$	852.62	860.3 ± 3.9
$\sigma_8\Omega_{\rm m}^{0.5}$	0.4233	$0.412^{+0.023}_{-0.020}$	$z_{\rm eq}$	3353.0	3356 ± 47	$\chi^2_{\rm prior}$	0.43	7.4 ± 3.7
$\sigma_8\Omega_{\rm m}^{0.25}$	0.5585	$0.533^{+0.050}_{-0.034}$	$k_{\rm eq}$	0.010236	0.01025 ± 0.00014	$\chi^2_{\rm CMB}$	1248.27	1257.2 ± 4.2

Best-fit $\chi^2_{\rm eff} = 1248.70$; $\Delta\chi^2_{\rm eff} = -0.28$; $\bar{\chi}^2_{\rm eff} = 1264.56$; $\Delta\bar{\chi}^2_{\rm eff} = 0.56$; $R - 1 = 0.00834$
$\chi^2_{\rm eff}$: CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.65 (Δ -0.04) plik_rd12_HM_v22_TE: 852.62 (Δ -0.23)

6.14 base_mnu_plikHM_TE_lowE_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02233 ± 0.00028	$\sigma_8/h^{0.5}$	$0.865^{+0.089}_{-0.055}$	$100\theta_{\rm eq}$	0.8234 ± 0.0089
$\boldsymbol{\Omega_c h^2}$	0.1180 ± 0.0020	$r_{\rm drag} h$	$94.2^{+6.4}_{-4.0}$	$100\theta_{\rm s,eq}$	0.4547 ± 0.0046
$\boldsymbol{100\theta_{MC}}$	1.04114 ± 0.00053	$\langle d^2 \rangle^{1/2}$	2.370 ± 0.043	$H(0.15)$	$69.6^{+3.7}_{-2.3}$
$\boldsymbol{\tau}$	$0.0516^{+0.0035}_{-0.0076}$	$z_{\rm re}$	$7.43^{+0.29}_{-0.86}$	$D_{\rm M}(0.15)$	677^{+22}_{-42}
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 0.708	$10^9 A_{\rm s}$	$2.042^{+0.030}_{-0.036}$	$H(0.38)$	$80.5^{+2.8}_{-1.8}$
$\boldsymbol{\ln(10^{10} A_s)}$	$3.016^{+0.015}_{-0.017}$	$10^9 A_{\rm s} e^{-2\tau}$	1.842 ± 0.020	$D_{\rm M}(0.38)$	1601^{+45}_{-83}
$\boldsymbol{n_s}$	0.959 ± 0.013	D_{40}	1210 ± 27	$H(0.51)$	$87.6^{+2.3}_{-1.6}$
$\boldsymbol{A_{100}^{\rm dust TE}}$	0.113 ± 0.038	D_{220}	5704 ± 58	$D_{\rm M}(0.51)$	2065^{+54}_{-98}
$\boldsymbol{A_{100\times143}^{\rm dust TE}}$	0.135 ± 0.030	D_{810}	2496 ± 26	$H(0.61)$	$93.5^{+1.9}_{-1.4}$
$\boldsymbol{A_{100\times217}^{\rm dust TE}}$	0.478 ± 0.084	D_{1420}	802 ± 12	$D_{\rm M}(0.61)$	2397^{+59}_{-110}
$\boldsymbol{A_{143}^{\rm dust TE}}$	0.219 ± 0.055	D_{2000}	224.7 ± 4.7	$H(2.33)$	$238.2^{+1.9}_{-3.2}$
$\boldsymbol{A_{143\times217}^{\rm dust TE}}$	0.658 ± 0.080	$n_{\rm s,0.002}$	0.959 ± 0.013	$D_{\rm M}(2.33)$	5861^{+64}_{-110}
$\boldsymbol{A_{217}^{\rm dust TE}}$	2.04 ± 0.27	$Y_{\rm P}$	$0.24537^{+0.00012}_{-0.00010}$	$f\sigma_8(0.15)$	$0.417^{+0.025}_{-0.019}$
$\boldsymbol{c_{100}}$	1.00017 ± 0.00070	$Y_{\rm P}^{\rm BBN}$	$0.24670^{+0.00012}_{-0.00010}$	$\sigma_8(0.15)$	$0.637^{+0.094}_{-0.051}$
$\boldsymbol{c_{217}}$	0.99799 ± 0.00065	10^5D/H	$2.594^{+0.050}_{-0.055}$	$f\sigma_8(0.38)$	$0.425^{+0.037}_{-0.022}$
$\boldsymbol{y_{cal}}$	1.0000 ± 0.0025	Age/Gyr	$14.03^{+0.14}_{-0.25}$	$\sigma_8(0.38)$	$0.562^{+0.088}_{-0.047}$
H_0	$63.9^{+4.2}_{-2.6}$	z_*	$1089.96^{+0.48}_{-0.60}$	$f\sigma_8(0.51)$	$0.419^{+0.042}_{-0.023}$
Ω_Λ	$0.637^{+0.065}_{-0.029}$	r_*	$144.72^{+0.56}_{-0.49}$	$\sigma_8(0.51)$	$0.524^{+0.084}_{-0.045}$
$\Omega_{\rm m}$	$0.363^{+0.029}_{-0.065}$	$100\theta_*$	1.04153 ± 0.00049	$f\sigma_8(0.61)$	$0.413^{+0.045}_{-0.024}$
$\Omega_{\rm m} h^2$	$0.1465^{+0.0034}_{-0.0056}$	$D_{\rm M}(z_*)$/Gpc	$13.895^{+0.052}_{-0.046}$	$\sigma_8(0.61)$	$0.498^{+0.081}_{-0.043}$
$\Omega_\nu h^2$	< 0.00761	$z_{\rm drag}$	1059.84 ± 0.56	$f\sigma_8(2.33)$	$0.255^{+0.040}_{-0.019}$
$\Omega_{\rm m} h^3$	$0.0934^{+0.0029}_{-0.0016}$	$r_{\rm drag}$	$147.40^{+0.55}_{-0.50}$	$\sigma_8(2.33)$	$0.259^{+0.044}_{-0.022}$
σ_8	$0.693^{+0.096}_{-0.054}$	$k_{\rm D}$	$0.14066^{+0.00058}_{-0.00067}$	$\chi^2_{\rm simall}$	396.5 ± 1.3
S_8	$0.755^{+0.041}_{-0.035}$	$100\theta_{\rm D}$	0.16074 ± 0.00032	$\chi^2_{\rm plikTE}$	860.3 ± 3.9
$\sigma_8 \Omega_{\rm m}^{0.5}$	$0.414^{+0.022}_{-0.019}$	$z_{\rm eq}$	3354 ± 46	$\chi^2_{\rm prior}$	7.4 ± 3.7
$\sigma_8 \Omega_{\rm m}^{0.25}$	$0.535^{+0.050}_{-0.033}$	$k_{\rm eq}$	0.01025 ± 0.00014	$\chi^2_{\rm CMB}$	1256.8 ± 4.1

$\bar{\chi}^2_{\rm eff} = 1264.17$; $\Delta\bar{\chi}^2_{\rm eff} = 0.52$; $R - 1 = 0.01053$

6.15 base_mnu_plikHM_EE_lowE

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02046	$0.0218^{+0.0015}_{-0.0019}$	D_{40}	1166.8	1186 ± 37	$H(0.38)$	69.59	$73.6^{+1.1}_{-5.2}$
$\boldsymbol{\Omega_c h^2}$	0.1181	0.1191 ± 0.0059	D_{220}	5357	5638 ± 310	$D_{\rm M}(0.38)$	2079	1889^{+300}_{-100}
$\boldsymbol{100\theta_{MC}}$	1.04062	1.0401 ± 0.0010	D_{810}	2544.6	2569^{+47}_{-42}	$H(0.51)$	79.66	$82.56^{+0.54}_{-3.6}$
$\boldsymbol{\tau}$	0.0411	$0.0444^{+0.0078}_{-0.0090}$	D_{1420}	820.4	832^{+24}_{-21}	$D_{\rm M}(0.51)$	2602	2390^{+300}_{-100}
$\boldsymbol{\Sigma m_\nu}$ [eV]	4.27	—	D_{2000}	226.3	$232^{+10}_{-8.9}$	$H(0.61)$	87.72	$89.80^{+0.20}_{-2.6}$
$\boldsymbol{\ln(10^{10} A_s)}$	3.0118	3.027 ± 0.025	$n_{\rm s,0.002}$	0.9279	$0.947^{+0.018}_{-0.026}$	$D_{\rm M}(0.61)$	2961	2739^{+300}_{-100}
$\boldsymbol{n_s}$	0.9279	$0.947^{+0.018}_{-0.026}$	$Y_{\rm P}$	0.24454	0.24510 ± 0.00072	$H(2.33)$	261.1	252^{+12}_{-15}
$\boldsymbol{y_{cal}}$	1.00002	1.0001 ± 0.0025	$Y_{\rm P}^{\rm BBN}$	0.24586	0.24643 ± 0.00073	$D_{\rm M}(2.33)$	6313	6134^{+240}_{-73}
H_0	42.9	$50.9^{+3.8}_{-11}$	10^5D/H	2.981	$2.73^{+0.31}_{-0.37}$	$f\sigma_8(0.15)$	0.3475	$0.374^{+0.032}_{-0.043}$
Ω_Λ	-0.004	$0.27^{+0.34}_{-0.29}$	Age/Gyr	15.183	$14.72^{+0.64}_{-0.22}$	$\sigma_8(0.15)$	0.344	$0.447^{+0.029}_{-0.14}$
$\Omega_{\rm m}$	1.004	$0.73^{+0.29}_{-0.34}$	z_*	1095.35	1092.5 ± 3.4	$f\sigma_8(0.38)$	0.290	$0.340^{+0.028}_{-0.073}$
$\Omega_{\rm m}h^2$	0.1845	$0.170^{+0.021}_{-0.0096}$	r_*	140.72	$141.9^{+1.2}_{-1.9}$	$\sigma_8(0.38)$	0.287	$0.384^{+0.024}_{-0.12}$
$\Omega_\nu h^2$	0.0459	< 0.0398	$100\theta_*$	1.04154	1.0408 ± 0.0011	$f\sigma_8(0.51)$	0.265	$0.322^{+0.026}_{-0.080}$
$\Omega_{\rm m}h^3$	0.0791	$0.0853^{+0.0037}_{-0.0085}$	$D_{\rm M}(z_*)$/Gpc	13.511	13.64 ± 0.15	$\sigma_8(0.51)$	0.263	$0.355^{+0.022}_{-0.12}$
σ_8	0.395	$0.500^{+0.031}_{-0.14}$	$z_{\rm drag}$	1057.64	1059.8 ± 3.0	$f\sigma_8(0.61)$	0.249	$0.309^{+0.025}_{-0.083}$
S_8	0.723	$0.731^{+0.060}_{-0.068}$	$r_{\rm drag}$	143.89	$144.73^{+0.93}_{-1.4}$	$\sigma_8(0.61)$	0.246	$0.335^{+0.021}_{-0.11}$
$\sigma_8\Omega_{\rm m}^{0.5}$	0.3962	$0.401^{+0.033}_{-0.037}$	$k_{\rm D}$	0.14437	0.1439 ± 0.0015	$f\sigma_8(2.33)$	0.1221	$0.169^{+0.012}_{-0.060}$
$\sigma_8\Omega_{\rm m}^{0.25}$	0.396	$0.445^{+0.031}_{-0.077}$	$100\theta_{\rm D}$	0.16105	$0.1601^{+0.0015}_{-0.0020}$	$\sigma_8(2.33)$	0.1202	$0.169^{+0.010}_{-0.061}$
$\sigma_8/h^{0.5}$	0.604	$0.695^{+0.046}_{-0.14}$	$z_{\rm eq}$	3312	3366^{+130}_{-110}	$\chi^2_{\rm simall}$	396.30	397.2 ± 1.6
$r_{\rm drag}h$	61.7	$73.8^{+5.7}_{-17}$	$k_{\rm eq}$	0.010443	$0.01046^{+0.00033}_{-0.00036}$	$\chi^2_{\rm plikEE}$	738.00	743.7 ± 3.2
$\langle d^2\rangle^{1/2}$	2.623	2.51 ± 0.13	$100\theta_{\rm eq}$	0.8467	$0.831^{+0.022}_{-0.031}$	$\chi^2_{\rm prior}$	0.000	0.98 ± 1.4
$z_{\rm re}$	7.16	$7.03^{+0.90}_{-0.79}$	$100\theta_{\rm s,eq}$	0.4691	$0.460^{+0.011}_{-0.017}$	$\chi^2_{\rm CMB}$	1134.30	1140.9 ± 3.6
$10^9 A_{\rm s}$	2.032	$2.065^{+0.048}_{-0.053}$	$H(0.15)$	52.9	$59.2^{+2.6}_{-8.5}$			
$10^9 A_{\rm s}e^{-2\tau}$	1.8719	1.889 ± 0.027	$D_{\rm M}(0.15)$	944	836^{+200}_{-200}			

Best-fit $\chi^2_{\rm eff} = 1134.30$; $\Delta\chi^2_{\rm eff} = -0.26$; $\bar{\chi}^2_{\rm eff} = 1141.86$; $\Delta\bar{\chi}^2_{\rm eff} = 0.25$; $R - 1 = 0.00789$
$\chi^2_{\rm eff}$: CMB - simall_100x143_offlike5_EE_Aplanck_B: 396.30 (Δ 0.71) plik_rd12_HM_v22_EE: 738.00 (Δ -0.96)

6.16 base_mnu_plikHM_EE_lowE_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	$0.0218^{+0.0015}_{-0.0019}$	D_{40}	1186 ± 37	$H(0.38)$	$73.7^{+1.2}_{-5.3}$
$\boldsymbol{\Omega_c h^2}$	0.1192 ± 0.0059	D_{220}	5634 ± 310	$D_{\rm M}(0.38)$	1886^{+300}_{-100}
$\boldsymbol{100\theta_{MC}}$	1.0401 ± 0.0010	D_{810}	2568 ± 45	$H(0.51)$	$82.63^{+0.60}_{-3.7}$
$\boldsymbol{\tau}$	$0.0476^{+0.0050}_{-0.0085}$	D_{1420}	832^{+24}_{-21}	$D_{\rm M}(0.51)$	2387^{+300}_{-100}
$\boldsymbol{\Sigma m_\nu}$ [eV]	—	D_{2000}	$232^{+10}_{-9.1}$	$H(0.61)$	$89.86^{+0.24}_{-2.7}$
$\boldsymbol{\ln(10^{10} A_s)}$	$3.033^{+0.021}_{-0.024}$	$n_{\rm s,0.002}$	$0.948^{+0.019}_{-0.027}$	$D_{\rm M}(0.61)$	2735^{+300}_{-100}
$\boldsymbol{n_s}$	$0.948^{+0.019}_{-0.027}$	$Y_{\rm P}$	0.24510 ± 0.00073	$H(2.33)$	252^{+12}_{-15}
$\boldsymbol{y_{cal}}$	1.0001 ± 0.0025	$Y_{\rm P}^{\rm BBN}$	0.24642 ± 0.00074	$D_{\rm M}(2.33)$	6131^{+250}_{-77}
H_0	$51.1^{+4.1}_{-11}$	10^5D/H	$2.73^{+0.32}_{-0.37}$	$f\sigma_8(0.15)$	$0.376^{+0.031}_{-0.043}$
Ω_Λ	$0.27^{+0.34}_{-0.30}$	Age/Gyr	$14.71^{+0.65}_{-0.23}$	$\sigma_8(0.15)$	$0.452^{+0.031}_{-0.14}$
$\Omega_{\rm m}$	$0.73^{+0.30}_{-0.34}$	z_*	1092.5 ± 3.4	$f\sigma_8(0.38)$	$0.343^{+0.029}_{-0.074}$
$\Omega_{\rm m}h^2$	$0.170^{+0.021}_{-0.025}$	r_*	$142.0^{+1.7}_{-1.9}$	$\sigma_8(0.38)$	$0.388^{+0.026}_{-0.13}$
$\Omega_\nu h^2$	< 0.0397	$100\theta_*$	1.0408 ± 0.0011	$f\sigma_8(0.51)$	$0.325^{+0.027}_{-0.081}$
$\Omega_{\rm m}h^3$	$0.0853^{+0.0038}_{-0.0087}$	$D_{\rm M}(z_*)$/Gpc	13.64 ± 0.15	$\sigma_8(0.51)$	$0.358^{+0.024}_{-0.12}$
σ_8	$0.505^{+0.033}_{-0.14}$	$z_{\rm drag}$	1059.8 ± 3.0	$f\sigma_8(0.61)$	$0.312^{+0.026}_{-0.084}$
S_8	$0.735^{+0.060}_{-0.068}$	$r_{\rm drag}$	$144.76^{+0.97}_{-1.5}$	$\sigma_8(0.61)$	$0.338^{+0.023}_{-0.12}$
$\sigma_8\Omega_{\rm m}^{0.5}$	$0.403^{+0.033}_{-0.037}$	$k_{\rm D}$	0.1438 ± 0.0015	$f\sigma_8(2.33)$	$0.171^{+0.013}_{-0.061}$
$\sigma_8\Omega_{\rm m}^{0.25}$	$0.448^{+0.031}_{-0.079}$	$100\theta_{\rm D}$	$0.1601^{+0.0015}_{-0.0021}$	$\sigma_8(2.33)$	$0.170^{+0.011}_{-0.062}$
$\sigma_8/h^{0.5}$	$0.701^{+0.046}_{-0.14}$	$z_{\rm eq}$	3368 ± 120	$\chi^2_{\rm simall}$	396.9 ± 1.4
$r_{\rm drag}h$	$74.0^{+6.1}_{-17}$	$k_{\rm eq}$	$0.01046^{+0.00032}_{-0.00037}$	$\chi^2_{\rm plikEE}$	743.6 ± 3.2
$\langle d^2\rangle^{1/2}$	$2.52^{+0.14}_{-0.13}$	$100\theta_{\rm eq}$	$0.831^{+0.022}_{-0.030}$	$\chi^2_{\rm prior}$	0.98 ± 1.4
$z_{\rm re}$	$7.42^{+0.23}_{-0.91}$	$100\theta_{\rm s,eq}$	$0.459^{+0.011}_{-0.016}$	$\chi^2_{\rm CMB}$	1140.5 ± 3.4
$10^9 A_{\rm s}$	$2.077^{+0.043}_{-0.051}$	$H(0.15)$	$59.4^{+2.7}_{-8.7}$		
$10^9 A_{\rm s}e^{-2\tau}$	1.889 ± 0.027	$D_{\rm M}(0.15)$	834^{+200}_{-200}		

$\bar{\chi}^2_{\rm eff} = 1141.50$; $\Delta\bar{\chi}^2_{\rm eff} = 0.19$; $R - 1 = 0.01065$

6.17 base_mnu_plikHM_TE_lowE_BAO

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022461	0.02249 ± 0.00023	$\langle d^2\rangle^{1/2}$	2.3776	2.363 ± 0.043	$H(0.38)$	83.18	$83.07^{+0.54}_{-0.47}$
$\boldsymbol{\Omega_c h^2}$	0.11756	0.1171 ± 0.0016	$z_{\rm re}$	7.25	$7.07^{+0.91}_{-0.75}$	$D_{\rm M}(0.38)$	1523.8	1527^{+11}_{-13}
$\boldsymbol{100\theta_{MC}}$	1.041331	1.04142 ± 0.00046	$10^9 A_{\rm s}$	2.0466	2.038 ± 0.041	$H(0.51)$	89.842	$89.73^{+0.48}_{-0.40}$
$\boldsymbol{\tau}$	0.0506	0.0492 ± 0.0085	$10^9 A_{\rm s} e^{-2\tau}$	1.8495	1.846 ± 0.019	$D_{\rm M}(0.51)$	1974.8	1978^{+14}_{-16}
$\boldsymbol{\Sigma m_\nu}$ [eV]	0.120	$0.158^{+0.051}_{-0.15}$	D_{40}	1214.5	1211 ± 25	$H(0.61)$	95.415	$95.31^{+0.44}_{-0.36}$
$\boldsymbol{\ln(10^{10} A_s)}$	3.0188	3.014 ± 0.020	D_{220}	5694	5695 ± 58	$D_{\rm M}(0.61)$	2298.6	2302^{+15}_{-17}
$\boldsymbol{n_s}$	0.9659	0.967 ± 0.010	D_{810}	2504.1	2502 ± 26	$H(2.33)$	235.41	235.37 ± 0.82
$\boldsymbol{y_{cal}}$	1.00003	0.99999 ± 0.0025	D_{1420}	805.7	806 ± 12	$D_{\rm M}(2.33)$	5759.8	5766^{+19}_{-24}
$\boldsymbol{A_{100}^{dustTE}}$	0.1120	0.113 ± 0.038	D_{2000}	227.02	226.9 ± 4.2	$f\sigma_8(0.15)$	0.4381	$0.433^{+0.016}_{-0.012}$
$\boldsymbol{A_{100\times143}^{dustTE}}$	0.1333	0.136 ± 0.030	$n_{\rm s,0.002}$	0.9659	0.967 ± 0.010	$\sigma_8(0.15)$	0.7229	$0.712^{+0.032}_{-0.020}$
$\boldsymbol{A_{100\times217}^{dustTE}}$	0.477	0.477 ± 0.085	$Y_{\rm P}$	0.245430	0.245438 ± 0.000091	$f\sigma_8(0.38)$	0.4572	$0.451^{+0.017}_{-0.012}$
$\boldsymbol{A_{143}^{dustTE}}$	0.216	0.220 ± 0.054	$Y_{\rm P}^{\rm BBN}$	0.246757	0.246765 ± 0.000092	$\sigma_8(0.38)$	0.6416	$0.632^{+0.029}_{-0.018}$
$\boldsymbol{A_{143\times217}^{dustTE}}$	0.658	0.655 ± 0.080	10^5D/H	2.5689	2.565 ± 0.042	$f\sigma_8(0.51)$	0.4565	$0.450^{+0.017}_{-0.012}$
$\boldsymbol{A_{217}^{dustTE}}$	2.046	2.03 ± 0.27	Age/Gyr	13.7913	$13.805^{+0.043}_{-0.055}$	$\sigma_8(0.51)$	0.6008	$0.592^{+0.027}_{-0.017}$
$\boldsymbol{c_{100}}$	1.00017	1.00019 ± 0.00070	z_*	1089.595	1089.53 ± 0.35	$f\sigma_8(0.61)$	0.4522	$0.446^{+0.017}_{-0.012}$
$\boldsymbol{c_{217}}$	0.99800	0.99800 ± 0.00064	r_*	144.993	145.07 ± 0.41	$\sigma_8(0.61)$	0.5719	$0.563^{+0.026}_{-0.016}$
H_0	67.96	$67.81^{+0.73}_{-0.66}$	$100\theta_*$	1.041549	1.04165 ± 0.00047	$f\sigma_8(2.33)$	0.2896	$0.286^{+0.011}_{-0.0070}$
Ω_Λ	0.6940	$0.6925^{+0.0087}_{-0.0077}$	$D_{\rm M}(z_*)$/Gpc	13.9209	13.927 ± 0.039	$\sigma_8(2.33)$	0.2982	$0.294^{+0.013}_{-0.0079}$
$\Omega_{\rm m}$	0.3060	$0.3075^{+0.0077}_{-0.0087}$	$z_{\rm drag}$	1059.97	1060.01 ± 0.52	$\chi^2_{\rm simall}$	395.67	396.8 ± 1.6
$\Omega_{\rm m} h^2$	0.14132	0.1413 ± 0.0012	$r_{\rm drag}$	147.636	147.71 ± 0.44	$\chi^2_{\rm plikTE}$	852.84	859.6 ± 3.6
$\Omega_\nu h^2$	0.00129	$0.00170^{+0.00055}_{-0.0016}$	$k_{\rm D}$	0.14036	0.14031 ± 0.00054	$\chi^2_{\rm 6DF}$	0.00099	0.052 ± 0.074
$\Omega_{\rm m} h^3$	0.09603	$0.09582^{+0.00088}_{-0.00072}$	$100\theta_{\rm D}$	0.160780	0.16076 ± 0.00030	$\chi^2_{\rm MGS}$	1.61	1.59 ± 0.62
σ_8	0.7816	$0.770^{+0.035}_{-0.022}$	$z_{\rm eq}$	3346.1	3336 ± 38	$\chi^2_{\rm DR12BAO}$	3.54	4.4 ± 1.5
S_8	0.7894	$0.779^{+0.030}_{-0.024}$	$k_{\rm eq}$	0.010213	0.01018 ± 0.00012	$\chi^2_{\rm prior}$	0.42	7.5 ± 3.7
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4324	$0.427^{+0.017}_{-0.013}$	$100\theta_{\rm eq}$	0.8241	$0.8262^{+0.0068}_{-0.0079}$	$\chi^2_{\rm BAO}$	5.15	6.1 ± 1.3
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.5813	$0.573^{+0.024}_{-0.017}$	$100\theta_{\rm s,eq}$	0.45495	$0.4560^{+0.0035}_{-0.0041}$	$\chi^2_{\rm CMB}$	1248.51	1256.4 ± 4.0
$\sigma_8/h^{0.5}$	0.9481	$0.935^{+0.038}_{-0.026}$	$H(0.15)$	73.18	$73.04^{+0.65}_{-0.58}$			
$r_{\rm drag} h$	100.33	100.2 ± 1.1	$D_{\rm M}(0.15)$	638.3	$639.7^{+5.5}_{-6.4}$			

Best-fit $\chi^2_{\rm eff} = 1254.08$; $\Delta\chi^2_{\rm eff} = -0.15$; $\bar{\chi}^2_{\rm eff} = 1269.93$; $\Delta\bar{\chi}^2_{\rm eff} = 0.51$; $R - 1 = 0.00751$

$\chi^2_{\rm eff}$: BAO - 6DF: 0.00 (Δ 0.00) MGS: 1.61 (Δ -0.14) DR12BAO: 3.54 (Δ 0.10) CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.67 (Δ 0.00) plik_rd12_HM_v22_TE: 852.84 (Δ -0.10)

6.18 base_mnu_plikHM_TE_lowE_BAO_post_lensing

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02250 ± 0.00022	$\langle d^2 \rangle^{1/2}$	2.420 ± 0.030	$H(0.38)$	83.30 ± 0.41
$\boldsymbol{\Omega_c h^2}$	0.1189 ± 0.0012	$z_{\rm re}$	7.60 ± 0.76	$D_{\rm M}(0.38)$	1522 ± 10
$\boldsymbol{100\theta_{MC}}$	1.04129 ± 0.00046	$10^9 A_{\rm s}$	2.085 ± 0.032	$H(0.51)$	89.99 ± 0.34
$\boldsymbol{\tau}$	0.0542 ± 0.0076	$10^9 A_{\rm s} e^{-2\tau}$	1.871 ± 0.014	$D_{\rm M}(0.51)$	1972 ± 12
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 0.0765	D_{40}	1222 ± 24	$H(0.61)$	95.58 ± 0.30
$\boldsymbol{\ln(10^{10} A_s)}$	3.037 ± 0.015	D_{220}	5722 ± 58	$D_{\rm M}(0.61)$	2296 ± 13
$\boldsymbol{n_s}$	$0.9674^{+0.0096}_{-0.011}$	D_{810}	2529 ± 22	$H(2.33)$	236.00 ± 0.75
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0027	D_{1420}	815 ± 10	$D_{\rm M}(2.33)$	5749 ± 15
$\boldsymbol{A_{100}^{dustTE}}$	0.114 ± 0.038	D_{2000}	230.4 ± 3.8	$f\sigma_8(0.15)$	0.4518 ± 0.0068
$\boldsymbol{A_{100\times143}^{dustTE}}$	0.136 ± 0.030	$n_{\rm s,0.002}$	$0.9674^{+0.0096}_{-0.011}$	$\sigma_8(0.15)$	$0.745^{+0.012}_{-0.0079}$
$\boldsymbol{A_{100\times217}^{dustTE}}$	0.474 ± 0.088	$Y_{\rm P}$	0.245443 ± 0.000084	$f\sigma_8(0.38)$	0.4710 ± 0.0062
$\boldsymbol{A_{143}^{dustTE}}$	0.220 ± 0.052	$Y_{\rm P}^{\rm BBN}$	0.246770 ± 0.000085	$\sigma_8(0.38)$	$0.661^{+0.011}_{-0.0071}$
$\boldsymbol{A_{143\times217}^{dustTE}}$	0.659 ± 0.077	10^5D/H	2.563 ± 0.039	$f\sigma_8(0.51)$	0.4702 ± 0.0060
$\boldsymbol{A_{217}^{dustTE}}$	2.05 ± 0.27	Age/Gyr	13.766 ± 0.035	$\sigma_8(0.51)$	$0.619^{+0.010}_{-0.0067}$
$\boldsymbol{c_{100}}$	1.00021 ± 0.00070	z_*	1089.66 ± 0.32	$f\sigma_8(0.61)$	$0.4656^{+0.0062}_{-0.0051}$
$\boldsymbol{c_{217}}$	0.99799 ± 0.00062	r_*	144.62 ± 0.30	$\sigma_8(0.61)$	$0.589^{+0.010}_{-0.0064}$
H_0	68.01 ± 0.60	$100\theta_*$	1.04147 ± 0.00045	$f\sigma_8(2.33)$	$0.2973^{+0.0044}_{-0.0031}$
Ω_Λ	0.6927 ± 0.0076	$D_{\rm M}(z_*)$/Gpc	13.886 ± 0.030	$\sigma_8(2.33)$	$0.3066^{+0.0051}_{-0.0035}$
$\Omega_{\rm m}$	0.3073 ± 0.0076	$z_{\rm drag}$	1060.15 ± 0.48	$\chi^2_{\rm lensing}$	10.6 ± 2.0
$\Omega_{\rm m} h^2$	0.1421 ± 0.0012	$r_{\rm drag}$	147.24 ± 0.33	$\chi^2_{\rm simall}$	396.9 ± 1.6
$\Omega_\nu h^2$	< 0.000823	$k_{\rm D}$	0.14080 ± 0.00044	$\chi^2_{\rm plikTE}$	860.0 ± 3.6
$\Omega_{\rm m} h^3$	0.09661 ± 0.00054	$100\theta_{\rm D}$	0.16068 ± 0.00028	$\chi^2_{\rm 6DF}$	0.045 ± 0.062
σ_8	$0.806^{+0.013}_{-0.0085}$	$z_{\rm eq}$	3379 ± 28	$\chi^2_{\rm MGS}$	1.56 ± 0.57
S_8	0.816 ± 0.013	$k_{\rm eq}$	0.010312 ± 0.000085	$\chi^2_{\rm DR12BAO}$	4.4 ± 1.3
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4468 ± 0.0073	$100\theta_{\rm eq}$	0.8182 ± 0.0052	$\chi^2_{\rm prior}$	7.5 ± 4.0
$\sigma_8 \Omega_{\rm m}^{0.25}$	$0.6002^{+0.0089}_{-0.0076}$	$100\theta_{\rm s,eq}$	0.4518 ± 0.0027	$\chi^2_{\rm CMB}$	1267.5 ± 3.9
$\sigma_8/h^{0.5}$	$0.978^{+0.014}_{-0.011}$	$H(0.15)$	73.25 ± 0.53	$\chi^2_{\rm BAO}$	6.0 ± 1.1
$r_{\rm drag} h$	100.14 ± 0.97	$D_{\rm M}(0.15)$	637.8 ± 5.1		

$\bar{\chi}^2_{\rm eff} = 1280.97$; $\Delta\bar{\chi}^2_{\rm eff} = 0.28$; $R - 1 = 0.04268$

6.19 base_mnu_plikHM_TE_lowE_BAO_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02250 ± 0.00023	$\langle d^2 \rangle^{1/2}$	2.367 ± 0.043	$H(0.38)$	$83.07^{+0.54}_{-0.48}$
$\boldsymbol{\Omega_c h^2}$	0.1171 ± 0.0017	$z_{\rm re}$	$7.43^{+0.26}_{-0.91}$	$D_{\rm M}(0.38)$	1527^{+12}_{-13}
$\boldsymbol{100\theta_{MC}}$	1.04143 ± 0.00046	$10^9 A_{\rm s}$	$2.051^{+0.029}_{-0.037}$	$H(0.51)$	$89.73^{+0.48}_{-0.41}$
$\boldsymbol{\tau}$	$0.0526^{+0.0035}_{-0.0078}$	$10^9 A_{\rm s} e^{-2\tau}$	1.846 ± 0.019	$D_{\rm M}(0.51)$	1978^{+14}_{-16}
$\boldsymbol{\Sigma m_\nu}$ [eV]	$0.162^{+0.060}_{-0.14}$	D_{40}	1209 ± 24	$H(0.61)$	$95.31^{+0.44}_{-0.37}$
$\boldsymbol{\ln(10^{10} A_s)}$	$3.021^{+0.014}_{-0.018}$	D_{220}	5693 ± 57	$D_{\rm M}(0.61)$	2302^{+15}_{-18}
$\boldsymbol{n_s}$	0.968 ± 0.010	D_{810}	2504 ± 26	$H(2.33)$	235.36 ± 0.82
$\boldsymbol{y_{cal}}$	0.9999 ± 0.0025	D_{1420}	806 ± 12	$D_{\rm M}(2.33)$	5766^{+19}_{-24}
$\boldsymbol{A_{100}^{dustTE}}$	0.113 ± 0.038	D_{2000}	227.3 ± 4.2	$f\sigma_8(0.15)$	$0.434^{+0.016}_{-0.012}$
$\boldsymbol{A_{100\times143}^{dustTE}}$	0.135 ± 0.030	$n_{\rm s,0.002}$	0.968 ± 0.010	$\sigma_8(0.15)$	$0.714^{+0.033}_{-0.020}$
$\boldsymbol{A_{100\times217}^{dustTE}}$	0.476 ± 0.085	$Y_{\rm P}$	0.245443 ± 0.000091	$f\sigma_8(0.38)$	$0.452^{+0.017}_{-0.012}$
$\boldsymbol{A_{143}^{dustTE}}$	0.220 ± 0.054	$Y_{\rm P}^{\rm BBN}$	0.246770 ± 0.000091	$\sigma_8(0.38)$	$0.633^{+0.029}_{-0.017}$
$\boldsymbol{A_{143\times217}^{dustTE}}$	0.655 ± 0.081	10^5D/H	2.563 ± 0.042	$f\sigma_8(0.51)$	$0.452^{+0.017}_{-0.012}$
$\boldsymbol{A_{217}^{dustTE}}$	2.03 ± 0.27	Age/Gyr	$13.805^{+0.044}_{-0.055}$	$\sigma_8(0.51)$	$0.593^{+0.027}_{-0.016}$
$\boldsymbol{c_{100}}$	1.00019 ± 0.00070	z_*	1089.51 ± 0.34	$f\sigma_8(0.61)$	$0.447^{+0.017}_{-0.011}$
$\boldsymbol{c_{217}}$	0.99800 ± 0.00064	r_*	145.08 ± 0.41	$\sigma_8(0.61)$	$0.564^{+0.026}_{-0.015}$
H_0	67.81 ± 0.71	$100\theta_*$	1.04166 ± 0.00047	$f\sigma_8(2.33)$	$0.286^{+0.011}_{-0.0068}$
Ω_Λ	$0.6926^{+0.0087}_{-0.0078}$	$D_{\rm M}(z_*)$/Gpc	13.928 ± 0.039	$\sigma_8(2.33)$	$0.295^{+0.013}_{-0.0077}$
$\Omega_{\rm m}$	$0.3074^{+0.0078}_{-0.0087}$	$z_{\rm drag}$	1060.03 ± 0.52	$\chi^2_{\rm simall}$	396.4 ± 1.1
$\Omega_{\rm m} h^2$	0.1413 ± 0.0012	$r_{\rm drag}$	147.72 ± 0.44	$\chi^2_{\rm plikTE}$	859.6 ± 3.6
$\Omega_\nu h^2$	$0.00174^{+0.00064}_{-0.0015}$	$k_{\rm D}$	0.14032 ± 0.00054	$\chi^2_{\rm 6DF}$	0.052 ± 0.075
$\Omega_{\rm m} h^3$	$0.09581^{+0.00089}_{-0.00072}$	$100\theta_{\rm D}$	0.16075 ± 0.00030	$\chi^2_{\rm MGS}$	1.59 ± 0.63
σ_8	$0.772^{+0.035}_{-0.021}$	$z_{\rm eq}$	3335 ± 38	$\chi^2_{\rm DR12BAO}$	4.4 ± 1.5
S_8	$0.781^{+0.030}_{-0.024}$	$k_{\rm eq}$	0.01018 ± 0.00012	$\chi^2_{\rm prior}$	7.5 ± 3.7
$\sigma_8 \Omega_{\rm m}^{0.5}$	$0.428^{+0.017}_{-0.013}$	$100\theta_{\rm eq}$	$0.8265^{+0.0069}_{-0.0079}$	$\chi^2_{\rm BAO}$	6.1 ± 1.3
$\sigma_8 \Omega_{\rm m}^{0.25}$	$0.574^{+0.024}_{-0.016}$	$100\theta_{\rm s,eq}$	$0.4562^{+0.0036}_{-0.0041}$	$\chi^2_{\rm CMB}$	1256.0 ± 3.8
$\sigma_8/h^{0.5}$	$0.937^{+0.039}_{-0.026}$	$H(0.15)$	73.04 ± 0.63		
$r_{\rm drag} h$	100.2 ± 1.1	$D_{\rm M}(0.15)$	$639.7^{+5.7}_{-6.4}$		

$\bar{\chi}^2_{\rm eff} = 1269.50$; $\Delta\bar{\chi}^2_{\rm eff} = 0.51$; $R - 1 = 0.00760$

6.20 base_mnu_plikHM_TE_lowE_BAO_post_lensing_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02251 ± 0.00022	$\langle d^2 \rangle^{1/2}$	2.421 ± 0.030	$H(0.38)$	83.31 ± 0.41
$\boldsymbol{\Omega_c h^2}$	0.1188 ± 0.0012	$z_{\rm re}$	$7.72^{+0.55}_{-0.82}$	$D_{\rm M}(0.38)$	1522 ± 11
$\boldsymbol{100\theta_{MC}}$	1.04130 ± 0.00045	$10^9 A_{\rm s}$	$2.090^{+0.026}_{-0.032}$	$H(0.51)$	89.99 ± 0.35
$\boldsymbol{\tau}$	$0.0553^{+0.0056}_{-0.0078}$	$10^9 A_{\rm s} e^{-2\tau}$	1.871 ± 0.014	$D_{\rm M}(0.51)$	1972 ± 13
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 0.0794	D_{40}	1222 ± 24	$H(0.61)$	95.58 ± 0.31
$\boldsymbol{\ln(10^{10} A_s)}$	$3.040^{+0.012}_{-0.015}$	D_{220}	5721 ± 58	$D_{\rm M}(0.61)$	2296 ± 14
$\boldsymbol{n_s}$	0.968 ± 0.010	D_{810}	2529 ± 22	$H(2.33)$	235.98 ± 0.75
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0027	D_{1420}	815 ± 11	$D_{\rm M}(2.33)$	5749 ± 15
$\boldsymbol{A_{100}^{dustTE}}$	0.114 ± 0.038	D_{2000}	230.4 ± 3.8	$f\sigma_8(0.15)$	0.4520 ± 0.0067
$\boldsymbol{A_{100\times143}^{dustTE}}$	0.136 ± 0.030	$n_{\rm s,0.002}$	0.968 ± 0.010	$\sigma_8(0.15)$	$0.746^{+0.012}_{-0.0078}$
$\boldsymbol{A_{100\times217}^{dustTE}}$	0.473 ± 0.087	$Y_{\rm P}$	0.245445 ± 0.000084	$f\sigma_8(0.38)$	0.4712 ± 0.0061
$\boldsymbol{A_{143}^{dustTE}}$	0.220 ± 0.053	$Y_{\rm P}^{\rm BBN}$	0.246772 ± 0.000085	$\sigma_8(0.38)$	$0.662^{+0.011}_{-0.0070}$
$\boldsymbol{A_{143\times217}^{dustTE}}$	0.659 ± 0.078	10^5D/H	2.561 ± 0.039	$f\sigma_8(0.51)$	$0.4704^{+0.0062}_{-0.0053}$
$\boldsymbol{A_{217}^{dustTE}}$	2.04 ± 0.27	Age/Gyr	$13.766^{+0.033}_{-0.037}$	$\sigma_8(0.51)$	$0.619^{+0.011}_{-0.0066}$
$\boldsymbol{c_{100}}$	1.00022 ± 0.00070	z_*	1089.65 ± 0.31	$f\sigma_8(0.61)$	$0.4658^{+0.0062}_{-0.0050}$
$\boldsymbol{c_{217}}$	0.99800 ± 0.00061	r_*	144.63 ± 0.30	$\sigma_8(0.61)$	$0.590^{+0.010}_{-0.0063}$
H_0	68.02 ± 0.61	$100\theta_*$	1.04147 ± 0.00045	$f\sigma_8(2.33)$	$0.2975^{+0.0044}_{-0.0031}$
Ω_Λ	0.6929 ± 0.0077	$D_{\rm M}(z_*)$/Gpc	13.887 ± 0.030	$\sigma_8(2.33)$	$0.3069^{+0.0052}_{-0.0035}$
$\Omega_{\rm m}$	0.3071 ± 0.0077	$z_{\rm drag}$	1060.16 ± 0.48	$\chi^2_{\rm lensing}$	10.5 ± 1.9
$\Omega_{\rm m} h^2$	0.1420 ± 0.0012	$r_{\rm drag}$	147.25 ± 0.33	$\chi^2_{\rm simall}$	396.9 ± 1.6
$\Omega_\nu h^2$	< 0.000854	$k_{\rm D}$	0.14080 ± 0.00045	$\chi^2_{\rm plikTE}$	860.0 ± 3.5
$\Omega_{\rm m} h^3$	0.09661 ± 0.00054	$100\theta_{\rm D}$	$0.16067^{+0.00025}_{-0.00028}$	$\chi^2_{\rm 6DF}$	0.045 ± 0.063
σ_8	$0.807^{+0.013}_{-0.0084}$	$z_{\rm eq}$	3378 ± 28	$\chi^2_{\rm MGS}$	1.58 ± 0.57
S_8	0.816 ± 0.013	$k_{\rm eq}$	0.010309 ± 0.000084	$\chi^2_{\rm DR12BAO}$	4.4 ± 1.3
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4470 ± 0.0072	$100\theta_{\rm eq}$	0.8184 ± 0.0051	$\chi^2_{\rm prior}$	7.5 ± 3.9
$\sigma_8 \Omega_{\rm m}^{0.25}$	$0.6004^{+0.0088}_{-0.0075}$	$100\theta_{\rm s,eq}$	0.4519 ± 0.0026	$\chi^2_{\rm CMB}$	1267.3 ± 3.8
$\sigma_8/h^{0.5}$	$0.978^{+0.014}_{-0.011}$	$H(0.15)$	73.26 ± 0.53	$\chi^2_{\rm BAO}$	6.0 ± 1.1
$r_{\rm drag} h$	100.16 ± 0.98	$D_{\rm M}(0.15)$	637.7 ± 5.2		

$\bar{\chi}^2_{\rm eff} = 1280.75$; $\Delta\bar{\chi}^2_{\rm eff} = 0.23$; $R - 1 = 0.05310$

6.21 base_mnu_plikHM_EE_lowE_BAO

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02346	$0.02412^{+0.00081}_{-0.0010}$	D_{220}	5888	5988 ± 170	$H(0.51)$	90.50	90.42 ± 0.62
$\boldsymbol{\Omega_c h^2}$	0.11759	$0.1150^{+0.0036}_{-0.0023}$	D_{810}	2579.1	2595 ± 37	$D_{\rm M}(0.51)$	1956.4	1959 ± 19
$\boldsymbol{100\theta_{MC}}$	1.03983	1.04008 ± 0.00080	D_{1420}	837.7	847 ± 17	$H(0.61)$	96.05	95.98 ± 0.58
$\boldsymbol{\tau}$	0.0519	0.0529 ± 0.0085	D_{2000}	238.8	241.9 ± 6.1	$D_{\rm M}(0.61)$	2278.0	2281 ± 21
$\boldsymbol{\Sigma m_\nu}$ [eV]	0.069	< 0.315	$n_{\rm s,0.002}$	0.9751	0.981 ± 0.011	$H(2.33)$	236.00	236.0 ± 1.0
$\boldsymbol{\ln(10^{10} A_s)}$	3.0490	3.051 ± 0.022	$Y_{\rm P}$	0.245852	$0.24609^{+0.00032}_{-0.00038}$	$D_{\rm M}(2.33)$	5724.7	5729 ± 31
$\boldsymbol{n_s}$	0.9751	0.981 ± 0.011	$Y_{\rm P}^{\rm BBN}$	0.247180	$0.24742^{+0.00032}_{-0.00038}$	$f\sigma_8(0.15)$	0.4452	$0.420^{+0.033}_{-0.018}$
$\boldsymbol{y_{cal}}$	0.99986	0.9999 ± 0.0025	10^5D/H	2.394	2.30 ± 0.14	$\sigma_8(0.15)$	0.7426	$0.697^{+0.058}_{-0.028}$
H_0	68.74	68.63 ± 0.88	Age/Gyr	13.709	13.719 ± 0.072	$f\sigma_8(0.38)$	0.4659	$0.440^{+0.034}_{-0.018}$
Ω_Λ	0.6999	$0.6987^{+0.0097}_{-0.0088}$	z_*	1088.40	$1087.5^{+1.2}_{-1.1}$	$\sigma_8(0.38)$	0.6595	$0.619^{+0.051}_{-0.024}$
$\Omega_{\rm m}$	0.3001	0.3013 ± 0.0093	r_*	144.22	144.34 ± 0.55	$f\sigma_8(0.51)$	0.4659	$0.440^{+0.034}_{-0.017}$
$\Omega_{\rm m}h^2$	0.14180	0.1418 ± 0.0014	$100\theta_*$	1.03991	1.04017 ± 0.00082	$\sigma_8(0.51)$	0.6178	$0.580^{+0.048}_{-0.022}$
$\Omega_\nu h^2$	0.00074	< 0.00339	$D_{\rm M}(z_*)$/Gpc	13.869	13.877 ± 0.053	$f\sigma_8(0.61)$	0.4619	$0.436^{+0.033}_{-0.017}$
$\Omega_{\rm m}h^3$	0.09747	0.0973 ± 0.0013	$z_{\rm drag}$	1062.26	$1063.5^{+1.8}_{-2.0}$	$\sigma_8(0.61)$	0.5881	$0.552^{+0.045}_{-0.021}$
σ_8	0.8023	$0.753^{+0.063}_{-0.030}$	$r_{\rm drag}$	146.53	146.46 ± 0.71	$f\sigma_8(2.33)$	0.2972	$0.281^{+0.020}_{-0.0093}$
S_8	0.8025	$0.754^{+0.062}_{-0.036}$	$k_{\rm D}$	0.14225	0.1428 ± 0.0012	$\sigma_8(2.33)$	0.3068	$0.289^{+0.022}_{-0.010}$
$\sigma_8\Omega_{\rm m}^{0.5}$	0.4395	$0.413^{+0.034}_{-0.020}$	$100\theta_{\rm D}$	0.15924	0.1586 ± 0.0010	$\chi^2_{\rm simall}$	395.62	396.7 ± 1.5
$\sigma_8\Omega_{\rm m}^{0.25}$	0.5939	$0.557^{+0.046}_{-0.024}$	$z_{\rm eq}$	3371	3324^{+67}_{-49}	$\chi^2_{\rm plikEE}$	739.05	744.0 ± 3.2
$\sigma_8/h^{0.5}$	0.968	$0.908^{+0.075}_{-0.038}$	$k_{\rm eq}$	0.010287	$0.01015^{+0.00020}_{-0.00015}$	$\chi^2_{\rm 6DF}$	0.0017	0.058 ± 0.081
$r_{\rm drag}h$	100.72	100.5 ± 1.2	$100\theta_{\rm eq}$	0.8212	$0.8323^{+0.0093}_{-0.015}$	$\chi^2_{\rm MGS}$	1.82	1.77 ± 0.71
$\langle d^2\rangle^{1/2}$	2.401	$2.342^{+0.075}_{-0.056}$	$100\theta_{\rm s,eq}$	0.4526	$0.4579^{+0.0047}_{-0.0074}$	$\chi^2_{\rm DR12BAO}$	3.62	4.7 ± 1.6
$z_{\rm re}$	7.17	$7.11^{+0.86}_{-0.72}$	$H(0.15)$	73.92	73.82 ± 0.80	$\chi^2_{\rm prior}$	0.003	0.99 ± 1.4
$10^9 A_{\rm s}$	2.1093	2.115 ± 0.046	$D_{\rm M}(0.15)$	631.5	632.5 ± 7.5	$\chi^2_{\rm BAO}$	5.44	6.5 ± 1.4
$10^9 A_{\rm s}e^{-2\tau}$	1.9015	1.902 ± 0.025	$H(0.38)$	83.87	83.79 ± 0.68	$\chi^2_{\rm CMB}$	1134.66	1140.7 ± 3.5
D_{40}	1231.6	1226 ± 31	$D_{\rm M}(0.38)$	1508.8	1511 ± 16			

Best-fit $\chi^2_{\rm eff} = 1140.11$; $\Delta\chi^2_{\rm eff} = -0.05$; $\bar{\chi}^2_{\rm eff} = 1148.18$; $\Delta\bar{\chi}^2_{\rm eff} = 0.82$; $R - 1 = 0.00933$

$\chi^2_{\rm eff}$: BAO - 6DF: 0.00 (Δ -0.00) MGS: 1.82 (Δ -0.07) DR12BAO: 3.62 (Δ 0.02) CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.62 (Δ 0.00) plik_rd12_HM_v22_EE: 739.05 (Δ 0.00)

6.22 base_mnu_plikHM_EE_lowE_BAO_post_lensing

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	$0.02390^{+0.00067}_{-0.00076}$	D_{220}	5959 ± 140	$H(0.51)$	90.52 ± 0.57
$\boldsymbol{\Omega_c h^2}$	0.1164 ± 0.0017	D_{810}	2593 ± 31	$D_{\rm M}(0.51)$	1957 ± 18
$\boldsymbol{100\theta_{MC}}$	1.03995 ± 0.00077	D_{1420}	845 ± 15	$H(0.61)$	96.08 ± 0.53
$\boldsymbol{\tau}$	0.0532 ± 0.0081	D_{2000}	241.3 ± 5.3	$D_{\rm M}(0.61)$	2278 ± 20
$\boldsymbol{\Sigma m_\nu}$ [eV]	$0.162^{+0.068}_{-0.13}$	$n_{\rm s,0.002}$	0.978 ± 0.010	$H(2.33)$	236.19 ± 0.87
$\boldsymbol{\ln(10^{10} A_s)}$	3.054 ± 0.018	$Y_{\rm P}$	0.24600 ± 0.00028	$D_{\rm M}(2.33)$	5723 ± 27
$\boldsymbol{n_s}$	0.978 ± 0.010	$Y_{\rm P}^{\rm BBN}$	0.24733 ± 0.00028	$f\sigma_8(0.15)$	$0.433^{+0.014}_{-0.012}$
$\boldsymbol{y_{cal}}$	0.99999 ± 0.0024	10^5D/H	2.33 ± 0.11	$\sigma_8(0.15)$	$0.720^{+0.026}_{-0.017}$
H_0	68.71 ± 0.86	Age/Gyr	13.705 ± 0.063	$f\sigma_8(0.38)$	$0.454^{+0.014}_{-0.011}$
Ω_Λ	0.6990 ± 0.0093	z_*	1087.85 ± 0.89	$\sigma_8(0.38)$	$0.640^{+0.023}_{-0.015}$
$\Omega_{\rm m}$	0.3010 ± 0.0093	r_*	144.18 ± 0.41	$f\sigma_8(0.51)$	$0.454^{+0.014}_{-0.010}$
$\Omega_{\rm m}h^2$	0.1420 ± 0.0013	$100\theta_*$	1.04003 ± 0.00078	$\sigma_8(0.51)$	$0.600^{+0.021}_{-0.014}$
$\Omega_\nu h^2$	$0.00174^{+0.00073}_{-0.0014}$	$D_{\rm M}(z_*)$/Gpc	13.863 ± 0.042	$f\sigma_8(0.61)$	$0.450^{+0.014}_{-0.010}$
$\Omega_{\rm m}h^3$	0.0976 ± 0.0010	$z_{\rm drag}$	1063.1 ± 1.5	$\sigma_8(0.61)$	$0.571^{+0.020}_{-0.014}$
σ_8	$0.778^{+0.028}_{-0.019}$	$r_{\rm drag}$	146.35 ± 0.58	$f\sigma_8(2.33)$	$0.2899^{+0.0087}_{-0.0058}$
S_8	$0.779^{+0.028}_{-0.023}$	$k_{\rm D}$	0.1427 ± 0.0011	$\sigma_8(2.33)$	$0.298^{+0.010}_{-0.0067}$
$\sigma_8\Omega_{\rm m}^{0.5}$	$0.427^{+0.015}_{-0.013}$	$100\theta_{\rm D}$	0.15880 ± 0.00083	$\chi^2_{\rm lensing}$	9.2 ± 1.3
$\sigma_8\Omega_{\rm m}^{0.25}$	$0.576^{+0.020}_{-0.015}$	$z_{\rm eq}$	3353 ± 31	$\chi^2_{\rm simall}$	396.7 ± 1.4
$\sigma_8/h^{0.5}$	$0.939^{+0.033}_{-0.024}$	$k_{\rm eq}$	0.010234 ± 0.000096	$\chi^2_{\rm plikEE}$	742.9 ± 2.6
$r_{\rm drag}h$	100.6 ± 1.2	$100\theta_{\rm eq}$	$0.8259^{+0.0063}_{-0.0071}$	$\chi^2_{\rm 6DF}$	0.059 ± 0.084
$\langle d^2\rangle^{1/2}$	2.375 ± 0.037	$100\theta_{\rm s,eq}$	0.4548 ± 0.0032	$\chi^2_{\rm MGS}$	1.80 ± 0.72
$z_{\rm re}$	$7.19^{+0.82}_{-0.75}$	$H(0.15)$	73.91 ± 0.77	$\chi^2_{\rm DR12BAO}$	4.7 ± 1.5
$10^9 A_{\rm s}$	2.121 ± 0.038	$D_{\rm M}(0.15)$	631.8 ± 7.2	$\chi^2_{\rm prior}$	0.96 ± 1.4
$10^9 A_{\rm s}e^{-2\tau}$	1.907 ± 0.019	$H(0.38)$	83.88 ± 0.64	$\chi^2_{\rm CMB}$	1148.8 ± 3.4
D_{40}	1233 ± 28	$D_{\rm M}(0.38)$	1509 ± 15	$\chi^2_{\rm BAO}$	6.5 ± 1.5

$\bar{\chi}^2_{\rm eff} = 1156.24$; $\Delta\bar{\chi}^2_{\rm eff} = 0.55$; $R - 1 = 0.01129$

6.23 base_mnu_plikHM_EE_lowE_BAO_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	$0.02409^{+0.00081}_{-0.0010}$	D_{220}	5981 ± 170	$H(0.51)$	90.40 ± 0.62
$\boldsymbol{\Omega_c h^2}$	$0.1150^{+0.0035}_{-0.0023}$	D_{810}	2594 ± 36	$D_{\rm M}(0.51)$	1960 ± 19
$\boldsymbol{100\theta_{MC}}$	1.04008 ± 0.00080	D_{1420}	846 ± 17	$H(0.61)$	95.96 ± 0.58
$\boldsymbol{\tau}$	$0.0560^{+0.0045}_{-0.0076}$	D_{2000}	241.8 ± 6.1	$D_{\rm M}(0.61)$	2282 ± 21
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 0.312	$n_{\rm s,0.002}$	0.981 ± 0.011	$H(2.33)$	236.0 ± 1.0
$\boldsymbol{\ln(10^{10} A_s)}$	3.057 ± 0.019	$Y_{\rm P}$	$0.24608^{+0.00031}_{-0.00039}$	$D_{\rm M}(2.33)$	5730 ± 31
$\boldsymbol{n_s}$	0.981 ± 0.011	$Y_{\rm P}^{\rm BBN}$	$0.24740^{+0.00031}_{-0.00039}$	$f\sigma_8(0.15)$	$0.422^{+0.032}_{-0.018}$
$\boldsymbol{y_{cal}}$	0.9999 ± 0.0025	10^5D/H	2.30 ± 0.14	$\sigma_8(0.15)$	$0.699^{+0.058}_{-0.027}$
H_0	68.60 ± 0.88	Age/Gyr	13.721 ± 0.072	$f\sigma_8(0.38)$	$0.441^{+0.033}_{-0.017}$
Ω_Λ	$0.6985^{+0.0097}_{-0.0088}$	z_*	$1087.6^{+1.2}_{-1.1}$	$\sigma_8(0.38)$	$0.621^{+0.051}_{-0.023}$
$\Omega_{\rm m}$	0.3015 ± 0.0093	r_*	144.36 ± 0.55	$f\sigma_8(0.51)$	$0.441^{+0.033}_{-0.017}$
$\Omega_{\rm m}h^2$	0.1418 ± 0.0014	$100\theta_*$	1.04017 ± 0.00082	$\sigma_8(0.51)$	$0.582^{+0.048}_{-0.021}$
$\Omega_\nu h^2$	< 0.00335	$D_{\rm M}(z_*)$/Gpc	13.878 ± 0.054	$f\sigma_8(0.61)$	$0.438^{+0.033}_{-0.016}$
$\Omega_{\rm m}h^3$	0.0973 ± 0.0013	$z_{\rm drag}$	$1063.5^{+1.7}_{-2.0}$	$\sigma_8(0.61)$	$0.554^{+0.045}_{-0.020}$
σ_8	$0.755^{+0.063}_{-0.029}$	$r_{\rm drag}$	146.48 ± 0.72	$f\sigma_8(2.33)$	$0.283^{+0.020}_{-0.0089}$
S_8	$0.757^{+0.061}_{-0.036}$	$k_{\rm D}$	0.1427 ± 0.0012	$\sigma_8(2.33)$	$0.290^{+0.022}_{-0.010}$
$\sigma_8\Omega_{\rm m}^{0.5}$	$0.415^{+0.034}_{-0.020}$	$100\theta_{\rm D}$	0.1586 ± 0.0010	$\chi^2_{\rm simall}$	396.4 ± 1.3
$\sigma_8\Omega_{\rm m}^{0.25}$	$0.560^{+0.046}_{-0.024}$	$z_{\rm eq}$	3324^{+65}_{-49}	$\chi^2_{\rm plikEE}$	743.9 ± 3.1
$\sigma_8/h^{0.5}$	$0.912^{+0.074}_{-0.037}$	$k_{\rm eq}$	$0.01015^{+0.00020}_{-0.00015}$	$\chi^2_{\rm 6DF}$	0.057 ± 0.080
$r_{\rm drag}h$	100.5 ± 1.2	$100\theta_{\rm eq}$	$0.8322^{+0.0094}_{-0.015}$	$\chi^2_{\rm MGS}$	1.75 ± 0.71
$\langle d^2\rangle^{1/2}$	$2.349^{+0.073}_{-0.054}$	$100\theta_{\rm s,eq}$	$0.4579^{+0.0047}_{-0.0073}$	$\chi^2_{\rm DR12BAO}$	4.7 ± 1.6
$z_{\rm re}$	$7.43^{+0.34}_{-0.81}$	$H(0.15)$	73.79 ± 0.80	$\chi^2_{\rm prior}$	0.99 ± 1.4
$10^9 A_{\rm s}$	$2.127^{+0.038}_{-0.042}$	$D_{\rm M}(0.15)$	632.8 ± 7.5	$\chi^2_{\rm BAO}$	6.5 ± 1.4
$10^9 A_{\rm s}e^{-2\tau}$	1.901 ± 0.024	$H(0.38)$	83.76 ± 0.68	$\chi^2_{\rm CMB}$	1140.3 ± 3.4
D_{40}	1226 ± 31	$D_{\rm M}(0.38)$	1511 ± 16		

$\bar{\chi}^2_{\rm eff} = 1147.83$; $\Delta\bar{\chi}^2_{\rm eff} = 0.76$; $R - 1 = 0.01081$

6.24 base_mnu_plikHM_EE_lowE_BAO_post_lensing_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	$0.02387^{+0.00067}_{-0.00076}$	D_{220}	5954 ± 140	$H(0.51)$	90.48 ± 0.57
$\boldsymbol{\Omega_c h^2}$	0.1163 ± 0.0017	D_{810}	2592 ± 31	$D_{\rm M}(0.51)$	1958 ± 18
$\boldsymbol{100\theta_{MC}}$	1.03996 ± 0.00078	D_{1420}	844^{+14}_{-15}	$H(0.61)$	96.04 ± 0.52
$\boldsymbol{\tau}$	$0.0559^{+0.0047}_{-0.0075}$	D_{2000}	241.1 ± 5.3	$D_{\rm M}(0.61)$	2279 ± 20
$\boldsymbol{\Sigma m_\nu}$ [eV]	$0.168^{+0.075}_{-0.12}$	$n_{\rm s,0.002}$	0.978 ± 0.011	$H(2.33)$	236.14 ± 0.86
$\boldsymbol{\ln(10^{10} A_s)}$	$3.059^{+0.015}_{-0.017}$	$Y_{\rm P}$	0.24599 ± 0.00028	$D_{\rm M}(2.33)$	5725 ± 27
$\boldsymbol{n_s}$	0.978 ± 0.011	$Y_{\rm P}^{\rm BBN}$	0.24732 ± 0.00028	$f\sigma_8(0.15)$	$0.434^{+0.015}_{-0.012}$
$\boldsymbol{y_{cal}}$	0.99999 ± 0.0025	10^5D/H	2.33 ± 0.11	$\sigma_8(0.15)$	$0.721^{+0.026}_{-0.018}$
H_0	68.67 ± 0.85	Age/Gyr	13.710 ± 0.063	$f\sigma_8(0.38)$	$0.454^{+0.015}_{-0.011}$
Ω_Λ	0.6987 ± 0.0093	z_*	1087.87 ± 0.89	$\sigma_8(0.38)$	$0.640^{+0.023}_{-0.016}$
$\Omega_{\rm m}$	0.3013 ± 0.0093	r_*	144.22 ± 0.40	$f\sigma_8(0.51)$	$0.454^{+0.014}_{-0.011}$
$\Omega_{\rm m}h^2$	0.1420 ± 0.0013	$100\theta_*$	1.04005 ± 0.00079	$\sigma_8(0.51)$	$0.600^{+0.022}_{-0.015}$
$\Omega_\nu h^2$	$0.00181^{+0.00081}_{-0.0013}$	$D_{\rm M}(z_*)$/Gpc	13.867 ± 0.041	$f\sigma_8(0.61)$	$0.450^{+0.014}_{-0.010}$
$\Omega_{\rm m}h^3$	0.0975 ± 0.0010	$z_{\rm drag}$	1063.1 ± 1.5	$\sigma_8(0.61)$	$0.571^{+0.020}_{-0.014}$
σ_8	$0.779^{+0.028}_{-0.020}$	$r_{\rm drag}$	146.40 ± 0.57	$f\sigma_8(2.33)$	$0.2900^{+0.0089}_{-0.0060}$
S_8	$0.780^{+0.028}_{-0.023}$	$k_{\rm D}$	0.1426 ± 0.0010	$\sigma_8(2.33)$	$0.299^{+0.010}_{-0.0070}$
$\sigma_8\Omega_{\rm m}^{0.5}$	$0.427^{+0.016}_{-0.013}$	$100\theta_{\rm D}$	0.15883 ± 0.00083	$\chi^2_{\rm lensing}$	9.2 ± 1.3
$\sigma_8\Omega_{\rm m}^{0.25}$	$0.577^{+0.020}_{-0.015}$	$z_{\rm eq}$	3350 ± 31	$\chi^2_{\rm simall}$	396.5 ± 1.4
$\sigma_8/h^{0.5}$	$0.940^{+0.034}_{-0.025}$	$k_{\rm eq}$	0.010226 ± 0.000095	$\chi^2_{\rm plikEE}$	742.8 ± 2.6
$r_{\rm drag}h$	100.5 ± 1.2	$100\theta_{\rm eq}$	0.8264 ± 0.0068	$\chi^2_{\rm 6DF}$	0.058 ± 0.083
$\langle d^2\rangle^{1/2}$	2.378 ± 0.037	$100\theta_{\rm s,eq}$	0.4550 ± 0.0032	$\chi^2_{\rm MGS}$	1.79 ± 0.71
$z_{\rm re}$	$7.46^{+0.36}_{-0.84}$	$H(0.15)$	73.86 ± 0.77	$\chi^2_{\rm DR12BAO}$	4.7 ± 1.6
$10^9 A_{\rm s}$	$2.131^{+0.031}_{-0.036}$	$D_{\rm M}(0.15)$	632.1 ± 7.2	$\chi^2_{\rm prior}$	0.97 ± 1.4
$10^9 A_{\rm s}e^{-2\tau}$	1.905 ± 0.019	$H(0.38)$	83.84 ± 0.64	$\chi^2_{\rm CMB}$	1148.5 ± 3.3
D_{40}	1233 ± 28	$D_{\rm M}(0.38)$	1510 ± 15	$\chi^2_{\rm BAO}$	6.5 ± 1.5

$\bar{\chi}^2_{\rm eff} = 1155.99$; $\Delta\bar{\chi}^2_{\rm eff} = 0.60$; $R - 1 = 0.01388$

6.25 base_mnu_plikHM_TT_lowl_lensing

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02218 ± 0.00028	$\sigma_8\Omega_m^{0.5}$	0.4530 ± 0.0092	$H(0.15)$	$70.3^{+2.6}_{-2.3}$
$\boldsymbol{\Omega_c h^2}$	0.1186 ± 0.0025	$\sigma_8\Omega_m^{0.25}$	$0.590^{+0.020}_{-0.015}$	$D_M(0.15)$	669^{+22}_{-30}
$\boldsymbol{100\theta_{MC}}$	1.04081 ± 0.00054	$\sigma_8/h^{0.5}$	$0.956^{+0.039}_{-0.028}$	$H(0.38)$	80.9 ± 1.8
$\boldsymbol{\tau}$	0.107 ± 0.029	$r_{drag}h$	$95.4^{+4.6}_{-4.0}$	$D_M(0.38)$	1585^{+45}_{-59}
$\boldsymbol{\Sigma m_\nu}$ [eV]	$0.41^{+0.18}_{-0.34}$	$\langle d^2\rangle^{1/2}$	$2.515^{+0.043}_{-0.050}$	$H(0.51)$	88.0 ± 1.4
$\boldsymbol{\ln(10^{10}A_s)}$	3.143 ± 0.053	z_{re}	$12.4^{+2.6}_{-2.1}$	$D_M(0.51)$	2047^{+53}_{-69}
$\boldsymbol{n_s}$	0.9681 ± 0.0077	10^9A_s	2.32 ± 0.12	$H(0.61)$	93.8 ± 1.2
$\boldsymbol{y_{cal}}$	1.0002 ± 0.0025	$10^9A_se^{-2\tau}$	1.871 ± 0.015	$D_M(0.61)$	2378^{+58}_{-74}
$\boldsymbol{A^{CIB}_{217}}$	47 ± 7	D_{40}	1233 ± 13	$H(2.33)$	$237.5^{+2.1}_{-2.5}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{220}	5714 ± 41	$D_M(2.33)$	5844^{+60}_{-73}
$\boldsymbol{A^{tSZ}_{143}}$	$5.3^{+2.2}_{-2.0}$	D_{810}	2531 ± 14	$f\sigma_8(0.15)$	0.4576 ± 0.0084
$\boldsymbol{A^{PS}_{100}}$	260 ± 28	D_{1420}	814.8 ± 5.0	$\sigma_8(0.15)$	$0.708^{+0.048}_{-0.035}$
$\boldsymbol{A^{PS}_{143}}$	47 ± 8	D_{2000}	230.1 ± 1.9	$f\sigma_8(0.38)$	$0.468^{+0.014}_{-0.0090}$
$\boldsymbol{A^{PS}_{143\times217}}$	43 ± 9	$n_{s,0.002}$	0.9681 ± 0.0077	$\sigma_8(0.38)$	$0.625^{+0.046}_{-0.034}$
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	Y_P	$0.24531^{+0.00014}_{-0.00010}$	$f\sigma_8(0.51)$	$0.463^{+0.017}_{-0.011}$
$\boldsymbol{A^{kSZ}}$	< 4.36	Y_P^{BBN}	$0.24664^{+0.00014}_{-0.00010}$	$\sigma_8(0.51)$	$0.584^{+0.044}_{-0.033}$
$\boldsymbol{A^{dustTT}_{100}}$	8.9 ± 1.8	10^5D/H	2.622 ± 0.053	$f\sigma_8(0.61)$	$0.456^{+0.020}_{-0.012}$
$\boldsymbol{A^{dustTT}_{143}}$	10.7 ± 1.8	Age/Gyr	$13.99^{+0.14}_{-0.17}$	$\sigma_8(0.61)$	$0.555^{+0.043}_{-0.032}$
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.2 ± 3.3	z_*	$1090.12^{+0.54}_{-0.61}$	$f\sigma_8(2.33)$	$0.283^{+0.021}_{-0.015}$
$\boldsymbol{A^{dustTT}_{217}}$	93.5 ± 7.3	r_*	144.81 ± 0.57	$\sigma_8(2.33)$	$0.288^{+0.024}_{-0.018}$
$\boldsymbol{c_{100}}$	0.99959 ± 0.00062	$100\theta_*$	1.04117 ± 0.00050	f^{143}_{2000}	30.2 ± 3.2
$\boldsymbol{c_{217}}$	0.99825 ± 0.00062	$D_M(z_*)$/Gpc	13.908 ± 0.052	$f^{143\times217}_{2000}$	32.8 ± 2.3
H_0	$64.7^{+3.0}_{-2.6}$	z_{drag}	1059.47 ± 0.52	f^{217}_{2000}	107.5 ± 2.1
Ω_Λ	$0.650^{+0.047}_{-0.030}$	r_{drag}	147.54 ± 0.55	$\chi^2_{lensing}$	9.1 ± 1.6
Ω_m	$0.350^{+0.030}_{-0.047}$	k_D	0.14033 ± 0.00055	χ^2_{lowl}	24.4 ± 1.3
$\Omega_m h^2$	$0.1452^{+0.0036}_{-0.0044}$	$100\theta_D$	0.16097 ± 0.00028	χ^2_{plik}	770.2 ± 5.5
$\Omega_\nu h^2$	$0.0045^{+0.0019}_{-0.0036}$	z_{eq}	3365 ± 56	χ^2_{prior}	7.3 ± 3.7
$\Omega_m h^3$	$0.0938^{+0.0019}_{-0.0014}$	k_{eq}	0.01027 ± 0.00017	χ^2_{CMB}	803.7 ± 5.5
σ_8	$0.769^{+0.049}_{-0.036}$	$100\theta_{eq}$	0.820 ± 0.011		
S_8	0.827 ± 0.017	$100\theta_{s,eq}$	0.4532 ± 0.0055		

$\bar{\chi}^2_{eff} = 811.02$; $\Delta\bar{\chi}^2_{eff} = -0.03$; $R - 1 = 0.01418$

6.26 base_mnu_plikHM_TT_lowl_lensing_post_BAO

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02237 ± 0.00021	$\sigma_8\Omega_m^{0.25}$	$0.605^{+0.011}_{-0.0096}$	$H(0.38)$	$82.95^{+0.53}_{-0.46}$
$\boldsymbol{\Omega_c h^2}$	0.1169 ± 0.0017	$\sigma_8/h^{0.5}$	$0.987^{+0.018}_{-0.016}$	$D_M(0.38)$	1529^{+11}_{-13}
$\boldsymbol{100\theta_{MC}}$	1.04116 ± 0.00044	$r_{drag}h$	100.1 ± 1.1	$H(0.51)$	$89.61^{+0.47}_{-0.40}$
$\boldsymbol{\tau}$	$0.097^{+0.025}_{-0.029}$	$\langle d^2\rangle^{1/2}$	2.479 ± 0.031	$D_M(0.51)$	1981^{+14}_{-16}
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 0.203	z_{re}	11.5 ± 2.2	$H(0.61)$	$95.18^{+0.43}_{-0.35}$
$\boldsymbol{\ln(10^{10}A_s)}$	$3.121^{+0.046}_{-0.052}$	$10^9 A_s$	$2.269^{+0.099}_{-0.12}$	$D_M(0.61)$	2306^{+15}_{-17}
$\boldsymbol{n_s}$	$0.9726^{+0.0056}_{-0.0063}$	$10^9 A_s e^{-2\tau}$	1.865 ± 0.013	$H(2.33)$	235.07 ± 0.79
$\boldsymbol{y_{cal}}$	$1.0001^{+0.0026}_{-0.0023}$	D_{40}	1228 ± 11	$D_M(2.33)$	5773^{+18}_{-23}
$\boldsymbol{A_{217}^{CIB}}$	47 ± 7	D_{220}	5720 ± 39	$f\sigma_8(0.15)$	0.4567 ± 0.0071
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{810}	2529 ± 14	$\sigma_8(0.15)$	$0.751^{+0.017}_{-0.014}$
$\boldsymbol{A_{143}^{tSZ}}$	$5.3^{+2.3}_{-2.0}$	D_{1420}	815.1 ± 5.0	$f\sigma_8(0.38)$	0.4763 ± 0.0073
$\boldsymbol{A_{100}^{PS}}$	258 ± 28	D_{2000}	230.7 ± 1.8	$\sigma_8(0.38)$	$0.667^{+0.015}_{-0.012}$
$\boldsymbol{A_{143}^{PS}}$	46 ± 8	$n_{s,0.002}$	$0.9726^{+0.0056}_{-0.0063}$	$f\sigma_8(0.51)$	0.4754 ± 0.0073
$\boldsymbol{A_{143\times217}^{PS}}$	42 ± 10	Y_P	$0.245392^{+0.000089}_{-0.000078}$	$\sigma_8(0.51)$	$0.624^{+0.014}_{-0.012}$
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	Y_P^{BBN}	$0.246719^{+0.000089}_{-0.000078}$	$f\sigma_8(0.61)$	$0.4709^{+0.0077}_{-0.0069}$
$\boldsymbol{A^{kSZ}}$	< 4.29	10^5D/H	2.586 ± 0.040	$\sigma_8(0.61)$	$0.594^{+0.014}_{-0.011}$
$\boldsymbol{A_{100}^{dustTT}}$	8.9 ± 1.9	Age/Gyr	$13.824^{+0.041}_{-0.054}$	$f\sigma_8(2.33)$	$0.3014^{+0.0058}_{-0.0053}$
$\boldsymbol{A_{143}^{dustTT}}$	10.6 ± 1.8	z_*	1089.66 ± 0.35	$\sigma_8(2.33)$	$0.3100^{+0.0069}_{-0.0060}$
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.2 ± 3.3	r_*	145.23 ± 0.40	f_{2000}^{143}	29.3 ± 3.0
$\boldsymbol{A_{217}^{dustTT}}$	93.6 ± 7.3	$100\theta_*$	1.04140 ± 0.00045	$f_{2000}^{143\times217}$	32.1 ± 2.1
$\boldsymbol{c_{100}}$	0.99961 ± 0.00063	$D_M(z_*)$/Gpc	13.945 ± 0.037	f_{2000}^{217}	106.8 ± 2.0
$\boldsymbol{c_{217}}$	0.99821 ± 0.00061	z_{drag}	1059.72 ± 0.46	$\chi^2_{lensing}$	9.3 ± 1.6
H_0	$67.71^{+0.73}_{-0.65}$	r_{drag}	147.91 ± 0.41	χ^2_{lowl}	23.54 ± 0.92
Ω_Λ	$0.6924^{+0.0088}_{-0.0077}$	k_D	0.14002 ± 0.00047	χ^2_{plik}	770.4 ± 5.5
Ω_m	$0.3076^{+0.0077}_{-0.0088}$	$100\theta_D$	0.16089 ± 0.00026	χ^2_{6DF}	0.053 ± 0.077
$\Omega_m h^2$	0.1410 ± 0.0012	z_{eq}	3328 ± 40	χ^2_{MGS}	1.58 ± 0.62
$\Omega_\nu h^2$	< 0.00218	k_{eq}	0.01016 ± 0.00012	$\chi^2_{DR12BAO}$	4.5 ± 1.5
$\Omega_m h^3$	$0.09544^{+0.00084}_{-0.00067}$	$100\theta_{eq}$	$0.8272^{+0.0073}_{-0.0082}$	χ^2_{prior}	7.3 ± 3.6
σ_8	$0.812^{+0.018}_{-0.014}$	$100\theta_{s,eq}$	$0.4567^{+0.0037}_{-0.0042}$	χ^2_{CMB}	803.2 ± 5.4
S_8	0.822 ± 0.014	$H(0.15)$	$72.93^{+0.65}_{-0.58}$	χ^2_{BAO}	6.1 ± 1.3
$\sigma_8\Omega_m^{0.5}$	0.4504 ± 0.0078	$D_M(0.15)$	$640.7^{+5.5}_{-6.4}$		

$\bar{\chi}^2_{eff} = 816.62$; $\Delta\bar{\chi}^2_{eff} = 0.30$; $R - 1 = 0.05945$

6.27 base_mnu_plikHM_TT_lowl_lensing_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02219 ± 0.00028	$\sigma_8\Omega_m^{0.5}$	0.4529 ± 0.0092	$H(0.15)$	$70.3^{+2.6}_{-2.3}$
$\boldsymbol{\Omega_c h^2}$	0.1186 ± 0.0025	$\sigma_8\Omega_m^{0.25}$	$0.590^{+0.020}_{-0.015}$	$D_M(0.15)$	669^{+22}_{-30}
$\boldsymbol{100\theta_{MC}}$	1.04082 ± 0.00054	$\sigma_8/h^{0.5}$	$0.956^{+0.039}_{-0.028}$	$H(0.38)$	80.9 ± 1.8
$\boldsymbol{\tau}$	0.108 ± 0.027	$r_{drag}h$	$95.4^{+4.7}_{-4.0}$	$D_M(0.38)$	1585^{+45}_{-59}
$\boldsymbol{\Sigma m_\nu}$ [eV]	$0.42^{+0.19}_{-0.33}$	$\langle d^2\rangle^{1/2}$	$2.516^{+0.041}_{-0.050}$	$H(0.51)$	87.9 ± 1.4
$\boldsymbol{\ln(10^{10}A_s)}$	3.144 ± 0.051	z_{re}	$12.5^{+2.5}_{-2.1}$	$D_M(0.51)$	2048^{+54}_{-69}
$\boldsymbol{n_s}$	0.9682 ± 0.0076	10^9A_s	2.32 ± 0.12	$H(0.61)$	93.8 ± 1.2
$\boldsymbol{y_{cal}}$	1.0002 ± 0.0025	$10^9A_se^{-2\tau}$	1.871 ± 0.015	$D_M(0.61)$	2378^{+58}_{-74}
$\boldsymbol{A^{CIB}_{217}}$	47 ± 7	D_{40}	1233 ± 13	$H(2.33)$	$237.5^{+2.1}_{-2.5}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{220}	5714 ± 41	$D_M(2.33)$	5845^{+61}_{-72}
$\boldsymbol{A^{tSZ}_{143}}$	$5.3^{+2.2}_{-2.0}$	D_{810}	2531 ± 14	$f\sigma_8(0.15)$	0.4575 ± 0.0084
$\boldsymbol{A^{PS}_{100}}$	260 ± 28	D_{1420}	814.8 ± 5.0	$\sigma_8(0.15)$	$0.708^{+0.048}_{-0.036}$
$\boldsymbol{A^{PS}_{143}}$	47 ± 8	D_{2000}	230.1 ± 1.9	$f\sigma_8(0.38)$	$0.468^{+0.014}_{-0.0090}$
$\boldsymbol{A^{PS}_{143\times217}}$	43 ± 9	$n_{s,0.002}$	0.9682 ± 0.0076	$\sigma_8(0.38)$	$0.625^{+0.046}_{-0.034}$
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	Y_P	$0.24531^{+0.00014}_{-0.00010}$	$f\sigma_8(0.51)$	$0.463^{+0.017}_{-0.011}$
$\boldsymbol{A^{kSZ}}$	< 4.34	Y_P^{BBN}	$0.24664^{+0.00014}_{-0.00010}$	$\sigma_8(0.51)$	$0.584^{+0.044}_{-0.033}$
$\boldsymbol{A^{dustTT}_{100}}$	8.9 ± 1.8	10^5D/H	2.621 ± 0.053	$f\sigma_8(0.61)$	$0.456^{+0.020}_{-0.012}$
$\boldsymbol{A^{dustTT}_{143}}$	10.7 ± 1.8	Age/Gyr	$13.99^{+0.14}_{-0.17}$	$\sigma_8(0.61)$	$0.555^{+0.043}_{-0.032}$
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.2 ± 3.3	z_*	$1090.12^{+0.54}_{-0.61}$	$f\sigma_8(2.33)$	$0.283^{+0.021}_{-0.015}$
$\boldsymbol{A^{dustTT}_{217}}$	93.5 ± 7.3	r_*	144.82 ± 0.57	$\sigma_8(2.33)$	$0.288^{+0.024}_{-0.018}$
$\boldsymbol{c_{100}}$	0.99959 ± 0.00062	$100\theta_*$	1.04118 ± 0.00049	f^{143}_{2000}	30.1 ± 3.2
$\boldsymbol{c_{217}}$	0.99825 ± 0.00062	$D_M(z_*)$/Gpc	13.909 ± 0.052	$f^{143\times217}_{2000}$	32.8 ± 2.3
H_0	$64.7^{+3.0}_{-2.6}$	z_{drag}	1059.48 ± 0.52	f^{217}_{2000}	107.4 ± 2.1
Ω_Λ	$0.650^{+0.047}_{-0.030}$	r_{drag}	147.55 ± 0.54	$\chi^2_{lensing}$	9.1 ± 1.6
Ω_m	$0.350^{+0.030}_{-0.047}$	k_D	0.14032 ± 0.00055	χ^2_{lowl}	24.4 ± 1.3
$\Omega_m h^2$	$0.1452^{+0.0036}_{-0.0044}$	$100\theta_D$	0.16096 ± 0.00028	χ^2_{plik}	770.2 ± 5.4
$\Omega_\nu h^2$	$0.0045^{+0.0021}_{-0.0035}$	z_{eq}	3363 ± 56	χ^2_{prior}	7.3 ± 3.7
$\Omega_m h^3$	$0.0938^{+0.0019}_{-0.0014}$	k_{eq}	0.01027 ± 0.00017	χ^2_{CMB}	803.7 ± 5.5
σ_8	$0.769^{+0.049}_{-0.036}$	$100\theta_{eq}$	0.821 ± 0.011		
S_8	0.827 ± 0.017	$100\theta_{s,eq}$	0.4533 ± 0.0055		

$\bar{\chi}^2_{eff} = 810.97$; $\Delta\bar{\chi}^2_{eff} = 0.10$; $R - 1 = 0.01413$

6.28 base_mnu_plikHM_TT_lowl_lensing_post_BAO_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02237 ± 0.00021	$\sigma_8\Omega_m^{0.25}$	$0.605^{+0.011}_{-0.0096}$	$H(0.38)$	$82.95^{+0.54}_{-0.46}$
$\boldsymbol{\Omega_c h^2}$	$0.1168^{+0.0018}_{-0.0016}$	$\sigma_8/h^{0.5}$	$0.987^{+0.018}_{-0.015}$	$D_M(0.38)$	1529^{+11}_{-13}
$\boldsymbol{100\theta_{MC}}$	1.04117 ± 0.00044	$r_{drag}h$	100.1 ± 1.1	$H(0.51)$	$89.61^{+0.47}_{-0.40}$
$\boldsymbol{\tau}$	$0.098^{+0.024}_{-0.029}$	$\langle d^2\rangle^{1/2}$	2.480 ± 0.031	$D_M(0.51)$	1981^{+14}_{-16}
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 0.204	z_{re}	11.5 ± 2.1	$H(0.61)$	$95.18^{+0.43}_{-0.36}$
$\boldsymbol{\ln(10^{10}A_s)}$	$3.122^{+0.043}_{-0.053}$	$10^9 A_s$	$2.272^{+0.093}_{-0.12}$	$D_M(0.61)$	2306^{+15}_{-18}
$\boldsymbol{n_s}$	$0.9727^{+0.0056}_{-0.0062}$	$10^9 A_s e^{-2\tau}$	1.865 ± 0.013	$H(2.33)$	235.06 ± 0.78
$\boldsymbol{y_{cal}}$	$1.0001^{+0.0026}_{-0.0023}$	D_{40}	1228 ± 11	$D_M(2.33)$	5774^{+18}_{-23}
$\boldsymbol{A_{217}^{CIB}}$	47 ± 7	D_{220}	5720 ± 39	$f\sigma_8(0.15)$	0.4567 ± 0.0071
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{810}	2529 ± 14	$\sigma_8(0.15)$	$0.751^{+0.017}_{-0.013}$
$\boldsymbol{A_{143}^{tSZ}}$	$5.3^{+2.3}_{-2.0}$	D_{1420}	815.0 ± 5.0	$f\sigma_8(0.38)$	0.4763 ± 0.0073
$\boldsymbol{A_{100}^{PS}}$	258 ± 28	D_{2000}	230.7 ± 1.8	$\sigma_8(0.38)$	$0.667^{+0.015}_{-0.012}$
$\boldsymbol{A_{143}^{PS}}$	46 ± 8	$n_{s,0.002}$	$0.9727^{+0.0056}_{-0.0062}$	$f\sigma_8(0.51)$	$0.4755^{+0.0076}_{-0.0069}$
$\boldsymbol{A_{143\times217}^{PS}}$	42 ± 10	Y_P	$0.245393^{+0.000088}_{-0.000078}$	$\sigma_8(0.51)$	$0.624^{+0.014}_{-0.012}$
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	Y_P^{BBN}	$0.246720^{+0.000088}_{-0.000078}$	$f\sigma_8(0.61)$	$0.4709^{+0.0077}_{-0.0069}$
$\boldsymbol{A^{kSZ}}$	< 4.28	10^5D/H	2.586 ± 0.039	$\sigma_8(0.61)$	$0.594^{+0.014}_{-0.011}$
$\boldsymbol{A_{100}^{dustTT}}$	8.9 ± 1.9	Age/Gyr	$13.824^{+0.042}_{-0.054}$	$f\sigma_8(2.33)$	$0.3015^{+0.0058}_{-0.0052}$
$\boldsymbol{A_{143}^{dustTT}}$	10.6 ± 1.8	z_*	1089.65 ± 0.35	$\sigma_8(2.33)$	$0.3101^{+0.0070}_{-0.0059}$
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.2 ± 3.3	r_*	145.23 ± 0.39	f_{2000}^{143}	29.3 ± 2.9
$\boldsymbol{A_{217}^{dustTT}}$	93.6 ± 7.3	$100\theta_*$	1.04141 ± 0.00045	$f_{2000}^{143\times217}$	32.0 ± 2.1
$\boldsymbol{c_{100}}$	0.99960 ± 0.00063	$D_M(z_*)$/Gpc	13.946 ± 0.037	f_{2000}^{217}	106.8 ± 2.0
$\boldsymbol{c_{217}}$	0.99821 ± 0.00061	z_{drag}	1059.73 ± 0.46	$\chi^2_{lensing}$	9.3 ± 1.6
H_0	$67.71^{+0.74}_{-0.65}$	r_{drag}	147.91 ± 0.40	χ^2_{lowl}	23.54 ± 0.92
Ω_Λ	$0.6924^{+0.0087}_{-0.0077}$	k_D	0.14002 ± 0.00047	χ^2_{plik}	770.3 ± 5.5
Ω_m	$0.3076^{+0.0077}_{-0.0087}$	$100\theta_D$	0.16089 ± 0.00026	χ^2_{6DF}	0.053 ± 0.076
$\Omega_m h^2$	0.1409 ± 0.0012	z_{eq}	3327 ± 39	χ^2_{MGS}	1.58 ± 0.62
$\Omega_\nu h^2$	< 0.00219	k_{eq}	0.01015 ± 0.00012	$\chi^2_{DR12BAO}$	4.4 ± 1.5
$\Omega_m h^3$	$0.09543^{+0.00084}_{-0.00066}$	$100\theta_{eq}$	$0.8274^{+0.0071}_{-0.0082}$	χ^2_{prior}	7.3 ± 3.7
σ_8	$0.812^{+0.018}_{-0.014}$	$100\theta_{s,eq}$	$0.4567^{+0.0036}_{-0.0042}$	χ^2_{CMB}	803.2 ± 5.4
S_8	0.822 ± 0.014	$H(0.15)$	$72.93^{+0.66}_{-0.58}$	χ^2_{BAO}	6.1 ± 1.3
$\sigma_8\Omega_m^{0.5}$	0.4505 ± 0.0078	$D_M(0.15)$	$640.6^{+5.5}_{-6.4}$		

$\bar{\chi}^2_{eff} = 816.56$; $\Delta\bar{\chi}^2_{eff} = 0.33$; $R - 1 = 0.05884$

6.29 base_mnu_plikHM_TTTEEE_lowl_lensing

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02241 ± 0.00018	$\Omega_\nu h^2$	< 0.00451	$100\theta_{\rm eq}$	0.8187 ± 0.0069
$\boldsymbol{\Omega_c h^2}$	0.1189 ± 0.0016	$\Omega_{\rm m} h^3$	$0.0948^{+0.0017}_{-0.00096}$	$100\theta_{\rm s,eq}$	0.4522 ± 0.0035
$\boldsymbol{100\theta_{MC}}$	1.04091 ± 0.00035	σ_8	$0.783^{+0.043}_{-0.027}$	$H(0.15)$	$71.0^{+2.2}_{-1.5}$
$\boldsymbol{\tau}$	0.101 ± 0.025	S_8	0.831 ± 0.014	$D_{\rm M}(0.15)$	661^{+15}_{-24}
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 0.420	$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4550 ± 0.0074	$H(0.38)$	$81.5^{+1.7}_{-1.2}$
$\boldsymbol{\ln(10^{10} A_s)}$	3.132 ± 0.047	$\sigma_8 \Omega_{\rm m}^{0.25}$	$0.597^{+0.019}_{-0.012}$	$D_{\rm M}(0.38)$	1569^{+30}_{-48}
$\boldsymbol{n_s}$	0.9685 ± 0.0054	$\sigma_8/h^{0.5}$	$0.968^{+0.035}_{-0.023}$	$H(0.51)$	$88.5^{+1.4}_{-0.99}$
$\boldsymbol{y_{cal}}$	1.0002 ± 0.0025	$r_{\rm drag} h$	$96.4^{+3.8}_{-2.7}$	$D_{\rm M}(0.51)$	2028^{+36}_{-57}
$\boldsymbol{A_{217}^{CIB}}$	46 ± 7	$\langle d^2 \rangle^{1/2}$	$2.507^{+0.037}_{-0.045}$	$H(0.61)$	$94.3^{+1.2}_{-0.85}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$z_{\rm re}$	$11.9^{+2.3}_{-2.0}$	$D_{\rm M}(0.61)$	2356^{+39}_{-62}
$\boldsymbol{A_{143}^{tSZ}}$	$5.6^{+2.1}_{-1.8}$	$10^9 A_{\rm s}$	$2.30^{+0.10}_{-0.12}$	$H(2.33)$	$237.4^{+1.4}_{-1.8}$
$\boldsymbol{A_{100}^{PS}}$	256 ± 28	$10^9 A_{\rm s} e^{-2\tau}$	1.874 ± 0.012	$D_{\rm M}(2.33)$	5817^{+40}_{-65}
$\boldsymbol{A_{143}^{PS}}$	45 ± 8	D_{40}	1235 ± 12	$f\sigma_8(0.15)$	0.4600 ± 0.0072
$\boldsymbol{A_{143\times217}^{PS}}$	42 ± 9	D_{220}	5731 ± 39	$\sigma_8(0.15)$	$0.722^{+0.042}_{-0.026}$
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	D_{810}	2534 ± 14	$f\sigma_8(0.38)$	$0.472^{+0.012}_{-0.0076}$
$\boldsymbol{A^{kSZ}}$	< 3.87	D_{1420}	816.9 ± 4.8	$\sigma_8(0.38)$	$0.638^{+0.040}_{-0.025}$
$\boldsymbol{A_{100}^{dust TT}}$	8.9 ± 1.8	D_{2000}	231.2 ± 1.6	$f\sigma_8(0.51)$	$0.468^{+0.015}_{-0.0087}$
$\boldsymbol{A_{143}^{dust TT}}$	10.8 ± 1.8	$n_{\rm s,0.002}$	0.9685 ± 0.0054	$\sigma_8(0.51)$	$0.596^{+0.038}_{-0.024}$
$\boldsymbol{A_{143\times217}^{dust TT}}$	18.5 ± 3.3	$Y_{\rm P}$	$0.245409^{+0.000073}_{-0.000063}$	$f\sigma_8(0.61)$	$0.462^{+0.016}_{-0.0095}$
$\boldsymbol{A_{217}^{dust TT}}$	93.6 ± 7.2	$Y_{\rm P}^{\rm BBN}$	$0.246735^{+0.000073}_{-0.000063}$	$\sigma_8(0.61)$	$0.567^{+0.037}_{-0.023}$
$\boldsymbol{A_{100}^{dust TE}}$	0.113 ± 0.038	10^5D/H	2.579 ± 0.033	$f\sigma_8(2.33)$	$0.288^{+0.017}_{-0.010}$
$\boldsymbol{A_{100\times143}^{dust TE}}$	0.134 ± 0.029	Age/Gyr	$13.921^{+0.089}_{-0.15}$	$\sigma_8(2.33)$	$0.294^{+0.020}_{-0.013}$
$\boldsymbol{A_{100\times217}^{dust TE}}$	0.482 ± 0.086	z_*	1089.83 ± 0.36	f_{2000}^{143}	28.7 ± 2.9
$\boldsymbol{A_{143}^{dust TE}}$	0.222 ± 0.054	r_*	144.61 ± 0.36	$f_{2000}^{143\times217}$	31.6 ± 2.0
$\boldsymbol{A_{143\times217}^{dust TE}}$	0.663 ± 0.081	$100\theta_*$	1.04121 ± 0.00032	f_{2000}^{217}	106.4 ± 1.9
$\boldsymbol{A_{217}^{dust TE}}$	2.08 ± 0.27	$D_{\rm M}(z_*)$/Gpc	13.889 ± 0.033	$\chi^2_{\rm lensing}$	9.4 ± 1.7
$\boldsymbol{c_{100}}$	0.99966 ± 0.00062	$z_{\rm drag}$	1060.00 ± 0.33	$\chi^2_{\rm lowl}$	24.2 ± 1.2
$\boldsymbol{c_{217}}$	0.99817 ± 0.00062	$r_{\rm drag}$	147.26 ± 0.34	$\chi^2_{\rm plik}$	2358.3 ± 6.0
H_0	$65.5^{+2.5}_{-1.7}$	$k_{\rm D}$	0.14077 ± 0.00035	$\chi^2_{\rm prior}$	11.5 ± 4.5
Ω_Λ	$0.661^{+0.036}_{-0.020}$	$100\theta_{\rm D}$	0.16068 ± 0.00019	$\chi^2_{\rm CMB}$	2391.9 ± 5.9
$\Omega_{\rm m}$	$0.339^{+0.020}_{-0.036}$	$z_{\rm eq}$	3376 ± 36		
$\Omega_{\rm m} h^2$	$0.1448^{+0.0024}_{-0.0033}$	$k_{\rm eq}$	0.01031 ± 0.00011		

$\bar{\chi}^2_{\rm eff} = 2403.40$; $\Delta\bar{\chi}^2_{\rm eff} = 0.91$; $R - 1 = 0.01886$

6.30 base_mnu_plikHM_TTTEEE_lowl_lensing_post_BAO

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02251 ± 0.00015	$\Omega_m h^3$	$0.09610^{+0.00064}_{-0.00041}$	$H(0.15)$	$73.04^{+0.60}_{-0.54}$
$\boldsymbol{\Omega_c h^2}$	0.1180 ± 0.0013	σ_8	$0.819^{+0.015}_{-0.012}$	$D_M(0.15)$	$639.8^{+5.1}_{-5.9}$
$\boldsymbol{100\theta_{MC}}$	1.04110 ± 0.00031	S_8	0.830 ± 0.012	$H(0.38)$	$83.10^{+0.48}_{-0.41}$
$\boldsymbol{\tau}$	$0.088^{+0.019}_{-0.024}$	$\sigma_8 \Omega_m^{0.5}$	0.4548 ± 0.0067	$D_M(0.38)$	1527^{+11}_{-12}
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 0.144	$\sigma_8 \Omega_m^{0.25}$	$0.6102^{+0.0094}_{-0.0080}$	$H(0.51)$	$89.78^{+0.42}_{-0.34}$
$\boldsymbol{\ln(10^{10} A_s)}$	$3.105^{+0.036}_{-0.045}$	$\sigma_8/h^{0.5}$	$0.994^{+0.015}_{-0.013}$	$D_M(0.51)$	1978^{+12}_{-14}
$\boldsymbol{n_s}$	$0.9710^{+0.0045}_{-0.0051}$	$r_{drag} h$	99.96 ± 1.0	$H(0.61)$	$95.38^{+0.37}_{-0.29}$
$\boldsymbol{y_{cal}}$	1.0002 ± 0.0025	$\langle d^2 \rangle^{1/2}$	2.478 ± 0.031	$D_M(0.61)$	2302^{+14}_{-16}
$\boldsymbol{A_{217}^{CIB}}$	46 ± 7	z_{re}	$10.6^{+1.8}_{-2.0}$	$H(2.33)$	$235.71^{+0.72}_{-0.61}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	> 0.370	$10^9 A_s$	$2.232^{+0.076}_{-0.10}$	$D_M(2.33)$	5761^{+14}_{-19}
$\boldsymbol{A_{143}^{tSZ}}$	$5.7^{+2.1}_{-1.8}$	$10^9 A_s e^{-2\tau}$	1.872 ± 0.012	$f\sigma_8(0.15)$	0.4605 ± 0.0063
$\boldsymbol{A_{100}^{PS}}$	255 ± 27	D_{40}	1230 ± 11	$\sigma_8(0.15)$	$0.757^{+0.014}_{-0.012}$
$\boldsymbol{A_{143}^{PS}}$	44 ± 8	D_{220}	5731 ± 39	$f\sigma_8(0.38)$	0.4799 ± 0.0064
$\boldsymbol{A_{143\times217}^{PS}}$	42 ± 9	D_{810}	2533 ± 14	$\sigma_8(0.38)$	$0.672^{+0.013}_{-0.011}$
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	D_{1420}	817.0 ± 4.9	$f\sigma_8(0.51)$	$0.4789^{+0.0067}_{-0.0059}$
$\boldsymbol{A^{kSZ}}$	< 3.61	D_{2000}	231.6 ± 1.7	$\sigma_8(0.51)$	$0.629^{+0.012}_{-0.010}$
$\boldsymbol{A_{100}^{dust TT}}$	8.9 ± 1.8	$n_{s,0.002}$	$0.9710^{+0.0045}_{-0.0051}$	$f\sigma_8(0.61)$	$0.4741^{+0.0067}_{-0.0060}$
$\boldsymbol{A_{143}^{dust TT}}$	10.8 ± 1.8	Y_P	$0.245449^{+0.000060}_{-0.000052}$	$\sigma_8(0.61)$	$0.598^{+0.012}_{-0.0098}$
$\boldsymbol{A_{143\times217}^{dust TT}}$	18.4 ± 3.2	Y_P^{BBN}	$0.246775^{+0.000060}_{-0.000052}$	$f\sigma_8(2.33)$	0.3029 ± 0.0050
$\boldsymbol{A_{217}^{dust TT}}$	93.4 ± 7.0	10^5D/H	$2.560^{+0.025}_{-0.029}$	$\sigma_8(2.33)$	$0.3118^{+0.0061}_{-0.0053}$
$\boldsymbol{A_{100}^{dust TE}}$	0.113 ± 0.038	Age/Gyr	$13.794^{+0.031}_{-0.045}$	f_{2000}^{143}	28.1 ± 2.9
$\boldsymbol{A_{100\times143}^{dust TE}}$	0.134 ± 0.030	z_*	1089.57 ± 0.26	$f_{2000}^{143\times217}$	31.1 ± 2.0
$\boldsymbol{A_{100\times217}^{dust TE}}$	0.476 ± 0.087	r_*	$144.83^{+0.26}_{-0.31}$	f_{2000}^{217}	105.9 ± 1.9
$\boldsymbol{A_{143}^{dust TE}}$	0.223 ± 0.052	$100\theta_*$	1.04131 ± 0.00031	$\chi^2_{lensing}$	9.99 ± 1.9
$\boldsymbol{A_{143\times217}^{dust TE}}$	0.661 ± 0.079	$D_M(z_*)$/Gpc	$13.909^{+0.025}_{-0.029}$	χ^2_{lowl}	23.55 ± 0.87
$\boldsymbol{A_{217}^{dust TE}}$	2.07 ± 0.26	z_{drag}	1060.13 ± 0.31	χ^2_{plik}	2357.9 ± 6.2
$\boldsymbol{c_{100}}$	0.99967 ± 0.00062	r_{drag}	$147.46^{+0.26}_{-0.31}$	χ^2_{6DF}	0.053 ± 0.074
$\boldsymbol{c_{217}}$	0.99817 ± 0.00061	k_D	$0.14059^{+0.00033}_{-0.00030}$	χ^2_{MGS}	1.46 ± 0.57
H_0	$67.79^{+0.67}_{-0.61}$	$100\theta_D$	0.16065 ± 0.00018	$\chi^2_{DR12BAO}$	4.6 ± 1.6
Ω_Λ	0.6914 ± 0.0078	z_{eq}	3358^{+32}_{-27}	χ^2_{prior}	11.5 ± 4.4
Ω_m	0.3086 ± 0.0078	k_{eq}	$0.010249^{+0.000097}_{-0.000082}$	χ^2_{CMB}	2391.4 ± 5.9
$\Omega_m h^2$	$0.1418^{+0.0011}_{-0.00096}$	$100\theta_{eq}$	$0.8220^{+0.0051}_{-0.0062}$	χ^2_{BAO}	6.1 ± 1.3
$\Omega_\nu h^2$	< 0.00154	$100\theta_{s,eq}$	$0.4538^{+0.0026}_{-0.0032}$		

$\bar{\chi}^2_{eff} = 2409.01$; $\Delta\bar{\chi}^2_{eff} = 1.36$; $R - 1 = 0.06296$

6.31 base_mnu_plikHM_TTTEEE_lowl_lensing_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02241 ± 0.00018	$\Omega_\nu h^2$	< 0.00452	$100\theta_{\rm eq}$	0.8188 ± 0.0068
$\boldsymbol{\Omega_c h^2}$	0.1188 ± 0.0016	$\Omega_{\rm m} h^3$	$0.0948^{+0.0017}_{-0.00097}$	$100\theta_{\rm s,eq}$	0.4522 ± 0.0035
$\boldsymbol{100\theta_{MC}}$	1.04091 ± 0.00035	σ_8	$0.783^{+0.043}_{-0.027}$	$H(0.15)$	$71.0^{+2.2}_{-1.5}$
$\boldsymbol{\tau}$	0.101 ± 0.024	S_8	0.831 ± 0.014	$D_{\rm M}(0.15)$	661^{+15}_{-24}
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 0.420	$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4550 ± 0.0074	$H(0.38)$	$81.5^{+1.7}_{-1.2}$
$\boldsymbol{\ln(10^{10} A_s)}$	3.133 ± 0.046	$\sigma_8 \Omega_{\rm m}^{0.25}$	$0.597^{+0.019}_{-0.012}$	$D_{\rm M}(0.38)$	1569^{+30}_{-48}
$\boldsymbol{n_s}$	0.9686 ± 0.0053	$\sigma_8/h^{0.5}$	$0.968^{+0.035}_{-0.023}$	$H(0.51)$	$88.5^{+1.4}_{-1.0}$
$\boldsymbol{y_{cal}}$	1.0002 ± 0.0025	$r_{\rm drag} h$	$96.4^{+3.9}_{-2.7}$	$D_{\rm M}(0.51)$	2028^{+36}_{-57}
$\boldsymbol{A^{CIB}_{217}}$	46 ± 7	$\langle d^2 \rangle^{1/2}$	$2.507^{+0.036}_{-0.045}$	$H(0.61)$	$94.3^{+1.2}_{-0.85}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$z_{\rm re}$	11.9 ± 2.1	$D_{\rm M}(0.61)$	2357^{+39}_{-62}
$\boldsymbol{A^{tSZ}_{143}}$	$5.6^{+2.1}_{-1.8}$	$10^9 A_{\rm s}$	$2.30^{+0.10}_{-0.12}$	$H(2.33)$	$237.4^{+1.4}_{-1.8}$
$\boldsymbol{A^{PS}_{100}}$	256 ± 28	$10^9 A_{\rm s} e^{-2\tau}$	1.874 ± 0.012	$D_{\rm M}(2.33)$	5817^{+40}_{-65}
$\boldsymbol{A^{PS}_{143}}$	45 ± 8	D_{40}	1235 ± 12	$f\sigma_8(0.15)$	0.4600 ± 0.0072
$\boldsymbol{A^{PS}_{143\times217}}$	42 ± 9	D_{220}	5731 ± 39	$\sigma_8(0.15)$	$0.722^{+0.042}_{-0.026}$
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	D_{810}	2534 ± 14	$f\sigma_8(0.38)$	$0.472^{+0.012}_{-0.0077}$
$\boldsymbol{A^{kSZ}}$	< 3.86	D_{1420}	816.9 ± 4.8	$\sigma_8(0.38)$	$0.638^{+0.040}_{-0.025}$
$\boldsymbol{A^{dustTT}_{100}}$	8.9 ± 1.8	D_{2000}	231.2 ± 1.6	$f\sigma_8(0.51)$	$0.468^{+0.015}_{-0.0088}$
$\boldsymbol{A^{dustTT}_{143}}$	10.8 ± 1.8	$n_{\rm s,0.002}$	0.9686 ± 0.0053	$\sigma_8(0.51)$	$0.596^{+0.039}_{-0.024}$
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.5 ± 3.3	$Y_{\rm P}$	$0.245409^{+0.000073}_{-0.000063}$	$f\sigma_8(0.61)$	$0.462^{+0.017}_{-0.0096}$
$\boldsymbol{A^{dustTT}_{217}}$	93.6 ± 7.2	$Y_{\rm P}^{\rm BBN}$	$0.246736^{+0.000073}_{-0.000063}$	$\sigma_8(0.61)$	$0.567^{+0.037}_{-0.023}$
$\boldsymbol{A^{dustTE}_{100}}$	0.113 ± 0.038	10^5D/H	$2.578^{+0.031}_{-0.034}$	$f\sigma_8(2.33)$	$0.288^{+0.017}_{-0.010}$
$\boldsymbol{A^{dustTE}_{100\times143}}$	0.134 ± 0.029	Age/Gyr	$13.922^{+0.090}_{-0.15}$	$\sigma_8(2.33)$	$0.294^{+0.020}_{-0.013}$
$\boldsymbol{A^{dustTE}_{100\times217}}$	0.482 ± 0.086	z_*	1089.83 ± 0.36	f^{143}_{2000}	28.7 ± 2.9
$\boldsymbol{A^{dustTE}_{143}}$	0.222 ± 0.054	r_*	144.62 ± 0.36	$f^{143\times217}_{2000}$	31.6 ± 2.0
$\boldsymbol{A^{dustTE}_{143\times217}}$	0.663 ± 0.081	$100\theta_*$	1.04121 ± 0.00032	f^{217}_{2000}	106.4 ± 1.9
$\boldsymbol{A^{dustTE}_{217}}$	2.08 ± 0.27	$D_{\rm M}(z_*)$/Gpc	13.889 ± 0.033	$\chi^2_{\rm lensing}$	9.4 ± 1.7
$\boldsymbol{c_{100}}$	0.99966 ± 0.00062	$z_{\rm drag}$	1060.00 ± 0.33	$\chi^2_{\rm lowl}$	24.2 ± 1.2
$\boldsymbol{c_{217}}$	0.99817 ± 0.00061	$r_{\rm drag}$	147.26 ± 0.34	$\chi^2_{\rm plik}$	2358.2 ± 6.0
H_0	$65.5^{+2.6}_{-1.7}$	$k_{\rm D}$	0.14077 ± 0.00035	$\chi^2_{\rm prior}$	11.5 ± 4.5
Ω_Λ	$0.661^{+0.036}_{-0.020}$	$100\theta_{\rm D}$	0.16068 ± 0.00019	$\chi^2_{\rm CMB}$	2391.9 ± 5.9
$\Omega_{\rm m}$	$0.339^{+0.020}_{-0.036}$	$z_{\rm eq}$	3375 ± 36		
$\Omega_{\rm m} h^2$	$0.1448^{+0.0024}_{-0.0033}$	$k_{\rm eq}$	0.01031 ± 0.00011		

$\bar{\chi}^2_{\rm eff} = 2403.37$; $\Delta\bar{\chi}^2_{\rm eff} = 1.02$; $R - 1 = 0.01980$

6.32 base_mnu_plikHM_TTTEEE_lowl_lensing_post_BAO_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02252 ± 0.00015	$\Omega_m h^3$	$0.09610^{+0.00064}_{-0.00041}$	$H(0.15)$	$73.04^{+0.60}_{-0.53}$
$\boldsymbol{\Omega_c h^2}$	0.1180 ± 0.0013	σ_8	$0.819^{+0.015}_{-0.012}$	$D_M(0.15)$	$639.8^{+5.1}_{-5.9}$
$\boldsymbol{100\theta_{MC}}$	1.04110 ± 0.00031	S_8	0.830 ± 0.012	$H(0.38)$	$83.10^{+0.48}_{-0.41}$
$\boldsymbol{\tau}$	$0.088^{+0.018}_{-0.024}$	$\sigma_8 \Omega_m^{0.5}$	0.4548 ± 0.0067	$D_M(0.38)$	1526^{+10}_{-12}
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 0.144	$\sigma_8 \Omega_m^{0.25}$	$0.6103^{+0.0094}_{-0.0080}$	$H(0.51)$	$89.78^{+0.42}_{-0.34}$
$\boldsymbol{\ln(10^{10} A_s)}$	$3.105^{+0.035}_{-0.045}$	$\sigma_8/h^{0.5}$	$0.995^{+0.015}_{-0.013}$	$D_M(0.51)$	1978^{+12}_{-14}
$\boldsymbol{n_s}$	$0.9711^{+0.0044}_{-0.0051}$	$r_{drag} h$	99.97 ± 1.0	$H(0.61)$	$95.38^{+0.37}_{-0.29}$
$\boldsymbol{y_{cal}}$	1.0002 ± 0.0025	$\langle d^2 \rangle^{1/2}$	2.479 ± 0.030	$D_M(0.61)$	2302^{+14}_{-16}
$\boldsymbol{A_{217}^{CIB}}$	46 ± 7	z_{re}	$10.7^{+1.7}_{-2.0}$	$H(2.33)$	$235.71^{+0.72}_{-0.60}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	> 0.370	$10^9 A_s$	$2.233^{+0.074}_{-0.10}$	$D_M(2.33)$	5761^{+14}_{-19}
$\boldsymbol{A_{143}^{tSZ}}$	$5.7^{+2.1}_{-1.7}$	$10^9 A_s e^{-2\tau}$	1.872 ± 0.012	$f\sigma_8(0.15)$	0.4605 ± 0.0063
$\boldsymbol{A_{100}^{PS}}$	255 ± 27	D_{40}	1230 ± 11	$\sigma_8(0.15)$	$0.757^{+0.014}_{-0.012}$
$\boldsymbol{A_{143}^{PS}}$	44 ± 8	D_{220}	5731 ± 39	$f\sigma_8(0.38)$	0.4799 ± 0.0064
$\boldsymbol{A_{143\times217}^{PS}}$	42 ± 9	D_{810}	2533 ± 14	$\sigma_8(0.38)$	$0.672^{+0.013}_{-0.011}$
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	D_{1420}	817.0 ± 4.9	$f\sigma_8(0.51)$	$0.4789^{+0.0066}_{-0.0059}$
$\boldsymbol{A^{kSZ}}$	< 3.59	D_{2000}	231.6 ± 1.7	$\sigma_8(0.51)$	$0.629^{+0.012}_{-0.010}$
$\boldsymbol{A_{100}^{dust TT}}$	8.9 ± 1.8	$n_{s,0.002}$	$0.9711^{+0.0044}_{-0.0051}$	$f\sigma_8(0.61)$	$0.4742^{+0.0067}_{-0.0059}$
$\boldsymbol{A_{143}^{dust TT}}$	10.8 ± 1.8	Y_P	$0.245449^{+0.000059}_{-0.000052}$	$\sigma_8(0.61)$	$0.598^{+0.012}_{-0.0097}$
$\boldsymbol{A_{143\times217}^{dust TT}}$	18.4 ± 3.2	Y_P^{BBN}	$0.246776^{+0.000059}_{-0.000052}$	$f\sigma_8(2.33)$	0.3029 ± 0.0050
$\boldsymbol{A_{217}^{dust TT}}$	93.4 ± 7.0	10^5D/H	$2.560^{+0.025}_{-0.029}$	$\sigma_8(2.33)$	$0.3118^{+0.0061}_{-0.0053}$
$\boldsymbol{A_{100}^{dust TE}}$	0.113 ± 0.038	Age/Gyr	$13.794^{+0.031}_{-0.044}$	f_{2000}^{143}	28.1 ± 2.9
$\boldsymbol{A_{100\times143}^{dust TE}}$	0.134 ± 0.030	z_*	1089.57 ± 0.26	$f_{2000}^{143\times217}$	31.1 ± 2.0
$\boldsymbol{A_{100\times217}^{dust TE}}$	0.476 ± 0.087	r_*	$144.84^{+0.26}_{-0.31}$	f_{2000}^{217}	105.9 ± 1.9
$\boldsymbol{A_{143}^{dust TE}}$	0.223 ± 0.053	$100\theta_*$	1.04131 ± 0.00031	$\chi^2_{lensing}$	9.99 ± 1.9
$\boldsymbol{A_{143\times217}^{dust TE}}$	0.661 ± 0.079	$D_M(z_*)$/Gpc	$13.909^{+0.024}_{-0.029}$	χ^2_{lowl}	23.55 ± 0.87
$\boldsymbol{A_{217}^{dust TE}}$	2.07 ± 0.26	z_{drag}	1060.13 ± 0.31	χ^2_{plik}	2357.8 ± 6.2
$\boldsymbol{c_{100}}$	0.99967 ± 0.00062	r_{drag}	$147.46^{+0.26}_{-0.31}$	χ^2_{6DF}	0.053 ± 0.074
$\boldsymbol{c_{217}}$	0.99817 ± 0.00061	k_D	$0.14059^{+0.00033}_{-0.00030}$	χ^2_{MGS}	1.47 ± 0.57
H_0	$67.79^{+0.67}_{-0.61}$	$100\theta_D$	0.16065 ± 0.00018	$\chi^2_{DR12BAO}$	4.6 ± 1.6
Ω_Λ	0.6914 ± 0.0078	z_{eq}	3358^{+32}_{-27}	χ^2_{prior}	11.5 ± 4.4
Ω_m	0.3086 ± 0.0078	k_{eq}	$0.010248^{+0.000096}_{-0.000081}$	χ^2_{CMB}	2391.4 ± 5.9
$\Omega_m h^2$	$0.1418^{+0.0011}_{-0.00096}$	$100\theta_{eq}$	$0.8220^{+0.0051}_{-0.0062}$	χ^2_{BAO}	6.1 ± 1.3
$\Omega_\nu h^2$	< 0.00155	$100\theta_{s,eq}$	$0.4538^{+0.0026}_{-0.0032}$		

$\bar{\chi}^2_{eff} = 2408.99$; $\Delta\bar{\chi}^2_{eff} = 1.41$; $R - 1 = 0.06301$

6.33 base_mnu_plikHM_TT_lowl_lowE_lensing

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022207	$0.02206^{+0.00025}_{-0.00022}$	$\sigma_8\Omega_m^{0.5}$	0.4564	0.4581 ± 0.0090	$H(0.15)$	73.09	$71.4^{+1.9}_{-0.84}$
$\boldsymbol{\Omega_c h^2}$	0.11967	$0.1210^{+0.0017}_{-0.0022}$	$\sigma_8\Omega_m^{0.25}$	0.6125	$0.603^{+0.013}_{-0.0083}$	$D_M(0.15)$	639.3	$656.5^{+7.9}_{-20}$
$\boldsymbol{100\theta_{MC}}$	1.04091	1.04066 ± 0.00051	$\sigma_8/h^{0.5}$	0.9981	$0.978^{+0.024}_{-0.012}$	$H(0.38)$	83.15	$81.9^{+1.5}_{-0.64}$
$\boldsymbol{\tau}$	0.0529	0.0525 ± 0.0077	$r_{drag}h$	99.98	$97.0^{+3.5}_{-1.6}$	$D_M(0.38)$	1525.4	1560^{+16}_{-41}
$\boldsymbol{\Sigma m_\nu}$ [eV]	0.000	< 0.180	$\langle d^2\rangle^{1/2}$	2.4453	2.451 ± 0.027	$H(0.51)$	89.84	$88.8^{+1.2}_{-0.53}$
$\boldsymbol{\ln(10^{10}A_s)}$	3.0395	3.042 ± 0.015	z_{re}	7.56	7.57 ± 0.79	$D_M(0.51)$	1976.5	2017^{+19}_{-48}
$\boldsymbol{n_s}$	0.9657	$0.9613^{+0.0062}_{-0.0052}$	$10^9 A_s$	2.0894	2.095 ± 0.032	$H(0.61)$	95.43	$94.57^{+0.99}_{-0.44}$
$\boldsymbol{y_{cal}}$	1.00016	1.0006 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.8797	1.886 ± 0.013	$D_M(0.61)$	2300.3	2345^{+21}_{-52}
$\boldsymbol{A_{217}^{CIB}}$	49.3	48 ± 7	D_{40}	1226.5	1235 ± 14	$H(2.33)$	235.85	$237.4^{+1.1}_{-2.0}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.22	—	D_{220}	5712.0	5714 ± 41	$D_M(2.33)$	5757.5	5800^{+20}_{-50}
$\boldsymbol{A_{143}^{tSZ}}$	7.16	5.0 ± 2.0	D_{810}	2535.2	2538 ± 14	$f\sigma_8(0.15)$	0.4606	0.4618 ± 0.0081
$\boldsymbol{A_{100}^{PS}}$	254.2	265 ± 28	D_{1420}	815.2	814.5 ± 5.1	$\sigma_8(0.15)$	0.7598	$0.732^{+0.030}_{-0.0096}$
$\boldsymbol{A_{143}^{PS}}$	47.3	50 ± 8	D_{2000}	230.06	229.3 ± 1.9	$f\sigma_8(0.38)$	0.4797	$0.4751^{+0.0085}_{-0.0063}$
$\boldsymbol{A_{143\times217}^{PS}}$	44.0	44 ± 9	$n_{s,0.002}$	0.9657	$0.9613^{+0.0062}_{-0.0052}$	$\sigma_8(0.38)$	0.6736	$0.647^{+0.029}_{-0.0090}$
$\boldsymbol{A_{217}^{PS}}$	117.8	115 ± 10	Y_P	0.245329	$0.24526^{+0.00013}_{-0.000087}$	$f\sigma_8(0.51)$	0.4786	$0.471^{+0.010}_{-0.0055}$
$\boldsymbol{A^{kSZ}}$	0.00	< 5.03	Y_P^{BBN}	0.246655	$0.24659^{+0.00013}_{-0.000088}$	$\sigma_8(0.51)$	0.6305	$0.605^{+0.028}_{-0.0086}$
$\boldsymbol{A_{100}^{dustTT}}$	8.90	8.9 ± 1.8	10^5D/H	2.6167	$2.645^{+0.042}_{-0.050}$	$f\sigma_8(0.61)$	0.4738	$0.465^{+0.011}_{-0.0050}$
$\boldsymbol{A_{143}^{dustTT}}$	10.79	10.7 ± 1.8	Age/Gyr	13.784	$13.883^{+0.045}_{-0.11}$	$\sigma_8(0.61)$	0.5999	$0.575^{+0.027}_{-0.0083}$
$\boldsymbol{A_{143\times217}^{dustTT}}$	19.24	18.3 ± 3.3	z_*	1090.093	$1090.42^{+0.37}_{-0.51}$	$f\sigma_8(2.33)$	0.3016	$0.290^{+0.012}_{-0.0038}$
$\boldsymbol{A_{217}^{dustTT}}$	94.3	93.3 ± 7.3	r_*	144.648	$144.39^{+0.48}_{-0.40}$	$\sigma_8(2.33)$	0.3116	$0.298^{+0.015}_{-0.0047}$
$\boldsymbol{c_{100}}$	0.99964	0.99961 ± 0.00061	$100\theta_*$	1.041085	1.04092 ± 0.00048	f_{2000}^{143}	30.16	31.7 ± 3.0
$\boldsymbol{c_{217}}$	0.99826	0.99827 ± 0.00062	$D_M(z_*)$/Gpc	13.8940	$13.871^{+0.044}_{-0.038}$	$f_{2000}^{143\times217}$	33.04	34.0 ± 2.1
H_0	67.84	$65.9^{+2.2}_{-0.97}$	z_{drag}	1059.513	1059.30 ± 0.48	f_{2000}^{217}	107.50	108.5 ± 2.0
Ω_Λ	0.6917	$0.666^{+0.031}_{-0.012}$	r_{drag}	147.369	$147.15^{+0.46}_{-0.41}$	$\chi^2_{lensing}$	9.04	9.43 ± 0.99
Ω_m	0.3083	$0.334^{+0.012}_{-0.031}$	k_D	0.140444	0.14057 ± 0.00049	χ^2_{simall}	395.86	397.0 ± 1.7
$\Omega_m h^2$	0.14188	$0.1447^{+0.0018}_{-0.0035}$	$100\theta_D$	0.160997	0.16111 ± 0.00027	χ^2_{lowl}	23.26	24.0 ± 1.2
$\Omega_\nu h^2$	0.00000	< 0.00194	z_{eq}	3390.4	3419^{+39}_{-48}	χ^2_{plik}	758.5	771.9 ± 5.4
$\Omega_m h^3$	0.09625	$0.0953^{+0.0012}_{-0.00054}$	k_{eq}	0.010348	$0.01044^{+0.00012}_{-0.00015}$	χ^2_{prior}	1.48	7.3 ± 3.7
σ_8	0.8221	$0.794^{+0.030}_{-0.010}$	$100\theta_{eq}$	0.8149	$0.8095^{+0.0089}_{-0.0074}$	χ^2_{CMB}	1186.6	1202.3 ± 5.8
S_8	0.8333	0.836 ± 0.016	$100\theta_{s,eq}$	0.45034	$0.4476^{+0.0045}_{-0.0038}$			

Best-fit $\chi^2_{eff} = 1188.10$; $\Delta\chi^2_{eff} = -0.47$; $\bar{\chi}^2_{eff} = 1209.58$; $\Delta\bar{\chi}^2_{eff} = 1.16$; $R - 1 = 0.00659$

χ^2_{eff}: CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 9.04 (Δ 0.14) simall_100x143_offlike5_EE_Aplanck_B: 395.86 (Δ -0.00) commander_dx12_v3_2_29: 23.26 (Δ 0.03) plik_rd12_HM_v22_TT: 758.46 (Δ -0.86)

6.34 base_mnu_plikHM_TT_lowl_lowE_lensing_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	$0.02207^{+0.00026}_{-0.00022}$	$\sigma_8\Omega_m^{0.5}$	0.4580 ± 0.0090	$H(0.15)$	$71.4^{+2.0}_{-0.85}$
$\boldsymbol{\Omega_c h^2}$	$0.1209^{+0.0017}_{-0.0022}$	$\sigma_8\Omega_m^{0.25}$	$0.603^{+0.013}_{-0.0083}$	$D_M(0.15)$	$656.3^{+8.0}_{-20}$
$\boldsymbol{100\theta_{MC}}$	1.04067 ± 0.00051	$\sigma_8/h^{0.5}$	$0.978^{+0.025}_{-0.012}$	$H(0.38)$	$81.9^{+1.5}_{-0.64}$
$\boldsymbol{\tau}$	$0.0538^{+0.0049}_{-0.0081}$	$r_{drag}h$	$97.1^{+3.6}_{-1.6}$	$D_M(0.38)$	1560^{+16}_{-41}
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 0.184	$\langle d^2\rangle^{1/2}$	2.452 ± 0.027	$H(0.51)$	$88.8^{+1.2}_{-0.53}$
$\boldsymbol{\ln(10^{10}A_s)}$	$3.044^{+0.011}_{-0.015}$	z_{re}	$7.71^{+0.54}_{-0.82}$	$D_M(0.51)$	2017^{+19}_{-48}
$\boldsymbol{n_s}$	$0.9616^{+0.0062}_{-0.0051}$	$10^9 A_s$	$2.100^{+0.023}_{-0.033}$	$H(0.61)$	$94.6^{+1.0}_{-0.45}$
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.886 ± 0.012	$D_M(0.61)$	2344^{+21}_{-52}
$\boldsymbol{A^{CIB}_{217}}$	48 ± 7	D_{40}	1235 ± 14	$H(2.33)$	$237.4^{+1.1}_{-2.0}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{220}	5714 ± 41	$D_M(2.33)$	5800^{+20}_{-50}
$\boldsymbol{A^{tSZ}_{143}}$	5.0 ± 2.0	D_{810}	2537 ± 14	$f\sigma_8(0.15)$	0.4617 ± 0.0081
$\boldsymbol{A^{PS}_{100}}$	265 ± 28	D_{1420}	814.5 ± 5.1	$\sigma_8(0.15)$	$0.732^{+0.030}_{-0.0097}$
$\boldsymbol{A^{PS}_{143}}$	50 ± 8	D_{2000}	229.3 ± 1.9	$f\sigma_8(0.38)$	$0.4751^{+0.0086}_{-0.0063}$
$\boldsymbol{A^{PS}_{143\times217}}$	44 ± 9	$n_{s,0.002}$	$0.9616^{+0.0062}_{-0.0051}$	$\sigma_8(0.38)$	$0.647^{+0.029}_{-0.0090}$
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	Y_P	$0.24526^{+0.00013}_{-0.000086}$	$f\sigma_8(0.51)$	$0.471^{+0.010}_{-0.0055}$
$\boldsymbol{A^{kSZ}}$	< 5.02	Y_P^{BBN}	$0.24659^{+0.00013}_{-0.000087}$	$\sigma_8(0.51)$	$0.605^{+0.028}_{-0.0086}$
$\boldsymbol{A^{dustTT}_{100}}$	8.9 ± 1.8	10^5D/H	$2.643^{+0.042}_{-0.050}$	$f\sigma_8(0.61)$	$0.465^{+0.011}_{-0.0050}$
$\boldsymbol{A^{dustTT}_{143}}$	10.7 ± 1.8	Age/Gyr	$13.883^{+0.046}_{-0.12}$	$\sigma_8(0.61)$	$0.575^{+0.027}_{-0.0084}$
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.3 ± 3.3	z_*	$1090.40^{+0.36}_{-0.51}$	$f\sigma_8(2.33)$	$0.291^{+0.012}_{-0.0038}$
$\boldsymbol{A^{dustTT}_{217}}$	93.3 ± 7.3	r_*	$144.41^{+0.48}_{-0.40}$	$\sigma_8(2.33)$	$0.298^{+0.015}_{-0.0047}$
$\boldsymbol{c_{100}}$	0.99961 ± 0.00061	$100\theta_*$	1.04093 ± 0.00048	f^{143}_{2000}	31.7 ± 3.0
$\boldsymbol{c_{217}}$	0.99827 ± 0.00062	$D_M(z_*)$/Gpc	$13.873^{+0.044}_{-0.037}$	$f^{143\times217}_{2000}$	34.0 ± 2.1
H_0	$65.9^{+2.3}_{-0.97}$	z_{drag}	1059.31 ± 0.48	f^{217}_{2000}	108.5 ± 2.0
Ω_Λ	$0.666^{+0.031}_{-0.012}$	r_{drag}	$147.17^{+0.47}_{-0.41}$	$\chi^2_{lensing}$	9.40 ± 0.99
Ω_m	$0.334^{+0.012}_{-0.031}$	k_D	0.14056 ± 0.00049	χ^2_{simall}	396.9 ± 1.8
$\Omega_m h^2$	$0.1447^{+0.0018}_{-0.0035}$	$100\theta_D$	0.16111 ± 0.00027	χ^2_{lowl}	23.9 ± 1.2
$\Omega_\nu h^2$	< 0.00197	z_{eq}	3417^{+38}_{-48}	χ^2_{plik}	771.8 ± 5.4
$\Omega_m h^3$	$0.0953^{+0.0012}_{-0.00054}$	k_{eq}	$0.01043^{+0.00012}_{-0.00015}$	χ^2_{prior}	7.3 ± 3.7
σ_8	$0.794^{+0.031}_{-0.010}$	$100\theta_{eq}$	$0.8099^{+0.0089}_{-0.0073}$	χ^2_{CMB}	1202.1 ± 5.8
S_8	0.836 ± 0.016	$100\theta_{s,eq}$	$0.4478^{+0.0045}_{-0.0037}$		

$\bar{\chi}^2_{eff} = 1209.38$; $\Delta\bar{\chi}^2_{eff} = 1.22$; $R - 1 = 0.00698$

6.35 base_mnu_plikHM_TTTEEE_lowl_lowE_lensing

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022421	0.02236 ± 0.00015	$\Omega_\nu h^2$	0.00000	< 0.00116	$100\theta_{\rm eq}$	0.8145	0.8128 ± 0.0054
$\boldsymbol{\Omega_c h^2}$	0.11969	0.1201 ± 0.0013	$\Omega_{\rm m} h^3$	0.096681	$0.09623^{+0.00064}_{-0.00033}$	$100\theta_{\rm s,eq}$	0.44999	0.4491 ± 0.0027
$\boldsymbol{100\theta_{MC}}$	1.040979	1.04088 ± 0.00032	σ_8	0.8224	$0.807^{+0.018}_{-0.0079}$	$H(0.15)$	73.28	$72.4^{+1.1}_{-0.58}$
$\boldsymbol{\tau}$	0.0532	0.0547 ± 0.0075	S_8	0.8320	0.832 ± 0.013	$D_{\rm M}(0.15)$	637.6	$645.8^{+5.6}_{-11}$
$\boldsymbol{\Sigma m_\nu}$ [eV]	0.000	< 0.108	$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4557	0.4556 ± 0.0069	$H(0.38)$	83.33	$82.69^{+0.80}_{-0.43}$
$\boldsymbol{\ln(10^{10} A_s)}$	3.0417	3.046 ± 0.015	$\sigma_8 \Omega_{\rm m}^{0.25}$	0.6122	$0.6063^{+0.0092}_{-0.0068}$	$D_{\rm M}(0.38)$	1521.6	1538^{+11}_{-22}
$\boldsymbol{n_s}$	0.96641	0.9647 ± 0.0043	$\sigma_8/h^{0.5}$	0.9970	$0.985^{+0.016}_{-0.010}$	$H(0.51)$	90.01	$89.48^{+0.66}_{-0.35}$
$\boldsymbol{y_{cal}}$	1.00050	1.0007 ± 0.0025	$r_{\rm drag} h$	100.09	$98.7^{+1.9}_{-1.1}$	$D_{\rm M}(0.51)$	1971.8	1992^{+13}_{-25}
$\boldsymbol{A^{CIB}_{217}}$	47.0	47 ± 7	$\langle d^2 \rangle^{1/2}$	2.4451	2.445 ± 0.021	$H(0.61)$	95.607	$95.16^{+0.55}_{-0.29}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.48	—	$z_{\rm re}$	7.54	7.71 ± 0.75	$D_{\rm M}(0.61)$	2295.0	2317^{+14}_{-28}
$\boldsymbol{A^{tSZ}_{143}}$	7.15	$5.5^{+2.2}_{-1.9}$	$10^9 A_{\rm s}$	2.0941	$2.103^{+0.029}_{-0.032}$	$H(2.33)$	236.08	$236.80^{+0.79}_{-1.1}$
$\boldsymbol{A^{PS}_{100}}$	250.1	259 ± 28	$10^9 A_{\rm s} e^{-2\tau}$	1.8828	1.884 ± 0.011	$D_{\rm M}(2.33)$	5747.6	5769^{+13}_{-27}
$\boldsymbol{A^{PS}_{143}}$	48.2	46 ± 8	D_{40}	1228.6	1233 ± 12	$f\sigma_8(0.15)$	0.4599	0.4599 ± 0.0064
$\boldsymbol{A^{PS}_{143\times217}}$	48.6	42 ± 9	D_{220}	5735.7	5736 ± 39	$\sigma_8(0.15)$	0.7602	$0.745^{+0.018}_{-0.0074}$
$\boldsymbol{A^{PS}_{217}}$	119.9	115 ± 10	D_{810}	2540.2	2540 ± 13	$f\sigma_8(0.38)$	0.4794	$0.4766^{+0.0062}_{-0.0053}$
$\boldsymbol{A^{kSZ}}$	0.00	< 4.27	D_{1420}	818.07	817.5 ± 4.7	$\sigma_8(0.38)$	0.6741	$0.660^{+0.017}_{-0.0067}$
$\boldsymbol{A^{dustTT}_{100}}$	8.76	8.9 ± 1.8	D_{2000}	231.33	230.9 ± 1.6	$f\sigma_8(0.51)$	0.4784	$0.4744^{+0.0066}_{-0.0048}$
$\boldsymbol{A^{dustTT}_{143}}$	10.99	10.9 ± 1.8	$n_{\rm s,0.002}$	0.96641	0.9647 ± 0.0043	$\sigma_8(0.51)$	0.6310	$0.617^{+0.016}_{-0.0064}$
$\boldsymbol{A^{dustTT}_{143\times217}}$	19.91	18.6 ± 3.3	$Y_{\rm P}$	0.245415	$0.245391^{+0.000064}_{-0.000056}$	$f\sigma_8(0.61)$	0.4736	$0.4689^{+0.0070}_{-0.0045}$
$\boldsymbol{A^{dustTT}_{217}}$	95.2	93.7 ± 7.3	$Y_{\rm P}^{\rm BBN}$	0.246742	$0.246717^{+0.000064}_{-0.000056}$	$\sigma_8(0.61)$	0.6004	$0.587^{+0.016}_{-0.0062}$
$\boldsymbol{A^{dustTE}_{100}}$	0.1136	0.114 ± 0.038	10^5D/H	2.5760	2.587 ± 0.029	$f\sigma_8(2.33)$	0.30194	$0.2962^{+0.0070}_{-0.0029}$
$\boldsymbol{A^{dustTE}_{100\times143}}$	0.1349	0.135 ± 0.029	Age/Gyr	13.7610	$13.811^{+0.029}_{-0.062}$	$\sigma_8(2.33)$	0.3119	$0.3048^{+0.0085}_{-0.0034}$
$\boldsymbol{A^{dustTE}_{100\times217}}$	0.483	0.481 ± 0.085	z_*	1089.823	1089.94 ± 0.28	f^{143}_{2000}	28.74	29.6 ± 2.7
$\boldsymbol{A^{dustTE}_{143}}$	0.225	0.226 ± 0.054	r_*	144.480	$144.40^{+0.29}_{-0.26}$	$f^{143\times217}_{2000}$	31.89	32.2 ± 1.9
$\boldsymbol{A^{dustTE}_{143\times217}}$	0.664	0.666 ± 0.080	$100\theta_*$	1.041123	1.04108 ± 0.00030	f^{217}_{2000}	106.51	107.1 ± 1.8
$\boldsymbol{A^{dustTE}_{217}}$	2.080	2.09 ± 0.27	$D_{\rm M}(z_*)$/Gpc	13.8773	13.870 ± 0.026	$\chi^2_{\rm lensing}$	9.022	9.29 ± 0.73
$\boldsymbol{c_{100}}$	0.99972	0.99967 ± 0.00061	$z_{\rm drag}$	1060.009	1059.93 ± 0.31	$\chi^2_{\rm simall}$	395.85	397.1 ± 1.8
$\boldsymbol{c_{217}}$	0.99820	0.99820 ± 0.00062	$r_{\rm drag}$	147.126	$147.06^{+0.29}_{-0.26}$	$\chi^2_{\rm lowl}$	23.26	23.55 ± 0.88
H_0	68.03	$67.1^{+1.2}_{-0.67}$	$k_{\rm D}$	0.140866	0.14089 ± 0.00030	$\chi^2_{\rm plik}$	2344.0	2359.8 ± 5.9
Ω_Λ	0.6929	$0.681^{+0.016}_{-0.0085}$	$100\theta_{\rm D}$	0.160709	0.16076 ± 0.00018	$\chi^2_{\rm prior}$	1.68	11.5 ± 4.6
$\Omega_{\rm m}$	0.3071	$0.3191^{+0.0085}_{-0.016}$	$z_{\rm eq}$	3396.0	3405 ± 29	$\chi^2_{\rm CMB}$	2772.2	2789.8 ± 6.1
$\Omega_{\rm m} h^2$	0.14211	$0.1435^{+0.0013}_{-0.0019}$	$k_{\rm eq}$	0.010365	0.010393 ± 0.000087			

Best-fit $\chi^2_{\rm eff} = 2773.86$; $\Delta\chi^2_{\rm eff} = -0.78$; $\bar{\chi}^2_{\rm eff} = 2801.35$; $\Delta\bar{\chi}^2_{\rm eff} = 0.66$; $R - 1 = 0.01138$

$\chi^2_{\rm eff}$: CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 9.02 (Δ 0.15) simall_100x143_offlike5_EE_Aplanck_B: 395.85 (Δ -0.20) commander_dx12_v3_2_29: 23.26 (Δ 0.01) plik_rd12_HM_v22b_TTTEEE: 2344.04 (Δ -0.89)

6.36 base_mnu_plikHM_TTTEEE_lowl_lowE_lensing_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02237 ± 0.00015	$\Omega_\nu h^2$	< 0.00117	$100\theta_{\rm eq}$	0.8130 ± 0.0053
$\boldsymbol{\Omega_c h^2}$	0.1201 ± 0.0013	$\Omega_{\rm m} h^3$	$0.09622^{+0.00064}_{-0.00033}$	$100\theta_{\rm s,eq}$	0.4492 ± 0.0027
$\boldsymbol{100\theta_{MC}}$	1.04089 ± 0.00032	σ_8	$0.807^{+0.018}_{-0.0078}$	$H(0.15)$	$72.5^{+1.1}_{-0.58}$
$\boldsymbol{\tau}$	$0.0556^{+0.0057}_{-0.0079}$	S_8	0.832 ± 0.013	$D_{\rm M}(0.15)$	$645.7^{+5.5}_{-11}$
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 0.109	$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4556 ± 0.0069	$H(0.38)$	$82.70^{+0.81}_{-0.43}$
$\boldsymbol{\ln(10^{10} A_s)}$	$3.047^{+0.012}_{-0.015}$	$\sigma_8 \Omega_{\rm m}^{0.25}$	$0.6063^{+0.0092}_{-0.0068}$	$D_{\rm M}(0.38)$	1538^{+11}_{-22}
$\boldsymbol{n_s}$	0.9649 ± 0.0042	$\sigma_8/h^{0.5}$	$0.985^{+0.016}_{-0.010}$	$H(0.51)$	$89.49^{+0.67}_{-0.35}$
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0025	$r_{\rm drag} h$	$98.7^{+1.9}_{-1.1}$	$D_{\rm M}(0.51)$	1991^{+13}_{-26}
$\boldsymbol{A_{217}^{CIB}}$	47 ± 7	$\langle d^2 \rangle^{1/2}$	2.446 ± 0.021	$H(0.61)$	$95.16^{+0.56}_{-0.29}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$z_{\rm re}$	$7.80^{+0.62}_{-0.77}$	$D_{\rm M}(0.61)$	2316^{+14}_{-28}
$\boldsymbol{A_{143}^{tSZ}}$	$5.5^{+2.2}_{-1.9}$	$10^9 A_{\rm s}$	$2.106^{+0.024}_{-0.032}$	$H(2.33)$	$236.78^{+0.78}_{-1.1}$
$\boldsymbol{A_{100}^{PS}}$	259 ± 28	$10^9 A_{\rm s} e^{-2\tau}$	1.884 ± 0.011	$D_{\rm M}(2.33)$	5769^{+13}_{-27}
$\boldsymbol{A_{143}^{PS}}$	46 ± 8	D_{40}	1232 ± 12	$f\sigma_8(0.15)$	0.4599 ± 0.0064
$\boldsymbol{A_{143\times217}^{PS}}$	42 ± 9	D_{220}	5736 ± 39	$\sigma_8(0.15)$	$0.745^{+0.018}_{-0.0073}$
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	D_{810}	2540 ± 13	$f\sigma_8(0.38)$	$0.4767^{+0.0063}_{-0.0053}$
$\boldsymbol{A^{kSZ}}$	< 4.25	D_{1420}	817.5 ± 4.7	$\sigma_8(0.38)$	$0.660^{+0.017}_{-0.0067}$
$\boldsymbol{A_{100}^{dust TT}}$	8.9 ± 1.8	D_{2000}	230.9 ± 1.5	$f\sigma_8(0.51)$	$0.4745^{+0.0067}_{-0.0048}$
$\boldsymbol{A_{143}^{dust TT}}$	10.9 ± 1.8	$n_{\rm s,0.002}$	0.9649 ± 0.0042	$\sigma_8(0.51)$	$0.617^{+0.016}_{-0.0063}$
$\boldsymbol{A_{143\times217}^{dust TT}}$	18.6 ± 3.3	$Y_{\rm P}$	$0.245392^{+0.000064}_{-0.000055}$	$f\sigma_8(0.61)$	$0.4690^{+0.0071}_{-0.0044}$
$\boldsymbol{A_{217}^{dust TT}}$	93.7 ± 7.3	$Y_{\rm P}^{\rm BBN}$	$0.246719^{+0.000064}_{-0.000055}$	$\sigma_8(0.61)$	$0.587^{+0.016}_{-0.0061}$
$\boldsymbol{A_{100}^{dust TE}}$	0.114 ± 0.038	10^5D/H	2.587 ± 0.029	$f\sigma_8(2.33)$	$0.2963^{+0.0070}_{-0.0029}$
$\boldsymbol{A_{100\times143}^{dust TE}}$	0.135 ± 0.029	Age/Gyr	$13.811^{+0.029}_{-0.062}$	$\sigma_8(2.33)$	$0.3049^{+0.0085}_{-0.0034}$
$\boldsymbol{A_{100\times217}^{dust TE}}$	0.481 ± 0.085	z_*	1089.93 ± 0.28	f_{2000}^{143}	29.6 ± 2.7
$\boldsymbol{A_{143}^{dust TE}}$	0.225 ± 0.053	r_*	$144.41^{+0.29}_{-0.26}$	$f_{2000}^{143\times217}$	32.2 ± 1.9
$\boldsymbol{A_{143\times217}^{dust TE}}$	0.666 ± 0.080	$100\theta_*$	1.04109 ± 0.00030	f_{2000}^{217}	107.1 ± 1.8
$\boldsymbol{A_{217}^{dust TE}}$	2.09 ± 0.27	$D_{\rm M}(z_*)$/Gpc	13.871 ± 0.026	$\chi^2_{\rm lensing}$	9.28 ± 0.73
$\boldsymbol{c_{100}}$	0.99967 ± 0.00061	$z_{\rm drag}$	1059.93 ± 0.31	$\chi^2_{\rm simall}$	397.1 ± 1.9
$\boldsymbol{c_{217}}$	0.99820 ± 0.00063	$r_{\rm drag}$	$147.07^{+0.28}_{-0.26}$	$\chi^2_{\rm lowl}$	23.54 ± 0.87
H_0	$67.1^{+1.2}_{-0.66}$	$k_{\rm D}$	0.14088 ± 0.00030	$\chi^2_{\rm plik}$	2359.7 ± 5.9
Ω_Λ	$0.681^{+0.016}_{-0.0083}$	$100\theta_{\rm D}$	0.16076 ± 0.00018	$\chi^2_{\rm prior}$	11.5 ± 4.6
$\Omega_{\rm m}$	$0.3189^{+0.0083}_{-0.016}$	$z_{\rm eq}$	3404 ± 28	$\chi^2_{\rm CMB}$	2789.7 ± 6.1
$\Omega_{\rm m} h^2$	$0.1434^{+0.0013}_{-0.0019}$	$k_{\rm eq}$	0.010390 ± 0.000086		

$\bar{\chi}^2_{\rm eff} = 2801.19$; $\Delta\bar{\chi}^2_{\rm eff} = 0.68$; $R - 1 = 0.01124$

6.37 base_mnu_CamSpecHM_TTTEEE_lowl_lowE_lensing

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022343	0.02227 ± 0.00016	σ_8	0.8210	$0.802^{+0.021}_{-0.0089}$	$100\theta_{s,eq}$	0.45078	0.4499 ± 0.0029
$\boldsymbol{\Omega_c h^2}$	0.11938	0.1199 ± 0.0013	S_8	0.8292	0.827 ± 0.013	$H(0.15)$	73.29	$72.3^{+1.2}_{-0.64}$
$\boldsymbol{100\theta_{MC}}$	1.040913	1.04083 ± 0.00033	$\sigma_8\Omega_m^{0.5}$	0.4541	0.4532 ± 0.0070	$D_M(0.15)$	637.4	$646.9^{+6.1}_{-12}$
$\boldsymbol{\tau}$	0.0532	0.0541 ± 0.0078	$\sigma_8\Omega_m^{0.25}$	0.6106	$0.6028^{+0.0099}_{-0.0071}$	$H(0.38)$	83.31	$82.58^{+0.89}_{-0.48}$
$\boldsymbol{\Sigma m_\nu}$ [eV]	0.000	< 0.127	$\sigma_8/h^{0.5}$	0.9952	$0.980^{+0.018}_{-0.011}$	$D_M(0.38)$	1521.5	1541^{+12}_{-24}
$\boldsymbol{\ln(10^{10}A_s)}$	3.0396	3.042 ± 0.015	$r_{drag}h$	100.24	$98.6^{+2.1}_{-1.2}$	$H(0.51)$	89.98	$89.37^{+0.74}_{-0.39}$
$\boldsymbol{n_s}$	0.96734	0.9650 ± 0.0044	$\langle d^2\rangle^{1/2}$	2.4383	2.437 ± 0.022	$D_M(0.51)$	1971.8	1995^{+15}_{-28}
$\boldsymbol{y_{cal}}$	1.00052	1.0006 ± 0.0025	z_{re}	7.56	7.66 ± 0.79	$H(0.61)$	95.560	$95.04^{+0.62}_{-0.33}$
$\boldsymbol{A_{100}^{PS}}$	232.8	241 ± 25	$10^9 A_s$	2.0896	2.095 ± 0.032	$D_M(0.61)$	2295.2	2320^{+16}_{-31}
$\boldsymbol{A_{143}^{PS}}$	42.3	40 ± 8	$10^9 A_s e^{-2\tau}$	1.8786	1.880 ± 0.011	$H(2.33)$	235.79	$236.59^{+0.89}_{-1.2}$
$\boldsymbol{A_{217}^{PS}}$	103.7	103 ± 10	D_{40}	1223.7	1229 ± 12	$D_M(2.33)$	5751.0	5776^{+15}_{-30}
$\boldsymbol{A_{217}^{CIB}}$	42.7	40 ± 7	D_{220}	5718.6	5721 ± 39	$f\sigma_8(0.15)$	0.4585	0.4576 ± 0.0065
$\boldsymbol{A_{143}^{tSZ}}$	6.19	$3.8^{+1.9}_{-2.5}$	D_{810}	2536.0	2536 ± 13	$\sigma_8(0.15)$	0.7591	$0.740^{+0.020}_{-0.0084}$
$\boldsymbol{r_{143\times217}^{PS}}$	0.665	0.66 ± 0.13	D_{1420}	816.63	815.9 ± 4.9	$f\sigma_8(0.38)$	0.4781	$0.4741^{+0.0065}_{-0.0054}$
$\boldsymbol{r_{143\times217}^{CIB}}$	0.753	$0.56^{+0.39}_{-0.17}$	D_{2000}	230.77	230.2 ± 1.7	$\sigma_8(0.38)$	0.6733	$0.656^{+0.019}_{-0.0077}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.36	—	$n_{s,0.002}$	0.96734	0.9650 ± 0.0044	$f\sigma_8(0.51)$	0.4773	$0.4719^{+0.0071}_{-0.0050}$
$\boldsymbol{A^{kSZ}}$	0.47	$4.8^{+2.4}_{-3.8}$	Y_P	0.245385	0.245354 ± 0.000066	$\sigma_8(0.51)$	0.6302	$0.613^{+0.018}_{-0.0073}$
$\boldsymbol{A_{100}^{dust}}$	1.009	1.01 ± 0.19	Y_P^{BBN}	0.246711	0.246680 ± 0.000066	$f\sigma_8(0.61)$	0.4726	$0.4664^{+0.0077}_{-0.0047}$
$\boldsymbol{A_{143}^{dust}}$	0.972	0.96 ± 0.18	10^5D/H	2.5905	2.604 ± 0.030	$\sigma_8(0.61)$	0.5997	$0.583^{+0.018}_{-0.0071}$
$\boldsymbol{A_{217}^{dust}}$	0.973	0.97 ± 0.10	Age/Gyr	13.769	$13.827^{+0.033}_{-0.069}$	$f\sigma_8(2.33)$	0.3016	$0.2946^{+0.0080}_{-0.0033}$
$\boldsymbol{A_{143\times217}^{dust}}$	1.018	1.02 ± 0.16	z_*	1089.893	1090.04 ± 0.29	$\sigma_8(2.33)$	0.3117	$0.3030^{+0.0097}_{-0.0039}$
$\boldsymbol{c_{100}}$	0.99772	0.9976 ± 0.0011	r_*	144.619	144.54 ± 0.31	f_{2000}^{143}	29.32	29.9 ± 2.9
$\boldsymbol{c_{217}}$	1.00120	1.0011 ± 0.0016	$100\theta_*$	1.041069	1.04104 ± 0.00031	f_{2000}^{217}	106.32	107.0 ± 2.0
$\boldsymbol{c_{TE}}$	0.99612	0.9968 ± 0.0049	$D_M(z_*)$/Gpc	13.8914	13.884 ± 0.029	$f_{2000}^{143\times217}$	31.71	32.3 ± 2.0
$\boldsymbol{c_{EE}}$	0.99172	0.9921 ± 0.0049	z_{drag}	1059.818	1059.70 ± 0.33	$\chi^2_{lensing}$	8.92	9.44 ± 0.87
H_0	68.06	$67.0^{+1.3}_{-0.74}$	r_{drag}	147.293	147.24 ± 0.31	χ^2_{simall}	395.86	397.1 ± 1.9
Ω_Λ	0.6940	$0.680^{+0.018}_{-0.0092}$	k_D	0.140629	0.14064 ± 0.00035	χ^2_{lowl}	22.92	23.30 ± 0.87
Ω_m	0.3060	$0.3198^{+0.0092}_{-0.018}$	$100\theta_D$	0.160816	0.16089 ± 0.00019	$\chi^2_{CamSpec}$	11499.3	11514.7 ± 5.6
$\Omega_m h^2$	0.14172	$0.1432^{+0.0014}_{-0.0021}$	z_{eq}	3386.7	3396 ± 30	χ^2_{prior}	2.05	7.8 ± 3.5
$\Omega_\nu h^2$	0.00000	< 0.00136	k_{eq}	0.010336	0.010366 ± 0.000092	χ^2_{CMB}	11927.0	11944.5 ± 6.0
$\Omega_m h^3$	0.09645	$0.09591^{+0.00071}_{-0.00039}$	$100\theta_{eq}$	0.8159	0.8141 ± 0.0057			

Best-fit $\chi^2_{eff} = 11929.03$; $\Delta\chi^2_{eff} = -0.62$; $\bar{\chi}^2_{eff} = 11952.30$; $\Delta\bar{\chi}^2_{eff} = 0.86$; $R - 1 = 0.01307$

χ^2_{eff}: CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.92 (Δ 0.09) simall_100x143_offlike5_EE_Aplanck_B: 395.86 (Δ -0.01) commander_dx12_v3_2_29: 22.93 (Δ -0.29) CamSpec like_10.7HM_1400_unified: 11499.28 (Δ -0.37)

6.38 base_mnu_CamSpecHM_TTTEEE_lowl_lowE_lensing_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02228 ± 0.00016	σ_8	$0.802^{+0.021}_{-0.0090}$	$100\theta_{s,eq}$	0.4500 ± 0.0029
$\boldsymbol{\Omega_c h^2}$	0.1198 ± 0.0013	S_8	0.827 ± 0.013	$H(0.15)$	$72.3^{+1.2}_{-0.64}$
$\boldsymbol{100\theta_{MC}}$	1.04083 ± 0.00033	$\sigma_8\Omega_m^{0.5}$	0.4532 ± 0.0070	$D_M(0.15)$	$646.9^{+6.1}_{-12}$
$\boldsymbol{\tau}$	$0.0552^{+0.0052}_{-0.0080}$	$\sigma_8\Omega_m^{0.25}$	$0.6029^{+0.0099}_{-0.0072}$	$H(0.38)$	$82.58^{+0.91}_{-0.48}$
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 0.129	$\sigma_8/h^{0.5}$	$0.980^{+0.018}_{-0.011}$	$D_M(0.38)$	1541^{+12}_{-24}
$\boldsymbol{\ln(10^{10}A_s)}$	$3.044^{+0.011}_{-0.015}$	$r_{drag}h$	$98.6^{+2.2}_{-1.2}$	$H(0.51)$	$89.37^{+0.75}_{-0.39}$
$\boldsymbol{n_s}$	0.9652 ± 0.0044	$\langle d^2\rangle^{1/2}$	2.438 ± 0.022	$D_M(0.51)$	1995^{+15}_{-29}
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0025	z_{re}	$7.78^{+0.57}_{-0.79}$	$H(0.61)$	$95.04^{+0.63}_{-0.33}$
$\boldsymbol{A^{PS}_{100}}$	241 ± 25	$10^9 A_s$	$2.100^{+0.024}_{-0.033}$	$D_M(0.61)$	2320^{+16}_{-31}
$\boldsymbol{A^{PS}_{143}}$	40 ± 8	$10^9 A_s e^{-2\tau}$	1.880 ± 0.011	$H(2.33)$	$236.57^{+0.88}_{-1.2}$
$\boldsymbol{A^{PS}_{217}}$	103 ± 10	D_{40}	1229 ± 12	$D_M(2.33)$	5776^{+15}_{-31}
$\boldsymbol{A^{CIB}_{217}}$	40 ± 7	D_{220}	5721 ± 39	$f\sigma_8(0.15)$	0.4577 ± 0.0065
$\boldsymbol{A^{tSZ}_{143}}$	$3.8^{+1.9}_{-2.5}$	D_{810}	2536 ± 13	$\sigma_8(0.15)$	$0.741^{+0.020}_{-0.0084}$
$\boldsymbol{r^{PS}_{143\times217}}$	0.66 ± 0.13	D_{1420}	815.9 ± 4.9	$f\sigma_8(0.38)$	$0.4742^{+0.0066}_{-0.0054}$
$\boldsymbol{r^{CIB}_{143\times217}}$	$0.56^{+0.39}_{-0.17}$	D_{2000}	230.2 ± 1.7	$\sigma_8(0.38)$	$0.656^{+0.019}_{-0.0077}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$n_{s,0.002}$	0.9652 ± 0.0044	$f\sigma_8(0.51)$	$0.4720^{+0.0072}_{-0.0050}$
$\boldsymbol{A^{kSZ}}$	$4.7^{+2.4}_{-3.8}$	Y_P	0.245355 ± 0.000065	$\sigma_8(0.51)$	$0.614^{+0.019}_{-0.0073}$
$\boldsymbol{A^{dust}_{100}}$	1.01 ± 0.19	Y_P^{BBN}	0.246682 ± 0.000066	$f\sigma_8(0.61)$	$0.4665^{+0.0078}_{-0.0047}$
$\boldsymbol{A^{dust}_{143}}$	0.96 ± 0.18	10^5D/H	2.604 ± 0.030	$\sigma_8(0.61)$	$0.584^{+0.018}_{-0.0070}$
$\boldsymbol{A^{dust}_{217}}$	0.97 ± 0.10	Age/Gyr	$13.828^{+0.033}_{-0.070}$	$f\sigma_8(2.33)$	$0.2947^{+0.0081}_{-0.0032}$
$\boldsymbol{A^{dust}_{143\times217}}$	1.02 ± 0.16	z_*	1090.03 ± 0.29	$\sigma_8(2.33)$	$0.3031^{+0.0098}_{-0.0038}$
$\boldsymbol{c_{100}}$	0.9976 ± 0.0011	r_*	144.55 ± 0.31	f^{143}_{2000}	29.9 ± 2.9
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	$100\theta_*$	1.04105 ± 0.00031	f^{217}_{2000}	107.0 ± 2.0
$\boldsymbol{c_{TE}}$	0.9968 ± 0.0049	$D_M(z_*)$/Gpc	13.885 ± 0.029	$f^{143\times217}_{2000}$	32.3 ± 2.0
$\boldsymbol{c_{EE}}$	0.9921 ± 0.0049	z_{drag}	1059.71 ± 0.33	$\chi^2_{lensing}$	9.39 ± 0.83
H_0	$67.0^{+1.4}_{-0.74}$	r_{drag}	147.25 ± 0.31	χ^2_{simall}	397.0 ± 1.9
Ω_Λ	$0.680^{+0.018}_{-0.0092}$	k_D	0.14063 ± 0.00035	χ^2_{lowl}	23.29 ± 0.87
Ω_m	$0.3197^{+0.0092}_{-0.018}$	$100\theta_D$	0.16088 ± 0.00019	$\chi^2_{CamSpec}$	11514.6 ± 5.6
$\Omega_m h^2$	$0.1432^{+0.0014}_{-0.0021}$	z_{eq}	3395 ± 30	χ^2_{prior}	7.8 ± 3.5
$\Omega_\nu h^2$	< 0.00139	k_{eq}	0.010362 ± 0.000092	χ^2_{CMB}	11944.4 ± 6.0
$\Omega_m h^3$	$0.09590^{+0.00071}_{-0.00039}$	$100\theta_{eq}$	0.8143 ± 0.0056		

$\bar{\chi}^2_{eff} = 11952.13$; $\Delta\bar{\chi}^2_{eff} = 0.88$; $R - 1 = 0.01210$

6.39 base_mnu_plikHM_TT_lowl_lowE_BAO

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022202	0.02222 ± 0.00019	$\sigma_8\Omega_m^{0.25}$	0.6127	$0.603^{+0.012}_{-0.0089}$	$H(0.38)$	83.155	83.00 ± 0.40
$\boldsymbol{\Omega_c h^2}$	0.11966	0.1190 ± 0.0013	$\sigma_8/h^{0.5}$	0.9983	$0.983^{+0.019}_{-0.013}$	$D_M(0.38)$	1525.2	1529 ± 10
$\boldsymbol{100\theta_{MC}}$	1.040943	1.04100 ± 0.00042	$r_{drag}h$	99.99	99.82 ± 0.98	$H(0.51)$	89.841	89.70 ± 0.33
$\boldsymbol{\tau}$	0.0529	0.0534 ± 0.0080	$\langle d^2\rangle^{1/2}$	2.4459	2.428 ± 0.030	$D_M(0.51)$	1976.3	1981 ± 12
$\boldsymbol{\Sigma m_\nu}$ [eV]	0.0026	< 0.0720	z_{re}	7.56	7.59 ± 0.82	$H(0.61)$	95.437	$95.30^{+0.30}_{-0.27}$
$\boldsymbol{\ln(10^{10}A_s)}$	3.0404	3.039 ± 0.017	$10^9 A_s$	2.0913	2.090 ± 0.035	$D_M(0.61)$	2300.1	2305 ± 13
$\boldsymbol{n_s}$	0.96587	0.9665 ± 0.0043	$10^9 A_s e^{-2\tau}$	1.8812	1.878 ± 0.012	$H(2.33)$	235.84	235.76 ± 0.78
$\boldsymbol{y_{cal}}$	1.00046	1.0005 ± 0.0025	D_{40}	1227.2	1226 ± 13	$D_M(2.33)$	5757.3	5765^{+13}_{-15}
$\boldsymbol{A_{217}^{CIB}}$	48.7	48 ± 7	D_{220}	5715.9	5720 ± 40	$f\sigma_8(0.15)$	0.4607	0.4550 ± 0.0088
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.30	—	D_{810}	2537.4	2536 ± 14	$\sigma_8(0.15)$	0.7601	$0.748^{+0.015}_{-0.0082}$
$\boldsymbol{A_{143}^{tSZ}}$	7.02	5.1 ± 2.0	D_{1420}	815.9	815.4 ± 5.1	$f\sigma_8(0.38)$	0.4799	$0.4736^{+0.0087}_{-0.0071}$
$\boldsymbol{A_{100}^{PS}}$	254.4	262 ± 28	D_{2000}	230.27	230.0 ± 1.8	$\sigma_8(0.38)$	0.6739	$0.663^{+0.013}_{-0.0070}$
$\boldsymbol{A_{143}^{PS}}$	48.7	48 ± 8	$n_{s,0.002}$	0.96587	0.9665 ± 0.0043	$f\sigma_8(0.51)$	0.4788	$0.4724^{+0.0084}_{-0.0064}$
$\boldsymbol{A_{143\times217}^{PS}}$	46.0	43^{+9}_{-10}	Y_P	0.245327	$0.245332^{+0.000084}_{-0.000073}$	$\sigma_8(0.51)$	0.6307	$0.620^{+0.012}_{-0.0065}$
$\boldsymbol{A_{217}^{PS}}$	118.9	115 ± 10	Y_P^{BBN}	0.246653	$0.246658^{+0.000085}_{-0.000073}$	$f\sigma_8(0.61)$	0.4739	$0.4676^{+0.0082}_{-0.0059}$
$\boldsymbol{A^{kSZ}}$	0.00	< 4.85	10^5D/H	2.6176	2.614 ± 0.036	$\sigma_8(0.61)$	0.6002	$0.590^{+0.012}_{-0.0062}$
$\boldsymbol{A_{100}^{dustTT}}$	8.85	9.0 ± 1.8	Age/Gyr	13.7838	$13.802^{+0.030}_{-0.035}$	$f\sigma_8(2.33)$	0.30178	$0.2977^{+0.0051}_{-0.0030}$
$\boldsymbol{A_{143}^{dustTT}}$	10.83	10.7 ± 1.8	z_*	1090.098	1090.02 ± 0.29	$\sigma_8(2.33)$	0.31171	$0.3070^{+0.0058}_{-0.0032}$
$\boldsymbol{A_{143\times217}^{dustTT}}$	19.40	18.3 ± 3.3	r_*	144.655	144.80 ± 0.33	f_{2000}^{143}	30.13	30.8 ± 2.9
$\boldsymbol{A_{217}^{dustTT}}$	94.6	93.4 ± 7.3	$100\theta_*$	1.041120	1.04120 ± 0.00042	$f_{2000}^{143\times217}$	33.01	33.2 ± 2.0
$\boldsymbol{c_{100}}$	0.99966	0.99962 ± 0.00061	$D_M(z_*)$/Gpc	13.8942	13.907 ± 0.032	f_{2000}^{217}	107.49	107.8 ± 1.9
$\boldsymbol{c_{217}}$	0.99825	0.99825 ± 0.00063	z_{drag}	1059.513	1059.52 ± 0.43	χ^2_{simall}	395.87	397.0 ± 1.8
H_0	67.85	67.66 ± 0.59	r_{drag}	147.377	147.52 ± 0.35	χ^2_{lowl}	23.25	23.11 ± 0.94
Ω_Λ	0.6918	$0.6900^{+0.0081}_{-0.0073}$	k_D	0.140431	0.14030 ± 0.00045	χ^2_{plik}	758.6	772.0 ± 5.5
Ω_m	0.3082	$0.3100^{+0.0073}_{-0.0081}$	$100\theta_D$	0.161010	0.16101 ± 0.00025	χ^2_{6DF}	0.0101	0.059 ± 0.081
$\Omega_m h^2$	0.14189	0.1419 ± 0.0012	z_{eq}	3390.0	3375 ± 30	χ^2_{MGS}	1.41	1.39 ± 0.55
$\Omega_\nu h^2$	0.000028	< 0.000774	k_{eq}	0.010346	0.010301 ± 0.000092	$\chi^2_{DR12BAO}$	3.90	4.7 ± 1.7
$\Omega_m h^3$	0.09627	$0.09599^{+0.00056}_{-0.00047}$	$100\theta_{eq}$	0.8150	0.8178 ± 0.0056	χ^2_{prior}	1.33	7.3 ± 3.7
σ_8	0.8223	$0.809^{+0.016}_{-0.0091}$	$100\theta_{s,eq}$	0.45039	0.4519 ± 0.0029	χ^2_{BAO}	5.32	6.2 ± 1.4
S_8	0.8335	0.822 ± 0.017	$H(0.15)$	73.10	72.92 ± 0.52	χ^2_{CMB}	1177.7	1192.1 ± 5.6
$\sigma_8\Omega_m^{0.5}$	0.4565	0.4503 ± 0.0094	$D_M(0.15)$	639.2	640.9 ± 5.1			

Best-fit $\chi^2_{eff} = 1184.39$; $\Delta\chi^2_{eff} = -1.36$; $\bar{\chi}^2_{eff} = 1205.62$; $\Delta\bar{\chi}^2_{eff} = -0.41$; $R - 1 = 0.00712$

χ^2_{eff}: BAO - 6DF: 0.01 (Δ -0.01) MGS: 1.41 (Δ 0.13) DR12BAO: 3.90 (Δ -0.28) CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.87 (Δ -0.02) commander_dx12_v3_2_29: 23.25 (Δ 0.43) plik_rd12_HM_v22_TT: 758.61 (Δ -1.49)

6.40 base_mnu_plikHM_TT_lowl_lowE_BAO_post_Pantheon

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022222	0.02223 ± 0.00019	$\sigma_8\Omega_m^{0.25}$	0.6109	$0.603^{+0.011}_{-0.0086}$	$H(0.38)$	83.230	83.07 ± 0.37
$\boldsymbol{\Omega_c h^2}$	0.11935	0.1189 ± 0.0012	$\sigma_8/h^{0.5}$	0.9959	$0.983^{+0.018}_{-0.013}$	$D_M(0.38)$	1523.1	1527.1 ± 9.7
$\boldsymbol{100\theta_{MC}}$	1.040940	1.04102 ± 0.00042	$r_{drag}h$	100.22	99.99 ± 0.93	$H(0.51)$	89.897	89.75 ± 0.32
$\boldsymbol{\tau}$	0.0530	0.0536 ± 0.0080	$\langle d^2\rangle^{1/2}$	2.4414	2.426 ± 0.030	$D_M(0.51)$	1973.9	1979 ± 11
$\boldsymbol{\Sigma m_\nu}$ [eV]	0.0020	< 0.0683	z_{re}	7.57	7.60 ± 0.81	$H(0.61)$	95.478	95.34 ± 0.27
$\boldsymbol{\ln(10^{10}A_s)}$	3.0398	3.039 ± 0.017	$10^9 A_s$	2.0901	2.090 ± 0.035	$D_M(0.61)$	2297.5	2303 ± 12
$\boldsymbol{n_s}$	0.96619	0.9669 ± 0.0042	$10^9 A_s e^{-2\tau}$	1.8798	1.877 ± 0.012	$H(2.33)$	235.66	235.65 ± 0.75
$\boldsymbol{y_{cal}}$	1.00041	1.0005 ± 0.0025	D_{40}	1226.5	1225 ± 13	$D_M(2.33)$	5755.7	5763 ± 14
$\boldsymbol{A_{217}^{CIB}}$	49.0	48 ± 7	D_{220}	5718.8	5720 ± 40	$f\sigma_8(0.15)$	0.4588	0.4542 ± 0.0085
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.30	—	D_{810}	2536.7	2535 ± 14	$\sigma_8(0.15)$	0.7591	$0.748^{+0.014}_{-0.0083}$
$\boldsymbol{A_{143}^{tSZ}}$	7.08	5.1 ± 2.0	D_{1420}	815.7	815.5 ± 5.1	$f\sigma_8(0.38)$	0.4784	$0.4731^{+0.0084}_{-0.0068}$
$\boldsymbol{A_{100}^{PS}}$	254.1	262 ± 28	D_{2000}	230.21	230.0 ± 1.8	$\sigma_8(0.38)$	0.6733	$0.663^{+0.012}_{-0.0072}$
$\boldsymbol{A_{143}^{PS}}$	48.8	48 ± 8	$n_{s,0.002}$	0.96619	0.9669 ± 0.0042	$f\sigma_8(0.51)$	0.4775	$0.4721^{+0.0081}_{-0.0062}$
$\boldsymbol{A_{143\times217}^{PS}}$	46.2	43^{+9}_{-10}	Y_P	0.245335	$0.245337^{+0.000083}_{-0.000072}$	$\sigma_8(0.51)$	0.6302	$0.621^{+0.012}_{-0.0067}$
$\boldsymbol{A_{217}^{PS}}$	118.6	115 ± 10	Y_P^{BBN}	0.246661	$0.246663^{+0.000084}_{-0.000073}$	$f\sigma_8(0.61)$	0.4728	$0.4674^{+0.0079}_{-0.0058}$
$\boldsymbol{A^{kSZ}}$	0.00	< 4.90	10^5D/H	2.6137	2.612 ± 0.036	$\sigma_8(0.61)$	0.5997	$0.591^{+0.011}_{-0.0063}$
$\boldsymbol{A_{100}^{dustTT}}$	8.82	9.0 ± 1.8	Age/Gyr	13.7805	$13.798^{+0.030}_{-0.034}$	$f\sigma_8(2.33)$	0.30162	$0.2980^{+0.0048}_{-0.0030}$
$\boldsymbol{A_{143}^{dustTT}}$	10.77	10.7 ± 1.8	z_*	1090.047	1089.99 ± 0.28	$\sigma_8(2.33)$	0.31163	$0.3073^{+0.0055}_{-0.0032}$
$\boldsymbol{A_{143\times217}^{dustTT}}$	19.36	18.3 ± 3.3	r_*	144.720	144.84 ± 0.32	f_{2000}^{143}	30.18	30.8 ± 2.9
$\boldsymbol{A_{217}^{dustTT}}$	94.4	93.5 ± 7.3	$100\theta_*$	1.041113	1.04122 ± 0.00041	$f_{2000}^{143\times217}$	33.06	33.2 ± 2.0
$\boldsymbol{c_{100}}$	0.99964	0.99962 ± 0.00061	$D_M(z_*)$/Gpc	13.9004	13.910 ± 0.031	f_{2000}^{217}	107.49	107.8 ± 1.9
$\boldsymbol{c_{217}}$	0.99827	0.99826 ± 0.00063	z_{drag}	1059.551	1059.53 ± 0.43	χ^2_{simall}	395.89	397.0 ± 1.8
H_0	67.98	67.76 ± 0.56	r_{drag}	147.435	147.55 ± 0.35	χ^2_{lowl}	23.19	23.04 ± 0.92
Ω_Λ	0.6936	0.6913 ± 0.0072	k_D	0.140386	0.14027 ± 0.00044	χ^2_{plik}	758.7	772.1 ± 5.5
Ω_m	0.3064	0.3087 ± 0.0072	$100\theta_D$	0.160989	0.16101 ± 0.00025	χ^2_{JLA}	1036.115	1036.30 ± 0.35
$\Omega_m h^2$	0.14159	0.1417 ± 0.0011	z_{eq}	3383.1	3372 ± 29	χ^2_{6DF}	0.0029	0.046 ± 0.064
$\Omega_\nu h^2$	0.000022	< 0.000734	k_{eq}	0.010325	0.010290 ± 0.000089	χ^2_{MGS}	1.54	1.48 ± 0.53
$\Omega_m h^3$	0.09625	$0.09601^{+0.00055}_{-0.00047}$	$100\theta_{eq}$	0.8163	0.8185 ± 0.0054	$\chi^2_{DR12BAO}$	3.67	4.4 ± 1.4
σ_8	0.8211	$0.809^{+0.015}_{-0.0092}$	$100\theta_{s,eq}$	0.45105	0.4522 ± 0.0028	χ^2_{prior}	1.42	7.4 ± 3.7
S_8	0.8299	0.820 ± 0.017	$H(0.15)$	73.204	73.01 ± 0.49	χ^2_{BAO}	5.21	6.0 ± 1.1
$\sigma_8\Omega_m^{0.5}$	0.4545	0.4494 ± 0.0091	$D_M(0.15)$	638.13	640.0 ± 4.8	χ^2_{CMB}	1177.8	1192.2 ± 5.5

Best-fit $\chi^2_{eff} = 2220.54$; $\bar{\chi}^2_{eff} = 2241.81$; $R - 1 = 0.00744$

χ^2_{eff}: BAO - 6DF: 0.00 MGS: 1.54 DR12BAO: 3.67 CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.89 commander_dx12_v3_2_29: 23.19 plik_rd12_HM_v22_TT: 758.72 SN - JLA Pantheon: 1036.12

6.41 base_mnu_plikHM_TT_lowl_lowE_BAO_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02222 ± 0.00019	$\sigma_8\Omega_m^{0.25}$	$0.604^{+0.012}_{-0.0086}$	$H(0.38)$	83.01 ± 0.40
$\boldsymbol{\Omega_c h^2}$	0.1190 ± 0.0013	$\sigma_8/h^{0.5}$	$0.984^{+0.018}_{-0.012}$	$D_M(0.38)$	1529 ± 10
$\boldsymbol{100\theta_{MC}}$	1.04100 ± 0.00042	$r_{drag}h$	99.83 ± 0.98	$H(0.51)$	89.70 ± 0.33
$\boldsymbol{\tau}$	$0.0548^{+0.0050}_{-0.0081}$	$\langle d^2\rangle^{1/2}$	2.431 ± 0.029	$D_M(0.51)$	1981 ± 12
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 0.0732	z_{re}	$7.73^{+0.56}_{-0.81}$	$H(0.61)$	95.30 ± 0.29
$\boldsymbol{\ln(10^{10}A_s)}$	$3.042^{+0.012}_{-0.016}$	$10^9 A_s$	$2.095^{+0.025}_{-0.035}$	$D_M(0.61)$	2305 ± 13
$\boldsymbol{n_s}$	0.9666 ± 0.0042	$10^9 A_s e^{-2\tau}$	1.877 ± 0.012	$H(2.33)$	235.75 ± 0.78
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	D_{40}	1226 ± 13	$D_M(2.33)$	5765^{+13}_{-15}
$\boldsymbol{A^{CIB}_{217}}$	48 ± 7	D_{220}	5719 ± 40	$f\sigma_8(0.15)$	0.4554 ± 0.0087
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{810}	2535 ± 14	$\sigma_8(0.15)$	$0.748^{+0.015}_{-0.0077}$
$\boldsymbol{A^{tSZ}_{143}}$	5.1 ± 2.0	D_{1420}	815.4 ± 5.1	$f\sigma_8(0.38)$	$0.4741^{+0.0086}_{-0.0069}$
$\boldsymbol{A^{PS}_{100}}$	262 ± 28	D_{2000}	230.0 ± 1.8	$\sigma_8(0.38)$	$0.663^{+0.013}_{-0.0066}$
$\boldsymbol{A^{PS}_{143}}$	48 ± 8	$n_{s,0.002}$	0.9666 ± 0.0042	$f\sigma_8(0.51)$	$0.4729^{+0.0083}_{-0.0062}$
$\boldsymbol{A^{PS}_{143\times217}}$	43 ± 9	Y_P	$0.245333^{+0.000085}_{-0.000073}$	$\sigma_8(0.51)$	$0.621^{+0.012}_{-0.0061}$
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	Y_P^{BBN}	$0.246659^{+0.000085}_{-0.000073}$	$f\sigma_8(0.61)$	$0.4681^{+0.0081}_{-0.0057}$
$\boldsymbol{A^{kSZ}}$	< 4.83	10^5D/H	2.614 ± 0.036	$\sigma_8(0.61)$	$0.591^{+0.011}_{-0.0058}$
$\boldsymbol{A^{dustTT}_{100}}$	9.0 ± 1.8	Age/Gyr	$13.802^{+0.030}_{-0.035}$	$f\sigma_8(2.33)$	$0.2981^{+0.0050}_{-0.0027}$
$\boldsymbol{A^{dustTT}_{143}}$	10.7 ± 1.8	z_*	1090.02 ± 0.29	$\sigma_8(2.33)$	$0.3073^{+0.0057}_{-0.0030}$
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.3 ± 3.3	r_*	144.81 ± 0.33	f^{143}_{2000}	30.8 ± 2.9
$\boldsymbol{A^{dustTT}_{217}}$	93.5 ± 7.3	$100\theta_*$	1.04120 ± 0.00042	$f^{143\times217}_{2000}$	33.2 ± 2.0
$\boldsymbol{c_{100}}$	0.99962 ± 0.00061	$D_M(z_*)$/Gpc	13.908 ± 0.032	f^{217}_{2000}	107.8 ± 1.9
$\boldsymbol{c_{217}}$	0.99825 ± 0.00063	z_{drag}	1059.52 ± 0.43	χ^2_{simall}	396.9 ± 1.9
H_0	67.67 ± 0.59	r_{drag}	147.53 ± 0.35	χ^2_{lowl}	23.13 ± 0.93
Ω_Λ	$0.6901^{+0.0081}_{-0.0073}$	k_D	0.14029 ± 0.00045	χ^2_{plik}	771.8 ± 5.5
Ω_m	0.3099 ± 0.0077	$100\theta_D$	0.16101 ± 0.00025	χ^2_{6DF}	0.058 ± 0.079
$\Omega_m h^2$	0.1419 ± 0.0012	z_{eq}	3375 ± 30	χ^2_{MGS}	1.39 ± 0.55
$\Omega_\nu h^2$	< 0.000787	k_{eq}	0.010300 ± 0.000091	$\chi^2_{DR12BAO}$	4.7 ± 1.7
$\Omega_m h^3$	$0.09599^{+0.00056}_{-0.00047}$	$100\theta_{eq}$	0.8179 ± 0.0056	χ^2_{prior}	7.3 ± 3.7
σ_8	$0.810^{+0.016}_{-0.0086}$	$100\theta_{s,eq}$	0.4519 ± 0.0029	χ^2_{BAO}	6.2 ± 1.4
S_8	0.823 ± 0.017	$H(0.15)$	72.93 ± 0.52	χ^2_{CMB}	1191.9 ± 5.5
$\sigma_8\Omega_m^{0.5}$	0.4507 ± 0.0093	$D_M(0.15)$	640.8 ± 5.1		

$\bar{\chi}^2_{eff} = 1205.36$; $\Delta\bar{\chi}^2_{eff} = -0.40$; $R - 1 = 0.00940$

6.42 base_mnu_plikHM_TT_lowl_lowE_BAO_post_Pantheon_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02224 ± 0.00019	$\sigma_8\Omega_m^{0.25}$	$0.603^{+0.011}_{-0.0083}$	$H(0.38)$	83.07 ± 0.37
$\boldsymbol{\Omega_c h^2}$	0.1188 ± 0.0012	$\sigma_8/h^{0.5}$	$0.984^{+0.018}_{-0.012}$	$D_M(0.38)$	1527.0 ± 9.7
$\boldsymbol{100\theta_{MC}}$	1.04102 ± 0.00042	$r_{drag}h$	100.00 ± 0.93	$H(0.51)$	89.75 ± 0.32
$\boldsymbol{\tau}$	$0.0550^{+0.0051}_{-0.0081}$	$\langle d^2\rangle^{1/2}$	2.429 ± 0.029	$D_M(0.51)$	1979 ± 12
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 0.0692	z_{re}	$7.74^{+0.57}_{-0.80}$	$H(0.61)$	95.34 ± 0.28
$\boldsymbol{\ln(10^{10}A_s)}$	$3.042^{+0.012}_{-0.016}$	$10^9 A_s$	$2.095^{+0.025}_{-0.034}$	$D_M(0.61)$	2303 ± 13
$\boldsymbol{n_s}$	0.9670 ± 0.0042	$10^9 A_s e^{-2\tau}$	1.877 ± 0.012	$H(2.33)$	235.64 ± 0.75
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	D_{40}	1225 ± 13	$D_M(2.33)$	5763 ± 14
$\boldsymbol{A^{CIB}_{217}}$	48 ± 7	D_{220}	5720 ± 40	$f\sigma_8(0.15)$	$0.4546^{+0.0086}_{-0.0077}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{810}	2535 ± 14	$\sigma_8(0.15)$	$0.749^{+0.014}_{-0.0077}$
$\boldsymbol{A^{tSZ}_{143}}$	5.1 ± 2.0	D_{1420}	815.5 ± 5.1	$f\sigma_8(0.38)$	$0.4736^{+0.0083}_{-0.0066}$
$\boldsymbol{A^{PS}_{100}}$	262 ± 28	D_{2000}	230.0 ± 1.8	$\sigma_8(0.38)$	$0.664^{+0.012}_{-0.0067}$
$\boldsymbol{A^{PS}_{143}}$	48 ± 8	$n_{s,0.002}$	0.9670 ± 0.0042	$f\sigma_8(0.51)$	$0.4725^{+0.0081}_{-0.0060}$
$\boldsymbol{A^{PS}_{143\times217}}$	43^{+9}_{-10}	Y_P	$0.245338^{+0.000084}_{-0.000072}$	$\sigma_8(0.51)$	$0.621^{+0.012}_{-0.0062}$
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	Y_P^{BBN}	$0.246664^{+0.000084}_{-0.000072}$	$f\sigma_8(0.61)$	$0.4678^{+0.0079}_{-0.0055}$
$\boldsymbol{A^{kSZ}}$	< 4.84	10^5D/H	2.612 ± 0.036	$\sigma_8(0.61)$	$0.591^{+0.011}_{-0.0059}$
$\boldsymbol{A^{dustTT}_{100}}$	9.0 ± 1.8	Age/Gyr	$13.798^{+0.030}_{-0.034}$	$f\sigma_8(2.33)$	$0.2983^{+0.0047}_{-0.0028}$
$\boldsymbol{A^{dustTT}_{143}}$	10.7 ± 1.8	z_*	1089.99 ± 0.28	$\sigma_8(2.33)$	$0.3076^{+0.0054}_{-0.0030}$
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.4 ± 3.3	r_*	144.84 ± 0.32	f^{143}_{2000}	30.7 ± 2.9
$\boldsymbol{A^{dustTT}_{217}}$	93.6 ± 7.3	$100\theta_*$	1.04122 ± 0.00042	$f^{143\times217}_{2000}$	33.2 ± 2.0
$\boldsymbol{c_{100}}$	0.99962 ± 0.00061	$D_M(z_*)$/Gpc	13.911 ± 0.031	f^{217}_{2000}	107.8 ± 1.9
$\boldsymbol{c_{217}}$	0.99826 ± 0.00063	z_{drag}	1059.54 ± 0.43	χ^2_{simall}	396.9 ± 1.9
H_0	67.77 ± 0.56	r_{drag}	147.56 ± 0.35	χ^2_{lowl}	23.06 ± 0.92
Ω_Λ	0.6914 ± 0.0072	k_D	0.14027 ± 0.00044	χ^2_{plik}	772.0 ± 5.5
Ω_m	0.3086 ± 0.0072	$100\theta_D$	0.16100 ± 0.00025	χ^2_{JLA}	1036.30 ± 0.35
$\Omega_m h^2$	0.1417 ± 0.0011	z_{eq}	3371 ± 29	χ^2_{6DF}	0.046 ± 0.063
$\Omega_\nu h^2$	< 0.000744	k_{eq}	0.010288 ± 0.000088	χ^2_{MGS}	1.48 ± 0.53
$\Omega_m h^3$	$0.09601^{+0.00055}_{-0.00047}$	$100\theta_{eq}$	0.8187 ± 0.0054	$\chi^2_{DR12BAO}$	4.4 ± 1.4
σ_8	$0.810^{+0.015}_{-0.0086}$	$100\theta_{s,eq}$	0.4523 ± 0.0028	χ^2_{prior}	7.3 ± 3.7
S_8	$0.821^{+0.017}_{-0.015}$	$H(0.15)$	73.02 ± 0.49	χ^2_{BAO}	6.0 ± 1.1
$\sigma_8\Omega_m^{0.5}$	$0.4498^{+0.0092}_{-0.0083}$	$D_M(0.15)$	640.0 ± 4.8	χ^2_{CMB}	1191.9 ± 5.5

$\bar{\chi}^2_{eff} = 2241.56$; $R - 1 = 0.00883$

6.43 base_mnu_plikHM_TTTEEE_lowl_lowE_BAO

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022420	0.02241 ± 0.00013	$\Omega_m h^3$	0.096697	$0.09648^{+0.00038}_{-0.00031}$	$H(0.15)$	73.286	$73.04^{+0.45}_{-0.40}$
$\boldsymbol{\Omega_c h^2}$	0.11968	0.1195 ± 0.0010	σ_8	0.8236	$0.814^{+0.013}_{-0.0084}$	$D_M(0.15)$	637.45	$639.9^{+3.9}_{-4.4}$
$\boldsymbol{100\theta_{MC}}$	1.041003	1.04100 ± 0.00029	S_8	0.8331	0.828 ± 0.014	$H(0.38)$	83.337	$83.13^{+0.34}_{-0.30}$
$\boldsymbol{\tau}$	0.0546	0.0550 ± 0.0077	$\sigma_8 \Omega_m^{0.5}$	0.4563	0.4533 ± 0.0074	$D_M(0.38)$	1521.4	$1526.4^{+7.9}_{-8.9}$
$\boldsymbol{\Sigma m_\nu}$ [eV]	0.0008	< 0.0581	$\sigma_8 \Omega_m^{0.25}$	0.6130	$0.6075^{+0.0092}_{-0.0077}$	$H(0.51)$	90.020	$89.84^{+0.28}_{-0.25}$
$\boldsymbol{\ln(10^{10} A_s)}$	3.0444	3.045 ± 0.016	$\sigma_8/h^{0.5}$	0.9985	$0.989^{+0.015}_{-0.012}$	$D_M(0.51)$	1971.5	$1977.6^{+9.3}_{-11}$
$\boldsymbol{n_s}$	0.96690	0.9666 ± 0.0038	$r_{drag} h$	100.11	99.75 ± 0.83	$H(0.61)$	95.614	$95.46^{+0.24}_{-0.21}$
$\boldsymbol{y_{cal}}$	1.00044	1.0008 ± 0.0025	$\langle d^2 \rangle^{1/2}$	2.4473	2.439 ± 0.026	$D_M(0.61)$	2294.7	2301^{+10}_{-11}
$\boldsymbol{A_{217}^{CIB}}$	46.5	47 ± 7	z_{re}	7.69	7.71 ± 0.78	$H(2.33)$	236.08	236.17 ± 0.61
$\boldsymbol{\xi^{tSZ \times CIB}}$	0.57	—	$10^9 A_s$	2.0998	2.101 ± 0.034	$D_M(2.33)$	5747.2	$5755.3^{+9.7}_{-12}$
$\boldsymbol{A_{143}^{tSZ}}$	7.12	$5.5^{+2.1}_{-1.9}$	$10^9 A_s e^{-2\tau}$	1.8826	1.882 ± 0.011	$f\sigma_8(0.15)$	0.4605	0.4579 ± 0.0070
$\boldsymbol{A_{100}^{PS}}$	248.4	258 ± 28	D_{40}	1227.6	1229 ± 12	$\sigma_8(0.15)$	0.7614	$0.752^{+0.012}_{-0.0076}$
$\boldsymbol{A_{143}^{PS}}$	49.1	46 ± 8	D_{220}	5732.5	5737 ± 38	$f\sigma_8(0.38)$	0.4800	$0.4766^{+0.0068}_{-0.0061}$
$\boldsymbol{A_{143\times217}^{PS}}$	50.7	42 ± 9	D_{810}	2540.2	2540 ± 13	$\sigma_8(0.38)$	0.6752	$0.667^{+0.011}_{-0.0066}$
$\boldsymbol{A_{217}^{PS}}$	120.9	115 ± 10	D_{1420}	818.24	817.9 ± 4.8	$f\sigma_8(0.51)$	0.4791	$0.4754^{+0.0066}_{-0.0056}$
$\boldsymbol{A^{kSZ}}$	0.00	< 4.07	D_{2000}	231.43	231.2 ± 1.6	$\sigma_8(0.51)$	0.6320	$0.6243^{+0.0099}_{-0.0062}$
$\boldsymbol{A_{100}^{dustTT}}$	8.78	8.9 ± 1.8	$n_{s,0.002}$	0.96690	0.9666 ± 0.0038	$f\sigma_8(0.61)$	0.4743	$0.4705^{+0.0065}_{-0.0053}$
$\boldsymbol{A_{143}^{dustTT}}$	11.02	10.9 ± 1.8	Y_P	0.245415	$0.245409^{+0.000054}_{-0.000048}$	$\sigma_8(0.61)$	0.6014	$0.5941^{+0.0094}_{-0.0058}$
$\boldsymbol{A_{143\times217}^{dustTT}}$	19.91	18.6 ± 3.3	Y_P^{BBN}	0.246742	$0.246736^{+0.000054}_{-0.000048}$	$f\sigma_8(2.33)$	0.30243	$0.2994^{+0.0041}_{-0.0029}$
$\boldsymbol{A_{217}^{dustTT}}$	95.1	93.8 ± 7.3	10^5D/H	2.5763	2.579 ± 0.025	$\sigma_8(2.33)$	0.31244	$0.3088^{+0.0048}_{-0.0030}$
$\boldsymbol{A_{100}^{dustTE}}$	0.1137	0.114 ± 0.038	Age/Gyr	13.7601	$13.779^{+0.022}_{-0.028}$	f_{2000}^{143}	28.51	29.3 ± 2.7
$\boldsymbol{A_{100\times143}^{dustTE}}$	0.1342	0.135 ± 0.029	z_*	1089.824	1089.82 ± 0.22	$f_{2000}^{143\times217}$	31.83	32.0 ± 1.8
$\boldsymbol{A_{100\times217}^{dustTE}}$	0.481	0.481 ± 0.085	r_*	144.483	144.55 ± 0.24	f_{2000}^{217}	106.42	106.9 ± 1.8
$\boldsymbol{A_{143}^{dustTE}}$	0.226	0.225 ± 0.054	$100\theta_*$	1.041157	1.04118 ± 0.00029	χ^2_{simall}	396.08	397.1 ± 1.9
$\boldsymbol{A_{143\times217}^{dustTE}}$	0.667	0.664 ± 0.079	$D_M(z_*)$/Gpc	13.8771	13.883 ± 0.023	χ^2_{lowl}	23.21	23.25 ± 0.85
$\boldsymbol{A_{217}^{dustTE}}$	2.082	2.08 ± 0.27	z_{drag}	1060.009	1059.99 ± 0.29	χ^2_{plik}	2343.8	2359.3 ± 5.9
$\boldsymbol{c_{100}}$	0.99970	0.99967 ± 0.00061	r_{drag}	147.129	147.20 ± 0.24	χ^2_{6DF}	0.0059	0.051 ± 0.070
$\boldsymbol{c_{217}}$	0.99819	0.99819 ± 0.00062	k_D	0.140861	0.14078 ± 0.00029	χ^2_{MGS}	1.473	1.33 ± 0.45
H_0	68.044	$67.76^{+0.51}_{-0.46}$	$100\theta_D$	0.160716	0.16074 ± 0.00017	$\chi^2_{DR12BAO}$	3.82	4.7 ± 1.5
Ω_Λ	0.6931	$0.6899^{+0.0067}_{-0.0060}$	z_{eq}	3395.8	3390 ± 23	χ^2_{prior}	1.67	11.6 ± 4.6
Ω_m	0.3069	$0.3101^{+0.0060}_{-0.0067}$	k_{eq}	0.010364	0.010347 ± 0.000070	χ^2_{BAO}	5.30	6.1 ± 1.2
$\Omega_m h^2$	0.14211	0.14238 ± 0.00096	$100\theta_{eq}$	0.81460	0.8156 ± 0.0043	χ^2_{CMB}	2763.1	2779.7 ± 5.8
$\Omega_\nu h^2$	0.000008	< 0.000625	$100\theta_{s,eq}$	0.45003	0.4506 ± 0.0022			

Best-fit $\chi^2_{eff} = 2770.08$; $\Delta\chi^2_{eff} = -1.83$; $\bar{\chi}^2_{eff} = 2797.32$; $\Delta\bar{\chi}^2_{eff} = -0.59$; $R - 1 = 0.00869$

χ^2_{eff}: BAO - 6DF: 0.01 (Δ -0.02) MGS: 1.47 (Δ 0.26) DR12BAO: 3.82 (Δ -0.60) CMB - simall_100x143_offlike5_EE_Aplanck_B: 396.08 (Δ -0.12) commander_dx12_v3_2_29: 23.21 (Δ 0.34) plik_rd12_HM_v22b_TTTEEE: 2343.84 (Δ -1.67)

6.44 base_mnu_plikHM_TTTEEE_lowl_lowE_BAO_post_Pantheon

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022434	0.02242 ± 0.00013	$\Omega_m h^3$	0.096697	$0.09650^{+0.00037}_{-0.00031}$	$H(0.15)$	73.341	73.10 ± 0.41
$\boldsymbol{\Omega_c h^2}$	0.11953	0.11934 ± 0.00097	σ_8	0.8239	$0.814^{+0.012}_{-0.0084}$	$D_M(0.15)$	636.92	639.3 ± 4.0
$\boldsymbol{100\theta_{MC}}$	1.041012	1.04102 ± 0.00029	S_8	0.8322	0.827 ± 0.013	$H(0.38)$	83.376	83.18 ± 0.31
$\boldsymbol{\tau}$	0.0553	0.0551 ± 0.0077	$\sigma_8 \Omega_m^{0.5}$	0.4558	0.4528 ± 0.0072	$D_M(0.38)$	1520.3	1525.1 ± 8.2
$\boldsymbol{\Sigma m_\nu}$ [eV]	0.0009	< 0.0552	$\sigma_8 \Omega_m^{0.25}$	0.6128	$0.6072^{+0.0089}_{-0.0076}$	$H(0.51)$	90.050	$89.88^{+0.27}_{-0.24}$
$\boldsymbol{\ln(10^{10} A_s)}$	3.0461	3.045 ± 0.016	$\sigma_8/h^{0.5}$	0.9984	$0.989^{+0.014}_{-0.011}$	$D_M(0.51)$	1970.3	1976.1 ± 9.7
$\boldsymbol{n_s}$	0.96757	0.9669 ± 0.0037	$r_{drag} h$	100.22	99.87 ± 0.78	$H(0.61)$	95.637	$95.49^{+0.23}_{-0.20}$
$\boldsymbol{y_{cal}}$	1.00071	1.0008 ± 0.0025	$\langle d^2 \rangle^{1/2}$	2.4464	2.438 ± 0.026	$D_M(0.61)$	2293.4	2300 ± 11
$\boldsymbol{A_{217}^{CIB}}$	45.7	47 ± 7	z_{re}	7.75	7.72 ± 0.78	$H(2.33)$	235.99	236.09 ± 0.58
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.69	—	$10^9 A_s$	2.1032	2.101 ± 0.034	$D_M(2.33)$	5746.3	$5753.9^{+9.4}_{-11}$
$\boldsymbol{A_{143}^{tSZ}}$	7.06	5.5 ± 1.9	$10^9 A_s e^{-2\tau}$	1.8831	1.881 ± 0.011	$f\sigma_8(0.15)$	0.4601	0.4574 ± 0.0068
$\boldsymbol{A_{100}^{PS}}$	247.8	257 ± 28	D_{40}	1227.0	1228 ± 12	$\sigma_8(0.15)$	0.7618	$0.753^{+0.011}_{-0.0076}$
$\boldsymbol{A_{143}^{PS}}$	50.6	45 ± 8	D_{220}	5735.2	5737 ± 38	$f\sigma_8(0.38)$	0.4798	0.4763 ± 0.0064
$\boldsymbol{A_{143\times217}^{PS}}$	53.5	42 ± 9	D_{810}	2541.8	2540 ± 14	$\sigma_8(0.38)$	0.6756	$0.667^{+0.010}_{-0.0066}$
$\boldsymbol{A_{217}^{PS}}$	122.0	115 ± 10	D_{1420}	819.02	818.0 ± 4.8	$f\sigma_8(0.51)$	0.4790	$0.4752^{+0.0064}_{-0.0056}$
$\boldsymbol{A^{kSZ}}$	0.00	< 4.13	D_{2000}	231.71	231.2 ± 1.6	$\sigma_8(0.51)$	0.6324	$0.6247^{+0.0094}_{-0.0062}$
$\boldsymbol{A_{100}^{dustTT}}$	8.82	8.9 ± 1.8	$n_{s,0.002}$	0.96757	0.9669 ± 0.0037	$f\sigma_8(0.61)$	0.4743	$0.4704^{+0.0062}_{-0.0053}$
$\boldsymbol{A_{143}^{dustTT}}$	11.07	10.9 ± 1.8	Y_P	0.245420	$0.245412^{+0.000054}_{-0.000048}$	$\sigma_8(0.61)$	0.6018	$0.5945^{+0.0090}_{-0.0058}$
$\boldsymbol{A_{143\times217}^{dustTT}}$	20.17	18.6 ± 3.3	Y_P^{BBN}	0.246747	$0.246739^{+0.000054}_{-0.000048}$	$f\sigma_8(2.33)$	0.30269	$0.2996^{+0.0040}_{-0.0029}$
$\boldsymbol{A_{217}^{dustTT}}$	95.6	93.8 ± 7.3	10^5D/H	2.5737	2.577 ± 0.025	$\sigma_8(2.33)$	0.31275	$0.3091^{+0.0045}_{-0.0030}$
$\boldsymbol{A_{100}^{dustTE}}$	0.1146	0.115 ± 0.038	Age/Gyr	13.7581	$13.776^{+0.021}_{-0.026}$	f_{2000}^{143}	28.32	29.2 ± 2.7
$\boldsymbol{A_{100\times143}^{dustTE}}$	0.1351	0.135 ± 0.029	z_*	1089.793	1089.80 ± 0.22	$f_{2000}^{143\times217}$	31.69	31.9 ± 1.8
$\boldsymbol{A_{100\times217}^{dustTE}}$	0.483	0.481 ± 0.085	r_*	144.510	144.57 ± 0.23	f_{2000}^{217}	106.26	106.8 ± 1.8
$\boldsymbol{A_{143}^{dustTE}}$	0.225	0.224 ± 0.054	$100\theta_*$	1.041152	1.04119 ± 0.00029	χ^2_{simall}	396.20	397.2 ± 1.9
$\boldsymbol{A_{143\times217}^{dustTE}}$	0.664	0.664 ± 0.079	$D_M(z_*)$/Gpc	13.8798	13.885 ± 0.022	χ^2_{lowl}	23.10	23.20 ± 0.84
$\boldsymbol{A_{217}^{dustTE}}$	2.072	2.08 ± 0.27	z_{drag}	1060.047	1060.00 ± 0.29	χ^2_{plik}	2343.9	2359.3 ± 5.9
$\boldsymbol{c_{100}}$	0.99973	0.99967 ± 0.00060	r_{drag}	147.151	147.22 ± 0.24	χ^2_{JLA}	1036.103	1036.30 ± 0.31
$\boldsymbol{c_{217}}$	0.99818	0.99819 ± 0.00062	k_D	0.140847	0.14077 ± 0.00029	χ^2_{6DF}	0.0030	0.041 ± 0.056
H_0	68.108	67.84 ± 0.47	$100\theta_D$	0.160701	0.16073 ± 0.00017	χ^2_{MGS}	1.540	1.40 ± 0.44
Ω_Λ	0.6939	0.6909 ± 0.0061	z_{eq}	3392.6	3388 ± 22	$\chi^2_{DR12BAO}$	3.71	4.5 ± 1.3
Ω_m	0.3061	0.3091 ± 0.0061	k_{eq}	0.010354	0.010339 ± 0.000068	χ^2_{prior}	1.63	11.5 ± 4.6
$\Omega_m h^2$	0.14198	0.14225 ± 0.00091	$100\theta_{eq}$	0.81521	0.8161 ± 0.0042	χ^2_{BAO}	5.256	5.92 ± 0.98
$\Omega_\nu h^2$	0.0000096	< 0.000594	$100\theta_{s,eq}$	0.45033	0.4508 ± 0.0021	χ^2_{CMB}	2763.2	2779.7 ± 5.8

Best-fit $\chi^2_{eff} = 3806.21$; $\bar{\chi}^2_{eff} = 3833.42$; $R - 1 = 0.01152$

χ^2_{eff}: BAO - 6DF: 0.00 MGS: 1.54 DR12BAO: 3.71 CMB - simall_100x143_offlike5_EE_Aplanck_B: 396.20 commander_dx12_v3_2_29: 23.10 plik_rd12_HM_v22b_TTTEEE: 2343.93 SN - JLA Pantheon: 1036.10

6.45 base_mnu_plikHM_TTTEEE_lowl_lowE_BAO_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02241 ± 0.00013	$\Omega_m h^3$	$0.09648^{+0.00038}_{-0.00031}$	$H(0.15)$	$73.04^{+0.45}_{-0.41}$
$\boldsymbol{\Omega_c h^2}$	0.1194 ± 0.0010	σ_8	$0.815^{+0.013}_{-0.0080}$	$D_M(0.15)$	$639.8^{+3.9}_{-4.4}$
$\boldsymbol{100\theta_{MC}}$	1.04101 ± 0.00029	S_8	0.828 ± 0.014	$H(0.38)$	$83.14^{+0.34}_{-0.30}$
$\boldsymbol{\tau}$	$0.0559^{+0.0054}_{-0.0081}$	$\sigma_8\Omega_m^{0.5}$	0.4536 ± 0.0074	$D_M(0.38)$	$1526.3^{+8.0}_{-9.0}$
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 0.0586	$\sigma_8\Omega_m^{0.25}$	$0.6079^{+0.0092}_{-0.0075}$	$H(0.51)$	$89.85^{+0.28}_{-0.25}$
$\boldsymbol{\ln(10^{10} A_s)}$	$3.047^{+0.013}_{-0.016}$	$\sigma_8/h^{0.5}$	$0.990^{+0.015}_{-0.011}$	$D_M(0.51)$	$1977.4^{+9.4}_{-11}$
$\boldsymbol{n_s}$	0.9667 ± 0.0038	$r_{drag}h$	99.76 ± 0.83	$H(0.61)$	$95.46^{+0.24}_{-0.21}$
$\boldsymbol{y_{cal}}$	1.0008 ± 0.0025	$\langle d^2\rangle^{1/2}$	2.441 ± 0.026	$D_M(0.61)$	2301^{+10}_{-11}
$\boldsymbol{A_{217}^{CIB}}$	47 ± 7	z_{re}	$7.81^{+0.59}_{-0.80}$	$H(2.33)$	236.16 ± 0.61
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$10^9 A_s$	$2.104^{+0.026}_{-0.035}$	$D_M(2.33)$	$5755.2^{+9.8}_{-12}$
$\boldsymbol{A_{143}^{tSZ}}$	$5.5^{+2.1}_{-1.9}$	$10^9 A_s e^{-2\tau}$	1.882 ± 0.011	$f\sigma_8(0.15)$	0.4582 ± 0.0070
$\boldsymbol{A_{100}^{PS}}$	258 ± 28	D_{40}	1229 ± 12	$\sigma_8(0.15)$	$0.753^{+0.012}_{-0.0072}$
$\boldsymbol{A_{143}^{PS}}$	46 ± 8	D_{220}	5737 ± 38	$f\sigma_8(0.38)$	$0.4770^{+0.0067}_{-0.0060}$
$\boldsymbol{A_{143\times217}^{PS}}$	42 ± 9	D_{810}	2540 ± 13	$\sigma_8(0.38)$	$0.668^{+0.010}_{-0.0062}$
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	D_{1420}	817.9 ± 4.8	$f\sigma_8(0.51)$	$0.4757^{+0.0065}_{-0.0055}$
$\boldsymbol{A^{kSZ}}$	< 4.05	D_{2000}	231.2 ± 1.6	$\sigma_8(0.51)$	$0.6248^{+0.0098}_{-0.0058}$
$\boldsymbol{A_{100}^{dustTT}}$	8.9 ± 1.8	$n_{s,0.002}$	0.9667 ± 0.0038	$f\sigma_8(0.61)$	$0.4708^{+0.0064}_{-0.0051}$
$\boldsymbol{A_{143}^{dustTT}}$	10.9 ± 1.8	Y_P	$0.245410^{+0.000054}_{-0.000048}$	$\sigma_8(0.61)$	$0.5945^{+0.0093}_{-0.0055}$
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.6 ± 3.3	Y_P^{BBN}	$0.246737^{+0.000054}_{-0.000048}$	$f\sigma_8(2.33)$	$0.2997^{+0.0040}_{-0.0027}$
$\boldsymbol{A_{217}^{dustTT}}$	93.8 ± 7.3	10^5D/H	2.578 ± 0.025	$\sigma_8(2.33)$	$0.3091^{+0.0047}_{-0.0028}$
$\boldsymbol{A_{100}^{dustTE}}$	0.114 ± 0.038	Age/Gyr	$13.779^{+0.022}_{-0.028}$	f_{2000}^{143}	29.2 ± 2.7
$\boldsymbol{A_{100\times143}^{dustTE}}$	0.135 ± 0.029	z_*	1089.82 ± 0.22	$f_{2000}^{143\times217}$	32.0 ± 1.8
$\boldsymbol{A_{100\times217}^{dustTE}}$	0.480 ± 0.084	r_*	144.55 ± 0.24	f_{2000}^{217}	106.8 ± 1.8
$\boldsymbol{A_{143}^{dustTE}}$	0.225 ± 0.054	$100\theta_*$	1.04118 ± 0.00029	χ^2_{simall}	397.1 ± 2.0
$\boldsymbol{A_{143\times217}^{dustTE}}$	0.664 ± 0.080	$D_M(z_*)$/Gpc	13.883 ± 0.023	χ^2_{lowl}	23.25 ± 0.85
$\boldsymbol{A_{217}^{dustTE}}$	2.08 ± 0.27	z_{drag}	1059.99 ± 0.29	χ^2_{plik}	2359.1 ± 5.9
$\boldsymbol{c_{100}}$	0.99967 ± 0.00061	r_{drag}	147.20 ± 0.24	χ^2_{6DF}	0.051 ± 0.069
$\boldsymbol{c_{217}}$	0.99819 ± 0.00062	k_D	0.14078 ± 0.00029	χ^2_{MGS}	1.34 ± 0.46
H_0	67.77 ± 0.50	$100\theta_D$	0.16074 ± 0.00017	$\chi^2_{DR12BAO}$	4.7 ± 1.5
Ω_Λ	$0.6900^{+0.0067}_{-0.0060}$	z_{eq}	3390 ± 23	χ^2_{prior}	11.6 ± 4.6
Ω_m	$0.3100^{+0.0060}_{-0.0067}$	k_{eq}	0.010345 ± 0.000070	χ^2_{BAO}	6.1 ± 1.2
$\Omega_m h^2$	0.14236 ± 0.00096	$100\theta_{eq}$	0.8157 ± 0.0043	χ^2_{CMB}	2779.5 ± 5.8
$\Omega_\nu h^2$	< 0.000630	$100\theta_{s,eq}$	0.4506 ± 0.0022		

$\bar{\chi}^2_{eff} = 2797.12$; $\Delta\bar{\chi}^2_{eff} = -0.59$; $R - 1 = 0.00800$

6.46 base_mnu_plikHM_TTTEEE_lowl_lowE_BAO_post_Pantheon_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02242 ± 0.00013	$\Omega_m h^3$	$0.09649^{+0.00037}_{-0.00031}$	$H(0.15)$	73.11 ± 0.41
$\boldsymbol{\Omega_c h^2}$	0.11932 ± 0.00097	σ_8	$0.815^{+0.012}_{-0.0080}$	$D_M(0.15)$	639.2 ± 4.0
$\boldsymbol{100\theta_{MC}}$	1.04102 ± 0.00029	S_8	0.827 ± 0.013	$H(0.38)$	83.19 ± 0.31
$\boldsymbol{\tau}$	$0.0561^{+0.0055}_{-0.0081}$	$\sigma_8 \Omega_m^{0.5}$	0.4531 ± 0.0072	$D_M(0.38)$	1525.0 ± 8.2
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 0.0557	$\sigma_8 \Omega_m^{0.25}$	$0.6077^{+0.0089}_{-0.0074}$	$H(0.51)$	$89.88^{+0.27}_{-0.24}$
$\boldsymbol{\ln(10^{10} A_s)}$	$3.047^{+0.013}_{-0.016}$	$\sigma_8/h^{0.5}$	$0.989^{+0.014}_{-0.011}$	$D_M(0.51)$	1975.9 ± 9.7
$\boldsymbol{n_s}$	0.9670 ± 0.0037	$r_{drag} h$	99.89 ± 0.78	$H(0.61)$	$95.49^{+0.23}_{-0.20}$
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0025	$\langle d^2 \rangle^{1/2}$	2.440 ± 0.025	$D_M(0.61)$	2300 ± 11
$\boldsymbol{A^{CIB}_{217}}$	47 ± 7	z_{re}	$7.83^{+0.60}_{-0.79}$	$H(2.33)$	236.08 ± 0.58
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$10^9 A_s$	$2.105^{+0.026}_{-0.035}$	$D_M(2.33)$	$5753.8^{+9.5}_{-12}$
$\boldsymbol{A^{tSZ}_{143}}$	5.5 ± 1.9	$10^9 A_s e^{-2\tau}$	1.881 ± 0.011	$f\sigma_8(0.15)$	0.4577 ± 0.0068
$\boldsymbol{A^{PS}_{100}}$	257 ± 28	D_{40}	1228 ± 12	$\sigma_8(0.15)$	$0.753^{+0.011}_{-0.0072}$
$\boldsymbol{A^{PS}_{143}}$	45 ± 8	D_{220}	5737 ± 38	$f\sigma_8(0.38)$	$0.4767^{+0.0065}_{-0.0059}$
$\boldsymbol{A^{PS}_{143\times217}}$	42 ± 9	D_{810}	2540 ± 14	$\sigma_8(0.38)$	$0.6680^{+0.0099}_{-0.0062}$
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	D_{1420}	817.9 ± 4.8	$f\sigma_8(0.51)$	$0.4755^{+0.0063}_{-0.0054}$
$\boldsymbol{A^{kSZ}}$	< 4.08	D_{2000}	231.2 ± 1.6	$\sigma_8(0.51)$	$0.6252^{+0.0093}_{-0.0058}$
$\boldsymbol{A^{dustTT}_{100}}$	8.9 ± 1.8	$n_{s,0.002}$	0.9670 ± 0.0037	$f\sigma_8(0.61)$	$0.4707^{+0.0062}_{-0.0051}$
$\boldsymbol{A^{dustTT}_{143}}$	10.8 ± 1.8	Y_P	$0.245413^{+0.000054}_{-0.000047}$	$\sigma_8(0.61)$	$0.5950^{+0.0088}_{-0.0055}$
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.6 ± 3.3	Y_P^{BBN}	$0.246740^{+0.000054}_{-0.000048}$	$f\sigma_8(2.33)$	$0.2999^{+0.0038}_{-0.0027}$
$\boldsymbol{A^{dustTT}_{217}}$	93.8 ± 7.3	10^5D/H	2.577 ± 0.024	$\sigma_8(2.33)$	$0.3094^{+0.0044}_{-0.0028}$
$\boldsymbol{A^{dustTE}_{100}}$	0.115 ± 0.038	Age/Gyr	$13.776^{+0.021}_{-0.026}$	f^{143}_{2000}	29.2 ± 2.7
$\boldsymbol{A^{dustTE}_{100\times143}}$	0.135 ± 0.029	z_*	1089.79 ± 0.22	$f^{143\times217}_{2000}$	31.9 ± 1.8
$\boldsymbol{A^{dustTE}_{100\times217}}$	0.481 ± 0.084	r_*	144.57 ± 0.23	f^{217}_{2000}	106.8 ± 1.8
$\boldsymbol{A^{dustTE}_{143}}$	0.224 ± 0.054	$100\theta_*$	1.04119 ± 0.00029	χ^2_{simall}	397.1 ± 2.0
$\boldsymbol{A^{dustTE}_{143\times217}}$	0.664 ± 0.079	$D_M(z_*)$/Gpc	13.885 ± 0.022	χ^2_{lowl}	23.21 ± 0.84
$\boldsymbol{A^{dustTE}_{217}}$	2.08 ± 0.27	z_{drag}	1060.00 ± 0.29	χ^2_{plik}	2359.2 ± 5.9
$\boldsymbol{c_{100}}$	0.99967 ± 0.00060	r_{drag}	147.22 ± 0.24	χ^2_{JLA}	1036.29 ± 0.30
$\boldsymbol{c_{217}}$	0.99818 ± 0.00062	k_D	0.14076 ± 0.00029	χ^2_{6DF}	0.041 ± 0.056
H_0	67.85 ± 0.47	$100\theta_D$	0.16073 ± 0.00017	χ^2_{MGS}	1.40 ± 0.44
Ω_Λ	0.6909 ± 0.0061	z_{eq}	3387 ± 22	$\chi^2_{DR12BAO}$	4.5 ± 1.2
Ω_m	0.3091 ± 0.0061	k_{eq}	0.010338 ± 0.000068	χ^2_{prior}	11.5 ± 4.6
$\Omega_m h^2$	0.14223 ± 0.00091	$100\theta_{eq}$	0.8162 ± 0.0042	χ^2_{BAO}	5.91 ± 0.96
$\Omega_\nu h^2$	< 0.000599	$100\theta_{s,eq}$	0.4509 ± 0.0021	χ^2_{CMB}	2779.5 ± 5.8

$\bar{\chi}^2_{eff} = 3833.24$; $R - 1 = 0.01167$

6.47 base_mnu_CamSpecHM_TT_lowl_lowE_BAO

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022216	0.02222 ± 0.00019	$\sigma_8\Omega_m^{0.5}$	0.4545	$0.450^{+0.010}_{-0.0086}$	$D_M(0.15)$	638.1	640.6 ± 5.0
$\boldsymbol{\Omega_c h^2}$	0.11938	0.1189 ± 0.0013	$\sigma_8\Omega_m^{0.25}$	0.6109	$0.603^{+0.013}_{-0.0088}$	$H(0.38)$	83.233	83.02 ± 0.39
$\boldsymbol{100\theta_{MC}}$	1.041014	1.04105 ± 0.00042	$\sigma_8/h^{0.5}$	0.9958	$0.982^{+0.020}_{-0.013}$	$D_M(0.38)$	1523.1	1528 ± 10
$\boldsymbol{\tau}$	0.0531	0.0536 ± 0.0079	$r_{drag}h$	100.22	99.88 ± 0.97	$H(0.51)$	89.903	89.71 ± 0.33
$\boldsymbol{\Sigma m_\nu}$ [eV]	0.0034	< 0.0747	$\langle d^2\rangle^{1/2}$	2.4386	$2.424^{+0.032}_{-0.029}$	$D_M(0.51)$	1973.8	1980 ± 12
$\boldsymbol{\ln(10^{10}A_s)}$	3.0387	3.038 ± 0.016	z_{re}	7.57	7.61 ± 0.81	$H(0.61)$	95.485	95.31 ± 0.29
$\boldsymbol{n_s}$	0.96698	0.9674 ± 0.0044	$10^9 A_s$	2.0878	2.088 ± 0.034	$D_M(0.61)$	2297.4	2304 ± 13
$\boldsymbol{y_{cal}}$	1.00052	1.0005 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.8776	1.875 ± 0.012	$H(2.33)$	235.69	235.71 ± 0.77
$\boldsymbol{A_{100}^{PS}}$	234.1	242 ± 25	D_{40}	1223.0	1222 ± 13	$D_M(2.33)$	5755.3	5764^{+13}_{-15}
$\boldsymbol{A_{143}^{PS}}$	43.5	40 ± 8	D_{220}	5706.7	5709 ± 40	$f\sigma_8(0.15)$	0.4588	$0.4543^{+0.0096}_{-0.0080}$
$\boldsymbol{A_{217}^{PS}}$	101.9	101 ± 10	D_{810}	2534.3	2533 ± 14	$\sigma_8(0.15)$	0.7590	$0.747^{+0.015}_{-0.0082}$
$\boldsymbol{A_{217}^{CIB}}$	44.6	41 ± 7	D_{1420}	815.3	815.0 ± 5.1	$f\sigma_8(0.38)$	0.4784	$0.4730^{+0.0092}_{-0.0070}$
$\boldsymbol{A_{143}^{tSZ}}$	6.47	$3.8^{+1.8}_{-2.6}$	D_{2000}	230.14	229.9 ± 1.8	$\sigma_8(0.38)$	0.6731	$0.662^{+0.014}_{-0.0071}$
$\boldsymbol{r_{143\times217}^{PS}}$	0.626	0.65 ± 0.13	$n_{s,0.002}$	0.96698	0.9674 ± 0.0044	$f\sigma_8(0.51)$	0.4775	$0.4719^{+0.0089}_{-0.0064}$
$\boldsymbol{r_{143\times217}^{CIB}}$	0.839	$0.58^{+0.40}_{-0.15}$	Y_P	0.245333	$0.245331^{+0.000087}_{-0.000073}$	$\sigma_8(0.51)$	0.6301	$0.620^{+0.013}_{-0.0066}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.29	—	Y_P^{BBN}	0.246659	$0.246657^{+0.000087}_{-0.000073}$	$f\sigma_8(0.61)$	0.4728	$0.4671^{+0.0087}_{-0.0059}$
$\boldsymbol{A^{kSZ}}$	0.3	—	10^5D/H	2.6148	2.615 ± 0.037	$\sigma_8(0.61)$	0.5996	$0.590^{+0.012}_{-0.0063}$
$\boldsymbol{A_{100}^{dust}}$	1.013	1.01 ± 0.19	Age/Gyr	13.7795	$13.801^{+0.031}_{-0.036}$	$f\sigma_8(2.33)$	0.30158	$0.2976^{+0.0052}_{-0.0030}$
$\boldsymbol{A_{143}^{dust}}$	0.992	0.98 ± 0.17	z_*	1090.057	1090.02 ± 0.30	$\sigma_8(2.33)$	0.31158	$0.3068^{+0.0060}_{-0.0032}$
$\boldsymbol{A_{217}^{dust}}$	0.969	0.97 ± 0.10	r_*	144.715	144.83 ± 0.33	f_{2000}^{143}	30.50	30.5 ± 3.0
$\boldsymbol{A_{143\times217}^{dust}}$	0.996	1.03 ± 0.16	$100\theta_*$	1.041179	1.04125 ± 0.00042	f_{2000}^{217}	107.13	107.4 ± 2.0
$\boldsymbol{c_{100}}$	0.99764	0.9975 ± 0.0010	$D_M(z_*)$/Gpc	13.8991	13.909 ± 0.032	$f_{2000}^{143\times217}$	32.49	32.7 ± 2.1
$\boldsymbol{c_{217}}$	1.00136	1.0012 ± 0.0016	z_{drag}	1059.513	1059.51 ± 0.44	χ^2_{simall}	395.87	397.0 ± 1.8
H_0	67.98	67.69 ± 0.59	r_{drag}	147.435	147.55 ± 0.36	χ^2_{lowl}	22.93	22.85 ± 0.93
Ω_Λ	0.6935	0.6904 ± 0.0075	k_D	0.140385	0.14027 ± 0.00045	$\chi^2_{CamSpec}$	7050.5	7063.9 ± 5.6
Ω_m	0.3065	0.3096 ± 0.0075	$100\theta_D$	0.161006	0.16103 ± 0.00026	χ^2_{6DF}	0.0029	0.054 ± 0.073
$\Omega_m h^2$	0.14164	0.1418 ± 0.0012	z_{eq}	3383.8	3373 ± 31	χ^2_{MGS}	1.54	1.42 ± 0.55
$\Omega_\nu h^2$	0.000037	< 0.000804	k_{eq}	0.010327	0.010295 ± 0.000093	$\chi^2_{DR12BAO}$	3.66	4.6 ± 1.5
$\Omega_m h^3$	0.09628	$0.09599^{+0.00057}_{-0.00049}$	$100\theta_{eq}$	0.8162	$0.8183^{+0.0053}_{-0.0060}$	χ^2_{prior}	2.06	7.6 ± 3.5
σ_8	0.8210	$0.808^{+0.017}_{-0.0092}$	$100\theta_{s,eq}$	0.45101	$0.4521^{+0.0027}_{-0.0031}$	χ^2_{BAO}	5.21	6.1 ± 1.3
S_8	0.8299	$0.821^{+0.019}_{-0.016}$	$H(0.15)$	73.21	72.95 ± 0.51	χ^2_{CMB}	7469.3	7483.8 ± 5.6

Best-fit $\chi^2_{eff} = 7476.59$; $\bar{\chi}^2_{eff} = 7497.48$; $\Delta\bar{\chi}^2_{eff} = -0.07$; $R - 1 = 0.00749$

χ^2_{eff}: BAO - 6DF: 0.00 MGS: 1.54 DR12BAO: 3.66 CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.87 commander_dx12_v3_2_29: 22.93 CamSpec like_10.7HM: 7050.52

6.48 base_mnu_CamSpecHM_TT_lowl_lowE_BAO_post_Pantheon

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02223 ± 0.00019	$\sigma_8\Omega_m^{0.25}$	$0.602^{+0.012}_{-0.0086}$	$D_M(0.38)$	1526.7 ± 9.7
$\boldsymbol{\Omega_c h^2}$	0.1188 ± 0.0013	$\sigma_8/h^{0.5}$	$0.982^{+0.019}_{-0.013}$	$H(0.51)$	89.76 ± 0.32
$\boldsymbol{100\theta_{MC}}$	1.04107 ± 0.00042	$r_{drag}h$	100.03 ± 0.92	$D_M(0.51)$	1978 ± 11
$\boldsymbol{\tau}$	0.0538 ± 0.0080	$\langle d^2\rangle^{1/2}$	$2.422^{+0.032}_{-0.028}$	$H(0.61)$	95.35 ± 0.28
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 0.0719	z_{re}	7.62 ± 0.81	$D_M(0.61)$	2302 ± 13
$\boldsymbol{\ln(10^{10}A_s)}$	3.038 ± 0.017	$10^9 A_s$	2.088 ± 0.034	$H(2.33)$	235.62 ± 0.74
$\boldsymbol{n_s}$	0.9677 ± 0.0044	$10^9 A_s e^{-2\tau}$	1.874 ± 0.012	$D_M(2.33)$	5763^{+13}_{-15}
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	D_{40}	1222 ± 13	$f\sigma_8(0.15)$	$0.4536^{+0.0093}_{-0.0077}$
$\boldsymbol{A_{100}^{PS}}$	242 ± 25	D_{220}	5710 ± 40	$\sigma_8(0.15)$	$0.747^{+0.015}_{-0.0082}$
$\boldsymbol{A_{143}^{PS}}$	40 ± 8	D_{810}	2533 ± 14	$f\sigma_8(0.38)$	$0.4726^{+0.0089}_{-0.0067}$
$\boldsymbol{A_{217}^{PS}}$	101 ± 10	D_{1420}	815.1 ± 5.1	$\sigma_8(0.38)$	$0.663^{+0.013}_{-0.0071}$
$\boldsymbol{A_{217}^{CIB}}$	41 ± 7	D_{2000}	229.9 ± 1.8	$f\sigma_8(0.51)$	$0.4715^{+0.0086}_{-0.0062}$
$\boldsymbol{A_{143}^{tSZ}}$	$3.8^{+1.8}_{-2.6}$	$n_{s,0.002}$	0.9677 ± 0.0044	$\sigma_8(0.51)$	$0.620^{+0.012}_{-0.0066}$
$\boldsymbol{r_{143\times217}^{PS}}$	0.65 ± 0.13	Y_P	$0.245336^{+0.000086}_{-0.000073}$	$f\sigma_8(0.61)$	$0.4668^{+0.0084}_{-0.0058}$
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.58^{+0.39}_{-0.15}$	Y_P^{BBN}	$0.246662^{+0.000086}_{-0.000073}$	$\sigma_8(0.61)$	$0.590^{+0.012}_{-0.0063}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	10^5D/H	2.612 ± 0.037	$f\sigma_8(2.33)$	$0.2978^{+0.0051}_{-0.0030}$
$\boldsymbol{A^{kSZ}}$	—	Age/Gyr	$13.798^{+0.030}_{-0.034}$	$\sigma_8(2.33)$	$0.3071^{+0.0057}_{-0.0032}$
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.19	z_*	1089.99 ± 0.29	f_{2000}^{143}	30.5 ± 3.0
$\boldsymbol{A_{143}^{dust}}$	0.98 ± 0.17	r_*	144.86 ± 0.33	f_{2000}^{217}	107.3 ± 2.0
$\boldsymbol{A_{217}^{dust}}$	0.97 ± 0.10	$100\theta_*$	1.04127 ± 0.00042	$f_{2000}^{143\times217}$	32.7 ± 2.1
$\boldsymbol{A_{143\times217}^{dust}}$	1.03 ± 0.16	$D_M(z_*)$/Gpc	13.912 ± 0.032	χ^2_{simall}	397.0 ± 1.8
$\boldsymbol{c_{100}}$	0.9975 ± 0.0010	z_{drag}	1059.52 ± 0.44	χ^2_{lowl}	22.79 ± 0.91
$\boldsymbol{c_{217}}$	1.0012 ± 0.0016	r_{drag}	147.57 ± 0.35	$\chi^2_{CamSpec}$	7064.0 ± 5.7
H_0	67.78 ± 0.56	k_D	0.14025 ± 0.00045	χ^2_{JLA}	1036.29 ± 0.33
Ω_Λ	0.6916 ± 0.0071	$100\theta_D$	0.16102 ± 0.00025	χ^2_{6DF}	0.044 ± 0.060
Ω_m	0.3084 ± 0.0071	z_{eq}	3370 ± 30	χ^2_{MGS}	1.50 ± 0.53
$\Omega_m h^2$	0.1416 ± 0.0011	k_{eq}	0.010285 ± 0.000090	$\chi^2_{DR12BAO}$	4.4 ± 1.3
$\Omega_\nu h^2$	< 0.000773	$100\theta_{eq}$	$0.8189^{+0.0051}_{-0.0058}$	χ^2_{prior}	7.6 ± 3.4
$\Omega_m h^3$	$0.09601^{+0.00056}_{-0.00048}$	$100\theta_{s,eq}$	$0.4524^{+0.0026}_{-0.0030}$	χ^2_{BAO}	5.9 ± 1.0
σ_8	$0.808^{+0.016}_{-0.0090}$	$H(0.15)$	73.03 ± 0.49	χ^2_{CMB}	7483.8 ± 5.6
S_8	$0.819^{+0.018}_{-0.015}$	$D_M(0.15)$	639.8 ± 4.8		
$\sigma_8\Omega_m^{0.5}$	$0.4487^{+0.0099}_{-0.0082}$	$H(0.38)$	83.08 ± 0.38		

$\bar{\chi}^2_{eff} = 8533.63$; $R - 1 = 0.00851$

6.49 base_mnu_CamSpecHM_TT_lowl_lowE_BAO_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02222 ± 0.00019	$\sigma_8\Omega_m^{0.5}$	$0.450^{+0.010}_{-0.0086}$	$D_M(0.15)$	640.5 ± 5.0
$\boldsymbol{\Omega_c h^2}$	0.1189 ± 0.0013	$\sigma_8\Omega_m^{0.25}$	$0.603^{+0.012}_{-0.0087}$	$H(0.38)$	83.03 ± 0.40
$\boldsymbol{100\theta_{MC}}$	1.04105 ± 0.00042	$\sigma_8/h^{0.5}$	$0.983^{+0.019}_{-0.013}$	$D_M(0.38)$	1528 ± 10
$\boldsymbol{\tau}$	$0.0549^{+0.0051}_{-0.0082}$	$r_{drag}h$	99.90 ± 0.97	$H(0.51)$	89.72 ± 0.33
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 0.0752	$\langle d^2\rangle^{1/2}$	$2.426^{+0.031}_{-0.028}$	$D_M(0.51)$	1980 ± 12
$\boldsymbol{\ln(10^{10}A_s)}$	$3.041^{+0.012}_{-0.016}$	z_{re}	$7.75^{+0.56}_{-0.81}$	$H(0.61)$	95.32 ± 0.29
$\boldsymbol{n_s}$	0.9675 ± 0.0044	$10^9 A_s$	$2.093^{+0.025}_{-0.034}$	$D_M(0.61)$	2304 ± 13
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.875 ± 0.012	$H(2.33)$	235.70 ± 0.77
$\boldsymbol{A_{100}^{PS}}$	242 ± 25	D_{40}	1222 ± 13	$D_M(2.33)$	5764^{+13}_{-16}
$\boldsymbol{A_{143}^{PS}}$	40 ± 8	D_{220}	5709 ± 40	$f\sigma_8(0.15)$	$0.4547^{+0.0096}_{-0.0080}$
$\boldsymbol{A_{217}^{PS}}$	101 ± 10	D_{810}	2533 ± 14	$\sigma_8(0.15)$	$0.748^{+0.015}_{-0.0079}$
$\boldsymbol{A_{217}^{CIB}}$	41 ± 7	D_{1420}	815.0 ± 5.1	$f\sigma_8(0.38)$	$0.4735^{+0.0091}_{-0.0069}$
$\boldsymbol{A_{143}^{tSZ}}$	$3.8^{+1.8}_{-2.6}$	D_{2000}	229.9 ± 1.8	$\sigma_8(0.38)$	$0.663^{+0.013}_{-0.0068}$
$\boldsymbol{r_{143\times217}^{PS}}$	0.65 ± 0.13	$n_{s,0.002}$	0.9675 ± 0.0044	$f\sigma_8(0.51)$	$0.4723^{+0.0088}_{-0.0062}$
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.58^{+0.39}_{-0.15}$	Y_P	$0.245333^{+0.000087}_{-0.000073}$	$\sigma_8(0.51)$	$0.621^{+0.012}_{-0.0064}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	$0.246659^{+0.000087}_{-0.000073}$	$f\sigma_8(0.61)$	$0.4676^{+0.0086}_{-0.0058}$
$\boldsymbol{A^{kSZ}}$	—	10^5D/H	2.614 ± 0.037	$\sigma_8(0.61)$	$0.591^{+0.012}_{-0.0060}$
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.19	Age/Gyr	$13.801^{+0.031}_{-0.036}$	$f\sigma_8(2.33)$	$0.2979^{+0.0051}_{-0.0028}$
$\boldsymbol{A_{143}^{dust}}$	0.98 ± 0.18	z_*	1090.01 ± 0.30	$\sigma_8(2.33)$	$0.3072^{+0.0058}_{-0.0031}$
$\boldsymbol{A_{217}^{dust}}$	0.97 ± 0.10	r_*	144.83 ± 0.33	f_{2000}^{143}	30.4 ± 3.0
$\boldsymbol{A_{143\times217}^{dust}}$	1.03 ± 0.16	$100\theta_*$	1.04126 ± 0.00042	f_{2000}^{217}	107.3 ± 2.0
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	$D_M(z_*)$/Gpc	13.909 ± 0.032	$f_{2000}^{143\times217}$	32.7 ± 2.1
$\boldsymbol{c_{217}}$	1.0012 ± 0.0016	z_{drag}	1059.51 ± 0.44	χ^2_{simall}	396.9 ± 1.8
H_0	67.71 ± 0.59	r_{drag}	147.55 ± 0.36	χ^2_{lowl}	22.86 ± 0.93
Ω_Λ	0.6906 ± 0.0076	k_D	0.14027 ± 0.00045	$\chi^2_{CamSpec}$	7063.8 ± 5.6
Ω_m	0.3094 ± 0.0076	$100\theta_D$	0.16102 ± 0.00026	χ^2_{6DF}	0.053 ± 0.072
$\Omega_m h^2$	0.1418 ± 0.0012	z_{eq}	3372 ± 31	χ^2_{MGS}	1.43 ± 0.55
$\Omega_\nu h^2$	< 0.000808	k_{eq}	0.010293 ± 0.000093	$\chi^2_{DR12BAO}$	4.6 ± 1.5
$\Omega_m h^3$	$0.09599^{+0.00057}_{-0.00049}$	$100\theta_{eq}$	$0.8184^{+0.0053}_{-0.0059}$	χ^2_{prior}	7.6 ± 3.5
σ_8	$0.809^{+0.016}_{-0.0088}$	$100\theta_{s,eq}$	$0.4522^{+0.0028}_{-0.0031}$	χ^2_{BAO}	6.1 ± 1.3
S_8	$0.821^{+0.019}_{-0.016}$	$H(0.15)$	72.96 ± 0.51	χ^2_{CMB}	7483.6 ± 5.5

$\bar{\chi}^2_{eff} = 7497.29$; $\Delta\bar{\chi}^2_{eff} = -0.02$; $R - 1 = 0.00759$

6.50 base_mnu_CamSpecHM_TT_lowl_lowE_BAO_post_Pantheon_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02224 ± 0.00019	$\sigma_8\Omega_m^{0.25}$	$0.603^{+0.012}_{-0.0085}$	$D_M(0.38)$	1526.5 ± 9.7
$\boldsymbol{\Omega_c h^2}$	0.1188 ± 0.0013	$\sigma_8/h^{0.5}$	$0.983^{+0.019}_{-0.012}$	$H(0.51)$	89.76 ± 0.32
$\boldsymbol{100\theta_{MC}}$	1.04107 ± 0.00042	$r_{drag}h$	100.05 ± 0.92	$D_M(0.51)$	1978 ± 12
$\boldsymbol{\tau}$	$0.0551^{+0.0051}_{-0.0083}$	$\langle d^2\rangle^{1/2}$	$2.425^{+0.030}_{-0.028}$	$H(0.61)$	95.35 ± 0.28
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 0.0722	z_{re}	$7.75^{+0.56}_{-0.83}$	$D_M(0.61)$	2302 ± 13
$\boldsymbol{\ln(10^{10}A_s)}$	$3.041^{+0.012}_{-0.016}$	$10^9 A_s$	$2.093^{+0.025}_{-0.035}$	$H(2.33)$	235.60 ± 0.74
$\boldsymbol{n_s}$	0.9678 ± 0.0044	$10^9 A_s e^{-2\tau}$	1.874 ± 0.012	$D_M(2.33)$	5763^{+13}_{-15}
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	D_{40}	1222 ± 13	$f\sigma_8(0.15)$	$0.4540^{+0.0092}_{-0.0077}$
$\boldsymbol{A_{100}^{PS}}$	242 ± 25	D_{220}	5710 ± 40	$\sigma_8(0.15)$	$0.748^{+0.015}_{-0.0079}$
$\boldsymbol{A_{143}^{PS}}$	40 ± 8	D_{810}	2533 ± 14	$f\sigma_8(0.38)$	$0.4730^{+0.0088}_{-0.0067}$
$\boldsymbol{A_{217}^{PS}}$	101 ± 10	D_{1420}	815.1 ± 5.1	$\sigma_8(0.38)$	$0.663^{+0.013}_{-0.0068}$
$\boldsymbol{A_{217}^{CIB}}$	41 ± 7	D_{2000}	230.0 ± 1.8	$f\sigma_8(0.51)$	$0.4720^{+0.0084}_{-0.0061}$
$\boldsymbol{A_{143}^{tSZ}}$	$3.8^{+1.8}_{-2.6}$	$n_{s,0.002}$	0.9678 ± 0.0044	$\sigma_8(0.51)$	$0.621^{+0.012}_{-0.0064}$
$\boldsymbol{r_{143\times217}^{PS}}$	0.65 ± 0.13	Y_P	$0.245337^{+0.000085}_{-0.000073}$	$f\sigma_8(0.61)$	$0.4673^{+0.0082}_{-0.0057}$
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.58^{+0.39}_{-0.15}$	Y_P^{BBN}	$0.246664^{+0.000085}_{-0.000073}$	$\sigma_8(0.61)$	$0.591^{+0.011}_{-0.0060}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	10^5D/H	2.612 ± 0.036	$f\sigma_8(2.33)$	$0.2981^{+0.0049}_{-0.0028}$
$\boldsymbol{A^{kSZ}}$	—	Age/Gyr	$13.797^{+0.030}_{-0.035}$	$\sigma_8(2.33)$	$0.3074^{+0.0055}_{-0.0031}$
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.20	z_*	1089.98 ± 0.29	f_{2000}^{143}	30.4 ± 3.0
$\boldsymbol{A_{143}^{dust}}$	0.98 ± 0.17	r_*	144.86 ± 0.33	f_{2000}^{217}	107.3 ± 2.0
$\boldsymbol{A_{217}^{dust}}$	0.97 ± 0.10	$100\theta_*$	1.04127 ± 0.00042	$f_{2000}^{143\times217}$	32.6 ± 2.1
$\boldsymbol{A_{143\times217}^{dust}}$	1.03 ± 0.16	$D_M(z_*)$/Gpc	13.912 ± 0.032	χ^2_{simall}	397.0 ± 1.8
$\boldsymbol{c_{100}}$	0.9975 ± 0.0010	z_{drag}	1059.53 ± 0.44	χ^2_{lowl}	22.80 ± 0.91
$\boldsymbol{c_{217}}$	1.0012 ± 0.0016	r_{drag}	147.58 ± 0.35	$\chi^2_{CamSpec}$	7063.9 ± 5.7
H_0	67.80 ± 0.56	k_D	0.14025 ± 0.00045	χ^2_{JLA}	1036.28 ± 0.33
Ω_Λ	0.6918 ± 0.0071	$100\theta_D$	0.16101 ± 0.00025	χ^2_{6DF}	0.043 ± 0.060
Ω_m	0.3082 ± 0.0071	z_{eq}	3369 ± 30	χ^2_{MGS}	1.51 ± 0.53
$\Omega_m h^2$	0.1416 ± 0.0011	k_{eq}	0.010283 ± 0.000090	$\chi^2_{DR12BAO}$	4.4 ± 1.3
$\Omega_\nu h^2$	< 0.000776	$100\theta_{eq}$	$0.8190^{+0.0051}_{-0.0057}$	χ^2_{prior}	7.6 ± 3.4
$\Omega_m h^3$	$0.09601^{+0.00057}_{-0.00049}$	$100\theta_{s,eq}$	$0.4525^{+0.0026}_{-0.0030}$	χ^2_{BAO}	5.9 ± 1.0
σ_8	$0.809^{+0.016}_{-0.0087}$	$H(0.15)$	73.04 ± 0.49	χ^2_{CMB}	7483.6 ± 5.6
S_8	$0.820^{+0.018}_{-0.015}$	$D_M(0.15)$	639.7 ± 4.8		
$\sigma_8\Omega_m^{0.5}$	$0.4491^{+0.0098}_{-0.0082}$	$H(0.38)$	83.08 ± 0.38		

$\bar{\chi}^2_{eff} = 8533.44$; $R - 1 = 0.00941$

6.51 base_mnu_CamSpecHM_TTTEEE_lowl_lowE_BAO

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022331	0.02234 ± 0.00015	S_8	0.8271	0.820 ± 0.015	$D_M(0.15)$	637.06	$640.1^{+4.3}_{-5.0}$
$\boldsymbol{\Omega_c h^2}$	0.11924	0.1189 ± 0.0011	$\sigma_8\Omega_m^{0.5}$	0.4530	0.4489 ± 0.0081	$H(0.38)$	83.331	$83.08^{+0.39}_{-0.33}$
$\boldsymbol{100\theta_{MC}}$	1.040959	1.04095 ± 0.00030	$\sigma_8\Omega_m^{0.25}$	0.6094	$0.602^{+0.011}_{-0.0082}$	$D_M(0.38)$	1520.8	$1527.1^{+8.7}_{-10}$
$\boldsymbol{\tau}$	0.0530	0.0534 ± 0.0079	$\sigma_8/h^{0.5}$	0.9933	$0.981^{+0.017}_{-0.012}$	$H(0.51)$	89.993	$89.77^{+0.33}_{-0.27}$
$\boldsymbol{\Sigma m_\nu}$ [eV]	0.0046	< 0.0757	$r_{drag}h$	100.34	99.88 ± 0.90	$D_M(0.51)$	1971.1	1979^{+10}_{-12}
$\boldsymbol{\ln(10^{10}A_s)}$	3.0382	3.038 ± 0.016	$\langle d^2\rangle^{1/2}$	2.4352	2.423 ± 0.027	$H(0.61)$	95.569	$95.38^{+0.29}_{-0.23}$
$\boldsymbol{n_s}$	0.96730	0.9675 ± 0.0039	z_{re}	7.54	7.56 ± 0.80	$D_M(0.61)$	2294.4	2303^{+11}_{-13}
$\boldsymbol{y_{cal}}$	1.00028	1.0005 ± 0.0025	$10^9 A_s$	2.0868	2.087 ± 0.034	$H(2.33)$	235.71	235.83 ± 0.65
$\boldsymbol{A^{PS}_{100}}$	232.4	239 ± 25	$10^9 A_s e^{-2\tau}$	1.8768	1.876 ± 0.011	$D_M(2.33)$	5750.8	5761^{+11}_{-14}
$\boldsymbol{A^{PS}_{143}}$	41.7	39 ± 8	D_{40}	1222.9	1223 ± 12	$f\sigma_8(0.15)$	0.4574	0.4537 ± 0.0076
$\boldsymbol{A^{PS}_{217}}$	102.5	103 ± 10	D_{220}	5715.7	5720 ± 39	$\sigma_8(0.15)$	0.7579	$0.746^{+0.014}_{-0.0083}$
$\boldsymbol{A^{CIB}_{217}}$	43.9	39 ± 7	D_{810}	2534.1	2534 ± 14	$f\sigma_8(0.38)$	0.4771	$0.4725^{+0.0077}_{-0.0065}$
$\boldsymbol{A^{tSZ}_{143}}$	6.59	$3.9^{+1.9}_{-2.5}$	D_{1420}	815.88	816.1 ± 4.8	$\sigma_8(0.38)$	0.6723	$0.662^{+0.013}_{-0.0073}$
$\boldsymbol{r^{PS}_{143\times217}}$	0.630	0.66 ± 0.13	D_{2000}	230.49	230.4 ± 1.6	$f\sigma_8(0.51)$	0.4764	$0.4714^{+0.0077}_{-0.0060}$
$\boldsymbol{r^{CIB}_{143\times217}}$	0.803	$0.56^{+0.40}_{-0.18}$	$n_{s,0.002}$	0.96730	0.9675 ± 0.0039	$\sigma_8(0.51)$	0.6294	$0.619^{+0.012}_{-0.0068}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.26	—	Y_P	0.245380	$0.245381^{+0.000061}_{-0.000055}$	$f\sigma_8(0.61)$	0.4718	$0.4666^{+0.0076}_{-0.0056}$
$\boldsymbol{A^{kSZ}}$	0.01	$4.7^{+2.3}_{-4.0}$	Y_P^{BBN}	0.246706	$0.246707^{+0.000062}_{-0.000055}$	$\sigma_8(0.61)$	0.5990	$0.589^{+0.012}_{-0.0065}$
$\boldsymbol{A^{dust}_{100}}$	1.011	1.01 ± 0.19	10^5D/H	2.5929	2.592 ± 0.028	$f\sigma_8(2.33)$	0.30133	$0.2974^{+0.0051}_{-0.0031}$
$\boldsymbol{A^{dust}_{143}}$	0.975	0.96 ± 0.18	Age/Gyr	13.7692	$13.792^{+0.025}_{-0.033}$	$\sigma_8(2.33)$	0.31136	$0.3066^{+0.0059}_{-0.0033}$
$\boldsymbol{A^{dust}_{217}}$	0.973	0.98 ± 0.10	z_*	1089.897	1089.87 ± 0.24	f^{143}_{2000}	29.72	29.5 ± 2.8
$\boldsymbol{A^{dust}_{143\times217}}$	1.006	1.03 ± 0.16	r_*	144.664	144.74 ± 0.26	f^{217}_{2000}	106.53	106.8 ± 1.9
$\boldsymbol{c_{100}}$	0.99768	0.9975 ± 0.0011	$100\theta_*$	1.041115	1.04114 ± 0.00030	$f^{143\times217}_{2000}$	31.88	32.0 ± 2.0
$\boldsymbol{c_{217}}$	1.00130	1.0011 ± 0.0016	$D_M(z_*)$/Gpc	13.8951	13.902 ± 0.025	χ^2_{small}	395.85	396.9 ± 1.7
$\boldsymbol{c_{TE}}$	0.99638	0.9968 ± 0.0049	z_{drag}	1059.780	1059.78 ± 0.32	χ^2_{lowl}	22.91	22.85 ± 0.83
$\boldsymbol{c_{EE}}$	0.99209	0.9923 ± 0.0049	r_{drag}	147.344	147.41 ± 0.27	$\chi^2_{CamSpec}$	11499.2	11514.8 ± 5.8
H_0	68.10	$67.75^{+0.58}_{-0.51}$	k_D	0.140566	0.14050 ± 0.00033	χ^2_{6DF}	0.0009	0.049 ± 0.069
Ω_Λ	0.6946	$0.6907^{+0.0074}_{-0.0065}$	$100\theta_D$	0.160845	0.16085 ± 0.00019	χ^2_{MGS}	1.61	1.41 ± 0.50
Ω_m	0.3054	$0.3093^{+0.0065}_{-0.0074}$	z_{eq}	3383.1	3376 ± 25	$\chi^2_{DR12BAO}$	3.59	4.6 ± 1.5
$\Omega_m h^2$	0.14162	0.1419 ± 0.0010	k_{eq}	0.010325	0.010304 ± 0.000075	χ^2_{prior}	2.14	7.8 ± 3.4
$\Omega_\nu h^2$	0.000049	< 0.000813	$100\theta_{eq}$	0.81658	0.8180 ± 0.0046	χ^2_{BAO}	5.20	6.0 ± 1.2
$\Omega_m h^3$	0.096442	$0.09616^{+0.00046}_{-0.00036}$	$100\theta_{s,eq}$	0.45112	0.4518 ± 0.0024	χ^2_{CMB}	11917.9	11934.6 ± 5.8
σ_8	0.8197	$0.807^{+0.016}_{-0.0092}$	$H(0.15)$	73.318	$73.01^{+0.51}_{-0.44}$			

Best-fit $\chi^2_{eff} = 11925.28$; $\bar{\chi}^2_{eff} = 11948.38$; $\Delta\bar{\chi}^2_{eff} = 0.10$; $R - 1 = 0.01113$

χ^2_{eff}: BAO - 6DF: 0.00 MGS: 1.61 DR12BAO: 3.59 CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.85 commander_dx12_v3_2_29: 22.91 CamSpec like_10.7HM_1400_unified: 11499.17

6.52 base_mnu_CamSpecHM_TTTEEE_lowl_lowE_BAO_post_Pantheon

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02235 ± 0.00015	S_8	0.819 ± 0.014	$D_M(0.15)$	$639.4^{+4.0}_{-4.7}$
$\boldsymbol{\Omega_c h^2}$	0.1188 ± 0.0010	$\sigma_8\Omega_m^{0.5}$	0.4485 ± 0.0079	$H(0.38)$	$83.13^{+0.37}_{-0.32}$
$\boldsymbol{100\theta_{MC}}$	1.04097 ± 0.00030	$\sigma_8\Omega_m^{0.25}$	$0.602^{+0.010}_{-0.0082}$	$D_M(0.38)$	$1525.6^{+8.2}_{-9.6}$
$\boldsymbol{\tau}$	0.0535 ± 0.0079	$\sigma_8/h^{0.5}$	$0.981^{+0.017}_{-0.012}$	$H(0.51)$	$89.82^{+0.31}_{-0.26}$
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 0.0701	$r_{drag}h$	100.01 ± 0.85	$D_M(0.51)$	$1976.8^{+9.7}_{-11}$
$\boldsymbol{\ln(10^{10}A_s)}$	3.038 ± 0.016	$\langle d^2\rangle^{1/2}$	2.422 ± 0.027	$H(0.61)$	$95.41^{+0.27}_{-0.22}$
$\boldsymbol{n_s}$	0.9678 ± 0.0039	z_{re}	7.56 ± 0.80	$D_M(0.61)$	2301^{+11}_{-12}
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	$10^9 A_s$	2.087 ± 0.034	$H(2.33)$	235.75 ± 0.63
$\boldsymbol{A^{PS}_{100}}$	239 ± 25	$10^9 A_s e^{-2\tau}$	1.875 ± 0.011	$D_M(2.33)$	5759^{+10}_{-13}
$\boldsymbol{A^{PS}_{143}}$	39 ± 8	D_{40}	1223 ± 12	$f\sigma_8(0.15)$	0.4533 ± 0.0074
$\boldsymbol{A^{PS}_{217}}$	103 ± 10	D_{220}	5721 ± 39	$\sigma_8(0.15)$	$0.747^{+0.014}_{-0.0081}$
$\boldsymbol{A^{CIB}_{217}}$	39 ± 7	D_{810}	2534 ± 14	$f\sigma_8(0.38)$	$0.4724^{+0.0074}_{-0.0064}$
$\boldsymbol{A^{tSZ}_{143}}$	$3.9^{+1.9}_{-2.5}$	D_{1420}	816.1 ± 4.8	$\sigma_8(0.38)$	$0.662^{+0.012}_{-0.0071}$
$\boldsymbol{r^{PS}_{143\times217}}$	0.66 ± 0.13	D_{2000}	230.4 ± 1.6	$f\sigma_8(0.51)$	$0.4714^{+0.0074}_{-0.0059}$
$\boldsymbol{r^{CIB}_{143\times217}}$	$0.55^{+0.40}_{-0.18}$	$n_{s,0.002}$	0.9678 ± 0.0039	$\sigma_8(0.51)$	$0.620^{+0.011}_{-0.0066}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P	$0.245384^{+0.000060}_{-0.000054}$	$f\sigma_8(0.61)$	$0.4667^{+0.0073}_{-0.0056}$
$\boldsymbol{A^{kSZ}}$	$4.7^{+2.3}_{-3.9}$	Y_P^{BBN}	$0.246710^{+0.000060}_{-0.000054}$	$\sigma_8(0.61)$	$0.590^{+0.011}_{-0.0063}$
$\boldsymbol{A^{dust}_{100}}$	1.01 ± 0.19	10^5D/H	2.591 ± 0.027	$f\sigma_8(2.33)$	$0.2977^{+0.0048}_{-0.0030}$
$\boldsymbol{A^{dust}_{143}}$	0.96 ± 0.18	Age/Gyr	$13.789^{+0.024}_{-0.031}$	$\sigma_8(2.33)$	$0.3070^{+0.0055}_{-0.0032}$
$\boldsymbol{A^{dust}_{217}}$	0.98 ± 0.10	z_*	1089.85 ± 0.23	f^{143}_{2000}	29.5 ± 2.8
$\boldsymbol{A^{dust}_{143\times217}}$	1.03 ± 0.16	r_*	144.76 ± 0.26	f^{217}_{2000}	106.7 ± 1.9
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	$100\theta_*$	1.04115 ± 0.00030	$f^{143\times217}_{2000}$	32.0 ± 2.0
$\boldsymbol{c_{217}}$	1.0011 ± 0.0015	$D_M(z_*)$/Gpc	13.904 ± 0.025	χ^2_{simall}	397.0 ± 1.7
$\boldsymbol{c_{TE}}$	0.9968 ± 0.0049	z_{drag}	1059.79 ± 0.32	χ^2_{lowl}	22.82 ± 0.82
$\boldsymbol{c_{EE}}$	0.9924 ± 0.0049	r_{drag}	147.43 ± 0.27	$\chi^2_{CamSpec}$	11514.7 ± 5.8
H_0	$67.84^{+0.55}_{-0.48}$	k_D	0.14048 ± 0.00033	χ^2_{JLA}	1036.27 ± 0.31
Ω_Λ	$0.6918^{+0.0069}_{-0.0062}$	$100\theta_D$	0.16084 ± 0.00019	χ^2_{6DF}	0.040 ± 0.056
Ω_m	$0.3082^{+0.0062}_{-0.0069}$	z_{eq}	3374 ± 24	χ^2_{MGS}	1.48 ± 0.49
$\Omega_m h^2$	0.14180 ± 0.00098	k_{eq}	0.010297 ± 0.000074	$\chi^2_{DR12BAO}$	4.4 ± 1.2
$\Omega_\nu h^2$	< 0.000754	$100\theta_{eq}$	0.8184 ± 0.0045	χ^2_{prior}	7.8 ± 3.4
$\Omega_m h^3$	$0.09618^{+0.00044}_{-0.00036}$	$100\theta_{s,eq}$	0.4521 ± 0.0023	χ^2_{BAO}	5.88 ± 0.97
σ_8	$0.808^{+0.015}_{-0.0090}$	$H(0.15)$	$73.08^{+0.48}_{-0.42}$	χ^2_{CMB}	11934.5 ± 5.9

$\bar{\chi}^2_{eff} = 12984.42$; $R - 1 = 0.01386$

6.53 base_mnu_CamSpecHM_TTTEEE_lowl_lowE_BAO_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02234 ± 0.00015	S_8	0.820 ± 0.015	$D_M(0.15)$	$640.0^{+4.3}_{-5.0}$
$\boldsymbol{\Omega_c h^2}$	0.1189 ± 0.0011	$\sigma_8\Omega_m^{0.5}$	0.4493 ± 0.0081	$H(0.38)$	$83.08^{+0.39}_{-0.33}$
$\boldsymbol{100\theta_{MC}}$	1.04096 ± 0.00030	$\sigma_8\Omega_m^{0.25}$	$0.603^{+0.011}_{-0.0080}$	$D_M(0.38)$	$1526.9^{+8.7}_{-10}$
$\boldsymbol{\tau}$	$0.0548^{+0.0048}_{-0.0084}$	$\sigma_8/h^{0.5}$	$0.982^{+0.017}_{-0.012}$	$H(0.51)$	$89.78^{+0.33}_{-0.27}$
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 0.0767	$r_{drag}h$	99.89 ± 0.90	$D_M(0.51)$	1978^{+10}_{-12}
$\boldsymbol{\ln(10^{10}A_s)}$	$3.041^{+0.012}_{-0.016}$	$\langle d^2\rangle^{1/2}$	2.426 ± 0.027	$H(0.61)$	$95.38^{+0.29}_{-0.23}$
$\boldsymbol{n_s}$	0.9677 ± 0.0039	z_{re}	$7.70^{+0.54}_{-0.83}$	$D_M(0.61)$	2302^{+11}_{-13}
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	$10^9 A_s$	$2.093^{+0.024}_{-0.035}$	$H(2.33)$	235.82 ± 0.65
$\boldsymbol{A_{100}^{PS}}$	239 ± 25	$10^9 A_s e^{-2\tau}$	1.876 ± 0.011	$D_M(2.33)$	5761^{+11}_{-14}
$\boldsymbol{A_{143}^{PS}}$	39 ± 8	D_{40}	1223 ± 12	$f\sigma_8(0.15)$	0.4542 ± 0.0076
$\boldsymbol{A_{217}^{PS}}$	103 ± 10	D_{220}	5720 ± 39	$\sigma_8(0.15)$	$0.747^{+0.014}_{-0.0079}$
$\boldsymbol{A_{217}^{CIB}}$	39 ± 7	D_{810}	2534 ± 14	$f\sigma_8(0.38)$	$0.4730^{+0.0077}_{-0.0063}$
$\boldsymbol{A_{143}^{tSZ}}$	$3.9^{+1.9}_{-2.5}$	D_{1420}	816.1 ± 4.8	$\sigma_8(0.38)$	$0.662^{+0.013}_{-0.0069}$
$\boldsymbol{r_{143\times217}^{PS}}$	0.66 ± 0.13	D_{2000}	230.4 ± 1.6	$f\sigma_8(0.51)$	$0.4719^{+0.0076}_{-0.0058}$
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.55^{+0.40}_{-0.18}$	$n_{s,0.002}$	0.9677 ± 0.0039	$\sigma_8(0.51)$	$0.620^{+0.012}_{-0.0064}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P	$0.245382^{+0.000061}_{-0.000055}$	$f\sigma_8(0.61)$	$0.4671^{+0.0075}_{-0.0054}$
$\boldsymbol{A^{kSZ}}$	$4.7^{+2.2}_{-4.0}$	Y_P^{BBN}	$0.246708^{+0.000062}_{-0.000055}$	$\sigma_8(0.61)$	$0.590^{+0.012}_{-0.0061}$
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.19	10^5D/H	2.592 ± 0.028	$f\sigma_8(2.33)$	$0.2977^{+0.0050}_{-0.0029}$
$\boldsymbol{A_{143}^{dust}}$	0.97 ± 0.18	Age/Gyr	$13.792^{+0.025}_{-0.033}$	$\sigma_8(2.33)$	$0.3070^{+0.0058}_{-0.0031}$
$\boldsymbol{A_{217}^{dust}}$	0.98 ± 0.10	z_*	1089.86 ± 0.24	f_{2000}^{143}	29.5 ± 2.8
$\boldsymbol{A_{143\times217}^{dust}}$	1.03 ± 0.16	r_*	144.74 ± 0.26	f_{2000}^{217}	106.7 ± 1.9
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	$100\theta_*$	1.04115 ± 0.00030	$f_{2000}^{143\times217}$	32.0 ± 2.0
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	$D_M(z_*)$/Gpc	13.902 ± 0.025	χ^2_{simall}	396.9 ± 1.8
$\boldsymbol{c_{TE}}$	0.9968 ± 0.0049	z_{drag}	1059.79 ± 0.32	χ^2_{lowl}	22.86 ± 0.83
$\boldsymbol{c_{EE}}$	0.9923 ± 0.0049	r_{drag}	147.42 ± 0.28	$\chi^2_{CamSpec}$	11514.6 ± 5.8
H_0	$67.76^{+0.58}_{-0.51}$	k_D	0.14050 ± 0.00033	χ^2_{6DF}	0.048 ± 0.068
Ω_Λ	$0.6908^{+0.0073}_{-0.0066}$	$100\theta_D$	0.16084 ± 0.00019	χ^2_{MGS}	1.42 ± 0.50
Ω_m	$0.3092^{+0.0066}_{-0.0073}$	z_{eq}	3375 ± 25	$\chi^2_{DR12BAO}$	4.6 ± 1.5
$\Omega_m h^2$	0.1419 ± 0.0010	k_{eq}	0.010302 ± 0.000075	χ^2_{prior}	7.8 ± 3.4
$\Omega_\nu h^2$	< 0.000825	$100\theta_{eq}$	0.8181 ± 0.0047	χ^2_{BAO}	6.0 ± 1.2
$\Omega_m h^3$	$0.09616^{+0.00047}_{-0.00036}$	$100\theta_{s,eq}$	0.4519 ± 0.0024	χ^2_{CMB}	11934.4 ± 5.8
σ_8	$0.808^{+0.015}_{-0.0087}$	$H(0.15)$	$73.01^{+0.51}_{-0.44}$		

$\bar{\chi}^2_{eff} = 11948.19$; $\Delta\bar{\chi}^2_{eff} = 0.20$; $R - 1 = 0.01072$

6.54 base_mnu_CamSpecHM_TTTEEE_lowl_lowE_BAO_post_Pantheon_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02235 ± 0.00015	S_8	0.820 ± 0.014	$D_M(0.15)$	$639.3^{+4.1}_{-4.7}$
$\boldsymbol{\Omega_c h^2}$	0.1188 ± 0.0010	$\sigma_8\Omega_m^{0.5}$	0.4489 ± 0.0079	$H(0.38)$	$83.14^{+0.37}_{-0.32}$
$\boldsymbol{100\theta_{MC}}$	1.04097 ± 0.00030	$\sigma_8\Omega_m^{0.25}$	$0.603^{+0.010}_{-0.0079}$	$D_M(0.38)$	$1525.5^{+8.3}_{-9.6}$
$\boldsymbol{\tau}$	$0.0549^{+0.0048}_{-0.0084}$	$\sigma_8/h^{0.5}$	$0.982^{+0.016}_{-0.012}$	$H(0.51)$	$89.82^{+0.31}_{-0.26}$
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 0.0715	$r_{drag}h$	100.02 ± 0.85	$D_M(0.51)$	$1976.7^{+9.8}_{-11}$
$\boldsymbol{\ln(10^{10}A_s)}$	$3.041^{+0.012}_{-0.017}$	$\langle d^2\rangle^{1/2}$	2.425 ± 0.026	$H(0.61)$	$95.41^{+0.27}_{-0.22}$
$\boldsymbol{n_s}$	0.9679 ± 0.0039	z_{re}	$7.71^{+0.54}_{-0.84}$	$D_M(0.61)$	2301^{+11}_{-12}
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	$10^9 A_s$	$2.093^{+0.024}_{-0.035}$	$H(2.33)$	235.74 ± 0.62
$\boldsymbol{A^{PS}_{100}}$	239 ± 25	$10^9 A_s e^{-2\tau}$	1.875 ± 0.011	$D_M(2.33)$	5759^{+11}_{-13}
$\boldsymbol{A^{PS}_{143}}$	39 ± 8	D_{40}	1223 ± 12	$f\sigma_8(0.15)$	0.4538 ± 0.0074
$\boldsymbol{A^{PS}_{217}}$	103 ± 10	D_{220}	5721 ± 39	$\sigma_8(0.15)$	$0.748^{+0.014}_{-0.0077}$
$\boldsymbol{A^{CIB}_{217}}$	39 ± 7	D_{810}	2534 ± 14	$f\sigma_8(0.38)$	$0.4729^{+0.0074}_{-0.0062}$
$\boldsymbol{A^{tSZ}_{143}}$	$3.9^{+1.9}_{-2.5}$	D_{1420}	816.1 ± 4.8	$\sigma_8(0.38)$	$0.663^{+0.012}_{-0.0067}$
$\boldsymbol{r^{PS}_{143\times217}}$	0.66 ± 0.13	D_{2000}	230.5 ± 1.6	$f\sigma_8(0.51)$	$0.4719^{+0.0073}_{-0.0057}$
$\boldsymbol{r^{CIB}_{143\times217}}$	$0.55^{+0.40}_{-0.18}$	$n_{s,0.002}$	0.9679 ± 0.0039	$\sigma_8(0.51)$	$0.621^{+0.011}_{-0.0062}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P	$0.245385^{+0.000060}_{-0.000054}$	$f\sigma_8(0.61)$	$0.4672^{+0.0072}_{-0.0054}$
$\boldsymbol{A^{kSZ}}$	$4.7^{+2.3}_{-3.9}$	Y_P^{BBN}	$0.246711^{+0.000060}_{-0.000054}$	$\sigma_8(0.61)$	$0.591^{+0.011}_{-0.0059}$
$\boldsymbol{A^{dust}_{100}}$	1.01 ± 0.19	10^5D/H	2.590 ± 0.027	$f\sigma_8(2.33)$	$0.2980^{+0.0047}_{-0.0028}$
$\boldsymbol{A^{dust}_{143}}$	0.97 ± 0.18	Age/Gyr	$13.789^{+0.024}_{-0.031}$	$\sigma_8(2.33)$	$0.3074^{+0.0054}_{-0.0030}$
$\boldsymbol{A^{dust}_{217}}$	0.98 ± 0.10	z_*	1089.84 ± 0.23	f^{143}_{2000}	29.4 ± 2.8
$\boldsymbol{A^{dust}_{143\times217}}$	1.03 ± 0.16	r_*	144.76 ± 0.26	f^{217}_{2000}	106.7 ± 1.9
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	$100\theta_*$	1.04116 ± 0.00030	$f^{143\times217}_{2000}$	31.9 ± 2.0
$\boldsymbol{c_{217}}$	1.0011 ± 0.0015	$D_M(z_*)$/Gpc	13.904 ± 0.025	χ^2_{simall}	396.9 ± 1.8
$\boldsymbol{c_{TE}}$	0.9968 ± 0.0049	z_{drag}	1059.80 ± 0.32	χ^2_{lowl}	22.83 ± 0.82
$\boldsymbol{c_{EE}}$	0.9923 ± 0.0049	r_{drag}	147.44 ± 0.27	$\chi^2_{CamSpec}$	11514.6 ± 5.8
H_0	$67.84^{+0.54}_{-0.49}$	k_D	0.14048 ± 0.00033	χ^2_{JLA}	1036.27 ± 0.31
Ω_Λ	$0.6919^{+0.0069}_{-0.0062}$	$100\theta_D$	0.16084 ± 0.00019	χ^2_{6DF}	0.039 ± 0.056
Ω_m	0.3081 ± 0.0066	z_{eq}	3373 ± 24	χ^2_{MGS}	1.49 ± 0.49
$\Omega_m h^2$	0.14178 ± 0.00098	k_{eq}	0.010295 ± 0.000074	$\chi^2_{DR12BAO}$	4.3 ± 1.2
$\Omega_\nu h^2$	< 0.000768	$100\theta_{eq}$	0.8185 ± 0.0045	χ^2_{prior}	7.8 ± 3.4
$\Omega_m h^3$	$0.09618^{+0.00045}_{-0.00036}$	$100\theta_{s,eq}$	0.4521 ± 0.0023	χ^2_{BAO}	5.87 ± 0.96
σ_8	$0.809^{+0.015}_{-0.0085}$	$H(0.15)$	$73.09^{+0.48}_{-0.42}$	χ^2_{CMB}	11934.3 ± 5.8

$\bar{\chi}^2_{eff} = 12984.21$; $R - 1 = 0.01410$

6.55 base_mnu_plikHM_TT_lowl_lowE_lensing_BAO

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022232	0.02222 ± 0.00019	$\sigma_8\Omega_m^{0.25}$	0.6115	$0.6058^{+0.0083}_{-0.0068}$	$H(0.38)$	83.236	83.01 ± 0.38
$\boldsymbol{\Omega_c h^2}$	0.11936	0.1192 ± 0.0011	$\sigma_8/h^{0.5}$	0.9967	$0.987^{+0.013}_{-0.010}$	$D_M(0.38)$	1523.0	1528.6 ± 9.9
$\boldsymbol{100\theta_{MC}}$	1.040955	1.04097 ± 0.00042	$r_{drag}h$	100.22	99.81 ± 0.92	$H(0.51)$	89.905	89.71 ± 0.32
$\boldsymbol{\tau}$	0.0542	0.0542 ± 0.0074	$\langle d^2\rangle^{1/2}$	2.4437	2.435 ± 0.022	$D_M(0.51)$	1973.7	1980 ± 12
$\boldsymbol{\Sigma m_\nu}$ [eV]	0.0037	< 0.0628	z_{re}	7.68	7.67 ± 0.75	$H(0.61)$	95.487	95.32 ± 0.28
$\boldsymbol{\ln(10^{10}A_s)}$	3.0419	3.042 ± 0.015	$10^9 A_s$	2.0944	2.095 ± 0.031	$D_M(0.61)$	2297.3	2305 ± 13
$\boldsymbol{n_s}$	0.96622	0.9659 ± 0.0041	$10^9 A_s e^{-2\tau}$	1.8794	1.879 ± 0.011	$H(2.33)$	235.68	235.80 ± 0.70
$\boldsymbol{y_{cal}}$	1.00022	1.0006 ± 0.0025	D_{40}	1226.6	1228 ± 12	$D_M(2.33)$	5755.2	5764 ± 14
$\boldsymbol{A_{217}^{CIB}}$	48.3	48 ± 7	D_{220}	5718.2	5723 ± 40	$f\sigma_8(0.15)$	0.4593	0.4566 ± 0.0064
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.36	—	D_{810}	2536.1	2536 ± 14	$\sigma_8(0.15)$	0.7598	$0.750^{+0.011}_{-0.0068}$
$\boldsymbol{A_{143}^{tSZ}}$	7.04	5.1 ± 2.0	D_{1420}	815.6	815.5 ± 5.1	$f\sigma_8(0.38)$	0.4788	$0.4753^{+0.0061}_{-0.0054}$
$\boldsymbol{A_{100}^{PS}}$	252.9	263 ± 28	D_{2000}	230.22	230.0 ± 1.8	$\sigma_8(0.38)$	0.6738	$0.6653^{+0.0098}_{-0.0060}$
$\boldsymbol{A_{143}^{PS}}$	49.3	48 ± 8	$n_{s,0.002}$	0.96622	0.9659 ± 0.0041	$f\sigma_8(0.51)$	0.4779	$0.4741^{+0.0059}_{-0.0049}$
$\boldsymbol{A_{143\times217}^{PS}}$	47.5	43 ± 9	Y_P	0.245339	$0.245330^{+0.000086}_{-0.000074}$	$\sigma_8(0.51)$	0.6307	$0.6226^{+0.0093}_{-0.0057}$
$\boldsymbol{A_{217}^{PS}}$	119.5	115 ± 10	Y_P^{BBN}	0.246666	$0.246656^{+0.000086}_{-0.000074}$	$f\sigma_8(0.61)$	0.4732	$0.4692^{+0.0057}_{-0.0046}$
$\boldsymbol{A^{kSZ}}$	0.00	< 4.76	10^5D/H	2.6117	2.615 ± 0.037	$\sigma_8(0.61)$	0.6002	$0.5925^{+0.0089}_{-0.0054}$
$\boldsymbol{A_{100}^{dustTT}}$	8.88	8.9 ± 1.8	Age/Gyr	13.7793	$13.800^{+0.030}_{-0.034}$	$f\sigma_8(2.33)$	0.30190	$0.2987^{+0.0039}_{-0.0026}$
$\boldsymbol{A_{143}^{dustTT}}$	10.78	10.7 ± 1.8	z_*	1090.035	1090.04 ± 0.29	$\sigma_8(2.33)$	0.31191	$0.3080^{+0.0046}_{-0.0029}$
$\boldsymbol{A_{143\times217}^{dustTT}}$	19.46	18.3 ± 3.3	r_*	144.709	144.77 ± 0.28	f_{2000}^{143}	30.01	30.8 ± 2.9
$\boldsymbol{A_{217}^{dustTT}}$	94.7	93.4 ± 7.3	$100\theta_*$	1.041127	1.04116 ± 0.00041	$f_{2000}^{143\times217}$	32.96	33.2 ± 2.0
$\boldsymbol{c_{100}}$	0.99967	0.99961 ± 0.00061	$D_M(z_*)$/Gpc	13.8993	13.905 ± 0.028	f_{2000}^{217}	107.38	107.9 ± 1.9
$\boldsymbol{c_{217}}$	0.99825	0.99826 ± 0.00062	z_{drag}	1059.551	1059.52 ± 0.44	$\chi^2_{lensing}$	8.963	9.41 ± 0.79
H_0	67.98	67.67 ± 0.57	r_{drag}	147.424	147.49 ± 0.31	χ^2_{simall}	396.04	397.0 ± 1.7
Ω_Λ	0.6935	0.6900 ± 0.0072	k_D	0.140409	0.14033 ± 0.00042	χ^2_{lowl}	23.24	23.28 ± 0.87
Ω_m	0.3065	0.3100 ± 0.0072	$100\theta_D$	0.160977	0.16101 ± 0.00026	χ^2_{plik}	758.7	771.4 ± 5.3
$\Omega_m h^2$	0.14163	0.1419 ± 0.0011	z_{eq}	3383.6	3379 ± 25	χ^2_{6DF}	0.0030	0.055 ± 0.073
$\Omega_\nu h^2$	0.000040	< 0.000675	k_{eq}	0.010327	0.010312 ± 0.000077	χ^2_{MGS}	1.54	1.37 ± 0.51
$\Omega_m h^3$	0.096281	0.09604 ± 0.00049	$100\theta_{eq}$	0.81623	0.8172 ± 0.0047	$\chi^2_{DR12BAO}$	3.67	4.7 ± 1.6
σ_8	0.8218	$0.812^{+0.012}_{-0.0074}$	$100\theta_{s,eq}$	0.45102	0.4515 ± 0.0024	χ^2_{prior}	1.30	7.3 ± 3.7
S_8	0.8306	0.825 ± 0.013	$H(0.15)$	73.209	72.93 ± 0.50	χ^2_{CMB}	1186.9	1201.0 ± 5.5
$\sigma_8\Omega_m^{0.5}$	0.4550	0.4520 ± 0.0069	$D_M(0.15)$	638.09	640.8 ± 4.9	χ^2_{BAO}	5.21	6.1 ± 1.3

Best-fit $\chi^2_{eff} = 1193.44$; $\Delta\chi^2_{eff} = -1.25$; $\bar{\chi}^2_{eff} = 1214.40$; $\Delta\bar{\chi}^2_{eff} = -0.33$; $R - 1 = 0.00805$

χ^2_{eff}: BAO - 6DF: 0.00 (Δ -0.03) MGS: 1.54 (Δ 0.32) DR12BAO: 3.67 (Δ -0.70) CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.96 (Δ 0.09) simall_100x143_offlike5_EE_Aplanck 396.04 (Δ -0.05) commander_dx12_v3_2_29: 23.24 (Δ 0.28) plik_rd12_HM_v22_TT: 758.68 (Δ -1.12)

6.56 base_mnu_plikHM_TT_lowl_lowE_lensing_BAO_post_Pantheon

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022258	0.02223 ± 0.00019	$\sigma_8/h^{0.5}$	0.9939	$0.987^{+0.013}_{-0.0098}$	$H(0.51)$	89.964	89.76 ± 0.31
$\boldsymbol{\Omega_c h^2}$	0.11907	0.1190 ± 0.0011	$r_{\rm drag} h$	100.44	99.96 ± 0.87	$D_{\rm M}(0.51)$	1971.2	1979 ± 11
$\boldsymbol{100\theta_{MC}}$	1.040953	1.04098 ± 0.00042	$\langle d^2 \rangle^{1/2}$	2.4362	2.434 ± 0.022	$H(0.61)$	95.532	95.35 ± 0.27
$\boldsymbol{\tau}$	0.0532	0.0545 ± 0.0074	$z_{\rm re}$	7.57	7.69 ± 0.74	$D_{\rm M}(0.61)$	2294.6	2303 ± 12
$\boldsymbol{\Sigma m_\nu}$ [eV]	0.0007	< 0.0589	$10^9 A_{\rm s}$	2.0892	2.095 ± 0.031	$H(2.33)$	235.51	235.70 ± 0.68
$\boldsymbol{\ln(10^{10} A_{\rm s})}$	3.0394	3.042 ± 0.015	$10^9 A_{\rm s} e^{-2\tau}$	1.8783	1.879 ± 0.011	$D_{\rm M}(2.33)$	5753.3	5762 ± 14
$\boldsymbol{n_{\rm s}}$	0.96705	0.9662 ± 0.0040	D_{40}	1224.6	1228 ± 12	$f\sigma_8(0.15)$	0.4572	0.4561 ± 0.0063
$\boldsymbol{y_{\rm cal}}$	1.00043	1.0007 ± 0.0025	D_{220}	5719.7	5725 ± 40	$\sigma_8(0.15)$	0.7585	$0.751^{+0.010}_{-0.0067}$
$\boldsymbol{A^{\rm CIB}_{217}}$	48.9	48 ± 7	D_{810}	2536.4	2537 ± 14	$f\sigma_8(0.38)$	0.4771	$0.4750^{+0.0060}_{-0.0053}$
$\boldsymbol{\xi^{\rm tSZ\times CIB}}$	0.33	—	D_{1420}	816.1	815.6 ± 5.1	$\sigma_8(0.38)$	0.6729	$0.6658^{+0.0094}_{-0.0059}$
$\boldsymbol{A^{\rm tSZ}_{143}}$	7.06	5.1 ± 2.0	D_{2000}	230.37	230.1 ± 1.8	$f\sigma_8(0.51)$	0.4764	$0.4739^{+0.0057}_{-0.0048}$
$\boldsymbol{A^{\rm PS}_{100}}$	253.8	262 ± 28	$n_{\rm s,0.002}$	0.96705	0.9662 ± 0.0040	$\sigma_8(0.51)$	0.6299	$0.6232^{+0.0089}_{-0.0055}$
$\boldsymbol{A^{\rm PS}_{143}}$	48.7	48 ± 8	$Y_{\rm P}$	0.245350	$0.245335^{+0.000085}_{-0.000074}$	$f\sigma_8(0.61)$	0.4719	$0.4691^{+0.0056}_{-0.0045}$
$\boldsymbol{A^{\rm PS}_{143\times217}}$	46.4	43 ± 9	$Y^{\rm BBN}_{\rm P}$	0.246676	$0.246661^{+0.000086}_{-0.000074}$	$\sigma_8(0.61)$	0.5995	$0.5931^{+0.0085}_{-0.0053}$
$\boldsymbol{A^{\rm PS}_{217}}$	118.5	115 ± 10	10^5D/H	2.6069	2.613 ± 0.037	$f\sigma_8(2.33)$	0.30156	$0.2990^{+0.0037}_{-0.0026}$
$\boldsymbol{A^{\rm kSZ}}$	0.01	< 4.79	Age/Gyr	13.7753	13.796 ± 0.031	$\sigma_8(2.33)$	0.31165	$0.3084^{+0.0044}_{-0.0029}$
$\boldsymbol{A^{{\rm dust}TT}_{100}}$	8.89	8.9 ± 1.8	z_*	1089.976	1090.01 ± 0.28	f^{143}_{2000}	29.99	30.7 ± 2.9
$\boldsymbol{A^{{\rm dust}TT}_{143}}$	10.83	10.7 ± 1.8	r_*	144.764	144.80 ± 0.28	$f^{143\times217}_{2000}$	32.93	33.2 ± 2.0
$\boldsymbol{A^{{\rm dust}TT}_{143\times217}}$	19.40	18.2 ± 3.3	$100\theta_*$	1.041119	1.04118 ± 0.00041	f^{217}_{2000}	107.35	107.8 ± 1.9
$\boldsymbol{A^{{\rm dust}TT}_{217}}$	94.5	93.4 ± 7.3	$D_{\rm M}(z_*)$/Gpc	13.9046	13.907 ± 0.027	$\chi^2_{\rm lensing}$	8.878	9.40 ± 0.78
$\boldsymbol{c_{100}}$	0.99964	0.99961 ± 0.00061	$z_{\rm drag}$	1059.589	1059.53 ± 0.44	$\chi^2_{\rm simall}$	395.88	397.0 ± 1.7
$\boldsymbol{c_{217}}$	0.99826	0.99826 ± 0.00063	$r_{\rm drag}$	147.471	147.51 ± 0.31	$\chi^2_{\rm lowl}$	23.01	23.22 ± 0.85
H_0	68.11	67.76 ± 0.54	$k_{\rm D}$	0.140378	0.14031 ± 0.00042	$\chi^2_{\rm plik}$	759.1	771.5 ± 5.3
Ω_Λ	0.6953	0.6912 ± 0.0068	$100\theta_{\rm D}$	0.160950	0.16100 ± 0.00026	$\chi^2_{\rm JLA}$	1036.061	1036.30 ± 0.33
$\Omega_{\rm m}$	0.3047	0.3088 ± 0.0068	$z_{\rm eq}$	3377.4	3376 ± 25	$\chi^2_{\rm 6DF}$	0.0001	0.044 ± 0.060
$\Omega_{\rm m} h^2$	0.14134	0.1418 ± 0.0010	$k_{\rm eq}$	0.010308	0.010302 ± 0.000075	$\chi^2_{\rm MGS}$	1.677	1.45 ± 0.50
$\Omega_\nu h^2$	0.000008	< 0.000634	$100\theta_{\rm eq}$	0.81741	0.8178 ± 0.0046	$\chi^2_{\rm DR12BAO}$	3.51	4.4 ± 1.3
$\Omega_{\rm m} h^3$	0.096264	0.09606 ± 0.00049	$100\theta_{\rm s,eq}$	0.45161	0.4518 ± 0.0024	$\chi^2_{\rm prior}$	1.41	7.3 ± 3.7
σ_8	0.8202	$0.812^{+0.011}_{-0.0073}$	$H(0.15)$	73.319	73.01 ± 0.47	$\chi^2_{\rm CMB}$	1186.8	1201.1 ± 5.5
S_8	0.8266	0.824 ± 0.012	$D_{\rm M}(0.15)$	637.01	640.0 ± 4.6	$\chi^2_{\rm BAO}$	5.189	5.9 ± 1.0
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4528	0.4514 ± 0.0067	$H(0.38)$	83.314	83.07 ± 0.36			
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.6094	$0.6055^{+0.0082}_{-0.0067}$	$D_{\rm M}(0.38)$	1520.9	1527.1 ± 9.4			

Best-fit $\chi^2_{\rm eff} = 2229.50$; $\Delta\chi^2_{\rm eff} = -1.49$; $\bar{\chi}^2_{\rm eff} = 2250.58$; $\Delta\bar{\chi}^2_{\rm eff} = -0.47$; $R - 1 = 0.00868$

$\chi^2_{\rm eff}$: BAO - 6DF: 0.00 (Δ -0.01) MGS: 1.68 (Δ 0.33) DR12BAO: 3.51 (Δ -0.52) CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.88 (Δ 0.01) simall_100x143_offlike5_EE_Aplanck 395.88 (Δ -0.56) commander_dx12_v3_2_29: 23.01 (Δ 0.17) plik_rd12_HM_v22_TT: 759.07 (Δ -0.78) SN - JLA Pantheon: 1036.06 (Δ -0.17)

6.57 base_mnu_plikHM_TT_lowl_lowE_lensing_BAO_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02222 ± 0.00019	$\sigma_8\Omega_m^{0.25}$	$0.6060^{+0.0083}_{-0.0067}$	$H(0.38)$	83.02 ± 0.38
$\boldsymbol{\Omega_c h^2}$	0.1191 ± 0.0011	$\sigma_8/h^{0.5}$	$0.987^{+0.013}_{-0.0097}$	$D_M(0.38)$	$1528.4^{+9.3}_{-10}$
$\boldsymbol{100\theta_{MC}}$	1.04097 ± 0.00042	$r_{drag}h$	99.83 ± 0.92	$H(0.51)$	$89.72^{+0.34}_{-0.30}$
$\boldsymbol{\tau}$	$0.0551^{+0.0055}_{-0.0076}$	$\langle d^2\rangle^{1/2}$	2.436 ± 0.022	$D_M(0.51)$	1980^{+11}_{-12}
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 0.0636	z_{re}	$7.77^{+0.59}_{-0.74}$	$H(0.61)$	$95.32^{+0.29}_{-0.26}$
$\boldsymbol{\ln(10^{10}A_s)}$	$3.043^{+0.012}_{-0.015}$	$10^9 A_s$	$2.098^{+0.024}_{-0.031}$	$D_M(0.61)$	2304^{+12}_{-13}
$\boldsymbol{n_s}$	0.9660 ± 0.0040	$10^9 A_s e^{-2\tau}$	1.879 ± 0.011	$H(2.33)$	235.78 ± 0.70
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0025	D_{40}	1228 ± 12	$D_M(2.33)$	5764^{+13}_{-15}
$\boldsymbol{A^{CIB}_{217}}$	48 ± 7	D_{220}	5723 ± 40	$f\sigma_8(0.15)$	0.4568 ± 0.0064
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{810}	2536 ± 14	$\sigma_8(0.15)$	$0.751^{+0.011}_{-0.0065}$
$\boldsymbol{A^{tSZ}_{143}}$	5.1 ± 2.0	D_{1420}	815.4 ± 5.1	$f\sigma_8(0.38)$	$0.4755^{+0.0061}_{-0.0053}$
$\boldsymbol{A^{PS}_{100}}$	263 ± 28	D_{2000}	230.0 ± 1.8	$\sigma_8(0.38)$	$0.6657^{+0.0098}_{-0.0058}$
$\boldsymbol{A^{PS}_{143}}$	48 ± 8	$n_{s,0.002}$	0.9660 ± 0.0040	$f\sigma_8(0.51)$	$0.4743^{+0.0058}_{-0.0048}$
$\boldsymbol{A^{PS}_{143\times217}}$	43 ± 9	Y_P	$0.245331^{+0.000085}_{-0.000074}$	$\sigma_8(0.51)$	$0.6230^{+0.0093}_{-0.0054}$
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	Y_P^{BBN}	$0.246657^{+0.000086}_{-0.000075}$	$f\sigma_8(0.61)$	$0.4695^{+0.0057}_{-0.0045}$
$\boldsymbol{A^{kSZ}}$	< 4.76	10^5D/H	2.614 ± 0.037	$\sigma_8(0.61)$	$0.5928^{+0.0088}_{-0.0052}$
$\boldsymbol{A^{dustTT}_{100}}$	8.9 ± 1.8	Age/Gyr	$13.800^{+0.030}_{-0.034}$	$f\sigma_8(2.33)$	$0.2989^{+0.0038}_{-0.0025}$
$\boldsymbol{A^{dustTT}_{143}}$	10.7 ± 1.8	z_*	1090.03 ± 0.29	$\sigma_8(2.33)$	$0.3082^{+0.0045}_{-0.0028}$
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.3 ± 3.3	r_*	144.78 ± 0.28	f^{143}_{2000}	30.8 ± 2.9
$\boldsymbol{A^{dustTT}_{217}}$	93.4 ± 7.3	$100\theta_*$	1.04117 ± 0.00041	$f^{143\times217}_{2000}$	33.2 ± 2.0
$\boldsymbol{c_{100}}$	0.99961 ± 0.00061	$D_M(z_*)$/Gpc	13.905 ± 0.028	f^{217}_{2000}	107.8 ± 1.9
$\boldsymbol{c_{217}}$	0.99826 ± 0.00062	z_{drag}	1059.52 ± 0.44	$\chi^2_{lensing}$	9.38 ± 0.76
H_0	67.68 ± 0.57	r_{drag}	147.50 ± 0.31	χ^2_{simall}	396.9 ± 1.7
Ω_Λ	$0.6901^{+0.0076}_{-0.0068}$	k_D	0.14032 ± 0.00042	χ^2_{lowl}	23.27 ± 0.87
Ω_m	$0.3099^{+0.0068}_{-0.0076}$	$100\theta_D$	0.16101 ± 0.00026	χ^2_{plik}	771.3 ± 5.3
$\Omega_m h^2$	0.1419 ± 0.0011	z_{eq}	3378 ± 25	χ^2_{6DF}	0.054 ± 0.073
$\Omega_\nu h^2$	< 0.000684	k_{eq}	0.010309 ± 0.000077	χ^2_{MGS}	1.39 ± 0.52
$\Omega_m h^3$	0.09604 ± 0.00049	$100\theta_{eq}$	0.8173 ± 0.0047	$\chi^2_{DR12BAO}$	4.7 ± 1.6
σ_8	$0.812^{+0.012}_{-0.0072}$	$100\theta_{s,eq}$	0.4516 ± 0.0024	χ^2_{prior}	7.3 ± 3.7
S_8	0.825 ± 0.013	$H(0.15)$	72.94 ± 0.50	χ^2_{CMB}	1200.9 ± 5.5
$\sigma_8\Omega_m^{0.5}$	0.4521 ± 0.0069	$D_M(0.15)$	$640.7^{+4.5}_{-5.1}$	χ^2_{BAO}	6.1 ± 1.3

$\bar{\chi}^2_{eff} = 1214.24$; $\Delta\bar{\chi}^2_{eff} = -0.34$; $R - 1 = 0.00889$

6.58 base_mnu_plikHM_TT_lowl_lowE_lensing_BAO_post_Pantheon_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02223 ± 0.00019	$\sigma_8/h^{0.5}$	$0.987^{+0.013}_{-0.0096}$	$H(0.51)$	89.76 ± 0.31
$\boldsymbol{\Omega_c h^2}$	0.1190 ± 0.0011	$r_{\rm drag} h$	99.98 ± 0.88	$D_{\rm M}(0.51)$	1978 ± 11
$\boldsymbol{100\theta_{MC}}$	1.04099 ± 0.00042	$\langle d^2 \rangle^{1/2}$	2.435 ± 0.022	$H(0.61)$	95.36 ± 0.27
$\boldsymbol{\tau}$	$0.0553^{+0.0056}_{-0.0075}$	$z_{\rm re}$	$7.78^{+0.60}_{-0.74}$	$D_{\rm M}(0.61)$	2302 ± 12
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 0.0598	$10^9 A_{\rm s}$	$2.098^{+0.024}_{-0.031}$	$H(2.33)$	235.69 ± 0.67
$\boldsymbol{\ln(10^{10} A_s)}$	$3.044^{+0.012}_{-0.015}$	$10^9 A_{\rm s} e^{-2\tau}$	1.878 ± 0.011	$D_{\rm M}(2.33)$	5762 ± 14
$\boldsymbol{n_s}$	0.9663 ± 0.0040	D_{40}	1227 ± 12	$f\sigma_8(0.15)$	0.4562 ± 0.0063
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0025	D_{220}	5724 ± 40	$\sigma_8(0.15)$	$0.751^{+0.010}_{-0.0064}$
$\boldsymbol{A^{CIB}_{217}}$	48 ± 7	D_{810}	2536 ± 14	$f\sigma_8(0.38)$	$0.4752^{+0.0060}_{-0.0052}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{1420}	815.6 ± 5.1	$\sigma_8(0.38)$	$0.6662^{+0.0094}_{-0.0056}$
$\boldsymbol{A^{tSZ}_{143}}$	5.1 ± 2.0	D_{2000}	230.1 ± 1.8	$f\sigma_8(0.51)$	$0.4741^{+0.0057}_{-0.0047}$
$\boldsymbol{A^{PS}_{100}}$	262 ± 28	$n_{\rm s,0.002}$	0.9663 ± 0.0040	$\sigma_8(0.51)$	$0.6235^{+0.0088}_{-0.0053}$
$\boldsymbol{A^{PS}_{143}}$	48 ± 8	$Y_{\rm P}$	$0.245336^{+0.000086}_{-0.000074}$	$f\sigma_8(0.61)$	$0.4693^{+0.0055}_{-0.0044}$
$\boldsymbol{A^{PS}_{143\times217}}$	43 ± 9	$Y^{\rm BBN}_{\rm P}$	$0.246662^{+0.000086}_{-0.000074}$	$\sigma_8(0.61)$	$0.5934^{+0.0084}_{-0.0051}$
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	10^5D/H	2.612 ± 0.037	$f\sigma_8(2.33)$	$0.2992^{+0.0037}_{-0.0025}$
$\boldsymbol{A^{kSZ}}$	< 4.79	Age/Gyr	13.796 ± 0.032	$\sigma_8(2.33)$	$0.3086^{+0.0043}_{-0.0027}$
$\boldsymbol{A^{dustTT}_{100}}$	8.9 ± 1.8	z_*	1090.01 ± 0.28	f^{143}_{2000}	30.7 ± 2.9
$\boldsymbol{A^{dustTT}_{143}}$	10.7 ± 1.8	r_*	144.80 ± 0.28	$f^{143\times217}_{2000}$	33.2 ± 2.0
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.2 ± 3.3	$100\theta_*$	1.04118 ± 0.00041	f^{217}_{2000}	107.8 ± 1.9
$\boldsymbol{A^{dustTT}_{217}}$	93.4 ± 7.3	$D_{\rm M}(z_*)$/Gpc	13.908 ± 0.027	$\chi^2_{\rm lensing}$	9.37 ± 0.75
$\boldsymbol{c_{100}}$	0.99961 ± 0.00061	$z_{\rm drag}$	1059.54 ± 0.44	$\chi^2_{\rm simall}$	397.0 ± 1.7
$\boldsymbol{c_{217}}$	0.99826 ± 0.00063	$r_{\rm drag}$	147.52 ± 0.31	$\chi^2_{\rm lowl}$	23.22 ± 0.85
H_0	67.77 ± 0.54	$k_{\rm D}$	0.14030 ± 0.00042	$\chi^2_{\rm plik}$	771.4 ± 5.3
Ω_Λ	0.6913 ± 0.0068	$100\theta_{\rm D}$	0.16100 ± 0.00026	$\chi^2_{\rm JLA}$	1036.29 ± 0.33
$\Omega_{\rm m}$	0.3087 ± 0.0068	$z_{\rm eq}$	3375 ± 25	$\chi^2_{\rm 6DF}$	0.043 ± 0.059
$\Omega_{\rm m} h^2$	0.1417 ± 0.0010	$k_{\rm eq}$	0.010300 ± 0.000075	$\chi^2_{\rm MGS}$	1.46 ± 0.50
$\Omega_\nu h^2$	< 0.000643	$100\theta_{\rm eq}$	0.8179 ± 0.0045	$\chi^2_{\rm DR12BAO}$	4.4 ± 1.3
$\Omega_{\rm m} h^3$	0.09606 ± 0.00049	$100\theta_{\rm s,eq}$	0.4519 ± 0.0023	$\chi^2_{\rm prior}$	7.3 ± 3.7
σ_8	$0.813^{+0.011}_{-0.0070}$	$H(0.15)$	73.02 ± 0.47	$\chi^2_{\rm CMB}$	1200.9 ± 5.5
S_8	0.824 ± 0.012	$D_{\rm M}(0.15)$	639.9 ± 4.6	$\chi^2_{\rm BAO}$	5.9 ± 1.0
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4515 ± 0.0067	$H(0.38)$	83.08 ± 0.37		
$\sigma_8 \Omega_{\rm m}^{0.25}$	$0.6057^{+0.0082}_{-0.0066}$	$D_{\rm M}(0.38)$	1526.9 ± 9.4		

$\bar{\chi}^2_{\rm eff} = 2250.42$; $\Delta\bar{\chi}^2_{\rm eff} = -0.48$; $R - 1 = 0.00933$

6.59 base_mnu_plikHM_TTTEEE_lowl_lowE_lensing_BAO

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022417	0.02242 ± 0.00013	$\Omega_m h^3$	0.096661	$0.09649^{+0.00037}_{-0.00031}$	$H(0.15)$	73.330	$73.09^{+0.46}_{-0.40}$
$\boldsymbol{\Omega_c h^2}$	0.11952	0.11934 ± 0.00093	σ_8	0.8220	$0.814^{+0.010}_{-0.0070}$	$D_M(0.15)$	637.01	$639.4^{+3.9}_{-4.6}$
$\boldsymbol{100\theta_{MC}}$	1.040999	1.04100 ± 0.00029	S_8	0.8303	0.826 ± 0.011	$H(0.38)$	83.364	$83.17^{+0.35}_{-0.30}$
$\boldsymbol{\tau}$	0.0533	0.0553 ± 0.0073	$\sigma_8 \Omega_m^{0.5}$	0.4548	0.4527 ± 0.0060	$D_M(0.38)$	1520.5	$1525.4^{+7.9}_{-9.3}$
$\boldsymbol{\Sigma m_\nu}$ [eV]	0.0009	< 0.0578	$\sigma_8 \Omega_m^{0.25}$	0.6114	$0.6070^{+0.0070}_{-0.0062}$	$H(0.51)$	90.038	$89.87^{+0.29}_{-0.25}$
$\boldsymbol{\ln(10^{10} A_s)}$	3.0415	3.045 ± 0.014	$\sigma_8/h^{0.5}$	0.9961	$0.988^{+0.011}_{-0.0093}$	$D_M(0.51)$	1970.6	$1976.4^{+9.3}_{-11}$
$\boldsymbol{n_s}$	0.96721	0.9666 ± 0.0037	$r_{drag} h$	100.22	99.85 ± 0.83	$H(0.61)$	95.625	$95.48^{+0.25}_{-0.21}$
$\boldsymbol{y_{cal}}$	1.00055	1.0006 ± 0.0024	$\langle d^2 \rangle^{1/2}$	2.4415	2.438 ± 0.020	$D_M(0.61)$	2293.7	2300^{+10}_{-12}
$\boldsymbol{A_{217}^{CIB}}$	46.5	47 ± 7	z_{re}	7.55	7.75 ± 0.73	$H(2.33)$	235.97	236.10 ± 0.59
$\boldsymbol{\xi^{tSZ \times CIB}}$	0.50	—	$10^9 A_s$	2.0937	2.101 ± 0.030	$D_M(2.33)$	5747.0	$5754.3^{+9.9}_{-12}$
$\boldsymbol{A_{143}^{tSZ}}$	7.23	$5.5^{+2.2}_{-1.9}$	$10^9 A_s e^{-2\tau}$	1.8820	1.881 ± 0.010	$f\sigma_8(0.15)$	0.4591	0.4573 ± 0.0056
$\boldsymbol{A_{100}^{PS}}$	248.9	258 ± 28	D_{40}	1226.5	1229 ± 11	$\sigma_8(0.15)$	0.7599	$0.7524^{+0.0098}_{-0.0064}$
$\boldsymbol{A_{143}^{PS}}$	48.1	45 ± 8	D_{220}	5732.7	5738 ± 38	$f\sigma_8(0.38)$	0.4787	0.4762 ± 0.0051
$\boldsymbol{A_{143\times217}^{PS}}$	49.2	42 ± 9	D_{810}	2540.3	2539 ± 13	$\sigma_8(0.38)$	0.6740	$0.6672^{+0.0089}_{-0.0057}$
$\boldsymbol{A_{217}^{PS}}$	120.4	115 ± 10	D_{1420}	818.33	817.6 ± 4.7	$f\sigma_8(0.51)$	0.47786	$0.4751^{+0.0050}_{-0.0044}$
$\boldsymbol{A^{kSZ}}$	0.00	< 4.13	D_{2000}	231.42	231.1 ± 1.5	$\sigma_8(0.51)$	0.6309	$0.6244^{+0.0084}_{-0.0053}$
$\boldsymbol{A_{100}^{dustTT}}$	8.86	8.9 ± 1.8	$n_{s,0.002}$	0.96721	0.9666 ± 0.0037	$f\sigma_8(0.61)$	0.47320	$0.4702^{+0.0049}_{-0.0042}$
$\boldsymbol{A_{143}^{dustTT}}$	11.04	10.9 ± 1.8	Y_P	0.245414	$0.245414^{+0.000054}_{-0.000048}$	$\sigma_8(0.61)$	0.6004	$0.5942^{+0.0080}_{-0.0051}$
$\boldsymbol{A_{143\times217}^{dustTT}}$	20.04	18.6 ± 3.3	Y_P^{BBN}	0.246741	$0.246740^{+0.000054}_{-0.000048}$	$f\sigma_8(2.33)$	0.30197	$0.2995^{+0.0035}_{-0.0025}$
$\boldsymbol{A_{217}^{dustTT}}$	95.5	93.7 ± 7.4	10^5D/H	2.5767	2.576 ± 0.025	$\sigma_8(2.33)$	0.31200	$0.3090^{+0.0042}_{-0.0027}$
$\boldsymbol{A_{100}^{dustTE}}$	0.1140	0.114 ± 0.038	Age/Gyr	13.7599	$13.777^{+0.023}_{-0.028}$	f_{2000}^{143}	28.58	29.3 ± 2.7
$\boldsymbol{A_{100\times143}^{dustTE}}$	0.1347	0.135 ± 0.030	z_*	1089.812	1089.79 ± 0.22	$f_{2000}^{143\times217}$	31.85	32.0 ± 1.9
$\boldsymbol{A_{100\times217}^{dustTE}}$	0.481	0.481 ± 0.085	r_*	144.527	144.57 ± 0.22	f_{2000}^{217}	106.44	106.8 ± 1.8
$\boldsymbol{A_{143}^{dustTE}}$	0.225	0.225 ± 0.053	$100\theta_*$	1.041148	1.04117 ± 0.00029	$\chi^2_{lensing}$	8.966	9.24 ± 0.63
$\boldsymbol{A_{143\times217}^{dustTE}}$	0.664	0.664 ± 0.080	$D_M(z_*)$/Gpc	13.8815	13.885 ± 0.021	χ^2_{small}	395.88	397.1 ± 1.8
$\boldsymbol{A_{217}^{dustTE}}$	2.079	2.08 ± 0.27	z_{drag}	1060.009	1060.00 ± 0.29	χ^2_{lowl}	23.09	23.25 ± 0.79
$\boldsymbol{c_{100}}$	0.99973	0.99967 ± 0.00062	r_{drag}	147.173	147.22 ± 0.23	χ^2_{plik}	2344.2	2359.3 ± 5.8
$\boldsymbol{c_{217}}$	0.99818	0.99818 ± 0.00062	k_D	0.140811	0.14077 ± 0.00028	χ^2_{6DF}	0.0030	0.046 ± 0.065
H_0	68.098	$67.83^{+0.53}_{-0.46}$	$100\theta_D$	0.160723	0.16073 ± 0.00017	χ^2_{MGS}	1.540	1.39 ± 0.46
Ω_Λ	0.6939	$0.6907^{+0.0068}_{-0.0059}$	z_{eq}	3391.8	3388 ± 21	$\chi^2_{DR12BAO}$	3.71	4.6 ± 1.4
Ω_m	0.3061	$0.3093^{+0.0059}_{-0.0068}$	k_{eq}	0.010352	0.010339 ± 0.000065	χ^2_{prior}	1.71	11.6 ± 4.5
$\Omega_m h^2$	0.14194	0.14226 ± 0.00094	$100\theta_{eq}$	0.81530	0.8161 ± 0.0040	χ^2_{CMB}	2772.2	2788.9 ± 5.9
$\Omega_\nu h^2$	0.0000097	< 0.000622	$100\theta_{s,eq}$	0.45039	0.4508 ± 0.0020	χ^2_{BAO}	5.252	6.0 ± 1.1

Best-fit $\chi^2_{eff} = 2779.13$; $\Delta\chi^2_{eff} = -1.56$; $\bar{\chi}^2_{eff} = 2806.44$; $\Delta\bar{\chi}^2_{eff} = -0.40$; $R - 1 = 0.01008$

χ^2_{eff}: BAO - 6DF: 0.00 (Δ -0.03) MGS: 1.54 (Δ 0.32) DR12BAO: 3.71 (Δ -0.71) CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.97 (Δ 0.24) simall_100x143_offlike5_EE_Aplanck 395.88 (Δ -0.64) commander_dx12_v3_2_29: 23.09 (Δ 0.19) plik_rd12_HM_v22b_TTTEEE: 2344.24 (Δ -1.08)

6.60 base_mnu_plikHM_TTTEEE_lowl_lowE_lensing_BAO_post_Pantheon

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02243 ± 0.00013	σ_8	$0.8145^{+0.0098}_{-0.0069}$	$H(0.38)$	$83.22^{+0.33}_{-0.29}$
$\boldsymbol{\Omega_c h^2}$	0.11924 ± 0.00091	S_8	0.826 ± 0.011	$D_{\rm M}(0.38)$	$1524.1^{+7.6}_{-8.6}$
$\boldsymbol{100\theta_{MC}}$	1.04102 ± 0.00030	$\sigma_8\Omega_{\rm m}^{0.5}$	0.4523 ± 0.0058	$H(0.51)$	$89.91^{+0.27}_{-0.24}$
$\boldsymbol{\tau}$	0.0555 ± 0.0073	$\sigma_8\Omega_{\rm m}^{0.25}$	$0.6069^{+0.0068}_{-0.0061}$	$D_{\rm M}(0.51)$	$1974.9^{+9.0}_{-10}$
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 0.0536	$\sigma_8/h^{0.5}$	$0.988^{+0.011}_{-0.0091}$	$H(0.61)$	$95.51^{+0.23}_{-0.20}$
$\boldsymbol{\ln(10^{10}A_s)}$	3.045 ± 0.014	$r_{\rm drag}h$	99.97 ± 0.78	$D_{\rm M}(0.61)$	$2298.4^{+9.8}_{-11}$
$\boldsymbol{n_s}$	0.9668 ± 0.0036	$\langle d^2\rangle^{1/2}$	2.438 ± 0.020	$H(2.33)$	236.03 ± 0.56
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0025	$z_{\rm re}$	7.76 ± 0.73	$D_{\rm M}(2.33)$	$5752.8^{+9.7}_{-11}$
$\boldsymbol{A^{CIB}_{217}}$	47 ± 7	$10^9 A_{\rm s}$	2.101 ± 0.030	$f\sigma_8(0.15)$	0.4570 ± 0.0055
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$10^9 A_{\rm s}e^{-2\tau}$	1.880 ± 0.010	$\sigma_8(0.15)$	$0.7529^{+0.0092}_{-0.0063}$
$\boldsymbol{A^{tSZ}_{143}}$	$5.5^{+2.1}_{-1.9}$	D_{40}	1228 ± 11	$f\sigma_8(0.38)$	0.4761 ± 0.0050
$\boldsymbol{A^{PS}_{100}}$	257 ± 28	D_{220}	5739 ± 38	$\sigma_8(0.38)$	$0.6677^{+0.0084}_{-0.0056}$
$\boldsymbol{A^{PS}_{143}}$	45 ± 8	D_{810}	2539 ± 13	$f\sigma_8(0.51)$	0.4750 ± 0.0048
$\boldsymbol{A^{PS}_{143\times217}}$	42 ± 9	D_{1420}	817.7 ± 4.7	$\sigma_8(0.51)$	$0.6250^{+0.0079}_{-0.0053}$
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	D_{2000}	231.1 ± 1.5	$f\sigma_8(0.61)$	$0.4702^{+0.0047}_{-0.0042}$
$\boldsymbol{A^{kSZ}}$	< 4.06	$n_{\rm s,0.002}$	0.9668 ± 0.0036	$\sigma_8(0.61)$	$0.5948^{+0.0076}_{-0.0050}$
$\boldsymbol{A^{dustTT}_{100}}$	8.9 ± 1.8	$Y_{\rm P}$	$0.245417^{+0.000053}_{-0.000048}$	$f\sigma_8(2.33)$	$0.2998^{+0.0033}_{-0.0025}$
$\boldsymbol{A^{dustTT}_{143}}$	10.9 ± 1.8	$Y_{\rm P}^{\rm BBN}$	$0.246743^{+0.000053}_{-0.000048}$	$\sigma_8(2.33)$	$0.3093^{+0.0039}_{-0.0027}$
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.6 ± 3.3	10^5D/H	2.575 ± 0.024	f^{143}_{2000}	29.2 ± 2.7
$\boldsymbol{A^{dustTT}_{217}}$	93.7 ± 7.5	Age/Gyr	$13.774^{+0.022}_{-0.026}$	$f^{143\times217}_{2000}$	31.9 ± 1.9
$\boldsymbol{A^{dustTE}_{100}}$	0.115 ± 0.039	z_*	1089.78 ± 0.21	f^{217}_{2000}	106.8 ± 1.8
$\boldsymbol{A^{dustTE}_{100\times143}}$	0.135 ± 0.029	r_*	144.59 ± 0.22	$\chi^2_{\rm lensing}$	9.22 ± 0.62
$\boldsymbol{A^{dustTE}_{100\times217}}$	0.483 ± 0.086	$100\theta_*$	1.04119 ± 0.00029	$\chi^2_{\rm simall}$	397.1 ± 1.9
$\boldsymbol{A^{dustTE}_{143}}$	0.223 ± 0.054	$D_{\rm M}(z_*)$/Gpc	13.887 ± 0.021	$\chi^2_{\rm lowl}$	23.22 ± 0.77
$\boldsymbol{A^{dustTE}_{143\times217}}$	0.663 ± 0.081	$z_{\rm drag}$	1060.02 ± 0.29	$\chi^2_{\rm plik}$	2359.2 ± 5.8
$\boldsymbol{A^{dustTE}_{217}}$	2.08 ± 0.27	$r_{\rm drag}$	147.23 ± 0.23	$\chi^2_{\rm JLA}$	1036.26 ± 0.29
$\boldsymbol{c_{100}}$	0.99966 ± 0.00062	$k_{\rm D}$	0.14076 ± 0.00028	$\chi^2_{\rm 6DF}$	0.037 ± 0.053
$\boldsymbol{c_{217}}$	0.99818 ± 0.00061	$100\theta_{\rm D}$	0.16072 ± 0.00017	$\chi^2_{\rm MGS}$	1.45 ± 0.44
H_0	$67.90^{+0.49}_{-0.45}$	$z_{\rm eq}$	3385 ± 21	$\chi^2_{\rm DR12BAO}$	4.4 ± 1.2
Ω_Λ	$0.6916^{+0.0064}_{-0.0057}$	$k_{\rm eq}$	0.010333 ± 0.000063	$\chi^2_{\rm prior}$	11.6 ± 4.6
$\Omega_{\rm m}$	$0.3084^{+0.0057}_{-0.0064}$	$100\theta_{\rm eq}$	0.8165 ± 0.0039	$\chi^2_{\rm CMB}$	2788.7 ± 5.9
$\Omega_{\rm m}h^2$	0.14214 ± 0.00089	$100\theta_{\rm s,eq}$	0.4510 ± 0.0020	$\chi^2_{\rm BAO}$	5.85 ± 0.91
$\Omega_\nu h^2$	< 0.000576	$H(0.15)$	$73.15^{+0.43}_{-0.39}$		
$\Omega_{\rm m}h^3$	$0.09651^{+0.00036}_{-0.00030}$	$D_{\rm M}(0.15)$	$638.8^{+3.8}_{-4.2}$		

$\bar{\chi}^2_{\rm eff} = 3842.47$; $\Delta\bar{\chi}^2_{\rm eff} = -0.67$; $R - 1 = 0.01315$

6.61 base_mnu_plikHM_TTTEEE_lowl_lowE_lensing_BAO_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02242 ± 0.00013	$\Omega_m h^3$	$0.09648^{+0.00037}_{-0.00031}$	$H(0.15)$	$73.09^{+0.46}_{-0.40}$
$\boldsymbol{\Omega_c h^2}$	0.11931 ± 0.00092	σ_8	$0.814^{+0.010}_{-0.0067}$	$D_M(0.15)$	$639.3^{+3.9}_{-4.6}$
$\boldsymbol{100\theta_{MC}}$	1.04100 ± 0.00029	S_8	0.827 ± 0.011	$H(0.38)$	$83.18^{+0.35}_{-0.30}$
$\boldsymbol{\tau}$	$0.0561^{+0.0056}_{-0.0076}$	$\sigma_8\Omega_m^{0.5}$	0.4528 ± 0.0059	$D_M(0.38)$	$1525.3^{+7.9}_{-9.3}$
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 0.0584	$\sigma_8\Omega_m^{0.25}$	$0.6072^{+0.0070}_{-0.0061}$	$H(0.51)$	$89.88^{+0.29}_{-0.25}$
$\boldsymbol{\ln(10^{10} A_s)}$	$3.046^{+0.012}_{-0.015}$	$\sigma_8/h^{0.5}$	$0.989^{+0.011}_{-0.0091}$	$D_M(0.51)$	$1976.2^{+9.3}_{-11}$
$\boldsymbol{n_s}$	0.9667 ± 0.0037	$r_{drag}h$	99.87 ± 0.83	$H(0.61)$	$95.48^{+0.25}_{-0.21}$
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0024	$\langle d^2\rangle^{1/2}$	2.439 ± 0.020	$D_M(0.61)$	2300^{+10}_{-12}
$\boldsymbol{A_{217}^{CIB}}$	47 ± 7	z_{re}	$7.82^{+0.60}_{-0.74}$	$H(2.33)$	236.09 ± 0.58
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$10^9 A_s$	$2.104^{+0.024}_{-0.031}$	$D_M(2.33)$	5754^{+10}_{-12}
$\boldsymbol{A_{143}^{tSZ}}$	$5.5^{+2.2}_{-1.9}$	$10^9 A_s e^{-2\tau}$	1.881 ± 0.010	$f\sigma_8(0.15)$	0.4575 ± 0.0055
$\boldsymbol{A_{100}^{PS}}$	258 ± 28	D_{40}	1229 ± 11	$\sigma_8(0.15)$	$0.7527^{+0.0097}_{-0.0061}$
$\boldsymbol{A_{143}^{PS}}$	45 ± 8	D_{220}	5737 ± 38	$f\sigma_8(0.38)$	0.4764 ± 0.0050
$\boldsymbol{A_{143\times217}^{PS}}$	42 ± 9	D_{810}	2539 ± 13	$\sigma_8(0.38)$	$0.6675^{+0.0088}_{-0.0054}$
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	D_{1420}	817.6 ± 4.7	$f\sigma_8(0.51)$	$0.4753^{+0.0049}_{-0.0044}$
$\boldsymbol{A^{kSZ}}$	< 4.12	D_{2000}	231.1 ± 1.5	$\sigma_8(0.51)$	$0.6247^{+0.0083}_{-0.0051}$
$\boldsymbol{A_{100}^{dustTT}}$	8.9 ± 1.8	$n_{s,0.002}$	0.9667 ± 0.0037	$f\sigma_8(0.61)$	$0.4704^{+0.0048}_{-0.0041}$
$\boldsymbol{A_{143}^{dustTT}}$	10.9 ± 1.8	Y_P	$0.245414^{+0.000054}_{-0.000048}$	$\sigma_8(0.61)$	$0.5945^{+0.0080}_{-0.0049}$
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.6 ± 3.3	Y_P^{BBN}	$0.246741^{+0.000054}_{-0.000048}$	$f\sigma_8(2.33)$	$0.2997^{+0.0035}_{-0.0024}$
$\boldsymbol{A_{217}^{dustTT}}$	93.7 ± 7.4	10^5D/H	2.576 ± 0.025	$\sigma_8(2.33)$	$0.3091^{+0.0041}_{-0.0026}$
$\boldsymbol{A_{100}^{dustTE}}$	0.114 ± 0.038	Age/Gyr	$13.777^{+0.023}_{-0.028}$	f_{2000}^{143}	29.3 ± 2.7
$\boldsymbol{A_{100\times143}^{dustTE}}$	0.135 ± 0.030	z_*	1089.79 ± 0.21	$f_{2000}^{143\times217}$	32.0 ± 1.8
$\boldsymbol{A_{100\times217}^{dustTE}}$	0.481 ± 0.085	r_*	144.57 ± 0.22	f_{2000}^{217}	106.8 ± 1.8
$\boldsymbol{A_{143}^{dustTE}}$	0.224 ± 0.053	$100\theta_*$	1.04118 ± 0.00029	$\chi^2_{lensing}$	9.22 ± 0.62
$\boldsymbol{A_{143\times217}^{dustTE}}$	0.664 ± 0.080	$D_M(z_*)$/Gpc	13.886 ± 0.021	χ^2_{simall}	397.1 ± 1.9
$\boldsymbol{A_{217}^{dustTE}}$	2.08 ± 0.27	z_{drag}	1060.01 ± 0.29	χ^2_{lowl}	23.25 ± 0.79
$\boldsymbol{c_{100}}$	0.99966 ± 0.00062	r_{drag}	147.22 ± 0.23	χ^2_{plik}	2359.1 ± 5.8
$\boldsymbol{c_{217}}$	0.99818 ± 0.00062	k_D	0.14077 ± 0.00028	χ^2_{6DF}	0.045 ± 0.063
H_0	$67.83^{+0.53}_{-0.46}$	$100\theta_D$	0.16072 ± 0.00017	χ^2_{MGS}	1.39 ± 0.46
Ω_Λ	$0.6908^{+0.0068}_{-0.0059}$	z_{eq}	3387 ± 21	$\chi^2_{DR12BAO}$	4.5 ± 1.4
Ω_m	$0.3092^{+0.0059}_{-0.0068}$	k_{eq}	0.010337 ± 0.000064	χ^2_{prior}	11.6 ± 4.5
$\Omega_m h^2$	0.14224 ± 0.00093	$100\theta_{eq}$	0.8162 ± 0.0039	χ^2_{CMB}	2788.7 ± 5.9
$\Omega_\nu h^2$	< 0.000628	$100\theta_{s,eq}$	0.4509 ± 0.0020	χ^2_{BAO}	6.0 ± 1.1

$\bar{\chi}^2_{eff} = 2806.28$; $\Delta\bar{\chi}^2_{eff} = -0.44$; $R - 1 = 0.01177$

6.62 base_mnu_plikHM_TTTEEE_lowl_lowE_lensing_BAO_post_Pantheon_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02243 ± 0.00013	σ_8	$0.8149^{+0.0097}_{-0.0066}$	$H(0.38)$	$83.22^{+0.33}_{-0.29}$
$\boldsymbol{\Omega_c h^2}$	0.11921 ± 0.00090	S_8	0.826 ± 0.011	$D_M(0.38)$	$1524.0^{+7.6}_{-8.6}$
$\boldsymbol{100\theta_{MC}}$	1.04102 ± 0.00029	$\sigma_8\Omega_m^{0.5}$	0.4524 ± 0.0058	$H(0.51)$	$89.91^{+0.27}_{-0.24}$
$\boldsymbol{\tau}$	$0.0562^{+0.0057}_{-0.0076}$	$\sigma_8\Omega_m^{0.25}$	$0.6071^{+0.0068}_{-0.0060}$	$D_M(0.51)$	$1974.7^{+9.0}_{-10}$
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 0.0542	$\sigma_8/h^{0.5}$	$0.989^{+0.011}_{-0.0090}$	$H(0.61)$	$95.51^{+0.23}_{-0.20}$
$\boldsymbol{\ln(10^{10} A_s)}$	$3.046^{+0.012}_{-0.015}$	$r_{drag}h$	99.98 ± 0.78	$D_M(0.61)$	$2298.3^{+9.8}_{-11}$
$\boldsymbol{n_s}$	0.9669 ± 0.0036	$\langle d^2\rangle^{1/2}$	2.439 ± 0.020	$H(2.33)$	236.01 ± 0.56
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0025	z_{re}	$7.83^{+0.61}_{-0.75}$	$D_M(2.33)$	$5752.8^{+9.7}_{-11}$
$\boldsymbol{A_{217}^{CIB}}$	47 ± 7	$10^9 A_s$	$2.104^{+0.025}_{-0.031}$	$f\sigma_8(0.15)$	0.4571 ± 0.0054
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$10^9 A_s e^{-2\tau}$	1.880 ± 0.010	$\sigma_8(0.15)$	$0.7533^{+0.0092}_{-0.0060}$
$\boldsymbol{A_{143}^{tSZ}}$	$5.5^{+2.1}_{-1.9}$	D_{40}	1228 ± 11	$f\sigma_8(0.38)$	0.4762 ± 0.0049
$\boldsymbol{A_{100}^{PS}}$	257 ± 28	D_{220}	5738 ± 38	$\sigma_8(0.38)$	$0.6680^{+0.0083}_{-0.0053}$
$\boldsymbol{A_{143}^{PS}}$	45 ± 8	D_{810}	2539 ± 13	$f\sigma_8(0.51)$	0.4752 ± 0.0047
$\boldsymbol{A_{143\times217}^{PS}}$	42 ± 9	D_{1420}	817.7 ± 4.7	$\sigma_8(0.51)$	$0.6253^{+0.0078}_{-0.0050}$
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	D_{2000}	231.2 ± 1.5	$f\sigma_8(0.61)$	$0.4704^{+0.0047}_{-0.0041}$
$\boldsymbol{A^{kSZ}}$	< 4.05	$n_{s,0.002}$	0.9669 ± 0.0036	$\sigma_8(0.61)$	$0.5951^{+0.0075}_{-0.0048}$
$\boldsymbol{A_{100}^{dustTT}}$	8.9 ± 1.8	Y_P	$0.245417^{+0.000053}_{-0.000047}$	$f\sigma_8(2.33)$	$0.2999^{+0.0033}_{-0.0023}$
$\boldsymbol{A_{143}^{dustTT}}$	10.9 ± 1.8	Y_P^{BBN}	$0.246744^{+0.000053}_{-0.000048}$	$\sigma_8(2.33)$	$0.3095^{+0.0038}_{-0.0026}$
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.6 ± 3.3	10^5D/H	2.575 ± 0.024	f_{2000}^{143}	29.2 ± 2.7
$\boldsymbol{A_{217}^{dustTT}}$	93.7 ± 7.5	Age/Gyr	$13.774^{+0.022}_{-0.026}$	$f_{2000}^{143\times217}$	31.9 ± 1.9
$\boldsymbol{A_{100}^{dustTE}}$	0.115 ± 0.039	z_*	1089.77 ± 0.21	f_{2000}^{217}	106.8 ± 1.8
$\boldsymbol{A_{100\times143}^{dustTE}}$	0.135 ± 0.029	r_*	144.59 ± 0.21	$\chi^2_{lensing}$	9.20 ± 0.60
$\boldsymbol{A_{100\times217}^{dustTE}}$	0.483 ± 0.086	$100\theta_*$	1.04119 ± 0.00029	χ^2_{simall}	397.1 ± 1.9
$\boldsymbol{A_{143}^{dustTE}}$	0.223 ± 0.054	$D_M(z_*)$/Gpc	13.887 ± 0.021	χ^2_{lowl}	23.22 ± 0.77
$\boldsymbol{A_{143\times217}^{dustTE}}$	0.663 ± 0.081	z_{drag}	1060.02 ± 0.29	χ^2_{plik}	2359.0 ± 5.8
$\boldsymbol{A_{217}^{dustTE}}$	2.08 ± 0.27	r_{drag}	147.24 ± 0.23	χ^2_{JLA}	1036.26 ± 0.29
$\boldsymbol{c_{100}}$	0.99966 ± 0.00062	k_D	0.14076 ± 0.00028	χ^2_{6DF}	0.036 ± 0.052
$\boldsymbol{c_{217}}$	0.99818 ± 0.00061	$100\theta_D$	0.16072 ± 0.00017	χ^2_{MGS}	1.46 ± 0.44
H_0	$67.91^{+0.49}_{-0.45}$	z_{eq}	3385 ± 20	$\chi^2_{DR12BAO}$	4.3 ± 1.2
Ω_Λ	$0.6917^{+0.0063}_{-0.0057}$	k_{eq}	0.010331 ± 0.000062	χ^2_{prior}	11.6 ± 4.6
Ω_m	$0.3083^{+0.0057}_{-0.0063}$	$100\theta_{eq}$	0.8166 ± 0.0038	χ^2_{CMB}	2788.6 ± 5.9
$\Omega_m h^2$	0.14212 ± 0.00089	$100\theta_{s,eq}$	0.4511 ± 0.0020	χ^2_{BAO}	5.84 ± 0.90
$\Omega_\nu h^2$	< 0.000583	$H(0.15)$	$73.16^{+0.43}_{-0.39}$		
$\Omega_m h^3$	$0.09650^{+0.00036}_{-0.00030}$	$D_M(0.15)$	$638.7^{+3.7}_{-4.2}$		

$\bar{\chi}^2_{eff} = 3842.29$; $\Delta\bar{\chi}^2_{eff} = -0.73$; $R - 1 = 0.01558$

6.63 base_mnu_CamSpecHM_TTTEEE_lowl_lowE_lensing_BAO

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022335	0.02233 ± 0.00015	S_8	0.8275	0.824 ± 0.011	$D_M(0.15)$	637.07	$639.9^{+3.9}_{-4.9}$
$\boldsymbol{\Omega_c h^2}$	0.11925	0.11911 ± 0.00093	$\sigma_8 \Omega_m^{0.5}$	0.4532	0.4511 ± 0.0060	$H(0.38)$	83.331	$83.10^{+0.38}_{-0.30}$
$\boldsymbol{100\theta_{MC}}$	1.040934	1.04094 ± 0.00030	$\sigma_8 \Omega_m^{0.25}$	0.6097	$0.6049^{+0.0076}_{-0.0063}$	$D_M(0.38)$	1520.8	$1526.7^{+7.8}_{-9.9}$
$\boldsymbol{\tau}$	0.0533	0.0545 ± 0.0073	$\sigma_8/h^{0.5}$	0.9938	$0.985^{+0.012}_{-0.0094}$	$H(0.51)$	89.993	$89.80^{+0.32}_{-0.25}$
$\boldsymbol{\Sigma m_\nu}$ [eV]	0.0037	< 0.0637	$r_{drag} h$	100.33	$99.88^{+0.89}_{-0.77}$	$D_M(0.51)$	1971.1	$1978.0^{+9.3}_{-12}$
$\boldsymbol{\ln(10^{10} A_s)}$	3.0391	3.041 ± 0.014	$\langle d^2 \rangle^{1/2}$	2.4368	2.431 ± 0.021	$H(0.61)$	95.569	$95.40^{+0.28}_{-0.21}$
$\boldsymbol{n_s}$	0.96708	0.9670 ± 0.0038	z_{re}	7.56	7.67 ± 0.74	$D_M(0.61)$	2294.4	2302^{+10}_{-13}
$\boldsymbol{y_{cal}}$	1.00049	1.0006 ± 0.0025	$10^9 A_s$	2.0887	2.094 ± 0.030	$H(2.33)$	235.71	235.88 ± 0.59
$\boldsymbol{A^{PS}_{100}}$	234.6	239 ± 25	$10^9 A_s e^{-2\tau}$	1.8776	1.877 ± 0.010	$D_M(2.33)$	5750.8	5759^{+10}_{-14}
$\boldsymbol{A^{PS}_{143}}$	41.4	39 ± 8	D_{40}	1224.1	1225 ± 11	$f\sigma_8(0.15)$	0.4576	0.4558 ± 0.0056
$\boldsymbol{A^{PS}_{217}}$	103.7	103 ± 10	D_{220}	5719.8	5724 ± 38	$\sigma_8(0.15)$	0.7583	$0.750^{+0.011}_{-0.0066}$
$\boldsymbol{A^{CIB}_{217}}$	42.1	39 ± 7	D_{810}	2535.1	2535 ± 13	$f\sigma_8(0.38)$	0.4774	$0.4746^{+0.0055}_{-0.0049}$
$\boldsymbol{A^{tSZ}_{143}}$	5.60	$3.9^{+1.9}_{-2.5}$	D_{1420}	816.11	816.2 ± 4.8	$\sigma_8(0.38)$	0.6727	$0.6649^{+0.0098}_{-0.0058}$
$\boldsymbol{r^{PS}_{143\times217}}$	0.641	0.66 ± 0.13	D_{2000}	230.55	230.5 ± 1.6	$f\sigma_8(0.51)$	0.47660	$0.4735^{+0.0054}_{-0.0045}$
$\boldsymbol{r^{CIB}_{143\times217}}$	0.743	$0.56^{+0.40}_{-0.17}$	$n_{s,0.002}$	0.96708	0.9670 ± 0.0038	$\sigma_8(0.51)$	0.6297	$0.6223^{+0.0093}_{-0.0055}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.33	—	Y_P	0.245382	$0.245379^{+0.000061}_{-0.000055}$	$f\sigma_8(0.61)$	0.47202	$0.4687^{+0.0054}_{-0.0043}$
$\boldsymbol{A^{kSZ}}$	1.47	$4.7^{+2.1}_{-4.0}$	Y_P^{BBN}	0.246708	$0.246705^{+0.000061}_{-0.000056}$	$\sigma_8(0.61)$	0.5993	$0.5922^{+0.0089}_{-0.0053}$
$\boldsymbol{A^{dust}_{100}}$	1.010	1.01 ± 0.19	10^5D/H	2.5920	2.593 ± 0.027	$f\sigma_8(2.33)$	0.30146	$0.2986^{+0.0039}_{-0.0025}$
$\boldsymbol{A^{dust}_{143}}$	0.987	0.96 ± 0.17	Age/Gyr	13.7691	$13.789^{+0.024}_{-0.031}$	$\sigma_8(2.33)$	0.31150	$0.3080^{+0.0046}_{-0.0028}$
$\boldsymbol{A^{dust}_{217}}$	0.968	0.98 ± 0.10	z_*	1089.892	1089.89 ± 0.22	f^{143}_{2000}	29.64	29.5 ± 2.8
$\boldsymbol{A^{dust}_{143\times217}}$	0.995	1.03 ± 0.16	r_*	144.659	144.70 ± 0.23	f^{217}_{2000}	106.61	106.7 ± 1.9
$\boldsymbol{c_{100}}$	0.99756	0.9976 ± 0.0011	$100\theta_*$	1.041097	1.04112 ± 0.00030	$f^{143\times217}_{2000}$	31.88	31.9 ± 2.0
$\boldsymbol{c_{217}}$	1.00108	1.0011 ± 0.0016	$D_M(z_*)$/Gpc	13.8949	13.898 ± 0.022	$\chi^2_{lensing}$	8.890	9.39 ± 0.79
$\boldsymbol{c_{TE}}$	0.99650	0.9966 ± 0.0049	z_{drag}	1059.780	1059.78 ± 0.32	χ^2_{simall}	395.87	397.0 ± 1.6
$\boldsymbol{c_{EE}}$	0.99208	0.9924 ± 0.0049	r_{drag}	147.338	147.37 ± 0.24	χ^2_{lowl}	22.96	23.02 ± 0.79
H_0	68.10	$67.77^{+0.56}_{-0.46}$	k_D	0.140577	0.14054 ± 0.00031	$\chi^2_{CamSpec}$	11499.2	11514.0 ± 5.5
Ω_Λ	0.6946	$0.6907^{+0.0071}_{-0.0058}$	$100\theta_D$	0.160835	0.16085 ± 0.00019	χ^2_{6DF}	0.0010	0.045 ± 0.065
Ω_m	0.3054	$0.3093^{+0.0058}_{-0.0071}$	z_{eq}	3383.4	3380 ± 21	χ^2_{MGS}	1.608	1.40 ± 0.47
$\Omega_m h^2$	0.14162	0.14200 ± 0.00094	k_{eq}	0.010326	0.010316 ± 0.000065	$\chi^2_{DR12BAO}$	3.60	4.5 ± 1.4
$\Omega_\nu h^2$	0.000040	< 0.000685	$100\theta_{eq}$	0.81653	0.8172 ± 0.0040	χ^2_{prior}	2.14	7.7 ± 3.4
$\Omega_m h^3$	0.096442	$0.09623^{+0.00040}_{-0.00035}$	$100\theta_{s,eq}$	0.45110	0.4514 ± 0.0020	χ^2_{CMB}	11926.9	11943.4 ± 5.8
σ_8	0.8201	$0.811^{+0.011}_{-0.0071}$	$H(0.15)$	73.318	$73.03^{+0.49}_{-0.40}$	χ^2_{BAO}	5.209	6.0 ± 1.1

Best-fit $\chi^2_{eff} = 11934.26$; $\bar{\chi}^2_{eff} = 11957.14$; $\Delta\bar{\chi}^2_{eff} = -0.26$; $R - 1 = 0.00745$

χ^2_{eff}: BAO - 6DF: 0.00 MGS: 1.61 DR12BAO: 3.60 CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.89 simall_100x143_offlike5_EE_Aplanck_B: 395.87 commander_dx12_v3_2_29: 22.96 CamSpec like_10.7HM_1400_unified: 11499.19

6.64 base_mnu_CamSpecHM_TTTEEE_lowl_lowE_lensing_BAO_post_Pantheon

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02234 ± 0.00014	$\sigma_8\Omega_m^{0.5}$	0.4507 ± 0.0059	$D_M(0.38)$	$1525.4^{+7.6}_{-9.1}$
$\boldsymbol{\Omega_c h^2}$	0.11901 ± 0.00091	$\sigma_8\Omega_m^{0.25}$	$0.6049^{+0.0074}_{-0.0062}$	$H(0.51)$	$89.84^{+0.30}_{-0.24}$
$\boldsymbol{100\theta_{MC}}$	1.04095 ± 0.00030	$\sigma_8/h^{0.5}$	$0.986^{+0.012}_{-0.0092}$	$D_M(0.51)$	$1976.5^{+8.9}_{-11}$
$\boldsymbol{\tau}$	0.0546 ± 0.0073	$r_{drag}h$	$99.998^{+0.82}_{-0.74}$	$H(0.61)$	$95.43^{+0.26}_{-0.21}$
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 0.0590	$\langle d^2\rangle^{1/2}$	2.430 ± 0.021	$D_M(0.61)$	$2300.4^{+9.7}_{-12}$
$\boldsymbol{\ln(10^{10}A_s)}$	3.042 ± 0.014	z_{re}	7.69 ± 0.74	$H(2.33)$	235.81 ± 0.57
$\boldsymbol{n_s}$	0.9672 ± 0.0037	$10^9 A_s$	2.094 ± 0.030	$D_M(2.33)$	5758^{+10}_{-13}
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.877 ± 0.010	$f\sigma_8(0.15)$	0.4554 ± 0.0055
$\boldsymbol{A_{100}^{PS}}$	239 ± 25	D_{40}	1225 ± 11	$\sigma_8(0.15)$	$0.750^{+0.010}_{-0.0064}$
$\boldsymbol{A_{143}^{PS}}$	39 ± 8	D_{220}	5724 ± 39	$f\sigma_8(0.38)$	$0.4745^{+0.0054}_{-0.0048}$
$\boldsymbol{A_{217}^{PS}}$	103 ± 10	D_{810}	2536 ± 13	$\sigma_8(0.38)$	$0.6655^{+0.0093}_{-0.0057}$
$\boldsymbol{A_{217}^{CIB}}$	39 ± 7	D_{1420}	816.3 ± 4.8	$f\sigma_8(0.51)$	$0.4735^{+0.0053}_{-0.0044}$
$\boldsymbol{A_{143}^{tSZ}}$	$3.9^{+1.8}_{-2.6}$	D_{2000}	230.5 ± 1.6	$\sigma_8(0.51)$	$0.6230^{+0.0088}_{-0.0054}$
$\boldsymbol{r_{143\times217}^{PS}}$	0.66 ± 0.13	$n_{s,0.002}$	0.9672 ± 0.0037	$f\sigma_8(0.61)$	$0.4687^{+0.0052}_{-0.0042}$
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.56^{+0.41}_{-0.16}$	Y_P	$0.245382^{+0.000061}_{-0.000054}$	$\sigma_8(0.61)$	$0.5928^{+0.0084}_{-0.0051}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	$0.246708^{+0.000062}_{-0.000054}$	$f\sigma_8(2.33)$	$0.2989^{+0.0037}_{-0.0025}$
$\boldsymbol{A^{kSZ}}$	$4.6^{+1.9}_{-4.2}$	10^5D/H	2.592 ± 0.027	$\sigma_8(2.33)$	$0.3083^{+0.0043}_{-0.0027}$
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.19	Age/Gyr	$13.786^{+0.023}_{-0.029}$	f_{2000}^{143}	29.4 ± 2.8
$\boldsymbol{A_{143}^{dust}}$	0.96 ± 0.17	z_*	1089.87 ± 0.22	f_{2000}^{217}	106.7 ± 1.9
$\boldsymbol{A_{217}^{dust}}$	0.98 ± 0.10	r_*	144.71 ± 0.22	$f_{2000}^{143\times217}$	31.9 ± 2.0
$\boldsymbol{A_{143\times217}^{dust}}$	1.03 ± 0.16	$100\theta_*$	1.04113 ± 0.00030	$\chi^2_{lensing}$	9.38 ± 0.78
$\boldsymbol{c_{100}}$	0.9976 ± 0.0011	$D_M(z_*)$/Gpc	13.900 ± 0.022	χ^2_{simall}	397.0 ± 1.7
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	z_{drag}	1059.79 ± 0.32	χ^2_{lowl}	22.99 ± 0.78
$\boldsymbol{c_{TE}}$	0.9965 ± 0.0049	r_{drag}	147.39 ± 0.24	$\chi^2_{CamSpec}$	11514.0 ± 5.5
$\boldsymbol{c_{EE}}$	0.9925 ± 0.0049	k_D	0.14053 ± 0.00031	χ^2_{JLA}	1036.26 ± 0.30
H_0	$67.85^{+0.52}_{-0.44}$	$100\theta_D$	0.16084 ± 0.00019	χ^2_{6DF}	0.037 ± 0.054
Ω_Λ	$0.6917^{+0.0066}_{-0.0056}$	z_{eq}	3378 ± 21	χ^2_{MGS}	1.47 ± 0.46
Ω_m	$0.3083^{+0.0056}_{-0.0066}$	k_{eq}	0.010310 ± 0.000063	$\chi^2_{DR12BAO}$	4.3 ± 1.2
$\Omega_m h^2$	0.14187 ± 0.00090	$100\theta_{eq}$	0.8176 ± 0.0039	χ^2_{prior}	7.7 ± 3.4
$\Omega_\nu h^2$	< 0.000634	$100\theta_{s,eq}$	0.4516 ± 0.0020	χ^2_{CMB}	11943.4 ± 5.7
$\Omega_m h^3$	$0.09625^{+0.00040}_{-0.00034}$	$H(0.15)$	$73.09^{+0.46}_{-0.38}$	χ^2_{BAO}	5.83 ± 0.93
σ_8	$0.812^{+0.011}_{-0.0070}$	$D_M(0.15)$	$639.3^{+3.7}_{-4.5}$		
S_8	0.823 ± 0.011	$H(0.38)$	$83.15^{+0.35}_{-0.29}$		

$\bar{\chi}^2_{eff} = 12993.20$; $\Delta\bar{\chi}^2_{eff} = -0.46$; $R - 1 = 0.00816$

6.65 base_mnu_CamSpecHM_TTTEEE_lowl_lowE_lensing_BAO_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02234 ± 0.00014	S_8	0.824 ± 0.011	$D_M(0.15)$	$639.8^{+3.8}_{-4.9}$
$\boldsymbol{\Omega_c h^2}$	0.11908 ± 0.00092	$\sigma_8\Omega_m^{0.5}$	0.4512 ± 0.0060	$H(0.38)$	$83.11^{+0.38}_{-0.30}$
$\boldsymbol{100\theta_{MC}}$	1.04094 ± 0.00030	$\sigma_8\Omega_m^{0.25}$	$0.6052^{+0.0075}_{-0.0062}$	$D_M(0.38)$	$1526.5^{+7.8}_{-9.9}$
$\boldsymbol{\tau}$	$0.0554^{+0.0053}_{-0.0076}$	$\sigma_8/h^{0.5}$	$0.986^{+0.012}_{-0.0092}$	$H(0.51)$	$89.80^{+0.32}_{-0.25}$
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 0.0644	$r_{drag}h$	$99.89^{+0.88}_{-0.76}$	$D_M(0.51)$	$1977.9^{+9.2}_{-12}$
$\boldsymbol{\ln(10^{10}A_s)}$	$3.043^{+0.011}_{-0.014}$	$\langle d^2\rangle^{1/2}$	2.433 ± 0.020	$H(0.61)$	$95.40^{+0.28}_{-0.21}$
$\boldsymbol{n_s}$	0.9671 ± 0.0037	z_{re}	$7.77^{+0.58}_{-0.75}$	$D_M(0.61)$	2302^{+10}_{-13}
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0025	$10^9 A_s$	$2.097^{+0.023}_{-0.031}$	$H(2.33)$	235.87 ± 0.59
$\boldsymbol{A_{100}^{PS}}$	239 ± 25	$10^9 A_s e^{-2\tau}$	1.877 ± 0.010	$D_M(2.33)$	5759^{+10}_{-14}
$\boldsymbol{A_{143}^{PS}}$	39 ± 8	D_{40}	1225 ± 11	$f\sigma_8(0.15)$	0.4560 ± 0.0056
$\boldsymbol{A_{217}^{PS}}$	103 ± 10	D_{220}	5723 ± 38	$\sigma_8(0.15)$	$0.750^{+0.011}_{-0.0064}$
$\boldsymbol{A_{217}^{CIB}}$	39 ± 7	D_{810}	2535 ± 13	$f\sigma_8(0.38)$	$0.4749^{+0.0053}_{-0.0048}$
$\boldsymbol{A_{143}^{tSZ}}$	$3.9^{+1.9}_{-2.5}$	D_{1420}	816.1 ± 4.8	$\sigma_8(0.38)$	$0.6653^{+0.0097}_{-0.0056}$
$\boldsymbol{r_{143\times217}^{PS}}$	0.66 ± 0.13	D_{2000}	230.5 ± 1.6	$f\sigma_8(0.51)$	$0.4737^{+0.0053}_{-0.0045}$
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.56^{+0.40}_{-0.17}$	$n_{s,0.002}$	0.9671 ± 0.0037	$\sigma_8(0.51)$	$0.6227^{+0.0092}_{-0.0053}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P	$0.245380^{+0.000061}_{-0.000055}$	$f\sigma_8(0.61)$	$0.4689^{+0.0053}_{-0.0042}$
$\boldsymbol{A^{kSZ}}$	$4.6^{+2.1}_{-4.1}$	Y_P^{BBN}	$0.246707^{+0.000061}_{-0.000055}$	$\sigma_8(0.61)$	$0.5926^{+0.0088}_{-0.0051}$
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.19	10^5D/H	2.592 ± 0.027	$f\sigma_8(2.33)$	$0.2988^{+0.0038}_{-0.0024}$
$\boldsymbol{A_{143}^{dust}}$	0.96 ± 0.17	Age/Gyr	$13.789^{+0.024}_{-0.031}$	$\sigma_8(2.33)$	$0.3082^{+0.0046}_{-0.0027}$
$\boldsymbol{A_{217}^{dust}}$	0.98 ± 0.10	z_*	1089.88 ± 0.22	f_{2000}^{143}	29.5 ± 2.8
$\boldsymbol{A_{143\times217}^{dust}}$	1.03 ± 0.16	r_*	144.70 ± 0.23	f_{2000}^{217}	106.7 ± 1.9
$\boldsymbol{c_{100}}$	0.9976 ± 0.0011	$100\theta_*$	1.04113 ± 0.00030	$f_{2000}^{143\times217}$	31.9 ± 2.0
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	$D_M(z_*)$/Gpc	13.898 ± 0.022	$\chi^2_{lensing}$	9.34 ± 0.72
$\boldsymbol{c_{TE}}$	0.9965 ± 0.0049	z_{drag}	1059.79 ± 0.32	χ^2_{simall}	396.9 ± 1.7
$\boldsymbol{c_{EE}}$	0.9924 ± 0.0049	r_{drag}	147.38 ± 0.24	χ^2_{lowl}	23.02 ± 0.78
H_0	$67.78^{+0.56}_{-0.46}$	k_D	0.14053 ± 0.00031	$\chi^2_{CamSpec}$	11513.9 ± 5.5
Ω_Λ	$0.6909^{+0.0071}_{-0.0058}$	$100\theta_D$	0.16084 ± 0.00019	χ^2_{6DF}	0.044 ± 0.064
Ω_m	$0.3091^{+0.0058}_{-0.0071}$	z_{eq}	3379 ± 21	χ^2_{MGS}	1.41 ± 0.47
$\Omega_m h^2$	0.14198 ± 0.00094	k_{eq}	0.010314 ± 0.000064	$\chi^2_{DR12BAO}$	4.5 ± 1.4
$\Omega_\nu h^2$	< 0.000692	$100\theta_{eq}$	0.8173 ± 0.0039	χ^2_{prior}	7.7 ± 3.4
$\Omega_m h^3$	$0.09623^{+0.00041}_{-0.00035}$	$100\theta_{s,eq}$	0.4515 ± 0.0020	χ^2_{CMB}	11943.2 ± 5.7
σ_8	$0.812^{+0.011}_{-0.0069}$	$H(0.15)$	$73.03^{+0.49}_{-0.40}$	χ^2_{BAO}	6.0 ± 1.1

$\bar{\chi}^2_{eff} = 11956.94$; $\Delta\bar{\chi}^2_{eff} = -0.31$; $R - 1 = 0.00819$

6.66 base_mnu_CamSpecHM_TTTEEE_lowl_lowE_lensing_BAO_post_Pantheon_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02234 ± 0.00014	$\sigma_8\Omega_m^{0.5}$	0.4509 ± 0.0059	$D_M(0.38)$	$1525.2^{+7.6}_{-9.1}$
$\boldsymbol{\Omega_c h^2}$	0.11899 ± 0.00090	$\sigma_8\Omega_m^{0.25}$	$0.6051^{+0.0073}_{-0.0061}$	$H(0.51)$	$89.84^{+0.30}_{-0.24}$
$\boldsymbol{100\theta_{MC}}$	1.04095 ± 0.00030	$\sigma_8/h^{0.5}$	$0.986^{+0.012}_{-0.0091}$	$D_M(0.51)$	$1976.3^{+8.9}_{-11}$
$\boldsymbol{\tau}$	$0.0555^{+0.0053}_{-0.0077}$	$r_{drag}h$	$100.01^{+0.82}_{-0.74}$	$H(0.61)$	$95.43^{+0.26}_{-0.21}$
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 0.0597	$\langle d^2\rangle^{1/2}$	2.432 ± 0.020	$D_M(0.61)$	$2300.2^{+9.7}_{-12}$
$\boldsymbol{\ln(10^{10}A_s)}$	$3.043^{+0.011}_{-0.015}$	z_{re}	$7.78^{+0.57}_{-0.76}$	$H(2.33)$	235.80 ± 0.57
$\boldsymbol{n_s}$	0.9673 ± 0.0037	$10^9 A_s$	$2.097^{+0.023}_{-0.031}$	$D_M(2.33)$	5758^{+10}_{-13}
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.877 ± 0.010	$f\sigma_8(0.15)$	0.4556 ± 0.0055
$\boldsymbol{A^{PS}_{100}}$	239 ± 25	D_{40}	1225 ± 11	$\sigma_8(0.15)$	$0.751^{+0.010}_{-0.0062}$
$\boldsymbol{A^{PS}_{143}}$	39 ± 8	D_{220}	5724 ± 39	$f\sigma_8(0.38)$	0.4747 ± 0.0051
$\boldsymbol{A^{PS}_{217}}$	103 ± 10	D_{810}	2535 ± 13	$\sigma_8(0.38)$	$0.6659^{+0.0092}_{-0.0055}$
$\boldsymbol{A^{CIB}_{217}}$	39 ± 7	D_{1420}	816.2 ± 4.8	$f\sigma_8(0.51)$	$0.4737^{+0.0051}_{-0.0044}$
$\boldsymbol{A^{tSZ}_{143}}$	$3.9^{+1.8}_{-2.6}$	D_{2000}	230.5 ± 1.6	$\sigma_8(0.51)$	$0.6233^{+0.0086}_{-0.0052}$
$\boldsymbol{r^{PS}_{143\times217}}$	0.66 ± 0.13	$n_{s,0.002}$	0.9673 ± 0.0037	$f\sigma_8(0.61)$	$0.4690^{+0.0051}_{-0.0041}$
$\boldsymbol{r^{CIB}_{143\times217}}$	$0.56^{+0.41}_{-0.16}$	Y_P	$0.245383^{+0.000061}_{-0.000054}$	$\sigma_8(0.61)$	$0.5932^{+0.0083}_{-0.0049}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	$0.246710^{+0.000061}_{-0.000054}$	$f\sigma_8(2.33)$	$0.2991^{+0.0036}_{-0.0024}$
$\boldsymbol{A^{kSZ}}$	$4.6^{+1.9}_{-4.2}$	10^5D/H	2.591 ± 0.027	$\sigma_8(2.33)$	$0.3085^{+0.0043}_{-0.0026}$
$\boldsymbol{A^{dust}_{100}}$	1.01 ± 0.19	Age/Gyr	$13.786^{+0.023}_{-0.029}$	f^{143}_{2000}	29.4 ± 2.8
$\boldsymbol{A^{dust}_{143}}$	0.96 ± 0.17	z_*	1089.86 ± 0.22	f^{217}_{2000}	106.7 ± 1.9
$\boldsymbol{A^{dust}_{217}}$	0.98 ± 0.10	r_*	144.72 ± 0.22	$f^{143\times217}_{2000}$	31.9 ± 2.0
$\boldsymbol{A^{dust}_{143\times217}}$	1.03 ± 0.16	$100\theta_*$	1.04114 ± 0.00030	$\chi^2_{lensing}$	9.33 ± 0.71
$\boldsymbol{c_{100}}$	0.9976 ± 0.0011	$D_M(z_*)$/Gpc	13.900 ± 0.022	χ^2_{simall}	396.9 ± 1.7
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	z_{drag}	1059.80 ± 0.32	χ^2_{lowl}	22.99 ± 0.78
$\boldsymbol{c_{TE}}$	0.9965 ± 0.0049	r_{drag}	147.39 ± 0.24	$\chi^2_{CamSpec}$	11514.0 ± 5.5
$\boldsymbol{c_{EE}}$	0.9925 ± 0.0049	k_D	0.14052 ± 0.00031	χ^2_{JLA}	1036.26 ± 0.30
H_0	$67.85^{+0.52}_{-0.44}$	$100\theta_D$	0.16084 ± 0.00019	χ^2_{6DF}	0.036 ± 0.053
Ω_Λ	$0.6918^{+0.0066}_{-0.0056}$	z_{eq}	3377 ± 21	χ^2_{MGS}	1.48 ± 0.46
Ω_m	$0.3082^{+0.0056}_{-0.0066}$	k_{eq}	0.010308 ± 0.000063	$\chi^2_{DR12BAO}$	4.3 ± 1.2
$\Omega_m h^2$	0.14185 ± 0.00090	$100\theta_{eq}$	0.8177 ± 0.0039	χ^2_{prior}	7.7 ± 3.4
$\Omega_\nu h^2$	< 0.000642	$100\theta_{s,eq}$	0.4517 ± 0.0020	χ^2_{CMB}	11943.2 ± 5.7
$\Omega_m h^3$	$0.09625^{+0.00040}_{-0.00034}$	$H(0.15)$	$73.10^{+0.46}_{-0.39}$	χ^2_{BAO}	5.82 ± 0.92
σ_8	$0.812^{+0.011}_{-0.0067}$	$D_M(0.15)$	$639.2^{+3.7}_{-4.5}$		
S_8	0.823 ± 0.011	$H(0.38)$	$83.15^{+0.35}_{-0.29}$		

$\bar{\chi}^2_{eff} = 12993.02$; $\Delta\bar{\chi}^2_{eff} = -0.51$; $R - 1 = 0.00952$

6.67 base_mnu_CleanedCamSpecHM_TT_lowl_lowE

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	$0.02203^{+0.00026}_{-0.00023}$	$\sigma_8\Omega_m^{0.25}$	$0.598^{+0.024}_{-0.012}$	$H(0.15)$	$71.2^{+2.1}_{-0.89}$
$\boldsymbol{\Omega_c h^2}$	0.1209 ± 0.0022	$\sigma_8/h^{0.5}$	$0.969^{+0.041}_{-0.017}$	$D_M(0.15)$	$658.5^{+8.3}_{-22}$
$\boldsymbol{100\theta_{MC}}$	1.04065 ± 0.00052	$r_{drag}h$	$96.8^{+3.8}_{-1.8}$	$H(0.38)$	$81.7^{+1.6}_{-0.66}$
$\boldsymbol{\tau}$	0.0513 ± 0.0079	$\langle d^2\rangle^{1/2}$	2.444 ± 0.038	$D_M(0.38)$	1564^{+17}_{-45}
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 0.198	z_{re}	7.45 ± 0.83	$H(0.51)$	$88.7^{+1.3}_{-0.53}$
$\boldsymbol{\ln(10^{10}A_s)}$	3.037 ± 0.016	$10^9 A_s$	2.085 ± 0.034	$D_M(0.51)$	2022^{+20}_{-52}
$\boldsymbol{n_s}$	$0.9607^{+0.0067}_{-0.0058}$	$10^9 A_s e^{-2\tau}$	1.881 ± 0.014	$H(0.61)$	$94.5^{+1.1}_{-0.44}$
$\boldsymbol{y_{cal}}$	1.0004 ± 0.0025	D_{40}	1233 ± 15	$D_M(0.61)$	2350^{+22}_{-57}
$\boldsymbol{A_{100}^{PS}}$	258 ± 27	D_{220}	5706 ± 42	$H(2.33)$	$237.5^{+1.3}_{-2.1}$
$\boldsymbol{A_{143}^{tSZ}}$	$3.6^{+1.6}_{-2.7}$	D_{810}	2532 ± 14	$D_M(2.33)$	5807^{+19}_{-56}
$\boldsymbol{A^{kSZ}}$	> 3.99	D_{1420}	812.3 ± 5.3	$f\sigma_8(0.15)$	0.458 ± 0.013
$\boldsymbol{A_{100}^{dust}}$	1.00 ± 0.20	D_{2000}	228.5 ± 2.0	$\sigma_8(0.15)$	$0.724^{+0.040}_{-0.010}$
$\boldsymbol{A_{143}^{power}}$	$10.9^{+2.2}_{-2.6}$	$n_{s,0.002}$	$0.9607^{+0.0067}_{-0.0058}$	$f\sigma_8(0.38)$	$0.471^{+0.016}_{-0.0097}$
$\boldsymbol{A_{217}^{power}}$	$8.5^{+1.8}_{-3.2}$	Y_P	$0.24525^{+0.00013}_{-0.000091}$	$\sigma_8(0.38)$	$0.640^{+0.037}_{-0.0087}$
$\boldsymbol{A_{143\times217}^{power}}$	$4.7^{+1.8}_{-3.0}$	Y_P^{BBN}	$0.24657^{+0.00013}_{-0.000092}$	$f\sigma_8(0.51)$	$0.467^{+0.018}_{-0.0082}$
$\boldsymbol{\gamma_{143}^{power}}$	$1.33^{+0.39}_{-0.53}$	10^5D/H	$2.650^{+0.043}_{-0.050}$	$\sigma_8(0.51)$	$0.598^{+0.036}_{-0.0081}$
$\boldsymbol{\gamma_{217}^{power}}$	1.34 ± 0.61	Age/Gyr	$13.899^{+0.042}_{-0.13}$	$f\sigma_8(0.61)$	$0.461^{+0.019}_{-0.0072}$
$\boldsymbol{\gamma_{143\times217}^{power}}$	$1.30^{+0.59}_{-0.68}$	z_*	$1090.45^{+0.41}_{-0.52}$	$\sigma_8(0.61)$	$0.569^{+0.034}_{-0.0077}$
$\boldsymbol{c_{100}}$	0.9978 ± 0.0011	r_*	144.44 ± 0.50	$f\sigma_8(2.33)$	$0.287^{+0.016}_{-0.0033}$
$\boldsymbol{c_{217}}$	$0.9994^{+0.0013}_{-0.0017}$	$100\theta_*$	1.04092 ± 0.00049	$\sigma_8(2.33)$	$0.295^{+0.018}_{-0.0040}$
H_0	$65.7^{+2.4}_{-1.0}$	$D_M(z_*)$/Gpc	13.876 ± 0.046	f_{2000}^{143}	24^{+3}_{-3}
Ω_Λ	$0.663^{+0.034}_{-0.012}$	z_{drag}	1059.23 ± 0.48	f_{2000}^{217}	17.4 ± 2.1
Ω_m	$0.337^{+0.012}_{-0.034}$	r_{drag}	147.21 ± 0.49	$f_{2000}^{143\times217}$	$11.7^{+2.2}_{-2.5}$
$\Omega_m h^2$	$0.1448^{+0.0021}_{-0.0036}$	k_D	0.14050 ± 0.00052	χ^2_{simall}	396.9 ± 1.6
$\Omega_\nu h^2$	< 0.00212	$100\theta_D$	0.16115 ± 0.00027	χ^2_{lowl}	23.9 ± 1.3
$\Omega_m h^3$	$0.0951^{+0.0014}_{-0.00046}$	z_{eq}	3415 ± 50	$\chi^2_{CamSpec}$	6717.4 ± 5.4
σ_8	$0.786^{+0.042}_{-0.011}$	k_{eq}	0.01042 ± 0.00015	χ^2_{prior}	5.3 ± 2.9
S_8	0.831 ± 0.025	$100\theta_{eq}$	0.8103 ± 0.0092	χ^2_{CMB}	7138.2 ± 5.5
$\sigma_8\Omega_m^{0.5}$	0.455 ± 0.014	$100\theta_{s,eq}$	0.4480 ± 0.0047		

$\bar{\chi}^2_{eff} = 7143.49$; $\Delta\bar{\chi}^2_{eff} = 1.29$; $R - 1 = 0.00791$

6.68 base_mnu_lensing_lenspriors

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02221	0.02220 ± 0.00050	D_{40}	1540	1082^{+200}_{-300}	$H(0.15)$	92.1	77 ± 20
$\boldsymbol{\Omega_c h^2}$	0.1272	$0.168^{+0.036}_{-0.042}$	D_{220}	6680	4588^{+900}_{-2000}	$D_{\rm M}(0.15)$	501	655^{+80}_{-200}
$\boldsymbol{100\theta_{MC}}$	1.118	$1.111^{+0.074}_{-0.063}$	D_{810}	2684	1908^{+500}_{-700}	$H(0.38)$	101.0	91^{+10}_{-20}
$\boldsymbol{\Sigma m_\nu}$ [eV]	0.55	< 2.80	D_{1420}	733	564^{+200}_{-300}	$D_{\rm M}(0.38)$	1217	1509^{+200}_{-400}
$\boldsymbol{\ln(10^{10} A_s)}$	3.238	2.96 ± 0.19	D_{2000}	210	167^{+40}_{-80}	$H(0.51)$	107.1	100 ± 10
$\boldsymbol{n_s}$	0.9607	0.960 ± 0.020	$n_{\rm s,0.002}$	0.9607	0.960 ± 0.020	$D_{\rm M}(0.51)$	1592	1927^{+200}_{-500}
H_0	87.6	—	$Y_{\rm P}$	0.245330	$0.24531^{+0.00023}_{-0.00020}$	$H(0.61)$	112.3	108 ± 10
Ω_Λ	0.798	$0.45^{+0.37}_{-0.11}$	$Y_{\rm P}^{\rm BBN}$	0.246656	$0.24664^{+0.00023}_{-0.00020}$	$D_{\rm M}(0.61)$	1866	2221^{+300}_{-600}
$\Omega_{\rm m}$	0.202	$0.55^{+0.11}_{-0.37}$	10^5D/H	2.616	$2.621^{+0.089}_{-0.10}$	$H(2.33)$	251.9	284^{+40}_{-30}
$\Omega_{\rm m}h^2$	0.155	$0.213^{+0.045}_{-0.064}$	Age/Gyr	11.97	$12.5^{+1.2}_{-2.1}$	$D_{\rm M}(2.33)$	4976	5207^{+510}_{-850}
$\Omega_\nu h^2$	0.0059	< 0.0301	z_*	1090.86	1094.9 ± 3.5	$f\sigma_8(0.15)$	0.4056	$0.457^{+0.044}_{-0.025}$
$\Omega_{\rm m}h^3$	0.136	$0.147^{+0.035}_{-0.067}$	r_*	142.6	$133.0^{+7.4}_{-11}$	$\sigma_8(0.15)$	0.816	$0.63^{+0.11}_{-0.13}$
σ_8	0.868	$0.70^{+0.11}_{-0.12}$	$100\theta_*$	1.118	$1.112^{+0.074}_{-0.063}$	$f\sigma_8(0.38)$	0.4510	$0.440^{+0.031}_{-0.019}$
S_8	0.713	$0.87^{+0.11}_{-0.14}$	$D_{\rm M}(z_*)$/Gpc	12.75	$12.0^{+1.0}_{-1.7}$	$\sigma_8(0.38)$	0.739	$0.55^{+0.11}_{-0.14}$
$\sigma_8\Omega_{\rm m}^{0.5}$	0.390	$0.474^{+0.058}_{-0.078}$	$z_{\rm drag}$	1060.16	1063.4 ± 3.1	$f\sigma_8(0.51)$	0.4647	$0.427^{+0.047}_{-0.023}$
$\sigma_8\Omega_{\rm m}^{0.25}$	0.5820	0.569 ± 0.023	$r_{\rm drag}$	145.3	$135.5^{+7.6}_{-11}$	$\sigma_8(0.51)$	0.699	$0.51^{+0.10}_{-0.14}$
$\sigma_8/h^{0.5}$	0.927	$0.846^{+0.055}_{-0.091}$	$k_{\rm D}$	0.1428	0.155 ± 0.011	$f\sigma_8(0.61)$	0.4703	$0.416^{+0.059}_{-0.029}$
$r_{\rm drag}h$	127.2	93^{+20}_{-30}	$100\theta_{\rm D}$	0.1726	$0.170^{+0.011}_{-0.0094}$	$\sigma_8(0.61)$	0.670	$0.488^{+0.098}_{-0.13}$
$\langle d^2\rangle^{1/2}$	2.516	2.495 ± 0.059	$z_{\rm eq}$	3569	4534^{+900}_{-1000}	$f\sigma_8(2.33)$	0.351	$0.250^{+0.052}_{-0.077}$
$z_{\rm re}$	8.12	$8.87^{+0.87}_{-0.75}$	$k_{\rm eq}$	0.01090	$0.0139^{+0.0026}_{-0.0032}$	$\sigma_8(2.33)$	0.366	$0.252^{+0.051}_{-0.086}$
$10^9 A_{\rm s}$	2.548	$1.96^{+0.29}_{-0.44}$	$100\theta_{\rm eq}$	0.843	$0.724^{+0.058}_{-0.095}$	$\chi^2_{\rm lensing}$	7.40	10.3 ± 2.2
$10^9 A_{\rm s}e^{-2\tau}$	2.282	$1.76^{+0.26}_{-0.40}$	$100\theta_{\rm s,eq}$	0.4670	$0.403^{+0.031}_{-0.049}$	$\chi^2_{\rm prior}$	0.00	2.0 ± 2.0

Best-fit $\chi^2_{\rm eff} = 7.40$; $\Delta\chi^2_{\rm eff} = -0.09$; $\bar{\chi}^2_{\rm eff} = 12.38$; $\Delta\bar{\chi}^2_{\rm eff} = 0.81$; $R - 1 = 0.00245$
$\chi^2_{\rm eff}$: CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8_CMBmarged: 7.40 (Δ -0.09)

6.69 base_mnu_lensing_lenspriors_post_Pantheon

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02221 ± 0.00051	D_{220}	4861^{+800}_{-2000}	$H(0.38)$	102^{+20}_{-9}
$\boldsymbol{\Omega_c h^2}$	$0.168^{+0.040}_{-0.035}$	D_{810}	1827^{+700}_{-1000}	$D_{\rm M}(0.38)$	1254^{+79}_{-200}
$\boldsymbol{100\theta_{MC}}$	$1.155^{+0.087}_{-0.038}$	D_{1420}	527^{+400}_{-300}	$H(0.51)$	110^{+20}_{-9}
$\boldsymbol{\Sigma m_\nu}$ [eV]	$2.02^{+0.64}_{-2.0}$	D_{2000}	153^{+100}_{-80}	$D_{\rm M}(0.51)$	1626^{+100}_{-260}
$\boldsymbol{\ln(10^{10} A_s)}$	$3.05^{+0.12}_{-0.13}$	$n_{\rm s,0.002}$	0.961 ± 0.020	$H(0.61)$	117^{+20}_{-10}
$\boldsymbol{n_s}$	0.961 ± 0.020	$Y_{\rm P}$	$0.24532^{+0.00023}_{-0.00020}$	$D_{\rm M}(0.61)$	1894^{+120}_{-300}
H_0	84^{+10}_{-6}	$Y_{\rm P}^{\rm BBN}$	$0.24664^{+0.00023}_{-0.00020}$	$H(2.33)$	287^{+40}_{-30}
Ω_Λ	0.701 ± 0.022	10^5D/H	2.619 ± 0.096	$D_{\rm M}(2.33)$	4764^{+310}_{-760}
$\Omega_{\rm m}$	0.299 ± 0.022	Age/Gyr	$11.41^{+0.74}_{-1.8}$	$f\sigma_8(0.15)$	0.433 ± 0.019
$\Omega_{\rm m}h^2$	0.212 ± 0.047	z_*	$1094.9^{+3.9}_{-3.4}$	$\sigma_8(0.15)$	0.717 ± 0.034
$\Omega_\nu h^2$	$0.0217^{+0.0067}_{-0.021}$	r_*	$132.9^{+6.2}_{-11}$	$f\sigma_8(0.38)$	$0.455^{+0.020}_{-0.018}$
$\Omega_{\rm m}h^3$	$0.182^{+0.051}_{-0.079}$	$100\theta_*$	$1.156^{+0.088}_{-0.038}$	$\sigma_8(0.38)$	0.638 ± 0.032
σ_8	0.774 ± 0.036	$D_{\rm M}(z_*)$/Gpc	$11.58^{+0.79}_{-1.8}$	$f\sigma_8(0.51)$	$0.456^{+0.020}_{-0.018}$
S_8	0.772 ± 0.035	$z_{\rm drag}$	$1063.4^{+3.3}_{-2.8}$	$\sigma_8(0.51)$	0.599 ± 0.030
$\sigma_8\Omega_{\rm m}^{0.5}$	0.423 ± 0.019	$r_{\rm drag}$	$135.4^{+6.3}_{-11}$	$f\sigma_8(0.61)$	$0.452^{+0.020}_{-0.018}$
$\sigma_8\Omega_{\rm m}^{0.25}$	0.572 ± 0.024	$k_{\rm D}$	$0.155^{+0.013}_{-0.0094}$	$\sigma_8(0.61)$	0.570 ± 0.029
$\sigma_8/h^{0.5}$	$0.850^{+0.065}_{-0.082}$	$100\theta_{\rm D}$	$0.177^{+0.012}_{-0.0056}$	$f\sigma_8(2.33)$	0.296 ± 0.015
$r_{\rm drag}h$	$112.8^{+8.6}_{-5.9}$	$z_{\rm eq}$	4552^{+1000}_{-800}	$\sigma_8(2.33)$	0.301 ± 0.016
$\langle d^2\rangle^{1/2}$	$2.488^{+0.053}_{-0.060}$	$k_{\rm eq}$	$0.0140^{+0.0030}_{-0.0026}$	$\chi^2_{\rm lensing}$	10.2 ± 2.1
$z_{\rm re}$	$8.93^{+0.94}_{-0.65}$	$100\theta_{\rm eq}$	$0.747^{+0.044}_{-0.073}$	$\chi^2_{\rm JLA}$	1036.9 ± 1.4
$10^9 A_{\rm s}$	$2.12^{+0.21}_{-0.30}$	$100\theta_{\rm s,eq}$	$0.417^{+0.023}_{-0.037}$	$\chi^2_{\rm prior}$	2.0 ± 2.1
$10^9 A_{\rm s} e^{-2\tau}$	$1.90^{+0.19}_{-0.27}$	$H(0.15)$	90^{+10}_{-8}		
D_{40}	1184^{+100}_{-200}	$D_{\rm M}(0.15)$	525^{+33}_{-85}		

$\bar{\chi}^2_{\rm eff} = 1049.14$; $\Delta\bar{\chi}^2_{\rm eff} = 0.61$; $R - 1 = 0.00858$

6.70 base_mnu_lensing_lenspriors_post_agr2

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02220 ± 0.00051	D_{40}	1101^{+200}_{-400}	$H(0.15)$	77^{+10}_{-20}
$\boldsymbol{\Omega_c h^2}$	0.166 ± 0.037	D_{220}	4687^{+900}_{-2000}	$D_{\rm M}(0.15)$	653^{+80}_{-200}
$\boldsymbol{100\theta_{MC}}$	$1.112^{+0.073}_{-0.062}$	D_{810}	1939^{+500}_{-800}	$H(0.38)$	91^{+10}_{-20}
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 2.96	D_{1420}	572^{+200}_{-300}	$D_{\rm M}(0.38)$	1505^{+200}_{-400}
$\boldsymbol{\ln(10^{10} A_s)}$	2.97 ± 0.19	D_{2000}	169^{+40}_{-90}	$H(0.51)$	100 ± 10
$\boldsymbol{n_s}$	0.959 ± 0.020	$n_{\rm s,0.002}$	0.959 ± 0.020	$D_{\rm M}(0.51)$	1921^{+200}_{-500}
H_0	—	$Y_{\rm P}$	$0.24531^{+0.00023}_{-0.00020}$	$H(0.61)$	108 ± 10
Ω_Λ	$0.46^{+0.38}_{-0.10}$	$Y_{\rm P}^{\rm BBN}$	$0.24664^{+0.00023}_{-0.00020}$	$D_{\rm M}(0.61)$	2215^{+300}_{-600}
$\Omega_{\rm m}$	$0.54^{+0.10}_{-0.38}$	10^5D/H	$2.621^{+0.089}_{-0.10}$	$H(2.33)$	283^{+40}_{-30}
$\Omega_{\rm m}h^2$	$0.212^{+0.048}_{-0.064}$	Age/Gyr	$12.5^{+1.2}_{-2.0}$	$D_{\rm M}(2.33)$	5203^{+500}_{-830}
$\Omega_\nu h^2$	< 0.0318	z_*	1094.8 ± 3.6	$f\sigma_8(0.15)$	$0.449^{+0.044}_{-0.022}$
$\Omega_{\rm m}h^3$	$0.146^{+0.035}_{-0.066}$	r_*	$133.3^{+7.0}_{-11}$	$\sigma_8(0.15)$	0.62 ± 0.11
σ_8	0.69 ± 0.10	$100\theta_*$	$1.113^{+0.073}_{-0.062}$	$f\sigma_8(0.38)$	$0.433^{+0.028}_{-0.014}$
S_8	$0.85^{+0.10}_{-0.14}$	$D_{\rm M}(z_*)$/Gpc	$12.0^{+1.0}_{-1.7}$	$\sigma_8(0.38)$	$0.55^{+0.11}_{-0.13}$
$\sigma_8\Omega_{\rm m}^{0.5}$	$0.465^{+0.056}_{-0.079}$	$z_{\rm drag}$	$1063.3^{+3.5}_{-3.1}$	$f\sigma_8(0.51)$	$0.420^{+0.044}_{-0.018}$
$\sigma_8\Omega_{\rm m}^{0.25}$	0.559 ± 0.018	$r_{\rm drag}$	$135.7^{+7.1}_{-12}$	$\sigma_8(0.51)$	$0.51^{+0.10}_{-0.13}$
$\sigma_8/h^{0.5}$	$0.832^{+0.042}_{-0.086}$	$k_{\rm D}$	$0.155^{+0.013}_{-0.011}$	$f\sigma_8(0.61)$	$0.410^{+0.056}_{-0.025}$
$r_{\rm drag}h$	93^{+20}_{-30}	$100\theta_{\rm D}$	0.1702 ± 0.0094	$\sigma_8(0.61)$	$0.482^{+0.097}_{-0.13}$
$\langle d^2\rangle^{1/2}$	2.498 ± 0.059	$z_{\rm eq}$	4494 ± 900	$f\sigma_8(2.33)$	$0.247^{+0.052}_{-0.076}$
$z_{\rm re}$	$8.86^{+0.92}_{-0.71}$	$k_{\rm eq}$	0.0138 ± 0.0027	$\sigma_8(2.33)$	$0.249^{+0.051}_{-0.085}$
$10^9 A_{\rm s}$	$1.99^{+0.30}_{-0.47}$	$100\theta_{\rm eq}$	$0.730^{+0.057}_{-0.10}$	$\chi^2_{\rm lensing}$	12.6 ± 2.1
$10^9 A_{\rm s}e^{-2\tau}$	$1.78^{+0.27}_{-0.42}$	$100\theta_{\rm s,eq}$	$0.407^{+0.031}_{-0.053}$	$\chi^2_{\rm prior}$	2.1 ± 2.1

$\bar{\chi}^2_{\rm eff} = 14.65$; $\Delta\bar{\chi}^2_{\rm eff} = 0.76$; $R - 1 = 0.00247$

6.71 base_mnu_lensing_lenspriors_post_conslmin40

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02220 ± 0.00050	D_{40}	1089^{+200}_{-400}	$H(0.15)$	77 ± 20
$\boldsymbol{\Omega_c h^2}$	$0.168^{+0.035}_{-0.048}$	D_{220}	4631^{+1000}_{-2000}	$D_{\rm M}(0.15)$	655^{+80}_{-200}
$\boldsymbol{100\theta_{MC}}$	$1.111^{+0.076}_{-0.064}$	D_{810}	1919^{+500}_{-800}	$H(0.38)$	91^{+10}_{-20}
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 2.82	D_{1420}	568^{+200}_{-300}	$D_{\rm M}(0.38)$	1509^{+200}_{-400}
$\boldsymbol{\ln(10^{10} A_s)}$	2.96 ± 0.21	D_{2000}	169^{+40}_{-90}	$H(0.51)$	100 ± 10
$\boldsymbol{n_s}$	0.959 ± 0.020	$n_{\rm s,0.002}$	0.959 ± 0.020	$D_{\rm M}(0.51)$	1926^{+200}_{-500}
H_0	—	$Y_{\rm P}$	$0.24531^{+0.00023}_{-0.00020}$	$H(0.61)$	108 ± 10
Ω_Λ	$0.45^{+0.38}_{-0.11}$	$Y_{\rm P}^{\rm BBN}$	$0.24664^{+0.00023}_{-0.00020}$	$D_{\rm M}(0.61)$	2220^{+300}_{-600}
$\Omega_{\rm m}$	$0.55^{+0.11}_{-0.38}$	10^5D/H	$2.621^{+0.089}_{-0.099}$	$H(2.33)$	284 ± 30
$\Omega_{\rm m}h^2$	$0.213^{+0.045}_{-0.069}$	Age/Gyr	$12.5^{+1.3}_{-2.1}$	$D_{\rm M}(2.33)$	5208^{+520}_{-870}
$\Omega_\nu h^2$	< 0.0303	z_*	$1094.9^{+3.7}_{-4.4}$	$f\sigma_8(0.15)$	$0.457^{+0.045}_{-0.025}$
$\Omega_{\rm m}h^3$	$0.147^{+0.035}_{-0.069}$	r_*	$133.0^{+8.4}_{-11}$	$\sigma_8(0.15)$	0.63 ± 0.11
σ_8	0.70 ± 0.11	$100\theta_*$	$1.112^{+0.076}_{-0.064}$	$f\sigma_8(0.38)$	$0.440^{+0.031}_{-0.020}$
S_8	$0.87^{+0.11}_{-0.14}$	$D_{\rm M}(z_*)$/Gpc	$12.0^{+1.1}_{-1.7}$	$\sigma_8(0.38)$	$0.55^{+0.11}_{-0.13}$
$\sigma_8\Omega_{\rm m}^{0.5}$	$0.474^{+0.060}_{-0.077}$	$z_{\rm drag}$	1063.4 ± 3.2	$f\sigma_8(0.51)$	$0.427^{+0.047}_{-0.023}$
$\sigma_8\Omega_{\rm m}^{0.25}$	0.569 ± 0.024	$r_{\rm drag}$	$135.5^{+8.6}_{-11}$	$\sigma_8(0.51)$	$0.51^{+0.10}_{-0.13}$
$\sigma_8/h^{0.5}$	$0.846^{+0.055}_{-0.090}$	$k_{\rm D}$	0.155 ± 0.011	$f\sigma_8(0.61)$	$0.416^{+0.058}_{-0.030}$
$r_{\rm drag}h$	93^{+20}_{-30}	$100\theta_{\rm D}$	$0.170^{+0.011}_{-0.0094}$	$\sigma_8(0.61)$	$0.488^{+0.099}_{-0.13}$
$\langle d^2\rangle^{1/2}$	2.496 ± 0.073	$z_{\rm eq}$	4547^{+800}_{-1000}	$f\sigma_8(2.33)$	$0.250^{+0.053}_{-0.076}$
$z_{\rm re}$	8.87 ± 0.78	$k_{\rm eq}$	$0.0140^{+0.0026}_{-0.0036}$	$\sigma_8(2.33)$	$0.252^{+0.052}_{-0.085}$
$10^9 A_{\rm s}$	$1.97^{+0.32}_{-0.49}$	$100\theta_{\rm eq}$	$0.724^{+0.066}_{-0.10}$	$\chi^2_{\rm lensing}$	10.3 ± 2.1
$10^9 A_{\rm s}e^{-2\tau}$	$1.77^{+0.28}_{-0.44}$	$100\theta_{\rm s,eq}$	$0.404^{+0.035}_{-0.052}$	$\chi^2_{\rm prior}$	2.0 ± 2.1

$\bar{\chi}^2_{\rm eff} = 12.33$; $\Delta\bar{\chi}^2_{\rm eff} = 0.78$; $R - 1 = 0.00626$

6.72 base_mnu_lensing_lenspriors_post_agrlmax425

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02220 ± 0.00050	D_{40}	1090^{+200}_{-300}	$H(0.15)$	76^{+10}_{-20}
$\boldsymbol{\Omega_c h^2}$	$0.166^{+0.031}_{-0.045}$	D_{220}	4639^{+1000}_{-2000}	$D_{\rm M}(0.15)$	658^{+80}_{-200}
$\boldsymbol{100\theta_{MC}}$	$1.107^{+0.072}_{-0.064}$	D_{810}	1937^{+500}_{-700}	$H(0.38)$	90^{+10}_{-20}
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 2.55	D_{1420}	573^{+200}_{-300}	$D_{\rm M}(0.38)$	1517^{+200}_{-400}
$\boldsymbol{\ln(10^{10} A_s)}$	2.96 ± 0.19	D_{2000}	170^{+40}_{-80}	$H(0.51)$	100 ± 10
$\boldsymbol{n_s}$	0.959 ± 0.020	$n_{\rm s,0.002}$	0.959 ± 0.020	$D_{\rm M}(0.51)$	1937^{+200}_{-500}
H_0	—	$Y_{\rm P}$	$0.24531^{+0.00023}_{-0.00020}$	$H(0.61)$	107 ± 10
Ω_Λ	$0.46^{+0.37}_{-0.11}$	$Y_{\rm P}^{\rm BBN}$	$0.24664^{+0.00023}_{-0.00020}$	$D_{\rm M}(0.61)$	2233^{+300}_{-600}
$\Omega_{\rm m}$	$0.54^{+0.11}_{-0.37}$	10^5D/H	$2.622^{+0.089}_{-0.10}$	$H(2.33)$	281^{+30}_{-40}
$\Omega_{\rm m}h^2$	$0.209^{+0.039}_{-0.065}$	Age/Gyr	$12.6^{+1.3}_{-2.0}$	$D_{\rm M}(2.33)$	5241^{+530}_{-850}
$\Omega_\nu h^2$	< 0.0274	z_*	$1094.6^{+3.2}_{-4.3}$	$f\sigma_8(0.15)$	$0.460^{+0.045}_{-0.025}$
$\Omega_{\rm m}h^3$	$0.143^{+0.033}_{-0.065}$	r_*	133.6 ± 8.2	$\sigma_8(0.15)$	0.64 ± 0.11
σ_8	0.70 ± 0.11	$100\theta_*$	$1.108^{+0.072}_{-0.064}$	$f\sigma_8(0.38)$	$0.443^{+0.031}_{-0.018}$
S_8	$0.87^{+0.11}_{-0.14}$	$D_{\rm M}(z_*)$/Gpc	$12.1^{+1.1}_{-1.6}$	$\sigma_8(0.38)$	$0.56^{+0.11}_{-0.14}$
$\sigma_8\Omega_{\rm m}^{0.5}$	$0.476^{+0.059}_{-0.078}$	$z_{\rm drag}$	1063.2 ± 3.0	$f\sigma_8(0.51)$	$0.431^{+0.047}_{-0.022}$
$\sigma_8\Omega_{\rm m}^{0.25}$	0.573 ± 0.023	$r_{\rm drag}$	136.0 ± 8.4	$\sigma_8(0.51)$	$0.52^{+0.10}_{-0.14}$
$\sigma_8/h^{0.5}$	$0.855^{+0.064}_{-0.081}$	$k_{\rm D}$	$0.1543^{+0.0099}_{-0.013}$	$f\sigma_8(0.61)$	$0.420^{+0.059}_{-0.029}$
$r_{\rm drag}h$	93^{+20}_{-30}	$100\theta_{\rm D}$	0.1696 ± 0.0095	$\sigma_8(0.61)$	$0.49^{+0.10}_{-0.13}$
$\langle d^2\rangle^{1/2}$	2.495 ± 0.059	$z_{\rm eq}$	4487^{+700}_{-1000}	$f\sigma_8(2.33)$	$0.252^{+0.054}_{-0.077}$
$z_{\rm re}$	8.82 ± 0.74	$k_{\rm eq}$	$0.0138^{+0.0023}_{-0.0034}$	$\sigma_8(2.33)$	$0.255^{+0.053}_{-0.087}$
$10^9 A_{\rm s}$	$1.97^{+0.31}_{-0.43}$	$100\theta_{\rm eq}$	$0.726^{+0.063}_{-0.092}$	$\chi^2_{\rm lensing}$	8.2 ± 2.3
$10^9 A_{\rm s}e^{-2\tau}$	$1.77^{+0.27}_{-0.39}$	$100\theta_{\rm s,eq}$	$0.404^{+0.034}_{-0.048}$	$\chi^2_{\rm prior}$	2.0 ± 2.1

$\bar{\chi}^2_{\rm eff} = 10.23$; $\Delta\bar{\chi}^2_{\rm eff} = 0.76$; $R - 1 = 0.00322$

6.73 base_mnu_lensing_lenspriors_post_ptt

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02219 ± 0.00049	D_{40}	1245^{+200}_{-400}	$H(0.15)$	76 ± 20
$\boldsymbol{\Omega_c h^2}$	0.153 ± 0.035	D_{220}	5459^{+1000}_{-2000}	$D_{\rm M}(0.15)$	660^{+100}_{-200}
$\boldsymbol{100\theta_{MC}}$	$1.102^{+0.080}_{-0.064}$	D_{810}	2219^{+600}_{-800}	$H(0.38)$	90 ± 10
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 2.81	D_{1420}	659^{+200}_{-300}	$D_{\rm M}(0.38)$	1528^{+200}_{-400}
$\boldsymbol{\ln(10^{10} A_s)}$	3.08 ± 0.20	D_{2000}	200^{+50}_{-100}	$H(0.51)$	98 ± 10
$\boldsymbol{n_s}$	0.959 ± 0.020	$n_{\rm s,0.002}$	0.959 ± 0.020	$D_{\rm M}(0.51)$	1954^{+300}_{-500}
H_0	—	$Y_{\rm P}$	0.24531 ± 0.00021	$H(0.61)$	105 ± 10
Ω_Λ	$0.49^{+0.35}_{-0.11}$	$Y_{\rm P}^{\rm BBN}$	0.24664 ± 0.00021	$D_{\rm M}(0.61)$	2255^{+300}_{-600}
$\Omega_{\rm m}$	$0.51^{+0.11}_{-0.35}$	10^5D/H	2.622 ± 0.093	$H(2.33)$	274^{+40}_{-30}
$\Omega_{\rm m}h^2$	$0.198^{+0.047}_{-0.055}$	Age/Gyr	$12.8^{+1.3}_{-2.2}$	$D_{\rm M}(2.33)$	5336^{+550}_{-910}
$\Omega_\nu h^2$	< 0.0302	z_*	1093.8 ± 3.5	$f\sigma_8(0.15)$	$0.441^{+0.046}_{-0.030}$
$\Omega_{\rm m}h^3$	$0.137^{+0.039}_{-0.061}$	r_*	$135.9^{+8.0}_{-10}$	$\sigma_8(0.15)$	0.63 ± 0.11
σ_8	0.69 ± 0.10	$100\theta_*$	$1.102^{+0.080}_{-0.064}$	$f\sigma_8(0.38)$	$0.429^{+0.027}_{-0.020}$
S_8	$0.83^{+0.11}_{-0.14}$	$D_{\rm M}(z_*)$/Gpc	$12.4^{+1.1}_{-1.8}$	$\sigma_8(0.38)$	$0.55^{+0.11}_{-0.12}$
$\sigma_8\Omega_{\rm m}^{0.5}$	$0.454^{+0.059}_{-0.074}$	$z_{\rm drag}$	1062.5 ± 3.1	$f\sigma_8(0.51)$	$0.419^{+0.041}_{-0.022}$
$\sigma_8\Omega_{\rm m}^{0.25}$	0.553 ± 0.023	$r_{\rm drag}$	$138.5^{+8.2}_{-11}$	$\sigma_8(0.51)$	$0.51^{+0.10}_{-0.12}$
$\sigma_8/h^{0.5}$	$0.838^{+0.056}_{-0.089}$	$k_{\rm D}$	0.152 ± 0.011	$f\sigma_8(0.61)$	$0.409^{+0.052}_{-0.028}$
$r_{\rm drag}h$	95^{+20}_{-30}	$100\theta_{\rm D}$	$0.169^{+0.011}_{-0.0095}$	$\sigma_8(0.61)$	$0.49^{+0.10}_{-0.12}$
$\langle d^2\rangle^{1/2}$	2.570 ± 0.071	$z_{\rm eq}$	4185 ± 800	$f\sigma_8(2.33)$	$0.250^{+0.056}_{-0.069}$
$z_{\rm re}$	$8.65^{+0.85}_{-0.74}$	$k_{\rm eq}$	0.0129 ± 0.0026	$\sigma_8(2.33)$	$0.253^{+0.056}_{-0.078}$
$10^9 A_{\rm s}$	$2.22^{+0.35}_{-0.52}$	$100\theta_{\rm eq}$	$0.761^{+0.064}_{-0.10}$	$\chi^2_{\rm lensing}$	11.5 ± 2.0
$10^9 A_{\rm s}e^{-2\tau}$	$1.99^{+0.31}_{-0.47}$	$100\theta_{\rm s,eq}$	$0.423^{+0.034}_{-0.051}$	$\chi^2_{\rm prior}$	2.0 ± 2.0

$\bar{\chi}^2_{\rm eff} = 13.44$; $\Delta\bar{\chi}^2_{\rm eff} = 0.40$; $R - 1 = 0.08205$

6.74 base_mnu_lensing_lenspriors_post_bfcl

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02220 ± 0.00050	D_{40}	1055^{+200}_{-300}	$H(0.15)$	77 ± 20
$\boldsymbol{\Omega_c h^2}$	$0.169^{+0.035}_{-0.044}$	D_{220}	4463^{+900}_{-2000}	$D_{\rm M}(0.15)$	654^{+80}_{-200}
$\boldsymbol{100\theta_{MC}}$	$1.112^{+0.074}_{-0.062}$	D_{810}	1859^{+500}_{-700}	$H(0.38)$	91^{+10}_{-20}
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 2.78	D_{1420}	549^{+200}_{-300}	$D_{\rm M}(0.38)$	1507^{+200}_{-400}
$\boldsymbol{\ln(10^{10} A_s)}$	2.94 ± 0.19	D_{2000}	163^{+40}_{-80}	$H(0.51)$	100 ± 10
$\boldsymbol{n_s}$	0.959 ± 0.020	$n_{\rm s,0.002}$	0.959 ± 0.020	$D_{\rm M}(0.51)$	1924^{+200}_{-500}
H_0	—	$Y_{\rm P}$	$0.24531^{+0.00023}_{-0.00020}$	$H(0.61)$	108 ± 10
Ω_Λ	$0.45^{+0.37}_{-0.11}$	$Y_{\rm P}^{\rm BBN}$	$0.24664^{+0.00023}_{-0.00020}$	$D_{\rm M}(0.61)$	2218^{+300}_{-600}
$\Omega_{\rm m}$	$0.55^{+0.11}_{-0.37}$	10^5D/H	$2.621^{+0.089}_{-0.10}$	$H(2.33)$	284 ± 30
$\Omega_{\rm m}h^2$	$0.213^{+0.044}_{-0.065}$	Age/Gyr	$12.5^{+1.2}_{-2.0}$	$D_{\rm M}(2.33)$	5199^{+510}_{-850}
$\Omega_\nu h^2$	< 0.0299	z_*	1094.9 ± 3.5	$f\sigma_8(0.15)$	$0.455^{+0.044}_{-0.025}$
$\Omega_{\rm m}h^3$	$0.147^{+0.035}_{-0.067}$	r_*	$132.9^{+7.8}_{-10}$	$\sigma_8(0.15)$	0.63 ± 0.11
σ_8	0.69 ± 0.11	$100\theta_*$	$1.112^{+0.074}_{-0.062}$	$f\sigma_8(0.38)$	$0.438^{+0.031}_{-0.019}$
S_8	$0.86^{+0.10}_{-0.14}$	$D_{\rm M}(z_*)$/Gpc	$12.0^{+1.1}_{-1.7}$	$\sigma_8(0.38)$	$0.55^{+0.11}_{-0.13}$
$\sigma_8\Omega_{\rm m}^{0.5}$	$0.472^{+0.057}_{-0.077}$	$z_{\rm drag}$	1063.5 ± 3.1	$f\sigma_8(0.51)$	$0.425^{+0.047}_{-0.023}$
$\sigma_8\Omega_{\rm m}^{0.25}$	0.566 ± 0.023	$r_{\rm drag}$	$135.3^{+7.9}_{-11}$	$\sigma_8(0.51)$	$0.51^{+0.10}_{-0.13}$
$\sigma_8/h^{0.5}$	$0.841^{+0.055}_{-0.090}$	$k_{\rm D}$	0.155 ± 0.011	$f\sigma_8(0.61)$	$0.414^{+0.059}_{-0.029}$
$r_{\rm drag}h$	93^{+20}_{-30}	$100\theta_{\rm D}$	$0.170^{+0.011}_{-0.0093}$	$\sigma_8(0.61)$	$0.485^{+0.099}_{-0.13}$
$\langle d^2\rangle^{1/2}$	2.470 ± 0.056	$z_{\rm eq}$	4559^{+800}_{-1000}	$f\sigma_8(2.33)$	$0.248^{+0.053}_{-0.075}$
$z_{\rm re}$	$8.88^{+0.85}_{-0.77}$	$k_{\rm eq}$	$0.0140^{+0.0026}_{-0.0033}$	$\sigma_8(2.33)$	$0.251^{+0.052}_{-0.084}$
$10^9 A_{\rm s}$	$1.92^{+0.29}_{-0.42}$	$100\theta_{\rm eq}$	$0.721^{+0.061}_{-0.094}$	$\chi^2_{\rm lensing}$	10.5 ± 2.2
$10^9 A_{\rm s}e^{-2\tau}$	$1.72^{+0.26}_{-0.38}$	$100\theta_{\rm s,eq}$	$0.402^{+0.033}_{-0.049}$	$\chi^2_{\rm prior}$	2.1 ± 2.1

$\bar{\chi}^2_{\rm eff} = 12.60$; $\Delta\bar{\chi}^2_{\rm eff} = 0.84$; $R - 1 = 0.00308$

6.75 base_mnu_lensing_lenspriors_post_agr2bfcl

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02220 ± 0.00050	D_{40}	1077^{+200}_{-300}	$H(0.15)$	77 ± 20
$\boldsymbol{\Omega_c h^2}$	$0.166^{+0.036}_{-0.044}$	D_{220}	4579^{+900}_{-2000}	$D_{\rm M}(0.15)$	652^{+80}_{-200}
$\boldsymbol{100\theta_{MC}}$	$1.112^{+0.075}_{-0.061}$	D_{810}	1896^{+500}_{-700}	$H(0.38)$	91^{+10}_{-20}
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 2.89	D_{1420}	559^{+200}_{-300}	$D_{\rm M}(0.38)$	1505^{+200}_{-400}
$\boldsymbol{\ln(10^{10} A_s)}$	2.95 ± 0.19	D_{2000}	166^{+40}_{-80}	$H(0.51)$	100 ± 10
$\boldsymbol{n_s}$	0.959 ± 0.020	$n_{\rm s,0.002}$	0.959 ± 0.020	$D_{\rm M}(0.51)$	1921^{+200}_{-500}
H_0	—	$Y_{\rm P}$	$0.24531^{+0.00023}_{-0.00019}$	$H(0.61)$	108 ± 10
Ω_Λ	$0.46^{+0.37}_{-0.10}$	$Y_{\rm P}^{\rm BBN}$	$0.24664^{+0.00023}_{-0.00020}$	$D_{\rm M}(0.61)$	2215^{+300}_{-600}
$\Omega_{\rm m}$	$0.54^{+0.10}_{-0.37}$	10^5D/H	$2.621^{+0.088}_{-0.10}$	$H(2.33)$	283^{+40}_{-30}
$\Omega_{\rm m}h^2$	$0.212^{+0.045}_{-0.067}$	Age/Gyr	$12.5^{+1.2}_{-2.0}$	$D_{\rm M}(2.33)$	5205^{+500}_{-840}
$\Omega_\nu h^2$	< 0.0311	z_*	1094.8 ± 3.6	$f\sigma_8(0.15)$	$0.447^{+0.043}_{-0.022}$
$\Omega_{\rm m}h^3$	$0.146^{+0.035}_{-0.066}$	r_*	$133.3^{+7.5}_{-11}$	$\sigma_8(0.15)$	0.62 ± 0.11
σ_8	0.68 ± 0.10	$100\theta_*$	$1.112^{+0.075}_{-0.061}$	$f\sigma_8(0.38)$	$0.431^{+0.027}_{-0.014}$
S_8	$0.85^{+0.10}_{-0.14}$	$D_{\rm M}(z_*)$/Gpc	$12.1^{+1.1}_{-1.7}$	$\sigma_8(0.38)$	$0.54^{+0.11}_{-0.13}$
$\sigma_8\Omega_{\rm m}^{0.5}$	$0.463^{+0.055}_{-0.077}$	$z_{\rm drag}$	1063.3 ± 3.1	$f\sigma_8(0.51)$	$0.419^{+0.044}_{-0.018}$
$\sigma_8\Omega_{\rm m}^{0.25}$	0.557 ± 0.018	$r_{\rm drag}$	$135.7^{+7.7}_{-11}$	$\sigma_8(0.51)$	$0.51^{+0.10}_{-0.13}$
$\sigma_8/h^{0.5}$	$0.829^{+0.044}_{-0.085}$	$k_{\rm D}$	0.155 ± 0.011	$f\sigma_8(0.61)$	$0.408^{+0.056}_{-0.025}$
$r_{\rm drag}h$	93^{+20}_{-30}	$100\theta_{\rm D}$	$0.170^{+0.011}_{-0.0091}$	$\sigma_8(0.61)$	$0.480^{+0.098}_{-0.13}$
$\langle d^2\rangle^{1/2}$	2.472 ± 0.057	$z_{\rm eq}$	4504^{+900}_{-1000}	$f\sigma_8(2.33)$	$0.246^{+0.053}_{-0.074}$
$z_{\rm re}$	$8.86^{+0.89}_{-0.76}$	$k_{\rm eq}$	$0.0138^{+0.0027}_{-0.0034}$	$\sigma_8(2.33)$	$0.249^{+0.051}_{-0.084}$
$10^9 A_{\rm s}$	$1.95^{+0.31}_{-0.45}$	$100\theta_{\rm eq}$	$0.729^{+0.061}_{-0.10}$	$\chi^2_{\rm lensing}$	12.8 ± 2.1
$10^9 A_{\rm s}e^{-2\tau}$	$1.74^{+0.27}_{-0.41}$	$100\theta_{\rm s,eq}$	$0.406^{+0.033}_{-0.052}$	$\chi^2_{\rm prior}$	2.1 ± 2.1

$\bar{\chi}^2_{\rm eff} = 14.86$; $\Delta\bar{\chi}^2_{\rm eff} = 0.79$; $R - 1 = 0.00267$

6.76 base_mnu_lensing_lenspriors_post_linear

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02219 ± 0.00050	D_{40}	1050^{+200}_{-300}	$H(0.15)$	77 ± 20
$\boldsymbol{\Omega_c h^2}$	$0.172^{+0.037}_{-0.043}$	D_{220}	4412^{+900}_{-2000}	$D_{\rm M}(0.15)$	657^{+80}_{-200}
$\boldsymbol{100\theta_{MC}}$	$1.113^{+0.072}_{-0.063}$	D_{810}	1847^{+500}_{-700}	$H(0.38)$	91^{+10}_{-20}
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 2.79	D_{1420}	545^{+200}_{-300}	$D_{\rm M}(0.38)$	1510^{+300}_{-400}
$\boldsymbol{\ln(10^{10} A_s)}$	2.94 ± 0.19	D_{2000}	161^{+40}_{-80}	$H(0.51)$	100 ± 10
$\boldsymbol{n_s}$	0.959 ± 0.020	$n_{\rm s,0.002}$	0.959 ± 0.020	$D_{\rm M}(0.51)$	1926^{+200}_{-500}
H_0	—	$Y_{\rm P}$	$0.24531^{+0.00023}_{-0.00020}$	$H(0.61)$	108 ± 10
Ω_Λ	$0.43^{+0.39}_{-0.11}$	$Y_{\rm P}^{\rm BBN}$	$0.24664^{+0.00023}_{-0.00020}$	$D_{\rm M}(0.61)$	2219^{+300}_{-600}
$\Omega_{\rm m}$	$0.57^{+0.11}_{-0.39}$	10^5D/H	$2.622^{+0.088}_{-0.10}$	$H(2.33)$	286^{+40}_{-30}
$\Omega_{\rm m}h^2$	$0.217^{+0.047}_{-0.064}$	Age/Gyr	$12.4^{+1.2}_{-2.0}$	$D_{\rm M}(2.33)$	5182^{+510}_{-830}
$\Omega_\nu h^2$	< 0.0300	z_*	1095.2 ± 3.6	$f\sigma_8(0.15)$	$0.466^{+0.045}_{-0.026}$
$\Omega_{\rm m}h^3$	$0.149^{+0.035}_{-0.067}$	r_*	$132.1^{+7.4}_{-10}$	$\sigma_8(0.15)$	$0.64^{+0.11}_{-0.13}$
σ_8	$0.70^{+0.11}_{-0.12}$	$100\theta_*$	$1.114^{+0.072}_{-0.063}$	$f\sigma_8(0.38)$	$0.447^{+0.032}_{-0.020}$
S_8	$0.89^{+0.11}_{-0.15}$	$D_{\rm M}(z_*)$/Gpc	$11.9^{+1.0}_{-1.6}$	$\sigma_8(0.38)$	$0.56^{+0.11}_{-0.14}$
$\sigma_8\Omega_{\rm m}^{0.5}$	$0.486^{+0.062}_{-0.080}$	$z_{\rm drag}$	1063.7 ± 3.1	$f\sigma_8(0.51)$	$0.432^{+0.049}_{-0.025}$
$\sigma_8\Omega_{\rm m}^{0.25}$	0.578 ± 0.024	$r_{\rm drag}$	$134.6^{+7.6}_{-11}$	$\sigma_8(0.51)$	$0.52^{+0.10}_{-0.14}$
$\sigma_8/h^{0.5}$	$0.855^{+0.059}_{-0.089}$	$k_{\rm D}$	0.156 ± 0.011	$f\sigma_8(0.61)$	$0.420^{+0.061}_{-0.031}$
$r_{\rm drag}h$	92^{+20}_{-30}	$100\theta_{\rm D}$	0.1703 ± 0.0094	$\sigma_8(0.61)$	$0.490^{+0.098}_{-0.14}$
$\langle d^2\rangle^{1/2}$	2.487 ± 0.059	$z_{\rm eq}$	4647^{+900}_{-1000}	$f\sigma_8(2.33)$	$0.250^{+0.052}_{-0.077}$
$z_{\rm re}$	$8.94^{+0.87}_{-0.75}$	$k_{\rm eq}$	$0.0143^{+0.0027}_{-0.0033}$	$\sigma_8(2.33)$	$0.253^{+0.051}_{-0.086}$
$10^9 A_{\rm s}$	$1.92^{+0.29}_{-0.43}$	$100\theta_{\rm eq}$	$0.712^{+0.059}_{-0.093}$	$\chi^2_{\rm lensing}$	10.8 ± 2.2
$10^9 A_{\rm s}e^{-2\tau}$	$1.72^{+0.26}_{-0.38}$	$100\theta_{\rm s,eq}$	$0.397^{+0.032}_{-0.048}$	$\chi^2_{\rm prior}$	2.0 ± 2.0

$\bar{\chi}^2_{\rm eff} = 12.85$; $\Delta\bar{\chi}^2_{\rm eff} = 0.82$; $R - 1 = 0.00368$

6.77 base_mnu_lensing_lenspriors_post_acc

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02220 ± 0.00051	D_{40}	1084^{+200}_{-300}	$H(0.15)$	77 ± 20
$\boldsymbol{\Omega_c h^2}$	$0.167^{+0.036}_{-0.042}$	D_{220}	4594^{+900}_{-2000}	$D_{\rm M}(0.15)$	655^{+80}_{-200}
$\boldsymbol{100\theta_{MC}}$	$1.111^{+0.074}_{-0.063}$	D_{810}	1913^{+500}_{-700}	$H(0.38)$	91^{+10}_{-20}
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 2.78	D_{1420}	565^{+200}_{-300}	$D_{\rm M}(0.38)$	1509^{+200}_{-400}
$\boldsymbol{\ln(10^{10} A_s)}$	2.96 ± 0.19	D_{2000}	168^{+40}_{-80}	$H(0.51)$	100 ± 10
$\boldsymbol{n_s}$	0.959 ± 0.020	$n_{\rm s,0.002}$	0.959 ± 0.020	$D_{\rm M}(0.51)$	1927^{+200}_{-500}
H_0	—	$Y_{\rm P}$	$0.24531^{+0.00023}_{-0.00020}$	$H(0.61)$	108 ± 10
Ω_Λ	$0.45^{+0.37}_{-0.11}$	$Y_{\rm P}^{\rm BBN}$	$0.24664^{+0.00023}_{-0.00020}$	$D_{\rm M}(0.61)$	2221^{+300}_{-600}
$\Omega_{\rm m}$	$0.55^{+0.11}_{-0.37}$	10^5D/H	$2.621^{+0.089}_{-0.10}$	$H(2.33)$	283^{+40}_{-30}
$\Omega_{\rm m}h^2$	$0.212^{+0.045}_{-0.063}$	Age/Gyr	$12.5^{+1.3}_{-2.0}$	$D_{\rm M}(2.33)$	5209^{+520}_{-850}
$\Omega_\nu h^2$	< 0.0299	z_*	1094.8 ± 3.5	$f\sigma_8(0.15)$	$0.457^{+0.044}_{-0.025}$
$\Omega_{\rm m}h^3$	$0.146^{+0.035}_{-0.067}$	r_*	$133.1^{+7.5}_{-10}$	$\sigma_8(0.15)$	0.63 ± 0.11
σ_8	0.70 ± 0.11	$100\theta_*$	$1.112^{+0.074}_{-0.063}$	$f\sigma_8(0.38)$	$0.440^{+0.030}_{-0.018}$
S_8	$0.86^{+0.10}_{-0.14}$	$D_{\rm M}(z_*)$/Gpc	$12.0^{+1.0}_{-1.7}$	$\sigma_8(0.38)$	$0.55^{+0.11}_{-0.13}$
$\sigma_8\Omega_{\rm m}^{0.5}$	$0.474^{+0.057}_{-0.077}$	$z_{\rm drag}$	1063.4 ± 3.0	$f\sigma_8(0.51)$	$0.427^{+0.047}_{-0.022}$
$\sigma_8\Omega_{\rm m}^{0.25}$	0.568 ± 0.022	$r_{\rm drag}$	$135.5^{+7.7}_{-11}$	$\sigma_8(0.51)$	$0.51^{+0.10}_{-0.13}$
$\sigma_8/h^{0.5}$	$0.845^{+0.056}_{-0.089}$	$k_{\rm D}$	0.155 ± 0.011	$f\sigma_8(0.61)$	$0.416^{+0.059}_{-0.029}$
$r_{\rm drag}h$	93^{+20}_{-30}	$100\theta_{\rm D}$	$0.170^{+0.011}_{-0.0094}$	$\sigma_8(0.61)$	$0.488^{+0.099}_{-0.13}$
$\langle d^2\rangle^{1/2}$	2.496 ± 0.059	$z_{\rm eq}$	4526^{+800}_{-1000}	$f\sigma_8(2.33)$	$0.250^{+0.053}_{-0.075}$
$z_{\rm re}$	$8.86^{+0.86}_{-0.75}$	$k_{\rm eq}$	$0.0139^{+0.0026}_{-0.0032}$	$\sigma_8(2.33)$	$0.252^{+0.052}_{-0.084}$
$10^9 A_{\rm s}$	$1.97^{+0.29}_{-0.44}$	$100\theta_{\rm eq}$	$0.724^{+0.058}_{-0.094}$	$\chi^2_{\rm lensing}$	10.3 ± 2.2
$10^9 A_{\rm s} e^{-2\tau}$	$1.76^{+0.26}_{-0.39}$	$100\theta_{\rm s,eq}$	$0.404^{+0.031}_{-0.049}$	$\chi^2_{\rm prior}$	2.0 ± 2.0

$\bar{\chi}^2_{\rm eff} = 12.32$; $\Delta\bar{\chi}^2_{\rm eff} = 0.74$; $R - 1 = 0.00185$

6.78 base_mnu_lensing_lenspriors_post_agr2acc

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02220 ± 0.00051	D_{40}	1101^{+200}_{-400}	$H(0.15)$	77^{+10}_{-20}
$\boldsymbol{\Omega_c h^2}$	0.166 ± 0.036	D_{220}	4682^{+900}_{-2000}	$D_{\rm M}(0.15)$	652^{+80}_{-200}
$\boldsymbol{100\theta_{MC}}$	$1.113^{+0.073}_{-0.062}$	D_{810}	1938^{+500}_{-800}	$H(0.38)$	91^{+10}_{-20}
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 2.98	D_{1420}	570^{+200}_{-300}	$D_{\rm M}(0.38)$	1504^{+200}_{-400}
$\boldsymbol{\ln(10^{10} A_s)}$	2.97 ± 0.19	D_{2000}	169^{+40}_{-80}	$H(0.51)$	100 ± 10
$\boldsymbol{n_s}$	0.959 ± 0.020	$n_{\rm s,0.002}$	0.959 ± 0.020	$D_{\rm M}(0.51)$	1920^{+200}_{-500}
H_0	—	$Y_{\rm P}$	$0.24531^{+0.00023}_{-0.00020}$	$H(0.61)$	108 ± 10
Ω_Λ	$0.46^{+0.38}_{-0.11}$	$Y_{\rm P}^{\rm BBN}$	$0.24664^{+0.00023}_{-0.00020}$	$D_{\rm M}(0.61)$	2214^{+300}_{-600}
$\Omega_{\rm m}$	$0.54^{+0.11}_{-0.38}$	10^5D/H	$2.620^{+0.089}_{-0.10}$	$H(2.33)$	283^{+40}_{-30}
$\Omega_{\rm m} h^2$	0.212 ± 0.050	Age/Gyr	$12.5^{+1.2}_{-2.0}$	$D_{\rm M}(2.33)$	5199^{+510}_{-830}
$\Omega_\nu h^2$	$0.0242^{+0.0079}_{-0.024}$	z_*	$1094.8^{+4.2}_{-3.6}$	$f\sigma_8(0.15)$	$0.448^{+0.044}_{-0.022}$
$\Omega_{\rm m} h^3$	$0.147^{+0.036}_{-0.066}$	r_*	$133.2^{+6.9}_{-11}$	$\sigma_8(0.15)$	0.62 ± 0.11
σ_8	0.68 ± 0.10	$100\theta_*$	$1.113^{+0.073}_{-0.062}$	$f\sigma_8(0.38)$	$0.432^{+0.027}_{-0.014}$
S_8	$0.85^{+0.10}_{-0.14}$	$D_{\rm M}(z_*)$/Gpc	$12.0^{+1.0}_{-1.7}$	$\sigma_8(0.38)$	$0.54^{+0.11}_{-0.13}$
$\sigma_8 \Omega_{\rm m}^{0.5}$	$0.464^{+0.056}_{-0.078}$	$z_{\rm drag}$	$1063.4^{+3.5}_{-3.0}$	$f\sigma_8(0.51)$	$0.419^{+0.044}_{-0.018}$
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.558 ± 0.017	$r_{\rm drag}$	$135.7^{+7.0}_{-12}$	$\sigma_8(0.51)$	$0.51^{+0.10}_{-0.13}$
$\sigma_8 / h^{0.5}$	$0.830^{+0.041}_{-0.085}$	$k_{\rm D}$	$0.155^{+0.013}_{-0.010}$	$f\sigma_8(0.61)$	$0.409^{+0.056}_{-0.025}$
$r_{\rm drag} h$	94^{+20}_{-30}	$100\theta_{\rm D}$	$0.170^{+0.010}_{-0.0092}$	$\sigma_8(0.61)$	$0.481^{+0.097}_{-0.13}$
$\langle d^2 \rangle^{1/2}$	2.499 ± 0.059	$z_{\rm eq}$	4496 ± 900	$f\sigma_8(2.33)$	$0.246^{+0.053}_{-0.075}$
$z_{\rm re}$	$8.87^{+0.93}_{-0.69}$	$k_{\rm eq}$	0.0138 ± 0.0027	$\sigma_8(2.33)$	$0.249^{+0.051}_{-0.084}$
$10^9 A_{\rm s}$	$1.99^{+0.30}_{-0.47}$	$100\theta_{\rm eq}$	$0.730^{+0.056}_{-0.10}$	$\chi^2_{\rm lensing}$	12.6 ± 2.1
$10^9 A_{\rm s} e^{-2\tau}$	$1.78^{+0.27}_{-0.42}$	$100\theta_{\rm s,eq}$	$0.407^{+0.031}_{-0.053}$	$\chi^2_{\rm prior}$	2.1 ± 2.1

$\bar{\chi}^2_{\rm eff} = 14.67$; $\Delta\bar{\chi}^2_{\rm eff} = 0.70$; $R - 1 = 0.00159$

6.79 base_mnu_lensing_lenspriors_post_takahashi

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02220 ± 0.00050	D_{40}	1095^{+200}_{-300}	$H(0.15)$	77 ± 20
$\boldsymbol{\Omega_c h^2}$	0.164 ± 0.034	D_{220}	4668^{+900}_{-2000}	$D_{\rm M}(0.15)$	655^{+80}_{-200}
$\boldsymbol{100\theta_{MC}}$	$1.110^{+0.074}_{-0.063}$	D_{810}	1939^{+500}_{-700}	$H(0.38)$	91^{+10}_{-20}
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 2.83	D_{1420}	572^{+200}_{-300}	$D_{\rm M}(0.38)$	1510^{+300}_{-400}
$\boldsymbol{\ln(10^{10} A_s)}$	2.97 ± 0.18	D_{2000}	170^{+40}_{-80}	$H(0.51)$	100 ± 10
$\boldsymbol{n_s}$	0.959 ± 0.020	$n_{\rm s,0.002}$	0.959 ± 0.020	$D_{\rm M}(0.51)$	1929^{+300}_{-500}
H_0	—	$Y_{\rm P}$	$0.24531^{+0.00023}_{-0.00020}$	$H(0.61)$	107 ± 10
Ω_Λ	$0.46^{+0.36}_{-0.11}$	$Y_{\rm P}^{\rm BBN}$	$0.24664^{+0.00023}_{-0.00020}$	$D_{\rm M}(0.61)$	2225^{+300}_{-600}
$\Omega_{\rm m}$	$0.54^{+0.11}_{-0.36}$	10^5D/H	2.621 ± 0.096	$H(2.33)$	281^{+40}_{-30}
$\Omega_{\rm m}h^2$	$0.209^{+0.045}_{-0.059}$	Age/Gyr	$12.5^{+1.3}_{-2.0}$	$D_{\rm M}(2.33)$	5228^{+510}_{-850}
$\Omega_\nu h^2$	< 0.0304	z_*	1094.6 ± 3.4	$f\sigma_8(0.15)$	$0.449^{+0.043}_{-0.028}$
$\Omega_{\rm m}h^3$	$0.144^{+0.034}_{-0.065}$	r_*	$133.6^{+7.2}_{-10}$	$\sigma_8(0.15)$	$0.63^{+0.11}_{-0.13}$
σ_8	$0.69^{+0.10}_{-0.12}$	$100\theta_*$	$1.111^{+0.074}_{-0.063}$	$f\sigma_8(0.38)$	$0.434^{+0.032}_{-0.021}$
S_8	$0.85^{+0.10}_{-0.14}$	$D_{\rm M}(z_*)$/Gpc	$12.1^{+1.0}_{-1.6}$	$\sigma_8(0.38)$	$0.55^{+0.11}_{-0.13}$
$\sigma_8\Omega_{\rm m}^{0.5}$	$0.465^{+0.056}_{-0.075}$	$z_{\rm drag}$	1063.2 ± 2.9	$f\sigma_8(0.51)$	$0.422^{+0.047}_{-0.024}$
$\sigma_8\Omega_{\rm m}^{0.25}$	0.560 ± 0.025	$r_{\rm drag}$	$136.1^{+7.3}_{-10}$	$\sigma_8(0.51)$	$0.51^{+0.10}_{-0.13}$
$\sigma_8/h^{0.5}$	$0.836^{+0.060}_{-0.096}$	$k_{\rm D}$	0.154 ± 0.010	$f\sigma_8(0.61)$	$0.411^{+0.059}_{-0.030}$
$r_{\rm drag}h$	93^{+20}_{-30}	$100\theta_{\rm D}$	$0.170^{+0.011}_{-0.0093}$	$\sigma_8(0.61)$	$0.484^{+0.097}_{-0.13}$
$\langle d^2\rangle^{1/2}$	2.498 ± 0.058	$z_{\rm eq}$	4448 ± 800	$f\sigma_8(2.33)$	$0.248^{+0.052}_{-0.075}$
$z_{\rm re}$	$8.82^{+0.84}_{-0.71}$	$k_{\rm eq}$	$0.0137^{+0.0026}_{-0.0029}$	$\sigma_8(2.33)$	$0.250^{+0.051}_{-0.084}$
$10^9 A_{\rm s}$	$1.98^{+0.29}_{-0.44}$	$100\theta_{\rm eq}$	$0.732^{+0.054}_{-0.091}$	$\chi^2_{\rm lensing}$	10.1 ± 2.1
$10^9 A_{\rm s}e^{-2\tau}$	$1.77^{+0.26}_{-0.39}$	$100\theta_{\rm s,eq}$	$0.408^{+0.029}_{-0.047}$	$\chi^2_{\rm prior}$	2.1 ± 2.1

$\bar{\chi}^2_{\rm eff} = 12.19$; $\Delta\bar{\chi}^2_{\rm eff} = 0.67$; $R - 1 = 0.00405$

6.80 base_mnu_lensing_lenspriors_post_agr2takahashi

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02220 ± 0.00051	D_{40}	1124^{+200}_{-400}	$H(0.15)$	77 ± 20
$\boldsymbol{\Omega_c h^2}$	0.161 ± 0.034	D_{220}	4816^{+900}_{-2000}	$D_{\rm M}(0.15)$	649^{+90}_{-200}
$\boldsymbol{100\theta_{MC}}$	$1.112^{+0.074}_{-0.061}$	D_{810}	1982^{+500}_{-800}	$H(0.38)$	91^{+10}_{-20}
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 2.99	D_{1420}	583^{+200}_{-300}	$D_{\rm M}(0.38)$	1499^{+300}_{-400}
$\boldsymbol{\ln(10^{10} A_s)}$	2.99 ± 0.19	D_{2000}	173^{+40}_{-90}	$H(0.51)$	100 ± 10
$\boldsymbol{n_s}$	0.959 ± 0.020	$n_{\rm s,0.002}$	0.959 ± 0.020	$D_{\rm M}(0.51)$	1917^{+200}_{-500}
H_0	—	$Y_{\rm P}$	$0.24531^{+0.00023}_{-0.00020}$	$H(0.61)$	107 ± 10
Ω_Λ	$0.48^{+0.35}_{-0.10}$	$Y_{\rm P}^{\rm BBN}$	$0.24664^{+0.00023}_{-0.00020}$	$D_{\rm M}(0.61)$	2211^{+300}_{-600}
$\Omega_{\rm m}$	$0.52^{+0.10}_{-0.35}$	10^5D/H	2.622 ± 0.096	$H(2.33)$	281^{+40}_{-30}
$\Omega_{\rm m} h^2$	0.207 ± 0.048	Age/Gyr	$12.5^{+1.2}_{-2.0}$	$D_{\rm M}(2.33)$	5219^{+500}_{-830}
$\Omega_\nu h^2$	< 0.0321	z_*	$1094.5^{+4.0}_{-3.5}$	$f\sigma_8(0.15)$	$0.438^{+0.042}_{-0.025}$
$\Omega_{\rm m} h^3$	$0.145^{+0.036}_{-0.064}$	r_*	$134.1^{+6.8}_{-11}$	$\sigma_8(0.15)$	$0.62^{+0.11}_{-0.12}$
σ_8	$0.68^{+0.10}_{-0.12}$	$100\theta_*$	$1.112^{+0.074}_{-0.061}$	$f\sigma_8(0.38)$	$0.425^{+0.028}_{-0.016}$
S_8	$0.825^{+0.095}_{-0.14}$	$D_{\rm M}(z_*)$/Gpc	$12.1^{+1.0}_{-1.6}$	$\sigma_8(0.38)$	$0.54^{+0.11}_{-0.13}$
$\sigma_8 \Omega_{\rm m}^{0.5}$	$0.452^{+0.052}_{-0.074}$	$z_{\rm drag}$	$1063.1^{+3.4}_{-2.9}$	$f\sigma_8(0.51)$	$0.414^{+0.044}_{-0.019}$
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.548 ± 0.020	$r_{\rm drag}$	$136.6^{+6.9}_{-11}$	$\sigma_8(0.51)$	$0.50^{+0.10}_{-0.13}$
$\sigma_8 / h^{0.5}$	$0.820^{+0.049}_{-0.092}$	$k_{\rm D}$	$0.154^{+0.012}_{-0.010}$	$f\sigma_8(0.61)$	$0.404^{+0.055}_{-0.026}$
$r_{\rm drag} h$	95^{+20}_{-30}	$100\theta_{\rm D}$	$0.170^{+0.011}_{-0.0090}$	$\sigma_8(0.61)$	$0.479^{+0.097}_{-0.13}$
$\langle d^2 \rangle^{1/2}$	2.502 ± 0.058	$z_{\rm eq}$	4381 ± 800	$f\sigma_8(2.33)$	$0.246^{+0.052}_{-0.073}$
$z_{\rm re}$	$8.80^{+0.89}_{-0.68}$	$k_{\rm eq}$	0.0135 ± 0.0026	$\sigma_8(2.33)$	$0.249^{+0.051}_{-0.083}$
$10^9 A_{\rm s}$	$2.02^{+0.30}_{-0.47}$	$100\theta_{\rm eq}$	$0.742^{+0.052}_{-0.097}$	$\chi^2_{\rm lensing}$	12.5 ± 2.0
$10^9 A_{\rm s} e^{-2\tau}$	$1.81^{+0.27}_{-0.42}$	$100\theta_{\rm s,eq}$	$0.413^{+0.028}_{-0.050}$	$\chi^2_{\rm prior}$	2.1 ± 2.1

$\bar{\chi}^2_{\rm eff} = 14.57$; $\Delta\bar{\chi}^2_{\rm eff} = 0.65$; $R - 1 = 0.00607$

6.81 base_mnu_lensing_lenspriors_post_Apr6

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02220 ± 0.00050	D_{40}	1076^{+200}_{-300}	$H(0.15)$	76^{+10}_{-20}
$\boldsymbol{\Omega_c h^2}$	$0.167^{+0.032}_{-0.045}$	D_{220}	4571^{+1000}_{-2000}	$D_{\rm M}(0.15)$	658^{+80}_{-200}
$\boldsymbol{100\theta_{MC}}$	$1.108^{+0.072}_{-0.064}$	D_{810}	1910^{+500}_{-700}	$H(0.38)$	91^{+10}_{-20}
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 2.58	D_{1420}	565^{+200}_{-300}	$D_{\rm M}(0.38)$	1516^{+200}_{-400}
$\boldsymbol{\ln(10^{10} A_s)}$	2.95 ± 0.19	D_{2000}	168^{+40}_{-80}	$H(0.51)$	100 ± 10
$\boldsymbol{n_s}$	0.959 ± 0.020	$n_{\rm s,0.002}$	0.959 ± 0.020	$D_{\rm M}(0.51)$	1935^{+200}_{-500}
H_0	—	$Y_{\rm P}$	$0.24531^{+0.00023}_{-0.00020}$	$H(0.61)$	107 ± 10
Ω_Λ	$0.45^{+0.37}_{-0.11}$	$Y_{\rm P}^{\rm BBN}$	$0.24664^{+0.00023}_{-0.00020}$	$D_{\rm M}(0.61)$	2231^{+300}_{-600}
$\Omega_{\rm m}$	$0.55^{+0.11}_{-0.37}$	10^5D/H	$2.622^{+0.089}_{-0.10}$	$H(2.33)$	282 ± 30
$\Omega_{\rm m}h^2$	$0.210^{+0.039}_{-0.066}$	Age/Gyr	$12.6^{+1.3}_{-2.0}$	$D_{\rm M}(2.33)$	5233^{+520}_{-850}
$\Omega_\nu h^2$	< 0.0277	z_*	$1094.7^{+3.2}_{-4.3}$	$f\sigma_8(0.15)$	$0.460^{+0.044}_{-0.025}$
$\Omega_{\rm m}h^3$	$0.144^{+0.033}_{-0.066}$	r_*	133.3 ± 8.2	$\sigma_8(0.15)$	0.64 ± 0.11
σ_8	0.70 ± 0.11	$100\theta_*$	$1.109^{+0.072}_{-0.064}$	$f\sigma_8(0.38)$	$0.443^{+0.031}_{-0.018}$
S_8	$0.87^{+0.11}_{-0.14}$	$D_{\rm M}(z_*)$/Gpc	$12.1^{+1.1}_{-1.6}$	$\sigma_8(0.38)$	$0.56^{+0.11}_{-0.13}$
$\sigma_8\Omega_{\rm m}^{0.5}$	$0.477^{+0.058}_{-0.078}$	$z_{\rm drag}$	1063.3 ± 3.0	$f\sigma_8(0.51)$	$0.430^{+0.048}_{-0.023}$
$\sigma_8\Omega_{\rm m}^{0.25}$	0.572 ± 0.023	$r_{\rm drag}$	135.8 ± 8.4	$\sigma_8(0.51)$	$0.52^{+0.10}_{-0.14}$
$\sigma_8/h^{0.5}$	$0.853^{+0.064}_{-0.082}$	$k_{\rm D}$	$0.155^{+0.010}_{-0.013}$	$f\sigma_8(0.61)$	$0.419^{+0.059}_{-0.029}$
$r_{\rm drag}h$	93^{+20}_{-30}	$100\theta_{\rm D}$	0.1697 ± 0.0095	$\sigma_8(0.61)$	$0.49^{+0.10}_{-0.13}$
$\langle d^2 \rangle^{1/2}$	2.486 ± 0.058	$z_{\rm eq}$	4512^{+800}_{-1000}	$f\sigma_8(2.33)$	$0.252^{+0.054}_{-0.077}$
$z_{\rm re}$	8.83 ± 0.74	$k_{\rm eq}$	$0.0139^{+0.0023}_{-0.0034}$	$\sigma_8(2.33)$	$0.254^{+0.052}_{-0.086}$
$10^9 A_{\rm s}$	$1.95^{+0.30}_{-0.42}$	$100\theta_{\rm eq}$	$0.723^{+0.063}_{-0.092}$	$\chi^2_{\rm lensing}$	9.2 ± 2.3
$10^9 A_{\rm s} e^{-2\tau}$	$1.75^{+0.27}_{-0.38}$	$100\theta_{\rm s,eq}$	$0.403^{+0.034}_{-0.048}$	$\chi^2_{\rm prior}$	2.0 ± 2.1

$\bar{\chi}^2_{\rm eff} = 11.22$; $\Delta\bar{\chi}^2_{\rm eff} = 0.82$; $R - 1 = 0.00322$

6.82 base_mnu_lensing_lenspriors_theta

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\mathbf{\Omega_b h^2}$	0.02221	0.02221 ± 0.00050	D_{40}	1365	1107^{+100}_{-300}	$H(0.15)$	69.8	$61.9^{+3.3}_{-9.1}$
$\mathbf{\Omega_c h^2}$	0.1191	$0.142^{+0.025}_{-0.021}$	D_{220}	6388	5103^{+700}_{-2000}	$D_{\rm M}(0.15)$	673	798^{+200}_{-70}
$\mathbf{100\theta_{MC}}$	1.04089	1.04089 ± 0.00060	D_{810}	2807	2374^{+300}_{-600}	$H(0.38)$	80.54	$76.4^{+1.3}_{-4.3}$
$\mathbf{\Sigma m_\nu}$ [eV]	0.46	$1.27^{+0.57}_{-1.1}$	D_{1420}	900	775^{+100}_{-200}	$D_{\rm M}(0.38)$	1595	1807^{+300}_{-100}
$\mathbf{\ln(10^{10} A_s)}$	3.145	$2.98^{+0.15}_{-0.19}$	D_{2000}	253.6	220^{+30}_{-50}	$H(0.51)$	87.63	$85.43^{+0.40}_{-2.5}$
$\mathbf{n_s}$	0.9603	0.961 ± 0.020	$n_{\rm s,0.002}$	0.9603	0.961 ± 0.020	$D_{\rm M}(0.51)$	2059	2291^{+300}_{-100}
H_0	64.1	< 57.9	$Y_{\rm P}$	0.245331	$0.24532^{+0.00022}_{-0.00020}$	$H(0.61)$	93.53	$92.75^{+0.69}_{-1.6}$
Ω_Λ	0.644	$0.29^{+0.46}_{-0.20}$	$Y_{\rm P}^{\rm BBN}$	0.246658	$0.24664^{+0.00023}_{-0.00020}$	$D_{\rm M}(0.61)$	2390	2628^{+290}_{-120}
$\Omega_{\rm m}$	0.356	$0.71^{+0.20}_{-0.46}$	10^5D/H	2.615	2.619 ± 0.095	$H(2.33)$	238.1	258^{+24}_{-16}
$\Omega_{\rm m}h^2$	0.1462	$0.178^{+0.037}_{-0.026}$	Age/Gyr	14.010	$14.25^{+0.30}_{-0.14}$	$D_{\rm M}(2.33)$	5855	5940^{+110}_{-44}
$\Omega_\nu h^2$	0.0049	$0.0136^{+0.0061}_{-0.012}$	z_*	1090.12	$1092.5^{+2.5}_{-2.1}$	$f\sigma_8(0.15)$	0.4567	$0.477^{+0.030}_{-0.015}$
$\Omega_{\rm m}h^3$	0.09369	0.0928 ± 0.0021	r_*	144.7	$138.7^{+4.3}_{-7.2}$	$\sigma_8(0.15)$	0.696	$0.579^{+0.066}_{-0.14}$
σ_8	0.757	$0.646^{+0.065}_{-0.14}$	$100\theta_*$	1.04127	1.04136 ± 0.00061	$f\sigma_8(0.38)$	0.4653	$0.435^{+0.039}_{-0.023}$
S_8	0.825	$0.934^{+0.13}_{-0.089}$	$D_{\rm M}(z_*)$/Gpc	13.89	$13.31^{+0.42}_{-0.69}$	$\sigma_8(0.38)$	0.614	$0.497^{+0.062}_{-0.14}$
$\sigma_8\Omega_{\rm m}^{0.5}$	0.452	$0.512^{+0.070}_{-0.049}$	$z_{\rm drag}$	1059.59	1061.5 ± 2.1	$f\sigma_8(0.51)$	0.460	0.413 ± 0.041
$\sigma_8\Omega_{\rm m}^{0.25}$	0.5849	0.570 ± 0.022	$r_{\rm drag}$	147.4	$141.2^{+4.5}_{-7.4}$	$\sigma_8(0.51)$	0.573	$0.460^{+0.058}_{-0.14}$
$\sigma_8/h^{0.5}$	0.946	$0.882^{+0.055}_{-0.072}$	$k_{\rm D}$	0.1405	$0.1477^{+0.0080}_{-0.0062}$	$f\sigma_8(0.61)$	0.452	0.397 ± 0.047
$r_{\rm drag}h$	94.4	76^{+8}_{-20}	$100\theta_{\rm D}$	0.16092	0.1600 ± 0.0011	$\sigma_8(0.61)$	0.545	$0.435^{+0.056}_{-0.13}$
$\langle d^2\rangle^{1/2}$	2.529	2.525 ± 0.051	$z_{\rm eq}$	3376	3935^{+600}_{-500}	$f\sigma_8(2.33)$	0.278	$0.219^{+0.030}_{-0.071}$
$z_{\rm re}$	7.829	$8.30^{+0.52}_{-0.41}$	$k_{\rm eq}$	0.01031	$0.0120^{+0.0018}_{-0.0016}$	$\sigma_8(2.33)$	0.282	$0.220^{+0.030}_{-0.075}$
$10^9 A_{\rm s}$	2.322	$1.99^{+0.23}_{-0.42}$	$100\theta_{\rm eq}$	0.818	$0.742^{+0.048}_{-0.093}$	$\chi^2_{\rm lensing}$	7.47	9.8 ± 2.0
$10^9 A_{\rm s}e^{-2\tau}$	2.080	$1.79^{+0.21}_{-0.38}$	$100\theta_{\rm s,eq}$	0.4521	$0.412^{+0.025}_{-0.049}$	$\chi^2_{\rm prior}$	0.00	3.0 ± 2.4

Best-fit $\chi^2_{\rm eff} = 7.48$; $\Delta\chi^2_{\rm eff} = -0.10$; $\bar{\chi}^2_{\rm eff} = 12.80$; $\Delta\bar{\chi}^2_{\rm eff} = 0.19$; $R - 1 = 0.00091$
$\chi^2_{\rm eff}$: CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8_CMBmarged: 7.47 (Δ -0.10)

6.83 base_mnu_lensing_lenspriors_theta_post_Pantheon

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02220 ± 0.00049	D_{220}	6816^{+560}_{-750}	$H(0.38)$	82.8 ± 1.0
$\boldsymbol{\Omega_c h^2}$	0.1129 ± 0.0043	D_{810}	2944^{+230}_{-310}	$D_{\rm M}(0.38)$	1529 ± 27
$\boldsymbol{100\theta_{MC}}$	1.04087 ± 0.00061	D_{1420}	940^{+76}_{-100}	$H(0.51)$	89.32 ± 0.87
$\boldsymbol{\Sigma m_\nu}$ [eV]	$0.28^{+0.10}_{-0.25}$	D_{2000}	264^{+22}_{-30}	$D_{\rm M}(0.51)$	1983 ± 32
$\boldsymbol{\ln(10^{10} A_s)}$	$3.182^{+0.081}_{-0.093}$	$n_{\rm s,0.002}$	0.963 ± 0.019	$H(0.61)$	$94.80^{+0.82}_{-0.73}$
$\boldsymbol{n_s}$	0.963 ± 0.019	$Y_{\rm P}$	0.24531 ± 0.00021	$D_{\rm M}(0.61)$	2308 ± 35
H_0	67.8 ± 1.6	$Y_{\rm P}^{\rm BBN}$	0.24664 ± 0.00021	$H(2.33)$	232.9 ± 2.7
Ω_Λ	0.699 ± 0.021	10^5D/H	2.620 ± 0.093	$D_{\rm M}(2.33)$	5801^{+37}_{-45}
$\Omega_{\rm m}$	0.301 ± 0.021	Age/Gyr	$13.894^{+0.086}_{-0.10}$	$f\sigma_8(0.15)$	0.441 ± 0.015
$\Omega_{\rm m}h^2$	0.1381 ± 0.0039	z_*	1089.55 ± 0.67	$\sigma_8(0.15)$	$0.732^{+0.028}_{-0.023}$
$\Omega_\nu h^2$	$0.0030^{+0.0011}_{-0.0027}$	r_*	146.4 ± 1.2	$f\sigma_8(0.38)$	$0.461^{+0.014}_{-0.012}$
$\Omega_{\rm m}h^3$	0.0936 ± 0.0018	$100\theta_*$	1.04119 ± 0.00062	$\sigma_8(0.38)$	$0.650^{+0.025}_{-0.022}$
σ_8	$0.790^{+0.029}_{-0.024}$	$D_{\rm M}(z_*)$/Gpc	14.06 ± 0.12	$f\sigma_8(0.51)$	$0.462^{+0.014}_{-0.012}$
S_8	0.790 ± 0.029	$z_{\rm drag}$	1059.0 ± 1.2	$\sigma_8(0.51)$	$0.609^{+0.024}_{-0.021}$
$\sigma_8\Omega_{\rm m}^{0.5}$	0.433 ± 0.016	$r_{\rm drag}$	149.2 ± 1.4	$f\sigma_8(0.61)$	$0.458^{+0.013}_{-0.011}$
$\sigma_8\Omega_{\rm m}^{0.25}$	$0.585^{+0.020}_{-0.017}$	$k_{\rm D}$	0.1386 ± 0.0016	$\sigma_8(0.61)$	$0.580^{+0.023}_{-0.020}$
$\sigma_8/h^{0.5}$	$0.959^{+0.031}_{-0.026}$	$100\theta_{\rm D}$	0.16121 ± 0.00073	$f\sigma_8(2.33)$	0.296 ± 0.010
$r_{\rm drag}h$	101.2 ± 2.8	$z_{\rm eq}$	3228 ± 110	$\sigma_8(2.33)$	0.304 ± 0.012
$\langle d^2\rangle^{1/2}$	2.523 ± 0.051	$k_{\rm eq}$	0.00985 ± 0.00032	$\chi^2_{\rm lensing}$	9.2 ± 1.7
$z_{\rm re}$	7.71 ± 0.12	$100\theta_{\rm eq}$	0.846 ± 0.021	$\chi^2_{\rm JLA}$	1036.9 ± 1.3
$10^9 A_{\rm s}$	$2.42^{+0.18}_{-0.24}$	$100\theta_{\rm s,eq}$	0.467 ± 0.011	$\chi^2_{\rm prior}$	3.0 ± 2.4
$10^9 A_{\rm s}e^{-2\tau}$	$2.17^{+0.16}_{-0.21}$	$H(0.15)$	73.0 ± 1.4		
D_{40}	1443^{+110}_{-130}	$D_{\rm M}(0.15)$	640 ± 13		

$\bar{\chi}^2_{\rm eff} = 1049.01$; $\Delta\bar{\chi}^2_{\rm eff} = 0.03$; $R - 1 = 0.00929$

6.84 base_mnu_lensing_lenspriors_theta_post_agr2

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02221 ± 0.00051	D_{40}	1140^{+200}_{-300}	$H(0.15)$	$62.1^{+3.5}_{-9.4}$
$\boldsymbol{\Omega_c h^2}$	$0.140^{+0.026}_{-0.021}$	D_{220}	5286^{+800}_{-2000}	$D_{\rm M}(0.15)$	796^{+200}_{-100}
$\boldsymbol{100\theta_{MC}}$	1.04089 ± 0.00060	D_{810}	2438^{+300}_{-600}	$H(0.38)$	$76.4^{+1.6}_{-4.5}$
$\boldsymbol{\Sigma m_\nu}$ [eV]	$1.36^{+0.77}_{-1.0}$	D_{1420}	795^{+100}_{-200}	$D_{\rm M}(0.38)$	1805^{+300}_{-100}
$\boldsymbol{\ln(10^{10} A_s)}$	$3.00^{+0.16}_{-0.20}$	D_{2000}	225^{+30}_{-50}	$H(0.51)$	$85.40^{+0.34}_{-2.6}$
$\boldsymbol{n_s}$	0.960 ± 0.020	$n_{\rm s,0.002}$	0.960 ± 0.020	$D_{\rm M}(0.51)$	2288^{+300}_{-100}
H_0	< 58.5	$Y_{\rm P}$	$0.24532^{+0.00023}_{-0.00020}$	$H(0.61)$	$92.66^{+0.61}_{-1.8}$
Ω_Λ	$0.29^{+0.48}_{-0.21}$	$Y_{\rm P}^{\rm BBN}$	$0.24664^{+0.00023}_{-0.00021}$	$D_{\rm M}(0.61)$	2625^{+300}_{-100}
$\Omega_{\rm m}$	$0.71^{+0.21}_{-0.48}$	10^5D/H	2.620 ± 0.096	$H(2.33)$	257^{+26}_{-19}
$\Omega_{\rm m} h^2$	$0.176^{+0.041}_{-0.027}$	Age/Gyr	$14.28^{+0.31}_{-0.13}$	$D_{\rm M}(2.33)$	5949^{+110}_{-37}
$\Omega_\nu h^2$	$0.0146^{+0.0083}_{-0.011}$	z_*	$1092.3^{+2.7}_{-2.2}$	$f\sigma_8(0.15)$	$0.466^{+0.030}_{-0.011}$
$\Omega_{\rm m} h^3$	0.0920 ± 0.0019	r_*	$139.2^{+4.4}_{-7.7}$	$\sigma_8(0.15)$	$0.571^{+0.065}_{-0.14}$
σ_8	$0.637^{+0.062}_{-0.14}$	$100\theta_*$	1.04139 ± 0.00061	$f\sigma_8(0.38)$	$0.427^{+0.037}_{-0.021}$
S_8	$0.912^{+0.14}_{-0.087}$	$D_{\rm M}(z_*)$/Gpc	$13.37^{+0.43}_{-0.74}$	$\sigma_8(0.38)$	$0.492^{+0.061}_{-0.14}$
$\sigma_8 \Omega_{\rm m}^{0.5}$	$0.500^{+0.076}_{-0.048}$	$z_{\rm drag}$	1061.3 ± 2.2	$f\sigma_8(0.51)$	0.406 ± 0.040
$\sigma_8 \Omega_{\rm m}^{0.25}$	$0.559^{+0.016}_{-0.020}$	$r_{\rm drag}$	$141.8^{+4.6}_{-7.8}$	$\sigma_8(0.51)$	$0.455^{+0.059}_{-0.14}$
$\sigma_8/h^{0.5}$	$0.867^{+0.047}_{-0.074}$	$k_{\rm D}$	$0.1471^{+0.0085}_{-0.0065}$	$f\sigma_8(0.61)$	0.390 ± 0.047
$r_{\rm drag} h$	77^{+9}_{-20}	$100\theta_{\rm D}$	0.1600 ± 0.0012	$\sigma_8(0.61)$	$0.430^{+0.056}_{-0.13}$
$\langle d^2 \rangle^{1/2}$	2.531 ± 0.049	$z_{\rm eq}$	3867^{+600}_{-500}	$f\sigma_8(2.33)$	$0.217^{+0.031}_{-0.072}$
$z_{\rm re}$	$8.27^{+0.56}_{-0.42}$	$k_{\rm eq}$	$0.0118^{+0.0020}_{-0.0016}$	$\sigma_8(2.33)$	$0.218^{+0.030}_{-0.075}$
$10^9 A_{\rm s}$	$2.04^{+0.25}_{-0.45}$	$100\theta_{\rm eq}$	$0.753^{+0.048}_{-0.099}$	$\chi^2_{\rm lensing}$	12.1 ± 2.0
$10^9 A_{\rm s} e^{-2\tau}$	$1.83^{+0.22}_{-0.40}$	$100\theta_{\rm s,eq}$	$0.418^{+0.026}_{-0.052}$	$\chi^2_{\rm prior}$	3.0 ± 2.4

$\bar{\chi}^2_{\rm eff} = 15.15$; $\Delta\bar{\chi}^2_{\rm eff} = 0.28$; $R - 1 = 0.00151$

6.85 base_mnu_lensing_lenspriors_theta_post_conslmin40

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02221 ± 0.00050	D_{40}	1131^{+200}_{-300}	$H(0.15)$	$62.1^{+3.4}_{-9.3}$
$\boldsymbol{\Omega_c h^2}$	0.141 ± 0.022	D_{220}	5233^{+800}_{-2000}	$D_{\rm M}(0.15)$	794^{+200}_{-80}
$\boldsymbol{100\theta_{MC}}$	1.04089 ± 0.00060	D_{810}	2421^{+300}_{-600}	$H(0.38)$	$76.5^{+1.3}_{-4.4}$
$\boldsymbol{\Sigma m_\nu}$ [eV]	$1.27^{+0.56}_{-1.1}$	D_{1420}	790^{+100}_{-200}	$D_{\rm M}(0.38)$	1801^{+300}_{-100}
$\boldsymbol{\ln(10^{10} A_s)}$	$3.00^{+0.16}_{-0.20}$	D_{2000}	224^{+30}_{-50}	$H(0.51)$	$85.46^{+0.46}_{-2.6}$
$\boldsymbol{n_s}$	0.961 ± 0.020	$n_{\rm s,0.002}$	0.961 ± 0.020	$D_{\rm M}(0.51)$	2284^{+300}_{-100}
H_0	< 58.3	$Y_{\rm P}$	$0.24532^{+0.00023}_{-0.00020}$	$H(0.61)$	$92.73^{+0.73}_{-1.7}$
Ω_Λ	$0.30^{+0.46}_{-0.20}$	$Y_{\rm P}^{\rm BBN}$	$0.24664^{+0.00023}_{-0.00020}$	$D_{\rm M}(0.61)$	2621^{+290}_{-120}
$\Omega_{\rm m}$	$0.70^{+0.20}_{-0.46}$	10^5D/H	2.620 ± 0.094	$H(2.33)$	257^{+23}_{-17}
$\Omega_{\rm m} h^2$	$0.177^{+0.035}_{-0.029}$	Age/Gyr	$14.25^{+0.30}_{-0.15}$	$D_{\rm M}(2.33)$	5940^{+110}_{-48}
$\Omega_\nu h^2$	$0.0136^{+0.0060}_{-0.011}$	z_*	$1092.4^{+2.5}_{-2.2}$	$f\sigma_8(0.15)$	$0.474^{+0.033}_{-0.016}$
$\Omega_{\rm m} h^3$	$0.0926^{+0.0021}_{-0.0023}$	r_*	$139.0^{+4.7}_{-7.2}$	$\sigma_8(0.15)$	$0.580^{+0.068}_{-0.14}$
σ_8	$0.647^{+0.067}_{-0.14}$	$100\theta_*$	1.04137 ± 0.00061	$f\sigma_8(0.38)$	$0.435^{+0.038}_{-0.023}$
S_8	$0.927^{+0.13}_{-0.094}$	$D_{\rm M}(z_*)$/Gpc	$13.34^{+0.45}_{-0.69}$	$\sigma_8(0.38)$	$0.499^{+0.064}_{-0.14}$
$\sigma_8 \Omega_{\rm m}^{0.5}$	$0.508^{+0.071}_{-0.052}$	$z_{\rm drag}$	1061.4 ± 2.1	$f\sigma_8(0.51)$	$0.413^{+0.055}_{-0.032}$
$\sigma_8 \Omega_{\rm m}^{0.25}$	$0.569^{+0.021}_{-0.024}$	$r_{\rm drag}$	$141.5^{+4.9}_{-7.3}$	$\sigma_8(0.51)$	$0.462^{+0.060}_{-0.14}$
$\sigma_8/h^{0.5}$	$0.881^{+0.056}_{-0.069}$	$k_{\rm D}$	$0.1474^{+0.0079}_{-0.0065}$	$f\sigma_8(0.61)$	0.397 ± 0.047
$r_{\rm drag} h$	77^{+9}_{-20}	$100\theta_{\rm D}$	0.1600 ± 0.0011	$\sigma_8(0.61)$	$0.437^{+0.058}_{-0.13}$
$\langle d^2 \rangle^{1/2}$	2.534 ± 0.061	$z_{\rm eq}$	3903 ± 500	$f\sigma_8(2.33)$	$0.221^{+0.031}_{-0.071}$
$z_{\rm re}$	$8.28^{+0.52}_{-0.42}$	$k_{\rm eq}$	0.0120 ± 0.0016	$\sigma_8(2.33)$	$0.221^{+0.031}_{-0.075}$
$10^9 A_{\rm s}$	$2.03^{+0.25}_{-0.45}$	$100\theta_{\rm eq}$	$0.747^{+0.052}_{-0.095}$	$\chi^2_{\rm lensing}$	9.7 ± 1.9
$10^9 A_{\rm s} e^{-2\tau}$	$1.82^{+0.23}_{-0.40}$	$100\theta_{\rm s,eq}$	$0.415^{+0.028}_{-0.050}$	$\chi^2_{\rm prior}$	3.0 ± 2.4

$\bar{\chi}^2_{\rm eff} = 12.69$; $\Delta\bar{\chi}^2_{\rm eff} = 0.12$; $R - 1 = 0.00184$

6.86 base_mnu_lensing_lenspriors_theta_post_agrlmax425

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02220 ± 0.00050	D_{40}	1098^{+100}_{-300}	$H(0.15)$	$61.8^{+3.3}_{-9.0}$
$\boldsymbol{\Omega_c h^2}$	0.143 ± 0.021	D_{220}	5051^{+800}_{-2000}	$D_{\rm M}(0.15)$	798^{+200}_{-80}
$\boldsymbol{100\theta_{MC}}$	1.04089 ± 0.00060	D_{810}	2353^{+300}_{-500}	$H(0.38)$	$76.4^{+1.3}_{-4.2}$
$\boldsymbol{\Sigma m_\nu}$ [eV]	$1.24^{+0.58}_{-0.99}$	D_{1420}	769^{+100}_{-200}	$D_{\rm M}(0.38)$	1808^{+300}_{-100}
$\boldsymbol{\ln(10^{10} A_s)}$	$2.97^{+0.15}_{-0.19}$	D_{2000}	218^{+30}_{-40}	$H(0.51)$	$85.42^{+0.43}_{-2.4}$
$\boldsymbol{n_s}$	0.960 ± 0.020	$n_{\rm s,0.002}$	0.960 ± 0.020	$D_{\rm M}(0.51)$	2291^{+300}_{-100}
H_0	< 57.8	$Y_{\rm P}$	$0.24532^{+0.00023}_{-0.00020}$	$H(0.61)$	$92.76^{+0.70}_{-1.6}$
Ω_Λ	$0.29^{+0.45}_{-0.20}$	$Y_{\rm P}^{\rm BBN}$	$0.24664^{+0.00023}_{-0.00020}$	$D_{\rm M}(0.61)$	2628^{+280}_{-120}
$\Omega_{\rm m}$	$0.71^{+0.20}_{-0.45}$	10^5D/H	2.620 ± 0.094	$H(2.33)$	259^{+22}_{-17}
$\Omega_{\rm m} h^2$	0.179 ± 0.028	Age/Gyr	$14.25^{+0.28}_{-0.14}$	$D_{\rm M}(2.33)$	5937^{+100}_{-44}
$\Omega_\nu h^2$	$0.0133^{+0.0063}_{-0.011}$	z_*	$1092.5^{+2.4}_{-2.2}$	$f\sigma_8(0.15)$	$0.479^{+0.030}_{-0.015}$
$\Omega_{\rm m} h^3$	0.0930 ± 0.0021	r_*	$138.5^{+4.5}_{-6.9}$	$\sigma_8(0.15)$	$0.580^{+0.067}_{-0.14}$
σ_8	$0.648^{+0.066}_{-0.13}$	$100\theta_*$	1.04136 ± 0.00061	$f\sigma_8(0.38)$	$0.438^{+0.039}_{-0.022}$
S_8	$0.939^{+0.12}_{-0.091}$	$D_{\rm M}(z_*)$/Gpc	$13.30^{+0.43}_{-0.66}$	$\sigma_8(0.38)$	$0.499^{+0.062}_{-0.14}$
$\sigma_8 \Omega_{\rm m}^{0.5}$	$0.514^{+0.068}_{-0.050}$	$z_{\rm drag}$	1061.5 ± 2.1	$f\sigma_8(0.51)$	$0.415^{+0.055}_{-0.031}$
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.573 ± 0.021	$r_{\rm drag}$	$141.1^{+4.7}_{-7.0}$	$\sigma_8(0.51)$	$0.461^{+0.059}_{-0.13}$
$\sigma_8/h^{0.5}$	$0.885^{+0.056}_{-0.068}$	$k_{\rm D}$	$0.1478^{+0.0076}_{-0.0064}$	$f\sigma_8(0.61)$	0.399 ± 0.047
$r_{\rm drag} h$	76^{+9}_{-20}	$100\theta_{\rm D}$	0.1600 ± 0.0011	$\sigma_8(0.61)$	$0.436^{+0.057}_{-0.13}$
$\langle d^2 \rangle^{1/2}$	2.522 ± 0.051	$z_{\rm eq}$	3952 ± 500	$f\sigma_8(2.33)$	$0.220^{+0.031}_{-0.070}$
$z_{\rm re}$	$8.31^{+0.50}_{-0.42}$	$k_{\rm eq}$	0.0121 ± 0.0016	$\sigma_8(2.33)$	$0.220^{+0.030}_{-0.073}$
$10^9 A_{\rm s}$	$1.98^{+0.24}_{-0.41}$	$100\theta_{\rm eq}$	$0.739^{+0.049}_{-0.090}$	$\chi^2_{\rm lensing}$	7.6 ± 2.0
$10^9 A_{\rm s} e^{-2\tau}$	$1.77^{+0.21}_{-0.37}$	$100\theta_{\rm s,eq}$	$0.411^{+0.026}_{-0.047}$	$\chi^2_{\rm prior}$	3.0 ± 2.4

$\bar{\chi}^2_{\rm eff} = 10.54$; $\Delta\bar{\chi}^2_{\rm eff} = 0.01$; $R - 1 = 0.00109$

6.87 base_mnu_lensing_lenspriors_theta_post_ptt

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02220 ± 0.00048	D_{40}	1264^{+200}_{-400}	$H(0.15)$	$62.9^{+3.9}_{-10}$
$\boldsymbol{\Omega_c h^2}$	$0.134^{+0.024}_{-0.022}$	D_{220}	5943^{+1000}_{-2000}	$D_{\rm M}(0.15)$	784^{+200}_{-100}
$\boldsymbol{100\theta_{MC}}$	1.04088 ± 0.00059	D_{810}	2695^{+400}_{-700}	$H(0.38)$	$76.8^{+1.4}_{-5.2}$
$\boldsymbol{\Sigma m_\nu}$ [eV]	$1.43^{+0.51}_{-1.3}$	D_{1420}	875^{+100}_{-200}	$D_{\rm M}(0.38)$	1786^{+300}_{-100}
$\boldsymbol{\ln(10^{10} A_s)}$	$3.09^{+0.17}_{-0.22}$	D_{2000}	248^{+30}_{-60}	$H(0.51)$	$85.46^{+0.35}_{-3.1}$
$\boldsymbol{n_s}$	0.961 ± 0.020	$n_{\rm s,0.002}$	0.961 ± 0.020	$D_{\rm M}(0.51)$	2268^{+300}_{-100}
H_0	< 59.2	$Y_{\rm P}$	0.24531 ± 0.00021	$H(0.61)$	$92.53^{+0.54}_{-2.1}$
Ω_Λ	$0.33^{+0.46}_{-0.21}$	$Y_{\rm P}^{\rm BBN}$	0.24664 ± 0.00021	$D_{\rm M}(0.61)$	2605^{+300}_{-100}
$\Omega_{\rm m}$	$0.67^{+0.21}_{-0.46}$	10^5D/H	2.620 ± 0.092	$H(2.33)$	254^{+23}_{-18}
$\Omega_{\rm m} h^2$	$0.171^{+0.035}_{-0.030}$	Age/Gyr	$14.30^{+0.35}_{-0.15}$	$D_{\rm M}(2.33)$	5958^{+130}_{-44}
$\Omega_\nu h^2$	$0.0154^{+0.0055}_{-0.014}$	z_*	$1091.9^{+2.7}_{-2.3}$	$f\sigma_8(0.15)$	$0.459^{+0.037}_{-0.020}$
$\Omega_{\rm m} h^3$	0.0911 ± 0.0021	r_*	$140.5^{+5.1}_{-7.4}$	$\sigma_8(0.15)$	$0.580^{+0.078}_{-0.14}$
σ_8	$0.644^{+0.075}_{-0.14}$	$100\theta_*$	1.04140 ± 0.00060	$f\sigma_8(0.38)$	$0.426^{+0.034}_{-0.023}$
S_8	$0.89^{+0.13}_{-0.11}$	$D_{\rm M}(z_*)$/Gpc	$13.49^{+0.49}_{-0.71}$	$\sigma_8(0.38)$	$0.501^{+0.073}_{-0.14}$
$\sigma_8 \Omega_{\rm m}^{0.5}$	$0.488^{+0.071}_{-0.058}$	$z_{\rm drag}$	1061.0 ± 2.2	$f\sigma_8(0.51)$	$0.407^{+0.051}_{-0.039}$
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.555 ± 0.022	$r_{\rm drag}$	$143.1^{+5.3}_{-7.6}$	$\sigma_8(0.51)$	$0.464^{+0.069}_{-0.14}$
$\sigma_8/h^{0.5}$	0.868 ± 0.060	$k_{\rm D}$	$0.1457^{+0.0082}_{-0.0069}$	$f\sigma_8(0.61)$	$0.392^{+0.061}_{-0.050}$
$r_{\rm drag} h$	79^{+10}_{-20}	$100\theta_{\rm D}$	0.1601 ± 0.0012	$\sigma_8(0.61)$	$0.439^{+0.066}_{-0.14}$
$\langle d^2 \rangle^{1/2}$	$2.596^{+0.063}_{-0.056}$	$z_{\rm eq}$	3727^{+600}_{-500}	$f\sigma_8(2.33)$	$0.223^{+0.036}_{-0.075}$
$z_{\rm re}$	$8.20^{+0.54}_{-0.44}$	$k_{\rm eq}$	$0.0114^{+0.0018}_{-0.0016}$	$\sigma_8(2.33)$	$0.224^{+0.035}_{-0.080}$
$10^9 A_{\rm s}$	$2.24^{+0.29}_{-0.54}$	$100\theta_{\rm eq}$	$0.775^{+0.057}_{-0.10}$	$\chi^2_{\rm lensing}$	11.1 ± 1.9
$10^9 A_{\rm s} e^{-2\tau}$	$2.01^{+0.26}_{-0.48}$	$100\theta_{\rm s,eq}$	$0.429^{+0.031}_{-0.053}$	$\chi^2_{\rm prior}$	2.9 ± 2.4

$\bar{\chi}^2_{\rm eff} = 13.98$; $\Delta\bar{\chi}^2_{\rm eff} = 0.12$; $R - 1 = 0.03431$

6.88 base_mnu_lensing_lenspriors_theta_post_bfcl

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02221 ± 0.00050	D_{40}	1078^{+100}_{-300}	$H(0.15)$	$61.8^{+3.5}_{-9.0}$
$\boldsymbol{\Omega_c h^2}$	0.143 ± 0.021	D_{220}	4963^{+800}_{-2000}	$D_{\rm M}(0.15)$	798^{+200}_{-90}
$\boldsymbol{100\theta_{MC}}$	1.04089 ± 0.00060	D_{810}	2314^{+300}_{-500}	$H(0.38)$	$76.4^{+1.3}_{-4.2}$
$\boldsymbol{\Sigma m_\nu}$ [eV]	$1.25^{+0.58}_{-1.0}$	D_{1420}	756^{+100}_{-200}	$D_{\rm M}(0.38)$	1808^{+300}_{-100}
$\boldsymbol{\ln(10^{10} A_s)}$	$2.95^{+0.15}_{-0.19}$	D_{2000}	215^{+30}_{-40}	$H(0.51)$	$85.43^{+0.45}_{-2.4}$
$\boldsymbol{n_s}$	0.961 ± 0.020	$n_{\rm s,0.002}$	0.961 ± 0.020	$D_{\rm M}(0.51)$	2292^{+300}_{-100}
H_0	< 57.9	$Y_{\rm P}$	0.24532 ± 0.00022	$H(0.61)$	$92.77^{+0.72}_{-1.6}$
Ω_Λ	$0.28^{+0.46}_{-0.20}$	$Y_{\rm P}^{\rm BBN}$	0.24664 ± 0.00022	$D_{\rm M}(0.61)$	2629^{+280}_{-120}
$\Omega_{\rm m}$	$0.72^{+0.20}_{-0.46}$	10^5D/H	2.619 ± 0.095	$H(2.33)$	259^{+23}_{-16}
$\Omega_{\rm m}h^2$	$0.179^{+0.035}_{-0.028}$	Age/Gyr	$14.25^{+0.29}_{-0.14}$	$D_{\rm M}(2.33)$	5938^{+100}_{-46}
$\Omega_\nu h^2$	$0.0134^{+0.0062}_{-0.011}$	z_*	$1092.5^{+2.4}_{-2.2}$	$f\sigma_8(0.15)$	$0.475^{+0.029}_{-0.015}$
$\Omega_{\rm m}h^3$	0.0929 ± 0.0021	r_*	$138.5^{+4.5}_{-7.0}$	$\sigma_8(0.15)$	$0.574^{+0.068}_{-0.14}$
σ_8	$0.641^{+0.066}_{-0.13}$	$100\theta_*$	1.04136 ± 0.00061	$f\sigma_8(0.38)$	$0.433^{+0.039}_{-0.023}$
S_8	$0.930^{+0.12}_{-0.090}$	$D_{\rm M}(z_*)$/Gpc	$13.30^{+0.43}_{-0.67}$	$\sigma_8(0.38)$	$0.493^{+0.063}_{-0.14}$
$\sigma_8\Omega_{\rm m}^{0.5}$	$0.510^{+0.068}_{-0.049}$	$z_{\rm drag}$	1061.5 ± 2.1	$f\sigma_8(0.51)$	0.411 ± 0.041
$\sigma_8\Omega_{\rm m}^{0.25}$	$0.567^{+0.020}_{-0.023}$	$r_{\rm drag}$	$141.1^{+4.7}_{-7.1}$	$\sigma_8(0.51)$	$0.456^{+0.060}_{-0.13}$
$\sigma_8/h^{0.5}$	$0.877^{+0.055}_{-0.069}$	$k_{\rm D}$	$0.1479^{+0.0077}_{-0.0064}$	$f\sigma_8(0.61)$	0.394 ± 0.047
$r_{\rm drag}h$	76^{+9}_{-20}	$100\theta_{\rm D}$	0.1600 ± 0.0011	$\sigma_8(0.61)$	$0.431^{+0.058}_{-0.13}$
$\langle d^2\rangle^{1/2}$	2.499 ± 0.048	$z_{\rm eq}$	3952 ± 500	$f\sigma_8(2.33)$	$0.217^{+0.031}_{-0.069}$
$z_{\rm re}$	$8.31^{+0.50}_{-0.42}$	$k_{\rm eq}$	0.0121 ± 0.0016	$\sigma_8(2.33)$	$0.218^{+0.031}_{-0.073}$
$10^9 A_{\rm s}$	$1.94^{+0.24}_{-0.40}$	$100\theta_{\rm eq}$	$0.739^{+0.049}_{-0.090}$	$\chi^2_{\rm lensing}$	9.96 ± 1.9
$10^9 A_{\rm s}e^{-2\tau}$	$1.74^{+0.21}_{-0.36}$	$100\theta_{\rm s,eq}$	$0.411^{+0.026}_{-0.048}$	$\chi^2_{\rm prior}$	3.0 ± 2.4

$\bar{\chi}^2_{\rm eff} = 12.95$; $\Delta\bar{\chi}^2_{\rm eff} = 0.10$; $R - 1 = 0.00197$

6.89 base_mnu_lensing_lenspriors_theta_post_agr2bfcl

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02220 ± 0.00051	D_{40}	1111^{+200}_{-300}	$H(0.15)$	$62.1^{+3.6}_{-9.4}$
$\boldsymbol{\Omega_c h^2}$	$0.140^{+0.025}_{-0.022}$	D_{220}	5147^{+800}_{-2000}	$D_{\rm M}(0.15)$	795^{+200}_{-100}
$\boldsymbol{100\theta_{MC}}$	1.04089 ± 0.00060	D_{810}	2378^{+300}_{-600}	$H(0.38)$	$76.4^{+1.7}_{-4.4}$
$\boldsymbol{\Sigma m_\nu}$ [eV]	$1.33^{+0.69}_{-1.0}$	D_{1420}	775^{+100}_{-200}	$D_{\rm M}(0.38)$	1804^{+300}_{-100}
$\boldsymbol{\ln(10^{10} A_s)}$	$2.98^{+0.16}_{-0.19}$	D_{2000}	220^{+30}_{-50}	$H(0.51)$	$85.41^{+0.41}_{-2.6}$
$\boldsymbol{n_s}$	0.960 ± 0.020	$n_{\rm s,0.002}$	0.960 ± 0.020	$D_{\rm M}(0.51)$	2287^{+300}_{-100}
H_0	< 58.6	$Y_{\rm P}$	0.24532 ± 0.00022	$H(0.61)$	$92.67^{+0.65}_{-1.7}$
Ω_Λ	$0.29^{+0.47}_{-0.21}$	$Y_{\rm P}^{\rm BBN}$	0.24664 ± 0.00022	$D_{\rm M}(0.61)$	2624^{+300}_{-100}
$\Omega_{\rm m}$	$0.71^{+0.21}_{-0.47}$	10^5D/H	2.620 ± 0.096	$H(2.33)$	257^{+25}_{-21}
$\Omega_{\rm m} h^2$	$0.177^{+0.039}_{-0.034}$	Age/Gyr	$14.27^{+0.30}_{-0.13}$	$D_{\rm M}(2.33)$	5946^{+110}_{-40}
$\Omega_\nu h^2$	$0.0143^{+0.0074}_{-0.011}$	z_*	1092.3 ± 2.2	$f\sigma_8(0.15)$	$0.464^{+0.029}_{-0.012}$
$\Omega_{\rm m} h^3$	0.0922 ± 0.0019	r_*	$139.1^{+4.6}_{-7.5}$	$\sigma_8(0.15)$	$0.569^{+0.067}_{-0.14}$
σ_8	$0.634^{+0.064}_{-0.13}$	$100\theta_*$	1.04138 ± 0.00061	$f\sigma_8(0.38)$	$0.425^{+0.037}_{-0.020}$
S_8	$0.908^{+0.13}_{-0.089}$	$D_{\rm M}(z_*)$/Gpc	$13.36^{+0.44}_{-0.72}$	$\sigma_8(0.38)$	$0.489^{+0.064}_{-0.14}$
$\sigma_8 \Omega_{\rm m}^{0.5}$	$0.497^{+0.073}_{-0.049}$	$z_{\rm drag}$	1061.4 ± 2.2	$f\sigma_8(0.51)$	0.404 ± 0.040
$\sigma_8 \Omega_{\rm m}^{0.25}$	$0.557^{+0.016}_{-0.020}$	$r_{\rm drag}$	$141.7^{+4.8}_{-7.6}$	$\sigma_8(0.51)$	$0.453^{+0.061}_{-0.13}$
$\sigma_8/h^{0.5}$	$0.863^{+0.049}_{-0.071}$	$k_{\rm D}$	$0.1472^{+0.0081}_{-0.0067}$	$f\sigma_8(0.61)$	0.389 ± 0.046
$r_{\rm drag} h$	77^{+9}_{-20}	$100\theta_{\rm D}$	0.1600 ± 0.0011	$\sigma_8(0.61)$	$0.428^{+0.059}_{-0.13}$
$\langle d^2 \rangle^{1/2}$	2.505 ± 0.046	$z_{\rm eq}$	3880^{+600}_{-500}	$f\sigma_8(2.33)$	$0.216^{+0.034}_{-0.071}$
$z_{\rm re}$	$8.28^{+0.52}_{-0.44}$	$k_{\rm eq}$	$0.0119^{+0.0019}_{-0.0017}$	$\sigma_8(2.33)$	$0.217^{+0.032}_{-0.074}$
$10^9 A_{\rm s}$	$1.99^{+0.25}_{-0.43}$	$100\theta_{\rm eq}$	$0.750^{+0.050}_{-0.097}$	$\chi^2_{\rm lensing}$	12.3 ± 1.9
$10^9 A_{\rm s} e^{-2\tau}$	$1.78^{+0.23}_{-0.38}$	$100\theta_{\rm s,eq}$	$0.416^{+0.027}_{-0.051}$	$\chi^2_{\rm prior}$	3.0 ± 2.3

$\bar{\chi}^2_{\rm eff} = 15.30$; $\Delta\bar{\chi}^2_{\rm eff} = 0.18$; $R - 1 = 0.00207$

6.90 base_mnu_lensing_lenspriors_theta_post_linear

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02220 ± 0.00049	D_{40}	1075^{+100}_{-300}	$H(0.15)$	$61.4^{+3.1}_{-8.6}$
$\boldsymbol{\Omega_c h^2}$	$0.146^{+0.025}_{-0.021}$	D_{220}	4920^{+700}_{-2000}	$D_{\rm M}(0.15)$	805^{+200}_{-80}
$\boldsymbol{100\theta_{MC}}$	1.04089 ± 0.00060	D_{810}	2311^{+300}_{-500}	$H(0.38)$	$76.2^{+1.2}_{-4.0}$
$\boldsymbol{\Sigma m_\nu}$ [eV]	$1.23^{+0.58}_{-0.99}$	D_{1420}	756^{+90}_{-200}	$D_{\rm M}(0.38)$	1819^{+300}_{-100}
$\boldsymbol{\ln(10^{10} A_s)}$	$2.96^{+0.14}_{-0.19}$	D_{2000}	215^{+30}_{-40}	$H(0.51)$	$85.42^{+0.38}_{-2.3}$
$\boldsymbol{n_s}$	0.961 ± 0.020	$n_{\rm s,0.002}$	0.961 ± 0.020	$D_{\rm M}(0.51)$	2302^{+300}_{-100}
H_0	< 57.0	$Y_{\rm P}$	$0.24531^{+0.00023}_{-0.00020}$	$H(0.61)$	$92.86^{+0.76}_{-1.5}$
Ω_Λ	$0.26^{+0.47}_{-0.21}$	$Y_{\rm P}^{\rm BBN}$	$0.24664^{+0.00023}_{-0.00020}$	$D_{\rm M}(0.61)$	2639^{+270}_{-110}
$\Omega_{\rm m}$	$0.74^{+0.21}_{-0.47}$	10^5D/H	2.620 ± 0.094	$H(2.33)$	260^{+24}_{-15}
$\Omega_{\rm m} h^2$	$0.181^{+0.038}_{-0.024}$	Age/Gyr	$14.24^{+0.28}_{-0.13}$	$D_{\rm M}(2.33)$	5934^{+99}_{-43}
$\Omega_\nu h^2$	$0.0132^{+0.0062}_{-0.011}$	z_*	$1092.7^{+2.5}_{-2.1}$	$f\sigma_8(0.15)$	$0.487^{+0.030}_{-0.016}$
$\Omega_{\rm m} h^3$	0.0933 ± 0.0022	r_*	$137.9^{+4.2}_{-7.0}$	$\sigma_8(0.15)$	$0.580^{+0.066}_{-0.14}$
σ_8	$0.649^{+0.065}_{-0.13}$	$100\theta_*$	1.04135 ± 0.00061	$f\sigma_8(0.38)$	$0.441^{+0.040}_{-0.024}$
S_8	$0.959^{+0.13}_{-0.089}$	$D_{\rm M}(z_*)$/Gpc	$13.25^{+0.40}_{-0.68}$	$\sigma_8(0.38)$	$0.498^{+0.061}_{-0.14}$
$\sigma_8 \Omega_{\rm m}^{0.5}$	$0.525^{+0.070}_{-0.049}$	$z_{\rm drag}$	$1061.7^{+2.3}_{-2.0}$	$f\sigma_8(0.51)$	0.417 ± 0.041
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.580 ± 0.022	$r_{\rm drag}$	$140.5^{+4.3}_{-7.2}$	$\sigma_8(0.51)$	$0.460^{+0.058}_{-0.13}$
$\sigma_8/h^{0.5}$	$0.892^{+0.056}_{-0.068}$	$k_{\rm D}$	$0.1485^{+0.0080}_{-0.0059}$	$f\sigma_8(0.61)$	0.400 ± 0.047
$r_{\rm drag} h$	75^{+8}_{-20}	$100\theta_{\rm D}$	$0.1600^{+0.0010}_{-0.0011}$	$\sigma_8(0.61)$	$0.434^{+0.055}_{-0.13}$
$\langle d^2 \rangle^{1/2}$	2.518 ± 0.051	$z_{\rm eq}$	4017^{+600}_{-500}	$f\sigma_8(2.33)$	$0.219^{+0.030}_{-0.068}$
$z_{\rm re}$	$8.35^{+0.52}_{-0.40}$	$k_{\rm eq}$	$0.0123^{+0.0019}_{-0.0015}$	$\sigma_8(2.33)$	$0.219^{+0.029}_{-0.071}$
$10^9 A_{\rm s}$	$1.95^{+0.22}_{-0.40}$	$100\theta_{\rm eq}$	$0.730^{+0.047}_{-0.089}$	$\chi^2_{\rm lensing}$	10.2 ± 1.9
$10^9 A_{\rm s} e^{-2\tau}$	$1.75^{+0.20}_{-0.36}$	$100\theta_{\rm s,eq}$	$0.406^{+0.025}_{-0.047}$	$\chi^2_{\rm prior}$	3.0 ± 2.4

$\bar{\chi}^2_{\rm eff} = 13.20$; $\Delta\bar{\chi}^2_{\rm eff} = 0.11$; $R - 1 = 0.00228$

6.91 base_mnu_lensing_lenspriors_theta_post_acc

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02222 ± 0.00050	D_{40}	1110^{+200}_{-300}	$H(0.15)$	$61.9^{+3.4}_{-9.1}$
$\boldsymbol{\Omega_c h^2}$	$0.142^{+0.024}_{-0.022}$	D_{220}	5116^{+800}_{-2000}	$D_{\rm M}(0.15)$	797^{+200}_{-90}
$\boldsymbol{100\theta_{MC}}$	1.04087 ± 0.00060	D_{810}	2381^{+300}_{-600}	$H(0.38)$	$76.4^{+1.3}_{-4.3}$
$\boldsymbol{\Sigma m_\nu}$ [eV]	$1.27^{+0.58}_{-1.1}$	D_{1420}	777^{+100}_{-200}	$D_{\rm M}(0.38)$	1806^{+300}_{-100}
$\boldsymbol{\ln(10^{10} A_s)}$	$2.98^{+0.15}_{-0.19}$	D_{2000}	221^{+30}_{-50}	$H(0.51)$	$85.42^{+0.44}_{-2.5}$
$\boldsymbol{n_s}$	0.961 ± 0.020	$n_{\rm s,0.002}$	0.961 ± 0.020	$D_{\rm M}(0.51)$	2289^{+300}_{-100}
H_0	< 58.0	$Y_{\rm P}$	$0.24532^{+0.00022}_{-0.00020}$	$H(0.61)$	$92.74^{+0.71}_{-1.6}$
Ω_Λ	$0.29^{+0.46}_{-0.20}$	$Y_{\rm P}^{\rm BBN}$	$0.24665^{+0.00023}_{-0.00020}$	$D_{\rm M}(0.61)$	2626^{+280}_{-120}
$\Omega_{\rm m}$	$0.71^{+0.20}_{-0.46}$	10^5D/H	2.617 ± 0.094	$H(2.33)$	258^{+23}_{-16}
$\Omega_{\rm m} h^2$	$0.178^{+0.036}_{-0.027}$	Age/Gyr	$14.25^{+0.29}_{-0.14}$	$D_{\rm M}(2.33)$	5940^{+110}_{-45}
$\Omega_\nu h^2$	$0.0136^{+0.0062}_{-0.011}$	z_*	$1092.5^{+2.5}_{-2.2}$	$f\sigma_8(0.15)$	$0.476^{+0.030}_{-0.015}$
$\Omega_{\rm m} h^3$	0.0927 ± 0.0021	r_*	$138.7^{+4.5}_{-7.1}$	$\sigma_8(0.15)$	$0.579^{+0.068}_{-0.14}$
σ_8	$0.646^{+0.067}_{-0.13}$	$100\theta_*$	1.04135 ± 0.00061	$f\sigma_8(0.38)$	$0.435^{+0.038}_{-0.023}$
S_8	$0.932^{+0.13}_{-0.092}$	$D_{\rm M}(z_*)$/Gpc	$13.32^{+0.43}_{-0.68}$	$\sigma_8(0.38)$	$0.497^{+0.064}_{-0.14}$
$\sigma_8 \Omega_{\rm m}^{0.5}$	$0.511^{+0.069}_{-0.050}$	$z_{\rm drag}$	1061.5 ± 2.1	$f\sigma_8(0.51)$	$0.413^{+0.055}_{-0.032}$
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.570 ± 0.021	$r_{\rm drag}$	$141.3^{+4.7}_{-7.2}$	$\sigma_8(0.51)$	$0.460^{+0.061}_{-0.14}$
$\sigma_8/h^{0.5}$	$0.881^{+0.056}_{-0.070}$	$k_{\rm D}$	$0.1477^{+0.0078}_{-0.0063}$	$f\sigma_8(0.61)$	0.397 ± 0.047
$r_{\rm drag} h$	76^{+9}_{-20}	$100\theta_{\rm D}$	0.1600 ± 0.0011	$\sigma_8(0.61)$	$0.435^{+0.058}_{-0.13}$
$\langle d^2 \rangle^{1/2}$	2.526 ± 0.051	$z_{\rm eq}$	3928^{+600}_{-500}	$f\sigma_8(2.33)$	$0.219^{+0.032}_{-0.070}$
$z_{\rm re}$	$8.30^{+0.52}_{-0.41}$	$k_{\rm eq}$	$0.0120^{+0.0018}_{-0.0016}$	$\sigma_8(2.33)$	$0.220^{+0.031}_{-0.074}$
$10^9 A_{\rm s}$	$2.00^{+0.24}_{-0.41}$	$100\theta_{\rm eq}$	$0.743^{+0.050}_{-0.091}$	$\chi^2_{\rm lensing}$	9.8 ± 2.0
$10^9 A_{\rm s} e^{-2\tau}$	$1.79^{+0.22}_{-0.37}$	$100\theta_{\rm s,eq}$	$0.412^{+0.027}_{-0.048}$	$\chi^2_{\rm prior}$	3.0 ± 2.4

$\bar{\chi}^2_{\rm eff} = 12.75$; $\Delta\bar{\chi}^2_{\rm eff} = 0.16$; $R - 1 = 0.00245$

6.92 base_mnu_lensing_lenspriors_theta_post_agr2acc

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02222 ± 0.00050	D_{40}	1149^{+200}_{-300}	$H(0.15)$	$62.2^{+3.6}_{-9.6}$
$\boldsymbol{\Omega_c h^2}$	$0.139^{+0.026}_{-0.021}$	D_{220}	5334^{+800}_{-2000}	$D_{\rm M}(0.15)$	793^{+200}_{-80}
$\boldsymbol{100\theta_{MC}}$	1.04088 ± 0.00060	D_{810}	2458^{+300}_{-600}	$H(0.38)$	$76.5^{+1.3}_{-4.6}$
$\boldsymbol{\Sigma m_\nu}$ [eV]	$1.36^{+0.70}_{-1.1}$	D_{1420}	801^{+100}_{-200}	$D_{\rm M}(0.38)$	1800^{+300}_{-100}
$\boldsymbol{\ln(10^{10} A_s)}$	$3.01^{+0.16}_{-0.20}$	D_{2000}	227^{+30}_{-50}	$H(0.51)$	$85.41^{+0.37}_{-2.7}$
$\boldsymbol{n_s}$	0.960 ± 0.020	$n_{\rm s,0.002}$	0.960 ± 0.020	$D_{\rm M}(0.51)$	2283^{+300}_{-100}
H_0	< 58.6	$Y_{\rm P}$	$0.24532^{+0.00022}_{-0.00020}$	$H(0.61)$	$92.64^{+0.63}_{-1.8}$
Ω_Λ	$0.30^{+0.47}_{-0.21}$	$Y_{\rm P}^{\rm BBN}$	$0.24665^{+0.00022}_{-0.00020}$	$D_{\rm M}(0.61)$	2621^{+300}_{-100}
$\Omega_{\rm m}$	$0.70^{+0.21}_{-0.47}$	10^5D/H	2.617 ± 0.094	$H(2.33)$	256^{+25}_{-20}
$\Omega_{\rm m} h^2$	$0.176^{+0.039}_{-0.030}$	Age/Gyr	$14.28^{+0.32}_{-0.13}$	$D_{\rm M}(2.33)$	5949^{+120}_{-38}
$\Omega_\nu h^2$	$0.0146^{+0.0075}_{-0.011}$	z_*	$1092.2^{+2.6}_{-2.2}$	$f\sigma_8(0.15)$	$0.464^{+0.030}_{-0.012}$
$\Omega_{\rm m} h^3$	0.0920 ± 0.0019	r_*	$139.4^{+4.6}_{-7.6}$	$\sigma_8(0.15)$	$0.572^{+0.066}_{-0.14}$
σ_8	$0.637^{+0.063}_{-0.14}$	$100\theta_*$	1.04138 ± 0.00062	$f\sigma_8(0.38)$	$0.426^{+0.037}_{-0.020}$
S_8	$0.907^{+0.13}_{-0.090}$	$D_{\rm M}(z_*)$/Gpc	$13.39^{+0.44}_{-0.73}$	$\sigma_8(0.38)$	$0.493^{+0.063}_{-0.14}$
$\sigma_8 \Omega_{\rm m}^{0.5}$	$0.497^{+0.073}_{-0.049}$	$z_{\rm drag}$	1061.3 ± 2.1	$f\sigma_8(0.51)$	0.406 ± 0.040
$\sigma_8 \Omega_{\rm m}^{0.25}$	$0.558^{+0.016}_{-0.019}$	$r_{\rm drag}$	$142.0^{+4.8}_{-7.7}$	$\sigma_8(0.51)$	$0.456^{+0.060}_{-0.14}$
$\sigma_8/h^{0.5}$	$0.866^{+0.048}_{-0.073}$	$k_{\rm D}$	$0.1470^{+0.0082}_{-0.0066}$	$f\sigma_8(0.61)$	0.390 ± 0.047
$r_{\rm drag} h$	77^{+9}_{-20}	$100\theta_{\rm D}$	0.1600 ± 0.0012	$\sigma_8(0.61)$	$0.431^{+0.057}_{-0.13}$
$\langle d^2 \rangle^{1/2}$	2.533 ± 0.049	$z_{\rm eq}$	3847^{+600}_{-500}	$f\sigma_8(2.33)$	$0.218^{+0.031}_{-0.072}$
$z_{\rm re}$	$8.26^{+0.54}_{-0.42}$	$k_{\rm eq}$	$0.0118^{+0.0019}_{-0.0016}$	$\sigma_8(2.33)$	$0.219^{+0.031}_{-0.076}$
$10^9 A_{\rm s}$	$2.06^{+0.25}_{-0.45}$	$100\theta_{\rm eq}$	$0.755^{+0.049}_{-0.098}$	$\chi^2_{\rm lensing}$	12.2 ± 2.0
$10^9 A_{\rm s} e^{-2\tau}$	$1.84^{+0.23}_{-0.40}$	$100\theta_{\rm s,eq}$	$0.419^{+0.026}_{-0.052}$	$\chi^2_{\rm prior}$	3.0 ± 2.4

$\bar{\chi}^2_{\rm eff} = 15.21$; $\Delta\bar{\chi}^2_{\rm eff} = 0.29$; $R - 1 = 0.00402$

6.93 base_mnu_lensing_lenspriors_theta_post_takahashi

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02221 ± 0.00050	D_{40}	1113^{+100}_{-300}	$H(0.15)$	$61.9^{+3.4}_{-9.1}$
$\boldsymbol{\Omega_c h^2}$	$0.141^{+0.024}_{-0.021}$	D_{220}	5145^{+800}_{-2000}	$D_{\rm M}(0.15)$	797^{+200}_{-80}
$\boldsymbol{100\theta_{MC}}$	1.04089 ± 0.00060	D_{810}	2387^{+300}_{-600}	$H(0.38)$	$76.3^{+1.3}_{-4.4}$
$\boldsymbol{\Sigma m_\nu}$ [eV]	$1.31^{+0.56}_{-1.1}$	D_{1420}	779^{+100}_{-200}	$D_{\rm M}(0.38)$	1808^{+300}_{-100}
$\boldsymbol{\ln(10^{10} A_s)}$	$2.98^{+0.15}_{-0.19}$	D_{2000}	221^{+30}_{-50}	$H(0.51)$	$85.35^{+0.43}_{-2.5}$
$\boldsymbol{n_s}$	0.961 ± 0.020	$n_{\rm s,0.002}$	0.961 ± 0.020	$D_{\rm M}(0.51)$	2291^{+300}_{-100}
H_0	< 57.9	$Y_{\rm P}$	$0.24532^{+0.00023}_{-0.00020}$	$H(0.61)$	$92.66^{+0.67}_{-1.7}$
Ω_Λ	$0.29^{+0.46}_{-0.20}$	$Y_{\rm P}^{\rm BBN}$	$0.24664^{+0.00023}_{-0.00021}$	$D_{\rm M}(0.61)$	2629^{+290}_{-120}
$\Omega_{\rm m}$	$0.71^{+0.20}_{-0.46}$	10^5D/H	2.619 ± 0.095	$H(2.33)$	258^{+23}_{-16}
$\Omega_{\rm m} h^2$	$0.178^{+0.036}_{-0.026}$	Age/Gyr	$14.27^{+0.30}_{-0.15}$	$D_{\rm M}(2.33)$	5945^{+110}_{-46}
$\Omega_\nu h^2$	$0.0141^{+0.0060}_{-0.012}$	z_*	$1092.4^{+2.5}_{-2.1}$	$f\sigma_8(0.15)$	$0.472^{+0.029}_{-0.016}$
$\Omega_{\rm m} h^3$	0.0925 ± 0.0022	r_*	$138.9^{+4.4}_{-7.0}$	$\sigma_8(0.15)$	$0.574^{+0.069}_{-0.14}$
σ_8	$0.641^{+0.068}_{-0.14}$	$100\theta_*$	1.04137 ± 0.00061	$f\sigma_8(0.38)$	$0.432^{+0.041}_{-0.024}$
S_8	$0.924^{+0.12}_{-0.085}$	$D_{\rm M}(z_*)$/Gpc	$13.33^{+0.42}_{-0.67}$	$\sigma_8(0.38)$	$0.494^{+0.064}_{-0.14}$
$\sigma_8 \Omega_{\rm m}^{0.5}$	$0.506^{+0.067}_{-0.046}$	$z_{\rm drag}$	1061.4 ± 2.1	$f\sigma_8(0.51)$	0.410 ± 0.042
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.565 ± 0.024	$r_{\rm drag}$	$141.4^{+4.6}_{-7.1}$	$\sigma_8(0.51)$	$0.457^{+0.061}_{-0.14}$
$\sigma_8/h^{0.5}$	$0.875^{+0.061}_{-0.073}$	$k_{\rm D}$	$0.1475^{+0.0078}_{-0.0062}$	$f\sigma_8(0.61)$	0.394 ± 0.048
$r_{\rm drag} h$	76^{+9}_{-20}	$100\theta_{\rm D}$	0.1600 ± 0.0011	$\sigma_8(0.61)$	$0.432^{+0.058}_{-0.13}$
$\langle d^2 \rangle^{1/2}$	2.527 ± 0.051	$z_{\rm eq}$	3907^{+600}_{-500}	$f\sigma_8(2.33)$	$0.218^{+0.032}_{-0.071}$
$z_{\rm re}$	$8.29^{+0.51}_{-0.41}$	$k_{\rm eq}$	$0.0120^{+0.0018}_{-0.0015}$	$\sigma_8(2.33)$	$0.218^{+0.031}_{-0.075}$
$10^9 A_{\rm s}$	$2.00^{+0.24}_{-0.42}$	$100\theta_{\rm eq}$	$0.746^{+0.047}_{-0.090}$	$\chi^2_{\rm lensing}$	9.7 ± 2.0
$10^9 A_{\rm s} e^{-2\tau}$	$1.79^{+0.22}_{-0.38}$	$100\theta_{\rm s,eq}$	$0.414^{+0.025}_{-0.047}$	$\chi^2_{\rm prior}$	3.0 ± 2.4

$\bar{\chi}^2_{\rm eff} = 12.69$; $\Delta\bar{\chi}^2_{\rm eff} = 0.14$; $R - 1 = 0.00149$

6.94 base_mnu_lensing_lenspriors_theta_post_agr2takahashi

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02220 ± 0.00051	D_{40}	1160^{+200}_{-300}	$H(0.15)$	$62.4^{+3.8}_{-9.8}$
$\boldsymbol{\Omega_c h^2}$	$0.137^{+0.024}_{-0.021}$	D_{220}	5400^{+900}_{-2000}	$D_{\rm M}(0.15)$	791^{+200}_{-90}
$\boldsymbol{100\theta_{MC}}$	1.04089 ± 0.00060	D_{810}	2476^{+300}_{-600}	$H(0.38)$	$76.5^{+1.7}_{-4.7}$
$\boldsymbol{\Sigma m_\nu}$ [eV]	$1.38^{+0.48}_{-1.3}$	D_{1420}	806^{+100}_{-200}	$D_{\rm M}(0.38)$	1797^{+300}_{-100}
$\boldsymbol{\ln(10^{10} A_s)}$	$3.01^{+0.16}_{-0.20}$	D_{2000}	228^{+30}_{-50}	$H(0.51)$	$85.39^{+0.47}_{-2.8}$
$\boldsymbol{n_s}$	0.960 ± 0.020	$n_{\rm s,0.002}$	0.960 ± 0.020	$D_{\rm M}(0.51)$	2280^{+300}_{-100}
H_0	< 59.1	$Y_{\rm P}$	0.24531 ± 0.00022	$H(0.61)$	$92.57^{+0.57}_{-1.9}$
Ω_Λ	$0.31^{+0.47}_{-0.20}$	$Y_{\rm P}^{\rm BBN}$	0.24664 ± 0.00022	$D_{\rm M}(0.61)$	2617^{+300}_{-100}
$\Omega_{\rm m}$	$0.69^{+0.20}_{-0.47}$	10^5D/H	2.620 ± 0.096	$H(2.33)$	256^{+24}_{-19}
$\Omega_{\rm m}h^2$	$0.174^{+0.037}_{-0.030}$	Age/Gyr	$14.28^{+0.33}_{-0.14}$	$D_{\rm M}(2.33)$	5953^{+120}_{-42}
$\Omega_\nu h^2$	$0.0149^{+0.0052}_{-0.014}$	z_*	$1092.1^{+2.5}_{-2.3}$	$f\sigma_8(0.15)$	$0.459^{+0.029}_{-0.012}$
$\Omega_{\rm m}h^3$	0.0917 ± 0.0020	r_*	$139.7^{+4.7}_{-7.4}$	$\sigma_8(0.15)$	$0.570^{+0.070}_{-0.15}$
σ_8	$0.634^{+0.068}_{-0.14}$	$100\theta_*$	1.04139 ± 0.00061	$f\sigma_8(0.38)$	$0.423^{+0.039}_{-0.021}$
S_8	$0.894^{+0.13}_{-0.087}$	$D_{\rm M}(z_*)$/Gpc	$13.42^{+0.45}_{-0.71}$	$\sigma_8(0.38)$	$0.491^{+0.066}_{-0.15}$
$\sigma_8\Omega_{\rm m}^{0.5}$	$0.490^{+0.069}_{-0.048}$	$z_{\rm drag}$	1061.2 ± 2.2	$f\sigma_8(0.51)$	0.403 ± 0.041
$\sigma_8\Omega_{\rm m}^{0.25}$	$0.553^{+0.019}_{-0.022}$	$r_{\rm drag}$	$142.3^{+4.9}_{-7.5}$	$\sigma_8(0.51)$	$0.455^{+0.063}_{-0.14}$
$\sigma_8/h^{0.5}$	$0.860^{+0.056}_{-0.074}$	$k_{\rm D}$	$0.1466^{+0.0081}_{-0.0067}$	$f\sigma_8(0.61)$	0.388 ± 0.048
$r_{\rm drag}h$	78^{+10}_{-20}	$100\theta_{\rm D}$	0.1601 ± 0.0012	$\sigma_8(0.61)$	$0.430^{+0.060}_{-0.14}$
$\langle d^2\rangle^{1/2}$	2.534 ± 0.049	$z_{\rm eq}$	3809^{+600}_{-500}	$f\sigma_8(2.33)$	$0.218^{+0.033}_{-0.074}$
$z_{\rm re}$	$8.24^{+0.52}_{-0.44}$	$k_{\rm eq}$	$0.0117^{+0.0018}_{-0.0016}$	$\sigma_8(2.33)$	$0.218^{+0.033}_{-0.078}$
$10^9 A_{\rm s}$	$2.07^{+0.26}_{-0.45}$	$100\theta_{\rm eq}$	$0.761^{+0.050}_{-0.096}$	$\chi^2_{\rm lensing}$	12.2 ± 2.0
$10^9 A_{\rm s}e^{-2\tau}$	$1.85^{+0.24}_{-0.40}$	$100\theta_{\rm s,eq}$	$0.422^{+0.027}_{-0.050}$	$\chi^2_{\rm prior}$	3.0 ± 2.4

$\bar{\chi}^2_{\rm eff} = 15.21$; $\Delta\bar{\chi}^2_{\rm eff} = 0.33$; $R - 1 = 0.00352$

6.95 base_mnu_lensing_lenspriors_theta_post_Apr6

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02221 ± 0.00050	D_{40}	1087^{+100}_{-300}	$H(0.15)$	$61.8^{+3.3}_{-8.9}$
$\boldsymbol{\Omega_c h^2}$	0.144 ± 0.021	D_{220}	4995^{+800}_{-2000}	$D_{\rm M}(0.15)$	798^{+200}_{-80}
$\boldsymbol{100\theta_{MC}}$	1.04089 ± 0.00060	D_{810}	2331^{+300}_{-500}	$H(0.38)$	$76.4^{+1.3}_{-4.1}$
$\boldsymbol{\Sigma m_\nu}$ [eV]	$1.23^{+0.57}_{-1.0}$	D_{1420}	761^{+100}_{-200}	$D_{\rm M}(0.38)$	1808^{+300}_{-100}
$\boldsymbol{\ln(10^{10} A_s)}$	$2.96^{+0.15}_{-0.19}$	D_{2000}	216^{+30}_{-40}	$H(0.51)$	$85.43^{+0.44}_{-2.3}$
$\boldsymbol{n_s}$	0.961 ± 0.020	$n_{\rm s,0.002}$	0.961 ± 0.020	$D_{\rm M}(0.51)$	2291^{+300}_{-100}
H_0	< 57.8	$Y_{\rm P}$	$0.24532^{+0.00023}_{-0.00020}$	$H(0.61)$	$92.78^{+0.71}_{-1.6}$
Ω_Λ	$0.29^{+0.45}_{-0.20}$	$Y_{\rm P}^{\rm BBN}$	$0.24664^{+0.00023}_{-0.00020}$	$D_{\rm M}(0.61)$	2628^{+280}_{-120}
$\Omega_{\rm m}$	$0.71^{+0.20}_{-0.45}$	10^5D/H	2.619 ± 0.095	$H(2.33)$	259^{+22}_{-17}
$\Omega_{\rm m} h^2$	0.179 ± 0.028	Age/Gyr	$14.24^{+0.28}_{-0.14}$	$D_{\rm M}(2.33)$	5936^{+100}_{-45}
$\Omega_\nu h^2$	$0.0132^{+0.0061}_{-0.011}$	z_*	$1092.6^{+2.4}_{-2.2}$	$f\sigma_8(0.15)$	$0.479^{+0.029}_{-0.015}$
$\Omega_{\rm m} h^3$	0.0931 ± 0.0021	r_*	$138.4^{+4.5}_{-6.9}$	$\sigma_8(0.15)$	$0.579^{+0.067}_{-0.14}$
σ_8	$0.647^{+0.066}_{-0.13}$	$100\theta_*$	1.04136 ± 0.00061	$f\sigma_8(0.38)$	$0.437^{+0.039}_{-0.022}$
S_8	$0.939^{+0.12}_{-0.090}$	$D_{\rm M}(z_*)$/Gpc	$13.29^{+0.43}_{-0.66}$	$\sigma_8(0.38)$	$0.498^{+0.063}_{-0.14}$
$\sigma_8 \Omega_{\rm m}^{0.5}$	$0.515^{+0.068}_{-0.050}$	$z_{\rm drag}$	1061.5 ± 2.1	$f\sigma_8(0.51)$	$0.415^{+0.055}_{-0.031}$
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.573 ± 0.021	$r_{\rm drag}$	$141.0^{+4.7}_{-7.0}$	$\sigma_8(0.51)$	$0.460^{+0.059}_{-0.13}$
$\sigma_8/h^{0.5}$	$0.885^{+0.056}_{-0.068}$	$k_{\rm D}$	$0.1479^{+0.0076}_{-0.0064}$	$f\sigma_8(0.61)$	0.398 ± 0.047
$r_{\rm drag} h$	76^{+9}_{-20}	$100\theta_{\rm D}$	0.1600 ± 0.0011	$\sigma_8(0.61)$	$0.435^{+0.057}_{-0.13}$
$\langle d^2 \rangle^{1/2}$	2.514 ± 0.050	$z_{\rm eq}$	3961 ± 500	$f\sigma_8(2.33)$	$0.219^{+0.031}_{-0.069}$
$z_{\rm re}$	$8.31^{+0.50}_{-0.42}$	$k_{\rm eq}$	0.0121 ± 0.0016	$\sigma_8(2.33)$	$0.219^{+0.030}_{-0.073}$
$10^9 A_{\rm s}$	$1.96^{+0.23}_{-0.40}$	$100\theta_{\rm eq}$	$0.738^{+0.049}_{-0.089}$	$\chi^2_{\rm lensing}$	8.5 ± 2.0
$10^9 A_{\rm s} e^{-2\tau}$	$1.76^{+0.21}_{-0.36}$	$100\theta_{\rm s,eq}$	$0.410^{+0.026}_{-0.047}$	$\chi^2_{\rm prior}$	3.0 ± 2.4

$\bar{\chi}^2_{\rm eff} = 11.51$; $\Delta\bar{\chi}^2_{\rm eff} = 0.04$; $R - 1 = 0.00127$

6.96 base_mnu_lensing_lenspriors_BAO

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\mathbf{\Omega_b h^2}$	0.02216	0.02222 ± 0.00050	D_{810}	2656	2165 ± 500	$H(0.51)$	93.4	$98.8^{+5.0}_{-6.4}$
$\mathbf{\Omega_c h^2}$	0.1328	$0.157^{+0.022}_{-0.029}$	D_{1420}	829	629^{+200}_{-200}	$D_{\rm M}(0.51)$	1926	1850 ± 79
$\mathbf{100\theta_{MC}}$	1.0763	$1.109^{+0.038}_{-0.034}$	D_{2000}	240	182^{+50}_{-70}	$H(0.61)$	99.6	$105.8^{+5.7}_{-7.3}$
$\mathbf{\Sigma m_\nu}$ [eV]	0.83	$1.64^{+0.59}_{-1.2}$	$n_{\rm s,0.002}$	0.9616	0.960 ± 0.020	$D_{\rm M}(0.61)$	2237	2144 ± 96
$\mathbf{\ln(10^{10} A_s)}$	3.127	3.03 ± 0.12	$Y_{\rm P}$	0.245310	$0.24532^{+0.00023}_{-0.00019}$	$H(2.33)$	252.3	274^{+21}_{-26}
$\mathbf{n_s}$	0.9616	0.960 ± 0.020	$Y_{\rm P}^{\rm BBN}$	0.246637	$0.24665^{+0.00023}_{-0.00019}$	$D_{\rm M}(2.33)$	5501	5193 ± 320
H_0	68.70	$70.6^{+1.8}_{-2.4}$	10^5D/H	2.625	$2.617^{+0.087}_{-0.10}$	$f\sigma_8(0.15)$	0.4545	0.457 ± 0.018
Ω_Λ	0.6527	$0.609^{+0.053}_{-0.045}$	Age/Gyr	13.16	12.43 ± 0.77	$\sigma_8(0.15)$	0.6990	0.669 ± 0.040
$\Omega_{\rm m}$	0.3473	$0.391^{+0.045}_{-0.053}$	z_*	1091.53	$1093.8^{+2.2}_{-2.8}$	$f\sigma_8(0.38)$	0.4653	0.459 ± 0.018
$\Omega_{\rm m}h^2$	0.1639	$0.196^{+0.028}_{-0.040}$	r_*	141.1	135.4 ± 6.0	$\sigma_8(0.38)$	0.6173	0.587 ± 0.038
$\Omega_\nu h^2$	0.0089	$0.0176^{+0.0064}_{-0.012}$	$100\theta_*$	1.0768	$1.110^{+0.038}_{-0.034}$	$f\sigma_8(0.51)$	0.4607	$0.450^{+0.020}_{-0.017}$
$\Omega_{\rm m}h^3$	0.1126	$0.139^{+0.021}_{-0.034}$	$D_{\rm M}(z_*)$/Gpc	13.10	$12.22^{+0.88}_{-1.0}$	$\sigma_8(0.51)$	0.5769	0.548 ± 0.037
σ_8	0.7590	0.730 ± 0.041	$z_{\rm drag}$	1060.54	1062.6 ± 2.3	$f\sigma_8(0.61)$	0.4538	$0.441^{+0.022}_{-0.018}$
S_8	0.8167	0.830 ± 0.036	$r_{\rm drag}$	143.7	137.9 ± 6.1	$\sigma_8(0.61)$	0.5485	0.520 ± 0.036
$\sigma_8\Omega_{\rm m}^{0.5}$	0.4473	0.454 ± 0.020	$k_{\rm D}$	0.1446	$0.1518^{+0.0068}_{-0.0086}$	$f\sigma_8(2.33)$	0.2828	$0.267^{+0.020}_{-0.017}$
$\sigma_8\Omega_{\rm m}^{0.25}$	0.5827	0.576 ± 0.023	$100\theta_{\rm D}$	0.16590	0.1701 ± 0.0045	$\sigma_8(2.33)$	0.2859	0.269 ± 0.020
$\sigma_8/h^{0.5}$	0.916	0.869 ± 0.056	$z_{\rm eq}$	3703	4271^{+500}_{-700}	$\chi^2_{\rm lensing}$	7.50	9.96 ± 2.1
$r_{\rm drag}h$	98.72	97.2 ± 2.0	$k_{\rm eq}$	0.01132	$0.0131^{+0.0016}_{-0.0022}$	$\chi^2_{\rm 6DF}$	0.086	0.40 ± 0.40
$\langle d^2\rangle^{1/2}$	2.526	2.505 ± 0.054	$100\theta_{\rm eq}$	0.791	$0.745^{+0.047}_{-0.057}$	$\chi^2_{\rm MGS}$	0.982	0.71 ± 0.63
$z_{\rm re}$	8.17	$8.66^{+0.50}_{-0.59}$	$100\theta_{\rm s,eq}$	0.4386	$0.415^{+0.025}_{-0.029}$	$\chi^2_{\rm DR12BAO}$	2.28	3.7 ± 1.6
$10^9 A_{\rm s}$	2.281	$2.08^{+0.22}_{-0.27}$	$H(0.15)$	74.66	$77.5^{+2.6}_{-3.4}$	$\chi^2_{\rm prior}$	0.01	2.0 ± 2.0
$10^9 A_{\rm s}e^{-2\tau}$	2.043	$1.87^{+0.20}_{-0.24}$	$D_{\rm M}(0.15)$	628.6	609^{+22}_{-20}	$\chi^2_{\rm BAO}$	3.35	4.9 ± 1.8
D_{40}	1310	1160^{+200}_{-200}	$H(0.38)$	85.96	$90.4^{+4.0}_{-5.3}$			
D_{220}	5922	5016^{+900}_{-1000}	$D_{\rm M}(0.38)$	1491	1436^{+62}_{-56}			

Best-fit $\chi^2_{\rm eff} = 10.86$; $\Delta\chi^2_{\rm eff} = -2.45$; $\bar{\chi}^2_{\rm eff} = 16.83$; $\Delta\bar{\chi}^2_{\rm eff} = -1.56$; $R - 1 = 0.00375$

$\chi^2_{\rm eff}$: BAO - 6DF: 0.09 (Δ 0.09) MGS: 0.98 (Δ -0.77) DR12BAO: 2.28 (Δ -1.35) CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8_CMBmarged: 7.50 (Δ -0.38)

6.97 base_mnu_lensing_lenspriors_BAO_post_Pantheon

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02223 ± 0.00049	D_{810}	2833 ± 280	$H(0.51)$	$90.8^{+2.1}_{-2.6}$
$\boldsymbol{\Omega_c h^2}$	$0.1202^{+0.0089}_{-0.011}$	D_{1420}	898 ± 97	$D_{\rm M}(0.51)$	1963^{+45}_{-39}
$\boldsymbol{100\theta_{MC}}$	1.054 ± 0.017	D_{2000}	255 ± 27	$H(0.61)$	$96.5^{+2.4}_{-2.9}$
$\boldsymbol{\Sigma m_\nu}$ [eV]	$0.48^{+0.17}_{-0.42}$	$n_{\rm s,0.002}$	0.961 ± 0.019	$D_{\rm M}(0.61)$	2283^{+54}_{-46}
$\boldsymbol{\ln(10^{10} A_s)}$	$3.159^{+0.093}_{-0.082}$	$Y_{\rm P}$	$0.24532^{+0.00023}_{-0.00019}$	$H(2.33)$	$240.0^{+8.3}_{-9.9}$
$\boldsymbol{n_s}$	0.961 ± 0.019	$Y_{\rm P}^{\rm BBN}$	$0.24665^{+0.00023}_{-0.00019}$	$D_{\rm M}(2.33)$	5693 ± 160
H_0	$68.1^{+1.1}_{-1.3}$	10^5D/H	$2.615^{+0.087}_{-0.097}$	$f\sigma_8(0.15)$	0.445 ± 0.016
Ω_Λ	$0.682^{+0.020}_{-0.017}$	Age/Gyr	13.63 ± 0.39	$\sigma_8(0.15)$	$0.718^{+0.029}_{-0.025}$
$\Omega_{\rm m}$	$0.318^{+0.017}_{-0.020}$	z_*	1090.2 ± 1.1	$f\sigma_8(0.38)$	0.462 ± 0.015
$\Omega_{\rm m}h^2$	$0.148^{+0.010}_{-0.013}$	r_*	$144.4^{+2.9}_{-2.5}$	$\sigma_8(0.38)$	$0.637^{+0.026}_{-0.022}$
$\Omega_\nu h^2$	$0.0051^{+0.0018}_{-0.0045}$	$100\theta_*$	1.054 ± 0.017	$f\sigma_8(0.51)$	0.461 ± 0.015
$\Omega_{\rm m}h^3$	$0.1006^{+0.0080}_{-0.011}$	$D_{\rm M}(z_*)$/Gpc	13.71 ± 0.47	$\sigma_8(0.51)$	$0.596^{+0.025}_{-0.021}$
σ_8	$0.777^{+0.030}_{-0.027}$	$z_{\rm drag}$	1059.7 ± 1.4	$f\sigma_8(0.61)$	0.456 ± 0.014
S_8	0.799 ± 0.031	$r_{\rm drag}$	$147.1^{+3.0}_{-2.6}$	$\sigma_8(0.61)$	$0.567^{+0.024}_{-0.020}$
$\sigma_8\Omega_{\rm m}^{0.5}$	0.438 ± 0.017	$k_{\rm D}$	$0.1409^{+0.0027}_{-0.0034}$	$f\sigma_8(2.33)$	$0.291^{+0.010}_{-0.0082}$
$\sigma_8\Omega_{\rm m}^{0.25}$	0.583 ± 0.020	$100\theta_{\rm D}$	0.1629 ± 0.0024	$\sigma_8(2.33)$	$0.297^{+0.013}_{-0.0099}$
$\sigma_8/h^{0.5}$	$0.942^{+0.038}_{-0.032}$	$z_{\rm eq}$	3404^{+210}_{-260}	$\chi^2_{\rm lensing}$	9.4 ± 2.0
$r_{\rm drag}h$	100.2 ± 1.1	$k_{\rm eq}$	$0.01040^{+0.00065}_{-0.00081}$	$\chi^2_{\rm JLA}$	1037.4 ± 1.8
$\langle d^2\rangle^{1/2}$	2.525 ± 0.055	$100\theta_{\rm eq}$	0.826 ± 0.031	$\chi^2_{\rm 6DF}$	0.052 ± 0.071
$z_{\rm re}$	7.87 ± 0.24	$100\theta_{\rm s,eq}$	0.456 ± 0.016	$\chi^2_{\rm MGS}$	1.70 ± 0.65
$10^9 A_{\rm s}$	2.36 ± 0.20	$H(0.15)$	$73.5^{+1.3}_{-1.6}$	$\chi^2_{\rm DR12BAO}$	3.8 ± 1.4
$10^9 A_{\rm s}e^{-2\tau}$	2.12 ± 0.18	$D_{\rm M}(0.15)$	636^{+13}_{-11}	$\chi^2_{\rm prior}$	1.9 ± 1.9
D_{40}	1396 ± 130	$H(0.38)$	$83.9^{+1.8}_{-2.2}$	$\chi^2_{\rm BAO}$	5.6 ± 1.6
D_{220}	6491 ± 700	$D_{\rm M}(0.38)$	1516^{+33}_{-28}		

$\bar{\chi}^2_{\rm eff} = 1054.29$; $\Delta\bar{\chi}^2_{\rm eff} = -0.05$; $R - 1 = 0.03518$

6.98 base_mnu_lensing_lenspriors_BAO_post_agr2

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02222 ± 0.00050	D_{810}	2193 ± 500	$H(0.51)$	$98.7^{+5.3}_{-6.5}$
$\boldsymbol{\Omega_c h^2}$	$0.155^{+0.023}_{-0.029}$	D_{1420}	636^{+200}_{-200}	$D_{\rm M}(0.51)$	1852 ± 82
$\boldsymbol{100\theta_{MC}}$	$1.110^{+0.040}_{-0.033}$	D_{2000}	184^{+50}_{-70}	$H(0.61)$	$105.7^{+6.0}_{-7.4}$
$\boldsymbol{\Sigma m_\nu}$ [eV]	$1.77^{+0.68}_{-1.1}$	$n_{\rm s,0.002}$	0.959 ± 0.020	$D_{\rm M}(0.61)$	2147 ± 100
$\boldsymbol{\ln(10^{10} A_s)}$	3.04 ± 0.12	$Y_{\rm P}$	$0.24532^{+0.00023}_{-0.00019}$	$H(2.33)$	274^{+22}_{-26}
$\boldsymbol{n_s}$	0.959 ± 0.020	$Y_{\rm P}^{\rm BBN}$	$0.24665^{+0.00023}_{-0.00019}$	$D_{\rm M}(2.33)$	5199^{+320}_{-360}
H_0	$70.5^{+1.9}_{-2.4}$	10^5D/H	$2.618^{+0.087}_{-0.10}$	$f\sigma_8(0.15)$	0.448 ± 0.015
Ω_Λ	0.608 ± 0.049	Age/Gyr	$12.44^{+0.76}_{-0.87}$	$\sigma_8(0.15)$	$0.655^{+0.031}_{-0.039}$
$\Omega_{\rm m}$	0.392 ± 0.049	z_*	$1093.7^{+2.3}_{-2.9}$	$f\sigma_8(0.38)$	0.450 ± 0.014
$\Omega_{\rm m}h^2$	$0.196^{+0.030}_{-0.041}$	r_*	135.6 ± 6.2	$\sigma_8(0.38)$	$0.575^{+0.030}_{-0.038}$
$\Omega_\nu h^2$	$0.0190^{+0.0073}_{-0.012}$	$100\theta_*$	$1.111^{+0.040}_{-0.033}$	$f\sigma_8(0.51)$	0.441 ± 0.015
$\Omega_{\rm m}h^3$	$0.139^{+0.023}_{-0.034}$	$D_{\rm M}(z_*)$/Gpc	$12.24^{+0.87}_{-1.1}$	$\sigma_8(0.51)$	$0.536^{+0.029}_{-0.037}$
σ_8	$0.715^{+0.031}_{-0.038}$	$z_{\rm drag}$	1062.5 ± 2.4	$f\sigma_8(0.61)$	0.432 ± 0.016
S_8	0.813 ± 0.031	$r_{\rm drag}$	138.1 ± 6.3	$\sigma_8(0.61)$	$0.509^{+0.028}_{-0.036}$
$\sigma_8\Omega_{\rm m}^{0.5}$	0.445 ± 0.017	$k_{\rm D}$	$0.1516^{+0.0072}_{-0.0087}$	$f\sigma_8(2.33)$	0.262 ± 0.017
$\sigma_8\Omega_{\rm m}^{0.25}$	0.564 ± 0.017	$100\theta_{\rm D}$	$0.1701^{+0.0051}_{-0.0043}$	$\sigma_8(2.33)$	$0.263^{+0.017}_{-0.021}$
$\sigma_8/h^{0.5}$	$0.852^{+0.046}_{-0.056}$	$z_{\rm eq}$	4237^{+500}_{-700}	$\chi^2_{\rm lensing}$	12.3 ± 2.1
$r_{\rm drag}h$	97.2 ± 2.0	$k_{\rm eq}$	$0.0130^{+0.0017}_{-0.0022}$	$\chi^2_{\rm 6DF}$	0.41 ± 0.41
$\langle d^2\rangle^{1/2}$	2.509 ± 0.054	$100\theta_{\rm eq}$	$0.751^{+0.048}_{-0.059}$	$\chi^2_{\rm MGS}$	0.71 ± 0.65
$z_{\rm re}$	8.66 ± 0.55	$100\theta_{\rm s,eq}$	$0.418^{+0.025}_{-0.030}$	$\chi^2_{\rm DR12BAO}$	3.8 ± 1.6
$10^9 A_{\rm s}$	$2.11^{+0.24}_{-0.27}$	$H(0.15)$	$77.4^{+2.7}_{-3.5}$	$\chi^2_{\rm prior}$	2.0 ± 2.0
$10^9 A_{\rm s}e^{-2\tau}$	$1.89^{+0.21}_{-0.24}$	$D_{\rm M}(0.15)$	610^{+23}_{-21}	$\chi^2_{\rm BAO}$	4.9 ± 1.8
D_{40}	1177^{+200}_{-200}	$H(0.38)$	$90.3^{+4.3}_{-5.3}$		
D_{220}	5112^{+1000}_{-1000}	$D_{\rm M}(0.38)$	1438 ± 59		

$\bar{\chi}^2_{\rm eff} = 19.21$; $\Delta\bar{\chi}^2_{\rm eff} = -1.94$; $R - 1 = 0.00433$

6.99 base_mnu_lensing_lenspriors_BAO_post_conslmin40

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02221 ± 0.00050	D_{810}	2202 ± 500	$H(0.51)$	$98.6^{+4.8}_{-6.6}$
$\boldsymbol{\Omega_c h^2}$	$0.155^{+0.021}_{-0.031}$	D_{1420}	642^{+200}_{-200}	$D_{\rm M}(0.51)$	1853^{+89}_{-77}
$\boldsymbol{100\theta_{MC}}$	1.108 ± 0.035	D_{2000}	186^{+60}_{-70}	$H(0.61)$	$105.5^{+5.5}_{-7.5}$
$\boldsymbol{\Sigma m_\nu}$ [eV]	$1.62^{+0.59}_{-1.1}$	$n_{\rm s,0.002}$	0.959 ± 0.020	$D_{\rm M}(0.61)$	2148^{+110}_{-94}
$\boldsymbol{\ln(10^{10} A_s)}$	3.04 ± 0.13	$Y_{\rm P}$	$0.24532^{+0.00023}_{-0.00019}$	$H(2.33)$	273^{+20}_{-26}
$\boldsymbol{n_s}$	0.959 ± 0.020	$Y_{\rm P}^{\rm BBN}$	$0.24665^{+0.00023}_{-0.00020}$	$D_{\rm M}(2.33)$	5206 ± 330
H_0	$70.5^{+1.8}_{-2.5}$	10^5D/H	$2.618^{+0.088}_{-0.10}$	$f\sigma_8(0.15)$	0.456 ± 0.020
Ω_Λ	$0.611^{+0.054}_{-0.043}$	Age/Gyr	12.46 ± 0.78	$\sigma_8(0.15)$	0.668 ± 0.040
$\Omega_{\rm m}$	$0.389^{+0.043}_{-0.054}$	z_*	$1093.7^{+2.1}_{-2.9}$	$f\sigma_8(0.38)$	0.458 ± 0.019
$\Omega_{\rm m}h^2$	$0.195^{+0.027}_{-0.041}$	r_*	$135.6^{+6.7}_{-5.7}$	$\sigma_8(0.38)$	0.587 ± 0.038
$\Omega_\nu h^2$	$0.0175^{+0.0064}_{-0.012}$	$100\theta_*$	1.109 ± 0.035	$f\sigma_8(0.51)$	0.450 ± 0.020
$\Omega_{\rm m}h^3$	$0.138^{+0.020}_{-0.035}$	$D_{\rm M}(z_*)$/Gpc	12.26 ± 0.93	$\sigma_8(0.51)$	0.547 ± 0.037
σ_8	0.729 ± 0.041	$z_{\rm drag}$	$1062.5^{+2.2}_{-2.6}$	$f\sigma_8(0.61)$	$0.441^{+0.022}_{-0.020}$
S_8	0.827 ± 0.040	$r_{\rm drag}$	$138.1^{+6.9}_{-5.9}$	$\sigma_8(0.61)$	0.520 ± 0.035
$\sigma_8\Omega_{\rm m}^{0.5}$	0.453 ± 0.022	$k_{\rm D}$	$0.1515^{+0.0066}_{-0.0089}$	$f\sigma_8(2.33)$	$0.267^{+0.020}_{-0.017}$
$\sigma_8\Omega_{\rm m}^{0.25}$	0.574 ± 0.025	$100\theta_{\rm D}$	0.1699 ± 0.0046	$\sigma_8(2.33)$	0.269 ± 0.020
$\sigma_8/h^{0.5}$	0.869 ± 0.056	$z_{\rm eq}$	4245^{+500}_{-700}	$\chi^2_{\rm lensing}$	9.96 ± 2.2
$r_{\rm drag}h$	97.3 ± 2.0	$k_{\rm eq}$	$0.0130^{+0.0016}_{-0.0023}$	$\chi^2_{\rm 6DF}$	0.39 ± 0.40
$\langle d^2\rangle^{1/2}$	2.511 ± 0.068	$100\theta_{\rm eq}$	$0.748^{+0.051}_{-0.059}$	$\chi^2_{\rm MGS}$	0.73 ± 0.64
$z_{\rm re}$	$8.64^{+0.48}_{-0.60}$	$100\theta_{\rm s,eq}$	0.417 ± 0.028	$\chi^2_{\rm DR12BAO}$	3.7 ± 1.6
$10^9 A_{\rm s}$	$2.10^{+0.25}_{-0.31}$	$H(0.15)$	$77.4^{+2.6}_{-3.6}$	$\chi^2_{\rm prior}$	2.0 ± 2.0
$10^9 A_{\rm s}e^{-2\tau}$	$1.89^{+0.22}_{-0.28}$	$D_{\rm M}(0.15)$	610^{+23}_{-20}	$\chi^2_{\rm BAO}$	4.9 ± 1.8
D_{40}	1176^{+200}_{-200}	$H(0.38)$	$90.2^{+3.9}_{-5.5}$		
D_{220}	5103^{+1000}_{-1000}	$D_{\rm M}(0.38)$	1439^{+64}_{-55}		

$\bar{\chi}^2_{\rm eff} = 16.84$; $\Delta\bar{\chi}^2_{\rm eff} = -1.51$; $R - 1 = 0.00475$

6.100 base_mnu_lensing_lenspriors_BAO_post_agrlmax425

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02221 ± 0.00050	D_{810}	2177 ± 500	$H(0.51)$	$98.5^{+4.7}_{-6.2}$
$\boldsymbol{\Omega_c h^2}$	$0.156^{+0.021}_{-0.028}$	D_{1420}	635^{+200}_{-200}	$D_{\rm M}(0.51)$	1853^{+83}_{-75}
$\boldsymbol{100\theta_{MC}}$	1.107 ± 0.034	D_{2000}	184^{+50}_{-60}	$H(0.61)$	$105.4^{+5.4}_{-7.0}$
$\boldsymbol{\Sigma m_\nu}$ [eV]	$1.54^{+0.56}_{-1.1}$	$n_{\rm s,0.002}$	0.959 ± 0.020	$D_{\rm M}(0.61)$	2149 ± 94
$\boldsymbol{\ln(10^{10} A_s)}$	3.03 ± 0.12	$Y_{\rm P}$	$0.24532^{+0.00023}_{-0.00019}$	$H(2.33)$	273^{+20}_{-25}
$\boldsymbol{n_s}$	0.959 ± 0.020	$Y_{\rm P}^{\rm BBN}$	$0.24665^{+0.00023}_{-0.00019}$	$D_{\rm M}(2.33)$	5209 ± 310
H_0	$70.6^{+1.8}_{-2.3}$	10^5D/H	$2.618^{+0.087}_{-0.10}$	$f\sigma_8(0.15)$	0.459 ± 0.018
Ω_Λ	$0.612^{+0.051}_{-0.043}$	Age/Gyr	12.46 ± 0.75	$\sigma_8(0.15)$	0.675 ± 0.039
$\Omega_{\rm m}$	$0.388^{+0.043}_{-0.051}$	z_*	$1093.7^{+2.1}_{-2.7}$	$f\sigma_8(0.38)$	0.462 ± 0.017
$\Omega_{\rm m}h^2$	$0.194^{+0.026}_{-0.039}$	r_*	$135.6^{+6.2}_{-5.6}$	$\sigma_8(0.38)$	0.592 ± 0.037
$\Omega_\nu h^2$	$0.0165^{+0.0060}_{-0.012}$	$100\theta_*$	1.108 ± 0.034	$f\sigma_8(0.51)$	$0.454^{+0.020}_{-0.017}$
$\Omega_{\rm m}h^3$	$0.138^{+0.020}_{-0.032}$	$D_{\rm M}(z_*)$/Gpc	12.27 ± 0.90	$\sigma_8(0.51)$	0.552 ± 0.035
σ_8	0.736 ± 0.039	$z_{\rm drag}$	$1062.5^{+2.2}_{-2.4}$	$f\sigma_8(0.61)$	$0.444^{+0.021}_{-0.017}$
S_8	0.833 ± 0.036	$r_{\rm drag}$	$138.1^{+6.4}_{-5.8}$	$\sigma_8(0.61)$	0.525 ± 0.034
$\sigma_8\Omega_{\rm m}^{0.5}$	0.457 ± 0.020	$k_{\rm D}$	$0.1514^{+0.0065}_{-0.0083}$	$f\sigma_8(2.33)$	$0.269^{+0.020}_{-0.016}$
$\sigma_8\Omega_{\rm m}^{0.25}$	0.579 ± 0.022	$100\theta_{\rm D}$	0.1698 ± 0.0044	$\sigma_8(2.33)$	0.271 ± 0.020
$\sigma_8/h^{0.5}$	0.877 ± 0.054	$z_{\rm eq}$	4251^{+500}_{-700}	$\chi^2_{\rm lensing}$	7.7 ± 2.1
$r_{\rm drag}h$	97.3 ± 2.0	$k_{\rm eq}$	$0.0130^{+0.0015}_{-0.0021}$	$\chi^2_{\rm 6DF}$	0.38 ± 0.39
$\langle d^2\rangle^{1/2}$	2.503 ± 0.055	$100\theta_{\rm eq}$	$0.746^{+0.047}_{-0.055}$	$\chi^2_{\rm MGS}$	0.74 ± 0.63
$z_{\rm re}$	$8.63^{+0.47}_{-0.57}$	$100\theta_{\rm s,eq}$	$0.415^{+0.025}_{-0.028}$	$\chi^2_{\rm DR12BAO}$	3.7 ± 1.6
$10^9 A_{\rm s}$	$2.08^{+0.22}_{-0.26}$	$H(0.15)$	$77.4^{+2.5}_{-3.3}$	$\chi^2_{\rm prior}$	2.0 ± 2.0
$10^9 A_{\rm s}e^{-2\tau}$	$1.86^{+0.20}_{-0.24}$	$D_{\rm M}(0.15)$	610^{+22}_{-19}	$\chi^2_{\rm BAO}$	4.8 ± 1.8
D_{40}	1162^{+200}_{-200}	$H(0.38)$	$90.2^{+3.9}_{-5.1}$		
D_{220}	5028^{+900}_{-1000}	$D_{\rm M}(0.38)$	1438^{+60}_{-53}		

$\bar{\chi}^2_{\rm eff} = 14.55$; $\Delta\bar{\chi}^2_{\rm eff} = -1.60$; $R - 1 = 0.00373$

6.101 base_mnu_lensing_lenspriors_BAO_post_bfcl

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02222 ± 0.00050	D_{810}	2111 ± 500	$H(0.51)$	$98.9^{+5.0}_{-6.4}$
$\boldsymbol{\Omega_c h^2}$	$0.157^{+0.022}_{-0.029}$	D_{1420}	614^{+200}_{-200}	$D_{\rm M}(0.51)$	1848 ± 80
$\boldsymbol{100\theta_{MC}}$	$1.110^{+0.038}_{-0.034}$	D_{2000}	178^{+50}_{-60}	$H(0.61)$	$105.8^{+5.7}_{-7.3}$
$\boldsymbol{\Sigma m_\nu}$ [eV]	$1.62^{+0.58}_{-1.2}$	$n_{\rm s,0.002}$	0.960 ± 0.020	$D_{\rm M}(0.61)$	2142 ± 97
$\boldsymbol{\ln(10^{10} A_s)}$	3.01 ± 0.12	$Y_{\rm P}$	$0.24532^{+0.00023}_{-0.00019}$	$H(2.33)$	274^{+21}_{-26}
$\boldsymbol{n_s}$	0.960 ± 0.020	$Y_{\rm P}^{\rm BBN}$	$0.24665^{+0.00023}_{-0.00020}$	$D_{\rm M}(2.33)$	5189 ± 320
H_0	$70.7^{+1.8}_{-2.4}$	10^5D/H	$2.617^{+0.088}_{-0.10}$	$f\sigma_8(0.15)$	0.455 ± 0.018
Ω_Λ	$0.609^{+0.053}_{-0.045}$	Age/Gyr	12.41 ± 0.77	$\sigma_8(0.15)$	0.666 ± 0.040
$\Omega_{\rm m}$	$0.391^{+0.045}_{-0.053}$	z_*	$1093.8^{+2.2}_{-2.8}$	$f\sigma_8(0.38)$	0.457 ± 0.018
$\Omega_{\rm m}h^2$	$0.197^{+0.028}_{-0.040}$	r_*	135.3 ± 6.0	$\sigma_8(0.38)$	0.584 ± 0.038
$\Omega_\nu h^2$	$0.0174^{+0.0063}_{-0.012}$	$100\theta_*$	$1.110^{+0.038}_{-0.034}$	$f\sigma_8(0.51)$	$0.448^{+0.020}_{-0.018}$
$\Omega_{\rm m}h^3$	$0.140^{+0.022}_{-0.034}$	$D_{\rm M}(z_*)$/Gpc	$12.21^{+0.89}_{-1.0}$	$\sigma_8(0.51)$	0.545 ± 0.037
σ_8	0.726 ± 0.041	$z_{\rm drag}$	1062.6 ± 2.3	$f\sigma_8(0.61)$	$0.439^{+0.022}_{-0.018}$
S_8	0.826 ± 0.036	$r_{\rm drag}$	137.7 ± 6.1	$\sigma_8(0.61)$	0.517 ± 0.035
$\sigma_8\Omega_{\rm m}^{0.5}$	0.452 ± 0.020	$k_{\rm D}$	$0.1519^{+0.0068}_{-0.0086}$	$f\sigma_8(2.33)$	$0.266^{+0.020}_{-0.017}$
$\sigma_8\Omega_{\rm m}^{0.25}$	0.573 ± 0.023	$100\theta_{\rm D}$	0.1701 ± 0.0046	$\sigma_8(2.33)$	0.267 ± 0.020
$\sigma_8/h^{0.5}$	0.865 ± 0.056	$z_{\rm eq}$	4287^{+500}_{-700}	$\chi^2_{\rm lensing}$	10.2 ± 2.1
$r_{\rm drag}h$	97.2 ± 2.0	$k_{\rm eq}$	$0.0131^{+0.0016}_{-0.0022}$	$\chi^2_{\rm 6DF}$	0.40 ± 0.40
$\langle d^2\rangle^{1/2}$	2.479 ± 0.051	$100\theta_{\rm eq}$	$0.743^{+0.047}_{-0.057}$	$\chi^2_{\rm MGS}$	0.71 ± 0.64
$z_{\rm re}$	$8.67^{+0.50}_{-0.59}$	$100\theta_{\rm s,eq}$	$0.414^{+0.025}_{-0.029}$	$\chi^2_{\rm DR12BAO}$	3.7 ± 1.6
$10^9 A_{\rm s}$	$2.03^{+0.22}_{-0.26}$	$H(0.15)$	$77.6^{+2.6}_{-3.4}$	$\chi^2_{\rm prior}$	2.0 ± 2.0
$10^9 A_{\rm s}e^{-2\tau}$	$1.82^{+0.19}_{-0.23}$	$D_{\rm M}(0.15)$	609^{+22}_{-20}	$\chi^2_{\rm BAO}$	4.9 ± 1.8
D_{40}	1132^{+100}_{-200}	$H(0.38)$	$90.5^{+4.1}_{-5.3}$		
D_{220}	4887^{+900}_{-1000}	$D_{\rm M}(0.38)$	1435^{+62}_{-56}		

$\bar{\chi}^2_{\rm eff} = 17.06$; $\Delta\bar{\chi}^2_{\rm eff} = -1.35$; $R - 1 = 0.00602$

6.102 base_mnu_lensing_lenspriors_BAO_post_agr2bfcl

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02222 ± 0.00050	D_{810}	2142 ± 500	$H(0.51)$	$98.7^{+5.3}_{-6.5}$
$\boldsymbol{\Omega_c h^2}$	$0.156^{+0.023}_{-0.030}$	D_{1420}	622^{+200}_{-200}	$D_{\rm M}(0.51)$	1852 ± 83
$\boldsymbol{100\theta_{MC}}$	$1.110^{+0.040}_{-0.033}$	D_{2000}	180^{+50}_{-70}	$H(0.61)$	$105.7^{+6.0}_{-7.5}$
$\boldsymbol{\Sigma m_\nu}$ **[eV]**	$1.73^{+0.67}_{-1.1}$	$n_{\rm s,0.002}$	0.959 ± 0.020	$D_{\rm M}(0.61)$	2146 ± 100
$\boldsymbol{\ln(10^{10} A_s)}$	$3.02^{+0.13}_{-0.11}$	$Y_{\rm P}$	$0.24532^{+0.00023}_{-0.00019}$	$H(2.33)$	274^{+22}_{-26}
$\boldsymbol{n_s}$	0.959 ± 0.020	$Y_{\rm P}^{\rm BBN}$	$0.24665^{+0.00023}_{-0.00019}$	$D_{\rm M}(2.33)$	5198 ± 330
H_0	$70.6^{+1.9}_{-2.5}$	10^5D/H	$2.617^{+0.087}_{-0.10}$	$f\sigma_8(0.15)$	0.446 ± 0.015
Ω_Λ	$0.608^{+0.053}_{-0.048}$	Age/Gyr	$12.44^{+0.78}_{-0.86}$	$\sigma_8(0.15)$	$0.652^{+0.032}_{-0.039}$
$\Omega_{\rm m}$	$0.392^{+0.048}_{-0.053}$	z_*	$1093.7^{+2.3}_{-2.9}$	$f\sigma_8(0.38)$	0.448 ± 0.014
$\Omega_{\rm m}h^2$	$0.196^{+0.030}_{-0.041}$	r_*	135.5 ± 6.2	$\sigma_8(0.38)$	$0.573^{+0.031}_{-0.038}$
$\Omega_\nu h^2$	$0.0186^{+0.0072}_{-0.012}$	$100\theta_*$	$1.110^{+0.040}_{-0.034}$	$f\sigma_8(0.51)$	0.440 ± 0.015
$\Omega_{\rm m}h^3$	$0.139^{+0.023}_{-0.035}$	$D_{\rm M}(z_*)$/Gpc	$12.23^{+0.89}_{-1.1}$	$\sigma_8(0.51)$	$0.534^{+0.030}_{-0.037}$
σ_8	$0.712^{+0.032}_{-0.038}$	$z_{\rm drag}$	1062.6 ± 2.4	$f\sigma_8(0.61)$	0.431 ± 0.016
S_8	0.810 ± 0.031	$r_{\rm drag}$	138.0 ± 6.4	$\sigma_8(0.61)$	$0.507^{+0.029}_{-0.036}$
$\sigma_8\Omega_{\rm m}^{0.5}$	0.444 ± 0.017	$k_{\rm D}$	$0.1517^{+0.0072}_{-0.0088}$	$f\sigma_8(2.33)$	0.261 ± 0.017
$\sigma_8\Omega_{\rm m}^{0.25}$	0.562 ± 0.017	$100\theta_{\rm D}$	$0.1701^{+0.0051}_{-0.0044}$	$\sigma_8(2.33)$	$0.262^{+0.017}_{-0.021}$
$\sigma_8/h^{0.5}$	$0.848^{+0.047}_{-0.055}$	$z_{\rm eq}$	4248^{+500}_{-700}	$\chi^2_{\rm lensing}$	12.5 ± 2.0
$r_{\rm drag}h$	97.2 ± 2.1	$k_{\rm eq}$	$0.0130^{+0.0017}_{-0.0022}$	$\chi^2_{\rm 6DF}$	0.41 ± 0.41
$\langle d^2\rangle^{1/2}$	2.483 ± 0.051	$100\theta_{\rm eq}$	$0.749^{+0.049}_{-0.059}$	$\chi^2_{\rm MGS}$	0.72 ± 0.66
$z_{\rm re}$	$8.66^{+0.53}_{-0.59}$	$100\theta_{\rm s,eq}$	$0.417^{+0.026}_{-0.030}$	$\chi^2_{\rm DR12BAO}$	3.8 ± 1.6
$10^9 A_{\rm s}$	$2.06^{+0.23}_{-0.26}$	$H(0.15)$	$77.4^{+2.7}_{-3.5}$	$\chi^2_{\rm prior}$	2.0 ± 2.0
$10^9 A_{\rm s}e^{-2\tau}$	$1.84^{+0.21}_{-0.24}$	$D_{\rm M}(0.15)$	610^{+23}_{-21}	$\chi^2_{\rm BAO}$	4.9 ± 1.8
D_{40}	1149^{+200}_{-200}	$H(0.38)$	$90.3^{+4.3}_{-5.4}$		
D_{220}	4987^{+900}_{-1000}	$D_{\rm M}(0.38)$	1438 ± 60		

$\bar{\chi}^2_{\rm eff} = 19.44$; $\Delta\bar{\chi}^2_{\rm eff} = -1.76$; $R - 1 = 0.00654$

6.103 base_mnu_lensing_lenspriors_BAO_post_linear

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02222 ± 0.00050	D_{810}	2122 ± 500	$H(0.51)$	$99.1^{+4.9}_{-6.3}$
$\boldsymbol{\Omega_c h^2}$	$0.159^{+0.022}_{-0.029}$	D_{1420}	616^{+200}_{-200}	$D_{\rm M}(0.51)$	1845 ± 79
$\boldsymbol{100\theta_{MC}}$	1.110 ± 0.034	D_{2000}	178^{+50}_{-60}	$H(0.61)$	$106.1^{+5.6}_{-7.2}$
$\boldsymbol{\Sigma m_\nu}$ [eV]	$1.56^{+0.57}_{-1.1}$	$n_{\rm s,0.002}$	0.960 ± 0.020	$D_{\rm M}(0.61)$	2138 ± 95
$\boldsymbol{\ln(10^{10} A_s)}$	3.01 ± 0.12	$Y_{\rm P}$	$0.24532^{+0.00023}_{-0.00019}$	$H(2.33)$	275^{+21}_{-25}
$\boldsymbol{n_s}$	0.960 ± 0.020	$Y_{\rm P}^{\rm BBN}$	$0.24665^{+0.00023}_{-0.00020}$	$D_{\rm M}(2.33)$	5176 ± 320
H_0	$70.8^{+1.8}_{-2.4}$	10^5D/H	$2.617^{+0.088}_{-0.10}$	$f\sigma_8(0.15)$	0.465 ± 0.019
Ω_Λ	$0.608^{+0.052}_{-0.044}$	Age/Gyr	12.38 ± 0.76	$\sigma_8(0.15)$	0.680 ± 0.041
$\Omega_{\rm m}$	$0.392^{+0.044}_{-0.052}$	z_*	$1093.9^{+2.2}_{-2.8}$	$f\sigma_8(0.38)$	0.467 ± 0.019
$\Omega_{\rm m}h^2$	$0.198^{+0.028}_{-0.040}$	r_*	135.0 ± 5.9	$\sigma_8(0.38)$	0.597 ± 0.039
$\Omega_\nu h^2$	$0.0167^{+0.0061}_{-0.012}$	$100\theta_*$	1.111 ± 0.034	$f\sigma_8(0.51)$	$0.458^{+0.021}_{-0.018}$
$\Omega_{\rm m}h^3$	$0.141^{+0.021}_{-0.034}$	$D_{\rm M}(z_*)$/Gpc	$12.18^{+0.87}_{-0.98}$	$\sigma_8(0.51)$	0.556 ± 0.037
σ_8	0.742 ± 0.042	$z_{\rm drag}$	1062.7 ± 2.3	$f\sigma_8(0.61)$	$0.448^{+0.022}_{-0.019}$
S_8	0.845 ± 0.038	$r_{\rm drag}$	137.5 ± 6.0	$\sigma_8(0.61)$	0.528 ± 0.036
$\sigma_8\Omega_{\rm m}^{0.5}$	0.463 ± 0.021	$k_{\rm D}$	$0.1522^{+0.0067}_{-0.0085}$	$f\sigma_8(2.33)$	$0.271^{+0.021}_{-0.017}$
$\sigma_8\Omega_{\rm m}^{0.25}$	0.586 ± 0.024	$100\theta_{\rm D}$	0.1702 ± 0.0045	$\sigma_8(2.33)$	0.273 ± 0.020
$\sigma_8/h^{0.5}$	0.882 ± 0.057	$z_{\rm eq}$	4327^{+500}_{-700}	$\chi^2_{\rm lensing}$	10.4 ± 2.1
$r_{\rm drag}h$	97.2 ± 2.0	$k_{\rm eq}$	$0.0133^{+0.0016}_{-0.0022}$	$\chi^2_{\rm 6DF}$	0.41 ± 0.41
$\langle d^2\rangle^{1/2}$	2.497 ± 0.054	$100\theta_{\rm eq}$	$0.738^{+0.046}_{-0.056}$	$\chi^2_{\rm MGS}$	0.70 ± 0.62
$z_{\rm re}$	$8.68^{+0.49}_{-0.58}$	$100\theta_{\rm s,eq}$	$0.411^{+0.024}_{-0.029}$	$\chi^2_{\rm DR12BAO}$	3.8 ± 1.7
$10^9 A_{\rm s}$	$2.05^{+0.21}_{-0.26}$	$H(0.15)$	$77.7^{+2.6}_{-3.4}$	$\chi^2_{\rm prior}$	2.0 ± 2.0
$10^9 A_{\rm s}e^{-2\tau}$	$1.84^{+0.19}_{-0.24}$	$D_{\rm M}(0.15)$	608^{+22}_{-20}	$\chi^2_{\rm BAO}$	4.9 ± 1.8
D_{40}	1141^{+100}_{-200}	$H(0.38)$	$90.7^{+4.0}_{-5.2}$		
D_{220}	4903^{+800}_{-1000}	$D_{\rm M}(0.38)$	1432^{+61}_{-55}		

$\bar{\chi}^2_{\rm eff} = 17.26$; $\Delta\bar{\chi}^2_{\rm eff} = -1.28$; $R - 1 = 0.00388$

6.104 base_mnu_lensing_lenspriors_BAO_post_acc

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02222 ± 0.00050	D_{810}	2171 ± 500	$H(0.51)$	$98.7^{+5.0}_{-6.3}$
$\boldsymbol{\Omega_c h^2}$	$0.156^{+0.022}_{-0.028}$	D_{1420}	631^{+200}_{-200}	$D_{\rm M}(0.51)$	1851 ± 80
$\boldsymbol{100\theta_{MC}}$	$1.109^{+0.038}_{-0.033}$	D_{2000}	183^{+50}_{-60}	$H(0.61)$	$105.7^{+5.8}_{-7.1}$
$\boldsymbol{\Sigma m_\nu}$ [eV]	$1.63^{+0.61}_{-1.1}$	$n_{\rm s,0.002}$	0.960 ± 0.020	$D_{\rm M}(0.61)$	2146 ± 97
$\boldsymbol{\ln(10^{10} A_s)}$	3.03 ± 0.12	$Y_{\rm P}$	$0.24532^{+0.00023}_{-0.00019}$	$H(2.33)$	274^{+21}_{-25}
$\boldsymbol{n_s}$	0.960 ± 0.020	$Y_{\rm P}^{\rm BBN}$	$0.24665^{+0.00023}_{-0.00019}$	$D_{\rm M}(2.33)$	5198 ± 320
H_0	$70.6^{+1.9}_{-2.3}$	10^5D/H	$2.617^{+0.087}_{-0.10}$	$f\sigma_8(0.15)$	0.456 ± 0.018
Ω_Λ	$0.610^{+0.052}_{-0.045}$	Age/Gyr	12.44 ± 0.77	$\sigma_8(0.15)$	0.668 ± 0.040
$\Omega_{\rm m}$	$0.390^{+0.045}_{-0.052}$	z_*	$1093.7^{+2.2}_{-2.8}$	$f\sigma_8(0.38)$	0.458 ± 0.018
$\Omega_{\rm m}h^2$	$0.196^{+0.028}_{-0.040}$	r_*	135.5 ± 6.0	$\sigma_8(0.38)$	0.587 ± 0.038
$\Omega_\nu h^2$	$0.0176^{+0.0066}_{-0.012}$	$100\theta_*$	$1.109^{+0.038}_{-0.033}$	$f\sigma_8(0.51)$	$0.450^{+0.020}_{-0.018}$
$\Omega_{\rm m}h^3$	$0.139^{+0.022}_{-0.033}$	$D_{\rm M}(z_*)$/Gpc	$12.24^{+0.87}_{-1.0}$	$\sigma_8(0.51)$	0.547 ± 0.037
σ_8	0.729 ± 0.041	$z_{\rm drag}$	1062.6 ± 2.3	$f\sigma_8(0.61)$	$0.441^{+0.022}_{-0.018}$
S_8	0.828 ± 0.036	$r_{\rm drag}$	137.9 ± 6.1	$\sigma_8(0.61)$	0.519 ± 0.036
$\sigma_8\Omega_{\rm m}^{0.5}$	0.454 ± 0.020	$k_{\rm D}$	$0.1517^{+0.0069}_{-0.0084}$	$f\sigma_8(2.33)$	$0.267^{+0.020}_{-0.018}$
$\sigma_8\Omega_{\rm m}^{0.25}$	0.575 ± 0.023	$100\theta_{\rm D}$	$0.1700^{+0.0049}_{-0.0043}$	$\sigma_8(2.33)$	0.268 ± 0.020
$\sigma_8/h^{0.5}$	0.869 ± 0.056	$z_{\rm eq}$	4261^{+500}_{-700}	$\chi^2_{\rm lensing}$	9.9 ± 2.1
$r_{\rm drag}h$	97.3 ± 2.0	$k_{\rm eq}$	$0.0131^{+0.0016}_{-0.0021}$	$\chi^2_{\rm 6DF}$	0.40 ± 0.40
$\langle d^2\rangle^{1/2}$	2.506 ± 0.054	$100\theta_{\rm eq}$	$0.746^{+0.046}_{-0.057}$	$\chi^2_{\rm MGS}$	0.72 ± 0.64
$z_{\rm re}$	$8.65^{+0.50}_{-0.57}$	$100\theta_{\rm s,eq}$	$0.416^{+0.024}_{-0.029}$	$\chi^2_{\rm DR12BAO}$	3.7 ± 1.6
$10^9 A_{\rm s}$	$2.08^{+0.22}_{-0.27}$	$H(0.15)$	$77.5^{+2.7}_{-3.4}$	$\chi^2_{\rm prior}$	2.0 ± 2.0
$10^9 A_{\rm s}e^{-2\tau}$	$1.87^{+0.20}_{-0.24}$	$D_{\rm M}(0.15)$	610^{+22}_{-20}	$\chi^2_{\rm BAO}$	4.9 ± 1.8
D_{40}	1163^{+200}_{-200}	$H(0.38)$	$90.3^{+4.1}_{-5.2}$		
D_{220}	5028^{+900}_{-1000}	$D_{\rm M}(0.38)$	1437 ± 57		

$\bar{\chi}^2_{\rm eff} = 16.78$; $\Delta\bar{\chi}^2_{\rm eff} = -1.57$; $R - 1 = 0.00542$

6.105 base_mnu_lensing_lenspriors_BAO_post_agr2acc

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02222 ± 0.00050	D_{810}	2198 ± 500	$H(0.51)$	$98.7^{+5.4}_{-6.4}$
$\boldsymbol{\Omega_c h^2}$	$0.155^{+0.023}_{-0.029}$	D_{1420}	637^{+200}_{-200}	$D_M(0.51)$	1853 ± 83
$\boldsymbol{100\theta_{MC}}$	$1.110^{+0.041}_{-0.032}$	D_{2000}	184^{+50}_{-70}	$H(0.61)$	$105.6^{+6.2}_{-7.3}$
$\boldsymbol{\Sigma m_\nu}$ [eV]	$1.79^{+0.71}_{-1.1}$	$n_{s,0.002}$	0.959 ± 0.020	$D_M(0.61)$	2148 ± 100
$\boldsymbol{\ln(10^{10} A_s)}$	3.04 ± 0.12	Y_P	$0.24532^{+0.00023}_{-0.00019}$	$H(2.33)$	274 ± 24
$\boldsymbol{n_s}$	0.959 ± 0.020	Y_P^{BBN}	$0.24665^{+0.00023}_{-0.00019}$	$D_M(2.33)$	5201^{+320}_{-370}
H_0	$70.5^{+1.9}_{-2.4}$	10^5D/H	$2.617^{+0.086}_{-0.10}$	$f\sigma_8(0.15)$	0.447 ± 0.014
Ω_Λ	0.608 ± 0.049	Age/Gyr	$12.44^{+0.76}_{-0.88}$	$\sigma_8(0.15)$	$0.653^{+0.031}_{-0.040}$
Ω_m	0.392 ± 0.049	z_*	$1093.7^{+2.4}_{-2.8}$	$f\sigma_8(0.38)$	0.448 ± 0.013
$\Omega_m h^2$	$0.196^{+0.030}_{-0.040}$	r_*	135.6 ± 6.2	$\sigma_8(0.38)$	$0.573^{+0.030}_{-0.039}$
$\Omega_\nu h^2$	$0.0192^{+0.0076}_{-0.012}$	$100\theta_*$	$1.111^{+0.041}_{-0.032}$	$f\sigma_8(0.51)$	0.440 ± 0.015
$\Omega_m h^3$	$0.139^{+0.023}_{-0.034}$	$D_M(z_*)$/Gpc	$12.24^{+0.87}_{-1.1}$	$\sigma_8(0.51)$	$0.534^{+0.029}_{-0.038}$
σ_8	$0.712^{+0.031}_{-0.039}$	z_{drag}	1062.5 ± 2.4	$f\sigma_8(0.61)$	0.431 ± 0.016
S_8	0.811 ± 0.031	r_{drag}	138.1 ± 6.4	$\sigma_8(0.61)$	$0.507^{+0.028}_{-0.037}$
$\sigma_8 \Omega_m^{0.5}$	0.444 ± 0.017	k_D	$0.1516^{+0.0073}_{-0.0087}$	$f\sigma_8(2.33)$	0.261 ± 0.017
$\sigma_8 \Omega_m^{0.25}$	0.562 ± 0.017	$100\theta_D$	$0.1701^{+0.0052}_{-0.0043}$	$\sigma_8(2.33)$	$0.262^{+0.017}_{-0.021}$
$\sigma_8/h^{0.5}$	$0.849^{+0.045}_{-0.057}$	z_{eq}	4230^{+600}_{-700}	$\chi^2_{lensing}$	12.3 ± 2.1
$r_{drag} h$	97.2 ± 2.1	k_{eq}	$0.0130^{+0.0017}_{-0.0022}$	χ^2_{6DF}	0.42 ± 0.41
$\langle d^2 \rangle^{1/2}$	2.511 ± 0.054	$100\theta_{eq}$	$0.752^{+0.048}_{-0.060}$	χ^2_{MGS}	0.71 ± 0.65
z_{re}	8.66 ± 0.55	$100\theta_{s,eq}$	$0.419^{+0.025}_{-0.031}$	$\chi^2_{DR12BAO}$	3.8 ± 1.6
$10^9 A_s$	$2.11^{+0.24}_{-0.28}$	$H(0.15)$	$77.4^{+2.8}_{-3.5}$	χ^2_{prior}	2.0 ± 2.0
$10^9 A_s e^{-2\tau}$	$1.89^{+0.21}_{-0.25}$	$D_M(0.15)$	610 ± 22	χ^2_{BAO}	4.9 ± 1.8
D_{40}	1180^{+200}_{-200}	$H(0.38)$	$90.3^{+4.4}_{-5.3}$		
D_{220}	5126^{+1000}_{-1000}	$D_M(0.38)$	1439 ± 60		

$\bar{\chi}^2_{eff} = 19.27$; $\Delta\bar{\chi}^2_{eff} = -2.00$; $R - 1 = 0.00616$

6.106 base_mnu_lensing_lenspriors_BAO_post_takahashi

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02221 ± 0.00050	D_{810}	2166 ± 500	$H(0.51)$	$98.7^{+5.0}_{-6.3}$
$\boldsymbol{\Omega_c h^2}$	$0.156^{+0.022}_{-0.028}$	D_{1420}	629^{+200}_{-200}	$D_{\rm M}(0.51)$	1851 ± 79
$\boldsymbol{100\theta_{MC}}$	$1.110^{+0.038}_{-0.034}$	D_{2000}	182^{+50}_{-70}	$H(0.61)$	$105.7^{+5.8}_{-7.2}$
$\boldsymbol{\Sigma m_\nu}$ [eV]	$1.72^{+0.61}_{-1.2}$	$n_{\rm s,0.002}$	0.960 ± 0.020	$D_{\rm M}(0.61)$	2146 ± 96
$\boldsymbol{\ln(10^{10} A_s)}$	3.03 ± 0.12	$Y_{\rm P}$	$0.24532^{+0.00023}_{-0.00019}$	$H(2.33)$	274^{+21}_{-25}
$\boldsymbol{n_s}$	0.960 ± 0.020	$Y_{\rm P}^{\rm BBN}$	$0.24665^{+0.00023}_{-0.00020}$	$D_{\rm M}(2.33)$	5195 ± 320
H_0	$70.6^{+1.9}_{-2.3}$	10^5D/H	$2.618^{+0.088}_{-0.10}$	$f\sigma_8(0.15)$	0.451 ± 0.018
Ω_Λ	$0.608^{+0.053}_{-0.045}$	Age/Gyr	12.43 ± 0.77	$\sigma_8(0.15)$	0.660 ± 0.044
$\Omega_{\rm m}$	$0.392^{+0.045}_{-0.053}$	z_*	$1093.8^{+2.2}_{-2.8}$	$f\sigma_8(0.38)$	$0.453^{+0.020}_{-0.018}$
$\Omega_{\rm m}h^2$	$0.196^{+0.028}_{-0.040}$	r_*	135.4 ± 5.9	$\sigma_8(0.38)$	0.579 ± 0.041
$\Omega_\nu h^2$	$0.0185^{+0.0065}_{-0.013}$	$100\theta_*$	$1.110^{+0.038}_{-0.034}$	$f\sigma_8(0.51)$	$0.444^{+0.023}_{-0.019}$
$\Omega_{\rm m}h^3$	$0.139^{+0.022}_{-0.034}$	$D_{\rm M}(z_*)$/Gpc	$12.23^{+0.87}_{-1.0}$	$\sigma_8(0.51)$	0.540 ± 0.040
σ_8	0.720 ± 0.044	$z_{\rm drag}$	1062.6 ± 2.3	$f\sigma_8(0.61)$	$0.435^{+0.024}_{-0.020}$
S_8	0.819 ± 0.035	$r_{\rm drag}$	137.9 ± 6.1	$\sigma_8(0.61)$	0.513 ± 0.038
$\sigma_8\Omega_{\rm m}^{0.5}$	0.448 ± 0.019	$k_{\rm D}$	$0.1517^{+0.0069}_{-0.0085}$	$f\sigma_8(2.33)$	$0.263^{+0.022}_{-0.018}$
$\sigma_8\Omega_{\rm m}^{0.25}$	0.568 ± 0.025	$100\theta_{\rm D}$	$0.1701^{+0.0049}_{-0.0044}$	$\sigma_8(2.33)$	0.265 ± 0.022
$\sigma_8/h^{0.5}$	0.858 ± 0.060	$z_{\rm eq}$	4251^{+500}_{-700}	$\chi^2_{\rm lensing}$	9.8 ± 2.0
$r_{\rm drag}h$	97.2 ± 2.0	$k_{\rm eq}$	$0.0130^{+0.0016}_{-0.0021}$	$\chi^2_{\rm 6DF}$	0.41 ± 0.41
$\langle d^2\rangle^{1/2}$	2.506 ± 0.054	$100\theta_{\rm eq}$	$0.748^{+0.045}_{-0.056}$	$\chi^2_{\rm MGS}$	0.71 ± 0.64
$z_{\rm re}$	$8.66^{+0.50}_{-0.59}$	$100\theta_{\rm s,eq}$	$0.417^{+0.024}_{-0.029}$	$\chi^2_{\rm DR12BAO}$	3.8 ± 1.6
$10^9 A_{\rm s}$	$2.08^{+0.23}_{-0.27}$	$H(0.15)$	$77.4^{+2.7}_{-3.4}$	$\chi^2_{\rm prior}$	2.0 ± 2.0
$10^9 A_{\rm s}e^{-2\tau}$	$1.87^{+0.20}_{-0.24}$	$D_{\rm M}(0.15)$	610 ± 21	$\chi^2_{\rm BAO}$	4.9 ± 1.8
D_{40}	1160^{+200}_{-200}	$H(0.38)$	$90.3^{+4.1}_{-5.2}$		
D_{220}	5029^{+900}_{-1000}	$D_{\rm M}(0.38)$	1437 ± 57		

$\bar{\chi}^2_{\rm eff} = 16.75$; $\Delta\bar{\chi}^2_{\rm eff} = -1.65$; $R - 1 = 0.00892$

6.107 base_mnu_lensing_lenspriors_BAO_post_agr2takahashi

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02222 ± 0.00050	D_{810}	2199 ± 500	$H(0.51)$	$98.6^{+5.4}_{-6.4}$
$\boldsymbol{\Omega_c h^2}$	$0.154^{+0.023}_{-0.028}$	D_{1420}	637^{+200}_{-200}	$D_{\rm M}(0.51)$	1854 ± 82
$\boldsymbol{100\theta_{MC}}$	$1.110^{+0.041}_{-0.033}$	D_{2000}	184^{+50}_{-70}	$H(0.61)$	$105.6^{+6.2}_{-7.3}$
$\boldsymbol{\Sigma m_\nu}$ **[eV]**	$1.87^{+0.70}_{-1.2}$	$n_{\rm s,0.002}$	0.959 ± 0.020	$D_{\rm M}(0.61)$	2149 ± 100
$\boldsymbol{\ln(10^{10} A_s)}$	$3.04^{+0.13}_{-0.12}$	$Y_{\rm P}$	$0.24532^{+0.00023}_{-0.00019}$	$H(2.33)$	274^{+23}_{-26}
$\boldsymbol{n_s}$	0.959 ± 0.020	$Y_{\rm P}^{\rm BBN}$	$0.24665^{+0.00023}_{-0.00019}$	$D_{\rm M}(2.33)$	5203^{+320}_{-360}
H_0	$70.4^{+1.9}_{-2.4}$	10^5D/H	$2.618^{+0.088}_{-0.10}$	$f\sigma_8(0.15)$	0.441 ± 0.014
Ω_Λ	$0.607^{+0.053}_{-0.048}$	Age/Gyr	$12.45^{+0.76}_{-0.88}$	$\sigma_8(0.15)$	$0.644^{+0.036}_{-0.042}$
$\Omega_{\rm m}$	0.393 ± 0.050	z_*	$1093.7^{+2.3}_{-2.9}$	$f\sigma_8(0.38)$	0.442 ± 0.015
$\Omega_{\rm m}h^2$	$0.196^{+0.030}_{-0.041}$	r_*	135.7 ± 6.2	$\sigma_8(0.38)$	$0.565^{+0.035}_{-0.041}$
$\Omega_\nu h^2$	$0.0201^{+0.0075}_{-0.013}$	$100\theta_*$	$1.111^{+0.041}_{-0.033}$	$f\sigma_8(0.51)$	0.434 ± 0.017
$\Omega_{\rm m}h^3$	$0.139^{+0.023}_{-0.034}$	$D_{\rm M}(z_*)$/Gpc	$12.24^{+0.87}_{-1.1}$	$\sigma_8(0.51)$	$0.527^{+0.033}_{-0.040}$
σ_8	$0.703^{+0.036}_{-0.042}$	$z_{\rm drag}$	1062.5 ± 2.4	$f\sigma_8(0.61)$	$0.425^{+0.020}_{-0.018}$
S_8	0.800 ± 0.029	$r_{\rm drag}$	138.2 ± 6.3	$\sigma_8(0.61)$	$0.500^{+0.032}_{-0.039}$
$\sigma_8\Omega_{\rm m}^{0.5}$	0.438 ± 0.016	$k_{\rm D}$	$0.1515^{+0.0073}_{-0.0087}$	$f\sigma_8(2.33)$	0.257 ± 0.019
$\sigma_8\Omega_{\rm m}^{0.25}$	0.555 ± 0.019	$100\theta_{\rm D}$	$0.1702^{+0.0051}_{-0.0043}$	$\sigma_8(2.33)$	$0.259^{+0.019}_{-0.022}$
$\sigma_8/h^{0.5}$	$0.838^{+0.052}_{-0.060}$	$z_{\rm eq}$	4208^{+600}_{-700}	$\chi^2_{\rm lensing}$	12.3 ± 2.0
$r_{\rm drag}h$	97.2 ± 2.1	$k_{\rm eq}$	$0.0129^{+0.0017}_{-0.0021}$	$\chi^2_{\rm 6DF}$	0.42 ± 0.42
$\langle d^2\rangle^{1/2}$	2.510 ± 0.054	$100\theta_{\rm eq}$	$0.755^{+0.047}_{-0.058}$	$\chi^2_{\rm MGS}$	0.71 ± 0.66
$z_{\rm re}$	8.66 ± 0.55	$100\theta_{\rm s,eq}$	$0.420^{+0.024}_{-0.030}$	$\chi^2_{\rm DR12BAO}$	3.8 ± 1.6
$10^9 A_{\rm s}$	$2.11^{+0.25}_{-0.28}$	$H(0.15)$	$77.3^{+2.8}_{-3.5}$	$\chi^2_{\rm prior}$	2.0 ± 2.0
$10^9 A_{\rm s}e^{-2\tau}$	$1.89^{+0.22}_{-0.25}$	$D_{\rm M}(0.15)$	611 ± 21	$\chi^2_{\rm BAO}$	5.0 ± 1.8
D_{40}	1178^{+200}_{-200}	$H(0.38)$	$90.2^{+4.4}_{-5.3}$		
D_{220}	5136^{+1000}_{-1000}	$D_{\rm M}(0.38)$	1440 ± 59		

$\bar{\chi}^2_{\rm eff} = 19.28$; $\Delta\bar{\chi}^2_{\rm eff} = -2.05$; $R - 1 = 0.00629$

6.108 base_mnu_lensing_lenspriors_BAO_post_Apr6

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02222 ± 0.00050	D_{810}	2153 ± 500	$H(0.51)$	$98.6^{+4.8}_{-6.2}$
$\boldsymbol{\Omega_c h^2}$	$0.156^{+0.021}_{-0.029}$	D_{1420}	628^{+200}_{-200}	$D_{\rm M}(0.51)$	1852^{+83}_{-75}
$\boldsymbol{100\theta_{MC}}$	1.108 ± 0.034	D_{2000}	182^{+50}_{-60}	$H(0.61)$	$105.5^{+5.5}_{-7.1}$
$\boldsymbol{\Sigma m_\nu}$ [eV]	$1.53^{+0.55}_{-1.1}$	$n_{\rm s,0.002}$	0.959 ± 0.020	$D_{\rm M}(0.61)$	2147 ± 94
$\boldsymbol{\ln(10^{10} A_s)}$	3.02 ± 0.12	$Y_{\rm P}$	$0.24532^{+0.00023}_{-0.00019}$	$H(2.33)$	273^{+20}_{-25}
$\boldsymbol{n_s}$	0.959 ± 0.020	$Y_{\rm P}^{\rm BBN}$	$0.24665^{+0.00023}_{-0.00019}$	$D_{\rm M}(2.33)$	5203 ± 310
H_0	$70.6^{+1.8}_{-2.3}$	10^5D/H	$2.618^{+0.087}_{-0.10}$	$f\sigma_8(0.15)$	0.459 ± 0.018
Ω_Λ	$0.611^{+0.052}_{-0.043}$	Age/Gyr	12.45 ± 0.75	$\sigma_8(0.15)$	0.674 ± 0.039
$\Omega_{\rm m}$	$0.389^{+0.043}_{-0.052}$	z_*	$1093.7^{+2.1}_{-2.8}$	$f\sigma_8(0.38)$	0.462 ± 0.018
$\Omega_{\rm m}h^2$	$0.195^{+0.027}_{-0.039}$	r_*	$135.5^{+6.2}_{-5.6}$	$\sigma_8(0.38)$	0.592 ± 0.037
$\Omega_\nu h^2$	$0.0165^{+0.0060}_{-0.012}$	$100\theta_*$	1.108 ± 0.034	$f\sigma_8(0.51)$	$0.453^{+0.020}_{-0.017}$
$\Omega_{\rm m}h^3$	$0.138^{+0.020}_{-0.033}$	$D_{\rm M}(z_*)$/Gpc	12.25 ± 0.90	$\sigma_8(0.51)$	0.552 ± 0.036
σ_8	0.735 ± 0.040	$z_{\rm drag}$	$1062.5^{+2.2}_{-2.4}$	$f\sigma_8(0.61)$	$0.444^{+0.021}_{-0.017}$
S_8	0.834 ± 0.036	$r_{\rm drag}$	$138.0^{+6.4}_{-5.8}$	$\sigma_8(0.61)$	0.524 ± 0.035
$\sigma_8\Omega_{\rm m}^{0.5}$	0.457 ± 0.020	$k_{\rm D}$	$0.1515^{+0.0065}_{-0.0084}$	$f\sigma_8(2.33)$	$0.269^{+0.020}_{-0.016}$
$\sigma_8\Omega_{\rm m}^{0.25}$	0.579 ± 0.023	$100\theta_{\rm D}$	0.1699 ± 0.0044	$\sigma_8(2.33)$	0.271 ± 0.020
$\sigma_8/h^{0.5}$	0.876 ± 0.054	$z_{\rm eq}$	4266^{+500}_{-700}	$\chi^2_{\rm lensing}$	8.7 ± 2.1
$r_{\rm drag}h$	97.3 ± 2.0	$k_{\rm eq}$	$0.0131^{+0.0016}_{-0.0021}$	$\chi^2_{\rm 6DF}$	0.38 ± 0.39
$\langle d^2\rangle^{1/2}$	2.494 ± 0.054	$100\theta_{\rm eq}$	$0.744^{+0.047}_{-0.055}$	$\chi^2_{\rm MGS}$	0.73 ± 0.63
$z_{\rm re}$	$8.64^{+0.48}_{-0.57}$	$100\theta_{\rm s,eq}$	$0.414^{+0.025}_{-0.028}$	$\chi^2_{\rm DR12BAO}$	3.7 ± 1.6
$10^9 A_{\rm s}$	$2.06^{+0.22}_{-0.26}$	$H(0.15)$	$77.4^{+2.5}_{-3.3}$	$\chi^2_{\rm prior}$	2.0 ± 2.0
$10^9 A_{\rm s}e^{-2\tau}$	$1.85^{+0.19}_{-0.23}$	$D_{\rm M}(0.15)$	609^{+22}_{-19}	$\chi^2_{\rm BAO}$	4.8 ± 1.8
D_{40}	1150^{+200}_{-200}	$H(0.38)$	$90.2^{+3.9}_{-5.1}$		
D_{220}	4970^{+900}_{-1000}	$D_{\rm M}(0.38)$	1437^{+60}_{-54}		

$\bar{\chi}^2_{\rm eff} = 15.55$; $\Delta\bar{\chi}^2_{\rm eff} = -1.46$; $R - 1 = 0.00430$

6.109 base_mnu_lensing_lenspriors_BAO_theta

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022173	0.02218 ± 0.00049	D_{810}	2916	2926^{+210}_{-320}	$H(0.51)$	89.10	89.08 ± 0.67
$\boldsymbol{\Omega_c h^2}$	0.11357	$0.1136^{+0.0038}_{-0.0032}$	D_{1420}	930	935^{+70}_{-100}	$D_{\rm M}(0.51)$	1991.0	1992 ± 19
$\boldsymbol{100\theta_{MC}}$	1.04088	1.04091 ± 0.00060	D_{2000}	261.4	263^{+21}_{-30}	$H(0.61)$	94.62	$94.61^{+0.72}_{-0.64}$
$\boldsymbol{\Sigma m_\nu}$ [eV]	0.292	$0.30^{+0.15}_{-0.21}$	$n_{\rm s,0.002}$	0.9607	0.962 ± 0.019	$D_{\rm M}(0.61)$	2317.6	2319 ± 21
$\boldsymbol{\ln(10^{10} A_s)}$	3.178	$3.177^{+0.078}_{-0.094}$	$Y_{\rm P}$	0.245315	$0.24530^{+0.00023}_{-0.00020}$	$H(2.33)$	233.39	233.4 ± 1.7
$\boldsymbol{n_s}$	0.9607	0.962 ± 0.019	$Y_{\rm P}^{\rm BBN}$	0.246641	$0.24663^{+0.00023}_{-0.00020}$	$D_{\rm M}(2.33)$	5808.5	5809^{+37}_{-43}
H_0	67.41	67.37 ± 0.80	10^5D/H	2.623	$2.624^{+0.087}_{-0.099}$	$f\sigma_8(0.15)$	0.4436	$0.443^{+0.014}_{-0.012}$
Ω_Λ	0.6944	0.6936 ± 0.0089	Age/Gyr	13.908	$13.910^{+0.088}_{-0.10}$	$\sigma_8(0.15)$	0.7294	$0.727^{+0.026}_{-0.021}$
$\Omega_{\rm m}$	0.3056	0.3064 ± 0.0089	z_*	1089.63	1089.65 ± 0.65	$f\sigma_8(0.38)$	0.4634	$0.462^{+0.014}_{-0.012}$
$\Omega_{\rm m} h^2$	0.13888	0.1390 ± 0.0022	r_*	146.23	146.21 ± 0.99	$\sigma_8(0.38)$	0.6478	$0.646^{+0.023}_{-0.019}$
$\Omega_\nu h^2$	0.00314	$0.0032^{+0.0016}_{-0.0023}$	$100\theta_*$	1.04122	1.04124 ± 0.00061	$f\sigma_8(0.51)$	0.4630	$0.462^{+0.014}_{-0.012}$
$\Omega_{\rm m} h^3$	0.09362	$0.0936^{+0.0019}_{-0.0018}$	$D_{\rm M}(z_*)$/Gpc	14.044	14.042 ± 0.095	$\sigma_8(0.51)$	0.6069	$0.605^{+0.021}_{-0.018}$
σ_8	0.7882	$0.786^{+0.028}_{-0.023}$	$z_{\rm drag}$	1059.06	1059.1 ± 1.2	$f\sigma_8(0.61)$	0.4588	$0.457^{+0.014}_{-0.011}$
S_8	0.7956	$0.794^{+0.027}_{-0.024}$	$r_{\rm drag}$	149.00	149.0 ± 1.1	$\sigma_8(0.61)$	0.5779	$0.576^{+0.020}_{-0.017}$
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4357	$0.435^{+0.015}_{-0.013}$	$k_{\rm D}$	0.13876	0.1388 ± 0.0014	$f\sigma_8(2.33)$	0.2953	$0.2942^{+0.0083}_{-0.0073}$
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.5860	$0.585^{+0.020}_{-0.017}$	$100\theta_{\rm D}$	0.16121	0.16121 ± 0.00071	$\sigma_8(2.33)$	0.3027	$0.3015^{+0.0098}_{-0.0084}$
$\sigma_8/h^{0.5}$	0.9600	$0.957^{+0.030}_{-0.026}$	$z_{\rm eq}$	3244	3244^{+92}_{-80}	$\chi^2_{\rm lensing}$	7.50	9.2 ± 1.8
$r_{\rm drag} h$	100.44	100.4 ± 1.1	$k_{\rm eq}$	0.009903	$0.00990^{+0.00028}_{-0.00024}$	$\chi^2_{\rm 6DF}$	0.0001	0.056 ± 0.079
$\langle d^2 \rangle^{1/2}$	2.526	$2.525^{+0.050}_{-0.056}$	$100\theta_{\rm eq}$	0.8425	$0.843^{+0.014}_{-0.019}$	$\chi^2_{\rm MGS}$	1.68	1.72 ± 0.69
$z_{\rm re}$	7.722	7.73 ± 0.11	$100\theta_{\rm s,eq}$	0.4648	$0.4650^{+0.0076}_{-0.0099}$	$\chi^2_{\rm DR12BAO}$	3.43	4.3 ± 1.4
$10^9 A_{\rm s}$	2.400	$2.41^{+0.17}_{-0.24}$	$H(0.15)$	72.58	72.54 ± 0.75	$\chi^2_{\rm prior}$	0.00	2.9 ± 2.4
$10^9 A_{\rm s} e^{-2\tau}$	2.150	$2.16^{+0.15}_{-0.22}$	$D_{\rm M}(0.15)$	643.6	644.0 ± 7.2	$\chi^2_{\rm BAO}$	5.11	6.1 ± 1.4
D_{40}	1437	1434^{+100}_{-130}	$H(0.38)$	82.50	82.47 ± 0.68			
D_{220}	6745	6763^{+510}_{-750}	$D_{\rm M}(0.38)$	1536.3	1537 ± 15			

Best-fit $\chi^2_{\rm eff} = 12.61$; $\Delta\chi^2_{\rm eff} = -0.74$; $\bar{\chi}^2_{\rm eff} = 18.27$; $\Delta\bar{\chi}^2_{\rm eff} = -0.08$; $R - 1 = 0.00180$

$\chi^2_{\rm eff}$: BAO - 6DF: 0.00 (Δ 0.00) MGS: 1.68 (Δ -0.07) DR12BAO: 3.43 (Δ 0.00) CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8_CMBmarged: 7.50 (Δ -0.60)

6.110 base_mnu_lensing_lenspriors_BAO_theta_post_Pantheon

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02219 ± 0.00049	D_{810}	2929^{+210}_{-320}	$H(0.51)$	$89.12^{+0.70}_{-0.63}$
$\boldsymbol{\Omega_c h^2}$	$0.1134^{+0.0038}_{-0.0032}$	D_{1420}	936^{+70}_{-110}	$D_{\rm M}(0.51)$	1990 ± 18
$\boldsymbol{100\theta_{MC}}$	1.04090 ± 0.00061	D_{2000}	263^{+20}_{-30}	$H(0.61)$	$94.64^{+0.71}_{-0.63}$
$\boldsymbol{\Sigma m_\nu}$ [eV]	$0.30^{+0.14}_{-0.22}$	$n_{\rm s,0.002}$	0.962 ± 0.019	$D_{\rm M}(0.61)$	2317 ± 20
$\boldsymbol{\ln(10^{10} A_s)}$	$3.178^{+0.077}_{-0.096}$	$Y_{\rm P}$	$0.24531^{+0.00023}_{-0.00019}$	$H(2.33)$	233.3 ± 1.7
$\boldsymbol{n_s}$	0.962 ± 0.019	$Y_{\rm P}^{\rm BBN}$	$0.24663^{+0.00023}_{-0.00019}$	$D_{\rm M}(2.33)$	5808^{+36}_{-43}
H_0	67.45 ± 0.76	10^5D/H	$2.623^{+0.087}_{-0.098}$	$f\sigma_8(0.15)$	$0.442^{+0.014}_{-0.012}$
Ω_Λ	0.6948 ± 0.0082	Age/Gyr	$13.907^{+0.087}_{-0.10}$	$\sigma_8(0.15)$	$0.728^{+0.026}_{-0.021}$
$\Omega_{\rm m}$	0.3052 ± 0.0082	z_*	1089.62 ± 0.64	$f\sigma_8(0.38)$	$0.462^{+0.014}_{-0.012}$
$\Omega_{\rm m} h^2$	0.1388 ± 0.0021	r_*	$146.24^{+0.94}_{-1.1}$	$\sigma_8(0.38)$	$0.647^{+0.023}_{-0.019}$
$\Omega_\nu h^2$	$0.0032^{+0.0015}_{-0.0023}$	$100\theta_*$	1.04123 ± 0.00062	$f\sigma_8(0.51)$	$0.462^{+0.014}_{-0.012}$
$\Omega_{\rm m} h^3$	$0.0936^{+0.0020}_{-0.0017}$	$D_{\rm M}(z_*)$/Gpc	$14.045^{+0.090}_{-0.10}$	$\sigma_8(0.51)$	$0.606^{+0.021}_{-0.018}$
σ_8	$0.787^{+0.028}_{-0.023}$	$z_{\rm drag}$	1059.1 ± 1.2	$f\sigma_8(0.61)$	$0.458^{+0.013}_{-0.011}$
S_8	$0.793^{+0.027}_{-0.024}$	$r_{\rm drag}$	149.0 ± 1.1	$\sigma_8(0.61)$	$0.577^{+0.020}_{-0.017}$
$\sigma_8 \Omega_{\rm m}^{0.5}$	$0.435^{+0.015}_{-0.013}$	$k_{\rm D}$	0.1388 ± 0.0014	$f\sigma_8(2.33)$	$0.2946^{+0.0083}_{-0.0072}$
$\sigma_8 \Omega_{\rm m}^{0.25}$	$0.585^{+0.020}_{-0.017}$	$100\theta_{\rm D}$	0.16120 ± 0.00071	$\sigma_8(2.33)$	$0.3020^{+0.0098}_{-0.0083}$
$\sigma_8/h^{0.5}$	$0.958^{+0.030}_{-0.026}$	$z_{\rm eq}$	3241^{+93}_{-78}	$\chi^2_{\rm lensing}$	9.2 ± 1.8
$r_{\rm drag} h$	100.5 ± 1.1	$k_{\rm eq}$	$0.00990^{+0.00028}_{-0.00024}$	$\chi^2_{\rm JLA}$	1036.21 ± 0.31
$\langle d^2 \rangle^{1/2}$	$2.525^{+0.050}_{-0.056}$	$100\theta_{\rm eq}$	$0.844^{+0.014}_{-0.019}$	$\chi^2_{\rm 6DF}$	0.048 ± 0.069
$z_{\rm re}$	7.72 ± 0.11	$100\theta_{\rm s,eq}$	$0.4653^{+0.0075}_{-0.010}$	$\chi^2_{\rm MGS}$	1.80 ± 0.66
$10^9 A_{\rm s}$	$2.41^{+0.16}_{-0.25}$	$H(0.15)$	72.62 ± 0.72	$\chi^2_{\rm DR12BAO}$	4.2 ± 1.2
$10^9 A_{\rm s} e^{-2\tau}$	$2.16^{+0.15}_{-0.22}$	$D_{\rm M}(0.15)$	643.2 ± 6.8	$\chi^2_{\rm prior}$	2.9 ± 2.4
D_{40}	1436^{+100}_{-130}	$H(0.38)$	82.53 ± 0.67	$\chi^2_{\rm BAO}$	6.0 ± 1.2
D_{220}	6772^{+510}_{-760}	$D_{\rm M}(0.38)$	1536 ± 15		

$\bar{\chi}^2_{\rm eff} = 1054.35$; $\Delta\bar{\chi}^2_{\rm eff} = -0.03$; $R - 1 = 0.00186$

6.111 base_mnu_lensing_lenspriors_BAO_theta_post_agr2

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02218 ± 0.00049	D_{810}	2967^{+250}_{-310}	$H(0.51)$	88.92 ± 0.68
$\boldsymbol{\Omega_c h^2}$	0.1125 ± 0.0035	D_{1420}	946^{+83}_{-100}	$D_{\rm M}(0.51)$	1995 ± 19
$\boldsymbol{100\theta_{MC}}$	1.04090 ± 0.00061	D_{2000}	266^{+24}_{-30}	$H(0.61)$	94.44 ± 0.68
$\boldsymbol{\Sigma m_\nu}$ [eV]	0.36 ± 0.17	$n_{\rm s,0.002}$	0.960 ± 0.020	$D_{\rm M}(0.61)$	2323 ± 21
$\boldsymbol{\ln(10^{10} A_s)}$	3.189 ± 0.087	$Y_{\rm P}$	$0.24531^{+0.00023}_{-0.00020}$	$H(2.33)$	233.0 ± 1.7
$\boldsymbol{n_s}$	0.960 ± 0.020	$Y_{\rm P}^{\rm BBN}$	$0.24663^{+0.00023}_{-0.00020}$	$D_{\rm M}(2.33)$	5820 ± 40
H_0	67.26 ± 0.81	10^5D/H	$2.623^{+0.088}_{-0.099}$	$f\sigma_8(0.15)$	0.435 ± 0.012
Ω_Λ	0.6937 ± 0.0088	Age/Gyr	13.935 ± 0.095	$\sigma_8(0.15)$	0.715 ± 0.022
$\Omega_{\rm m}$	0.3063 ± 0.0088	z_*	1089.56 ± 0.64	$f\sigma_8(0.38)$	$0.455^{+0.012}_{-0.011}$
$\Omega_{\rm m}h^2$	0.1385 ± 0.0021	r_*	146.49 ± 0.99	$\sigma_8(0.38)$	0.635 ± 0.019
$\Omega_\nu h^2$	0.0038 ± 0.0019	$100\theta_*$	1.04126 ± 0.00062	$f\sigma_8(0.51)$	$0.454^{+0.012}_{-0.011}$
$\Omega_{\rm m}h^3$	0.0931 ± 0.0018	$D_{\rm M}(z_*)$/Gpc	14.068 ± 0.095	$\sigma_8(0.51)$	0.595 ± 0.018
σ_8	0.772 ± 0.024	$z_{\rm drag}$	1059.0 ± 1.2	$f\sigma_8(0.61)$	$0.450^{+0.012}_{-0.011}$
S_8	0.780 ± 0.023	$r_{\rm drag}$	149.3 ± 1.1	$\sigma_8(0.61)$	0.566 ± 0.017
$\sigma_8\Omega_{\rm m}^{0.5}$	0.427 ± 0.013	$k_{\rm D}$	0.1385 ± 0.0014	$f\sigma_8(2.33)$	0.2901 ± 0.0074
$\sigma_8\Omega_{\rm m}^{0.25}$	0.575 ± 0.017	$100\theta_{\rm D}$	0.16122 ± 0.00071	$\sigma_8(2.33)$	0.2969 ± 0.0086
$\sigma_8/h^{0.5}$	0.942 ± 0.026	$z_{\rm eq}$	3217 ± 85	$\chi^2_{\rm lensing}$	11.7 ± 1.8
$r_{\rm drag}h$	100.4 ± 1.1	$k_{\rm eq}$	0.00982 ± 0.00026	$\chi^2_{\rm 6DF}$	0.055 ± 0.077
$\langle d^2\rangle^{1/2}$	2.528 ± 0.054	$100\theta_{\rm eq}$	$0.848^{+0.016}_{-0.018}$	$\chi^2_{\rm MGS}$	1.73 ± 0.69
$z_{\rm re}$	7.71 ± 0.11	$100\theta_{\rm s,eq}$	$0.4678^{+0.0085}_{-0.0095}$	$\chi^2_{\rm DR12BAO}$	4.3 ± 1.4
$10^9 A_{\rm s}$	$2.44^{+0.20}_{-0.24}$	$H(0.15)$	72.42 ± 0.76	$\chi^2_{\rm prior}$	3.0 ± 2.4
$10^9 A_{\rm s}e^{-2\tau}$	$2.18^{+0.18}_{-0.21}$	$D_{\rm M}(0.15)$	645.1 ± 7.3	$\chi^2_{\rm BAO}$	6.1 ± 1.4
D_{40}	1461 ± 110	$H(0.38)$	82.33 ± 0.69		
D_{220}	6900^{+610}_{-720}	$D_{\rm M}(0.38)$	1540 ± 16		

$\bar{\chi}^2_{\rm eff} = 20.82$; $\Delta\bar{\chi}^2_{\rm eff} = -0.90$; $R - 1 = 0.00190$

6.112 base_mnu_lensing_lenspriors_BAO_theta_post_conslmin40

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02218 ± 0.00050	D_{810}	2993^{+250}_{-380}	$H(0.51)$	$88.96^{+0.77}_{-0.69}$
$\boldsymbol{\Omega_c h^2}$	$0.1128^{+0.0044}_{-0.0036}$	D_{1420}	955^{+81}_{-120}	$D_{\rm M}(0.51)$	1995^{+19}_{-21}
$\boldsymbol{100\theta_{MC}}$	1.04091 ± 0.00061	D_{2000}	268^{+23}_{-35}	$H(0.61)$	$94.48^{+0.78}_{-0.69}$
$\boldsymbol{\Sigma m_\nu}$ [eV]	$0.34^{+0.16}_{-0.25}$	$n_{\rm s,0.002}$	0.962 ± 0.019	$D_{\rm M}(0.61)$	2322^{+21}_{-24}
$\boldsymbol{\ln(10^{10} A_s)}$	$3.198^{+0.090}_{-0.11}$	$Y_{\rm P}$	$0.24530^{+0.00023}_{-0.00020}$	$H(2.33)$	233.1 ± 1.8
$\boldsymbol{n_s}$	0.962 ± 0.019	$Y_{\rm P}^{\rm BBN}$	$0.24663^{+0.00023}_{-0.00020}$	$D_{\rm M}(2.33)$	5817^{+40}_{-47}
H_0	67.28 ± 0.83	10^5D/H	$2.625^{+0.088}_{-0.10}$	$f\sigma_8(0.15)$	$0.440^{+0.015}_{-0.013}$
Ω_Λ	0.6936 ± 0.0089	Age/Gyr	$13.928^{+0.096}_{-0.11}$	$\sigma_8(0.15)$	$0.723^{+0.028}_{-0.023}$
$\Omega_{\rm m}$	0.3064 ± 0.0089	z_*	1089.59 ± 0.66	$f\sigma_8(0.38)$	$0.460^{+0.015}_{-0.013}$
$\Omega_{\rm m}h^2$	0.1386 ± 0.0023	r_*	146.4 ± 1.1	$\sigma_8(0.38)$	$0.642^{+0.025}_{-0.021}$
$\Omega_\nu h^2$	$0.0037^{+0.0018}_{-0.0027}$	$100\theta_*$	1.04126 ± 0.00062	$f\sigma_8(0.51)$	$0.459^{+0.015}_{-0.012}$
$\Omega_{\rm m}h^3$	$0.0933^{+0.0021}_{-0.0019}$	$D_{\rm M}(z_*)$/Gpc	14.06 ± 0.10	$\sigma_8(0.51)$	$0.601^{+0.023}_{-0.019}$
σ_8	$0.781^{+0.031}_{-0.025}$	$z_{\rm drag}$	1059.0 ± 1.2	$f\sigma_8(0.61)$	$0.455^{+0.015}_{-0.012}$
S_8	$0.789^{+0.030}_{-0.026}$	$r_{\rm drag}$	149.2 ± 1.2	$\sigma_8(0.61)$	$0.572^{+0.022}_{-0.018}$
$\sigma_8\Omega_{\rm m}^{0.5}$	$0.432^{+0.017}_{-0.014}$	$k_{\rm D}$	0.1386 ± 0.0014	$f\sigma_8(2.33)$	$0.2929^{+0.0091}_{-0.0077}$
$\sigma_8\Omega_{\rm m}^{0.25}$	$0.581^{+0.022}_{-0.018}$	$100\theta_{\rm D}$	$0.16122^{+0.00067}_{-0.00075}$	$\sigma_8(2.33)$	$0.300^{+0.011}_{-0.0090}$
$\sigma_8/h^{0.5}$	$0.952^{+0.034}_{-0.028}$	$z_{\rm eq}$	3225^{+100}_{-89}	$\chi^2_{\rm lensing}$	9.1 ± 1.7
$r_{\rm drag}h$	100.4 ± 1.1	$k_{\rm eq}$	$0.00985^{+0.00031}_{-0.00027}$	$\chi^2_{\rm 6DF}$	0.056 ± 0.079
$\langle d^2\rangle^{1/2}$	$2.540^{+0.060}_{-0.072}$	$100\theta_{\rm eq}$	$0.847^{+0.016}_{-0.022}$	$\chi^2_{\rm MGS}$	1.71 ± 0.69
$z_{\rm re}$	7.72 ± 0.11	$100\theta_{\rm s,eq}$	$0.4671^{+0.0085}_{-0.012}$	$\chi^2_{\rm DR12BAO}$	4.3 ± 1.4
$10^9 A_{\rm s}$	$2.46^{+0.19}_{-0.29}$	$H(0.15)$	72.45 ± 0.78	$\chi^2_{\rm prior}$	3.0 ± 2.4
$10^9 A_{\rm s}e^{-2\tau}$	$2.20^{+0.17}_{-0.26}$	$D_{\rm M}(0.15)$	$644.9^{+7.0}_{-7.9}$	$\chi^2_{\rm BAO}$	6.1 ± 1.4
D_{40}	1468^{+120}_{-160}	$H(0.38)$	$82.37^{+0.78}_{-0.70}$		
D_{220}	6942^{+600}_{-930}	$D_{\rm M}(0.38)$	1539^{+15}_{-17}		

$\bar{\chi}^2_{\rm eff} = 18.19$; $\Delta\bar{\chi}^2_{\rm eff} = -0.08$; $R - 1 = 0.00198$

6.113 base_mnu_lensing_lenspriors_BAO_theta_post_agrlmax425

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02217 ± 0.00049	D_{810}	2919^{+210}_{-320}	$H(0.51)$	$89.09^{+0.71}_{-0.64}$
$\boldsymbol{\Omega_c h^2}$	$0.1137^{+0.0038}_{-0.0032}$	D_{1420}	933^{+69}_{-100}	$D_{\rm M}(0.51)$	1992 ± 19
$\boldsymbol{100\theta_{MC}}$	1.04091 ± 0.00061	D_{2000}	262^{+20}_{-30}	$H(0.61)$	$94.62^{+0.72}_{-0.63}$
$\boldsymbol{\Sigma m_\nu}$ [eV]	$0.29^{+0.14}_{-0.22}$	$n_{\rm s,0.002}$	0.962 ± 0.019	$D_{\rm M}(0.61)$	2318 ± 21
$\boldsymbol{\ln(10^{10} A_s)}$	$3.175^{+0.076}_{-0.095}$	$Y_{\rm P}$	$0.24530^{+0.00023}_{-0.00019}$	$H(2.33)$	233.5 ± 1.7
$\boldsymbol{n_s}$	0.962 ± 0.019	$Y_{\rm P}^{\rm BBN}$	$0.24663^{+0.00023}_{-0.00020}$	$D_{\rm M}(2.33)$	5808^{+36}_{-43}
H_0	67.38 ± 0.80	10^5D/H	$2.625^{+0.087}_{-0.099}$	$f\sigma_8(0.15)$	$0.443^{+0.013}_{-0.012}$
Ω_Λ	0.6936 ± 0.0088	Age/Gyr	$13.907^{+0.086}_{-0.10}$	$\sigma_8(0.15)$	$0.729^{+0.025}_{-0.021}$
$\Omega_{\rm m}$	0.3064 ± 0.0088	z_*	1089.67 ± 0.65	$f\sigma_8(0.38)$	$0.463^{+0.014}_{-0.012}$
$\Omega_{\rm m}h^2$	0.1390 ± 0.0022	r_*	$146.18^{+0.94}_{-1.0}$	$\sigma_8(0.38)$	$0.647^{+0.022}_{-0.019}$
$\Omega_\nu h^2$	$0.0031^{+0.0015}_{-0.0023}$	$100\theta_*$	1.04124 ± 0.00062	$f\sigma_8(0.51)$	$0.463^{+0.014}_{-0.011}$
$\Omega_{\rm m}h^3$	$0.0937^{+0.0019}_{-0.0017}$	$D_{\rm M}(z_*)$/Gpc	$14.039^{+0.090}_{-0.10}$	$\sigma_8(0.51)$	$0.606^{+0.021}_{-0.018}$
σ_8	$0.788^{+0.027}_{-0.023}$	$z_{\rm drag}$	1059.0 ± 1.2	$f\sigma_8(0.61)$	$0.458^{+0.013}_{-0.011}$
S_8	$0.796^{+0.027}_{-0.024}$	$r_{\rm drag}$	148.9 ± 1.1	$\sigma_8(0.61)$	$0.577^{+0.020}_{-0.017}$
$\sigma_8\Omega_{\rm m}^{0.5}$	$0.436^{+0.015}_{-0.013}$	$k_{\rm D}$	0.1388 ± 0.0014	$f\sigma_8(2.33)$	$0.2947^{+0.0083}_{-0.0073}$
$\sigma_8\Omega_{\rm m}^{0.25}$	$0.586^{+0.020}_{-0.017}$	$100\theta_{\rm D}$	0.16122 ± 0.00071	$\sigma_8(2.33)$	$0.3021^{+0.0097}_{-0.0083}$
$\sigma_8/h^{0.5}$	$0.959^{+0.030}_{-0.026}$	$z_{\rm eq}$	3248^{+92}_{-78}	$\chi^2_{\rm lensing}$	7.0 ± 1.8
$r_{\rm drag}h$	100.4 ± 1.1	$k_{\rm eq}$	$0.00991^{+0.00028}_{-0.00024}$	$\chi^2_{\rm 6DF}$	0.056 ± 0.079
$\langle d^2\rangle^{1/2}$	$2.524^{+0.050}_{-0.056}$	$100\theta_{\rm eq}$	$0.842^{+0.014}_{-0.019}$	$\chi^2_{\rm MGS}$	1.71 ± 0.69
$z_{\rm re}$	7.73 ± 0.11	$100\theta_{\rm s,eq}$	$0.4647^{+0.0075}_{-0.0098}$	$\chi^2_{\rm DR12BAO}$	4.4 ± 1.4
$10^9 A_{\rm s}$	$2.40^{+0.16}_{-0.24}$	$H(0.15)$	72.55 ± 0.74	$\chi^2_{\rm prior}$	2.9 ± 2.4
$10^9 A_{\rm s}e^{-2\tau}$	$2.15^{+0.14}_{-0.22}$	$D_{\rm M}(0.15)$	643.9 ± 7.1	$\chi^2_{\rm BAO}$	6.1 ± 1.4
D_{40}	1430^{+100}_{-130}	$H(0.38)$	82.49 ± 0.68		
D_{220}	6741^{+500}_{-750}	$D_{\rm M}(0.38)$	1537 ± 15		

$\bar{\chi}^2_{\rm eff} = 16.07$; $\Delta\bar{\chi}^2_{\rm eff} = -0.02$; $R - 1 = 0.00165$

6.114 base_mnu_lensing_lenspriors_BAO_theta_post_ptt

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02220 ± 0.00051	D_{810}	3253^{+350}_{-300}	$H(0.51)$	88.54 ± 0.73
$\boldsymbol{\Omega_c h^2}$	$0.1098^{+0.0034}_{-0.0041}$	D_{1420}	1035 ± 100	$D_{\rm M}(0.51)$	2004 ± 21
$\boldsymbol{100\theta_{MC}}$	1.04092 ± 0.00061	D_{2000}	290 ± 30	$H(0.61)$	94.04 ± 0.73
$\boldsymbol{\Sigma m_\nu}$ [eV]	$0.50^{+0.22}_{-0.19}$	$n_{\rm s,0.002}$	0.960 ± 0.019	$D_{\rm M}(0.61)$	2333 ± 23
$\boldsymbol{\ln(10^{10} A_s)}$	$3.28^{+0.11}_{-0.078}$	$Y_{\rm P}$	$0.24531^{+0.00024}_{-0.00020}$	$H(2.33)$	232.1 ± 1.7
$\boldsymbol{n_s}$	0.960 ± 0.019	$Y_{\rm P}^{\rm BBN}$	$0.24664^{+0.00024}_{-0.00020}$	$D_{\rm M}(2.33)$	5844 ± 44
H_0	66.96 ± 0.86	10^5D/H	$2.621^{+0.091}_{-0.10}$	$f\sigma_8(0.15)$	0.432 ± 0.015
Ω_Λ	0.6935 ± 0.0091	Age/Gyr	13.99 ± 0.10	$\sigma_8(0.15)$	0.707 ± 0.027
$\Omega_{\rm m}$	0.3065 ± 0.0091	z_*	1089.36 ± 0.67	$f\sigma_8(0.38)$	0.451 ± 0.015
$\Omega_{\rm m}h^2$	0.1374 ± 0.0022	r_*	$147.1^{+1.1}_{-0.99}$	$\sigma_8(0.38)$	0.628 ± 0.024
$\Omega_\nu h^2$	$0.0053^{+0.0024}_{-0.0020}$	$100\theta_*$	1.04133 ± 0.00063	$f\sigma_8(0.51)$	0.451 ± 0.015
$\Omega_{\rm m}h^3$	$0.0920^{+0.0018}_{-0.0021}$	$D_{\rm M}(z_*)$/Gpc	$14.13^{+0.10}_{-0.095}$	$\sigma_8(0.51)$	0.588 ± 0.023
σ_8	0.764 ± 0.029	$z_{\rm drag}$	1058.9 ± 1.2	$f\sigma_8(0.61)$	0.447 ± 0.015
S_8	0.772 ± 0.029	$r_{\rm drag}$	149.9 ± 1.2	$\sigma_8(0.61)$	0.560 ± 0.022
$\sigma_8\Omega_{\rm m}^{0.5}$	0.423 ± 0.016	$k_{\rm D}$	0.1379 ± 0.0014	$f\sigma_8(2.33)$	0.2887 ± 0.0094
$\sigma_8\Omega_{\rm m}^{0.25}$	0.568 ± 0.021	$100\theta_{\rm D}$	0.16125 ± 0.00073	$\sigma_8(2.33)$	0.294 ± 0.011
$\sigma_8/h^{0.5}$	0.933 ± 0.033	$z_{\rm eq}$	3155^{+84}_{-100}	$\chi^2_{\rm lensing}$	10.6 ± 1.7
$r_{\rm drag}h$	100.4 ± 1.2	$k_{\rm eq}$	$0.00964^{+0.00025}_{-0.00030}$	$\chi^2_{\rm 6DF}$	0.058 ± 0.080
$\langle d^2\rangle^{1/2}$	2.605 ± 0.067	$100\theta_{\rm eq}$	0.862 ± 0.019	$\chi^2_{\rm MGS}$	1.72 ± 0.71
$z_{\rm re}$	7.69 ± 0.12	$100\theta_{\rm s,eq}$	0.475 ± 0.010	$\chi^2_{\rm DR12BAO}$	4.4 ± 1.4
$10^9 A_{\rm s}$	$2.66^{+0.27}_{-0.23}$	$H(0.15)$	72.10 ± 0.81	$\chi^2_{\rm prior}$	3.0 ± 2.4
$10^9 A_{\rm s}e^{-2\tau}$	$2.39^{+0.24}_{-0.20}$	$D_{\rm M}(0.15)$	648.0 ± 7.8	$\chi^2_{\rm BAO}$	6.1 ± 1.4
D_{40}	1602^{+150}_{-130}	$H(0.38)$	81.98 ± 0.75		
D_{220}	7646^{+900}_{-700}	$D_{\rm M}(0.38)$	1547 ± 17		

$\bar{\chi}^2_{\rm eff} = 19.79$; $\Delta\bar{\chi}^2_{\rm eff} = -2.61$; $R - 1 = 0.03408$

6.115 base_mnu_lensing_lenspriors_BAO_theta_post_bfcl

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02218 ± 0.00049	D_{810}	2861^{+200}_{-310}	$H(0.51)$	$89.11^{+0.71}_{-0.63}$
$\boldsymbol{\Omega_c h^2}$	$0.1138^{+0.0038}_{-0.0031}$	D_{1420}	914^{+66}_{-100}	$D_{\rm M}(0.51)$	1991^{+18}_{-20}
$\boldsymbol{100\theta_{MC}}$	1.04091 ± 0.00061	D_{2000}	257^{+19}_{-29}	$H(0.61)$	$94.64^{+0.72}_{-0.62}$
$\boldsymbol{\Sigma m_\nu}$ [eV]	$0.29^{+0.13}_{-0.22}$	$n_{\rm s,0.002}$	0.963 ± 0.019	$D_{\rm M}(0.61)$	2318^{+20}_{-22}
$\boldsymbol{\ln(10^{10} A_s)}$	$3.154^{+0.074}_{-0.093}$	$Y_{\rm P}$	$0.24530^{+0.00023}_{-0.00020}$	$H(2.33)$	233.5 ± 1.7
$\boldsymbol{n_s}$	0.963 ± 0.019	$Y_{\rm P}^{\rm BBN}$	$0.24663^{+0.00023}_{-0.00020}$	$D_{\rm M}(2.33)$	5807^{+36}_{-43}
H_0	67.39 ± 0.80	10^5D/H	$2.625^{+0.088}_{-0.098}$	$f\sigma_8(0.15)$	$0.440^{+0.014}_{-0.011}$
Ω_Λ	0.6936 ± 0.0088	Age/Gyr	$13.905^{+0.085}_{-0.10}$	$\sigma_8(0.15)$	$0.723^{+0.025}_{-0.021}$
$\Omega_{\rm m}$	0.3064 ± 0.0088	z_*	1089.67 ± 0.64	$f\sigma_8(0.38)$	$0.459^{+0.014}_{-0.011}$
$\Omega_{\rm m}h^2$	0.1391 ± 0.0022	r_*	$146.16^{+0.93}_{-1.1}$	$\sigma_8(0.38)$	$0.642^{+0.023}_{-0.018}$
$\Omega_\nu h^2$	$0.0031^{+0.0014}_{-0.0024}$	$100\theta_*$	1.04124 ± 0.00062	$f\sigma_8(0.51)$	$0.459^{+0.014}_{-0.011}$
$\Omega_{\rm m}h^3$	$0.0937^{+0.0019}_{-0.0017}$	$D_{\rm M}(z_*)$/Gpc	$14.037^{+0.090}_{-0.10}$	$\sigma_8(0.51)$	$0.601^{+0.021}_{-0.017}$
σ_8	$0.781^{+0.028}_{-0.022}$	$z_{\rm drag}$	1059.1 ± 1.2	$f\sigma_8(0.61)$	$0.454^{+0.013}_{-0.011}$
S_8	$0.789^{+0.027}_{-0.023}$	$r_{\rm drag}$	$148.9^{+1.0}_{-1.2}$	$\sigma_8(0.61)$	$0.572^{+0.020}_{-0.016}$
$\sigma_8\Omega_{\rm m}^{0.5}$	$0.432^{+0.015}_{-0.013}$	$k_{\rm D}$	0.1388 ± 0.0014	$f\sigma_8(2.33)$	$0.2921^{+0.0082}_{-0.0071}$
$\sigma_8\Omega_{\rm m}^{0.25}$	$0.581^{+0.020}_{-0.016}$	$100\theta_{\rm D}$	0.16121 ± 0.00071	$\sigma_8(2.33)$	$0.2995^{+0.0097}_{-0.0082}$
$\sigma_8/h^{0.5}$	$0.951^{+0.030}_{-0.025}$	$z_{\rm eq}$	3250^{+93}_{-78}	$\chi^2_{\rm lensing}$	9.4 ± 1.8
$r_{\rm drag}h$	100.4 ± 1.1	$k_{\rm eq}$	$0.00992^{+0.00028}_{-0.00024}$	$\chi^2_{\rm 6DF}$	0.055 ± 0.079
$\langle d^2\rangle^{1/2}$	2.499 ± 0.050	$100\theta_{\rm eq}$	$0.842^{+0.014}_{-0.019}$	$\chi^2_{\rm MGS}$	1.71 ± 0.69
$z_{\rm re}$	7.73 ± 0.11	$100\theta_{\rm s,eq}$	$0.4644^{+0.0074}_{-0.0099}$	$\chi^2_{\rm DR12BAO}$	4.4 ± 1.4
$10^9 A_{\rm s}$	$2.35^{+0.16}_{-0.23}$	$H(0.15)$	72.57 ± 0.74	$\chi^2_{\rm prior}$	2.9 ± 2.3
$10^9 A_{\rm s}e^{-2\tau}$	$2.11^{+0.14}_{-0.21}$	$D_{\rm M}(0.15)$	643.8 ± 7.1	$\chi^2_{\rm BAO}$	6.1 ± 1.4
D_{40}	1400^{+100}_{-120}	$H(0.38)$	$82.50^{+0.72}_{-0.65}$		
D_{220}	6599^{+490}_{-720}	$D_{\rm M}(0.38)$	1537 ± 15		

$\bar{\chi}^2_{\rm eff} = 18.46$; $\Delta\bar{\chi}^2_{\rm eff} = 0.09$; $R - 1 = 0.00205$

6.116 base_mnu_lensing_lenspriors_BAO_theta_post_agr2bfcl

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02218 ± 0.00049	D_{810}	2894^{+240}_{-300}	$H(0.51)$	88.97 ± 0.67
$\boldsymbol{\Omega_c h^2}$	0.1128 ± 0.0034	D_{1420}	924^{+77}_{-100}	$D_{\rm M}(0.51)$	1994 ± 19
$\boldsymbol{100\theta_{MC}}$	1.04091 ± 0.00062	D_{2000}	259^{+22}_{-29}	$H(0.61)$	94.49 ± 0.67
$\boldsymbol{\Sigma m_\nu}$ [eV]	0.34 ± 0.17	$n_{\rm s,0.002}$	0.961 ± 0.019	$D_{\rm M}(0.61)$	2321 ± 21
$\boldsymbol{\ln(10^{10} A_s)}$	3.165 ± 0.084	$Y_{\rm P}$	$0.24531^{+0.00023}_{-0.00020}$	$H(2.33)$	233.2 ± 1.7
$\boldsymbol{n_s}$	0.961 ± 0.019	$Y_{\rm P}^{\rm BBN}$	$0.24663^{+0.00023}_{-0.00020}$	$D_{\rm M}(2.33)$	5816 ± 40
H_0	67.29 ± 0.81	10^5D/H	2.624 ± 0.093	$f\sigma_8(0.15)$	0.433 ± 0.012
Ω_Λ	0.6937 ± 0.0088	Age/Gyr	13.927 ± 0.094	$\sigma_8(0.15)$	0.711 ± 0.022
$\Omega_{\rm m}$	0.3063 ± 0.0088	z_*	1089.59 ± 0.64	$f\sigma_8(0.38)$	$0.453^{+0.012}_{-0.011}$
$\Omega_{\rm m}h^2$	0.1386 ± 0.0021	r_*	146.40 ± 0.98	$\sigma_8(0.38)$	$0.632^{+0.020}_{-0.018}$
$\Omega_\nu h^2$	0.0036 ± 0.0019	$100\theta_*$	1.04126 ± 0.00063	$f\sigma_8(0.51)$	$0.452^{+0.012}_{-0.011}$
$\Omega_{\rm m}h^3$	0.0933 ± 0.0018	$D_{\rm M}(z_*)$/Gpc	14.060 ± 0.094	$\sigma_8(0.51)$	$0.592^{+0.019}_{-0.017}$
σ_8	0.769 ± 0.023	$z_{\rm drag}$	1059.0 ± 1.2	$f\sigma_8(0.61)$	$0.448^{+0.012}_{-0.011}$
S_8	0.777 ± 0.023	$r_{\rm drag}$	149.2 ± 1.1	$\sigma_8(0.61)$	$0.564^{+0.018}_{-0.016}$
$\sigma_8\Omega_{\rm m}^{0.5}$	0.425 ± 0.013	$k_{\rm D}$	0.1386 ± 0.0014	$f\sigma_8(2.33)$	0.2884 ± 0.0073
$\sigma_8\Omega_{\rm m}^{0.25}$	0.572 ± 0.017	$100\theta_{\rm D}$	0.16122 ± 0.00071	$\sigma_8(2.33)$	$0.2953^{+0.0088}_{-0.0080}$
$\sigma_8/h^{0.5}$	0.937 ± 0.026	$z_{\rm eq}$	3226 ± 84	$\chi^2_{\rm lensing}$	11.9 ± 1.8
$r_{\rm drag}h$	100.4 ± 1.1	$k_{\rm eq}$	0.00985 ± 0.00025	$\chi^2_{\rm 6DF}$	0.055 ± 0.077
$\langle d^2\rangle^{1/2}$	2.501 ± 0.051	$100\theta_{\rm eq}$	$0.847^{+0.016}_{-0.018}$	$\chi^2_{\rm MGS}$	1.72 ± 0.69
$z_{\rm re}$	7.72 ± 0.11	$100\theta_{\rm s,eq}$	$0.4669^{+0.0083}_{-0.0095}$	$\chi^2_{\rm DR12BAO}$	4.3 ± 1.4
$10^9 A_{\rm s}$	$2.38^{+0.18}_{-0.22}$	$H(0.15)$	72.46 ± 0.75	$\chi^2_{\rm prior}$	3.0 ± 2.4
$10^9 A_{\rm s}e^{-2\tau}$	$2.13^{+0.16}_{-0.20}$	$D_{\rm M}(0.15)$	644.8 ± 7.2	$\chi^2_{\rm BAO}$	6.1 ± 1.4
D_{40}	1422 ± 110	$H(0.38)$	82.38 ± 0.69		
D_{220}	6715^{+580}_{-680}	$D_{\rm M}(0.38)$	1539 ± 15		

$\bar{\chi}^2_{\rm eff} = 20.96$; $\Delta\bar{\chi}^2_{\rm eff} = -0.55$; $R - 1 = 0.00384$

6.117 base_mnu_lensing_lenspriors_BAO_theta_post_linear

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02217 ± 0.00049	D_{810}	2899^{+190}_{-310}	$H(0.51)$	$89.18^{+0.70}_{-0.61}$
$\boldsymbol{\Omega_c h^2}$	$0.1143^{+0.0038}_{-0.0029}$	D_{1420}	927^{+63}_{-100}	$D_{\rm M}(0.51)$	1990^{+17}_{-19}
$\boldsymbol{100\theta_{MC}}$	1.04091 ± 0.00060	D_{2000}	260^{+19}_{-29}	$H(0.61)$	$94.71^{+0.71}_{-0.60}$
$\boldsymbol{\Sigma m_\nu}$ [eV]	$0.262^{+0.095}_{-0.23}$	$n_{\rm s,0.002}$	0.963 ± 0.019	$D_{\rm M}(0.61)$	2316^{+19}_{-22}
$\boldsymbol{\ln(10^{10} A_s)}$	$3.169^{+0.068}_{-0.094}$	$Y_{\rm P}$	$0.24530^{+0.00023}_{-0.00019}$	$H(2.33)$	233.7 ± 1.7
$\boldsymbol{n_s}$	0.963 ± 0.019	$Y_{\rm P}^{\rm BBN}$	$0.24663^{+0.00023}_{-0.00020}$	$D_{\rm M}(2.33)$	5803^{+34}_{-43}
H_0	67.44 ± 0.79	10^5D/H	$2.626^{+0.087}_{-0.099}$	$f\sigma_8(0.15)$	$0.447^{+0.014}_{-0.012}$
Ω_Λ	0.6936 ± 0.0089	Age/Gyr	$13.895^{+0.081}_{-0.10}$	$\sigma_8(0.15)$	$0.735^{+0.026}_{-0.020}$
$\Omega_{\rm m}$	0.3064 ± 0.0089	z_*	1089.71 ± 0.64	$f\sigma_8(0.38)$	$0.467^{+0.014}_{-0.011}$
$\Omega_{\rm m}h^2$	0.1393 ± 0.0021	r_*	$146.04^{+0.90}_{-1.0}$	$\sigma_8(0.38)$	$0.653^{+0.023}_{-0.018}$
$\Omega_\nu h^2$	$0.0028^{+0.0010}_{-0.0025}$	$100\theta_*$	1.04122 ± 0.00061	$f\sigma_8(0.51)$	$0.466^{+0.014}_{-0.011}$
$\Omega_{\rm m}h^3$	$0.0939^{+0.0019}_{-0.0016}$	$D_{\rm M}(z_*)$/Gpc	$14.026^{+0.086}_{-0.10}$	$\sigma_8(0.51)$	$0.611^{+0.021}_{-0.017}$
σ_8	$0.795^{+0.028}_{-0.022}$	$z_{\rm drag}$	1059.1 ± 1.2	$f\sigma_8(0.61)$	$0.462^{+0.013}_{-0.011}$
S_8	$0.803^{+0.027}_{-0.023}$	$r_{\rm drag}$	$148.8^{+1.0}_{-1.2}$	$\sigma_8(0.61)$	$0.582^{+0.020}_{-0.016}$
$\sigma_8\Omega_{\rm m}^{0.5}$	$0.440^{+0.015}_{-0.013}$	$k_{\rm D}$	0.1390 ± 0.0014	$f\sigma_8(2.33)$	$0.2968^{+0.0084}_{-0.0071}$
$\sigma_8\Omega_{\rm m}^{0.25}$	$0.591^{+0.020}_{-0.016}$	$100\theta_{\rm D}$	0.16121 ± 0.00071	$\sigma_8(2.33)$	$0.3045^{+0.0098}_{-0.0081}$
$\sigma_8/h^{0.5}$	$0.967^{+0.031}_{-0.025}$	$z_{\rm eq}$	3261^{+92}_{-73}	$\chi^2_{\rm lensing}$	9.7 ± 1.8
$r_{\rm drag}h$	100.3 ± 1.1	$k_{\rm eq}$	$0.00996^{+0.00028}_{-0.00022}$	$\chi^2_{\rm 6DF}$	0.056 ± 0.080
$\langle d^2\rangle^{1/2}$	$2.520^{+0.048}_{-0.055}$	$100\theta_{\rm eq}$	$0.840^{+0.013}_{-0.018}$	$\chi^2_{\rm MGS}$	1.71 ± 0.69
$z_{\rm re}$	7.73 ± 0.11	$100\theta_{\rm s,eq}$	$0.4632^{+0.0069}_{-0.0097}$	$\chi^2_{\rm DR12BAO}$	4.4 ± 1.5
$10^9 A_{\rm s}$	$2.39^{+0.14}_{-0.23}$	$H(0.15)$	72.62 ± 0.73	$\chi^2_{\rm prior}$	2.9 ± 2.4
$10^9 A_{\rm s}e^{-2\tau}$	$2.14^{+0.13}_{-0.21}$	$D_{\rm M}(0.15)$	643.3 ± 7.0	$\chi^2_{\rm BAO}$	6.1 ± 1.4
D_{40}	1417^{+94}_{-130}	$H(0.38)$	$82.56^{+0.71}_{-0.63}$		
D_{220}	6673^{+450}_{-730}	$D_{\rm M}(0.38)$	1535^{+14}_{-16}		

$\bar{\chi}^2_{\rm eff} = 18.71$; $\Delta\bar{\chi}^2_{\rm eff} = 0.26$; $R - 1 = 0.00239$

6.118 base_mnu_lensing_lenspriors_BAO_theta_post_acc

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02218 ± 0.00049	D_{810}	2928^{+210}_{-320}	$H(0.51)$	$89.07^{+0.72}_{-0.65}$
$\boldsymbol{\Omega_c h^2}$	$0.1135^{+0.0038}_{-0.0032}$	D_{1420}	935^{+71}_{-110}	$D_{\rm M}(0.51)$	1992 ± 19
$\boldsymbol{100\theta_{MC}}$	1.04091 ± 0.00061	D_{2000}	263^{+21}_{-30}	$H(0.61)$	$94.60^{+0.72}_{-0.64}$
$\boldsymbol{\Sigma m_\nu}$ [eV]	$0.30^{+0.15}_{-0.22}$	$n_{\rm s,0.002}$	0.962 ± 0.019	$D_{\rm M}(0.61)$	2319 ± 21
$\boldsymbol{\ln(10^{10} A_s)}$	$3.177^{+0.078}_{-0.095}$	$Y_{\rm P}$	$0.24530^{+0.00023}_{-0.00019}$	$H(2.33)$	233.4 ± 1.7
$\boldsymbol{n_s}$	0.962 ± 0.019	$Y_{\rm P}^{\rm BBN}$	$0.24663^{+0.00023}_{-0.00020}$	$D_{\rm M}(2.33)$	5810^{+37}_{-44}
H_0	67.36 ± 0.80	10^5D/H	$2.625^{+0.087}_{-0.099}$	$f\sigma_8(0.15)$	$0.442^{+0.014}_{-0.012}$
Ω_Λ	0.6937 ± 0.0088	Age/Gyr	$13.911^{+0.088}_{-0.10}$	$\sigma_8(0.15)$	$0.727^{+0.026}_{-0.022}$
$\Omega_{\rm m}$	0.3063 ± 0.0088	z_*	1089.65 ± 0.65	$f\sigma_8(0.38)$	$0.462^{+0.014}_{-0.012}$
$\Omega_{\rm m} h^2$	0.1389 ± 0.0022	r_*	146.23 ± 0.99	$\sigma_8(0.38)$	$0.645^{+0.023}_{-0.019}$
$\Omega_\nu h^2$	$0.0032^{+0.0016}_{-0.0023}$	$100\theta_*$	1.04124 ± 0.00062	$f\sigma_8(0.51)$	$0.461^{+0.014}_{-0.012}$
$\Omega_{\rm m} h^3$	$0.0936^{+0.0020}_{-0.0018}$	$D_{\rm M}(z_*)$/Gpc	14.043 ± 0.095	$\sigma_8(0.51)$	$0.604^{+0.021}_{-0.018}$
σ_8	$0.785^{+0.028}_{-0.023}$	$z_{\rm drag}$	1059.0 ± 1.2	$f\sigma_8(0.61)$	$0.457^{+0.014}_{-0.011}$
S_8	$0.793^{+0.027}_{-0.024}$	$r_{\rm drag}$	149.0 ± 1.1	$\sigma_8(0.61)$	$0.575^{+0.020}_{-0.017}$
$\sigma_8 \Omega_{\rm m}^{0.5}$	$0.435^{+0.015}_{-0.013}$	$k_{\rm D}$	0.1388 ± 0.0014	$f\sigma_8(2.33)$	$0.2940^{+0.0084}_{-0.0074}$
$\sigma_8 \Omega_{\rm m}^{0.25}$	$0.584^{+0.020}_{-0.017}$	$100\theta_{\rm D}$	0.16121 ± 0.00071	$\sigma_8(2.33)$	$0.3013^{+0.0099}_{-0.0085}$
$\sigma_8/h^{0.5}$	$0.957^{+0.031}_{-0.026}$	$z_{\rm eq}$	3243^{+93}_{-80}	$\chi^2_{\rm lensing}$	9.2 ± 1.8
$r_{\rm drag} h$	100.4 ± 1.1	$k_{\rm eq}$	$0.00990^{+0.00028}_{-0.00024}$	$\chi^2_{\rm 6DF}$	0.056 ± 0.079
$\langle d^2 \rangle^{1/2}$	$2.526^{+0.050}_{-0.056}$	$100\theta_{\rm eq}$	$0.843^{+0.014}_{-0.019}$	$\chi^2_{\rm MGS}$	1.72 ± 0.69
$z_{\rm re}$	7.73 ± 0.11	$100\theta_{\rm s,eq}$	$0.4652^{+0.0076}_{-0.010}$	$\chi^2_{\rm DR12BAO}$	4.3 ± 1.4
$10^9 A_{\rm s}$	$2.41^{+0.17}_{-0.24}$	$H(0.15)$	72.54 ± 0.75	$\chi^2_{\rm prior}$	2.9 ± 2.4
$10^9 A_{\rm s} e^{-2\tau}$	$2.16^{+0.15}_{-0.22}$	$D_{\rm M}(0.15)$	644.0 ± 7.2	$\chi^2_{\rm BAO}$	6.1 ± 1.4
D_{40}	1435^{+110}_{-130}	$H(0.38)$	82.47 ± 0.69		
D_{220}	6766^{+520}_{-760}	$D_{\rm M}(0.38)$	1537 ± 15		

$\bar{\chi}^2_{\rm eff} = 18.25$; $\Delta\bar{\chi}^2_{\rm eff} = -0.10$; $R - 1 = 0.00162$

6.119 base_mnu_lensing_lenspriors_BAO_theta_post_agr2acc

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02219 ± 0.00049	D_{810}	2975^{+260}_{-310}	$H(0.51)$	88.90 ± 0.68
$\boldsymbol{\Omega_c h^2}$	0.1123 ± 0.0035	D_{1420}	948^{+84}_{-100}	$D_{\rm M}(0.51)$	1996 ± 19
$\boldsymbol{100\theta_{MC}}$	1.04090 ± 0.00061	D_{2000}	266^{+24}_{-30}	$H(0.61)$	94.42 ± 0.68
$\boldsymbol{\Sigma m_\nu}$ [eV]	0.36 ± 0.18	$n_{\rm s,0.002}$	0.960 ± 0.020	$D_{\rm M}(0.61)$	2323 ± 22
$\boldsymbol{\ln(10^{10} A_s)}$	3.192 ± 0.087	$Y_{\rm P}$	$0.24531^{+0.00023}_{-0.00020}$	$H(2.33)$	233.0 ± 1.7
$\boldsymbol{n_s}$	0.960 ± 0.020	$Y_{\rm P}^{\rm BBN}$	$0.24663^{+0.00023}_{-0.00020}$	$D_{\rm M}(2.33)$	5821 ± 40
H_0	67.24 ± 0.81	10^5D/H	$2.623^{+0.088}_{-0.099}$	$f\sigma_8(0.15)$	0.435 ± 0.012
Ω_Λ	0.6937 ± 0.0088	Age/Gyr	13.938 ± 0.096	$\sigma_8(0.15)$	0.713 ± 0.022
$\Omega_{\rm m}$	0.3063 ± 0.0088	z_*	1089.54 ± 0.64	$f\sigma_8(0.38)$	0.454 ± 0.012
$\Omega_{\rm m}h^2$	0.1384 ± 0.0021	r_*	146.52 ± 0.99	$\sigma_8(0.38)$	0.634 ± 0.020
$\Omega_\nu h^2$	0.0039 ± 0.0019	$100\theta_*$	1.04126 ± 0.00062	$f\sigma_8(0.51)$	0.454 ± 0.012
$\Omega_{\rm m}h^3$	0.0931 ± 0.0018	$D_{\rm M}(z_*)$/Gpc	14.072 ± 0.095	$\sigma_8(0.51)$	0.594 ± 0.018
σ_8	0.771 ± 0.024	$z_{\rm drag}$	1059.0 ± 1.2	$f\sigma_8(0.61)$	0.449 ± 0.012
S_8	0.779 ± 0.023	$r_{\rm drag}$	149.3 ± 1.1	$\sigma_8(0.61)$	0.565 ± 0.017
$\sigma_8\Omega_{\rm m}^{0.5}$	0.426 ± 0.013	$k_{\rm D}$	0.1385 ± 0.0014	$f\sigma_8(2.33)$	0.2896 ± 0.0074
$\sigma_8\Omega_{\rm m}^{0.25}$	0.573 ± 0.017	$100\theta_{\rm D}$	0.16123 ± 0.00071	$\sigma_8(2.33)$	0.2963 ± 0.0087
$\sigma_8/h^{0.5}$	0.940 ± 0.026	$z_{\rm eq}$	3214 ± 85	$\chi^2_{\rm lensing}$	11.8 ± 1.9
$r_{\rm drag}h$	100.4 ± 1.1	$k_{\rm eq}$	0.00981 ± 0.00026	$\chi^2_{\rm 6DF}$	0.055 ± 0.077
$\langle d^2\rangle^{1/2}$	2.530 ± 0.054	$100\theta_{\rm eq}$	0.849 ± 0.017	$\chi^2_{\rm MGS}$	1.73 ± 0.69
$z_{\rm re}$	7.71 ± 0.11	$100\theta_{\rm s,eq}$	0.4682 ± 0.0089	$\chi^2_{\rm DR12BAO}$	4.3 ± 1.4
$10^9 A_{\rm s}$	$2.44^{+0.20}_{-0.23}$	$H(0.15)$	72.40 ± 0.76	$\chi^2_{\rm prior}$	3.0 ± 2.4
$10^9 A_{\rm s}e^{-2\tau}$	$2.19^{+0.18}_{-0.21}$	$D_{\rm M}(0.15)$	645.2 ± 7.3	$\chi^2_{\rm BAO}$	6.1 ± 1.4
D_{40}	1465 ± 110	$H(0.38)$	82.31 ± 0.70		
D_{220}	6921^{+620}_{-720}	$D_{\rm M}(0.38)$	1540 ± 16		

$\bar{\chi}^2_{\rm eff} = 20.92$; $\Delta\bar{\chi}^2_{\rm eff} = -1.02$; $R - 1 = 0.00208$

6.120 base_mnu_lensing_lenspriors_BAO_theta_post_takahashi

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02218 ± 0.00049	D_{810}	2935^{+220}_{-320}	$H(0.51)$	89.04 ± 0.68
$\boldsymbol{\Omega_c h^2}$	$0.1133^{+0.0039}_{-0.0033}$	D_{1420}	937^{+73}_{-110}	$D_{\rm M}(0.51)$	1993 ± 19
$\boldsymbol{100\theta_{MC}}$	1.04091 ± 0.00061	D_{2000}	264^{+21}_{-30}	$H(0.61)$	$94.56^{+0.73}_{-0.66}$
$\boldsymbol{\Sigma m_\nu}$ [eV]	$0.31^{+0.16}_{-0.22}$	$n_{\rm s,0.002}$	0.962 ± 0.019	$D_{\rm M}(0.61)$	2320 ± 21
$\boldsymbol{\ln(10^{10} A_s)}$	$3.180^{+0.080}_{-0.095}$	$Y_{\rm P}$	$0.24530^{+0.00023}_{-0.00020}$	$H(2.33)$	233.3 ± 1.7
$\boldsymbol{n_s}$	0.962 ± 0.019	$Y_{\rm P}^{\rm BBN}$	$0.24663^{+0.00023}_{-0.00020}$	$D_{\rm M}(2.33)$	5812^{+38}_{-44}
H_0	67.34 ± 0.81	10^5D/H	$2.624^{+0.088}_{-0.098}$	$f\sigma_8(0.15)$	$0.441^{+0.014}_{-0.013}$
Ω_Λ	0.6936 ± 0.0088	Age/Gyr	$13.917^{+0.091}_{-0.10}$	$\sigma_8(0.15)$	$0.724^{+0.027}_{-0.023}$
$\Omega_{\rm m}$	0.3064 ± 0.0088	z_*	1089.63 ± 0.65	$f\sigma_8(0.38)$	$0.460^{+0.015}_{-0.012}$
$\Omega_{\rm m}h^2$	0.1388 ± 0.0022	r_*	146.3 ± 1.0	$\sigma_8(0.38)$	$0.643^{+0.024}_{-0.020}$
$\Omega_\nu h^2$	$0.0034^{+0.0017}_{-0.0023}$	$100\theta_*$	1.04124 ± 0.00062	$f\sigma_8(0.51)$	$0.460^{+0.014}_{-0.012}$
$\Omega_{\rm m}h^3$	0.0935 ± 0.0018	$D_{\rm M}(z_*)$/Gpc	14.049 ± 0.097	$\sigma_8(0.51)$	$0.602^{+0.022}_{-0.019}$
σ_8	$0.782^{+0.029}_{-0.025}$	$z_{\rm drag}$	1059.0 ± 1.2	$f\sigma_8(0.61)$	$0.456^{+0.014}_{-0.012}$
S_8	$0.790^{+0.028}_{-0.025}$	$r_{\rm drag}$	149.1 ± 1.1	$\sigma_8(0.61)$	$0.573^{+0.021}_{-0.018}$
$\sigma_8\Omega_{\rm m}^{0.5}$	$0.433^{+0.016}_{-0.014}$	$k_{\rm D}$	0.1387 ± 0.0014	$f\sigma_8(2.33)$	$0.2931^{+0.0088}_{-0.0077}$
$\sigma_8\Omega_{\rm m}^{0.25}$	$0.582^{+0.021}_{-0.018}$	$100\theta_{\rm D}$	0.16122 ± 0.00071	$\sigma_8(2.33)$	$0.300^{+0.010}_{-0.0089}$
$\sigma_8/h^{0.5}$	$0.953^{+0.032}_{-0.027}$	$z_{\rm eq}$	3237^{+94}_{-82}	$\chi^2_{\rm lensing}$	9.2 ± 1.8
$r_{\rm drag}h$	100.4 ± 1.1	$k_{\rm eq}$	$0.00988^{+0.00028}_{-0.00025}$	$\chi^2_{\rm 6DF}$	0.056 ± 0.079
$\langle d^2\rangle^{1/2}$	2.526 ± 0.053	$100\theta_{\rm eq}$	$0.844^{+0.015}_{-0.020}$	$\chi^2_{\rm MGS}$	1.72 ± 0.69
$z_{\rm re}$	7.72 ± 0.11	$100\theta_{\rm s,eq}$	$0.4658^{+0.0079}_{-0.010}$	$\chi^2_{\rm DR12BAO}$	4.3 ± 1.4
$10^9 A_{\rm s}$	$2.41^{+0.17}_{-0.24}$	$H(0.15)$	72.51 ± 0.76	$\chi^2_{\rm prior}$	3.0 ± 2.4
$10^9 A_{\rm s}e^{-2\tau}$	$2.16^{+0.15}_{-0.22}$	$D_{\rm M}(0.15)$	644.3 ± 7.2	$\chi^2_{\rm BAO}$	6.1 ± 1.4
D_{40}	1439^{+110}_{-130}	$H(0.38)$	82.44 ± 0.69		
D_{220}	6792^{+530}_{-760}	$D_{\rm M}(0.38)$	1538 ± 16		

$\bar{\chi}^2_{\rm eff} = 18.22$; $\Delta\bar{\chi}^2_{\rm eff} = -0.18$; $R - 1 = 0.00182$

6.121 base_mnu_lensing_lenspriors_BAO_theta_post_agr2takahashi

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02219 ± 0.00049	D_{810}	2984^{+260}_{-310}	$H(0.51)$	88.86 ± 0.69
$\boldsymbol{\Omega_c h^2}$	0.1120 ± 0.0035	D_{1420}	951^{+86}_{-100}	$D_{\rm M}(0.51)$	1997 ± 19
$\boldsymbol{100\theta_{MC}}$	1.04090 ± 0.00062	D_{2000}	267^{+25}_{-30}	$H(0.61)$	94.37 ± 0.69
$\boldsymbol{\Sigma m_\nu}$ [eV]	0.38 ± 0.18	$n_{\rm s,0.002}$	0.960 ± 0.020	$D_{\rm M}(0.61)$	2324 ± 22
$\boldsymbol{\ln(10^{10} A_s)}$	3.195 ± 0.087	$Y_{\rm P}$	$0.24531^{+0.00023}_{-0.00020}$	$H(2.33)$	232.9 ± 1.7
$\boldsymbol{n_s}$	0.960 ± 0.020	$Y_{\rm P}^{\rm BBN}$	$0.24663^{+0.00023}_{-0.00020}$	$D_{\rm M}(2.33)$	5824 ± 41
H_0	67.20 ± 0.82	10^5D/H	$2.623^{+0.088}_{-0.098}$	$f\sigma_8(0.15)$	0.433 ± 0.012
Ω_Λ	0.6937 ± 0.0088	Age/Gyr	13.945 ± 0.097	$\sigma_8(0.15)$	0.710 ± 0.023
$\Omega_{\rm m}$	0.3063 ± 0.0088	z_*	1089.52 ± 0.64	$f\sigma_8(0.38)$	0.452 ± 0.012
$\Omega_{\rm m}h^2$	0.1383 ± 0.0022	r_*	146.6 ± 1.0	$\sigma_8(0.38)$	0.631 ± 0.020
$\Omega_\nu h^2$	0.0041 ± 0.0019	$100\theta_*$	1.04127 ± 0.00063	$f\sigma_8(0.51)$	0.452 ± 0.012
$\Omega_{\rm m}h^3$	0.0929 ± 0.0018	$D_{\rm M}(z_*)$/Gpc	14.079 ± 0.096	$\sigma_8(0.51)$	0.591 ± 0.019
σ_8	0.767 ± 0.025	$z_{\rm drag}$	1059.0 ± 1.2	$f\sigma_8(0.61)$	0.448 ± 0.012
S_8	0.775 ± 0.024	$r_{\rm drag}$	149.4 ± 1.1	$\sigma_8(0.61)$	0.563 ± 0.018
$\sigma_8\Omega_{\rm m}^{0.5}$	0.424 ± 0.013	$k_{\rm D}$	0.1384 ± 0.0014	$f\sigma_8(2.33)$	0.2884 ± 0.0078
$\sigma_8\Omega_{\rm m}^{0.25}$	0.571 ± 0.018	$100\theta_{\rm D}$	0.16123 ± 0.00071	$\sigma_8(2.33)$	0.2950 ± 0.0090
$\sigma_8/h^{0.5}$	0.936 ± 0.027	$z_{\rm eq}$	3207 ± 86	$\chi^2_{\rm lensing}$	11.8 ± 1.9
$r_{\rm drag}h$	100.4 ± 1.1	$k_{\rm eq}$	0.00979 ± 0.00026	$\chi^2_{\rm 6DF}$	0.055 ± 0.077
$\langle d^2\rangle^{1/2}$	2.530 ± 0.055	$100\theta_{\rm eq}$	0.851 ± 0.017	$\chi^2_{\rm MGS}$	1.73 ± 0.69
$z_{\rm re}$	7.71 ± 0.11	$100\theta_{\rm s,eq}$	0.4690 ± 0.0090	$\chi^2_{\rm DR12BAO}$	4.3 ± 1.4
$10^9 A_{\rm s}$	$2.45^{+0.20}_{-0.23}$	$H(0.15)$	72.37 ± 0.76	$\chi^2_{\rm prior}$	3.0 ± 2.4
$10^9 A_{\rm s}e^{-2\tau}$	$2.19^{+0.18}_{-0.21}$	$D_{\rm M}(0.15)$	645.6 ± 7.3	$\chi^2_{\rm BAO}$	6.1 ± 1.4
D_{40}	1469 ± 110	$H(0.38)$	82.27 ± 0.70		
D_{220}	6952 ± 660	$D_{\rm M}(0.38)$	1541 ± 16		

$\bar{\chi}^2_{\rm eff} = 20.91$; $\Delta\bar{\chi}^2_{\rm eff} = -1.18$; $R - 1 = 0.00288$

6.122 base_mnu_lensing_lenspriors_BAO_theta_post_Apr6

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02217 ± 0.00049	D_{810}	2893^{+200}_{-310}	$H(0.51)$	$89.12^{+0.70}_{-0.63}$
$\boldsymbol{\Omega_c h^2}$	$0.1139^{+0.0038}_{-0.0031}$	D_{1420}	925^{+66}_{-100}	$D_{\rm M}(0.51)$	1991 ± 19
$\boldsymbol{100\theta_{MC}}$	1.04091 ± 0.00061	D_{2000}	260^{+19}_{-29}	$H(0.61)$	$94.65^{+0.72}_{-0.62}$
$\boldsymbol{\Sigma m_\nu}$ [eV]	$0.28^{+0.13}_{-0.22}$	$n_{\rm s,0.002}$	0.963 ± 0.019	$D_{\rm M}(0.61)$	2318^{+20}_{-22}
$\boldsymbol{\ln(10^{10} A_s)}$	$3.166^{+0.073}_{-0.094}$	$Y_{\rm P}$	$0.24530^{+0.00023}_{-0.00019}$	$H(2.33)$	233.6 ± 1.7
$\boldsymbol{n_s}$	0.963 ± 0.019	$Y_{\rm P}^{\rm BBN}$	$0.24663^{+0.00023}_{-0.00020}$	$D_{\rm M}(2.33)$	5807^{+36}_{-43}
H_0	67.40 ± 0.80	10^5D/H	$2.625^{+0.087}_{-0.098}$	$f\sigma_8(0.15)$	$0.443^{+0.013}_{-0.012}$
Ω_Λ	0.6936 ± 0.0088	Age/Gyr	$13.903^{+0.084}_{-0.10}$	$\sigma_8(0.15)$	$0.728^{+0.025}_{-0.021}$
$\Omega_{\rm m}$	0.3064 ± 0.0088	z_*	1089.68 ± 0.64	$f\sigma_8(0.38)$	$0.463^{+0.014}_{-0.011}$
$\Omega_{\rm m}h^2$	0.1391 ± 0.0021	r_*	$146.13^{+0.92}_{-1.0}$	$\sigma_8(0.38)$	$0.647^{+0.022}_{-0.018}$
$\Omega_\nu h^2$	$0.0030^{+0.0014}_{-0.0024}$	$100\theta_*$	1.04123 ± 0.00062	$f\sigma_8(0.51)$	$0.462^{+0.013}_{-0.011}$
$\Omega_{\rm m}h^3$	$0.0938^{+0.0019}_{-0.0017}$	$D_{\rm M}(z_*)$/Gpc	$14.034^{+0.089}_{-0.10}$	$\sigma_8(0.51)$	$0.606^{+0.021}_{-0.017}$
σ_8	$0.787^{+0.027}_{-0.022}$	$z_{\rm drag}$	1059.1 ± 1.2	$f\sigma_8(0.61)$	$0.458^{+0.013}_{-0.011}$
S_8	$0.795^{+0.027}_{-0.023}$	$r_{\rm drag}$	$148.9^{+1.0}_{-1.2}$	$\sigma_8(0.61)$	$0.577^{+0.020}_{-0.016}$
$\sigma_8\Omega_{\rm m}^{0.5}$	$0.436^{+0.015}_{-0.013}$	$k_{\rm D}$	0.1389 ± 0.0014	$f\sigma_8(2.33)$	$0.2944^{+0.0082}_{-0.0072}$
$\sigma_8\Omega_{\rm m}^{0.25}$	$0.586^{+0.020}_{-0.016}$	$100\theta_{\rm D}$	0.16121 ± 0.00071	$\sigma_8(2.33)$	$0.3019^{+0.0097}_{-0.0082}$
$\sigma_8/h^{0.5}$	$0.959^{+0.030}_{-0.025}$	$z_{\rm eq}$	3252^{+92}_{-77}	$\chi^2_{\rm lensing}$	8.0 ± 1.8
$r_{\rm drag}h$	100.3 ± 1.1	$k_{\rm eq}$	$0.00993^{+0.00028}_{-0.00023}$	$\chi^2_{\rm 6DF}$	0.056 ± 0.079
$\langle d^2\rangle^{1/2}$	$2.515^{+0.049}_{-0.055}$	$100\theta_{\rm eq}$	$0.841^{+0.014}_{-0.019}$	$\chi^2_{\rm MGS}$	1.71 ± 0.69
$z_{\rm re}$	7.73 ± 0.11	$100\theta_{\rm s,eq}$	$0.4642^{+0.0073}_{-0.0098}$	$\chi^2_{\rm DR12BAO}$	4.4 ± 1.4
$10^9 A_{\rm s}$	$2.38^{+0.15}_{-0.24}$	$H(0.15)$	72.58 ± 0.74	$\chi^2_{\rm prior}$	2.9 ± 2.4
$10^9 A_{\rm s}e^{-2\tau}$	$2.13^{+0.14}_{-0.21}$	$D_{\rm M}(0.15)$	643.7 ± 7.1	$\chi^2_{\rm BAO}$	6.1 ± 1.4
D_{40}	1416^{+100}_{-120}	$H(0.38)$	82.51 ± 0.67		
D_{220}	6672^{+480}_{-730}	$D_{\rm M}(0.38)$	1536 ± 15		

$\bar{\chi}^2_{\rm eff} = 17.02$; $\Delta\bar{\chi}^2_{\rm eff} = 0.08$; $R - 1 = 0.00149$

6.123 base_mnu_lensing_lenspriors_pttagr2

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02220 ± 0.00051	D_{40}	1359^{+300}_{-400}	$H(0.15)$	76^{+10}_{-20}
$\boldsymbol{\Omega_c h^2}$	$0.143^{+0.031}_{-0.040}$	D_{220}	6093^{+1000}_{-2000}	$D_{\rm M}(0.15)$	658^{+80}_{-200}
$\boldsymbol{100\theta_{MC}}$	$1.094^{+0.078}_{-0.065}$	D_{810}	2457^{+700}_{-900}	$H(0.38)$	89^{+10}_{-20}
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 2.60	D_{1420}	733^{+200}_{-300}	$D_{\rm M}(0.38)$	1529^{+200}_{-500}
$\boldsymbol{\ln(10^{10} A_s)}$	$3.15^{+0.22}_{-0.20}$	D_{2000}	221^{+50}_{-100}	$H(0.51)$	97 ± 10
$\boldsymbol{n_s}$	0.959 ± 0.019	$n_{\rm s,0.002}$	0.959 ± 0.019	$D_{\rm M}(0.51)$	1959^{+200}_{-500}
H_0	—	$Y_{\rm P}$	$0.24531^{+0.00023}_{-0.00020}$	$H(0.61)$	104 ± 10
Ω_Λ	$0.521^{+0.33}_{-0.092}$	$Y_{\rm P}^{\rm BBN}$	$0.24664^{+0.00023}_{-0.00020}$	$D_{\rm M}(0.61)$	2264^{+300}_{-600}
$\Omega_{\rm m}$	$0.479^{+0.092}_{-0.33}$	10^5D/H	$2.620^{+0.089}_{-0.10}$	$H(2.33)$	267 ± 30
$\Omega_{\rm m}h^2$	$0.187^{+0.039}_{-0.060}$	Age/Gyr	$13.0^{+1.3}_{-2.2}$	$D_{\rm M}(2.33)$	5411^{+540}_{-920}
$\Omega_\nu h^2$	< 0.0279	z_*	$1092.9^{+3.3}_{-4.3}$	$f\sigma_8(0.15)$	$0.427^{+0.050}_{-0.027}$
$\Omega_{\rm m}h^3$	$0.129^{+0.033}_{-0.060}$	r_*	138.2 ± 8.7	$\sigma_8(0.15)$	0.63 ± 0.11
σ_8	0.684 ± 0.099	$100\theta_*$	$1.095^{+0.078}_{-0.065}$	$f\sigma_8(0.38)$	$0.421^{+0.023}_{-0.015}$
S_8	$0.796^{+0.098}_{-0.14}$	$D_{\rm M}(z_*)$/Gpc	$12.7^{+1.2}_{-1.8}$	$\sigma_8(0.38)$	0.55 ± 0.11
$\sigma_8\Omega_{\rm m}^{0.5}$	$0.436^{+0.054}_{-0.077}$	$z_{\rm drag}$	1061.8 ± 3.1	$f\sigma_8(0.51)$	$0.412^{+0.035}_{-0.015}$
$\sigma_8\Omega_{\rm m}^{0.25}$	0.541 ± 0.018	$r_{\rm drag}$	$140.7^{+9.1}_{-10}$	$\sigma_8(0.51)$	0.51 ± 0.11
$\sigma_8/h^{0.5}$	$0.831^{+0.051}_{-0.082}$	$k_{\rm D}$	$0.149^{+0.011}_{-0.012}$	$f\sigma_8(0.61)$	$0.404^{+0.046}_{-0.020}$
$r_{\rm drag}h$	97^{+20}_{-30}	$100\theta_{\rm D}$	$0.168^{+0.011}_{-0.0095}$	$\sigma_8(0.61)$	$0.49^{+0.10}_{-0.12}$
$\langle d^2\rangle^{1/2}$	2.598 ± 0.074	$z_{\rm eq}$	3950^{+700}_{-1000}	$f\sigma_8(2.33)$	$0.252^{+0.057}_{-0.068}$
$z_{\rm re}$	8.48 ± 0.76	$k_{\rm eq}$	$0.0121^{+0.0023}_{-0.0031}$	$\sigma_8(2.33)$	$0.256^{+0.057}_{-0.079}$
$10^9 A_{\rm s}$	$2.38^{+0.41}_{-0.55}$	$100\theta_{\rm eq}$	$0.789^{+0.072}_{-0.11}$	$\chi^2_{\rm lensing}$	18.6 ± 2.2
$10^9 A_{\rm s}e^{-2\tau}$	$2.13^{+0.37}_{-0.50}$	$100\theta_{\rm s,eq}$	$0.438^{+0.038}_{-0.054}$	$\chi^2_{\rm prior}$	2.0 ± 2.0

$\bar{\chi}^2_{\rm eff} = 20.55$; $\Delta\bar{\chi}^2_{\rm eff} = 0.50$; $R - 1 = 0.00794$

6.124 base_mnu_lensing_lenspriors_pttagr2_theta

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02221 ± 0.00049	D_{40}	1373^{+200}_{-500}	$H(0.15)$	$64.1^{+4.8}_{-12}$
$\boldsymbol{\Omega_c h^2}$	0.128 ± 0.022	D_{220}	6521^{+1000}_{-3000}	$D_{\rm M}(0.15)$	768 ± 100
$\boldsymbol{100\theta_{MC}}$	1.04090 ± 0.00060	D_{810}	2894^{+400}_{-800}	$H(0.38)$	$77.4^{+1.9}_{-5.9}$
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 1.96	D_{1420}	935^{+100}_{-200}	$D_{\rm M}(0.38)$	1758^{+300}_{-100}
$\boldsymbol{\ln(10^{10} A_s)}$	$3.15^{+0.19}_{-0.23}$	D_{2000}	264^{+40}_{-60}	$H(0.51)$	$85.79^{+0.63}_{-3.6}$
$\boldsymbol{n_s}$	0.959 ± 0.020	$n_{\rm s,0.002}$	0.959 ± 0.020	$D_{\rm M}(0.51)$	2238^{+300}_{-200}
H_0	< 62.1	$Y_{\rm P}$	$0.24532^{+0.00023}_{-0.00020}$	$H(0.61)$	$92.61^{+0.31}_{-2.5}$
Ω_Λ	$0.38^{+0.45}_{-0.18}$	$Y_{\rm P}^{\rm BBN}$	$0.24664^{+0.00023}_{-0.00020}$	$D_{\rm M}(0.61)$	2574^{+400}_{-200}
$\Omega_{\rm m}$	$0.62^{+0.18}_{-0.45}$	10^5D/H	2.619 ± 0.094	$H(2.33)$	250 ± 20
$\Omega_{\rm m} h^2$	0.166 ± 0.031	Age/Gyr	$14.30^{+0.39}_{-0.15}$	$D_{\rm M}(2.33)$	5957^{+150}_{-41}
$\Omega_\nu h^2$	< 0.0211	z_*	1091.4 ± 2.4	$f\sigma_8(0.15)$	$0.443^{+0.042}_{-0.016}$
$\Omega_{\rm m} h^3$	0.0902 ± 0.0017	r_*	$141.9^{+5.4}_{-8.5}$	$\sigma_8(0.15)$	$0.582^{+0.071}_{-0.16}$
σ_8	$0.644^{+0.068}_{-0.15}$	$100\theta_*$	1.04143 ± 0.00062	$f\sigma_8(0.38)$	$0.417^{+0.030}_{-0.018}$
S_8	$0.85^{+0.14}_{-0.11}$	$D_{\rm M}(z_*)$/Gpc	$13.63^{+0.52}_{-0.82}$	$\sigma_8(0.38)$	$0.506^{+0.069}_{-0.16}$
$\sigma_8 \Omega_{\rm m}^{0.5}$	$0.467^{+0.078}_{-0.062}$	$z_{\rm drag}$	1060.6 ± 2.3	$f\sigma_8(0.51)$	$0.401^{+0.048}_{-0.027}$
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.542 ± 0.017	$r_{\rm drag}$	$144.6^{+5.6}_{-8.6}$	$\sigma_8(0.51)$	$0.470^{+0.066}_{-0.15}$
$\sigma_8/h^{0.5}$	$0.855^{+0.049}_{-0.069}$	$k_{\rm D}$	0.1442 ± 0.0074	$f\sigma_8(0.61)$	0.388 ± 0.044
$r_{\rm drag} h$	82^{+10}_{-30}	$100\theta_{\rm D}$	$0.1602^{+0.0013}_{-0.0015}$	$\sigma_8(0.61)$	$0.445^{+0.063}_{-0.15}$
$\langle d^2 \rangle^{1/2}$	2.623 ± 0.063	$z_{\rm eq}$	3581 ± 500	$f\sigma_8(2.33)$	$0.227^{+0.036}_{-0.081}$
$z_{\rm re}$	$8.10^{+0.57}_{-0.48}$	$k_{\rm eq}$	0.0110 ± 0.0017	$\sigma_8(2.33)$	$0.229^{+0.035}_{-0.087}$
$10^9 A_{\rm s}$	$2.39^{+0.33}_{-0.62}$	$100\theta_{\rm eq}$	$0.800^{+0.060}_{-0.12}$	$\chi^2_{\rm lensing}$	18.3 ± 2.0
$10^9 A_{\rm s} e^{-2\tau}$	$2.14^{+0.30}_{-0.56}$	$100\theta_{\rm s,eq}$	$0.442^{+0.032}_{-0.061}$	$\chi^2_{\rm prior}$	3.0 ± 2.4

$\bar{\chi}^2_{\rm eff} = 21.22$; $\Delta\bar{\chi}^2_{\rm eff} = 0.31$; $R - 1 = 0.00948$

6.125 base_mnu_lensing_lenspriors_pttagr2_BAO

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02221 ± 0.00049	D_{810}	2561 ± 600	$H(0.51)$	$96.9^{+4.9}_{-5.8}$
$\boldsymbol{\Omega_c h^2}$	$0.144^{+0.020}_{-0.025}$	D_{1420}	750^{+200}_{-200}	$D_M(0.51)$	1882 ± 77
$\boldsymbol{100\theta_{MC}}$	$1.103^{+0.037}_{-0.031}$	D_{2000}	216 ± 60	$H(0.61)$	$103.6^{+5.6}_{-6.5}$
$\boldsymbol{\Sigma m_\nu}$ [eV]	$1.93^{+0.68}_{-1.0}$	$n_{s,0.002}$	0.959 ± 0.020	$D_M(0.61)$	2182 ± 94
$\boldsymbol{\ln(10^{10} A_s)}$	3.16 ± 0.12	Y_P	$0.24532^{+0.00023}_{-0.00019}$	$H(2.33)$	267 ± 21
$\boldsymbol{n_s}$	0.959 ± 0.020	Y_P^{BBN}	$0.24664^{+0.00023}_{-0.00019}$	$D_M(2.33)$	5300^{+300}_{-340}
H_0	$69.6^{+1.8}_{-2.2}$	10^5D/H	$2.620^{+0.086}_{-0.098}$	$f\sigma_8(0.15)$	0.431 ± 0.015
Ω_Λ	0.617 ± 0.045	Age/Gyr	$12.68^{+0.72}_{-0.83}$	$\sigma_8(0.15)$	$0.635^{+0.030}_{-0.036}$
Ω_m	0.383 ± 0.045	z_*	$1093.0^{+2.2}_{-2.6}$	$f\sigma_8(0.38)$	0.434 ± 0.014
$\Omega_m h^2$	$0.187^{+0.027}_{-0.035}$	r_*	137.7 ± 5.8	$\sigma_8(0.38)$	$0.559^{+0.029}_{-0.035}$
$\Omega_\nu h^2$	$0.0207^{+0.0074}_{-0.011}$	$100\theta_*$	$1.104^{+0.038}_{-0.031}$	$f\sigma_8(0.51)$	0.427 ± 0.015
$\Omega_m h^3$	$0.130^{+0.021}_{-0.029}$	$D_M(z_*)$/Gpc	$12.50^{+0.82}_{-1.0}$	$\sigma_8(0.51)$	$0.521^{+0.028}_{-0.034}$
σ_8	$0.693^{+0.031}_{-0.036}$	z_{drag}	1061.9 ± 2.2	$f\sigma_8(0.61)$	0.419 ± 0.016
S_8	0.779 ± 0.032	r_{drag}	140.3 ± 5.9	$\sigma_8(0.61)$	$0.495^{+0.027}_{-0.034}$
$\sigma_8 \Omega_m^{0.5}$	0.427 ± 0.017	k_D	$0.1491^{+0.0068}_{-0.0078}$	$f\sigma_8(2.33)$	0.256 ± 0.016
$\sigma_8 \Omega_m^{0.25}$	0.544 ± 0.018	$100\theta_D$	$0.1692^{+0.0047}_{-0.0040}$	$\sigma_8(2.33)$	$0.257^{+0.016}_{-0.020}$
$\sigma_8/h^{0.5}$	$0.831^{+0.043}_{-0.052}$	z_{eq}	3964^{+500}_{-600}	$\chi^2_{lensing}$	18.4 ± 2.1
$r_{drag} h$	97.5 ± 1.9	k_{eq}	$0.0122^{+0.0015}_{-0.0019}$	χ^2_{6DF}	0.35 ± 0.35
$\langle d^2 \rangle^{1/2}$	2.598 ± 0.063	$100\theta_{eq}$	$0.784^{+0.047}_{-0.057}$	χ^2_{MGS}	0.79 ± 0.67
z_{re}	8.51 ± 0.50	$100\theta_{s,eq}$	$0.435^{+0.024}_{-0.029}$	$\chi^2_{DR12BAO}$	3.6 ± 1.5
$10^9 A_s$	$2.38^{+0.26}_{-0.33}$	$H(0.15)$	$76.2^{+2.6}_{-3.1}$	χ^2_{prior}	2.0 ± 1.9
$10^9 A_s e^{-2\tau}$	$2.13^{+0.24}_{-0.29}$	$D_M(0.15)$	619 ± 20	χ^2_{BAO}	4.7 ± 1.7
D_{40}	1340^{+200}_{-200}	$H(0.38)$	$88.7^{+4.0}_{-4.8}$		
D_{220}	5992^{+1000}_{-1000}	$D_M(0.38)$	1460 ± 56		

$\bar{\chi}^2_{eff} = 25.07$; $\Delta\bar{\chi}^2_{eff} = -4.02$; $R - 1 = 0.00956$

6.126 base_mnu_lensing_lenspriors_pttagr2_BAO_theta

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02218 ± 0.00049	D_{810}	3410 ± 320	$H(0.51)$	$88.18^{+0.62}_{-0.71}$
$\boldsymbol{\Omega_c h^2}$	$0.1074^{+0.0030}_{-0.0036}$	D_{1420}	1083 ± 110	$D_{\rm M}(0.51)$	2013 ± 19
$\boldsymbol{100\theta_{MC}}$	1.04090 ± 0.00060	D_{2000}	304 ± 31	$H(0.61)$	$93.66^{+0.61}_{-0.70}$
$\boldsymbol{\Sigma m_\nu}$ [eV]	$0.62^{+0.19}_{-0.16}$	$n_{\rm s,0.002}$	0.959 ± 0.020	$D_{\rm M}(0.61)$	2343 ± 22
$\boldsymbol{\ln(10^{10} A_s)}$	$3.322^{+0.093}_{-0.077}$	$Y_{\rm P}$	$0.24531^{+0.00023}_{-0.00019}$	$H(2.33)$	231.2 ± 1.6
$\boldsymbol{n_s}$	0.959 ± 0.020	$Y_{\rm P}^{\rm BBN}$	$0.24663^{+0.00023}_{-0.00019}$	$D_{\rm M}(2.33)$	5868^{+42}_{-37}
H_0	66.67 ± 0.81	10^5D/H	$2.623^{+0.087}_{-0.099}$	$f\sigma_8(0.15)$	0.420 ± 0.013
Ω_Λ	0.6933 ± 0.0088	Age/Gyr	$14.050^{+0.099}_{-0.087}$	$\sigma_8(0.15)$	0.686 ± 0.024
$\Omega_{\rm m}$	0.3067 ± 0.0088	z_*	1089.20 ± 0.63	$f\sigma_8(0.38)$	0.439 ± 0.013
$\Omega_{\rm m}h^2$	$0.1363^{+0.0019}_{-0.0022}$	r_*	$147.7^{+1.0}_{-0.89}$	$\sigma_8(0.38)$	0.610 ± 0.021
$\Omega_\nu h^2$	$0.0067^{+0.0020}_{-0.0017}$	$100\theta_*$	1.04137 ± 0.00061	$f\sigma_8(0.51)$	0.439 ± 0.013
$\Omega_{\rm m}h^3$	$0.0909^{+0.0015}_{-0.0019}$	$D_{\rm M}(z_*)$/Gpc	$14.185^{+0.096}_{-0.085}$	$\sigma_8(0.51)$	0.571 ± 0.020
σ_8	0.741 ± 0.025	$z_{\rm drag}$	1058.7 ± 1.2	$f\sigma_8(0.61)$	0.435 ± 0.013
S_8	0.749 ± 0.025	$r_{\rm drag}$	150.5 ± 1.1	$\sigma_8(0.61)$	0.544 ± 0.019
$\sigma_8\Omega_{\rm m}^{0.5}$	0.410 ± 0.014	$k_{\rm D}$	0.1373 ± 0.0013	$f\sigma_8(2.33)$	0.2818 ± 0.0085
$\sigma_8\Omega_{\rm m}^{0.25}$	0.551 ± 0.018	$100\theta_{\rm D}$	0.16129 ± 0.00071	$\sigma_8(2.33)$	0.2866 ± 0.0096
$\sigma_8/h^{0.5}$	0.908 ± 0.028	$z_{\rm eq}$	3096^{+75}_{-88}	$\chi^2_{\rm lensing}$	17.8 ± 1.9
$r_{\rm drag}h$	100.4 ± 1.1	$k_{\rm eq}$	$0.00946^{+0.00022}_{-0.00026}$	$\chi^2_{\rm 6DF}$	0.055 ± 0.079
$\langle d^2\rangle^{1/2}$	2.630 ± 0.065	$100\theta_{\rm eq}$	0.874 ± 0.018	$\chi^2_{\rm MGS}$	1.71 ± 0.68
$z_{\rm re}$	7.67 ± 0.11	$100\theta_{\rm s,eq}$	0.4812 ± 0.0094	$\chi^2_{\rm DR12BAO}$	4.3 ± 1.4
$10^9 A_{\rm s}$	2.78 ± 0.24	$H(0.15)$	71.80 ± 0.75	$\chi^2_{\rm prior}$	3.0 ± 2.4
$10^9 A_{\rm s}e^{-2\tau}$	2.49 ± 0.21	$D_{\rm M}(0.15)$	650.7 ± 7.3	$\chi^2_{\rm BAO}$	6.1 ± 1.4
D_{40}	1677 ± 130	$H(0.38)$	$81.64^{+0.64}_{-0.72}$		
D_{220}	8082 ± 760	$D_{\rm M}(0.38)$	1553 ± 16		

$\bar{\chi}^2_{\rm eff} = 26.80$; $\Delta\bar{\chi}^2_{\rm eff} = -6.67$; $R - 1 = 0.01217$

6.127 base_mnu_lensing_DESpriors

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_m}$	0.311	$0.325^{+0.056}_{-0.089}$	$\Omega_{\rm b}h^2$	0.0250	$0.0256^{+0.0054}_{-0.012}$	S_8	0.802	0.804 ± 0.056
$\boldsymbol{\Omega_b}$	0.0540	—	$\Omega_{\rm c}h^2$	0.1137	$0.126^{+0.019}_{-0.027}$	$\sigma_8\Omega_{\rm m}^{0.5}$	0.4391	0.440 ± 0.031
$\boldsymbol{H_0}$	68.1	< 76.1	Ω_Λ	0.689	$0.675^{+0.089}_{-0.056}$	$\sigma_8\Omega_{\rm m}^{0.25}$	0.5880	0.586 ± 0.020
$\boldsymbol{\Sigma m_\nu}$ [eV]	0.513	—	$\Omega_\nu h^2$	0.00551	$0.0058^{+0.0045}_{-0.0021}$	$\chi^2_{\rm lensing}$	7.25	9.5 ± 2.0
$\boldsymbol{10^9 A_s}$	2.677	$2.42^{+0.35}_{-0.53}$	$\ln(10^{10}A_{\rm s})$	3.287	3.17 ± 0.18			
$\boldsymbol{n_s}$	1.017	—	σ_8	0.787	0.782 ± 0.048			

Best-fit $\chi^2_{\rm eff} = 7.25$; $\Delta\chi^2_{\rm eff} = -0.13$; $\bar{\chi}^2_{\rm eff} = 9.49$; $\Delta\bar{\chi}^2_{\rm eff} = -0.15$; $R - 1 = 0.00994$
$\chi^2_{\rm eff}$: CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8_CMBmarged: 7.25 (Δ -0.13)

6.128 base_mnu_lensing_DESpriors_BAO

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_m}$	0.3615	$0.334^{+0.027}_{-0.034}$	$\Omega_c h^2$	0.1352	$0.133^{+0.021}_{-0.029}$	$\sigma_8\Omega_m^{0.25}$	0.5830	0.588 ± 0.020
$\boldsymbol{\Omega_b}$	0.0445	$0.0472^{+0.0079}_{-0.015}$	Ω_Λ	0.6385	$0.666^{+0.034}_{-0.027}$	$\chi^2_{\rm lensing}$	7.59	9.6 ± 2.0
$\boldsymbol{H_0}$	67.8	$69.9^{+5.0}_{-11}$	$\Omega_\nu h^2$	0.01071	$0.0067^{+0.0038}_{-0.0015}$	$\chi^2_{\rm 6DF}$	0.139	0.12 ± 0.16
$\boldsymbol{\Sigma m_\nu}$ [eV]	0.996	> 0.506	$\ln(10^{10}A_s)$	3.125	$3.12^{+0.15}_{-0.20}$	$\chi^2_{\rm MGS}$	0.82	1.34 ± 0.73
$\boldsymbol{10^9 A_s}$	2.277	$2.29^{+0.27}_{-0.50}$	σ_8	0.7519	0.775 ± 0.030	$\chi^2_{\rm DR12BAO}$	2.11	3.7 ± 1.6
$\boldsymbol{n_s}$	0.972	< 0.992	S_8	0.8254	0.816 ± 0.035	$\chi^2_{\rm BAO}$	3.07	5.2 ± 1.8
$\Omega_b h^2$	0.0205	$0.0244^{+0.0048}_{-0.014}$	$\sigma_8\Omega_m^{0.5}$	0.4521	0.447 ± 0.019			

Best-fit $\chi^2_{\rm eff} = 10.66$; $\Delta\chi^2_{\rm eff} = -1.15$; $\bar{\chi}^2_{\rm eff} = 14.70$; $\Delta\bar{\chi}^2_{\rm eff} = -1.82$; $R - 1 = 0.01029$
$\chi^2_{\rm eff}$: BAO - 6DF: 0.14 (Δ 0.09) MGS: 0.82 (Δ -0.34) DR12BAO: 2.11 (Δ -0.32) CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8_CMBmarged: 7.59 (Δ -0.58)

6.129 base_mnu_lensing_DESpriors_CookeDH

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_m}$	0.287	$0.335^{+0.079}_{-0.10}$	$\Omega_b h^2$	0.02219	0.02220 ± 0.00051	S_8	0.788	0.809 ± 0.063
$\boldsymbol{\Omega_b}$	0.0478	—	$\Omega_c h^2$	0.1069	$0.121^{+0.015}_{-0.021}$	$\sigma_8\Omega_m^{0.5}$	0.4318	0.443 ± 0.035
$\boldsymbol{H_0}$	68.2	$67.9^{+4.5}_{-12}$	Ω_Λ	0.713	$0.665^{+0.10}_{-0.079}$	$\sigma_8\Omega_m^{0.25}$	0.5897	0.586 ± 0.020
$\boldsymbol{\Sigma m_\nu}$ [eV]	0.412	—	$\Omega_\nu h^2$	0.00443	0.0057 ± 0.0029	$\chi^2_{\rm lensing}$	7.26	9.4 ± 2.0
$\boldsymbol{10^9 A_s}$	2.783	$2.47^{+0.40}_{-0.56}$	$\ln(10^{10}A_s)$	3.326	3.19 ± 0.19	$\chi^2_{\rm prior}$	0.00	1.0 ± 1.4
$\boldsymbol{n_s}$	1.021	—	σ_8	0.805	$0.778^{+0.047}_{-0.065}$			

Best-fit $\chi^2_{\rm eff} = 7.26$; $\Delta\chi^2_{\rm eff} = -0.11$; $\bar{\chi}^2_{\rm eff} = 10.46$; $\Delta\bar{\chi}^2_{\rm eff} = -0.11$; $R - 1 = 0.00663$
$\chi^2_{\rm eff}$: CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8_CMBmarged: 7.26 (Δ -0.10)

6.130 base_mnu_lensing_DESpriors_CookeDH_BAO

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_m}$	0.3643	0.336 ± 0.027	$\Omega_c h^2$	0.1457	$0.129^{+0.015}_{-0.018}$	$\sigma_8\Omega_m^{0.25}$	0.5805	0.588 ± 0.020
$\boldsymbol{\Omega_b}$	0.04553	0.0473 ± 0.0022	Ω_Λ	0.6357	0.664 ± 0.027	$\chi^2_{\rm lensing}$	7.65	9.5 ± 2.0
$\boldsymbol{H_0}$	69.83	$68.5^{+1.4}_{-1.7}$	$\Omega_\nu h^2$	0.00977	$0.0067^{+0.0039}_{-0.0014}$	$\chi^2_{\rm 6DF}$	0.141	0.12 ± 0.16
$\boldsymbol{\Sigma m_\nu}$ [eV]	0.908	> 0.508	$\ln(10^{10}A_s)$	3.015	$3.12^{+0.15}_{-0.18}$	$\chi^2_{\rm MGS}$	0.82	1.30 ± 0.72
$\boldsymbol{10^9 A_s}$	2.039	$2.30^{+0.28}_{-0.46}$	σ_8	0.7472	$0.773^{+0.026}_{-0.029}$	$\chi^2_{\rm DR12BAO}$	2.08	3.6 ± 1.6
$\boldsymbol{n_s}$	0.920	< 0.991	S_8	0.8234	0.817 ± 0.035	$\chi^2_{\rm prior}$	0.000	1.0 ± 1.4
$\Omega_b h^2$	0.022204	0.02218 ± 0.00050	$\sigma_8\Omega_m^{0.5}$	0.4510	0.447 ± 0.019	$\chi^2_{\rm BAO}$	3.04	5.0 ± 1.8

Best-fit $\chi^2_{\rm eff} = 10.69$; $\Delta\chi^2_{\rm eff} = -1.30$; $\bar{\chi}^2_{\rm eff} = 15.50$; $\Delta\bar{\chi}^2_{\rm eff} = -1.65$; $R - 1 = 0.01121$
$\chi^2_{\rm eff}$: BAO - 6DF: 0.14 (Δ 0.11) MGS: 0.82 (Δ -0.46) DR12BAO: 2.08 (Δ -0.59) CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8_CMBmarged: 7.65 (Δ -0.35)

6.131 base_mnu_DES_lenspriors

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\mathbf{\Omega_b h^2}$	0.02220	0.02221 ± 0.00052	$\Omega_m h^2$	0.1354	$0.169^{+0.020}_{-0.039}$	k_D	0.1376	$0.1456^{+0.0054}_{-0.0091}$
$\mathbf{\Omega_c h^2}$	0.1092	$0.136^{+0.017}_{-0.031}$	$\Omega_\nu h^2$	0.0040	$0.0110^{+0.0035}_{-0.0099}$	$100\theta_D$	0.1626	$0.1699^{+0.0066}_{-0.0087}$
$\mathbf{100\theta_{MC}}$	1.049	$1.103^{+0.047}_{-0.063}$	$\Omega_m h^3$	0.0963	$0.134^{+0.022}_{-0.049}$	z_{eq}	3139	3781^{+410}_{-730}
$\mathbf{\Sigma m_\nu}$ [eV]	0.38	$1.02^{+0.33}_{-0.92}$	σ_8	0.835	$0.809^{+0.078}_{-0.090}$	k_{eq}	0.00958	$0.0116^{+0.0013}_{-0.0023}$
$\mathbf{\ln(10^{10} A_s)}$	3.374	3.22 ± 0.17	S_8	0.7887	0.777 ± 0.026	$100\theta_{eq}$	0.871	$0.809^{+0.058}_{-0.052}$
$\mathbf{n_s}$	0.9624	0.961 ± 0.020	$\sigma_8 \Omega_m^{0.5}$	0.4320	0.426 ± 0.014	$100\theta_{s,eq}$	0.4797	$0.448^{+0.030}_{-0.026}$
$\mathbf{b^1_{DES}}$	1.405	$1.46^{+0.15}_{-0.20}$	$\sigma_8 \Omega_m^{0.25}$	0.6005	0.586 ± 0.039	$H(0.15)$	75.9	$83.2^{+7.4}_{-12}$
$\mathbf{b^2_{DES}}$	1.607	$1.67^{+0.16}_{-0.21}$	$\sigma_8/h^{0.5}$	0.990	$0.919^{+0.068}_{-0.079}$	$D_M(0.15)$	613	568 ± 70
$\mathbf{b^3_{DES}}$	1.590	$1.66^{+0.15}_{-0.20}$	$r_{drag} h$	106.8	$110.7^{+9.3}_{-12}$	$H(0.38)$	85.2	$93.7^{+7.6}_{-13}$
$\mathbf{b^4_{DES}}$	1.918	$2.00^{+0.18}_{-0.24}$	$\langle d^2 \rangle^{1/2}$	2.697	2.59 ± 0.16	$D_M(0.38)$	1472	1361 ± 200
$\mathbf{b^5_{DES}}$	1.977	$2.06^{+0.20}_{-0.25}$	z_{re}	7.67	$8.27^{+0.46}_{-0.65}$	$H(0.51)$	91.5	$100.8^{+7.8}_{-13}$
$\mathbf{m^1_{DES}}$	0.0130	0.012 ± 0.023	$10^9 A_s$	2.920	$2.54^{+0.38}_{-0.48}$	$D_M(0.51)$	1913	1766 ± 200
$\mathbf{m^2_{DES}}$	0.0158	0.015 ± 0.022	$10^9 A_s e^{-2\tau}$	2.616	$2.27^{+0.34}_{-0.43}$	$H(0.61)$	96.7	$106.7^{+8.1}_{-13}$
$\mathbf{m^3_{DES}}$	0.0063	0.009 ± 0.021	D_{40}	1769	1481^{+200}_{-300}	$D_M(0.61)$	2232	2059^{+200}_{-200}
$\mathbf{m^4_{DES}}$	0.0092	0.011 ± 0.022	D_{220}	8361	6575^{+1000}_{-2000}	$H(2.33)$	231.8	258^{+18}_{-29}
$\mathbf{A_{IA,DES}}$	0.480	$0.46^{+0.17}_{-0.22}$	D_{810}	3562	2675 ± 700	$D_M(2.33)$	5706	5221^{+560}_{-500}
$\mathbf{\alpha_{IA,DES}}$	-1.48	$-0.4^{+2.3}_{-2.8}$	D_{1420}	1129	786^{+300}_{-300}	$f\sigma_8(0.15)$	0.4438	0.437 ± 0.017
$\mathbf{\Delta z^1_{l,DES}}$	0.0042	0.0042 ± 0.0075	D_{2000}	319	227^{+70}_{-90}	$\sigma_8(0.15)$	0.777	$0.752^{+0.077}_{-0.089}$
$\mathbf{\Delta z^2_{l,DES}}$	0.0016	0.0017 ± 0.0067	$n_{s,0.002}$	0.9624	0.961 ± 0.020	$f\sigma_8(0.38)$	0.4736	0.464 ± 0.027
$\mathbf{\Delta z^3_{l,DES}}$	0.0042	0.0041 ± 0.0066	Y_P	0.245328	$0.24532^{+0.00023}_{-0.00021}$	$\sigma_8(0.38)$	0.695	$0.672^{+0.073}_{-0.085}$
$\mathbf{\Delta z^4_{l,DES}}$	0.0027	0.0020 ± 0.0092	Y_P^{BBN}	0.246654	$0.24664^{+0.00023}_{-0.00021}$	$f\sigma_8(0.51)$	0.4780	0.467 ± 0.033
$\mathbf{\Delta z^5_{l,DES}}$	0.0010	0.0012 ± 0.0098	10^5D/H	2.617	$2.619^{+0.092}_{-0.10}$	$\sigma_8(0.51)$	0.653	$0.631^{+0.070}_{-0.083}$
$\mathbf{\Delta z^1_{s,DES}}$	-0.0012	-0.004 ± 0.014	Age/Gyr	13.68	$12.5^{+1.3}_{-1.2}$	$f\sigma_8(0.61)$	0.4770	0.465 ± 0.036
$\mathbf{\Delta z^2_{s,DES}}$	-0.0289	-0.029 ± 0.011	z_*	1089.22	$1091.8^{+1.9}_{-2.9}$	$\sigma_8(0.61)$	0.623	$0.602^{+0.068}_{-0.081}$
$\mathbf{\Delta z^3_{s,DES}}$	0.0060	0.0071 ± 0.0098	r_*	147.4	$140.5^{+7.4}_{-5.1}$	$f\sigma_8(2.33)$	0.3214	$0.313^{+0.036}_{-0.044}$
$\mathbf{\Delta z^4_{s,DES}}$	-0.0254	-0.023 ± 0.019	$100\theta_*$	1.050	$1.104^{+0.047}_{-0.063}$	$\sigma_8(2.33)$	0.3307	$0.320^{+0.039}_{-0.048}$
H_0	71.1	$77.7^{+7.6}_{-12}$	$D_M(z_*)$/Gpc	14.04	$12.8^{+1.3}_{-1.1}$	χ^2_{DES}	500.43	513.6 ± 5.2
Ω_Λ	0.7322	$0.716^{+0.055}_{-0.037}$	z_{drag}	1058.79	$1060.9^{+1.9}_{-2.6}$	χ^2_{prior}	1.28	14.3 ± 5.2
Ω_m	0.2678	$0.284^{+0.037}_{-0.055}$	r_{drag}	150.2	$143.1^{+7.6}_{-5.2}$			

Best-fit $\chi^2_{eff} = 501.71$; $\Delta\chi^2_{eff} = -0.11$; $\bar{\chi}^2_{eff} = 527.89$; $\Delta\bar{\chi}^2_{eff} = 0.86$; $R - 1 = 0.01326$
χ^2_{eff}: WL - DES_1YR_final: 500.43 (Δ -0.01)

6.132 base_mnu_DESlens_lenspriors

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\mathbf{\Omega_b h^2}$	0.022178	0.02218 ± 0.00049	$\sigma_8/h^{0.5}$	0.998	$0.84^{+0.11}_{-0.14}$	$100\theta_{\rm eq}$	0.826	$0.705^{+0.086}_{-0.12}$
$\mathbf{\Omega_c h^2}$	0.119	$0.191^{+0.041}_{-0.069}$	$r_{\rm drag}h$	106.4	111^{+20}_{-10}	$100\theta_{\rm s,eq}$	0.456	$0.394^{+0.047}_{-0.061}$
$\mathbf{100\theta_{MC}}$	1.054	$1.160^{+0.077}_{-0.043}$	$\langle d^2\rangle^{1/2}$	2.478	$2.27^{+0.33}_{-0.49}$	$H(0.15)$	77.1	91^{+10}_{-6}
$\mathbf{\Sigma m_\nu}$ [eV]	0.03	< 2.11	$z_{\rm re}$	7.81	$9.17^{+0.86}_{-1.0}$	$D_{\rm M}(0.15)$	604	524^{+20}_{-88}
$\mathbf{\ln(10^{10} A_s)}$	3.09	2.76 ± 0.51	$10^9 A_{\rm s}$	2.20	$1.79^{+0.37}_{-1.2}$	$H(0.38)$	86.7	104^{+20}_{-9}
$\mathbf{n_s}$	0.9600	0.961 ± 0.020	$10^9 A_{\rm s} e^{-2\tau}$	1.97	$1.61^{+0.33}_{-1.0}$	$D_{\rm M}(0.38)$	1449	1245^{+56}_{-200}
$\mathbf{m^1_{DES}}$	0.0143	0.013 ± 0.023	D_{40}	1313	1012^{+200}_{-700}	$H(0.51)$	93.1	113^{+20}_{-10}
$\mathbf{m^2_{DES}}$	0.0141	0.013 ± 0.022	D_{220}	6013	4126^{+800}_{-3000}	$D_{\rm M}(0.51)$	1882	1610^{+79}_{-260}
$\mathbf{m^3_{DES}}$	0.0020	0.003 ± 0.022	D_{810}	2646	1551^{+300}_{-1000}	$H(0.61)$	98.5	120^{+20}_{-10}
$\mathbf{m^4_{DES}}$	0.0168	0.018 ± 0.022	D_{1420}	843	440^{+60}_{-300}	$D_{\rm M}(0.61)$	2195	1872^{+97}_{-300}
$\mathbf{A_{IA,DES}}$	1.27	$0.78^{+0.78}_{-0.55}$	D_{2000}	239	128^{+20}_{-100}	$H(2.33)$	237.1	298^{+40}_{-50}
$\mathbf{\alpha_{IA,DES}}$	3.00	> 0.982	$n_{\rm s,0.002}$	0.9600	0.961 ± 0.020	$D_{\rm M}(2.33)$	5597	4661^{+360}_{-710}
$\mathbf{\Delta z^1_{s,DES}}$	0.0029	0.002 ± 0.015	$Y_{\rm P}$	0.245317	$0.24531^{+0.00023}_{-0.00019}$	$f\sigma_8(0.15)$	0.4499	$0.433^{+0.028}_{-0.019}$
$\mathbf{\Delta z^2_{s,DES}}$	-0.0198	-0.020 ± 0.012	$Y_{\rm P}^{\rm BBN}$	0.246643	$0.24663^{+0.00023}_{-0.00020}$	$\sigma_8(0.15)$	0.787	0.71 ± 0.13
$\mathbf{\Delta z^3_{s,DES}}$	0.0080	0.008 ± 0.011	10^5D/H	2.622	$2.624^{+0.087}_{-0.098}$	$f\sigma_8(0.38)$	0.4780	$0.450^{+0.050}_{-0.035}$
$\mathbf{\Delta z^4_{s,DES}}$	-0.0172	-0.016 ± 0.021	Age/Gyr	13.41	$11.17^{+0.89}_{-1.7}$	$\sigma_8(0.38)$	0.702	$0.63^{+0.12}_{-0.13}$
H_0	72.1	> 80.2	z_*	1090.11	$1096.2^{+3.8}_{-5.2}$	$f\sigma_8(0.51)$	0.481	$0.449^{+0.059}_{-0.044}$
Ω_Λ	0.727	$0.666^{+0.13}_{-0.056}$	r_*	144.7	130 ± 10	$\sigma_8(0.51)$	0.659	$0.59^{+0.11}_{-0.13}$
$\Omega_{\rm m}$	0.273	$0.334^{+0.056}_{-0.13}$	$100\theta_*$	1.054	$1.161^{+0.077}_{-0.043}$	$f\sigma_8(0.61)$	0.480	$0.445^{+0.065}_{-0.050}$
$\Omega_{\rm m}h^2$	0.142	$0.231^{+0.046}_{-0.083}$	$D_{\rm M}(z_*)$/Gpc	13.73	$11.3^{+1.2}_{-1.8}$	$\sigma_8(0.61)$	0.628	$0.56^{+0.11}_{-0.13}$
$\Omega_\nu h^2$	0.0003	< 0.0227	$z_{\rm drag}$	1059.44	$1064.4^{+3.5}_{-4.3}$	$f\sigma_8(2.33)$	0.318	$0.291^{+0.059}_{-0.069}$
$\Omega_{\rm m}h^3$	0.102	$0.198^{+0.053}_{-0.087}$	$r_{\rm drag}$	147.5	132 ± 11	$\sigma_8(2.33)$	0.330	$0.297^{+0.061}_{-0.077}$
σ_8	0.847	0.77 ± 0.13	$k_{\rm D}$	0.1403	$0.159^{+0.012}_{-0.016}$	$\chi^2_{\rm DES}$	228.76	233.9 ± 2.9
S_8	0.8081	$0.778^{+0.036}_{-0.028}$	$100\theta_{\rm D}$	0.1631	$0.178^{+0.011}_{-0.0063}$	$\chi^2_{\rm prior}$	0.32	9.4 ± 4.2
$\sigma_8\Omega_{\rm m}^{0.5}$	0.4426	$0.426^{+0.020}_{-0.016}$	$z_{\rm eq}$	3385	5090^{+1000}_{-2000}			
$\sigma_8\Omega_{\rm m}^{0.25}$	0.612	0.570 ± 0.057	$k_{\rm eq}$	0.01033	$0.0156^{+0.0030}_{-0.0051}$			

Best-fit $\chi^2_{\rm eff} = 229.09$; $\Delta\chi^2_{\rm eff} = 0.04$; $\bar{\chi}^2_{\rm eff} = 243.30$; $\Delta\bar{\chi}^2_{\rm eff} = -0.04$; $R - 1 = 0.00940$
$\chi^2_{\rm eff}$: WL - DES_1YR_final: 228.76 (Δ 0.03)

6.133 base_mnu_DES_lenspriors_lensing

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\mathbf{\Omega_b h^2}$	0.02219	0.02220 ± 0.00050	$\Omega_m h^2$	0.1468	$0.170^{+0.019}_{-0.037}$	k_D	0.1405	$0.1458^{+0.0049}_{-0.0084}$
$\mathbf{\Omega_c h^2}$	0.1187	$0.137^{+0.015}_{-0.029}$	$\Omega_\nu h^2$	0.0059	$0.0108^{+0.0038}_{-0.0090}$	$100\theta_D$	0.1645	$0.1696^{+0.0058}_{-0.0077}$
$\mathbf{100\theta_{MC}}$	1.0643	$1.101^{+0.042}_{-0.056}$	$\Omega_m h^3$	0.1045	$0.132^{+0.019}_{-0.044}$	z_{eq}	3367	3802^{+360}_{-690}
$\mathbf{\Sigma m_\nu}$ [eV]	0.55	$1.01^{+0.35}_{-0.84}$	σ_8	0.7882	0.787 ± 0.038	k_{eq}	0.01028	$0.0116^{+0.0011}_{-0.0021}$
$\mathbf{\ln(10^{10} A_s)}$	3.225	$3.16^{+0.10}_{-0.082}$	S_8	0.7741	0.772 ± 0.015	$100\theta_{eq}$	0.8386	$0.802^{+0.055}_{-0.044}$
$\mathbf{n_s}$	0.9640	0.962 ± 0.020	$\sigma_8 \Omega_m^{0.5}$	0.4240	0.4226 ± 0.0083	$100\theta_{s,eq}$	0.4633	$0.445^{+0.028}_{-0.022}$
$\mathbf{b^1_{DES}}$	1.503	1.50 ± 0.11	$\sigma_8 \Omega_m^{0.25}$	0.5781	0.577 ± 0.016	$H(0.15)$	76.4	$82.0^{+5.8}_{-9.2}$
$\mathbf{b^2_{DES}}$	1.712	1.711 ± 0.094	$\sigma_8/h^{0.5}$	0.9340	0.902 ± 0.046	$D_M(0.15)$	610	573 ± 53
$\mathbf{b^3_{DES}}$	1.696	1.694 ± 0.085	$r_{drag} h$	105.0	$108.9^{+6.1}_{-7.6}$	$H(0.38)$	86.4	$92.7^{+6.2}_{-10}$
$\mathbf{b^4_{DES}}$	2.049	2.044 ± 0.098	$\langle d^2 \rangle^{1/2}$	2.5495	2.525 ± 0.049	$D_M(0.38)$	1461	1372^{+140}_{-120}
$\mathbf{b^5_{DES}}$	2.123	2.11 ± 0.11	z_{re}	7.88	$8.28^{+0.40}_{-0.63}$	$H(0.51)$	93.1	$99.9^{+6.6}_{-11}$
$\mathbf{m^1_{DES}}$	0.0135	0.012 ± 0.023	$10^9 A_s$	2.514	2.36 ± 0.22	$D_M(0.51)$	1895	1780^{+170}_{-150}
$\mathbf{m^2_{DES}}$	0.0161	0.015 ± 0.022	$10^9 A_s e^{-2\tau}$	2.252	2.12 ± 0.20	$H(0.61)$	98.7	$105.9^{+6.9}_{-11}$
$\mathbf{m^3_{DES}}$	0.0087	0.010 ± 0.021	D_{40}	1486	1367^{+200}_{-100}	$D_M(0.61)$	2208	2074^{+200}_{-180}
$\mathbf{m^4_{DES}}$	0.0115	0.013 ± 0.021	D_{220}	6896	6076^{+1000}_{-900}	$H(2.33)$	240.5	258^{+16}_{-27}
$\mathbf{A_{IA,DES}}$	0.460	$0.44^{+0.17}_{-0.20}$	D_{810}	3020	2525^{+700}_{-400}	$D_M(2.33)$	5580	5241^{+500}_{-420}
$\mathbf{\alpha_{IA,DES}}$	-1.42	$-0.3^{+2.3}_{-2.9}$	D_{1420}	954	744 ± 200	$f\sigma_8(0.15)$	0.4349	0.4337 ± 0.0080
$\mathbf{\Delta z^1_{l,DES}}$	0.0038	0.0042 ± 0.0075	D_{2000}	272	214^{+80}_{-100}	$\sigma_8(0.15)$	0.7312	0.730 ± 0.038
$\mathbf{\Delta z^2_{l,DES}}$	0.0013	0.0016 ± 0.0067	$n_{s,0.002}$	0.9640	0.962 ± 0.020	$f\sigma_8(0.38)$	0.4587	0.458 ± 0.011
$\mathbf{\Delta z^3_{l,DES}}$	0.0039	0.0039 ± 0.0065	Y_P	0.245324	$0.24531^{+0.00023}_{-0.00020}$	$\sigma_8(0.38)$	0.6517	0.651 ± 0.036
$\mathbf{\Delta z^4_{l,DES}}$	0.0026	0.0019 ± 0.0092	Y_P^{BBN}	0.246650	$0.24664^{+0.00023}_{-0.00020}$	$f\sigma_8(0.51)$	0.4604	0.459 ± 0.013
$\mathbf{\Delta z^5_{l,DES}}$	0.0009	0.0009 ± 0.0098	10^5D/H	2.619	$2.621^{+0.088}_{-0.10}$	$\sigma_8(0.51)$	0.6114	$0.611^{+0.033}_{-0.037}$
$\mathbf{\Delta z^1_{s,DES}}$	-0.0013	-0.004 ± 0.014	Age/Gyr	13.37	$12.6^{+1.2}_{-1.0}$	$f\sigma_8(0.61)$	0.4577	0.457 ± 0.015
$\mathbf{\Delta z^2_{s,DES}}$	-0.0288	-0.029 ± 0.011	z_*	1090.14	$1091.9^{+1.6}_{-2.8}$	$\sigma_8(0.61)$	0.5828	$0.582^{+0.032}_{-0.036}$
$\mathbf{\Delta z^3_{s,DES}}$	0.0074	0.0076 ± 0.0096	r_*	144.7	$140.2^{+7.0}_{-4.5}$	$f\sigma_8(2.33)$	0.3013	$0.302^{+0.017}_{-0.019}$
$\mathbf{\Delta z^4_{s,DES}}$	-0.0228	-0.021 ± 0.018	$100\theta_*$	1.0647	$1.102^{+0.042}_{-0.056}$	$\sigma_8(2.33)$	0.3080	$0.308^{+0.019}_{-0.021}$
H_0	71.2	$76.5^{+5.6}_{-8.8}$	$D_M(z_*)$/Gpc	13.59	$12.8^{+1.2}_{-1.0}$	$\chi^2_{lensing}$	7.67	9.2 ± 1.6
Ω_Λ	0.7106	$0.710^{+0.031}_{-0.025}$	z_{drag}	1059.55	$1061.0^{+1.9}_{-2.4}$	χ^2_{DES}	501.53	513.1 ± 4.7
Ω_m	0.2894	$0.290^{+0.025}_{-0.031}$	r_{drag}	147.5	$142.9^{+7.1}_{-4.7}$	χ^2_{prior}	1.05	14.0 ± 5.1

Best-fit $\chi^2_{eff} = 510.25$; $\bar{\chi}^2_{eff} = 536.25$; $\Delta\bar{\chi}^2_{eff} = 0.27$; $R - 1 = 0.01350$

χ^2_{eff}: CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8_CMBmarged: 7.67 WL - DES_1YR_final: 501.53

6.134 base_mnu_DESlens_lenspriors_lensing

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022225	0.02221 ± 0.00049	$\sigma_8/h^{0.5}$	0.936	0.888 ± 0.056	$100\theta_{\rm eq}$	0.814	0.762 ± 0.058
$\boldsymbol{\Omega_c h^2}$	0.1264	$0.158^{+0.026}_{-0.039}$	$r_{\rm drag}h$	105.0	113.3 ± 8.6	$100\theta_{\rm s,eq}$	0.4506	0.424 ± 0.030
$\boldsymbol{100\theta_{MC}}$	1.075	$1.137^{+0.066}_{-0.052}$	$\langle d^2\rangle^{1/2}$	2.516	2.485 ± 0.056	$H(0.15)$	77.6	88.4 ± 9.5
$\boldsymbol{\Sigma m_\nu}$ [eV]	0.56	$1.41^{+0.35}_{-1.4}$	$z_{\rm re}$	8.02	$8.69^{+0.62}_{-0.75}$	$D_{\rm M}(0.15)$	602	534^{+39}_{-80}
$\boldsymbol{\ln(10^{10}A_s)}$	3.155	$3.07^{+0.13}_{-0.11}$	$10^9 A_{\rm s}$	2.345	2.17 ± 0.25	$H(0.38)$	87.9	100 ± 10
$\boldsymbol{n_s}$	0.9602	0.961 ± 0.020	$10^9 A_{\rm s} e^{-2\tau}$	2.101	1.94 ± 0.23	$D_{\rm M}(0.38)$	1438	1278^{+95}_{-190}
$\boldsymbol{m^1_{DES}}$	0.0148	0.013 ± 0.023	D_{40}	1381	1233 ± 200	$H(0.51)$	94.8	107 ± 11
$\boldsymbol{m^2_{DES}}$	0.0131	0.013 ± 0.022	D_{220}	6246	5179^{+1000}_{-1000}	$D_{\rm M}(0.51)$	1865	1659^{+120}_{-240}
$\boldsymbol{m^3_{DES}}$	0.0015	0.004 ± 0.021	D_{810}	2754	2025 ± 700	$H(0.61)$	100.6	114 ± 12
$\boldsymbol{m^4_{DES}}$	0.0180	0.017 ± 0.021	D_{1420}	858	576^{+200}_{-300}	$D_{\rm M}(0.61)$	2172	1933^{+150}_{-270}
$\boldsymbol{A_{IA,DES}}$	1.20	$0.69^{+0.77}_{-0.60}$	D_{2000}	247	167 ± 60	$H(2.33)$	246.6	276^{+26}_{-33}
$\boldsymbol{\alpha_{IA,DES}}$	2.93	> 1.01	$n_{\rm s,0.002}$	0.9602	0.961 ± 0.020	$D_{\rm M}(2.33)$	5467	4896^{+410}_{-630}
$\boldsymbol{\Delta z^1_{s,DES}}$	0.0031	0.002 ± 0.015	$Y_{\rm P}$	0.245336	$0.24532^{+0.00022}_{-0.00019}$	$f\sigma_8(0.15)$	0.4437	$0.439^{+0.013}_{-0.0098}$
$\boldsymbol{\Delta z^2_{s,DES}}$	−0.0196	-0.020 ± 0.012	$Y_{\rm P}^{\rm BBN}$	0.246663	$0.24664^{+0.00022}_{-0.00019}$	$\sigma_8(0.15)$	0.7372	$0.746^{+0.041}_{-0.050}$
$\boldsymbol{\Delta z^3_{s,DES}}$	0.0080	0.009 ± 0.011	10^5D/H	2.613	2.619 ± 0.092	$f\sigma_8(0.38)$	0.4661	0.464 ± 0.013
$\boldsymbol{\Delta z^4_{s,DES}}$	−0.0165	-0.016 ± 0.020	Age/Gyr	13.09	$11.73^{+0.99}_{-1.5}$	$\sigma_8(0.38)$	0.6561	$0.665^{+0.040}_{-0.049}$
H_0	72.2	82 ± 9	z_*	1090.78	$1093.7^{+2.6}_{-3.6}$	$f\sigma_8(0.51)$	0.4669	0.467 ± 0.015
Ω_Λ	0.7032	0.713 ± 0.038	r_*	142.7	$135.5^{+8.1}_{-7.1}$	$\sigma_8(0.51)$	0.6152	$0.625^{+0.039}_{-0.048}$
$\Omega_{\rm m}$	0.2968	0.287 ± 0.038	$100\theta_*$	1.075	$1.138^{+0.066}_{-0.052}$	$f\sigma_8(0.61)$	0.4635	0.464 ± 0.017
$\Omega_{\rm m}h^2$	0.1547	$0.195^{+0.031}_{-0.051}$	$D_{\rm M}(z_*)$/Gpc	13.28	$12.0^{+1.1}_{-1.4}$	$\sigma_8(0.61)$	0.5862	$0.596^{+0.038}_{-0.047}$
$\Omega_\nu h^2$	0.0061	$0.0151^{+0.0037}_{-0.015}$	$z_{\rm drag}$	1060.16	$1062.5^{+2.4}_{-3.0}$	$f\sigma_8(2.33)$	0.3025	$0.309^{+0.020}_{-0.025}$
$\Omega_{\rm m}h^3$	0.112	$0.164^{+0.036}_{-0.063}$	$r_{\rm drag}$	145.4	$138.0^{+8.2}_{-7.3}$	$\sigma_8(2.33)$	0.3089	$0.316^{+0.022}_{-0.029}$
σ_8	0.7955	$0.803^{+0.041}_{-0.050}$	$k_{\rm D}$	0.1426	$0.1516^{+0.0079}_{-0.011}$	$\chi^2_{\rm lensing}$	7.47	9.7 ± 1.9
S_8	0.7913	$0.781^{+0.025}_{-0.019}$	$100\theta_{\rm D}$	0.1659	$0.1745^{+0.0091}_{-0.0071}$	$\chi^2_{\rm DES}$	228.84	232.8 ± 2.5
$\sigma_8\Omega_{\rm m}^{0.5}$	0.4334	$0.428^{+0.014}_{-0.011}$	$z_{\rm eq}$	3552	4301^{+600}_{-900}	$\chi^2_{\rm prior}$	0.37	9.2 ± 4.2
$\sigma_8\Omega_{\rm m}^{0.25}$	0.5871	0.586 ± 0.018	$k_{\rm eq}$	0.01085	$0.0132^{+0.0019}_{-0.0029}$			

Best-fit $\chi^2_{\rm eff} = 236.68$; $\Delta\chi^2_{\rm eff} = -0.28$; $\bar{\chi}^2_{\rm eff} = 251.69$; $\Delta\bar{\chi}^2_{\rm eff} = -0.08$; $R - 1 = 0.01019$

$\chi^2_{\rm eff}$: CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8_CMBmarged: 7.47 (Δ -0.18) WL - DES_1YR_final: 228.84 (Δ -0.14)

6.135 base_mnu_DES_lenspriors_BAO

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\mathbf{\Omega_b h^2}$	0.022198	0.02222 ± 0.00049	$\Omega_\nu h^2$	0.00879	$0.0105^{+0.0042}_{-0.0057}$	$z_{\rm eq}$	3382	3539^{+310}_{-370}
$\mathbf{\Omega_c h^2}$	0.1193	$0.126^{+0.013}_{-0.015}$	$\Omega_{\rm m} h^3$	0.1019	$0.109^{+0.013}_{-0.016}$	$k_{\rm eq}$	0.01034	$0.01083^{+0.00096}_{-0.0011}$
$\mathbf{100\theta_{MC}}$	1.0613	1.070 ± 0.025	σ_8	0.7394	$0.718^{+0.037}_{-0.047}$	$100\theta_{\rm eq}$	0.8343	0.818 ± 0.039
$\mathbf{\Sigma m_\nu}$ [eV]	0.818	$0.98^{+0.39}_{-0.53}$	S_8	0.7720	0.761 ± 0.022	$100\theta_{\rm s,eq}$	0.4610	0.453 ± 0.020
$\mathbf{\ln(10^{10} A_s)}$	3.239	3.15 ± 0.16	$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4228	0.417 ± 0.012	$H(0.15)$	73.35	$74.1^{+1.7}_{-2.0}$
$\mathbf{n_s}$	0.9629	0.962 ± 0.020	$\sigma_8 \Omega_{\rm m}^{0.25}$	0.5591	$0.547^{+0.021}_{-0.024}$	$D_{\rm M}(0.15)$	638.4	633 ± 14
$\mathbf{b^1_{DES}}$	1.604	1.65 ± 0.13	$\sigma_8/h^{0.5}$	0.898	$0.870^{+0.049}_{-0.063}$	$H(0.38)$	83.93	$85.1^{+2.5}_{-2.9}$
$\mathbf{b^2_{DES}}$	1.820	1.87 ± 0.12	$r_{\rm drag} h$	99.71	99.2 ± 1.5	$D_{\rm M}(0.38)$	1518.8	1503 ± 39
$\mathbf{b^3_{DES}}$	1.796	1.85 ± 0.11	$\langle d^2 \rangle^{1/2}$	2.578	$2.51^{+0.13}_{-0.15}$	$H(0.51)$	90.94	$92.4^{+3.1}_{-3.6}$
$\mathbf{b^4_{DES}}$	2.161	2.23 ± 0.14	$z_{\rm re}$	7.927	8.06 ± 0.33	$D_{\rm M}(0.51)$	1965	1944 ± 54
$\mathbf{b^5_{DES}}$	2.226	2.29 ± 0.16	$10^9 A_{\rm s}$	2.550	$2.36^{+0.29}_{-0.42}$	$H(0.61)$	96.79	$98.4^{+3.6}_{-4.1}$
$\mathbf{m^1_{DES}}$	0.0131	0.011 ± 0.023	$10^9 A_{\rm s} e^{-2\tau}$	2.284	$2.11^{+0.26}_{-0.38}$	$D_{\rm M}(0.61)$	2285	2259 ± 65
$\mathbf{m^2_{DES}}$	0.0148	0.014 ± 0.022	D_{40}	1491	1370^{+200}_{-300}	$H(2.33)$	242.1	248 ± 14
$\mathbf{m^3_{DES}}$	0.0049	0.008 ± 0.021	D_{220}	7000	6366^{+1000}_{-1000}	$D_{\rm M}(2.33)$	5668	5579 ± 220
$\mathbf{m^4_{DES}}$	0.0093	0.012 ± 0.021	D_{810}	3073	2772^{+500}_{-600}	$f\sigma_8(0.15)$	0.4319	0.424 ± 0.013
$\mathbf{A_{IA,DES}}$	0.404	$0.40^{+0.15}_{-0.18}$	D_{1420}	976	862 ± 200	$\sigma_8(0.15)$	0.6827	$0.662^{+0.036}_{-0.046}$
$\mathbf{\alpha_{IA,DES}}$	-2.09	$-0.7^{+2.0}_{-3.1}$	D_{2000}	278	247 ± 50	$f\sigma_8(0.38)$	0.4468	0.437 ± 0.017
$\mathbf{\Delta z^1_{l,DES}}$	0.0035	0.0038 ± 0.0074	$n_{\rm s,0.002}$	0.9629	0.962 ± 0.020	$\sigma_8(0.38)$	0.6049	$0.586^{+0.033}_{-0.043}$
$\mathbf{\Delta z^2_{l,DES}}$	0.0010	0.0012 ± 0.0066	$Y_{\rm P}$	0.245325	$0.24532^{+0.00023}_{-0.00019}$	$f\sigma_8(0.51)$	0.4444	0.433 ± 0.019
$\mathbf{\Delta z^3_{l,DES}}$	0.0038	0.0035 ± 0.0066	$Y_{\rm P}^{\rm BBN}$	0.246651	$0.24665^{+0.00023}_{-0.00019}$	$\sigma_8(0.51)$	0.5661	$0.548^{+0.032}_{-0.042}$
$\mathbf{\Delta z^4_{l,DES}}$	0.0018	0.0013 ± 0.0092	10^5D/H	2.618	$2.617^{+0.086}_{-0.098}$	$f\sigma_8(0.61)$	0.4392	0.428 ± 0.020
$\mathbf{\Delta z^5_{l,DES}}$	0.0002	0.0000 ± 0.0097	Age/Gyr	13.57	13.35 ± 0.54	$\sigma_8(0.61)$	0.5387	$0.521^{+0.031}_{-0.040}$
$\mathbf{\Delta z^1_{s,DES}}$	-0.0016	-0.004 ± 0.014	z_*	1090.32	$1090.9^{+1.4}_{-1.7}$	$f\sigma_8(2.33)$	0.2791	$0.269^{+0.017}_{-0.020}$
$\mathbf{\Delta z^2_{s,DES}}$	-0.0288	-0.029 ± 0.011	r_*	144.37	142.7 ± 3.9	$\sigma_8(2.33)$	0.2825	$0.273^{+0.018}_{-0.022}$
$\mathbf{\Delta z^3_{s,DES}}$	0.0065	0.0078 ± 0.0098	$100\theta_*$	1.0618	1.071 ± 0.025	$\chi^2_{\rm 6DF}$	0.014	0.12 ± 0.15
$\mathbf{\Delta z^4_{s,DES}}$	-0.0233	-0.020 ± 0.019	$D_{\rm M}(z_*)$/Gpc	13.60	13.34 ± 0.66	$\chi^2_{\rm MGS}$	1.41	1.32 ± 0.72
H_0	67.80	68.3 ± 1.4	$z_{\rm drag}$	1059.70	1060.3 ± 1.7	$\chi^2_{\rm DR12BAO}$	2.54	3.5 ± 1.4
Ω_Λ	0.6730	0.661 ± 0.030	$r_{\rm drag}$	147.07	145.3 ± 4.0	$\chi^2_{\rm DES}$	501.99	514.2 ± 5.1
$\Omega_{\rm m}$	0.3270	0.339 ± 0.030	$k_{\rm D}$	0.14097	$0.1430^{+0.0042}_{-0.0049}$	$\chi^2_{\rm prior}$	1.11	14.0 ± 5.2
$\Omega_{\rm m} h^2$	0.1503	$0.159^{+0.017}_{-0.020}$	$100\theta_{\rm D}$	0.16391	$0.1650^{+0.0034}_{-0.0031}$	$\chi^2_{\rm BAO}$	3.96	4.9 ± 1.7

Best-fit $\chi^2_{\rm eff} = 507.06$; $\Delta\chi^2_{\rm eff} = -2.55$; $\bar{\chi}^2_{\rm eff} = 533.12$; $\Delta\bar{\chi}^2_{\rm eff} = -1.59$; $R - 1 = 0.01294$

$\chi^2_{\rm eff}$: BAO - 6DF: 0.01 (Δ -0.04) MGS: 1.41 (Δ -0.94) DR12BAO: 2.54 (Δ -2.10) WL - DES_1YR_final: 501.99 (Δ 0.63)

6.136 base_mnu_DESlens_lenspriors_BAO

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\mathbf{\Omega_b h^2}$	0.02214	0.02222 ± 0.00050	$r_{\rm drag} h$	99.38	97.4 ± 2.0	$H(0.15)$	74.08	$78.3^{+2.9}_{-4.0}$
$\mathbf{\Omega_c h^2}$	0.1280	$0.166^{+0.025}_{-0.038}$	$\langle d^2 \rangle^{1/2}$	2.349	$2.14^{+0.24}_{-0.31}$	$D_{\rm M}(0.15)$	632.2	603^{+26}_{-22}
$\mathbf{100\theta_{MC}}$	1.0610	1.108 ± 0.035	$z_{\rm re}$	8.02	$8.71^{+0.50}_{-0.62}$	$H(0.38)$	84.8	$91.3^{+4.2}_{-5.9}$
$\mathbf{\Sigma m_\nu}$ [eV]	0.39	$1.06^{+0.29}_{-1.0}$	$10^9 A_{\rm s}$	1.94	$1.51^{+0.33}_{-0.67}$	$D_{\rm M}(0.38)$	1504	1422^{+70}_{-60}
$\mathbf{\ln(10^{10} A_s)}$	2.967	2.64 ± 0.37	$10^9 A_{\rm s} e^{-2\tau}$	1.741	$1.35^{+0.30}_{-0.60}$	$H(0.51)$	92.0	$99.7^{+5.1}_{-7.0}$
$\mathbf{n_s}$	0.9595	0.961 ± 0.020	D_{40}	1138	845^{+200}_{-400}	$D_{\rm M}(0.51)$	1945	1833^{+95}_{-83}
$\mathbf{m^1_{DES}}$	0.0141	0.013 ± 0.023	D_{220}	5144	3648^{+800}_{-2000}	$H(0.61)$	97.9	$106.7^{+5.8}_{-7.9}$
$\mathbf{m^2_{DES}}$	0.0135	0.012 ± 0.022	D_{810}	2315	1601^{+400}_{-900}	$D_{\rm M}(0.61)$	2261	2125^{+110}_{-100}
$\mathbf{m^3_{DES}}$	0.0002	0.002 ± 0.022	D_{1420}	738	473^{+100}_{-300}	$H(2.33)$	245.3	276^{+20}_{-27}
$\mathbf{m^4_{DES}}$	0.0176	0.019 ± 0.022	D_{2000}	210	137^{+40}_{-90}	$D_{\rm M}(2.33)$	5604	5152 ± 350
$\mathbf{A_{IA,DES}}$	1.30	0.95 ± 0.60	$n_{\rm s,0.002}$	0.9595	0.961 ± 0.020	$f\sigma_8(0.15)$	0.4387	$0.423^{+0.017}_{-0.015}$
$\mathbf{\alpha_{IA,DES}}$	2.81	> 0.869	$Y_{\rm P}$	0.245301	$0.24532^{+0.00023}_{-0.00020}$	$\sigma_8(0.15)$	0.695	0.623 ± 0.051
$\mathbf{\Delta z^1_{s,DES}}$	0.0033	0.003 ± 0.015	$Y_{\rm P}^{\rm BBN}$	0.246628	$0.24665^{+0.00023}_{-0.00020}$	$f\sigma_8(0.38)$	0.4528	$0.425^{+0.023}_{-0.021}$
$\mathbf{\Delta z^2_{s,DES}}$	−0.0199	-0.021 ± 0.012	10^5D/H	2.629	$2.616^{+0.089}_{-0.10}$	$\sigma_8(0.38)$	0.6152	0.548 ± 0.048
$\mathbf{\Delta z^3_{s,DES}}$	0.0076	0.008 ± 0.011	Age/Gyr	13.41	12.33 ± 0.85	$f\sigma_8(0.51)$	0.4498	0.418 ± 0.025
$\mathbf{\Delta z^4_{s,DES}}$	−0.0166	-0.016 ± 0.021	z_*	1090.96	$1094.1^{+2.3}_{-3.0}$	$\sigma_8(0.51)$	0.5754	0.511 ± 0.046
H_0	68.44	$71.4^{+2.1}_{-2.9}$	r_*	142.5	$134.2^{+7.1}_{-6.3}$	$f\sigma_8(0.61)$	0.4441	0.409 ± 0.026
Ω_Λ	0.6706	$0.612^{+0.051}_{-0.041}$	$100\theta_*$	1.0614	1.108 ± 0.035	$\sigma_8(0.61)$	0.5473	0.485 ± 0.045
$\Omega_{\rm m}$	0.3294	$0.388^{+0.041}_{-0.051}$	$D_{\rm M}(z_*)$/Gpc	13.43	12.14 ± 0.99	$f\sigma_8(2.33)$	0.2795	0.248 ± 0.024
$\Omega_{\rm m} h^2$	0.1543	$0.200^{+0.027}_{-0.043}$	$z_{\rm drag}$	1060.01	$1062.9^{+2.2}_{-2.7}$	$\sigma_8(2.33)$	0.2852	$0.250^{+0.023}_{-0.026}$
$\Omega_\nu h^2$	0.0042	$0.0114^{+0.0031}_{-0.011}$	$r_{\rm drag}$	145.2	$136.6^{+7.3}_{-6.4}$	$\chi^2_{\rm 6DF}$	0.036	0.37 ± 0.40
$\Omega_{\rm m} h^3$	0.1056	$0.144^{+0.021}_{-0.037}$	$k_{\rm D}$	0.1428	$0.1530^{+0.0071}_{-0.0093}$	$\chi^2_{\rm MGS}$	1.217	0.76 ± 0.64
σ_8	0.754	0.680 ± 0.053	$100\theta_{\rm D}$	0.16390	0.1700 ± 0.0047	$\chi^2_{\rm DR12BAO}$	2.70	3.7 ± 1.7
S_8	0.7896	$0.769^{+0.028}_{-0.024}$	$z_{\rm eq}$	3588	4500^{+600}_{-900}	$\chi^2_{\rm DES}$	228.92	233.8 ± 2.9
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4325	$0.421^{+0.015}_{-0.013}$	$k_{\rm eq}$	0.01095	$0.0138^{+0.0018}_{-0.0028}$	$\chi^2_{\rm prior}$	0.45	9.6 ± 4.3
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.5709	0.535 ± 0.028	$100\theta_{\rm eq}$	0.797	0.720 ± 0.070	$\chi^2_{\rm BAO}$	3.95	4.8 ± 1.9
$\sigma_8 / h^{0.5}$	0.911	0.806 ± 0.074	$100\theta_{\rm s,eq}$	0.4414	0.401 ± 0.037			

Best-fit $\chi^2_{\rm eff} = 233.32$; $\Delta\chi^2_{\rm eff} = -0.09$; $\bar{\chi}^2_{\rm eff} = 248.17$; $\Delta\bar{\chi}^2_{\rm eff} = 0.05$; $R - 1 = 0.01903$
$\chi^2_{\rm eff}$: BAO - 6DF: 0.04 (Δ -0.01) MGS: 1.22 (Δ 0.06) DR12BAO: 2.70 (Δ 0.38) WL - DES_1YR_final: 228.92 (Δ -0.50)

6.137 base_mnu_DES_lenspriors_lensing_BAO

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\mathbf{\Omega_b h^2}$	0.02220	0.02221 ± 0.00050	$\Omega_m h^3$	0.0991	$0.1022^{+0.0093}_{-0.013}$	$100\theta_{eq}$	0.8382	0.833 ± 0.030
$\mathbf{\Omega_c h^2}$	0.1172	$0.1198^{+0.0093}_{-0.012}$	σ_8	0.7541	0.748 ± 0.028	$100\theta_{s,eq}$	0.4629	0.460 ± 0.015
$\mathbf{100\theta_{MC}}$	1.0549	1.059 ± 0.021	S_8	0.7784	0.776 ± 0.015	$H(0.15)$	73.11	$73.5^{+1.4}_{-1.7}$
$\mathbf{\Sigma m_\nu}$ [eV]	0.654	$0.75^{+0.32}_{-0.45}$	$\sigma_8\Omega_m^{0.5}$	0.4263	0.4249 ± 0.0081	$D_M(0.15)$	639.9	637^{+13}_{-12}
$\mathbf{ln(10^{10} A_s)}$	3.228	3.210 ± 0.069	$\sigma_8\Omega_m^{0.25}$	0.5670	0.564 ± 0.013	$H(0.38)$	83.46	$84.1^{+2.0}_{-2.5}$
$\mathbf{n_s}$	0.9646	0.963 ± 0.019	$\sigma_8/h^{0.5}$	0.9166	0.907 ± 0.038	$D_M(0.38)$	1524.2	1516^{+35}_{-31}
$\mathbf{b^1_{DES}}$	1.579	1.588 ± 0.096	$r_{drag}h$	100.03	99.98 ± 1.3	$H(0.51)$	90.33	$91.0^{+2.4}_{-3.0}$
$\mathbf{b^2_{DES}}$	1.793	1.803 ± 0.082	$\langle d^2\rangle^{1/2}$	2.5594	2.553 ± 0.043	$D_M(0.51)$	1973.3	1962^{+48}_{-43}
$\mathbf{b^3_{DES}}$	1.771	1.781 ± 0.072	z_{re}	7.857	$7.92^{+0.24}_{-0.31}$	$H(0.61)$	96.07	$96.9^{+2.7}_{-3.4}$
$\mathbf{b^4_{DES}}$	2.134	2.143 ± 0.082	$10^9 A_s$	2.523	$2.48^{+0.16}_{-0.18}$	$D_M(0.61)$	2295	2281^{+59}_{-52}
$\mathbf{b^5_{DES}}$	2.205	2.211 ± 0.098	$10^9 A_s e^{-2\tau}$	2.261	$2.22^{+0.14}_{-0.16}$	$H(2.33)$	239.2	$241.8^{+9.9}_{-12}$
$\mathbf{m^1_{DES}}$	0.0130	0.011 ± 0.023	D_{40}	1480	1452 ± 100	$D_M(2.33)$	5714	5672 ± 190
$\mathbf{m^2_{DES}}$	0.0151	0.013 ± 0.022	D_{220}	6974	6814 ± 650	$f\sigma_8(0.15)$	0.4354	0.4333 ± 0.0078
$\mathbf{m^3_{DES}}$	0.0041	0.004 ± 0.020	D_{810}	3059	2965 ± 270	$\sigma_8(0.15)$	0.6969	0.691 ± 0.027
$\mathbf{m^4_{DES}}$	0.0081	0.008 ± 0.021	D_{1420}	976	933^{+100}_{-90}	$f\sigma_8(0.38)$	0.4520	0.4489 ± 0.0090
$\mathbf{A_{IA,DES}}$	0.417	$0.42^{+0.15}_{-0.18}$	D_{2000}	276.7	267 ± 28	$\sigma_8(0.38)$	0.6181	0.612 ± 0.026
$\mathbf{\alpha_{IA,DES}}$	−2.06	$-0.8^{+1.9}_{-3.0}$	$n_{s,0.002}$	0.9646	0.963 ± 0.019	$f\sigma_8(0.51)$	0.4504	$0.447^{+0.011}_{-0.0096}$
$\mathbf{\Delta z^1_{l,DES}}$	0.0034	0.0038 ± 0.0074	Y_P	0.245324	$0.24532^{+0.00023}_{-0.00020}$	$\sigma_8(0.51)$	0.5787	0.573 ± 0.025
$\mathbf{\Delta z^2_{l,DES}}$	0.0012	0.0013 ± 0.0066	Y_P^{BBN}	0.246650	$0.24664^{+0.00023}_{-0.00020}$	$f\sigma_8(0.61)$	0.4455	$0.442^{+0.012}_{-0.010}$
$\mathbf{\Delta z^3_{l,DES}}$	0.0037	0.0038 ± 0.0066	10^5D/H	2.619	$2.619^{+0.090}_{-0.10}$	$\sigma_8(0.61)$	0.5509	0.546 ± 0.024
$\mathbf{\Delta z^4_{l,DES}}$	0.0016	0.0014 ± 0.0091	Age/Gyr	13.678	13.58 ± 0.45	$f\sigma_8(2.33)$	0.2846	$0.281^{+0.013}_{-0.010}$
$\mathbf{\Delta z^5_{l,DES}}$	0.0001	0.0002 ± 0.0098	z_*	1090.06	$1090.3^{+1.0}_{-1.4}$	$\sigma_8(2.33)$	0.2890	0.286 ± 0.014
$\mathbf{\Delta z^1_{s,DES}}$	−0.0010	-0.004 ± 0.014	r_*	145.05	$144.3^{+3.3}_{-2.8}$	$\chi^2_{lensing}$	8.26	9.7 ± 1.7
$\mathbf{\Delta z^2_{s,DES}}$	−0.0292	-0.030 ± 0.011	$100\theta_*$	1.0554	1.060 ± 0.021	χ^2_{6DF}	0.0044	0.067 ± 0.094
$\mathbf{\Delta z^3_{s,DES}}$	0.0061	0.0063 ± 0.0096	$D_M(z_*)$/Gpc	13.74	13.63 ± 0.56	χ^2_{MGS}	1.54	1.64 ± 0.70
$\mathbf{\Delta z^4_{s,DES}}$	−0.0249	-0.023 ± 0.018	z_{drag}	1059.47	1059.7 ± 1.5	$\chi^2_{DR12BAO}$	2.75	3.7 ± 1.4
H_0	67.69	$68.0^{+1.1}_{-1.3}$	r_{drag}	147.78	$147.1^{+3.4}_{-3.0}$	χ^2_{DES}	501.88	512.2 ± 4.6
Ω_Λ	0.6804	$0.676^{+0.026}_{-0.022}$	k_D	0.14016	$0.1410^{+0.0032}_{-0.0040}$	χ^2_{prior}	1.28	14.2 ± 5.2
Ω_m	0.3196	$0.324^{+0.022}_{-0.026}$	$100\theta_D$	0.16309	0.1636 ± 0.0028	χ^2_{BAO}	4.29	5.4 ± 1.8
$\Omega_m h^2$	0.1464	$0.150^{+0.012}_{-0.017}$	z_{eq}	3331	3394^{+220}_{-290}			
$\Omega_\nu h^2$	0.00703	$0.0081^{+0.0035}_{-0.0049}$	k_{eq}	0.01018	$0.01038^{+0.00069}_{-0.00090}$			

Best-fit $\chi^2_{eff} = 515.71$; $\Delta\chi^2_{eff} = -2.15$; $\bar{\chi}^2_{eff} = 541.45$; $\Delta\bar{\chi}^2_{eff} = -1.12$; $R - 1 = 0.01087$

χ^2_{eff}: BAO - 6DF: 0.00 (Δ -0.03) MGS: 1.54 (Δ -0.65) DR12BAO: 2.75 (Δ -1.46) CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8_CMBmarged: 8.26 (Δ 0.53) WL - DES_1YR_final: 501.88 (Δ -0.76)

6.138 base_mnu_DESlens_lenspriors_lensing_BAO

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022190	0.02221 ± 0.00050	$r_{\rm drag} h$	99.58	$99.4^{+1.6}_{-1.4}$	$H(0.15)$	73.84	$74.4^{+1.5}_{-2.1}$
$\boldsymbol{\Omega_c h^2}$	0.1240	$0.128^{+0.010}_{-0.016}$	$\langle d^2 \rangle^{1/2}$	2.535	2.528 ± 0.051	$D_{\rm M}(0.15)$	634.3	631^{+16}_{-12}
$\boldsymbol{100\theta_{MC}}$	1.0633	$1.069^{+0.021}_{-0.029}$	$z_{\rm re}$	7.985	$8.06^{+0.26}_{-0.38}$	$H(0.38)$	84.56	$85.4^{+2.1}_{-3.2}$
$\boldsymbol{\Sigma m_\nu}$ [eV]	0.665	$0.83^{+0.29}_{-0.67}$	$10^9 A_{\rm s}$	2.370	$2.34^{+0.18}_{-0.20}$	$D_{\rm M}(0.38)$	1508.5	1498^{+43}_{-32}
$\boldsymbol{\ln(10^{10} A_s)}$	3.166	3.149 ± 0.083	$10^9 A_{\rm s} e^{-2\tau}$	2.123	$2.10^{+0.16}_{-0.18}$	$H(0.51)$	91.66	$92.6^{+2.5}_{-3.9}$
$\boldsymbol{n_s}$	0.9599	0.962 ± 0.020	D_{40}	1389	1357 ± 130	$D_{\rm M}(0.51)$	1951	1937^{+60}_{-44}
$\boldsymbol{m^1_{DES}}$	0.0146	0.014 ± 0.023	D_{220}	6387	6235 ± 800	$H(0.61)$	97.58	$98.7^{+2.8}_{-4.5}$
$\boldsymbol{m^2_{DES}}$	0.0131	0.012 ± 0.022	D_{810}	2830	2734^{+300}_{-300}	$D_{\rm M}(0.61)$	2268	2251^{+73}_{-53}
$\boldsymbol{m^3_{DES}}$	−0.0043	-0.005 ± 0.021	D_{1420}	897	851^{+100}_{-100}	$H(2.33)$	244.5	248^{+10}_{-16}
$\boldsymbol{m^4_{DES}}$	0.0149	0.013 ± 0.021	D_{2000}	256.4	244^{+40}_{-30}	$D_{\rm M}(2.33)$	5621	5568^{+250}_{-190}
$\boldsymbol{A_{IA,DES}}$	1.31	1.05 ± 0.52	$n_{\rm s,0.002}$	0.9599	0.962 ± 0.020	$f\sigma_8(0.15)$	0.4450	0.442 ± 0.010
$\boldsymbol{\alpha_{IA,DES}}$	2.52	$1.72^{+3.2}_{-0.83}$	$Y_{\rm P}$	0.245322	$0.24532^{+0.00023}_{-0.00020}$	$\sigma_8(0.15)$	0.7021	$0.693^{+0.036}_{-0.031}$
$\boldsymbol{\Delta z^1_{s,DES}}$	0.0037	0.003 ± 0.015	$Y_{\rm P}^{\rm BBN}$	0.246648	$0.24665^{+0.00023}_{-0.00020}$	$f\sigma_8(0.38)$	0.4596	0.455 ± 0.011
$\boldsymbol{\Delta z^2_{s,DES}}$	−0.0199	-0.020 ± 0.012	10^5D/H	2.620	$2.618^{+0.087}_{-0.10}$	$\sigma_8(0.38)$	0.6217	$0.613^{+0.035}_{-0.029}$
$\boldsymbol{\Delta z^3_{s,DES}}$	0.0062	0.006 ± 0.010	Age/Gyr	13.45	$13.33^{+0.61}_{-0.45}$	$f\sigma_8(0.51)$	0.4568	$0.452^{+0.014}_{-0.012}$
$\boldsymbol{\Delta z^4_{s,DES}}$	−0.0198	-0.021 ± 0.020	z_*	1090.66	$1091.0^{+1.1}_{-1.7}$	$\sigma_8(0.51)$	0.5816	$0.574^{+0.034}_{-0.028}$
H_0	68.21	$68.6^{+1.2}_{-1.6}$	r_*	143.29	$142.4^{+4.4}_{-2.9}$	$f\sigma_8(0.61)$	0.4511	$0.446^{+0.015}_{-0.012}$
Ω_Λ	0.6703	$0.664^{+0.036}_{-0.022}$	$100\theta_*$	1.0638	$1.070^{+0.021}_{-0.029}$	$\sigma_8(0.61)$	0.5534	$0.546^{+0.033}_{-0.027}$
$\Omega_{\rm m}$	0.3297	$0.336^{+0.022}_{-0.036}$	$D_{\rm M}(z_*)$/Gpc	13.47	$13.32^{+0.74}_{-0.56}$	$f\sigma_8(2.33)$	0.2852	$0.281^{+0.016}_{-0.011}$
$\Omega_{\rm m} h^2$	0.1534	$0.159^{+0.013}_{-0.023}$	$z_{\rm drag}$	1059.93	$1060.3^{+1.6}_{-1.8}$	$\sigma_8(2.33)$	0.2894	$0.285^{+0.019}_{-0.014}$
$\Omega_\nu h^2$	0.0071	$0.0089^{+0.0032}_{-0.0072}$	$r_{\rm drag}$	145.98	$145.0^{+4.5}_{-3.1}$	$\chi^2_{\rm lensing}$	7.61	9.4 ± 1.8
$\Omega_{\rm m} h^3$	0.1046	$0.1091^{+0.0096}_{-0.018}$	$k_{\rm D}$	0.14205	$0.1433^{+0.0033}_{-0.0053}$	$\chi^2_{\rm 6DF}$	0.0206	0.10 ± 0.15
σ_8	0.7608	$0.752^{+0.036}_{-0.032}$	$100\theta_{\rm D}$	0.16418	$0.1649^{+0.0029}_{-0.0037}$	$\chi^2_{\rm MGS}$	1.34	1.42 ± 0.71
S_8	0.7975	0.794 ± 0.020	$z_{\rm eq}$	3495	3581^{+240}_{-390}	$\chi^2_{\rm DR12BAO}$	2.49	3.5 ± 1.4
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4368	0.435 ± 0.011	$k_{\rm eq}$	0.01068	$0.01095^{+0.00074}_{-0.0012}$	$\chi^2_{\rm DES}$	229.21	232.8 ± 2.6
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.5765	0.572 ± 0.016	$100\theta_{\rm eq}$	0.8152	$0.809^{+0.038}_{-0.032}$	$\chi^2_{\rm prior}$	0.70	9.7 ± 4.3
$\sigma_8 / h^{0.5}$	0.9211	$0.908^{+0.051}_{-0.041}$	$100\theta_{\rm s,eq}$	0.4511	$0.448^{+0.019}_{-0.016}$	$\chi^2_{\rm BAO}$	3.85	5.0 ± 1.7

Best-fit $\chi^2_{\rm eff} = 241.37$; $\Delta\chi^2_{\rm eff} = -1.37$; $\bar{\chi}^2_{\rm eff} = 256.90$; $\Delta\bar{\chi}^2_{\rm eff} = -0.36$; $R - 1 = 0.00947$

$\chi^2_{\rm eff}$: BAO - 6DF: 0.02 (Δ 0.01) MGS: 1.34 (Δ -0.62) DR12BAO: 2.49 (Δ -1.21) CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8_CMBmarged: 7.61 (Δ -0.09) WL - DES_1YR_final: 229.21 (Δ 0.28)

6.139 base_mnu_DES_DESpriors

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_{\rm m}}$	0.2690	$0.280^{+0.026}_{-0.040}$	$\boldsymbol{m^3_{\rm DES}}$	0.0078	0.009 ± 0.021	$\Omega_{\rm b}h^2$	0.0497	$0.0291^{+0.0084}_{-0.015}$
$\boldsymbol{\Omega_b}$	0.0651	$0.050^{+0.013}_{-0.011}$	$\boldsymbol{m^4_{\rm DES}}$	0.0101	0.011 ± 0.021	$\Omega_{\rm c}h^2$	0.1451	$0.120^{+0.021}_{-0.026}$
$\boldsymbol{H_0}$	87.4	75^{+10}_{-7}	$\boldsymbol{A_{\rm IA,DES}}$	0.482	$0.46^{+0.17}_{-0.21}$	Ω_Λ	0.7310	$0.720^{+0.040}_{-0.026}$
$\boldsymbol{\Sigma m_\nu}$ [eV]	0.994	—	$\boldsymbol{\alpha_{\rm IA,DES}}$	-1.42	$-0.4^{+2.3}_{-2.8}$	$\Omega_\nu h^2$	0.01069	$0.0058^{+0.0041}_{-0.0022}$
$\boldsymbol{10^9 A_{\rm s}}$	2.87	$2.82^{+0.46}_{-0.64}$	$\boldsymbol{\Delta z^1_{\rm l,DES}}$	0.0039	0.0043 ± 0.0075	$\ln(10^{10}A_{\rm s})$	3.357	3.32 ± 0.20
$\boldsymbol{n_{\rm s}}$	1.070	> 0.965	$\boldsymbol{\Delta z^2_{\rm l,DES}}$	0.0017	0.0019 ± 0.0067	σ_8	0.838	0.812 ± 0.066
$\boldsymbol{b^1_{\rm DES}}$	1.430	$1.46^{+0.12}_{-0.16}$	$\boldsymbol{\Delta z^3_{\rm l,DES}}$	0.0043	0.0043 ± 0.0065	S_8	0.7932	0.780 ± 0.024
$\boldsymbol{b^2_{\rm DES}}$	1.638	$1.67^{+0.12}_{-0.16}$	$\boldsymbol{\Delta z^4_{\rm l,DES}}$	0.0023	0.0024 ± 0.0092	$\sigma_8\Omega_{\rm m}^{0.5}$	0.4345	0.427 ± 0.013
$\boldsymbol{b^3_{\rm DES}}$	1.624	$1.66^{+0.12}_{-0.16}$	$\boldsymbol{\Delta z^5_{\rm l,DES}}$	0.0006	0.0008 ± 0.0097	$\sigma_8\Omega_{\rm m}^{0.25}$	0.6033	0.589 ± 0.031
$\boldsymbol{b^4_{\rm DES}}$	1.959	$2.00^{+0.14}_{-0.19}$	$\boldsymbol{\Delta z^1_{\rm s,DES}}$	-0.0014	-0.004 ± 0.014	$\chi^2_{\rm DES}$	498.53	511.7 ± 5.0
$\boldsymbol{b^5_{\rm DES}}$	2.021	$2.06^{+0.16}_{-0.20}$	$\boldsymbol{\Delta z^2_{\rm s,DES}}$	-0.0290	-0.029 ± 0.011	$\chi^2_{\rm prior}$	1.17	12.2 ± 4.8
$\boldsymbol{m^1_{\rm DES}}$	0.0133	0.012 ± 0.023	$\boldsymbol{\Delta z^3_{\rm s,DES}}$	0.0066	0.0073 ± 0.0098			
$\boldsymbol{m^2_{\rm DES}}$	0.0152	0.014 ± 0.022	$\boldsymbol{\Delta z^4_{\rm s,DES}}$	-0.0247	-0.023 ± 0.019			

Best-fit $\chi^2_{\rm eff} = 499.70$; $\Delta\chi^2_{\rm eff} = -0.29$; $\bar{\chi}^2_{\rm eff} = 523.90$; $\Delta\bar{\chi}^2_{\rm eff} = -0.15$; $R - 1 = 0.02752$
$\chi^2_{\rm eff}$: WL - DES_1YR_final: 498.53 (Δ -0.14)

6.140 base_mnu_DESlens_DESpriors

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_{\rm m}}$	0.279	$0.305^{+0.045}_{-0.084}$	$\boldsymbol{m^4_{\rm DES}}$	0.0168	0.017 ± 0.022	Ω_Λ	0.721	$0.695^{+0.084}_{-0.045}$
$\boldsymbol{\Omega_b}$	0.0402	—	$\boldsymbol{A_{\rm IA,DES}}$	1.30	$0.79^{+0.74}_{-0.62}$	$\Omega_\nu h^2$	0.00597	$0.0054^{+0.0025}_{-0.0045}$
$\boldsymbol{H_0}$	76.6	> 68.9	$\boldsymbol{\alpha_{\rm IA,DES}}$	3.15	> 0.990	$\ln(10^{10}A_{\rm s})$	3.137	$3.11^{+0.55}_{-0.37}$
$\boldsymbol{\Sigma m_\nu}$ [eV]	0.555	—	$\boldsymbol{\Delta z^1_{\rm s,DES}}$	0.0036	0.002 ± 0.015	σ_8	0.829	0.79 ± 0.10
$\boldsymbol{10^9 A_{\rm s}}$	2.30	$2.47^{+0.73}_{-1.4}$	$\boldsymbol{\Delta z^2_{\rm s,DES}}$	-0.0192	-0.020 ± 0.012	S_8	0.7988	$0.781^{+0.033}_{-0.027}$
$\boldsymbol{n_{\rm s}}$	0.967	> 0.949	$\boldsymbol{\Delta z^3_{\rm s,DES}}$	0.0079	0.008 ± 0.011	$\sigma_8\Omega_{\rm m}^{0.5}$	0.4375	$0.428^{+0.018}_{-0.015}$
$\boldsymbol{m^1_{\rm DES}}$	0.0140	0.013 ± 0.023	$\boldsymbol{\Delta z^4_{\rm s,DES}}$	-0.0176	-0.017 ± 0.021	$\sigma_8\Omega_{\rm m}^{0.25}$	0.6023	$0.581^{+0.048}_{-0.043}$
$\boldsymbol{m^2_{\rm DES}}$	0.0134	0.013 ± 0.022	$\Omega_{\rm b}h^2$	0.0235	$0.0273^{+0.0067}_{-0.012}$	$\chi^2_{\rm DES}$	228.71	233.3 ± 2.8
$\boldsymbol{m^3_{\rm DES}}$	0.0017	0.003 ± 0.022	$\Omega_{\rm c}h^2$	0.1338	$0.133^{+0.022}_{-0.040}$	$\chi^2_{\rm prior}$	0.35	7.5 ± 3.7

Best-fit $\chi^2_{\rm eff} = 229.06$; $\Delta\chi^2_{\rm eff} = 0.00$; $\bar{\chi}^2_{\rm eff} = 240.80$; $\Delta\bar{\chi}^2_{\rm eff} = 0.03$; $R - 1 = 0.01006$
$\chi^2_{\rm eff}$: WL - DES_1YR_final: 228.71 (Δ 0.03)

6.141 base_mnu_DESwt_DESpriors

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_{\rm m}}$	$0.314^{+0.038}_{-0.058}$	$\boldsymbol{m^3_{\rm DES}}$	0.021 ± 0.022	$\Omega_{\rm b}h^2$	$0.0258^{+0.0056}_{-0.014}$
$\boldsymbol{\Omega_b}$	$0.0515^{+0.014}_{-0.0093}$	$\boldsymbol{m^4_{\rm DES}}$	0.007 ± 0.022	$\Omega_{\rm c}h^2$	$0.117^{+0.017}_{-0.026}$
$\boldsymbol{H_0}$	< 74.0	$\boldsymbol{A_{\rm IA,DES}}$	$0.39^{+0.15}_{-0.19}$	Ω_Λ	$0.686^{+0.058}_{-0.038}$
$\boldsymbol{\Sigma m_\nu}$ [eV]	> 0.467	$\boldsymbol{\alpha_{\rm IA,DES}}$	$-0.8^{+1.7}_{-3.6}$	$\Omega_\nu h^2$	$0.0064^{+0.0041}_{-0.0016}$
$\boldsymbol{10^9 A_{\rm s}}$	$2.71^{+0.43}_{-0.74}$	$\boldsymbol{\Delta z^1_{\rm l,DES}}$	0.0034 ± 0.0077	$\ln(10^{10}A_{\rm s})$	$3.27^{+0.22}_{-0.24}$
$\boldsymbol{n_{\rm s}}$	—	$\boldsymbol{\Delta z^2_{\rm l,DES}}$	0.0022 ± 0.0067	σ_8	$0.764^{+0.074}_{-0.085}$
$\boldsymbol{b^1_{\rm DES}}$	$1.52^{+0.15}_{-0.20}$	$\boldsymbol{\Delta z^3_{\rm l,DES}}$	0.0049 ± 0.0067	S_8	0.773 ± 0.036
$\boldsymbol{b^2_{\rm DES}}$	$1.77^{+0.16}_{-0.21}$	$\boldsymbol{\Delta z^4_{\rm l,DES}}$	0.0028 ± 0.0092	$\sigma_8\Omega_{\rm m}^{0.5}$	0.423 ± 0.020
$\boldsymbol{b^3_{\rm DES}}$	$1.75^{+0.16}_{-0.20}$	$\boldsymbol{\Delta z^5_{\rm l,DES}}$	0.0004 ± 0.0098	$\sigma_8\Omega_{\rm m}^{0.25}$	0.568 ± 0.040
$\boldsymbol{b^4_{\rm DES}}$	$2.11^{+0.19}_{-0.24}$	$\boldsymbol{\Delta z^1_{\rm s,DES}}$	-0.004 ± 0.014	$\chi^2_{\rm DES}$	260.8 ± 4.9
$\boldsymbol{b^5_{\rm DES}}$	$2.17^{+0.20}_{-0.25}$	$\boldsymbol{\Delta z^2_{\rm s,DES}}$	-0.031 ± 0.011	$\chi^2_{\rm prior}$	13.0 ± 5.1
$\boldsymbol{m^1_{\rm DES}}$	0.011 ± 0.023	$\boldsymbol{\Delta z^3_{\rm s,DES}}$	0.008 ± 0.010		
$\boldsymbol{m^2_{\rm DES}}$	0.009 ± 0.022	$\boldsymbol{\Delta z^4_{\rm s,DES}}$	-0.023 ± 0.019		

$\bar{\chi}^2_{\rm eff} = 273.80$; $\Delta\bar{\chi}^2_{\rm eff} = -0.35$; $R-1 = 0.00927$

6.142 base_mnu_DES_DESpriors_lensing

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_{\rm m}}$	0.2762	$0.284^{+0.021}_{-0.027}$	$\boldsymbol{m^3_{\rm DES}}$	0.0114	0.011 ± 0.021	$\Omega_{\rm b}h^2$	0.0401	$0.0304^{+0.0092}_{-0.014}$
$\boldsymbol{\Omega_b}$	0.0607	$0.0517^{+0.014}_{-0.0087}$	$\boldsymbol{m^4_{\rm DES}}$	0.0125	0.013 ± 0.021	$\Omega_{\rm c}h^2$	0.1333	$0.125^{+0.023}_{-0.026}$
$\boldsymbol{H_0}$	81.3	75^{+10}_{-8}	$\boldsymbol{A_{\rm IA,DES}}$	0.476	$0.46^{+0.17}_{-0.20}$	Ω_Λ	0.7238	$0.716^{+0.027}_{-0.021}$
$\boldsymbol{\Sigma m_\nu}$ [eV]	0.846	$0.56^{+0.41}_{-0.18}$	$\boldsymbol{\alpha_{\rm IA,DES}}$	-1.24	$-0.4^{+2.3}_{-2.8}$	$\Omega_\nu h^2$	0.00910	$0.0060^{+0.0041}_{-0.0020}$
$\boldsymbol{10^9 A_{\rm s}}$	2.769	$2.59^{+0.35}_{-0.48}$	$\boldsymbol{\Delta z^1_{\rm l,DES}}$	0.0039	0.0042 ± 0.0075	$\ln(10^{10}A_{\rm s})$	3.321	3.24 ± 0.16
$\boldsymbol{n_{\rm s}}$	1.0700	> 0.973	$\boldsymbol{\Delta z^2_{\rm l,DES}}$	0.0016	0.0018 ± 0.0067	σ_8	0.8150	0.798 ± 0.034
$\boldsymbol{b^1_{\rm DES}}$	1.474	1.487 ± 0.099	$\boldsymbol{\Delta z^3_{\rm l,DES}}$	0.0041	0.0040 ± 0.0065	S_8	0.7819	0.774 ± 0.015
$\boldsymbol{b^2_{\rm DES}}$	1.687	$1.702^{+0.080}_{-0.089}$	$\boldsymbol{\Delta z^4_{\rm l,DES}}$	0.0024	0.0021 ± 0.0091	$\sigma_8\Omega_{\rm m}^{0.5}$	0.4283	0.4242 ± 0.0083
$\boldsymbol{b^3_{\rm DES}}$	1.676	1.688 ± 0.076	$\boldsymbol{\Delta z^5_{\rm l,DES}}$	0.0004	0.0004 ± 0.0097	$\sigma_8\Omega_{\rm m}^{0.25}$	0.5908	0.582 ± 0.015
$\boldsymbol{b^4_{\rm DES}}$	2.024	2.038 ± 0.088	$\boldsymbol{\Delta z^1_{\rm s,DES}}$	-0.0016	-0.004 ± 0.014	$\chi^2_{\rm lensing}$	7.33	8.9 ± 1.5
$\boldsymbol{b^5_{\rm DES}}$	2.099	2.11 ± 0.10	$\boldsymbol{\Delta z^2_{\rm s,DES}}$	-0.0287	-0.029 ± 0.011	$\chi^2_{\rm DES}$	499.67	511.3 ± 4.5
$\boldsymbol{m^1_{\rm DES}}$	0.0134	0.012 ± 0.023	$\boldsymbol{\Delta z^3_{\rm s,DES}}$	0.0076	0.0078 ± 0.0096	$\chi^2_{\rm prior}$	0.98	12.0 ± 4.7
$\boldsymbol{m^2_{\rm DES}}$	0.0151	0.015 ± 0.022	$\boldsymbol{\Delta z^4_{\rm s,DES}}$	-0.0226	-0.022 ± 0.018			

Best-fit $\chi^2_{\rm eff} = 507.98$; $\Delta\chi^2_{\rm eff} = -2.02$; $\bar{\chi}^2_{\rm eff} = 532.25$; $\Delta\bar{\chi}^2_{\rm eff} = -1.15$; $R-1 = 0.00959$
$\chi^2_{\rm eff}$: CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8_CMBmarged: 7.33 (Δ -0.44) WL - DES_1YR_final: 499.67 (Δ -1.58)

6.143 base_mnu_DESlens_DESpriors_lensing

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_{\rm m}}$	0.2945	$0.289^{+0.028}_{-0.034}$	$\boldsymbol{A_{\rm IA,DES}}$	1.28	0.82 ± 0.71	$\ln(10^{10}A_{\rm s})$	3.502	3.20 ± 0.16
$\boldsymbol{\Omega_b}$	0.0445	$0.0488^{+0.0065}_{-0.019}$	$\boldsymbol{\alpha_{\rm IA,DES}}$	3.10	> 0.960	σ_8	0.8016	0.804 ± 0.040
$\boldsymbol{H_0}$	61.5	74^{+10}_{-9}	$\boldsymbol{\Delta z^1_{\rm s,DES}}$	0.0028	0.002 ± 0.015	S_8	0.7942	$0.786^{+0.023}_{-0.020}$
$\boldsymbol{\Sigma m_\nu}$ [eV]	0.416	—	$\boldsymbol{\Delta z^2_{\rm s,DES}}$	-0.0192	-0.020 ± 0.012	$\sigma_8\Omega_{\rm m}^{0.5}$	0.4350	$0.430^{+0.012}_{-0.011}$
$\boldsymbol{10^9 A_{\rm s}}$	3.318	$2.49^{+0.34}_{-0.49}$	$\boldsymbol{\Delta z^3_{\rm s,DES}}$	0.0081	0.008 ± 0.011	$\sigma_8\Omega_{\rm m}^{0.25}$	0.5905	0.588 ± 0.018
$\boldsymbol{n_{\rm s}}$	1.070	> 0.958	$\boldsymbol{\Delta z^4_{\rm s,DES}}$	-0.0166	-0.016 ± 0.021	$\chi^2_{\rm lensing}$	7.22	9.1 ± 1.7
$\boldsymbol{m^1_{\rm DES}}$	0.0144	0.014 ± 0.023	$\Omega_{\rm b}h^2$	0.0169	$0.0276^{+0.0070}_{-0.013}$	$\chi^2_{\rm DES}$	228.84	232.5 ± 2.4
$\boldsymbol{m^2_{\rm DES}}$	0.0138	0.013 ± 0.022	$\Omega_{\rm c}h^2$	0.0902	$0.126^{+0.022}_{-0.028}$	$\chi^2_{\rm prior}$	0.35	7.4 ± 3.7
$\boldsymbol{m^3_{\rm DES}}$	0.0019	0.003 ± 0.021	Ω_Λ	0.7055	$0.711^{+0.034}_{-0.028}$			
$\boldsymbol{m^4_{\rm DES}}$	0.0181	0.017 ± 0.021	$\Omega_\nu h^2$	0.00447	$0.0054^{+0.0021}_{-0.0043}$			

Best-fit $\chi^2_{\rm eff} = 236.41$; $\Delta\chi^2_{\rm eff} = -0.27$; $\bar{\chi}^2_{\rm eff} = 248.95$; $\Delta\bar{\chi}^2_{\rm eff} = -0.29$; $R-1 = 0.00343$
$\chi^2_{\rm eff}$: CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8_CMBmarged: 7.22 (Δ -0.24) WL - DES_1YR_final: 228.84 (Δ -0.01)

6.144 base_mnu_DESwt_DESpriors_lensing

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_m}$	0.2942	$0.298^{+0.025}_{-0.039}$	$\boldsymbol{m^3_{DES}}$	0.0217	0.022 ± 0.022	$\Omega_b h^2$	0.0301	$0.0282^{+0.0077}_{-0.014}$
$\boldsymbol{\Omega_b}$	0.0547	$0.0512^{+0.014}_{-0.0096}$	$\boldsymbol{m^4_{DES}}$	0.0072	0.008 ± 0.022	$\Omega_c h^2$	0.1213	$0.124^{+0.021}_{-0.026}$
$\boldsymbol{H_0}$	74.2	73^{+10}_{-10}	$\boldsymbol{A_{IA,DES}}$	0.379	$0.41^{+0.15}_{-0.20}$	Ω_Λ	0.7058	$0.702^{+0.039}_{-0.025}$
$\boldsymbol{\Sigma m_\nu}$ [eV]	0.987	> 0.448	$\boldsymbol{\alpha_{IA,DES}}$	-2.53	$-0.6^{+2.0}_{-3.6}$	$\Omega_\nu h^2$	0.01062	$0.0063^{+0.0041}_{-0.0018}$
$\boldsymbol{10^9 A_s}$	2.962	$2.55^{+0.32}_{-0.49}$	$\boldsymbol{\Delta z^1_{l,DES}}$	0.0024	0.0033 ± 0.0077	$\ln(10^{10} A_s)$	3.388	3.23 ± 0.15
$\boldsymbol{n_s}$	1.070	> 0.947	$\boldsymbol{\Delta z^2_{l,DES}}$	0.0015	0.0018 ± 0.0067	σ_8	0.7864	$0.778^{+0.041}_{-0.037}$
$\boldsymbol{b^1_{DES}}$	1.492	$1.490^{+0.099}_{-0.11}$	$\boldsymbol{\Delta z^3_{l,DES}}$	0.0046	0.0046 ± 0.0066	S_8	0.7788	0.772 ± 0.019
$\boldsymbol{b^2_{DES}}$	1.736	$1.733^{+0.087}_{-0.10}$	$\boldsymbol{\Delta z^4_{l,DES}}$	0.0032	0.0027 ± 0.0091	$\sigma_8 \Omega_m^{0.5}$	0.4266	0.423 ± 0.011
$\boldsymbol{b^3_{DES}}$	1.723	$1.722^{+0.078}_{-0.095}$	$\boldsymbol{\Delta z^5_{l,DES}}$	0.0006	0.0004 ± 0.0099	$\sigma_8 \Omega_m^{0.25}$	0.5792	0.573 ± 0.016
$\boldsymbol{b^4_{DES}}$	2.079	$2.077^{+0.091}_{-0.11}$	$\boldsymbol{\Delta z^1_{s,DES}}$	-0.0006	-0.004 ± 0.015	$\chi^2_{lensing}$	7.50	9.4 ± 1.8
$\boldsymbol{b^5_{DES}}$	2.146	$2.15^{+0.11}_{-0.12}$	$\boldsymbol{\Delta z^2_{s,DES}}$	-0.0302	-0.031 ± 0.011	χ^2_{DES}	250.01	260.4 ± 4.6
$\boldsymbol{m^1_{DES}}$	0.0124	0.011 ± 0.023	$\boldsymbol{\Delta z^3_{s,DES}}$	0.0077	0.0086 ± 0.0098	χ^2_{prior}	1.35	12.8 ± 4.9
$\boldsymbol{m^2_{DES}}$	0.0107	0.009 ± 0.022	$\boldsymbol{\Delta z^4_{s,DES}}$	-0.0232	-0.022 ± 0.019			

Best-fit $\chi^2_{eff} = 258.86$; $\Delta\chi^2_{eff} = -1.55$; $\bar{\chi}^2_{eff} = 282.68$; $\Delta\bar{\chi}^2_{eff} = -0.74$; $R - 1 = 0.01262$
χ^2_{eff}: CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8_CMBmarged: 7.50 (Δ -0.38) WL - DES_1YR_final: 250.01 (Δ -1.24)

6.145 base_mnu_DES_DESpriors_BAO_CookeDH

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_m}$	0.3151	0.314 ± 0.020	$\boldsymbol{m^4_{DES}}$	0.0099	0.011 ± 0.021	Ω_Λ	0.6849	0.686 ± 0.020
$\boldsymbol{\Omega_b}$	0.04966	0.0490 ± 0.0018	$\boldsymbol{A_{IA,DES}}$	0.420	$0.42^{+0.15}_{-0.19}$	$\Omega_\nu h^2$	0.01069	$0.0070^{+0.0036}_{-0.0013}$
$\boldsymbol{H_0}$	66.86	$67.3^{+1.1}_{-1.3}$	$\boldsymbol{\alpha_{IA,DES}}$	-1.96	$-0.6^{+2.1}_{-2.9}$	$\ln(10^{10} A_s)$	3.464	3.26 ± 0.18
$\boldsymbol{\Sigma m_\nu}$ [eV]	0.994	> 0.552	$\boldsymbol{\Delta z^1_{l,DES}}$	0.0036	0.0041 ± 0.0074	σ_8	0.7590	$0.752^{+0.033}_{-0.039}$
$\boldsymbol{10^9 A_s}$	3.194	$2.66^{+0.42}_{-0.55}$	$\boldsymbol{\Delta z^2_{l,DES}}$	0.0012	0.0015 ± 0.0067	S_8	0.7779	0.768 ± 0.022
$\boldsymbol{n_s}$	1.070	> 0.952	$\boldsymbol{\Delta z^3_{l,DES}}$	0.0038	0.0038 ± 0.0066	$\sigma_8 \Omega_m^{0.5}$	0.4261	0.421 ± 0.012
$\boldsymbol{b^1_{DES}}$	1.578	1.58 ± 0.11	$\boldsymbol{\Delta z^4_{l,DES}}$	0.0017	0.0017 ± 0.0091	$\sigma_8 \Omega_m^{0.25}$	0.5687	0.563 ± 0.021
$\boldsymbol{b^2_{DES}}$	1.796	1.80 ± 0.10	$\boldsymbol{\Delta z^5_{l,DES}}$	0.0003	0.0002 ± 0.0098	χ^2_{6DF}	0.0004	0.066 ± 0.093
$\boldsymbol{b^3_{DES}}$	1.773	1.777 ± 0.098	$\boldsymbol{\Delta z^1_{s,DES}}$	-0.0012	-0.004 ± 0.014	χ^2_{MGS}	1.68	1.70 ± 0.73
$\boldsymbol{b^4_{DES}}$	2.133	2.14 ± 0.12	$\boldsymbol{\Delta z^2_{s,DES}}$	-0.0288	-0.030 ± 0.011	$\chi^2_{DR12BAO}$	2.85	4.0 ± 1.6
$\boldsymbol{b^5_{DES}}$	2.199	2.21 ± 0.14	$\boldsymbol{\Delta z^3_{s,DES}}$	0.0066	0.0074 ± 0.0098	χ^2_{DES}	500.55	512.5 ± 4.8
$\boldsymbol{m^1_{DES}}$	0.0130	0.012 ± 0.023	$\boldsymbol{\Delta z^4_{s,DES}}$	-0.0229	-0.021 ± 0.019	χ^2_{prior}	1.06	13.2 ± 5.0
$\boldsymbol{m^2_{DES}}$	0.0151	0.014 ± 0.022	$\Omega_b h^2$	0.02220	0.02221 ± 0.00050	χ^2_{BAO}	4.53	5.8 ± 1.8
$\boldsymbol{m^3_{DES}}$	0.0061	0.008 ± 0.021	$\Omega_c h^2$	0.1080	$0.1134^{+0.0097}_{-0.012}$			

Best-fit $\chi^2_{eff} = 506.13$; $\Delta\chi^2_{eff} = -3.37$; $\bar{\chi}^2_{eff} = 531.41$; $\Delta\bar{\chi}^2_{eff} = -2.42$; $R - 1 = 0.00759$
χ^2_{eff}: BAO - 6DF: 0.00 (Δ -0.02) MGS: 1.68 (Δ -0.44) DR12BAO: 2.85 (Δ -1.04) WL - DES_1YR_final: 500.55 (Δ -1.77)

6.146 base_mnu_DESlens_DESpriors_BAO_CookeDH

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_{\rm m}}$	0.3561	$0.347^{+0.031}_{-0.038}$	$\boldsymbol{\alpha_{\rm IA,DES}}$	2.66	> 0.928	S_8	0.7848	$0.775^{+0.028}_{-0.024}$
$\boldsymbol{\Omega_b}$	0.04595	0.0462 ± 0.0029	$\boldsymbol{\Delta z^1_{\rm s,DES}}$	0.0033	0.003 ± 0.015	$\sigma_8\Omega_{\rm m}^{0.5}$	0.4299	$0.425^{+0.015}_{-0.013}$
$\boldsymbol{H_0}$	69.54	$69.4^{+1.9}_{-2.4}$	$\boldsymbol{\Delta z^2_{\rm s,DES}}$	-0.0198	-0.021 ± 0.012	$\sigma_8\Omega_{\rm m}^{0.25}$	0.5564	0.554 ± 0.027
$\boldsymbol{\Sigma m_\nu}$ [eV]	0.803	> 0.420	$\boldsymbol{\Delta z^3_{\rm s,DES}}$	0.0076	0.008 ± 0.011	$\chi^2_{\rm 6DF}$	0.105	0.16 ± 0.21
$\boldsymbol{10^9 A_{\rm s}}$	1.79	$1.85^{+0.41}_{-0.85}$	$\boldsymbol{\Delta z^4_{\rm s,DES}}$	-0.0169	-0.016 ± 0.021	$\chi^2_{\rm MGS}$	0.93	1.19 ± 0.73
$\boldsymbol{n_{\rm s}}$	0.996	—	$\Omega_{\rm b}h^2$	0.02222	0.02220 ± 0.00050	$\chi^2_{\rm DR12BAO}$	2.11	3.5 ± 1.5
$\boldsymbol{m^1_{\rm DES}}$	0.0146	0.013 ± 0.023	$\Omega_{\rm c}h^2$	0.1413	$0.140^{+0.020}_{-0.030}$	$\chi^2_{\rm DES}$	228.97	233.1 ± 2.7
$\boldsymbol{m^2_{\rm DES}}$	0.0131	0.013 ± 0.022	Ω_Λ	0.6439	$0.653^{+0.038}_{-0.031}$	$\chi^2_{\rm prior}$	0.44	8.5 ± 4.0
$\boldsymbol{m^3_{\rm DES}}$	0.0008	0.002 ± 0.021	$\Omega_\nu h^2$	0.00863	$0.0061^{+0.0044}_{-0.0018}$	$\chi^2_{\rm BAO}$	3.14	4.8 ± 1.7
$\boldsymbol{m^4_{\rm DES}}$	0.0191	0.018 ± 0.021	$\ln(10^{10}A_{\rm s})$	2.886	2.85 ± 0.37			
$\boldsymbol{A_{\rm IA,DES}}$	1.30	0.95 ± 0.67	σ_8	0.7203	0.724 ± 0.048			

Best-fit $\chi^2_{\rm eff} = 232.56$; $\Delta\chi^2_{\rm eff} = -0.61$; $\bar{\chi}^2_{\rm eff} = 246.46$; $\Delta\bar{\chi}^2_{\rm eff} = -0.83$; $R - 1 = 0.01007$
$\chi^2_{\rm eff}$: BAO - 6DF: 0.10 (Δ 0.02) MGS: 0.93 (Δ -0.05) DR12BAO: 2.11 (Δ -0.07) WL - DES_1YR_final: 228.97 (Δ -0.49)

6.147 base_mnu_DESwt_DESpriors_BAO_CookeDH

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_{\rm m}}$	0.3553	$0.322^{+0.022}_{-0.019}$	$\boldsymbol{m^4_{\rm DES}}$	0.0060	0.007 ± 0.022	Ω_Λ	0.6447	$0.678^{+0.019}_{-0.022}$
$\boldsymbol{\Omega_b}$	0.04650	0.0486 ± 0.0018	$\boldsymbol{A_{\rm IA,DES}}$	0.275	$0.38^{+0.15}_{-0.18}$	$\Omega_\nu h^2$	0.01068	$0.00762^{+0.0031}_{-0.00093}$
$\boldsymbol{H_0}$	69.09	67.6 ± 1.3	$\boldsymbol{\alpha_{\rm IA,DES}}$	-4.16	$-0.8^{+1.6}_{-3.6}$	$\ln(10^{10}A_{\rm s})$	3.073	3.23 ± 0.20
$\boldsymbol{\Sigma m_\nu}$ [eV]	0.993	> 0.633	$\boldsymbol{\Delta z^1_{\rm l,DES}}$	0.0026	0.0034 ± 0.0077	σ_8	0.7076	$0.742^{+0.038}_{-0.047}$
$\boldsymbol{10^9 A_{\rm s}}$	2.161	$2.57^{+0.38}_{-0.59}$	$\boldsymbol{\Delta z^2_{\rm l,DES}}$	0.0018	0.0020 ± 0.0067	S_8	0.7701	0.767 ± 0.034
$\boldsymbol{n_{\rm s}}$	0.872	< 0.982	$\boldsymbol{\Delta z^3_{\rm l,DES}}$	0.0046	0.0047 ± 0.0067	$\sigma_8\Omega_{\rm m}^{0.5}$	0.4218	0.420 ± 0.018
$\boldsymbol{b^1_{\rm DES}}$	1.608	1.55 ± 0.12	$\boldsymbol{\Delta z^4_{\rm l,DES}}$	0.0031	0.0025 ± 0.0092	$\sigma_8\Omega_{\rm m}^{0.25}$	0.5463	0.558 ± 0.028
$\boldsymbol{b^2_{\rm DES}}$	1.866	1.81 ± 0.12	$\boldsymbol{\Delta z^5_{\rm l,DES}}$	0.0008	0.0004 ± 0.0097	$\chi^2_{\rm 6DF}$	0.1040	0.08 ± 0.11
$\boldsymbol{b^3_{\rm DES}}$	1.841	1.79 ± 0.11	$\boldsymbol{\Delta z^1_{\rm s,DES}}$	0.0016	-0.004 ± 0.015	$\chi^2_{\rm MGS}$	0.93	1.51 ± 0.69
$\boldsymbol{b^4_{\rm DES}}$	2.213	2.15 ± 0.14	$\boldsymbol{\Delta z^2_{\rm s,DES}}$	-0.0301	-0.031 ± 0.011	$\chi^2_{\rm DR12BAO}$	2.12	3.8 ± 1.6
$\boldsymbol{b^5_{\rm DES}}$	2.265	2.22 ± 0.16	$\boldsymbol{\Delta z^3_{\rm s,DES}}$	0.0072	0.0085 ± 0.0098	$\chi^2_{\rm DES}$	249.71	260.3 ± 4.8
$\boldsymbol{m^1_{\rm DES}}$	0.0131	0.011 ± 0.023	$\boldsymbol{\Delta z^4_{\rm s,DES}}$	-0.0231	-0.022 ± 0.019	$\chi^2_{\rm prior}$	1.34	13.9 ± 5.2
$\boldsymbol{m^2_{\rm DES}}$	0.0092	0.009 ± 0.023	$\Omega_{\rm b}h^2$	0.022195	0.02219 ± 0.00050	$\chi^2_{\rm BAO}$	3.15	5.4 ± 1.7
$\boldsymbol{m^3_{\rm DES}}$	0.0190	0.021 ± 0.022	$\Omega_{\rm c}h^2$	0.1367	0.117 ± 0.012			

Best-fit $\chi^2_{\rm eff} = 254.20$; $\bar{\chi}^2_{\rm eff} = 279.60$; $\Delta\bar{\chi}^2_{\rm eff} = -2.92$; $R - 1 = 0.00791$
$\chi^2_{\rm eff}$: BAO - 6DF: 0.10 MGS: 0.93 DR12BAO: 2.12 WL - DES_1YR_final: 249.71

6.148 base_mnu_DES_DESpriors_lensing_BAO_CookeDH

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_{\rm m}}$	0.3135	$0.310^{+0.019}_{-0.017}$	$\boldsymbol{m^4_{\rm DES}}$	0.0083	0.0098 ± 0.021	Ω_Λ	0.6865	$0.690^{+0.017}_{-0.019}$
$\boldsymbol{\Omega_b}$	0.04967	0.0491 ± 0.0017	$\boldsymbol{A_{\rm IA,DES}}$	0.430	$0.44^{+0.16}_{-0.19}$	$\Omega_\nu h^2$	0.00993	$0.0067^{+0.0037}_{-0.0016}$
$\boldsymbol{H_0}$	66.82	$67.2^{+1.1}_{-1.2}$	$\boldsymbol{\alpha_{\rm IA,DES}}$	-1.98	$-0.7^{+2.0}_{-2.9}$	$\ln(10^{10} A_{\rm s})$	3.451	$3.30^{+0.16}_{-0.10}$
$\boldsymbol{\Sigma m_\nu}$ [eV]	0.923	> 0.505	$\boldsymbol{\Delta z^1_{\rm l,DES}}$	0.0035	0.0040 ± 0.0074	σ_8	0.7658	$0.765^{+0.022}_{-0.026}$
$\boldsymbol{10^9 A_{\rm s}}$	3.152	$2.73^{+0.39}_{-0.32}$	$\boldsymbol{\Delta z^2_{\rm l,DES}}$	0.0011	0.0013 ± 0.0066	S_8	0.7828	0.777 ± 0.015
$\boldsymbol{n_{\rm s}}$	1.0699	> 0.974	$\boldsymbol{\Delta z^3_{\rm l,DES}}$	0.0037	0.0038 ± 0.0066	$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4288	0.4256 ± 0.0081
$\boldsymbol{b^1_{\rm DES}}$	1.570	1.555 ± 0.088	$\boldsymbol{\Delta z^4_{\rm l,DES}}$	0.0017	0.0015 ± 0.0090	$\sigma_8 \Omega_{\rm m}^{0.25}$	0.5730	0.571 ± 0.013
$\boldsymbol{b^2_{\rm DES}}$	1.786	1.770 ± 0.072	$\boldsymbol{\Delta z^5_{\rm l,DES}}$	0.0001	0.0002 ± 0.0098	$\chi^2_{\rm lensing}$	7.75	9.2 ± 1.6
$\boldsymbol{b^3_{\rm DES}}$	1.766	1.751 ± 0.063	$\boldsymbol{\Delta z^1_{\rm s,DES}}$	-0.0015	-0.004 ± 0.014	$\chi^2_{\rm 6DF}$	0.0003	0.054 ± 0.077
$\boldsymbol{b^4_{\rm DES}}$	2.127	2.110 ± 0.072	$\boldsymbol{\Delta z^2_{\rm s,DES}}$	-0.0292	-0.030 ± 0.011	$\chi^2_{\rm MGS}$	1.68	1.82 ± 0.69
$\boldsymbol{b^5_{\rm DES}}$	2.195	2.180 ± 0.089	$\boldsymbol{\Delta z^3_{\rm s,DES}}$	0.0064	0.0066 ± 0.0097	$\chi^2_{\rm DR12BAO}$	2.93	4.1 ± 1.4
$\boldsymbol{m^1_{\rm DES}}$	0.0129	0.011 ± 0.023	$\boldsymbol{\Delta z^4_{\rm s,DES}}$	-0.0242	-0.023 ± 0.018	$\chi^2_{\rm DES}$	500.52	511.3 ± 4.4
$\boldsymbol{m^2_{\rm DES}}$	0.0151	0.014 ± 0.022	$\Omega_{\rm b} h^2$	0.02218	0.02220 ± 0.00051	$\chi^2_{\rm prior}$	1.19	13.2 ± 5.0
$\boldsymbol{m^3_{\rm DES}}$	0.0043	0.006 ± 0.020	$\Omega_{\rm c} h^2$	0.1078	$0.1113^{+0.0085}_{-0.011}$	$\chi^2_{\rm BAO}$	4.61	5.9 ± 1.7

Best-fit $\chi^2_{\rm eff} = 514.07$; $\Delta\chi^2_{\rm eff} = -3.77$; $\bar{\chi}^2_{\rm eff} = 539.56$; $\Delta\bar{\chi}^2_{\rm eff} = -2.54$; $R - 1 = 0.00815$

$\chi^2_{\rm eff}$: BAO - 6DF: 0.00 (Δ -0.02) MGS: 1.68 (Δ -0.44) DR12BAO: 2.93 (Δ -1.06) CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8_CMBmarged: 7.75 (Δ -0.09) WL - DES_1YR_final: 500.52 (Δ -2.30)

6.149 base_mnu_DESlens_DESpriors_lensing_BAO_CookeDH

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_{\rm m}}$	0.3213	0.316 ± 0.020	$\boldsymbol{\alpha_{\rm IA,DES}}$	2.67	> 0.980	S_8	0.7985	0.793 ± 0.020
$\boldsymbol{\Omega_b}$	0.04924	0.0485 ± 0.0019	$\boldsymbol{\Delta z^1_{\rm s,DES}}$	0.0033	0.003 ± 0.015	$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4373	0.434 ± 0.011
$\boldsymbol{H_0}$	67.15	$67.7^{+1.2}_{-1.4}$	$\boldsymbol{\Delta z^2_{\rm s,DES}}$	-0.0196	-0.020 ± 0.012	$\sigma_8 \Omega_{\rm m}^{0.25}$	0.5809	0.580 ± 0.015
$\boldsymbol{\Sigma m_\nu}$ [eV]	0.939	$0.56^{+0.41}_{-0.17}$	$\boldsymbol{\Delta z^3_{\rm s,DES}}$	0.0068	0.006 ± 0.011	$\chi^2_{\rm lensing}$	7.30	9.0 ± 1.6
$\boldsymbol{10^9 A_{\rm s}}$	2.994	$2.53^{+0.33}_{-0.40}$	$\boldsymbol{\Delta z^4_{\rm s,DES}}$	-0.0188	-0.019 ± 0.020	$\chi^2_{\rm 6DF}$	0.0083	0.060 ± 0.083
$\boldsymbol{n_{\rm s}}$	1.070	> 0.955	$\Omega_{\rm b} h^2$	0.022205	0.02220 ± 0.00049	$\chi^2_{\rm MGS}$	1.47	1.68 ± 0.69
$\boldsymbol{m^1_{\rm DES}}$	0.0139	0.013 ± 0.023	$\Omega_{\rm c} h^2$	0.1126	$0.1169^{+0.0099}_{-0.013}$	$\chi^2_{\rm DR12BAO}$	2.73	3.9 ± 1.5
$\boldsymbol{m^2_{\rm DES}}$	0.0129	0.013 ± 0.022	Ω_Λ	0.6787	0.684 ± 0.020	$\chi^2_{\rm DES}$	228.90	232.3 ± 2.3
$\boldsymbol{m^3_{\rm DES}}$	-0.0026	-0.002 ± 0.021	$\Omega_\nu h^2$	0.01010	$0.0060^{+0.0041}_{-0.0020}$	$\chi^2_{\rm prior}$	0.55	8.5 ± 4.0
$\boldsymbol{m^4_{\rm DES}}$	0.0154	0.014 ± 0.021	$\ln(10^{10} A_{\rm s})$	3.399	$3.22^{+0.15}_{-0.14}$	$\chi^2_{\rm BAO}$	4.21	5.7 ± 1.7
$\boldsymbol{A_{\rm IA,DES}}$	1.30	1.03 ± 0.55	σ_8	0.7716	$0.773^{+0.024}_{-0.029}$			

Best-fit $\chi^2_{\rm eff} = 240.96$; $\Delta\chi^2_{\rm eff} = -1.38$; $\bar{\chi}^2_{\rm eff} = 255.37$; $\Delta\bar{\chi}^2_{\rm eff} = -1.12$; $R - 1 = 0.00560$

$\chi^2_{\rm eff}$: BAO - 6DF: 0.01 (Δ 0.01) MGS: 1.47 (Δ -0.14) DR12BAO: 2.73 (Δ -0.23) CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8_CMBmarged: 7.30 (Δ -0.53) WL - DES_1YR_final: 228.90 (Δ -0.51)

6.150 base_mnu_DESwt_DESpriors_lensing_BAO_CookeDH

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_{\rm m}}$	0.3298	0.319 ± 0.020	$\boldsymbol{m^4_{\rm DES}}$	0.0050	0.006 ± 0.022	Ω_Λ	0.6702	0.681 ± 0.020
$\boldsymbol{\Omega_b}$	0.04815	0.0487 ± 0.0018	$\boldsymbol{A_{\rm IA,DES}}$	0.293	$0.39^{+0.15}_{-0.18}$	$\Omega_\nu h^2$	0.01075	$0.0071^{+0.0035}_{-0.0012}$
$\boldsymbol{H_0}$	67.83	$67.6^{+1.2}_{-1.3}$	$\boldsymbol{\alpha_{\rm IA,DES}}$	-4.06	$-0.8^{+1.7}_{-3.6}$	$\ln(10^{10} A_{\rm s})$	3.308	3.24 ± 0.14
$\boldsymbol{\Sigma m_\nu}$ [eV]	0.999	> 0.567	$\boldsymbol{\Delta z^1_{\rm l,DES}}$	0.0017	0.0033 ± 0.0076	σ_8	0.7463	$0.756^{+0.023}_{-0.027}$
$\boldsymbol{10^9 A_{\rm s}}$	2.734	$2.59^{+0.30}_{-0.45}$	$\boldsymbol{\Delta z^2_{\rm l,DES}}$	0.0017	0.0021 ± 0.0067	S_8	0.7826	0.778 ± 0.018
$\boldsymbol{n_{\rm s}}$	1.011	—	$\boldsymbol{\Delta z^3_{\rm l,DES}}$	0.0045	0.0047 ± 0.0067	$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4286	0.4261 ± 0.0099
$\boldsymbol{b^1_{\rm DES}}$	1.554	1.533 ± 0.090	$\boldsymbol{\Delta z^4_{\rm l,DES}}$	0.0029	0.0024 ± 0.0090	$\sigma_8 \Omega_{\rm m}^{0.25}$	0.5656	0.567 ± 0.014
$\boldsymbol{b^2_{\rm DES}}$	1.811	1.781 ± 0.072	$\boldsymbol{\Delta z^5_{\rm l,DES}}$	-0.0003	0.0002 ± 0.0098	$\chi^2_{\rm lensing}$	8.31	9.6 ± 1.8
$\boldsymbol{b^3_{\rm DES}}$	1.791	1.768 ± 0.064	$\boldsymbol{\Delta z^1_{\rm s,DES}}$	0.0010	-0.004 ± 0.015	$\chi^2_{\rm 6DF}$	0.0103	0.066 ± 0.091
$\boldsymbol{b^4_{\rm DES}}$	2.161	2.130 ± 0.073	$\boldsymbol{\Delta z^2_{\rm s,DES}}$	-0.0308	-0.031 ± 0.011	$\chi^2_{\rm MGS}$	1.47	1.62 ± 0.70
$\boldsymbol{b^5_{\rm DES}}$	2.230	2.197 ± 0.093	$\boldsymbol{\Delta z^3_{\rm s,DES}}$	0.0065	0.0078 ± 0.0097	$\chi^2_{\rm DR12BAO}$	2.43	3.8 ± 1.5
$\boldsymbol{m^1_{\rm DES}}$	0.0128	0.011 ± 0.023	$\boldsymbol{\Delta z^4_{\rm s,DES}}$	-0.0243	-0.023 ± 0.018	$\chi^2_{\rm DES}$	250.04	259.8 ± 4.5
$\boldsymbol{m^2_{\rm DES}}$	0.0101	0.009 ± 0.023	$\Omega_{\rm b} h^2$	0.02215	0.02220 ± 0.00051	$\chi^2_{\rm prior}$	1.42	13.8 ± 5.2
$\boldsymbol{m^3_{\rm DES}}$	0.0186	0.021 ± 0.021	$\Omega_{\rm c} h^2$	0.1188	$0.116^{+0.010}_{-0.013}$	$\chi^2_{\rm BAO}$	3.91	5.5 ± 1.7

Best-fit $\chi^2_{\rm eff} = 263.68$; $\Delta\chi^2_{\rm eff} = -2.67$; $\bar{\chi}^2_{\rm eff} = 288.83$; $\Delta\bar{\chi}^2_{\rm eff} = -2.43$; $R - 1 = 0.00663$

$\chi^2_{\rm eff}$: BAO - 6DF: 0.01 (Δ 0.01) MGS: 1.47 (Δ -0.27) DR12BAO: 2.43 (Δ -0.78) CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8_CMBmarged: 8.31 (Δ -0.18) WL - DES_1YR_final: 250.04 (Δ -1.55)

6.151 base_mnu_plikHM_TTTEEE_lowl_lowE_DES

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022539	0.02251 ± 0.00015	$\boldsymbol{\Delta z^1_{l,DES}}$	0.0031	0.0034 ± 0.0075	z_{drag}	1060.200	1060.11 ± 0.31
$\boldsymbol{\Omega_c h^2}$	0.11805	0.1180 ± 0.0011	$\boldsymbol{\Delta z^2_{l,DES}}$	0.0007	0.0008 ± 0.0066	r_{drag}	147.426	147.47 ± 0.26
$\boldsymbol{100\theta_{MC}}$	1.041154	1.04111 ± 0.00031	$\boldsymbol{\Delta z^3_{l,DES}}$	0.0035	0.0034 ± 0.0066	k_D	0.140634	0.14058 ± 0.00030
$\boldsymbol{\tau}$	0.0551	0.0542 ± 0.0080	$\boldsymbol{\Delta z^4_{l,DES}}$	0.0009	0.0005 ± 0.0091	$100\theta_D$	0.160628	0.16066 ± 0.00017
$\boldsymbol{\Sigma m_\nu}$ [eV]	0.000	< 0.102	$\boldsymbol{\Delta z^5_{l,DES}}$	-0.0007	-0.0006 ± 0.0097	z_{eq}	3359.6	3357 ± 25
$\boldsymbol{\ln(10^{10} A_s)}$	3.0412	3.039 ± 0.016	$\boldsymbol{\Delta z^1_{s,DES}}$	0.0009	-0.004 ± 0.014	k_{eq}	0.010254	0.010248 ± 0.000077
$\boldsymbol{n_s}$	0.97047	0.9693 ± 0.0041	$\boldsymbol{\Delta z^2_{s,DES}}$	-0.0302	-0.031 ± 0.011	$100\theta_{eq}$	0.82158	0.8220 ± 0.0048
$\boldsymbol{y_{cal}}$	1.00023	1.0004 ± 0.0025	$\boldsymbol{\Delta z^3_{s,DES}}$	0.0033	0.0043 ± 0.0095	$100\theta_{s,eq}$	0.45358	0.4538 ± 0.0025
$\boldsymbol{A^{CIB}_{217}}$	46.4	47 ± 7	$\boldsymbol{\Delta z^4_{s,DES}}$	-0.0314	-0.029 ± 0.018	$H(0.15)$	73.91	$73.2^{+1.1}_{-0.38}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.56	—	H_0	68.78	$68.0^{+1.3}_{-0.44}$	$D_M(0.15)$	631.4	$638.5^{+3.4}_{-11}$
$\boldsymbol{A^{tSZ}_{143}}$	7.19	$5.6^{+2.2}_{-1.9}$	Ω_Λ	0.7028	$0.693^{+0.016}_{-0.0051}$	$H(0.38)$	83.79	$83.21^{+0.87}_{-0.28}$
$\boldsymbol{A^{PS}_{100}}$	247.0	258 ± 28	Ω_m	0.2972	$0.3071^{+0.0051}_{-0.016}$	$D_M(0.38)$	1509.2	$1523.9^{+7.0}_{-23}$
$\boldsymbol{A^{PS}_{143}}$	47.9	45 ± 8	$\Omega_m h^2$	0.14059	$0.14156^{+0.00097}_{-0.0019}$	$H(0.51)$	90.370	$89.88^{+0.73}_{-0.23}$
$\boldsymbol{A^{PS}_{143\times217}}$	49.8	42 ± 9	$\Omega_\nu h^2$	0.00000	< 0.00110	$D_M(0.51)$	1957.2	$1974.8^{+8.3}_{-27}$
$\boldsymbol{A^{PS}_{217}}$	120.2	114 ± 10	$\Omega_m h^3$	0.09669	$0.09617^{+0.00075}_{-0.00024}$	$H(0.61)$	95.886	$95.46^{+0.62}_{-0.19}$
$\boldsymbol{A^{kSZ}}$	0.00	< 4.42	σ_8	0.8175	$0.796^{+0.024}_{-0.0060}$	$D_M(0.61)$	2279.3	$2298.5^{+9.0}_{-29}$
$\boldsymbol{A^{dustTT}_{100}}$	8.93	9.0 ± 1.8	S_8	0.8137	0.804 ± 0.014	$H(2.33)$	235.14	$235.60^{+0.63}_{-1.1}$
$\boldsymbol{A^{dustTT}_{143}}$	11.11	11.0 ± 1.8	$\sigma_8\Omega_m^{0.5}$	0.4457	0.4406 ± 0.0076	$D_M(2.33)$	5736.2	$5757.4^{+8.3}_{-30}$
$\boldsymbol{A^{dustTT}_{143\times217}}$	19.98	18.7 ± 3.3	$\sigma_8\Omega_m^{0.25}$	0.6036	$0.592^{+0.014}_{-0.0065}$	$f\sigma_8(0.15)$	0.4507	$0.4459^{+0.0074}_{-0.0066}$
$\boldsymbol{A^{dustTT}_{217}}$	95.1	93.7 ± 7.3	$\sigma_8/h^{0.5}$	0.9857	$0.965^{+0.023}_{-0.0092}$	$\sigma_8(0.15)$	0.7567	$0.736^{+0.023}_{-0.0054}$
$\boldsymbol{A^{dustTE}_{100}}$	0.1128	0.114 ± 0.038	$r_{drag}h$	101.39	$100.2^{+2.0}_{-0.76}$	$f\sigma_8(0.38)$	0.4722	$0.4651^{+0.0090}_{-0.0053}$
$\boldsymbol{A^{dustTE}_{100\times143}}$	0.1338	0.134 ± 0.029	$\langle d^2\rangle^{1/2}$	2.4190	2.405 ± 0.024	$\sigma_8(0.38)$	0.6721	$0.653^{+0.022}_{-0.0046}$
$\boldsymbol{A^{dustTE}_{100\times217}}$	0.482	0.483 ± 0.085	z_{re}	7.69	7.60 ± 0.80	$f\sigma_8(0.51)$	0.4724	$0.4643^{+0.0098}_{-0.0046}$
$\boldsymbol{A^{dustTE}_{143}}$	0.221	0.223 ± 0.053	$10^9 A_s$	2.0930	$2.088^{+0.031}_{-0.035}$	$\sigma_8(0.51)$	0.6296	$0.611^{+0.021}_{-0.0043}$
$\boldsymbol{A^{dustTE}_{143\times217}}$	0.661	0.663 ± 0.080	$10^9 A_s e^{-2\tau}$	1.8746	1.874 ± 0.011	$f\sigma_8(0.61)$	0.4685	$0.460^{+0.010}_{-0.0041}$
$\boldsymbol{A^{dustTE}_{217}}$	2.060	2.07 ± 0.27	D_{40}	1219.4	1221 ± 12	$\sigma_8(0.61)$	0.5994	$0.582^{+0.020}_{-0.0041}$
$\boldsymbol{c_{100}}$	0.99971	0.99966 ± 0.00061	D_{220}	5738.9	5743 ± 39	$f\sigma_8(2.33)$	0.3018	$0.2942^{+0.0090}_{-0.0019}$
$\boldsymbol{c_{217}}$	0.99817	0.99820 ± 0.00062	D_{810}	2537.6	2537 ± 13	$\sigma_8(2.33)$	0.3123	$0.303^{+0.011}_{-0.0021}$
$\boldsymbol{b^1_{DES}}$	1.485	$1.524^{+0.077}_{-0.091}$	D_{1420}	818.65	817.9 ± 4.7	f^{143}_{2000}	28.14	29.4 ± 2.8
$\boldsymbol{b^2_{DES}}$	1.684	$1.726^{+0.052}_{-0.079}$	D_{2000}	231.65	231.1 ± 1.6	$f^{143\times217}_{2000}$	31.48	32.0 ± 1.9
$\boldsymbol{b^3_{DES}}$	1.672	$1.713^{+0.044}_{-0.072}$	$n_{s,0.002}$	0.97047	0.9693 ± 0.0041	f^{217}_{2000}	106.06	106.8 ± 1.8
$\boldsymbol{b^4_{DES}}$	2.029	$2.078^{+0.052}_{-0.084}$	Y_P	0.245458	$0.245446^{+0.000058}_{-0.000051}$	χ^2_{simall}	396.04	397.0 ± 1.8
$\boldsymbol{b^5_{DES}}$	2.130	$2.180^{+0.078}_{-0.10}$	Y_P^{BBN}	0.246785	$0.246772^{+0.000058}_{-0.000051}$	χ^2_{lowl}	22.53	22.58 ± 0.76
$\boldsymbol{m^1_{DES}}$	0.0133	0.012 ± 0.023	10^5D/H	2.5551	$2.561^{+0.025}_{-0.028}$	χ^2_{plik}	2346.7	2364.2 ± 6.9
$\boldsymbol{m^2_{DES}}$	0.0140	0.013 ± 0.022	Age/Gyr	13.7365	$13.785^{+0.018}_{-0.068}$	χ^2_{DES}	509.10	518.2 ± 4.9
$\boldsymbol{m^3_{DES}}$	-0.0032	-0.002 ± 0.020	z_*	1089.534	$1089.58^{+0.23}_{-0.27}$	χ^2_{prior}	4.0	25 ± 7
$\boldsymbol{m^4_{DES}}$	0.0021	0.003 ± 0.021	r_*	144.815	$144.84^{+0.27}_{-0.24}$	χ^2_{CMB}	2765.3	2783.8 ± 6.9
$\boldsymbol{A_{IA,DES}}$	0.445	$0.47^{+0.15}_{-0.19}$	$100\theta_*$	1.041290	1.04130 ± 0.00030			
$\boldsymbol{\alpha_{IA,DES}}$	-2.47	$-1.1^{+1.7}_{-2.9}$	$D_M(z_*)$/Gpc	13.9072	13.910 ± 0.024			

Best-fit $\chi^2_{eff} = 3278.38$; $\Delta\chi^2_{eff} = -1.32$; $\bar{\chi}^2_{eff} = 3326.68$; $\Delta\bar{\chi}^2_{eff} = 1.19$; $R - 1 = 0.02965$

χ^2_{eff}: CMB - simall_100x143_offlike5_EE_Aplanck_B: 396.04 (Δ -0.04) commander_dx12_v3_2_29: 22.53 (Δ 0.08) plik_rd12_HM_v22b_TTTEEE: 2346.69 (Δ -1.36) WL - DES_1YR_final: 509.10 (Δ -0.08)

6.152 base_mnu_plikHM_TTTEEE_lowl_lowE_DES_post_BAO

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02251 ± 0.00013	$\boldsymbol{\Delta z^2_{l,DES}}$	0.0007 ± 0.0066	k_D	0.14058 ± 0.00028
$\boldsymbol{\Omega_c h^2}$	0.11801 ± 0.00091	$\boldsymbol{\Delta z^3_{l,DES}}$	0.0032 ± 0.0066	$100\theta_D$	0.16066 ± 0.00017
$\boldsymbol{100\theta_{MC}}$	1.04112 ± 0.00029	$\boldsymbol{\Delta z^4_{l,DES}}$	0.0004 ± 0.0090	z_{eq}	3358 ± 21
$\boldsymbol{\tau}$	0.0539 ± 0.0079	$\boldsymbol{\Delta z^5_{l,DES}}$	-0.0007 ± 0.0096	k_{eq}	0.010249 ± 0.000063
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 0.0815	$\boldsymbol{\Delta z^1_{s,DES}}$	-0.003 ± 0.014	$100\theta_{eq}$	0.8219 ± 0.0040
$\boldsymbol{\ln(10^{10} A_s)}$	3.038 ± 0.016	$\boldsymbol{\Delta z^2_{s,DES}}$	-0.031 ± 0.011	$100\theta_{s,eq}$	0.4537 ± 0.0020
$\boldsymbol{n_s}$	0.9693 ± 0.0037	$\boldsymbol{\Delta z^3_{s,DES}}$	0.0043 ± 0.0093	$H(0.15)$	$73.43^{+0.53}_{-0.41}$
$\boldsymbol{y_{cal}}$	1.0004 ± 0.0025	$\boldsymbol{\Delta z^4_{s,DES}}$	-0.030 ± 0.018	$D_M(0.15)$	$635.9^{+3.9}_{-5.1}$
$\boldsymbol{A^{CIB}_{217}}$	47 ± 7	H_0	$68.24^{+0.60}_{-0.47}$	$H(0.38)$	$83.41^{+0.41}_{-0.31}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Ω_Λ	$0.6966^{+0.0072}_{-0.0057}$	$D_M(0.38)$	$1518.6^{+8.0}_{-10}$
$\boldsymbol{A^{tSZ}_{143}}$	$5.6^{+2.2}_{-1.9}$	Ω_m	$0.3034^{+0.0057}_{-0.0072}$	$H(0.51)$	$90.05^{+0.35}_{-0.26}$
$\boldsymbol{A^{PS}_{100}}$	258 ± 28	$\Omega_m h^2$	0.14124 ± 0.00090	$D_M(0.51)$	$1968.5^{+9.4}_{-12}$
$\boldsymbol{A^{PS}_{143}}$	45 ± 8	$\Omega_\nu h^2$	< 0.000876	$H(0.61)$	$95.60^{+0.31}_{-0.22}$
$\boldsymbol{A^{PS}_{143\times217}}$	42 ± 9	$\Omega_m h^3$	$0.09638^{+0.00046}_{-0.00033}$	$D_M(0.61)$	2292^{+10}_{-14}
$\boldsymbol{A^{PS}_{217}}$	114 ± 10	σ_8	$0.803^{+0.015}_{-0.0090}$	$H(2.33)$	235.44 ± 0.56
$\boldsymbol{A^{kSZ}}$	< 4.28	S_8	0.807 ± 0.013	$D_M(2.33)$	5750^{+10}_{-15}
$\boldsymbol{A^{dustTT}_{100}}$	9.0 ± 1.8	$\sigma_8\Omega_m^{0.5}$	0.4422 ± 0.0069	$f\sigma_8(0.15)$	0.4475 ± 0.0065
$\boldsymbol{A^{dustTT}_{143}}$	11.0 ± 1.8	$\sigma_8\Omega_m^{0.25}$	$0.5958^{+0.0098}_{-0.0073}$	$\sigma_8(0.15)$	$0.743^{+0.015}_{-0.0083}$
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.6 ± 3.3	$\sigma_8/h^{0.5}$	$0.972^{+0.016}_{-0.011}$	$f\sigma_8(0.38)$	$0.4675^{+0.0068}_{-0.0056}$
$\boldsymbol{A^{dustTT}_{217}}$	93.6 ± 7.3	$r_{drag}h$	$100.62^{+0.92}_{-0.77}$	$\sigma_8(0.38)$	$0.659^{+0.013}_{-0.0073}$
$\boldsymbol{A^{dustTE}_{100}}$	0.115 ± 0.039	$\langle d^2\rangle^{1/2}$	2.408 ± 0.024	$f\sigma_8(0.51)$	$0.4671^{+0.0069}_{-0.0054}$
$\boldsymbol{A^{dustTE}_{100\times143}}$	0.134 ± 0.029	z_{re}	7.55 ± 0.80	$\sigma_8(0.51)$	$0.617^{+0.013}_{-0.0069}$
$\boldsymbol{A^{dustTE}_{100\times217}}$	0.484 ± 0.084	$10^9 A_s$	$2.087^{+0.031}_{-0.036}$	$f\sigma_8(0.61)$	$0.4628^{+0.0070}_{-0.0051}$
$\boldsymbol{A^{dustTE}_{143}}$	0.224 ± 0.053	$10^9 A_s e^{-2\tau}$	1.874 ± 0.011	$\sigma_8(0.61)$	$0.588^{+0.012}_{-0.0065}$
$\boldsymbol{A^{dustTE}_{143\times217}}$	0.663 ± 0.080	D_{40}	1222 ± 11	$f\sigma_8(2.33)$	$0.2968^{+0.0053}_{-0.0031}$
$\boldsymbol{A^{dustTE}_{217}}$	2.07 ± 0.26	D_{220}	5742 ± 39	$\sigma_8(2.33)$	$0.3063^{+0.0062}_{-0.0034}$
$\boldsymbol{c_{100}}$	0.99966 ± 0.00061	D_{810}	2537 ± 13	f^{143}_{2000}	29.2 ± 2.7
$\boldsymbol{c_{217}}$	0.99820 ± 0.00062	D_{1420}	817.8 ± 4.7	$f^{143\times217}_{2000}$	31.9 ± 1.8
$\boldsymbol{b^1_{DES}}$	1.510 ± 0.076	D_{2000}	231.1 ± 1.5	f^{217}_{2000}	106.7 ± 1.7
$\boldsymbol{b^2_{DES}}$	1.711 ± 0.058	$n_{s,0.002}$	0.9693 ± 0.0037	χ^2_{simall}	396.9 ± 1.7
$\boldsymbol{b^3_{DES}}$	1.698 ± 0.050	Y_P	0.245448 ± 0.000050	χ^2_{lowl}	22.63 ± 0.74
$\boldsymbol{b^4_{DES}}$	2.061 ± 0.059	Y_P^{BBN}	0.246775 ± 0.000050	χ^2_{plik}	2363.1 ± 6.6
$\boldsymbol{b^5_{DES}}$	2.164 ± 0.079	10^5D/H	2.560 ± 0.024	χ^2_{6DF}	0.032 ± 0.046
$\boldsymbol{m^1_{DES}}$	0.012 ± 0.023	Age/Gyr	$13.768^{+0.024}_{-0.035}$	χ^2_{MGS}	1.85 ± 0.53
$\boldsymbol{m^2_{DES}}$	0.013 ± 0.022	z_*	1089.57 ± 0.21	$\chi^2_{DR12BAO}$	3.91 ± 0.85
$\boldsymbol{m^3_{DES}}$	-0.003 ± 0.020	r_*	144.84 ± 0.22	χ^2_{DES}	518.2 ± 4.7
$\boldsymbol{m^4_{DES}}$	0.002 ± 0.020	$100\theta_*$	1.04130 ± 0.00029	χ^2_{prior}	25 ± 7
$\boldsymbol{A_{IA,DES}}$	$0.48^{+0.15}_{-0.19}$	$D_M(z_*)$/Gpc	13.910 ± 0.021	χ^2_{BAO}	5.79 ± 0.80
$\boldsymbol{\alpha_{IA,DES}}$	$-1.1^{+1.7}_{-2.9}$	z_{drag}	1060.12 ± 0.29	χ^2_{CMB}	2782.7 ± 6.6
$\boldsymbol{\Delta z^1_{l,DES}}$	0.0036 ± 0.0075	r_{drag}	147.46 ± 0.23		

$\bar{\chi}^2_{eff} = 3331.24$; $\Delta\bar{\chi}^2_{eff} = 0.41$; $R - 1 = 0.02942$

6.153 base_mnu_plikHM_TTTEEE_lowl_lowE_DES_post_lensing

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02252 ± 0.00014	$\boldsymbol{\Delta z^1_{l,DES}}$	0.0033 ± 0.0076	z_{drag}	1060.14 ± 0.30
$\boldsymbol{\Omega_c h^2}$	0.1181 ± 0.0010	$\boldsymbol{\Delta z^2_{l,DES}}$	0.0006 ± 0.0065	r_{drag}	147.42 ± 0.24
$\boldsymbol{100\theta_{MC}}$	1.04112 ± 0.00030	$\boldsymbol{\Delta z^3_{l,DES}}$	0.0034 ± 0.0066	k_D	0.14063 ± 0.00028
$\boldsymbol{\tau}$	0.0563 ± 0.0079	$\boldsymbol{\Delta z^4_{l,DES}}$	0.0003 ± 0.0091	$100\theta_D$	0.16065 ± 0.00017
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 0.0684	$\boldsymbol{\Delta z^5_{l,DES}}$	-0.0005 ± 0.0098	z_{eq}	3361 ± 23
$\boldsymbol{\ln(10^{10} A_s)}$	3.044 ± 0.015	$\boldsymbol{\Delta z^1_{s,DES}}$	-0.003 ± 0.014	k_{eq}	0.010259 ± 0.000071
$\boldsymbol{n_s}$	0.9690 ± 0.0039	$\boldsymbol{\Delta z^2_{s,DES}}$	-0.031 ± 0.011	$100\theta_{eq}$	0.8213 ± 0.0045
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0025	$\boldsymbol{\Delta z^3_{s,DES}}$	0.0039 ± 0.0094	$100\theta_{s,eq}$	0.4534 ± 0.0023
$\boldsymbol{A^{CIB}_{217}}$	47 ± 7	$\boldsymbol{\Delta z^4_{s,DES}}$	-0.031 ± 0.018	$H(0.15)$	$73.46^{+0.74}_{-0.43}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	H_0	$68.26^{+0.85}_{-0.50}$	$D_M(0.15)$	$635.8^{+4.1}_{-7.2}$
$\boldsymbol{A^{tSZ}_{143}}$	$5.6^{+2.2}_{-1.9}$	Ω_Λ	$0.697^{+0.011}_{-0.0060}$	$H(0.38)$	$83.43^{+0.57}_{-0.33}$
$\boldsymbol{A^{PS}_{100}}$	257 ± 28	Ω_m	$0.3035^{+0.0060}_{-0.011}$	$D_M(0.38)$	$1518.3^{+8.3}_{-15}$
$\boldsymbol{A^{PS}_{143}}$	45 ± 8	$\Omega_m h^2$	$0.14130^{+0.00099}_{-0.0014}$	$H(0.51)$	$90.07^{+0.47}_{-0.27}$
$\boldsymbol{A^{PS}_{143\times217}}$	42 ± 9	$\Omega_\nu h^2$	< 0.000736	$D_M(0.51)$	$1968.0^{+9.8}_{-17}$
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	$\Omega_m h^3$	$0.09644^{+0.00046}_{-0.00030}$	$H(0.61)$	$95.63^{+0.40}_{-0.23}$
$\boldsymbol{A^{kSZ}}$	< 4.15	σ_8	$0.807^{+0.013}_{-0.0066}$	$D_M(0.61)$	2291^{+11}_{-19}
$\boldsymbol{A^{dustTT}_{100}}$	8.9 ± 1.9	S_8	0.812 ± 0.011	$H(2.33)$	$235.49^{+0.63}_{-0.80}$
$\boldsymbol{A^{dustTT}_{143}}$	10.9 ± 1.8	$\sigma_8\Omega_m^{0.5}$	0.4445 ± 0.0059	$D_M(2.33)$	5749^{+10}_{-19}
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.6 ± 3.3	$\sigma_8\Omega_m^{0.25}$	$0.5990^{+0.0076}_{-0.0061}$	$f\sigma_8(0.15)$	0.4497 ± 0.0055
$\boldsymbol{A^{dustTT}_{217}}$	93.6 ± 7.2	$\sigma_8/h^{0.5}$	$0.977^{+0.013}_{-0.0089}$	$\sigma_8(0.15)$	$0.747^{+0.013}_{-0.0061}$
$\boldsymbol{A^{dustTE}_{100}}$	0.115 ± 0.039	$r_{drag}h$	$100.6^{+1.4}_{-0.84}$	$f\sigma_8(0.38)$	0.4698 ± 0.0052
$\boldsymbol{A^{dustTE}_{100\times143}}$	0.134 ± 0.029	$\langle d^2\rangle^{1/2}$	2.418 ± 0.020	$\sigma_8(0.38)$	$0.663^{+0.012}_{-0.0055}$
$\boldsymbol{A^{dustTE}_{100\times217}}$	0.481 ± 0.085	z_{re}	7.79 ± 0.77	$f\sigma_8(0.51)$	$0.4694^{+0.0054}_{-0.0044}$
$\boldsymbol{A^{dustTE}_{143}}$	0.223 ± 0.054	$10^9 A_s$	$2.100^{+0.030}_{-0.034}$	$\sigma_8(0.51)$	$0.621^{+0.011}_{-0.0052}$
$\boldsymbol{A^{dustTE}_{143\times217}}$	0.663 ± 0.079	$10^9 A_s e^{-2\tau}$	1.876 ± 0.010	$f\sigma_8(0.61)$	$0.4651^{+0.0055}_{-0.0041}$
$\boldsymbol{A^{dustTE}_{217}}$	2.07 ± 0.27	D_{40}	1224 ± 11	$\sigma_8(0.61)$	$0.591^{+0.011}_{-0.0049}$
$\boldsymbol{c_{100}}$	0.99967 ± 0.00061	D_{220}	5748 ± 39	$f\sigma_8(2.33)$	$0.2982^{+0.0050}_{-0.0025}$
$\boldsymbol{c_{217}}$	0.99820 ± 0.00062	D_{810}	2539 ± 13	$\sigma_8(2.33)$	$0.3078^{+0.0060}_{-0.0027}$
$\boldsymbol{b^1_{DES}}$	1.503 ± 0.076	D_{1420}	818.3 ± 4.7	f^{143}_{2000}	29.0 ± 2.7
$\boldsymbol{b^2_{DES}}$	1.702 ± 0.058	D_{2000}	231.4 ± 1.6	$f^{143\times217}_{2000}$	31.8 ± 1.9
$\boldsymbol{b^3_{DES}}$	1.690 ± 0.049	$n_{s,0.002}$	0.9690 ± 0.0039	f^{217}_{2000}	106.7 ± 1.7
$\boldsymbol{b^4_{DES}}$	2.050 ± 0.058	Y_P	0.245450 ± 0.000053	$\chi^2_{lensing}$	9.6 ± 1.1
$\boldsymbol{b^5_{DES}}$	2.153 ± 0.079	Y_P^{BBN}	0.246777 ± 0.000054	χ^2_{simall}	397.3 ± 2.0
$\boldsymbol{m^1_{DES}}$	0.012 ± 0.023	10^5D/H	2.559 ± 0.026	χ^2_{lowl}	22.81 ± 0.74
$\boldsymbol{m^2_{DES}}$	0.012 ± 0.022	Age/Gyr	$13.765^{+0.023}_{-0.042}$	χ^2_{plik}	2362.0 ± 6.1
$\boldsymbol{m^3_{DES}}$	-0.005 ± 0.020	z_*	1089.57 ± 0.24	χ^2_{DES}	518.6 ± 4.9
$\boldsymbol{m^4_{DES}}$	0.001 ± 0.021	r_*	144.80 ± 0.24	χ^2_{prior}	25 ± 7
$\boldsymbol{A_{IA,DES}}$	$0.48^{+0.15}_{-0.18}$	$100\theta_*$	1.04129 ± 0.00030	χ^2_{CMB}	2791.6 ± 6.6
$\boldsymbol{\alpha_{IA,DES}}$	$-1.2^{+1.6}_{-3.0}$	$D_M(z_*)$/Gpc	13.906 ± 0.022		

$\bar{\chi}^2_{eff} = 3335.09$; $\Delta\bar{\chi}^2_{eff} = 0.33$; $R - 1 = 0.04222$

6.154 base_mnu_plikHM_TTTEEE_lowl_lowE_DES_post_BAO_lensing

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02251 ± 0.00013	$\boldsymbol{\Delta z^2_{l,DES}}$	0.0006 ± 0.0066	k_D	0.14063 ± 0.00027
$\boldsymbol{\Omega_c h^2}$	0.11821 ± 0.00085	$\boldsymbol{\Delta z^3_{l,DES}}$	0.0033 ± 0.0066	$100\theta_D$	0.16065 ± 0.00017
$\boldsymbol{100\theta_{MC}}$	1.04111 ± 0.00029	$\boldsymbol{\Delta z^4_{l,DES}}$	0.0002 ± 0.0090	z_{eq}	3363 ± 19
$\boldsymbol{\tau}$	0.0558 ± 0.0077	$\boldsymbol{\Delta z^5_{l,DES}}$	-0.0006 ± 0.0098	k_{eq}	0.010264 ± 0.000059
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 0.0645	$\boldsymbol{\Delta z^1_{s,DES}}$	-0.003 ± 0.014	$100\theta_{eq}$	0.8209 ± 0.0037
$\boldsymbol{\ln(10^{10} A_s)}$	3.043 ± 0.015	$\boldsymbol{\Delta z^2_{s,DES}}$	-0.031 ± 0.011	$100\theta_{s,eq}$	0.4533 ± 0.0019
$\boldsymbol{n_s}$	0.9688 ± 0.0036	$\boldsymbol{\Delta z^3_{s,DES}}$	0.0038 ± 0.0092	$H(0.15)$	$73.48^{+0.47}_{-0.39}$
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0024	$\boldsymbol{\Delta z^4_{s,DES}}$	-0.031 ± 0.018	$D_M(0.15)$	$635.5^{+3.7}_{-4.6}$
$\boldsymbol{A^{CIB}_{217}}$	47 ± 7	H_0	$68.29^{+0.54}_{-0.44}$	$H(0.38)$	$83.45^{+0.37}_{-0.29}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Ω_Λ	$0.6969^{+0.0066}_{-0.0054}$	$D_M(0.38)$	$1517.7^{+7.5}_{-9.4}$
$\boldsymbol{A^{tSZ}_{143}}$	$5.6^{+2.2}_{-1.9}$	Ω_m	$0.3031^{+0.0054}_{-0.0066}$	$H(0.51)$	$90.09^{+0.31}_{-0.24}$
$\boldsymbol{A^{PS}_{100}}$	257 ± 28	$\Omega_m h^2$	0.14129 ± 0.00087	$D_M(0.51)$	$1967.3^{+8.9}_{-11}$
$\boldsymbol{A^{PS}_{143}}$	45 ± 8	$\Omega_\nu h^2$	< 0.000693	$H(0.61)$	$95.65^{+0.27}_{-0.21}$
$\boldsymbol{A^{PS}_{143\times217}}$	42 ± 9	$\Omega_m h^3$	$0.09648^{+0.00038}_{-0.00031}$	$D_M(0.61)$	$2290.4^{+9.6}_{-12}$
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	σ_8	$0.809^{+0.011}_{-0.0076}$	$H(2.33)$	235.49 ± 0.54
$\boldsymbol{A^{kSZ}}$	< 4.11	S_8	0.8127 ± 0.0099	$D_M(2.33)$	$5747.5^{+9.8}_{-13}$
$\boldsymbol{A^{dustTT}_{100}}$	8.9 ± 1.9	$\sigma_8\Omega_m^{0.5}$	0.4451 ± 0.0054	$f\sigma_8(0.15)$	0.4503 ± 0.0051
$\boldsymbol{A^{dustTT}_{143}}$	10.9 ± 1.8	$\sigma_8\Omega_m^{0.25}$	$0.6000^{+0.0069}_{-0.0061}$	$\sigma_8(0.15)$	$0.748^{+0.010}_{-0.0071}$
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.6 ± 3.3	$\sigma_8/h^{0.5}$	$0.979^{+0.011}_{-0.0093}$	$f\sigma_8(0.38)$	0.4705 ± 0.0049
$\boldsymbol{A^{dustTT}_{217}}$	93.5 ± 7.3	$r_{drag}h$	$100.66^{+0.85}_{-0.73}$	$\sigma_8(0.38)$	$0.6640^{+0.0095}_{-0.0064}$
$\boldsymbol{A^{dustTE}_{100}}$	0.115 ± 0.039	$\langle d^2\rangle^{1/2}$	2.419 ± 0.019	$f\sigma_8(0.51)$	0.4701 ± 0.0048
$\boldsymbol{A^{dustTE}_{100\times143}}$	0.134 ± 0.029	z_{re}	7.75 ± 0.76	$\sigma_8(0.51)$	$0.6218^{+0.0090}_{-0.0060}$
$\boldsymbol{A^{dustTE}_{100\times217}}$	0.482 ± 0.084	$10^9 A_s$	$2.098^{+0.030}_{-0.034}$	$f\sigma_8(0.61)$	$0.4658^{+0.0049}_{-0.0043}$
$\boldsymbol{A^{dustTE}_{143}}$	0.223 ± 0.054	$10^9 A_s e^{-2\tau}$	1.876 ± 0.010	$\sigma_8(0.61)$	$0.5919^{+0.0086}_{-0.0057}$
$\boldsymbol{A^{dustTE}_{143\times217}}$	0.662 ± 0.079	D_{40}	1224 ± 11	$f\sigma_8(2.33)$	$0.2987^{+0.0038}_{-0.0028}$
$\boldsymbol{A^{dustTE}_{217}}$	2.06 ± 0.27	D_{220}	5747 ± 38	$\sigma_8(2.33)$	$0.3083^{+0.0045}_{-0.0031}$
$\boldsymbol{c_{100}}$	0.99967 ± 0.00061	D_{810}	2538 ± 13	f^{143}_{2000}	29.1 ± 2.7
$\boldsymbol{c_{217}}$	0.99819 ± 0.00062	D_{1420}	818.2 ± 4.6	$f^{143\times217}_{2000}$	31.8 ± 1.8
$\boldsymbol{b^1_{DES}}$	$1.502^{+0.076}_{-0.069}$	D_{2000}	231.3 ± 1.5	f^{217}_{2000}	106.7 ± 1.7
$\boldsymbol{b^2_{DES}}$	1.700 ± 0.054	$n_{s,0.002}$	0.9688 ± 0.0036	$\chi^2_{lensing}$	9.48 ± 0.95
$\boldsymbol{b^3_{DES}}$	1.686 ± 0.046	Y_P	0.245448 ± 0.000050	χ^2_{simall}	397.2 ± 1.9
$\boldsymbol{b^4_{DES}}$	2.047 ± 0.054	Y_P^{BBN}	0.246775 ± 0.000050	χ^2_{lowl}	22.84 ± 0.72
$\boldsymbol{b^5_{DES}}$	2.150 ± 0.076	10^5D/H	2.560 ± 0.024	χ^2_{plik}	2361.5 ± 5.9
$\boldsymbol{m^1_{DES}}$	0.012 ± 0.023	Age/Gyr	$13.762^{+0.022}_{-0.030}$	χ^2_{6DF}	0.028 ± 0.040
$\boldsymbol{m^2_{DES}}$	0.012 ± 0.022	z_*	1089.58 ± 0.20	χ^2_{MGS}	1.87 ± 0.50
$\boldsymbol{m^3_{DES}}$	-0.005 ± 0.019	r_*	144.79 ± 0.20	$\chi^2_{DR12BAO}$	3.84 ± 0.72
$\boldsymbol{m^4_{DES}}$	0.001 ± 0.020	$100\theta_*$	1.04128 ± 0.00028	χ^2_{DES}	518.6 ± 4.8
$\boldsymbol{A_{IA,DES}}$	$0.48^{+0.15}_{-0.19}$	$D_M(z_*)$/Gpc	13.905 ± 0.020	χ^2_{prior}	25 ± 7
$\boldsymbol{\alpha_{IA,DES}}$	$-1.2^{+1.6}_{-3.0}$	z_{drag}	1060.13 ± 0.29	χ^2_{CMB}	2790.9 ± 6.4
$\boldsymbol{\Delta z^1_{l,DES}}$	0.0035 ± 0.0076	r_{drag}	147.41 ± 0.22	χ^2_{BAO}	5.73 ± 0.71

$\bar{\chi}^2_{eff} = 3340.15$; $\Delta\bar{\chi}^2_{eff} = 0.20$; $R - 1 = 0.03956$

6.155 base_mnu_plikHM_TTTEEE_lowl_lowE_DES_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02251 ± 0.00015	$\boldsymbol{\Delta z^1_{l,DES}}$	0.0033 ± 0.0075	$z_{\rm drag}$	1060.12 ± 0.31
$\boldsymbol{\Omega_c h^2}$	0.1179 ± 0.0011	$\boldsymbol{\Delta z^2_{l,DES}}$	0.0008 ± 0.0066	$r_{\rm drag}$	147.47 ± 0.26
$\boldsymbol{100\theta_{MC}}$	1.04112 ± 0.00031	$\boldsymbol{\Delta z^3_{l,DES}}$	0.0034 ± 0.0066	$k_{\rm D}$	0.14057 ± 0.00030
$\boldsymbol{\tau}$	$0.0555^{+0.0052}_{-0.0083}$	$\boldsymbol{\Delta z^4_{l,DES}}$	0.0005 ± 0.0091	$100\theta_{\rm D}$	0.16066 ± 0.00017
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 0.104	$\boldsymbol{\Delta z^5_{l,DES}}$	-0.0006 ± 0.0097	$z_{\rm eq}$	3356 ± 25
$\boldsymbol{\ln(10^{10} A_s)}$	$3.041^{+0.012}_{-0.017}$	$\boldsymbol{\Delta z^1_{s,DES}}$	-0.003 ± 0.014	$k_{\rm eq}$	0.010244 ± 0.000076
$\boldsymbol{n_s}$	0.9694 ± 0.0041	$\boldsymbol{\Delta z^2_{s,DES}}$	-0.031 ± 0.011	$100\theta_{\rm eq}$	0.8222 ± 0.0047
$\boldsymbol{y_{cal}}$	1.0004 ± 0.0025	$\boldsymbol{\Delta z^3_{s,DES}}$	0.0043 ± 0.0096	$100\theta_{\rm s,eq}$	0.4539 ± 0.0024
$\boldsymbol{A^{CIB}_{217}}$	47 ± 7	$\boldsymbol{\Delta z^4_{s,DES}}$	-0.029 ± 0.018	$H(0.15)$	$73.2^{+1.1}_{-0.38}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	H_0	$68.0^{+1.3}_{-0.44}$	$D_{\rm M}(0.15)$	$638.4^{+3.4}_{-11}$
$\boldsymbol{A^{tSZ}_{143}}$	$5.6^{+2.2}_{-1.9}$	Ω_Λ	$0.693^{+0.016}_{-0.0051}$	$H(0.38)$	$83.22^{+0.88}_{-0.29}$
$\boldsymbol{A^{PS}_{100}}$	258 ± 28	$\Omega_{\rm m}$	$0.3069^{+0.0051}_{-0.016}$	$D_{\rm M}(0.38)$	$1523.7^{+7.0}_{-23}$
$\boldsymbol{A^{PS}_{143}}$	45 ± 8	$\Omega_{\rm m}h^2$	$0.14153^{+0.00096}_{-0.0019}$	$H(0.51)$	$89.88^{+0.74}_{-0.23}$
$\boldsymbol{A^{PS}_{143\times217}}$	41 ± 9	$\Omega_\nu h^2$	< 0.00112	$D_{\rm M}(0.51)$	$1974.6^{+8.3}_{-27}$
$\boldsymbol{A^{PS}_{217}}$	114 ± 10	$\Omega_{\rm m}h^3$	$0.09617^{+0.00076}_{-0.00024}$	$H(0.61)$	$95.46^{+0.63}_{-0.19}$
$\boldsymbol{A^{kSZ}}$	< 4.40	σ_8	$0.796^{+0.024}_{-0.0057}$	$D_{\rm M}(0.61)$	$2298.3^{+9.0}_{-29}$
$\boldsymbol{A^{dustTT}_{100}}$	9.0 ± 1.9	S_8	0.805 ± 0.014	$H(2.33)$	$235.58^{+0.62}_{-1.1}$
$\boldsymbol{A^{dustTT}_{143}}$	11.0 ± 1.8	$\sigma_8\Omega_{\rm m}^{0.5}$	0.4408 ± 0.0077	$D_{\rm M}(2.33)$	$5757.3^{+8.4}_{-30}$
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.7 ± 3.3	$\sigma_8\Omega_{\rm m}^{0.25}$	$0.592^{+0.014}_{-0.0064}$	$f\sigma_8(0.15)$	$0.4461^{+0.0074}_{-0.0066}$
$\boldsymbol{A^{dustTT}_{217}}$	93.7 ± 7.3	$\sigma_8/h^{0.5}$	$0.966^{+0.024}_{-0.0089}$	$\sigma_8(0.15)$	$0.737^{+0.023}_{-0.0050}$
$\boldsymbol{A^{dustTE}_{100}}$	0.114 ± 0.038	$r_{\rm drag}h$	$100.2^{+2.0}_{-0.76}$	$f\sigma_8(0.38)$	$0.4653^{+0.0091}_{-0.0052}$
$\boldsymbol{A^{dustTE}_{100\times143}}$	0.134 ± 0.029	$\langle d^2\rangle^{1/2}$	2.407 ± 0.024	$\sigma_8(0.38)$	$0.654^{+0.022}_{-0.0043}$
$\boldsymbol{A^{dustTE}_{100\times217}}$	0.482 ± 0.086	$z_{\rm re}$	$7.73^{+0.56}_{-0.84}$	$f\sigma_8(0.51)$	$0.4646^{+0.0098}_{-0.0045}$
$\boldsymbol{A^{dustTE}_{143}}$	0.224 ± 0.054	$10^9 A_{\rm s}$	$2.093^{+0.024}_{-0.035}$	$\sigma_8(0.51)$	$0.612^{+0.021}_{-0.0040}$
$\boldsymbol{A^{dustTE}_{143\times217}}$	0.663 ± 0.080	$10^9 A_{\rm s}e^{-2\tau}$	1.873 ± 0.011	$f\sigma_8(0.61)$	$0.460^{+0.010}_{-0.0040}$
$\boldsymbol{A^{dustTE}_{217}}$	2.07 ± 0.27	D_{40}	1221 ± 12	$\sigma_8(0.61)$	$0.582^{+0.020}_{-0.0037}$
$\boldsymbol{c_{100}}$	0.99966 ± 0.00061	D_{220}	5743 ± 39	$f\sigma_8(2.33)$	$0.2945^{+0.0090}_{-0.0017}$
$\boldsymbol{c_{217}}$	0.99820 ± 0.00062	D_{810}	2537 ± 13	$\sigma_8(2.33)$	$0.304^{+0.011}_{-0.0019}$
$\boldsymbol{b^1_{DES}}$	$1.522^{+0.077}_{-0.092}$	D_{1420}	818.0 ± 4.7	f^{143}_{2000}	29.3 ± 2.8
$\boldsymbol{b^2_{DES}}$	$1.725^{+0.052}_{-0.080}$	D_{2000}	231.1 ± 1.6	$f^{143\times217}_{2000}$	32.0 ± 1.9
$\boldsymbol{b^3_{DES}}$	$1.712^{+0.044}_{-0.072}$	$n_{\rm s,0.002}$	0.9694 ± 0.0041	f^{217}_{2000}	106.8 ± 1.8
$\boldsymbol{b^4_{DES}}$	$2.077^{+0.052}_{-0.085}$	$Y_{\rm P}$	$0.245447^{+0.000057}_{-0.000051}$	$\chi^2_{\rm simall}$	396.9 ± 1.8
$\boldsymbol{b^5_{DES}}$	$2.177^{+0.077}_{-0.10}$	$Y^{\rm BBN}_{\rm P}$	$0.246774^{+0.000058}_{-0.000052}$	$\chi^2_{\rm lowl}$	22.58 ± 0.76
$\boldsymbol{m^1_{DES}}$	0.012 ± 0.023	10^5D/H	2.560 ± 0.027	$\chi^2_{\rm plik}$	2364.1 ± 6.9
$\boldsymbol{m^2_{DES}}$	0.013 ± 0.022	Age/Gyr	$13.785^{+0.018}_{-0.069}$	$\chi^2_{\rm DES}$	518.2 ± 4.9
$\boldsymbol{m^3_{DES}}$	-0.003 ± 0.020	z_*	$1089.57^{+0.23}_{-0.27}$	$\chi^2_{\rm prior}$	25 ± 7
$\boldsymbol{m^4_{DES}}$	0.003 ± 0.021	r_*	144.85 ± 0.26	$\chi^2_{\rm CMB}$	2783.6 ± 6.9
$\boldsymbol{A_{IA,DES}}$	$0.47^{+0.15}_{-0.19}$	$100\theta_*$	1.04131 ± 0.00030		
$\boldsymbol{\alpha_{IA,DES}}$	$-1.1^{+1.7}_{-2.9}$	$D_{\rm M}(z_*)$/Gpc	13.910 ± 0.024		

$\bar{\chi}^2_{\rm eff} = 3326.51$; $\Delta\bar{\chi}^2_{\rm eff} = 1.28$; $R - 1 = 0.03143$

6.156 base_mnu_plikHM_TTTEEE_lowl_lowE_DES_post_BAO_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02252 ± 0.00013	$\boldsymbol{\Delta z^2_{l,DES}}$	0.0006 ± 0.0066	k_D	0.14057 ± 0.00028
$\boldsymbol{\Omega_c h^2}$	0.11796 ± 0.00090	$\boldsymbol{\Delta z^3_{l,DES}}$	0.0032 ± 0.0066	$100\theta_D$	0.16066 ± 0.00017
$\boldsymbol{100\theta_{MC}}$	1.04113 ± 0.00029	$\boldsymbol{\Delta z^4_{l,DES}}$	0.0004 ± 0.0091	z_{eq}	3357 ± 20
$\boldsymbol{\tau}$	$0.0552^{+0.0051}_{-0.0083}$	$\boldsymbol{\Delta z^5_{l,DES}}$	-0.0007 ± 0.0096	k_{eq}	0.010246 ± 0.000062
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 0.0837	$\boldsymbol{\Delta z^1_{s,DES}}$	-0.003 ± 0.014	$100\theta_{eq}$	0.8221 ± 0.0039
$\boldsymbol{\ln(10^{10} A_s)}$	$3.041^{+0.012}_{-0.017}$	$\boldsymbol{\Delta z^2_{s,DES}}$	-0.031 ± 0.011	$100\theta_{s,eq}$	0.4538 ± 0.0020
$\boldsymbol{n_s}$	0.9695 ± 0.0036	$\boldsymbol{\Delta z^3_{s,DES}}$	0.0042 ± 0.0093	$H(0.15)$	$73.44^{+0.53}_{-0.41}$
$\boldsymbol{y_{cal}}$	1.0004 ± 0.0025	$\boldsymbol{\Delta z^4_{s,DES}}$	-0.030 ± 0.018	$D_M(0.15)$	$635.9^{+3.9}_{-5.2}$
$\boldsymbol{A^{CIB}_{217}}$	47 ± 7	H_0	$68.25^{+0.60}_{-0.47}$	$H(0.38)$	$83.41^{+0.42}_{-0.32}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Ω_Λ	$0.6967^{+0.0073}_{-0.0057}$	$D_M(0.38)$	$1518.5^{+8.0}_{-11}$
$\boldsymbol{A^{tSZ}_{143}}$	$5.6^{+2.2}_{-1.9}$	Ω_m	$0.3033^{+0.0057}_{-0.0073}$	$H(0.51)$	$90.05^{+0.36}_{-0.26}$
$\boldsymbol{A^{PS}_{100}}$	257 ± 28	$\Omega_m h^2$	0.14121 ± 0.00090	$D_M(0.51)$	$1968.4^{+9.5}_{-13}$
$\boldsymbol{A^{PS}_{143}}$	45 ± 8	$\Omega_\nu h^2$	< 0.000900	$H(0.61)$	$95.61^{+0.31}_{-0.22}$
$\boldsymbol{A^{PS}_{143\times217}}$	42 ± 9	$\Omega_m h^3$	$0.09637^{+0.00046}_{-0.00033}$	$D_M(0.61)$	2292^{+10}_{-14}
$\boldsymbol{A^{PS}_{217}}$	114 ± 10	σ_8	$0.804^{+0.016}_{-0.0087}$	$H(2.33)$	235.42 ± 0.55
$\boldsymbol{A^{kSZ}}$	< 4.28	S_8	0.808 ± 0.013	$D_M(2.33)$	5750^{+10}_{-15}
$\boldsymbol{A^{dustTT}_{100}}$	9.0 ± 1.9	$\sigma_8\Omega_m^{0.5}$	0.4424 ± 0.0069	$f\sigma_8(0.15)$	0.4478 ± 0.0065
$\boldsymbol{A^{dustTT}_{143}}$	11.0 ± 1.8	$\sigma_8\Omega_m^{0.25}$	$0.5962^{+0.0099}_{-0.0072}$	$\sigma_8(0.15)$	$0.743^{+0.015}_{-0.0080}$
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.6 ± 3.3	$\sigma_8/h^{0.5}$	$0.973^{+0.016}_{-0.011}$	$f\sigma_8(0.38)$	$0.4679^{+0.0068}_{-0.0056}$
$\boldsymbol{A^{dustTT}_{217}}$	93.6 ± 7.3	$r_{drag}h$	$100.64^{+0.93}_{-0.76}$	$\sigma_8(0.38)$	$0.660^{+0.013}_{-0.0071}$
$\boldsymbol{A^{dustTE}_{100}}$	0.115 ± 0.039	$\langle d^2\rangle^{1/2}$	2.410 ± 0.023	$f\sigma_8(0.51)$	$0.4674^{+0.0069}_{-0.0053}$
$\boldsymbol{A^{dustTE}_{100\times143}}$	0.134 ± 0.029	z_{re}	$7.69^{+0.53}_{-0.86}$	$\sigma_8(0.51)$	$0.618^{+0.013}_{-0.0066}$
$\boldsymbol{A^{dustTE}_{100\times217}}$	0.483 ± 0.084	$10^9 A_s$	$2.092^{+0.024}_{-0.035}$	$f\sigma_8(0.61)$	$0.4632^{+0.0070}_{-0.0050}$
$\boldsymbol{A^{dustTE}_{143}}$	0.224 ± 0.053	$10^9 A_s e^{-2\tau}$	1.874 ± 0.011	$\sigma_8(0.61)$	$0.588^{+0.012}_{-0.0063}$
$\boldsymbol{A^{dustTE}_{143\times217}}$	0.663 ± 0.080	D_{40}	1222 ± 11	$f\sigma_8(2.33)$	$0.2971^{+0.0052}_{-0.0029}$
$\boldsymbol{A^{dustTE}_{217}}$	2.07 ± 0.26	D_{220}	5742 ± 39	$\sigma_8(2.33)$	$0.3065^{+0.0062}_{-0.0032}$
$\boldsymbol{c_{100}}$	0.99966 ± 0.00061	D_{810}	2536 ± 13	f^{143}_{2000}	29.2 ± 2.7
$\boldsymbol{c_{217}}$	0.99820 ± 0.00062	D_{1420}	817.8 ± 4.7	$f^{143\times217}_{2000}$	31.9 ± 1.8
$\boldsymbol{b^1_{DES}}$	1.509 ± 0.076	D_{2000}	231.2 ± 1.6	f^{217}_{2000}	106.7 ± 1.7
$\boldsymbol{b^2_{DES}}$	1.710 ± 0.058	$n_{s,0.002}$	0.9695 ± 0.0036	χ^2_{simall}	396.9 ± 1.7
$\boldsymbol{b^3_{DES}}$	1.696 ± 0.050	Y_P	0.245450 ± 0.000050	χ^2_{lowl}	22.64 ± 0.74
$\boldsymbol{b^4_{DES}}$	2.060 ± 0.059	Y_P^{BBN}	0.246776 ± 0.000051	χ^2_{plik}	2363.0 ± 6.6
$\boldsymbol{b^5_{DES}}$	2.161 ± 0.079	10^5D/H	2.559 ± 0.024	χ^2_{6DF}	0.032 ± 0.046
$\boldsymbol{m^1_{DES}}$	0.012 ± 0.023	Age/Gyr	$13.768^{+0.024}_{-0.035}$	χ^2_{MGS}	1.86 ± 0.53
$\boldsymbol{m^2_{DES}}$	0.013 ± 0.022	z_*	1089.56 ± 0.21	$\chi^2_{DR12BAO}$	3.91 ± 0.84
$\boldsymbol{m^3_{DES}}$	-0.003 ± 0.020	r_*	144.85 ± 0.21	χ^2_{DES}	518.2 ± 4.7
$\boldsymbol{m^4_{DES}}$	0.002 ± 0.020	$100\theta_*$	1.04131 ± 0.00029	χ^2_{prior}	25 ± 7
$\boldsymbol{A_{IA,DES}}$	$0.48^{+0.15}_{-0.19}$	$D_M(z_*)$/Gpc	13.910 ± 0.021	χ^2_{BAO}	5.80 ± 0.81
$\boldsymbol{\alpha_{IA,DES}}$	$-1.1^{+1.7}_{-2.9}$	z_{drag}	1060.13 ± 0.29	χ^2_{CMB}	2782.5 ± 6.6
$\boldsymbol{\Delta z^1_{l,DES}}$	0.0035 ± 0.0075	r_{drag}	147.47 ± 0.23		

$\bar{\chi}^2_{eff} = 3331.11$; $\Delta\bar{\chi}^2_{eff} = 0.57$; $R - 1 = 0.03220$

6.157 base_mnu_plikHM_TTTEEE_lowl_lowE_DES_post_lensing_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02252 ± 0.00014	$\boldsymbol{\Delta z^1_{l,DES}}$	0.0033 ± 0.0076	$z_{\rm drag}$	1060.14 ± 0.30
$\boldsymbol{\Omega_c h^2}$	0.1181 ± 0.0010	$\boldsymbol{\Delta z^2_{l,DES}}$	0.0006 ± 0.0066	$r_{\rm drag}$	147.43 ± 0.24
$\boldsymbol{100\theta_{MC}}$	1.04112 ± 0.00030	$\boldsymbol{\Delta z^3_{l,DES}}$	0.0033 ± 0.0066	$k_{\rm D}$	0.14062 ± 0.00028
$\boldsymbol{\tau}$	$0.0570^{+0.0062}_{-0.0081}$	$\boldsymbol{\Delta z^4_{l,DES}}$	0.0003 ± 0.0091	$100\theta_{\rm D}$	0.16065 ± 0.00017
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 0.0691	$\boldsymbol{\Delta z^5_{l,DES}}$	-0.0005 ± 0.0098	$z_{\rm eq}$	3360 ± 23
$\boldsymbol{\ln(10^{10} A_s)}$	$3.046^{+0.012}_{-0.016}$	$\boldsymbol{\Delta z^1_{s,DES}}$	-0.003 ± 0.014	$k_{\rm eq}$	0.010255 ± 0.000070
$\boldsymbol{n_s}$	0.9691 ± 0.0039	$\boldsymbol{\Delta z^2_{s,DES}}$	-0.031 ± 0.011	$100\theta_{\rm eq}$	0.8215 ± 0.0044
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0025	$\boldsymbol{\Delta z^3_{s,DES}}$	0.0039 ± 0.0093	$100\theta_{\rm s,eq}$	0.4535 ± 0.0022
$\boldsymbol{A^{CIB}_{217}}$	47 ± 7	$\boldsymbol{\Delta z^4_{s,DES}}$	-0.031 ± 0.018	$H(0.15)$	$73.47^{+0.74}_{-0.43}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	H_0	$68.27^{+0.85}_{-0.49}$	$D_{\rm M}(0.15)$	$635.7^{+4.0}_{-7.2}$
$\boldsymbol{A^{tSZ}_{143}}$	$5.6^{+2.2}_{-1.9}$	Ω_Λ	$0.697^{+0.011}_{-0.0059}$	$H(0.38)$	$83.44^{+0.57}_{-0.32}$
$\boldsymbol{A^{PS}_{100}}$	257 ± 28	$\Omega_{\rm m}$	$0.3032^{+0.0059}_{-0.011}$	$D_{\rm M}(0.38)$	$1518.0^{+8.2}_{-15}$
$\boldsymbol{A^{PS}_{143}}$	45 ± 8	$\Omega_{\rm m}h^2$	$0.14126^{+0.00098}_{-0.0013}$	$H(0.51)$	$90.08^{+0.47}_{-0.27}$
$\boldsymbol{A^{PS}_{143\times217}}$	42 ± 9	$\Omega_\nu h^2$	< 0.000742	$D_{\rm M}(0.51)$	$1967.7^{+9.7}_{-17}$
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	$\Omega_{\rm m}h^3$	$0.09643^{+0.00046}_{-0.00030}$	$H(0.61)$	$95.64^{+0.40}_{-0.22}$
$\boldsymbol{A^{kSZ}}$	< 4.14	σ_8	$0.807^{+0.013}_{-0.0064}$	$D_{\rm M}(0.61)$	2291^{+11}_{-19}
$\boldsymbol{A^{dust}_{100}}$	8.9 ± 1.9	S_8	0.812 ± 0.011	$H(2.33)$	$235.46^{+0.62}_{-0.79}$
$\boldsymbol{A^{dust}_{143}}$	10.9 ± 1.8	$\sigma_8\Omega_{\rm m}^{0.5}$	0.4445 ± 0.0059	$D_{\rm M}(2.33)$	5748^{+10}_{-19}
$\boldsymbol{A^{dust}_{143\times217}}$	18.6 ± 3.3	$\sigma_8\Omega_{\rm m}^{0.25}$	$0.5991^{+0.0076}_{-0.0060}$	$f\sigma_8(0.15)$	0.4498 ± 0.0055
$\boldsymbol{A^{dust}_{217}}$	93.7 ± 7.2	$\sigma_8/h^{0.5}$	$0.977^{+0.013}_{-0.0089}$	$\sigma_8(0.15)$	$0.747^{+0.013}_{-0.0058}$
$\boldsymbol{A^{dust}_{100}}$	0.115 ± 0.039	$r_{\rm drag}h$	$100.7^{+1.4}_{-0.83}$	$f\sigma_8(0.38)$	0.4699 ± 0.0052
$\boldsymbol{A^{dust}_{100\times143}}$	0.134 ± 0.029	$\langle d^2\rangle^{1/2}$	2.419 ± 0.020	$\sigma_8(0.38)$	$0.663^{+0.012}_{-0.0052}$
$\boldsymbol{A^{dust}_{100\times217}}$	0.481 ± 0.086	$z_{\rm re}$	$7.87^{+0.64}_{-0.80}$	$f\sigma_8(0.51)$	$0.4695^{+0.0054}_{-0.0044}$
$\boldsymbol{A^{dust}_{143}}$	0.223 ± 0.054	$10^9 A_{\rm s}$	$2.102^{+0.025}_{-0.034}$	$\sigma_8(0.51)$	$0.621^{+0.011}_{-0.0049}$
$\boldsymbol{A^{dust}_{143\times217}}$	0.663 ± 0.079	$10^9 A_{\rm s}e^{-2\tau}$	1.876 ± 0.010	$f\sigma_8(0.61)$	$0.4652^{+0.0055}_{-0.0041}$
$\boldsymbol{A^{dust}_{217}}$	2.07 ± 0.27	D_{40}	1224 ± 11	$\sigma_8(0.61)$	$0.591^{+0.011}_{-0.0047}$
$\boldsymbol{c_{100}}$	0.99967 ± 0.00061	D_{220}	5748 ± 39	$f\sigma_8(2.33)$	$0.2984^{+0.0049}_{-0.0023}$
$\boldsymbol{c_{217}}$	0.99820 ± 0.00062	D_{810}	2538 ± 13	$\sigma_8(2.33)$	$0.3080^{+0.0059}_{-0.0026}$
$\boldsymbol{b^1_{DES}}$	1.503 ± 0.076	D_{1420}	818.3 ± 4.7	f^{143}_{2000}	29.0 ± 2.7
$\boldsymbol{b^2_{DES}}$	1.701 ± 0.058	D_{2000}	231.4 ± 1.6	$f^{143\times217}_{2000}$	31.7 ± 1.9
$\boldsymbol{b^3_{DES}}$	1.689 ± 0.050	$n_{\rm s,0.002}$	0.9691 ± 0.0039	f^{217}_{2000}	106.7 ± 1.7
$\boldsymbol{b^4_{DES}}$	2.049 ± 0.058	$Y_{\rm P}$	0.245451 ± 0.000053	$\chi^2_{\rm lensing}$	9.5 ± 1.0
$\boldsymbol{b^5_{DES}}$	2.152 ± 0.079	$Y^{\rm BBN}_{\rm P}$	0.246778 ± 0.000053	$\chi^2_{\rm simall}$	397.3 ± 2.1
$\boldsymbol{m^1_{DES}}$	0.012 ± 0.023	10^5D/H	2.559 ± 0.025	$\chi^2_{\rm lowl}$	22.80 ± 0.74
$\boldsymbol{m^2_{DES}}$	0.012 ± 0.022	Age/Gyr	$13.765^{+0.023}_{-0.043}$	$\chi^2_{\rm plik}$	2361.9 ± 6.1
$\boldsymbol{m^3_{DES}}$	-0.005 ± 0.020	z_*	1089.56 ± 0.23	$\chi^2_{\rm DES}$	518.6 ± 4.9
$\boldsymbol{m^4_{DES}}$	0.001 ± 0.021	r_*	144.81 ± 0.23	$\chi^2_{\rm prior}$	25 ± 7
$\boldsymbol{A_{IA,DES}}$	$0.48^{+0.15}_{-0.18}$	$100\theta_*$	1.04129 ± 0.00030	$\chi^2_{\rm CMB}$	2791.5 ± 6.6
$\boldsymbol{\alpha_{IA,DES}}$	$-1.2^{+1.6}_{-3.0}$	$D_{\rm M}(z_*)$/Gpc	13.907 ± 0.022		

$\bar{\chi}^2_{\rm eff} = 3335.01$; $\Delta\bar{\chi}^2_{\rm eff} = 0.43$; $R - 1 = 0.04380$

6.158 base_mnu_plikHM_TTTEEE_lowl_lowE_DES_post_BAO_lensing_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02251 ± 0.00013	$\boldsymbol{\Delta z^2_{l,DES}}$	0.0005 ± 0.0066	k_D	0.14063 ± 0.00027
$\boldsymbol{\Omega_c h^2}$	0.11817 ± 0.00083	$\boldsymbol{\Delta z^3_{l,DES}}$	0.0032 ± 0.0066	$100\theta_D$	0.16065 ± 0.00017
$\boldsymbol{100\theta_{MC}}$	1.04111 ± 0.00029	$\boldsymbol{\Delta z^4_{l,DES}}$	0.0002 ± 0.0091	z_{eq}	3362 ± 19
$\boldsymbol{\tau}$	$0.0566^{+0.0060}_{-0.0079}$	$\boldsymbol{\Delta z^5_{l,DES}}$	-0.0006 ± 0.0097	k_{eq}	0.010261 ± 0.000058
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 0.0656	$\boldsymbol{\Delta z^1_{s,DES}}$	-0.003 ± 0.014	$100\theta_{eq}$	0.8211 ± 0.0036
$\boldsymbol{\ln(10^{10} A_s)}$	$3.045^{+0.012}_{-0.016}$	$\boldsymbol{\Delta z^2_{s,DES}}$	-0.031 ± 0.011	$100\theta_{s,eq}$	0.4533 ± 0.0019
$\boldsymbol{n_s}$	0.9689 ± 0.0035	$\boldsymbol{\Delta z^3_{s,DES}}$	0.0038 ± 0.0092	$H(0.15)$	$73.49^{+0.48}_{-0.38}$
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0024	$\boldsymbol{\Delta z^4_{s,DES}}$	-0.031 ± 0.018	$D_M(0.15)$	$635.4^{+3.6}_{-4.6}$
$\boldsymbol{A^{CIB}_{217}}$	47 ± 7	H_0	$68.30^{+0.54}_{-0.44}$	$H(0.38)$	$83.46^{+0.37}_{-0.29}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Ω_Λ	$0.6971^{+0.0067}_{-0.0053}$	$D_M(0.38)$	$1517.5^{+7.4}_{-9.5}$
$\boldsymbol{A^{tSZ}_{143}}$	$5.6^{+2.2}_{-1.9}$	Ω_m	$0.3029^{+0.0053}_{-0.0067}$	$H(0.51)$	$90.09^{+0.31}_{-0.24}$
$\boldsymbol{A^{PS}_{100}}$	257 ± 28	$\Omega_m h^2$	0.14126 ± 0.00086	$D_M(0.51)$	$1967.1^{+8.8}_{-11}$
$\boldsymbol{A^{PS}_{143}}$	45 ± 8	$\Omega_\nu h^2$	< 0.000705	$H(0.61)$	$95.65^{+0.27}_{-0.21}$
$\boldsymbol{A^{PS}_{143\times217}}$	42 ± 9	$\Omega_m h^3$	$0.09647^{+0.00038}_{-0.00031}$	$D_M(0.61)$	$2290.2^{+9.6}_{-12}$
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	σ_8	$0.809^{+0.011}_{-0.0074}$	$H(2.33)$	235.47 ± 0.54
$\boldsymbol{A^{kSZ}}$	< 4.11	S_8	0.813 ± 0.010	$D_M(2.33)$	$5747.4^{+9.8}_{-13}$
$\boldsymbol{A^{dustTT}_{100}}$	8.9 ± 1.9	$\sigma_8\Omega_m^{0.5}$	0.4452 ± 0.0055	$f\sigma_8(0.15)$	0.4504 ± 0.0051
$\boldsymbol{A^{dustTT}_{143}}$	10.9 ± 1.8	$\sigma_8\Omega_m^{0.25}$	$0.6001^{+0.0069}_{-0.0061}$	$\sigma_8(0.15)$	$0.748^{+0.010}_{-0.0068}$
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.5 ± 3.3	$\sigma_8/h^{0.5}$	$0.979^{+0.011}_{-0.0092}$	$f\sigma_8(0.38)$	0.4706 ± 0.0049
$\boldsymbol{A^{dustTT}_{217}}$	93.6 ± 7.3	$r_{drag}h$	$100.68^{+0.85}_{-0.72}$	$\sigma_8(0.38)$	$0.6643^{+0.0095}_{-0.0061}$
$\boldsymbol{A^{dustTE}_{100}}$	0.115 ± 0.039	$\langle d^2\rangle^{1/2}$	2.420 ± 0.019	$f\sigma_8(0.51)$	$0.4703^{+0.0049}_{-0.0044}$
$\boldsymbol{A^{dustTE}_{100\times143}}$	0.134 ± 0.029	z_{re}	$7.83^{+0.62}_{-0.80}$	$\sigma_8(0.51)$	$0.6221^{+0.0090}_{-0.0058}$
$\boldsymbol{A^{dustTE}_{100\times217}}$	0.481 ± 0.085	$10^9 A_s$	$2.101^{+0.025}_{-0.033}$	$f\sigma_8(0.61)$	$0.4660^{+0.0049}_{-0.0042}$
$\boldsymbol{A^{dustTE}_{143}}$	0.223 ± 0.054	$10^9 A_s e^{-2\tau}$	1.876 ± 0.010	$\sigma_8(0.61)$	$0.5922^{+0.0087}_{-0.0055}$
$\boldsymbol{A^{dustTE}_{143\times217}}$	0.662 ± 0.079	D_{40}	1224 ± 11	$f\sigma_8(2.33)$	$0.2989^{+0.0037}_{-0.0027}$
$\boldsymbol{A^{dustTE}_{217}}$	2.07 ± 0.27	D_{220}	5747 ± 38	$\sigma_8(2.33)$	$0.3085^{+0.0045}_{-0.0029}$
$\boldsymbol{c_{100}}$	0.99967 ± 0.00061	D_{810}	2538 ± 13	f^{143}_{2000}	29.0 ± 2.7
$\boldsymbol{c_{217}}$	0.99819 ± 0.00062	D_{1420}	818.2 ± 4.7	$f^{143\times217}_{2000}$	31.8 ± 1.8
$\boldsymbol{b^1_{DES}}$	$1.501^{+0.077}_{-0.069}$	D_{2000}	231.3 ± 1.5	f^{217}_{2000}	106.7 ± 1.7
$\boldsymbol{b^2_{DES}}$	1.698 ± 0.054	$n_{s,0.002}$	0.9689 ± 0.0035	$\chi^2_{lensing}$	9.43 ± 0.91
$\boldsymbol{b^3_{DES}}$	1.686 ± 0.046	Y_P	0.245449 ± 0.000050	χ^2_{simall}	397.1 ± 2.0
$\boldsymbol{b^4_{DES}}$	2.046 ± 0.054	Y_P^{BBN}	0.246776 ± 0.000050	χ^2_{lowl}	22.84 ± 0.72
$\boldsymbol{b^5_{DES}}$	2.149 ± 0.076	10^5D/H	2.560 ± 0.024	χ^2_{plik}	2361.4 ± 5.9
$\boldsymbol{m^1_{DES}}$	0.012 ± 0.023	Age/Gyr	$13.762^{+0.022}_{-0.030}$	χ^2_{6DF}	0.029 ± 0.040
$\boldsymbol{m^2_{DES}}$	0.012 ± 0.022	z_*	1089.58 ± 0.20	χ^2_{MGS}	1.88 ± 0.50
$\boldsymbol{m^3_{DES}}$	-0.005 ± 0.020	r_*	144.80 ± 0.20	$\chi^2_{DR12BAO}$	3.83 ± 0.71
$\boldsymbol{m^4_{DES}}$	0.001 ± 0.021	$100\theta_*$	1.04128 ± 0.00028	χ^2_{DES}	518.6 ± 4.8
$\boldsymbol{A_{IA,DES}}$	$0.48^{+0.15}_{-0.19}$	$D_M(z_*)$/Gpc	13.906 ± 0.019	χ^2_{prior}	25 ± 7
$\boldsymbol{\alpha_{IA,DES}}$	$-1.2^{+1.6}_{-3.0}$	z_{drag}	1060.14 ± 0.29	χ^2_{CMB}	2790.8 ± 6.4
$\boldsymbol{\Delta z^1_{l,DES}}$	0.0034 ± 0.0076	r_{drag}	147.42 ± 0.21	χ^2_{BAO}	5.74 ± 0.71

$\bar{\chi}^2_{eff} = 3340.08$; $\Delta\bar{\chi}^2_{eff} = 0.31$; $R - 1 = 0.04389$

6.159 base_mnu_plikHM_TTTEEE_lowl_lowE_DESlens

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022459	0.02244 ± 0.00014	$\boldsymbol{\Delta z^2_{s,DES}}$	-0.0205	-0.021 ± 0.012	k_D	0.140734	0.14072 ± 0.00031
$\boldsymbol{\Omega_c h^2}$	0.11895	0.1190 ± 0.0011	$\boldsymbol{\Delta z^3_{s,DES}}$	0.0051	0.004 ± 0.010	$100\theta_D$	0.160688	0.16071 ± 0.00017
$\boldsymbol{100\theta_{MC}}$	1.041035	1.04100 ± 0.00031	$\boldsymbol{\Delta z^4_{s,DES}}$	-0.0221	-0.023 ± 0.020	z_{eq}	3379.3	3381 ± 26
$\boldsymbol{\tau}$	0.0539	0.0538 ± 0.0079	H_0	68.35	$67.6^{+1.1}_{-0.59}$	k_{eq}	0.010314	0.010318 ± 0.000079
$\boldsymbol{\Sigma m_\nu}$ [eV]	0.000	< 0.100	Ω_Λ	0.6973	$0.688^{+0.013}_{-0.0075}$	$100\theta_{eq}$	0.81770	0.8175 ± 0.0049
$\boldsymbol{\ln(10^{10} A_s)}$	3.0410	3.041 ± 0.016	Ω_m	0.3027	$0.3117^{+0.0075}_{-0.013}$	$100\theta_{s,eq}$	0.45161	0.4515 ± 0.0025
$\boldsymbol{n_s}$	0.96870	0.9673 ± 0.0040	$\Omega_m h^2$	0.14141	$0.1424^{+0.0012}_{-0.0016}$	$H(0.15)$	73.54	$72.90^{+0.92}_{-0.51}$
$\boldsymbol{y_{cal}}$	1.00028	1.0005 ± 0.0025	$\Omega_\nu h^2$	0.00000	< 0.00108	$D_M(0.15)$	634.9	$641.3^{+4.9}_{-9.1}$
$\boldsymbol{A^{CIB}_{217}}$	46.2	47 ± 7	$\Omega_m h^3$	0.096652	$0.09626^{+0.00062}_{-0.00033}$	$H(0.38)$	83.52	$83.01^{+0.71}_{-0.38}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.60	—	σ_8	0.8202	$0.803^{+0.020}_{-0.0084}$	$D_M(0.38)$	1516.4	$1529.4^{+9.9}_{-19}$
$\boldsymbol{A^{tSZ}_{143}}$	7.19	$5.5^{+2.2}_{-1.9}$	S_8	0.8239	0.818 ± 0.014	$H(0.51)$	90.155	$89.73^{+0.59}_{-0.31}$
$\boldsymbol{A^{PS}_{100}}$	246.3	258 ± 28	$\sigma_8 \Omega_m^{0.5}$	0.4513	0.4481 ± 0.0074	$D_M(0.51)$	1965.7	1981^{+12}_{-22}
$\boldsymbol{A^{PS}_{143}}$	49.0	45 ± 8	$\sigma_8 \Omega_m^{0.25}$	0.6084	$0.600^{+0.011}_{-0.0076}$	$H(0.61)$	95.715	$95.35^{+0.50}_{-0.25}$
$\boldsymbol{A^{PS}_{143\times217}}$	51.4	42 ± 9	$\sigma_8/h^{0.5}$	0.9921	$0.977^{+0.019}_{-0.011}$	$D_M(0.61)$	2288.5	2305^{+13}_{-24}
$\boldsymbol{A^{PS}_{217}}$	120.8	114 ± 10	$r_{drag} h$	100.66	$99.6^{+1.6}_{-1.0}$	$H(2.33)$	235.64	$236.13^{+0.76}_{-0.92}$
$\boldsymbol{A^{kSZ}}$	0.01	< 4.34	$\langle d^2 \rangle^{1/2}$	2.4321	2.423 ± 0.025	$D_M(2.33)$	5743.4	5761^{+11}_{-24}
$\boldsymbol{A^{dustTT}_{100}}$	8.83	8.9 ± 1.8	z_{re}	7.60	7.58 ± 0.80	$f\sigma_8(0.15)$	0.4558	0.4530 ± 0.0070
$\boldsymbol{A^{dustTT}_{143}}$	11.03	10.9 ± 1.8	$10^9 A_s$	2.0927	$2.092^{+0.031}_{-0.035}$	$\sigma_8(0.15)$	0.7586	$0.742^{+0.019}_{-0.0077}$
$\boldsymbol{A^{dustTT}_{143\times217}}$	20.05	18.7 ± 3.3	$10^9 A_s e^{-2\tau}$	1.8787	1.878 ± 0.011	$f\sigma_8(0.38)$	0.4762	$0.4712^{+0.0077}_{-0.0060}$
$\boldsymbol{A^{dustTT}_{217}}$	95.2	93.8 ± 7.3	D_{40}	1222.8	1226 ± 12	$\sigma_8(0.38)$	0.6732	$0.658^{+0.018}_{-0.0069}$
$\boldsymbol{A^{dustTE}_{100}}$	0.1142	0.114 ± 0.038	D_{220}	5731.9	5736 ± 38	$f\sigma_8(0.51)$	0.4758	$0.4699^{+0.0082}_{-0.0054}$
$\boldsymbol{A^{dustTE}_{100\times143}}$	0.1350	0.135 ± 0.029	D_{810}	2538.8	2538 ± 14	$\sigma_8(0.51)$	0.6303	$0.616^{+0.017}_{-0.0065}$
$\boldsymbol{A^{dustTE}_{100\times217}}$	0.481	0.480 ± 0.085	D_{1420}	818.38	817.6 ± 4.7	$f\sigma_8(0.61)$	0.4714	$0.4650^{+0.0085}_{-0.0051}$
$\boldsymbol{A^{dustTE}_{143}}$	0.225	0.224 ± 0.055	D_{2000}	231.49	231.0 ± 1.6	$\sigma_8(0.61)$	0.6000	$0.586^{+0.016}_{-0.0062}$
$\boldsymbol{A^{dustTE}_{143\times217}}$	0.663	0.664 ± 0.081	$n_{s,0.002}$	0.96870	0.9673 ± 0.0040	$f\sigma_8(2.33)$	0.3019	$0.2959^{+0.0073}_{-0.0029}$
$\boldsymbol{A^{dustTE}_{217}}$	2.078	2.08 ± 0.27	Y_P	0.245430	$0.245419^{+0.000059}_{-0.000050}$	$\sigma_8(2.33)$	0.3121	$0.3048^{+0.0086}_{-0.0033}$
$\boldsymbol{c_{100}}$	0.99972	0.99966 ± 0.00061	Y_P^{BBN}	0.246756	$0.246745^{+0.000059}_{-0.000050}$	f^{143}_{2000}	28.26	29.4 ± 2.7
$\boldsymbol{c_{217}}$	0.99817	0.99821 ± 0.00062	10^5D/H	2.5691	$2.574^{+0.025}_{-0.028}$	$f^{143\times217}_{2000}$	31.64	32.1 ± 1.8
$\boldsymbol{m^1_{DES}}$	0.0139	0.014 ± 0.023	Age/Gyr	13.7521	$13.793^{+0.026}_{-0.056}$	f^{217}_{2000}	106.15	106.9 ± 1.8
$\boldsymbol{m^2_{DES}}$	0.0127	0.012 ± 0.022	z_*	1089.711	$1089.76^{+0.23}_{-0.26}$	χ^2_{small}	395.91	397.0 ± 1.8
$\boldsymbol{m^3_{DES}}$	-0.0066	-0.008 ± 0.020	r_*	144.641	144.63 ± 0.27	χ^2_{lowl}	22.82	22.99 ± 0.82
$\boldsymbol{m^4_{DES}}$	0.0122	0.011 ± 0.021	$100\theta_*$	1.041180	1.04119 ± 0.00030	χ^2_{plik}	2345.0	2361.3 ± 6.2
$\boldsymbol{A_{IA,DES}}$	1.45	1.24 ± 0.50	$D_M(z_*)$/Gpc	13.8920	13.891 ± 0.025	χ^2_{DES}	229.18	232.1 ± 2.5
$\boldsymbol{\alpha_{IA,DES}}$	2.54	$1.9^{+2.8}_{-1.0}$	z_{drag}	1060.047	1060.02 ± 0.30	χ^2_{prior}	2.6	19.6 ± 5.9
$\boldsymbol{\Delta z^1_{s,DES}}$	0.0046	0.005 ± 0.015	r_{drag}	147.278	147.27 ± 0.27	χ^2_{CMB}	2763.7	2781.3 ± 6.2

Best-fit $\chi^2_{eff} = 2995.53$; $\Delta\chi^2_{eff} = -1.14$; $\bar{\chi}^2_{eff} = 3032.97$; $\Delta\bar{\chi}^2_{eff} = 0.93$; $R - 1 = 0.01346$

χ^2_{eff}: CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.91 (Δ 0.04) commander_dx12_v3_2_29: 22.82 (Δ 0.05) plik_rd12_HM_v22b_TTTEEE: 2344.99 (Δ -1.16) WL - DES_1YR_final: 229.18 (Δ 0.01)

6.160 base_mnu_plikHM_TTTEEE_lowl_lowE_DESlens_post_BAO

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02246 ± 0.00013	$\boldsymbol{\Delta z^4_{s,DES}}$	-0.022 ± 0.020	$100\theta_{eq}$	0.8186 ± 0.0040
$\boldsymbol{\Omega_c h^2}$	0.11876 ± 0.00092	H_0	$67.99^{+0.55}_{-0.45}$	$100\theta_{s,eq}$	0.4521 ± 0.0021
$\boldsymbol{100\theta_{MC}}$	1.04106 ± 0.00029	Ω_Λ	$0.6931^{+0.0069}_{-0.0057}$	$H(0.15)$	$73.23^{+0.48}_{-0.39}$
$\boldsymbol{\tau}$	0.0544 ± 0.0078	Ω_m	$0.3069^{+0.0057}_{-0.0069}$	$D_M(0.15)$	$638.0^{+3.7}_{-4.7}$
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 0.0715	$\Omega_m h^2$	0.14183 ± 0.00091	$H(0.38)$	$83.27^{+0.37}_{-0.29}$
$\boldsymbol{\ln(10^{10} A_s)}$	3.041 ± 0.016	$\Omega_\nu h^2$	< 0.000769	$D_M(0.38)$	$1522.6^{+7.6}_{-9.7}$
$\boldsymbol{n_s}$	0.9680 ± 0.0037	$\Omega_m h^3$	$0.09643^{+0.00042}_{-0.00033}$	$H(0.51)$	$89.94^{+0.31}_{-0.24}$
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	σ_8	$0.809^{+0.013}_{-0.0086}$	$D_M(0.51)$	$1973.2^{+9.0}_{-11}$
$\boldsymbol{A^{CIB}_{217}}$	47 ± 7	S_8	0.818 ± 0.012	$H(0.61)$	$95.53^{+0.27}_{-0.21}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$\sigma_8\Omega_m^{0.5}$	0.4479 ± 0.0066	$D_M(0.61)$	$2296.7^{+9.7}_{-12}$
$\boldsymbol{A^{tSZ}_{143}}$	$5.6^{+2.1}_{-1.9}$	$\sigma_8\Omega_m^{0.25}$	$0.6019^{+0.0087}_{-0.0072}$	$H(2.33)$	235.82 ± 0.58
$\boldsymbol{A^{PS}_{100}}$	257 ± 28	$\sigma_8/h^{0.5}$	$0.981^{+0.014}_{-0.011}$	$D_M(2.33)$	$5752.6^{+9.9}_{-13}$
$\boldsymbol{A^{PS}_{143}}$	45 ± 8	$r_{drag}h$	$100.17^{+0.87}_{-0.76}$	$f\sigma_8(0.15)$	0.4529 ± 0.0063
$\boldsymbol{A^{PS}_{143\times217}}$	42 ± 9	$\langle d^2\rangle^{1/2}$	2.423 ± 0.024	$\sigma_8(0.15)$	$0.748^{+0.012}_{-0.0079}$
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	z_{re}	7.63 ± 0.79	$f\sigma_8(0.38)$	$0.4722^{+0.0062}_{-0.0055}$
$\boldsymbol{A^{kSZ}}$	< 4.18	$10^9 A_s$	2.093 ± 0.034	$\sigma_8(0.38)$	$0.663^{+0.011}_{-0.0070}$
$\boldsymbol{A^{dustTT}_{100}}$	8.9 ± 1.9	$10^9 A_s e^{-2\tau}$	1.877 ± 0.011	$f\sigma_8(0.51)$	$0.4714^{+0.0062}_{-0.0052}$
$\boldsymbol{A^{dustTT}_{143}}$	10.9 ± 1.8	D_{40}	1225 ± 12	$\sigma_8(0.51)$	$0.621^{+0.010}_{-0.0066}$
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.7 ± 3.3	D_{220}	5738 ± 38	$f\sigma_8(0.61)$	$0.4668^{+0.0062}_{-0.0050}$
$\boldsymbol{A^{dustTT}_{217}}$	93.9 ± 7.4	D_{810}	2538 ± 14	$\sigma_8(0.61)$	$0.591^{+0.010}_{-0.0062}$
$\boldsymbol{A^{dustTE}_{100}}$	0.114 ± 0.038	D_{1420}	817.7 ± 4.8	$f\sigma_8(2.33)$	$0.2982^{+0.0044}_{-0.0030}$
$\boldsymbol{A^{dustTE}_{100\times143}}$	0.135 ± 0.029	D_{2000}	231.1 ± 1.6	$\sigma_8(2.33)$	$0.3076^{+0.0051}_{-0.0033}$
$\boldsymbol{A^{dustTE}_{100\times217}}$	0.479 ± 0.084	$n_{s,0.002}$	0.9680 ± 0.0037	f^{143}_{2000}	29.2 ± 2.7
$\boldsymbol{A^{dustTE}_{143}}$	0.224 ± 0.054	Y_P	$0.245428^{+0.000053}_{-0.000045}$	$f^{143\times217}_{2000}$	31.9 ± 1.8
$\boldsymbol{A^{dustTE}_{143\times217}}$	0.663 ± 0.081	Y_P^{BBN}	$0.246755^{+0.000053}_{-0.000045}$	f^{217}_{2000}	106.7 ± 1.7
$\boldsymbol{A^{dustTE}_{217}}$	2.07 ± 0.27	10^5D/H	$2.569^{+0.022}_{-0.025}$	χ^2_{small}	397.0 ± 1.8
$\boldsymbol{c_{100}}$	0.99966 ± 0.00061	Age/Gyr	$13.774^{+0.022}_{-0.031}$	χ^2_{lowl}	22.92 ± 0.78
$\boldsymbol{c_{217}}$	0.99821 ± 0.00061	z_*	1089.70 ± 0.21	χ^2_{plik}	2360.7 ± 6.0
$\boldsymbol{m^1_{DES}}$	0.014 ± 0.023	r_*	144.69 ± 0.23	χ^2_{6DF}	0.032 ± 0.049
$\boldsymbol{m^2_{DES}}$	0.012 ± 0.022	$100\theta_*$	1.04123 ± 0.00028	χ^2_{MGS}	1.57 ± 0.48
$\boldsymbol{m^3_{DES}}$	-0.007 ± 0.020	$D_M(z_*)$/Gpc	13.896 ± 0.022	$\chi^2_{DR12BAO}$	4.2 ± 1.1
$\boldsymbol{m^4_{DES}}$	0.012 ± 0.021	z_{drag}	1060.05 ± 0.29	χ^2_{DES}	231.9 ± 2.4
$\boldsymbol{A_{IA,DES}}$	1.25 ± 0.50	r_{drag}	147.32 ± 0.24	χ^2_{prior}	19.6 ± 5.9
$\boldsymbol{\alpha_{IA,DES}}$	$1.91^{+2.8}_{-0.97}$	k_D	0.14069 ± 0.00029	χ^2_{BAO}	5.78 ± 0.84
$\boldsymbol{\Delta z^1_{s,DES}}$	0.005 ± 0.015	$100\theta_D$	0.16070 ± 0.00017	χ^2_{CMB}	2780.6 ± 6.0
$\boldsymbol{\Delta z^2_{s,DES}}$	-0.021 ± 0.012	z_{eq}	3375 ± 21		
$\boldsymbol{\Delta z^3_{s,DES}}$	0.004 ± 0.010	k_{eq}	0.010300 ± 0.000065		

$\bar{\chi}^2_{eff} = 3037.88$; $\Delta\bar{\chi}^2_{eff} = 0.68$; $R - 1 = 0.03194$

6.161 base_mnu_plikHM_TTTEEE_lowl_lowE_DESlens_post_lensing

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02244 ± 0.00014	$\boldsymbol{\Delta z^3_{s,DES}}$	0.004 ± 0.010	z_{eq}	3383 ± 25
$\boldsymbol{\Omega_c h^2}$	0.1191 ± 0.0011	$\boldsymbol{\Delta z^4_{s,DES}}$	-0.023 ± 0.020	k_{eq}	0.010325 ± 0.000075
$\boldsymbol{100\theta_{MC}}$	1.04100 ± 0.00030	H_0	$67.70^{+0.95}_{-0.56}$	$100\theta_{eq}$	0.8171 ± 0.0047
$\boldsymbol{\tau}$	0.0551 ± 0.0077	Ω_Λ	$0.689^{+0.012}_{-0.0071}$	$100\theta_{s,eq}$	0.4513 ± 0.0024
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 0.0855	Ω_m	$0.3108^{+0.0071}_{-0.012}$	$H(0.15)$	$72.98^{+0.83}_{-0.49}$
$\boldsymbol{\ln(10^{10} A_s)}$	3.044 ± 0.015	$\Omega_m h^2$	$0.1423^{+0.0011}_{-0.0015}$	$D_M(0.15)$	$640.5^{+4.6}_{-8.2}$
$\boldsymbol{n_s}$	0.9670 ± 0.0040	$\Omega_\nu h^2$	< 0.000920	$H(0.38)$	$83.08^{+0.63}_{-0.36}$
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0025	$\Omega_m h^3$	$0.09635^{+0.00052}_{-0.00032}$	$D_M(0.38)$	$1527.8^{+9.4}_{-17}$
$\boldsymbol{A^{CIB}_{217}}$	47 ± 7	σ_8	$0.807^{+0.015}_{-0.0071}$	$H(0.51)$	$89.79^{+0.52}_{-0.30}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	S_8	0.821 ± 0.011	$D_M(0.51)$	1979^{+11}_{-20}
$\boldsymbol{A^{tSZ}_{143}}$	$5.5^{+2.1}_{-1.9}$	$\sigma_8\Omega_m^{0.5}$	0.4499 ± 0.0060	$H(0.61)$	$95.41^{+0.44}_{-0.25}$
$\boldsymbol{A^{PS}_{100}}$	258 ± 27	$\sigma_8\Omega_m^{0.25}$	$0.6026^{+0.0080}_{-0.0061}$	$D_M(0.61)$	2303^{+12}_{-21}
$\boldsymbol{A^{PS}_{143}}$	45 ± 8	$\sigma_8/h^{0.5}$	$0.981^{+0.014}_{-0.0090}$	$H(2.33)$	$236.12^{+0.70}_{-0.88}$
$\boldsymbol{A^{PS}_{143\times217}}$	42 ± 9	$r_{drag}h$	$99.7^{+1.5}_{-0.96}$	$D_M(2.33)$	5758^{+11}_{-21}
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	$\langle d^2\rangle^{1/2}$	2.430 ± 0.020	$f\sigma_8(0.15)$	0.4547 ± 0.0055
$\boldsymbol{A^{kSZ}}$	< 4.24	z_{re}	7.71 ± 0.76	$\sigma_8(0.15)$	$0.746^{+0.014}_{-0.0067}$
$\boldsymbol{A^{dustTT}_{100}}$	8.9 ± 1.9	$10^9 A_s$	2.099 ± 0.032	$f\sigma_8(0.38)$	$0.4732^{+0.0054}_{-0.0048}$
$\boldsymbol{A^{dustTT}_{143}}$	10.9 ± 1.8	$10^9 A_s e^{-2\tau}$	1.880 ± 0.011	$\sigma_8(0.38)$	$0.662^{+0.014}_{-0.0061}$
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.7 ± 3.3	D_{40}	1228 ± 11	$f\sigma_8(0.51)$	$0.4719^{+0.0057}_{-0.0043}$
$\boldsymbol{A^{dustTT}_{217}}$	93.9 ± 7.4	D_{220}	5740 ± 38	$\sigma_8(0.51)$	$0.619^{+0.013}_{-0.0058}$
$\boldsymbol{A^{dustTE}_{100}}$	0.114 ± 0.038	D_{810}	2539 ± 14	$f\sigma_8(0.61)$	$0.4671^{+0.0060}_{-0.0040}$
$\boldsymbol{A^{dustTE}_{100\times143}}$	0.135 ± 0.029	D_{1420}	817.8 ± 4.8	$\sigma_8(0.61)$	$0.589^{+0.013}_{-0.0056}$
$\boldsymbol{A^{dustTE}_{100\times217}}$	0.480 ± 0.083	D_{2000}	231.1 ± 1.6	$f\sigma_8(2.33)$	$0.2973^{+0.0057}_{-0.0027}$
$\boldsymbol{A^{dustTE}_{143}}$	0.223 ± 0.054	$n_{s,0.002}$	0.9670 ± 0.0040	$\sigma_8(2.33)$	$0.3064^{+0.0068}_{-0.0031}$
$\boldsymbol{A^{dustTE}_{143\times217}}$	0.664 ± 0.081	Y_P	$0.245421^{+0.000059}_{-0.000049}$	f^{143}_{2000}	29.3 ± 2.7
$\boldsymbol{A^{dustTE}_{217}}$	2.08 ± 0.27	Y_P^{BBN}	$0.246748^{+0.000059}_{-0.000049}$	$f^{143\times217}_{2000}$	32.0 ± 1.8
$\boldsymbol{c_{100}}$	0.99966 ± 0.00062	10^5D/H	$2.573^{+0.024}_{-0.028}$	f^{217}_{2000}	106.8 ± 1.8
$\boldsymbol{c_{217}}$	0.99822 ± 0.00060	Age/Gyr	$13.786^{+0.025}_{-0.048}$	$\chi^2_{lensing}$	9.28 ± 0.75
$\boldsymbol{m^1_{DES}}$	0.014 ± 0.023	z_*	$1089.75^{+0.22}_{-0.26}$	χ^2_{simall}	397.1 ± 1.9
$\boldsymbol{m^2_{DES}}$	0.012 ± 0.022	r_*	144.61 ± 0.25	χ^2_{lowl}	23.14 ± 0.79
$\boldsymbol{m^3_{DES}}$	-0.009 ± 0.020	$100\theta_*$	1.04118 ± 0.00029	χ^2_{plik}	2360.3 ± 5.8
$\boldsymbol{m^4_{DES}}$	0.010 ± 0.021	$D_M(z_*)$/Gpc	13.889 ± 0.024	χ^2_{DES}	232.1 ± 2.5
$\boldsymbol{A_{IA,DES}}$	1.27 ± 0.49	z_{drag}	1060.04 ± 0.30	χ^2_{prior}	19.7 ± 5.9
$\boldsymbol{\alpha_{IA,DES}}$	$1.8^{+2.8}_{-1.1}$	r_{drag}	147.25 ± 0.26	χ^2_{CMB}	2789.8 ± 6.0
$\boldsymbol{\Delta z^1_{s,DES}}$	0.005 ± 0.015	k_D	0.14076 ± 0.00030		
$\boldsymbol{\Delta z^2_{s,DES}}$	-0.021 ± 0.012	$100\theta_D$	0.16070 ± 0.00017		

$\bar{\chi}^2_{eff} = 3041.62$; $\Delta\bar{\chi}^2_{eff} = 1.20$; $R - 1 = 0.02141$

6.162 base_mnu_plikHM_TTTEEE_lowl_lowE_DESlens_post_BAO_lensing

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02246 ± 0.00013	$\boldsymbol{\Delta z^4_{s,DES}}$	-0.022 ± 0.020	$100\theta_{eq}$	0.8182 ± 0.0037
$\boldsymbol{\Omega_c h^2}$	0.11884 ± 0.00087	H_0	$68.02^{+0.53}_{-0.44}$	$100\theta_{s,eq}$	0.4519 ± 0.0019
$\boldsymbol{100\theta_{MC}}$	1.04105 ± 0.00029	Ω_Λ	$0.6933^{+0.0067}_{-0.0055}$	$H(0.15)$	$73.25^{+0.47}_{-0.38}$
$\boldsymbol{\tau}$	0.0554 ± 0.0075	Ω_m	$0.3067^{+0.0055}_{-0.0067}$	$D_M(0.15)$	$637.8^{+3.6}_{-4.6}$
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 0.0646	$\Omega_m h^2$	0.14186 ± 0.00089	$H(0.38)$	$83.29^{+0.36}_{-0.29}$
$\boldsymbol{\ln(10^{10} A_s)}$	3.044 ± 0.015	$\Omega_\nu h^2$	< 0.000694	$D_M(0.38)$	$1522.2^{+7.4}_{-9.3}$
$\boldsymbol{n_s}$	0.9677 ± 0.0035	$\Omega_m h^3$	$0.09648^{+0.00038}_{-0.00032}$	$H(0.51)$	$89.96^{+0.30}_{-0.24}$
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0025	σ_8	$0.811^{+0.010}_{-0.0073}$	$D_M(0.51)$	$1972.6^{+8.8}_{-11}$
$\boldsymbol{A^{CIB}_{217}}$	47 ± 7	S_8	0.8202 ± 0.0099	$H(0.61)$	$95.55^{+0.26}_{-0.20}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$\sigma_8\Omega_m^{0.5}$	0.4492 ± 0.0054	$D_M(0.61)$	$2296.0^{+9.5}_{-12}$
$\boldsymbol{A^{tSZ}_{143}}$	$5.6^{+2.1}_{-1.9}$	$\sigma_8\Omega_m^{0.25}$	$0.6037^{+0.0067}_{-0.0058}$	$H(2.33)$	235.84 ± 0.56
$\boldsymbol{A^{PS}_{100}}$	257 ± 28	$\sigma_8/h^{0.5}$	$0.984^{+0.011}_{-0.0090}$	$D_M(2.33)$	$5751.5^{+9.6}_{-13}$
$\boldsymbol{A^{PS}_{143}}$	45 ± 8	$r_{drag}h$	$100.19^{+0.85}_{-0.73}$	$f\sigma_8(0.15)$	0.4541 ± 0.0051
$\boldsymbol{A^{PS}_{143\times217}}$	42 ± 9	$\langle d^2\rangle^{1/2}$	2.429 ± 0.019	$\sigma_8(0.15)$	$0.7501^{+0.0097}_{-0.0068}$
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	z_{re}	7.74 ± 0.74	$f\sigma_8(0.38)$	0.4736 ± 0.0047
$\boldsymbol{A^{kSZ}}$	< 4.12	$10^9 A_s$	2.099 ± 0.031	$\sigma_8(0.38)$	$0.6654^{+0.0089}_{-0.0061}$
$\boldsymbol{A^{dustTT}_{100}}$	8.9 ± 1.9	$10^9 A_s e^{-2\tau}$	1.879 ± 0.011	$f\sigma_8(0.51)$	$0.4727^{+0.0047}_{-0.0042}$
$\boldsymbol{A^{dustTT}_{143}}$	10.9 ± 1.8	D_{40}	1227 ± 11	$\sigma_8(0.51)$	$0.6229^{+0.0085}_{-0.0058}$
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.7 ± 3.3	D_{220}	5741 ± 38	$f\sigma_8(0.61)$	$0.4681^{+0.0047}_{-0.0040}$
$\boldsymbol{A^{dustTT}_{217}}$	93.9 ± 7.4	D_{810}	2539 ± 13	$\sigma_8(0.61)$	$0.5929^{+0.0081}_{-0.0055}$
$\boldsymbol{A^{dustTE}_{100}}$	0.115 ± 0.038	D_{1420}	817.9 ± 4.7	$f\sigma_8(2.33)$	$0.2990^{+0.0036}_{-0.0027}$
$\boldsymbol{A^{dustTE}_{100\times143}}$	0.135 ± 0.029	D_{2000}	231.2 ± 1.5	$\sigma_8(2.33)$	$0.3085^{+0.0042}_{-0.0030}$
$\boldsymbol{A^{dustTE}_{100\times217}}$	0.479 ± 0.084	$n_{s,0.002}$	0.9677 ± 0.0035	f^{143}_{2000}	29.1 ± 2.7
$\boldsymbol{A^{dustTE}_{143}}$	0.223 ± 0.055	Y_P	$0.245430^{+0.000052}_{-0.000044}$	$f^{143\times217}_{2000}$	31.9 ± 1.8
$\boldsymbol{A^{dustTE}_{143\times217}}$	0.664 ± 0.082	Y_P^{BBN}	$0.246757^{+0.000052}_{-0.000044}$	f^{217}_{2000}	106.7 ± 1.7
$\boldsymbol{A^{dustTE}_{217}}$	2.07 ± 0.27	10^5D/H	$2.569^{+0.022}_{-0.025}$	$\chi^2_{lensing}$	9.23 ± 0.68
$\boldsymbol{c_{100}}$	0.99966 ± 0.00062	Age/Gyr	$13.771^{+0.022}_{-0.029}$	χ^2_{simall}	397.1 ± 1.9
$\boldsymbol{c_{217}}$	0.99821 ± 0.00060	z_*	$1089.70^{+0.19}_{-0.21}$	χ^2_{lowl}	23.04 ± 0.74
$\boldsymbol{m^1_{DES}}$	0.014 ± 0.023	r_*	144.66 ± 0.21	χ^2_{plik}	2360.0 ± 5.7
$\boldsymbol{m^2_{DES}}$	0.012 ± 0.022	$100\theta_*$	1.04122 ± 0.00028	χ^2_{6DF}	0.030 ± 0.046
$\boldsymbol{m^3_{DES}}$	-0.007 ± 0.020	$D_M(z_*)$/Gpc	13.894 ± 0.020	χ^2_{MGS}	1.58 ± 0.47
$\boldsymbol{m^4_{DES}}$	0.011 ± 0.021	z_{drag}	1060.07 ± 0.29	$\chi^2_{DR12BAO}$	4.1 ± 1.0
$\boldsymbol{A_{IA,DES}}$	1.27 ± 0.50	r_{drag}	147.30 ± 0.22	χ^2_{DES}	231.9 ± 2.4
$\boldsymbol{\alpha_{IA,DES}}$	$1.90^{+2.8}_{-0.99}$	k_D	0.14072 ± 0.00028	χ^2_{prior}	19.6 ± 5.9
$\boldsymbol{\Delta z^1_{s,DES}}$	0.005 ± 0.015	$100\theta_D$	0.16069 ± 0.00017	χ^2_{CMB}	2789.3 ± 6.0
$\boldsymbol{\Delta z^2_{s,DES}}$	-0.021 ± 0.012	z_{eq}	3377 ± 20	χ^2_{BAO}	5.74 ± 0.79
$\boldsymbol{\Delta z^3_{s,DES}}$	0.004 ± 0.010	k_{eq}	0.010306 ± 0.000061		

$\bar{\chi}^2_{eff} = 3046.62$; $\Delta\bar{\chi}^2_{eff} = 0.89$; $R - 1 = 0.03081$

6.163 base_mnu_plikHM_TTTEEE_lowl_lowE_DESlens_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02244 ± 0.00014	$\boldsymbol{\Delta z^2_{s,DES}}$	-0.021 ± 0.012	k_D	0.14072 ± 0.00031
$\boldsymbol{\Omega_c h^2}$	0.1190 ± 0.0011	$\boldsymbol{\Delta z^3_{s,DES}}$	0.004 ± 0.010	$100\theta_D$	0.16071 ± 0.00017
$\boldsymbol{100\theta_{MC}}$	1.04101 ± 0.00030	$\boldsymbol{\Delta z^4_{s,DES}}$	-0.023 ± 0.020	z_{eq}	3380 ± 26
$\boldsymbol{\tau}$	$0.0551^{+0.0051}_{-0.0082}$	H_0	$67.6^{+1.1}_{-0.58}$	k_{eq}	0.010315 ± 0.000078
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 0.101	Ω_Λ	$0.689^{+0.013}_{-0.0074}$	$100\theta_{eq}$	0.8177 ± 0.0049
$\boldsymbol{\ln(10^{10} A_s)}$	$3.043^{+0.011}_{-0.016}$	Ω_m	$0.3115^{+0.0074}_{-0.013}$	$100\theta_{s,eq}$	0.4516 ± 0.0025
$\boldsymbol{n_s}$	0.9674 ± 0.0040	$\Omega_m h^2$	$0.1423^{+0.0012}_{-0.0016}$	$H(0.15)$	$72.91^{+0.92}_{-0.51}$
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	$\Omega_\nu h^2$	< 0.00109	$D_M(0.15)$	$641.2^{+4.8}_{-9.2}$
$\boldsymbol{A^{CIB}_{217}}$	47 ± 7	$\Omega_m h^3$	$0.09625^{+0.00062}_{-0.00032}$	$H(0.38)$	$83.02^{+0.71}_{-0.38}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	σ_8	$0.804^{+0.020}_{-0.0080}$	$D_M(0.38)$	$1529.1^{+9.8}_{-19}$
$\boldsymbol{A^{tSZ}_{143}}$	$5.5^{+2.2}_{-1.9}$	S_8	0.819 ± 0.013	$H(0.51)$	$89.74^{+0.59}_{-0.31}$
$\boldsymbol{A^{PS}_{100}}$	258 ± 28	$\sigma_8\Omega_m^{0.5}$	0.4483 ± 0.0074	$D_M(0.51)$	1981^{+12}_{-22}
$\boldsymbol{A^{PS}_{143}}$	45 ± 8	$\sigma_8\Omega_m^{0.25}$	$0.600^{+0.011}_{-0.0075}$	$H(0.61)$	$95.36^{+0.50}_{-0.25}$
$\boldsymbol{A^{PS}_{143\times217}}$	42 ± 9	$\sigma_8/h^{0.5}$	$0.977^{+0.019}_{-0.011}$	$D_M(0.61)$	2305^{+12}_{-24}
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	$r_{drag}h$	$99.6^{+1.6}_{-1.0}$	$H(2.33)$	$236.10^{+0.75}_{-0.92}$
$\boldsymbol{A^{kSZ}}$	< 4.30	$\langle d^2\rangle^{1/2}$	2.425 ± 0.024	$D_M(2.33)$	5761^{+11}_{-24}
$\boldsymbol{A^{dustTT}_{100}}$	8.9 ± 1.8	z_{re}	$7.72^{+0.55}_{-0.82}$	$f\sigma_8(0.15)$	0.4533 ± 0.0069
$\boldsymbol{A^{dustTT}_{143}}$	10.9 ± 1.8	$10^9 A_s$	$2.097^{+0.024}_{-0.034}$	$\sigma_8(0.15)$	$0.743^{+0.019}_{-0.0074}$
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.7 ± 3.3	$10^9 A_s e^{-2\tau}$	1.878 ± 0.011	$f\sigma_8(0.38)$	$0.4716^{+0.0076}_{-0.0059}$
$\boldsymbol{A^{dustTT}_{217}}$	93.8 ± 7.3	D_{40}	1226 ± 12	$\sigma_8(0.38)$	$0.659^{+0.018}_{-0.0065}$
$\boldsymbol{A^{dustTE}_{100}}$	0.114 ± 0.038	D_{220}	5736 ± 38	$f\sigma_8(0.51)$	$0.4702^{+0.0081}_{-0.0053}$
$\boldsymbol{A^{dustTE}_{100\times143}}$	0.135 ± 0.030	D_{810}	2538 ± 14	$\sigma_8(0.51)$	$0.616^{+0.017}_{-0.0062}$
$\boldsymbol{A^{dustTE}_{100\times217}}$	0.480 ± 0.085	D_{1420}	817.6 ± 4.8	$f\sigma_8(0.61)$	$0.4654^{+0.0084}_{-0.0049}$
$\boldsymbol{A^{dustTE}_{143}}$	0.224 ± 0.055	D_{2000}	231.0 ± 1.6	$\sigma_8(0.61)$	$0.586^{+0.016}_{-0.0059}$
$\boldsymbol{A^{dustTE}_{143\times217}}$	0.664 ± 0.081	$n_{s,0.002}$	0.9674 ± 0.0040	$f\sigma_8(2.33)$	$0.2962^{+0.0072}_{-0.0027}$
$\boldsymbol{A^{dustTE}_{217}}$	2.08 ± 0.27	Y_P	$0.245420^{+0.000059}_{-0.000049}$	$\sigma_8(2.33)$	$0.3051^{+0.0086}_{-0.0031}$
$\boldsymbol{c_{100}}$	0.99966 ± 0.00061	Y_P^{BBN}	$0.246747^{+0.000059}_{-0.000050}$	f^{143}_{2000}	29.3 ± 2.7
$\boldsymbol{c_{217}}$	0.99821 ± 0.00061	10^5D/H	$2.573^{+0.024}_{-0.028}$	$f^{143\times217}_{2000}$	32.0 ± 1.8
$\boldsymbol{m^1_{DES}}$	0.014 ± 0.023	Age/Gyr	$13.793^{+0.026}_{-0.056}$	f^{217}_{2000}	106.8 ± 1.8
$\boldsymbol{m^2_{DES}}$	0.012 ± 0.022	z_*	$1089.75^{+0.23}_{-0.26}$	χ^2_{small}	396.9 ± 1.9
$\boldsymbol{m^3_{DES}}$	-0.008 ± 0.020	r_*	144.64 ± 0.26	χ^2_{lowl}	23.00 ± 0.82
$\boldsymbol{m^4_{DES}}$	0.011 ± 0.021	$100\theta_*$	1.04120 ± 0.00030	χ^2_{plik}	2361.1 ± 6.2
$\boldsymbol{A_{IA,DES}}$	1.25 ± 0.50	$D_M(z_*)$/Gpc	13.892 ± 0.025	χ^2_{DES}	232.1 ± 2.5
$\boldsymbol{\alpha_{IA,DES}}$	$1.9^{+2.7}_{-1.1}$	z_{drag}	1060.02 ± 0.30	χ^2_{prior}	19.6 ± 6.0
$\boldsymbol{\Delta z^1_{s,DES}}$	0.005 ± 0.015	r_{drag}	147.28 ± 0.27	χ^2_{CMB}	2781.1 ± 6.2

$\bar{\chi}^2_{eff} = 3032.78$; $\Delta\bar{\chi}^2_{eff} = 0.96$; $R - 1 = 0.01688$

6.164 base_mnu_plikHM_TTTEEE_lowl_lowE_DESlens_post_BAO_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02246 ± 0.00013	$\boldsymbol{\Delta z^4_{s,DES}}$	-0.022 ± 0.020	$100\theta_{eq}$	0.8187 ± 0.0040
$\boldsymbol{\Omega_c h^2}$	0.11873 ± 0.00092	H_0	$68.00^{+0.55}_{-0.44}$	$100\theta_{s,eq}$	0.4522 ± 0.0020
$\boldsymbol{100\theta_{MC}}$	1.04106 ± 0.00029	Ω_Λ	$0.6932^{+0.0069}_{-0.0056}$	$H(0.15)$	$73.24^{+0.49}_{-0.39}$
$\boldsymbol{\tau}$	$0.0556^{+0.0054}_{-0.0079}$	Ω_m	$0.3068^{+0.0056}_{-0.0069}$	$D_M(0.15)$	$637.9^{+3.7}_{-4.8}$
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 0.0722	$\Omega_m h^2$	0.14181 ± 0.00091	$H(0.38)$	$83.27^{+0.38}_{-0.29}$
$\boldsymbol{\ln(10^{10} A_s)}$	$3.043^{+0.012}_{-0.016}$	$\Omega_\nu h^2$	< 0.000776	$D_M(0.38)$	$1522.5^{+7.5}_{-9.7}$
$\boldsymbol{n_s}$	0.9681 ± 0.0036	$\Omega_m h^3$	$0.09643^{+0.00042}_{-0.00033}$	$H(0.51)$	$89.95^{+0.32}_{-0.24}$
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	σ_8	$0.809^{+0.013}_{-0.0082}$	$D_M(0.51)$	$1973.0^{+8.9}_{-12}$
$\boldsymbol{A^{CIB}_{217}}$	47 ± 7	S_8	0.818 ± 0.012	$H(0.61)$	$95.53^{+0.27}_{-0.21}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$\sigma_8\Omega_m^{0.5}$	0.4482 ± 0.0066	$D_M(0.61)$	$2296.5^{+9.7}_{-13}$
$\boldsymbol{A^{tSZ}_{143}}$	$5.6^{+2.1}_{-1.9}$	$\sigma_8\Omega_m^{0.25}$	$0.6023^{+0.0087}_{-0.0070}$	$H(2.33)$	235.81 ± 0.57
$\boldsymbol{A^{PS}_{100}}$	257 ± 28	$\sigma_8/h^{0.5}$	$0.982^{+0.014}_{-0.011}$	$D_M(2.33)$	$5752.6^{+9.8}_{-14}$
$\boldsymbol{A^{PS}_{143}}$	45 ± 8	$r_{drag}h$	$100.19^{+0.88}_{-0.75}$	$f\sigma_8(0.15)$	0.4532 ± 0.0062
$\boldsymbol{A^{PS}_{143\times217}}$	42 ± 9	$\langle d^2\rangle^{1/2}$	2.425 ± 0.023	$\sigma_8(0.15)$	$0.748^{+0.012}_{-0.0075}$
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	z_{re}	$7.75^{+0.58}_{-0.80}$	$f\sigma_8(0.38)$	$0.4726^{+0.0061}_{-0.0054}$
$\boldsymbol{A^{kSZ}}$	< 4.14	$10^9 A_s$	$2.098^{+0.025}_{-0.034}$	$\sigma_8(0.38)$	$0.664^{+0.011}_{-0.0066}$
$\boldsymbol{A^{dustTT}_{100}}$	8.9 ± 1.9	$10^9 A_s e^{-2\tau}$	1.877 ± 0.011	$f\sigma_8(0.51)$	$0.4718^{+0.0061}_{-0.0050}$
$\boldsymbol{A^{dustTT}_{143}}$	10.9 ± 1.8	D_{40}	1225 ± 12	$\sigma_8(0.51)$	$0.622^{+0.010}_{-0.0062}$
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.7 ± 3.3	D_{220}	5737 ± 38	$f\sigma_8(0.61)$	$0.4672^{+0.0061}_{-0.0048}$
$\boldsymbol{A^{dustTT}_{217}}$	94.0 ± 7.4	D_{810}	2538 ± 14	$\sigma_8(0.61)$	$0.592^{+0.010}_{-0.0059}$
$\boldsymbol{A^{dustTE}_{100}}$	0.114 ± 0.038	D_{1420}	817.7 ± 4.8	$f\sigma_8(2.33)$	$0.2985^{+0.0044}_{-0.0028}$
$\boldsymbol{A^{dustTE}_{100\times143}}$	0.135 ± 0.029	D_{2000}	231.2 ± 1.6	$\sigma_8(2.33)$	$0.3079^{+0.0051}_{-0.0031}$
$\boldsymbol{A^{dustTE}_{100\times217}}$	0.479 ± 0.084	$n_{s,0.002}$	0.9681 ± 0.0036	f^{143}_{2000}	29.2 ± 2.7
$\boldsymbol{A^{dustTE}_{143}}$	0.224 ± 0.055	Y_P	$0.245430^{+0.000052}_{-0.000045}$	$f^{143\times217}_{2000}$	31.9 ± 1.8
$\boldsymbol{A^{dustTE}_{143\times217}}$	0.664 ± 0.081	Y_P^{BBN}	$0.246756^{+0.000053}_{-0.000045}$	f^{217}_{2000}	106.7 ± 1.7
$\boldsymbol{A^{dustTE}_{217}}$	2.07 ± 0.27	10^5D/H	$2.569^{+0.022}_{-0.025}$	χ^2_{small}	397.0 ± 1.9
$\boldsymbol{c_{100}}$	0.99966 ± 0.00062	Age/Gyr	$13.774^{+0.022}_{-0.031}$	χ^2_{lowl}	22.93 ± 0.78
$\boldsymbol{c_{217}}$	0.99821 ± 0.00061	z_*	1089.69 ± 0.20	χ^2_{plik}	2360.5 ± 6.0
$\boldsymbol{m^1_{DES}}$	0.014 ± 0.023	r_*	144.69 ± 0.22	χ^2_{6DF}	0.032 ± 0.048
$\boldsymbol{m^2_{DES}}$	0.012 ± 0.022	$100\theta_*$	1.04123 ± 0.00029	χ^2_{MGS}	1.58 ± 0.48
$\boldsymbol{m^3_{DES}}$	-0.007 ± 0.020	$D_M(z_*)$/Gpc	13.896 ± 0.022	$\chi^2_{DR12BAO}$	4.2 ± 1.1
$\boldsymbol{m^4_{DES}}$	0.012 ± 0.021	z_{drag}	1060.06 ± 0.29	χ^2_{DES}	231.9 ± 2.4
$\boldsymbol{A_{IA,DES}}$	1.25 ± 0.50	r_{drag}	147.33 ± 0.24	χ^2_{prior}	19.6 ± 6.0
$\boldsymbol{\alpha_{IA,DES}}$	$1.91^{+2.8}_{-0.97}$	k_D	0.14069 ± 0.00029	χ^2_{BAO}	5.77 ± 0.83
$\boldsymbol{\Delta z^1_{s,DES}}$	0.005 ± 0.015	$100\theta_D$	0.16070 ± 0.00017	χ^2_{CMB}	2780.5 ± 6.0
$\boldsymbol{\Delta z^2_{s,DES}}$	-0.021 ± 0.012	z_{eq}	3374 ± 21		
$\boldsymbol{\Delta z^3_{s,DES}}$	0.004 ± 0.010	k_{eq}	0.010298 ± 0.000064		

$\bar{\chi}^2_{eff} = 3037.78$; $\Delta\bar{\chi}^2_{eff} = 0.91$; $R - 1 = 0.03703$

6.165 base_mnu_plikHM_TTTEEE_lowl_lowE_DESlens_post_lensing_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02244 ± 0.00014	$\boldsymbol{\Delta z^3_{s,DES}}$	0.004 ± 0.010	z_{eq}	3382 ± 24
$\boldsymbol{\Omega_c h^2}$	0.1191 ± 0.0011	$\boldsymbol{\Delta z^4_{s,DES}}$	-0.023 ± 0.020	k_{eq}	0.010322 ± 0.000074
$\boldsymbol{100\theta_{MC}}$	1.04100 ± 0.00030	H_0	$67.71^{+0.95}_{-0.56}$	$100\theta_{eq}$	0.8173 ± 0.0046
$\boldsymbol{\tau}$	$0.0560^{+0.0056}_{-0.0079}$	Ω_Λ	$0.689^{+0.012}_{-0.0070}$	$100\theta_{s,eq}$	0.4514 ± 0.0024
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 0.0863	Ω_m	$0.3106^{+0.0070}_{-0.012}$	$H(0.15)$	$72.99^{+0.83}_{-0.49}$
$\boldsymbol{\ln(10^{10} A_s)}$	$3.045^{+0.012}_{-0.015}$	$\Omega_m h^2$	$0.1423^{+0.0011}_{-0.0015}$	$D_M(0.15)$	$640.4^{+4.6}_{-8.2}$
$\boldsymbol{n_s}$	0.9671 ± 0.0039	$\Omega_\nu h^2$	< 0.000928	$H(0.38)$	$83.09^{+0.64}_{-0.36}$
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0025	$\Omega_m h^3$	$0.09635^{+0.00052}_{-0.00032}$	$D_M(0.38)$	$1527.5^{+9.4}_{-17}$
$\boldsymbol{A^{CIB}_{217}}$	47 ± 7	σ_8	$0.808^{+0.015}_{-0.0069}$	$H(0.51)$	$89.80^{+0.52}_{-0.30}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	S_8	0.821 ± 0.011	$D_M(0.51)$	1979^{+11}_{-20}
$\boldsymbol{A^{tSZ}_{143}}$	$5.5^{+2.1}_{-1.9}$	$\sigma_8 \Omega_m^{0.5}$	0.4499 ± 0.0059	$H(0.61)$	$95.41^{+0.44}_{-0.25}$
$\boldsymbol{A^{PS}_{100}}$	258 ± 28	$\sigma_8 \Omega_m^{0.25}$	$0.6028^{+0.0081}_{-0.0060}$	$D_M(0.61)$	2303^{+12}_{-21}
$\boldsymbol{A^{PS}_{143}}$	45 ± 8	$\sigma_8/h^{0.5}$	$0.981^{+0.014}_{-0.0089}$	$H(2.33)$	$236.09^{+0.70}_{-0.88}$
$\boldsymbol{A^{PS}_{143\times217}}$	42 ± 9	$r_{drag} h$	$99.7^{+1.5}_{-0.95}$	$D_M(2.33)$	5758^{+11}_{-21}
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	$\langle d^2 \rangle^{1/2}$	2.431 ± 0.019	$f\sigma_8(0.15)$	0.4548 ± 0.0055
$\boldsymbol{A^{kSZ}}$	< 4.22	z_{re}	$7.80^{+0.59}_{-0.78}$	$\sigma_8(0.15)$	$0.746^{+0.015}_{-0.0064}$
$\boldsymbol{A^{dustTT}_{100}}$	8.9 ± 1.9	$10^9 A_s$	$2.102^{+0.024}_{-0.032}$	$f\sigma_8(0.38)$	$0.4733^{+0.0054}_{-0.0048}$
$\boldsymbol{A^{dustTT}_{143}}$	10.9 ± 1.8	$10^9 A_s e^{-2\tau}$	1.879 ± 0.011	$\sigma_8(0.38)$	$0.662^{+0.014}_{-0.0058}$
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.7 ± 3.3	D_{40}	1228 ± 11	$f\sigma_8(0.51)$	$0.4721^{+0.0058}_{-0.0043}$
$\boldsymbol{A^{dustTT}_{217}}$	93.9 ± 7.4	D_{220}	5740 ± 38	$\sigma_8(0.51)$	$0.619^{+0.013}_{-0.0055}$
$\boldsymbol{A^{dustTE}_{100}}$	0.114 ± 0.038	D_{810}	2539 ± 14	$f\sigma_8(0.61)$	$0.4672^{+0.0060}_{-0.0039}$
$\boldsymbol{A^{dustTE}_{100\times143}}$	0.135 ± 0.029	D_{1420}	817.8 ± 4.8	$\sigma_8(0.61)$	$0.589^{+0.013}_{-0.0053}$
$\boldsymbol{A^{dustTE}_{100\times217}}$	0.480 ± 0.083	D_{2000}	231.1 ± 1.6	$f\sigma_8(2.33)$	$0.2975^{+0.0057}_{-0.0025}$
$\boldsymbol{A^{dustTE}_{143}}$	0.223 ± 0.054	$n_{s,0.002}$	0.9671 ± 0.0039	$\sigma_8(2.33)$	$0.3066^{+0.0068}_{-0.0029}$
$\boldsymbol{A^{dustTE}_{143\times217}}$	0.664 ± 0.082	Y_P	$0.245422^{+0.000058}_{-0.000049}$	f^{143}_{2000}	29.2 ± 2.7
$\boldsymbol{A^{dustTE}_{217}}$	2.08 ± 0.27	Y_P^{BBN}	$0.246749^{+0.000058}_{-0.000049}$	$f^{143\times217}_{2000}$	32.0 ± 1.8
$\boldsymbol{c_{100}}$	0.99966 ± 0.00062	10^5D/H	$2.572^{+0.024}_{-0.028}$	f^{217}_{2000}	106.8 ± 1.8
$\boldsymbol{c_{217}}$	0.99822 ± 0.00060	Age/Gyr	$13.786^{+0.025}_{-0.048}$	$\chi^2_{lensing}$	9.24 ± 0.71
$\boldsymbol{m^1_{DES}}$	0.014 ± 0.023	z_*	$1089.75^{+0.22}_{-0.26}$	χ^2_{simall}	397.1 ± 2.0
$\boldsymbol{m^2_{DES}}$	0.011 ± 0.022	r_*	144.62 ± 0.25	χ^2_{lowl}	23.13 ± 0.79
$\boldsymbol{m^3_{DES}}$	-0.009 ± 0.020	$100\theta_*$	1.04119 ± 0.00029	χ^2_{plik}	2360.2 ± 5.8
$\boldsymbol{m^4_{DES}}$	0.010 ± 0.021	$D_M(z_*)$/Gpc	13.890 ± 0.023	χ^2_{DES}	232.1 ± 2.5
$\boldsymbol{A_{IA,DES}}$	1.27 ± 0.49	z_{drag}	1060.04 ± 0.30	χ^2_{prior}	19.8 ± 6.0
$\boldsymbol{\alpha_{IA,DES}}$	$1.8^{+2.8}_{-1.1}$	r_{drag}	147.26 ± 0.25	χ^2_{CMB}	2789.7 ± 6.0
$\boldsymbol{\Delta z^1_{s,DES}}$	0.005 ± 0.015	k_D	0.14075 ± 0.00030		
$\boldsymbol{\Delta z^2_{s,DES}}$	-0.021 ± 0.012	$100\theta_D$	0.16070 ± 0.00017		

$\bar{\chi}^2_{eff} = 3041.52$; $\Delta\bar{\chi}^2_{eff} = 1.27$; $R - 1 = 0.02594$

6.166 base_mnu_plikHM_TTTEEE_lowl_lowE_DESlens_post_BAO_lensing_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02247 ± 0.00013	$\boldsymbol{\Delta z^4_{s,DES}}$	-0.023 ± 0.020	$100\theta_{eq}$	0.8184 ± 0.0037
$\boldsymbol{\Omega_c h^2}$	0.11881 ± 0.00086	H_0	$68.02^{+0.54}_{-0.43}$	$100\theta_{s,eq}$	0.4520 ± 0.0019
$\boldsymbol{100\theta_{MC}}$	1.04105 ± 0.00029	Ω_Λ	$0.6934^{+0.0067}_{-0.0055}$	$H(0.15)$	$73.26^{+0.47}_{-0.38}$
$\boldsymbol{\tau}$	$0.0562^{+0.0057}_{-0.0076}$	Ω_m	$0.3066^{+0.0055}_{-0.0067}$	$D_M(0.15)$	$637.7^{+3.6}_{-4.6}$
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 0.0657	$\Omega_m h^2$	0.14183 ± 0.00089	$H(0.38)$	$83.29^{+0.36}_{-0.29}$
$\boldsymbol{\ln(10^{10} A_s)}$	$3.045^{+0.012}_{-0.015}$	$\Omega_\nu h^2$	< 0.000706	$D_M(0.38)$	$1522.1^{+7.4}_{-9.4}$
$\boldsymbol{n_s}$	0.9678 ± 0.0035	$\Omega_m h^3$	$0.09648^{+0.00038}_{-0.00032}$	$H(0.51)$	$89.96^{+0.30}_{-0.24}$
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0025	σ_8	$0.812^{+0.010}_{-0.0070}$	$D_M(0.51)$	$1972.5^{+8.7}_{-11}$
$\boldsymbol{A^{CIB}_{217}}$	47 ± 7	S_8	0.8204 ± 0.0098	$H(0.61)$	$95.55^{+0.26}_{-0.20}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$\sigma_8\Omega_m^{0.5}$	0.4493 ± 0.0054	$D_M(0.61)$	$2295.9^{+9.5}_{-12}$
$\boldsymbol{A^{tSZ}_{143}}$	$5.6^{+2.1}_{-1.9}$	$\sigma_8\Omega_m^{0.25}$	$0.6039^{+0.0066}_{-0.0057}$	$H(2.33)$	235.83 ± 0.56
$\boldsymbol{A^{PS}_{100}}$	257 ± 28	$\sigma_8/h^{0.5}$	$0.984^{+0.011}_{-0.0088}$	$D_M(2.33)$	$5751.5^{+9.6}_{-13}$
$\boldsymbol{A^{PS}_{143}}$	45 ± 8	$r_{drag}h$	$100.20^{+0.85}_{-0.73}$	$f\sigma_8(0.15)$	0.4543 ± 0.0050
$\boldsymbol{A^{PS}_{143\times217}}$	42 ± 9	$\langle d^2\rangle^{1/2}$	2.430 ± 0.019	$\sigma_8(0.15)$	$0.7505^{+0.0098}_{-0.0065}$
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	z_{re}	$7.82^{+0.60}_{-0.75}$	$f\sigma_8(0.38)$	0.4737 ± 0.0047
$\boldsymbol{A^{kSZ}}$	< 4.12	$10^9 A_s$	$2.102^{+0.025}_{-0.031}$	$\sigma_8(0.38)$	$0.6658^{+0.0090}_{-0.0059}$
$\boldsymbol{A^{dust TT}_{100}}$	8.9 ± 1.9	$10^9 A_s e^{-2\tau}$	1.878 ± 0.010	$f\sigma_8(0.51)$	$0.4729^{+0.0047}_{-0.0041}$
$\boldsymbol{A^{dust TT}_{143}}$	10.9 ± 1.8	D_{40}	1226 ± 11	$\sigma_8(0.51)$	$0.6232^{+0.0085}_{-0.0055}$
$\boldsymbol{A^{dust TT}_{143\times217}}$	18.7 ± 3.3	D_{220}	5741 ± 37	$f\sigma_8(0.61)$	$0.4683^{+0.0047}_{-0.0040}$
$\boldsymbol{A^{dust TT}_{217}}$	94.0 ± 7.4	D_{810}	2539 ± 13	$\sigma_8(0.61)$	$0.5932^{+0.0081}_{-0.0053}$
$\boldsymbol{A^{dust TE}_{100}}$	0.115 ± 0.038	D_{1420}	817.9 ± 4.7	$f\sigma_8(2.33)$	$0.2992^{+0.0035}_{-0.0025}$
$\boldsymbol{A^{dust TE}_{100\times143}}$	0.135 ± 0.029	D_{2000}	231.2 ± 1.5	$\sigma_8(2.33)$	$0.3087^{+0.0042}_{-0.0028}$
$\boldsymbol{A^{dust TE}_{100\times217}}$	0.479 ± 0.084	$n_{s,0.002}$	0.9678 ± 0.0035	f^{143}_{2000}	29.1 ± 2.7
$\boldsymbol{A^{dust TE}_{143}}$	0.223 ± 0.055	Y_P	$0.245431^{+0.000052}_{-0.000044}$	$f^{143\times217}_{2000}$	31.8 ± 1.8
$\boldsymbol{A^{dust TE}_{143\times217}}$	0.664 ± 0.082	Y_P^{BBN}	$0.246758^{+0.000052}_{-0.000044}$	f^{217}_{2000}	106.7 ± 1.7
$\boldsymbol{A^{dust TE}_{217}}$	2.07 ± 0.27	10^5D/H	$2.568^{+0.022}_{-0.025}$	$\chi^2_{lensing}$	9.19 ± 0.64
$\boldsymbol{c_{100}}$	0.99966 ± 0.00062	Age/Gyr	$13.771^{+0.022}_{-0.029}$	χ^2_{simall}	397.1 ± 1.9
$\boldsymbol{c_{217}}$	0.99821 ± 0.00060	z_*	$1089.69^{+0.19}_{-0.21}$	χ^2_{lowl}	23.04 ± 0.74
$\boldsymbol{m^1_{DES}}$	0.014 ± 0.023	r_*	144.67 ± 0.21	χ^2_{plik}	2359.9 ± 5.7
$\boldsymbol{m^2_{DES}}$	0.012 ± 0.022	$100\theta_*$	1.04122 ± 0.00028	χ^2_{6DF}	0.030 ± 0.046
$\boldsymbol{m^3_{DES}}$	-0.007 ± 0.020	$D_M(z_*)$/Gpc	13.894 ± 0.020	χ^2_{MGS}	1.59 ± 0.47
$\boldsymbol{m^4_{DES}}$	0.011 ± 0.021	z_{drag}	1060.07 ± 0.29	$\chi^2_{DR12BAO}$	4.1 ± 1.0
$\boldsymbol{A_{IA,DES}}$	1.27 ± 0.50	r_{drag}	147.30 ± 0.22	χ^2_{DES}	231.9 ± 2.4
$\boldsymbol{\alpha_{IA,DES}}$	$1.90^{+2.8}_{-0.99}$	k_D	0.14071 ± 0.00028	χ^2_{prior}	19.6 ± 6.0
$\boldsymbol{\Delta z^1_{s,DES}}$	0.005 ± 0.015	$100\theta_D$	0.16069 ± 0.00017	χ^2_{CMB}	2789.2 ± 6.0
$\boldsymbol{\Delta z^2_{s,DES}}$	-0.021 ± 0.012	z_{eq}	3376 ± 20	χ^2_{BAO}	5.74 ± 0.79
$\boldsymbol{\Delta z^3_{s,DES}}$	0.004 ± 0.010	k_{eq}	0.010304 ± 0.000060		

$\bar{\chi}^2_{eff} = 3046.53$; $\Delta\bar{\chi}^2_{eff} = 0.94$; $R - 1 = 0.03665$

6.167 base_mnu_BAO_Cooke17

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02223 ± 0.00050	Age/Gyr	$12.7^{+1.0}_{-1.3}$	$D_M(0.15)$	620 ± 39
$\boldsymbol{\Omega_c h^2}$	$0.143^{+0.042}_{-0.057}$	z_*	$1093.2^{+3.3}_{-3.9}$	$H(0.38)$	$89.0^{+6.5}_{-7.7}$
$\boldsymbol{100\theta_{MC}}$	$1.107^{+0.042}_{-0.035}$	r_*	138 ± 10	$D_M(0.38)$	1462 ± 100
$\boldsymbol{\Sigma m_\nu}$ **[eV]**	—	$100\theta_*$	$1.108^{+0.042}_{-0.035}$	$H(0.51)$	$97.3^{+7.6}_{-9.1}$
H_0	$69.6^{+3.6}_{-4.3}$	$D_M(z_*)$/Gpc	$12.5^{+1.2}_{-1.5}$	$D_M(0.51)$	1884 ± 140
Ω_Λ	0.611 ± 0.053	z_{drag}	1062.1 ± 3.2	$H(0.61)$	$104.2^{+8.5}_{-10}$
Ω_m	0.389 ± 0.053	r_{drag}	140 ± 10	$D_M(0.61)$	2184 ± 160
$\Omega_m h^2$	$0.192^{+0.036}_{-0.052}$	k_D	$0.150^{+0.011}_{-0.012}$	$H(2.33)$	270^{+28}_{-33}
$\Omega_\nu h^2$	< 0.0359	$100\theta_D$	0.1695 ± 0.0054	$D_M(2.33)$	5299^{+440}_{-530}
$\Omega_m h^3$	$0.135^{+0.028}_{-0.046}$	z_{eq}	3943^{+1000}_{-1000}	$\chi^2_{Cooke17}$	1.0 ± 1.4
$r_{drag} h$	97.3 ± 2.2	k_{eq}	$0.0122^{+0.0029}_{-0.0041}$	χ^2_{6DF}	0.41 ± 0.42
Y_P	0.24533 ± 0.00021	$100\theta_{eq}$	$0.842^{+0.096}_{-0.22}$	χ^2_{MGS}	0.74 ± 0.70
Y_P^{BBN}	0.24665 ± 0.00022	$100\theta_{s,eq}$	$0.464^{+0.053}_{-0.11}$	$\chi^2_{DR12BAO}$	3.9 ± 1.8
10^5D/H	2.614 ± 0.094	$H(0.15)$	$76.3^{+4.6}_{-5.5}$	χ^2_{BAO}	5.1 ± 2.0

$\bar{\chi}^2_{eff} = 6.05$; $\Delta\bar{\chi}^2_{eff} = 0.08$; $R - 1 = 0.01904$

6.168 base_mnu_BAO_Cooke17_Pantheon

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02224 ± 0.00049	z_*	$1088.4^{+1.6}_{-1.9}$	$D_M(0.38)$	1593 ± 66
$\boldsymbol{\Omega_c h^2}$	$0.084^{+0.026}_{-0.031}$	r_*	151.8 ± 6.2	$H(0.51)$	86.4 ± 4.1
$\boldsymbol{100\theta_{MC}}$	1.049 ± 0.020	$100\theta_*$	1.050 ± 0.020	$D_M(0.51)$	2063 ± 88
$\boldsymbol{\Sigma m_\nu}$ **[eV]**	—	$D_M(z_*)$/Gpc	$14.47^{+0.74}_{-0.85}$	$H(0.61)$	91.8 ± 4.5
H_0	$65.0^{+2.3}_{-2.8}$	z_{drag}	1058.2 ± 1.8	$D_M(0.61)$	2401 ± 100
Ω_Λ	0.686 ± 0.020	r_{drag}	154.6 ± 6.4	$H(2.33)$	228 ± 14
Ω_m	0.314 ± 0.020	k_D	0.1345 ± 0.0057	$D_M(2.33)$	5997 ± 300
$\Omega_m h^2$	$0.133^{+0.015}_{-0.017}$	$100\theta_D$	0.1619 ± 0.0027	$\chi^2_{Cooke17}$	0.96 ± 1.3
$\Omega_\nu h^2$	< 0.0363	z_{eq}	2541^{+600}_{-700}	χ^2_{JLA}	1037.3 ± 1.7
$\Omega_m h^3$	$0.087^{+0.012}_{-0.015}$	k_{eq}	$0.0080^{+0.0017}_{-0.0021}$	χ^2_{6DF}	0.053 ± 0.075
$r_{drag} h$	100.3 ± 1.2	$100\theta_{eq}$	$1.09^{+0.12}_{-0.30}$	χ^2_{MGS}	1.76 ± 0.67
Y_P	$0.24533^{+0.00022}_{-0.00020}$	$100\theta_{s,eq}$	$0.592^{+0.066}_{-0.15}$	$\chi^2_{DR12BAO}$	4.0 ± 1.7
Y_P^{BBN}	$0.24665^{+0.00022}_{-0.00020}$	$H(0.15)$	$70.1^{+2.7}_{-3.1}$	χ^2_{BAO}	5.8 ± 1.9
10^5D/H	2.614 ± 0.092	$D_M(0.15)$	668 ± 27		
Age/Gyr	$14.36^{+0.67}_{-0.75}$	$H(0.38)$	$79.9^{+3.4}_{-3.8}$		

$\bar{\chi}^2_{eff} = 1044.09$; $\Delta\bar{\chi}^2_{eff} = 0.07$; $R - 1 = 0.00579$

6.169 base_mnu_BAO_Cooke17_Pantheon_theta

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02225 ± 0.00051	z_*	$1087.72^{+0.88}_{-1.4}$	$D_M(0.38)$	1614^{+61}_{-34}
$\boldsymbol{\Omega_c h^2}$	$0.077^{+0.017}_{-0.032}$	r_*	$153.7^{+5.9}_{-2.9}$	$H(0.51)$	$84.9^{+1.5}_{-3.2}$
$\boldsymbol{100\theta_{MC}}$	1.04090 ± 0.00061	$100\theta_*$	1.04167 ± 0.00064	$D_M(0.51)$	2092^{+79}_{-43}
$\boldsymbol{\Sigma m_\nu}$ [eV]	—	$D_M(z_*)$/Gpc	$14.76^{+0.56}_{-0.28}$	$H(0.61)$	$90.1^{+1.6}_{-3.4}$
H_0	$64.2^{+1.3}_{-2.5}$	z_{drag}	1057.7 ± 1.5	$D_M(0.61)$	2435^{+92}_{-49}
Ω_Λ	0.6943 ± 0.0082	r_{drag}	$156.6^{+6.0}_{-3.1}$	$H(2.33)$	$222.3^{+4.2}_{-8.5}$
Ω_m	0.3057 ± 0.0082	k_D	$0.1325^{+0.0023}_{-0.0046}$	$D_M(2.33)$	6102^{+230}_{-110}
$\Omega_m h^2$	$0.1261^{+0.0047}_{-0.0097}$	$100\theta_D$	0.16076 ± 0.00081	$\chi^2_{Cooke17}$	1.0 ± 1.4
$\Omega_\nu h^2$	< 0.0370	z_{eq}	2367^{+400}_{-800}	χ^2_{JLA}	1036.23 ± 0.33
$\Omega_m h^3$	$0.0811^{+0.0040}_{-0.0092}$	k_{eq}	$0.0074^{+0.0010}_{-0.0021}$	χ^2_{6DF}	0.049 ± 0.071
$r_{drag}h$	100.5 ± 1.1	$100\theta_{eq}$	$1.13^{+0.14}_{-0.30}$	χ^2_{MGS}	1.81 ± 0.66
Y_P	$0.24534^{+0.00023}_{-0.00020}$	$100\theta_{s,eq}$	$0.612^{+0.070}_{-0.15}$	$\chi^2_{DR12BAO}$	4.1 ± 1.2
Y_P^{BBN}	$0.24666^{+0.00023}_{-0.00020}$	$H(0.15)$	$69.1^{+1.4}_{-2.7}$	χ^2_{prior}	1.0 ± 1.4
10^5D/H	2.611 ± 0.095	$D_M(0.15)$	676^{+26}_{-15}	χ^2_{BAO}	6.0 ± 1.3
Age/Gyr	$14.61^{+0.55}_{-0.27}$	$H(0.38)$	$78.6^{+1.5}_{-3.0}$		

$\bar{\chi}^2_{eff} = 1044.27$; $\Delta\bar{\chi}^2_{eff} = 0.04$; $R - 1 = 0.00708$

6.170 base_mnu_BAO_Cooke17_theta

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02221 ± 0.00050	z_*	$1087.77^{+0.93}_{-1.3}$	$D_M(0.38)$	1616^{+60}_{-34}
$\boldsymbol{\Omega_c h^2}$	$0.077^{+0.020}_{-0.028}$	r_*	$153.8^{+5.6}_{-3.1}$	$H(0.51)$	$84.8^{+1.6}_{-3.1}$
$\boldsymbol{100\theta_{MC}}$	1.04092 ± 0.00060	$100\theta_*$	1.04170 ± 0.00063	$D_M(0.51)$	2095^{+78}_{-44}
$\boldsymbol{\Sigma m_\nu}$ [eV]	—	$D_M(z_*)$/Gpc	$14.76^{+0.53}_{-0.30}$	$H(0.61)$	$90.1^{+1.7}_{-3.3}$
H_0	$64.1^{+1.4}_{-2.4}$	z_{drag}	$1057.6^{+1.3}_{-1.5}$	$D_M(0.61)$	2438^{+90}_{-50}
Ω_Λ	0.6931 ± 0.0088	r_{drag}	$156.7^{+5.7}_{-3.3}$	$H(2.33)$	$222.3^{+4.4}_{-8.1}$
Ω_m	0.3069 ± 0.0088	k_D	$0.1324^{+0.0024}_{-0.0045}$	$D_M(2.33)$	6107^{+220}_{-120}
$\Omega_m h^2$	$0.1261^{+0.0050}_{-0.0093}$	$100\theta_D$	0.16081 ± 0.00082	$\chi^2_{Cooke17}$	1.0 ± 1.5
$\Omega_\nu h^2$	0.027 ± 0.015	z_{eq}	2363^{+500}_{-700}	χ^2_{6DF}	0.055 ± 0.077
$\Omega_m h^3$	$0.0810^{+0.0043}_{-0.0089}$	k_{eq}	$0.0074^{+0.0012}_{-0.0019}$	χ^2_{MGS}	1.72 ± 0.69
$r_{drag}h$	100.4 ± 1.1	$100\theta_{eq}$	$1.13^{+0.22}_{-0.29}$	$\chi^2_{DR12BAO}$	4.3 ± 1.4
Y_P	$0.24532^{+0.00023}_{-0.00019}$	$100\theta_{s,eq}$	$0.61^{+0.11}_{-0.14}$	χ^2_{prior}	0.99 ± 1.4
Y_P^{BBN}	$0.24665^{+0.00023}_{-0.00020}$	$H(0.15)$	$69.0^{+1.4}_{-2.6}$	χ^2_{BAO}	6.1 ± 1.4
10^5D/H	2.618 ± 0.094	$D_M(0.15)$	677^{+25}_{-15}		
Age/Gyr	$14.62^{+0.53}_{-0.29}$	$H(0.38)$	$78.5^{+1.5}_{-2.9}$		

$\bar{\chi}^2_{eff} = 8.05$; $\Delta\bar{\chi}^2_{eff} = -0.15$; $R - 1 = 0.07129$

7 nnu

7.1 base_nnu_plikHM_TT_lowl_lowE

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022023	0.02207 ± 0.00031	$\sigma_8\Omega_m^{0.5}$	0.4621	0.460 ± 0.013	$100\theta_{s,eq}$	0.4460	0.4476 ± 0.0061
$\boldsymbol{\Omega_c h^2}$	0.11884	0.1200 ± 0.0040	$\sigma_8\Omega_m^{0.25}$	0.6108	0.610 ± 0.012	$H(0.15)$	71.12	71.9 ± 2.2
$\boldsymbol{100\theta_{MC}}$	1.04093	1.04086 ± 0.00058	$\sigma_8/h^{0.5}$	0.9958	0.993 ± 0.016	$D_M(0.15)$	658.4	652 ± 21
$\boldsymbol{\tau}$	0.0519	0.0514 ± 0.0080	$r_{drag}h$	97.65	98.2 ± 2.1	$H(0.38)$	81.40	82.2 ± 2.2
$\boldsymbol{N_{eff}}$	2.895	3.00 ± 0.28	$\langle d^2\rangle^{1/2}$	2.4673	2.457 ± 0.045	$D_M(0.38)$	1566.3	1551 ± 47
$\boldsymbol{\ln(10^{10}A_s)}$	3.0355	3.037 ± 0.021	z_{re}	7.47	7.41 ± 0.84	$H(0.51)$	88.20	89.0 ± 2.1
$\boldsymbol{n_s}$	0.9575	0.961 ± 0.013	$10^9 A_s$	2.0811	2.085 ± 0.043	$D_M(0.51)$	2026	2007 ± 59
$\boldsymbol{y_{cal}}$	1.00046	1.0005 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.8760	1.881 ± 0.022	$H(0.61)$	93.88	94.7 ± 2.1
$\boldsymbol{A_{217}^{CIB}}$	46.8	48 ± 7	D_{40}	1239.8	1237 ± 22	$D_M(0.61)$	2356	2334 ± 66
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.55	—	D_{220}	5710.2	5713 ± 41	$H(2.33)$	234.95	236.1 ± 3.6
$\boldsymbol{A_{143}^{tSZ}}$	6.95	5.1 ± 2.0	D_{810}	2536.8	2536 ± 14	$D_M(2.33)$	5844	5801 ± 120
$\boldsymbol{A_{100}^{PS}}$	249.8	262 ± 29	D_{1420}	816.5	814.8 ± 5.2	$f\sigma_8(0.15)$	0.4653	0.464 ± 0.012
$\boldsymbol{A_{143}^{PS}}$	50.6	49 ± 9	D_{2000}	230.89	229.9 ± 2.3	$\sigma_8(0.15)$	0.7445	0.747 ± 0.013
$\boldsymbol{A_{143\times217}^{PS}}$	51.5	44 ± 9	$n_{s,0.002}$	0.9575	0.961 ± 0.013	$f\sigma_8(0.38)$	0.4800	0.4793 ± 0.0095
$\boldsymbol{A_{217}^{PS}}$	121.2	115 ± 10	Y_P	0.24321	0.2446 ± 0.0039	$\sigma_8(0.38)$	0.6582	0.661 ± 0.012
$\boldsymbol{A^{kSZ}}$	0.00	< 4.72	Y_P^{BBN}	0.24453	0.2459 ± 0.0039	$f\sigma_8(0.51)$	0.4767	0.4766 ± 0.0084
$\boldsymbol{A_{100}^{dustTT}}$	8.77	8.9 ± 1.8	10^5D/H	2.599	2.625 ± 0.069	$\sigma_8(0.51)$	0.6153	0.618 ± 0.012
$\boldsymbol{A_{143}^{dustTT}}$	10.74	10.7 ± 1.8	Age/Gyr	13.986	13.89 ± 0.30	$f\sigma_8(0.61)$	0.4705	0.4707 ± 0.0079
$\boldsymbol{A_{143\times217}^{dustTT}}$	19.66	18.2 ± 3.3	z_*	1090.110	1090.25 ± 0.49	$\sigma_8(0.61)$	0.5850	0.588 ± 0.012
$\boldsymbol{A_{217}^{dustTT}}$	95.2	93.3 ± 7.4	r_*	145.76	144.9 ± 2.5	$f\sigma_8(2.33)$	0.2944	0.2959 ± 0.0062
$\boldsymbol{c_{100}}$	0.99966	0.99960 ± 0.00062	$100\theta_*$	1.04126	1.04110 ± 0.00072	$\sigma_8(2.33)$	0.3028	0.3047 ± 0.0069
$\boldsymbol{c_{217}}$	0.99824	0.99825 ± 0.00062	$D_M(z_*)$/Gpc	13.999	13.92 ± 0.23	f_{2000}^{143}	29.17	31 ± 4
H_0	65.73	66.5 ± 2.3	z_{drag}	1058.94	1059.2 ± 1.1	$f_{2000}^{143\times217}$	32.43	33.3 ± 2.6
Ω_Λ	0.6725	$0.677^{+0.019}_{-0.017}$	r_{drag}	148.56	147.7 ± 2.6	f_{2000}^{217}	106.89	107.9 ± 2.3
Ω_m	0.3275	$0.323^{+0.017}_{-0.019}$	k_D	0.13965	0.1402 ± 0.0019	χ^2_{simall}	395.85	396.9 ± 1.6
$\Omega_m h^2$	0.14151	0.1428 ± 0.0041	$100\theta_D$	0.16071	0.16097 ± 0.00065	χ^2_{lowl}	24.50	24.4 ± 2.2
$\Omega_m h^3$	0.0930	$0.0950^{+0.0051}_{-0.0058}$	z_{eq}	3436	3419 ± 63	χ^2_{plik}	757.7	771.7 ± 5.8
σ_8	0.8074	0.810 ± 0.014	k_{eq}	0.010379	0.01040 ± 0.00016	χ^2_{prior}	1.26	7.3 ± 3.6
S_8	0.8436	0.840 ± 0.024	$100\theta_{eq}$	0.8063	0.810 ± 0.012	χ^2_{CMB}	1178.0	1192.9 ± 5.6

Best-fit $\chi^2_{eff} = 1179.27$; $\Delta\chi^2_{eff} = -0.31$; $\bar{\chi}^2_{eff} = 1200.18$; $\Delta\bar{\chi}^2_{eff} = 0.61$; $R - 1 = 0.00449$

χ^2_{eff}: CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.85 (Δ -0.02) commander_dx12_v3_2_29: 24.50 (Δ 0.89) plik_rd12_HM_v22_TT: 757.66 (Δ -1.09)

7.2 base_nnu_plikHM_TT_lowl_lowE_post_lensing

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022013	0.02206 ± 0.00029	$\sigma_8\Omega_m^{0.25}$	0.6060	0.6073 ± 0.0084	$D_M(0.15)$	660.8	653 ± 20
$\boldsymbol{\Omega_c h^2}$	0.11746	0.1190 ± 0.0038	$\sigma_8/h^{0.5}$	0.9906	0.990 ± 0.010	$H(0.38)$	81.07	81.9 ± 2.0
$\boldsymbol{100\theta_{MC}}$	1.04110	1.04096 ± 0.00058	$r_{drag}h$	97.78	98.3 ± 1.7	$D_M(0.38)$	1572.1	1555 ± 44
$\boldsymbol{\tau}$	0.0503	0.0512 ± 0.0079	$\langle d^2\rangle^{1/2}$	2.4593	2.454 ± 0.031	$H(0.51)$	87.84	88.7 ± 2.0
$\boldsymbol{N_{eff}}$	2.831	2.95 ± 0.27	z_{re}	7.28	7.38 ± 0.82	$D_M(0.51)$	2034	2013 ± 54
$\boldsymbol{\ln(10^{10}A_s)}$	3.0283	3.034 ± 0.020	$10^9 A_s$	2.0663	2.078 ± 0.042	$H(0.61)$	93.48	94.3 ± 2.0
$\boldsymbol{n_s}$	0.9559	0.959 ± 0.012	$10^9 A_s e^{-2\tau}$	1.8685	1.876 ± 0.022	$D_M(0.61)$	2365	2341 ± 62
$\boldsymbol{y_{cal}}$	1.00025	1.0005 ± 0.0025	D_{40}	1240.1	1237 ± 19	$H(2.33)$	233.82	235.2 ± 3.5
$\boldsymbol{A_{217}^{CIB}}$	46.8	47 ± 7	D_{220}	5711.8	5715 ± 41	$D_M(2.33)$	5869	5821 ± 120
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.53	—	D_{810}	2534.5	2535 ± 14	$f\sigma_8(0.15)$	0.4615	0.4612 ± 0.0081
$\boldsymbol{A_{143}^{tSZ}}$	6.99	$5.2^{+2.2}_{-2.0}$	D_{1420}	816.7	815.1 ± 5.2	$\sigma_8(0.15)$	0.7393	0.744 ± 0.013
$\boldsymbol{A_{100}^{PS}}$	248.4	261 ± 28	D_{2000}	231.20	230.1 ± 2.3	$f\sigma_8(0.38)$	0.4762	0.4770 ± 0.0066
$\boldsymbol{A_{143}^{PS}}$	49.2	48 ± 9	$n_{s,0.002}$	0.9559	0.959 ± 0.012	$\sigma_8(0.38)$	0.6538	0.658 ± 0.012
$\boldsymbol{A_{143\times217}^{PS}}$	50.2	43 ± 9	Y_P	0.24233	0.2439 ± 0.0038	$f\sigma_8(0.51)$	0.4731	0.4744 ± 0.0064
$\boldsymbol{A_{217}^{PS}}$	120.4	115 ± 10	Y_P^{BBN}	0.24364	0.2452 ± 0.0038	$\sigma_8(0.51)$	0.6112	0.616 ± 0.012
$\boldsymbol{A^{kSZ}}$	0.01	< 4.66	10^5D/H	2.578	2.609 ± 0.068	$f\sigma_8(0.61)$	0.4670	0.4686 ± 0.0063
$\boldsymbol{A_{100}^{dustTT}}$	8.82	9.0 ± 1.8	Age/Gyr	14.047	13.93 ± 0.29	$\sigma_8(0.61)$	0.5812	0.585 ± 0.011
$\boldsymbol{A_{143}^{dustTT}}$	10.70	10.7 ± 1.8	z_*	1089.935	1090.12 ± 0.47	$f\sigma_8(2.33)$	0.2925	0.2948 ± 0.0062
$\boldsymbol{A_{143\times217}^{dustTT}}$	19.43	18.2 ± 3.3	r_*	146.47	145.5 ± 2.5	$\sigma_8(2.33)$	0.3009	0.3035 ± 0.0068
$\boldsymbol{A_{217}^{dustTT}}$	94.7	93.4 ± 7.4	$100\theta_*$	1.04145	1.04124 ± 0.00072	f_{2000}^{143}	28.72	30 ± 4
$\boldsymbol{c_{100}}$	0.99964	0.99960 ± 0.00063	$D_M(z_*)$/Gpc	14.064	13.97 ± 0.23	$f_{2000}^{143\times217}$	31.99	33.0 ± 2.5
$\boldsymbol{c_{217}}$	0.99821	0.99824 ± 0.00061	z_{drag}	1058.75	1059.1 ± 1.1	f_{2000}^{217}	106.46	107.6 ± 2.3
H_0	65.50	66.3 ± 2.1	r_{drag}	149.28	148.3 ± 2.6	$\chi^2_{lensing}$	8.61	9.37 ± 0.98
Ω_Λ	0.6734	0.678 ± 0.015	k_D	0.13915	0.1398 ± 0.0018	χ^2_{simall}	395.69	396.8 ± 1.5
Ω_m	0.3266	0.322 ± 0.015	$100\theta_D$	0.16054	0.16084 ± 0.00064	χ^2_{lowl}	24.61	24.4 ± 1.9
$\Omega_m h^2$	0.14012	0.1417 ± 0.0040	z_{eq}	3432	3416 ± 50	χ^2_{plik}	757.8	771.1 ± 5.5
$\Omega_m h^3$	0.0918	$0.0941^{+0.0049}_{-0.0056}$	k_{eq}	0.010323	0.01035 ± 0.00014	χ^2_{prior}	1.28	7.3 ± 3.6
σ_8	0.8017	0.806 ± 0.013	$100\theta_{eq}$	0.8070	0.8101 ± 0.0095	χ^2_{CMB}	1186.7	1201.7 ± 5.6
S_8	0.8365	0.835 ± 0.016	$100\theta_{s,eq}$	0.44635	0.4479 ± 0.0048			
$\sigma_8\Omega_m^{0.5}$	0.4582	0.4576 ± 0.0089	$H(0.15)$	70.86	71.7 ± 2.1			

Best-fit $\chi^2_{eff} = 1188.03$; $\Delta\chi^2_{eff} = -0.54$; $\bar{\chi}^2_{eff} = 1208.98$; $\Delta\bar{\chi}^2_{eff} = 0.57$; $R - 1 = 0.00963$

χ^2_{eff}: CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.62 (Δ -0.29) simall_100x143_offlike5_EE_Aplanck_B: 395.69 (Δ -0.17) commander_dx12_v3_2_29: 24.61 (Δ 1.37) plik_rd12_HM_v22_TT: 757.83 (Δ -1.49)

7.3 base_nnu_plikHM_TT_lowl_lowE_post_Cooke17_Aver15

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02205 ± 0.00026	$\sigma_8\Omega_m^{0.25}$	0.610 ± 0.011	$D_M(0.15)$	654 ± 16
$\boldsymbol{\Omega_c h^2}$	0.1196 ± 0.0029	$\sigma_8/h^{0.5}$	0.994 ± 0.016	$H(0.38)$	81.9 ± 1.5
$\boldsymbol{100\theta_{MC}}$	1.04089 ± 0.00051	$r_{drag}h$	98.0 ± 1.9	$D_M(0.38)$	1557 ± 35
$\boldsymbol{\tau}$	0.0511 ± 0.0079	$\langle d^2\rangle^{1/2}$	2.461 ± 0.041	$H(0.51)$	88.7 ± 1.5
$\boldsymbol{N_{eff}}$	2.96 ± 0.19	z_{re}	7.38 ± 0.82	$D_M(0.51)$	2015 ± 43
$\boldsymbol{\ln(10^{10}A_s)}$	3.035 ± 0.018	$10^9 A_s$	2.081 ± 0.038	$H(0.61)$	94.4 ± 1.5
$\boldsymbol{n_s}$	0.9590 ± 0.0099	$10^9 A_s e^{-2\tau}$	1.879 ± 0.018	$D_M(0.61)$	2342 ± 48
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	D_{40}	1239 ± 19	$H(2.33)$	235.7 ± 2.5
$\boldsymbol{A_{217}^{CIB}}$	47 ± 7	D_{220}	5713 ± 40	$D_M(2.33)$	5817 ± 86
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{810}	2536 ± 14	$f\sigma_8(0.15)$	0.464 ± 0.012
$\boldsymbol{A_{143}^{tSZ}}$	$5.2^{+2.2}_{-2.0}$	D_{1420}	815.0 ± 5.0	$\sigma_8(0.15)$	0.746 ± 0.010
$\boldsymbol{A_{100}^{PS}}$	261 ± 28	D_{2000}	230.0 ± 1.9	$f\sigma_8(0.38)$	0.4793 ± 0.0093
$\boldsymbol{A_{143}^{PS}}$	48 ± 8	$n_{s,0.002}$	0.9590 ± 0.0099	$\sigma_8(0.38)$	0.6595 ± 0.0093
$\boldsymbol{A_{143\times217}^{PS}}$	44 ± 9	Y_P	0.2440 ± 0.0026	$f\sigma_8(0.51)$	0.4764 ± 0.0080
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	Y_P^{BBN}	0.2454 ± 0.0026	$\sigma_8(0.51)$	0.6166 ± 0.0089
$\boldsymbol{A^{kSZ}}$	< 4.60	10^5D/H	2.617 ± 0.049	$f\sigma_8(0.61)$	0.4704 ± 0.0073
$\boldsymbol{A_{100}^{dust TT}}$	9.0 ± 1.8	Age/Gyr	13.92 ± 0.20	$\sigma_8(0.61)$	0.5864 ± 0.0086
$\boldsymbol{A_{143}^{dust TT}}$	10.7 ± 1.8	z_*	1090.21 ± 0.40	$f\sigma_8(2.33)$	0.2952 ± 0.0046
$\boldsymbol{A_{143\times217}^{dust TT}}$	18.3 ± 3.3	r_*	145.3 ± 1.7	$\sigma_8(2.33)$	0.3038 ± 0.0051
$\boldsymbol{A_{217}^{dust TT}}$	93.5 ± 7.4	$100\theta_*$	1.04116 ± 0.00057	f_{2000}^{143}	30.6 ± 3.1
$\boldsymbol{c_{100}}$	0.99960 ± 0.00063	$D_M(z_*)$/Gpc	13.95 ± 0.16	$f_{2000}^{143\times217}$	33.1 ± 2.2
$\boldsymbol{c_{217}}$	0.99824 ± 0.00061	z_{drag}	1059.08 ± 0.83	f_{2000}^{217}	107.7 ± 2.1
H_0	66.2 ± 1.7	r_{drag}	148.0 ± 1.8	χ^2_{simall}	396.8 ± 1.6
Ω_Λ	0.675 ± 0.016	k_D	0.1400 ± 0.0013	χ^2_{lowl}	24.5 ± 1.9
Ω_m	0.325 ± 0.016	$100\theta_D$	0.16089 ± 0.00044	χ^2_{plik}	770.9 ± 5.5
$\Omega_m h^2$	0.1423 ± 0.0030	z_{eq}	3425 ± 56	χ^2_{Aver15}	0.44 ± 0.62
$\Omega_m h^3$	0.0942 ± 0.0037	k_{eq}	0.01039 ± 0.00015	$\chi^2_{Cooke17}$	0.27 ± 0.39
σ_8	0.808 ± 0.011	$100\theta_{eq}$	0.808 ± 0.010	χ^2_{prior}	7.2 ± 3.6
S_8	0.841 ± 0.024	$100\theta_{s,eq}$	0.4470 ± 0.0053	χ^2_{CMB}	1192.2 ± 5.4
$\sigma_8\Omega_m^{0.5}$	0.461 ± 0.013	$H(0.15)$	71.6 ± 1.6	χ^2_{Abund}	0.71 ± 0.84

$\bar{\chi}^2_{eff} = 1200.19$; $R - 1 = 0.00823$

7.4 base_nnu_plikHM_TT_lowl_lowE_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02210 ± 0.00030	$\sigma_8\Omega_m^{0.5}$	0.460 ± 0.013	$100\theta_{s,eq}$	0.4480 ± 0.0060
$\boldsymbol{\Omega_c h^2}$	0.1202 ± 0.0040	$\sigma_8\Omega_m^{0.25}$	0.611 ± 0.012	$H(0.15)$	72.1 ± 2.2
$\boldsymbol{100\theta_{MC}}$	1.04084 ± 0.00058	$\sigma_8/h^{0.5}$	0.994 ± 0.016	$D_M(0.15)$	650 ± 21
$\boldsymbol{\tau}$	$0.0533^{+0.0044}_{-0.0082}$	$r_{drag}h$	98.4 ± 2.1	$H(0.38)$	82.3 ± 2.1
$\boldsymbol{N_{eff}}$	3.02 ± 0.28	$\langle d^2\rangle^{1/2}$	2.459 ± 0.044	$D_M(0.38)$	1548 ± 47
$\boldsymbol{\ln(10^{10}A_s)}$	$3.041^{+0.016}_{-0.019}$	z_{re}	$7.63^{+0.48}_{-0.86}$	$H(0.51)$	89.1 ± 2.1
$\boldsymbol{n_s}$	0.962 ± 0.013	$10^9 A_s$	$2.094^{+0.033}_{-0.041}$	$D_M(0.51)$	2003 ± 58
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.882 ± 0.022	$H(0.61)$	94.8 ± 2.1
$\boldsymbol{A^{CIB}_{217}}$	48 ± 7	D_{40}	1235 ± 22	$D_M(0.61)$	2330 ± 65
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{220}	5713 ± 41	$H(2.33)$	236.3 ± 3.6
$\boldsymbol{A^{tSZ}_{143}}$	5.1 ± 2.0	D_{810}	2536 ± 14	$D_M(2.33)$	5793 ± 120
$\boldsymbol{A^{PS}_{100}}$	262 ± 29	D_{1420}	814.8 ± 5.2	$f\sigma_8(0.15)$	0.464 ± 0.012
$\boldsymbol{A^{PS}_{143}}$	49 ± 9	D_{2000}	229.8 ± 2.3	$\sigma_8(0.15)$	0.749 ± 0.012
$\boldsymbol{A^{PS}_{143\times217}}$	44 ± 9	$n_{s,0.002}$	0.962 ± 0.013	$f\sigma_8(0.38)$	0.4799 ± 0.0094
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	Y_P	0.2448 ± 0.0038	$\sigma_8(0.38)$	0.663 ± 0.012
$\boldsymbol{A^{kSZ}}$	< 4.73	Y_P^{BBN}	0.2461 ± 0.0038	$f\sigma_8(0.51)$	0.4773 ± 0.0083
$\boldsymbol{A^{dustTT}_{100}}$	8.9 ± 1.8	10^5D/H	2.626 ± 0.069	$\sigma_8(0.51)$	0.620 ± 0.011
$\boldsymbol{A^{dustTT}_{143}}$	10.7 ± 1.8	Age/Gyr	13.87 ± 0.29	$f\sigma_8(0.61)$	0.4715 ± 0.0077
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.2 ± 3.3	z_*	1090.25 ± 0.49	$\sigma_8(0.61)$	0.589 ± 0.011
$\boldsymbol{A^{dustTT}_{217}}$	93.3 ± 7.4	r_*	144.8 ± 2.5	$f\sigma_8(2.33)$	0.2968 ± 0.0059
$\boldsymbol{c_{100}}$	0.99960 ± 0.00062	$100\theta_*$	1.04108 ± 0.00071	$\sigma_8(2.33)$	0.3056 ± 0.0066
$\boldsymbol{c_{217}}$	0.99825 ± 0.00062	$D_M(z_*)$/Gpc	13.91 ± 0.23	f^{143}_{2000}	31 ± 4
H_0	66.7 ± 2.3	z_{drag}	1059.3 ± 1.1	$f^{143\times217}_{2000}$	33.3 ± 2.6
Ω_Λ	$0.678^{+0.019}_{-0.017}$	r_{drag}	147.6 ± 2.6	f^{217}_{2000}	107.9 ± 2.4
Ω_m	$0.322^{+0.017}_{-0.019}$	k_D	0.1403 ± 0.0018	χ^2_{simall}	396.7 ± 1.5
$\Omega_m h^2$	0.1429 ± 0.0041	$100\theta_D$	0.16100 ± 0.00065	χ^2_{lowl}	24.2 ± 2.2
$\Omega_m h^3$	$0.0954^{+0.0051}_{-0.0057}$	z_{eq}	3415 ± 63	χ^2_{plik}	771.7 ± 5.8
σ_8	0.811 ± 0.013	k_{eq}	0.01040 ± 0.00016	χ^2_{prior}	7.3 ± 3.6
S_8	0.840 ± 0.024	$100\theta_{eq}$	0.810 ± 0.012	χ^2_{CMB}	1192.7 ± 5.5

$\bar{\chi}^2_{eff} = 1199.93$; $\Delta\bar{\chi}^2_{eff} = 0.61$; $R - 1 = 0.00341$

7.5 base_nnu_plikHM_TT_lowl_lowE_post_lensing_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02209 ± 0.00029	$\sigma_8\Omega_m^{0.25}$	0.6077 ± 0.0083	$D_M(0.15)$	651 ± 19
$\boldsymbol{\Omega_c h^2}$	0.1191 ± 0.0038	$\sigma_8/h^{0.5}$	0.990 ± 0.010	$H(0.38)$	82.1 ± 2.0
$\boldsymbol{100\theta_{MC}}$	1.04095 ± 0.00058	$r_{drag}h$	98.5 ± 1.7	$D_M(0.38)$	1551 ± 43
$\boldsymbol{\tau}$	$0.0532^{+0.0043}_{-0.0081}$	$\langle d^2\rangle^{1/2}$	2.454 ± 0.031	$H(0.51)$	88.9 ± 2.0
$\boldsymbol{N_{eff}}$	2.97 ± 0.27	z_{re}	$7.59^{+0.45}_{-0.86}$	$D_M(0.51)$	2008 ± 53
$\boldsymbol{\ln(10^{10}A_s)}$	$3.038^{+0.016}_{-0.019}$	$10^9 A_s$	$2.087^{+0.033}_{-0.040}$	$H(0.61)$	94.5 ± 2.0
$\boldsymbol{n_s}$	0.961 ± 0.012	$10^9 A_s e^{-2\tau}$	1.876 ± 0.022	$D_M(0.61)$	2335 ± 60
$\boldsymbol{y_{cal}}$	1.0004 ± 0.0025	D_{40}	1236 ± 18	$H(2.33)$	235.4 ± 3.5
$\boldsymbol{A_{217}^{CIB}}$	47 ± 7	D_{220}	5716 ± 41	$D_M(2.33)$	5811 ± 120
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{810}	2535 ± 14	$f\sigma_8(0.15)$	0.4610 ± 0.0081
$\boldsymbol{A_{143}^{tSZ}}$	5.2 ± 2.0	D_{1420}	815.0 ± 5.3	$\sigma_8(0.15)$	0.746 ± 0.012
$\boldsymbol{A_{100}^{PS}}$	261 ± 28	D_{2000}	230.1 ± 2.3	$f\sigma_8(0.38)$	0.4773 ± 0.0066
$\boldsymbol{A_{143}^{PS}}$	48 ± 9	$n_{s,0.002}$	0.961 ± 0.012	$\sigma_8(0.38)$	0.660 ± 0.012
$\boldsymbol{A_{143\times217}^{PS}}$	43 ± 9	Y_P	0.2442 ± 0.0037	$f\sigma_8(0.51)$	0.4748 ± 0.0063
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	Y_P^{BBN}	0.2455 ± 0.0037	$\sigma_8(0.51)$	0.617 ± 0.011
$\boldsymbol{A^{kSZ}}$	< 4.66	10^5D/H	2.611 ± 0.069	$f\sigma_8(0.61)$	0.4692 ± 0.0062
$\boldsymbol{A_{100}^{dustTT}}$	9.0 ± 1.8	Age/Gyr	13.91 ± 0.28	$\sigma_8(0.61)$	0.587 ± 0.011
$\boldsymbol{A_{143}^{dustTT}}$	10.7 ± 1.8	z_*	1090.11 ± 0.47	$f\sigma_8(2.33)$	0.2957 ± 0.0059
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.2 ± 3.3	r_*	145.3 ± 2.5	$\sigma_8(2.33)$	0.3045 ± 0.0065
$\boldsymbol{A_{217}^{dustTT}}$	93.4 ± 7.4	$100\theta_*$	1.04121 ± 0.00071	f_{2000}^{143}	31 ± 4
$\boldsymbol{c_{100}}$	0.99960 ± 0.00063	$D_M(z_*)$/Gpc	13.96 ± 0.23	$f_{2000}^{143\times217}$	33.0 ± 2.5
$\boldsymbol{c_{217}}$	0.99825 ± 0.00061	z_{drag}	1059.2 ± 1.0	f_{2000}^{217}	107.7 ± 2.3
H_0	66.6 ± 2.0	r_{drag}	148.1 ± 2.6	$\chi^2_{lensing}$	9.38 ± 0.99
Ω_Λ	0.679 ± 0.014	k_D	0.1399 ± 0.0018	χ^2_{simall}	396.7 ± 1.5
Ω_m	0.321 ± 0.014	$100\theta_D$	0.16088 ± 0.00064	χ^2_{lowl}	24.2 ± 1.9
$\Omega_m h^2$	0.1418 ± 0.0040	z_{eq}	3410 ± 48	χ^2_{plik}	771.2 ± 5.5
$\Omega_m h^3$	$0.0944^{+0.0049}_{-0.0055}$	k_{eq}	0.01035 ± 0.00013	χ^2_{prior}	7.3 ± 3.6
σ_8	0.808 ± 0.012	$100\theta_{eq}$	0.8113 ± 0.0091	χ^2_{CMB}	1201.4 ± 5.6
S_8	0.835 ± 0.016	$100\theta_{s,eq}$	0.4485 ± 0.0046		
$\sigma_8\Omega_m^{0.5}$	0.4572 ± 0.0089	$H(0.15)$	71.9 ± 2.0		

$\bar{\chi}^2_{eff} = 1208.73$; $\Delta\bar{\chi}^2_{eff} = 0.57$; $R - 1 = 0.01118$

7.6 base_nnu_plikHM_TT_lowl_lowE_post_Cooke17_Aver15_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02206 ± 0.00026	$\sigma_8\Omega_m^{0.25}$	0.611 ± 0.011	$D_M(0.15)$	653 ± 16
$\boldsymbol{\Omega_c h^2}$	0.1196 ± 0.0029	$\sigma_8/h^{0.5}$	0.995 ± 0.016	$H(0.38)$	82.0 ± 1.5
$\boldsymbol{100\theta_{MC}}$	1.04089 ± 0.00051	$r_{drag}h$	98.1 ± 1.9	$D_M(0.38)$	1555 ± 34
$\boldsymbol{\tau}$	$0.0531^{+0.0043}_{-0.0081}$	$\langle d^2\rangle^{1/2}$	2.463 ± 0.041	$H(0.51)$	88.8 ± 1.5
$\boldsymbol{N_{eff}}$	2.97 ± 0.19	z_{re}	$7.59^{+0.45}_{-0.86}$	$D_M(0.51)$	2012 ± 42
$\boldsymbol{\ln(10^{10}A_s)}$	$3.040^{+0.014}_{-0.017}$	$10^9 A_s$	$2.090^{+0.028}_{-0.037}$	$H(0.61)$	94.4 ± 1.5
$\boldsymbol{n_s}$	0.9596 ± 0.0098	$10^9 A_s e^{-2\tau}$	1.879 ± 0.018	$D_M(0.61)$	2339 ± 48
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	D_{40}	1238 ± 19	$H(2.33)$	235.7 ± 2.5
$\boldsymbol{A_{217}^{CIB}}$	47 ± 7	D_{220}	5713 ± 40	$D_M(2.33)$	5812 ± 85
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{810}	2536 ± 14	$f\sigma_8(0.15)$	0.464 ± 0.012
$\boldsymbol{A_{143}^{tSZ}}$	5.2 ± 2.0	D_{1420}	815.0 ± 5.0	$\sigma_8(0.15)$	0.7471 ± 0.0095
$\boldsymbol{A_{100}^{PS}}$	261 ± 28	D_{2000}	230.1 ± 1.9	$f\sigma_8(0.38)$	0.4799 ± 0.0092
$\boldsymbol{A_{143}^{PS}}$	48 ± 8	$n_{s,0.002}$	0.9596 ± 0.0098	$\sigma_8(0.38)$	0.6610 ± 0.0087
$\boldsymbol{A_{143\times217}^{PS}}$	44 ± 9	Y_P	0.2442 ± 0.0026	$f\sigma_8(0.51)$	0.4770 ± 0.0079
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	Y_P^{BBN}	0.2455 ± 0.0026	$\sigma_8(0.51)$	$0.6180^{+0.0078}_{-0.0087}$
$\boldsymbol{A^{kSZ}}$	< 4.56	10^5D/H	2.617 ± 0.049	$f\sigma_8(0.61)$	0.4711 ± 0.0071
$\boldsymbol{A_{100}^{dustTT}}$	9.0 ± 1.8	Age/Gyr	13.91 ± 0.20	$\sigma_8(0.61)$	$0.5878^{+0.0075}_{-0.0085}$
$\boldsymbol{A_{143}^{dustTT}}$	10.7 ± 1.8	z_*	1090.20 ± 0.40	$f\sigma_8(2.33)$	$0.2959^{+0.0040}_{-0.0045}$
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.3 ± 3.3	r_*	145.2 ± 1.7	$\sigma_8(2.33)$	$0.3046^{+0.0044}_{-0.0050}$
$\boldsymbol{A_{217}^{dustTT}}$	93.4 ± 7.4	$100\theta_*$	1.04115 ± 0.00057	f_{2000}^{143}	30.5 ± 3.1
$\boldsymbol{c_{100}}$	0.99961 ± 0.00063	$D_M(z_*)$/Gpc	13.94 ± 0.16	$f_{2000}^{143\times217}$	33.1 ± 2.2
$\boldsymbol{c_{217}}$	0.99825 ± 0.00061	z_{drag}	1059.13 ± 0.82	f_{2000}^{217}	107.7 ± 2.1
H_0	66.3 ± 1.7	r_{drag}	148.0 ± 1.8	χ^2_{simall}	396.7 ± 1.5
Ω_Λ	0.676 ± 0.016	k_D	0.1400 ± 0.0013	χ^2_{lowl}	24.5 ± 1.9
Ω_m	0.324 ± 0.016	$100\theta_D$	0.16090 ± 0.00044	χ^2_{plik}	770.8 ± 5.5
$\Omega_m h^2$	0.1423 ± 0.0030	z_{eq}	3422 ± 56	χ^2_{Aver15}	0.44 ± 0.62
$\Omega_m h^3$	0.0944 ± 0.0037	k_{eq}	0.01039 ± 0.00015	$\chi^2_{Cooke17}$	0.28 ± 0.39
σ_8	0.810 ± 0.010	$100\theta_{eq}$	0.809 ± 0.010	χ^2_{prior}	7.2 ± 3.6
S_8	0.842 ± 0.024	$100\theta_{s,eq}$	0.4473 ± 0.0053	χ^2_{CMB}	1191.9 ± 5.3
$\sigma_8\Omega_m^{0.5}$	0.461 ± 0.013	$H(0.15)$	71.7 ± 1.6	χ^2_{Abund}	0.72 ± 0.85

$\bar{\chi}^2_{eff} = 1199.89$; $R - 1 = 0.00918$

7.7 base_nnu_plikHM_TTTEEE_lowl_lowE

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022194	0.02225 ± 0.00022	$\Omega_m h^2$	0.14008	0.1413 ± 0.0030	k_{eq}	0.010317	0.01035 ± 0.00012
$\boldsymbol{\Omega_c h^2}$	0.11725	0.1184 ± 0.0029	$\Omega_m h^3$	0.09221	0.0938 ± 0.0037	$100\theta_{eq}$	0.8082	0.8099 ± 0.0068
$\boldsymbol{100\theta_{MC}}$	1.041225	1.04111 ± 0.00043	σ_8	0.8040	0.806 ± 0.011	$100\theta_{s,eq}$	0.44683	0.4477 ± 0.0034
$\boldsymbol{\tau}$	0.0538	0.0532 ± 0.0077	S_8	0.8347	0.833 ± 0.016	$H(0.15)$	71.15	71.7 ± 1.4
$\boldsymbol{N_{eff}}$	2.836	2.92 ± 0.19	$\sigma_8 \Omega_m^{0.5}$	0.4572	0.4565 ± 0.0086	$D_M(0.15)$	657.8	653 ± 13
$\boldsymbol{\ln(10^{10} A_s)}$	3.0365	3.038 ± 0.018	$\sigma_8 \Omega_m^{0.25}$	0.6063	0.6066 ± 0.0087	$H(0.38)$	81.33	81.9 ± 1.4
$\boldsymbol{n_s}$	0.9579	0.9597 ± 0.0085	$\sigma_8/h^{0.5}$	0.9910	0.989 ± 0.012	$D_M(0.38)$	1565.8	1554 ± 30
$\boldsymbol{y_{cal}}$	1.00052	1.0008 ± 0.0025	$r_{drag} h$	98.15	98.5 ± 1.2	$H(0.51)$	88.07	88.7 ± 1.4
$\boldsymbol{A_{217}^{CIB}}$	43.5	46 ± 7	$\langle d^2 \rangle^{1/2}$	2.4604	2.456 ± 0.030	$D_M(0.51)$	2026.5	2012 ± 37
$\boldsymbol{\xi^{tSZ \times CIB}}$	0.962	> 0.385	z_{re}	7.60	7.54 ± 0.79	$H(0.61)$	93.70	94.3 ± 1.4
$\boldsymbol{A_{143}^{tSZ}}$	6.85	$5.6^{+2.1}_{-1.9}$	$10^9 A_s$	2.0831	2.086 ± 0.038	$D_M(0.61)$	2356.6	2340 ± 42
$\boldsymbol{A_{100}^{PS}}$	243.7	256 ± 28	$10^9 A_s e^{-2\tau}$	1.8707	1.876 ± 0.018	$H(2.33)$	233.89	234.9 ± 2.6
$\boldsymbol{A_{143}^{PS}}$	52.4	45 ± 8	D_{40}	1239.7	1239 ± 16	$D_M(2.33)$	5857	5822 ± 84
$\boldsymbol{A_{143\times217}^{PS}}$	58.7	42 ± 9	D_{220}	5729.7	5734 ± 38	$f\sigma_8(0.15)$	0.4608	0.4603 ± 0.0081
$\boldsymbol{A_{217}^{PS}}$	124.4	115 ± 10	D_{810}	2539.3	2539 ± 14	$\sigma_8(0.15)$	0.7418	0.744 ± 0.010
$\boldsymbol{A^{kSZ}}$	0.00	< 3.89	D_{1420}	819.67	818.0 ± 4.8	$f\sigma_8(0.38)$	0.4763	0.4764 ± 0.0069
$\boldsymbol{A_{100}^{dust TT}}$	8.70	8.9 ± 1.8	D_{2000}	232.48	231.6 ± 1.8	$\sigma_8(0.38)$	0.6563	0.6585 ± 0.0096
$\boldsymbol{A_{143}^{dust TT}}$	10.90	10.8 ± 1.8	$n_{s,0.002}$	0.9579	0.9597 ± 0.0085	$f\sigma_8(0.51)$	0.4736	0.4740 ± 0.0065
$\boldsymbol{A_{143\times217}^{dust TT}}$	20.22	18.4 ± 3.3	Y_P	0.24247	0.2436 ± 0.0026	$\sigma_8(0.51)$	0.6137	0.6159 ± 0.0091
$\boldsymbol{A_{217}^{dust TT}}$	96.0	93.6 ± 7.4	Y_P^{BBN}	0.24378	0.2449 ± 0.0026	$f\sigma_8(0.61)$	0.4677	0.4683 ± 0.0063
$\boldsymbol{A_{100}^{dust TE}}$	0.1143	0.114 ± 0.038	10^5D/H	2.5456	2.564 ± 0.044	$\sigma_8(0.61)$	0.5836	0.5858 ± 0.0088
$\boldsymbol{A_{100\times143}^{dust TE}}$	0.1342	0.135 ± 0.030	Age/Gyr	14.018	13.94 ± 0.20	$f\sigma_8(2.33)$	0.29383	0.2950 ± 0.0046
$\boldsymbol{A_{100\times217}^{dust TE}}$	0.482	0.481 ± 0.085	z_*	1089.693	1089.81 ± 0.34	$\sigma_8(2.33)$	0.30242	0.3038 ± 0.0050
$\boldsymbol{A_{143}^{dust TE}}$	0.225	0.225 ± 0.053	r_*	146.36	145.6 ± 1.8	f_{2000}^{143}	27.19	28.7 ± 3.0
$\boldsymbol{A_{143\times217}^{dust TE}}$	0.668	0.666 ± 0.080	$100\theta_*$	1.04156	1.04139 ± 0.00054	$f_{2000}^{143\times217}$	30.88	31.6 ± 2.1
$\boldsymbol{A_{217}^{dust TE}}$	2.087	2.09 ± 0.27	$D_M(z_*)$/Gpc	14.052	13.98 ± 0.17	f_{2000}^{217}	105.44	106.5 ± 1.9
$\boldsymbol{c_{100}}$	0.99976	0.99968 ± 0.00061	z_{drag}	1059.17	1059.42 ± 0.78	χ^2_{simall}	396.03	397.0 ± 1.7
$\boldsymbol{c_{217}}$	0.99816	0.99817 ± 0.00062	r_{drag}	149.11	148.3 ± 1.9	χ^2_{lowl}	24.41	24.3 ± 1.5
H_0	65.82	66.4 ± 1.4	k_D	0.13944	0.1400 ± 0.0014	χ^2_{plik}	2343.0	2359.2 ± 6.0
Ω_Λ	0.6767	0.679 ± 0.010	$100\theta_D$	0.160328	0.16052 ± 0.00040	χ^2_{prior}	1.33	11.6 ± 4.6
Ω_m	0.3233	0.321 ± 0.010	z_{eq}	3428.9	3420 ± 36	χ^2_{CMB}	2763.4	2780.5 ± 6.0

Best-fit $\chi^2_{eff} = 2764.72$; $\Delta\chi^2_{eff} = -1.05$; $\bar{\chi}^2_{eff} = 2792.10$; $\Delta\bar{\chi}^2_{eff} = 0.33$; $R - 1 = 0.01315$

χ^2_{eff}: CMB - simall_100x143_offlike5_EE_Aplanck_B: 396.03 (Δ -0.02) commander_dx12_v3_2_29: 24.41 (Δ 1.15) plik_rd12_HM_v22b_TTTEEE: 2342.95 (Δ -1.69)

7.8 base_nnu_plikHM_TTTEEE_lowl_lowE_post_lensing

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022195	0.02224 ± 0.00022	$\Omega_m h^3$	0.09181	0.0933 ± 0.0037	$100\theta_{s,eq}$	0.44715	0.4478 ± 0.0031
$\boldsymbol{\Omega_c h^2}$	0.11671	0.1179 ± 0.0028	σ_8	0.8018	0.8044 ± 0.0099	$H(0.15)$	71.10	71.6 ± 1.4
$\boldsymbol{100\theta_{MC}}$	1.041296	1.04116 ± 0.00043	S_8	0.8312	0.831 ± 0.013	$D_M(0.15)$	658.2	654 ± 13
$\boldsymbol{\tau}$	0.0533	0.0530 ± 0.0072	$\sigma_8\Omega_m^{0.5}$	0.4553	0.4554 ± 0.0069	$H(0.38)$	81.25	81.8 ± 1.4
$\boldsymbol{N_{eff}}$	2.815	2.89 ± 0.19	$\sigma_8\Omega_m^{0.25}$	0.6042	0.6052 ± 0.0070	$D_M(0.38)$	1567.0	1557 ± 29
$\boldsymbol{\ln(10^{10}A_s)}$	3.0339	3.036 ± 0.017	$\sigma_8/h^{0.5}$	0.9885	0.9880 ± 0.0089	$H(0.51)$	87.97	88.5 ± 1.4
$\boldsymbol{n_s}$	0.9577	0.9589 ± 0.0084	$r_{drag}h$	98.27	98.5 ± 1.1	$D_M(0.51)$	2028.1	2015 ± 37
$\boldsymbol{y_{cal}}$	1.00049	1.0007 ± 0.0025	$\langle d^2\rangle^{1/2}$	2.4559	2.454 ± 0.024	$H(0.61)$	93.59	94.1 ± 1.4
$\boldsymbol{A_{217}^{CIB}}$	43.4	46 ± 7	z_{re}	7.53	7.50 ± 0.74	$D_M(0.61)$	2358.6	2344 ± 42
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.984	> 0.391	10^9A_s	2.0778	2.083 ± 0.035	$H(2.33)$	233.46	234.5 ± 2.6
$\boldsymbol{A_{143}^{tSZ}}$	6.95	$5.6^{+2.2}_{-1.9}$	$10^9A_se^{-2\tau}$	1.8679	1.873 ± 0.017	$D_M(2.33)$	5864	5832 ± 84
$\boldsymbol{A_{100}^{PS}}$	242.3	256 ± 28	D_{40}	1239.1	1240 ± 15	$f\sigma_8(0.15)$	0.4589	0.4592 ± 0.0064
$\boldsymbol{A_{143}^{PS}}$	52.0	44 ± 8	D_{220}	5730.4	5736 ± 38	$\sigma_8(0.15)$	0.7399	0.7424 ± 0.0095
$\boldsymbol{A_{143\times217}^{PS}}$	59.1	42 ± 9	D_{810}	2538.8	2538 ± 13	$f\sigma_8(0.38)$	0.4747	0.4753 ± 0.0055
$\boldsymbol{A_{217}^{PS}}$	124.4	115 ± 10	D_{1420}	819.91	818.1 ± 4.8	$\sigma_8(0.38)$	0.6547	0.6571 ± 0.0090
$\boldsymbol{A^{kSZ}}$	0.01	< 3.94	D_{2000}	232.64	231.7 ± 1.8	$f\sigma_8(0.51)$	0.4720	0.4729 ± 0.0053
$\boldsymbol{A_{100}^{dustTT}}$	8.69	8.9 ± 1.8	$n_{s,0.002}$	0.9577	0.9589 ± 0.0084	$\sigma_8(0.51)$	0.6122	0.6146 ± 0.0087
$\boldsymbol{A_{143}^{dustTT}}$	10.89	10.8 ± 1.8	Y_P	0.24218	0.2433 ± 0.0026	$f\sigma_8(0.61)$	0.4662	0.4673 ± 0.0052
$\boldsymbol{A_{143\times217}^{dustTT}}$	20.32	18.4 ± 3.3	Y_P^{BBN}	0.24349	0.2446 ± 0.0026	$\sigma_8(0.61)$	0.5822	0.5845 ± 0.0084
$\boldsymbol{A_{217}^{dustTT}}$	96.1	93.6 ± 7.4	10^5D/H	2.5380	2.558 ± 0.043	$f\sigma_8(2.33)$	0.29318	0.2944 ± 0.0044
$\boldsymbol{A_{100}^{dustTE}}$	0.1135	0.114 ± 0.038	Age/Gyr	14.036	13.96 ± 0.20	$\sigma_8(2.33)$	0.30178	0.3031 ± 0.0049
$\boldsymbol{A_{100\times143}^{dustTE}}$	0.1357	0.135 ± 0.029	z_*	1089.620	1089.75 ± 0.32	f_{2000}^{143}	26.90	28.6 ± 3.0
$\boldsymbol{A_{100\times217}^{dustTE}}$	0.482	0.480 ± 0.086	r_*	146.61	145.9 ± 1.8	$f_{2000}^{143\times217}$	30.75	31.5 ± 2.0
$\boldsymbol{A_{143}^{dustTE}}$	0.228	0.225 ± 0.053	$100\theta_*$	1.04165	1.04145 ± 0.00053	f_{2000}^{217}	105.29	106.4 ± 1.9
$\boldsymbol{A_{143\times217}^{dustTE}}$	0.669	0.667 ± 0.081	$D_M(z_*)$/Gpc	14.075	14.01 ± 0.17	$\chi^2_{lensing}$	8.501	9.02 ± 0.70
$\boldsymbol{A_{217}^{dustTE}}$	2.090	2.08 ± 0.27	z_{drag}	1059.09	1059.35 ± 0.79	χ^2_{simall}	395.95	396.8 ± 1.5
$\boldsymbol{c_{100}}$	0.99976	0.99969 ± 0.00061	r_{drag}	149.36	148.6 ± 1.9	χ^2_{lowl}	24.36	24.4 ± 1.5
$\boldsymbol{c_{217}}$	0.99816	0.99817 ± 0.00062	k_D	0.13926	0.1398 ± 0.0014	χ^2_{plik}	2343.0	2359.1 ± 5.9
H_0	65.79	66.3 ± 1.4	$100\theta_D$	0.160274	0.16046 ± 0.00040	χ^2_{prior}	1.43	11.6 ± 4.6
Ω_Λ	0.6776	0.6794 ± 0.0097	z_{eq}	3425.7	3419 ± 33	χ^2_{CMB}	2771.9	2789.3 ± 6.0
Ω_m	0.3224	0.3206 ± 0.0097	k_{eq}	0.010292	0.01033 ± 0.00011			
$\Omega_m h^2$	0.13955	0.1408 ± 0.0030	$100\theta_{eq}$	0.8088	0.8101 ± 0.0062			

Best-fit $\chi^2_{eff} = 2773.28$; $\Delta\chi^2_{eff} = -1.35$; $\bar{\chi}^2_{eff} = 2800.86$; $\Delta\bar{\chi}^2_{eff} = 0.17$; $R - 1 = 0.01957$

χ^2_{eff}: CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.50 (Δ -0.37) simall_100x143_offlike5_EE_Aplanck_B: 395.95 (Δ -0.10) commander_dx12_v3_2_29: 24.36 (Δ 1.11) plik_rd12_HM_v22b_TTTEEE: 2343.04 (Δ -1.89)

7.9 base_nnu_plikHM_TTTEEE_lowl_lowE_post_Cooke17_Aver15

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	$0.02225^{+0.00019}_{-0.00021}$	$\Omega_m h^3$	0.0943 ± 0.0030	$100\theta_{s,eq}$	0.4478 ± 0.0033
$\boldsymbol{\Omega_c h^2}$	0.1188 ± 0.0024	σ_8	0.8074 ± 0.0096	$H(0.15)$	71.8 ± 1.2
$\boldsymbol{100\theta_{MC}}$	1.04105 ± 0.00039	S_8	0.835 ± 0.016	$D_M(0.15)$	651 ± 11
$\boldsymbol{\tau}$	0.0531 ± 0.0075	$\sigma_8\Omega_m^{0.5}$	0.4572 ± 0.0086	$H(0.38)$	82.0 ± 1.1
$\boldsymbol{N_{eff}}$	2.94 ± 0.15	$\sigma_8\Omega_m^{0.25}$	0.6075 ± 0.0083	$D_M(0.38)$	1551 ± 25
$\boldsymbol{\ln(10^{10}A_s)}$	3.039 ± 0.017	$\sigma_8/h^{0.5}$	0.990 ± 0.011	$H(0.51)$	88.8 ± 1.1
$\boldsymbol{n_s}$	0.9604 ± 0.0073	$r_{drag}h$	98.5 ± 1.2	$D_M(0.51)$	2008 ± 31
$\boldsymbol{y_{cal}}$	1.0008 ± 0.0025	$\langle d^2\rangle^{1/2}$	2.455 ± 0.029	$H(0.61)$	94.5 ± 1.1
$\boldsymbol{A_{217}^{CIB}}$	46 ± 7	z_{re}	7.53 ± 0.77	$D_M(0.61)$	2336 ± 35
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	10^9A_s	2.088 ± 0.036	$H(2.33)$	235.3 ± 2.1
$\boldsymbol{A_{143}^{tSZ}}$	$5.5^{+2.1}_{-1.9}$	$10^9A_se^{-2\tau}$	1.878 ± 0.015	$D_M(2.33)$	5812 ± 67
$\boldsymbol{A_{100}^{PS}}$	257 ± 28	D_{40}	1238 ± 15	$f\sigma_8(0.15)$	0.4610 ± 0.0080
$\boldsymbol{A_{143}^{PS}}$	45 ± 8	D_{220}	5733 ± 38	$\sigma_8(0.15)$	0.7452 ± 0.0090
$\boldsymbol{A_{143\times217}^{PS}}$	42 ± 9	D_{810}	2539 ± 14	$f\sigma_8(0.38)$	0.4772 ± 0.0067
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	D_{1420}	817.8 ± 4.8	$\sigma_8(0.38)$	0.6596 ± 0.0082
$\boldsymbol{A^{kSZ}}$	< 4.00	D_{2000}	231.4 ± 1.7	$f\sigma_8(0.51)$	0.4747 ± 0.0061
$\boldsymbol{A_{100}^{dustTT}}$	8.9 ± 1.8	$n_{s,0.002}$	0.9604 ± 0.0073	$\sigma_8(0.51)$	0.6169 ± 0.0078
$\boldsymbol{A_{143}^{dustTT}}$	10.8 ± 1.8	Y_P	0.2439 ± 0.0021	$f\sigma_8(0.61)$	0.4690 ± 0.0058
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.5 ± 3.3	Y_P^{BBN}	0.2452 ± 0.0021	$\sigma_8(0.61)$	0.5867 ± 0.0075
$\boldsymbol{A_{217}^{dustTT}}$	93.7 ± 7.4	10^5D/H	2.573 ± 0.037	$f\sigma_8(2.33)$	0.2955 ± 0.0039
$\boldsymbol{A_{100}^{dustTE}}$	0.114 ± 0.039	Age/Gyr	13.91 ± 0.16	$\sigma_8(2.33)$	0.3043 ± 0.0042
$\boldsymbol{A_{100\times143}^{dustTE}}$	0.135 ± 0.029	z_*	1089.87 ± 0.30	f_{2000}^{143}	29.0 ± 2.9
$\boldsymbol{A_{100\times217}^{dustTE}}$	0.480 ± 0.085	r_*	145.4 ± 1.4	$f_{2000}^{143\times217}$	31.8 ± 1.9
$\boldsymbol{A_{143}^{dustTE}}$	0.225 ± 0.053	$100\theta_*$	1.04132 ± 0.00046	f_{2000}^{217}	106.7 ± 1.9
$\boldsymbol{A_{143\times217}^{dustTE}}$	0.667 ± 0.080	$D_M(z_*)$/Gpc	13.96 ± 0.13	χ^2_{simall}	396.9 ± 1.7
$\boldsymbol{A_{217}^{dustTE}}$	2.09 ± 0.27	z_{drag}	1059.48 ± 0.67	χ^2_{lowl}	24.2 ± 1.4
$\boldsymbol{c_{100}}$	0.99968 ± 0.00061	r_{drag}	148.1 ± 1.5	χ^2_{plik}	2359.2 ± 5.9
$\boldsymbol{c_{217}}$	0.99818 ± 0.00062	k_D	0.1401 ± 0.0011	χ^2_{Aver15}	0.28 ± 0.40
H_0	66.5 ± 1.2	$100\theta_D$	0.16059 ± 0.00032	$\chi^2_{Cooke17}$	0.38 ± 0.43
Ω_Λ	0.6793 ± 0.0098	z_{eq}	3419 ± 34	χ^2_{prior}	11.6 ± 4.6
Ω_m	0.3207 ± 0.0098	k_{eq}	0.01036 ± 0.00011	χ^2_{CMB}	2780.3 ± 5.8
$\Omega_m h^2$	0.1417 ± 0.0025	$100\theta_{eq}$	0.8100 ± 0.0065	χ^2_{Abund}	0.67 ± 0.62

$\bar{\chi}^2_{eff} = 2792.58$; $R - 1 = 0.01890$

7.10 base_nnu_plikHM_TTTEEE_lowl_lowE_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02225 ± 0.00022	$\Omega_m h^2$	0.1413 ± 0.0030	k_{eq}	0.01035 ± 0.00012
$\boldsymbol{\Omega_c h^2}$	0.1184 ± 0.0029	$\Omega_m h^3$	0.0939 ± 0.0037	$100\theta_{eq}$	0.8102 ± 0.0068
$\boldsymbol{100\theta_{MC}}$	1.04111 ± 0.00043	σ_8	0.807 ± 0.010	$100\theta_{s,eq}$	0.4479 ± 0.0034
$\boldsymbol{\tau}$	$0.0546^{+0.0049}_{-0.0079}$	S_8	0.834 ± 0.016	$H(0.15)$	71.8 ± 1.4
$\boldsymbol{N_{eff}}$	2.92 ± 0.19	$\sigma_8\Omega_m^{0.5}$	0.4569 ± 0.0086	$D_M(0.15)$	652 ± 13
$\boldsymbol{\ln(10^{10} A_s)}$	$3.041^{+0.014}_{-0.018}$	$\sigma_8\Omega_m^{0.25}$	0.6073 ± 0.0085	$H(0.38)$	82.0 ± 1.4
$\boldsymbol{n_s}$	0.9600 ± 0.0085	$\sigma_8/h^{0.5}$	0.991 ± 0.011	$D_M(0.38)$	1553 ± 30
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0025	$r_{drag}h$	98.5 ± 1.2	$H(0.51)$	88.7 ± 1.4
$\boldsymbol{A_{217}^{CIB}}$	46 ± 7	$\langle d^2\rangle^{1/2}$	2.458 ± 0.029	$D_M(0.51)$	2011 ± 37
$\boldsymbol{\xi^{tSZ\times CIB}}$	> 0.385	z_{re}	$7.69^{+0.55}_{-0.78}$	$H(0.61)$	94.3 ± 1.4
$\boldsymbol{A_{143}^{tSZ}}$	$5.6^{+2.1}_{-1.8}$	$10^9 A_s$	$2.092^{+0.030}_{-0.038}$	$D_M(0.61)$	2338 ± 42
$\boldsymbol{A_{100}^{PS}}$	256 ± 28	$10^9 A_s e^{-2\tau}$	1.876 ± 0.018	$H(2.33)$	235.0 ± 2.6
$\boldsymbol{A_{143}^{PS}}$	45 ± 8	D_{40}	1239 ± 16	$D_M(2.33)$	5819 ± 83
$\boldsymbol{A_{143\times217}^{PS}}$	42 ± 9	D_{220}	5734 ± 38	$f\sigma_8(0.15)$	0.4607 ± 0.0080
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	D_{810}	2538 ± 14	$\sigma_8(0.15)$	0.7451 ± 0.0099
$\boldsymbol{A^{kSZ}}$	< 3.87	D_{1420}	818.0 ± 4.8	$f\sigma_8(0.38)$	0.4770 ± 0.0068
$\boldsymbol{A_{100}^{dust TT}}$	8.9 ± 1.8	D_{2000}	231.6 ± 1.8	$\sigma_8(0.38)$	0.6596 ± 0.0091
$\boldsymbol{A_{143}^{dust TT}}$	10.8 ± 1.8	$n_{s,0.002}$	0.9600 ± 0.0085	$f\sigma_8(0.51)$	0.4746 ± 0.0063
$\boldsymbol{A_{143\times217}^{dust TT}}$	18.4 ± 3.3	Y_P	0.2437 ± 0.0026	$\sigma_8(0.51)$	0.6169 ± 0.0087
$\boldsymbol{A_{217}^{dust TT}}$	93.6 ± 7.3	Y_P^{BBN}	0.2450 ± 0.0026	$f\sigma_8(0.61)$	0.4689 ± 0.0060
$\boldsymbol{A_{100}^{dust TE}}$	0.114 ± 0.038	10^5D/H	2.565 ± 0.044	$\sigma_8(0.61)$	0.5867 ± 0.0084
$\boldsymbol{A_{100\times143}^{dust TE}}$	0.135 ± 0.030	Age/Gyr	13.93 ± 0.20	$f\sigma_8(2.33)$	0.2955 ± 0.0044
$\boldsymbol{A_{100\times217}^{dust TE}}$	0.480 ± 0.085	z_*	1089.81 ± 0.34	$\sigma_8(2.33)$	0.3043 ± 0.0048
$\boldsymbol{A_{143}^{dust TE}}$	0.225 ± 0.053	r_*	145.6 ± 1.8	f_{2000}^{143}	28.7 ± 3.0
$\boldsymbol{A_{143\times217}^{dust TE}}$	0.666 ± 0.080	$100\theta_*$	1.04138 ± 0.00054	$f_{2000}^{143\times217}$	31.6 ± 2.1
$\boldsymbol{A_{217}^{dust TE}}$	2.08 ± 0.27	$D_M(z_*)$/Gpc	13.98 ± 0.17	f_{2000}^{217}	106.5 ± 1.9
$\boldsymbol{c_{100}}$	0.99968 ± 0.00061	z_{drag}	1059.45 ± 0.78	χ^2_{simall}	396.9 ± 1.8
$\boldsymbol{c_{217}}$	0.99817 ± 0.00063	r_{drag}	148.3 ± 1.9	χ^2_{lowl}	24.3 ± 1.5
H_0	66.4 ± 1.4	k_D	0.1400 ± 0.0014	χ^2_{plik}	2359.1 ± 6.0
Ω_Λ	0.680 ± 0.010	$100\theta_D$	0.16053 ± 0.00040	χ^2_{prior}	11.5 ± 4.6
Ω_m	0.320 ± 0.010	z_{eq}	3418 ± 36	χ^2_{CMB}	2780.3 ± 5.9

$\bar{\chi}^2_{eff} = 2791.81$; $\Delta\bar{\chi}^2_{eff} = 0.28$; $R - 1 = 0.01491$

7.11 base_nnu_plikHM_TTTEEE_lowl_lowE_post_lensing_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02224 ± 0.00022	$\Omega_m h^3$	0.0934 ± 0.0037	$100\theta_{s,eq}$	0.4480 ± 0.0031
$\boldsymbol{\Omega_c h^2}$	0.1179 ± 0.0028	σ_8	0.8052 ± 0.0096	$H(0.15)$	71.7 ± 1.4
$\boldsymbol{100\theta_{MC}}$	1.04116 ± 0.00043	S_8	0.831 ± 0.013	$D_M(0.15)$	653 ± 13
$\boldsymbol{\tau}$	$0.0542^{+0.0048}_{-0.0074}$	$\sigma_8\Omega_m^{0.5}$	0.4554 ± 0.0069	$H(0.38)$	81.8 ± 1.4
$\boldsymbol{N_{eff}}$	2.90 ± 0.19	$\sigma_8\Omega_m^{0.25}$	0.6056 ± 0.0069	$D_M(0.38)$	1555 ± 29
$\boldsymbol{\ln(10^{10} A_s)}$	$3.038^{+0.014}_{-0.017}$	$\sigma_8/h^{0.5}$	0.9886 ± 0.0088	$H(0.51)$	88.6 ± 1.4
$\boldsymbol{n_s}$	0.9593 ± 0.0084	$r_{drag}h$	98.6 ± 1.1	$D_M(0.51)$	2014 ± 37
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0025	$\langle d^2\rangle^{1/2}$	2.455 ± 0.024	$H(0.61)$	94.2 ± 1.4
$\boldsymbol{A_{217}^{CIB}}$	46 ± 7	z_{re}	$7.63^{+0.53}_{-0.74}$	$D_M(0.61)$	2342 ± 42
$\boldsymbol{\xi^{tSZ\times CIB}}$	> 0.391	$10^9 A_s$	$2.087^{+0.028}_{-0.035}$	$H(2.33)$	234.6 ± 2.6
$\boldsymbol{A_{143}^{tSZ}}$	$5.6^{+2.2}_{-1.9}$	$10^9 A_s e^{-2\tau}$	1.873 ± 0.017	$D_M(2.33)$	5829 ± 83
$\boldsymbol{A_{100}^{PS}}$	256 ± 28	D_{40}	1239 ± 15	$f\sigma_8(0.15)$	0.4593 ± 0.0064
$\boldsymbol{A_{143}^{PS}}$	44 ± 8	D_{220}	5735 ± 38	$\sigma_8(0.15)$	0.7433 ± 0.0092
$\boldsymbol{A_{143\times217}^{PS}}$	42 ± 9	D_{810}	2538 ± 13	$f\sigma_8(0.38)$	0.4756 ± 0.0055
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	D_{1420}	818.0 ± 4.8	$\sigma_8(0.38)$	0.6580 ± 0.0087
$\boldsymbol{A^{kSZ}}$	< 3.91	D_{2000}	231.6 ± 1.8	$f\sigma_8(0.51)$	0.4732 ± 0.0052
$\boldsymbol{A_{100}^{dustTT}}$	8.9 ± 1.8	$n_{s,0.002}$	0.9593 ± 0.0084	$\sigma_8(0.51)$	0.6154 ± 0.0083
$\boldsymbol{A_{143}^{dustTT}}$	10.8 ± 1.8	Y_P	0.2433 ± 0.0026	$f\sigma_8(0.61)$	0.4676 ± 0.0051
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.4 ± 3.3	Y_P^{BBN}	0.2446 ± 0.0026	$\sigma_8(0.61)$	0.5853 ± 0.0081
$\boldsymbol{A_{217}^{dustTT}}$	93.6 ± 7.3	10^5D/H	2.558 ± 0.043	$f\sigma_8(2.33)$	0.2948 ± 0.0043
$\boldsymbol{A_{100}^{dustTE}}$	0.114 ± 0.039	Age/Gyr	13.95 ± 0.20	$\sigma_8(2.33)$	0.3036 ± 0.0047
$\boldsymbol{A_{100\times143}^{dustTE}}$	0.135 ± 0.029	z_*	1089.75 ± 0.32	f_{2000}^{143}	28.6 ± 3.0
$\boldsymbol{A_{100\times217}^{dustTE}}$	0.480 ± 0.087	r_*	145.9 ± 1.8	$f_{2000}^{143\times217}$	31.5 ± 2.0
$\boldsymbol{A_{143}^{dustTE}}$	0.224 ± 0.053	$100\theta_*$	1.04145 ± 0.00053	f_{2000}^{217}	106.4 ± 1.9
$\boldsymbol{A_{143\times217}^{dustTE}}$	0.666 ± 0.081	$D_M(z_*)$/Gpc	14.01 ± 0.17	$\chi^2_{lensing}$	9.01 ± 0.70
$\boldsymbol{A_{217}^{dustTE}}$	2.08 ± 0.27	z_{drag}	1059.37 ± 0.79	χ^2_{simall}	396.8 ± 1.5
$\boldsymbol{c_{100}}$	0.99969 ± 0.00061	r_{drag}	148.6 ± 1.9	χ^2_{lowl}	24.4 ± 1.5
$\boldsymbol{c_{217}}$	0.99817 ± 0.00062	k_D	0.1398 ± 0.0014	χ^2_{plik}	2358.9 ± 5.9
H_0	66.3 ± 1.4	$100\theta_D$	0.16047 ± 0.00040	χ^2_{prior}	11.5 ± 4.6
Ω_Λ	0.6800 ± 0.0095	z_{eq}	3417 ± 32	χ^2_{CMB}	2789.1 ± 5.9
Ω_m	0.3200 ± 0.0095	k_{eq}	0.01032 ± 0.00011		
$\Omega_m h^2$	0.1408 ± 0.0029	$100\theta_{eq}$	0.8105 ± 0.0062		

$\bar{\chi}^2_{eff} = 2800.61$; $\Delta\bar{\chi}^2_{eff} = 0.11$; $R - 1 = 0.02136$

7.12 base_nnu_plikHM_TTTEEE_lowl_lowE_post_Cooke17_Aver15_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02225 ± 0.00020	$\Omega_m h^3$	0.0943 ± 0.0030	$100\theta_{s,eq}$	0.4479 ± 0.0033
$\boldsymbol{\Omega_c h^2}$	0.1188 ± 0.0024	σ_8	0.8084 ± 0.0092	$H(0.15)$	71.9 ± 1.2
$\boldsymbol{100\theta_{MC}}$	1.04105 ± 0.00039	S_8	0.835 ± 0.016	$D_M(0.15)$	651 ± 11
$\boldsymbol{\tau}$	$0.0544^{+0.0050}_{-0.0075}$	$\sigma_8\Omega_m^{0.5}$	0.4575 ± 0.0086	$H(0.38)$	82.1 ± 1.1
$\boldsymbol{N_{eff}}$	2.94 ± 0.15	$\sigma_8\Omega_m^{0.25}$	0.6081 ± 0.0082	$D_M(0.38)$	1551 ± 25
$\boldsymbol{\ln(10^{10} A_s)}$	$3.041^{+0.013}_{-0.017}$	$\sigma_8/h^{0.5}$	0.991 ± 0.011	$H(0.51)$	88.8 ± 1.1
$\boldsymbol{n_s}$	0.9606 ± 0.0074	$r_{drag}h$	98.5 ± 1.2	$D_M(0.51)$	2007 ± 31
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0025	$\langle d^2\rangle^{1/2}$	2.458 ± 0.029	$H(0.61)$	94.5 ± 1.1
$\boldsymbol{A^{CIB}_{217}}$	46 ± 7	z_{re}	$7.68^{+0.54}_{-0.77}$	$D_M(0.61)$	2335 ± 35
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$10^9 A_s$	$2.094^{+0.028}_{-0.036}$	$H(2.33)$	235.3 ± 2.1
$\boldsymbol{A^{tSZ}_{143}}$	$5.5^{+2.1}_{-1.9}$	$10^9 A_s e^{-2\tau}$	1.878 ± 0.015	$D_M(2.33)$	5811 ± 67
$\boldsymbol{A^{PS}_{100}}$	257 ± 28	D_{40}	1238 ± 15	$f\sigma_8(0.15)$	0.4613 ± 0.0079
$\boldsymbol{A^{PS}_{143}}$	45 ± 8	D_{220}	5732 ± 38	$\sigma_8(0.15)$	0.7462 ± 0.0085
$\boldsymbol{A^{PS}_{143\times217}}$	42 ± 9	D_{810}	2539 ± 14	$f\sigma_8(0.38)$	0.4776 ± 0.0066
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	D_{1420}	817.7 ± 4.8	$\sigma_8(0.38)$	0.6605 ± 0.0078
$\boldsymbol{A^{kSZ}}$	< 3.98	D_{2000}	231.4 ± 1.7	$f\sigma_8(0.51)$	0.4752 ± 0.0060
$\boldsymbol{A^{dustTT}_{100}}$	8.9 ± 1.9	$n_{s,0.002}$	0.9606 ± 0.0074	$\sigma_8(0.51)$	0.6177 ± 0.0074
$\boldsymbol{A^{dustTT}_{143}}$	10.8 ± 1.8	Y_P	0.2440 ± 0.0021	$f\sigma_8(0.61)$	0.4696 ± 0.0056
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.5 ± 3.3	Y_P^{BBN}	0.2453 ± 0.0021	$\sigma_8(0.61)$	$0.5875^{+0.0066}_{-0.0074}$
$\boldsymbol{A^{dustTT}_{217}}$	93.7 ± 7.4	10^5D/H	2.573 ± 0.037	$f\sigma_8(2.33)$	0.2959 ± 0.0037
$\boldsymbol{A^{dustTE}_{100}}$	0.114 ± 0.039	Age/Gyr	13.91 ± 0.16	$\sigma_8(2.33)$	0.3047 ± 0.0040
$\boldsymbol{A^{dustTE}_{100\times143}}$	0.135 ± 0.029	z_*	1089.86 ± 0.30	f^{143}_{2000}	29.0 ± 2.9
$\boldsymbol{A^{dustTE}_{100\times217}}$	0.479 ± 0.086	r_*	145.4 ± 1.4	$f^{143\times217}_{2000}$	31.8 ± 1.9
$\boldsymbol{A^{dustTE}_{143}}$	0.225 ± 0.053	$100\theta_*$	1.04132 ± 0.00046	f^{217}_{2000}	106.6 ± 1.9
$\boldsymbol{A^{dustTE}_{143\times217}}$	0.667 ± 0.080	$D_M(z_*)$/Gpc	13.96 ± 0.13	χ^2_{simall}	396.9 ± 1.7
$\boldsymbol{A^{dustTE}_{217}}$	2.08 ± 0.27	z_{drag}	1059.49 ± 0.67	χ^2_{lowl}	24.2 ± 1.4
$\boldsymbol{c_{100}}$	0.99968 ± 0.00061	r_{drag}	148.1 ± 1.5	χ^2_{plik}	2359.0 ± 5.9
$\boldsymbol{c_{217}}$	0.99818 ± 0.00062	k_D	0.1402 ± 0.0011	χ^2_{Aver15}	0.28 ± 0.40
H_0	66.5 ± 1.2	$100\theta_D$	0.16059 ± 0.00032	$\chi^2_{Cooke17}$	0.39 ± 0.43
Ω_Λ	0.6796 ± 0.0098	z_{eq}	3418 ± 34	χ^2_{prior}	11.6 ± 4.6
Ω_m	0.3204 ± 0.0098	k_{eq}	0.01036 ± 0.00011	χ^2_{CMB}	2780.1 ± 5.8
$\Omega_m h^2$	0.1417 ± 0.0025	$100\theta_{eq}$	0.8102 ± 0.0065	χ^2_{Abund}	0.67 ± 0.61

$\bar{\chi}^2_{eff} = 2792.34$; $R - 1 = 0.02177$

7.13 base_nnu_CamSpecHM_TT_lowl_lowE

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02204 ± 0.00032	$\sigma_8\Omega_m^{0.5}$	0.460 ± 0.014	$H(0.15)$	71.5 ± 2.3
$\boldsymbol{\Omega_c h^2}$	0.1192 ± 0.0041	$\sigma_8\Omega_m^{0.25}$	0.609 ± 0.012	$D_M(0.15)$	655 ± 23
$\boldsymbol{100\theta_{MC}}$	1.04099 ± 0.00059	$\sigma_8/h^{0.5}$	0.992 ± 0.017	$H(0.38)$	81.8 ± 2.3
$\boldsymbol{\tau}$	0.0514 ± 0.0082	$r_{drag}h$	98.1 ± 2.2	$D_M(0.38)$	1559 ± 50
$\boldsymbol{N_{eff}}$	2.94 ± 0.29	$\langle d^2\rangle^{1/2}$	2.457 ± 0.046	$H(0.51)$	88.6 ± 2.2
$\boldsymbol{\ln(10^{10}A_s)}$	3.033 ± 0.021	z_{re}	7.40 ± 0.85	$D_M(0.51)$	2017 ± 62
$\boldsymbol{n_s}$	0.959 ± 0.014	$10^9 A_s$	2.077 ± 0.044	$H(0.61)$	94.3 ± 2.2
$\boldsymbol{y_{cal}}$	1.0004 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.874 ± 0.023	$D_M(0.61)$	2346 ± 70
$\boldsymbol{A_{100}^{PS}}$	240 ± 26	D_{40}	1236 ± 23	$H(2.33)$	235.3 ± 3.7
$\boldsymbol{A_{143}^{PS}}$	40 ± 9	D_{220}	5702 ± 42	$D_M(2.33)$	5826 ± 130
$\boldsymbol{A_{217}^{PS}}$	102 ± 10	D_{810}	2532 ± 14	$f\sigma_8(0.15)$	0.463 ± 0.013
$\boldsymbol{A_{217}^{CIB}}$	40 ± 8	D_{1420}	814.6 ± 5.2	$\sigma_8(0.15)$	0.744 ± 0.013
$\boldsymbol{A_{143}^{tSZ}}$	$3.8^{+1.9}_{-2.6}$	D_{2000}	230.1 ± 2.3	$f\sigma_8(0.38)$	0.4783 ± 0.0097
$\boldsymbol{r_{143\times217}^{PS}}$	0.65 ± 0.13	$n_{s,0.002}$	0.959 ± 0.014	$\sigma_8(0.38)$	0.658 ± 0.013
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.57^{+0.41}_{-0.15}$	Y_P	0.2438 ± 0.0041	$f\sigma_8(0.51)$	0.4754 ± 0.0086
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	0.2451 ± 0.0041	$\sigma_8(0.51)$	0.616 ± 0.012
$\boldsymbol{A^{kSZ}}$	$4.8^{+2.7}_{-3.6}$	10^5D/H	2.611 ± 0.071	$f\sigma_8(0.61)$	0.4694 ± 0.0080
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.20	Age/Gyr	13.94 ± 0.31	$\sigma_8(0.61)$	0.585 ± 0.012
$\boldsymbol{A_{143}^{dust}}$	0.97 ± 0.18	z_*	1090.16 ± 0.50	$f\sigma_8(2.33)$	0.2947 ± 0.0064
$\boldsymbol{A_{217}^{dust}}$	0.97 ± 0.10	r_*	145.5 ± 2.6	$\sigma_8(2.33)$	0.3034 ± 0.0072
$\boldsymbol{A_{143\times217}^{dust}}$	1.03 ± 0.16	$100\theta_*$	1.04127 ± 0.00074	f_{2000}^{143}	30 ± 4
$\boldsymbol{c_{100}}$	0.9975 ± 0.0010	$D_M(z_*)$/Gpc	13.97 ± 0.24	f_{2000}^{217}	107.1 ± 2.5
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	z_{drag}	1059.0 ± 1.1	$f_{2000}^{143\times217}$	32.4 ± 2.7
H_0	66.2 ± 2.4	r_{drag}	148.3 ± 2.7	χ^2_{simall}	396.9 ± 1.7
Ω_Λ	$0.675^{+0.020}_{-0.018}$	k_D	0.1398 ± 0.0019	χ^2_{lowl}	24.4 ± 2.3
Ω_m	0.325 ± 0.019	$100\theta_D$	0.16084 ± 0.00068	$\chi^2_{CamSpec}$	7063.3 ± 5.7
$\Omega_m h^2$	0.1419 ± 0.0042	z_{eq}	3425 ± 67	χ^2_{prior}	7.6 ± 3.4
$\Omega_m h^3$	$0.0939^{+0.0053}_{-0.0059}$	k_{eq}	0.01037 ± 0.00016	χ^2_{CMB}	7484.6 ± 5.6
σ_8	0.807 ± 0.014	$100\theta_{eq}$	0.809 ± 0.012		
S_8	0.839 ± 0.025	$100\theta_{s,eq}$	0.4472 ± 0.0063		

$\bar{\chi}^2_{eff} = 7492.17$; $\Delta\bar{\chi}^2_{eff} = 0.63$; $R - 1 = 0.00609$

7.14 base_nnu_CamSpecHM_TT_lowl_lowE_post_lensing

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02202 ± 0.00030	$\sigma_8\Omega_m^{0.5}$	0.4580 ± 0.0092	$H(0.15)$	71.3 ± 2.1
$\boldsymbol{\Omega_c h^2}$	0.1182 ± 0.0039	$\sigma_8\Omega_m^{0.25}$	0.6067 ± 0.0084	$D_M(0.15)$	658 ± 21
$\boldsymbol{100\theta_{MC}}$	1.04108 ± 0.00058	$\sigma_8/h^{0.5}$	0.990 ± 0.011	$H(0.38)$	81.5 ± 2.1
$\boldsymbol{\tau}$	0.0514 ± 0.0081	$r_{drag}h$	98.0 ± 1.8	$D_M(0.38)$	1565 ± 46
$\boldsymbol{N_{eff}}$	2.89 ± 0.28	$\langle d^2\rangle^{1/2}$	2.457 ± 0.032	$H(0.51)$	88.2 ± 2.1
$\boldsymbol{\ln(10^{10}A_s)}$	3.031 ± 0.021	z_{re}	7.38 ± 0.84	$D_M(0.51)$	2025 ± 57
$\boldsymbol{n_s}$	0.958 ± 0.012	$10^9 A_s$	2.072 ± 0.043	$H(0.61)$	93.9 ± 2.1
$\boldsymbol{y_{cal}}$	1.0004 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.869 ± 0.023	$D_M(0.61)$	2355 ± 65
$\boldsymbol{A_{100}^{PS}}$	239 ± 26	D_{40}	1237 ± 19	$H(2.33)$	234.5 ± 3.6
$\boldsymbol{A_{143}^{PS}}$	39 ± 9	D_{220}	5705 ± 41	$D_M(2.33)$	5848 ± 130
$\boldsymbol{A_{217}^{PS}}$	102 ± 10	D_{810}	2532 ± 14	$f\sigma_8(0.15)$	0.4614 ± 0.0083
$\boldsymbol{A_{217}^{CIB}}$	40 ± 7	D_{1420}	815.0 ± 5.2	$\sigma_8(0.15)$	0.742 ± 0.013
$\boldsymbol{A_{143}^{tSZ}}$	$3.9^{+1.9}_{-2.6}$	D_{2000}	230.4 ± 2.3	$f\sigma_8(0.38)$	0.4766 ± 0.0067
$\boldsymbol{r_{143\times217}^{PS}}$	0.66 ± 0.13	$n_{s,0.002}$	0.958 ± 0.012	$\sigma_8(0.38)$	0.656 ± 0.012
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.57^{+0.41}_{-0.16}$	Y_P	0.2430 ± 0.0039	$f\sigma_8(0.51)$	0.4737 ± 0.0064
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	0.2443 ± 0.0039	$\sigma_8(0.51)$	0.613 ± 0.012
$\boldsymbol{A^{kSZ}}$	$4.7^{+2.1}_{-4.2}$	10^5D/H	2.596 ± 0.069	$f\sigma_8(0.61)$	0.4678 ± 0.0064
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.20	Age/Gyr	14.00 ± 0.30	$\sigma_8(0.61)$	0.583 ± 0.012
$\boldsymbol{A_{143}^{dust}}$	0.97 ± 0.17	z_*	1090.04 ± 0.47	$f\sigma_8(2.33)$	0.2936 ± 0.0063
$\boldsymbol{A_{217}^{dust}}$	0.97 ± 0.10	r_*	146.0 ± 2.6	$\sigma_8(2.33)$	0.3022 ± 0.0070
$\boldsymbol{A_{143\times217}^{dust}}$	1.03 ± 0.16	$100\theta_*$	1.04141 ± 0.00073	f_{2000}^{143}	30 ± 4
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	$D_M(z_*)$/Gpc	14.02 ± 0.24	f_{2000}^{217}	106.8 ± 2.5
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	z_{drag}	1058.9 ± 1.1	$f_{2000}^{143\times217}$	32.0 ± 2.7
H_0	65.9 ± 2.2	r_{drag}	148.8 ± 2.7	$\chi^2_{lensing}$	9.33 ± 0.99
Ω_Λ	0.675 ± 0.015	k_D	0.1394 ± 0.0019	χ^2_{simall}	396.8 ± 1.6
Ω_m	0.325 ± 0.015	$100\theta_D$	0.16071 ± 0.00066	χ^2_{lowl}	24.5 ± 2.0
$\Omega_m h^2$	0.1408 ± 0.0041	z_{eq}	3425 ± 53	$\chi^2_{CamSpec}$	7062.7 ± 5.4
$\Omega_m h^3$	0.0929 ± 0.0054	k_{eq}	0.01034 ± 0.00014	χ^2_{prior}	7.5 ± 3.4
σ_8	0.804 ± 0.013	$100\theta_{eq}$	0.808 ± 0.010	χ^2_{CMB}	7493.4 ± 5.6
S_8	0.836 ± 0.017	$100\theta_{s,eq}$	0.4471 ± 0.0051		

$\bar{\chi}^2_{eff} = 7500.99$; $\Delta\bar{\chi}^2_{eff} = 0.75$; $R - 1 = 0.00870$

7.15 base_nnu_CamSpecHM_TT_lowl_lowE_post_Cooke17_Aver15

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02203 ± 0.00027	$\sigma_8\Omega_m^{0.25}$	0.609 ± 0.012	$H(0.38)$	81.8 ± 1.6
$\boldsymbol{\Omega_c h^2}$	0.1192 ± 0.0030	$\sigma_8/h^{0.5}$	0.993 ± 0.016	$D_M(0.38)$	1559 ± 36
$\boldsymbol{100\theta_{MC}}$	1.04098 ± 0.00052	$r_{drag}h$	98.0 ± 2.0	$H(0.51)$	88.6 ± 1.5
$\boldsymbol{\tau}$	0.0513 ± 0.0080	$\langle d^2\rangle^{1/2}$	2.458 ± 0.042	$D_M(0.51)$	2017 ± 44
$\boldsymbol{N_{eff}}$	2.94 ± 0.19	z_{re}	7.39 ± 0.83	$H(0.61)$	94.2 ± 1.5
$\boldsymbol{\ln(10^{10}A_s)}$	3.033 ± 0.018	$10^9 A_s$	2.077 ± 0.038	$D_M(0.61)$	2346 ± 50
$\boldsymbol{n_s}$	0.959 ± 0.010	$10^9 A_s e^{-2\tau}$	1.874 ± 0.018	$H(2.33)$	235.3 ± 2.5
$\boldsymbol{y_{cal}}$	1.0004 ± 0.0025	D_{40}	1236 ± 19	$D_M(2.33)$	5826 ± 88
$\boldsymbol{A_{100}^{PS}}$	240 ± 25	D_{220}	5701 ± 41	$f\sigma_8(0.15)$	0.463 ± 0.012
$\boldsymbol{A_{143}^{PS}}$	40 ± 9	D_{810}	2532 ± 14	$\sigma_8(0.15)$	0.744 ± 0.010
$\boldsymbol{A_{217}^{PS}}$	102 ± 10	D_{1420}	814.5 ± 5.0	$f\sigma_8(0.38)$	0.4785 ± 0.0094
$\boldsymbol{A_{217}^{CIB}}$	40 ± 7	D_{2000}	230.0 ± 1.9	$\sigma_8(0.38)$	0.6584 ± 0.0093
$\boldsymbol{A_{143}^{tSZ}}$	$3.8^{+1.9}_{-2.6}$	$n_{s,0.002}$	0.959 ± 0.010	$f\sigma_8(0.51)$	0.4756 ± 0.0081
$\boldsymbol{r_{143\times217}^{PS}}$	0.65 ± 0.13	Y_P	0.2438 ± 0.0027	$\sigma_8(0.51)$	0.6156 ± 0.0089
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.57^{+0.41}_{-0.15}$	Y_P^{BBN}	0.2451 ± 0.0027	$f\sigma_8(0.61)$	0.4696 ± 0.0074
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	10^5D/H	2.611 ± 0.049	$\sigma_8(0.61)$	0.5854 ± 0.0086
$\boldsymbol{A^{kSZ}}$	$4.8^{+2.5}_{-3.8}$	Age/Gyr	13.94 ± 0.21	$f\sigma_8(2.33)$	0.2947 ± 0.0046
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.20	z_*	1090.17 ± 0.40	$\sigma_8(2.33)$	0.3033 ± 0.0051
$\boldsymbol{A_{143}^{dust}}$	0.97 ± 0.17	r_*	145.5 ± 1.7	f_{2000}^{143}	30.1 ± 3.2
$\boldsymbol{A_{217}^{dust}}$	0.97 ± 0.10	$100\theta_*$	1.04126 ± 0.00058	f_{2000}^{217}	107.1 ± 2.1
$\boldsymbol{A_{143\times217}^{dust}}$	1.03 ± 0.16	$D_M(z_*)$/Gpc	13.97 ± 0.16	$f_{2000}^{143\times217}$	32.4 ± 2.3
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	z_{drag}	1059.00 ± 0.84	χ^2_{simall}	396.9 ± 1.6
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	r_{drag}	148.3 ± 1.8	χ^2_{lowl}	24.3 ± 1.9
H_0	66.1 ± 1.8	k_D	0.1398 ± 0.0013	$\chi^2_{CamSpec}$	7062.8 ± 5.4
Ω_Λ	$0.675^{+0.017}_{-0.016}$	$100\theta_D$	0.16085 ± 0.00044	χ^2_{Aver15}	0.45 ± 0.63
Ω_m	0.325 ± 0.017	z_{eq}	3426 ± 58	$\chi^2_{Cooke17}$	0.28 ± 0.39
$\Omega_m h^2$	0.1419 ± 0.0030	k_{eq}	0.01038 ± 0.00015	χ^2_{prior}	7.6 ± 3.4
$\Omega_m h^3$	0.0938 ± 0.0037	$100\theta_{eq}$	0.808 ± 0.011	χ^2_{CMB}	7484.0 ± 5.4
σ_8	0.807 ± 0.011	$100\theta_{s,eq}$	0.4470 ± 0.0055	χ^2_{Abund}	0.73 ± 0.85
S_8	0.840 ± 0.025	$H(0.15)$	71.5 ± 1.7		
$\sigma_8\Omega_m^{0.5}$	0.460 ± 0.014	$D_M(0.15)$	655 ± 17		

$\bar{\chi}^2_{eff} = 7492.26$; $R - 1 = 0.00836$

7.16 base_nnu_CamSpecHM_TT_lowl_lowE_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02206 ± 0.00031	$\sigma_8\Omega_m^{0.5}$	0.460 ± 0.014	$H(0.15)$	71.7 ± 2.3
$\boldsymbol{\Omega_c h^2}$	0.1193 ± 0.0041	$\sigma_8\Omega_m^{0.25}$	0.610 ± 0.012	$D_M(0.15)$	653 ± 22
$\boldsymbol{100\theta_{MC}}$	1.04098 ± 0.00059	$\sigma_8/h^{0.5}$	0.993 ± 0.017	$H(0.38)$	82.0 ± 2.2
$\boldsymbol{\tau}$	$0.0534^{+0.0044}_{-0.0084}$	$r_{drag}h$	98.2 ± 2.2	$D_M(0.38)$	1555 ± 49
$\boldsymbol{N_{eff}}$	2.96 ± 0.29	$\langle d^2\rangle^{1/2}$	2.458 ± 0.046	$H(0.51)$	88.7 ± 2.2
$\boldsymbol{\ln(10^{10}A_s)}$	$3.038^{+0.016}_{-0.020}$	z_{re}	$7.62^{+0.48}_{-0.87}$	$D_M(0.51)$	2013 ± 61
$\boldsymbol{n_s}$	0.960 ± 0.013	10^9A_s	$2.086^{+0.033}_{-0.041}$	$H(0.61)$	94.4 ± 2.2
$\boldsymbol{y_{cal}}$	1.0004 ± 0.0025	$10^9A_se^{-2\tau}$	1.875 ± 0.023	$D_M(0.61)$	2340 ± 69
$\boldsymbol{A_{100}^{PS}}$	240 ± 26	D_{40}	1234 ± 22	$H(2.33)$	235.5 ± 3.7
$\boldsymbol{A_{143}^{PS}}$	40 ± 9	D_{220}	5702 ± 41	$D_M(2.33)$	5817 ± 130
$\boldsymbol{A_{217}^{PS}}$	102 ± 10	D_{810}	2532 ± 14	$f\sigma_8(0.15)$	0.463 ± 0.013
$\boldsymbol{A_{217}^{CIB}}$	40 ± 8	D_{1420}	814.5 ± 5.2	$\sigma_8(0.15)$	0.746 ± 0.013
$\boldsymbol{A_{143}^{tSZ}}$	$3.8^{+1.9}_{-2.6}$	D_{2000}	230.0 ± 2.3	$f\sigma_8(0.38)$	0.4788 ± 0.0097
$\boldsymbol{r_{143\times217}^{PS}}$	0.65 ± 0.13	$n_{s,0.002}$	0.960 ± 0.013	$\sigma_8(0.38)$	0.660 ± 0.012
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.57^{+0.41}_{-0.15}$	Y_P	0.2440 ± 0.0040	$f\sigma_8(0.51)$	0.4760 ± 0.0085
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	0.2453 ± 0.0040	$\sigma_8(0.51)$	0.617 ± 0.012
$\boldsymbol{A^{kSZ}}$	$4.8^{+2.7}_{-3.6}$	10^5D/H	2.613 ± 0.071	$f\sigma_8(0.61)$	0.4702 ± 0.0079
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.20	Age/Gyr	13.92 ± 0.31	$\sigma_8(0.61)$	0.587 ± 0.011
$\boldsymbol{A_{143}^{dust}}$	0.97 ± 0.18	z_*	1090.16 ± 0.50	$f\sigma_8(2.33)$	0.2956 ± 0.0061
$\boldsymbol{A_{217}^{dust}}$	0.97 ± 0.10	r_*	145.3 ± 2.6	$\sigma_8(2.33)$	0.3043 ± 0.0068
$\boldsymbol{A_{143\times217}^{dust}}$	1.03 ± 0.16	$100\theta_*$	1.04125 ± 0.00073	f_{2000}^{143}	30 ± 4
$\boldsymbol{c_{100}}$	0.9975 ± 0.0010	$D_M(z_*)$/Gpc	13.96 ± 0.24	f_{2000}^{217}	107.1 ± 2.5
$\boldsymbol{c_{217}}$	1.0012 ± 0.0016	z_{drag}	1059.1 ± 1.1	$f_{2000}^{143\times217}$	32.4 ± 2.7
H_0	66.4 ± 2.4	r_{drag}	148.1 ± 2.7	χ^2_{simall}	396.8 ± 1.6
Ω_Λ	0.677 ± 0.019	k_D	0.1399 ± 0.0019	χ^2_{lowl}	24.3 ± 2.3
Ω_m	0.323 ± 0.019	$100\theta_D$	0.16087 ± 0.00067	$\chi^2_{CamSpec}$	7063.2 ± 5.7
$\Omega_m h^2$	0.1420 ± 0.0042	z_{eq}	3420 ± 65	χ^2_{prior}	7.6 ± 3.4
$\Omega_m h^3$	$0.0943^{+0.0053}_{-0.0059}$	k_{eq}	0.01037 ± 0.00016	χ^2_{CMB}	7484.3 ± 5.5
σ_8	0.809 ± 0.013	$100\theta_{eq}$	0.810 ± 0.012		
S_8	0.839 ± 0.025	$100\theta_{s,eq}$	0.4477 ± 0.0062		

$\bar{\chi}^2_{eff} = 7491.86$; $\Delta\bar{\chi}^2_{eff} = 0.60$; $R - 1 = 0.00538$

7.17 base_nnu_CamSpecHM_TT_lowl_lowE_post_lensing_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02205 ± 0.00029	$\sigma_8\Omega_m^{0.5}$	0.4575 ± 0.0092	$H(0.15)$	71.5 ± 2.1
$\boldsymbol{\Omega_c h^2}$	0.1183 ± 0.0039	$\sigma_8\Omega_m^{0.25}$	0.6071 ± 0.0084	$D_M(0.15)$	655 ± 20
$\boldsymbol{100\theta_{MC}}$	1.04108 ± 0.00058	$\sigma_8/h^{0.5}$	0.991 ± 0.011	$H(0.38)$	81.7 ± 2.1
$\boldsymbol{\tau}$	$0.0535^{+0.0045}_{-0.0081}$	$r_{drag}h$	98.3 ± 1.7	$D_M(0.38)$	1560 ± 45
$\boldsymbol{N_{eff}}$	2.91 ± 0.28	$\langle d^2\rangle^{1/2}$	2.456 ± 0.032	$H(0.51)$	88.4 ± 2.1
$\boldsymbol{\ln(10^{10}A_s)}$	$3.035^{+0.016}_{-0.019}$	z_{re}	$7.61^{+0.48}_{-0.85}$	$D_M(0.51)$	2019 ± 56
$\boldsymbol{n_s}$	0.959 ± 0.012	10^9A_s	$2.081^{+0.033}_{-0.040}$	$H(0.61)$	94.1 ± 2.1
$\boldsymbol{y_{cal}}$	1.0004 ± 0.0025	$10^9A_se^{-2\tau}$	1.870 ± 0.022	$D_M(0.61)$	2348 ± 63
$\boldsymbol{A_{100}^{PS}}$	239 ± 26	D_{40}	1236 ± 19	$H(2.33)$	234.6 ± 3.6
$\boldsymbol{A_{143}^{PS}}$	39 ± 9	D_{220}	5705 ± 41	$D_M(2.33)$	5837 ± 120
$\boldsymbol{A_{217}^{PS}}$	102 ± 10	D_{810}	2532 ± 14	$f\sigma_8(0.15)$	0.4611 ± 0.0083
$\boldsymbol{A_{217}^{CIB}}$	40 ± 8	D_{1420}	814.9 ± 5.2	$\sigma_8(0.15)$	0.743 ± 0.012
$\boldsymbol{A_{143}^{tSZ}}$	$3.9^{+1.9}_{-2.6}$	D_{2000}	230.4 ± 2.3	$f\sigma_8(0.38)$	0.4768 ± 0.0067
$\boldsymbol{r_{143\times217}^{PS}}$	0.65 ± 0.13	$n_{s,0.002}$	0.959 ± 0.012	$\sigma_8(0.38)$	0.658 ± 0.012
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.57^{+0.42}_{-0.15}$	Y_P	0.2433 ± 0.0039	$f\sigma_8(0.51)$	0.4742 ± 0.0063
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	0.2446 ± 0.0039	$\sigma_8(0.51)$	0.615 ± 0.011
$\boldsymbol{A^{kSZ}}$	$4.7^{+2.2}_{-4.1}$	10^5D/H	2.598 ± 0.069	$f\sigma_8(0.61)$	0.4684 ± 0.0063
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.20	Age/Gyr	13.97 ± 0.29	$\sigma_8(0.61)$	0.585 ± 0.011
$\boldsymbol{A_{143}^{dust}}$	0.97 ± 0.17	z_*	1090.03 ± 0.47	$f\sigma_8(2.33)$	0.2946 ± 0.0060
$\boldsymbol{A_{217}^{dust}}$	0.97 ± 0.10	r_*	145.9 ± 2.6	$\sigma_8(2.33)$	0.3033 ± 0.0066
$\boldsymbol{A_{143\times217}^{dust}}$	1.03 ± 0.16	$100\theta_*$	1.04139 ± 0.00072	f_{2000}^{143}	30 ± 4
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	$D_M(z_*)$/Gpc	14.01 ± 0.24	f_{2000}^{217}	106.8 ± 2.4
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	z_{drag}	1058.9 ± 1.1	$f_{2000}^{143\times217}$	32.1 ± 2.7
H_0	66.1 ± 2.1	r_{drag}	148.7 ± 2.7	$\chi^2_{lensing}$	9.34 ± 0.99
Ω_Λ	0.677 ± 0.015	k_D	0.1395 ± 0.0019	χ^2_{simall}	396.7 ± 1.6
Ω_m	0.323 ± 0.015	$100\theta_D$	0.16075 ± 0.00065	χ^2_{lowl}	24.3 ± 1.9
$\Omega_m h^2$	0.1410 ± 0.0041	z_{eq}	3418 ± 51	$\chi^2_{CamSpec}$	7062.7 ± 5.4
$\Omega_m h^3$	0.0933 ± 0.0054	k_{eq}	0.01033 ± 0.00014	χ^2_{prior}	7.6 ± 3.4
σ_8	0.806 ± 0.012	$100\theta_{eq}$	0.8098 ± 0.0095	χ^2_{CMB}	7493.2 ± 5.5
S_8	0.835 ± 0.017	$100\theta_{s,eq}$	0.4478 ± 0.0048		

$\bar{\chi}^2_{eff} = 7500.70$; $\Delta\bar{\chi}^2_{eff} = 0.69$; $R - 1 = 0.00702$

7.18 base_nnu_CamSpecHM_TT_lowl_lowE_post_Cooke17_Aver15_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02205 ± 0.00027	$\sigma_8\Omega_m^{0.25}$	0.610 ± 0.011	$H(0.38)$	81.9 ± 1.6
$\boldsymbol{\Omega_c h^2}$	0.1192 ± 0.0030	$\sigma_8/h^{0.5}$	0.994 ± 0.016	$D_M(0.38)$	1557 ± 36
$\boldsymbol{100\theta_{MC}}$	1.04098 ± 0.00052	$r_{drag}h$	98.1 ± 1.9	$H(0.51)$	88.6 ± 1.5
$\boldsymbol{\tau}$	$0.0532^{+0.0044}_{-0.0080}$	$\langle d^2\rangle^{1/2}$	2.460 ± 0.042	$D_M(0.51)$	2014 ± 44
$\boldsymbol{N_{eff}}$	2.95 ± 0.19	z_{re}	$7.60^{+0.48}_{-0.84}$	$H(0.61)$	94.3 ± 1.5
$\boldsymbol{\ln(10^{10}A_s)}$	$3.037^{+0.013}_{-0.017}$	$10^9 A_s$	$2.085^{+0.027}_{-0.036}$	$D_M(0.61)$	2342 ± 49
$\boldsymbol{n_s}$	0.960 ± 0.010	$10^9 A_s e^{-2\tau}$	1.875 ± 0.018	$H(2.33)$	235.4 ± 2.5
$\boldsymbol{y_{cal}}$	1.0004 ± 0.0025	D_{40}	1235 ± 19	$D_M(2.33)$	5820 ± 88
$\boldsymbol{A_{100}^{PS}}$	240 ± 25	D_{220}	5701 ± 41	$f\sigma_8(0.15)$	0.464 ± 0.012
$\boldsymbol{A_{143}^{PS}}$	40 ± 9	D_{810}	2532 ± 14	$\sigma_8(0.15)$	0.7459 ± 0.0095
$\boldsymbol{A_{217}^{PS}}$	102 ± 10	D_{1420}	814.6 ± 5.0	$f\sigma_8(0.38)$	0.4790 ± 0.0094
$\boldsymbol{A_{217}^{CIB}}$	40 ± 7	D_{2000}	230.1 ± 1.9	$\sigma_8(0.38)$	0.6599 ± 0.0087
$\boldsymbol{A_{143}^{tSZ}}$	$3.8^{+1.9}_{-2.6}$	$n_{s,0.002}$	0.960 ± 0.010	$f\sigma_8(0.51)$	0.4762 ± 0.0080
$\boldsymbol{r_{143\times217}^{PS}}$	0.65 ± 0.13	Y_P	0.2439 ± 0.0026	$\sigma_8(0.51)$	0.6170 ± 0.0083
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.57^{+0.41}_{-0.15}$	Y_P^{BBN}	0.2452 ± 0.0027	$f\sigma_8(0.61)$	0.4702 ± 0.0072
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	10^5D/H	2.612 ± 0.049	$\sigma_8(0.61)$	0.5868 ± 0.0081
$\boldsymbol{A^{kSZ}}$	$4.8^{+2.4}_{-3.9}$	Age/Gyr	13.93 ± 0.21	$f\sigma_8(2.33)$	0.2954 ± 0.0043
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.20	z_*	1090.16 ± 0.40	$\sigma_8(2.33)$	0.3041 ± 0.0048
$\boldsymbol{A_{143}^{dust}}$	0.97 ± 0.18	r_*	145.4 ± 1.7	f_{2000}^{143}	30.0 ± 3.2
$\boldsymbol{A_{217}^{dust}}$	0.97 ± 0.10	$100\theta_*$	1.04126 ± 0.00058	f_{2000}^{217}	107.1 ± 2.1
$\boldsymbol{A_{143\times217}^{dust}}$	1.03 ± 0.16	$D_M(z_*)$/Gpc	13.96 ± 0.16	$f_{2000}^{143\times217}$	32.4 ± 2.3
$\boldsymbol{c_{100}}$	0.9975 ± 0.0010	z_{drag}	1059.05 ± 0.84	χ^2_{simall}	396.7 ± 1.6
$\boldsymbol{c_{217}}$	1.0011 ± 0.0015	r_{drag}	148.2 ± 1.8	χ^2_{lowl}	24.2 ± 1.9
H_0	66.2 ± 1.8	k_D	0.1399 ± 0.0013	$\chi^2_{CamSpec}$	7062.7 ± 5.4
Ω_Λ	$0.676^{+0.017}_{-0.015}$	$100\theta_D$	0.16086 ± 0.00044	χ^2_{Aver15}	0.45 ± 0.62
Ω_m	$0.324^{+0.015}_{-0.017}$	z_{eq}	3422 ± 57	$\chi^2_{Cooke17}$	0.28 ± 0.39
$\Omega_m h^2$	0.1419 ± 0.0030	k_{eq}	0.01037 ± 0.00015	χ^2_{prior}	7.6 ± 3.4
$\Omega_m h^3$	0.0940 ± 0.0037	$100\theta_{eq}$	0.809 ± 0.011	χ^2_{CMB}	7483.7 ± 5.3
σ_8	0.808 ± 0.010	$100\theta_{s,eq}$	0.4474 ± 0.0055	χ^2_{Abund}	0.73 ± 0.85
S_8	0.840 ± 0.025	$H(0.15)$	71.6 ± 1.7		
$\sigma_8\Omega_m^{0.5}$	0.460 ± 0.013	$D_M(0.15)$	654 ± 16		

$\bar{\chi}^2_{eff} = 7491.99$; $R - 1 = 0.00722$

7.19 base_nnu_CamSpecHM_TTTEEE_lowl_lowE

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022177	0.02220 ± 0.00023	σ_8	0.8020	0.803 ± 0.012	$100\theta_{\rm eq}$	0.8118	0.8124 ± 0.0077
$\boldsymbol{\Omega_c h^2}$	0.11735	0.1179 ± 0.0034	S_8	0.8267	0.826 ± 0.016	$100\theta_{\rm s,eq}$	0.44874	0.4490 ± 0.0039
$\boldsymbol{100\theta_{MC}}$	1.041117	1.04108 ± 0.00047	$\sigma_8\Omega_{\rm m}^{0.5}$	0.4528	0.4527 ± 0.0090	$H(0.15)$	71.61	71.8 ± 1.6
$\boldsymbol{\tau}$	0.0527	0.0520 ± 0.0079	$\sigma_8\Omega_{\rm m}^{0.25}$	0.6026	0.6028 ± 0.0091	$D_{\rm M}(0.15)$	653.2	651 ± 16
$\boldsymbol{N_{eff}}$	2.885	2.92 ± 0.22	$\sigma_8/h^{0.5}$	0.9848	0.984 ± 0.012	$H(0.38)$	81.74	82.0 ± 1.6
$\boldsymbol{\ln(10^{10}A_s)}$	3.0322	3.032 ± 0.019	$r_{\rm drag}h$	98.70	98.8 ± 1.4	$D_{\rm M}(0.38)$	1556.1	1552 ± 35
$\boldsymbol{n_s}$	0.9607	0.9613 ± 0.0095	$\langle d^2\rangle^{1/2}$	2.4422	2.440 ± 0.031	$H(0.51)$	88.45	88.7 ± 1.6
$\boldsymbol{y_{cal}}$	1.00022	1.0005 ± 0.0025	$z_{\rm re}$	7.50	7.41 ± 0.82	$D_{\rm M}(0.51)$	2014.6	2009 ± 44
$\boldsymbol{A_{100}^{PS}}$	230.1	236 ± 25	$10^9 A_{\rm s}$	2.0743	2.074 ± 0.040	$H(0.61)$	94.07	94.3 ± 1.7
$\boldsymbol{A_{143}^{PS}}$	42.7	38 ± 9	$10^9 A_{\rm s}e^{-2\tau}$	1.8666	1.869 ± 0.020	$D_{\rm M}(0.61)$	2343.3	2337 ± 50
$\boldsymbol{A_{217}^{PS}}$	105.0	103 ± 10	D_{40}	1230.9	1231 ± 16	$H(2.33)$	234.09	234.6 ± 3.1
$\boldsymbol{A_{217}^{CIB}}$	41.1	39 ± 7	D_{220}	5711.7	5715 ± 38	$D_{\rm M}(2.33)$	5836	5823 ± 99
$\boldsymbol{A_{143}^{tSZ}}$	5.90	$3.9^{+1.9}_{-2.5}$	D_{810}	2532.6	2533 ± 14	$f\sigma_8(0.15)$	0.4568	0.4567 ± 0.0084
$\boldsymbol{r_{143\times217}^{PS}}$	0.687	0.66 ± 0.13	D_{1420}	816.89	816.4 ± 5.0	$\sigma_8(0.15)$	0.7404	0.741 ± 0.011
$\boldsymbol{r_{143\times217}^{CIB}}$	0.754	$0.54^{+0.38}_{-0.21}$	D_{2000}	231.28	230.9 ± 2.1	$f\sigma_8(0.38)$	0.4733	0.4733 ± 0.0073
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.51	—	$n_{\rm s,0.002}$	0.9607	0.9613 ± 0.0095	$\sigma_8(0.38)$	0.6555	0.656 ± 0.011
$\boldsymbol{A^{kSZ}}$	0.80	< 5.98	$Y_{\rm P}$	0.24314	0.2436 ± 0.0031	$f\sigma_8(0.51)$	0.4711	0.4712 ± 0.0069
$\boldsymbol{A_{100}^{dust}}$	1.017	1.01 ± 0.20	$Y_{\rm P}^{\rm BBN}$	0.24446	0.2449 ± 0.0031	$\sigma_8(0.51)$	0.6132	0.614 ± 0.010
$\boldsymbol{A_{143}^{dust}}$	0.973	0.96 ± 0.18	10^5D/H	2.566	2.575 ± 0.057	$f\sigma_8(0.61)$	0.4656	0.4658 ± 0.0067
$\boldsymbol{A_{217}^{dust}}$	0.979	0.98 ± 0.10	Age/Gyr	13.970	13.94 ± 0.23	$\sigma_8(0.61)$	0.5832	0.5840 ± 0.0099
$\boldsymbol{A_{143\times217}^{dust}}$	1.011	1.02 ± 0.16	z_*	1089.771	1089.83 ± 0.41	$f\sigma_8(2.33)$	0.2938	0.2942 ± 0.0052
$\boldsymbol{c_{100}}$	0.99769	0.9975 ± 0.0011	r_*	146.09	145.8 ± 2.1	$\sigma_8(2.33)$	0.3026	0.3031 ± 0.0057
$\boldsymbol{c_{217}}$	1.00117	1.0011 ± 0.0016	$100\theta_*$	1.04143	1.04137 ± 0.00060	f_{2000}^{143}	28.51	29 ± 3
$\boldsymbol{c_{TE}}$	0.9956	0.9959 ± 0.0052	$D_{\rm M}(z_*)$/Gpc	14.028	14.00 ± 0.20	f_{2000}^{217}	105.81	106.2 ± 2.3
$\boldsymbol{c_{EE}}$	0.9902	0.9906 ± 0.0057	$z_{\rm drag}$	1059.17	1059.27 ± 0.85	$f_{2000}^{143\times217}$	31.09	31.4 ± 2.5
H_0	66.32	66.5 ± 1.7	$r_{\rm drag}$	148.84	148.5 ± 2.2	$\chi^2_{\rm simall}$	395.87	396.8 ± 1.6
Ω_Λ	0.6813	0.682 ± 0.011	$k_{\rm D}$	0.13951	0.1397 ± 0.0016	$\chi^2_{\rm lowl}$	23.68	23.8 ± 1.5
$\Omega_{\rm m}$	0.3187	0.318 ± 0.011	$100\theta_{\rm D}$	0.16053	0.16061 ± 0.00053	$\chi^2_{\rm CamSpec}$	11498.6	11514.5 ± 5.9
$\Omega_{\rm m}h^2$	0.14017	0.1407 ± 0.0035	$z_{\rm eq}$	3407.9	3405 ± 41	$\chi^2_{\rm prior}$	2.07	7.9 ± 3.4
$\Omega_{\rm m}h^3$	0.09296	$0.0937^{+0.0041}_{-0.0046}$	$k_{\rm eq}$	0.010288	0.01030 ± 0.00013	$\chi^2_{\rm CMB}$	11918.2	11935.2 ± 5.9

Best-fit $\chi^2_{\rm eff} = 11920.27$; $\Delta\chi^2_{\rm eff} = -0.49$; $\bar{\chi}^2_{\rm eff} = 11943.05$; $\Delta\bar{\chi}^2_{\rm eff} = 0.59$; $R - 1 = 0.00888$

$\chi^2_{\rm eff}$: CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.87 (Δ -0.03) commander_dx12_v3_2_29: 23.68 (Δ 0.68) CamSpec like_10.7HM_1400_unified: 11498.65 (Δ -0.99)

7.20 base_nnu_CamSpecHM_TTTEEE_lowl_lowE_post_lensing

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02217 ± 0.00022	S_8	0.828 ± 0.013	$H(0.15)$	71.5 ± 1.6
$\boldsymbol{\Omega_c h^2}$	0.1175 ± 0.0033	$\sigma_8\Omega_m^{0.5}$	0.4537 ± 0.0070	$D_M(0.15)$	654 ± 15
$\boldsymbol{100\theta_{MC}}$	1.04113 ± 0.00047	$\sigma_8\Omega_m^{0.25}$	0.6033 ± 0.0073	$H(0.38)$	81.7 ± 1.6
$\boldsymbol{\tau}$	0.0527 ± 0.0074	$\sigma_8/h^{0.5}$	0.9859 ± 0.0091	$D_M(0.38)$	1558 ± 34
$\boldsymbol{N_{eff}}$	2.88 ± 0.22	$r_{drag}h$	98.6 ± 1.3	$H(0.51)$	88.4 ± 1.6
$\boldsymbol{\ln(10^{10}A_s)}$	3.033 ± 0.018	$\langle d^2\rangle^{1/2}$	2.447 ± 0.025	$D_M(0.51)$	2017 ± 43
$\boldsymbol{n_s}$	0.9595 ± 0.0093	z_{re}	7.48 ± 0.76	$H(0.61)$	94.0 ± 1.6
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0024	$10^9 A_s$	2.075 ± 0.037	$D_M(0.61)$	2346 ± 49
$\boldsymbol{A_{100}^{PS}}$	236 ± 25	$10^9 A_s e^{-2\tau}$	1.868 ± 0.019	$H(2.33)$	234.1 ± 3.0
$\boldsymbol{A_{143}^{PS}}$	37 ± 9	D_{40}	1235 ± 16	$D_M(2.33)$	5840 ± 98
$\boldsymbol{A_{217}^{PS}}$	104 ± 10	D_{220}	5718 ± 38	$f\sigma_8(0.15)$	0.4576 ± 0.0065
$\boldsymbol{A_{217}^{CIB}}$	38 ± 7	D_{810}	2533 ± 13	$\sigma_8(0.15)$	0.741 ± 0.011
$\boldsymbol{A_{143}^{tSZ}}$	$3.9^{+1.9}_{-2.5}$	D_{1420}	816.8 ± 5.0	$f\sigma_8(0.38)$	0.4739 ± 0.0057
$\boldsymbol{r_{143\times217}^{PS}}$	0.67 ± 0.13	D_{2000}	231.2 ± 2.1	$\sigma_8(0.38)$	0.656 ± 0.010
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.54^{+0.39}_{-0.21}$	$n_{s,0.002}$	0.9595 ± 0.0093	$f\sigma_8(0.51)$	0.4715 ± 0.0056
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P	0.2431 ± 0.0031	$\sigma_8(0.51)$	0.6132 ± 0.0098
$\boldsymbol{A^{kSZ}}$	< 5.88	Y_P^{BBN}	0.2444 ± 0.0031	$f\sigma_8(0.61)$	0.4659 ± 0.0056
$\boldsymbol{A_{100}^{dust}}$	1.00 ± 0.20	10^5D/H	2.567 ± 0.055	$\sigma_8(0.61)$	0.5832 ± 0.0095
$\boldsymbol{A_{143}^{dust}}$	0.95 ± 0.18	Age/Gyr	13.98 ± 0.23	$f\sigma_8(2.33)$	0.2938 ± 0.0050
$\boldsymbol{A_{217}^{dust}}$	0.98 ± 0.10	z_*	1089.79 ± 0.39	$\sigma_8(2.33)$	0.3025 ± 0.0055
$\boldsymbol{A_{143\times217}^{dust}}$	1.02 ± 0.16	r_*	146.1 ± 2.1	f_{2000}^{143}	28 ± 3
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	$100\theta_*$	1.04144 ± 0.00060	f_{2000}^{217}	106.1 ± 2.3
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	$D_M(z_*)$/Gpc	14.03 ± 0.19	$f_{2000}^{143\times217}$	31.1 ± 2.4
$\boldsymbol{c_{TE}}$	0.9956 ± 0.0051	z_{drag}	1059.14 ± 0.84	$\chi^2_{lensing}$	9.08 ± 0.76
$\boldsymbol{c_{EE}}$	0.9902 ± 0.0056	r_{drag}	148.9 ± 2.2	χ^2_{simall}	396.8 ± 1.5
H_0	66.2 ± 1.6	k_D	0.1395 ± 0.0015	χ^2_{lowl}	24.1 ± 1.5
Ω_Λ	0.680 ± 0.011	$100\theta_D$	0.16052 ± 0.00052	$\chi^2_{CamSpec}$	11513.8 ± 5.7
Ω_m	0.320 ± 0.011	z_{eq}	3412 ± 37	χ^2_{prior}	7.9 ± 3.4
$\Omega_m h^2$	0.1403 ± 0.0034	k_{eq}	0.01030 ± 0.00011	χ^2_{CMB}	11943.8 ± 6.0
$\Omega_m h^3$	$0.0930^{+0.0040}_{-0.0045}$	$100\theta_{eq}$	0.8111 ± 0.0070		
σ_8	0.802 ± 0.011	$100\theta_{s,eq}$	0.4484 ± 0.0035		

$\bar{\chi}^2_{eff} = 11951.65$; $\Delta\bar{\chi}^2_{eff} = 0.20$; $R - 1 = 0.01144$

7.21 base_nnu_CamSpecHM_TTTEEE_lowl_lowE_post_Cooke17_Aver15

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02220 ± 0.00020	S_8	0.827 ± 0.016	$H(0.15)$	72.0 ± 1.3
$\boldsymbol{\Omega_c h^2}$	0.1183 ± 0.0026	$\sigma_8\Omega_m^{0.5}$	0.4532 ± 0.0089	$D_M(0.15)$	650 ± 12
$\boldsymbol{100\theta_{MC}}$	1.04103 ± 0.00040	$\sigma_8\Omega_m^{0.25}$	0.6036 ± 0.0086	$H(0.38)$	82.1 ± 1.3
$\boldsymbol{\tau}$	0.0519 ± 0.0079	$\sigma_8/h^{0.5}$	0.985 ± 0.012	$D_M(0.38)$	1549 ± 27
$\boldsymbol{N_{eff}}$	2.95 ± 0.17	$r_{drag}h$	98.8 ± 1.3	$H(0.51)$	88.8 ± 1.3
$\boldsymbol{\ln(10^{10}A_s)}$	3.033 ± 0.018	$\langle d^2\rangle^{1/2}$	2.440 ± 0.030	$D_M(0.51)$	2005 ± 34
$\boldsymbol{n_s}$	0.9620 ± 0.0078	z_{re}	7.42 ± 0.82	$H(0.61)$	94.5 ± 1.3
$\boldsymbol{y_{cal}}$	1.0004 ± 0.0025	10^9A_s	2.076 ± 0.037	$D_M(0.61)$	2333 ± 39
$\boldsymbol{A_{100}^{PS}}$	237 ± 25	$10^9A_se^{-2\tau}$	1.871 ± 0.016	$H(2.33)$	234.9 ± 2.3
$\boldsymbol{A_{143}^{PS}}$	39 ± 8	D_{40}	1230 ± 15	$D_M(2.33)$	5813 ± 74
$\boldsymbol{A_{217}^{PS}}$	103 ± 10	D_{220}	5714 ± 38	$f\sigma_8(0.15)$	0.4572 ± 0.0083
$\boldsymbol{A_{217}^{CIB}}$	39 ± 7	D_{810}	2533 ± 14	$\sigma_8(0.15)$	0.7423 ± 0.0095
$\boldsymbol{A_{143}^{tSZ}}$	$3.9^{+1.8}_{-2.6}$	D_{1420}	816.1 ± 4.8	$f\sigma_8(0.38)$	0.4740 ± 0.0069
$\boldsymbol{r_{143\times217}^{PS}}$	0.66 ± 0.13	D_{2000}	230.7 ± 1.8	$\sigma_8(0.38)$	0.6573 ± 0.0088
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.55^{+0.42}_{-0.17}$	$n_{s,0.002}$	0.9620 ± 0.0078	$f\sigma_8(0.51)$	0.4719 ± 0.0064
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P	0.2439 ± 0.0023	$\sigma_8(0.51)$	0.6149 ± 0.0083
$\boldsymbol{A^{kSZ}}$	< 6.01	Y_P^{BBN}	0.2453 ± 0.0023	$f\sigma_8(0.61)$	0.4664 ± 0.0061
$\boldsymbol{A_{100}^{dust}}$	1.00 ± 0.20	10^5D/H	2.583 ± 0.043	$\sigma_8(0.61)$	0.5849 ± 0.0081
$\boldsymbol{A_{143}^{dust}}$	0.96 ± 0.18	Age/Gyr	13.91 ± 0.18	$f\sigma_8(2.33)$	0.2947 ± 0.0042
$\boldsymbol{A_{217}^{dust}}$	0.98 ± 0.10	z_*	1089.89 ± 0.33	$\sigma_8(2.33)$	0.3036 ± 0.0046
$\boldsymbol{A_{143\times217}^{dust}}$	1.03 ± 0.16	r_*	145.5 ± 1.6	f_{2000}^{143}	29.1 ± 3.1
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	$100\theta_*$	1.04129 ± 0.00048	f_{2000}^{217}	106.4 ± 2.1
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	$D_M(z_*)$/Gpc	13.98 ± 0.15	$f_{2000}^{143\times217}$	31.6 ± 2.2
$\boldsymbol{c_{TE}}$	0.9962 ± 0.0050	z_{drag}	1059.32 ± 0.69	χ^2_{simall}	396.8 ± 1.6
$\boldsymbol{c_{EE}}$	0.9911 ± 0.0053	r_{drag}	148.3 ± 1.6	χ^2_{lowl}	23.7 ± 1.3
H_0	66.7 ± 1.3	k_D	0.1399 ± 0.0012	$\chi^2_{CamSpec}$	11514.2 ± 5.8
Ω_Λ	0.682 ± 0.010	$100\theta_D$	0.16068 ± 0.00039	χ^2_{Aver15}	0.35 ± 0.48
Ω_m	0.318 ± 0.010	z_{eq}	3404 ± 37	$\chi^2_{Cooke17}$	0.35 ± 0.45
$\Omega_m h^2$	0.1411 ± 0.0027	k_{eq}	0.01032 ± 0.00011	χ^2_{prior}	7.9 ± 3.4
$\Omega_m h^3$	0.0941 ± 0.0033	$100\theta_{eq}$	0.8126 ± 0.0070	χ^2_{CMB}	11934.7 ± 5.9
σ_8	0.804 ± 0.010	$100\theta_{s,eq}$	0.4491 ± 0.0036	χ^2_{Abund}	0.69 ± 0.73

$\bar{\chi}^2_{eff} = 11943.28$; $R - 1 = 0.01315$

7.22 base_nnu_CamSpecHM_TTTEEE_lowl_lowE_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02221 ± 0.00023	σ_8	0.804 ± 0.011	$100\theta_{\rm eq}$	0.8127 ± 0.0076
$\boldsymbol{\Omega_c h^2}$	0.1179 ± 0.0034	S_8	0.827 ± 0.016	$100\theta_{\rm s,eq}$	0.4492 ± 0.0039
$\boldsymbol{100\theta_{MC}}$	1.04108 ± 0.00047	$\sigma_8\Omega_{\rm m}^{0.5}$	0.4531 ± 0.0089	$H(0.15)$	71.9 ± 1.6
$\boldsymbol{\tau}$	$0.0538^{+0.0043}_{-0.0082}$	$\sigma_8\Omega_{\rm m}^{0.25}$	0.6036 ± 0.0089	$D_{\rm M}(0.15)$	651 ± 16
$\boldsymbol{N_{eff}}$	2.93 ± 0.22	$\sigma_8/h^{0.5}$	0.985 ± 0.012	$H(0.38)$	82.1 ± 1.6
$\boldsymbol{\ln(10^{10}A_s)}$	$3.036^{+0.014}_{-0.019}$	$r_{\rm drag}h$	98.9 ± 1.4	$D_{\rm M}(0.38)$	1550 ± 35
$\boldsymbol{n_s}$	0.9618 ± 0.0094	$\langle d^2\rangle^{1/2}$	2.443 ± 0.031	$H(0.51)$	88.8 ± 1.6
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	$z_{\rm re}$	$7.60^{+0.47}_{-0.85}$	$D_{\rm M}(0.51)$	2007 ± 43
$\boldsymbol{A^{PS}_{100}}$	236 ± 25	$10^9 A_{\rm s}$	$2.082^{+0.029}_{-0.039}$	$H(0.61)$	94.4 ± 1.7
$\boldsymbol{A^{PS}_{143}}$	38 ± 9	$10^9 A_{\rm s}e^{-2\tau}$	1.869 ± 0.020	$D_{\rm M}(0.61)$	2335 ± 49
$\boldsymbol{A^{PS}_{217}}$	103 ± 10	D_{40}	1231 ± 16	$H(2.33)$	234.6 ± 3.0
$\boldsymbol{A^{CIB}_{217}}$	39 ± 7	D_{220}	5715 ± 38	$D_{\rm M}(2.33)$	5819 ± 98
$\boldsymbol{A^{tSZ}_{143}}$	$3.9^{+1.9}_{-2.5}$	D_{810}	2533 ± 14	$f\sigma_8(0.15)$	0.4571 ± 0.0083
$\boldsymbol{r^{PS}_{143\times217}}$	0.66 ± 0.13	D_{1420}	816.4 ± 5.0	$\sigma_8(0.15)$	0.743 ± 0.011
$\boldsymbol{r^{CIB}_{143\times217}}$	$0.54^{+0.38}_{-0.21}$	D_{2000}	230.9 ± 2.1	$f\sigma_8(0.38)$	0.4740 ± 0.0071
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$n_{\rm s,0.002}$	0.9618 ± 0.0094	$\sigma_8(0.38)$	0.658 ± 0.010
$\boldsymbol{A^{kSZ}}$	< 5.97	$Y_{\rm P}$	0.2437 ± 0.0031	$f\sigma_8(0.51)$	0.4719 ± 0.0066
$\boldsymbol{A^{dust}_{100}}$	1.01 ± 0.20	$Y_{\rm P}^{\rm BBN}$	0.2450 ± 0.0031	$\sigma_8(0.51)$	0.6152 ± 0.0097
$\boldsymbol{A^{dust}_{143}}$	0.96 ± 0.18	10^5D/H	2.576 ± 0.057	$f\sigma_8(0.61)$	0.4665 ± 0.0064
$\boldsymbol{A^{dust}_{217}}$	0.98 ± 0.10	Age/Gyr	13.93 ± 0.23	$\sigma_8(0.61)$	0.5852 ± 0.0094
$\boldsymbol{A^{dust}_{143\times217}}$	1.02 ± 0.16	z_*	1089.83 ± 0.41	$f\sigma_8(2.33)$	0.2949 ± 0.0049
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	r_*	145.7 ± 2.1	$\sigma_8(2.33)$	0.3038 ± 0.0054
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	$100\theta_*$	1.04136 ± 0.00060	f^{143}_{2000}	29 ± 3
$\boldsymbol{c_{TE}}$	0.9959 ± 0.0051	$D_{\rm M}(z_*)$/Gpc	13.99 ± 0.20	f^{217}_{2000}	106.2 ± 2.3
$\boldsymbol{c_{EE}}$	0.9906 ± 0.0057	$z_{\rm drag}$	1059.31 ± 0.84	$f^{143\times217}_{2000}$	31.3 ± 2.5
H_0	66.6 ± 1.7	$r_{\rm drag}$	148.5 ± 2.2	$\chi^2_{\rm simall}$	396.7 ± 1.6
Ω_Λ	0.682 ± 0.011	$k_{\rm D}$	0.1398 ± 0.0015	$\chi^2_{\rm lowl}$	23.7 ± 1.5
$\Omega_{\rm m}$	0.318 ± 0.011	$100\theta_{\rm D}$	0.16062 ± 0.00053	$\chi^2_{\rm CamSpec}$	11514.4 ± 5.9
$\Omega_{\rm m}h^2$	0.1408 ± 0.0035	$z_{\rm eq}$	3403 ± 40	$\chi^2_{\rm prior}$	7.9 ± 3.4
$\Omega_{\rm m}h^3$	0.0938 ± 0.0044	$k_{\rm eq}$	0.01030 ± 0.00013	$\chi^2_{\rm CMB}$	11934.9 ± 5.8

$\bar{\chi}^2_{\rm eff} = 11942.78$; $\Delta\bar{\chi}^2_{\rm eff} = 0.60$; $R - 1 = 0.01065$

7.23 base_nnu_CamSpecHM_TTTEEE_lowl_lowE_post_lensing_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02218 ± 0.00022	S_8	0.828 ± 0.013	$H(0.15)$	71.6 ± 1.6
$\boldsymbol{\Omega_c h^2}$	0.1175 ± 0.0033	$\sigma_8\Omega_m^{0.5}$	0.4538 ± 0.0070	$D_M(0.15)$	653 ± 15
$\boldsymbol{100\theta_{MC}}$	1.04113 ± 0.00047	$\sigma_8\Omega_m^{0.25}$	0.6038 ± 0.0072	$H(0.38)$	81.8 ± 1.6
$\boldsymbol{\tau}$	$0.0540^{+0.0047}_{-0.0077}$	$\sigma_8/h^{0.5}$	0.9865 ± 0.0089	$D_M(0.38)$	1556 ± 34
$\boldsymbol{N_{eff}}$	2.89 ± 0.22	$r_{drag}h$	98.7 ± 1.2	$H(0.51)$	88.5 ± 1.6
$\boldsymbol{\ln(10^{10}A_s)}$	$3.035^{+0.014}_{-0.018}$	$\langle d^2\rangle^{1/2}$	2.448 ± 0.025	$D_M(0.51)$	2015 ± 43
$\boldsymbol{n_s}$	0.9601 ± 0.0092	z_{re}	$7.62^{+0.50}_{-0.79}$	$H(0.61)$	94.1 ± 1.6
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0025	$10^9 A_s$	$2.081^{+0.028}_{-0.037}$	$D_M(0.61)$	2344 ± 48
$\boldsymbol{A_{100}^{PS}}$	236 ± 25	$10^9 A_s e^{-2\tau}$	1.868 ± 0.019	$H(2.33)$	234.2 ± 3.0
$\boldsymbol{A_{143}^{PS}}$	38 ± 9	D_{40}	1234 ± 15	$D_M(2.33)$	5836 ± 97
$\boldsymbol{A_{217}^{PS}}$	104 ± 10	D_{220}	5718 ± 39	$f\sigma_8(0.15)$	0.4577 ± 0.0065
$\boldsymbol{A_{217}^{CIB}}$	38 ± 7	D_{810}	2533 ± 13	$\sigma_8(0.15)$	0.742 ± 0.010
$\boldsymbol{A_{143}^{tSZ}}$	$3.9^{+1.9}_{-2.5}$	D_{1420}	816.8 ± 5.0	$f\sigma_8(0.38)$	0.4742 ± 0.0057
$\boldsymbol{r_{143\times217}^{PS}}$	0.67 ± 0.13	D_{2000}	231.2 ± 2.1	$\sigma_8(0.38)$	$0.6566^{+0.0091}_{-0.010}$
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.54^{+0.38}_{-0.21}$	$n_{s,0.002}$	0.9601 ± 0.0092	$f\sigma_8(0.51)$	0.4719 ± 0.0055
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P	0.2432 ± 0.0031	$\sigma_8(0.51)$	$0.6141^{+0.0088}_{-0.0099}$
$\boldsymbol{A^{kSZ}}$	< 5.90	Y_P^{BBN}	0.2445 ± 0.0031	$f\sigma_8(0.61)$	0.4664 ± 0.0055
$\boldsymbol{A_{100}^{dust}}$	1.00 ± 0.20	10^5D/H	2.567 ± 0.056	$\sigma_8(0.61)$	$0.5842^{+0.0085}_{-0.0096}$
$\boldsymbol{A_{143}^{dust}}$	0.95 ± 0.18	Age/Gyr	13.97 ± 0.23	$f\sigma_8(2.33)$	$0.2943^{+0.0045}_{-0.0051}$
$\boldsymbol{A_{217}^{dust}}$	0.98 ± 0.10	z_*	1089.79 ± 0.39	$\sigma_8(2.33)$	$0.3031^{+0.0050}_{-0.0056}$
$\boldsymbol{A_{143\times217}^{dust}}$	1.02 ± 0.16	r_*	146.1 ± 2.1	f_{2000}^{143}	28 ± 3
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	$100\theta_*$	1.04144 ± 0.00060	f_{2000}^{217}	106.1 ± 2.3
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	$D_M(z_*)$/Gpc	14.03 ± 0.19	$f_{2000}^{143\times217}$	31.1 ± 2.4
$\boldsymbol{c_{TE}}$	0.9956 ± 0.0051	z_{drag}	1059.18 ± 0.84	$\chi^2_{lensing}$	9.05 ± 0.72
$\boldsymbol{c_{EE}}$	0.9902 ± 0.0056	r_{drag}	148.8 ± 2.2	χ^2_{simall}	396.7 ± 1.5
H_0	66.3 ± 1.6	k_D	0.1396 ± 0.0015	χ^2_{lowl}	24.0 ± 1.5
Ω_Λ	0.681 ± 0.010	$100\theta_D$	0.16054 ± 0.00052	$\chi^2_{CamSpec}$	11513.8 ± 5.7
Ω_m	0.319 ± 0.010	z_{eq}	3409 ± 36	χ^2_{prior}	7.9 ± 3.4
$\Omega_m h^2$	0.1403 ± 0.0034	k_{eq}	0.01029 ± 0.00011	χ^2_{CMB}	11943.5 ± 5.9
$\Omega_m h^3$	$0.0931^{+0.0040}_{-0.0045}$	$100\theta_{eq}$	0.8116 ± 0.0069		
σ_8	0.803 ± 0.011	$100\theta_{s,eq}$	0.4486 ± 0.0035		

$\bar{\chi}^2_{eff} = 11951.41$; $\Delta\bar{\chi}^2_{eff} = 0.16$; $R - 1 = 0.01353$

7.24 base_nnu_CamSpecHM_TTTEEE_lowl_lowE_post_Cooke17_Aver15_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02220 ± 0.00020	S_8	0.828 ± 0.016	$H(0.15)$	72.0 ± 1.3
$\boldsymbol{\Omega_c h^2}$	0.1183 ± 0.0026	$\sigma_8\Omega_m^{0.5}$	0.4536 ± 0.0088	$D_M(0.15)$	650 ± 12
$\boldsymbol{100\theta_{MC}}$	1.04103 ± 0.00040	$\sigma_8\Omega_m^{0.25}$	0.6044 ± 0.0084	$H(0.38)$	82.2 ± 1.3
$\boldsymbol{\tau}$	$0.0537^{+0.0043}_{-0.0081}$	$\sigma_8/h^{0.5}$	0.986 ± 0.011	$D_M(0.38)$	1548 ± 27
$\boldsymbol{N_{eff}}$	2.95 ± 0.17	$r_{drag}h$	98.9 ± 1.3	$H(0.51)$	88.9 ± 1.3
$\boldsymbol{\ln(10^{10}A_s)}$	$3.037^{+0.013}_{-0.018}$	$\langle d^2\rangle^{1/2}$	2.443 ± 0.030	$D_M(0.51)$	2004 ± 34
$\boldsymbol{n_s}$	0.9625 ± 0.0078	z_{re}	$7.60^{+0.46}_{-0.84}$	$H(0.61)$	94.5 ± 1.3
$\boldsymbol{y_{cal}}$	1.0004 ± 0.0024	$10^9 A_s$	$2.084^{+0.026}_{-0.037}$	$D_M(0.61)$	2331 ± 38
$\boldsymbol{A_{100}^{PS}}$	237 ± 25	$10^9 A_s e^{-2\tau}$	1.871 ± 0.016	$H(2.33)$	235.0 ± 2.3
$\boldsymbol{A_{143}^{PS}}$	39 ± 8	D_{40}	1230 ± 15	$D_M(2.33)$	5810 ± 74
$\boldsymbol{A_{217}^{PS}}$	103 ± 10	D_{220}	5713 ± 38	$f\sigma_8(0.15)$	0.4577 ± 0.0082
$\boldsymbol{A_{217}^{CIB}}$	39 ± 7	D_{810}	2533 ± 13	$\sigma_8(0.15)$	$0.7437^{+0.0082}_{-0.0093}$
$\boldsymbol{A_{143}^{tSZ}}$	$3.9^{+1.8}_{-2.6}$	D_{1420}	816.1 ± 4.8	$f\sigma_8(0.38)$	0.4746 ± 0.0068
$\boldsymbol{r_{143\times217}^{PS}}$	0.66 ± 0.13	D_{2000}	230.7 ± 1.8	$\sigma_8(0.38)$	$0.6586^{+0.0075}_{-0.0086}$
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.55^{+0.41}_{-0.19}$	$n_{s,0.002}$	0.9625 ± 0.0078	$f\sigma_8(0.51)$	0.4725 ± 0.0061
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P	0.2440 ± 0.0023	$\sigma_8(0.51)$	$0.6161^{+0.0072}_{-0.0082}$
$\boldsymbol{A^{kSZ}}$	< 6.01	Y_P^{BBN}	0.2453 ± 0.0023	$f\sigma_8(0.61)$	0.4672 ± 0.0058
$\boldsymbol{A_{100}^{dust}}$	1.00 ± 0.20	10^5D/H	2.584 ± 0.043	$\sigma_8(0.61)$	$0.5861^{+0.0069}_{-0.0079}$
$\boldsymbol{A_{143}^{dust}}$	0.95 ± 0.18	Age/Gyr	13.91 ± 0.18	$f\sigma_8(2.33)$	$0.2953^{+0.0037}_{-0.0041}$
$\boldsymbol{A_{217}^{dust}}$	0.98 ± 0.10	z_*	1089.89 ± 0.33	$\sigma_8(2.33)$	$0.3042^{+0.0040}_{-0.0045}$
$\boldsymbol{A_{143\times217}^{dust}}$	1.03 ± 0.16	r_*	145.5 ± 1.6	f_{2000}^{143}	29.0 ± 3.1
$\boldsymbol{c_{100}}$	0.9975 ± 0.0010	$100\theta_*$	1.04129 ± 0.00048	f_{2000}^{217}	106.4 ± 2.1
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	$D_M(z_*)$/Gpc	13.97 ± 0.15	$f_{2000}^{143\times217}$	31.5 ± 2.2
$\boldsymbol{c_{TE}}$	0.9961 ± 0.0050	z_{drag}	1059.35 ± 0.69	χ^2_{simall}	396.7 ± 1.6
$\boldsymbol{c_{EE}}$	0.9911 ± 0.0052	r_{drag}	148.2 ± 1.6	χ^2_{lowl}	23.6 ± 1.3
H_0	66.7 ± 1.3	k_D	0.1399 ± 0.0012	$\chi^2_{CamSpec}$	11514.1 ± 5.8
Ω_Λ	0.683 ± 0.010	$100\theta_D$	0.16069 ± 0.00039	χ^2_{Aver15}	0.35 ± 0.49
Ω_m	0.317 ± 0.010	z_{eq}	3402 ± 37	$\chi^2_{Cooke17}$	0.35 ± 0.45
$\Omega_m h^2$	0.1412 ± 0.0027	k_{eq}	0.01032 ± 0.00011	χ^2_{prior}	7.8 ± 3.4
$\Omega_m h^3$	0.0942 ± 0.0033	$100\theta_{eq}$	0.8129 ± 0.0070	χ^2_{CMB}	11934.5 ± 5.8
σ_8	$0.8054^{+0.0088}_{-0.0099}$	$100\theta_{s,eq}$	0.4493 ± 0.0036	χ^2_{Abund}	0.70 ± 0.72

$\bar{\chi}^2_{eff} = 11943.02$; $R - 1 = 0.01235$

7.25 base_nnu_plikHM_TE_lowE

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022426	0.02247 ± 0.00040	$r_{\rm drag} h$	100.71	100.9 ± 2.4	$100\theta_{\rm s,eq}$	0.4539	0.4543 ± 0.0070
$\boldsymbol{\Omega_c h^2}$	0.1162	$0.1175^{+0.0064}_{-0.0075}$	$\langle d^2 \rangle^{1/2}$	2.390	2.387 ± 0.054	$H(0.15)$	72.96	$73.5^{+3.2}_{-3.7}$
$\boldsymbol{100\theta_{\rm MC}}$	1.04154	1.04149 ± 0.00097	$z_{\rm re}$	7.07	$7.10^{+0.93}_{-0.74}$	$D_{\rm M}(0.15)$	640.0	637 ± 32
$\boldsymbol{\tau}$	0.0491	$0.0495^{+0.0085}_{-0.0075}$	$10^9 A_{\rm s}$	2.0369	2.042 ± 0.050	$H(0.38)$	82.86	$83.4^{+3.2}_{-3.8}$
$\boldsymbol{N_{\rm eff}}$	2.949	$3.03^{+0.45}_{-0.54}$	$10^9 A_{\rm s} e^{-2\tau}$	1.8463	1.849 ± 0.030	$D_{\rm M}(0.38)$	1528	1521 ± 71
$\boldsymbol{\ln(10^{10} A_{\rm s})}$	3.0140	3.016 ± 0.024	D_{40}	1218.2	1214 ± 33	$H(0.51)$	89.45	$90.0^{+3.3}_{-3.8}$
$\boldsymbol{n_{\rm s}}$	0.9633	0.966 ± 0.019	D_{220}	5701	5693 ± 58	$D_{\rm M}(0.51)$	1981	1972 ± 90
$\boldsymbol{A_{100}^{{\rm dust}TE}}$	0.1144	0.113 ± 0.038	D_{810}	2507.7	2507 ± 26	$H(0.61)$	94.97	$95.5^{+3.3}_{-3.9}$
$\boldsymbol{A_{100\times143}^{{\rm dust}TE}}$	0.1350	0.136 ± 0.029	D_{1420}	808.3	808 ± 15	$D_{\rm M}(0.61)$	2307	2296 ± 100
$\boldsymbol{A_{100\times217}^{{\rm dust}TE}}$	0.475	0.477 ± 0.085	D_{2000}	228.4	228.1 ± 6.6	$H(2.33)$	233.9	$234.9^{+6.1}_{-6.9}$
$\boldsymbol{A_{143}^{{\rm dust}TE}}$	0.220	0.221 ± 0.054	$n_{\rm s,0.002}$	0.9633	0.966 ± 0.019	$D_{\rm M}(2.33)$	5788	5763 ± 210
$\boldsymbol{A_{143\times217}^{{\rm dust}TE}}$	0.661	0.657 ± 0.080	$Y_{\rm P}$	0.2441	0.2450 ± 0.0068	$f\sigma_8(0.15)$	0.4395	0.440 ± 0.012
$\boldsymbol{A_{217}^{{\rm dust}TE}}$	2.042	2.04 ± 0.27	$Y_{\rm P}^{\rm BBN}$	0.2454	0.2463 ± 0.0068	$\sigma_8(0.15)$	0.7300	0.733 ± 0.019
$\boldsymbol{c_{100}}$	1.00017	1.00017 ± 0.00069	10^5D/H	2.542	$2.56^{+0.11}_{-0.13}$	$f\sigma_8(0.38)$	0.4592	0.460 ± 0.011
$\boldsymbol{c_{217}}$	0.99800	0.99800 ± 0.00065	Age/Gyr	13.86	13.80 ± 0.50	$\sigma_8(0.38)$	0.6480	0.651 ± 0.018
$\boldsymbol{y_{\rm cal}}$	0.99998	0.99997 ± 0.0025	z_*	1089.42	$1089.54^{+0.75}_{-0.84}$	$f\sigma_8(0.51)$	0.4588	0.460 ± 0.010
H_0	67.80	$68.3^{+3.2}_{-3.8}$	r_*	145.87	145.3 ± 4.5	$\sigma_8(0.51)$	0.6068	0.610 ± 0.017
Ω_Λ	0.6970	$0.698^{+0.020}_{-0.018}$	$100\theta_*$	1.04178	1.0417 ± 0.0013	$f\sigma_8(0.61)$	0.4547	0.456 ± 0.010
$\Omega_{\rm m}$	0.3030	$0.302^{+0.018}_{-0.020}$	$D_{\rm M}(z_*)$/Gpc	14.002	13.95 ± 0.42	$\sigma_8(0.61)$	0.5776	0.580 ± 0.017
$\Omega_{\rm m} h^2$	0.1393	$0.1406^{+0.0067}_{-0.0078}$	$z_{\rm drag}$	1059.70	1060.0 ± 1.7	$f\sigma_8(2.33)$	0.2916	$0.2930^{+0.0084}_{-0.0093}$
$\Omega_{\rm m} h^3$	0.0944	$0.0962^{+0.0083}_{-0.011}$	$r_{\rm drag}$	148.54	147.9 ± 4.7	$\sigma_8(2.33)$	0.3010	$0.3025^{+0.0093}_{-0.010}$
σ_8	0.7891	0.792 ± 0.019	$k_{\rm D}$	0.13977	0.1403 ± 0.0033	$\chi^2_{\rm simall}$	395.65	396.8 ± 1.6
S_8	0.7931	0.795 ± 0.024	$100\theta_{\rm D}$	0.16053	$0.1607^{+0.0011}_{-0.0012}$	$\chi^2_{\rm plikTE}$	852.89	860.8 ± 3.9
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4344	0.435 ± 0.013	$z_{\rm eq}$	3357	3355 ± 72	$\chi^2_{\rm prior}$	0.36	7.4 ± 3.6
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.5855	0.587 ± 0.013	$k_{\rm eq}$	0.010180	0.01022 ± 0.00022	$\chi^2_{\rm CMB}$	1248.54	1257.6 ± 4.2
$\sigma_8 / h^{0.5}$	0.9583	0.959 ± 0.018	$100\theta_{\rm eq}$	0.8220	0.823 ± 0.014			

Best-fit $\chi^2_{\rm eff} = 1248.90$; $\Delta\chi^2_{\rm eff} = -0.08$; $\bar{\chi}^2_{\rm eff} = 1264.95$; $\Delta\bar{\chi}^2_{\rm eff} = 0.95$; $R - 1 = 0.00876$
$\chi^2_{\rm eff}$: CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.65 (Δ -0.04) plik_rd12_HM_v22_TE: 852.89 (Δ 0.04)

7.26 base_nnu_plikHM_TE_lowE_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02249 ± 0.00040	$r_{\rm drag} h$	101.0 ± 2.4	$100\theta_{\rm s,eq}$	0.4547 ± 0.0070
$\boldsymbol{\Omega_c h^2}$	$0.1177^{+0.0065}_{-0.0076}$	$\langle d^2 \rangle^{1/2}$	2.391 ± 0.053	$H(0.15)$	$73.7^{+3.2}_{-3.8}$
$\boldsymbol{100\theta_{MC}}$	$1.04146^{+0.00091}_{-0.0010}$	$z_{\rm re}$	$7.46^{+0.33}_{-0.85}$	$D_{\rm M}(0.15)$	635 ± 32
$\boldsymbol{\tau}$	$0.0528^{+0.0038}_{-0.0075}$	$10^9 A_{\rm s}$	$2.057^{+0.038}_{-0.044}$	$H(0.38)$	$83.6^{+3.3}_{-3.8}$
$\boldsymbol{N_{\rm eff}}$	$3.06^{+0.45}_{-0.54}$	$10^9 A_{\rm s} e^{-2\tau}$	$1.850^{+0.031}_{-0.028}$	$D_{\rm M}(0.38)$	1517 ± 71
$\boldsymbol{\ln(10^{10} A_s)}$	$3.024^{+0.019}_{-0.021}$	D_{40}	1212 ± 33	$H(0.51)$	$90.2^{+3.3}_{-3.9}$
$\boldsymbol{n_s}$	0.968 ± 0.018	D_{220}	5691 ± 58	$D_{\rm M}(0.51)$	1967 ± 89
$\boldsymbol{A_{100}^{{\rm dust}TE}}$	0.114 ± 0.038	D_{810}	2508 ± 26	$H(0.61)$	$95.7^{+3.4}_{-3.9}$
$\boldsymbol{A_{100\times143}^{{\rm dust}TE}}$	0.136 ± 0.029	D_{1420}	808 ± 15	$D_{\rm M}(0.61)$	2290 ± 100
$\boldsymbol{A_{100\times217}^{{\rm dust}TE}}$	0.477 ± 0.085	D_{2000}	228.1 ± 6.6	$H(2.33)$	$235.2^{+6.1}_{-6.9}$
$\boldsymbol{A_{143}^{{\rm dust}TE}}$	0.221 ± 0.055	$n_{\rm s,0.002}$	0.968 ± 0.018	$D_{\rm M}(2.33)$	5752 ± 210
$\boldsymbol{A_{143\times217}^{{\rm dust}TE}}$	0.657 ± 0.080	$Y_{\rm P}$	0.2453 ± 0.0068	$f\sigma_8(0.15)$	0.442 ± 0.012
$\boldsymbol{A_{217}^{{\rm dust}TE}}$	2.04 ± 0.27	$Y_{\rm P}^{\rm BBN}$	0.2467 ± 0.0068	$\sigma_8(0.15)$	0.736 ± 0.018
$\boldsymbol{c_{100}}$	1.00017 ± 0.00069	10^5D/H	$2.56^{+0.11}_{-0.13}$	$f\sigma_8(0.38)$	0.462 ± 0.010
$\boldsymbol{c_{217}}$	0.99800 ± 0.00065	Age/Gyr	13.77 ± 0.50	$\sigma_8(0.38)$	0.654 ± 0.017
$\boldsymbol{y_{\rm cal}}$	0.99997 ± 0.0025	z_*	1089.56 ± 0.81	$f\sigma_8(0.51)$	0.4618 ± 0.0098
H_0	$68.5^{+3.3}_{-3.8}$	r_*	145.1 ± 4.5	$\sigma_8(0.51)$	0.613 ± 0.017
Ω_Λ	$0.699^{+0.020}_{-0.018}$	$100\theta_*$	1.0416 ± 0.0013	$f\sigma_8(0.61)$	0.4578 ± 0.0096
$\Omega_{\rm m}$	$0.301^{+0.018}_{-0.020}$	$D_{\rm M}(z_*)$/Gpc	13.93 ± 0.42	$\sigma_8(0.61)$	0.583 ± 0.016
$\Omega_{\rm m} h^2$	$0.1409^{+0.0068}_{-0.0079}$	$z_{\rm drag}$	1060.0 ± 1.7	$f\sigma_8(2.33)$	$0.2945^{+0.0082}_{-0.0091}$
$\Omega_{\rm m} h^3$	$0.0967^{+0.0084}_{-0.011}$	$r_{\rm drag}$	147.7 ± 4.7	$\sigma_8(2.33)$	$0.3041^{+0.0090}_{-0.010}$
σ_8	0.796 ± 0.019	$k_{\rm D}$	0.1404 ± 0.0033	$\chi^2_{\rm simall}$	396.4 ± 1.1
S_8	0.797 ± 0.024	$100\theta_{\rm D}$	$0.1607^{+0.0011}_{-0.0012}$	$\chi^2_{\rm plikTE}$	860.9 ± 3.9
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.436 ± 0.013	$z_{\rm eq}$	3351 ± 72	$\chi^2_{\rm prior}$	7.3 ± 3.6
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.589 ± 0.013	$k_{\rm eq}$	0.01022 ± 0.00022	$\chi^2_{\rm CMB}$	1257.2 ± 4.1
$\sigma_8 / h^{0.5}$	0.962 ± 0.018	$100\theta_{\rm eq}$	0.824 ± 0.014		

$\bar{\chi}^2_{\rm eff} = 1264.59$; $\Delta\bar{\chi}^2_{\rm eff} = 0.94$; $R - 1 = 0.01129$

7.27 base_nnu_plikHM_EE_lowE

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02145	$0.0228^{+0.0025}_{-0.0030}$	D_{40}	1247.8	1234^{+38}_{-33}	$D_{\rm M}(0.15)$	740	684^{+100}_{-100}
$\boldsymbol{\Omega_c h^2}$	0.0958	$0.108^{+0.014}_{-0.025}$	D_{220}	5741	5844 ± 280	$H(0.38)$	73.0	$80.0^{+8.4}_{-15}$
$\boldsymbol{100\theta_{MC}}$	1.04375	$1.0421^{+0.0031}_{-0.0047}$	D_{810}	2585.1	2583 ± 39	$D_{\rm M}(0.38)$	1755	1627^{+200}_{-300}
$\boldsymbol{\tau}$	0.0511	0.0512 ± 0.0092	D_{1420}	861.7	850 ± 25	$H(0.51)$	79.3	$86.4^{+8.4}_{-15}$
$\boldsymbol{N_{eff}}$	1.57	$2.47^{+0.90}_{-2.1}$	D_{2000}	252.6	246^{+14}_{-12}	$D_{\rm M}(0.51)$	2268	2105^{+300}_{-400}
$\boldsymbol{\ln(10^{10} A_s)}$	2.982	$3.010^{+0.089}_{-0.060}$	$n_{\rm s,0.002}$	0.9366	$0.960^{+0.042}_{-0.050}$	$H(0.61)$	84.6	$91.8^{+8.6}_{-15}$
$\boldsymbol{n_s}$	0.9366	$0.960^{+0.042}_{-0.050}$	$Y_{\rm P}$	0.2228	0.235 ± 0.022	$D_{\rm M}(0.61)$	2634	2447^{+400}_{-400}
$\boldsymbol{y_{cal}}$	1.00000	0.9999 ± 0.0025	$Y_{\rm P}^{\rm BBN}$	0.2240	0.236 ± 0.023	$H(2.33)$	214.0	226^{+17}_{-26}
H_0	58.4	65^{+9}_{-10}	10^5D/H	2.220	$2.29^{+0.19}_{-0.23}$	$D_{\rm M}(2.33)$	6480	6088^{+700}_{-800}
Ω_Λ	0.654	$0.680^{+0.077}_{-0.055}$	Age/Gyr	15.51	$14.6^{+1.8}_{-2.0}$	$f\sigma_8(0.15)$	0.4406	0.436 ± 0.030
$\Omega_{\rm m}$	0.346	$0.320^{+0.055}_{-0.077}$	z_*	1087.27	$1087.7^{+1.6}_{-1.8}$	$\sigma_8(0.15)$	0.686	$0.714^{+0.047}_{-0.062}$
$\Omega_{\rm m}h^2$	0.1179	$0.131^{+0.016}_{-0.028}$	r_*	161.1	153^{+16}_{-18}	$f\sigma_8(0.38)$	0.4503	0.452 ± 0.024
$\Omega_{\rm m}h^3$	0.0688	$0.088^{+0.014}_{-0.040}$	$100\theta_*$	1.0451	$1.0428^{+0.0042}_{-0.0061}$	$\sigma_8(0.38)$	0.605	$0.633^{+0.045}_{-0.062}$
σ_8	0.746	$0.773^{+0.048}_{-0.061}$	$D_{\rm M}(z_*)$/Gpc	15.42	14.6 ± 1.5	$f\sigma_8(0.51)$	0.4453	0.450 ± 0.023
S_8	0.801	$0.791^{+0.056}_{-0.066}$	$z_{\rm drag}$	1054.7	1059.1 ± 8.6	$\sigma_8(0.51)$	0.565	$0.592^{+0.043}_{-0.061}$
$\sigma_8\Omega_{\rm m}^{0.5}$	0.4390	$0.433^{+0.031}_{-0.036}$	$r_{\rm drag}$	164.4	155^{+17}_{-19}	$f\sigma_8(0.61)$	0.4383	0.446 ± 0.024
$\sigma_8\Omega_{\rm m}^{0.25}$	0.5723	0.578 ± 0.030	$k_{\rm D}$	0.1296	$0.137^{+0.011}_{-0.015}$	$\sigma_8(0.61)$	0.537	$0.564^{+0.042}_{-0.061}$
$\sigma_8/h^{0.5}$	0.9766	$0.963^{+0.043}_{-0.049}$	$100\theta_{\rm D}$	0.15718	$0.1583^{+0.0018}_{-0.0023}$	$f\sigma_8(2.33)$	0.2697	$0.284^{+0.022}_{-0.033}$
$r_{\rm drag}h$	95.9	$99.6^{+6.7}_{-8.3}$	$z_{\rm eq}$	3496	3420 ± 180	$\sigma_8(2.33)$	0.2767	$0.294^{+0.024}_{-0.038}$
$\langle d^2 \rangle^{1/2}$	2.456	2.41 ± 0.11	$k_{\rm eq}$	0.00955	$0.00992^{+0.00058}_{-0.00077}$	$\chi^2_{\rm simall}$	395.57	396.7 ± 1.5
$z_{\rm re}$	6.96	6.97 ± 0.90	$100\theta_{\rm eq}$	0.7954	$0.814^{+0.035}_{-0.041}$	$\chi^2_{\rm plikEE}$	737.95	744.0 ± 3.5
$10^9 A_{\rm s}$	1.973	$2.03^{+0.17}_{-0.14}$	$100\theta_{\rm s,eq}$	0.4407	$0.449^{+0.017}_{-0.019}$	$\chi^2_{\rm prior}$	0.000	0.99 ± 1.4
$10^9 A_{\rm s} e^{-2\tau}$	1.781	$1.84^{+0.15}_{-0.094}$	$H(0.15)$	63.4	70^{+8}_{-10}	$\chi^2_{\rm CMB}$	1133.52	1140.8 ± 3.8

Best-fit $\chi^2_{\rm eff} = 1133.52$; $\Delta\chi^2_{\rm eff} = -1.03$; $\bar{\chi}^2_{\rm eff} = 1141.76$; $\Delta\bar{\chi}^2_{\rm eff} = 0.14$; $R - 1 = 0.00807$

$\chi^2_{\rm eff}$: CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.57 (Δ -0.03) plik_rd12_HM_v22_EE: 737.95 (Δ -1.00)

7.28 base_nnu_plikHM_EE_lowE_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.0231 ± 0.0027	D_{40}	1231^{+39}_{-33}	$D_{\rm M}(0.15)$	669^{+100}_{-100}
$\boldsymbol{\Omega_c h^2}$	$0.111^{+0.016}_{-0.025}$	D_{220}	5861^{+300}_{-270}	$H(0.38)$	82^{+10}_{-10}
$\boldsymbol{100\theta_{MC}}$	$1.0416^{+0.0028}_{-0.0046}$	D_{810}	2583 ± 39	$D_{\rm M}(0.38)$	1593^{+200}_{-300}
$\boldsymbol{\tau}$	$0.0553^{+0.0047}_{-0.0082}$	D_{1420}	847 ± 25	$H(0.51)$	$88.0^{+9.7}_{-15}$
$\boldsymbol{N_{eff}}$	$2.7^{+1.1}_{-2.0}$	D_{2000}	244 ± 13	$D_{\rm M}(0.51)$	2062^{+300}_{-400}
$\boldsymbol{\ln(10^{10} A_s)}$	$3.026^{+0.085}_{-0.052}$	$n_{\rm s,0.002}$	0.966 ± 0.045	$H(0.61)$	$93.4^{+9.9}_{-15}$
$\boldsymbol{n_s}$	0.966 ± 0.045	$Y_{\rm P}$	0.238 ± 0.023	$D_{\rm M}(0.61)$	2399^{+300}_{-400}
$\boldsymbol{y_{cal}}$	0.9999 ± 0.0025	$Y_{\rm P}^{\rm BBN}$	0.239 ± 0.023	$H(2.33)$	229^{+19}_{-25}
H_0	67^{+10}_{-10}	10^5D/H	$2.32^{+0.20}_{-0.23}$	$D_{\rm M}(2.33)$	5987^{+700}_{-900}
Ω_Λ	$0.687^{+0.078}_{-0.051}$	Age/Gyr	$14.3^{+1.6}_{-2.1}$	$f\sigma_8(0.15)$	0.438 ± 0.030
$\Omega_{\rm m}$	$0.313^{+0.051}_{-0.078}$	z_*	$1087.8^{+1.6}_{-1.8}$	$\sigma_8(0.15)$	$0.724^{+0.050}_{-0.059}$
$\Omega_{\rm m}h^2$	$0.135^{+0.018}_{-0.028}$	r_*	151^{+15}_{-19}	$f\sigma_8(0.38)$	0.455 ± 0.023
$\Omega_{\rm m}h^3$	$0.093^{+0.018}_{-0.041}$	$100\theta_*$	$1.0421^{+0.0039}_{-0.0061}$	$\sigma_8(0.38)$	$0.643^{+0.048}_{-0.059}$
σ_8	$0.783^{+0.050}_{-0.058}$	$D_{\rm M}(z_*)$/Gpc	$14.4^{+1.4}_{-1.7}$	$f\sigma_8(0.51)$	0.454 ± 0.023
S_8	$0.792^{+0.056}_{-0.066}$	$z_{\rm drag}$	1060.1 ± 8.7	$\sigma_8(0.51)$	$0.602^{+0.047}_{-0.058}$
$\sigma_8\Omega_{\rm m}^{0.5}$	$0.434^{+0.031}_{-0.036}$	$r_{\rm drag}$	153^{+15}_{-20}	$f\sigma_8(0.61)$	0.450 ± 0.023
$\sigma_8\Omega_{\rm m}^{0.25}$	0.582 ± 0.029	$k_{\rm D}$	$0.139^{+0.012}_{-0.014}$	$\sigma_8(0.61)$	$0.573^{+0.046}_{-0.057}$
$\sigma_8/h^{0.5}$	$0.964^{+0.043}_{-0.048}$	$100\theta_{\rm D}$	$0.1586^{+0.0018}_{-0.0023}$	$f\sigma_8(2.33)$	$0.289^{+0.025}_{-0.031}$
$r_{\rm drag}h$	$100.4^{+7.0}_{-8.2}$	$z_{\rm eq}$	3400^{+170}_{-190}	$\sigma_8(2.33)$	$0.299^{+0.027}_{-0.036}$
$\langle d^2\rangle^{1/2}$	2.41 ± 0.11	$k_{\rm eq}$	$0.01001^{+0.00062}_{-0.00076}$	$\chi^2_{\rm simall}$	396.5 ± 1.4
$z_{\rm re}$	< 7.62	$100\theta_{\rm eq}$	$0.818^{+0.036}_{-0.041}$	$\chi^2_{\rm plikEE}$	744.1 ± 3.5
$10^9 A_{\rm s}$	$2.07^{+0.17}_{-0.12}$	$100\theta_{\rm s,eq}$	0.451 ± 0.018	$\chi^2_{\rm prior}$	1.0 ± 1.4
$10^9 A_{\rm s}e^{-2\tau}$	$1.85^{+0.15}_{-0.085}$	$H(0.15)$	72^{+10}_{-10}	$\chi^2_{\rm CMB}$	1140.6 ± 3.7

$\bar{\chi}^2_{\rm eff} = 1141.65$; $\Delta\bar{\chi}^2_{\rm eff} = 0.34$; $R - 1 = 0.00915$

7.29 base_nnu_plikHM_TE_lowE_BAO

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022391	0.02240 ± 0.00029	$\langle d^2 \rangle^{1/2}$	2.3895	2.393 ± 0.033	$D_M(0.15)$	644.6	642 ± 20
$\boldsymbol{\Omega_c h^2}$	0.1152	$0.1165^{+0.0056}_{-0.0067}$	z_{re}	7.06	$7.01^{+0.95}_{-0.73}$	$H(0.38)$	82.35	82.7 ± 2.3
$\boldsymbol{100\theta_{MC}}$	1.04169	1.04161 ± 0.00089	$10^9 A_s$	2.0347	2.035 ± 0.048	$D_M(0.38)$	1538.9	1533 ± 46
$\boldsymbol{\tau}$	0.0493	$0.0488^{+0.0088}_{-0.0075}$	$10^9 A_s e^{-2\tau}$	1.8437	1.846 ± 0.029	$H(0.51)$	88.93	89.3 ± 2.5
$\boldsymbol{N_{eff}}$	2.873	$2.94^{+0.34}_{-0.39}$	D_{40}	1213.7	1218 ± 25	$D_M(0.51)$	1995	1987 ± 59
$\boldsymbol{\ln(10^{10} A_s)}$	3.0129	$3.013^{+0.025}_{-0.022}$	D_{220}	5690	5695 ± 58	$H(0.61)$	94.44	$94.9^{+2.4}_{-2.7}$
$\boldsymbol{n_s}$	0.9643	0.963 ± 0.013	D_{810}	2513.2	2508 ± 26	$D_M(0.61)$	2322	2313 ± 67
$\boldsymbol{y_{cal}}$	0.99998	1.0000 ± 0.0025	D_{1420}	812.6	809 ± 14	$H(2.33)$	232.9	$233.9^{+5.1}_{-5.8}$
$\boldsymbol{A_{100}^{dustTE}}$	0.1131	0.113 ± 0.038	D_{2000}	230.2	228.7 ± 6.0	$D_M(2.33)$	5820	5798 ± 150
$\boldsymbol{A_{100\times143}^{dustTE}}$	0.1357	0.136 ± 0.030	$n_{s,0.002}$	0.9643	0.963 ± 0.013	$f\sigma_8(0.15)$	0.4404	0.441 ± 0.010
$\boldsymbol{A_{100\times217}^{dustTE}}$	0.473	0.477 ± 0.086	Y_P	0.2431	0.2439 ± 0.0051	$\sigma_8(0.15)$	0.7288	0.730 ± 0.017
$\boldsymbol{A_{143}^{dustTE}}$	0.219	0.221 ± 0.054	Y_P^{BBN}	0.2444	0.2452 ± 0.0052	$f\sigma_8(0.38)$	0.4596	0.460 ± 0.010
$\boldsymbol{A_{143\times217}^{dustTE}}$	0.659	0.658 ± 0.080	10^5D/H	2.522	$2.543^{+0.099}_{-0.11}$	$\sigma_8(0.38)$	0.6467	0.648 ± 0.016
$\boldsymbol{A_{217}^{dustTE}}$	2.030	2.04 ± 0.27	Age/Gyr	13.934	13.88 ± 0.36	$f\sigma_8(0.51)$	0.4589	0.460 ± 0.010
$\boldsymbol{c_{100}}$	1.00017	1.00017 ± 0.00070	z_*	1089.30	$1089.46^{+0.72}_{-0.81}$	$\sigma_8(0.51)$	0.6055	0.607 ± 0.015
$\boldsymbol{c_{217}}$	0.99795	0.99799 ± 0.00065	r_*	146.55	146.0 ± 3.7	$f\sigma_8(0.61)$	0.4546	0.455 ± 0.010
H_0	67.30	67.6 ± 2.1	$100\theta_*$	1.04199	1.0419 ± 0.0011	$\sigma_8(0.61)$	0.5763	0.578 ± 0.014
Ω_Λ	0.6947	0.6948 ± 0.0086	$D_M(z_*)$/Gpc	14.065	14.01 ± 0.34	$f\sigma_8(2.33)$	0.2909	0.2915 ± 0.0074
Ω_m	0.3053	0.3052 ± 0.0086	z_{drag}	1059.51	1059.7 ± 1.3	$\sigma_8(2.33)$	0.3001	0.3008 ± 0.0078
$\Omega_m h^2$	0.1383	$0.1395^{+0.0058}_{-0.0069}$	r_{drag}	149.24	148.7 ± 3.8	χ^2_{simall}	395.67	396.8 ± 1.6
$\Omega_m h^3$	0.0930	$0.0945^{+0.0063}_{-0.0078}$	k_D	0.13931	0.1397 ± 0.0027	χ^2_{plikTE}	852.90	860.0 ± 3.8
σ_8	0.7881	0.790 ± 0.019	$100\theta_D$	0.16034	$0.16052^{+0.00088}_{-0.00098}$	χ^2_{6DF}	0.0001	0.048 ± 0.068
S_8	0.7950	0.796 ± 0.019	z_{eq}	3366.6	3366 ± 34	χ^2_{MGS}	1.68	1.76 ± 0.65
$\sigma_8 \Omega_m^{0.5}$	0.4354	0.436 ± 0.010	k_{eq}	0.010155	$0.01020^{+0.00020}_{-0.00024}$	$\chi^2_{DR12BAO}$	3.460	4.2 ± 1.2
$\sigma_8 \Omega_m^{0.25}$	0.5858	0.587 ± 0.013	$100\theta_{eq}$	0.8202	0.8203 ± 0.0063	χ^2_{prior}	0.41	7.4 ± 3.7
$\sigma_8/h^{0.5}$	0.9607	0.960 ± 0.014	$100\theta_{s,eq}$	0.45301	0.4530 ± 0.0032	χ^2_{BAO}	5.14	6.0 ± 1.2
$r_{drag} h$	100.44	100.4 ± 1.1	$H(0.15)$	72.45	72.8 ± 2.2	χ^2_{CMB}	1248.57	1256.9 ± 4.2

Best-fit $\chi^2_{eff} = 1254.11$; $\Delta\chi^2_{eff} = -0.12$; $\bar{\chi}^2_{eff} = 1270.28$; $\Delta\bar{\chi}^2_{eff} = 0.86$; $R - 1 = 0.00797$

χ^2_{eff}: BAO - 6DF: 0.00 (Δ 0.00) MGS: 1.68 (Δ -0.07) DR12BAO: 3.46 (Δ 0.02) CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.67 (Δ 0.00) plik_rd12_HM_v22_TE: 852.90 (Δ -0.03)

7.30 base_nnu_plikHM_TE_lowE_BAO_post_lensing

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02240 ± 0.00028	z_{re}	7.59 ± 0.75	$D_M(0.38)$	1550 ± 43
$\boldsymbol{\Omega_c h^2}$	$0.1154^{+0.0051}_{-0.0061}$	$10^9 A_s$	2.071 ± 0.039	$H(0.51)$	88.5 ± 2.3
$\boldsymbol{100\theta_{MC}}$	1.04179 ± 0.00086	$10^9 A_s e^{-2\tau}$	1.856 ± 0.026	$D_M(0.51)$	2008 ± 55
$\boldsymbol{\tau}$	0.0547 ± 0.0075	D_{40}	1225 ± 25	$H(0.61)$	94.1 ± 2.3
$\boldsymbol{N_{eff}}$	$2.83^{+0.31}_{-0.35}$	D_{220}	5724 ± 55	$D_M(0.61)$	2337 ± 63
$\boldsymbol{\ln(10^{10} A_s)}$	3.030 ± 0.019	D_{810}	2533 ± 21	$H(2.33)$	$232.8^{+4.6}_{-5.3}$
$\boldsymbol{n_s}$	0.963 ± 0.012	D_{1420}	820 ± 12	$D_M(2.33)$	5843 ± 140
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	D_{2000}	233.1 ± 5.3	$f\sigma_8(0.15)$	0.4485 ± 0.0078
$\boldsymbol{A_{100}^{dustTE}}$	0.113 ± 0.038	$n_{s,0.002}$	0.963 ± 0.012	$\sigma_8(0.15)$	0.736 ± 0.015
$\boldsymbol{A_{100\times143}^{dustTE}}$	0.138 ± 0.030	Y_P	0.2424 ± 0.0047	$f\sigma_8(0.38)$	0.4667 ± 0.0081
$\boldsymbol{A_{100\times217}^{dustTE}}$	0.479 ± 0.087	Y_P^{BBN}	0.2437 ± 0.0048	$\sigma_8(0.38)$	0.653 ± 0.014
$\boldsymbol{A_{143}^{dustTE}}$	0.224 ± 0.054	10^5D/H	$2.505^{+0.089}_{-0.10}$	$f\sigma_8(0.51)$	0.4654 ± 0.0083
$\boldsymbol{A_{143\times217}^{dustTE}}$	0.661 ± 0.081	Age/Gyr	13.99 ± 0.34	$\sigma_8(0.51)$	0.611 ± 0.013
$\boldsymbol{A_{217}^{dustTE}}$	2.06 ± 0.27	z_*	$1089.25^{+0.64}_{-0.74}$	$f\sigma_8(0.61)$	0.4606 ± 0.0084
$\boldsymbol{c_{100}}$	1.00020 ± 0.00071	r_*	146.8 ± 3.4	$\sigma_8(0.61)$	0.581 ± 0.013
$\boldsymbol{c_{217}}$	0.99800 ± 0.00065	$100\theta_*$	1.0421 ± 0.0011	$f\sigma_8(2.33)$	0.2931 ± 0.0065
H_0	66.8 ± 2.0	$D_M(z_*)$/Gpc	14.09 ± 0.32	$\sigma_8(2.33)$	0.3022 ± 0.0070
Ω_Λ	0.6893 ± 0.0083	z_{drag}	1059.5 ± 1.2	$\chi^2_{lensing}$	10.2 ± 1.9
Ω_m	0.3107 ± 0.0083	r_{drag}	149.5 ± 3.5	χ^2_{simall}	396.9 ± 1.9
$\Omega_m h^2$	$0.1384^{+0.0052}_{-0.0062}$	k_D	0.1393 ± 0.0025	χ^2_{plikTE}	860.5 ± 3.8
$\Omega_m h^3$	$0.0925^{+0.0058}_{-0.0069}$	$100\theta_D$	0.16015 ± 0.00085	χ^2_{6DF}	0.063 ± 0.084
σ_8	0.797 ± 0.016	z_{eq}	3391 ± 31	χ^2_{MGS}	1.35 ± 0.55
S_8	0.810 ± 0.014	k_{eq}	$0.01020^{+0.00018}_{-0.00022}$	$\chi^2_{DR12BAO}$	4.8 ± 1.7
$\sigma_8 \Omega_m^{0.5}$	0.4439 ± 0.0079	$100\theta_{eq}$	0.8159 ± 0.0058	χ^2_{prior}	7.6 ± 3.8
$\sigma_8 \Omega_m^{0.25}$	0.595 ± 0.010	$100\theta_{s,eq}$	0.4507 ± 0.0029	χ^2_{CMB}	1267.6 ± 4.3
$\sigma_8/h^{0.5}$	0.975 ± 0.010	$H(0.15)$	72.0 ± 2.0	χ^2_{BAO}	6.2 ± 1.4
$r_{drag} h$	99.8 ± 1.0	$D_M(0.15)$	650 ± 19		
$\langle d^2 \rangle^{1/2}$	2.422 ± 0.029	$H(0.38)$	81.9 ± 2.2		

$\bar{\chi}^2_{eff} = 1281.35$; $\Delta\bar{\chi}^2_{eff} = 0.66$; $R - 1 = 0.02891$

7.31 base_nnu_plikHM_TE_lowE_BAO_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02242 ± 0.00029	$\langle d^2 \rangle^{1/2}$	2.401 ± 0.031	$D_M(0.15)$	642 ± 20
$\boldsymbol{\Omega_c h^2}$	$0.1166^{+0.0056}_{-0.0067}$	z_{re}	$7.41^{+0.31}_{-0.83}$	$H(0.38)$	$82.8^{+2.2}_{-2.4}$
$\boldsymbol{100\theta_{MC}}$	1.04160 ± 0.00089	$10^9 A_s$	$2.052^{+0.037}_{-0.042}$	$D_M(0.38)$	1532 ± 46
$\boldsymbol{\tau}$	$0.0526^{+0.0038}_{-0.0072}$	$10^9 A_s e^{-2\tau}$	1.847 ± 0.029	$H(0.51)$	$89.4^{+2.3}_{-2.6}$
$\boldsymbol{N_{eff}}$	$2.95^{+0.33}_{-0.39}$	D_{40}	1217 ± 25	$D_M(0.51)$	1985 ± 58
$\boldsymbol{\ln(10^{10} A_s)}$	3.021 ± 0.020	D_{220}	5694 ± 58	$H(0.61)$	$94.9^{+2.4}_{-2.7}$
$\boldsymbol{n_s}$	0.964 ± 0.013	D_{810}	2509 ± 26	$D_M(0.61)$	2311 ± 67
$\boldsymbol{y_{cal}}$	1.0000 ± 0.0025	D_{1420}	809 ± 14	$H(2.33)$	$234.0^{+5.0}_{-5.8}$
$\boldsymbol{A_{100}^{dustTE}}$	0.114 ± 0.038	D_{2000}	228.9 ± 5.9	$D_M(2.33)$	5793 ± 150
$\boldsymbol{A_{100\times143}^{dustTE}}$	0.136 ± 0.030	$n_{s,0.002}$	0.964 ± 0.013	$f\sigma_8(0.15)$	0.4429 ± 0.0097
$\boldsymbol{A_{100\times217}^{dustTE}}$	0.477 ± 0.086	Y_P	0.2440 ± 0.0051	$\sigma_8(0.15)$	0.734 ± 0.017
$\boldsymbol{A_{143}^{dustTE}}$	0.221 ± 0.054	Y_P^{BBN}	0.2453 ± 0.0051	$f\sigma_8(0.38)$	0.4624 ± 0.0098
$\boldsymbol{A_{143\times217}^{dustTE}}$	0.658 ± 0.080	10^5D/H	$2.544^{+0.098}_{-0.11}$	$\sigma_8(0.38)$	0.651 ± 0.015
$\boldsymbol{A_{217}^{dustTE}}$	2.04 ± 0.27	Age/Gyr	13.87 ± 0.36	$f\sigma_8(0.51)$	0.4618 ± 0.0098
$\boldsymbol{c_{100}}$	1.00017 ± 0.00070	z_*	$1089.46^{+0.71}_{-0.80}$	$\sigma_8(0.51)$	0.610 ± 0.014
$\boldsymbol{c_{217}}$	0.99798 ± 0.00065	r_*	145.9 ± 3.7	$f\sigma_8(0.61)$	0.4574 ± 0.0098
H_0	67.7 ± 2.1	$100\theta_*$	1.0418 ± 0.0011	$\sigma_8(0.61)$	0.580 ± 0.014
Ω_Λ	0.6951 ± 0.0087	$D_M(z_*)$/Gpc	14.00 ± 0.34	$f\sigma_8(2.33)$	0.2928 ± 0.0071
Ω_m	0.3049 ± 0.0087	z_{drag}	1059.7 ± 1.3	$\sigma_8(2.33)$	0.3022 ± 0.0075
$\Omega_m h^2$	$0.1397^{+0.0057}_{-0.0068}$	r_{drag}	148.6 ± 3.8	χ^2_{simall}	396.4 ± 1.2
$\Omega_m h^3$	$0.0947^{+0.0063}_{-0.0078}$	k_D	0.1398 ± 0.0027	χ^2_{plikTE}	860.1 ± 3.8
σ_8	0.793 ± 0.018	$100\theta_D$	$0.16053^{+0.00087}_{-0.00097}$	χ^2_{6DF}	0.048 ± 0.070
S_8	0.800 ± 0.018	z_{eq}	3366 ± 34	χ^2_{MGS}	1.78 ± 0.65
$\sigma_8 \Omega_m^{0.5}$	0.4379 ± 0.0098	k_{eq}	$0.01020^{+0.00020}_{-0.00024}$	$\chi^2_{DR12BAO}$	4.2 ± 1.2
$\sigma_8 \Omega_m^{0.25}$	0.589 ± 0.013	$100\theta_{eq}$	0.8205 ± 0.0063	χ^2_{prior}	7.5 ± 3.7
$\sigma_8/h^{0.5}$	0.964 ± 0.013	$100\theta_{s,eq}$	0.4531 ± 0.0032	χ^2_{BAO}	6.0 ± 1.2
$r_{drag} h$	100.5 ± 1.1	$H(0.15)$	$72.9^{+2.1}_{-2.3}$	χ^2_{CMB}	1256.5 ± 4.1

$\bar{\chi}^2_{eff} = 1269.92$; $\Delta\bar{\chi}^2_{eff} = 0.92$; $R - 1 = 0.01050$

7.32 base_nnu_plikHM_TE_lowE_BAO_post_lensing_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02241 ± 0.00028	$z_{\rm re}$	$7.71^{+0.56}_{-0.74}$	$D_{\rm M}(0.38)$	1550 ± 43
$\boldsymbol{\Omega_c h^2}$	$0.1154^{+0.0051}_{-0.0060}$	$10^9 A_{\rm s}$	$2.075^{+0.034}_{-0.039}$	$H(0.51)$	88.6 ± 2.3
$\boldsymbol{100\theta_{\rm MC}}$	1.04179 ± 0.00086	$10^9 A_{\rm s} e^{-2\tau}$	1.856 ± 0.026	$D_{\rm M}(0.51)$	2008 ± 55
$\boldsymbol{\tau}$	$0.0558^{+0.0054}_{-0.0072}$	D_{40}	1225 ± 25	$H(0.61)$	94.1 ± 2.3
$\boldsymbol{N_{\rm eff}}$	$2.83^{+0.31}_{-0.35}$	D_{220}	5722 ± 55	$D_{\rm M}(0.61)$	2336 ± 63
$\boldsymbol{\ln(10^{10} A_{\rm s})}$	$3.033^{+0.016}_{-0.018}$	D_{810}	2532 ± 21	$H(2.33)$	$232.8^{+4.7}_{-5.3}$
$\boldsymbol{n_{\rm s}}$	0.963 ± 0.012	D_{1420}	820 ± 12	$D_{\rm M}(2.33)$	5842 ± 140
$\boldsymbol{y_{\rm cal}}$	1.0005 ± 0.0025	D_{2000}	233.0 ± 5.3	$f\sigma_8(0.15)$	$0.4487^{+0.0072}_{-0.0080}$
$\boldsymbol{A^{{\rm dust}TE}_{100}}$	0.113 ± 0.038	$n_{\rm s,0.002}$	0.963 ± 0.012	$\sigma_8(0.15)$	0.737 ± 0.015
$\boldsymbol{A^{{\rm dust}TE}_{100\times143}}$	0.138 ± 0.029	$Y_{\rm P}$	0.2424 ± 0.0048	$f\sigma_8(0.38)$	0.4670 ± 0.0081
$\boldsymbol{A^{{\rm dust}TE}_{100\times217}}$	0.479 ± 0.087	$Y_{\rm P}^{\rm BBN}$	0.2437 ± 0.0048	$\sigma_8(0.38)$	0.653 ± 0.014
$\boldsymbol{A^{{\rm dust}TE}_{143}}$	0.224 ± 0.054	10^5D/H	$2.506^{+0.090}_{-0.10}$	$f\sigma_8(0.51)$	0.4658 ± 0.0082
$\boldsymbol{A^{{\rm dust}TE}_{143\times217}}$	0.661 ± 0.081	Age/Gyr	13.99 ± 0.34	$\sigma_8(0.51)$	0.611 ± 0.013
$\boldsymbol{A^{{\rm dust}TE}_{217}}$	2.06 ± 0.27	z_*	$1089.25^{+0.65}_{-0.74}$	$f\sigma_8(0.61)$	0.4610 ± 0.0083
$\boldsymbol{c_{100}}$	1.00020 ± 0.00071	r_*	146.8 ± 3.4	$\sigma_8(0.61)$	0.582 ± 0.013
$\boldsymbol{c_{217}}$	0.99799 ± 0.00065	$100\theta_*$	1.0421 ± 0.0011	$f\sigma_8(2.33)$	0.2934 ± 0.0065
H_0	66.8 ± 2.0	$D_{\rm M}(z_*)$/Gpc	14.09 ± 0.32	$\sigma_8(2.33)$	0.3026 ± 0.0069
Ω_Λ	0.6896 ± 0.0083	$z_{\rm drag}$	1059.5 ± 1.2	$\chi^2_{\rm lensing}$	10.1 ± 1.8
$\Omega_{\rm m}$	0.3104 ± 0.0083	$r_{\rm drag}$	149.5 ± 3.5	$\chi^2_{\rm simall}$	396.9 ± 1.9
$\Omega_{\rm m} h^2$	$0.1384^{+0.0053}_{-0.0062}$	$k_{\rm D}$	0.1393 ± 0.0025	$\chi^2_{\rm plikTE}$	860.4 ± 3.7
$\Omega_{\rm m} h^3$	$0.0926^{+0.0058}_{-0.0070}$	$100\theta_{\rm D}$	0.16016 ± 0.00085	$\chi^2_{\rm 6DF}$	0.061 ± 0.081
σ_8	0.797 ± 0.016	$z_{\rm eq}$	3390 ± 31	$\chi^2_{\rm MGS}$	1.37 ± 0.55
S_8	$0.811^{+0.013}_{-0.015}$	$k_{\rm eq}$	$0.01019^{+0.00018}_{-0.00022}$	$\chi^2_{\rm DR12BAO}$	4.7 ± 1.6
$\sigma_8 \Omega_{\rm m}^{0.5}$	$0.4441^{+0.0072}_{-0.0080}$	$100\theta_{\rm eq}$	0.8161 ± 0.0058	$\chi^2_{\rm prior}$	7.5 ± 3.8
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.595 ± 0.010	$100\theta_{\rm s,eq}$	0.4508 ± 0.0029	$\chi^2_{\rm CMB}$	1267.4 ± 4.2
$\sigma_8/h^{0.5}$	0.9756 ± 0.0097	$H(0.15)$	72.0 ± 2.0	$\chi^2_{\rm BAO}$	6.1 ± 1.3
$r_{\rm drag} h$	99.79 ± 0.99	$D_{\rm M}(0.15)$	650 ± 19		
$\langle d^2 \rangle^{1/2}$	2.424 ± 0.028	$H(0.38)$	82.0 ± 2.2		

$\bar{\chi}^2_{\rm eff} = 1281.05$; $\Delta\bar{\chi}^2_{\rm eff} = 0.53$; $R - 1 = 0.03229$

7.33 base_nnu_plikHM_EE_lowE_BAO

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02342	$0.02296^{+0.00095}_{-0.00082}$	D_{810}	2611.9	2589 ± 36	$D_{\rm M}(0.51)$	2052	2075^{+140}_{-160}
$\boldsymbol{\Omega_c h^2}$	0.1056	$0.106^{+0.014}_{-0.017}$	D_{1420}	862.6	854 ± 26	$H(0.61)$	91.7	91.3 ± 6.3
$\boldsymbol{100\theta_{MC}}$	1.04152	$1.0421^{+0.0022}_{-0.0033}$	D_{2000}	250.4	248 ± 13	$D_{\rm M}(0.61)$	2389	2415^{+160}_{-190}
$\boldsymbol{\tau}$	0.0522	$0.0514^{+0.0085}_{-0.0077}$	$n_{\rm s,0.002}$	0.9643	0.962 ± 0.020	$H(2.33)$	225.7	225 ± 14
$\boldsymbol{N_{eff}}$	2.37	$2.37^{+0.81}_{-0.97}$	$Y_{\rm P}$	0.2363	0.235 ± 0.014	$D_{\rm M}(2.33)$	5996	6051^{+370}_{-450}
$\boldsymbol{\ln(10^{10} A_s)}$	3.0317	$3.015^{+0.051}_{-0.038}$	$Y_{\rm P}^{\rm BBN}$	0.2376	0.236 ± 0.014	$f\sigma_8(0.15)$	0.4293	0.429 ± 0.023
$\boldsymbol{n_s}$	0.9643	0.962 ± 0.020	10^5D/H	2.182	$2.25^{+0.21}_{-0.24}$	$\sigma_8(0.15)$	0.7136	0.709 ± 0.043
$\boldsymbol{y_{cal}}$	1.00042	0.99997 ± 0.0025	Age/Gyr	14.36	$14.49^{+0.89}_{-1.1}$	$f\sigma_8(0.38)$	0.4487	0.447 ± 0.024
H_0	65.49	65.0 ± 4.9	z_*	1086.77	$1087.2^{+1.6}_{-1.9}$	$\sigma_8(0.38)$	0.6336	0.629 ± 0.039
Ω_Λ	0.6976	$0.694^{+0.013}_{-0.011}$	r_*	151.2	$152.5^{+9.4}_{-11}$	$f\sigma_8(0.51)$	0.4484	0.447 ± 0.025
$\Omega_{\rm m}$	0.3024	$0.306^{+0.011}_{-0.013}$	$100\theta_*$	1.04203	$1.0427^{+0.0028}_{-0.0040}$	$\sigma_8(0.51)$	0.5933	0.589 ± 0.037
$\Omega_{\rm m} h^2$	0.1297	$0.130^{+0.015}_{-0.018}$	$D_{\rm M}(z_*)$/Gpc	14.51	$14.62^{+0.87}_{-1.0}$	$f\sigma_8(0.61)$	0.4444	0.442 ± 0.025
$\Omega_{\rm m} h^3$	0.0849	$0.085^{+0.014}_{-0.019}$	$z_{\rm drag}$	1060.77	$1059.6^{+3.8}_{-3.4}$	$\sigma_8(0.61)$	0.5648	0.561 ± 0.035
σ_8	0.7713	0.767 ± 0.046	$r_{\rm drag}$	153.6	$155.1^{+9.6}_{-12}$	$f\sigma_8(2.33)$	0.2852	0.283 ± 0.018
S_8	0.7744	0.774 ± 0.040	$k_{\rm D}$	0.1376	0.1366 ± 0.0074	$\sigma_8(2.33)$	0.2944	0.292 ± 0.019
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4242	0.424 ± 0.022	$100\theta_{\rm D}$	0.15735	$0.1579^{+0.0019}_{-0.0022}$	$\chi^2_{\rm simall}$	395.54	396.7 ± 1.6
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.5720	0.570 ± 0.032	$z_{\rm eq}$	3391.6	3390^{+39}_{-44}	$\chi^2_{\rm plikEE}$	738.76	743.5 ± 3.2
$\sigma_8/h^{0.5}$	0.9531	$0.951^{+0.028}_{-0.023}$	$k_{\rm eq}$	0.00987	0.00984 ± 0.00060	$\chi^2_{\rm 6DF}$	0.0003	0.064 ± 0.088
$r_{\rm drag} h$	100.58	100.3 ± 1.2	$100\theta_{\rm eq}$	0.8181	0.8175 ± 0.0075	$\chi^2_{\rm MGS}$	1.75	1.70 ± 0.73
$\langle d^2 \rangle^{1/2}$	2.3977	2.390 ± 0.038	$100\theta_{\rm s,eq}$	0.45109	0.4511 ± 0.0036	$\chi^2_{\rm DR12BAO}$	3.56	4.5 ± 1.5
$z_{\rm re}$	6.95	$6.92^{+0.88}_{-0.76}$	$H(0.15)$	70.5	70.0 ± 5.2	$\chi^2_{\rm prior}$	0.028	0.98 ± 1.4
$10^9 A_{\rm s}$	2.073	$2.04^{+0.10}_{-0.081}$	$D_{\rm M}(0.15)$	662.6	671^{+45}_{-55}	$\chi^2_{\rm BAO}$	5.30	6.2 ± 1.4
$10^9 A_{\rm s} e^{-2\tau}$	1.868	$1.842^{+0.087}_{-0.064}$	$H(0.38)$	80.0	79.6 ± 5.7	$\chi^2_{\rm CMB}$	1134.30	1140.2 ± 3.5
D_{40}	1246.9	1235 ± 31	$D_{\rm M}(0.38)$	1583	1601^{+110}_{-130}			
D_{220}	5969	5880 ± 130	$H(0.51)$	86.4	85.9 ± 6.0			

Best-fit $\chi^2_{\rm eff} = 1139.64$; $\Delta\chi^2_{\rm eff} = -0.53$; $\bar{\chi}^2_{\rm eff} = 1147.36$; $\Delta\bar{\chi}^2_{\rm eff} = 0.01$; $R - 1 = 0.00877$

$\chi^2_{\rm eff}$: BAO - 6DF: 0.00 (Δ -0.00) MGS: 1.75 (Δ -0.14) DR12BAO: 3.56 (Δ -0.04) CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.54 (Δ -0.07) plik_rd12_HM_v22_EE: 738.76 (Δ -0.28)

7.34 base_nnu_plikHM_EE_lowE_BAO_post_lensing

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02296 ± 0.00073	D_{810}	2586 ± 29	$D_{\rm M}(0.51)$	2065^{+110}_{-120}
$\boldsymbol{\Omega_c h^2}$	$0.106^{+0.011}_{-0.012}$	D_{1420}	852 ± 21	$H(0.61)$	91.5 ± 4.8
$\boldsymbol{100\theta_{MC}}$	$1.0418^{+0.0018}_{-0.0025}$	D_{2000}	247 ± 10	$D_{\rm M}(0.61)$	2404^{+120}_{-140}
$\boldsymbol{\tau}$	$0.0513^{+0.0081}_{-0.0072}$	$n_{\rm s,0.002}$	0.963 ± 0.015	$H(2.33)$	226 ± 11
$\boldsymbol{N_{eff}}$	$2.40^{+0.62}_{-0.71}$	$Y_{\rm P}$	0.236 ± 0.010	$D_{\rm M}(2.33)$	6023^{+290}_{-330}
$\boldsymbol{\ln(10^{10} A_s)}$	$3.018^{+0.033}_{-0.028}$	$Y_{\rm P}^{\rm BBN}$	0.237 ± 0.010	$f\sigma_8(0.15)$	0.430 ± 0.016
$\boldsymbol{n_s}$	0.963 ± 0.015	10^5D/H	2.26 ± 0.17	$\sigma_8(0.15)$	0.712 ± 0.030
$\boldsymbol{y_{cal}}$	0.9999 ± 0.0024	Age/Gyr	$14.42^{+0.68}_{-0.78}$	$f\sigma_8(0.38)$	0.449 ± 0.017
H_0	65.2 ± 3.8	z_*	1087.3 ± 1.3	$\sigma_8(0.38)$	0.632 ± 0.028
Ω_Λ	$0.694^{+0.012}_{-0.010}$	r_*	$151.7^{+7.1}_{-8.2}$	$f\sigma_8(0.51)$	0.448 ± 0.017
$\Omega_{\rm m}$	$0.306^{+0.010}_{-0.012}$	$100\theta_*$	$1.0424^{+0.0023}_{-0.0030}$	$\sigma_8(0.51)$	0.591 ± 0.026
$\Omega_{\rm m}h^2$	$0.130^{+0.011}_{-0.013}$	$D_{\rm M}(z_*)$/Gpc	$14.55^{+0.65}_{-0.74}$	$f\sigma_8(0.61)$	0.444 ± 0.017
$\Omega_{\rm m}h^3$	$0.085^{+0.011}_{-0.014}$	$z_{\rm drag}$	1059.7 ± 2.8	$\sigma_8(0.61)$	0.563 ± 0.025
σ_8	0.770 ± 0.032	$r_{\rm drag}$	$154.3^{+7.3}_{-8.5}$	$f\sigma_8(2.33)$	0.284 ± 0.013
S_8	0.776 ± 0.028	$k_{\rm D}$	0.1369 ± 0.0055	$\sigma_8(2.33)$	0.293 ± 0.014
$\sigma_8\Omega_{\rm m}^{0.5}$	0.425 ± 0.015	$100\theta_{\rm D}$	0.1580 ± 0.0016	$\chi^2_{\rm lensing}$	9.2 ± 1.2
$\sigma_8\Omega_{\rm m}^{0.25}$	0.572 ± 0.022	$z_{\rm eq}$	3387 ± 36	$\chi^2_{\rm simall}$	396.6 ± 1.4
$\sigma_8/h^{0.5}$	$0.953^{+0.018}_{-0.016}$	$k_{\rm eq}$	0.00986 ± 0.00043	$\chi^2_{\rm plikEE}$	742.5 ± 2.7
$r_{\rm drag}h$	100.3 ± 1.2	$100\theta_{\rm eq}$	0.8179 ± 0.0068	$\chi^2_{\rm 6DF}$	0.061 ± 0.085
$\langle d^2\rangle^{1/2}$	2.391 ± 0.031	$100\theta_{\rm s,eq}$	0.4514 ± 0.0032	$\chi^2_{\rm MGS}$	1.68 ± 0.71
$z_{\rm re}$	$6.94^{+0.83}_{-0.71}$	$H(0.15)$	70.2 ± 4.0	$\chi^2_{\rm DR12BAO}$	4.4 ± 1.4
$10^9 A_{\rm s}$	$2.047^{+0.067}_{-0.060}$	$D_{\rm M}(0.15)$	668^{+35}_{-41}	$\chi^2_{\rm prior}$	0.96 ± 1.4
$10^9 A_{\rm s}e^{-2\tau}$	$1.847^{+0.059}_{-0.048}$	$H(0.38)$	79.8 ± 4.3	$\chi^2_{\rm CMB}$	1148.2 ± 3.5
D_{40}	1234 ± 28	$D_{\rm M}(0.38)$	1593^{+83}_{-95}	$\chi^2_{\rm BAO}$	6.2 ± 1.3
D_{220}	5873 ± 110	$H(0.51)$	86.2 ± 4.6		

$\bar{\chi}^2_{\rm eff} = 1155.37$; $\Delta\bar{\chi}^2_{\rm eff} = -0.32$; $R - 1 = 0.00317$

7.35 base_nnu_plikHM_EE_lowE_BAO_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	$0.02301^{+0.00093}_{-0.00082}$	D_{810}	2586 ± 36	$D_{\rm M}(0.51)$	2058^{+130}_{-160}
$\boldsymbol{\Omega_c h^2}$	$0.108^{+0.014}_{-0.017}$	D_{1420}	851 ± 26	$H(0.61)$	92.0 ± 6.2
$\boldsymbol{100\theta_{MC}}$	$1.0418^{+0.0021}_{-0.0032}$	D_{2000}	246 ± 12	$D_{\rm M}(0.61)$	2395^{+150}_{-180}
$\boldsymbol{\tau}$	$0.0553^{+0.0044}_{-0.0070}$	$n_{\rm s,0.002}$	0.964 ± 0.019	$H(2.33)$	227 ± 14
$\boldsymbol{N_{eff}}$	$2.47^{+0.81}_{-0.96}$	$Y_{\rm P}$	0.237 ± 0.013	$D_{\rm M}(2.33)$	6004^{+360}_{-440}
$\boldsymbol{\ln(10^{10} A_s)}$	$3.028^{+0.046}_{-0.034}$	$Y_{\rm P}^{\rm BBN}$	0.238 ± 0.013	$f\sigma_8(0.15)$	0.433 ± 0.022
$\boldsymbol{n_s}$	0.964 ± 0.019	10^5D/H	$2.27^{+0.20}_{-0.24}$	$\sigma_8(0.15)$	0.717 ± 0.042
$\boldsymbol{y_{cal}}$	0.99995 ± 0.0025	Age/Gyr	$14.38^{+0.87}_{-1.0}$	$f\sigma_8(0.38)$	0.452 ± 0.024
H_0	65.6 ± 4.9	z_*	$1087.4^{+1.6}_{-1.8}$	$\sigma_8(0.38)$	0.636 ± 0.038
Ω_Λ	$0.695^{+0.012}_{-0.011}$	r_*	$151.3^{+9.1}_{-11}$	$f\sigma_8(0.51)$	0.451 ± 0.024
$\Omega_{\rm m}$	$0.305^{+0.011}_{-0.012}$	$100\theta_*$	$1.0423^{+0.0027}_{-0.0039}$	$\sigma_8(0.51)$	0.596 ± 0.035
$\Omega_{\rm m}h^2$	$0.131^{+0.015}_{-0.018}$	$D_{\rm M}(z_*)$/Gpc	$14.51^{+0.84}_{-1.0}$	$f\sigma_8(0.61)$	0.447 ± 0.024
$\Omega_{\rm m}h^3$	$0.087^{+0.014}_{-0.019}$	$z_{\rm drag}$	$1060.0^{+3.8}_{-3.3}$	$\sigma_8(0.61)$	0.567 ± 0.034
σ_8	0.775 ± 0.044	$r_{\rm drag}$	$153.8^{+9.4}_{-11}$	$f\sigma_8(2.33)$	0.286 ± 0.017
S_8	0.781 ± 0.039	$k_{\rm D}$	0.1374 ± 0.0073	$\sigma_8(2.33)$	0.295 ± 0.018
$\sigma_8\Omega_{\rm m}^{0.5}$	0.428 ± 0.021	$100\theta_{\rm D}$	$0.1581^{+0.0019}_{-0.0021}$	$\chi^2_{\rm simall}$	396.4 ± 1.4
$\sigma_8\Omega_{\rm m}^{0.25}$	0.576 ± 0.030	$z_{\rm eq}$	3387^{+38}_{-43}	$\chi^2_{\rm plikEE}$	743.4 ± 3.1
$\sigma_8/h^{0.5}$	$0.957^{+0.025}_{-0.021}$	$k_{\rm eq}$	0.00991 ± 0.00059	$\chi^2_{\rm 6DF}$	0.063 ± 0.087
$r_{\rm drag}h$	100.4 ± 1.2	$100\theta_{\rm eq}$	0.8181 ± 0.0074	$\chi^2_{\rm MGS}$	1.73 ± 0.73
$\langle d^2\rangle^{1/2}$	2.401 ± 0.035	$100\theta_{\rm s,eq}$	0.4514 ± 0.0035	$\chi^2_{\rm DR12BAO}$	4.5 ± 1.4
$z_{\rm re}$	< 7.55	$H(0.15)$	70.6 ± 5.1	$\chi^2_{\rm prior}$	0.97 ± 1.4
$10^9 A_{\rm s}$	$2.066^{+0.092}_{-0.074}$	$D_{\rm M}(0.15)$	665^{+44}_{-53}	$\chi^2_{\rm BAO}$	6.3 ± 1.4
$10^9 A_{\rm s}e^{-2\tau}$	$1.850^{+0.085}_{-0.063}$	$H(0.38)$	80.2 ± 5.6	$\chi^2_{\rm CMB}$	1139.8 ± 3.4
D_{40}	1234 ± 31	$D_{\rm M}(0.38)$	1588^{+100}_{-120}		
D_{220}	5875 ± 130	$H(0.51)$	86.6 ± 5.9		

$\bar{\chi}^2_{\rm eff} = 1147.01$; $\Delta\bar{\chi}^2_{\rm eff} = -0.05$; $R - 1 = 0.00611$

7.36 base_nnu_plikHM_EE_lowE_BAO_post_lensing_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02292 ± 0.00073	D_{810}	2582 ± 28	$D_{\rm M}(0.51)$	2060^{+110}_{-120}
$\boldsymbol{\Omega_c h^2}$	$0.107^{+0.011}_{-0.013}$	D_{1420}	850 ± 21	$H(0.61)$	91.7 ± 4.8
$\boldsymbol{100\theta_{MC}}$	$1.0417^{+0.0018}_{-0.0025}$	D_{2000}	246 ± 10	$D_{\rm M}(0.61)$	2398^{+120}_{-140}
$\boldsymbol{\tau}$	$0.0549^{+0.0039}_{-0.0067}$	$n_{\rm s,0.002}$	0.964 ± 0.016	$H(2.33)$	226 ± 11
$\boldsymbol{N_{eff}}$	2.44 ± 0.69	$Y_{\rm P}$	0.237 ± 0.010	$D_{\rm M}(2.33)$	6009^{+290}_{-330}
$\boldsymbol{\ln(10^{10} A_s)}$	$3.025^{+0.032}_{-0.026}$	$Y_{\rm P}^{\rm BBN}$	0.238 ± 0.010	$f\sigma_8(0.15)$	0.432 ± 0.016
$\boldsymbol{n_s}$	0.964 ± 0.016	10^5D/H	2.28 ± 0.17	$\sigma_8(0.15)$	0.715 ± 0.030
$\boldsymbol{y_{cal}}$	0.9998 ± 0.0024	Age/Gyr	$14.39^{+0.69}_{-0.80}$	$f\sigma_8(0.38)$	0.451 ± 0.017
H_0	65.4 ± 3.9	z_*	1087.5 ± 1.3	$\sigma_8(0.38)$	0.635 ± 0.028
Ω_Λ	$0.695^{+0.012}_{-0.010}$	r_*	$151.4^{+7.2}_{-8.4}$	$f\sigma_8(0.51)$	0.450 ± 0.017
$\Omega_{\rm m}$	$0.305^{+0.010}_{-0.012}$	$100\theta_*$	$1.0423^{+0.0023}_{-0.0030}$	$\sigma_8(0.51)$	0.594 ± 0.026
$\Omega_{\rm m}h^2$	$0.131^{+0.011}_{-0.013}$	$D_{\rm M}(z_*)$/Gpc	$14.52^{+0.66}_{-0.76}$	$f\sigma_8(0.61)$	0.446 ± 0.017
$\Omega_{\rm m}h^3$	$0.086^{+0.011}_{-0.014}$	$z_{\rm drag}$	1059.7 ± 2.8	$\sigma_8(0.61)$	0.566 ± 0.025
σ_8	0.773 ± 0.032	$r_{\rm drag}$	$154.0^{+7.4}_{-8.7}$	$f\sigma_8(2.33)$	0.286 ± 0.013
S_8	0.780 ± 0.028	$k_{\rm D}$	0.1371 ± 0.0056	$\sigma_8(2.33)$	0.295 ± 0.014
$\sigma_8\Omega_{\rm m}^{0.5}$	0.427 ± 0.015	$100\theta_{\rm D}$	0.1581 ± 0.0016	$\chi^2_{\rm lensing}$	9.1 ± 1.2
$\sigma_8\Omega_{\rm m}^{0.25}$	0.575 ± 0.022	$z_{\rm eq}$	3383^{+34}_{-38}	$\chi^2_{\rm simall}$	396.3 ± 1.2
$\sigma_8/h^{0.5}$	0.957 ± 0.017	$k_{\rm eq}$	0.00988 ± 0.00044	$\chi^2_{\rm plikEE}$	742.4 ± 2.6
$r_{\rm drag}h$	100.4 ± 1.2	$100\theta_{\rm eq}$	0.8185 ± 0.0068	$\chi^2_{\rm 6DF}$	0.061 ± 0.086
$\langle d^2\rangle^{1/2}$	2.398 ± 0.029	$100\theta_{\rm s,eq}$	0.4517 ± 0.0032	$\chi^2_{\rm MGS}$	1.72 ± 0.71
$z_{\rm re}$	< 7.51	$H(0.15)$	70.4 ± 4.0	$\chi^2_{\rm DR12BAO}$	4.4 ± 1.4
$10^9 A_{\rm s}$	$2.061^{+0.065}_{-0.055}$	$D_{\rm M}(0.15)$	666^{+36}_{-42}	$\chi^2_{\rm prior}$	0.9 ± 1.3
$10^9 A_{\rm s}e^{-2\tau}$	$1.847^{+0.060}_{-0.049}$	$H(0.38)$	80.0 ± 4.4	$\chi^2_{\rm CMB}$	1147.9 ± 3.4
D_{40}	1232 ± 27	$D_{\rm M}(0.38)$	1589^{+84}_{-97}	$\chi^2_{\rm BAO}$	6.2 ± 1.4
D_{220}	5860 ± 110	$H(0.51)$	86.4 ± 4.6		

$\bar{\chi}^2_{\rm eff} = 1155.01$; $\Delta\bar{\chi}^2_{\rm eff} = -0.38$; $R - 1 = 0.00359$

7.37 base_nnu_plikHM_TT_lowl_lowE_BAO

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022244	0.02227 ± 0.00023	$\sigma_8/h^{0.5}$	0.9823	0.983 ± 0.012	$D_M(0.38)$	1525.5	1518 ± 30
$\boldsymbol{\Omega_c h^2}$	0.11934	0.1206 ± 0.0039	$r_{drag}h$	99.87	99.96 ± 1.0	$H(0.51)$	89.87	90.3 ± 1.6
$\boldsymbol{100\theta_{MC}}$	1.04094	1.04085 ± 0.00056	$\langle d^2\rangle^{1/2}$	2.4251	2.426 ± 0.028	$D_M(0.51)$	1976.5	1967 ± 38
$\boldsymbol{\tau}$	0.0545	0.0539 ± 0.0080	z_{re}	7.72	7.67 ± 0.83	$H(0.61)$	95.47	96.0 ± 1.6
$\boldsymbol{N_{eff}}$	3.075	3.15 ± 0.23	$10^9 A_s$	2.0950	2.100 ± 0.042	$D_M(0.61)$	2300.2	2289 ± 43
$\boldsymbol{\ln(10^{10} A_s)}$	3.0421	3.044 ± 0.020	$10^9 A_s e^{-2\tau}$	1.8787	1.885 ± 0.021	$H(2.33)$	236.10	237.1 ± 3.4
$\boldsymbol{n_s}$	0.9686	0.9696 ± 0.0084	D_{40}	1221.3	1222 ± 15	$D_M(2.33)$	5754	5728 ± 93
$\boldsymbol{y_{cal}}$	1.00034	1.0006 ± 0.0025	D_{220}	5713.9	5719 ± 40	$f\sigma_8(0.15)$	0.4546	0.4557 ± 0.0085
$\boldsymbol{A_{217}^{CIB}}$	49.7	48 ± 7	D_{810}	2536.1	2537 ± 14	$\sigma_8(0.15)$	0.7477	0.750 ± 0.013
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.19	—	D_{1420}	815.8	814.9 ± 5.2	$f\sigma_8(0.38)$	0.4734	0.4748 ± 0.0081
$\boldsymbol{A_{143}^{tSZ}}$	7.05	4.9 ± 2.0	D_{2000}	230.01	229.4 ± 2.2	$\sigma_8(0.38)$	0.6630	0.666 ± 0.012
$\boldsymbol{A_{100}^{PS}}$	256.6	266 ± 29	$n_{s,0.002}$	0.9686	0.9696 ± 0.0084	$f\sigma_8(0.51)$	0.4723	0.4737 ± 0.0079
$\boldsymbol{A_{143}^{PS}}$	47.6	50 ± 9	Y_P	0.24573	0.2466 ± 0.0031	$\sigma_8(0.51)$	0.6206	0.623 ± 0.011
$\boldsymbol{A_{143\times217}^{PS}}$	43.4	44^{+9}_{-10}	Y_P^{BBN}	0.24706	0.2480 ± 0.0031	$f\sigma_8(0.61)$	0.4675	0.4690 ± 0.0077
$\boldsymbol{A_{217}^{PS}}$	117.6	115 ± 10	10^5D/H	2.620	2.640 ± 0.067	$\sigma_8(0.61)$	0.5906	0.593 ± 0.010
$\boldsymbol{A^{kSZ}}$	0.00	< 5.15	Age/Gyr	13.777	13.71 ± 0.22	$f\sigma_8(2.33)$	0.2979	0.2991 ± 0.0054
$\boldsymbol{A_{100}^{dustTT}}$	8.86	9.0 ± 1.8	z_*	1090.051	1090.19 ± 0.49	$\sigma_8(2.33)$	0.3072	0.3085 ± 0.0057
$\boldsymbol{A_{143}^{dustTT}}$	10.81	10.8 ± 1.8	r_*	144.55	143.9 ± 2.2	f_{2000}^{143}	30.47	31.7 ± 3.4
$\boldsymbol{A_{143\times217}^{dustTT}}$	19.15	18.3 ± 3.3	$100\theta_*$	1.04111	1.04098 ± 0.00067	$f_{2000}^{143\times217}$	33.22	33.9 ± 2.5
$\boldsymbol{A_{217}^{dustTT}}$	94.1	93.2 ± 7.4	$D_M(z_*)$/Gpc	13.884	13.82 ± 0.20	f_{2000}^{217}	107.69	108.5 ± 2.3
$\boldsymbol{c_{100}}$	0.99965	0.99961 ± 0.00061	z_{drag}	1059.63	1059.81 ± 0.86	χ^2_{simall}	396.05	397.1 ± 1.9
$\boldsymbol{c_{217}}$	0.99825	0.99828 ± 0.00062	r_{drag}	147.26	146.6 ± 2.3	χ^2_{lowl}	22.69	22.8 ± 1.1
H_0	67.82	68.2 ± 1.5	k_D	0.14048	0.1410 ± 0.0017	χ^2_{plik}	760.2	773.2 ± 5.7
Ω_Λ	0.6908	0.6914 ± 0.0083	$100\theta_D$	0.16107	0.16125 ± 0.00058	χ^2_{6DF}	0.0157	0.057 ± 0.076
Ω_m	0.3092	0.3086 ± 0.0083	z_{eq}	3370.5	3368 ± 31	χ^2_{MGS}	1.34	1.47 ± 0.60
$\Omega_m h^2$	0.14223	0.1435 ± 0.0040	k_{eq}	0.010307	0.01035 ± 0.00015	$\chi^2_{DR12BAO}$	4.05	4.7 ± 1.6
$\Omega_m h^3$	0.09646	$0.0979^{+0.0043}_{-0.0048}$	$100\theta_{eq}$	0.8187	0.8192 ± 0.0059	χ^2_{prior}	1.38	7.3 ± 3.7
σ_8	0.8089	0.812 ± 0.014	$100\theta_{s,eq}$	0.45229	0.4525 ± 0.0030	χ^2_{BAO}	5.41	6.2 ± 1.3
S_8	0.8213	0.823 ± 0.016	$H(0.15)$	73.08	73.5 ± 1.5	χ^2_{CMB}	1178.9	1193.0 ± 5.6
$\sigma_8\Omega_m^{0.5}$	0.4498	0.4509 ± 0.0088	$D_M(0.15)$	639.4	636 ± 13			
$\sigma_8\Omega_m^{0.25}$	0.6032	0.605 ± 0.010	$H(0.38)$	83.17	83.6 ± 1.5			

Best-fit $\chi^2_{eff} = 1185.72$; $\Delta\chi^2_{eff} = -0.03$; $\bar{\chi}^2_{eff} = 1206.54$; $\Delta\bar{\chi}^2_{eff} = 0.52$; $R - 1 = 0.01083$

χ^2_{eff}: BAO - 6DF: 0.02 (Δ -0.01) MGS: 1.34 (Δ 0.06) DR12BAO: 4.05 (Δ -0.14) CMB - simall_100x143_offlike5_EE_Aplanck_B: 396.05 (Δ 0.16) commander_dx12_v3_2_29: 22.69 (Δ -0.14) plik_rd12_HM_v22_TT: 760.20 (Δ 0.10)

7.38 base_nnu_plikHM_TT_lowl_lowE_BAO_post_lensing_JLA

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022247	0.02227 ± 0.00023	$\sigma_8/h^{0.5}$	0.9834	0.9844 ± 0.0092	$D_M(0.38)$	1527.8	1520 ± 29
$\boldsymbol{\Omega_c h^2}$	0.11922	0.1202 ± 0.0036	$r_{drag}h$	99.76	99.90 ± 0.97	$H(0.51)$	89.76	90.2 ± 1.5
$\boldsymbol{100\theta_{MC}}$	1.04096	1.04087 ± 0.00054	$\langle d^2\rangle^{1/2}$	2.4284	2.431 ± 0.023	$D_M(0.51)$	1979.4	1970 ± 37
$\boldsymbol{\tau}$	0.0545	0.0553 ± 0.0075	z_{re}	7.72	7.80 ± 0.75	$H(0.61)$	95.37	95.8 ± 1.5
$\boldsymbol{N_{eff}}$	3.060	3.12 ± 0.22	$10^9 A_s$	2.0965	2.105 ± 0.036	$D_M(0.61)$	2303.5	2293 ± 42
$\boldsymbol{\ln(10^{10} A_s)}$	3.0429	3.047 ± 0.017	$10^9 A_s e^{-2\tau}$	1.8801	1.884 ± 0.019	$H(2.33)$	235.97	236.9 ± 3.2
$\boldsymbol{n_s}$	0.9680	0.9687 ± 0.0082	D_{40}	1223.3	1225 ± 14	$D_M(2.33)$	5760	5736 ± 90
$\boldsymbol{y_{cal}}$	1.00062	1.0007 ± 0.0025	D_{220}	5720.2	5725 ± 40	$f\sigma_8(0.15)$	0.4552	0.4562 ± 0.0066
$\boldsymbol{A_{217}^{CIB}}$	48.0	48 ± 7	D_{810}	2538.8	2538 ± 14	$\sigma_8(0.15)$	0.7478	0.751 ± 0.011
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.42	—	D_{1420}	816.9	815.3 ± 5.2	$f\sigma_8(0.38)$	0.4739	0.4751 ± 0.0064
$\boldsymbol{A_{143}^{tSZ}}$	6.90	5.0 ± 2.0	D_{2000}	230.45	229.6 ± 2.2	$\sigma_8(0.38)$	0.6630	0.666 ± 0.010
$\boldsymbol{A_{100}^{PS}}$	253.3	265 ± 28	$n_{s,0.002}$	0.9680	0.9687 ± 0.0082	$f\sigma_8(0.51)$	0.4726	0.4740 ± 0.0063
$\boldsymbol{A_{143}^{PS}}$	50.5	49 ± 8	Y_P	0.24553	0.2464 ± 0.0030	$\sigma_8(0.51)$	0.6205	0.6231 ± 0.0097
$\boldsymbol{A_{143\times217}^{PS}}$	49.1	43 ± 9	Y_P^{BBN}	0.24686	0.2477 ± 0.0030	$f\sigma_8(0.61)$	0.4678	0.4693 ± 0.0063
$\boldsymbol{A_{217}^{PS}}$	120.3	115 ± 10	10^5D/H	2.614	2.632 ± 0.065	$\sigma_8(0.61)$	0.5905	0.5930 ± 0.0094
$\boldsymbol{A^{kSZ}}$	0.04	< 5.05	Age/Gyr	13.791	13.73 ± 0.21	$f\sigma_8(2.33)$	0.29779	0.2991 ± 0.0049
$\boldsymbol{A_{100}^{dustTT}}$	8.89	9.0 ± 1.8	z_*	1090.023	1090.14 ± 0.46	$\sigma_8(2.33)$	0.3071	0.3085 ± 0.0052
$\boldsymbol{A_{143}^{dustTT}}$	10.81	10.7 ± 1.8	r_*	144.66	144.1 ± 2.1	f_{2000}^{143}	30.02	31.4 ± 3.4
$\boldsymbol{A_{143\times217}^{dustTT}}$	19.47	18.3 ± 3.3	$100\theta_*$	1.04115	1.04102 ± 0.00065	$f_{2000}^{143\times217}$	33.02	33.7 ± 2.4
$\boldsymbol{A_{217}^{dustTT}}$	94.7	93.2 ± 7.3	$D_M(z_*)$/Gpc	13.894	13.84 ± 0.19	f_{2000}^{217}	107.48	108.3 ± 2.2
$\boldsymbol{c_{100}}$	0.99967	0.99962 ± 0.00062	z_{drag}	1059.59	1059.77 ± 0.83	$\chi^2_{lensing}$	8.92	9.45 ± 0.82
$\boldsymbol{c_{217}}$	0.99825	0.99827 ± 0.00062	r_{drag}	147.37	146.8 ± 2.1	χ^2_{simall}	396.08	397.1 ± 1.9
H_0	67.70	68.1 ± 1.4	k_D	0.14043	0.1408 ± 0.0016	χ^2_{lowl}	22.79	23.0 ± 1.1
Ω_Λ	0.6899	0.6910 ± 0.0078	$100\theta_D$	0.16101	0.16118 ± 0.00056	χ^2_{plik}	760.1	772.5 ± 5.5
Ω_m	0.3101	0.3090 ± 0.0078	z_{eq}	3374.5	3370 ± 29	χ^2_{JLA}	706.709	706.73 ± 0.21
$\Omega_m h^2$	0.14211	0.1432 ± 0.0037	k_{eq}	0.010309	0.01034 ± 0.00013	χ^2_{6DF}	0.0217	0.053 ± 0.071
$\Omega_m h^3$	0.09621	0.0975 ± 0.0043	$100\theta_{eq}$	0.8180	0.8188 ± 0.0054	χ^2_{MGS}	1.28	1.43 ± 0.55
σ_8	0.8091	0.812 ± 0.012	$100\theta_{s,eq}$	0.45192	0.4523 ± 0.0028	$\chi^2_{DR12BAO}$	4.20	4.6 ± 1.5
S_8	0.8226	0.824 ± 0.013	$H(0.15)$	72.97	73.4 ± 1.4	χ^2_{prior}	1.29	7.3 ± 3.6
$\sigma_8\Omega_m^{0.5}$	0.4506	0.4514 ± 0.0069	$D_M(0.15)$	640.5	637 ± 13	χ^2_{CMB}	1187.9	1202.0 ± 5.6
$\sigma_8\Omega_m^{0.25}$	0.6038	0.6055 ± 0.0081	$H(0.38)$	83.05	83.5 ± 1.5	χ^2_{BAO}	5.50	6.1 ± 1.2

Best-fit $\chi^2_{eff} = 1901.41$; $\bar{\chi}^2_{eff} = 1922.14$; $R - 1 = 0.01097$

χ^2_{eff}: BAO - 6DF: 0.02 MGS: 1.28 DR12BAO: 4.20 CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.92 simall_100x143_offlike5_EE_Aplanck_B: 396.08 commander_dx12_v3_2_29: 22.79 plik_rd12_HM_v22_TT: 760.13 SN - JLA December_2013: 706.71

7.39 base_nnu_plikHM_TT_lowl_lowE_BAO_post_lensing_Pantheon

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022272	0.02228 ± 0.00023	$\sigma_8\Omega_m^{0.25}$	0.6045	0.6054 ± 0.0081	$D_M(0.15)$	638.7	637 ± 12
$\boldsymbol{\Omega_c h^2}$	0.11960	0.1203 ± 0.0036	$\sigma_8/h^{0.5}$	0.9838	0.9842 ± 0.0092	$H(0.38)$	83.26	83.5 ± 1.4
$\boldsymbol{100\theta_{MC}}$	1.04094	1.04087 ± 0.00054	$r_{drag}h$	99.88	99.97 ± 0.94	$D_M(0.38)$	1523.8	1519 ± 28
$\boldsymbol{\tau}$	0.0552	0.0555 ± 0.0074	$\langle d^2\rangle^{1/2}$	2.4283	2.430 ± 0.022	$H(0.51)$	89.96	90.3 ± 1.5
$\boldsymbol{N_{eff}}$	3.087	3.13 ± 0.22	z_{re}	7.79	7.82 ± 0.75	$D_M(0.51)$	1974.3	1968 ± 36
$\boldsymbol{\ln(10^{10}A_s)}$	3.0452	3.047 ± 0.017	$10^9 A_s$	2.1014	2.106 ± 0.036	$H(0.61)$	95.58	95.9 ± 1.5
$\boldsymbol{n_s}$	0.9690	0.9691 ± 0.0080	$10^9 A_s e^{-2\tau}$	1.8818	1.885 ± 0.019	$D_M(0.61)$	2297.7	2290 ± 41
$\boldsymbol{y_{cal}}$	1.00063	1.0007 ± 0.0025	D_{40}	1222.4	1224 ± 14	$H(2.33)$	236.34	236.9 ± 3.1
$\boldsymbol{A_{217}^{CIB}}$	48.9	48 ± 7	D_{220}	5720.6	5725 ± 40	$D_M(2.33)$	5748	5732 ± 89
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.27	—	D_{810}	2538.9	2538 ± 14	$f\sigma_8(0.15)$	0.4555	0.4560 ± 0.0066
$\boldsymbol{A_{143}^{tSZ}}$	7.03	5.0 ± 2.0	D_{1420}	816.7	815.3 ± 5.2	$\sigma_8(0.15)$	0.7493	0.751 ± 0.011
$\boldsymbol{A_{100}^{PS}}$	254.6	265 ± 28	D_{2000}	230.29	229.6 ± 2.2	$f\sigma_8(0.38)$	0.4744	0.4751 ± 0.0064
$\boldsymbol{A_{143}^{PS}}$	48.5	49 ± 8	$n_{s,0.002}$	0.9690	0.9691 ± 0.0080	$\sigma_8(0.38)$	0.6645	0.666 ± 0.010
$\boldsymbol{A_{143\times217}^{PS}}$	45.6	43^{+9}_{-10}	Y_P	0.24590	0.2465 ± 0.0029	$f\sigma_8(0.51)$	0.4733	0.4740 ± 0.0063
$\boldsymbol{A_{217}^{PS}}$	119.0	115 ± 10	Y_P^{BBN}	0.24723	0.2478 ± 0.0029	$\sigma_8(0.51)$	0.6219	0.6235 ± 0.0096
$\boldsymbol{A^{kSZ}}$	0.00	< 5.07	10^5D/H	2.618	2.633 ± 0.064	$f\sigma_8(0.61)$	0.4685	0.4693 ± 0.0063
$\boldsymbol{A_{100}^{dustTT}}$	8.89	9.0 ± 1.8	Age/Gyr	13.763	13.72 ± 0.21	$\sigma_8(0.61)$	0.5919	0.5934 ± 0.0093
$\boldsymbol{A_{143}^{dustTT}}$	10.76	10.7 ± 1.8	z_*	1090.048	1090.15 ± 0.46	$f\sigma_8(2.33)$	0.29851	0.2993 ± 0.0048
$\boldsymbol{A_{143\times217}^{dustTT}}$	19.19	18.3 ± 3.3	r_*	144.41	144.0 ± 2.1	$\sigma_8(2.33)$	0.3079	0.3087 ± 0.0052
$\boldsymbol{A_{217}^{dustTT}}$	94.4	93.2 ± 7.3	$100\theta_*$	1.04111	1.04101 ± 0.00065	$\chi^2_{lensing}$	8.94	9.46 ± 0.82
$\boldsymbol{c_{100}}$	0.99965	0.99962 ± 0.00062	$D_M(z_*)$/Gpc	13.870	13.84 ± 0.19	χ^2_{simall}	396.19	397.2 ± 1.9
$\boldsymbol{c_{217}}$	0.99825	0.99827 ± 0.00062	z_{drag}	1059.70	1059.81 ± 0.82	χ^2_{lowl}	22.70	22.9 ± 1.1
H_0	67.90	68.2 ± 1.4	r_{drag}	147.10	146.7 ± 2.1	χ^2_{plik}	760.0	772.6 ± 5.5
Ω_Λ	0.6909	0.6915 ± 0.0075	k_D	0.14062	0.1409 ± 0.0016	χ^2_{JLA}	1036.223	1036.31 ± 0.36
Ω_m	0.3091	0.3085 ± 0.0075	$100\theta_D$	0.16106	0.16119 ± 0.00056	χ^2_{6DF}	0.0154	0.048 ± 0.064
$\Omega_m h^2$	0.14251	0.1432 ± 0.0037	z_{eq}	3371.8	3369 ± 28	χ^2_{MGS}	1.34	1.46 ± 0.54
$\Omega_m h^3$	0.09676	0.0977 ± 0.0043	k_{eq}	0.010319	0.01034 ± 0.00013	$\chi^2_{DR12BAO}$	4.05	4.5 ± 1.4
σ_8	0.8106	0.812 ± 0.012	$100\theta_{eq}$	0.8185	0.8192 ± 0.0053	χ^2_{prior}	1.42	7.3 ± 3.6
S_8	0.8229	0.824 ± 0.012	$100\theta_{s,eq}$	0.45220	0.4525 ± 0.0027	χ^2_{CMB}	1187.9	1202.1 ± 5.6
$\sigma_8\Omega_m^{0.5}$	0.4507	0.4512 ± 0.0068	$H(0.15)$	73.16	73.4 ± 1.4	χ^2_{BAO}	5.40	6.0 ± 1.1

Best-fit $\chi^2_{eff} = 2230.92$; $\Delta\chi^2_{eff} = -0.07$; $\bar{\chi}^2_{eff} = 2251.69$; $\Delta\bar{\chi}^2_{eff} = 0.64$; $R - 1 = 0.01122$

χ^2_{eff}: BAO - 6DF: 0.01 (Δ 0.00) MGS: 1.34 (Δ 0.00) DR12BAO: 4.05 (Δ 0.01) CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.94 (Δ 0.07) simall_100x143_offlike5_EE_Aplanck_B 396.19 (Δ -0.26) commander_dx12_v3_2_29: 22.70 (Δ -0.14) plik_rd12_HM_v22_TT: 760.05 (Δ 0.20) SN - JLA Pantheon: 1036.22 (Δ -0.01)

7.40 base_nnu_plikHM_TT_lowl_lowE_BAO_post_lensing

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022244	0.02225 ± 0.00023	$\sigma_8/h^{0.5}$	0.9835	0.9847 ± 0.0092	$D_M(0.38)$	1529.9	1523 ± 29
$\boldsymbol{\Omega_c h^2}$	0.11919	0.1201 ± 0.0036	$r_{drag}h$	99.65	99.80 ± 0.99	$H(0.51)$	89.67	90.1 ± 1.5
$\boldsymbol{100\theta_{MC}}$	1.04095	1.04088 ± 0.00054	$\langle d^2 \rangle^{1/2}$	2.4306	2.432 ± 0.023	$D_M(0.51)$	1981.9	1973 ± 37
$\boldsymbol{\tau}$	0.0544	0.0551 ± 0.0075	z_{re}	7.70	7.78 ± 0.75	$H(0.61)$	95.29	95.7 ± 1.6
$\boldsymbol{N_{eff}}$	3.050	3.11 ± 0.22	$10^9 A_s$	2.0947	2.103 ± 0.036	$D_M(0.61)$	2306.3	2296 ± 42
$\boldsymbol{\ln(10^{10} A_s)}$	3.0420	3.046 ± 0.017	$10^9 A_s e^{-2\tau}$	1.8789	1.884 ± 0.020	$H(2.33)$	235.92	236.7 ± 3.2
$\boldsymbol{n_s}$	0.9671	0.9681 ± 0.0083	D_{40}	1224.7	1225 ± 14	$D_M(2.33)$	5765	5742 ± 91
$\boldsymbol{y_{cal}}$	1.00054	1.0007 ± 0.0025	D_{220}	5719.9	5724 ± 40	$f\sigma_8(0.15)$	0.4555	0.4565 ± 0.0066
$\boldsymbol{A_{217}^{CIB}}$	49.2	48 ± 7	D_{810}	2537.2	2538 ± 14	$\sigma_8(0.15)$	0.7472	0.750 ± 0.011
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.23	—	D_{1420}	816.3	815.3 ± 5.2	$f\sigma_8(0.38)$	0.4740	0.4752 ± 0.0064
$\boldsymbol{A_{143}^{tSZ}}$	7.15	5.0 ± 2.0	D_{2000}	230.29	229.7 ± 2.2	$\sigma_8(0.38)$	0.6624	0.665 ± 0.010
$\boldsymbol{A_{100}^{PS}}$	253.8	265 ± 28	$n_{s,0.002}$	0.9671	0.9681 ± 0.0083	$f\sigma_8(0.51)$	0.4726	0.4740 ± 0.0063
$\boldsymbol{A_{143}^{PS}}$	47.5	49 ± 8	Y_P	0.24540	0.2462 ± 0.0030	$\sigma_8(0.51)$	0.6199	0.6226 ± 0.0098
$\boldsymbol{A_{143\times217}^{PS}}$	44.2	43 ± 9	Y_P^{BBN}	0.24673	0.2475 ± 0.0030	$f\sigma_8(0.61)$	0.4677	0.4692 ± 0.0063
$\boldsymbol{A_{217}^{PS}}$	118.0	115 ± 10	10^5D/H	2.611	2.630 ± 0.065	$\sigma_8(0.61)$	0.5899	0.5925 ± 0.0094
$\boldsymbol{A^{kSZ}}$	0.06	< 5.02	Age/Gyr	13.802	13.75 ± 0.22	$f\sigma_8(2.33)$	0.29746	0.2988 ± 0.0049
$\boldsymbol{A_{100}^{dustTT}}$	9.00	9.0 ± 1.8	z_*	1090.014	1090.14 ± 0.46	$\sigma_8(2.33)$	0.3067	0.3081 ± 0.0053
$\boldsymbol{A_{143}^{dustTT}}$	10.76	10.7 ± 1.8	r_*	144.72	144.2 ± 2.1	f_{2000}^{143}	30.21	31.4 ± 3.4
$\boldsymbol{A_{143\times217}^{dustTT}}$	19.28	18.3 ± 3.3	$100\theta_*$	1.04113	1.04104 ± 0.00065	$f_{2000}^{143\times217}$	33.07	33.7 ± 2.4
$\boldsymbol{A_{217}^{dustTT}}$	94.5	93.3 ± 7.3	$D_M(z_*)$/Gpc	13.900	13.85 ± 0.19	f_{2000}^{217}	107.57	108.3 ± 2.2
$\boldsymbol{c_{100}}$	0.99968	0.99962 ± 0.00062	z_{drag}	1059.59	1059.72 ± 0.84	$\chi^2_{lensing}$	8.90	9.42 ± 0.81
$\boldsymbol{c_{217}}$	0.99825	0.99827 ± 0.00062	r_{drag}	147.43	146.9 ± 2.2	χ^2_{simall}	396.08	397.1 ± 1.9
H_0	67.59	68.0 ± 1.4	k_D	0.14040	0.1408 ± 0.0016	χ^2_{lowl}	22.94	23.0 ± 1.2
Ω_Λ	0.6890	0.6902 ± 0.0080	$100\theta_D$	0.16098	0.16115 ± 0.00056	χ^2_{plik}	759.7	772.4 ± 5.5
Ω_m	0.3110	0.3098 ± 0.0080	z_{eq}	3377.8	3373 ± 29	χ^2_{6DF}	0.0293	0.060 ± 0.079
$\Omega_m h^2$	0.14208	0.1430 ± 0.0037	k_{eq}	0.010313	0.01034 ± 0.00013	χ^2_{MGS}	1.22	1.37 ± 0.55
$\Omega_m h^3$	0.09603	0.0973 ± 0.0044	$100\theta_{eq}$	0.8173	0.8183 ± 0.0056	$\chi^2_{DR12BAO}$	4.38	4.8 ± 1.6
σ_8	0.8086	0.812 ± 0.012	$100\theta_{s,eq}$	0.45159	0.4521 ± 0.0028	χ^2_{prior}	1.45	7.3 ± 3.6
S_8	0.8233	0.825 ± 0.013	$H(0.15)$	72.87	73.2 ± 1.4	χ^2_{CMB}	1187.6	1201.9 ± 5.6
$\sigma_8\Omega_m^{0.5}$	0.4509	0.4518 ± 0.0069	$D_M(0.15)$	641.4	638 ± 13	χ^2_{BAO}	5.63	6.2 ± 1.3
$\sigma_8\Omega_m^{0.25}$	0.6038	0.6055 ± 0.0081	$H(0.38)$	82.96	83.4 ± 1.5			

Best-fit $\chi^2_{eff} = 1194.71$; $\Delta\chi^2_{eff} = 0.03$; $\bar{\chi}^2_{eff} = 1215.41$; $\Delta\bar{\chi}^2_{eff} = 0.68$; $R - 1 = 0.01056$

χ^2_{eff}: BAO - 6DF: 0.03 (Δ 0.00) MGS: 1.22 (Δ 0.00) DR12BAO: 4.38 (Δ 0.01) CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.90 (Δ 0.03) simall_100x143_offlike5_EE_Aplanck_l 396.08 (Δ -0.01) commander_dx12_v3_2_29: 22.94 (Δ -0.02) plik_rd12_HM_v22_TT: 759.72 (Δ -0.09)

7.41 base_nnu_plikHM_TT_lowl_lowE_BAO_post_Aver15

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_{\rm b}h^2}$	0.02222 ± 0.00022	$\sigma_8/h^{0.5}$	0.982 ± 0.012	$D_{\rm M}(0.38)$	1528 ± 24
$\boldsymbol{\Omega_{\rm c}h^2}$	0.1192 ± 0.0031	$r_{\rm drag}h$	99.8 ± 1.0	$H(0.51)$	89.8 ± 1.2
$\boldsymbol{100\theta_{\rm MC}}$	1.04098 ± 0.00051	$\langle d^2\rangle^{1/2}$	2.428 ± 0.028	$D_{\rm M}(0.51)$	1980 ± 31
$\boldsymbol{\tau}$	0.0537 ± 0.0080	$z_{\rm re}$	7.62 ± 0.82	$H(0.61)$	95.4 ± 1.3
$\boldsymbol{N_{\rm eff}}$	3.06 ± 0.18	$10^9 A_{\rm s}$	2.092 ± 0.039	$D_{\rm M}(0.61)$	2304 ± 35
$\boldsymbol{\ln(10^{10}A_{\rm s})}$	3.040 ± 0.019	$10^9 A_{\rm s}e^{-2\tau}$	1.878 ± 0.018	$H(2.33)$	235.9 ± 2.7
$\boldsymbol{n_{\rm s}}$	0.9669 ± 0.0071	D_{40}	1225 ± 14	$D_{\rm M}(2.33)$	5762 ± 75
$\boldsymbol{y_{\rm cal}}$	1.0006 ± 0.0025	D_{220}	5720 ± 40	$f\sigma_8(0.15)$	0.4544 ± 0.0082
$\boldsymbol{A^{\rm CIB}_{217}}$	48 ± 7	D_{810}	2536 ± 14	$\sigma_8(0.15)$	0.747 ± 0.011
$\boldsymbol{\xi^{\rm tSZ\times CIB}}$	—	D_{1420}	815.4 ± 5.1	$f\sigma_8(0.38)$	0.4730 ± 0.0075
$\boldsymbol{A^{\rm tSZ}_{143}}$	5.0 ± 2.0	D_{2000}	229.9 ± 2.1	$\sigma_8(0.38)$	0.6619 ± 0.0098
$\boldsymbol{A^{\rm PS}_{100}}$	264 ± 28	$n_{\rm s,0.002}$	0.9669 ± 0.0071	$f\sigma_8(0.51)$	0.4718 ± 0.0072
$\boldsymbol{A^{\rm PS}_{143}}$	49 ± 8	$Y_{\rm P}$	0.2455 ± 0.0024	$\sigma_8(0.51)$	0.6195 ± 0.0093
$\boldsymbol{A^{\rm PS}_{143\times217}}$	43 ± 9	$Y_{\rm P}^{\rm BBN}$	0.2468 ± 0.0024	$f\sigma_8(0.61)$	0.4669 ± 0.0069
$\boldsymbol{A^{\rm PS}_{217}}$	115 ± 10	$10^5{\rm D/H}$	2.619 ± 0.058	$\sigma_8(0.61)$	0.5895 ± 0.0089
$\boldsymbol{A^{\rm kSZ}}$	< 4.85	Age/Gyr	13.80 ± 0.18	$f\sigma_8(2.33)$	0.2973 ± 0.0045
$\boldsymbol{A^{{\rm dust}TT}_{100}}$	9.0 ± 1.8	z_*	1090.05 ± 0.43	$\sigma_8(2.33)$	0.3066 ± 0.0048
$\boldsymbol{A^{{\rm dust}TT}_{143}}$	10.7 ± 1.8	r_*	144.7 ± 1.7	f^{143}_{2000}	31.0 ± 3.2
$\boldsymbol{A^{{\rm dust}TT}_{143\times217}}$	18.3 ± 3.3	$100\theta_*$	1.04117 ± 0.00059	$f^{143\times217}_{2000}$	33.4 ± 2.3
$\boldsymbol{A^{{\rm dust}TT}_{217}}$	93.3 ± 7.3	$D_{\rm M}(z_*)/{\rm Gpc}$	13.90 ± 0.16	f^{217}_{2000}	108.0 ± 2.1
$\boldsymbol{c_{100}}$	0.99962 ± 0.00061	$z_{\rm drag}$	1059.54 ± 0.72	$\chi^2_{\rm simall}$	397.1 ± 1.9
$\boldsymbol{c_{217}}$	0.99827 ± 0.00062	$r_{\rm drag}$	147.4 ± 1.8	$\chi^2_{\rm lowl}$	23.0 ± 1.1
H_0	67.7 ± 1.2	$k_{\rm D}$	0.1404 ± 0.0013	$\chi^2_{\rm plik}$	772.6 ± 5.6
Ω_Λ	0.6899 ± 0.0080	$100\theta_{\rm D}$	0.16105 ± 0.00048	$\chi^2_{\rm Aver15}$	0.60 ± 0.79
$\Omega_{\rm m}$	0.3101 ± 0.0080	$z_{\rm eq}$	3373 ± 30	$\chi^2_{\rm 6DF}$	0.062 ± 0.080
$\Omega_{\rm m}h^2$	0.1421 ± 0.0032	$k_{\rm eq}$	0.01030 ± 0.00013	$\chi^2_{\rm MGS}$	1.37 ± 0.56
$\Omega_{\rm m}h^3$	0.0962 ± 0.0035	$100\theta_{\rm eq}$	0.8182 ± 0.0057	$\chi^2_{\rm DR12BAO}$	4.8 ± 1.7
σ_8	0.808 ± 0.012	$100\theta_{\rm s,eq}$	0.4521 ± 0.0029	$\chi^2_{\rm prior}$	7.3 ± 3.6
S_8	0.821 ± 0.016	$H(0.15)$	73.0 ± 1.2	$\chi^2_{\rm BAO}$	6.2 ± 1.4
$\sigma_8\Omega_{\rm m}^{0.5}$	0.4497 ± 0.0086	$D_{\rm M}(0.15)$	641 ± 11	$\chi^2_{\rm CMB}$	1192.7 ± 5.5
$\sigma_8\Omega_{\rm m}^{0.25}$	0.6027 ± 0.0095	$H(0.38)$	83.0 ± 1.2		

$\bar{\chi}^2_{\rm eff} = 1206.79$; $R - 1 = 0.01271$

7.42 base_nnu_plikHM_TT_lowl_lowE_BAO_post_Cooke17_Aver15

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02222 ± 0.00022	$r_{\rm drag} h$	99.8 ± 1.0	$D_{\rm M}(0.51)$	1980 ± 29
$\boldsymbol{\Omega_c h^2}$	0.1191 ± 0.0029	$\langle d^2 \rangle^{1/2}$	2.428 ± 0.028	$H(0.61)$	95.3 ± 1.2
$\boldsymbol{100\theta_{\rm MC}}$	1.04098 ± 0.00049	$z_{\rm re}$	7.62 ± 0.82	$D_{\rm M}(0.61)$	2304 ± 33
$\boldsymbol{\tau}$	0.0538 ± 0.0080	$10^9 A_{\rm s}$	2.092 ± 0.039	$H(2.33)$	235.9 ± 2.5
$\boldsymbol{N_{\rm eff}}$	3.06 ± 0.16	$10^9 A_{\rm s} e^{-2\tau}$	1.878 ± 0.017	$D_{\rm M}(2.33)$	5763 ± 70
$\boldsymbol{\ln(10^{10} A_{\rm s})}$	3.040 ± 0.019	D_{40}	1225 ± 14	$f\sigma_8(0.15)$	0.4544 ± 0.0080
$\boldsymbol{n_{\rm s}}$	0.9669 ± 0.0069	D_{220}	5720 ± 40	$\sigma_8(0.15)$	0.746 ± 0.010
$\boldsymbol{y_{\rm cal}}$	1.0006 ± 0.0025	D_{810}	2536 ± 14	$f\sigma_8(0.38)$	0.4730 ± 0.0073
$\boldsymbol{A^{\rm CIB}_{217}}$	48 ± 7	D_{1420}	815.4 ± 5.0	$\sigma_8(0.38)$	0.6618 ± 0.0093
$\boldsymbol{\xi^{\rm tSZ\times CIB}}$	—	D_{2000}	229.9 ± 1.9	$f\sigma_8(0.51)$	0.4717 ± 0.0069
$\boldsymbol{A^{\rm tSZ}_{143}}$	5.1 ± 2.0	$n_{\rm s,0.002}$	0.9669 ± 0.0069	$\sigma_8(0.51)$	0.6194 ± 0.0088
$\boldsymbol{A^{\rm PS}_{100}}$	264 ± 28	$Y_{\rm P}$	0.2455 ± 0.0022	$f\sigma_8(0.61)$	0.4669 ± 0.0066
$\boldsymbol{A^{\rm PS}_{143}}$	49 ± 8	$Y_{\rm P}^{\rm BBN}$	0.2468 ± 0.0023	$\sigma_8(0.61)$	0.5894 ± 0.0084
$\boldsymbol{A^{\rm PS}_{143\times 217}}$	43 ± 9	10^5D/H	2.618 ± 0.049	$f\sigma_8(2.33)$	0.2973 ± 0.0043
$\boldsymbol{A^{\rm PS}_{217}}$	115 ± 10	Age/Gyr	13.80 ± 0.17	$\sigma_8(2.33)$	0.3065 ± 0.0046
$\boldsymbol{A^{\rm kSZ}}$	< 4.82	z_*	1090.04 ± 0.37	f^{143}_{2000}	31.0 ± 3.1
$\boldsymbol{A^{{\rm dust}TT}_{100}}$	9.0 ± 1.8	r_*	144.7 ± 1.6	$f^{143\times 217}_{2000}$	33.4 ± 2.2
$\boldsymbol{A^{{\rm dust}TT}_{143}}$	10.7 ± 1.8	$100\theta_*$	1.04118 ± 0.00056	f^{217}_{2000}	108.0 ± 2.0
$\boldsymbol{A^{{\rm dust}TT}_{143\times 217}}$	18.3 ± 3.3	$D_{\rm M}(z_*)$/Gpc	13.90 ± 0.15	$\chi^2_{\rm simall}$	397.1 ± 1.9
$\boldsymbol{A^{{\rm dust}TT}_{217}}$	93.3 ± 7.3	$z_{\rm drag}$	1059.53 ± 0.72	$\chi^2_{\rm lowl}$	23.1 ± 1.1
$\boldsymbol{c_{100}}$	0.99962 ± 0.00061	$r_{\rm drag}$	147.5 ± 1.7	$\chi^2_{\rm plik}$	772.4 ± 5.5
$\boldsymbol{c_{217}}$	0.99827 ± 0.00062	$k_{\rm D}$	0.1403 ± 0.0013	$\chi^2_{\rm Aver15}$	0.54 ± 0.69
H_0	67.7 ± 1.1	$100\theta_{\rm D}$	0.16105 ± 0.00042	$\chi^2_{\rm Cooke17}$	0.27 ± 0.39
Ω_Λ	0.6899 ± 0.0080	$z_{\rm eq}$	3373 ± 30	$\chi^2_{\rm 6DF}$	0.062 ± 0.081
$\Omega_{\rm m}$	0.3101 ± 0.0080	$k_{\rm eq}$	0.01030 ± 0.00012	$\chi^2_{\rm MGS}$	1.37 ± 0.56
$\Omega_{\rm m} h^2$	0.1420 ± 0.0030	$100\theta_{\rm eq}$	0.8182 ± 0.0057	$\chi^2_{\rm DR12BAO}$	4.8 ± 1.7
$\Omega_{\rm m} h^3$	0.0961 ± 0.0033	$100\theta_{\rm s,eq}$	0.4521 ± 0.0029	$\chi^2_{\rm prior}$	7.3 ± 3.6
σ_8	0.808 ± 0.011	$H(0.15)$	73.0 ± 1.1	$\chi^2_{\rm BAO}$	6.3 ± 1.4
S_8	0.821 ± 0.015	$D_{\rm M}(0.15)$	641 ± 10	$\chi^2_{\rm CMB}$	1192.5 ± 5.5
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4497 ± 0.0084	$H(0.38)$	83.0 ± 1.1	$\chi^2_{\rm Abund}$	0.81 ± 0.90
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.6026 ± 0.0091	$D_{\rm M}(0.38)$	1528 ± 23		
$\sigma_8 / h^{0.5}$	0.982 ± 0.012	$H(0.51)$	89.7 ± 1.2		

$\bar{\chi}^2_{\rm eff} = 1206.80$; $R - 1 = 0.01238$

7.43 base_nnu_plikHM_TT_lowl_lowE_BAO_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02227 ± 0.00023	$\sigma_8/h^{0.5}$	0.984 ± 0.012	$D_M(0.38)$	1517 ± 30
$\boldsymbol{\Omega_c h^2}$	0.1206 ± 0.0039	$r_{drag}h$	99.99 ± 1.0	$H(0.51)$	90.4 ± 1.6
$\boldsymbol{100\theta_{MC}}$	1.04084 ± 0.00056	$\langle d^2\rangle^{1/2}$	2.428 ± 0.027	$D_M(0.51)$	1965 ± 38
$\boldsymbol{\tau}$	$0.0552^{+0.0053}_{-0.0082}$	z_{re}	$7.80^{+0.60}_{-0.82}$	$H(0.61)$	96.0 ± 1.6
$\boldsymbol{N_{eff}}$	3.15 ± 0.23	$10^9 A_s$	$2.105^{+0.033}_{-0.041}$	$D_M(0.61)$	2287 ± 43
$\boldsymbol{\ln(10^{10} A_s)}$	$3.047^{+0.016}_{-0.019}$	$10^9 A_s e^{-2\tau}$	1.885 ± 0.021	$H(2.33)$	237.2 ± 3.4
$\boldsymbol{n_s}$	0.9699 ± 0.0084	D_{40}	1222 ± 15	$D_M(2.33)$	5725 ± 93
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0025	D_{220}	5719 ± 40	$f\sigma_8(0.15)$	0.4562 ± 0.0084
$\boldsymbol{A_{217}^{CIB}}$	48 ± 7	D_{810}	2537 ± 14	$\sigma_8(0.15)$	0.752 ± 0.012
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{1420}	814.9 ± 5.2	$f\sigma_8(0.38)$	0.4753 ± 0.0079
$\boldsymbol{A_{143}^{tSZ}}$	4.9 ± 2.0	D_{2000}	229.4 ± 2.2	$\sigma_8(0.38)$	0.667 ± 0.011
$\boldsymbol{A_{100}^{PS}}$	266 ± 29	$n_{s,0.002}$	0.9699 ± 0.0084	$f\sigma_8(0.51)$	0.4743 ± 0.0076
$\boldsymbol{A_{143}^{PS}}$	50 ± 9	Y_P	0.2467 ± 0.0031	$\sigma_8(0.51)$	0.624 ± 0.010
$\boldsymbol{A_{143\times217}^{PS}}$	44^{+9}_{-10}	Y_P^{BBN}	0.2480 ± 0.0031	$f\sigma_8(0.61)$	0.4696 ± 0.0075
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	10^5D/H	2.641 ± 0.067	$\sigma_8(0.61)$	0.594 ± 0.010
$\boldsymbol{A^{kSZ}}$	< 5.13	Age/Gyr	13.71 ± 0.22	$f\sigma_8(2.33)$	0.2995 ± 0.0052
$\boldsymbol{A_{100}^{dustTT}}$	9.0 ± 1.8	z_*	1090.20 ± 0.49	$\sigma_8(2.33)$	0.3090 ± 0.0055
$\boldsymbol{A_{143}^{dustTT}}$	10.8 ± 1.8	r_*	143.9 ± 2.2	f_{2000}^{143}	31.7 ± 3.4
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.3 ± 3.3	$100\theta_*$	1.04097 ± 0.00067	$f_{2000}^{143\times217}$	33.9 ± 2.5
$\boldsymbol{A_{217}^{dustTT}}$	93.2 ± 7.4	$D_M(z_*)$/Gpc	13.82 ± 0.20	f_{2000}^{217}	108.4 ± 2.3
$\boldsymbol{c_{100}}$	0.99961 ± 0.00061	z_{drag}	1059.84 ± 0.85	χ^2_{simall}	397.0 ± 1.9
$\boldsymbol{c_{217}}$	0.99828 ± 0.00062	r_{drag}	146.6 ± 2.3	χ^2_{lowl}	22.8 ± 1.1
H_0	68.2 ± 1.5	k_D	0.1410 ± 0.0017	χ^2_{plik}	773.0 ± 5.7
Ω_Λ	0.6917 ± 0.0083	$100\theta_D$	0.16126 ± 0.00058	χ^2_{6DF}	0.056 ± 0.075
Ω_m	0.3083 ± 0.0083	z_{eq}	3368 ± 31	χ^2_{MGS}	1.48 ± 0.60
$\Omega_m h^2$	0.1436 ± 0.0040	k_{eq}	0.01035 ± 0.00015	$\chi^2_{DR12BAO}$	4.6 ± 1.5
$\Omega_m h^3$	$0.0980^{+0.0043}_{-0.0048}$	$100\theta_{eq}$	0.8193 ± 0.0059	χ^2_{prior}	7.3 ± 3.7
σ_8	0.813 ± 0.013	$100\theta_{s,eq}$	0.4526 ± 0.0030	χ^2_{BAO}	6.2 ± 1.3
S_8	0.824 ± 0.016	$H(0.15)$	73.5 ± 1.5	χ^2_{CMB}	1192.8 ± 5.5
$\sigma_8\Omega_m^{0.5}$	0.4514 ± 0.0087	$D_M(0.15)$	636 ± 13		
$\sigma_8\Omega_m^{0.25}$	0.606 ± 0.010	$H(0.38)$	83.6 ± 1.5		

$\bar{\chi}^2_{eff} = 1206.29$; $\Delta\bar{\chi}^2_{eff} = 0.53$; $R - 1 = 0.01028$

7.44 base_nnu_plikHM_TT_lowl_lowE_BAO_post_lensing_JLA_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02227 ± 0.00023	$\sigma_8/h^{0.5}$	0.9848 ± 0.0090	$D_M(0.38)$	1520 ± 29
$\boldsymbol{\Omega_c h^2}$	0.1202 ± 0.0036	$r_{drag}h$	99.93 ± 0.96	$H(0.51)$	90.2 ± 1.5
$\boldsymbol{100\theta_{MC}}$	1.04087 ± 0.00054	$\langle d^2\rangle^{1/2}$	2.432 ± 0.022	$D_M(0.51)$	1969 ± 36
$\boldsymbol{\tau}$	$0.0560^{+0.0057}_{-0.0078}$	z_{re}	$7.87^{+0.61}_{-0.76}$	$H(0.61)$	95.8 ± 1.5
$\boldsymbol{N_{eff}}$	3.13 ± 0.22	$10^9 A_s$	$2.108^{+0.031}_{-0.036}$	$D_M(0.61)$	2292 ± 42
$\boldsymbol{\ln(10^{10} A_s)}$	$3.048^{+0.015}_{-0.017}$	$10^9 A_s e^{-2\tau}$	1.884 ± 0.019	$H(2.33)$	236.9 ± 3.2
$\boldsymbol{n_s}$	0.9689 ± 0.0081	D_{40}	1224 ± 14	$D_M(2.33)$	5735 ± 90
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0025	D_{220}	5724 ± 40	$f\sigma_8(0.15)$	0.4563 ± 0.0066
$\boldsymbol{A_{217}^{CIB}}$	48 ± 7	D_{810}	2538 ± 14	$\sigma_8(0.15)$	0.751 ± 0.011
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{1420}	815.3 ± 5.2	$f\sigma_8(0.38)$	0.4753 ± 0.0063
$\boldsymbol{A_{143}^{tSZ}}$	5.0 ± 2.0	D_{2000}	229.6 ± 2.2	$\sigma_8(0.38)$	0.666 ± 0.010
$\boldsymbol{A_{100}^{PS}}$	265 ± 28	$n_{s,0.002}$	0.9689 ± 0.0081	$f\sigma_8(0.51)$	0.4743 ± 0.0062
$\boldsymbol{A_{143}^{PS}}$	49 ± 8	Y_P	0.2464 ± 0.0029	$\sigma_8(0.51)$	0.6236 ± 0.0095
$\boldsymbol{A_{143\times217}^{PS}}$	43 ± 9	Y_P^{BBN}	0.2477 ± 0.0030	$f\sigma_8(0.61)$	0.4695 ± 0.0062
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	10^5D/H	2.632 ± 0.065	$\sigma_8(0.61)$	0.5934 ± 0.0092
$\boldsymbol{A^{kSZ}}$	< 5.04	Age/Gyr	13.73 ± 0.21	$f\sigma_8(2.33)$	0.2993 ± 0.0048
$\boldsymbol{A_{100}^{dustTT}}$	9.0 ± 1.8	z_*	1090.14 ± 0.46	$\sigma_8(2.33)$	0.3087 ± 0.0051
$\boldsymbol{A_{143}^{dustTT}}$	10.7 ± 1.8	r_*	144.1 ± 2.1	f_{2000}^{143}	31.4 ± 3.4
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.3 ± 3.3	$100\theta_*$	1.04102 ± 0.00065	$f_{2000}^{143\times217}$	33.7 ± 2.5
$\boldsymbol{A_{217}^{dustTT}}$	93.2 ± 7.3	$D_M(z_*)$/Gpc	13.84 ± 0.19	f_{2000}^{217}	108.3 ± 2.2
$\boldsymbol{c_{100}}$	0.99962 ± 0.00062	z_{drag}	1059.79 ± 0.83	$\chi^2_{lensing}$	9.41 ± 0.78
$\boldsymbol{c_{217}}$	0.99827 ± 0.00061	r_{drag}	146.8 ± 2.1	χ^2_{simall}	397.1 ± 1.9
H_0	68.1 ± 1.4	k_D	0.1409 ± 0.0016	χ^2_{lowl}	22.9 ± 1.1
Ω_Λ	0.6912 ± 0.0077	$100\theta_D$	0.16118 ± 0.00056	χ^2_{plik}	772.4 ± 5.5
Ω_m	0.3088 ± 0.0077	z_{eq}	3370 ± 29	χ^2_{JLA}	706.72 ± 0.20
$\Omega_m h^2$	0.1432 ± 0.0037	k_{eq}	0.01034 ± 0.00013	χ^2_{6DF}	0.051 ± 0.068
$\Omega_m h^3$	0.0975 ± 0.0043	$100\theta_{eq}$	$0.8190^{+0.0050}_{-0.0056}$	χ^2_{MGS}	1.44 ± 0.55
σ_8	0.813 ± 0.011	$100\theta_{s,eq}$	0.4524 ± 0.0027	$\chi^2_{DR12BAO}$	4.6 ± 1.4
S_8	0.824 ± 0.013	$H(0.15)$	73.4 ± 1.4	χ^2_{prior}	7.3 ± 3.6
$\sigma_8\Omega_m^{0.5}$	0.4515 ± 0.0069	$D_M(0.15)$	637 ± 13	χ^2_{CMB}	1201.9 ± 5.6
$\sigma_8\Omega_m^{0.25}$	0.6057 ± 0.0080	$H(0.38)$	83.5 ± 1.5	χ^2_{BAO}	6.1 ± 1.2

$\bar{\chi}^2_{eff} = 1921.98$; $R - 1 = 0.01169$

7.45 base_nnu_plikHM_TT_lowl_lowE_BAO_post_lensing_Pantheon_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02228 ± 0.00023	$\sigma_8/h^{0.5}$	0.9846 ± 0.0090	$D_M(0.38)$	1518 ± 28
$\boldsymbol{\Omega_c h^2}$	0.1203 ± 0.0036	$r_{drag}h$	99.995 ± 0.93	$H(0.51)$	90.3 ± 1.5
$\boldsymbol{100\theta_{MC}}$	1.04087 ± 0.00054	$\langle d^2\rangle^{1/2}$	2.431 ± 0.022	$D_M(0.51)$	1967 ± 36
$\boldsymbol{\tau}$	$0.0561^{+0.0057}_{-0.0077}$	z_{re}	$7.88^{+0.62}_{-0.76}$	$H(0.61)$	95.9 ± 1.5
$\boldsymbol{N_{eff}}$	3.13 ± 0.22	$10^9 A_s$	$2.109^{+0.031}_{-0.036}$	$D_M(0.61)$	2290 ± 41
$\boldsymbol{\ln(10^{10} A_s)}$	$3.048^{+0.015}_{-0.017}$	$10^9 A_s e^{-2\tau}$	1.885 ± 0.019	$H(2.33)$	237.0 ± 3.1
$\boldsymbol{n_s}$	0.9693 ± 0.0080	D_{40}	1224 ± 14	$D_M(2.33)$	5731 ± 89
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0025	D_{220}	5725 ± 40	$f\sigma_8(0.15)$	0.4561 ± 0.0066
$\boldsymbol{A_{217}^{CIB}}$	48 ± 7	D_{810}	2538 ± 14	$\sigma_8(0.15)$	0.752 ± 0.011
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{1420}	815.3 ± 5.2	$f\sigma_8(0.38)$	0.4753 ± 0.0063
$\boldsymbol{A_{143}^{tSZ}}$	5.0 ± 2.0	D_{2000}	229.6 ± 2.2	$\sigma_8(0.38)$	0.6665 ± 0.0099
$\boldsymbol{A_{100}^{PS}}$	265 ± 28	$n_{s,0.002}$	0.9693 ± 0.0080	$f\sigma_8(0.51)$	0.4743 ± 0.0062
$\boldsymbol{A_{143}^{PS}}$	49 ± 8	Y_P	0.2465 ± 0.0029	$\sigma_8(0.51)$	0.6239 ± 0.0094
$\boldsymbol{A_{143\times217}^{PS}}$	43 ± 9	Y_P^{BBN}	0.2478 ± 0.0029	$f\sigma_8(0.61)$	0.4695 ± 0.0062
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	10^5D/H	2.633 ± 0.065	$\sigma_8(0.61)$	0.5938 ± 0.0091
$\boldsymbol{A^{kSZ}}$	< 5.06	Age/Gyr	13.72 ± 0.21	$f\sigma_8(2.33)$	0.2995 ± 0.0047
$\boldsymbol{A_{100}^{dustTT}}$	9.0 ± 1.8	z_*	1090.14 ± 0.46	$\sigma_8(2.33)$	0.3089 ± 0.0051
$\boldsymbol{A_{143}^{dustTT}}$	10.7 ± 1.8	r_*	144.0 ± 2.1	f_{2000}^{143}	31.5 ± 3.4
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.3 ± 3.3	$100\theta_*$	1.04101 ± 0.00065	$f_{2000}^{143\times217}$	33.7 ± 2.5
$\boldsymbol{A_{217}^{dustTT}}$	93.2 ± 7.3	$D_M(z_*)$/Gpc	13.83 ± 0.19	f_{2000}^{217}	108.3 ± 2.2
$\boldsymbol{c_{100}}$	0.99962 ± 0.00061	z_{drag}	1059.82 ± 0.82	$\chi^2_{lensing}$	9.42 ± 0.78
$\boldsymbol{c_{217}}$	0.99827 ± 0.00062	r_{drag}	146.7 ± 2.1	χ^2_{simall}	397.2 ± 1.9
H_0	68.2 ± 1.4	k_D	0.1409 ± 0.0016	χ^2_{lowl}	22.9 ± 1.1
Ω_Λ	0.6917 ± 0.0074	$100\theta_D$	0.16120 ± 0.00056	χ^2_{plik}	772.5 ± 5.5
Ω_m	0.3083 ± 0.0074	z_{eq}	3368 ± 28	χ^2_{JLA}	1036.30 ± 0.35
$\Omega_m h^2$	0.1432 ± 0.0037	k_{eq}	0.01034 ± 0.00013	χ^2_{6DF}	0.046 ± 0.062
$\Omega_m h^3$	$0.0977^{+0.0040}_{-0.0045}$	$100\theta_{eq}$	$0.8193^{+0.0049}_{-0.0054}$	χ^2_{MGS}	1.48 ± 0.54
σ_8	0.813 ± 0.011	$100\theta_{s,eq}$	$0.4526^{+0.0025}_{-0.0028}$	$\chi^2_{DR12BAO}$	4.5 ± 1.3
S_8	0.824 ± 0.012	$H(0.15)$	73.5 ± 1.4	χ^2_{prior}	7.3 ± 3.6
$\sigma_8\Omega_m^{0.5}$	0.4513 ± 0.0068	$D_M(0.15)$	636 ± 12	χ^2_{CMB}	1202.0 ± 5.6
$\sigma_8\Omega_m^{0.25}$	0.6057 ± 0.0080	$H(0.38)$	83.6 ± 1.4	χ^2_{BAO}	6.0 ± 1.1

$\bar{\chi}^2_{eff} = 2251.53$; $\Delta\bar{\chi}^2_{eff} = 0.63$; $R - 1 = 0.01179$

7.46 base_nnu_plikHM_TT_lowl_lowE_BAO_post_lensing_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02226 ± 0.00023	$\sigma_8/h^{0.5}$	0.9851 ± 0.0090	$D_M(0.38)$	1522 ± 29
$\boldsymbol{\Omega_c h^2}$	0.1201 ± 0.0036	$r_{drag}h$	99.84 ± 0.98	$H(0.51)$	90.1 ± 1.5
$\boldsymbol{100\theta_{MC}}$	1.04088 ± 0.00054	$\langle d^2\rangle^{1/2}$	2.433 ± 0.023	$D_M(0.51)$	1972 ± 37
$\boldsymbol{\tau}$	$0.0558^{+0.0056}_{-0.0078}$	z_{re}	$7.85^{+0.61}_{-0.76}$	$H(0.61)$	95.7 ± 1.6
$\boldsymbol{N_{eff}}$	3.11 ± 0.22	$10^9 A_s$	$2.106^{+0.031}_{-0.036}$	$D_M(0.61)$	2295 ± 42
$\boldsymbol{\ln(10^{10} A_s)}$	$3.047^{+0.015}_{-0.017}$	$10^9 A_s e^{-2\tau}$	1.884 ± 0.020	$H(2.33)$	236.8 ± 3.2
$\boldsymbol{n_s}$	0.9683 ± 0.0083	D_{40}	1225 ± 14	$D_M(2.33)$	5741 ± 91
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0025	D_{220}	5724 ± 40	$f\sigma_8(0.15)$	0.4566 ± 0.0066
$\boldsymbol{A_{217}^{CIB}}$	48 ± 7	D_{810}	2538 ± 14	$\sigma_8(0.15)$	0.751 ± 0.011
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{1420}	815.3 ± 5.2	$f\sigma_8(0.38)$	0.4754 ± 0.0063
$\boldsymbol{A_{143}^{tSZ}}$	5.0 ± 2.0	D_{2000}	229.7 ± 2.2	$\sigma_8(0.38)$	0.666 ± 0.010
$\boldsymbol{A_{100}^{PS}}$	265 ± 28	$n_{s,0.002}$	0.9683 ± 0.0083	$f\sigma_8(0.51)$	0.4743 ± 0.0062
$\boldsymbol{A_{143}^{PS}}$	49 ± 8	Y_P	0.2462 ± 0.0030	$\sigma_8(0.51)$	0.6231 ± 0.0096
$\boldsymbol{A_{143\times217}^{PS}}$	43 ± 9	Y_P^{BBN}	0.2475 ± 0.0030	$f\sigma_8(0.61)$	0.4694 ± 0.0062
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	10^5D/H	2.631 ± 0.065	$\sigma_8(0.61)$	0.5930 ± 0.0092
$\boldsymbol{A^{kSZ}}$	< 5.00	Age/Gyr	13.74 ± 0.22	$f\sigma_8(2.33)$	0.2991 ± 0.0048
$\boldsymbol{A_{100}^{dustTT}}$	9.0 ± 1.8	z_*	1090.14 ± 0.46	$\sigma_8(2.33)$	0.3084 ± 0.0052
$\boldsymbol{A_{143}^{dustTT}}$	10.7 ± 1.8	r_*	144.2 ± 2.1	f_{2000}^{143}	31.4 ± 3.4
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.3 ± 3.3	$100\theta_*$	1.04104 ± 0.00065	$f_{2000}^{143\times217}$	33.6 ± 2.5
$\boldsymbol{A_{217}^{dustTT}}$	93.3 ± 7.3	$D_M(z_*)$/Gpc	13.85 ± 0.19	f_{2000}^{217}	108.2 ± 2.2
$\boldsymbol{c_{100}}$	0.99962 ± 0.00062	z_{drag}	1059.74 ± 0.83	$\chi^2_{lensing}$	9.39 ± 0.77
$\boldsymbol{c_{217}}$	0.99827 ± 0.00061	r_{drag}	146.9 ± 2.2	χ^2_{simall}	397.1 ± 1.9
H_0	68.0 ± 1.4	k_D	0.1408 ± 0.0016	χ^2_{lowl}	23.0 ± 1.2
Ω_Λ	0.6904 ± 0.0079	$100\theta_D$	0.16116 ± 0.00056	χ^2_{plik}	772.3 ± 5.5
Ω_m	0.3096 ± 0.0079	z_{eq}	3372 ± 29	χ^2_{6DF}	0.058 ± 0.076
$\Omega_m h^2$	0.1430 ± 0.0037	k_{eq}	0.01034 ± 0.00013	χ^2_{MGS}	1.39 ± 0.55
$\Omega_m h^3$	0.0973 ± 0.0044	$100\theta_{eq}$	0.8184 ± 0.0055	$\chi^2_{DR12BAO}$	4.7 ± 1.6
σ_8	0.812 ± 0.011	$100\theta_{s,eq}$	0.4521 ± 0.0028	χ^2_{prior}	7.2 ± 3.6
S_8	0.825 ± 0.013	$H(0.15)$	73.3 ± 1.4	χ^2_{CMB}	1201.8 ± 5.6
$\sigma_8\Omega_m^{0.5}$	0.4519 ± 0.0069	$D_M(0.15)$	638 ± 13	χ^2_{BAO}	6.2 ± 1.3
$\sigma_8\Omega_m^{0.25}$	0.6058 ± 0.0080	$H(0.38)$	83.4 ± 1.5		

$\bar{\chi}^2_{eff} = 1215.24$; $\Delta\bar{\chi}^2_{eff} = 0.67$; $R - 1 = 0.01151$

7.47 base_nnu_plikHM_TT_lowl_lowE_BAO_post_Aver15_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02223 ± 0.00022	$\sigma_8/h^{0.5}$	0.983 ± 0.011	$D_M(0.38)$	1528 ± 24
$\boldsymbol{\Omega_c h^2}$	0.1192 ± 0.0031	$r_{drag}h$	99.8 ± 1.0	$H(0.51)$	89.8 ± 1.2
$\boldsymbol{100\theta_{MC}}$	1.04098 ± 0.00051	$\langle d^2\rangle^{1/2}$	2.430 ± 0.027	$D_M(0.51)$	1979 ± 30
$\boldsymbol{\tau}$	$0.0551^{+0.0052}_{-0.0083}$	z_{re}	$7.77^{+0.58}_{-0.83}$	$H(0.61)$	95.4 ± 1.3
$\boldsymbol{N_{eff}}$	3.06 ± 0.18	$10^9 A_s$	$2.097^{+0.030}_{-0.039}$	$D_M(0.61)$	2303 ± 35
$\boldsymbol{\ln(10^{10} A_s)}$	$3.043^{+0.014}_{-0.018}$	$10^9 A_s e^{-2\tau}$	1.878 ± 0.018	$H(2.33)$	236.0 ± 2.7
$\boldsymbol{n_s}$	0.9672 ± 0.0071	D_{40}	1225 ± 14	$D_M(2.33)$	5760 ± 74
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0025	D_{220}	5720 ± 40	$f\sigma_8(0.15)$	0.4549 ± 0.0081
$\boldsymbol{A_{217}^{CIB}}$	48 ± 7	D_{810}	2536 ± 14	$\sigma_8(0.15)$	0.748 ± 0.010
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{1420}	815.4 ± 5.1	$f\sigma_8(0.38)$	0.4736 ± 0.0073
$\boldsymbol{A_{143}^{tSZ}}$	5.1 ± 2.0	D_{2000}	229.9 ± 2.1	$\sigma_8(0.38)$	0.6629 ± 0.0093
$\boldsymbol{A_{100}^{PS}}$	264 ± 28	$n_{s,0.002}$	0.9672 ± 0.0071	$f\sigma_8(0.51)$	0.4724 ± 0.0070
$\boldsymbol{A_{143}^{PS}}$	49 ± 8	Y_P	0.2455 ± 0.0024	$\sigma_8(0.51)$	0.6204 ± 0.0088
$\boldsymbol{A_{143\times217}^{PS}}$	43 ± 9	Y_P^{BBN}	0.2469 ± 0.0024	$f\sigma_8(0.61)$	0.4676 ± 0.0067
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	10^5D/H	2.619 ± 0.058	$\sigma_8(0.61)$	0.5904 ± 0.0084
$\boldsymbol{A^{kSZ}}$	< 4.81	Age/Gyr	13.79 ± 0.18	$f\sigma_8(2.33)$	0.2978 ± 0.0043
$\boldsymbol{A_{100}^{dustTT}}$	9.0 ± 1.8	z_*	1090.05 ± 0.43	$\sigma_8(2.33)$	0.3071 ± 0.0046
$\boldsymbol{A_{143}^{dustTT}}$	10.7 ± 1.8	r_*	144.7 ± 1.7	f_{2000}^{143}	31.0 ± 3.2
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.3 ± 3.3	$100\theta_*$	1.04117 ± 0.00059	$f_{2000}^{143\times217}$	33.4 ± 2.3
$\boldsymbol{A_{217}^{dustTT}}$	93.3 ± 7.3	$D_M(z_*)$/Gpc	13.90 ± 0.16	f_{2000}^{217}	108.0 ± 2.1
$\boldsymbol{c_{100}}$	0.99961 ± 0.00061	z_{drag}	1059.56 ± 0.72	χ^2_{simall}	397.0 ± 1.9
$\boldsymbol{c_{217}}$	0.99826 ± 0.00061	r_{drag}	147.4 ± 1.8	χ^2_{lowl}	23.0 ± 1.1
H_0	67.7 ± 1.2	k_D	0.1404 ± 0.0013	χ^2_{plik}	772.4 ± 5.5
Ω_Λ	0.6902 ± 0.0079	$100\theta_D$	0.16106 ± 0.00048	χ^2_{Aver15}	0.61 ± 0.80
Ω_m	0.3098 ± 0.0079	z_{eq}	3372 ± 30	χ^2_{6DF}	0.060 ± 0.079
$\Omega_m h^2$	0.1421 ± 0.0032	k_{eq}	0.01030 ± 0.00013	χ^2_{MGS}	1.39 ± 0.56
$\Omega_m h^3$	0.0963 ± 0.0035	$100\theta_{eq}$	0.8184 ± 0.0056	$\chi^2_{DR12BAO}$	4.8 ± 1.6
σ_8	0.809 ± 0.011	$100\theta_{s,eq}$	0.4522 ± 0.0029	χ^2_{prior}	7.3 ± 3.6
S_8	0.822 ± 0.015	$H(0.15)$	73.0 ± 1.2	χ^2_{BAO}	6.2 ± 1.4
$\sigma_8\Omega_m^{0.5}$	0.4502 ± 0.0085	$D_M(0.15)$	640 ± 11	χ^2_{CMB}	1192.4 ± 5.4
$\sigma_8\Omega_m^{0.25}$	0.6034 ± 0.0092	$H(0.38)$	83.1 ± 1.2		

$\bar{\chi}^2_{eff} = 1206.51$; $R - 1 = 0.01186$

7.48 base_nnu_plikHM_TT_lowl_lowE_BAO_post_Cooke17_Aver15_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02223 ± 0.00021	$r_{\rm drag} h$	99.8 ± 1.0	$D_{\rm M}(0.51)$	1979 ± 29
$\boldsymbol{\Omega_c h^2}$	0.1192 ± 0.0029	$\langle d^2 \rangle^{1/2}$	2.430 ± 0.027	$H(0.61)$	95.4 ± 1.2
$\boldsymbol{100\theta_{\rm MC}}$	1.04098 ± 0.00049	$z_{\rm re}$	$7.77^{+0.58}_{-0.83}$	$D_{\rm M}(0.61)$	2303 ± 33
$\boldsymbol{\tau}$	$0.0551^{+0.0052}_{-0.0083}$	$10^9 A_{\rm s}$	$2.097^{+0.029}_{-0.039}$	$H(2.33)$	235.9 ± 2.5
$\boldsymbol{N_{\rm eff}}$	3.06 ± 0.16	$10^9 A_{\rm s} e^{-2\tau}$	1.878 ± 0.017	$D_{\rm M}(2.33)$	5761 ± 70
$\boldsymbol{\ln(10^{10} A_{\rm s})}$	$3.043^{+0.014}_{-0.018}$	D_{40}	1225 ± 14	$f\sigma_8(0.15)$	0.4549 ± 0.0079
$\boldsymbol{n_{\rm s}}$	0.9671 ± 0.0069	D_{220}	5720 ± 40	$\sigma_8(0.15)$	0.7475 ± 0.0098
$\boldsymbol{y_{\rm cal}}$	1.0006 ± 0.0025	D_{810}	2536 ± 14	$f\sigma_8(0.38)$	0.4735 ± 0.0071
$\boldsymbol{A^{\rm CIB}_{217}}$	48 ± 7	D_{1420}	815.5 ± 5.0	$\sigma_8(0.38)$	0.6628 ± 0.0088
$\boldsymbol{\xi^{\rm tSZ\times CIB}}$	—	D_{2000}	229.9 ± 1.9	$f\sigma_8(0.51)$	0.4723 ± 0.0067
$\boldsymbol{A^{\rm tSZ}_{143}}$	5.1 ± 2.0	$n_{\rm s,0.002}$	0.9671 ± 0.0069	$\sigma_8(0.51)$	0.6204 ± 0.0083
$\boldsymbol{A^{\rm PS}_{100}}$	264 ± 28	$Y_{\rm P}$	0.2455 ± 0.0022	$f\sigma_8(0.61)$	0.4675 ± 0.0064
$\boldsymbol{A^{\rm PS}_{143}}$	49 ± 8	$Y_{\rm P}^{\rm BBN}$	0.2468 ± 0.0022	$\sigma_8(0.61)$	0.5903 ± 0.0080
$\boldsymbol{A^{\rm PS}_{143\times 217}}$	43 ± 9	10^5D/H	2.618 ± 0.049	$f\sigma_8(2.33)$	0.2977 ± 0.0041
$\boldsymbol{A^{\rm PS}_{217}}$	115 ± 10	Age/Gyr	13.79 ± 0.17	$\sigma_8(2.33)$	0.3070 ± 0.0044
$\boldsymbol{A^{\rm kSZ}}$	< 4.78	z_*	1090.04 ± 0.37	f^{143}_{2000}	31.0 ± 3.1
$\boldsymbol{A^{{\rm dust}TT}_{100}}$	9.0 ± 1.8	r_*	144.7 ± 1.6	$f^{143\times 217}_{2000}$	33.3 ± 2.2
$\boldsymbol{A^{{\rm dust}TT}_{143}}$	10.7 ± 1.8	$100\theta_*$	1.04117 ± 0.00055	f^{217}_{2000}	107.9 ± 2.0
$\boldsymbol{A^{{\rm dust}TT}_{143\times 217}}$	18.3 ± 3.3	$D_{\rm M}(z_*)$/Gpc	13.90 ± 0.15	$\chi^2_{\rm simall}$	397.0 ± 1.9
$\boldsymbol{A^{{\rm dust}TT}_{217}}$	93.3 ± 7.3	$z_{\rm drag}$	1059.55 ± 0.72	$\chi^2_{\rm lowl}$	23.1 ± 1.1
$\boldsymbol{c_{100}}$	0.99961 ± 0.00061	$r_{\rm drag}$	147.4 ± 1.7	$\chi^2_{\rm plik}$	772.2 ± 5.4
$\boldsymbol{c_{217}}$	0.99826 ± 0.00061	$k_{\rm D}$	0.1404 ± 0.0013	$\chi^2_{\rm Aver15}$	0.55 ± 0.70
H_0	67.7 ± 1.1	$100\theta_{\rm D}$	0.16105 ± 0.00042	$\chi^2_{\rm Cooke17}$	0.27 ± 0.39
Ω_Λ	0.6902 ± 0.0079	$z_{\rm eq}$	3372 ± 30	$\chi^2_{\rm 6DF}$	0.060 ± 0.079
$\Omega_{\rm m}$	0.3098 ± 0.0079	$k_{\rm eq}$	0.01030 ± 0.00012	$\chi^2_{\rm MGS}$	1.39 ± 0.56
$\Omega_{\rm m} h^2$	0.1420 ± 0.0030	$100\theta_{\rm eq}$	0.8184 ± 0.0056	$\chi^2_{\rm DR12BAO}$	4.8 ± 1.7
$\Omega_{\rm m} h^3$	0.0962 ± 0.0033	$100\theta_{\rm s,eq}$	0.4521 ± 0.0029	$\chi^2_{\rm prior}$	7.3 ± 3.6
σ_8	0.809 ± 0.011	$H(0.15)$	73.0 ± 1.1	$\chi^2_{\rm BAO}$	6.2 ± 1.4
S_8	0.822 ± 0.015	$D_{\rm M}(0.15)$	640 ± 10	$\chi^2_{\rm CMB}$	1192.2 ± 5.4
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4502 ± 0.0083	$H(0.38)$	83.1 ± 1.1	$\chi^2_{\rm Abund}$	0.82 ± 0.91
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.6034 ± 0.0088	$D_{\rm M}(0.38)$	1528 ± 23		
$\sigma_8 / h^{0.5}$	0.983 ± 0.011	$H(0.51)$	89.8 ± 1.2		

$\bar{\chi}^2_{\rm eff} = 1206.53$; $R - 1 = 0.01138$

7.49 base_nnu_plikHM_TTTEEE_lowl_lowE_BAO

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022382	0.02239 ± 0.00018	σ_8	0.8060	0.808 ± 0.012	$D_M(0.15)$	645.7	643 ± 11
$\boldsymbol{\Omega_c h^2}$	0.11790	0.1186 ± 0.0031	S_8	0.8229	0.823 ± 0.014	$H(0.38)$	82.48	82.8 ± 1.2
$\boldsymbol{100\theta_{MC}}$	1.041192	1.04110 ± 0.00044	$\sigma_8\Omega_m^{0.5}$	0.4507	0.4509 ± 0.0075	$D_M(0.38)$	1539.6	1534 ± 24
$\boldsymbol{\tau}$	0.0551	0.0556 ± 0.0080	$\sigma_8\Omega_m^{0.25}$	0.6027	0.6035 ± 0.0087	$H(0.51)$	89.17	89.5 ± 1.2
$\boldsymbol{N_{eff}}$	2.956	3.01 ± 0.18	$\sigma_8/h^{0.5}$	0.9837	0.984 ± 0.011	$D_M(0.51)$	1994.2	1987 ± 30
$\boldsymbol{\ln(10^{10}A_s)}$	3.0415	3.043 ± 0.019	$r_{drag}h$	99.43	99.56 ± 0.85	$H(0.61)$	94.77	95.1 ± 1.3
$\boldsymbol{n_s}$	0.9652	0.9655 ± 0.0070	$\langle d^2\rangle^{1/2}$	2.4359	2.436 ± 0.025	$D_M(0.61)$	2320.4	2312 ± 35
$\boldsymbol{y_{cal}}$	1.00061	1.0007 ± 0.0025	z_{re}	7.72	7.76 ± 0.80	$H(2.33)$	234.91	235.5 ± 2.7
$\boldsymbol{A_{217}^{CIB}}$	44.0	46 ± 7	$10^9 A_s$	2.0936	$2.098^{+0.036}_{-0.041}$	$D_M(2.33)$	5795	5777 ± 75
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.89	—	$10^9 A_s e^{-2\tau}$	1.8751	1.877 ± 0.018	$f\sigma_8(0.15)$	0.4552	0.4554 ± 0.0073
$\boldsymbol{A_{143}^{tSZ}}$	7.01	$5.6^{+2.1}_{-1.9}$	D_{40}	1228.4	1229 ± 13	$\sigma_8(0.15)$	0.7447	0.746 ± 0.011
$\boldsymbol{A_{100}^{PS}}$	244.3	257 ± 28	D_{220}	5735.9	5737 ± 39	$f\sigma_8(0.38)$	0.4732	0.4737 ± 0.0069
$\boldsymbol{A_{143}^{PS}}$	52.0	45 ± 8	D_{810}	2541.0	2539 ± 14	$\sigma_8(0.38)$	0.6600	0.6616 ± 0.0097
$\boldsymbol{A_{143\times217}^{PS}}$	57.7	42 ± 9	D_{1420}	820.11	818.1 ± 4.9	$f\sigma_8(0.51)$	0.4716	0.4723 ± 0.0067
$\boldsymbol{A_{217}^{PS}}$	124.0	115 ± 10	D_{2000}	232.28	231.4 ± 1.9	$\sigma_8(0.51)$	0.6176	0.6191 ± 0.0092
$\boldsymbol{A^{kSZ}}$	0.01	< 4.05	$n_{s,0.002}$	0.9652	0.9655 ± 0.0070	$f\sigma_8(0.61)$	0.4666	0.4673 ± 0.0066
$\boldsymbol{A_{100}^{dustTT}}$	8.76	8.9 ± 1.8	Y_P	0.24418	0.2448 ± 0.0025	$\sigma_8(0.61)$	0.5876	0.5891 ± 0.0088
$\boldsymbol{A_{143}^{dustTT}}$	11.02	10.9 ± 1.8	Y_P^{BBN}	0.24551	0.2461 ± 0.0025	$f\sigma_8(2.33)$	0.29624	0.2970 ± 0.0045
$\boldsymbol{A_{143\times217}^{dustTT}}$	20.45	18.6 ± 3.3	10^5D/H	2.5521	2.569 ± 0.046	$\sigma_8(2.33)$	0.30535	0.3062 ± 0.0048
$\boldsymbol{A_{217}^{dustTT}}$	96.2	93.8 ± 7.3	Age/Gyr	13.874	13.83 ± 0.18	f_{2000}^{143}	27.52	29.0 ± 3.0
$\boldsymbol{A_{100}^{dustTE}}$	0.1135	0.114 ± 0.038	z_*	1089.632	1089.74 ± 0.35	$f_{2000}^{143\times217}$	31.16	31.8 ± 2.1
$\boldsymbol{A_{100\times143}^{dustTE}}$	0.1351	0.135 ± 0.029	r_*	145.42	145.0 ± 1.8	f_{2000}^{217}	105.72	106.7 ± 2.0
$\boldsymbol{A_{100\times217}^{dustTE}}$	0.479	0.482 ± 0.085	$100\theta_*$	1.04144	1.04131 ± 0.00054	χ^2_{simall}	396.16	397.3 ± 2.1
$\boldsymbol{A_{143}^{dustTE}}$	0.225	0.224 ± 0.054	$D_M(z_*)$/Gpc	13.964	13.93 ± 0.16	χ^2_{lowl}	23.21	23.3 ± 1.1
$\boldsymbol{A_{143\times217}^{dustTE}}$	0.666	0.664 ± 0.080	z_{drag}	1059.74	1059.84 ± 0.70	χ^2_{plik}	2344.8	2360.4 ± 6.2
$\boldsymbol{A_{217}^{dustTE}}$	2.070	2.08 ± 0.27	r_{drag}	148.10	147.7 ± 1.8	χ^2_{6DF}	0.0470	0.066 ± 0.077
$\boldsymbol{c_{100}}$	0.99975	0.99966 ± 0.00061	k_D	0.14017	0.1404 ± 0.0013	χ^2_{MGS}	1.097	1.23 ± 0.46
$\boldsymbol{c_{217}}$	0.99816	0.99818 ± 0.00062	$100\theta_D$	0.160506	0.16065 ± 0.00040	$\chi^2_{DR12BAO}$	4.79	5.0 ± 1.6
H_0	67.14	67.4 ± 1.2	z_{eq}	3393.6	3389 ± 25	χ^2_{prior}	1.47	11.6 ± 4.6
Ω_Λ	0.6873	0.6883 ± 0.0069	k_{eq}	0.010295	0.01031 ± 0.00012	χ^2_{BAO}	5.93	6.3 ± 1.3
Ω_m	0.3127	0.3117 ± 0.0069	$100\theta_{eq}$	0.81501	0.8159 ± 0.0047	χ^2_{CMB}	2764.2	2781.0 ± 6.0
$\Omega_m h^2$	0.14093	0.1417 ± 0.0032	$100\theta_{s,eq}$	0.45027	0.4507 ± 0.0024			
$\Omega_m h^3$	0.09462	0.0956 ± 0.0035	$H(0.15)$	72.40	72.7 ± 1.2			

Best-fit $\chi^2_{eff} = 2771.61$; $\Delta\chi^2_{eff} = -0.30$; $\bar{\chi}^2_{eff} = 2798.95$; $\Delta\bar{\chi}^2_{eff} = 1.05$; $R - 1 = 0.01038$

χ^2_{eff}: BAO - 6DF: 0.05 (Δ 0.02) MGS: 1.10 (Δ -0.12) DR12BAO: 4.79 (Δ 0.38) CMB - simall_100x143_offlike5_EE_Aplanck_B: 396.16 (Δ -0.04) commander_dx12_v3_2_29: 23.21 (Δ 0.34) plik_rd12_HM_v22b_TTTEEE: 2344.84 (Δ -0.67)

7.50 base_nnu_plikHM_TTTEEE_lowl_lowE_BAO_post_lensing_JLA

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022382	0.02238 ± 0.00018	σ_8	0.8061	$0.8082^{+0.0091}_{-0.010}$	$D_M(0.15)$	645.5	643 ± 10
$\boldsymbol{\Omega_c h^2}$	0.11760	0.1185 ± 0.0028	S_8	0.8218	0.824 ± 0.011	$H(0.38)$	82.47	82.7 ± 1.1
$\boldsymbol{100\theta_{MC}}$	1.041191	1.04110 ± 0.00041	$\sigma_8\Omega_m^{0.5}$	0.4501	0.4511 ± 0.0060	$D_M(0.38)$	1539.5	1534 ± 23
$\boldsymbol{\tau}$	0.0566	$0.0565^{+0.0068}_{-0.0076}$	$\sigma_8\Omega_m^{0.25}$	0.6023	0.6038 ± 0.0070	$H(0.51)$	89.15	89.4 ± 1.2
$\boldsymbol{N_{eff}}$	2.948	3.00 ± 0.17	$\sigma_8/h^{0.5}$	0.9836	0.9845 ± 0.0085	$D_M(0.51)$	1994.2	1988 ± 29
$\boldsymbol{\ln(10^{10}A_s)}$	3.0438	3.045 ± 0.016	$r_{drag}h$	99.54	99.56 ± 0.80	$H(0.61)$	94.74	95.1 ± 1.2
$\boldsymbol{n_s}$	0.9649	0.9654 ± 0.0067	$\langle d^2\rangle^{1/2}$	2.4377	2.439 ± 0.021	$D_M(0.61)$	2320.5	2313 ± 33
$\boldsymbol{y_{cal}}$	1.00079	1.0008 ± 0.0025	z_{re}	7.86	7.86 ± 0.74	$H(2.33)$	234.68	235.4 ± 2.5
$\boldsymbol{A_{217}^{CIB}}$	45.2	47 ± 7	$10^9 A_s$	2.0986	$2.102^{+0.031}_{-0.035}$	$D_M(2.33)$	5798	5780 ± 71
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.75	—	$10^9 A_s e^{-2\tau}$	1.8740	1.877 ± 0.016	$f\sigma_8(0.15)$	0.4547	0.4557 ± 0.0057
$\boldsymbol{A_{143}^{tSZ}}$	7.06	$5.6^{+2.2}_{-1.9}$	D_{40}	1229.7	1230 ± 13	$\sigma_8(0.15)$	0.7448	$0.7468^{+0.0086}_{-0.0096}$
$\boldsymbol{A_{100}^{PS}}$	245.9	256 ± 28	D_{220}	5740.1	5739 ± 38	$f\sigma_8(0.38)$	0.4728	0.4739 ± 0.0055
$\boldsymbol{A_{143}^{PS}}$	50.0	45 ± 8	D_{810}	2540.7	2539 ± 14	$\sigma_8(0.38)$	0.6602	$0.6620^{+0.0079}_{-0.0089}$
$\boldsymbol{A_{143\times217}^{PS}}$	54.1	42 ± 9	D_{1420}	819.97	818.5 ± 4.9	$f\sigma_8(0.51)$	0.4714	0.4725 ± 0.0054
$\boldsymbol{A_{217}^{PS}}$	122.2	115 ± 10	D_{2000}	232.26	231.5 ± 1.9	$\sigma_8(0.51)$	0.6178	$0.6195^{+0.0075}_{-0.0085}$
$\boldsymbol{A^{kSZ}}$	0.00	< 4.09	$n_{s,0.002}$	0.9649	0.9654 ± 0.0067	$f\sigma_8(0.61)$	0.4664	0.4676 ± 0.0054
$\boldsymbol{A_{100}^{dustTT}}$	8.82	8.8 ± 1.8	Y_P	0.24408	0.2447 ± 0.0023	$\sigma_8(0.61)$	0.5879	$0.5895^{+0.0072}_{-0.0082}$
$\boldsymbol{A_{143}^{dustTT}}$	11.01	10.8 ± 1.8	Y_P^{BBN}	0.24540	0.2460 ± 0.0023	$f\sigma_8(2.33)$	0.29640	$0.2972^{+0.0037}_{-0.0042}$
$\boldsymbol{A_{143\times217}^{dustTT}}$	20.16	18.5 ± 3.3	10^5D/H	2.5494	2.567 ± 0.043	$\sigma_8(2.33)$	0.30555	$0.3064^{+0.0040}_{-0.0046}$
$\boldsymbol{A_{217}^{dustTT}}$	95.5	93.6 ± 7.4	Age/Gyr	13.881	13.84 ± 0.17	f_{2000}^{143}	27.68	28.8 ± 3.0
$\boldsymbol{A_{100}^{dustTE}}$	0.1133	0.114 ± 0.038	z_*	1089.599	1089.72 ± 0.32	$f_{2000}^{143\times217}$	31.23	31.7 ± 2.1
$\boldsymbol{A_{100\times143}^{dustTE}}$	0.1346	0.135 ± 0.030	r_*	145.54	145.1 ± 1.6	f_{2000}^{217}	105.87	106.6 ± 2.0
$\boldsymbol{A_{100\times217}^{dustTE}}$	0.481	0.481 ± 0.085	$100\theta_*$	1.04144	1.04132 ± 0.00050	$\chi^2_{lensing}$	8.580	9.06 ± 0.64
$\boldsymbol{A_{143}^{dustTE}}$	0.226	0.225 ± 0.054	$D_M(z_*)$/Gpc	13.975	13.93 ± 0.15	χ^2_{simall}	396.47	397.4 ± 2.1
$\boldsymbol{A_{143\times217}^{dustTE}}$	0.666	0.665 ± 0.079	z_{drag}	1059.70	1059.82 ± 0.67	χ^2_{lowl}	23.29	23.4 ± 1.0
$\boldsymbol{A_{217}^{dustTE}}$	2.075	2.07 ± 0.26	r_{drag}	148.22	147.8 ± 1.7	χ^2_{plik}	2344.5	2359.6 ± 5.9
$\boldsymbol{c_{100}}$	0.99975	0.99966 ± 0.00062	k_D	0.14007	0.1404 ± 0.0013	χ^2_{JLA}	706.758	706.79 ± 0.20
$\boldsymbol{c_{217}}$	0.99816	0.99818 ± 0.00061	$100\theta_D$	0.160487	0.16063 ± 0.00038	χ^2_{6DF}	0.0376	0.063 ± 0.071
H_0	67.16	67.4 ± 1.1	z_{eq}	3389.7	3388 ± 23	χ^2_{MGS}	1.156	1.23 ± 0.43
Ω_Λ	0.6882	0.6884 ± 0.0065	k_{eq}	0.010278	0.01031 ± 0.00011	$\chi^2_{DR12BAO}$	4.58	5.0 ± 1.5
Ω_m	0.3118	0.3116 ± 0.0065	$100\theta_{eq}$	0.81571	0.8160 ± 0.0044	χ^2_{prior}	1.59	11.6 ± 4.5
$\Omega_m h^2$	0.14063	0.1415 ± 0.0029	$100\theta_{s,eq}$	0.45064	0.4508 ± 0.0022	χ^2_{CMB}	2772.9	2789.4 ± 6.0
$\Omega_m h^3$	0.09444	$0.0954^{+0.0031}_{-0.0035}$	$H(0.15)$	72.41	72.7 ± 1.1	χ^2_{BAO}	5.77	6.3 ± 1.2

Best-fit $\chi^2_{eff} = 3486.99$; $\bar{\chi}^2_{eff} = 3514.05$; $R - 1 = 0.03296$

χ^2_{eff}: BAO - 6DF: 0.04 MGS: 1.16 DR12BAO: 4.58 CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.58 simall_100x143_offlike5_EE_Aplanck_B: 396.47 commander_dx12_v3_2_29: 23.29 plik_rd12_HM_v22b_TTTEEE: 2344.53 SN - JLA December_2013: 706.76

7.51 base_nnu_plikHM_TTTEEE_lowl_lowE_BAO_post_lensing_Pantheon

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022393	0.02240 ± 0.00018	$\Omega_m h^3$	0.09465	0.0955 ± 0.0034	$100\theta_{s,eq}$	0.45058	0.4509 ± 0.0022
$\boldsymbol{\Omega_c h^2}$	0.11780	0.1185 ± 0.0029	σ_8	0.8067	0.808 ± 0.010	$H(0.15)$	72.46	72.7 ± 1.1
$\boldsymbol{100\theta_{MC}}$	1.041204	1.04111 ± 0.00043	S_8	0.8224	0.823 ± 0.011	$D_M(0.15)$	645.0	643 ± 10
$\boldsymbol{\tau}$	0.0566	0.0567 ± 0.0074	$\sigma_8\Omega_m^{0.5}$	0.4505	0.4507 ± 0.0060	$H(0.38)$	82.53	82.8 ± 1.2
$\boldsymbol{N_{eff}}$	2.958	3.00 ± 0.17	$\sigma_8\Omega_m^{0.25}$	0.6028	0.6035 ± 0.0071	$D_M(0.38)$	1538.3	1533 ± 23
$\boldsymbol{\ln(10^{10}A_s)}$	3.0444	3.046 ± 0.016	$\sigma_8/h^{0.5}$	0.9840	0.9840 ± 0.0086	$H(0.51)$	89.21	89.5 ± 1.2
$\boldsymbol{n_s}$	0.9651	0.9656 ± 0.0067	$r_{drag}h$	99.54	99.63 ± 0.79	$D_M(0.51)$	1992.7	1986 ± 29
$\boldsymbol{y_{cal}}$	1.00080	1.0008 ± 0.0025	$\langle d^2\rangle^{1/2}$	2.4382	2.438 ± 0.021	$H(0.61)$	94.81	95.1 ± 1.2
$\boldsymbol{A_{217}^{CIB}}$	45.4	46 ± 7	z_{re}	7.86	7.87 ± 0.73	$D_M(0.61)$	2318.7	2311 ± 34
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.69	—	$10^9 A_s$	2.0997	2.102 ± 0.034	$H(2.33)$	234.86	235.4 ± 2.5
$\boldsymbol{A_{143}^{tSZ}}$	7.09	$5.6^{+2.2}_{-1.8}$	$10^9 A_s e^{-2\tau}$	1.8752	1.877 ± 0.017	$D_M(2.33)$	5794	5778 ± 72
$\boldsymbol{A_{100}^{PS}}$	246.6	257 ± 28	D_{40}	1229.7	1230 ± 13	$f\sigma_8(0.15)$	0.4550	0.4553 ± 0.0058
$\boldsymbol{A_{143}^{PS}}$	49.3	45 ± 8	D_{220}	5740.8	5740 ± 38	$\sigma_8(0.15)$	0.7454	0.7468 ± 0.0094
$\boldsymbol{A_{143\times217}^{PS}}$	52.6	42 ± 9	D_{810}	2541.2	2539 ± 14	$f\sigma_8(0.38)$	0.4732	0.4737 ± 0.0056
$\boldsymbol{A_{217}^{PS}}$	121.8	115 ± 10	D_{1420}	820.02	818.4 ± 4.9	$\sigma_8(0.38)$	0.6607	0.6620 ± 0.0086
$\boldsymbol{A^{kSZ}}$	0.00	< 3.98	D_{2000}	232.25	231.5 ± 1.9	$f\sigma_8(0.51)$	0.4718	0.4723 ± 0.0055
$\boldsymbol{A_{100}^{dustTT}}$	8.81	8.9 ± 1.8	$n_{s,0.002}$	0.9651	0.9656 ± 0.0067	$\sigma_8(0.51)$	0.6183	0.6196 ± 0.0082
$\boldsymbol{A_{143}^{dustTT}}$	10.92	10.9 ± 1.8	Y_P	0.24421	0.2448 ± 0.0024	$f\sigma_8(0.61)$	0.4668	0.4674 ± 0.0055
$\boldsymbol{A_{143\times217}^{dustTT}}$	20.06	18.6 ± 3.3	Y_P^{BBN}	0.24554	0.2461 ± 0.0024	$\sigma_8(0.61)$	0.5883	0.5895 ± 0.0079
$\boldsymbol{A_{217}^{dustTT}}$	95.5	93.8 ± 7.4	10^5D/H	2.5507	2.565 ± 0.044	$f\sigma_8(2.33)$	0.29664	0.2973 ± 0.0041
$\boldsymbol{A_{100}^{dustTE}}$	0.1130	0.114 ± 0.038	Age/Gyr	13.870	13.83 ± 0.17	$\sigma_8(2.33)$	0.30580	0.3065 ± 0.0044
$\boldsymbol{A_{100\times143}^{dustTE}}$	0.1338	0.135 ± 0.030	z_*	1089.612	1089.71 ± 0.33	$\chi^2_{lensing}$	8.584	9.06 ± 0.65
$\boldsymbol{A_{100\times217}^{dustTE}}$	0.479	0.482 ± 0.085	r_*	145.43	145.1 ± 1.7	χ^2_{simall}	396	229 ± 200
$\boldsymbol{A_{143}^{dustTE}}$	0.223	0.224 ± 0.054	$100\theta_*$	1.04144	1.04132 ± 0.00052	χ^2_{lowl}	23	191 ± 200
$\boldsymbol{A_{143\times217}^{dustTE}}$	0.661	0.664 ± 0.080	$D_M(z_*)$/Gpc	13.965	13.93 ± 0.16	χ^2_{plik}	2344.6	2359.9 ± 6.0
$\boldsymbol{A_{217}^{dustTE}}$	2.069	2.07 ± 0.27	z_{drag}	1059.74	1059.85 ± 0.68	χ^2_{JLA}	1036.358	1036.40 ± 0.36
$\boldsymbol{c_{100}}$	0.99975	0.99968 ± 0.00061	r_{drag}	148.10	147.7 ± 1.8	χ^2_{6DF}	0.038	0.59 ± 0.66
$\boldsymbol{c_{217}}$	0.99817	0.99817 ± 0.00062	k_D	0.14016	0.1404 ± 0.0013	χ^2_{MGS}	1.16	0.72 ± 0.68
H_0	67.21	67.5 ± 1.1	$100\theta_D$	0.160503	0.16063 ± 0.00039	$\chi^2_{DR12BAO}$	4.58	4.8 ± 1.4
Ω_Λ	0.6882	0.6889 ± 0.0064	z_{eq}	3390.4	3387 ± 23	χ^2_{prior}	1.59	11.6 ± 4.5
Ω_m	0.3118	0.3111 ± 0.0064	k_{eq}	0.010286	0.01030 ± 0.00011	χ^2_{CMB}	2772.9	2789.7 ± 6.1
$\Omega_m h^2$	0.14084	0.1415 ± 0.0030	$100\theta_{eq}$	0.81562	0.8163 ± 0.0044	χ^2_{BAO}	5.78	6.2 ± 1.1

Best-fit $\chi^2_{eff} = 3816.60$; $\Delta\chi^2_{eff} = -0.35$; $\bar{\chi}^2_{eff} = 3843.85$; $\Delta\bar{\chi}^2_{eff} = 0.72$; $R - 1 = 0.01448$

χ^2_{eff}: BAO - 6DF: 0.04 (Δ 0.01) MGS: 1.16 (Δ -0.12) DR12BAO: 4.58 (Δ 0.31) CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.58 (Δ -0.15) simall_100x143_offlike5_EE_Aplanck 396.47 (Δ 0.01) commander_dx12_v3_2_29: 23.28 (Δ 0.40) plik_rd12_HM_v22b_TTTEEE: 2344.55 (Δ -0.86) SN - JLA Pantheon: 1036.36 (Δ 0.10)

7.52 base_nnu_plikHM_TTTEEE_lowl_lowE_BAO_post_lensing

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022341	0.02237 ± 0.00018	σ_8	0.8047	0.8076 ± 0.0099	$D_M(0.15)$	648.2	644 ± 10
$\boldsymbol{\Omega_c h^2}$	0.11726	0.1183 ± 0.0029	S_8	0.8229	0.824 ± 0.011	$H(0.38)$	82.19	82.7 ± 1.2
$\boldsymbol{100\theta_{MC}}$	1.041259	1.04112 ± 0.00043	$\sigma_8\Omega_m^{0.5}$	0.4507	0.4512 ± 0.0061	$D_M(0.38)$	1545.4	1537 ± 24
$\boldsymbol{\tau}$	0.0558	0.0563 ± 0.0074	$\sigma_8\Omega_m^{0.25}$	0.6022	0.6036 ± 0.0071	$H(0.51)$	88.88	89.4 ± 1.2
$\boldsymbol{N_{eff}}$	2.914	2.99 ± 0.17	$\sigma_8/h^{0.5}$	0.9841	0.9844 ± 0.0086	$D_M(0.51)$	2001.6	1990 ± 30
$\boldsymbol{\ln(10^{10}A_s)}$	3.0412	3.044 ± 0.016	$r_{drag}h$	99.31	99.49 ± 0.82	$H(0.61)$	94.46	95.0 ± 1.2
$\boldsymbol{n_s}$	0.9635	0.9647 ± 0.0069	$\langle d^2\rangle^{1/2}$	2.4400	2.440 ± 0.021	$D_M(0.61)$	2328.9	2316 ± 34
$\boldsymbol{y_{cal}}$	1.00056	1.0008 ± 0.0025	z_{re}	7.78	7.83 ± 0.73	$H(2.33)$	234.31	235.3 ± 2.5
$\boldsymbol{A_{217}^{CIB}}$	44.0	46 ± 7	$10^9 A_s$	2.0929	2.100 ± 0.034	$D_M(2.33)$	5814	5785 ± 73
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.92	—	$10^9 A_s e^{-2\tau}$	1.8719	1.876 ± 0.017	$f\sigma_8(0.15)$	0.4551	0.4557 ± 0.0058
$\boldsymbol{A_{143}^{tSZ}}$	6.98	$5.6^{+2.2}_{-1.8}$	D_{40}	1230.9	1231 ± 13	$\sigma_8(0.15)$	0.7434	0.7462 ± 0.0094
$\boldsymbol{A_{100}^{PS}}$	243.4	256 ± 28	D_{220}	5736.4	5739 ± 38	$f\sigma_8(0.38)$	0.4728	0.4738 ± 0.0056
$\boldsymbol{A_{143}^{PS}}$	51.9	45 ± 8	D_{810}	2540.1	2539 ± 14	$\sigma_8(0.38)$	0.6587	0.6613 ± 0.0086
$\boldsymbol{A_{143\times217}^{PS}}$	58.2	42 ± 9	D_{1420}	820.08	818.4 ± 4.9	$f\sigma_8(0.51)$	0.4712	0.4724 ± 0.0055
$\boldsymbol{A_{217}^{PS}}$	123.9	115 ± 10	D_{2000}	232.41	231.5 ± 1.9	$\sigma_8(0.51)$	0.6163	0.6189 ± 0.0082
$\boldsymbol{A^{kSZ}}$	0.01	< 3.94	$n_{s,0.002}$	0.9635	0.9647 ± 0.0069	$f\sigma_8(0.61)$	0.4660	0.4673 ± 0.0054
$\boldsymbol{A_{100}^{dustTT}}$	8.73	8.9 ± 1.8	Y_P	0.24360	0.2445 ± 0.0024	$\sigma_8(0.61)$	0.5864	0.5889 ± 0.0079
$\boldsymbol{A_{143}^{dustTT}}$	10.94	10.9 ± 1.8	Y_P^{BBN}	0.24492	0.2459 ± 0.0024	$f\sigma_8(2.33)$	0.29559	0.2969 ± 0.0041
$\boldsymbol{A_{143\times217}^{dustTT}}$	20.27	18.6 ± 3.3	10^5D/H	2.5452	2.564 ± 0.044	$\sigma_8(2.33)$	0.30464	0.3061 ± 0.0044
$\boldsymbol{A_{217}^{dustTT}}$	95.8	93.7 ± 7.4	Age/Gyr	13.918	13.85 ± 0.17	f_{2000}^{143}	27.26	28.8 ± 3.0
$\boldsymbol{A_{100}^{dustTE}}$	0.1141	0.114 ± 0.038	z_*	1089.587	1089.71 ± 0.33	$f_{2000}^{143\times217}$	31.03	31.6 ± 2.1
$\boldsymbol{A_{100\times143}^{dustTE}}$	0.1351	0.135 ± 0.030	r_*	145.84	145.2 ± 1.7	f_{2000}^{217}	105.56	106.6 ± 2.0
$\boldsymbol{A_{100\times217}^{dustTE}}$	0.482	0.482 ± 0.085	$100\theta_*$	1.04153	1.04135 ± 0.00053	$\chi^2_{lensing}$	8.540	9.05 ± 0.65
$\boldsymbol{A_{143}^{dustTE}}$	0.225	0.224 ± 0.054	$D_M(z_*)$/Gpc	14.002	13.94 ± 0.16	χ^2_{simall}	396	229 ± 200
$\boldsymbol{A_{143\times217}^{dustTE}}$	0.666	0.664 ± 0.080	z_{drag}	1059.55	1059.78 ± 0.69	χ^2_{lowl}	23	192 ± 200
$\boldsymbol{A_{217}^{dustTE}}$	2.076	2.07 ± 0.27	r_{drag}	148.53	147.9 ± 1.8	χ^2_{plik}	2344.3	2359.7 ± 6.0
$\boldsymbol{c_{100}}$	0.99977	0.99968 ± 0.00061	k_D	0.13985	0.1403 ± 0.0013	χ^2_{6DF}	0.057	0.57 ± 0.63
$\boldsymbol{c_{217}}$	0.99816	0.99817 ± 0.00062	$100\theta_D$	0.160431	0.16060 ± 0.00039	χ^2_{MGS}	1.04	0.69 ± 0.65
H_0	66.86	67.3 ± 1.1	z_{eq}	3396.3	3391 ± 24	$\chi^2_{DR12BAO}$	5.00	5.1 ± 1.6
Ω_Λ	0.6863	0.6878 ± 0.0067	k_{eq}	0.010274	0.01031 ± 0.00011	χ^2_{prior}	1.42	11.6 ± 4.5
Ω_m	0.3137	0.3122 ± 0.0067	$100\theta_{eq}$	0.81444	0.8155 ± 0.0045	χ^2_{CMB}	2772.7	2789.5 ± 6.0
$\Omega_m h^2$	0.14025	0.1414 ± 0.0030	$100\theta_{s,eq}$	0.45000	0.4505 ± 0.0023	χ^2_{BAO}	6.09	6.4 ± 1.3
$\Omega_m h^3$	0.09378	$0.0952^{+0.0032}_{-0.0036}$	$H(0.15)$	72.12	72.6 ± 1.1			

Best-fit $\chi^2_{eff} = 2780.19$; $\Delta\chi^2_{eff} = -0.51$; $\bar{\chi}^2_{eff} = 2807.45$; $\Delta\bar{\chi}^2_{eff} = 0.60$; $R - 1 = 0.01513$

χ^2_{eff}: BAO - 6DF: 0.06 (Δ 0.03) MGS: 1.04 (Δ -0.18) DR12BAO: 5.00 (Δ 0.58) CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.54 (Δ -0.19) simall_100x143_offlike5_EE_Aplanck
396.33 (Δ -0.19) commander_dx12_v3_2_29: 23.47 (Δ 0.57) plik_rd12_HM_v22b_TTTEEE: 2344.34 (Δ -0.98)

7.53 base_nnu_plikHM_TTTEEE_lowl_lowE_BAO_post_Aver15

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02237 ± 0.00017	σ_8	0.807 ± 0.010	$D_M(0.15)$	644.5 ± 9.2
$\boldsymbol{\Omega_c h^2}$	0.1182 ± 0.0026	S_8	0.823 ± 0.013	$H(0.38)$	82.6 ± 1.0
$\boldsymbol{100\theta_{MC}}$	1.04114 ± 0.00040	$\sigma_8\Omega_m^{0.5}$	0.4506 ± 0.0073	$D_M(0.38)$	1537 ± 21
$\boldsymbol{\tau}$	0.0554 ± 0.0079	$\sigma_8\Omega_m^{0.25}$	0.6028 ± 0.0082	$H(0.51)$	89.3 ± 1.0
$\boldsymbol{N_{eff}}$	2.98 ± 0.15	$\sigma_8/h^{0.5}$	0.983 ± 0.011	$D_M(0.51)$	1991 ± 26
$\boldsymbol{\ln(10^{10}A_s)}$	3.042 ± 0.018	$r_{drag}h$	99.50 ± 0.83	$H(0.61)$	94.9 ± 1.1
$\boldsymbol{n_s}$	0.9648 ± 0.0062	$\langle d^2\rangle^{1/2}$	2.437 ± 0.025	$D_M(0.61)$	2317 ± 30
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0025	z_{re}	7.74 ± 0.80	$H(2.33)$	235.2 ± 2.3
$\boldsymbol{A_{217}^{CIB}}$	46 ± 7	$10^9 A_s$	2.095 ± 0.038	$D_M(2.33)$	5787 ± 64
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$10^9 A_s e^{-2\tau}$	1.875 ± 0.016	$f\sigma_8(0.15)$	0.4551 ± 0.0070
$\boldsymbol{A_{143}^{tSZ}}$	$5.6^{+2.1}_{-1.8}$	D_{40}	1230 ± 13	$\sigma_8(0.15)$	0.7452 ± 0.0097
$\boldsymbol{A_{100}^{PS}}$	256 ± 28	D_{220}	5737 ± 39	$f\sigma_8(0.38)$	0.4732 ± 0.0065
$\boldsymbol{A_{143}^{PS}}$	45 ± 8	D_{810}	2538 ± 14	$\sigma_8(0.38)$	0.6605 ± 0.0087
$\boldsymbol{A_{143\times217}^{PS}}$	42 ± 9	D_{1420}	818.3 ± 4.9	$f\sigma_8(0.51)$	0.4717 ± 0.0063
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	D_{2000}	231.5 ± 1.8	$\sigma_8(0.51)$	0.6181 ± 0.0082
$\boldsymbol{A^{kSZ}}$	< 3.94	$n_{s,0.002}$	0.9648 ± 0.0062	$f\sigma_8(0.61)$	0.4667 ± 0.0061
$\boldsymbol{A_{100}^{dust}TT}$	8.9 ± 1.8	Y_P	0.2445 ± 0.0021	$\sigma_8(0.61)$	0.5881 ± 0.0079
$\boldsymbol{A_{143}^{dust}TT}$	10.9 ± 1.8	Y_P^{BBN}	0.2458 ± 0.0021	$f\sigma_8(2.33)$	0.2965 ± 0.0040
$\boldsymbol{A_{143\times217}^{dust}TT}$	18.6 ± 3.3	10^5D/H	2.564 ± 0.041	$\sigma_8(2.33)$	0.3057 ± 0.0043
$\boldsymbol{A_{217}^{dust}TT}$	93.8 ± 7.4	Age/Gyr	13.85 ± 0.15	f_{2000}^{143}	28.8 ± 2.9
$\boldsymbol{A_{100}^{dust}TE}$	0.114 ± 0.038	z_*	1089.70 ± 0.32	$f_{2000}^{143\times217}$	31.6 ± 2.0
$\boldsymbol{A_{100\times143}^{dust}TE}$	0.135 ± 0.030	r_*	145.2 ± 1.5	f_{2000}^{217}	106.5 ± 1.9
$\boldsymbol{A_{100\times217}^{dust}TE}$	0.482 ± 0.085	$100\theta_*$	1.04137 ± 0.00048	χ^2_{simall}	228 ± 200
$\boldsymbol{A_{143}^{dust}TE}$	0.224 ± 0.054	$D_M(z_*)$/Gpc	13.95 ± 0.14	χ^2_{lowl}	192 ± 200
$\boldsymbol{A_{143\times217}^{dust}TE}$	0.664 ± 0.080	z_{drag}	1059.75 ± 0.61	χ^2_{plik}	2359.9 ± 6.1
$\boldsymbol{A_{217}^{dust}TE}$	2.07 ± 0.27	r_{drag}	147.9 ± 1.6	χ^2_{Aver15}	0.32 ± 0.45
$\boldsymbol{c_{100}}$	0.99967 ± 0.00062	k_D	0.1403 ± 0.0011	χ^2_{6DF}	0.58 ± 0.63
$\boldsymbol{c_{217}}$	0.99818 ± 0.00062	$100\theta_D$	0.16060 ± 0.00035	χ^2_{MGS}	0.69 ± 0.65
H_0	67.3 ± 1.0	z_{eq}	3390 ± 24	$\chi^2_{DR12BAO}$	5.1 ± 1.6
Ω_Λ	0.6878 ± 0.0067	k_{eq}	0.01030 ± 0.00011	χ^2_{prior}	11.6 ± 4.5
Ω_m	0.3122 ± 0.0067	$100\theta_{eq}$	0.8156 ± 0.0046	χ^2_{BAO}	6.4 ± 1.4
$\Omega_m h^2$	0.1413 ± 0.0027	$100\theta_{s,eq}$	0.4506 ± 0.0023	χ^2_{CMB}	2780.6 ± 6.0
$\Omega_m h^3$	0.0950 ± 0.0030	$H(0.15)$	72.5 ± 1.0		

$\bar{\chi}^2_{eff} = 2798.91$; $R - 1 = 0.01423$

7.54 base_nnu_plikHM_TTTEEE_lowl_lowE_BAO_post_Cooke17_Aver15

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02237 ± 0.00017	S_8	0.824 ± 0.013	$D_M(0.38)$	1534 ± 20
$\boldsymbol{\Omega_c h^2}$	0.1187 ± 0.0025	$\sigma_8\Omega_m^{0.5}$	0.4513 ± 0.0072	$H(0.51)$	89.5 ± 1.0
$\boldsymbol{100\theta_{MC}}$	1.04108 ± 0.00039	$\sigma_8\Omega_m^{0.25}$	0.6038 ± 0.0080	$D_M(0.51)$	1987 ± 25
$\boldsymbol{\tau}$	0.0554 ± 0.0080	$\sigma_8/h^{0.5}$	0.984 ± 0.011	$H(0.61)$	95.1 ± 1.0
$\boldsymbol{N_{eff}}$	3.01 ± 0.14	$r_{drag}h$	99.50 ± 0.83	$D_M(0.61)$	2313 ± 29
$\boldsymbol{\ln(10^{10}A_s)}$	3.043 ± 0.018	$\langle d^2\rangle^{1/2}$	2.437 ± 0.025	$H(2.33)$	235.6 ± 2.2
$\boldsymbol{n_s}$	0.9655 ± 0.0061	z_{re}	7.75 ± 0.80	$D_M(2.33)$	5778 ± 61
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0025	$10^9 A_s$	2.097 ± 0.038	$f\sigma_8(0.15)$	0.4558 ± 0.0069
$\boldsymbol{A_{217}^{CIB}}$	47 ± 7	$10^9 A_s e^{-2\tau}$	1.877 ± 0.016	$\sigma_8(0.15)$	0.7465 ± 0.0094
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{40}	1229 ± 13	$f\sigma_8(0.38)$	0.4740 ± 0.0064
$\boldsymbol{A_{143}^{tSZ}}$	$5.6^{+2.2}_{-1.9}$	D_{220}	5735 ± 38	$\sigma_8(0.38)$	0.6616 ± 0.0084
$\boldsymbol{A_{100}^{PS}}$	257 ± 28	D_{810}	2539 ± 14	$f\sigma_8(0.51)$	0.4725 ± 0.0061
$\boldsymbol{A_{143}^{PS}}$	45 ± 8	D_{1420}	818.0 ± 4.8	$\sigma_8(0.51)$	0.6192 ± 0.0080
$\boldsymbol{A_{143\times217}^{PS}}$	42 ± 9	D_{2000}	231.3 ± 1.7	$f\sigma_8(0.61)$	0.4675 ± 0.0059
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	$n_{s,0.002}$	0.9655 ± 0.0061	$\sigma_8(0.61)$	0.5891 ± 0.0076
$\boldsymbol{A^{kSZ}}$	< 4.05	Y_P	0.2448 ± 0.0020	$f\sigma_8(2.33)$	0.2970 ± 0.0039
$\boldsymbol{A_{100}^{dustTT}}$	8.9 ± 1.8	Y_P^{BBN}	0.2462 ± 0.0020	$\sigma_8(2.33)$	$0.3062^{+0.0039}_{-0.0043}$
$\boldsymbol{A_{143}^{dustTT}}$	10.9 ± 1.8	10^5D/H	2.572 ± 0.038	f_{2000}^{143}	29.1 ± 2.9
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.6 ± 3.3	Age/Gyr	13.83 ± 0.15	$f_{2000}^{143\times217}$	31.8 ± 2.0
$\boldsymbol{A_{217}^{dustTT}}$	93.8 ± 7.4	z_*	1089.77 ± 0.29	f_{2000}^{217}	106.7 ± 1.9
$\boldsymbol{A_{100}^{dustTE}}$	0.114 ± 0.038	r_*	145.0 ± 1.4	χ^2_{simall}	230 ± 200
$\boldsymbol{A_{100\times143}^{dustTE}}$	0.135 ± 0.030	$100\theta_*$	1.04129 ± 0.00046	χ^2_{lowl}	190 ± 200
$\boldsymbol{A_{100\times217}^{dustTE}}$	0.482 ± 0.085	$D_M(z_*)$/Gpc	13.92 ± 0.13	χ^2_{plik}	2359.9 ± 6.1
$\boldsymbol{A_{143}^{dustTE}}$	0.224 ± 0.054	z_{drag}	1059.80 ± 0.61	χ^2_{Aver15}	0.34 ± 0.46
$\boldsymbol{A_{143\times217}^{dustTE}}$	0.665 ± 0.080	r_{drag}	147.7 ± 1.5	$\chi^2_{Cooke17}$	0.40 ± 0.45
$\boldsymbol{A_{217}^{dustTE}}$	2.08 ± 0.27	k_D	0.1404 ± 0.0011	χ^2_{6DF}	0.57 ± 0.63
$\boldsymbol{c_{100}}$	0.99967 ± 0.00061	$100\theta_D$	0.16067 ± 0.00032	χ^2_{MGS}	0.69 ± 0.65
$\boldsymbol{c_{217}}$	0.99818 ± 0.00062	z_{eq}	3390 ± 24	$\chi^2_{DR12BAO}$	5.1 ± 1.7
H_0	67.39 ± 0.98	k_{eq}	0.01032 ± 0.00010	χ^2_{prior}	11.6 ± 4.5
Ω_Λ	0.6879 ± 0.0067	$100\theta_{eq}$	0.8157 ± 0.0046	χ^2_{BAO}	6.4 ± 1.4
Ω_m	0.3121 ± 0.0067	$100\theta_{s,eq}$	0.4506 ± 0.0023	χ^2_{CMB}	2780.5 ± 5.9
$\Omega_m h^2$	0.1417 ± 0.0026	$H(0.15)$	72.67 ± 0.97	χ^2_{Abund}	0.74 ± 0.57
$\Omega_m h^3$	0.0955 ± 0.0029	$D_M(0.15)$	643.4 ± 9.0		
σ_8	0.808 ± 0.010	$H(0.38)$	82.77 ± 0.99		

$\bar{\chi}^2_{eff} = 2799.26$; $R - 1 = 0.01400$

7.55 base_nnu_plikHM_TTTEEE_lowl_lowE_BAO_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02239 ± 0.00018	σ_8	0.809 ± 0.011	$D_M(0.15)$	643 ± 11
$\boldsymbol{\Omega_c h^2}$	0.1186 ± 0.0031	S_8	0.824 ± 0.013	$H(0.38)$	82.8 ± 1.2
$\boldsymbol{100\theta_{MC}}$	1.04110 ± 0.00044	$\sigma_8\Omega_m^{0.5}$	0.4512 ± 0.0074	$D_M(0.38)$	1533 ± 24
$\boldsymbol{\tau}$	$0.0565^{+0.0056}_{-0.0083}$	$\sigma_8\Omega_m^{0.25}$	0.6040 ± 0.0085	$H(0.51)$	89.5 ± 1.2
$\boldsymbol{N_{eff}}$	3.01 ± 0.18	$\sigma_8/h^{0.5}$	0.984 ± 0.010	$D_M(0.51)$	1986 ± 30
$\boldsymbol{\ln(10^{10} A_s)}$	$3.045^{+0.015}_{-0.019}$	$r_{drag}h$	99.57 ± 0.85	$H(0.61)$	95.1 ± 1.3
$\boldsymbol{n_s}$	0.9657 ± 0.0069	$\langle d^2\rangle^{1/2}$	2.438 ± 0.024	$D_M(0.61)$	2311 ± 35
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0025	z_{re}	$7.86^{+0.61}_{-0.82}$	$H(2.33)$	235.6 ± 2.7
$\boldsymbol{A_{217}^{CIB}}$	46 ± 7	$10^9 A_s$	$2.102^{+0.031}_{-0.040}$	$D_M(2.33)$	5776 ± 75
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$10^9 A_s e^{-2\tau}$	1.877 ± 0.018	$f\sigma_8(0.15)$	0.4558 ± 0.0071
$\boldsymbol{A_{143}^{tSZ}}$	$5.5^{+2.2}_{-1.9}$	D_{40}	1229 ± 13	$\sigma_8(0.15)$	0.747 ± 0.010
$\boldsymbol{A_{100}^{PS}}$	257 ± 28	D_{220}	5737 ± 39	$f\sigma_8(0.38)$	0.4741 ± 0.0067
$\boldsymbol{A_{143}^{PS}}$	45 ± 8	D_{810}	2539 ± 14	$\sigma_8(0.38)$	0.6623 ± 0.0094
$\boldsymbol{A_{143\times217}^{PS}}$	42 ± 9	D_{1420}	818.1 ± 4.9	$f\sigma_8(0.51)$	0.4727 ± 0.0065
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	D_{2000}	231.4 ± 1.9	$\sigma_8(0.51)$	0.6198 ± 0.0089
$\boldsymbol{A^{kSZ}}$	< 4.04	$n_{s,0.002}$	0.9657 ± 0.0069	$f\sigma_8(0.61)$	0.4677 ± 0.0064
$\boldsymbol{A_{100}^{dustTT}}$	8.9 ± 1.8	Y_P	0.2449 ± 0.0025	$\sigma_8(0.61)$	$0.5897^{+0.0079}_{-0.0088}$
$\boldsymbol{A_{143}^{dustTT}}$	10.9 ± 1.8	Y_P^{BBN}	0.2462 ± 0.0025	$f\sigma_8(2.33)$	$0.2974^{+0.0040}_{-0.0045}$
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.6 ± 3.3	10^5D/H	2.569 ± 0.046	$\sigma_8(2.33)$	$0.3066^{+0.0043}_{-0.0048}$
$\boldsymbol{A_{217}^{dustTT}}$	93.8 ± 7.3	Age/Gyr	13.83 ± 0.18	f_{2000}^{143}	29.0 ± 3.0
$\boldsymbol{A_{100}^{dustTE}}$	0.114 ± 0.038	z_*	1089.74 ± 0.35	$f_{2000}^{143\times217}$	31.7 ± 2.1
$\boldsymbol{A_{100\times143}^{dustTE}}$	0.135 ± 0.029	r_*	145.0 ± 1.8	f_{2000}^{217}	106.6 ± 2.0
$\boldsymbol{A_{100\times217}^{dustTE}}$	0.482 ± 0.085	$100\theta_*$	1.04131 ± 0.00054	χ^2_{simall}	397.3 ± 2.2
$\boldsymbol{A_{143}^{dustTE}}$	0.224 ± 0.054	$D_M(z_*)$/Gpc	13.92 ± 0.16	χ^2_{lowl}	23.3 ± 1.1
$\boldsymbol{A_{143\times217}^{dustTE}}$	0.664 ± 0.080	z_{drag}	1059.85 ± 0.70	χ^2_{plik}	2360.2 ± 6.2
$\boldsymbol{A_{217}^{dustTE}}$	2.08 ± 0.27	r_{drag}	147.7 ± 1.8	χ^2_{6DF}	0.065 ± 0.076
$\boldsymbol{c_{100}}$	0.99966 ± 0.00061	k_D	0.1405 ± 0.0013	χ^2_{MGS}	1.24 ± 0.46
$\boldsymbol{c_{217}}$	0.99818 ± 0.00062	$100\theta_D$	0.16065 ± 0.00040	$\chi^2_{DR12BAO}$	5.0 ± 1.6
H_0	67.4 ± 1.2	z_{eq}	3388 ± 25	χ^2_{prior}	11.6 ± 4.5
Ω_Λ	0.6885 ± 0.0069	k_{eq}	0.01031 ± 0.00012	χ^2_{BAO}	6.3 ± 1.3
Ω_m	0.3115 ± 0.0069	$100\theta_{eq}$	0.8160 ± 0.0047	χ^2_{CMB}	2780.8 ± 6.0
$\Omega_m h^2$	0.1417 ± 0.0032	$100\theta_{s,eq}$	0.4508 ± 0.0024		
$\Omega_m h^3$	0.0956 ± 0.0035	$H(0.15)$	72.7 ± 1.2		

$\bar{\chi}^2_{eff} = 2798.76$; $\Delta\bar{\chi}^2_{eff} = 1.04$; $R - 1 = 0.01049$

7.56 base_nnu_plikHM_TTTEEE_lowl_lowE_BAO_post_lensing_JLA_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02239 ± 0.00018	σ_8	$0.8085^{+0.0089}_{-0.010}$	$D_M(0.15)$	643 ± 10
$\boldsymbol{\Omega_c h^2}$	0.1185 ± 0.0028	S_8	0.824 ± 0.011	$H(0.38)$	82.8 ± 1.1
$\boldsymbol{100\theta_{MC}}$	1.04110 ± 0.00041	$\sigma_8\Omega_m^{0.5}$	0.4512 ± 0.0059	$D_M(0.38)$	1534 ± 23
$\boldsymbol{\tau}$	$0.0571^{+0.0058}_{-0.0077}$	$\sigma_8\Omega_m^{0.25}$	0.6040 ± 0.0069	$H(0.51)$	89.5 ± 1.2
$\boldsymbol{N_{eff}}$	3.00 ± 0.17	$\sigma_8/h^{0.5}$	0.9848 ± 0.0084	$D_M(0.51)$	1987 ± 29
$\boldsymbol{\ln(10^{10}A_s)}$	$3.046^{+0.014}_{-0.017}$	$r_{drag}h$	99.58 ± 0.80	$H(0.61)$	95.1 ± 1.2
$\boldsymbol{n_s}$	0.9655 ± 0.0066	$\langle d^2\rangle^{1/2}$	2.440 ± 0.020	$D_M(0.61)$	2313 ± 33
$\boldsymbol{y_{cal}}$	1.0008 ± 0.0025	z_{re}	$7.91^{+0.61}_{-0.75}$	$H(2.33)$	235.4 ± 2.5
$\boldsymbol{A^{CIB}_{217}}$	47 ± 7	$10^9 A_s$	$2.104^{+0.028}_{-0.035}$	$D_M(2.33)$	5779 ± 71
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$10^9 A_s e^{-2\tau}$	1.877 ± 0.016	$f\sigma_8(0.15)$	0.4558 ± 0.0057
$\boldsymbol{A^{tSZ}_{143}}$	$5.6^{+2.2}_{-1.9}$	D_{40}	1230 ± 13	$\sigma_8(0.15)$	$0.7472^{+0.0083}_{-0.0096}$
$\boldsymbol{A^{PS}_{100}}$	256 ± 28	D_{220}	5738 ± 38	$f\sigma_8(0.38)$	0.4741 ± 0.0054
$\boldsymbol{A^{PS}_{143}}$	45 ± 8	D_{810}	2539 ± 14	$\sigma_8(0.38)$	$0.6623^{+0.0076}_{-0.0088}$
$\boldsymbol{A^{PS}_{143\times217}}$	42 ± 9	D_{1420}	818.4 ± 4.9	$f\sigma_8(0.51)$	0.4727 ± 0.0053
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	D_{2000}	231.5 ± 1.9	$\sigma_8(0.51)$	$0.6198^{+0.0072}_{-0.0084}$
$\boldsymbol{A^{kSZ}}$	< 4.10	$n_{s,0.002}$	0.9655 ± 0.0066	$f\sigma_8(0.61)$	0.4677 ± 0.0053
$\boldsymbol{A^{dustTT}_{100}}$	8.8 ± 1.8	Y_P	0.2447 ± 0.0023	$\sigma_8(0.61)$	$0.5898^{+0.0070}_{-0.0081}$
$\boldsymbol{A^{dustTT}_{143}}$	10.9 ± 1.8	Y_P^{BBN}	0.2461 ± 0.0023	$f\sigma_8(2.33)$	$0.2974^{+0.0036}_{-0.0042}$
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.5 ± 3.3	10^5D/H	2.567 ± 0.043	$\sigma_8(2.33)$	$0.3066^{+0.0038}_{-0.0045}$
$\boldsymbol{A^{dustTT}_{217}}$	93.6 ± 7.4	Age/Gyr	13.84 ± 0.17	f^{143}_{2000}	28.8 ± 3.0
$\boldsymbol{A^{dustTE}_{100}}$	0.114 ± 0.038	z_*	1089.72 ± 0.32	$f^{143\times217}_{2000}$	31.7 ± 2.1
$\boldsymbol{A^{dustTE}_{100\times143}}$	0.135 ± 0.030	r_*	145.1 ± 1.6	f^{217}_{2000}	106.6 ± 2.0
$\boldsymbol{A^{dustTE}_{100\times217}}$	0.480 ± 0.085	$100\theta_*$	1.04131 ± 0.00050	$\chi^2_{lensing}$	9.04 ± 0.61
$\boldsymbol{A^{dustTE}_{143}}$	0.224 ± 0.054	$D_M(z_*)$/Gpc	13.93 ± 0.15	χ^2_{simall}	397.4 ± 2.1
$\boldsymbol{A^{dustTE}_{143\times217}}$	0.665 ± 0.079	z_{drag}	1059.82 ± 0.67	χ^2_{lowl}	23.4 ± 1.0
$\boldsymbol{A^{dustTE}_{217}}$	2.07 ± 0.26	r_{drag}	147.7 ± 1.7	χ^2_{plik}	2359.6 ± 5.8
$\boldsymbol{c_{100}}$	0.99966 ± 0.00062	k_D	0.1404 ± 0.0013	χ^2_{JLA}	706.78 ± 0.19
$\boldsymbol{c_{217}}$	0.99818 ± 0.00061	$100\theta_D$	0.16063 ± 0.00038	χ^2_{6DF}	0.061 ± 0.069
H_0	67.4 ± 1.1	z_{eq}	3388 ± 23	χ^2_{MGS}	1.24 ± 0.43
Ω_Λ	0.6885 ± 0.0065	k_{eq}	0.01031 ± 0.00011	$\chi^2_{DR12BAO}$	4.9 ± 1.5
Ω_m	0.3115 ± 0.0065	$100\theta_{eq}$	0.8161 ± 0.0044	χ^2_{prior}	11.6 ± 4.5
$\Omega_m h^2$	0.1415 ± 0.0029	$100\theta_{s,eq}$	0.4508 ± 0.0022	χ^2_{CMB}	2789.3 ± 5.9
$\Omega_m h^3$	$0.0954^{+0.0031}_{-0.0036}$	$H(0.15)$	72.7 ± 1.1	χ^2_{BAO}	6.2 ± 1.2

$\bar{\chi}^2_{eff} = 3513.91$; $R - 1 = 0.03578$

7.57 base_nnu_plikHM_TTTEEE_lowl_lowE_BAO_post_lensing_Pantheon_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02240 ± 0.00018	σ_8	0.8085 ± 0.0098	$D_M(0.15)$	643 ± 10
$\boldsymbol{\Omega_c h^2}$	0.1185 ± 0.0029	S_8	0.823 ± 0.011	$H(0.38)$	82.8 ± 1.2
$\boldsymbol{100\theta_{MC}}$	1.04111 ± 0.00043	$\sigma_8\Omega_m^{0.5}$	0.4508 ± 0.0060	$D_M(0.38)$	1533 ± 23
$\boldsymbol{\tau}$	$0.0572^{+0.0058}_{-0.0077}$	$\sigma_8\Omega_m^{0.25}$	0.6037 ± 0.0070	$H(0.51)$	89.5 ± 1.2
$\boldsymbol{N_{eff}}$	3.00 ± 0.17	$\sigma_8/h^{0.5}$	0.9843 ± 0.0084	$D_M(0.51)$	1986 ± 29
$\boldsymbol{\ln(10^{10} A_s)}$	$3.047^{+0.014}_{-0.017}$	$r_{drag}h$	99.65 ± 0.78	$H(0.61)$	95.1 ± 1.2
$\boldsymbol{n_s}$	0.9656 ± 0.0067	$\langle d^2\rangle^{1/2}$	2.439 ± 0.020	$D_M(0.61)$	2311 ± 34
$\boldsymbol{y_{cal}}$	1.0008 ± 0.0025	z_{re}	$7.92^{+0.61}_{-0.75}$	$H(2.33)$	235.4 ± 2.5
$\boldsymbol{A_{217}^{CIB}}$	46 ± 7	$10^9 A_s$	$2.104^{+0.029}_{-0.035}$	$D_M(2.33)$	5777 ± 72
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$10^9 A_s e^{-2\tau}$	1.877 ± 0.017	$f\sigma_8(0.15)$	0.4554 ± 0.0058
$\boldsymbol{A_{143}^{tSZ}}$	$5.6^{+2.2}_{-1.8}$	D_{40}	1230 ± 13	$\sigma_8(0.15)$	0.7471 ± 0.0093
$\boldsymbol{A_{100}^{PS}}$	257 ± 28	D_{220}	5740 ± 38	$f\sigma_8(0.38)$	0.4738 ± 0.0055
$\boldsymbol{A_{143}^{PS}}$	45 ± 8	D_{810}	2539 ± 14	$\sigma_8(0.38)$	0.6623 ± 0.0085
$\boldsymbol{A_{143\times217}^{PS}}$	42 ± 9	D_{1420}	818.4 ± 4.9	$f\sigma_8(0.51)$	0.4725 ± 0.0054
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	D_{2000}	231.5 ± 1.9	$\sigma_8(0.51)$	0.6199 ± 0.0081
$\boldsymbol{A^{kSZ}}$	< 3.98	$n_{s,0.002}$	0.9656 ± 0.0067	$f\sigma_8(0.61)$	0.4676 ± 0.0054
$\boldsymbol{A_{100}^{dustTT}}$	8.9 ± 1.8	Y_P	0.2448 ± 0.0024	$\sigma_8(0.61)$	0.5898 ± 0.0078
$\boldsymbol{A_{143}^{dustTT}}$	10.9 ± 1.8	Y_P^{BBN}	0.2461 ± 0.0024	$f\sigma_8(2.33)$	0.2974 ± 0.0040
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.6 ± 3.3	10^5D/H	2.565 ± 0.044	$\sigma_8(2.33)$	0.3067 ± 0.0043
$\boldsymbol{A_{217}^{dustTT}}$	93.8 ± 7.4	Age/Gyr	13.83 ± 0.17	f_{2000}^{143}	28.8 ± 3.0
$\boldsymbol{A_{100}^{dustTE}}$	0.114 ± 0.038	z_*	1089.70 ± 0.33	$f_{2000}^{143\times217}$	31.7 ± 2.1
$\boldsymbol{A_{100\times143}^{dustTE}}$	0.135 ± 0.030	r_*	145.1 ± 1.7	f_{2000}^{217}	106.6 ± 2.0
$\boldsymbol{A_{100\times217}^{dustTE}}$	0.481 ± 0.085	$100\theta_*$	1.04132 ± 0.00052	$\chi^2_{lensing}$	9.04 ± 0.62
$\boldsymbol{A_{143}^{dustTE}}$	0.224 ± 0.054	$D_M(z_*)$/Gpc	13.93 ± 0.16	χ^2_{simall}	230 ± 200
$\boldsymbol{A_{143\times217}^{dustTE}}$	0.664 ± 0.080	z_{drag}	1059.85 ± 0.68	χ^2_{lowl}	191 ± 200
$\boldsymbol{A_{217}^{dustTE}}$	2.07 ± 0.27	r_{drag}	147.7 ± 1.8	χ^2_{plik}	2359.8 ± 6.0
$\boldsymbol{c_{100}}$	0.99967 ± 0.00062	k_D	0.1404 ± 0.0013	χ^2_{JLA}	1036.39 ± 0.35
$\boldsymbol{c_{217}}$	0.99817 ± 0.00062	$100\theta_D$	0.16063 ± 0.00039	χ^2_{6DF}	0.60 ± 0.67
H_0	67.5 ± 1.1	z_{eq}	3386 ± 23	χ^2_{MGS}	0.73 ± 0.69
Ω_Λ	0.6891 ± 0.0063	k_{eq}	0.01030 ± 0.00011	$\chi^2_{DR12BAO}$	4.8 ± 1.4
Ω_m	0.3109 ± 0.0063	$100\theta_{eq}$	0.8164 ± 0.0043	χ^2_{prior}	11.6 ± 4.5
$\Omega_m h^2$	0.1415 ± 0.0030	$100\theta_{s,eq}$	0.4510 ± 0.0022	χ^2_{CMB}	2789.6 ± 6.0
$\Omega_m h^3$	0.0955 ± 0.0034	$H(0.15)$	72.7 ± 1.1	χ^2_{BAO}	6.1 ± 1.1

$\bar{\chi}^2_{eff} = 3843.70$; $\Delta\bar{\chi}^2_{eff} = 0.68$; $R - 1 = 0.01456$

7.58 base_nnu_plikHM_TTTEEE_lowl_lowE_BAO_post_lensing_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02238 ± 0.00018	σ_8	0.8080 ± 0.0098	$D_M(0.15)$	644 ± 10
$\boldsymbol{\Omega_c h^2}$	0.1183 ± 0.0029	S_8	0.824 ± 0.011	$H(0.38)$	82.7 ± 1.2
$\boldsymbol{100\theta_{MC}}$	1.04113 ± 0.00043	$\sigma_8\Omega_m^{0.5}$	0.4513 ± 0.0060	$D_M(0.38)$	1536 ± 24
$\boldsymbol{\tau}$	$0.0569^{+0.0057}_{-0.0077}$	$\sigma_8\Omega_m^{0.25}$	0.6039 ± 0.0070	$H(0.51)$	89.4 ± 1.2
$\boldsymbol{N_{eff}}$	2.99 ± 0.17	$\sigma_8/h^{0.5}$	0.9848 ± 0.0084	$D_M(0.51)$	1990 ± 30
$\boldsymbol{\ln(10^{10} A_s)}$	$3.045^{+0.014}_{-0.017}$	$r_{drag}h$	99.51 ± 0.81	$H(0.61)$	95.0 ± 1.2
$\boldsymbol{n_s}$	0.9648 ± 0.0068	$\langle d^2\rangle^{1/2}$	2.441 ± 0.021	$D_M(0.61)$	2315 ± 34
$\boldsymbol{y_{cal}}$	1.0008 ± 0.0025	z_{re}	$7.89^{+0.61}_{-0.75}$	$H(2.33)$	235.3 ± 2.5
$\boldsymbol{A_{217}^{CIB}}$	46 ± 7	$10^9 A_s$	$2.102^{+0.029}_{-0.035}$	$D_M(2.33)$	5785 ± 73
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$10^9 A_s e^{-2\tau}$	1.876 ± 0.017	$f\sigma_8(0.15)$	0.4558 ± 0.0058
$\boldsymbol{A_{143}^{tSZ}}$	$5.6^{+2.2}_{-1.8}$	D_{40}	1231 ± 13	$\sigma_8(0.15)$	0.7466 ± 0.0092
$\boldsymbol{A_{100}^{PS}}$	256 ± 28	D_{220}	5739 ± 38	$f\sigma_8(0.38)$	0.4740 ± 0.0055
$\boldsymbol{A_{143}^{PS}}$	45 ± 8	D_{810}	2539 ± 14	$\sigma_8(0.38)$	0.6617 ± 0.0085
$\boldsymbol{A_{143\times217}^{PS}}$	42 ± 9	D_{1420}	818.4 ± 4.9	$f\sigma_8(0.51)$	0.4725 ± 0.0054
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	D_{2000}	231.5 ± 1.9	$\sigma_8(0.51)$	0.6192 ± 0.0081
$\boldsymbol{A^{kSZ}}$	< 3.95	$n_{s,0.002}$	0.9648 ± 0.0068	$f\sigma_8(0.61)$	0.4675 ± 0.0054
$\boldsymbol{A_{100}^{dustTT}}$	8.9 ± 1.8	Y_P	0.2446 ± 0.0024	$\sigma_8(0.61)$	0.5892 ± 0.0078
$\boldsymbol{A_{143}^{dustTT}}$	10.9 ± 1.8	Y_P^{BBN}	0.2459 ± 0.0024	$f\sigma_8(2.33)$	0.2971 ± 0.0040
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.6 ± 3.3	10^5D/H	2.564 ± 0.044	$\sigma_8(2.33)$	$0.3062^{+0.0040}_{-0.0045}$
$\boldsymbol{A_{217}^{dustTT}}$	93.7 ± 7.4	Age/Gyr	13.85 ± 0.17	f_{2000}^{143}	28.8 ± 3.0
$\boldsymbol{A_{100}^{dustTE}}$	0.114 ± 0.038	z_*	1089.71 ± 0.33	$f_{2000}^{143\times217}$	31.6 ± 2.1
$\boldsymbol{A_{100\times143}^{dustTE}}$	0.135 ± 0.030	r_*	145.2 ± 1.7	f_{2000}^{217}	106.5 ± 2.0
$\boldsymbol{A_{100\times217}^{dustTE}}$	0.482 ± 0.085	$100\theta_*$	1.04135 ± 0.00053	$\chi^2_{lensing}$	9.02 ± 0.61
$\boldsymbol{A_{143}^{dustTE}}$	0.224 ± 0.054	$D_M(z_*)$/Gpc	13.94 ± 0.16	χ^2_{simall}	230 ± 200
$\boldsymbol{A_{143\times217}^{dustTE}}$	0.664 ± 0.080	z_{drag}	1059.78 ± 0.69	χ^2_{lowl}	191 ± 200
$\boldsymbol{A_{217}^{dustTE}}$	2.07 ± 0.27	r_{drag}	147.9 ± 1.8	χ^2_{plik}	2359.6 ± 6.0
$\boldsymbol{c_{100}}$	0.99967 ± 0.00061	k_D	0.1403 ± 0.0013	χ^2_{6DF}	0.57 ± 0.63
$\boldsymbol{c_{217}}$	0.99817 ± 0.00062	$100\theta_D$	0.16060 ± 0.00039	χ^2_{MGS}	0.69 ± 0.65
H_0	67.3 ± 1.1	z_{eq}	3390 ± 24	$\chi^2_{DR12BAO}$	5.1 ± 1.6
Ω_Λ	0.6879 ± 0.0066	k_{eq}	0.01030 ± 0.00011	χ^2_{prior}	11.6 ± 4.5
Ω_m	0.3121 ± 0.0066	$100\theta_{eq}$	0.8156 ± 0.0045	χ^2_{CMB}	2789.4 ± 6.0
$\Omega_m h^2$	0.1414 ± 0.0030	$100\theta_{s,eq}$	0.4506 ± 0.0023	χ^2_{BAO}	6.3 ± 1.3
$\Omega_m h^3$	$0.0952^{+0.0032}_{-0.0036}$	$H(0.15)$	72.6 ± 1.1		

$\bar{\chi}^2_{eff} = 2807.29$; $\Delta\bar{\chi}^2_{eff} = 0.57$; $R - 1 = 0.01488$

7.59 base_nnu_plikHM_TTTEEE_lowl_lowE_BAO_post_Aver15_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02237 ± 0.00017	σ_8	0.807 ± 0.010	$D_M(0.15)$	644.4 ± 9.2
$\boldsymbol{\Omega_c h^2}$	0.1182 ± 0.0026	S_8	0.823 ± 0.013	$H(0.38)$	82.6 ± 1.0
$\boldsymbol{100\theta_{MC}}$	1.04114 ± 0.00041	$\sigma_8\Omega_m^{0.5}$	0.4509 ± 0.0072	$D_M(0.38)$	1537 ± 21
$\boldsymbol{\tau}$	$0.0564^{+0.0055}_{-0.0083}$	$\sigma_8\Omega_m^{0.25}$	0.6033 ± 0.0080	$H(0.51)$	89.3 ± 1.0
$\boldsymbol{N_{eff}}$	2.98 ± 0.15	$\sigma_8/h^{0.5}$	0.984 ± 0.010	$D_M(0.51)$	1990 ± 26
$\boldsymbol{\ln(10^{10}A_s)}$	$3.044^{+0.014}_{-0.018}$	$r_{drag}h$	99.52 ± 0.82	$H(0.61)$	94.9 ± 1.1
$\boldsymbol{n_s}$	0.9649 ± 0.0062	$\langle d^2\rangle^{1/2}$	2.439 ± 0.024	$D_M(0.61)$	2316 ± 30
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0025	z_{re}	$7.84^{+0.60}_{-0.82}$	$H(2.33)$	235.2 ± 2.3
$\boldsymbol{A^{CIB}_{217}}$	46 ± 7	$10^9 A_s$	$2.099^{+0.030}_{-0.038}$	$D_M(2.33)$	5787 ± 64
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$10^9 A_s e^{-2\tau}$	1.875 ± 0.016	$f\sigma_8(0.15)$	0.4555 ± 0.0069
$\boldsymbol{A^{tSZ}_{143}}$	$5.6^{+2.2}_{-1.8}$	D_{40}	1230 ± 13	$\sigma_8(0.15)$	0.7459 ± 0.0093
$\boldsymbol{A^{PS}_{100}}$	256 ± 28	D_{220}	5736 ± 39	$f\sigma_8(0.38)$	0.4736 ± 0.0064
$\boldsymbol{A^{PS}_{143}}$	45 ± 8	D_{810}	2538 ± 14	$\sigma_8(0.38)$	$0.6612^{+0.0078}_{-0.0087}$
$\boldsymbol{A^{PS}_{143\times217}}$	42 ± 9	D_{1420}	818.3 ± 4.9	$f\sigma_8(0.51)$	0.4722 ± 0.0061
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	D_{2000}	231.5 ± 1.8	$\sigma_8(0.51)$	$0.6187^{+0.0073}_{-0.0082}$
$\boldsymbol{A^{kSZ}}$	< 3.95	$n_{s,0.002}$	0.9649 ± 0.0062	$f\sigma_8(0.61)$	0.4672 ± 0.0059
$\boldsymbol{A^{dustTT}_{100}}$	8.9 ± 1.8	Y_P	0.2445 ± 0.0021	$\sigma_8(0.61)$	$0.5887^{+0.0070}_{-0.0079}$
$\boldsymbol{A^{dustTT}_{143}}$	10.9 ± 1.8	Y_P^{BBN}	0.2458 ± 0.0021	$f\sigma_8(2.33)$	$0.2968^{+0.0036}_{-0.0041}$
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.6 ± 3.3	10^5D/H	2.564 ± 0.041	$\sigma_8(2.33)$	$0.3060^{+0.0038}_{-0.0043}$
$\boldsymbol{A^{dustTT}_{217}}$	93.8 ± 7.4	Age/Gyr	13.85 ± 0.15	f^{143}_{2000}	28.8 ± 2.9
$\boldsymbol{A^{dustTE}_{100}}$	0.114 ± 0.038	z_*	1089.70 ± 0.32	$f^{143\times217}_{2000}$	31.6 ± 2.0
$\boldsymbol{A^{dustTE}_{100\times143}}$	0.135 ± 0.030	r_*	145.2 ± 1.5	f^{217}_{2000}	106.5 ± 1.9
$\boldsymbol{A^{dustTE}_{100\times217}}$	0.482 ± 0.085	$100\theta_*$	1.04137 ± 0.00048	χ^2_{simall}	229 ± 200
$\boldsymbol{A^{dustTE}_{143}}$	0.224 ± 0.054	$D_M(z_*)$/Gpc	13.95 ± 0.14	χ^2_{lowl}	191 ± 200
$\boldsymbol{A^{dustTE}_{143\times217}}$	0.664 ± 0.080	z_{drag}	1059.76 ± 0.61	χ^2_{plik}	2359.7 ± 6.1
$\boldsymbol{A^{dustTE}_{217}}$	2.07 ± 0.27	r_{drag}	147.9 ± 1.6	χ^2_{Aver15}	0.32 ± 0.45
$\boldsymbol{c_{100}}$	0.99967 ± 0.00062	k_D	0.1403 ± 0.0011	χ^2_{6DF}	0.58 ± 0.64
$\boldsymbol{c_{217}}$	0.99817 ± 0.00062	$100\theta_D$	0.16060 ± 0.00035	χ^2_{MGS}	0.69 ± 0.66
H_0	67.3 ± 1.0	z_{eq}	3390 ± 24	$\chi^2_{DR12BAO}$	5.1 ± 1.6
Ω_Λ	0.6880 ± 0.0066	k_{eq}	0.01030 ± 0.00011	χ^2_{prior}	11.6 ± 4.5
Ω_m	0.3120 ± 0.0066	$100\theta_{eq}$	0.8157 ± 0.0046	χ^2_{BAO}	6.3 ± 1.3
$\Omega_m h^2$	0.1413 ± 0.0027	$100\theta_{s,eq}$	0.4506 ± 0.0023	χ^2_{CMB}	2780.4 ± 5.9
$\Omega_m h^3$	0.0951 ± 0.0030	$H(0.15)$	72.6 ± 1.0		

$\bar{\chi}^2_{eff} = 2798.70$; $R - 1 = 0.01387$

7.60 base_nnu_plikHM_TTTEEE_lowl_lowE_BAO_post_Cooke17_Aver15_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02237 ± 0.00017	S_8	0.825 ± 0.013	$D_M(0.38)$	1534 ± 20
$\boldsymbol{\Omega_c h^2}$	0.1187 ± 0.0025	$\sigma_8\Omega_m^{0.5}$	0.4517 ± 0.0071	$H(0.51)$	89.5 ± 1.0
$\boldsymbol{100\theta_{MC}}$	1.04108 ± 0.00039	$\sigma_8\Omega_m^{0.25}$	0.6044 ± 0.0078	$D_M(0.51)$	1987 ± 25
$\boldsymbol{\tau}$	$0.0564^{+0.0055}_{-0.0083}$	$\sigma_8/h^{0.5}$	0.985 ± 0.010	$H(0.61)$	95.1 ± 1.0
$\boldsymbol{N_{eff}}$	3.01 ± 0.14	$r_{drag}h$	99.51 ± 0.83	$D_M(0.61)$	2312 ± 29
$\boldsymbol{\ln(10^{10}A_s)}$	$3.045^{+0.014}_{-0.018}$	$\langle d^2\rangle^{1/2}$	2.439 ± 0.024	$H(2.33)$	235.6 ± 2.2
$\boldsymbol{n_s}$	0.9656 ± 0.0061	z_{re}	$7.85^{+0.60}_{-0.82}$	$D_M(2.33)$	5777 ± 61
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0025	$10^9 A_s$	$2.101^{+0.029}_{-0.038}$	$f\sigma_8(0.15)$	0.4562 ± 0.0068
$\boldsymbol{A^{CIB}_{217}}$	47 ± 7	$10^9 A_s e^{-2\tau}$	1.877 ± 0.016	$\sigma_8(0.15)$	$0.7472^{+0.0084}_{-0.0094}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{40}	1229 ± 13	$f\sigma_8(0.38)$	0.4744 ± 0.0062
$\boldsymbol{A^{tSZ}_{143}}$	$5.6^{+2.2}_{-1.9}$	D_{220}	5734 ± 39	$\sigma_8(0.38)$	$0.6623^{+0.0075}_{-0.0085}$
$\boldsymbol{A^{PS}_{100}}$	257 ± 28	D_{810}	2538 ± 14	$f\sigma_8(0.51)$	0.4729 ± 0.0059
$\boldsymbol{A^{PS}_{143}}$	45 ± 8	D_{1420}	817.9 ± 4.9	$\sigma_8(0.51)$	$0.6198^{+0.0070}_{-0.0081}$
$\boldsymbol{A^{PS}_{143\times217}}$	42 ± 9	D_{2000}	231.3 ± 1.7	$f\sigma_8(0.61)$	0.4679 ± 0.0057
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	$n_{s,0.002}$	0.9656 ± 0.0061	$\sigma_8(0.61)$	$0.5897^{+0.0067}_{-0.0077}$
$\boldsymbol{A^{kSZ}}$	< 4.05	Y_P	0.2449 ± 0.0020	$f\sigma_8(2.33)$	$0.2973^{+0.0034}_{-0.0040}$
$\boldsymbol{A^{dustTT}_{100}}$	8.9 ± 1.8	Y_P^{BBN}	0.2462 ± 0.0020	$\sigma_8(2.33)$	$0.3065^{+0.0036}_{-0.0042}$
$\boldsymbol{A^{dustTT}_{143}}$	10.9 ± 1.8	10^5D/H	2.572 ± 0.037	f^{143}_{2000}	29.0 ± 2.9
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.6 ± 3.3	Age/Gyr	13.83 ± 0.15	$f^{143\times217}_{2000}$	31.8 ± 2.0
$\boldsymbol{A^{dustTT}_{217}}$	93.8 ± 7.4	z_*	1089.77 ± 0.29	f^{217}_{2000}	106.7 ± 1.9
$\boldsymbol{A^{dustTE}_{100}}$	0.114 ± 0.038	r_*	145.0 ± 1.4	χ^2_{simall}	231 ± 200
$\boldsymbol{A^{dustTE}_{100\times143}}$	0.135 ± 0.030	$100\theta_*$	1.04129 ± 0.00046	χ^2_{lowl}	190 ± 200
$\boldsymbol{A^{dustTE}_{100\times217}}$	0.482 ± 0.085	$D_M(z_*)$/Gpc	13.92 ± 0.13	χ^2_{plik}	2359.7 ± 6.0
$\boldsymbol{A^{dustTE}_{143}}$	0.224 ± 0.054	z_{drag}	1059.81 ± 0.61	χ^2_{Aver15}	0.34 ± 0.47
$\boldsymbol{A^{dustTE}_{143\times217}}$	0.665 ± 0.080	r_{drag}	147.7 ± 1.5	$\chi^2_{Cooke17}$	0.40 ± 0.45
$\boldsymbol{A^{dustTE}_{217}}$	2.07 ± 0.27	k_D	0.1404 ± 0.0011	χ^2_{6DF}	0.57 ± 0.64
$\boldsymbol{c_{100}}$	0.99966 ± 0.00062	$100\theta_D$	0.16067 ± 0.00032	χ^2_{MGS}	0.70 ± 0.66
$\boldsymbol{c_{217}}$	0.99817 ± 0.00062	z_{eq}	3389 ± 24	$\chi^2_{DR12BAO}$	5.1 ± 1.6
H_0	67.41 ± 0.98	k_{eq}	0.01032 ± 0.00010	χ^2_{prior}	11.6 ± 4.5
Ω_Λ	0.6880 ± 0.0067	$100\theta_{eq}$	0.8158 ± 0.0046	χ^2_{BAO}	6.4 ± 1.3
Ω_m	0.3120 ± 0.0067	$100\theta_{s,eq}$	0.4507 ± 0.0023	χ^2_{CMB}	2780.3 ± 5.9
$\Omega_m h^2$	0.1417 ± 0.0026	$H(0.15)$	72.68 ± 0.97	χ^2_{Abund}	0.74 ± 0.57
$\Omega_m h^3$	0.0955 ± 0.0029	$D_M(0.15)$	643.3 ± 9.0		
σ_8	$0.8087^{+0.0090}_{-0.010}$	$H(0.38)$	82.78 ± 0.99		

$\bar{\chi}^2_{eff} = 2799.05$; $R - 1 = 0.01367$

7.61 base_nnu_CamSpecHM_TTTEEE_lowl_lowE_BAO

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022321	0.02231 ± 0.00019	$\sigma_8\Omega_m^{0.5}$	0.4481	0.4476 ± 0.0074	$H(0.38)$	82.89	82.8 ± 1.4
$\boldsymbol{\Omega_c h^2}$	0.11858	0.1182 ± 0.0034	$\sigma_8\Omega_m^{0.25}$	0.6006	0.5999 ± 0.0087	$D_M(0.38)$	1530.8	1534 ± 27
$\boldsymbol{100\theta_{MC}}$	1.040988	1.04106 ± 0.00047	$\sigma_8/h^{0.5}$	0.9791	0.979 ± 0.011	$H(0.51)$	89.59	89.4 ± 1.4
$\boldsymbol{\tau}$	0.0533	0.0536 ± 0.0077	$r_{drag}h$	99.76	99.77 ± 0.91	$D_M(0.51)$	1983.2	1987 ± 35
$\boldsymbol{N_{eff}}$	3.023	3.00 ± 0.20	$\langle d^2\rangle^{1/2}$	2.4232	2.423 ± 0.025	$H(0.61)$	95.18	95.0 ± 1.4
$\boldsymbol{\ln(10^{10}A_s)}$	3.0368	3.036 ± 0.018	z_{re}	7.57	7.57 ± 0.78	$D_M(0.61)$	2307.9	2312 ± 40
$\boldsymbol{n_s}$	0.9667	0.9662 ± 0.0076	$10^9 A_s$	2.0838	2.083 ± 0.038	$H(2.33)$	235.50	235.1 ± 3.0
$\boldsymbol{y_{cal}}$	1.00020	1.0005 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.8729	1.871 ± 0.019	$D_M(2.33)$	5772	5782 ± 85
$\boldsymbol{A_{100}^{PS}}$	233.9	238 ± 25	D_{40}	1222.9	1224 ± 14	$f\sigma_8(0.15)$	0.4528	0.4523 ± 0.0072
$\boldsymbol{A_{143}^{PS}}$	45.4	38 ± 9	D_{220}	5718.2	5720 ± 38	$\sigma_8(0.15)$	0.7439	0.743 ± 0.011
$\boldsymbol{A_{217}^{PS}}$	101.0	102 ± 10	D_{810}	2532.9	2534 ± 14	$f\sigma_8(0.38)$	0.4714	0.4708 ± 0.0068
$\boldsymbol{A_{217}^{CIB}}$	43.3	39^{+7}_{-8}	D_{1420}	815.81	816.4 ± 5.0	$\sigma_8(0.38)$	0.6596	0.659 ± 0.010
$\boldsymbol{A_{143}^{tSZ}}$	5.94	$4.0^{+1.9}_{-2.5}$	D_{2000}	230.39	230.7 ± 2.0	$f\sigma_8(0.51)$	0.4701	0.4696 ± 0.0067
$\boldsymbol{r_{143\times217}^{PS}}$	0.641	0.66 ± 0.13	$n_{s,0.002}$	0.9667	0.9662 ± 0.0076	$\sigma_8(0.51)$	0.6173	0.6166 ± 0.0096
$\boldsymbol{r_{143\times217}^{CIB}}$	0.903	$0.56^{+0.40}_{-0.17}$	Y_P	0.24507	0.2447 ± 0.0028	$f\sigma_8(0.61)$	0.4653	0.4648 ± 0.0066
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.55	—	Y_P^{BBN}	0.24639	0.2460 ± 0.0028	$\sigma_8(0.61)$	0.5874	0.5867 ± 0.0092
$\boldsymbol{A^{kSZ}}$	1.32	< 6.09	10^5D/H	2.587	2.581 ± 0.056	$f\sigma_8(2.33)$	0.29624	0.2959 ± 0.0048
$\boldsymbol{A_{100}^{dust}}$	1.012	1.01 ± 0.19	Age/Gyr	13.818	13.84 ± 0.20	$\sigma_8(2.33)$	0.3055	0.3051 ± 0.0051
$\boldsymbol{A_{143}^{dust}}$	0.998	0.96 ± 0.17	z_*	1089.833	1089.79 ± 0.40	f_{2000}^{143}	30.15	29 ± 3
$\boldsymbol{A_{217}^{dust}}$	0.981	0.98 ± 0.10	r_*	144.95	145.2 ± 2.0	f_{2000}^{217}	106.63	106.5 ± 2.2
$\boldsymbol{A_{143\times217}^{dust}}$	0.974	1.02 ± 0.16	$100\theta_*$	1.04120	1.04128 ± 0.00059	$f_{2000}^{143\times217}$	31.93	31.7 ± 2.4
$\boldsymbol{c_{100}}$	0.99766	0.9975 ± 0.0011	$D_M(z_*)$/Gpc	13.922	13.95 ± 0.18	χ^2_{simall}	395.88	396.9 ± 1.7
$\boldsymbol{c_{217}}$	1.00145	1.0011 ± 0.0016	z_{drag}	1059.70	1059.62 ± 0.75	χ^2_{lowl}	22.86	23.0 ± 1.1
$\boldsymbol{c_{TE}}$	0.9966	0.9966 ± 0.0051	r_{drag}	147.64	147.9 ± 2.0	$\chi^2_{CamSpec}$	11500.0	11515.3 ± 6.0
$\boldsymbol{c_{EE}}$	0.9922	0.9919 ± 0.0054	k_D	0.14034	0.1402 ± 0.0015	χ^2_{6DF}	0.0220	0.056 ± 0.071
H_0	67.57	67.5 ± 1.3	$100\theta_D$	0.160795	0.16074 ± 0.00049	χ^2_{MGS}	1.279	1.35 ± 0.51
Ω_Λ	0.6900	0.6899 ± 0.0074	z_{eq}	3377.4	3378 ± 27	$\chi^2_{DR12BAO}$	4.22	4.7 ± 1.5
Ω_m	0.3100	0.3101 ± 0.0074	k_{eq}	0.010292	0.01028 ± 0.00012	χ^2_{prior}	2.31	7.8 ± 3.4
$\Omega_m h^2$	0.14154	0.1411 ± 0.0035	$100\theta_{eq}$	0.8176	0.8177 ± 0.0051	χ^2_{BAO}	5.52	6.1 ± 1.2
$\Omega_m h^3$	0.09564	$0.0952^{+0.0037}_{-0.0042}$	$100\theta_{s,eq}$	0.45169	0.4517 ± 0.0026	χ^2_{CMB}	11918.7	11935.2 ± 5.9
σ_8	0.8049	0.804 ± 0.012	$H(0.15)$	72.83	72.7 ± 1.3			
S_8	0.8182	0.817 ± 0.013	$D_M(0.15)$	641.7	643 ± 12			

Best-fit $\chi^2_{eff} = 11926.54$; $\bar{\chi}^2_{eff} = 11949.07$; $\Delta\bar{\chi}^2_{eff} = 0.79$; $R - 1 = 0.00571$

χ^2_{eff}: BAO - 6DF: 0.02 MGS: 1.28 DR12BAO: 4.22 CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.88 commander_dx12_v3_2_29: 22.86 CamSpec like_10.7HM_1400_unified: 11499.97

7.62 base_nnu_CamSpecHM_TTTEEE_lowl_lowE_BAO_post_lensing_JLA

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02230 ± 0.00019	$\sigma_8\Omega_m^{0.5}$	0.4494 ± 0.0061	$H(0.38)$	82.7 ± 1.3
$\boldsymbol{\Omega_c h^2}$	0.1181 ± 0.0032	$\sigma_8\Omega_m^{0.25}$	0.6017 ± 0.0072	$D_M(0.38)$	1536 ± 27
$\boldsymbol{100\theta_{MC}}$	1.04108 ± 0.00047	$\sigma_8/h^{0.5}$	0.9819 ± 0.0085	$H(0.51)$	89.3 ± 1.4
$\boldsymbol{\tau}$	0.0553 ± 0.0070	$r_{drag}h$	99.63 ± 0.86	$D_M(0.51)$	1990 ± 34
$\boldsymbol{N_{eff}}$	$2.99^{+0.18}_{-0.21}$	$\langle d^2\rangle^{1/2}$	2.432 ± 0.022	$H(0.61)$	94.9 ± 1.4
$\boldsymbol{\ln(10^{10}A_s)}$	3.041 ± 0.016	z_{re}	7.75 ± 0.70	$D_M(0.61)$	2316 ± 38
$\boldsymbol{n_s}$	0.9654 ± 0.0073	$10^9 A_s$	2.092 ± 0.034	$H(2.33)$	$235.1^{+2.7}_{-3.0}$
$\boldsymbol{y_{cal}}$	1.0008 ± 0.0024	$10^9 A_s e^{-2\tau}$	1.873 ± 0.018	$D_M(2.33)$	5788 ± 82
$\boldsymbol{A_{100}^{PS}}$	238 ± 24	D_{40}	1227 ± 13	$f\sigma_8(0.15)$	0.4540 ± 0.0059
$\boldsymbol{A_{143}^{PS}}$	38 ± 9	D_{220}	5726 ± 37	$\sigma_8(0.15)$	0.7445 ± 0.0099
$\boldsymbol{A_{217}^{PS}}$	103 ± 10	D_{810}	2536 ± 13	$f\sigma_8(0.38)$	0.4723 ± 0.0057
$\boldsymbol{A_{217}^{CIB}}$	39 ± 7	D_{1420}	817.1 ± 5.1	$\sigma_8(0.38)$	0.6600 ± 0.0091
$\boldsymbol{A_{143}^{tSZ}}$	$4.0^{+1.9}_{-2.4}$	D_{2000}	231.0 ± 2.1	$f\sigma_8(0.51)$	0.4710 ± 0.0056
$\boldsymbol{r_{143\times217}^{PS}}$	0.66 ± 0.14	$n_{s,0.002}$	0.9654 ± 0.0073	$\sigma_8(0.51)$	0.6177 ± 0.0087
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.55^{+0.41}_{-0.18}$	Y_P	0.2446 ± 0.0027	$f\sigma_8(0.61)$	0.4660 ± 0.0056
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	0.2459 ± 0.0027	$\sigma_8(0.61)$	0.5878 ± 0.0084
$\boldsymbol{A^{kSZ}}$	< 5.77	10^5D/H	2.578 ± 0.054	$f\sigma_8(2.33)$	0.2964 ± 0.0044
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.19	Age/Gyr	13.86 ± 0.20	$\sigma_8(2.33)$	0.3056 ± 0.0047
$\boldsymbol{A_{143}^{dust}}$	0.95 ± 0.17	z_*	1089.78 ± 0.39	f_{2000}^{143}	29 ± 3
$\boldsymbol{A_{217}^{dust}}$	0.98 ± 0.10	r_*	145.3 ± 1.9	f_{2000}^{217}	106.4 ± 2.2
$\boldsymbol{A_{143\times217}^{dust}}$	1.02 ± 0.16	$100\theta_*$	1.04131 ± 0.00058	$f_{2000}^{143\times217}$	31.5 ± 2.5
$\boldsymbol{c_{100}}$	0.9976 ± 0.0010	$D_M(z_*)$/Gpc	13.95 ± 0.18	$\chi^2_{lensing}$	9.29 ± 0.86
$\boldsymbol{c_{217}}$	1.0011 ± 0.0015	z_{drag}	1059.60 ± 0.73	χ^2_{simall}	397.0 ± 1.7
$\boldsymbol{c_{TE}}$	0.9964 ± 0.0052	r_{drag}	148.0 ± 2.0	χ^2_{lowl}	23.2 ± 1.1
$\boldsymbol{c_{EE}}$	0.9917 ± 0.0053	k_D	0.1401 ± 0.0014	$\chi^2_{CamSpec}$	11514.6 ± 5.9
H_0	67.3 ± 1.3	$100\theta_D$	0.16071 ± 0.00048	χ^2_{JLA}	706.78 ± 0.21
Ω_Λ	$0.6888^{+0.0074}_{-0.0066}$	z_{eq}	3382 ± 25	χ^2_{6DF}	0.061 ± 0.076
Ω_m	$0.3112^{+0.0066}_{-0.0074}$	k_{eq}	0.01028 ± 0.00012	χ^2_{MGS}	1.27 ± 0.46
$\Omega_m h^2$	$0.1411^{+0.0031}_{-0.0035}$	$100\theta_{eq}$	0.8168 ± 0.0048	$\chi^2_{DR12BAO}$	4.9 ± 1.6
$\Omega_m h^3$	$0.0950^{+0.0035}_{-0.0041}$	$100\theta_{s,eq}$	0.4513 ± 0.0024	χ^2_{prior}	7.7 ± 3.3
σ_8	0.806 ± 0.010	$H(0.15)$	72.6 ± 1.3	χ^2_{CMB}	11944.1 ± 6.0
S_8	0.821 ± 0.011	$D_M(0.15)$	644 ± 12	χ^2_{BAO}	6.2 ± 1.3

$\bar{\chi}^2_{eff} = 12664.75$; $R - 1 = 0.04059$

7.63 base_nnu_CamSpecHM_TTTEEE_lowl_lowE_BAO_post_lensing_Pantheon

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02232 ± 0.00019	$\sigma_8\Omega_m^{0.5}$	0.4490 ± 0.0061	$H(0.38)$	82.8 ± 1.3
$\boldsymbol{\Omega_c h^2}$	0.1182 ± 0.0032	$\sigma_8\Omega_m^{0.25}$	0.6016 ± 0.0073	$D_M(0.38)$	1534 ± 26
$\boldsymbol{100\theta_{MC}}$	1.04106 ± 0.00046	$\sigma_8/h^{0.5}$	0.9815 ± 0.0085	$H(0.51)$	89.5 ± 1.3
$\boldsymbol{\tau}$	0.0558 ± 0.0071	$r_{drag}h$	99.74 ± 0.84	$D_M(0.51)$	1987 ± 33
$\boldsymbol{N_{eff}}$	3.00 ± 0.19	$\langle d^2\rangle^{1/2}$	2.431 ± 0.021	$H(0.61)$	95.0 ± 1.4
$\boldsymbol{\ln(10^{10}A_s)}$	3.042 ± 0.016	z_{re}	7.79 ± 0.71	$D_M(0.61)$	2312 ± 38
$\boldsymbol{n_s}$	0.9660 ± 0.0073	$10^9 A_s$	2.094 ± 0.034	$H(2.33)$	235.2 ± 2.8
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.873 ± 0.018	$D_M(2.33)$	5781 ± 81
$\boldsymbol{A_{100}^{PS}}$	238 ± 25	D_{40}	1226 ± 13	$f\sigma_8(0.15)$	0.4537 ± 0.0059
$\boldsymbol{A_{143}^{PS}}$	38 ± 9	D_{220}	5726 ± 38	$\sigma_8(0.15)$	0.7451 ± 0.0099
$\boldsymbol{A_{217}^{PS}}$	103 ± 10	D_{810}	2535 ± 13	$f\sigma_8(0.38)$	0.4722 ± 0.0057
$\boldsymbol{A_{217}^{CIB}}$	39 ± 7	D_{1420}	816.9 ± 5.0	$\sigma_8(0.38)$	0.6606 ± 0.0091
$\boldsymbol{A_{143}^{tSZ}}$	$4.0^{+1.9}_{-2.5}$	D_{2000}	230.9 ± 2.0	$f\sigma_8(0.51)$	0.4709 ± 0.0057
$\boldsymbol{r_{143\times217}^{PS}}$	0.66 ± 0.14	$n_{s,0.002}$	0.9660 ± 0.0073	$\sigma_8(0.51)$	0.6183 ± 0.0087
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.55^{+0.41}_{-0.17}$	Y_P	0.2447 ± 0.0027	$f\sigma_8(0.61)$	0.4661 ± 0.0056
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	0.2461 ± 0.0027	$\sigma_8(0.61)$	0.5883 ± 0.0084
$\boldsymbol{A^{kSZ}}$	< 6.01	10^5D/H	2.580 ± 0.054	$f\sigma_8(2.33)$	0.2967 ± 0.0044
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.20	Age/Gyr	13.84 ± 0.19	$\sigma_8(2.33)$	0.3059 ± 0.0047
$\boldsymbol{A_{143}^{dust}}$	0.95 ± 0.17	z_*	1089.78 ± 0.39	f_{2000}^{143}	29 ± 3
$\boldsymbol{A_{217}^{dust}}$	0.98 ± 0.10	r_*	145.2 ± 1.9	f_{2000}^{217}	106.5 ± 2.2
$\boldsymbol{A_{143\times217}^{dust}}$	1.02 ± 0.16	$100\theta_*$	1.04128 ± 0.00057	$f_{2000}^{143\times217}$	31.6 ± 2.4
$\boldsymbol{c_{100}}$	0.9976 ± 0.0011	$D_M(z_*)$/Gpc	13.94 ± 0.17	$\chi^2_{lensing}$	9.32 ± 0.86
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	z_{drag}	1059.65 ± 0.72	χ^2_{simall}	397.1 ± 1.8
$\boldsymbol{c_{TE}}$	0.9964 ± 0.0051	r_{drag}	147.9 ± 2.0	χ^2_{lowl}	23.1 ± 1.1
$\boldsymbol{c_{EE}}$	0.9919 ± 0.0054	k_D	0.1402 ± 0.0014	$\chi^2_{CamSpec}$	11514.7 ± 5.8
H_0	67.5 ± 1.2	$100\theta_D$	0.16073 ± 0.00047	χ^2_{JLA}	1036.37 ± 0.36
Ω_Λ	0.6897 ± 0.0068	z_{eq}	3379 ± 25	χ^2_{6DF}	0.052 ± 0.064
Ω_m	0.3103 ± 0.0068	k_{eq}	0.01028 ± 0.00012	χ^2_{MGS}	1.33 ± 0.46
$\Omega_m h^2$	0.1412 ± 0.0033	$100\theta_{eq}$	0.8175 ± 0.0047	$\chi^2_{DR12BAO}$	4.7 ± 1.4
$\Omega_m h^3$	0.0953 ± 0.0038	$100\theta_{s,eq}$	0.4516 ± 0.0024	χ^2_{prior}	7.7 ± 3.4
σ_8	0.806 ± 0.010	$H(0.15)$	72.7 ± 1.3	χ^2_{CMB}	11944.3 ± 5.9
S_8	0.820 ± 0.011	$D_M(0.15)$	643 ± 11	χ^2_{BAO}	6.1 ± 1.1

$\bar{\chi}^2_{eff} = 12994.43$; $\Delta\bar{\chi}^2_{eff} = 0.76$; $R - 1 = 0.01041$

7.64 base_nnu_CamSpecHM_TTTEEE_lowl_lowE_BAO_post_lensing

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02230 ± 0.00019	$\sigma_8\Omega_m^{0.5}$	0.4495 ± 0.0061	$H(0.38)$	82.6 ± 1.3
$\boldsymbol{\Omega_c h^2}$	0.1180 ± 0.0032	$\sigma_8\Omega_m^{0.25}$	0.6017 ± 0.0073	$D_M(0.38)$	1537 ± 27
$\boldsymbol{100\theta_{MC}}$	1.04108 ± 0.00046	$\sigma_8/h^{0.5}$	0.9820 ± 0.0086	$H(0.51)$	89.3 ± 1.4
$\boldsymbol{\tau}$	0.0554 ± 0.0071	$r_{drag}h$	99.59 ± 0.87	$D_M(0.51)$	1991 ± 34
$\boldsymbol{N_{eff}}$	2.98 ± 0.20	$\langle d^2\rangle^{1/2}$	2.433 ± 0.021	$H(0.61)$	94.9 ± 1.4
$\boldsymbol{\ln(10^{10}A_s)}$	3.040 ± 0.016	z_{re}	7.76 ± 0.71	$D_M(0.61)$	2317 ± 39
$\boldsymbol{n_s}$	0.9651 ± 0.0074	$10^9 A_s$	2.092 ± 0.034	$H(2.33)$	235.0 ± 2.8
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.872 ± 0.018	$D_M(2.33)$	5791 ± 83
$\boldsymbol{A_{100}^{PS}}$	238 ± 25	D_{40}	1227 ± 13	$f\sigma_8(0.15)$	0.4541 ± 0.0059
$\boldsymbol{A_{143}^{PS}}$	38 ± 9	D_{220}	5725 ± 38	$\sigma_8(0.15)$	0.744 ± 0.010
$\boldsymbol{A_{217}^{PS}}$	103 ± 10	D_{810}	2535 ± 13	$f\sigma_8(0.38)$	0.4723 ± 0.0057
$\boldsymbol{A_{217}^{CIB}}$	39 ± 7	D_{1420}	816.9 ± 5.0	$\sigma_8(0.38)$	0.6598 ± 0.0092
$\boldsymbol{A_{143}^{tSZ}}$	$4.0^{+1.9}_{-2.5}$	D_{2000}	230.9 ± 2.0	$f\sigma_8(0.51)$	0.4709 ± 0.0057
$\boldsymbol{r_{143\times217}^{PS}}$	0.66 ± 0.14	$n_{s,0.002}$	0.9651 ± 0.0074	$\sigma_8(0.51)$	0.6174 ± 0.0088
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.55^{+0.41}_{-0.17}$	Y_P	0.2445 ± 0.0027	$f\sigma_8(0.61)$	0.4660 ± 0.0056
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	0.2458 ± 0.0027	$\sigma_8(0.61)$	0.5875 ± 0.0085
$\boldsymbol{A^{kSZ}}$	< 5.97	10^5D/H	2.577 ± 0.054	$f\sigma_8(2.33)$	0.2962 ± 0.0044
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.20	Age/Gyr	13.86 ± 0.20	$\sigma_8(2.33)$	0.3054 ± 0.0048
$\boldsymbol{A_{143}^{dust}}$	0.95 ± 0.17	z_*	1089.78 ± 0.39	f_{2000}^{143}	29 ± 3
$\boldsymbol{A_{217}^{dust}}$	0.98 ± 0.10	r_*	145.4 ± 1.9	f_{2000}^{217}	106.4 ± 2.2
$\boldsymbol{A_{143\times217}^{dust}}$	1.02 ± 0.16	$100\theta_*$	1.04131 ± 0.00058	$f_{2000}^{143\times217}$	31.5 ± 2.4
$\boldsymbol{c_{100}}$	0.9976 ± 0.0010	$D_M(z_*)$/Gpc	13.96 ± 0.18	$\chi^2_{lensing}$	9.27 ± 0.84
$\boldsymbol{c_{217}}$	1.0011 ± 0.0015	z_{drag}	1059.57 ± 0.73	χ^2_{simall}	397.1 ± 1.8
$\boldsymbol{c_{TE}}$	0.9963 ± 0.0051	r_{drag}	148.1 ± 2.0	χ^2_{lowl}	23.2 ± 1.1
$\boldsymbol{c_{EE}}$	0.9916 ± 0.0054	k_D	0.1401 ± 0.0014	$\chi^2_{CamSpec}$	11514.5 ± 5.8
H_0	67.3 ± 1.3	$100\theta_D$	0.16070 ± 0.00048	χ^2_{6DF}	0.065 ± 0.077
Ω_Λ	0.6885 ± 0.0071	z_{eq}	3383 ± 26	χ^2_{MGS}	1.25 ± 0.47
Ω_m	0.3115 ± 0.0071	k_{eq}	0.01028 ± 0.00012	$\chi^2_{DR12BAO}$	5.0 ± 1.6
$\Omega_m h^2$	0.1410 ± 0.0033	$100\theta_{eq}$	0.8166 ± 0.0049	χ^2_{prior}	7.7 ± 3.4
$\Omega_m h^3$	$0.0949^{+0.0036}_{-0.0040}$	$100\theta_{s,eq}$	0.4512 ± 0.0025	χ^2_{CMB}	11944.1 ± 5.9
σ_8	0.805 ± 0.011	$H(0.15)$	72.5 ± 1.3	χ^2_{BAO}	6.3 ± 1.3
S_8	0.821 ± 0.011	$D_M(0.15)$	645 ± 12		

$\bar{\chi}^2_{eff} = 11958.08$; $\Delta\bar{\chi}^2_{eff} = 0.68$; $R - 1 = 0.01000$

7.65 base_nnu_CamSpecHM_TTTEEE_lowl_lowE_BAO_post_Aver15

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02229 ± 0.00018	$\sigma_8\Omega_m^{0.5}$	0.4472 ± 0.0073	$H(0.38)$	82.6 ± 1.1
$\boldsymbol{\Omega_c h^2}$	0.1177 ± 0.0028	$\sigma_8\Omega_m^{0.25}$	0.5991 ± 0.0082	$D_M(0.38)$	1537 ± 23
$\boldsymbol{100\theta_{MC}}$	1.04111 ± 0.00042	$\sigma_8/h^{0.5}$	0.978 ± 0.011	$H(0.51)$	89.2 ± 1.1
$\boldsymbol{\tau}$	0.0536 ± 0.0077	$r_{drag}h$	99.71 ± 0.87	$D_M(0.51)$	1992 ± 29
$\boldsymbol{N_{eff}}$	2.97 ± 0.17	$\langle d^2\rangle^{1/2}$	2.424 ± 0.025	$H(0.61)$	94.8 ± 1.2
$\boldsymbol{\ln(10^{10}A_s)}$	3.035 ± 0.018	z_{re}	7.56 ± 0.78	$D_M(0.61)$	2318 ± 33
$\boldsymbol{n_s}$	0.9652 ± 0.0066	$10^9 A_s$	2.081 ± 0.037	$H(2.33)$	234.7 ± 2.4
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.869 ± 0.017	$D_M(2.33)$	5794 ± 70
$\boldsymbol{A_{100}^{PS}}$	238 ± 25	D_{40}	1225 ± 13	$f\sigma_8(0.15)$	0.4519 ± 0.0070
$\boldsymbol{A_{143}^{PS}}$	38 ± 8	D_{220}	5720 ± 38	$\sigma_8(0.15)$	0.7417 ± 0.0098
$\boldsymbol{A_{217}^{PS}}$	102 ± 10	D_{810}	2533 ± 14	$f\sigma_8(0.38)$	0.4702 ± 0.0065
$\boldsymbol{A_{217}^{CIB}}$	39 ± 7	D_{1420}	816.6 ± 5.0	$\sigma_8(0.38)$	0.6575 ± 0.0089
$\boldsymbol{A_{143}^{tSZ}}$	$4.0^{+1.9}_{-2.5}$	D_{2000}	230.9 ± 1.9	$f\sigma_8(0.51)$	0.4689 ± 0.0063
$\boldsymbol{r_{143\times217}^{PS}}$	0.66 ± 0.14	$n_{s,0.002}$	0.9652 ± 0.0066	$\sigma_8(0.51)$	0.6154 ± 0.0084
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.56^{+0.42}_{-0.16}$	Y_P	0.2443 ± 0.0023	$f\sigma_8(0.61)$	0.4641 ± 0.0061
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	0.2456 ± 0.0023	$\sigma_8(0.61)$	0.5856 ± 0.0081
$\boldsymbol{A^{kSZ}}$	< 6.07	10^5D/H	2.574 ± 0.048	$f\sigma_8(2.33)$	0.2953 ± 0.0041
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.20	Age/Gyr	13.87 ± 0.17	$\sigma_8(2.33)$	0.3045 ± 0.0044
$\boldsymbol{A_{143}^{dust}}$	0.96 ± 0.18	z_*	1089.74 ± 0.36	f_{2000}^{143}	28.9 ± 3.1
$\boldsymbol{A_{217}^{dust}}$	0.98 ± 0.10	r_*	145.5 ± 1.6	f_{2000}^{217}	106.3 ± 2.1
$\boldsymbol{A_{143\times217}^{dust}}$	1.02 ± 0.16	$100\theta_*$	1.04135 ± 0.00051	$f_{2000}^{143\times217}$	31.5 ± 2.3
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	$D_M(z_*)$/Gpc	13.97 ± 0.15	χ^2_{simall}	396.9 ± 1.7
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	z_{drag}	1059.53 ± 0.63	χ^2_{lowl}	23.1 ± 1.0
$\boldsymbol{c_{TE}}$	0.9964 ± 0.0051	r_{drag}	148.2 ± 1.7	$\chi^2_{CamSpec}$	11514.9 ± 5.8
$\boldsymbol{c_{EE}}$	0.9916 ± 0.0053	k_D	0.1399 ± 0.0012	χ^2_{Aver15}	0.36 ± 0.51
H_0	67.3 ± 1.1	$100\theta_D$	0.16068 ± 0.00042	χ^2_{6DF}	0.056 ± 0.070
Ω_Λ	0.6894 ± 0.0069	z_{eq}	3379 ± 26	χ^2_{MGS}	1.32 ± 0.48
Ω_m	0.3106 ± 0.0069	k_{eq}	0.01026 ± 0.00011	$\chi^2_{DR12BAO}$	4.8 ± 1.5
$\Omega_m h^2$	0.1406 ± 0.0029	$100\theta_{eq}$	0.8173 ± 0.0048	χ^2_{prior}	7.8 ± 3.4
$\Omega_m h^3$	0.0946 ± 0.0032	$100\theta_{s,eq}$	0.4515 ± 0.0025	χ^2_{BAO}	6.1 ± 1.2
σ_8	0.803 ± 0.011	$H(0.15)$	72.5 ± 1.1	χ^2_{CMB}	11934.9 ± 5.8
S_8	0.817 ± 0.013	$D_M(0.15)$	645 ± 10		

$\bar{\chi}^2_{eff} = 11949.20$; $R - 1 = 0.00729$

7.66 base_nnu_CamSpecHM_TTTEEE_lowl_lowE_BAO_post_Cooke17_Aver15

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02229 ± 0.00018	$\sigma_8\Omega_m^{0.25}$	0.6000 ± 0.0080	$H(0.51)$	89.4 ± 1.1
$\boldsymbol{\Omega_c h^2}$	0.1181 ± 0.0026	$\sigma_8/h^{0.5}$	0.979 ± 0.010	$D_M(0.51)$	1988 ± 27
$\boldsymbol{100\theta_{MC}}$	1.04106 ± 0.00040	$r_{drag}h$	99.73 ± 0.87	$H(0.61)$	95.0 ± 1.1
$\boldsymbol{\tau}$	0.0535 ± 0.0077	$\langle d^2\rangle^{1/2}$	2.424 ± 0.025	$D_M(0.61)$	2314 ± 31
$\boldsymbol{N_{eff}}$	3.00 ± 0.15	z_{re}	7.56 ± 0.78	$H(2.33)$	235.1 ± 2.3
$\boldsymbol{\ln(10^{10}A_s)}$	3.036 ± 0.018	$10^9 A_s$	2.082 ± 0.037	$D_M(2.33)$	5784 ± 66
$\boldsymbol{n_s}$	0.9659 ± 0.0063	$10^9 A_s e^{-2\tau}$	1.871 ± 0.016	$f\sigma_8(0.15)$	0.4525 ± 0.0069
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	D_{40}	1224 ± 13	$\sigma_8(0.15)$	0.7428 ± 0.0095
$\boldsymbol{A_{100}^{PS}}$	238 ± 25	D_{220}	5719 ± 38	$f\sigma_8(0.38)$	0.4709 ± 0.0063
$\boldsymbol{A_{143}^{PS}}$	38 ± 8	D_{810}	2533 ± 14	$\sigma_8(0.38)$	0.6586 ± 0.0085
$\boldsymbol{A_{217}^{PS}}$	102 ± 10	D_{1420}	816.2 ± 4.9	$f\sigma_8(0.51)$	0.4696 ± 0.0061
$\boldsymbol{A_{217}^{CIB}}$	40 ± 7	D_{2000}	230.6 ± 1.8	$\sigma_8(0.51)$	0.6164 ± 0.0081
$\boldsymbol{A_{143}^{tSZ}}$	$3.9^{+1.9}_{-2.5}$	$n_{s,0.002}$	0.9659 ± 0.0063	$f\sigma_8(0.61)$	0.4648 ± 0.0059
$\boldsymbol{r_{143\times217}^{PS}}$	0.66 ± 0.13	Y_P	0.2447 ± 0.0021	$\sigma_8(0.61)$	0.5865 ± 0.0077
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.56^{+0.42}_{-0.15}$	Y_P^{BBN}	0.2460 ± 0.0021	$f\sigma_8(2.33)$	0.2958 ± 0.0040
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	10^5D/H	2.583 ± 0.043	$\sigma_8(2.33)$	0.3050 ± 0.0042
$\boldsymbol{A^{kSZ}}$	$4.6^{+1.7}_{-4.4}$	Age/Gyr	13.85 ± 0.16	f_{2000}^{143}	29.3 ± 3.1
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.20	z_*	1089.80 ± 0.32	f_{2000}^{217}	106.5 ± 2.1
$\boldsymbol{A_{143}^{dust}}$	0.96 ± 0.18	r_*	145.3 ± 1.5	$f_{2000}^{143\times217}$	31.8 ± 2.2
$\boldsymbol{A_{217}^{dust}}$	0.97 ± 0.10	$100\theta_*$	1.04128 ± 0.00048	χ^2_{simall}	396.9 ± 1.6
$\boldsymbol{A_{143\times217}^{dust}}$	1.02 ± 0.16	$D_M(z_*)$/Gpc	13.95 ± 0.14	χ^2_{lowl}	23.00 ± 0.99
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	z_{drag}	1059.57 ± 0.62	$\chi^2_{CamSpec}$	11514.9 ± 5.8
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	r_{drag}	148.0 ± 1.6	χ^2_{Aver15}	0.36 ± 0.49
$\boldsymbol{c_{TE}}$	0.9966 ± 0.0051	k_D	0.1401 ± 0.0011	$\chi^2_{Cooke17}$	0.35 ± 0.45
$\boldsymbol{c_{EE}}$	0.9920 ± 0.0051	$100\theta_D$	0.16075 ± 0.00038	χ^2_{6DF}	0.055 ± 0.069
H_0	67.4 ± 1.1	z_{eq}	3378 ± 26	χ^2_{MGS}	1.32 ± 0.48
Ω_Λ	0.6895 ± 0.0069	k_{eq}	0.01027 ± 0.00010	$\chi^2_{DR12BAO}$	4.7 ± 1.5
Ω_m	0.3105 ± 0.0069	$100\theta_{eq}$	0.8175 ± 0.0048	χ^2_{prior}	7.8 ± 3.5
$\Omega_m h^2$	0.1410 ± 0.0027	$100\theta_{s,eq}$	0.4516 ± 0.0025	χ^2_{BAO}	6.1 ± 1.2
$\Omega_m h^3$	0.0951 ± 0.0030	$H(0.15)$	72.7 ± 1.0	χ^2_{CMB}	11934.8 ± 5.8
σ_8	0.804 ± 0.010	$D_M(0.15)$	643.3 ± 9.6	χ^2_{Abund}	0.71 ± 0.65
S_8	0.818 ± 0.013	$H(0.38)$	82.7 ± 1.1		
$\sigma_8\Omega_m^{0.5}$	0.4478 ± 0.0072	$D_M(0.38)$	1535 ± 22		

$\bar{\chi}^2_{eff} = 11949.40$; $R - 1 = 0.00827$

7.67 base_nnu_CamSpecHM_TTTEEE_lowl_lowE_BAO_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02231 ± 0.00019	$\sigma_8\Omega_m^{0.5}$	0.4481 ± 0.0073	$H(0.38)$	82.8 ± 1.4
$\boldsymbol{\Omega_c h^2}$	0.1182 ± 0.0034	$\sigma_8\Omega_m^{0.25}$	0.6006 ± 0.0084	$D_M(0.38)$	1533 ± 27
$\boldsymbol{100\theta_{MC}}$	1.04106 ± 0.00047	$\sigma_8/h^{0.5}$	0.980 ± 0.010	$H(0.51)$	89.5 ± 1.4
$\boldsymbol{\tau}$	$0.0549^{+0.0050}_{-0.0079}$	$r_{drag}h$	99.79 ± 0.91	$D_M(0.51)$	1986 ± 35
$\boldsymbol{N_{eff}}$	3.00 ± 0.20	$\langle d^2\rangle^{1/2}$	2.426 ± 0.024	$H(0.61)$	95.1 ± 1.4
$\boldsymbol{\ln(10^{10}A_s)}$	$3.039^{+0.015}_{-0.018}$	z_{re}	$7.70^{+0.55}_{-0.80}$	$D_M(0.61)$	2312 ± 40
$\boldsymbol{n_s}$	0.9664 ± 0.0076	$10^9 A_s$	$2.089^{+0.031}_{-0.038}$	$H(2.33)$	235.1 ± 3.0
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.871 ± 0.019	$D_M(2.33)$	5781 ± 85
$\boldsymbol{A_{100}^{PS}}$	238 ± 25	D_{40}	1224 ± 14	$f\sigma_8(0.15)$	0.4528 ± 0.0070
$\boldsymbol{A_{143}^{PS}}$	38 ± 9	D_{220}	5720 ± 38	$\sigma_8(0.15)$	0.744 ± 0.011
$\boldsymbol{A_{217}^{PS}}$	102 ± 10	D_{810}	2534 ± 14	$f\sigma_8(0.38)$	0.4713 ± 0.0066
$\boldsymbol{A_{217}^{CIB}}$	39^{+7}_{-8}	D_{1420}	816.4 ± 5.0	$\sigma_8(0.38)$	0.6597 ± 0.0098
$\boldsymbol{A_{143}^{tSZ}}$	$4.0^{+1.9}_{-2.4}$	D_{2000}	230.7 ± 2.1	$f\sigma_8(0.51)$	0.4701 ± 0.0065
$\boldsymbol{r_{143\times217}^{PS}}$	0.66 ± 0.13	$n_{s,0.002}$	0.9664 ± 0.0076	$\sigma_8(0.51)$	0.6174 ± 0.0093
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.56^{+0.40}_{-0.17}$	Y_P	0.2448 ± 0.0028	$f\sigma_8(0.61)$	0.4653 ± 0.0064
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	0.2461 ± 0.0028	$\sigma_8(0.61)$	0.5875 ± 0.0089
$\boldsymbol{A^{kSZ}}$	< 6.07	10^5D/H	2.581 ± 0.056	$f\sigma_8(2.33)$	0.2963 ± 0.0046
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.19	Age/Gyr	13.84 ± 0.20	$\sigma_8(2.33)$	0.3056 ± 0.0049
$\boldsymbol{A_{143}^{dust}}$	0.96 ± 0.17	z_*	1089.78 ± 0.41	f_{2000}^{143}	29 ± 3
$\boldsymbol{A_{217}^{dust}}$	0.98 ± 0.10	r_*	145.2 ± 2.0	f_{2000}^{217}	106.5 ± 2.2
$\boldsymbol{A_{143\times217}^{dust}}$	1.02 ± 0.16	$100\theta_*$	1.04128 ± 0.00059	$f_{2000}^{143\times217}$	31.6 ± 2.4
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	$D_M(z_*)$/Gpc	13.94 ± 0.18	χ^2_{simall}	396.9 ± 1.7
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	z_{drag}	1059.64 ± 0.75	χ^2_{lowl}	23.0 ± 1.1
$\boldsymbol{c_{TE}}$	0.9965 ± 0.0051	r_{drag}	147.9 ± 2.0	$\chi^2_{CamSpec}$	11515.1 ± 5.9
$\boldsymbol{c_{EE}}$	0.9919 ± 0.0055	k_D	0.1402 ± 0.0015	χ^2_{6DF}	0.054 ± 0.070
H_0	67.5 ± 1.3	$100\theta_D$	0.16074 ± 0.00049	χ^2_{MGS}	1.36 ± 0.51
Ω_Λ	0.6901 ± 0.0073	z_{eq}	3377 ± 27	$\chi^2_{DR12BAO}$	4.7 ± 1.5
Ω_m	0.3099 ± 0.0073	k_{eq}	0.01028 ± 0.00012	χ^2_{prior}	7.7 ± 3.4
$\Omega_m h^2$	0.1411 ± 0.0035	$100\theta_{eq}$	0.8178 ± 0.0051	χ^2_{BAO}	6.1 ± 1.2
$\Omega_m h^3$	$0.0953^{+0.0037}_{-0.0042}$	$100\theta_{s,eq}$	0.4518 ± 0.0026	χ^2_{CMB}	11935.0 ± 5.8
σ_8	0.805 ± 0.011	$H(0.15)$	72.7 ± 1.3		
S_8	0.818 ± 0.013	$D_M(0.15)$	643 ± 12		

$\bar{\chi}^2_{eff} = 11948.82$; $\Delta\bar{\chi}^2_{eff} = 0.83$; $R - 1 = 0.00628$

7.68 base_nnu_CamSpecHM_TTTEEE_lowl_lowE_BAO_post_lensing_JLA_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02231 ± 0.00019	$\sigma_8\Omega_m^{0.5}$	0.4495 ± 0.0061	$H(0.38)$	82.7 ± 1.3
$\boldsymbol{\Omega_c h^2}$	0.1181 ± 0.0032	$\sigma_8\Omega_m^{0.25}$	0.6020 ± 0.0071	$D_M(0.38)$	1536 ± 27
$\boldsymbol{100\theta_{MC}}$	1.04108 ± 0.00047	$\sigma_8/h^{0.5}$	0.9823 ± 0.0083	$H(0.51)$	89.3 ± 1.4
$\boldsymbol{\tau}$	$0.0560^{+0.0056}_{-0.0070}$	$r_{drag}h$	99.65 ± 0.85	$D_M(0.51)$	1990 ± 34
$\boldsymbol{N_{eff}}$	$2.99^{+0.18}_{-0.21}$	$\langle d^2\rangle^{1/2}$	2.433 ± 0.021	$H(0.61)$	94.9 ± 1.4
$\boldsymbol{\ln(10^{10}A_s)}$	3.042 ± 0.015	z_{re}	$7.82^{+0.59}_{-0.70}$	$D_M(0.61)$	2315 ± 38
$\boldsymbol{n_s}$	0.9655 ± 0.0073	$10^9 A_s$	$2.095^{+0.030}_{-0.034}$	$H(2.33)$	235.0 ± 2.8
$\boldsymbol{y_{cal}}$	1.0008 ± 0.0024	$10^9 A_s e^{-2\tau}$	1.873 ± 0.018	$D_M(2.33)$	5787 ± 82
$\boldsymbol{A_{100}^{PS}}$	237 ± 24	D_{40}	1227 ± 13	$f\sigma_8(0.15)$	0.4541 ± 0.0058
$\boldsymbol{A_{143}^{PS}}$	38 ± 9	D_{220}	5725 ± 37	$\sigma_8(0.15)$	0.7449 ± 0.0097
$\boldsymbol{A_{217}^{PS}}$	103 ± 10	D_{810}	2536 ± 13	$f\sigma_8(0.38)$	0.4725 ± 0.0056
$\boldsymbol{A_{217}^{CIB}}$	39 ± 7	D_{1420}	817.1 ± 5.1	$\sigma_8(0.38)$	0.6604 ± 0.0090
$\boldsymbol{A_{143}^{tSZ}}$	$4.0^{+1.9}_{-2.4}$	D_{2000}	231.0 ± 2.1	$f\sigma_8(0.51)$	0.4712 ± 0.0055
$\boldsymbol{r_{143\times217}^{PS}}$	0.66 ± 0.14	$n_{s,0.002}$	0.9655 ± 0.0073	$\sigma_8(0.51)$	0.6180 ± 0.0085
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.55^{+0.40}_{-0.18}$	Y_P	0.2446 ± 0.0027	$f\sigma_8(0.61)$	0.4663 ± 0.0055
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	0.2459 ± 0.0027	$\sigma_8(0.61)$	0.5881 ± 0.0082
$\boldsymbol{A^{kSZ}}$	< 5.77	10^5D/H	2.578 ± 0.054	$f\sigma_8(2.33)$	0.2966 ± 0.0043
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.19	Age/Gyr	13.86 ± 0.20	$\sigma_8(2.33)$	0.3058 ± 0.0046
$\boldsymbol{A_{143}^{dust}}$	0.95 ± 0.17	z_*	1089.77 ± 0.39	f_{2000}^{143}	29 ± 3
$\boldsymbol{A_{217}^{dust}}$	0.98 ± 0.10	r_*	145.3 ± 1.9	f_{2000}^{217}	106.4 ± 2.2
$\boldsymbol{A_{143\times217}^{dust}}$	1.02 ± 0.16	$100\theta_*$	1.04131 ± 0.00058	$f_{2000}^{143\times217}$	31.5 ± 2.5
$\boldsymbol{c_{100}}$	0.9975 ± 0.0010	$D_M(z_*)$/Gpc	13.95 ± 0.18	$\chi^2_{lensing}$	9.23 ± 0.79
$\boldsymbol{c_{217}}$	1.0011 ± 0.0015	z_{drag}	1059.60 ± 0.73	χ^2_{simall}	397.0 ± 1.7
$\boldsymbol{c_{TE}}$	0.9963 ± 0.0052	r_{drag}	148.0 ± 2.0	χ^2_{lowl}	23.2 ± 1.1
$\boldsymbol{c_{EE}}$	0.9917 ± 0.0054	k_D	0.1401 ± 0.0014	$\chi^2_{CamSpec}$	11514.5 ± 5.9
H_0	67.3 ± 1.3	$100\theta_D$	0.16071 ± 0.00048	χ^2_{JLA}	706.78 ± 0.21
Ω_Λ	$0.6889^{+0.0074}_{-0.0066}$	z_{eq}	3382 ± 25	χ^2_{6DF}	0.059 ± 0.073
Ω_m	$0.3111^{+0.0066}_{-0.0074}$	k_{eq}	0.01028 ± 0.00011	χ^2_{MGS}	1.28 ± 0.46
$\Omega_m h^2$	$0.1410^{+0.0031}_{-0.0035}$	$100\theta_{eq}$	0.8169 ± 0.0048	$\chi^2_{DR12BAO}$	4.8 ± 1.5
$\Omega_m h^3$	$0.0950^{+0.0035}_{-0.0041}$	$100\theta_{s,eq}$	0.4513 ± 0.0024	χ^2_{prior}	7.7 ± 3.3
σ_8	0.806 ± 0.010	$H(0.15)$	72.6 ± 1.3	χ^2_{CMB}	11943.9 ± 6.0
S_8	0.821 ± 0.011	$D_M(0.15)$	644 ± 12	χ^2_{BAO}	6.2 ± 1.2

$\bar{\chi}^2_{eff} = 12664.58$; $R - 1 = 0.04058$

7.69 base_nnu_CamSpecHM_TTTEEE_lowl_lowE_BAO_post_lensing_Pantheon_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02232 ± 0.00019	$\sigma_8\Omega_m^{0.5}$	0.4491 ± 0.0061	$H(0.38)$	82.8 ± 1.3
$\boldsymbol{\Omega_c h^2}$	0.1182 ± 0.0032	$\sigma_8\Omega_m^{0.25}$	0.6019 ± 0.0072	$D_M(0.38)$	1533 ± 26
$\boldsymbol{100\theta_{MC}}$	1.04106 ± 0.00046	$\sigma_8/h^{0.5}$	0.9819 ± 0.0083	$H(0.51)$	89.5 ± 1.3
$\boldsymbol{\tau}$	$0.0564^{+0.0057}_{-0.0073}$	$r_{drag}h$	99.76 ± 0.83	$D_M(0.51)$	1987 ± 33
$\boldsymbol{N_{eff}}$	3.00 ± 0.19	$\langle d^2\rangle^{1/2}$	2.432 ± 0.021	$H(0.61)$	95.1 ± 1.4
$\boldsymbol{\ln(10^{10}A_s)}$	$3.043^{+0.014}_{-0.016}$	z_{re}	$7.85^{+0.61}_{-0.71}$	$D_M(0.61)$	2312 ± 38
$\boldsymbol{n_s}$	0.9661 ± 0.0073	10^9A_s	$2.097^{+0.030}_{-0.034}$	$H(2.33)$	235.2 ± 2.8
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0024	$10^9A_se^{-2\tau}$	1.873 ± 0.018	$D_M(2.33)$	5781 ± 81
$\boldsymbol{A_{100}^{PS}}$	238 ± 25	D_{40}	1226^{+12}_{-14}	$f\sigma_8(0.15)$	0.4538 ± 0.0059
$\boldsymbol{A_{143}^{PS}}$	38 ± 9	D_{220}	5725 ± 37	$\sigma_8(0.15)$	0.7454 ± 0.0098
$\boldsymbol{A_{217}^{PS}}$	103 ± 10	D_{810}	2535 ± 13	$f\sigma_8(0.38)$	0.4724 ± 0.0057
$\boldsymbol{A_{217}^{CIB}}$	39 ± 7	D_{1420}	816.9 ± 5.0	$\sigma_8(0.38)$	0.6609 ± 0.0090
$\boldsymbol{A_{143}^{tSZ}}$	$4.0^{+1.9}_{-2.5}$	D_{2000}	230.9 ± 2.0	$f\sigma_8(0.51)$	0.4711 ± 0.0056
$\boldsymbol{r_{143\times217}^{PS}}$	0.66 ± 0.14	$n_{s,0.002}$	0.9661 ± 0.0073	$\sigma_8(0.51)$	0.6186 ± 0.0086
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.55^{+0.41}_{-0.17}$	Y_P	0.2447 ± 0.0027	$f\sigma_8(0.61)$	0.4663 ± 0.0056
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	0.2461 ± 0.0027	$\sigma_8(0.61)$	0.5886 ± 0.0082
$\boldsymbol{A^{kSZ}}$	< 6.01	10^5D/H	2.580 ± 0.054	$f\sigma_8(2.33)$	0.2969 ± 0.0043
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.20	Age/Gyr	13.84 ± 0.19	$\sigma_8(2.33)$	0.3061 ± 0.0046
$\boldsymbol{A_{143}^{dust}}$	0.95 ± 0.17	z_*	1089.78 ± 0.39	f_{2000}^{143}	29 ± 3
$\boldsymbol{A_{217}^{dust}}$	0.98 ± 0.10	r_*	145.2 ± 1.9	f_{2000}^{217}	106.5 ± 2.2
$\boldsymbol{A_{143\times217}^{dust}}$	1.02 ± 0.16	$100\theta_*$	1.04128 ± 0.00057	$f_{2000}^{143\times217}$	31.6 ± 2.4
$\boldsymbol{c_{100}}$	0.9976 ± 0.0011	$D_M(z_*)$/Gpc	13.94 ± 0.17	$\chi^2_{lensing}$	9.27 ± 0.79
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	z_{drag}	1059.65 ± 0.72	χ^2_{simall}	397.1 ± 1.8
$\boldsymbol{c_{TE}}$	0.9964 ± 0.0052	r_{drag}	147.9 ± 2.0	χ^2_{lowl}	23.1 ± 1.1
$\boldsymbol{c_{EE}}$	0.9919 ± 0.0054	k_D	0.1402 ± 0.0014	$\chi^2_{CamSpec}$	11514.7 ± 5.8
H_0	67.5 ± 1.2	$100\theta_D$	0.16073 ± 0.00047	χ^2_{JLA}	1036.36 ± 0.36
Ω_Λ	0.6899 ± 0.0068	z_{eq}	3378 ± 25	χ^2_{6DF}	0.051 ± 0.063
Ω_m	0.3101 ± 0.0068	k_{eq}	0.01028 ± 0.00012	χ^2_{MGS}	1.34 ± 0.46
$\Omega_m h^2$	0.1412 ± 0.0033	$100\theta_{eq}$	0.8176 ± 0.0047	$\chi^2_{DR12BAO}$	4.7 ± 1.3
$\Omega_m h^3$	0.0953 ± 0.0038	$100\theta_{s,eq}$	0.4516 ± 0.0024	χ^2_{prior}	7.7 ± 3.4
σ_8	0.807 ± 0.010	$H(0.15)$	72.7 ± 1.3	χ^2_{CMB}	11944.2 ± 5.9
S_8	0.820 ± 0.011	$D_M(0.15)$	643 ± 11	χ^2_{BAO}	6.0 ± 1.1

$\bar{\chi}^2_{eff} = 12994.30$; $\Delta\bar{\chi}^2_{eff} = 0.77$; $R - 1 = 0.01134$

7.70 base_nnu_CamSpecHM_TTTEEE_lowl_lowE_BAO_post_lensing_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02230 ± 0.00019	$\sigma_8\Omega_m^{0.5}$	0.4496 ± 0.0061	$H(0.38)$	82.6 ± 1.3
$\boldsymbol{\Omega_c h^2}$	0.1180 ± 0.0032	$\sigma_8\Omega_m^{0.25}$	0.6020 ± 0.0072	$D_M(0.38)$	1537 ± 27
$\boldsymbol{100\theta_{MC}}$	1.04108 ± 0.00047	$\sigma_8/h^{0.5}$	0.9824 ± 0.0083	$H(0.51)$	89.3 ± 1.4
$\boldsymbol{\tau}$	$0.0561^{+0.0056}_{-0.0073}$	$r_{drag}h$	99.61 ± 0.87	$D_M(0.51)$	1991 ± 34
$\boldsymbol{N_{eff}}$	2.98 ± 0.20	$\langle d^2\rangle^{1/2}$	2.434 ± 0.021	$H(0.61)$	94.9 ± 1.4
$\boldsymbol{\ln(10^{10}A_s)}$	$3.042^{+0.014}_{-0.016}$	z_{re}	$7.82^{+0.60}_{-0.72}$	$D_M(0.61)$	2317 ± 39
$\boldsymbol{n_s}$	0.9652 ± 0.0074	10^9A_s	$2.094^{+0.030}_{-0.034}$	$H(2.33)$	235.0 ± 2.8
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0025	$10^9A_se^{-2\tau}$	1.872 ± 0.018	$D_M(2.33)$	5790 ± 83
$\boldsymbol{A^{PS}_{100}}$	238 ± 25	D_{40}	1227^{+13}_{-14}	$f\sigma_8(0.15)$	0.4542 ± 0.0059
$\boldsymbol{A^{PS}_{143}}$	38 ± 9	D_{220}	5724 ± 38	$\sigma_8(0.15)$	0.7447 ± 0.0098
$\boldsymbol{A^{PS}_{217}}$	103 ± 10	D_{810}	2535 ± 13	$f\sigma_8(0.38)$	0.4725 ± 0.0056
$\boldsymbol{A^{CIB}_{217}}$	39 ± 7	D_{1420}	816.9 ± 5.0	$\sigma_8(0.38)$	0.6601 ± 0.0091
$\boldsymbol{A^{tSZ}_{143}}$	$4.0^{+1.9}_{-2.5}$	D_{2000}	231.0 ± 2.0	$f\sigma_8(0.51)$	0.4711 ± 0.0056
$\boldsymbol{r^{PS}_{143\times217}}$	0.66 ± 0.14	$n_{s,0.002}$	0.9652 ± 0.0074	$\sigma_8(0.51)$	0.6178 ± 0.0086
$\boldsymbol{r^{CIB}_{143\times217}}$	$0.55^{+0.41}_{-0.17}$	Y_P	0.2445 ± 0.0027	$f\sigma_8(0.61)$	0.4662 ± 0.0056
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	0.2458 ± 0.0027	$\sigma_8(0.61)$	0.5879 ± 0.0083
$\boldsymbol{A^{kSZ}}$	< 5.97	10^5D/H	2.577 ± 0.054	$f\sigma_8(2.33)$	0.2964 ± 0.0043
$\boldsymbol{A^{dust}_{100}}$	1.01 ± 0.20	Age/Gyr	13.86 ± 0.20	$\sigma_8(2.33)$	0.3056 ± 0.0047
$\boldsymbol{A^{dust}_{143}}$	0.95 ± 0.17	z_*	1089.77 ± 0.39	f^{143}_{2000}	29 ± 3
$\boldsymbol{A^{dust}_{217}}$	0.98 ± 0.10	r_*	145.4 ± 1.9	f^{217}_{2000}	106.4 ± 2.2
$\boldsymbol{A^{dust}_{143\times217}}$	1.02 ± 0.16	$100\theta_*$	1.04132 ± 0.00058	$f^{143\times217}_{2000}$	31.5 ± 2.4
$\boldsymbol{c_{100}}$	0.9976 ± 0.0011	$D_M(z_*)$/Gpc	13.96 ± 0.18	$\chi^2_{lensing}$	9.22 ± 0.77
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	z_{drag}	1059.57 ± 0.73	χ^2_{simall}	397.1 ± 1.8
$\boldsymbol{c_{TE}}$	0.9963 ± 0.0051	r_{drag}	148.1 ± 2.0	χ^2_{lowl}	23.2 ± 1.1
$\boldsymbol{c_{EE}}$	0.9916 ± 0.0055	k_D	0.1401 ± 0.0014	$\chi^2_{CamSpec}$	11514.5 ± 5.8
H_0	67.3 ± 1.3	$100\theta_D$	0.16070 ± 0.00048	χ^2_{6DF}	0.063 ± 0.075
Ω_Λ	0.6886 ± 0.0071	z_{eq}	3383 ± 26	χ^2_{MGS}	1.26 ± 0.47
Ω_m	0.3114 ± 0.0071	k_{eq}	0.01028 ± 0.00012	$\chi^2_{DR12BAO}$	4.9 ± 1.6
$\Omega_m h^2$	0.1410 ± 0.0033	$100\theta_{eq}$	0.8167 ± 0.0049	χ^2_{prior}	7.7 ± 3.4
$\Omega_m h^3$	$0.0949^{+0.0036}_{-0.0040}$	$100\theta_{s,eq}$	0.4512 ± 0.0025	χ^2_{CMB}	11944.0 ± 5.9
σ_8	0.806 ± 0.010	$H(0.15)$	72.5 ± 1.3	χ^2_{BAO}	6.2 ± 1.3
S_8	0.821 ± 0.011	$D_M(0.15)$	644 ± 12		

$\bar{\chi}^2_{eff} = 11957.94$; $\Delta\bar{\chi}^2_{eff} = 0.68$; $R - 1 = 0.01105$

7.71 base_nnu_CamSpecHM_TTTEEE_lowl_lowE_BAO_post_Aver15_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02230 ± 0.00018	$\sigma_8\Omega_m^{0.5}$	0.4477 ± 0.0072	$H(0.38)$	82.6 ± 1.1
$\boldsymbol{\Omega_c h^2}$	0.1177 ± 0.0028	$\sigma_8\Omega_m^{0.25}$	0.5998 ± 0.0079	$D_M(0.38)$	1537 ± 23
$\boldsymbol{100\theta_{MC}}$	1.04111 ± 0.00043	$\sigma_8/h^{0.5}$	0.980 ± 0.010	$H(0.51)$	89.3 ± 1.1
$\boldsymbol{\tau}$	$0.0549^{+0.0050}_{-0.0078}$	$r_{drag}h$	99.74 ± 0.86	$D_M(0.51)$	1991 ± 29
$\boldsymbol{N_{eff}}$	2.97 ± 0.17	$\langle d^2\rangle^{1/2}$	2.427 ± 0.024	$H(0.61)$	94.8 ± 1.2
$\boldsymbol{\ln(10^{10}A_s)}$	$3.038^{+0.014}_{-0.017}$	z_{re}	$7.70^{+0.55}_{-0.79}$	$D_M(0.61)$	2317 ± 33
$\boldsymbol{n_s}$	0.9654 ± 0.0065	10^9A_s	$2.086^{+0.029}_{-0.036}$	$H(2.33)$	234.7 ± 2.4
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	$10^9A_se^{-2\tau}$	1.869 ± 0.017	$D_M(2.33)$	5793 ± 70
$\boldsymbol{A^{PS}_{100}}$	237 ± 25	D_{40}	1225 ± 13	$f\sigma_8(0.15)$	0.4524 ± 0.0069
$\boldsymbol{A^{PS}_{143}}$	38 ± 8	D_{220}	5720 ± 38	$\sigma_8(0.15)$	0.7427 ± 0.0094
$\boldsymbol{A^{PS}_{217}}$	102 ± 10	D_{810}	2533 ± 14	$f\sigma_8(0.38)$	0.4708 ± 0.0063
$\boldsymbol{A^{CIB}_{217}}$	39 ± 7	D_{1420}	816.6 ± 5.0	$\sigma_8(0.38)$	0.6584 ± 0.0085
$\boldsymbol{A^{tSZ}_{143}}$	$4.0^{+1.9}_{-2.5}$	D_{2000}	230.9 ± 1.9	$f\sigma_8(0.51)$	0.4695 ± 0.0060
$\boldsymbol{r^{PS}_{143\times217}}$	0.66 ± 0.14	$n_{s,0.002}$	0.9654 ± 0.0065	$\sigma_8(0.51)$	0.6163 ± 0.0080
$\boldsymbol{r^{CIB}_{143\times217}}$	$0.56^{+0.41}_{-0.16}$	Y_P	0.2443 ± 0.0023	$f\sigma_8(0.61)$	0.4647 ± 0.0059
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	0.2457 ± 0.0023	$\sigma_8(0.61)$	0.5864 ± 0.0077
$\boldsymbol{A^{kSZ}}$	< 6.05	10^5D/H	2.574 ± 0.048	$f\sigma_8(2.33)$	0.2957 ± 0.0039
$\boldsymbol{A^{dust}_{100}}$	1.01 ± 0.20	Age/Gyr	13.87 ± 0.17	$\sigma_8(2.33)$	0.3049 ± 0.0042
$\boldsymbol{A^{dust}_{143}}$	0.96 ± 0.18	z_*	1089.73 ± 0.36	f^{143}_{2000}	28.9 ± 3.1
$\boldsymbol{A^{dust}_{217}}$	0.98 ± 0.10	r_*	145.5 ± 1.6	f^{217}_{2000}	106.3 ± 2.1
$\boldsymbol{A^{dust}_{143\times217}}$	1.02 ± 0.16	$100\theta_*$	1.04135 ± 0.00051	$f^{143\times217}_{2000}$	31.5 ± 2.3
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	$D_M(z_*)$/Gpc	13.97 ± 0.15	χ^2_{simall}	396.9 ± 1.7
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	z_{drag}	1059.54 ± 0.63	χ^2_{lowl}	23.1 ± 1.0
$\boldsymbol{c_{TE}}$	0.9963 ± 0.0051	r_{drag}	148.2 ± 1.7	$\chi^2_{CamSpec}$	11514.8 ± 5.8
$\boldsymbol{c_{EE}}$	0.9915 ± 0.0053	k_D	0.1400 ± 0.0012	χ^2_{Aver15}	0.36 ± 0.51
H_0	67.3 ± 1.1	$100\theta_D$	0.16068 ± 0.00042	χ^2_{6DF}	0.054 ± 0.068
Ω_Λ	0.6895 ± 0.0069	z_{eq}	3379 ± 26	χ^2_{MGS}	1.33 ± 0.48
Ω_m	0.3105 ± 0.0069	k_{eq}	0.01026 ± 0.00011	$\chi^2_{DR12BAO}$	4.7 ± 1.5
$\Omega_m h^2$	0.1406 ± 0.0029	$100\theta_{eq}$	0.8175 ± 0.0048	χ^2_{prior}	7.8 ± 3.4
$\Omega_m h^3$	0.0947 ± 0.0032	$100\theta_{s,eq}$	0.4516 ± 0.0025	χ^2_{BAO}	6.1 ± 1.2
σ_8	0.804 ± 0.010	$H(0.15)$	72.6 ± 1.1	χ^2_{CMB}	11934.7 ± 5.7
S_8	0.817 ± 0.013	$D_M(0.15)$	644 ± 10		

$\bar{\chi}^2_{eff} = 11948.97$; $R - 1 = 0.00928$

7.72 base_nnu_CamSpecHM_TTTEEE_lowl_lowE_BAO_post_Cooke17_Aver15_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02229 ± 0.00018	$\sigma_8\Omega_m^{0.25}$	0.6007 ± 0.0077	$H(0.51)$	89.4 ± 1.1
$\boldsymbol{\Omega_c h^2}$	0.1181 ± 0.0026	$\sigma_8/h^{0.5}$	0.9802 ± 0.0099	$D_M(0.51)$	1988 ± 27
$\boldsymbol{100\theta_{MC}}$	1.04106 ± 0.00040	$r_{drag}h$	99.75 ± 0.86	$H(0.61)$	95.0 ± 1.1
$\boldsymbol{\tau}$	$0.0549^{+0.0050}_{-0.0078}$	$\langle d^2\rangle^{1/2}$	2.427 ± 0.024	$D_M(0.61)$	2313 ± 31
$\boldsymbol{N_{eff}}$	3.00 ± 0.15	z_{re}	$7.70^{+0.55}_{-0.78}$	$H(2.33)$	235.1 ± 2.3
$\boldsymbol{\ln(10^{10}A_s)}$	$3.039^{+0.014}_{-0.017}$	$10^9 A_s$	$2.088^{+0.029}_{-0.035}$	$D_M(2.33)$	5783 ± 66
$\boldsymbol{n_s}$	0.9661 ± 0.0063	$10^9 A_s e^{-2\tau}$	1.871 ± 0.016	$f\sigma_8(0.15)$	0.4530 ± 0.0067
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	D_{40}	1224 ± 13	$\sigma_8(0.15)$	0.7439 ± 0.0090
$\boldsymbol{A_{100}^{PS}}$	238 ± 25	D_{220}	5718 ± 38	$f\sigma_8(0.38)$	0.4715 ± 0.0061
$\boldsymbol{A_{143}^{PS}}$	38 ± 8	D_{810}	2533 ± 14	$\sigma_8(0.38)$	0.6595 ± 0.0081
$\boldsymbol{A_{217}^{PS}}$	102 ± 10	D_{1420}	816.2 ± 4.9	$f\sigma_8(0.51)$	0.4702 ± 0.0058
$\boldsymbol{A_{217}^{CIB}}$	40 ± 7	D_{2000}	230.6 ± 1.8	$\sigma_8(0.51)$	0.6173 ± 0.0077
$\boldsymbol{A_{143}^{tSZ}}$	$3.9^{+1.9}_{-2.5}$	$n_{s,0.002}$	0.9661 ± 0.0063	$f\sigma_8(0.61)$	0.4654 ± 0.0056
$\boldsymbol{r_{143\times217}^{PS}}$	0.66 ± 0.14	Y_P	0.2447 ± 0.0021	$\sigma_8(0.61)$	0.5874 ± 0.0073
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.56^{+0.42}_{-0.15}$	Y_P^{BBN}	0.2460 ± 0.0021	$f\sigma_8(2.33)$	0.2962 ± 0.0038
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	10^5D/H	2.583 ± 0.043	$\sigma_8(2.33)$	0.3054 ± 0.0040
$\boldsymbol{A^{kSZ}}$	$4.6^{+1.6}_{-4.5}$	Age/Gyr	13.85 ± 0.16	f_{2000}^{143}	29.2 ± 3.1
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.20	z_*	1089.80 ± 0.32	f_{2000}^{217}	106.5 ± 2.1
$\boldsymbol{A_{143}^{dust}}$	0.96 ± 0.18	r_*	145.2 ± 1.5	$f_{2000}^{143\times217}$	31.7 ± 2.2
$\boldsymbol{A_{217}^{dust}}$	0.97 ± 0.10	$100\theta_*$	1.04128 ± 0.00048	χ^2_{simall}	396.8 ± 1.7
$\boldsymbol{A_{143\times217}^{dust}}$	1.02 ± 0.16	$D_M(z_*)$/Gpc	13.95 ± 0.14	χ^2_{lowl}	23.01 ± 0.99
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	z_{drag}	1059.58 ± 0.62	$\chi^2_{CamSpec}$	11514.7 ± 5.8
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	r_{drag}	147.9 ± 1.6	χ^2_{Aver15}	0.36 ± 0.50
$\boldsymbol{c_{TE}}$	0.9966 ± 0.0050	k_D	0.1401 ± 0.0011	$\chi^2_{Cooke17}$	0.35 ± 0.45
$\boldsymbol{c_{EE}}$	0.9920 ± 0.0052	$100\theta_D$	0.16076 ± 0.00038	χ^2_{6DF}	0.054 ± 0.067
H_0	67.4 ± 1.1	z_{eq}	3378 ± 25	χ^2_{MGS}	1.34 ± 0.48
Ω_Λ	0.6897 ± 0.0069	k_{eq}	0.01027 ± 0.00010	$\chi^2_{DR12BAO}$	4.7 ± 1.4
Ω_m	0.3103 ± 0.0069	$100\theta_{eq}$	0.8176 ± 0.0048	χ^2_{prior}	7.8 ± 3.4
$\Omega_m h^2$	0.1411 ± 0.0027	$100\theta_{s,eq}$	0.4517 ± 0.0025	χ^2_{BAO}	6.1 ± 1.1
$\Omega_m h^3$	0.0951 ± 0.0030	$H(0.15)$	72.7 ± 1.0	χ^2_{CMB}	11934.6 ± 5.7
σ_8	0.8049 ± 0.0096	$D_M(0.15)$	643.1 ± 9.6	χ^2_{Abund}	0.71 ± 0.65
S_8	0.819 ± 0.013	$H(0.38)$	82.7 ± 1.1		
$\sigma_8\Omega_m^{0.5}$	0.4483 ± 0.0070	$D_M(0.38)$	1534 ± 22		

$\bar{\chi}^2_{eff} = 11949.15$; $R - 1 = 0.01020$

7.73 base_nnu_plikHM_TT_lowl_lowE_Riess18

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022625	0.02260 ± 0.00023	$\sigma_8\Omega_m^{0.25}$	0.6042	0.606 ± 0.012	$D_M(0.15)$	611.1	610 ± 12
$\boldsymbol{\Omega_c h^2}$	0.12382	0.1248 ± 0.0036	$\sigma_8/h^{0.5}$	0.9757	0.977 ± 0.015	$H(0.38)$	86.33	86.6 ± 1.3
$\boldsymbol{100\theta_{MC}}$	1.04058	1.04048 ± 0.00054	$r_{drag}h$	102.21	102.2 ± 1.5	$D_M(0.38)$	1462.2	1459 ± 26
$\boldsymbol{\tau}$	0.0568	$0.0573^{+0.0076}_{-0.0086}$	$\langle d^2\rangle^{1/2}$	2.3870	2.391 ± 0.034	$H(0.51)$	93.01	93.3 ± 1.4
$\boldsymbol{N_{eff}}$	3.478	3.53 ± 0.20	z_{re}	7.99	8.04 ± 0.83	$D_M(0.51)$	1897.3	1893 ± 32
$\boldsymbol{\ln(10^{10}A_s)}$	3.0599	3.061 ± 0.019	$10^9 A_s$	2.1325	$2.136^{+0.037}_{-0.041}$	$H(0.61)$	98.62	98.9 ± 1.4
$\boldsymbol{n_s}$	0.9858	0.9858 ± 0.0079	$10^9 A_s e^{-2\tau}$	1.9035	1.905 ± 0.019	$D_M(0.61)$	2210.4	2205 ± 36
$\boldsymbol{y_{cal}}$	1.00109	1.0006 ± 0.0025	D_{40}	1200.2	1201 ± 15	$H(2.33)$	240.73	241.4 ± 2.9
$\boldsymbol{A_{217}^{CIB}}$	48.4	50 ± 7	D_{220}	5729.7	5724 ± 41	$D_M(2.33)$	5581	5566 ± 74
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.59	—	D_{810}	2545.7	2542 ± 14	$f\sigma_8(0.15)$	0.4500	0.452 ± 0.011
$\boldsymbol{A_{143}^{tSZ}}$	5.42	4.6 ± 2.0	D_{1420}	816.1	813.7 ± 5.4	$\sigma_8(0.15)$	0.7624	0.764 ± 0.011
$\boldsymbol{A_{100}^{PS}}$	264.6	272 ± 28	D_{2000}	228.71	227.7 ± 2.1	$f\sigma_8(0.38)$	0.4732	0.4747 ± 0.0095
$\boldsymbol{A_{143}^{PS}}$	54.9	53 ± 8	$n_{s,0.002}$	0.9858	0.9858 ± 0.0079	$\sigma_8(0.38)$	0.6781	0.680 ± 0.010
$\boldsymbol{A_{143\times217}^{PS}}$	50.2	45^{+9}_{-10}	Y_P	0.25111	0.2517 ± 0.0025	$f\sigma_8(0.51)$	0.4743	0.4757 ± 0.0087
$\boldsymbol{A_{217}^{PS}}$	118.5	115 ± 10	Y_P^{BBN}	0.25245	0.2530 ± 0.0025	$\sigma_8(0.51)$	0.6356	0.6372 ± 0.0096
$\boldsymbol{A^{kSZ}}$	3.04	$4.6^{+2.0}_{-4.1}$	10^5D/H	2.686	2.706 ± 0.062	$f\sigma_8(0.61)$	0.4710	0.4723 ± 0.0082
$\boldsymbol{A_{100}^{dustTT}}$	9.01	9.1 ± 1.8	Age/Gyr	13.366	13.33 ± 0.18	$\sigma_8(0.61)$	0.6054	0.6069 ± 0.0092
$\boldsymbol{A_{143}^{dustTT}}$	10.96	10.9 ± 1.8	z_*	1090.346	1090.50 ± 0.49	$f\sigma_8(2.33)$	0.30605	0.3068 ± 0.0047
$\boldsymbol{A_{143\times217}^{dustTT}}$	19.35	18.5 ± 3.3	r_*	141.20	140.8 ± 1.8	$\sigma_8(2.33)$	0.3165	0.3173 ± 0.0050
$\boldsymbol{A_{217}^{dustTT}}$	94.5	93.0 ± 7.3	$100\theta_*$	1.04046	1.04034 ± 0.00061	f_{2000}^{143}	32.80	34.0 ± 3.3
$\boldsymbol{c_{100}}$	0.99963	0.99962 ± 0.00062	$D_M(z_*)$/Gpc	13.571	13.53 ± 0.16	$f_{2000}^{143\times217}$	35.12	35.8 ± 2.4
$\boldsymbol{c_{217}}$	0.99833	0.99831 ± 0.00062	z_{drag}	1061.12	1061.18 ± 0.73	f_{2000}^{217}	109.46	110.1 ± 2.2
H_0	71.11	71.3 ± 1.4	r_{drag}	143.74	143.3 ± 1.8	χ^2_{simall}	396.30	397.5 ± 2.2
Ω_Λ	0.7091	$0.708^{+0.011}_{-0.010}$	k_D	0.14304	0.1433 ± 0.0014	χ^2_{lowl}	20.96	21.17 ± 0.79
Ω_m	0.2909	$0.292^{+0.010}_{-0.011}$	$100\theta_D$	0.16184	0.16200 ± 0.00051	χ^2_{plik}	765.1	777.8 ± 6.1
$\Omega_m h^2$	0.14709	0.1480 ± 0.0037	z_{eq}	3307.8	3308 ± 42	$\chi^2_{H073p45}$	1.99	2.4 ± 2.4
$\Omega_m h^3$	0.10459	0.1055 ± 0.0040	k_{eq}	0.010384	0.01042 ± 0.00016	χ^2_{prior}	1.91	7.5 ± 3.8
σ_8	0.8227	0.825 ± 0.013	$100\theta_{eq}$	0.8314	0.8313 ± 0.0084	χ^2_{CMB}	1182.4	1196.5 ± 5.9
S_8	0.8102	0.813 ± 0.021	$100\theta_{s,eq}$	0.45861	0.4586 ± 0.0043			
$\sigma_8\Omega_m^{0.5}$	0.4438	0.445 ± 0.012	$H(0.15)$	76.31	76.5 ± 1.4			

Best-fit $\chi^2_{eff} = 1186.27$; $\Delta\chi^2_{eff} = -5.30$; $\bar{\chi}^2_{eff} = 1206.39$; $\Delta\bar{\chi}^2_{eff} = -5.69$; $R - 1 = 0.00670$

χ^2_{eff}: CMB - simall_100x143_offlike5_EE_Aplanck_B: 396.30 (Δ 0.22) commander_dx12_v3_2_29: 20.96 (Δ -1.12) plik_rd12_HM_v22_TT: 765.11 (Δ 2.09) Hubble - H073p45: 1.99 (Δ -6.99)

7.74 base_nnu_plikHM_TT_lowl_lowE_Riess18_post_BAO

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022516	0.02251 ± 0.00021	$\sigma_8/h^{0.5}$	0.9839	0.984 ± 0.012	$D_M(0.38)$	1474.6	1472 ± 22
$\boldsymbol{\Omega_c h^2}$	0.12435	0.1254 ± 0.0035	$r_{drag}h$	101.26	101.12 ± 0.92	$H(0.51)$	92.51	92.8 ± 1.2
$\boldsymbol{100\theta_{MC}}$	1.04048	1.04039 ± 0.00052	$\langle d^2\rangle^{1/2}$	2.4070	2.409 ± 0.027	$D_M(0.51)$	1912.4	1908 ± 28
$\boldsymbol{\tau}$	0.0565	0.0558 ± 0.0080	z_{re}	7.99	7.92 ± 0.82	$H(0.61)$	98.16	98.4 ± 1.3
$\boldsymbol{N_{eff}}$	3.442	3.49 ± 0.19	$10^9 A_s$	2.1354	2.133 ± 0.039	$D_M(0.61)$	2227.0	2222 ± 32
$\boldsymbol{\ln(10^{10} A_s)}$	3.0612	3.060 ± 0.018	$10^9 A_s e^{-2\tau}$	1.9072	1.907 ± 0.019	$H(2.33)$	240.82	241.6 ± 2.9
$\boldsymbol{n_s}$	0.9825	0.9819 ± 0.0067	D_{40}	1206.9	1207 ± 14	$D_M(2.33)$	5603	5588 ± 72
$\boldsymbol{y_{cal}}$	1.00148	1.0005 ± 0.0025	D_{220}	5727.5	5719 ± 41	$f\sigma_8(0.15)$	0.4562	0.4576 ± 0.0085
$\boldsymbol{A_{217}^{CIB}}$	52.6	50 ± 7	D_{810}	2548.1	2542 ± 14	$\sigma_8(0.15)$	0.7641	0.765 ± 0.011
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.27	—	D_{1420}	816.4	813.3 ± 5.2	$f\sigma_8(0.38)$	0.4780	0.4791 ± 0.0079
$\boldsymbol{A_{143}^{tSZ}}$	6.34	4.6 ± 2.0	D_{2000}	228.87	227.7 ± 2.1	$\sigma_8(0.38)$	0.6788	0.680 ± 0.010
$\boldsymbol{A_{100}^{PS}}$	264.3	273 ± 28	$n_{s,0.002}$	0.9825	0.9819 ± 0.0067	$f\sigma_8(0.51)$	0.4782	0.4792 ± 0.0076
$\boldsymbol{A_{143}^{PS}}$	52.0	54 ± 8	Y_P	0.25060	0.2512 ± 0.0025	$\sigma_8(0.51)$	0.6359	0.6367 ± 0.0095
$\boldsymbol{A_{143\times217}^{PS}}$	46.4	45^{+9}_{-10}	Y_P^{BBN}	0.25195	0.2525 ± 0.0025	$f\sigma_8(0.61)$	0.4742	0.4752 ± 0.0073
$\boldsymbol{A_{217}^{PS}}$	116.2	115 ± 10	10^5D/H	2.694	2.711 ± 0.062	$\sigma_8(0.61)$	0.6055	0.6062 ± 0.0090
$\boldsymbol{A^{kSZ}}$	1.18	$4.6^{+2.1}_{-3.9}$	Age/Gyr	13.417	13.38 ± 0.17	$f\sigma_8(2.33)$	0.30581	0.3061 ± 0.0046
$\boldsymbol{A_{100}^{dustTT}}$	9.07	9.1 ± 1.9	z_*	1090.492	1090.63 ± 0.46	$\sigma_8(2.33)$	0.31594	0.3162 ± 0.0048
$\boldsymbol{A_{143}^{dustTT}}$	10.80	10.9 ± 1.8	r_*	141.32	140.9 ± 1.8	f_{2000}^{143}	32.57	34.0 ± 3.3
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.26	18.5 ± 3.3	$100\theta_*$	1.04039	1.04028 ± 0.00060	$f_{2000}^{143\times217}$	35.15	35.8 ± 2.3
$\boldsymbol{A_{217}^{dustTT}}$	91.0	93.0 ± 7.3	$D_M(z_*)$/Gpc	13.583	13.54 ± 0.17	f_{2000}^{217}	109.36	110.1 ± 2.1
$\boldsymbol{c_{100}}$	0.99969	0.99961 ± 0.00062	z_{drag}	1060.89	1061.00 ± 0.71	χ^2_{simall}	396.32	397.3 ± 2.0
$\boldsymbol{c_{217}}$	0.99825	0.99831 ± 0.00063	r_{drag}	143.90	143.4 ± 1.8	χ^2_{lowl}	21.31	21.55 ± 0.74
H_0	70.37	70.5 ± 1.1	k_D	0.14292	0.1433 ± 0.0014	χ^2_{plik}	763.9	776.3 ± 5.8
Ω_Λ	0.7022	0.7011 ± 0.0069	$100\theta_D$	0.16183	0.16195 ± 0.00050	$\chi^2_{H073p45}$	3.43	3.6 ± 2.5
Ω_m	0.2978	0.2989 ± 0.0069	z_{eq}	3332.5	3337 ± 28	χ^2_{6DF}	0.0250	0.052 ± 0.071
$\Omega_m h^2$	0.14751	0.1486 ± 0.0036	k_{eq}	0.010438	0.01048 ± 0.00014	χ^2_{MGS}	2.19	2.16 ± 0.60
$\Omega_m h^3$	0.10381	0.1048 ± 0.0039	$100\theta_{eq}$	0.8263	0.8256 ± 0.0052	$\chi^2_{DR12BAO}$	3.483	3.99 ± 0.81
σ_8	0.8254	0.827 ± 0.012	$100\theta_{s,eq}$	0.45607	0.4557 ± 0.0027	χ^2_{prior}	1.79	7.5 ± 3.7
S_8	0.8224	0.825 ± 0.016	$H(0.15)$	75.64	75.8 ± 1.1	χ^2_{BAO}	5.70	6.2 ± 1.2
$\sigma_8\Omega_m^{0.5}$	0.4504	0.4519 ± 0.0088	$D_M(0.15)$	617.0	615.8 ± 9.6	χ^2_{CMB}	1181.6	1195.1 ± 5.7
$\sigma_8\Omega_m^{0.25}$	0.6097	0.6112 ± 0.0099	$H(0.38)$	85.76	86.0 ± 1.2			

Best-fit $\chi^2_{eff} = 1192.50$; $\bar{\chi}^2_{eff} = 1212.38$; $R - 1 = 0.01231$

χ^2_{eff}: BAO - 6DF: 0.03 MGS: 2.19 DR12BAO: 3.48 CMB - simall_100x143_offlike5_EE_Aplanck_B: 396.32 commander_dx12_v3_2_29: 21.31 plik_rd12_HM_v22_TT: 763.94 Hubble - H073p45: 3.44

7.75 base_nnu_plikHM_TT_lowl_lowE_Riess18_post_BAO_Pantheon

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022501	0.02252 ± 0.00021	$\sigma_8/h^{0.5}$	0.9826	0.984 ± 0.012	$D_M(0.38)$	1474.7	1471 ± 22
$\boldsymbol{\Omega_c h^2}$	0.12468	0.1254 ± 0.0035	$r_{drag}h$	101.15	101.14 ± 0.88	$H(0.51)$	92.54	92.8 ± 1.2
$\boldsymbol{100\theta_{MC}}$	1.04039	1.04039 ± 0.00052	$\langle d^2\rangle^{1/2}$	2.4070	2.409 ± 0.026	$D_M(0.51)$	1912.4	1908 ± 28
$\boldsymbol{\tau}$	0.0551	0.0558 ± 0.0080	z_{re}	7.85	7.92 ± 0.82	$H(0.61)$	98.20	98.4 ± 1.3
$\boldsymbol{N_{eff}}$	3.454	3.49 ± 0.19	$10^9 A_s$	2.1278	2.133 ± 0.039	$D_M(0.61)$	2226.9	2222 ± 32
$\boldsymbol{\ln(10^{10} A_s)}$	3.0577	3.060 ± 0.018	$10^9 A_s e^{-2\tau}$	1.9060	1.907 ± 0.019	$H(2.33)$	241.05	241.6 ± 2.9
$\boldsymbol{n_s}$	0.9810	0.9820 ± 0.0066	D_{40}	1208.8	1207 ± 13	$D_M(2.33)$	5600	5588 ± 72
$\boldsymbol{y_{cal}}$	1.00080	1.0005 ± 0.0025	D_{220}	5725.6	5719 ± 41	$f\sigma_8(0.15)$	0.4560	0.4575 ± 0.0083
$\boldsymbol{A_{217}^{CIB}}$	46.8	50 ± 7	D_{810}	2543.6	2542 ± 14	$\sigma_8(0.15)$	0.7629	0.765 ± 0.011
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.99	—	D_{1420}	814.1	813.3 ± 5.2	$f\sigma_8(0.38)$	0.4776	0.4791 ± 0.0079
$\boldsymbol{A_{143}^{tSZ}}$	3.50	4.6 ± 2.0	D_{2000}	227.98	227.7 ± 2.1	$\sigma_8(0.38)$	0.6777	0.680 ± 0.010
$\boldsymbol{A_{100}^{PS}}$	273.7	273 ± 28	$n_{s,0.002}$	0.9810	0.9820 ± 0.0066	$f\sigma_8(0.51)$	0.4777	0.4792 ± 0.0075
$\boldsymbol{A_{143}^{PS}}$	57.2	54 ± 8	Y_P	0.25075	0.2512 ± 0.0025	$\sigma_8(0.51)$	0.6348	0.6367 ± 0.0095
$\boldsymbol{A_{143\times217}^{PS}}$	50.8	45^{+9}_{-10}	Y_P^{BBN}	0.25209	0.2525 ± 0.0025	$f\sigma_8(0.61)$	0.4737	0.4752 ± 0.0073
$\boldsymbol{A_{217}^{PS}}$	117.0	115 ± 10	10^5D/H	2.701	2.711 ± 0.062	$\sigma_8(0.61)$	0.6044	0.6062 ± 0.0090
$\boldsymbol{A^{kSZ}}$	6.17	$4.6^{+2.1}_{-3.9}$	Age/Gyr	13.411	13.38 ± 0.17	$f\sigma_8(2.33)$	0.30522	0.3061 ± 0.0046
$\boldsymbol{A_{100}^{dustTT}}$	9.04	9.1 ± 1.9	z_*	1090.552	1090.63 ± 0.46	$\sigma_8(2.33)$	0.31529	0.3162 ± 0.0048
$\boldsymbol{A_{143}^{dustTT}}$	10.77	10.9 ± 1.8	r_*	141.20	140.9 ± 1.8	f_{2000}^{143}	33.70	34.0 ± 3.3
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.02	18.5 ± 3.3	$100\theta_*$	1.04031	1.04029 ± 0.00060	$f_{2000}^{143\times217}$	35.57	35.8 ± 2.3
$\boldsymbol{A_{217}^{dustTT}}$	92.9	93.0 ± 7.3	$D_M(z_*)$/Gpc	13.573	13.54 ± 0.17	f_{2000}^{217}	109.89	110.1 ± 2.1
$\boldsymbol{c_{100}}$	0.99960	0.99962 ± 0.00062	z_{drag}	1060.89	1061.00 ± 0.71	χ^2_{simall}	396.12	397.3 ± 2.0
$\boldsymbol{c_{217}}$	0.99827	0.99831 ± 0.00063	r_{drag}	143.77	143.4 ± 1.8	χ^2_{lowl}	21.51	21.54 ± 0.73
H_0	70.35	70.5 ± 1.1	k_D	0.14300	0.1433 ± 0.0014	χ^2_{plik}	763.8	776.3 ± 5.8
Ω_Λ	0.7014	0.7012 ± 0.0066	$100\theta_D$	0.16187	0.16196 ± 0.00050	$\chi^2_{H073p45}$	3.48	3.6 ± 2.4
Ω_m	0.2986	0.2988 ± 0.0066	z_{eq}	3334.6	3336 ± 27	χ^2_{JLA}	1035.970	1036.06 ± 0.13
$\Omega_m h^2$	0.14782	0.1486 ± 0.0036	k_{eq}	0.010452	0.01048 ± 0.00014	χ^2_{6DF}	0.0181	0.050 ± 0.067
$\Omega_m h^3$	0.10400	0.1048 ± 0.0039	$100\theta_{eq}$	0.82585	0.8256 ± 0.0050	χ^2_{MGS}	2.12	2.17 ± 0.58
σ_8	0.8241	0.827 ± 0.012	$100\theta_{s,eq}$	0.45583	0.4557 ± 0.0026	$\chi^2_{DR12BAO}$	3.446	3.95 ± 0.75
S_8	0.8223	0.825 ± 0.016	$H(0.15)$	75.63	75.8 ± 1.1	χ^2_{prior}	1.99	7.5 ± 3.7
$\sigma_8\Omega_m^{0.5}$	0.4504	0.4519 ± 0.0086	$D_M(0.15)$	617.1	615.8 ± 9.4	χ^2_{BAO}	5.58	6.2 ± 1.2
$\sigma_8\Omega_m^{0.25}$	0.6093	0.6112 ± 0.0099	$H(0.38)$	85.78	86.0 ± 1.2	χ^2_{CMB}	1181.4	1195.1 ± 5.7

Best-fit $\chi^2_{eff} = 2228.44$; $\bar{\chi}^2_{eff} = 2248.36$; $R - 1 = 0.01231$

χ^2_{eff}: BAO - 6DF: 0.02 MGS: 2.12 DR12BAO: 3.45 CMB - simall_100x143_offlike5_EE_Aplanck_B: 396.12 commander_dx12_v3_2_29: 21.51 plik_rd12_HM_v22_TT: 763.78 Hubble - H073p45: 3.48 SN - JLA Pantheon: 1035.97

7.76 base_nnu_plikHM_TT_lowl_lowE_Riess18_post_lensing

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022573	0.02258 ± 0.00023	$\sigma_8\Omega_m^{0.25}$	0.6088	0.6095 ± 0.0084	$D_M(0.15)$	614.2	613 ± 11
$\boldsymbol{\Omega_c h^2}$	0.12449	0.1248 ± 0.0033	$\sigma_8/h^{0.5}$	0.9820	0.983 ± 0.010	$H(0.38)$	86.06	86.3 ± 1.3
$\boldsymbol{100\theta_{MC}}$	1.04051	1.04047 ± 0.00052	$r_{drag}h$	101.59	101.7 ± 1.3	$D_M(0.38)$	1468.5	1465 ± 26
$\boldsymbol{\tau}$	0.0581	$0.0590^{+0.0071}_{-0.0087}$	$\langle d^2\rangle^{1/2}$	2.4033	2.405 ± 0.025	$H(0.51)$	92.80	93.0 ± 1.4
$\boldsymbol{N_{eff}}$	3.471	3.50 ± 0.19	z_{re}	8.15	$8.22^{+0.73}_{-0.82}$	$D_M(0.51)$	1904.8	1901 ± 32
$\boldsymbol{\ln(10^{10}A_s)}$	3.0629	$3.066^{+0.016}_{-0.018}$	$10^9 A_s$	2.1389	$2.146^{+0.033}_{-0.038}$	$H(0.61)$	98.44	98.6 ± 1.4
$\boldsymbol{n_s}$	0.9834	0.9837 ± 0.0078	$10^9 A_s e^{-2\tau}$	1.9041	1.906 ± 0.017	$D_M(0.61)$	2218.5	2214 ± 36
$\boldsymbol{y_{cal}}$	1.00032	1.0008 ± 0.0025	D_{40}	1204.4	1206 ± 14	$H(2.33)$	241.07	241.4 ± 2.7
$\boldsymbol{A_{217}^{CIB}}$	46.9	49 ± 7	D_{220}	5722.5	5729 ± 41	$D_M(2.33)$	5588	5579 ± 75
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.72	—	D_{810}	2542.8	2544 ± 14	$f\sigma_8(0.15)$	0.4547	0.4550 ± 0.0079
$\boldsymbol{A_{143}^{tSZ}}$	5.07	4.6 ± 2.0	D_{1420}	814.5	814.1 ± 5.4	$\sigma_8(0.15)$	0.7647	0.7662 ± 0.0099
$\boldsymbol{A_{100}^{PS}}$	264.8	272 ± 29	D_{2000}	228.22	228.0 ± 2.1	$f\sigma_8(0.38)$	0.4771	0.4775 ± 0.0068
$\boldsymbol{A_{143}^{PS}}$	56.7	53 ± 8	$n_{s,0.002}$	0.9834	0.9837 ± 0.0078	$\sigma_8(0.38)$	0.6797	0.6811 ± 0.0091
$\boldsymbol{A_{143\times217}^{PS}}$	52.4	45^{+9}_{-10}	Y_P	0.25099	0.2513 ± 0.0025	$f\sigma_8(0.51)$	0.4776	0.4781 ± 0.0063
$\boldsymbol{A_{217}^{PS}}$	120.0	115 ± 10	Y_P^{BBN}	0.25234	0.2527 ± 0.0025	$\sigma_8(0.51)$	0.6368	0.6382 ± 0.0087
$\boldsymbol{A^{kSZ}}$	3.42	$4.5^{+1.8}_{-4.1}$	10^5D/H	2.693	2.701 ± 0.060	$f\sigma_8(0.61)$	0.4739	0.4745 ± 0.0061
$\boldsymbol{A_{100}^{dustTT}}$	9.07	9.1 ± 1.9	Age/Gyr	13.383	13.36 ± 0.18	$\sigma_8(0.61)$	0.6064	0.6078 ± 0.0084
$\boldsymbol{A_{143}^{dustTT}}$	10.90	10.9 ± 1.8	z_*	1090.460	1090.51 ± 0.45	$f\sigma_8(2.33)$	0.30639	0.3071 ± 0.0044
$\boldsymbol{A_{143\times217}^{dustTT}}$	19.47	18.4 ± 3.3	r_*	141.11	140.9 ± 1.7	$\sigma_8(2.33)$	0.31667	0.3175 ± 0.0049
$\boldsymbol{A_{217}^{dustTT}}$	95.1	93.0 ± 7.4	$100\theta_*$	1.04041	1.04035 ± 0.00060	f_{2000}^{143}	32.98	33.7 ± 3.3
$\boldsymbol{c_{100}}$	0.99965	0.99962 ± 0.00062	$D_M(z_*)$/Gpc	13.563	13.55 ± 0.16	$f_{2000}^{143\times217}$	35.17	35.6 ± 2.3
$\boldsymbol{c_{217}}$	0.99828	0.99830 ± 0.00062	z_{drag}	1061.04	1061.11 ± 0.73	f_{2000}^{217}	109.40	109.9 ± 2.2
H_0	70.72	70.9 ± 1.4	r_{drag}	143.66	143.5 ± 1.8	$\chi^2_{lensing}$	9.68	10.3 ± 1.1
Ω_Λ	0.7046	0.7053 ± 0.0094	k_D	0.14311	0.1432 ± 0.0013	χ^2_{simall}	396.67	397.9 ± 2.5
Ω_m	0.2954	0.2947 ± 0.0094	$100\theta_D$	0.16185	0.16193 ± 0.00050	χ^2_{lowl}	21.30	21.43 ± 0.80
$\Omega_m h^2$	0.14771	0.1481 ± 0.0034	z_{eq}	3324.9	3321 ± 36	χ^2_{plik}	764.3	776.3 ± 5.9
$\Omega_m h^3$	0.10445	0.1050 ± 0.0039	k_{eq}	0.010433	0.01044 ± 0.00013	$\chi^2_{H073p45}$	2.71	3.0 ± 2.7
σ_8	0.8258	0.827 ± 0.010	$100\theta_{eq}$	0.8280	0.8287 ± 0.0070	χ^2_{prior}	1.56	7.5 ± 3.8
S_8	0.8194	0.820 ± 0.015	$100\theta_{s,eq}$	0.45688	0.4572 ± 0.0036	χ^2_{CMB}	1191.9	1205.9 ± 6.1
$\sigma_8\Omega_m^{0.5}$	0.4488	0.4490 ± 0.0084	$H(0.15)$	75.97	76.2 ± 1.4			

Best-fit $\chi^2_{eff} = 1196.19$; $\Delta\chi^2_{eff} = -4.86$; $\bar{\chi}^2_{eff} = 1216.39$; $\Delta\bar{\chi}^2_{eff} = -4.79$; $R - 1 = 0.01200$

χ^2_{eff}: CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 9.68 (Δ 0.70) simall_100x143_offlike5_EE_Aplanck_B: 396.67 (Δ 0.10) commander_dx12_v3_2_29: 21.30 (Δ -1.38) plik_rd12_HM_v22_TT: 764.27 (Δ 3.38) Hubble - H073p45: 2.71 (Δ -7.96)

7.77 base_nnu_plikHM_TT_lowl_lowE_Riess18_post_BAO_lensing

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02251 ± 0.00021	$\sigma_8/h^{0.5}$	0.9855 ± 0.0092	$D_M(0.38)$	1475 ± 22
$\boldsymbol{\Omega_c h^2}$	0.1250 ± 0.0033	$r_{drag}h$	101.05 ± 0.86	$H(0.51)$	92.6 ± 1.2
$\boldsymbol{100\theta_{MC}}$	1.04043 ± 0.00051	$\langle d^2\rangle^{1/2}$	2.414 ± 0.022	$D_M(0.51)$	1913 ± 28
$\boldsymbol{\tau}$	0.0570 ± 0.0075	z_{re}	8.04 ± 0.75	$H(0.61)$	98.2 ± 1.3
$\boldsymbol{N_{eff}}$	3.46 ± 0.18	$10^9 A_s$	$2.137^{+0.031}_{-0.035}$	$D_M(0.61)$	2227 ± 32
$\boldsymbol{\ln(10^{10} A_s)}$	3.062 ± 0.016	$10^9 A_s e^{-2\tau}$	1.906 ± 0.017	$H(2.33)$	241.2 ± 2.7
$\boldsymbol{n_s}$	0.9807 ± 0.0066	D_{40}	1210 ± 13	$D_M(2.33)$	5599 ± 70
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0025	D_{220}	5724 ± 41	$f\sigma_8(0.15)$	0.4578 ± 0.0067
$\boldsymbol{A_{217}^{CIB}}$	49 ± 7	D_{810}	2543 ± 14	$\sigma_8(0.15)$	0.7649 ± 0.0097
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{1420}	813.7 ± 5.2	$f\sigma_8(0.38)$	0.4793 ± 0.0063
$\boldsymbol{A_{143}^{tSZ}}$	4.7 ± 2.0	D_{2000}	227.9 ± 2.1	$\sigma_8(0.38)$	0.6794 ± 0.0088
$\boldsymbol{A_{100}^{PS}}$	272 ± 29	$n_{s,0.002}$	0.9807 ± 0.0066	$f\sigma_8(0.51)$	0.4793 ± 0.0061
$\boldsymbol{A_{143}^{PS}}$	53 ± 8	Y_P	0.2508 ± 0.0024	$\sigma_8(0.51)$	0.6364 ± 0.0083
$\boldsymbol{A_{143\times217}^{PS}}$	45^{+9}_{-10}	Y_P^{BBN}	0.2521 ± 0.0024	$f\sigma_8(0.61)$	0.4752 ± 0.0059
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	10^5D/H	2.701 ± 0.059	$\sigma_8(0.61)$	0.6059 ± 0.0080
$\boldsymbol{A^{kSZ}}$	$4.5^{+1.8}_{-4.1}$	Age/Gyr	13.41 ± 0.17	$f\sigma_8(2.33)$	0.3059 ± 0.0041
$\boldsymbol{A_{100}^{dustTT}}$	9.1 ± 1.9	z_*	1090.57 ± 0.44	$\sigma_8(2.33)$	0.3160 ± 0.0044
$\boldsymbol{A_{143}^{dustTT}}$	10.9 ± 1.8	r_*	141.1 ± 1.7	f_{2000}^{143}	33.7 ± 3.3
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.5 ± 3.3	$100\theta_*$	1.04034 ± 0.00059	$f_{2000}^{143\times217}$	35.6 ± 2.3
$\boldsymbol{A_{217}^{dustTT}}$	93.1 ± 7.3	$D_M(z_*)$/Gpc	13.57 ± 0.16	f_{2000}^{217}	109.9 ± 2.1
$\boldsymbol{c_{100}}$	0.99963 ± 0.00062	z_{drag}	1060.93 ± 0.69	$\chi^2_{lensing}$	10.02 ± 0.81
$\boldsymbol{c_{217}}$	0.99830 ± 0.00062	r_{drag}	143.7 ± 1.7	χ^2_{simall}	397.4 ± 2.0
H_0	70.3 ± 1.1	k_D	0.1431 ± 0.0013	χ^2_{lowl}	21.70 ± 0.76
Ω_Λ	0.7005 ± 0.0065	$100\theta_D$	0.16187 ± 0.00049	χ^2_{plik}	775.5 ± 5.7
Ω_m	0.2995 ± 0.0065	z_{eq}	3339 ± 25	$\chi^2_{H073p45}$	4.0 ± 2.6
$\Omega_m h^2$	0.1481 ± 0.0033	k_{eq}	0.01047 ± 0.00013	χ^2_{6DF}	0.044 ± 0.059
$\Omega_m h^3$	0.1042 ± 0.0037	$100\theta_{eq}$	0.8251 ± 0.0048	χ^2_{MGS}	2.11 ± 0.56
σ_8	0.826 ± 0.010	$100\theta_{s,eq}$	0.4554 ± 0.0025	$\chi^2_{DR12BAO}$	3.90 ± 0.69
S_8	0.826 ± 0.013	$H(0.15)$	75.6 ± 1.1	χ^2_{prior}	7.4 ± 3.7
$\sigma_8\Omega_m^{0.5}$	0.4523 ± 0.0070	$D_M(0.15)$	617.4 ± 9.5	χ^2_{CMB}	1204.6 ± 5.8
$\sigma_8\Omega_m^{0.25}$	0.6114 ± 0.0079	$H(0.38)$	85.8 ± 1.2	χ^2_{BAO}	6.1 ± 1.0

$\bar{\chi}^2_{eff} = 1222.03$; $\Delta\bar{\chi}^2_{eff} = -4.42$; $R - 1 = 0.01416$

7.78 base_nnu_plikHM_TT_lowl_lowE_Riess18_post_BAO_lensing_Pantheon

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022522	0.02251 ± 0.00020	$\sigma_8/h^{0.5}$	0.9852	0.9854 ± 0.0092	$D_M(0.38)$	1476.1	1475 ± 21
$\boldsymbol{\Omega_c h^2}$	0.12443	0.1250 ± 0.0033	$r_{drag}h$	101.14	101.06 ± 0.82	$H(0.51)$	92.46	92.6 ± 1.2
$\boldsymbol{100\theta_{MC}}$	1.04049	1.04043 ± 0.00051	$\langle d^2\rangle^{1/2}$	2.4136	2.414 ± 0.021	$D_M(0.51)$	1914.1	1913 ± 27
$\boldsymbol{\tau}$	0.0576	0.0571 ± 0.0075	z_{re}	8.10	8.04 ± 0.74	$H(0.61)$	98.11	98.2 ± 1.2
$\boldsymbol{N_{eff}}$	3.436	3.46 ± 0.18	$10^9 A_s$	2.1390	2.137 ± 0.034	$D_M(0.61)$	2228.9	2227 ± 31
$\boldsymbol{\ln(10^{10} A_s)}$	3.0629	3.062 ± 0.016	$10^9 A_s e^{-2\tau}$	1.9061	1.906 ± 0.017	$H(2.33)$	240.86	241.2 ± 2.7
$\boldsymbol{n_s}$	0.9810	0.9808 ± 0.0065	D_{40}	1210.0	1210 ± 13	$D_M(2.33)$	5605	5599 ± 69
$\boldsymbol{y_{cal}}$	1.00105	1.0007 ± 0.0025	D_{220}	5729.2	5724 ± 41	$f\sigma_8(0.15)$	0.4571	0.4578 ± 0.0067
$\boldsymbol{A_{217}^{CIB}}$	52.5	49 ± 7	D_{810}	2545.4	2543 ± 14	$\sigma_8(0.15)$	0.7646	0.7649 ± 0.0097
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.01	—	D_{1420}	815.2	813.7 ± 5.2	$f\sigma_8(0.38)$	0.4787	0.4792 ± 0.0063
$\boldsymbol{A_{143}^{tSZ}}$	6.79	4.7 ± 2.0	D_{2000}	228.51	227.9 ± 2.1	$\sigma_8(0.38)$	0.6792	0.6794 ± 0.0087
$\boldsymbol{A_{100}^{PS}}$	265.7	272 ± 29	$n_{s,0.002}$	0.9810	0.9808 ± 0.0065	$f\sigma_8(0.51)$	0.4788	0.4793 ± 0.0061
$\boldsymbol{A_{143}^{PS}}$	49.1	53 ± 8	Y_P	0.25053	0.2508 ± 0.0024	$\sigma_8(0.51)$	0.6362	0.6364 ± 0.0083
$\boldsymbol{A_{143\times217}^{PS}}$	40.6	45^{+9}_{-10}	Y_P^{BBN}	0.25187	0.2521 ± 0.0024	$f\sigma_8(0.61)$	0.4748	0.4752 ± 0.0059
$\boldsymbol{A_{217}^{PS}}$	116.0	115 ± 10	10^5D/H	2.691	2.701 ± 0.059	$\sigma_8(0.61)$	0.6057	0.6059 ± 0.0079
$\boldsymbol{A^{kSZ}}$	0.63	$4.5^{+1.7}_{-4.1}$	Age/Gyr	13.422	13.41 ± 0.17	$f\sigma_8(2.33)$	0.30588	0.3060 ± 0.0041
$\boldsymbol{A_{100}^{dustTT}}$	9.12	9.1 ± 1.9	z_*	1090.485	1090.57 ± 0.44	$\sigma_8(2.33)$	0.31598	0.3160 ± 0.0044
$\boldsymbol{A_{143}^{dustTT}}$	10.90	10.9 ± 1.8	r_*	141.33	141.1 ± 1.7	$\chi^2_{lensing}$	9.48	10.01 ± 0.81
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.96	18.5 ± 3.3	$100\theta_*$	1.04042	1.04034 ± 0.00059	χ^2_{simall}	396.63	397.4 ± 2.0
$\boldsymbol{A_{217}^{dustTT}}$	93.2	93.1 ± 7.3	$D_M(z_*)$/Gpc	13.584	13.57 ± 0.16	χ^2_{lowl}	21.55	21.69 ± 0.75
$\boldsymbol{c_{100}}$	0.99967	0.99963 ± 0.00062	z_{drag}	1060.92	1060.93 ± 0.69	χ^2_{plik}	763.0	775.5 ± 5.7
$\boldsymbol{c_{217}}$	0.99831	0.99830 ± 0.00062	r_{drag}	143.90	143.7 ± 1.7	$\chi^2_{H073p45}$	3.63	3.9 ± 2.5
H_0	70.29	70.3 ± 1.1	k_D	0.14294	0.1431 ± 0.0013	χ^2_{JLA}	1035.9700	1036.05 ± 0.12
Ω_Λ	0.7012	0.7006 ± 0.0062	$100\theta_D$	0.161797	0.16187 ± 0.00049	χ^2_{6DF}	0.0176	0.042 ± 0.056
Ω_m	0.2988	0.2994 ± 0.0062	z_{eq}	3337.1	3339 ± 25	χ^2_{MGS}	2.12	2.12 ± 0.54
$\Omega_m h^2$	0.14759	0.1481 ± 0.0033	k_{eq}	0.010448	0.01047 ± 0.00013	$\chi^2_{DR12BAO}$	3.442	3.87 ± 0.64
$\Omega_m h^3$	0.10374	0.1042 ± 0.0037	$100\theta_{eq}$	0.82552	0.8252 ± 0.0047	χ^2_{prior}	1.74	7.4 ± 3.7
σ_8	0.8260	0.826 ± 0.010	$100\theta_{s,eq}$	0.45564	0.4555 ± 0.0024	χ^2_{CMB}	1190.6	1204.6 ± 5.8
S_8	0.8243	0.826 ± 0.013	$H(0.15)$	75.56	75.6 ± 1.1	χ^2_{BAO}	5.58	6.03 ± 0.98
$\sigma_8\Omega_m^{0.5}$	0.4515	0.4522 ± 0.0069	$D_M(0.15)$	617.7	617.3 ± 9.3			
$\sigma_8\Omega_m^{0.25}$	0.6107	0.6113 ± 0.0079	$H(0.38)$	85.70	85.8 ± 1.2			

Best-fit $\chi^2_{eff} = 2237.54$; $\Delta\chi^2_{eff} = -4.73$; $\bar{\chi}^2_{eff} = 2258.00$; $\Delta\bar{\chi}^2_{eff} = -4.51$; $R - 1 = 0.01420$

χ^2_{eff}: BAO - 6DF: 0.02 (Δ 0.02) MGS: 2.12 (Δ 0.44) DR12BAO: 3.44 (Δ -0.05) CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 9.48 (Δ 0.43) simall_100x143_offlike5_EE_Aplanck_ 396.63 (Δ 0.05) commander_dx12_v3_2_29: 21.55 (Δ -1.10) plik_rd12_HM_v22_TT: 762.97 (Δ 2.07) Hubble - H073p45: 3.63 (Δ -6.94) SN - JLA Pantheon: 1035.97 (Δ -0.10)

7.79 base_nnu_plikHM_TT_lowl_lowE_Riess18_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02261 ± 0.00023	$\sigma_8\Omega_m^{0.25}$	0.606 ± 0.012	$D_M(0.15)$	610 ± 12
$\boldsymbol{\Omega_c h^2}$	0.1247 ± 0.0036	$\sigma_8/h^{0.5}$	0.978 ± 0.015	$H(0.38)$	86.6 ± 1.3
$\boldsymbol{100\theta_{MC}}$	1.04048 ± 0.00054	$r_{drag}h$	102.2 ± 1.5	$D_M(0.38)$	1459 ± 26
$\boldsymbol{\tau}$	$0.0579^{+0.0064}_{-0.0088}$	$\langle d^2\rangle^{1/2}$	2.392 ± 0.034	$H(0.51)$	93.3 ± 1.4
$\boldsymbol{N_{eff}}$	3.53 ± 0.20	z_{re}	$8.11^{+0.69}_{-0.85}$	$D_M(0.51)$	1893 ± 32
$\boldsymbol{\ln(10^{10}A_s)}$	$3.063^{+0.016}_{-0.019}$	$10^9 A_s$	$2.139^{+0.033}_{-0.041}$	$H(0.61)$	98.9 ± 1.4
$\boldsymbol{n_s}$	0.9859 ± 0.0079	$10^9 A_s e^{-2\tau}$	1.905 ± 0.019	$D_M(0.61)$	2205 ± 36
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0025	D_{40}	1201 ± 15	$H(2.33)$	241.4 ± 2.9
$\boldsymbol{A_{217}^{CIB}}$	50 ± 7	D_{220}	5724 ± 41	$D_M(2.33)$	5566 ± 74
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{810}	2542 ± 14	$f\sigma_8(0.15)$	0.452 ± 0.011
$\boldsymbol{A_{143}^{tSZ}}$	4.6 ± 2.0	D_{1420}	813.7 ± 5.4	$\sigma_8(0.15)$	0.765 ± 0.011
$\boldsymbol{A_{100}^{PS}}$	272 ± 28	D_{2000}	227.7 ± 2.1	$f\sigma_8(0.38)$	0.4749 ± 0.0095
$\boldsymbol{A_{143}^{PS}}$	53 ± 8	$n_{s,0.002}$	0.9859 ± 0.0079	$\sigma_8(0.38)$	0.680 ± 0.010
$\boldsymbol{A_{143\times217}^{PS}}$	45^{+9}_{-10}	Y_P	0.2517 ± 0.0025	$f\sigma_8(0.51)$	0.4759 ± 0.0087
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	Y_P^{BBN}	0.2530 ± 0.0025	$\sigma_8(0.51)$	0.6376 ± 0.0094
$\boldsymbol{A^{kSZ}}$	$4.6^{+2.0}_{-4.1}$	10^5D/H	2.706 ± 0.062	$f\sigma_8(0.61)$	0.4726 ± 0.0081
$\boldsymbol{A_{100}^{dustTT}}$	9.1 ± 1.8	Age/Gyr	13.33 ± 0.18	$\sigma_8(0.61)$	0.6073 ± 0.0090
$\boldsymbol{A_{143}^{dustTT}}$	10.9 ± 1.8	z_*	1090.49 ± 0.49	$f\sigma_8(2.33)$	0.3070 ± 0.0046
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.5 ± 3.3	r_*	140.8 ± 1.8	$\sigma_8(2.33)$	0.3175 ± 0.0049
$\boldsymbol{A_{217}^{dustTT}}$	93.0 ± 7.3	$100\theta_*$	1.04035 ± 0.00061	f_{2000}^{143}	34.0 ± 3.3
$\boldsymbol{c_{100}}$	0.99962 ± 0.00062	$D_M(z_*)$/Gpc	13.53 ± 0.16	$f_{2000}^{143\times217}$	35.8 ± 2.4
$\boldsymbol{c_{217}}$	0.99831 ± 0.00062	z_{drag}	1061.19 ± 0.73	f_{2000}^{217}	110.1 ± 2.2
H_0	71.3 ± 1.4	r_{drag}	143.3 ± 1.8	χ^2_{simall}	397.5 ± 2.3
Ω_Λ	$0.709^{+0.011}_{-0.010}$	k_D	0.1433 ± 0.0014	χ^2_{lowl}	21.17 ± 0.79
Ω_m	$0.291^{+0.010}_{-0.011}$	$100\theta_D$	0.16200 ± 0.00051	χ^2_{plik}	777.7 ± 6.1
$\Omega_m h^2$	0.1480 ± 0.0037	z_{eq}	3308 ± 42	$\chi^2_{H073p45}$	2.4 ± 2.4
$\Omega_m h^3$	0.1055 ± 0.0040	k_{eq}	0.01042 ± 0.00016	χ^2_{prior}	7.5 ± 3.8
σ_8	0.825 ± 0.012	$100\theta_{eq}$	0.8314 ± 0.0084	χ^2_{CMB}	1196.4 ± 5.9
S_8	0.813 ± 0.021	$100\theta_{s,eq}$	0.4586 ± 0.0043		
$\sigma_8\Omega_m^{0.5}$	0.446 ± 0.012	$H(0.15)$	76.5 ± 1.4		

$\bar{\chi}^2_{eff} = 1206.27$; $\Delta\bar{\chi}^2_{eff} = -5.54$; $R - 1 = 0.00718$

7.80 base_nnu_plikHM_TT_lowl_lowE_Riess18_post_BAO_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02252 ± 0.00021	$\sigma_8/h^{0.5}$	0.985 ± 0.012	$D_M(0.38)$	1472 ± 22
$\boldsymbol{\Omega_c h^2}$	0.1254 ± 0.0035	$r_{drag}h$	101.13 ± 0.92	$H(0.51)$	92.8 ± 1.2
$\boldsymbol{100\theta_{MC}}$	1.04039 ± 0.00052	$\langle d^2\rangle^{1/2}$	2.411 ± 0.026	$D_M(0.51)$	1908 ± 28
$\boldsymbol{\tau}$	$0.0566^{+0.0062}_{-0.0081}$	z_{re}	$8.00^{+0.66}_{-0.81}$	$H(0.61)$	98.4 ± 1.3
$\boldsymbol{N_{eff}}$	3.49 ± 0.19	$10^9 A_s$	$2.136^{+0.032}_{-0.040}$	$D_M(0.61)$	2222 ± 32
$\boldsymbol{\ln(10^{10} A_s)}$	$3.061^{+0.015}_{-0.019}$	$10^9 A_s e^{-2\tau}$	1.907 ± 0.019	$H(2.33)$	241.7 ± 2.9
$\boldsymbol{n_s}$	0.9820 ± 0.0067	D_{40}	1207 ± 14	$D_M(2.33)$	5587 ± 72
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	D_{220}	5719 ± 41	$f\sigma_8(0.15)$	0.4579 ± 0.0084
$\boldsymbol{A_{217}^{CIB}}$	50 ± 7	D_{810}	2542 ± 14	$\sigma_8(0.15)$	0.766 ± 0.011
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{1420}	813.3 ± 5.2	$f\sigma_8(0.38)$	0.4795 ± 0.0078
$\boldsymbol{A_{143}^{tSZ}}$	4.6 ± 2.0	D_{2000}	227.7 ± 2.1	$\sigma_8(0.38)$	0.6802 ± 0.0098
$\boldsymbol{A_{100}^{PS}}$	273 ± 28	$n_{s,0.002}$	0.9820 ± 0.0067	$f\sigma_8(0.51)$	0.4796 ± 0.0074
$\boldsymbol{A_{143}^{PS}}$	54 ± 8	Y_P	0.2512 ± 0.0025	$\sigma_8(0.51)$	0.6371 ± 0.0092
$\boldsymbol{A_{143\times217}^{PS}}$	45^{+9}_{-10}	Y_P^{BBN}	0.2525 ± 0.0025	$f\sigma_8(0.61)$	0.4755 ± 0.0072
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	10^5D/H	2.711 ± 0.061	$\sigma_8(0.61)$	0.6066 ± 0.0088
$\boldsymbol{A^{kSZ}}$	$4.6^{+2.0}_{-3.9}$	Age/Gyr	13.38 ± 0.17	$f\sigma_8(2.33)$	0.3063 ± 0.0045
$\boldsymbol{A_{100}^{dustTT}}$	9.1 ± 1.9	z_*	1090.63 ± 0.46	$\sigma_8(2.33)$	0.3165 ± 0.0047
$\boldsymbol{A_{143}^{dustTT}}$	10.9 ± 1.8	r_*	140.9 ± 1.8	f_{2000}^{143}	33.9 ± 3.3
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.5 ± 3.3	$100\theta_*$	1.04028 ± 0.00060	$f_{2000}^{143\times217}$	35.8 ± 2.3
$\boldsymbol{A_{217}^{dustTT}}$	93.0 ± 7.3	$D_M(z_*)$/Gpc	13.54 ± 0.17	f_{2000}^{217}	110.0 ± 2.1
$\boldsymbol{c_{100}}$	0.99961 ± 0.00062	z_{drag}	1061.00 ± 0.71	χ^2_{simall}	397.2 ± 2.0
$\boldsymbol{c_{217}}$	0.99831 ± 0.00063	r_{drag}	143.4 ± 1.8	χ^2_{lowl}	21.55 ± 0.75
H_0	70.5 ± 1.1	k_D	0.1433 ± 0.0014	χ^2_{plik}	776.2 ± 5.8
Ω_Λ	0.7012 ± 0.0069	$100\theta_D$	0.16195 ± 0.00050	$\chi^2_{H073p45}$	3.6 ± 2.5
Ω_m	0.2988 ± 0.0069	z_{eq}	3337 ± 28	χ^2_{6DF}	0.053 ± 0.072
$\Omega_m h^2$	0.1486 ± 0.0036	k_{eq}	0.01048 ± 0.00014	χ^2_{MGS}	2.17 ± 0.60
$\Omega_m h^3$	0.1048 ± 0.0039	$100\theta_{eq}$	0.8256 ± 0.0052	$\chi^2_{DR12BAO}$	4.00 ± 0.82
σ_8	0.827 ± 0.012	$100\theta_{s,eq}$	0.4557 ± 0.0027	χ^2_{prior}	7.4 ± 3.7
S_8	0.826 ± 0.016	$H(0.15)$	75.8 ± 1.1	χ^2_{BAO}	6.2 ± 1.2
$\sigma_8\Omega_m^{0.5}$	0.4522 ± 0.0087	$D_M(0.15)$	615.8 ± 9.6	χ^2_{CMB}	1195.0 ± 5.7
$\sigma_8\Omega_m^{0.25}$	0.6116 ± 0.0098	$H(0.38)$	86.0 ± 1.2		

$\bar{\chi}^2_{eff} = 1212.22$; $R - 1 = 0.01139$

7.81 base_nnu_plikHM_TT_lowl_lowE_Riess18_post_BAO_Pantheon_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02252 ± 0.00021	$\sigma_8/h^{0.5}$	0.985 ± 0.011	$D_M(0.38)$	1471 ± 22
$\boldsymbol{\Omega_c h^2}$	0.1254 ± 0.0036	$r_{drag}h$	101.14 ± 0.88	$H(0.51)$	92.8 ± 1.2
$\boldsymbol{100\theta_{MC}}$	1.04039 ± 0.00052	$\langle d^2\rangle^{1/2}$	2.410 ± 0.026	$D_M(0.51)$	1908 ± 28
$\boldsymbol{\tau}$	$0.0566^{+0.0062}_{-0.0082}$	z_{re}	$8.00^{+0.66}_{-0.81}$	$H(0.61)$	98.4 ± 1.3
$\boldsymbol{N_{eff}}$	3.49 ± 0.19	$10^9 A_s$	$2.136^{+0.032}_{-0.040}$	$D_M(0.61)$	2222 ± 32
$\boldsymbol{\ln(10^{10} A_s)}$	$3.061^{+0.015}_{-0.019}$	$10^9 A_s e^{-2\tau}$	1.907 ± 0.019	$H(2.33)$	241.7 ± 2.9
$\boldsymbol{n_s}$	0.9821 ± 0.0066	D_{40}	1207 ± 13	$D_M(2.33)$	5587 ± 72
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	D_{220}	5719 ± 41	$f\sigma_8(0.15)$	0.4578 ± 0.0083
$\boldsymbol{A_{217}^{CIB}}$	50 ± 7	D_{810}	2542 ± 14	$\sigma_8(0.15)$	0.766 ± 0.011
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{1420}	813.3 ± 5.2	$f\sigma_8(0.38)$	0.4794 ± 0.0077
$\boldsymbol{A_{143}^{tSZ}}$	4.6 ± 2.0	D_{2000}	227.7 ± 2.1	$\sigma_8(0.38)$	0.6802 ± 0.0098
$\boldsymbol{A_{100}^{PS}}$	273 ± 28	$n_{s,0.002}$	0.9821 ± 0.0066	$f\sigma_8(0.51)$	0.4795 ± 0.0074
$\boldsymbol{A_{143}^{PS}}$	54 ± 8	Y_P	0.2512 ± 0.0025	$\sigma_8(0.51)$	0.6372 ± 0.0092
$\boldsymbol{A_{143\times217}^{PS}}$	45^{+9}_{-10}	Y_P^{BBN}	0.2525 ± 0.0025	$f\sigma_8(0.61)$	0.4755 ± 0.0072
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	10^5D/H	2.711 ± 0.062	$\sigma_8(0.61)$	0.6066 ± 0.0088
$\boldsymbol{A^{kSZ}}$	$4.6^{+2.0}_{-4.0}$	Age/Gyr	13.38 ± 0.17	$f\sigma_8(2.33)$	0.3064 ± 0.0045
$\boldsymbol{A_{100}^{dustTT}}$	9.1 ± 1.9	z_*	1090.63 ± 0.46	$\sigma_8(2.33)$	0.3165 ± 0.0047
$\boldsymbol{A_{143}^{dustTT}}$	10.9 ± 1.8	r_*	140.9 ± 1.8	f_{2000}^{143}	33.9 ± 3.3
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.5 ± 3.3	$100\theta_*$	1.04028 ± 0.00060	$f_{2000}^{143\times217}$	35.8 ± 2.3
$\boldsymbol{A_{217}^{dustTT}}$	93.0 ± 7.3	$D_M(z_*)$/Gpc	13.54 ± 0.17	f_{2000}^{217}	110.0 ± 2.1
$\boldsymbol{c_{100}}$	0.99961 ± 0.00062	z_{drag}	1061.01 ± 0.71	χ^2_{simall}	397.2 ± 2.0
$\boldsymbol{c_{217}}$	0.99831 ± 0.00063	r_{drag}	143.4 ± 1.8	χ^2_{lowl}	21.54 ± 0.74
H_0	70.5 ± 1.1	k_D	0.1433 ± 0.0014	χ^2_{plik}	776.2 ± 5.8
Ω_Λ	0.7012 ± 0.0066	$100\theta_D$	0.16195 ± 0.00050	$\chi^2_{H073p45}$	3.5 ± 2.4
Ω_m	0.2988 ± 0.0066	z_{eq}	3336 ± 27	χ^2_{JLA}	1036.06 ± 0.13
$\Omega_m h^2$	0.1486 ± 0.0036	k_{eq}	0.01048 ± 0.00014	χ^2_{6DF}	0.050 ± 0.067
$\Omega_m h^3$	0.1048 ± 0.0039	$100\theta_{eq}$	0.8257 ± 0.0050	χ^2_{MGS}	2.17 ± 0.58
σ_8	0.827 ± 0.012	$100\theta_{s,eq}$	0.4557 ± 0.0026	$\chi^2_{DR12BAO}$	3.95 ± 0.75
S_8	0.826 ± 0.016	$H(0.15)$	75.8 ± 1.1	χ^2_{prior}	7.4 ± 3.7
$\sigma_8\Omega_m^{0.5}$	0.4521 ± 0.0085	$D_M(0.15)$	615.7 ± 9.5	χ^2_{BAO}	6.2 ± 1.2
$\sigma_8\Omega_m^{0.25}$	0.6116 ± 0.0097	$H(0.38)$	86.0 ± 1.2	χ^2_{CMB}	1195.0 ± 5.7

$\bar{\chi}^2_{eff} = 2248.19$; $R - 1 = 0.01138$

7.82 base_nnu_plikHM_TT_lowl_lowE_Riess18_post_lensing_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02258 ± 0.00023	$\sigma_8\Omega_m^{0.25}$	0.6095 ± 0.0084	$D_M(0.15)$	613 ± 11
$\boldsymbol{\Omega_c h^2}$	0.1248 ± 0.0033	$\sigma_8/h^{0.5}$	0.983 ± 0.010	$H(0.38)$	86.3 ± 1.3
$\boldsymbol{100\theta_{MC}}$	1.04047 ± 0.00052	$r_{drag}h$	101.7 ± 1.3	$D_M(0.38)$	1465 ± 26
$\boldsymbol{\tau}$	$0.0593^{+0.0066}_{-0.0088}$	$\langle d^2\rangle^{1/2}$	2.406 ± 0.025	$H(0.51)$	93.0 ± 1.4
$\boldsymbol{N_{eff}}$	3.50 ± 0.19	z_{re}	$8.25^{+0.69}_{-0.84}$	$D_M(0.51)$	1901 ± 32
$\boldsymbol{\ln(10^{10}A_s)}$	$3.066^{+0.015}_{-0.018}$	$10^9 A_s$	$2.147^{+0.031}_{-0.039}$	$H(0.61)$	98.6 ± 1.4
$\boldsymbol{n_s}$	0.9837 ± 0.0078	$10^9 A_s e^{-2\tau}$	1.906 ± 0.017	$D_M(0.61)$	2214 ± 36
$\boldsymbol{y_{cal}}$	1.0008 ± 0.0025	D_{40}	1206 ± 14	$H(2.33)$	241.4 ± 2.7
$\boldsymbol{A_{217}^{CIB}}$	49 ± 7	D_{220}	5729 ± 41	$D_M(2.33)$	5579 ± 75
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{810}	2544 ± 14	$f\sigma_8(0.15)$	0.4550 ± 0.0079
$\boldsymbol{A_{143}^{tSZ}}$	4.6 ± 2.0	D_{1420}	814.1 ± 5.4	$\sigma_8(0.15)$	0.7664 ± 0.0098
$\boldsymbol{A_{100}^{PS}}$	272 ± 28	D_{2000}	228.0 ± 2.1	$f\sigma_8(0.38)$	0.4776 ± 0.0068
$\boldsymbol{A_{143}^{PS}}$	53 ± 8	$n_{s,0.002}$	0.9837 ± 0.0078	$\sigma_8(0.38)$	0.6813 ± 0.0090
$\boldsymbol{A_{143\times217}^{PS}}$	45^{+9}_{-10}	Y_P	0.2513 ± 0.0025	$f\sigma_8(0.51)$	0.4782 ± 0.0063
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	Y_P^{BBN}	0.2527 ± 0.0025	$\sigma_8(0.51)$	0.6384 ± 0.0087
$\boldsymbol{A^{kSZ}}$	$4.5^{+1.8}_{-4.1}$	10^5D/H	2.701 ± 0.060	$f\sigma_8(0.61)$	0.4745 ± 0.0061
$\boldsymbol{A_{100}^{dust TT}}$	9.1 ± 1.9	Age/Gyr	13.36 ± 0.18	$\sigma_8(0.61)$	0.6079 ± 0.0084
$\boldsymbol{A_{143}^{dust TT}}$	10.9 ± 1.8	z_*	1090.50 ± 0.45	$f\sigma_8(2.33)$	0.3072 ± 0.0044
$\boldsymbol{A_{143\times217}^{dust TT}}$	18.4 ± 3.3	r_*	140.9 ± 1.7	$\sigma_8(2.33)$	0.3175 ± 0.0048
$\boldsymbol{A_{217}^{dust TT}}$	93.1 ± 7.4	$100\theta_*$	1.04035 ± 0.00060	f_{2000}^{143}	33.7 ± 3.3
$\boldsymbol{c_{100}}$	0.99963 ± 0.00062	$D_M(z_*)$/Gpc	13.55 ± 0.16	$f_{2000}^{143\times217}$	35.6 ± 2.3
$\boldsymbol{c_{217}}$	0.99830 ± 0.00062	z_{drag}	1061.11 ± 0.73	f_{2000}^{217}	109.9 ± 2.2
H_0	70.9 ± 1.4	r_{drag}	143.5 ± 1.8	$\chi^2_{lensing}$	10.2 ± 1.0
Ω_Λ	0.7054 ± 0.0094	k_D	0.1432 ± 0.0013	χ^2_{simall}	397.9 ± 2.5
Ω_m	0.2946 ± 0.0094	$100\theta_D$	0.16193 ± 0.00050	χ^2_{lowl}	21.43 ± 0.80
$\Omega_m h^2$	0.1480 ± 0.0033	z_{eq}	3321 ± 36	χ^2_{plik}	776.3 ± 5.8
$\Omega_m h^3$	0.1050 ± 0.0039	k_{eq}	0.01044 ± 0.00013	$\chi^2_{H073p45}$	3.0 ± 2.7
σ_8	0.827 ± 0.010	$100\theta_{eq}$	0.8288 ± 0.0070	χ^2_{prior}	7.5 ± 3.8
S_8	0.820 ± 0.015	$100\theta_{s,eq}$	0.4573 ± 0.0036	χ^2_{CMB}	1205.8 ± 6.1
$\sigma_8\Omega_m^{0.5}$	0.4490 ± 0.0084	$H(0.15)$	76.2 ± 1.4		

$\bar{\chi}^2_{eff} = 1216.31$; $\Delta\bar{\chi}^2_{eff} = -4.76$; $R - 1 = 0.01206$

7.83 base_nnu_plikHM_TT_lowl_lowE_Riess18_post_BAO_lensing_Pantheon_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02251 ± 0.00020	$r_{\rm drag} h$	101.07 ± 0.82	$D_{\rm M}(0.51)$	1913 ± 27
$\boldsymbol{\Omega_c h^2}$	0.1249 ± 0.0033	$\langle d^2 \rangle^{1/2}$	2.415 ± 0.021	$H(0.61)$	98.2 ± 1.2
$\boldsymbol{100\theta_{MC}}$	1.04043 ± 0.00051	$z_{\rm re}$	$8.08^{+0.65}_{-0.74}$	$D_{\rm M}(0.61)$	2227 ± 31
$\boldsymbol{\tau}$	$0.0575^{+0.0063}_{-0.0076}$	$10^9 A_{\rm s}$	$2.138^{+0.029}_{-0.035}$	$H(2.33)$	241.2 ± 2.7
$\boldsymbol{N_{\rm eff}}$	3.46 ± 0.18	$10^9 A_{\rm s} e^{-2\tau}$	1.906 ± 0.017	$D_{\rm M}(2.33)$	5599 ± 69
$\boldsymbol{\ln(10^{10} A_{\rm s})}$	$3.062^{+0.014}_{-0.016}$	D_{40}	1210 ± 13	$f\sigma_8(0.15)$	0.4578 ± 0.0066
$\boldsymbol{n_{\rm s}}$	0.9808 ± 0.0065	D_{220}	5724 ± 41	$\sigma_8(0.15)$	0.7651 ± 0.0096
$\boldsymbol{y_{\rm cal}}$	1.0006 ± 0.0025	D_{810}	2543 ± 14	$f\sigma_8(0.38)$	0.4793 ± 0.0062
$\boldsymbol{A^{\rm CIB}_{217}}$	49 ± 7	D_{1420}	813.7 ± 5.2	$\sigma_8(0.38)$	0.6796 ± 0.0087
$\boldsymbol{\xi^{\rm tSZ\times CIB}}$	—	D_{2000}	227.9 ± 2.1	$f\sigma_8(0.51)$	0.4794 ± 0.0060
$\boldsymbol{A^{\rm tSZ}_{143}}$	4.7 ± 2.0	$n_{\rm s,0.002}$	0.9808 ± 0.0065	$\sigma_8(0.51)$	0.6366 ± 0.0082
$\boldsymbol{A^{\rm PS}_{100}}$	272 ± 29	$Y_{\rm P}$	0.2508 ± 0.0024	$f\sigma_8(0.61)$	0.4753 ± 0.0059
$\boldsymbol{A^{\rm PS}_{143}}$	53 ± 8	$Y_{\rm P}^{\rm BBN}$	0.2521 ± 0.0024	$\sigma_8(0.61)$	0.6061 ± 0.0079
$\boldsymbol{A^{\rm PS}_{143\times217}}$	45^{+9}_{-10}	10^5D/H	2.701 ± 0.059	$f\sigma_8(2.33)$	0.3061 ± 0.0040
$\boldsymbol{A^{\rm PS}_{217}}$	115 ± 10	Age/Gyr	13.41 ± 0.17	$\sigma_8(2.33)$	0.3161 ± 0.0043
$\boldsymbol{A^{\rm kSZ}}$	$4.5^{+1.7}_{-4.1}$	z_*	1090.56 ± 0.43	f^{143}_{2000}	33.7 ± 3.3
$\boldsymbol{A^{{\rm dust}TT}_{100}}$	9.1 ± 1.9	r_*	141.1 ± 1.7	$f^{143\times217}_{2000}$	35.5 ± 2.3
$\boldsymbol{A^{{\rm dust}TT}_{143}}$	10.9 ± 1.8	$100\theta_*$	1.04034 ± 0.00059	f^{217}_{2000}	109.8 ± 2.1
$\boldsymbol{A^{{\rm dust}TT}_{143\times217}}$	18.5 ± 3.3	$D_{\rm M}(z_*)$/Gpc	13.57 ± 0.16	$\chi^2_{\rm lensing}$	9.99 ± 0.78
$\boldsymbol{A^{{\rm dust}TT}_{217}}$	93.1 ± 7.3	$z_{\rm drag}$	1060.93 ± 0.69	$\chi^2_{\rm simall}$	397.4 ± 2.0
$\boldsymbol{c_{100}}$	0.99963 ± 0.00062	$r_{\rm drag}$	143.7 ± 1.7	$\chi^2_{\rm lowl}$	21.69 ± 0.75
$\boldsymbol{c_{217}}$	0.99830 ± 0.00062	$k_{\rm D}$	0.1431 ± 0.0013	$\chi^2_{\rm plik}$	775.4 ± 5.7
H_0	70.3 ± 1.1	$100\theta_{\rm D}$	0.16187 ± 0.00049	$\chi^2_{\rm H073p45}$	3.9 ± 2.5
Ω_Λ	0.7007 ± 0.0062	$z_{\rm eq}$	3338 ± 25	$\chi^2_{\rm JLA}$	1036.05 ± 0.12
$\Omega_{\rm m}$	0.2993 ± 0.0062	$k_{\rm eq}$	0.01047 ± 0.00013	$\chi^2_{\rm 6DF}$	0.043 ± 0.057
$\Omega_{\rm m} h^2$	0.1481 ± 0.0033	$100\theta_{\rm eq}$	0.8252 ± 0.0046	$\chi^2_{\rm MGS}$	2.12 ± 0.54
$\Omega_{\rm m} h^3$	0.1042 ± 0.0037	$100\theta_{\rm s,eq}$	0.4555 ± 0.0024	$\chi^2_{\rm DR12BAO}$	3.87 ± 0.64
σ_8	0.827 ± 0.010	$H(0.15)$	75.6 ± 1.1	$\chi^2_{\rm prior}$	7.4 ± 3.7
S_8	0.826 ± 0.013	$D_{\rm M}(0.15)$	617.3 ± 9.3	$\chi^2_{\rm CMB}$	1204.5 ± 5.7
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4522 ± 0.0069	$H(0.38)$	85.8 ± 1.2	$\chi^2_{\rm BAO}$	6.03 ± 0.99
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.6114 ± 0.0078	$D_{\rm M}(0.38)$	1475 ± 21		
$\sigma_8 / h^{0.5}$	0.9857 ± 0.0091	$H(0.51)$	92.6 ± 1.2		

$\bar{\chi}^2_{\rm eff} = 2257.90$; $\Delta\bar{\chi}^2_{\rm eff} = -4.53$; $R - 1 = 0.01350$

7.84 base_nnu_plikHM_TTTEEE_lowl_lowE_Riess18

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022649	0.02266 ± 0.00019	$\Omega_m h^3$	0.10061	0.1014 ± 0.0032	$100\theta_{s,eq}$	0.45380	0.4539 ± 0.0030
$\boldsymbol{\Omega_c h^2}$	0.12182	0.1225 ± 0.0028	σ_8	0.8177	0.820 ± 0.011	$H(0.15)$	74.59	74.8 ± 1.1
$\boldsymbol{100\theta_{MC}}$	1.040761	1.04068 ± 0.00039	S_8	0.8203	0.822 ± 0.016	$D_M(0.15)$	626.0	624.2 ± 9.9
$\boldsymbol{\tau}$	0.0578	0.0579 ± 0.0081	$\sigma_8\Omega_m^{0.5}$	0.4493	0.4504 ± 0.0086	$H(0.38)$	84.68	84.9 ± 1.1
$\boldsymbol{N_{eff}}$	3.256	3.30 ± 0.16	$\sigma_8\Omega_m^{0.25}$	0.6061	0.6077 ± 0.0090	$D_M(0.38)$	1495.1	1491 ± 22
$\boldsymbol{\ln(10^{10}A_s)}$	3.0551	3.058 ± 0.018	$\sigma_8/h^{0.5}$	0.9820	0.983 ± 0.012	$H(0.51)$	91.40	91.7 ± 1.1
$\boldsymbol{n_s}$	0.9765	0.9770 ± 0.0068	$r_{drag}h$	100.72	100.8 ± 1.1	$D_M(0.51)$	1938.3	1933 ± 28
$\boldsymbol{y_{cal}}$	1.00002	1.0008 ± 0.0025	$\langle d^2\rangle^{1/2}$	2.4160	2.419 ± 0.028	$H(0.61)$	97.03	97.3 ± 1.1
$\boldsymbol{A_{217}^{CIB}}$	47.3	48 ± 7	z_{re}	8.03	8.03 ± 0.81	$D_M(0.61)$	2256.7	2251 ± 31
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.66	—	$10^9 A_s$	2.1224	$2.129^{+0.036}_{-0.040}$	$H(2.33)$	238.72	239.3 ± 2.4
$\boldsymbol{A_{143}^{tSZ}}$	6.26	$5.3^{+2.2}_{-2.0}$	$10^9 A_s e^{-2\tau}$	1.8906	1.896 ± 0.016	$D_M(2.33)$	5666	5651 ± 64
$\boldsymbol{A_{100}^{PS}}$	255.9	263 ± 28	D_{40}	1212.9	1215 ± 14	$f\sigma_8(0.15)$	0.4547	0.4558 ± 0.0082
$\boldsymbol{A_{143}^{PS}}$	51.3	48 ± 8	D_{220}	5731.2	5739 ± 39	$\sigma_8(0.15)$	0.7566	0.7588 ± 0.0099
$\boldsymbol{A_{143\times217}^{PS}}$	51.0	43 ± 9	D_{810}	2540.0	2543 ± 14	$f\sigma_8(0.38)$	0.4753	0.4765 ± 0.0073
$\boldsymbol{A_{217}^{PS}}$	118.6	114 ± 10	D_{1420}	817.08	817.1 ± 4.8	$\sigma_8(0.38)$	0.6717	0.6737 ± 0.0090
$\boldsymbol{A^{kSZ}}$	1.69	< 4.87	D_{2000}	230.29	230.1 ± 1.8	$f\sigma_8(0.51)$	0.4751	0.4763 ± 0.0068
$\boldsymbol{A_{100}^{dustTT}}$	8.94	9.1 ± 1.8	$n_{s,0.002}$	0.9765	0.9770 ± 0.0068	$\sigma_8(0.51)$	0.6291	0.6309 ± 0.0085
$\boldsymbol{A_{143}^{dustTT}}$	11.11	11.1 ± 1.8	Y_P	0.24827	0.2488 ± 0.0021	$f\sigma_8(0.61)$	0.4708	0.4721 ± 0.0065
$\boldsymbol{A_{143\times217}^{dustTT}}$	19.63	18.8 ± 3.3	Y_P^{BBN}	0.24961	0.2501 ± 0.0021	$\sigma_8(0.61)$	0.5988	0.6006 ± 0.0081
$\boldsymbol{A_{217}^{dustTT}}$	94.1	93.6 ± 7.3	10^5D/H	2.6068	2.618 ± 0.043	$f\sigma_8(2.33)$	0.30231	0.3032 ± 0.0042
$\boldsymbol{A_{100}^{dustTE}}$	0.1141	0.115 ± 0.038	Age/Gyr	13.568	13.53 ± 0.15	$\sigma_8(2.33)$	0.31212	0.3131 ± 0.0045
$\boldsymbol{A_{100\times143}^{dustTE}}$	0.1338	0.135 ± 0.030	z_*	1089.933	1090.02 ± 0.35	f_{2000}^{143}	29.98	30.8 ± 3.0
$\boldsymbol{A_{100\times217}^{dustTE}}$	0.478	0.480 ± 0.085	r_*	142.73	142.4 ± 1.5	$f_{2000}^{143\times217}$	32.90	33.2 ± 2.0
$\boldsymbol{A_{143}^{dustTE}}$	0.222	0.225 ± 0.054	$100\theta_*$	1.040778	1.04068 ± 0.00047	f_{2000}^{217}	107.20	107.9 ± 1.9
$\boldsymbol{A_{143\times217}^{dustTE}}$	0.664	0.662 ± 0.080	$D_M(z_*)$/Gpc	13.713	13.68 ± 0.14	χ^2_{simall}	396.61	397.6 ± 2.4
$\boldsymbol{A_{217}^{dustTE}}$	2.083	2.07 ± 0.27	z_{drag}	1060.89	1060.98 ± 0.63	χ^2_{lowl}	21.93	22.03 ± 0.89
$\boldsymbol{c_{100}}$	0.99968	0.99965 ± 0.00062	r_{drag}	145.27	144.9 ± 1.5	χ^2_{plik}	2349.8	2365.3 ± 7.0
$\boldsymbol{c_{217}}$	0.99820	0.99822 ± 0.00063	k_D	0.14222	0.1425 ± 0.0012	$\chi^2_{H073p45}$	6.15	6.0 ± 3.3
H_0	69.33	69.5 ± 1.2	$100\theta_D$	0.161081	0.16119 ± 0.00036	χ^2_{prior}	1.84	11.9 ± 4.7
Ω_Λ	0.6981	0.6983 ± 0.0084	z_{eq}	3357.6	3356 ± 31	χ^2_{CMB}	2768.3	2785.0 ± 6.7
Ω_m	0.3019	0.3017 ± 0.0084	k_{eq}	0.010391	0.01042 ± 0.00012			
$\Omega_m h^2$	0.14511	0.1458 ± 0.0029	$100\theta_{eq}$	0.8222	0.8224 ± 0.0060			

Best-fit $\chi^2_{eff} = 2776.34$; $\Delta\chi^2_{eff} = -1.60$; $\bar{\chi}^2_{eff} = 2802.87$; $\Delta\bar{\chi}^2_{eff} = -1.30$; $R - 1 = 0.00770$

χ^2_{eff}: CMB - simall_100x143_offlike5_EE_Aplanck_B: 396.62 (Δ 0.14) commander_dx12_v3_2_29: 21.93 (Δ -0.61) plik_rd12_HM_v22b_TTTEEE: 2349.80 (Δ 3.04) Hubble - H073p45: 6.15 (Δ -4.44)

7.85 base_nnu_plikHM_TTTEEE_lowl_lowE_Riess18_post_BAO

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022656	0.02264 ± 0.00016	σ_8	0.8205	0.820 ± 0.011	$D_M(0.15)$	626.2	625.1 ± 8.5
$\boldsymbol{\Omega_c h^2}$	0.12217	0.1226 ± 0.0028	S_8	0.8245	0.824 ± 0.013	$H(0.38)$	84.69	84.8 ± 1.0
$\boldsymbol{100\theta_{MC}}$	1.040676	1.04068 ± 0.00039	$\sigma_8\Omega_m^{0.5}$	0.4516	0.4511 ± 0.0074	$D_M(0.38)$	1495.4	1493 ± 19
$\boldsymbol{\tau}$	0.0587	$0.0576^{+0.0073}_{-0.0082}$	$\sigma_8\Omega_m^{0.25}$	0.6087	0.6082 ± 0.0084	$H(0.51)$	91.42	91.6 ± 1.0
$\boldsymbol{N_{eff}}$	3.266	3.29 ± 0.15	$\sigma_8/h^{0.5}$	0.9856	0.984 ± 0.011	$D_M(0.51)$	1938.5	1935 ± 24
$\boldsymbol{\ln(10^{10}A_s)}$	3.0601	3.057 ± 0.018	$r_{drag}h$	100.57	100.62 ± 0.79	$H(0.61)$	97.06	97.2 ± 1.1
$\boldsymbol{n_s}$	0.9763	0.9764 ± 0.0060	$\langle d^2\rangle^{1/2}$	2.4243	2.421 ± 0.025	$D_M(0.61)$	2256.9	2253 ± 28
$\boldsymbol{y_{cal}}$	1.00108	1.0007 ± 0.0025	z_{re}	8.12	8.00 ± 0.79	$H(2.33)$	238.98	239.3 ± 2.4
$\boldsymbol{A_{217}^{CIB}}$	49.5	48 ± 7	$10^9 A_s$	2.1329	$2.127^{+0.036}_{-0.040}$	$D_M(2.33)$	5664	5655 ± 61
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.30	—	$10^9 A_s e^{-2\tau}$	1.8968	1.896 ± 0.016	$f\sigma_8(0.15)$	0.4569	0.4564 ± 0.0071
$\boldsymbol{A_{143}^{tSZ}}$	7.10	$5.3^{+2.2}_{-2.0}$	D_{40}	1216.8	1216 ± 13	$\sigma_8(0.15)$	0.7590	0.7586 ± 0.0099
$\boldsymbol{A_{100}^{PS}}$	254.2	263 ± 28	D_{220}	5745.1	5739 ± 38	$f\sigma_8(0.38)$	0.4774	0.4770 ± 0.0067
$\boldsymbol{A_{143}^{PS}}$	47.2	48 ± 8	D_{810}	2546.1	2543 ± 13	$\sigma_8(0.38)$	0.6738	0.6735 ± 0.0089
$\boldsymbol{A_{143\times217}^{PS}}$	45.2	42 ± 9	D_{1420}	818.81	817.0 ± 4.8	$f\sigma_8(0.51)$	0.4770	0.4766 ± 0.0065
$\boldsymbol{A_{217}^{PS}}$	118.0	114 ± 10	D_{2000}	230.79	230.1 ± 1.8	$\sigma_8(0.51)$	0.6309	0.6307 ± 0.0084
$\boldsymbol{A^{kSZ}}$	0.12	< 4.95	$n_{s,0.002}$	0.9763	0.9764 ± 0.0060	$f\sigma_8(0.61)$	0.4727	0.4723 ± 0.0063
$\boldsymbol{A_{100}^{dustTT}}$	8.84	9.1 ± 1.8	Y_P	0.24840	0.2487 ± 0.0020	$\sigma_8(0.61)$	0.6006	0.6004 ± 0.0080
$\boldsymbol{A_{143}^{dustTT}}$	10.97	11.1 ± 1.8	Y_P^{BBN}	0.24974	0.2500 ± 0.0020	$f\sigma_8(2.33)$	0.30315	0.3030 ± 0.0041
$\boldsymbol{A_{143\times217}^{dustTT}}$	19.01	18.8 ± 3.3	10^5D/H	2.6089	2.619 ± 0.043	$\sigma_8(2.33)$	0.31294	0.3128 ± 0.0043
$\boldsymbol{A_{217}^{dustTT}}$	93.0	93.6 ± 7.3	Age/Gyr	13.561	13.54 ± 0.15	f_{2000}^{143}	29.70	30.8 ± 2.9
$\boldsymbol{A_{100}^{dustTE}}$	0.1125	0.115 ± 0.038	z_*	1089.962	1090.03 ± 0.33	$f_{2000}^{143\times217}$	32.75	33.2 ± 2.0
$\boldsymbol{A_{100\times143}^{dustTE}}$	0.1351	0.135 ± 0.030	r_*	142.59	142.4 ± 1.5	f_{2000}^{217}	107.37	107.9 ± 1.9
$\boldsymbol{A_{100\times217}^{dustTE}}$	0.482	0.481 ± 0.086	$100\theta_*$	1.040694	1.04068 ± 0.00047	χ^2_{simall}	396.87	397.6 ± 2.3
$\boldsymbol{A_{143}^{dustTE}}$	0.219	0.225 ± 0.054	$D_M(z_*)$/Gpc	13.701	13.68 ± 0.14	χ^2_{lowl}	22.03	22.08 ± 0.79
$\boldsymbol{A_{143\times217}^{dustTE}}$	0.660	0.663 ± 0.080	z_{drag}	1060.92	1060.94 ± 0.59	χ^2_{plik}	2349.0	2364.6 ± 6.7
$\boldsymbol{A_{217}^{dustTE}}$	2.084	2.08 ± 0.26	r_{drag}	145.13	144.9 ± 1.5	$\chi^2_{H073p45}$	6.25	6.2 ± 2.9
$\boldsymbol{c_{100}}$	0.99965	0.99965 ± 0.00062	k_D	0.14234	0.1425 ± 0.0012	χ^2_{6DF}	0.0003	0.027 ± 0.039
$\boldsymbol{c_{217}}$	0.99820	0.99822 ± 0.00062	$100\theta_D$	0.161086	0.16118 ± 0.00036	χ^2_{MGS}	1.748	1.84 ± 0.49
H_0	69.30	69.43 ± 0.97	z_{eq}	3361.7	3360 ± 23	$\chi^2_{DR12BAO}$	3.515	3.90 ± 0.67
Ω_Λ	0.6971	0.6974 ± 0.0061	k_{eq}	0.010411	0.01042 ± 0.00011	χ^2_{prior}	2.08	11.9 ± 4.7
Ω_m	0.3029	0.3026 ± 0.0061	$100\theta_{eq}$	0.82138	0.8217 ± 0.0044	χ^2_{BAO}	5.263	5.76 ± 0.67
$\Omega_m h^2$	0.14547	0.1459 ± 0.0029	$100\theta_{s,eq}$	0.45338	0.4536 ± 0.0022	χ^2_{CMB}	2767.9	2784.3 ± 6.4
$\Omega_m h^3$	0.10081	0.1013 ± 0.0031	$H(0.15)$	74.57	74.71 ± 0.98			

Best-fit $\chi^2_{eff} = 2781.50$; $\bar{\chi}^2_{eff} = 2808.11$; $R - 1 = 0.00961$

χ^2_{eff}: BAO - 6DF: 0.00 MGS: 1.75 DR12BAO: 3.52 CMB - simall_100x143_offlike5_EE_Aplanck_B: 396.87 commander_dx12_v3_2_29: 22.03 plik_rd12_HM_v22b_TTTEEE: 2349.01 Hubble - H073p45: 6.25

7.86 base_nnu_plikHM_TTTEEE_lowl_lowE_Riess18_post_BAO_Pantheon

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022659	0.02265 ± 0.00016	$\Omega_m h^3$	0.10091	0.1013 ± 0.0031	$100\theta_{s,eq}$	0.45366	0.4537 ± 0.0022
$\boldsymbol{\Omega_c h^2}$	0.12214	0.1226 ± 0.0028	σ_8	0.8189	0.820 ± 0.011	$H(0.15)$	74.65	74.74 ± 0.96
$\boldsymbol{100\theta_{MC}}$	1.040729	1.04068 ± 0.00039	S_8	0.8218	0.823 ± 0.013	$D_M(0.15)$	625.5	624.8 ± 8.3
$\boldsymbol{\tau}$	0.0575	$0.0577^{+0.0073}_{-0.0082}$	$\sigma_8\Omega_m^{0.5}$	0.4501	0.4509 ± 0.0073	$H(0.38)$	84.75	84.86 ± 0.99
$\boldsymbol{N_{eff}}$	3.270	3.29 ± 0.15	$\sigma_8\Omega_m^{0.25}$	0.6071	0.6080 ± 0.0084	$D_M(0.38)$	1494.0	1492 ± 19
$\boldsymbol{\ln(10^{10}A_s)}$	3.0566	3.058 ± 0.018	$\sigma_8/h^{0.5}$	0.9831	0.984 ± 0.011	$H(0.51)$	91.48	91.6 ± 1.0
$\boldsymbol{n_s}$	0.9764	0.9766 ± 0.0059	$r_{drag}h$	100.68	100.67 ± 0.76	$D_M(0.51)$	1936.8	1935 ± 24
$\boldsymbol{y_{cal}}$	1.00062	1.0007 ± 0.0025	$\langle d^2\rangle^{1/2}$	2.4188	2.420 ± 0.024	$H(0.61)$	97.12	97.2 ± 1.1
$\boldsymbol{A_{217}^{CIB}}$	50.3	48 ± 7	z_{re}	8.01	8.01 ± 0.79	$D_M(0.61)$	2254.9	2252 ± 27
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.05	—	10^9A_s	2.1256	$2.128^{+0.036}_{-0.040}$	$H(2.33)$	238.98	239.3 ± 2.3
$\boldsymbol{A_{143}^{tSZ}}$	7.52	$5.3^{+2.2}_{-2.0}$	$10^9A_se^{-2\tau}$	1.8945	1.896 ± 0.016	$D_M(2.33)$	5661	5654 ± 61
$\boldsymbol{A_{100}^{PS}}$	253.2	263 ± 28	D_{40}	1215.2	1216 ± 13	$f\sigma_8(0.15)$	0.4555	0.4562 ± 0.0070
$\boldsymbol{A_{143}^{PS}}$	42.8	48 ± 8	D_{220}	5740.3	5739 ± 38	$\sigma_8(0.15)$	0.7576	0.7587 ± 0.0099
$\boldsymbol{A_{143\times217}^{PS}}$	38.4	42 ± 9	D_{810}	2543.2	2543 ± 13	$f\sigma_8(0.38)$	0.4761	0.4768 ± 0.0067
$\boldsymbol{A_{217}^{PS}}$	115.6	114 ± 10	D_{1420}	817.75	817.1 ± 4.8	$\sigma_8(0.38)$	0.6726	0.6736 ± 0.0089
$\boldsymbol{A^{kSZ}}$	0.00	< 4.95	D_{2000}	230.41	230.1 ± 1.8	$f\sigma_8(0.51)$	0.4758	0.4765 ± 0.0064
$\boldsymbol{A_{100}^{dustTT}}$	9.04	9.1 ± 1.8	$n_{s,0.002}$	0.9764	0.9766 ± 0.0059	$\sigma_8(0.51)$	0.6299	0.6308 ± 0.0083
$\boldsymbol{A_{143}^{dustTT}}$	11.13	11.1 ± 1.8	Y_P	0.24846	0.2487 ± 0.0020	$f\sigma_8(0.61)$	0.4716	0.4722 ± 0.0063
$\boldsymbol{A_{143\times217}^{dustTT}}$	19.30	18.8 ± 3.3	Y_P^{BBN}	0.24980	0.2501 ± 0.0020	$\sigma_8(0.61)$	0.5996	0.6004 ± 0.0080
$\boldsymbol{A_{217}^{dustTT}}$	94.1	93.6 ± 7.3	10^5D/H	2.6097	2.619 ± 0.043	$f\sigma_8(2.33)$	0.30269	0.3031 ± 0.0041
$\boldsymbol{A_{100}^{dustTE}}$	0.1162	0.115 ± 0.038	Age/Gyr	13.555	13.54 ± 0.14	$\sigma_8(2.33)$	0.31250	0.3129 ± 0.0043
$\boldsymbol{A_{100\times143}^{dustTE}}$	0.1343	0.135 ± 0.030	z_*	1089.960	1090.03 ± 0.33	χ^2_{simall}	396.56	397.6 ± 2.3
$\boldsymbol{A_{100\times217}^{dustTE}}$	0.485	0.481 ± 0.086	r_*	142.57	142.4 ± 1.5	χ^2_{lowl}	21.99	22.06 ± 0.78
$\boldsymbol{A_{143}^{dustTE}}$	0.224	0.225 ± 0.054	$100\theta_*$	1.040740	1.04068 ± 0.00047	χ^2_{plik}	2349.3	2364.7 ± 6.6
$\boldsymbol{A_{143\times217}^{dustTE}}$	0.665	0.663 ± 0.080	$D_M(z_*)$/Gpc	13.699	13.68 ± 0.14	$\chi^2_{H073p45}$	6.00	6.1 ± 2.8
$\boldsymbol{A_{217}^{dustTE}}$	2.066	2.08 ± 0.26	z_{drag}	1060.92	1060.95 ± 0.59	χ^2_{JLA}	1036.004	1036.08 ± 0.15
$\boldsymbol{c_{100}}$	0.99967	0.99965 ± 0.00062	r_{drag}	145.11	144.9 ± 1.5	χ^2_{6DF}	0.0015	0.026 ± 0.037
$\boldsymbol{c_{217}}$	0.99821	0.99822 ± 0.00062	k_D	0.14235	0.1425 ± 0.0012	χ^2_{MGS}	1.819	1.86 ± 0.48
H_0	69.38	69.47 ± 0.95	$100\theta_D$	0.161106	0.16118 ± 0.00036	$\chi^2_{DR12BAO}$	3.466	3.85 ± 0.60
Ω_Λ	0.6979	0.6977 ± 0.0059	z_{eq}	3359.1	3359 ± 22	χ^2_{prior}	2.17	11.9 ± 4.7
Ω_m	0.3021	0.3023 ± 0.0059	k_{eq}	0.010406	0.01042 ± 0.00011	χ^2_{BAO}	5.287	5.74 ± 0.64
$\Omega_m h^2$	0.14544	0.1459 ± 0.0029	$100\theta_{eq}$	0.82191	0.8219 ± 0.0042	χ^2_{CMB}	2767.9	2784.4 ± 6.3

Best-fit $\chi^2_{eff} = 3817.33$; $\bar{\chi}^2_{eff} = 3844.11$; $R - 1 = 0.00997$

χ^2_{eff}: BAO - 6DF: 0.00 MGS: 1.82 DR12BAO: 3.47 CMB - simall_100x143_offlike5_EE_Aplanck_B: 396.56 commander_dx12_v3_2_29: 21.99 plik_rd12_HM_v22b_TTTEEE: 2349.32 Hubble - H073p45: 6.00 SN - JLA Pantheon: 1036.00

7.87 base_nnu_plikHM_TTTEEE_lowl_lowE_Riess18_post_lensing

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022643	0.02265 ± 0.00019	$\Omega_m h^3$	0.10031	0.1011 ± 0.0032	$100\theta_{s,eq}$	0.45339	0.4536 ± 0.0028
$\boldsymbol{\Omega_c h^2}$	0.12171	0.1223 ± 0.0027	σ_8	0.8189	0.8202 ± 0.0093	$H(0.15)$	74.44	74.7 ± 1.1
$\boldsymbol{100\theta_{MC}}$	1.040739	1.04070 ± 0.00039	S_8	0.8229	0.823 ± 0.013	$D_M(0.15)$	627.2	625.5 ± 9.8
$\boldsymbol{\tau}$	0.0587	0.0587 ± 0.0078	$\sigma_8\Omega_m^{0.5}$	0.4507	0.4510 ± 0.0069	$H(0.38)$	84.55	84.8 ± 1.1
$\boldsymbol{N_{eff}}$	3.241	3.28 ± 0.16	$\sigma_8\Omega_m^{0.25}$	0.6075	0.6082 ± 0.0072	$D_M(0.38)$	1498.0	1494 ± 22
$\boldsymbol{\ln(10^{10}A_s)}$	3.0583	3.059 ± 0.016	$\sigma_8/h^{0.5}$	0.9846	0.9845 ± 0.0091	$H(0.51)$	91.27	91.5 ± 1.1
$\boldsymbol{n_s}$	0.9759	0.9761 ± 0.0067	$r_{drag}h$	100.58	100.7 ± 1.0	$D_M(0.51)$	1941.8	1937 ± 27
$\boldsymbol{y_{cal}}$	1.00070	1.0009 ± 0.0025	$\langle d^2\rangle^{1/2}$	2.4227	2.423 ± 0.022	$H(0.61)$	96.90	97.2 ± 1.1
$\boldsymbol{A_{217}^{CIB}}$	46.5	48 ± 7	z_{re}	8.12	8.10 ± 0.76	$D_M(0.61)$	2260.7	2255 ± 31
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.53	—	$10^9 A_s$	2.1291	2.131 ± 0.035	$H(2.33)$	238.59	239.1 ± 2.3
$\boldsymbol{A_{143}^{tSZ}}$	7.30	$5.3^{+2.2}_{-2.0}$	$10^9 A_s e^{-2\tau}$	1.8931	1.895 ± 0.015	$D_M(2.33)$	5673	5659 ± 64
$\boldsymbol{A_{100}^{PS}}$	251.5	263 ± 28	D_{40}	1215.9	1217 ± 13	$f\sigma_8(0.15)$	0.4560	0.4563 ± 0.0065
$\boldsymbol{A_{143}^{PS}}$	50.5	47 ± 8	D_{220}	5739.8	5743 ± 39	$\sigma_8(0.15)$	0.7576	0.7588 ± 0.0088
$\boldsymbol{A_{143\times217}^{PS}}$	51.3	42 ± 9	D_{810}	2543.9	2543 ± 13	$f\sigma_8(0.38)$	0.4765	0.4769 ± 0.0058
$\boldsymbol{A_{217}^{PS}}$	121.6	114 ± 10	D_{1420}	818.49	817.4 ± 4.8	$\sigma_8(0.38)$	0.6725	0.6736 ± 0.0081
$\boldsymbol{A^{kSZ}}$	0.00	< 4.85	D_{2000}	230.81	230.2 ± 1.8	$f\sigma_8(0.51)$	0.4761	0.4766 ± 0.0055
$\boldsymbol{A_{100}^{dustTT}}$	9.03	9.0 ± 1.8	$n_{s,0.002}$	0.9759	0.9761 ± 0.0067	$\sigma_8(0.51)$	0.6297	0.6308 ± 0.0078
$\boldsymbol{A_{143}^{dustTT}}$	11.37	11.0 ± 1.8	Y_P	0.24807	0.2485 ± 0.0021	$f\sigma_8(0.61)$	0.4718	0.4723 ± 0.0053
$\boldsymbol{A_{143\times217}^{dustTT}}$	20.90	18.8 ± 3.3	Y_P^{BBN}	0.24940	0.2499 ± 0.0021	$\sigma_8(0.61)$	0.5994	0.6005 ± 0.0075
$\boldsymbol{A_{217}^{dustTT}}$	96.8	93.6 ± 7.3	10^5D/H	2.6027	2.614 ± 0.041	$f\sigma_8(2.33)$	0.30256	0.3031 ± 0.0039
$\boldsymbol{A_{100}^{dustTE}}$	0.1139	0.115 ± 0.038	Age/Gyr	13.584	13.55 ± 0.15	$\sigma_8(2.33)$	0.31233	0.3130 ± 0.0043
$\boldsymbol{A_{100\times143}^{dustTE}}$	0.1338	0.135 ± 0.030	z_*	1089.915	1089.99 ± 0.33	f_{2000}^{143}	29.56	30.6 ± 2.9
$\boldsymbol{A_{100\times217}^{dustTE}}$	0.482	0.482 ± 0.086	r_*	142.83	142.5 ± 1.5	$f_{2000}^{143\times217}$	32.66	33.1 ± 2.0
$\boldsymbol{A_{143}^{dustTE}}$	0.223	0.224 ± 0.054	$100\theta_*$	1.040777	1.04071 ± 0.00046	f_{2000}^{217}	107.19	107.8 ± 1.9
$\boldsymbol{A_{143\times217}^{dustTE}}$	0.664	0.663 ± 0.080	$D_M(z_*)$/Gpc	13.724	13.69 ± 0.13	$\chi^2_{lensing}$	9.02	9.54 ± 0.72
$\boldsymbol{A_{217}^{dustTE}}$	2.073	2.08 ± 0.27	z_{drag}	1060.85	1060.92 ± 0.63	χ^2_{simall}	396.87	397.8 ± 2.4
$\boldsymbol{c_{100}}$	0.99973	0.99966 ± 0.00062	r_{drag}	145.38	145.1 ± 1.5	χ^2_{lowl}	22.04	22.16 ± 0.86
$\boldsymbol{c_{217}}$	0.99820	0.99821 ± 0.00062	k_D	0.14215	0.1424 ± 0.0011	χ^2_{plik}	2348.8	2364.2 ± 6.7
H_0	69.18	69.4 ± 1.1	$100\theta_D$	0.161034	0.16114 ± 0.00035	$\chi^2_{H073p45}$	6.61	6.4 ± 3.4
Ω_Λ	0.6970	0.6976 ± 0.0078	z_{eq}	3361.8	3359 ± 28	χ^2_{prior}	1.87	11.8 ± 4.7
Ω_m	0.3030	0.3024 ± 0.0078	k_{eq}	0.010394	0.01041 ± 0.00011	χ^2_{CMB}	2776.8	2793.7 ± 6.7
$\Omega_m h^2$	0.14500	0.1456 ± 0.0027	$100\theta_{eq}$	0.8214	0.8219 ± 0.0055			

Best-fit $\chi^2_{eff} = 2785.24$; $\Delta\chi^2_{eff} = -1.49$; $\bar{\chi}^2_{eff} = 2811.92$; $\Delta\bar{\chi}^2_{eff} = -1.05$; $R - 1 = 0.01134$

χ^2_{eff}: CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 9.02 (Δ 0.30) simall_100x143_offlike5_EE_Aplanck_B: 396.87 (Δ -0.07) commander_dx12_v3_2_29: 22.04 (Δ -0.68) plik_rd12_HM_v22b_TTTEEE: 2348.83 (Δ 2.88) Hubble - H073p45: 6.61 (Δ -4.16)

7.88 base_nnu_plikHM_TTTEEE_lowl_lowE_Riess18_post_BAO_lensing

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022622	0.02264 ± 0.00016	σ_8	0.8183	0.8200 ± 0.0093	$D_M(0.15)$	628.1	626.1 ± 8.5
$\boldsymbol{\Omega_c h^2}$	0.12173	0.1223 ± 0.0026	S_8	0.8236	0.824 ± 0.011	$H(0.38)$	84.46	84.7 ± 1.0
$\boldsymbol{100\theta_{MC}}$	1.040731	1.04070 ± 0.00039	$\sigma_8\Omega_m^{0.5}$	0.4511	0.4513 ± 0.0061	$D_M(0.38)$	1499.9	1495 ± 19
$\boldsymbol{\tau}$	0.0577	0.0584 ± 0.0074	$\sigma_8\Omega_m^{0.25}$	0.6075	0.6083 ± 0.0070	$H(0.51)$	91.19	91.5 ± 1.0
$\boldsymbol{N_{eff}}$	3.234	3.27 ± 0.15	$\sigma_8/h^{0.5}$	0.9845	0.9849 ± 0.0086	$D_M(0.51)$	1944.2	1938 ± 24
$\boldsymbol{\ln(10^{10}A_s)}$	3.0565	3.059 ± 0.016	$r_{drag}h$	100.46	100.58 ± 0.76	$H(0.61)$	96.82	97.1 ± 1.1
$\boldsymbol{n_s}$	0.9751	0.9756 ± 0.0059	$\langle d^2\rangle^{1/2}$	2.4235	2.424 ± 0.021	$D_M(0.61)$	2263.3	2256 ± 28
$\boldsymbol{y_{cal}}$	1.00093	1.0008 ± 0.0025	z_{re}	8.02	8.08 ± 0.73	$H(2.33)$	238.56	239.0 ± 2.3
$\boldsymbol{A_{217}^{CIB}}$	48.9	48 ± 7	$10^9 A_s$	2.1252	2.130 ± 0.034	$D_M(2.33)$	5677	5663 ± 60
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.28	—	$10^9 A_s e^{-2\tau}$	1.8937	1.895 ± 0.015	$f\sigma_8(0.15)$	0.4563	0.4566 ± 0.0059
$\boldsymbol{A_{143}^{tSZ}}$	7.32	$5.3^{+2.2}_{-2.0}$	D_{40}	1217.5	1218 ± 12	$\sigma_8(0.15)$	0.7569	0.7586 ± 0.0087
$\boldsymbol{A_{100}^{PS}}$	253.7	263 ± 28	D_{220}	5741.7	5742 ± 38	$f\sigma_8(0.38)$	0.4765	0.4771 ± 0.0055
$\boldsymbol{A_{143}^{PS}}$	46.9	47 ± 8	D_{810}	2544.4	2543 ± 13	$\sigma_8(0.38)$	0.6718	0.6734 ± 0.0079
$\boldsymbol{A_{143\times217}^{PS}}$	44.6	42 ± 9	D_{1420}	818.51	817.3 ± 4.8	$f\sigma_8(0.51)$	0.4760	0.4767 ± 0.0054
$\boldsymbol{A_{217}^{PS}}$	118.0	114 ± 10	D_{2000}	230.78	230.2 ± 1.8	$\sigma_8(0.51)$	0.6290	0.6305 ± 0.0075
$\boldsymbol{A^{kSZ}}$	0.01	< 4.87	$n_{s,0.002}$	0.9751	0.9756 ± 0.0059	$f\sigma_8(0.61)$	0.4716	0.4724 ± 0.0053
$\boldsymbol{A_{100}^{dustTT}}$	8.93	9.0 ± 1.8	Y_P	0.24797	0.2485 ± 0.0020	$\sigma_8(0.61)$	0.5987	0.6002 ± 0.0072
$\boldsymbol{A_{143}^{dustTT}}$	11.10	11.0 ± 1.8	Y_P^{BBN}	0.24931	0.2498 ± 0.0020	$f\sigma_8(2.33)$	0.30217	0.3030 ± 0.0037
$\boldsymbol{A_{143\times217}^{dustTT}}$	19.78	18.8 ± 3.3	10^5D/H	2.6042	2.614 ± 0.041	$\sigma_8(2.33)$	0.31188	0.3127 ± 0.0040
$\boldsymbol{A_{217}^{dustTT}}$	94.8	93.6 ± 7.3	Age/Gyr	13.593	13.56 ± 0.14	f_{2000}^{143}	29.77	30.7 ± 2.9
$\boldsymbol{A_{100}^{dustTE}}$	0.1143	0.115 ± 0.038	z_*	1089.937	1090.00 ± 0.32	$f_{2000}^{143\times217}$	32.72	33.1 ± 2.0
$\boldsymbol{A_{100\times143}^{dustTE}}$	0.1347	0.135 ± 0.030	r_*	142.88	142.6 ± 1.4	f_{2000}^{217}	107.31	107.8 ± 1.9
$\boldsymbol{A_{100\times217}^{dustTE}}$	0.479	0.482 ± 0.086	$100\theta_*$	1.040769	1.04072 ± 0.00046	$\chi^2_{lensing}$	9.02	9.48 ± 0.66
$\boldsymbol{A_{143}^{dustTE}}$	0.221	0.224 ± 0.053	$D_M(z_*)$/Gpc	13.728	13.70 ± 0.13	χ^2_{simall}	396.62	397.7 ± 2.2
$\boldsymbol{A_{143\times217}^{dustTE}}$	0.664	0.664 ± 0.080	z_{drag}	1060.77	1060.89 ± 0.59	χ^2_{lowl}	22.11	22.20 ± 0.79
$\boldsymbol{A_{217}^{dustTE}}$	2.074	2.08 ± 0.26	r_{drag}	145.44	145.1 ± 1.5	χ^2_{plik}	2348.4	2363.8 ± 6.5
$\boldsymbol{c_{100}}$	0.99969	0.99966 ± 0.00062	k_D	0.14211	0.1423 ± 0.0011	$\chi^2_{H073p45}$	6.95	6.5 ± 2.9
$\boldsymbol{c_{217}}$	0.99823	0.99821 ± 0.00062	$100\theta_D$	0.161034	0.16113 ± 0.00035	χ^2_{6DF}	0.0000	0.024 ± 0.035
H_0	69.08	69.32 ± 0.97	z_{eq}	3364.7	3361 ± 22	χ^2_{MGS}	1.677	1.81 ± 0.47
Ω_Λ	0.6961	0.6970 ± 0.0059	k_{eq}	0.010398	0.01041 ± 0.00010	$\chi^2_{DR12BAO}$	3.569	3.88 ± 0.64
Ω_m	0.3039	0.3030 ± 0.0059	$100\theta_{eq}$	0.82076	0.8214 ± 0.0042	χ^2_{prior}	1.99	11.8 ± 4.7
$\Omega_m h^2$	0.14500	0.1456 ± 0.0027	$100\theta_{s,eq}$	0.45309	0.4534 ± 0.0021	χ^2_{CMB}	2776.2	2793.1 ± 6.4
$\Omega_m h^3$	0.10016	0.1009 ± 0.0031	$H(0.15)$	74.35	74.59 ± 0.97	χ^2_{BAO}	5.246	5.71 ± 0.61

Best-fit $\chi^2_{eff} = 2790.37$; $\Delta\chi^2_{eff} = -1.64$; $\bar{\chi}^2_{eff} = 2817.17$; $\Delta\bar{\chi}^2_{eff} = -1.07$; $R - 1 = 0.01178$

χ^2_{eff}: BAO - 6DF: 0.00 (Δ -0.00) MGS: 1.68 (Δ 0.14) DR12BAO: 3.57 (Δ -0.13) CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 9.02 (Δ 0.23) simall_100x143_offlike5_EE_Aplanck 396.62 (Δ 0.04) commander_dx12_v3_2_29: 22.11 (Δ -0.54) plik_rd12_HM_v22b_TTTEEE: 2348.44 (Δ 1.98) Hubble - H073p45: 6.95 (Δ -3.70)

7.89 base_nnu_plikHM_TTTEEE_lowl_lowE_Riess18_post_BAO_lensing_Pantheon

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022652	0.02264 ± 0.00016	S_8	0.8217	0.824 ± 0.011	$D_M(0.38)$	1495.4	1494 ± 19
$\boldsymbol{\Omega_c h^2}$	0.12189	0.1223 ± 0.0026	$\sigma_8 \Omega_m^{0.5}$	0.4501	0.4511 ± 0.0060	$H(0.51)$	91.40	91.5 ± 1.0
$\boldsymbol{100\theta_{MC}}$	1.040756	1.04070 ± 0.00039	$\sigma_8 \Omega_m^{0.25}$	0.6070	0.6082 ± 0.0070	$D_M(0.51)$	1938.6	1937 ± 24
$\boldsymbol{\tau}$	0.0578	0.0586 ± 0.0074	$\sigma_8/h^{0.5}$	0.9834	0.9847 ± 0.0086	$H(0.61)$	97.03	97.1 ± 1.0
$\boldsymbol{N_{eff}}$	3.257	3.28 ± 0.15	$r_{drag} h$	100.68	100.62 ± 0.73	$D_M(0.61)$	2257.0	2255 ± 27
$\boldsymbol{\ln(10^{10} A_s)}$	3.0571	3.059 ± 0.016	$\langle d^2 \rangle^{1/2}$	2.4189	2.424 ± 0.020	$H(2.33)$	238.77	239.1 ± 2.3
$\boldsymbol{n_s}$	0.9766	0.9759 ± 0.0058	z_{re}	8.03	8.10 ± 0.73	$D_M(2.33)$	5666	5661 ± 60
$\boldsymbol{y_{cal}}$	1.00090	1.0008 ± 0.0025	$10^9 A_s$	2.1267	2.131 ± 0.034	$f\sigma_8(0.15)$	0.4554	0.4564 ± 0.0058
$\boldsymbol{A_{217}^{CIB}}$	49.0	48 ± 7	$10^9 A_s e^{-2\tau}$	1.8944	1.895 ± 0.015	$\sigma_8(0.15)$	0.7575	0.7587 ± 0.0087
$\boldsymbol{\xi^{tSZ \times CIB}}$	0.23	—	D_{40}	1215.0	1217 ± 12	$f\sigma_8(0.38)$	0.4761	0.4770 ± 0.0055
$\boldsymbol{A_{143}^{tSZ}}$	7.34	$5.3^{+2.2}_{-2.0}$	D_{220}	5741.0	5742 ± 38	$\sigma_8(0.38)$	0.6725	0.6735 ± 0.0079
$\boldsymbol{A_{100}^{PS}}$	253.6	263 ± 28	D_{810}	2544.8	2543 ± 13	$f\sigma_8(0.51)$	0.4758	0.4766 ± 0.0054
$\boldsymbol{A_{143}^{PS}}$	46.0	47 ± 8	D_{1420}	818.67	817.3 ± 4.8	$\sigma_8(0.51)$	0.6298	0.6307 ± 0.0075
$\boldsymbol{A_{143\times217}^{PS}}$	43.2	42 ± 9	D_{2000}	230.77	230.2 ± 1.8	$f\sigma_8(0.61)$	0.4715	0.4723 ± 0.0053
$\boldsymbol{A_{217}^{PS}}$	117.8	114 ± 10	$n_{s,0.002}$	0.9766	0.9759 ± 0.0058	$\sigma_8(0.61)$	0.5995	0.6004 ± 0.0072
$\boldsymbol{A^{kSZ}}$	0.01	< 4.88	Y_P	0.24828	0.2485 ± 0.0020	$f\sigma_8(2.33)$	0.30264	0.3031 ± 0.0037
$\boldsymbol{A_{100}^{dust TT}}$	8.92	9.0 ± 1.8	Y_P^{BBN}	0.24962	0.2498 ± 0.0020	$\sigma_8(2.33)$	0.31245	0.3129 ± 0.0039
$\boldsymbol{A_{143}^{dust TT}}$	11.07	11.0 ± 1.8	10^5D/H	2.6064	2.614 ± 0.041	f_{2000}^{143}	29.78	30.7 ± 2.9
$\boldsymbol{A_{143\times217}^{dust TT}}$	19.69	18.8 ± 3.3	Age/Gyr	13.567	13.55 ± 0.14	$f_{2000}^{143\times217}$	32.69	33.1 ± 2.0
$\boldsymbol{A_{217}^{dust TT}}$	94.7	93.6 ± 7.3	z_*	1089.936	1090.00 ± 0.32	f_{2000}^{217}	107.36	107.8 ± 1.9
$\boldsymbol{A_{100}^{dust TE}}$	0.1138	0.115 ± 0.038	r_*	142.70	142.5 ± 1.4	$\chi^2_{lensing}$	9.10	9.48 ± 0.66
$\boldsymbol{A_{100\times143}^{dust TE}}$	0.1345	0.135 ± 0.030	$100\theta_*$	1.040779	1.04071 ± 0.00046	χ^2_{simall}	396.61	397.7 ± 2.3
$\boldsymbol{A_{100\times217}^{dust TE}}$	0.482	0.482 ± 0.086	$D_M(z_*)$/Gpc	13.711	13.70 ± 0.13	χ^2_{lowl}	21.93	22.17 ± 0.78
$\boldsymbol{A_{143}^{dust TE}}$	0.224	0.224 ± 0.053	z_{drag}	1060.89	1060.90 ± 0.58	χ^2_{plik}	2349.2	2363.9 ± 6.5
$\boldsymbol{A_{143\times217}^{dust TE}}$	0.662	0.663 ± 0.080	r_{drag}	145.25	145.1 ± 1.5	$\chi^2_{H073p45}$	6.20	6.4 ± 2.9
$\boldsymbol{A_{217}^{dust TE}}$	2.076	2.08 ± 0.26	k_D	0.14225	0.1424 ± 0.0011	χ^2_{JLA}	1036.005	1036.08 ± 0.14
$\boldsymbol{c_{100}}$	0.99968	0.99966 ± 0.00062	$100\theta_D$	0.161077	0.16114 ± 0.00035	χ^2_{6DF}	0.0015	0.023 ± 0.033
$\boldsymbol{c_{217}}$	0.99821	0.99821 ± 0.00062	z_{eq}	3359.1	3360 ± 21	χ^2_{MGS}	1.819	1.83 ± 0.46
H_0	69.32	69.36 ± 0.95	k_{eq}	0.010396	0.01041 ± 0.00010	$\chi^2_{DR12BAO}$	3.463	3.83 ± 0.58
Ω_Λ	0.6978	0.6974 ± 0.0057	$100\theta_{eq}$	0.82190	0.8217 ± 0.0040	χ^2_{prior}	2.04	11.8 ± 4.7
Ω_m	0.3022	0.3026 ± 0.0057	$100\theta_{s,eq}$	0.45366	0.4535 ± 0.0021	χ^2_{CMB}	2776.9	2793.2 ± 6.4
$\Omega_m h^2$	0.14519	0.1456 ± 0.0027	$H(0.15)$	74.58	74.63 ± 0.95	χ^2_{BAO}	5.284	5.69 ± 0.58
$\Omega_m h^3$	0.10064	0.1010 ± 0.0030	$D_M(0.15)$	626.1	625.7 ± 8.3			
σ_8	0.8188	0.8201 ± 0.0093	$H(0.38)$	84.68	84.75 ± 0.99			

Best-fit $\chi^2_{eff} = 3826.39$; $\bar{\chi}^2_{eff} = 3853.18$; $\Delta\bar{\chi}^2_{eff} = -1.17$; $R - 1 = 0.01179$

χ^2_{eff}: BAO - 6DF: 0.00 MGS: 1.82 DR12BAO: 3.46 CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 9.10 simall_100x143_offlike5_EE_Aplanck_B: 396.62 commander_dx12_v3_2_29: 21.93 plik_rd12_HM_v22b_TTTEEE: 2349.22 Hubble - H073p45: 6.20 SN - JLA Pantheon: 1036.01

7.90 base_nnu_plikHM_TTTEEE_lowl_lowE_Riess18_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02266 ± 0.00019	$\Omega_m h^3$	0.1015 ± 0.0032	$100\theta_{s,eq}$	0.4540 ± 0.0030
$\boldsymbol{\Omega_c h^2}$	0.1225 ± 0.0028	σ_8	0.820 ± 0.010	$H(0.15)$	74.8 ± 1.1
$\boldsymbol{100\theta_{MC}}$	1.04068 ± 0.00039	S_8	0.823 ± 0.016	$D_M(0.15)$	624.1 ± 9.8
$\boldsymbol{\tau}$	$0.0584^{+0.0065}_{-0.0085}$	$\sigma_8\Omega_m^{0.5}$	0.4505 ± 0.0086	$H(0.38)$	84.9 ± 1.1
$\boldsymbol{N_{eff}}$	3.30 ± 0.16	$\sigma_8\Omega_m^{0.25}$	0.6080 ± 0.0089	$D_M(0.38)$	1491 ± 22
$\boldsymbol{\ln(10^{10} A_s)}$	$3.059^{+0.016}_{-0.019}$	$\sigma_8/h^{0.5}$	0.984 ± 0.012	$H(0.51)$	91.7 ± 1.1
$\boldsymbol{n_s}$	0.9771 ± 0.0068	$r_{drag}h$	100.8 ± 1.1	$D_M(0.51)$	1933 ± 28
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0025	$\langle d^2\rangle^{1/2}$	2.420 ± 0.028	$H(0.61)$	97.3 ± 1.1
$\boldsymbol{A_{217}^{CIB}}$	48 ± 7	z_{re}	$8.08^{+0.69}_{-0.82}$	$D_M(0.61)$	2250 ± 31
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$10^9 A_s$	$2.131^{+0.032}_{-0.041}$	$H(2.33)$	239.3 ± 2.4
$\boldsymbol{A_{143}^{tSZ}}$	$5.3^{+2.2}_{-2.0}$	$10^9 A_s e^{-2\tau}$	1.896 ± 0.016	$D_M(2.33)$	5651 ± 64
$\boldsymbol{A_{100}^{PS}}$	263 ± 28	D_{40}	1215 ± 14	$f\sigma_8(0.15)$	0.4559 ± 0.0082
$\boldsymbol{A_{143}^{PS}}$	48 ± 8	D_{220}	5739 ± 39	$\sigma_8(0.15)$	0.7592 ± 0.0097
$\boldsymbol{A_{143\times217}^{PS}}$	43 ± 9	D_{810}	2543 ± 14	$f\sigma_8(0.38)$	0.4767 ± 0.0072
$\boldsymbol{A_{217}^{PS}}$	114 ± 10	D_{1420}	817.1 ± 4.8	$\sigma_8(0.38)$	0.6741 ± 0.0087
$\boldsymbol{A^{kSZ}}$	< 4.86	D_{2000}	230.1 ± 1.8	$f\sigma_8(0.51)$	0.4765 ± 0.0067
$\boldsymbol{A_{100}^{dustTT}}$	9.1 ± 1.8	$n_{s,0.002}$	0.9771 ± 0.0068	$\sigma_8(0.51)$	0.6313 ± 0.0082
$\boldsymbol{A_{143}^{dustTT}}$	11.1 ± 1.8	Y_P	0.2488 ± 0.0021	$f\sigma_8(0.61)$	0.4723 ± 0.0064
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.8 ± 3.3	Y_P^{BBN}	0.2502 ± 0.0021	$\sigma_8(0.61)$	0.6010 ± 0.0079
$\boldsymbol{A_{217}^{dustTT}}$	93.6 ± 7.3	10^5D/H	2.619 ± 0.043	$f\sigma_8(2.33)$	0.3034 ± 0.0041
$\boldsymbol{A_{100}^{dustTE}}$	0.115 ± 0.038	Age/Gyr	13.53 ± 0.15	$\sigma_8(2.33)$	0.3133 ± 0.0044
$\boldsymbol{A_{100\times143}^{dustTE}}$	0.135 ± 0.030	z_*	1090.02 ± 0.35	f_{2000}^{143}	30.8 ± 3.0
$\boldsymbol{A_{100\times217}^{dustTE}}$	0.480 ± 0.085	r_*	142.4 ± 1.5	$f_{2000}^{143\times217}$	33.2 ± 2.0
$\boldsymbol{A_{143}^{dustTE}}$	0.225 ± 0.054	$100\theta_*$	1.04068 ± 0.00047	f_{2000}^{217}	107.9 ± 1.9
$\boldsymbol{A_{143\times217}^{dustTE}}$	0.662 ± 0.080	$D_M(z_*)$/Gpc	13.68 ± 0.14	χ^2_{simall}	397.6 ± 2.4
$\boldsymbol{A_{217}^{dustTE}}$	2.07 ± 0.27	z_{drag}	1060.98 ± 0.63	χ^2_{lowl}	22.03 ± 0.89
$\boldsymbol{c_{100}}$	0.99965 ± 0.00062	r_{drag}	144.9 ± 1.5	χ^2_{plik}	2365.2 ± 7.0
$\boldsymbol{c_{217}}$	0.99822 ± 0.00063	k_D	0.1425 ± 0.0012	$\chi^2_{H073p45}$	6.0 ± 3.3
H_0	69.6 ± 1.1	$100\theta_D$	0.16119 ± 0.00036	χ^2_{prior}	11.9 ± 4.7
Ω_Λ	0.6985 ± 0.0083	z_{eq}	3356 ± 31	χ^2_{CMB}	2784.9 ± 6.6
Ω_m	0.3015 ± 0.0083	k_{eq}	0.01041 ± 0.00012		
$\Omega_m h^2$	0.1459 ± 0.0029	$100\theta_{eq}$	0.8225 ± 0.0060		

$\bar{\chi}^2_{eff} = 2802.74$; $\Delta\bar{\chi}^2_{eff} = -1.14$; $R - 1 = 0.00708$

7.91 base_nnu_plikHM_TTTEEE_lowl_lowE_Riess18_post_BAO_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02265 ± 0.00016	σ_8	0.821 ± 0.010	$D_M(0.15)$	625.0 ± 8.4
$\boldsymbol{\Omega_c h^2}$	0.1226 ± 0.0028	S_8	0.824 ± 0.013	$H(0.38)$	84.8 ± 1.0
$\boldsymbol{100\theta_{MC}}$	1.04068 ± 0.00039	$\sigma_8\Omega_m^{0.5}$	0.4513 ± 0.0073	$D_M(0.38)$	1493 ± 19
$\boldsymbol{\tau}$	$0.0582^{+0.0063}_{-0.0084}$	$\sigma_8\Omega_m^{0.25}$	0.6085 ± 0.0083	$H(0.51)$	91.6 ± 1.0
$\boldsymbol{N_{eff}}$	3.29 ± 0.15	$\sigma_8/h^{0.5}$	0.985 ± 0.010	$D_M(0.51)$	1935 ± 24
$\boldsymbol{\ln(10^{10}A_s)}$	$3.058^{+0.015}_{-0.018}$	$r_{drag}h$	100.63 ± 0.79	$H(0.61)$	97.2 ± 1.1
$\boldsymbol{n_s}$	0.9765 ± 0.0060	$\langle d^2\rangle^{1/2}$	2.422 ± 0.024	$D_M(0.61)$	2253 ± 28
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0025	z_{re}	$8.06^{+0.67}_{-0.82}$	$H(2.33)$	239.3 ± 2.4
$\boldsymbol{A^{CIB}_{217}}$	48 ± 7	$10^9 A_s$	$2.130^{+0.032}_{-0.040}$	$D_M(2.33)$	5655 ± 61
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$10^9 A_s e^{-2\tau}$	1.896 ± 0.016	$f\sigma_8(0.15)$	0.4566 ± 0.0070
$\boldsymbol{A^{tSZ}_{143}}$	$5.3^{+2.2}_{-2.0}$	D_{40}	1216 ± 13	$\sigma_8(0.15)$	0.7591 ± 0.0096
$\boldsymbol{A^{PS}_{100}}$	263 ± 28	D_{220}	5738 ± 39	$f\sigma_8(0.38)$	0.4772 ± 0.0066
$\boldsymbol{A^{PS}_{143}}$	48 ± 8	D_{810}	2543 ± 13	$\sigma_8(0.38)$	0.6739 ± 0.0086
$\boldsymbol{A^{PS}_{143\times217}}$	42 ± 9	D_{1420}	817.0 ± 4.8	$f\sigma_8(0.51)$	0.4769 ± 0.0063
$\boldsymbol{A^{PS}_{217}}$	114 ± 10	D_{2000}	230.1 ± 1.8	$\sigma_8(0.51)$	0.6311 ± 0.0081
$\boldsymbol{A^{kSZ}}$	< 4.94	$n_{s,0.002}$	0.9765 ± 0.0060	$f\sigma_8(0.61)$	0.4726 ± 0.0061
$\boldsymbol{A^{dustTT}_{100}}$	9.1 ± 1.8	Y_P	0.2487 ± 0.0020	$\sigma_8(0.61)$	0.6007 ± 0.0078
$\boldsymbol{A^{dustTT}_{143}}$	11.1 ± 1.8	Y_P^{BBN}	0.2500 ± 0.0020	$f\sigma_8(2.33)$	0.3032 ± 0.0040
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.8 ± 3.3	10^5D/H	2.619 ± 0.043	$\sigma_8(2.33)$	0.3130 ± 0.0042
$\boldsymbol{A^{dustTT}_{217}}$	93.6 ± 7.3	Age/Gyr	13.54 ± 0.15	f^{143}_{2000}	30.8 ± 2.9
$\boldsymbol{A^{dustTE}_{100}}$	0.115 ± 0.038	z_*	1090.03 ± 0.33	$f^{143\times217}_{2000}$	33.2 ± 2.0
$\boldsymbol{A^{dustTE}_{100\times143}}$	0.135 ± 0.030	r_*	142.4 ± 1.5	f^{217}_{2000}	107.9 ± 1.9
$\boldsymbol{A^{dustTE}_{100\times217}}$	0.482 ± 0.086	$100\theta_*$	1.04068 ± 0.00047	χ^2_{simall}	397.6 ± 2.3
$\boldsymbol{A^{dustTE}_{143}}$	0.225 ± 0.054	$D_M(z_*)$/Gpc	13.68 ± 0.14	χ^2_{lowl}	22.09 ± 0.79
$\boldsymbol{A^{dustTE}_{143\times217}}$	0.664 ± 0.080	z_{drag}	1060.94 ± 0.59	χ^2_{plik}	2364.5 ± 6.6
$\boldsymbol{A^{dustTE}_{217}}$	2.08 ± 0.26	r_{drag}	144.9 ± 1.5	$\chi^2_{H073p45}$	6.2 ± 2.9
$\boldsymbol{c_{100}}$	0.99965 ± 0.00062	k_D	0.1425 ± 0.0012	χ^2_{6DF}	0.027 ± 0.039
$\boldsymbol{c_{217}}$	0.99822 ± 0.00062	$100\theta_D$	0.16118 ± 0.00036	χ^2_{MGS}	1.84 ± 0.49
H_0	69.44 ± 0.97	z_{eq}	3360 ± 23	$\chi^2_{DR12BAO}$	3.89 ± 0.66
Ω_Λ	0.6974 ± 0.0061	k_{eq}	0.01042 ± 0.00011	χ^2_{prior}	11.9 ± 4.7
Ω_m	0.3026 ± 0.0061	$100\theta_{eq}$	0.8217 ± 0.0044	χ^2_{BAO}	5.76 ± 0.67
$\Omega_m h^2$	0.1459 ± 0.0029	$100\theta_{s,eq}$	0.4536 ± 0.0022	χ^2_{CMB}	2784.2 ± 6.3
$\Omega_m h^3$	0.1013 ± 0.0031	$H(0.15)$	74.72 ± 0.97		

$\bar{\chi}^2_{eff} = 2807.99$; $R - 1 = 0.00955$

7.92 base_nnu_plikHM_TTTEEE_lowl_lowE_Riess18_post_BAO_Pantheon_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02265 ± 0.00016	σ_8	0.821 ± 0.010	$D_M(0.15)$	624.7 ± 8.3
$\boldsymbol{\Omega_c h^2}$	0.1226 ± 0.0028	S_8	0.824 ± 0.013	$H(0.38)$	84.87 ± 0.99
$\boldsymbol{100\theta_{MC}}$	1.04068 ± 0.00039	$\sigma_8\Omega_m^{0.5}$	0.4511 ± 0.0072	$D_M(0.38)$	1492 ± 19
$\boldsymbol{\tau}$	$0.0582^{+0.0063}_{-0.0084}$	$\sigma_8\Omega_m^{0.25}$	0.6084 ± 0.0083	$H(0.51)$	91.6 ± 1.0
$\boldsymbol{N_{eff}}$	3.29 ± 0.15	$\sigma_8/h^{0.5}$	0.984 ± 0.010	$D_M(0.51)$	1934 ± 24
$\boldsymbol{\ln(10^{10}A_s)}$	$3.059^{+0.015}_{-0.018}$	$r_{drag}h$	100.68 ± 0.76	$H(0.61)$	97.3 ± 1.1
$\boldsymbol{n_s}$	0.9767 ± 0.0059	$\langle d^2\rangle^{1/2}$	2.421 ± 0.024	$D_M(0.61)$	2252 ± 27
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0025	z_{re}	$8.07^{+0.67}_{-0.82}$	$H(2.33)$	239.3 ± 2.4
$\boldsymbol{A^{CIB}_{217}}$	48 ± 7	$10^9 A_s$	$2.130^{+0.032}_{-0.040}$	$D_M(2.33)$	5653 ± 60
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$10^9 A_s e^{-2\tau}$	1.896 ± 0.016	$f\sigma_8(0.15)$	0.4564 ± 0.0070
$\boldsymbol{A^{tSZ}_{143}}$	$5.3^{+2.2}_{-2.0}$	D_{40}	1215 ± 13	$\sigma_8(0.15)$	0.7591 ± 0.0096
$\boldsymbol{A^{PS}_{100}}$	263 ± 28	D_{220}	5739 ± 39	$f\sigma_8(0.38)$	0.4771 ± 0.0066
$\boldsymbol{A^{PS}_{143}}$	48 ± 8	D_{810}	2543 ± 13	$\sigma_8(0.38)$	0.6739 ± 0.0086
$\boldsymbol{A^{PS}_{143\times217}}$	42 ± 9	D_{1420}	817.0 ± 4.8	$f\sigma_8(0.51)$	0.4768 ± 0.0063
$\boldsymbol{A^{PS}_{217}}$	114 ± 10	D_{2000}	230.1 ± 1.8	$\sigma_8(0.51)$	0.6311 ± 0.0081
$\boldsymbol{A^{kSZ}}$	< 4.95	$n_{s,0.002}$	0.9767 ± 0.0059	$f\sigma_8(0.61)$	0.4725 ± 0.0061
$\boldsymbol{A^{dustTT}_{100}}$	9.1 ± 1.8	Y_P	0.2487 ± 0.0020	$\sigma_8(0.61)$	0.6008 ± 0.0078
$\boldsymbol{A^{dustTT}_{143}}$	11.1 ± 1.8	Y_P^{BBN}	0.2501 ± 0.0020	$f\sigma_8(2.33)$	0.3033 ± 0.0040
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.8 ± 3.3	10^5D/H	2.619 ± 0.043	$\sigma_8(2.33)$	0.3131 ± 0.0042
$\boldsymbol{A^{dustTT}_{217}}$	93.6 ± 7.3	Age/Gyr	13.54 ± 0.14	f^{143}_{2000}	30.8 ± 2.9
$\boldsymbol{A^{dustTE}_{100}}$	0.115 ± 0.038	z_*	1090.03 ± 0.33	$f^{143\times217}_{2000}$	33.2 ± 2.0
$\boldsymbol{A^{dustTE}_{100\times143}}$	0.135 ± 0.030	r_*	142.4 ± 1.5	f^{217}_{2000}	107.9 ± 1.9
$\boldsymbol{A^{dustTE}_{100\times217}}$	0.482 ± 0.086	$100\theta_*$	1.04068 ± 0.00047	χ^2_{simall}	397.6 ± 2.3
$\boldsymbol{A^{dustTE}_{143}}$	0.225 ± 0.054	$D_M(z_*)$/Gpc	13.68 ± 0.14	χ^2_{lowl}	22.06 ± 0.78
$\boldsymbol{A^{dustTE}_{143\times217}}$	0.663 ± 0.080	z_{drag}	1060.96 ± 0.59	χ^2_{plik}	2364.6 ± 6.6
$\boldsymbol{A^{dustTE}_{217}}$	2.08 ± 0.26	r_{drag}	144.9 ± 1.5	$\chi^2_{H073p45}$	6.1 ± 2.8
$\boldsymbol{c_{100}}$	0.99965 ± 0.00062	k_D	0.1425 ± 0.0012	χ^2_{JLA}	1036.08 ± 0.14
$\boldsymbol{c_{217}}$	0.99822 ± 0.00062	$100\theta_D$	0.16118 ± 0.00036	χ^2_{6DF}	0.026 ± 0.037
H_0	69.48 ± 0.95	z_{eq}	3359 ± 22	χ^2_{MGS}	1.87 ± 0.48
Ω_Λ	0.6978 ± 0.0058	k_{eq}	0.01042 ± 0.00011	$\chi^2_{DR12BAO}$	3.85 ± 0.60
Ω_m	0.3022 ± 0.0058	$100\theta_{eq}$	0.8220 ± 0.0042	χ^2_{prior}	11.9 ± 4.7
$\Omega_m h^2$	0.1459 ± 0.0029	$100\theta_{s,eq}$	0.4537 ± 0.0021	χ^2_{BAO}	5.74 ± 0.64
$\Omega_m h^3$	0.1014 ± 0.0031	$H(0.15)$	74.75 ± 0.96	χ^2_{CMB}	2784.3 ± 6.3

$\bar{\chi}^2_{eff} = 3843.99$; $R - 1 = 0.00997$

7.93 base_nnu_plikHM_TTTEEE_lowl_lowE_Riess18_post_lensing_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02265 ± 0.00018	$\Omega_m h^3$	0.1011 ± 0.0032	$100\theta_{s,eq}$	0.4537 ± 0.0028
$\boldsymbol{\Omega_c h^2}$	0.1223 ± 0.0027	σ_8	0.8204 ± 0.0092	$H(0.15)$	74.7 ± 1.1
$\boldsymbol{100\theta_{MC}}$	1.04070 ± 0.00039	S_8	0.823 ± 0.013	$D_M(0.15)$	625.3 ± 9.7
$\boldsymbol{\tau}$	$0.0590^{+0.0065}_{-0.0081}$	$\sigma_8\Omega_m^{0.5}$	0.4510 ± 0.0069	$H(0.38)$	84.8 ± 1.1
$\boldsymbol{N_{eff}}$	3.28 ± 0.16	$\sigma_8\Omega_m^{0.25}$	0.6083 ± 0.0072	$D_M(0.38)$	1494 ± 22
$\boldsymbol{\ln(10^{10} A_s)}$	$3.060^{+0.015}_{-0.017}$	$\sigma_8/h^{0.5}$	0.9847 ± 0.0090	$H(0.51)$	91.5 ± 1.1
$\boldsymbol{n_s}$	0.9762 ± 0.0066	$r_{drag}h$	100.7 ± 1.0	$D_M(0.51)$	1936 ± 27
$\boldsymbol{y_{cal}}$	1.0008 ± 0.0025	$\langle d^2\rangle^{1/2}$	2.424 ± 0.022	$H(0.61)$	97.2 ± 1.1
$\boldsymbol{A_{217}^{CIB}}$	48 ± 7	z_{re}	$8.14^{+0.68}_{-0.77}$	$D_M(0.61)$	2254 ± 31
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$10^9 A_s$	$2.133^{+0.030}_{-0.037}$	$H(2.33)$	239.1 ± 2.3
$\boldsymbol{A_{143}^{tSZ}}$	$5.3^{+2.2}_{-2.0}$	$10^9 A_s e^{-2\tau}$	1.895 ± 0.015	$D_M(2.33)$	5659 ± 64
$\boldsymbol{A_{100}^{PS}}$	263 ± 28	D_{40}	1217 ± 13	$f\sigma_8(0.15)$	0.4564 ± 0.0065
$\boldsymbol{A_{143}^{PS}}$	47 ± 8	D_{220}	5742 ± 39	$\sigma_8(0.15)$	0.7590 ± 0.0087
$\boldsymbol{A_{143\times217}^{PS}}$	42 ± 9	D_{810}	2543 ± 13	$f\sigma_8(0.38)$	0.4770 ± 0.0058
$\boldsymbol{A_{217}^{PS}}$	114 ± 10	D_{1420}	817.3 ± 4.8	$\sigma_8(0.38)$	0.6739 ± 0.0080
$\boldsymbol{A^{kSZ}}$	< 4.86	D_{2000}	230.2 ± 1.8	$f\sigma_8(0.51)$	0.4767 ± 0.0054
$\boldsymbol{A_{100}^{dust TT}}$	9.0 ± 1.8	$n_{s,0.002}$	0.9762 ± 0.0066	$\sigma_8(0.51)$	0.6311 ± 0.0076
$\boldsymbol{A_{143}^{dust TT}}$	11.0 ± 1.8	Y_P	0.2486 ± 0.0021	$f\sigma_8(0.61)$	0.4724 ± 0.0053
$\boldsymbol{A_{143\times217}^{dust TT}}$	18.8 ± 3.3	Y_P^{BBN}	0.2499 ± 0.0021	$\sigma_8(0.61)$	0.6007 ± 0.0074
$\boldsymbol{A_{217}^{dust TT}}$	93.6 ± 7.3	10^5D/H	2.614 ± 0.041	$f\sigma_8(2.33)$	0.3033 ± 0.0038
$\boldsymbol{A_{100}^{dust TE}}$	0.115 ± 0.038	Age/Gyr	13.55 ± 0.15	$\sigma_8(2.33)$	0.3131 ± 0.0042
$\boldsymbol{A_{100\times143}^{dust TE}}$	0.135 ± 0.030	z_*	1089.99 ± 0.33	f_{2000}^{143}	30.6 ± 2.9
$\boldsymbol{A_{100\times217}^{dust TE}}$	0.482 ± 0.086	r_*	142.5 ± 1.5	$f_{2000}^{143\times217}$	33.1 ± 2.0
$\boldsymbol{A_{143}^{dust TE}}$	0.224 ± 0.054	$100\theta_*$	1.04071 ± 0.00046	f_{2000}^{217}	107.8 ± 1.9
$\boldsymbol{A_{143\times217}^{dust TE}}$	0.663 ± 0.080	$D_M(z_*)$/Gpc	13.69 ± 0.13	$\chi^2_{lensing}$	9.53 ± 0.70
$\boldsymbol{A_{217}^{dust TE}}$	2.08 ± 0.27	z_{drag}	1060.93 ± 0.63	χ^2_{simall}	397.8 ± 2.4
$\boldsymbol{c_{100}}$	0.99966 ± 0.00062	r_{drag}	145.1 ± 1.5	χ^2_{lowl}	22.16 ± 0.86
$\boldsymbol{c_{217}}$	0.99821 ± 0.00062	k_D	0.1424 ± 0.0011	χ^2_{plik}	2364.2 ± 6.7
H_0	69.4 ± 1.1	$100\theta_D$	0.16114 ± 0.00035	$\chi^2_{H073p45}$	6.4 ± 3.4
Ω_Λ	0.6977 ± 0.0077	z_{eq}	3359 ± 28	χ^2_{prior}	11.8 ± 4.7
Ω_m	0.3023 ± 0.0077	k_{eq}	0.01041 ± 0.00011	χ^2_{CMB}	2793.6 ± 6.7
$\Omega_m h^2$	0.1456 ± 0.0027	$100\theta_{eq}$	0.8220 ± 0.0055		

$\bar{\chi}^2_{eff} = 2811.83$; $\Delta\bar{\chi}^2_{eff} = -1.04$; $R - 1 = 0.01079$

7.94 base_nnu_plikHM_TTTEEE_lowl_lowE_Riess18_post_BAO_lensing_Pantheon_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02264 ± 0.00016	S_8	0.824 ± 0.011	$D_M(0.38)$	1494 ± 19
$\boldsymbol{\Omega_c h^2}$	0.1223 ± 0.0026	$\sigma_8\Omega_m^{0.5}$	0.4512 ± 0.0060	$H(0.51)$	91.5 ± 1.0
$\boldsymbol{100\theta_{MC}}$	1.04070 ± 0.00039	$\sigma_8\Omega_m^{0.25}$	0.6083 ± 0.0069	$D_M(0.51)$	1937 ± 24
$\boldsymbol{\tau}$	$0.0588^{+0.0064}_{-0.0077}$	$\sigma_8/h^{0.5}$	0.9849 ± 0.0085	$H(0.61)$	97.1 ± 1.0
$\boldsymbol{N_{eff}}$	3.28 ± 0.15	$r_{drag}h$	100.63 ± 0.73	$D_M(0.61)$	2255 ± 27
$\boldsymbol{\ln(10^{10}A_s)}$	$3.060^{+0.014}_{-0.016}$	$\langle d^2\rangle^{1/2}$	2.424 ± 0.020	$H(2.33)$	239.1 ± 2.3
$\boldsymbol{n_s}$	0.9759 ± 0.0058	z_{re}	$8.13^{+0.66}_{-0.74}$	$D_M(2.33)$	5661 ± 60
$\boldsymbol{y_{cal}}$	1.0008 ± 0.0025	$10^9 A_s$	$2.132^{+0.030}_{-0.035}$	$f\sigma_8(0.15)$	0.4565 ± 0.0058
$\boldsymbol{A_{217}^{CIB}}$	48 ± 7	$10^9 A_s e^{-2\tau}$	1.895 ± 0.015	$\sigma_8(0.15)$	0.7589 ± 0.0086
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{40}	1217 ± 12	$f\sigma_8(0.38)$	0.4771 ± 0.0055
$\boldsymbol{A_{143}^{tSZ}}$	$5.3^{+2.2}_{-2.0}$	D_{220}	5742 ± 38	$\sigma_8(0.38)$	0.6737 ± 0.0078
$\boldsymbol{A_{100}^{PS}}$	263 ± 28	D_{810}	2543 ± 13	$f\sigma_8(0.51)$	0.4768 ± 0.0053
$\boldsymbol{A_{143}^{PS}}$	47 ± 8	D_{1420}	817.3 ± 4.8	$\sigma_8(0.51)$	0.6309 ± 0.0074
$\boldsymbol{A_{143\times217}^{PS}}$	42 ± 9	D_{2000}	230.2 ± 1.8	$f\sigma_8(0.61)$	0.4725 ± 0.0052
$\boldsymbol{A_{217}^{PS}}$	114 ± 10	$n_{s,0.002}$	0.9759 ± 0.0058	$\sigma_8(0.61)$	0.6006 ± 0.0071
$\boldsymbol{A^{kSZ}}$	< 4.88	Y_P	0.2485 ± 0.0020	$f\sigma_8(2.33)$	0.3031 ± 0.0036
$\boldsymbol{A_{100}^{dustTT}}$	9.0 ± 1.8	Y_P^{BBN}	0.2498 ± 0.0020	$\sigma_8(2.33)$	0.3130 ± 0.0039
$\boldsymbol{A_{143}^{dustTT}}$	11.0 ± 1.8	10^5D/H	2.614 ± 0.041	f_{2000}^{143}	30.7 ± 2.9
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.8 ± 3.3	Age/Gyr	13.55 ± 0.14	$f_{2000}^{143\times217}$	33.1 ± 2.0
$\boldsymbol{A_{217}^{dustTT}}$	93.6 ± 7.3	z_*	1090.00 ± 0.32	f_{2000}^{217}	107.8 ± 1.9
$\boldsymbol{A_{100}^{dustTE}}$	0.115 ± 0.038	r_*	142.5 ± 1.4	$\chi^2_{lensing}$	9.47 ± 0.63
$\boldsymbol{A_{100\times143}^{dustTE}}$	0.135 ± 0.030	$100\theta_*$	1.04071 ± 0.00046	χ^2_{simall}	397.7 ± 2.3
$\boldsymbol{A_{100\times217}^{dustTE}}$	0.482 ± 0.086	$D_M(z_*)$/Gpc	13.70 ± 0.13	χ^2_{lowl}	22.17 ± 0.78
$\boldsymbol{A_{143}^{dustTE}}$	0.224 ± 0.053	z_{drag}	1060.91 ± 0.58	χ^2_{plik}	2363.8 ± 6.5
$\boldsymbol{A_{143\times217}^{dustTE}}$	0.663 ± 0.080	r_{drag}	145.1 ± 1.5	$\chi^2_{H073p45}$	6.4 ± 2.8
$\boldsymbol{A_{217}^{dustTE}}$	2.08 ± 0.26	k_D	0.1424 ± 0.0011	χ^2_{JLA}	1036.08 ± 0.14
$\boldsymbol{c_{100}}$	0.99966 ± 0.00062	$100\theta_D$	0.16114 ± 0.00035	χ^2_{6DF}	0.023 ± 0.033
$\boldsymbol{c_{217}}$	0.99821 ± 0.00062	z_{eq}	3360 ± 21	χ^2_{MGS}	1.84 ± 0.46
H_0	69.37 ± 0.95	k_{eq}	0.01041 ± 0.00010	$\chi^2_{DR12BAO}$	3.83 ± 0.57
Ω_Λ	0.6974 ± 0.0056	$100\theta_{eq}$	0.8217 ± 0.0040	χ^2_{prior}	11.8 ± 4.7
Ω_m	0.3026 ± 0.0056	$100\theta_{s,eq}$	0.4536 ± 0.0020	χ^2_{CMB}	2793.2 ± 6.4
$\Omega_m h^2$	0.1456 ± 0.0027	$H(0.15)$	74.64 ± 0.95	χ^2_{BAO}	5.69 ± 0.58
$\Omega_m h^3$	0.1010 ± 0.0031	$D_M(0.15)$	625.7 ± 8.3		
σ_8	0.8203 ± 0.0091	$H(0.38)$	84.76 ± 0.98		

$\bar{\chi}^2_{eff} = 3853.10$; $\Delta\bar{\chi}^2_{eff} = -1.17$; $R - 1 = 0.01147$

7.95 base_nnu_CamSpecHM_TTTEEE_lowl_lowE_Riess18

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02261 ± 0.00018	S_8	0.815 ± 0.016	$H(0.15)$	75.5 ± 1.2
$\boldsymbol{\Omega_c h^2}$	0.1231 ± 0.0031	$\sigma_8\Omega_m^{0.5}$	0.4462 ± 0.0085	$D_M(0.15)$	619 ± 10
$\boldsymbol{100\theta_{MC}}$	1.04053 ± 0.00042	$\sigma_8\Omega_m^{0.25}$	0.6044 ± 0.0091	$H(0.38)$	85.5 ± 1.2
$\boldsymbol{\tau}$	0.0556 ± 0.0080	$\sigma_8/h^{0.5}$	0.977 ± 0.012	$D_M(0.38)$	1479 ± 24
$\boldsymbol{N_{eff}}$	3.38 ± 0.18	$r_{drag}h$	101.4 ± 1.1	$H(0.51)$	92.2 ± 1.2
$\boldsymbol{\ln(10^{10}A_s)}$	3.053 ± 0.018	$\langle d^2\rangle^{1/2}$	2.399 ± 0.028	$D_M(0.51)$	1918 ± 30
$\boldsymbol{n_s}$	0.9804 ± 0.0069	z_{re}	7.83 ± 0.81	$H(0.61)$	97.9 ± 1.3
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	10^9A_s	2.119 ± 0.038	$D_M(0.61)$	2233 ± 34
$\boldsymbol{A_{100}^{PS}}$	247 ± 25	$10^9A_se^{-2\tau}$	1.896 ± 0.017	$H(2.33)$	239.9 ± 2.6
$\boldsymbol{A_{143}^{PS}}$	43 ± 9	D_{40}	1207 ± 14	$D_M(2.33)$	5621 ± 70
$\boldsymbol{A_{217}^{PS}}$	101 ± 10	D_{220}	5726 ± 39	$f\sigma_8(0.15)$	0.4519 ± 0.0082
$\boldsymbol{A_{217}^{CIB}}$	42 ± 7	D_{810}	2539 ± 14	$\sigma_8(0.15)$	0.758 ± 0.010
$\boldsymbol{A_{143}^{tSZ}}$	$3.7^{+1.7}_{-2.7}$	D_{1420}	814.5 ± 5.1	$f\sigma_8(0.38)$	0.4737 ± 0.0073
$\boldsymbol{r_{143\times217}^{PS}}$	0.65 ± 0.12	D_{2000}	228.7 ± 2.0	$\sigma_8(0.38)$	0.6736 ± 0.0092
$\boldsymbol{r_{143\times217}^{CIB}}$	> 0.482	$n_{s,0.002}$	0.9804 ± 0.0069	$f\sigma_8(0.51)$	0.4740 ± 0.0069
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P	0.2499 ± 0.0023	$\sigma_8(0.51)$	0.6311 ± 0.0088
$\boldsymbol{A^{kSZ}}$	$5.2^{+3.8}_{-2.3}$	Y_P^{BBN}	0.2512 ± 0.0023	$f\sigma_8(0.61)$	0.4702 ± 0.0066
$\boldsymbol{A_{100}^{dust}}$	1.02 ± 0.20	10^5D/H	2.657 ± 0.051	$\sigma_8(0.61)$	0.6009 ± 0.0084
$\boldsymbol{A_{143}^{dust}}$	0.98 ± 0.18	Age/Gyr	13.46 ± 0.17	$f\sigma_8(2.33)$	0.3036 ± 0.0043
$\boldsymbol{A_{217}^{dust}}$	0.97 ± 0.10	z_*	1090.22 ± 0.39	$\sigma_8(2.33)$	0.3137 ± 0.0046
$\boldsymbol{A_{143\times217}^{dust}}$	1.03 ± 0.16	r_*	141.9 ± 1.6	f_{2000}^{143}	32.0 ± 3.3
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	$100\theta_*$	1.04049 ± 0.00050	f_{2000}^{217}	108.4 ± 2.2
$\boldsymbol{c_{217}}$	1.0013 ± 0.0016	$D_M(z_*)$/Gpc	13.63 ± 0.15	$f_{2000}^{143\times217}$	34.0 ± 2.3
$\boldsymbol{c_{TE}}$	0.9990 ± 0.0050	z_{drag}	1060.97 ± 0.65	χ^2_{simall}	397.2 ± 1.9
$\boldsymbol{c_{EE}}$	0.9965 ± 0.0055	r_{drag}	144.4 ± 1.7	χ^2_{lowl}	21.54 ± 0.77
H_0	70.2 ± 1.2	k_D	0.1427 ± 0.0013	$\chi^2_{CamSpec}$	11520.7 ± 6.6
Ω_Λ	0.7030 ± 0.0083	$100\theta_D$	0.16153 ± 0.00044	$\chi^2_{H073p45}$	4.3 ± 3.0
Ω_m	0.2970 ± 0.0083	z_{eq}	3332 ± 31	χ^2_{prior}	7.9 ± 3.5
$\Omega_m h^2$	0.1464 ± 0.0031	k_{eq}	0.01040 ± 0.00012	χ^2_{CMB}	11939.4 ± 6.5
$\Omega_m h^3$	0.1028 ± 0.0036	$100\theta_{eq}$	0.8267 ± 0.0062		
σ_8	0.819 ± 0.011	$100\theta_{s,eq}$	0.4562 ± 0.0031		

$\bar{\chi}^2_{eff} = 11951.65$; $\Delta\bar{\chi}^2_{eff} = -2.61$; $R - 1 = 0.01475$

7.96 base_nnu_CamSpecHM_TTTEEE_lowl_lowE_Riess18_post_BAO

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02256 ± 0.00017	$\sigma_8\Omega_m^{0.5}$	0.4486 ± 0.0074	$H(0.38)$	85.2 ± 1.1
$\boldsymbol{\Omega_c h^2}$	0.1232 ± 0.0031	$\sigma_8\Omega_m^{0.25}$	0.6061 ± 0.0085	$D_M(0.38)$	1485 ± 21
$\boldsymbol{100\theta_{MC}}$	1.04052 ± 0.00042	$\sigma_8/h^{0.5}$	0.980 ± 0.011	$H(0.51)$	91.9 ± 1.2
$\boldsymbol{\tau}$	0.0549 ± 0.0079	$r_{drag}h$	100.95 ± 0.81	$D_M(0.51)$	1926 ± 27
$\boldsymbol{N_{eff}}$	3.35 ± 0.18	$\langle d^2\rangle^{1/2}$	2.407 ± 0.025	$H(0.61)$	97.6 ± 1.2
$\boldsymbol{\ln(10^{10}A_s)}$	3.052 ± 0.018	z_{re}	7.77 ± 0.80	$D_M(0.61)$	2243 ± 31
$\boldsymbol{n_s}$	0.9784 ± 0.0062	$10^9 A_s$	2.116 ± 0.038	$H(2.33)$	239.8 ± 2.6
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.896 ± 0.017	$D_M(2.33)$	5635 ± 68
$\boldsymbol{A_{100}^{PS}}$	246 ± 25	D_{40}	1210 ± 13	$f\sigma_8(0.15)$	0.4541 ± 0.0071
$\boldsymbol{A_{143}^{PS}}$	43 ± 9	D_{220}	5723 ± 39	$\sigma_8(0.15)$	0.758 ± 0.010
$\boldsymbol{A_{217}^{PS}}$	101 ± 10	D_{810}	2539 ± 14	$f\sigma_8(0.38)$	0.4752 ± 0.0068
$\boldsymbol{A_{217}^{CIB}}$	42 ± 7	D_{1420}	814.4 ± 5.1	$\sigma_8(0.38)$	0.6729 ± 0.0092
$\boldsymbol{A_{143}^{tSZ}}$	$3.7^{+1.7}_{-2.6}$	D_{2000}	228.7 ± 2.0	$f\sigma_8(0.51)$	0.4751 ± 0.0065
$\boldsymbol{r_{143\times217}^{PS}}$	0.65 ± 0.12	$n_{s,0.002}$	0.9784 ± 0.0062	$\sigma_8(0.51)$	0.6303 ± 0.0086
$\boldsymbol{r_{143\times217}^{CIB}}$	> 0.480	Y_P	0.2495 ± 0.0023	$f\sigma_8(0.61)$	0.4710 ± 0.0064
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	0.2508 ± 0.0023	$\sigma_8(0.61)$	0.6001 ± 0.0083
$\boldsymbol{A^{kSZ}}$	$5.2^{+3.6}_{-2.5}$	10^5D/H	2.656 ± 0.052	$f\sigma_8(2.33)$	0.3030 ± 0.0042
$\boldsymbol{A_{100}^{dust}}$	1.02 ± 0.20	Age/Gyr	13.49 ± 0.16	$\sigma_8(2.33)$	0.3129 ± 0.0045
$\boldsymbol{A_{143}^{dust}}$	0.97 ± 0.17	z_*	1090.25 ± 0.39	f_{2000}^{143}	31.9 ± 3.2
$\boldsymbol{A_{217}^{dust}}$	0.97 ± 0.10	r_*	142.0 ± 1.6	f_{2000}^{217}	108.3 ± 2.2
$\boldsymbol{A_{143\times217}^{dust}}$	1.03 ± 0.16	$100\theta_*$	1.04050 ± 0.00051	$f_{2000}^{143\times217}$	33.9 ± 2.3
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	$D_M(z_*)$/Gpc	13.65 ± 0.15	χ^2_{simall}	397.1 ± 1.8
$\boldsymbol{c_{217}}$	1.0013 ± 0.0016	z_{drag}	1060.84 ± 0.62	χ^2_{lowl}	21.73 ± 0.74
$\boldsymbol{c_{TE}}$	0.9987 ± 0.0050	r_{drag}	144.6 ± 1.7	$\chi^2_{CamSpec}$	11519.5 ± 6.3
$\boldsymbol{c_{EE}}$	0.9960 ± 0.0054	k_D	0.1426 ± 0.0013	$\chi^2_{H073p45}$	5.2 ± 2.9
H_0	69.8 ± 1.1	$100\theta_D$	0.16148 ± 0.00044	χ^2_{6DF}	0.036 ± 0.050
Ω_Λ	0.6998 ± 0.0062	z_{eq}	3344 ± 24	χ^2_{MGS}	2.04 ± 0.52
Ω_m	0.3002 ± 0.0062	k_{eq}	0.01042 ± 0.00012	$\chi^2_{DR12BAO}$	3.84 ± 0.59
$\Omega_m h^2$	0.1464 ± 0.0032	$100\theta_{eq}$	0.8243 ± 0.0046	χ^2_{prior}	7.9 ± 3.5
$\Omega_m h^3$	0.1022 ± 0.0035	$100\theta_{s,eq}$	0.4550 ± 0.0023	χ^2_{BAO}	5.92 ± 0.87
σ_8	0.819 ± 0.011	$H(0.15)$	75.1 ± 1.1	χ^2_{CMB}	11938.4 ± 6.2
S_8	0.819 ± 0.013	$D_M(0.15)$	621.7 ± 9.2		

$\bar{\chi}^2_{eff} = 11957.32$; $R - 1 = 0.01940$

7.97 base_nnu_CamSpecHM_TTTEEE_lowl_lowE_Riess18_post_BAO_Pantheon

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02256 ± 0.00016	$\sigma_8\Omega_m^{0.5}$	0.4485 ± 0.0073	$H(0.38)$	85.2 ± 1.1
$\boldsymbol{\Omega_c h^2}$	0.1232 ± 0.0031	$\sigma_8\Omega_m^{0.25}$	0.6060 ± 0.0085	$D_M(0.38)$	1485 ± 21
$\boldsymbol{100\theta_{MC}}$	1.04052 ± 0.00042	$\sigma_8/h^{0.5}$	0.980 ± 0.010	$H(0.51)$	92.0 ± 1.1
$\boldsymbol{\tau}$	0.0550 ± 0.0079	$r_{drag}h$	100.97 ± 0.78	$D_M(0.51)$	1926 ± 26
$\boldsymbol{N_{eff}}$	3.36 ± 0.18	$\langle d^2\rangle^{1/2}$	2.406 ± 0.024	$H(0.61)$	97.6 ± 1.2
$\boldsymbol{\ln(10^{10}A_s)}$	3.052 ± 0.018	z_{re}	7.78 ± 0.80	$D_M(0.61)$	2242 ± 30
$\boldsymbol{n_s}$	0.9785 ± 0.0061	$10^9 A_s$	2.116 ± 0.038	$H(2.33)$	239.8 ± 2.6
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.896 ± 0.017	$D_M(2.33)$	5635 ± 67
$\boldsymbol{A_{100}^{PS}}$	246 ± 25	D_{40}	1210 ± 13	$f\sigma_8(0.15)$	0.4540 ± 0.0071
$\boldsymbol{A_{143}^{PS}}$	43 ± 9	D_{220}	5723 ± 39	$\sigma_8(0.15)$	0.758 ± 0.010
$\boldsymbol{A_{217}^{PS}}$	101 ± 10	D_{810}	2539 ± 14	$f\sigma_8(0.38)$	0.4751 ± 0.0067
$\boldsymbol{A_{217}^{CIB}}$	42 ± 7	D_{1420}	814.4 ± 5.1	$\sigma_8(0.38)$	0.6730 ± 0.0092
$\boldsymbol{A_{143}^{tSZ}}$	$3.7^{+1.7}_{-2.6}$	D_{2000}	228.7 ± 2.0	$f\sigma_8(0.51)$	0.4751 ± 0.0065
$\boldsymbol{r_{143\times217}^{PS}}$	0.65 ± 0.12	$n_{s,0.002}$	0.9785 ± 0.0061	$\sigma_8(0.51)$	0.6304 ± 0.0086
$\boldsymbol{r_{143\times217}^{CIB}}$	> 0.480	Y_P	0.2495 ± 0.0023	$f\sigma_8(0.61)$	0.4710 ± 0.0064
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	0.2508 ± 0.0023	$\sigma_8(0.61)$	0.6001 ± 0.0083
$\boldsymbol{A^{kSZ}}$	$5.2^{+3.6}_{-2.5}$	10^5D/H	2.656 ± 0.052	$f\sigma_8(2.33)$	0.3030 ± 0.0042
$\boldsymbol{A_{100}^{dust}}$	1.02 ± 0.20	Age/Gyr	13.49 ± 0.16	$\sigma_8(2.33)$	0.3130 ± 0.0045
$\boldsymbol{A_{143}^{dust}}$	0.97 ± 0.17	z_*	1090.25 ± 0.39	f_{2000}^{143}	31.9 ± 3.2
$\boldsymbol{A_{217}^{dust}}$	0.97 ± 0.10	r_*	142.0 ± 1.6	f_{2000}^{217}	108.3 ± 2.2
$\boldsymbol{A_{143\times217}^{dust}}$	1.03 ± 0.16	$100\theta_*$	1.04050 ± 0.00051	$f_{2000}^{143\times217}$	33.9 ± 2.3
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	$D_M(z_*)$/Gpc	13.65 ± 0.15	χ^2_{simall}	397.1 ± 1.8
$\boldsymbol{c_{217}}$	1.0013 ± 0.0016	z_{drag}	1060.85 ± 0.61	χ^2_{lowl}	21.72 ± 0.72
$\boldsymbol{c_{TE}}$	0.9987 ± 0.0050	r_{drag}	144.6 ± 1.7	$\chi^2_{CamSpec}$	11519.6 ± 6.3
$\boldsymbol{c_{EE}}$	0.9960 ± 0.0054	k_D	0.1426 ± 0.0013	$\chi^2_{H073p45}$	5.1 ± 2.8
H_0	69.9 ± 1.0	$100\theta_D$	0.16149 ± 0.00044	χ^2_{JLA}	1036.05 ± 0.11
Ω_Λ	0.6999 ± 0.0059	z_{eq}	3344 ± 23	χ^2_{6DF}	0.035 ± 0.048
Ω_m	0.3001 ± 0.0059	k_{eq}	0.01041 ± 0.00012	χ^2_{MGS}	2.06 ± 0.51
$\Omega_m h^2$	0.1464 ± 0.0032	$100\theta_{eq}$	0.8244 ± 0.0044	$\chi^2_{DR12BAO}$	3.81 ± 0.55
$\Omega_m h^3$	0.1023 ± 0.0035	$100\theta_{s,eq}$	0.4550 ± 0.0022	χ^2_{prior}	7.9 ± 3.5
σ_8	0.819 ± 0.011	$H(0.15)$	75.1 ± 1.1	χ^2_{BAO}	5.90 ± 0.84
S_8	0.819 ± 0.013	$D_M(0.15)$	621.6 ± 9.1	χ^2_{CMB}	11938.4 ± 6.2

$\bar{\chi}^2_{eff} = 12993.30$; $R - 1 = 0.01907$

7.98 base_nnu_CamSpecHM_TTTEEE_lowl_lowE_Riess18_post_lensing

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02259 ± 0.00018	S_8	0.820 ± 0.012	$H(0.15)$	75.2 ± 1.2
$\boldsymbol{\Omega_c h^2}$	0.1231 ± 0.0029	$\sigma_8 \Omega_m^{0.5}$	0.4489 ± 0.0068	$D_M(0.15)$	621 ± 10
$\boldsymbol{100\theta_{MC}}$	1.04053 ± 0.00041	$\sigma_8 \Omega_m^{0.25}$	0.6071 ± 0.0072	$H(0.38)$	85.3 ± 1.2
$\boldsymbol{\tau}$	0.0576 ± 0.0078	$\sigma_8/h^{0.5}$	0.9815 ± 0.0089	$D_M(0.38)$	1483 ± 23
$\boldsymbol{N_{eff}}$	3.36 ± 0.18	$r_{drag} h$	101.1 ± 1.0	$H(0.51)$	92.0 ± 1.2
$\boldsymbol{\ln(10^{10} A_s)}$	3.058 ± 0.016	$\langle d^2 \rangle^{1/2}$	2.411 ± 0.022	$D_M(0.51)$	1923 ± 29
$\boldsymbol{n_s}$	0.9788 ± 0.0068	z_{re}	8.04 ± 0.77	$H(0.61)$	97.7 ± 1.3
$\boldsymbol{y_{cal}}$	1.0008 ± 0.0025	$10^9 A_s$	2.129 ± 0.035	$D_M(0.61)$	2240 ± 34
$\boldsymbol{A_{100}^{PS}}$	247 ± 25	$10^9 A_s e^{-2\tau}$	1.897 ± 0.016	$H(2.33)$	239.8 ± 2.5
$\boldsymbol{A_{143}^{PS}}$	43 ± 9	D_{40}	1211 ± 13	$D_M(2.33)$	5631 ± 70
$\boldsymbol{A_{217}^{PS}}$	101 ± 10	D_{220}	5731 ± 39	$f\sigma_8(0.15)$	0.4545 ± 0.0064
$\boldsymbol{A_{217}^{CIB}}$	41 ± 7	D_{810}	2541 ± 14	$\sigma_8(0.15)$	0.7598 ± 0.0091
$\boldsymbol{A_{143}^{tSZ}}$	$3.7^{+1.7}_{-2.6}$	D_{1420}	815.0 ± 5.1	$f\sigma_8(0.38)$	0.4759 ± 0.0058
$\boldsymbol{r_{143\times217}^{PS}}$	0.65 ± 0.12	D_{2000}	228.9 ± 2.0	$\sigma_8(0.38)$	0.6749 ± 0.0084
$\boldsymbol{r_{143\times217}^{CIB}}$	> 0.473	$n_{s,0.002}$	0.9788 ± 0.0068	$f\sigma_8(0.51)$	0.4760 ± 0.0055
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P	0.2496 ± 0.0023	$\sigma_8(0.51)$	0.6322 ± 0.0081
$\boldsymbol{A^{kSZ}}$	$5.1^{+3.5}_{-2.7}$	Y_P^{BBN}	0.2509 ± 0.0023	$f\sigma_8(0.61)$	0.4720 ± 0.0053
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.20	10^5D/H	2.653 ± 0.051	$\sigma_8(0.61)$	0.6019 ± 0.0078
$\boldsymbol{A_{143}^{dust}}$	0.96 ± 0.17	Age/Gyr	13.48 ± 0.17	$f\sigma_8(2.33)$	0.3040 ± 0.0041
$\boldsymbol{A_{217}^{dust}}$	0.97 ± 0.10	z_*	1090.22 ± 0.38	$\sigma_8(2.33)$	0.3140 ± 0.0044
$\boldsymbol{A_{143\times217}^{dust}}$	1.03 ± 0.16	r_*	142.0 ± 1.6	f_{2000}^{143}	31.8 ± 3.2
$\boldsymbol{c_{100}}$	0.9976 ± 0.0010	$100\theta_*$	1.04050 ± 0.00050	f_{2000}^{217}	108.3 ± 2.2
$\boldsymbol{c_{217}}$	1.0013 ± 0.0016	$D_M(z_*)$/Gpc	13.64 ± 0.15	$f_{2000}^{143\times217}$	33.8 ± 2.3
$\boldsymbol{c_{TE}}$	0.9986 ± 0.0050	z_{drag}	1060.90 ± 0.64	$\chi^2_{lensing}$	9.92 ± 0.96
$\boldsymbol{c_{EE}}$	0.9962 ± 0.0054	r_{drag}	144.5 ± 1.7	χ^2_{simall}	397.5 ± 2.1
H_0	70.0 ± 1.2	k_D	0.1426 ± 0.0012	χ^2_{lowl}	21.79 ± 0.80
Ω_Λ	0.7009 ± 0.0078	$100\theta_D$	0.16148 ± 0.00043	$\chi^2_{CamSpec}$	11519.4 ± 6.4
Ω_m	0.2991 ± 0.0078	z_{eq}	3341 ± 29	$\chi^2_{H073p45}$	5.0 ± 3.2
$\Omega_m h^2$	0.1463 ± 0.0030	k_{eq}	0.01041 ± 0.00011	χ^2_{prior}	7.8 ± 3.5
$\Omega_m h^3$	0.1024 ± 0.0036	$100\theta_{eq}$	0.8251 ± 0.0057	χ^2_{CMB}	11948.6 ± 6.6
σ_8	0.8209 ± 0.0096	$100\theta_{s,eq}$	0.4553 ± 0.0029		

$\bar{\chi}^2_{eff} = 11961.40$; $\Delta\bar{\chi}^2_{eff} = -2.22$; $R - 1 = 0.02109$

7.99 base_nnu_CamSpecHM_TTTEEE_lowl_lowE_Riess18_post_BAO_lensing

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02255 ± 0.00016	$\sigma_8\Omega_m^{0.5}$	0.4501 ± 0.0060	$H(0.38)$	85.1 ± 1.1
$\boldsymbol{\Omega_c h^2}$	0.1230 ± 0.0030	$\sigma_8\Omega_m^{0.25}$	0.6076 ± 0.0070	$D_M(0.38)$	1488 ± 21
$\boldsymbol{100\theta_{MC}}$	1.04053 ± 0.00042	$\sigma_8/h^{0.5}$	0.9826 ± 0.0084	$H(0.51)$	91.8 ± 1.1
$\boldsymbol{\tau}$	0.0568 ± 0.0074	$r_{drag}h$	100.82 ± 0.78	$D_M(0.51)$	1929 ± 26
$\boldsymbol{N_{eff}}$	3.34 ± 0.17	$\langle d^2\rangle^{1/2}$	2.415 ± 0.020	$H(0.61)$	97.5 ± 1.2
$\boldsymbol{\ln(10^{10}A_s)}$	3.056 ± 0.016	z_{re}	7.96 ± 0.74	$D_M(0.61)$	2246 ± 30
$\boldsymbol{n_s}$	0.9775 ± 0.0061	$10^9 A_s$	2.125 ± 0.033	$H(2.33)$	239.7 ± 2.5
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.897 ± 0.016	$D_M(2.33)$	5642 ± 67
$\boldsymbol{A_{100}^{PS}}$	246 ± 25	D_{40}	1213 ± 12	$f\sigma_8(0.15)$	0.4556 ± 0.0058
$\boldsymbol{A_{143}^{PS}}$	43 ± 9	D_{220}	5729 ± 39	$\sigma_8(0.15)$	0.7590 ± 0.0089
$\boldsymbol{A_{217}^{PS}}$	101 ± 10	D_{810}	2540 ± 14	$f\sigma_8(0.38)$	0.4765 ± 0.0055
$\boldsymbol{A_{217}^{CIB}}$	41^{+7}_{-8}	D_{1420}	814.9 ± 5.1	$\sigma_8(0.38)$	0.6740 ± 0.0082
$\boldsymbol{A_{143}^{tSZ}}$	$3.7^{+1.7}_{-2.6}$	D_{2000}	229.0 ± 2.0	$f\sigma_8(0.51)$	0.4763 ± 0.0054
$\boldsymbol{r_{143\times217}^{PS}}$	0.65 ± 0.12	$n_{s,0.002}$	0.9775 ± 0.0061	$\sigma_8(0.51)$	0.6312 ± 0.0077
$\boldsymbol{r_{143\times217}^{CIB}}$	> 0.471	Y_P	0.2493 ± 0.0022	$f\sigma_8(0.61)$	0.4721 ± 0.0053
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	0.2506 ± 0.0023	$\sigma_8(0.61)$	0.6009 ± 0.0074
$\boldsymbol{A^{kSZ}}$	$5.1^{+3.4}_{-2.8}$	10^5D/H	2.652 ± 0.051	$f\sigma_8(2.33)$	0.3034 ± 0.0039
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.20	Age/Gyr	13.51 ± 0.16	$\sigma_8(2.33)$	0.3133 ± 0.0041
$\boldsymbol{A_{143}^{dust}}$	0.96 ± 0.17	z_*	1090.23 ± 0.38	f_{2000}^{143}	31.7 ± 3.2
$\boldsymbol{A_{217}^{dust}}$	0.97 ± 0.10	r_*	142.1 ± 1.6	f_{2000}^{217}	108.2 ± 2.2
$\boldsymbol{A_{143\times217}^{dust}}$	1.03 ± 0.16	$100\theta_*$	1.04052 ± 0.00050	$f_{2000}^{143\times217}$	33.7 ± 2.3
$\boldsymbol{c_{100}}$	0.9976 ± 0.0010	$D_M(z_*)$/Gpc	13.66 ± 0.15	$\chi^2_{lensing}$	9.80 ± 0.83
$\boldsymbol{c_{217}}$	1.0013 ± 0.0016	z_{drag}	1060.80 ± 0.60	χ^2_{simall}	397.3 ± 1.9
$\boldsymbol{c_{TE}}$	0.9985 ± 0.0050	r_{drag}	144.7 ± 1.6	χ^2_{lowl}	21.90 ± 0.76
$\boldsymbol{c_{EE}}$	0.9959 ± 0.0054	k_D	0.1425 ± 0.0012	$\chi^2_{CamSpec}$	11518.7 ± 6.2
H_0	69.7 ± 1.1	$100\theta_D$	0.16144 ± 0.00043	$\chi^2_{H073p45}$	5.5 ± 2.9
Ω_Λ	0.6988 ± 0.0060	z_{eq}	3348 ± 23	χ^2_{6DF}	0.030 ± 0.042
Ω_m	0.3012 ± 0.0060	k_{eq}	0.01042 ± 0.00011	χ^2_{MGS}	1.96 ± 0.49
$\Omega_m h^2$	0.1462 ± 0.0030	$100\theta_{eq}$	0.8235 ± 0.0044	$\chi^2_{DR12BAO}$	3.81 ± 0.55
$\Omega_m h^3$	0.1019 ± 0.0034	$100\theta_{s,eq}$	0.4546 ± 0.0022	χ^2_{prior}	7.8 ± 3.5
σ_8	0.8203 ± 0.0095	$H(0.15)$	75.0 ± 1.1	χ^2_{CMB}	11947.7 ± 6.3
S_8	0.822 ± 0.011	$D_M(0.15)$	622.9 ± 9.2	χ^2_{BAO}	5.80 ± 0.73

$\bar{\chi}^2_{eff} = 11966.84$; $\Delta\bar{\chi}^2_{eff} = -1.97$; $R - 1 = 0.02276$

7.100 base_nnu_CamSpecHM_TTTEEE_lowl_lowE_Riess18_post_BAO_lensing_Pantheon

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02256 ± 0.00016	$\sigma_8\Omega_m^{0.25}$	0.6076 ± 0.0070	$H(0.51)$	91.8 ± 1.1
$\boldsymbol{\Omega_c h^2}$	0.1231 ± 0.0030	$\sigma_8/h^{0.5}$	0.9825 ± 0.0083	$D_M(0.51)$	1929 ± 26
$\boldsymbol{100\theta_{MC}}$	1.04053 ± 0.00041	$r_{drag}h$	100.85 ± 0.75	$H(0.61)$	97.5 ± 1.2
$\boldsymbol{\tau}$	0.0569 ± 0.0074	$\langle d^2\rangle^{1/2}$	2.414 ± 0.020	$D_M(0.61)$	2246 ± 30
$\boldsymbol{N_{eff}}$	3.34 ± 0.17	z_{re}	7.97 ± 0.73	$H(2.33)$	239.7 ± 2.5
$\boldsymbol{\ln(10^{10}A_s)}$	3.056 ± 0.015	$10^9 A_s$	2.125 ± 0.033	$D_M(2.33)$	5641 ± 66
$\boldsymbol{n_s}$	0.9777 ± 0.0061	$10^9 A_s e^{-2\tau}$	1.897 ± 0.016	$f\sigma_8(0.15)$	0.4555 ± 0.0058
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0025	D_{40}	1213 ± 12	$\sigma_8(0.15)$	0.7591 ± 0.0089
$\boldsymbol{A_{100}^{PS}}$	246 ± 25	D_{220}	5729 ± 39	$f\sigma_8(0.38)$	0.4764 ± 0.0055
$\boldsymbol{A_{143}^{PS}}$	43 ± 9	D_{810}	2540 ± 14	$\sigma_8(0.38)$	0.6741 ± 0.0081
$\boldsymbol{A_{217}^{PS}}$	101 ± 10	D_{1420}	814.9 ± 5.1	$f\sigma_8(0.51)$	0.4763 ± 0.0054
$\boldsymbol{A_{217}^{CIB}}$	41^{+7}_{-8}	D_{2000}	229.0 ± 2.0	$\sigma_8(0.51)$	0.6313 ± 0.0077
$\boldsymbol{A_{143}^{tSZ}}$	$3.7^{+1.7}_{-2.6}$	$n_{s,0.002}$	0.9777 ± 0.0061	$f\sigma_8(0.61)$	0.4721 ± 0.0053
$\boldsymbol{r_{143\times217}^{PS}}$	0.65 ± 0.12	Y_P	0.2493 ± 0.0022	$\sigma_8(0.61)$	0.6010 ± 0.0074
$\boldsymbol{r_{143\times217}^{CIB}}$	> 0.470	Y_P^{BBN}	0.2506 ± 0.0022	$f\sigma_8(2.33)$	0.3034 ± 0.0038
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	10^5D/H	2.652 ± 0.051	$\sigma_8(2.33)$	0.3133 ± 0.0041
$\boldsymbol{A^{kSZ}}$	$5.1^{+3.4}_{-2.8}$	Age/Gyr	13.51 ± 0.16	f_{2000}^{143}	31.7 ± 3.2
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.20	z_*	1090.23 ± 0.38	f_{2000}^{217}	108.2 ± 2.2
$\boldsymbol{A_{143}^{dust}}$	0.96 ± 0.17	r_*	142.1 ± 1.6	$f_{2000}^{143\times217}$	33.7 ± 2.3
$\boldsymbol{A_{217}^{dust}}$	0.97 ± 0.10	$100\theta_*$	1.04051 ± 0.00050	$\chi^2_{lensing}$	9.80 ± 0.83
$\boldsymbol{A_{143\times217}^{dust}}$	1.03 ± 0.16	$D_M(z_*)$/Gpc	13.66 ± 0.15	χ^2_{simall}	397.3 ± 1.9
$\boldsymbol{c_{100}}$	0.9976 ± 0.0010	z_{drag}	1060.81 ± 0.60	χ^2_{lowl}	21.89 ± 0.75
$\boldsymbol{c_{217}}$	1.0013 ± 0.0016	r_{drag}	144.7 ± 1.6	$\chi^2_{CamSpec}$	11518.7 ± 6.2
$\boldsymbol{c_{TE}}$	0.9985 ± 0.0050	k_D	0.1425 ± 0.0012	$\chi^2_{H073p45}$	5.4 ± 2.9
$\boldsymbol{c_{EE}}$	0.9959 ± 0.0054	$100\theta_D$	0.16145 ± 0.00043	χ^2_{JLA}	1036.06 ± 0.12
H_0	69.7 ± 1.0	z_{eq}	3347 ± 22	χ^2_{6DF}	0.029 ± 0.040
Ω_Λ	0.6990 ± 0.0058	k_{eq}	0.01042 ± 0.00011	χ^2_{MGS}	1.98 ± 0.48
Ω_m	0.3010 ± 0.0058	$100\theta_{eq}$	0.8237 ± 0.0042	$\chi^2_{DR12BAO}$	3.79 ± 0.51
$\Omega_m h^2$	0.1463 ± 0.0030	$100\theta_{s,eq}$	0.4547 ± 0.0021	χ^2_{prior}	7.8 ± 3.5
$\Omega_m h^3$	0.1020 ± 0.0034	$H(0.15)$	75.0 ± 1.0	χ^2_{CMB}	11947.7 ± 6.3
σ_8	0.8204 ± 0.0095	$D_M(0.15)$	622.7 ± 9.0	χ^2_{BAO}	5.79 ± 0.71
S_8	0.822 ± 0.011	$H(0.38)$	85.1 ± 1.1		
$\sigma_8\Omega_m^{0.5}$	0.4500 ± 0.0060	$D_M(0.38)$	1488 ± 21		

$\bar{\chi}^2_{eff} = 13002.84$; $\Delta\bar{\chi}^2_{eff} = -2.06$; $R - 1 = 0.02245$

7.101 base_nnu_CamSpecHM_TTTEEE_lowl_lowE_Riess18_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02261 ± 0.00018	S_8	0.815 ± 0.015	$H(0.15)$	75.5 ± 1.2
$\boldsymbol{\Omega_c h^2}$	0.1231 ± 0.0031	$\sigma_8 \Omega_m^{0.5}$	0.4464 ± 0.0085	$D_M(0.15)$	618 ± 10
$\boldsymbol{100\theta_{MC}}$	1.04054 ± 0.00042	$\sigma_8 \Omega_m^{0.25}$	0.6048 ± 0.0089	$H(0.38)$	85.6 ± 1.2
$\boldsymbol{\tau}$	$0.0565^{+0.0060}_{-0.0083}$	$\sigma_8/h^{0.5}$	0.978 ± 0.011	$D_M(0.38)$	1478 ± 23
$\boldsymbol{N_{eff}}$	3.38 ± 0.18	$r_{drag} h$	101.4 ± 1.1	$H(0.51)$	92.3 ± 1.2
$\boldsymbol{\ln(10^{10} A_s)}$	$3.055^{+0.015}_{-0.018}$	$\langle d^2 \rangle^{1/2}$	2.401 ± 0.027	$D_M(0.51)$	1917 ± 30
$\boldsymbol{n_s}$	0.9805 ± 0.0069	z_{re}	$7.92^{+0.65}_{-0.81}$	$H(0.61)$	97.9 ± 1.3
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	$10^9 A_s$	$2.123^{+0.031}_{-0.039}$	$D_M(0.61)$	2233 ± 34
$\boldsymbol{A_{100}^{PS}}$	247 ± 25	$10^9 A_s e^{-2\tau}$	1.896 ± 0.017	$H(2.33)$	239.9 ± 2.6
$\boldsymbol{A_{143}^{PS}}$	43 ± 9	D_{40}	1207 ± 14	$D_M(2.33)$	5620 ± 70
$\boldsymbol{A_{217}^{PS}}$	101 ± 10	D_{220}	5726 ± 39	$f\sigma_8(0.15)$	0.4522 ± 0.0081
$\boldsymbol{A_{217}^{CIB}}$	42 ± 7	D_{810}	2539 ± 14	$\sigma_8(0.15)$	0.7588 ± 0.0099
$\boldsymbol{A_{143}^{tSZ}}$	$3.7^{+1.7}_{-2.6}$	D_{1420}	814.5 ± 5.1	$f\sigma_8(0.38)$	0.4740 ± 0.0072
$\boldsymbol{r_{143\times217}^{PS}}$	0.65 ± 0.12	D_{2000}	228.7 ± 2.0	$\sigma_8(0.38)$	0.6742 ± 0.0090
$\boldsymbol{r_{143\times217}^{CIB}}$	> 0.481	$n_{s,0.002}$	0.9805 ± 0.0069	$f\sigma_8(0.51)$	0.4744 ± 0.0067
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P	0.2499 ± 0.0023	$\sigma_8(0.51)$	0.6317 ± 0.0085
$\boldsymbol{A^{kSZ}}$	$5.2^{+3.8}_{-2.3}$	Y_P^{BBN}	0.2512 ± 0.0023	$f\sigma_8(0.61)$	0.4706 ± 0.0064
$\boldsymbol{A_{100}^{dust}}$	1.02 ± 0.20	10^5D/H	2.657 ± 0.051	$\sigma_8(0.61)$	0.6015 ± 0.0081
$\boldsymbol{A_{143}^{dust}}$	0.98 ± 0.18	Age/Gyr	13.46 ± 0.17	$f\sigma_8(2.33)$	0.3038 ± 0.0042
$\boldsymbol{A_{217}^{dust}}$	0.97 ± 0.10	z_*	1090.21 ± 0.39	$\sigma_8(2.33)$	0.3140 ± 0.0045
$\boldsymbol{A_{143\times217}^{dust}}$	1.03 ± 0.16	r_*	141.8 ± 1.6	f_{2000}^{143}	32.0 ± 3.3
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	$100\theta_*$	1.04049 ± 0.00050	f_{2000}^{217}	108.4 ± 2.2
$\boldsymbol{c_{217}}$	1.0013 ± 0.0016	$D_M(z_*)$/Gpc	13.63 ± 0.15	$f_{2000}^{143\times217}$	33.9 ± 2.3
$\boldsymbol{c_{TE}}$	0.9989 ± 0.0050	z_{drag}	1060.98 ± 0.64	χ^2_{simall}	397.1 ± 1.9
$\boldsymbol{c_{EE}}$	0.9965 ± 0.0055	r_{drag}	144.4 ± 1.7	χ^2_{lowl}	21.54 ± 0.77
H_0	70.2 ± 1.2	k_D	0.1427 ± 0.0013	$\chi^2_{CamSpec}$	11520.6 ± 6.6
Ω_Λ	0.7032 ± 0.0082	$100\theta_D$	0.16153 ± 0.00044	$\chi^2_{H073p45}$	4.3 ± 3.0
Ω_m	0.2968 ± 0.0082	z_{eq}	3332 ± 31	χ^2_{prior}	7.9 ± 3.5
$\Omega_m h^2$	0.1464 ± 0.0031	k_{eq}	0.01040 ± 0.00012	χ^2_{CMB}	11939.3 ± 6.4
$\Omega_m h^3$	0.1029 ± 0.0036	$100\theta_{eq}$	0.8268 ± 0.0061		
σ_8	0.819 ± 0.011	$100\theta_{s,eq}$	0.4563 ± 0.0031		

$\bar{\chi}^2_{eff} = 11951.46$; $\Delta\bar{\chi}^2_{eff} = -2.54$; $R - 1 = 0.01420$

7.102 base_nnu_CamSpecHM_TTTEEE_lowl_lowE_Riess18_post_BAO_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02256 ± 0.00017	$\sigma_8\Omega_m^{0.5}$	0.4489 ± 0.0073	$H(0.38)$	85.2 ± 1.1
$\boldsymbol{\Omega_c h^2}$	0.1232 ± 0.0031	$\sigma_8\Omega_m^{0.25}$	0.6065 ± 0.0083	$D_M(0.38)$	1485 ± 21
$\boldsymbol{100\theta_{MC}}$	1.04052 ± 0.00042	$\sigma_8/h^{0.5}$	0.981 ± 0.010	$H(0.51)$	92.0 ± 1.2
$\boldsymbol{\tau}$	$0.0559^{+0.0057}_{-0.0082}$	$r_{drag}h$	100.97 ± 0.81	$D_M(0.51)$	1926 ± 27
$\boldsymbol{N_{eff}}$	3.35 ± 0.18	$\langle d^2\rangle^{1/2}$	2.408 ± 0.024	$H(0.61)$	97.6 ± 1.2
$\boldsymbol{\ln(10^{10}A_s)}$	$3.054^{+0.015}_{-0.018}$	z_{re}	$7.87^{+0.63}_{-0.82}$	$D_M(0.61)$	2242 ± 31
$\boldsymbol{n_s}$	0.9786 ± 0.0062	$10^9 A_s$	$2.120^{+0.031}_{-0.038}$	$H(2.33)$	239.8 ± 2.6
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.896 ± 0.017	$D_M(2.33)$	5635 ± 68
$\boldsymbol{A_{100}^{PS}}$	246 ± 25	D_{40}	1210 ± 13	$f\sigma_8(0.15)$	0.4544 ± 0.0070
$\boldsymbol{A_{143}^{PS}}$	43 ± 9	D_{220}	5723 ± 39	$\sigma_8(0.15)$	0.7584 ± 0.0099
$\boldsymbol{A_{217}^{PS}}$	101 ± 10	D_{810}	2539 ± 14	$f\sigma_8(0.38)$	0.4756 ± 0.0066
$\boldsymbol{A_{217}^{CIB}}$	42 ± 7	D_{1420}	814.4 ± 5.1	$\sigma_8(0.38)$	0.6736 ± 0.0089
$\boldsymbol{A_{143}^{tSZ}}$	$3.7^{+1.7}_{-2.6}$	D_{2000}	228.8 ± 2.0	$f\sigma_8(0.51)$	0.4755 ± 0.0064
$\boldsymbol{r_{143\times217}^{PS}}$	0.65 ± 0.12	$n_{s,0.002}$	0.9786 ± 0.0062	$\sigma_8(0.51)$	0.6309 ± 0.0084
$\boldsymbol{r_{143\times217}^{CIB}}$	> 0.478	Y_P	0.2495 ± 0.0023	$f\sigma_8(0.61)$	0.4714 ± 0.0062
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	0.2508 ± 0.0023	$\sigma_8(0.61)$	0.6006 ± 0.0080
$\boldsymbol{A^{kSZ}}$	$5.2^{+3.6}_{-2.6}$	10^5D/H	2.655 ± 0.052	$f\sigma_8(2.33)$	0.3033 ± 0.0041
$\boldsymbol{A_{100}^{dust}}$	1.02 ± 0.20	Age/Gyr	13.49 ± 0.16	$\sigma_8(2.33)$	0.3132 ± 0.0043
$\boldsymbol{A_{143}^{dust}}$	0.97 ± 0.17	z_*	1090.25 ± 0.39	f_{2000}^{143}	31.8 ± 3.2
$\boldsymbol{A_{217}^{dust}}$	0.97 ± 0.10	r_*	142.0 ± 1.6	f_{2000}^{217}	108.3 ± 2.2
$\boldsymbol{A_{143\times217}^{dust}}$	1.03 ± 0.16	$100\theta_*$	1.04050 ± 0.00051	$f_{2000}^{143\times217}$	33.8 ± 2.3
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	$D_M(z_*)$/Gpc	13.65 ± 0.15	χ^2_{simall}	397.0 ± 1.8
$\boldsymbol{c_{217}}$	1.0013 ± 0.0016	z_{drag}	1060.85 ± 0.62	χ^2_{lowl}	21.74 ± 0.74
$\boldsymbol{c_{TE}}$	0.9986 ± 0.0050	r_{drag}	144.6 ± 1.7	$\chi^2_{CamSpec}$	11519.4 ± 6.3
$\boldsymbol{c_{EE}}$	0.9960 ± 0.0054	k_D	0.1426 ± 0.0013	$\chi^2_{H073p45}$	5.1 ± 2.9
H_0	69.8 ± 1.1	$100\theta_D$	0.16148 ± 0.00044	χ^2_{6DF}	0.037 ± 0.050
Ω_Λ	0.6999 ± 0.0061	z_{eq}	3344 ± 24	χ^2_{MGS}	2.05 ± 0.52
Ω_m	0.3001 ± 0.0061	k_{eq}	0.01041 ± 0.00012	$\chi^2_{DR12BAO}$	3.84 ± 0.59
$\Omega_m h^2$	0.1464 ± 0.0032	$100\theta_{eq}$	0.8244 ± 0.0045	χ^2_{prior}	7.9 ± 3.5
$\Omega_m h^3$	0.1023 ± 0.0035	$100\theta_{s,eq}$	0.4550 ± 0.0023	χ^2_{BAO}	5.93 ± 0.88
σ_8	0.820 ± 0.011	$H(0.15)$	75.1 ± 1.1	χ^2_{CMB}	11938.2 ± 6.2
S_8	0.820 ± 0.013	$D_M(0.15)$	621.6 ± 9.2		

$\bar{\chi}^2_{eff} = 11957.12$; $R - 1 = 0.01923$

7.103 base_nnu_CamSpecHM_TTTEEE_lowl_lowE_Riess18_post_BAO_Pantheon_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02257 ± 0.00016	$\sigma_8\Omega_m^{0.5}$	0.4488 ± 0.0072	$H(0.38)$	85.2 ± 1.1
$\boldsymbol{\Omega_c h^2}$	0.1232 ± 0.0031	$\sigma_8\Omega_m^{0.25}$	0.6065 ± 0.0083	$D_M(0.38)$	1485 ± 21
$\boldsymbol{100\theta_{MC}}$	1.04052 ± 0.00042	$\sigma_8/h^{0.5}$	0.981 ± 0.010	$H(0.51)$	92.0 ± 1.1
$\boldsymbol{\tau}$	$0.0559^{+0.0057}_{-0.0082}$	$r_{drag}h$	100.99 ± 0.78	$D_M(0.51)$	1925 ± 26
$\boldsymbol{N_{eff}}$	3.36 ± 0.18	$\langle d^2\rangle^{1/2}$	2.408 ± 0.023	$H(0.61)$	97.6 ± 1.2
$\boldsymbol{\ln(10^{10}A_s)}$	$3.054^{+0.015}_{-0.018}$	z_{re}	$7.87^{+0.63}_{-0.82}$	$D_M(0.61)$	2242 ± 30
$\boldsymbol{n_s}$	0.9787 ± 0.0061	10^9A_s	$2.120^{+0.031}_{-0.038}$	$H(2.33)$	239.8 ± 2.6
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	$10^9A_se^{-2\tau}$	1.896 ± 0.017	$D_M(2.33)$	5634 ± 67
$\boldsymbol{A^{PS}_{100}}$	246 ± 25	D_{40}	1210 ± 13	$f\sigma_8(0.15)$	0.4543 ± 0.0070
$\boldsymbol{A^{PS}_{143}}$	43 ± 9	D_{220}	5723 ± 39	$\sigma_8(0.15)$	0.7585 ± 0.0099
$\boldsymbol{A^{PS}_{217}}$	101 ± 10	D_{810}	2539 ± 14	$f\sigma_8(0.38)$	0.4755 ± 0.0066
$\boldsymbol{A^{CIB}_{217}}$	42 ± 7	D_{1420}	814.5 ± 5.1	$\sigma_8(0.38)$	0.6736 ± 0.0089
$\boldsymbol{A^{tSZ}_{143}}$	$3.7^{+1.7}_{-2.6}$	D_{2000}	228.7 ± 2.0	$f\sigma_8(0.51)$	0.4755 ± 0.0064
$\boldsymbol{r^{PS}_{143\times217}}$	0.65 ± 0.12	$n_{s,0.002}$	0.9787 ± 0.0061	$\sigma_8(0.51)$	0.6309 ± 0.0083
$\boldsymbol{r^{CIB}_{143\times217}}$	> 0.478	Y_P	0.2495 ± 0.0023	$f\sigma_8(0.61)$	0.4714 ± 0.0062
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	0.2509 ± 0.0023	$\sigma_8(0.61)$	0.6007 ± 0.0080
$\boldsymbol{A^{kSZ}}$	$5.2^{+3.6}_{-2.5}$	10^5D/H	2.656 ± 0.052	$f\sigma_8(2.33)$	0.3033 ± 0.0041
$\boldsymbol{A^{dust}_{100}}$	1.02 ± 0.20	Age/Gyr	13.49 ± 0.16	$\sigma_8(2.33)$	0.3133 ± 0.0043
$\boldsymbol{A^{dust}_{143}}$	0.97 ± 0.17	z_*	1090.24 ± 0.39	f^{143}_{2000}	31.8 ± 3.2
$\boldsymbol{A^{dust}_{217}}$	0.97 ± 0.10	r_*	142.0 ± 1.6	f^{217}_{2000}	108.3 ± 2.2
$\boldsymbol{A^{dust}_{143\times217}}$	1.03 ± 0.16	$100\theta_*$	1.04049 ± 0.00051	$f^{143\times217}_{2000}$	33.8 ± 2.3
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	$D_M(z_*)$/Gpc	13.65 ± 0.15	χ^2_{simall}	397.0 ± 1.8
$\boldsymbol{c_{217}}$	1.0013 ± 0.0016	z_{drag}	1060.86 ± 0.61	χ^2_{lowl}	21.73 ± 0.73
$\boldsymbol{c_{TE}}$	0.9986 ± 0.0050	r_{drag}	144.6 ± 1.7	$\chi^2_{CamSpec}$	11519.5 ± 6.3
$\boldsymbol{c_{EE}}$	0.9960 ± 0.0054	k_D	0.1426 ± 0.0013	$\chi^2_{H073p45}$	5.1 ± 2.8
H_0	69.9 ± 1.0	$100\theta_D$	0.16148 ± 0.00044	χ^2_{JLA}	1036.05 ± 0.11
Ω_Λ	0.7001 ± 0.0059	z_{eq}	3343 ± 23	χ^2_{6DF}	0.036 ± 0.049
Ω_m	0.2999 ± 0.0059	k_{eq}	0.01041 ± 0.00012	χ^2_{MGS}	2.06 ± 0.50
$\Omega_m h^2$	0.1464 ± 0.0032	$100\theta_{eq}$	0.8245 ± 0.0044	$\chi^2_{DR12BAO}$	3.81 ± 0.55
$\Omega_m h^3$	0.1023 ± 0.0035	$100\theta_{s,eq}$	0.4551 ± 0.0022	χ^2_{prior}	7.9 ± 3.5
σ_8	0.820 ± 0.011	$H(0.15)$	75.1 ± 1.1	χ^2_{BAO}	5.91 ± 0.85
S_8	0.819 ± 0.013	$D_M(0.15)$	621.5 ± 9.1	χ^2_{CMB}	11938.2 ± 6.2

$\bar{\chi}^2_{eff} = 12993.11$; $R - 1 = 0.01889$

7.104 base_nnu_CamSpecHM_TTTEEE_lowl_lowE_Riess18_post_lensing_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02259 ± 0.00018	S_8	0.820 ± 0.012	$H(0.15)$	75.2 ± 1.2
$\boldsymbol{\Omega_c h^2}$	0.1231 ± 0.0029	$\sigma_8\Omega_m^{0.5}$	0.4489 ± 0.0068	$D_M(0.15)$	621 ± 10
$\boldsymbol{100\theta_{MC}}$	1.04053 ± 0.00041	$\sigma_8\Omega_m^{0.25}$	0.6072 ± 0.0072	$H(0.38)$	85.3 ± 1.2
$\boldsymbol{\tau}$	$0.0580^{+0.0064}_{-0.0081}$	$\sigma_8/h^{0.5}$	0.9817 ± 0.0088	$D_M(0.38)$	1483 ± 23
$\boldsymbol{N_{eff}}$	3.36 ± 0.18	$r_{drag}h$	101.1 ± 1.0	$H(0.51)$	92.1 ± 1.2
$\boldsymbol{\ln(10^{10}A_s)}$	$3.059^{+0.014}_{-0.016}$	$\langle d^2\rangle^{1/2}$	2.412 ± 0.022	$D_M(0.51)$	1923 ± 29
$\boldsymbol{n_s}$	0.9789 ± 0.0068	z_{re}	$8.08^{+0.68}_{-0.77}$	$H(0.61)$	97.7 ± 1.3
$\boldsymbol{y_{cal}}$	1.0008 ± 0.0025	$10^9 A_s$	$2.131^{+0.030}_{-0.036}$	$D_M(0.61)$	2239 ± 34
$\boldsymbol{A_{100}^{PS}}$	247 ± 25	$10^9 A_s e^{-2\tau}$	1.897 ± 0.016	$H(2.33)$	239.8 ± 2.5
$\boldsymbol{A_{143}^{PS}}$	43 ± 9	D_{40}	1211 ± 13	$D_M(2.33)$	5631 ± 70
$\boldsymbol{A_{217}^{PS}}$	101 ± 10	D_{220}	5731 ± 39	$f\sigma_8(0.15)$	0.4546 ± 0.0064
$\boldsymbol{A_{217}^{CIB}}$	41 ± 7	D_{810}	2541 ± 14	$\sigma_8(0.15)$	0.7601 ± 0.0090
$\boldsymbol{A_{143}^{tSZ}}$	$3.7^{+1.7}_{-2.6}$	D_{1420}	815.0 ± 5.1	$f\sigma_8(0.38)$	0.4760 ± 0.0057
$\boldsymbol{r_{143\times217}^{PS}}$	0.65 ± 0.12	D_{2000}	228.9 ± 2.0	$\sigma_8(0.38)$	0.6752 ± 0.0083
$\boldsymbol{r_{143\times217}^{CIB}}$	> 0.473	$n_{s,0.002}$	0.9789 ± 0.0068	$f\sigma_8(0.51)$	0.4761 ± 0.0055
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P	0.2496 ± 0.0023	$\sigma_8(0.51)$	0.6325 ± 0.0079
$\boldsymbol{A^{kSZ}}$	$5.1^{+3.5}_{-2.7}$	Y_P^{BBN}	0.2509 ± 0.0023	$f\sigma_8(0.61)$	0.4721 ± 0.0053
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.20	10^5D/H	2.653 ± 0.050	$\sigma_8(0.61)$	0.6022 ± 0.0076
$\boldsymbol{A_{143}^{dust}}$	0.96 ± 0.17	Age/Gyr	13.48 ± 0.17	$f\sigma_8(2.33)$	0.3041 ± 0.0040
$\boldsymbol{A_{217}^{dust}}$	0.97 ± 0.10	z_*	1090.21 ± 0.37	$\sigma_8(2.33)$	0.3141 ± 0.0044
$\boldsymbol{A_{143\times217}^{dust}}$	1.03 ± 0.16	r_*	142.0 ± 1.6	f_{2000}^{143}	31.7 ± 3.2
$\boldsymbol{c_{100}}$	0.9976 ± 0.0010	$100\theta_*$	1.04050 ± 0.00050	f_{2000}^{217}	108.3 ± 2.2
$\boldsymbol{c_{217}}$	1.0013 ± 0.0016	$D_M(z_*)$/Gpc	13.64 ± 0.15	$f_{2000}^{143\times217}$	33.8 ± 2.3
$\boldsymbol{c_{TE}}$	0.9985 ± 0.0050	z_{drag}	1060.91 ± 0.64	$\chi^2_{lensing}$	9.90 ± 0.93
$\boldsymbol{c_{EE}}$	0.9963 ± 0.0054	r_{drag}	144.5 ± 1.7	χ^2_{simall}	397.5 ± 2.1
H_0	70.0 ± 1.2	k_D	0.1426 ± 0.0012	χ^2_{lowl}	21.78 ± 0.80
Ω_Λ	0.7010 ± 0.0077	$100\theta_D$	0.16148 ± 0.00043	$\chi^2_{CamSpec}$	11519.4 ± 6.4
Ω_m	0.2990 ± 0.0077	z_{eq}	3340 ± 29	$\chi^2_{H073p45}$	4.9 ± 3.2
$\Omega_m h^2$	0.1463 ± 0.0030	k_{eq}	0.01041 ± 0.00011	χ^2_{prior}	7.8 ± 3.5
$\Omega_m h^3$	0.1024 ± 0.0036	$100\theta_{eq}$	0.8252 ± 0.0056	χ^2_{CMB}	11948.5 ± 6.5
σ_8	0.8212 ± 0.0095	$100\theta_{s,eq}$	0.4554 ± 0.0028		

$\bar{\chi}^2_{eff} = 11961.28$; $\Delta\bar{\chi}^2_{eff} = -2.23$; $R - 1 = 0.02116$

7.105 base_nnu_CamSpecHM_TTTEEE_lowl_lowE_Riess18_post_BAO_lensing_Pantheon_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02256 ± 0.00016	$\sigma_8\Omega_m^{0.25}$	0.6077 ± 0.0069	$H(0.51)$	91.8 ± 1.1
$\boldsymbol{\Omega_c h^2}$	0.1230 ± 0.0029	$\sigma_8/h^{0.5}$	0.9828 ± 0.0082	$D_M(0.51)$	1929 ± 26
$\boldsymbol{100\theta_{MC}}$	1.04053 ± 0.00041	$r_{drag}h$	100.86 ± 0.74	$H(0.61)$	97.5 ± 1.2
$\boldsymbol{\tau}$	$0.0573^{+0.0062}_{-0.0077}$	$\langle d^2\rangle^{1/2}$	2.415 ± 0.020	$D_M(0.61)$	2245 ± 30
$\boldsymbol{N_{eff}}$	3.34 ± 0.17	z_{re}	$8.01^{+0.65}_{-0.75}$	$H(2.33)$	239.7 ± 2.5
$\boldsymbol{\ln(10^{10}A_s)}$	$3.057^{+0.014}_{-0.015}$	$10^9 A_s$	$2.127^{+0.029}_{-0.033}$	$D_M(2.33)$	5641 ± 66
$\boldsymbol{n_s}$	0.9777 ± 0.0060	$10^9 A_s e^{-2\tau}$	1.896 ± 0.016	$f\sigma_8(0.15)$	0.4556 ± 0.0058
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0025	D_{40}	1213 ± 12	$\sigma_8(0.15)$	0.7594 ± 0.0088
$\boldsymbol{A_{100}^{PS}}$	246 ± 25	D_{220}	5729 ± 39	$f\sigma_8(0.38)$	0.4765 ± 0.0055
$\boldsymbol{A_{143}^{PS}}$	43 ± 9	D_{810}	2540 ± 14	$\sigma_8(0.38)$	0.6743 ± 0.0080
$\boldsymbol{A_{217}^{PS}}$	101 ± 10	D_{1420}	814.9 ± 5.1	$f\sigma_8(0.51)$	0.4764 ± 0.0053
$\boldsymbol{A_{217}^{CIB}}$	41^{+7}_{-8}	D_{2000}	229.0 ± 2.0	$\sigma_8(0.51)$	0.6315 ± 0.0076
$\boldsymbol{A_{143}^{tSZ}}$	$3.7^{+1.7}_{-2.6}$	$n_{s,0.002}$	0.9777 ± 0.0060	$f\sigma_8(0.61)$	0.4722 ± 0.0052
$\boldsymbol{r_{143\times217}^{PS}}$	0.65 ± 0.12	Y_P	0.2493 ± 0.0022	$\sigma_8(0.61)$	0.6012 ± 0.0073
$\boldsymbol{r_{143\times217}^{CIB}}$	> 0.470	Y_P^{BBN}	0.2506 ± 0.0022	$f\sigma_8(2.33)$	0.3036 ± 0.0038
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	10^5D/H	2.652 ± 0.051	$\sigma_8(2.33)$	0.3135 ± 0.0040
$\boldsymbol{A^{kSZ}}$	$5.1^{+3.4}_{-2.8}$	Age/Gyr	13.51 ± 0.16	f_{2000}^{143}	31.7 ± 3.2
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.20	z_*	1090.23 ± 0.37	f_{2000}^{217}	108.2 ± 2.2
$\boldsymbol{A_{143}^{dust}}$	0.96 ± 0.17	r_*	142.1 ± 1.6	$f_{2000}^{143\times217}$	33.7 ± 2.3
$\boldsymbol{A_{217}^{dust}}$	0.97 ± 0.10	$100\theta_*$	1.04051 ± 0.00050	$\chi^2_{lensing}$	9.77 ± 0.79
$\boldsymbol{A_{143\times217}^{dust}}$	1.03 ± 0.16	$D_M(z_*)$/Gpc	13.66 ± 0.15	χ^2_{simall}	397.3 ± 1.9
$\boldsymbol{c_{100}}$	0.9976 ± 0.0010	z_{drag}	1060.82 ± 0.60	χ^2_{lowl}	21.89 ± 0.75
$\boldsymbol{c_{217}}$	1.0013 ± 0.0016	r_{drag}	144.7 ± 1.6	$\chi^2_{CamSpec}$	11518.7 ± 6.2
$\boldsymbol{c_{TE}}$	0.9984 ± 0.0050	k_D	0.1425 ± 0.0012	$\chi^2_{H073p45}$	5.4 ± 2.9
$\boldsymbol{c_{EE}}$	0.9959 ± 0.0054	$100\theta_D$	0.16144 ± 0.00043	χ^2_{JLA}	1036.05 ± 0.12
H_0	69.7 ± 1.0	z_{eq}	3347 ± 22	χ^2_{6DF}	0.029 ± 0.040
Ω_Λ	0.6991 ± 0.0057	k_{eq}	0.01041 ± 0.00011	χ^2_{MGS}	1.98 ± 0.48
Ω_m	0.3009 ± 0.0057	$100\theta_{eq}$	0.8238 ± 0.0042	$\chi^2_{DR12BAO}$	3.78 ± 0.51
$\Omega_m h^2$	0.1462 ± 0.0030	$100\theta_{s,eq}$	0.4547 ± 0.0021	χ^2_{prior}	7.8 ± 3.5
$\Omega_m h^3$	0.1020 ± 0.0034	$H(0.15)$	75.0 ± 1.0	χ^2_{CMB}	11947.6 ± 6.2
σ_8	0.8206 ± 0.0093	$D_M(0.15)$	622.6 ± 9.0	χ^2_{BAO}	5.79 ± 0.71
S_8	0.822 ± 0.011	$H(0.38)$	85.1 ± 1.1		
$\sigma_8\Omega_m^{0.5}$	0.4501 ± 0.0059	$D_M(0.38)$	1487 ± 21		

$\bar{\chi}^2_{eff} = 13002.71$; $\Delta\bar{\chi}^2_{eff} = -2.09$; $R - 1 = 0.02249$

7.106 base_nnu_CleanedCamSpecHM_TT_lowl_lowE

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02206 ± 0.00032	$\sigma_8/h^{0.5}$	0.990 ± 0.016	$D_M(0.15)$	651 ± 23
$\boldsymbol{\Omega_c h^2}$	0.1197 ± 0.0041	$r_{drag} h$	98.4 ± 2.2	$H(0.38)$	82.2 ± 2.3
$\boldsymbol{100\theta_{MC}}$	1.04088 ± 0.00058	$\langle d^2 \rangle^{1/2}$	2.454 ± 0.046	$D_M(0.38)$	1551 ± 50
$\boldsymbol{\tau}$	0.0515 ± 0.0081	z_{re}	$7.43^{+0.85}_{-0.76}$	$H(0.51)$	88.9 ± 2.3
$\boldsymbol{N_{eff}}$	2.99 ± 0.29	$10^9 A_s$	2.080 ± 0.044	$D_M(0.51)$	2007 ± 62
$\boldsymbol{\ln(10^{10} A_s)}$	3.035 ± 0.021	$10^9 A_s e^{-2\tau}$	1.876 ± 0.023	$H(0.61)$	94.6 ± 2.3
$\boldsymbol{n_s}$	0.960 ± 0.014	D_{40}	1236 ± 22	$D_M(0.61)$	2335 ± 70
$\boldsymbol{y_{cal}}$	1.0004 ± 0.0025	D_{220}	5707 ± 41	$H(2.33)$	235.8 ± 3.7
$\boldsymbol{A_{100}^{PS}}$	255 ± 28	D_{810}	2530 ± 14	$D_M(2.33)$	5805 ± 130
$\boldsymbol{A_{143}^{tSZ}}$	$3.8^{+1.8}_{-2.7}$	D_{1420}	812.7 ± 5.4	$f\sigma_8(0.15)$	0.462 ± 0.012
$\boldsymbol{A^{kSZ}}$	—	D_{2000}	229.2 ± 2.4	$\sigma_8(0.15)$	0.745 ± 0.013
$\boldsymbol{A_{100}^{dust}}$	1.00 ± 0.20	$n_{s,0.002}$	0.960 ± 0.014	$f\sigma_8(0.38)$	0.4777 ± 0.0095
$\boldsymbol{A_{143}^{power}}$	$10.3^{+2.3}_{-2.8}$	Y_P	0.2444 ± 0.0041	$\sigma_8(0.38)$	0.659 ± 0.013
$\boldsymbol{A_{217}^{power}}$	$8.2^{+1.6}_{-3.2}$	Y_P^{BBN}	0.2458 ± 0.0041	$f\sigma_8(0.51)$	0.4751 ± 0.0085
$\boldsymbol{A_{143\times217}^{power}}$	$4.3^{+1.6}_{-3.1}$	10^5D/H	2.625 ± 0.072	$\sigma_8(0.51)$	0.617 ± 0.012
$\boldsymbol{\gamma_{143}^{power}}$	$1.32^{+0.41}_{-0.54}$	Age/Gyr	13.90 ± 0.31	$f\sigma_8(0.61)$	0.4693 ± 0.0080
$\boldsymbol{\gamma_{217}^{power}}$	$1.38^{+0.74}_{-0.62}$	z_*	1090.23 ± 0.50	$\sigma_8(0.61)$	0.587 ± 0.012
$\boldsymbol{\gamma_{143\times217}^{power}}$	1.32 ± 0.59	r_*	145.1 ± 2.6	$f\sigma_8(2.33)$	0.2954 ± 0.0065
$\boldsymbol{c_{100}}$	0.9978 ± 0.0011	$100\theta_*$	1.04113 ± 0.00072	$\sigma_8(2.33)$	0.3041 ± 0.0073
$\boldsymbol{c_{217}}$	$0.9994^{+0.0012}_{-0.0017}$	$D_M(z_*)$/Gpc	13.94 ± 0.24	f_{2000}^{143}	23 ± 4
H_0	66.6 ± 2.5	z_{drag}	1059.1 ± 1.1	f_{2000}^{217}	16.7 ± 2.5
Ω_Λ	0.678 ± 0.019	r_{drag}	147.9 ± 2.7	$f_{2000}^{143\times217}$	10.9 ± 2.7
Ω_m	0.322 ± 0.019	k_D	0.1401 ± 0.0019	χ^2_{simall}	396.9 ± 1.6
$\Omega_m h^2$	0.1424 ± 0.0042	$100\theta_D$	0.16098 ± 0.00068	χ^2_{lowl}	24.4 ± 2.3
$\Omega_m h^3$	$0.0948^{+0.0053}_{-0.0061}$	z_{eq}	3414 ± 66	$\chi^2_{CamSpec}$	6716.4 ± 5.6
σ_8	0.808 ± 0.014	k_{eq}	0.01038 ± 0.00016	χ^2_{prior}	5.3 ± 2.9
S_8	0.837 ± 0.025	$100\theta_{eq}$	0.810 ± 0.012	χ^2_{CMB}	7137.7 ± 5.4
$\sigma_8 \Omega_m^{0.5}$	0.458 ± 0.014	$100\theta_{s,eq}$	0.4481 ± 0.0063		
$\sigma_8 \Omega_m^{0.25}$	0.608 ± 0.012	$H(0.15)$	71.9 ± 2.4		

$\bar{\chi}^2_{eff} = 7142.96$; $\Delta\bar{\chi}^2_{eff} = 0.76$; $R - 1 = 0.00706$

7.107 base_nnu_lensing_lenspriors_BAO_Cooke17_Aver15

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02186	0.02200 ± 0.00066	D_{1420}	859	843 ± 100	$D_M(0.51)$	2011	1999 ± 59
$\boldsymbol{\Omega_c h^2}$	0.1127	$0.115^{+0.011}_{-0.013}$	D_{2000}	242.0	240^{+25}_{-31}	$H(0.61)$	93.57	94.3 ± 3.1
$\boldsymbol{100\theta_{MC}}$	1.0384	1.040 ± 0.015	$n_{s,0.002}$	0.9566	0.956 ± 0.020	$D_M(0.61)$	2341	2328 ± 70
$\boldsymbol{N_{eff}}$	2.883	2.91 ± 0.27	Y_P	0.24296	0.2434 ± 0.0038	$H(2.33)$	230.4	232.3 ± 9.6
$\boldsymbol{\ln(10^{10} A_s)}$	3.092	3.08 ± 0.10	Y_P^{BBN}	0.24428	0.2447 ± 0.0038	$D_M(2.33)$	5875	5838 ± 200
$\boldsymbol{n_s}$	0.9566	0.956 ± 0.020	10^5D/H	2.626	2.610 ± 0.091	$f\sigma_8(0.15)$	0.4495	0.452 ± 0.018
H_0	66.82	67.2 ± 1.9	Age/Gyr	14.067	13.98 ± 0.48	$\sigma_8(0.15)$	0.7470	0.748 ± 0.017
Ω_Λ	0.6973	$0.695^{+0.018}_{-0.016}$	z_*	1089.75	1089.8 ± 1.1	$f\sigma_8(0.38)$	0.4698	0.471 ± 0.015
Ω_m	0.3027	$0.305^{+0.016}_{-0.018}$	r_*	147.63	146.8 ± 4.1	$\sigma_8(0.38)$	0.6631	0.664 ± 0.014
$\Omega_m h^2$	0.1352	$0.138^{+0.011}_{-0.013}$	$100\theta_*$	1.0387	1.041 ± 0.015	$f\sigma_8(0.51)$	0.4694	0.471 ± 0.014
$\Omega_m h^3$	0.0903	$0.0928^{+0.0091}_{-0.011}$	$D_M(z_*)$/Gpc	14.21	14.12 ± 0.55	$\sigma_8(0.51)$	0.6210	0.622 ± 0.013
σ_8	0.8074	0.809 ± 0.019	z_{drag}	1058.06	1058.6 ± 2.1	$f\sigma_8(0.61)$	0.4652	0.466 ± 0.013
S_8	0.8111	0.815 ± 0.035	r_{drag}	150.52	149.7 ± 4.3	$\sigma_8(0.61)$	0.5911	0.592 ± 0.013
$\sigma_8 \Omega_m^{0.5}$	0.4442	0.447 ± 0.019	k_D	0.13755	0.1385 ± 0.0041	$f\sigma_8(2.33)$	0.2984	0.2988 ± 0.0063
$\sigma_8 \Omega_m^{0.25}$	0.5989	0.601 ± 0.019	$100\theta_D$	0.16070	0.1608 ± 0.0020	$\sigma_8(2.33)$	0.3081	0.3084 ± 0.0066
$\sigma_8/h^{0.5}$	0.9878	0.987 ± 0.020	z_{eq}	3286	3337^{+240}_{-290}	$\chi^2_{lensing}$	7.84	9.9 ± 2.2
$r_{drag} h$	100.58	100.5 ± 1.2	k_{eq}	0.00992	$0.01009^{+0.00074}_{-0.00089}$	χ^2_{Aver15}	0.024	0.9 ± 1.3
$\langle d^2 \rangle^{1/2}$	2.487	2.485 ± 0.053	$100\theta_{eq}$	0.8310	0.826 ± 0.038	$\chi^2_{Cooke17}$	0.007	0.9 ± 1.4
z_{re}	7.719	7.73 ± 0.23	$100\theta_{s,eq}$	0.4590	0.456 ± 0.019	χ^2_{6DF}	0.0003	0.058 ± 0.082
$10^9 A_s$	2.203	$2.19^{+0.20}_{-0.24}$	$H(0.15)$	71.90	72.3 ± 2.1	χ^2_{MGS}	1.75	1.81 ± 0.71
$10^9 A_s e^{-2\tau}$	1.973	$1.96^{+0.18}_{-0.22}$	$D_M(0.15)$	649.4	646 ± 18	$\chi^2_{DR12BAO}$	3.53	4.4 ± 1.6
D_{40}	1325	1318^{+130}_{-150}	$H(0.38)$	81.65	82.2 ± 2.6	χ^2_{prior}	0.03	1.0 ± 1.4
D_{220}	6159	6121^{+800}_{-900}	$D_M(0.38)$	1551.0	1543 ± 45	χ^2_{BAO}	5.28	6.3 ± 1.7
D_{810}	2685	2648 ± 300	$H(0.51)$	88.14	88.8 ± 2.9	χ^2_{Abund}	0.03	1.9 ± 1.9

Best-fit $\chi^2_{eff} = 13.18$; $\bar{\chi}^2_{eff} = 19.03$; $R - 1 = 0.01158$

χ^2_{eff}: Abund - Yp_Aver2015: 0.02 D_Cooke2017: 0.01 BAO - 6DF: 0.00 MGS: 1.75 DR12BAO: 3.53 CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8_CMBmarged: 7.84

7.108 base_nnu_lensing_lenspriors_BAO_Cooke17_Aver15_post_Pantheon

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02202 ± 0.00066	D_{2000}	243^{+22}_{-27}	$D_{\rm M}(0.61)$	2331 ± 68
$\boldsymbol{\Omega_c h^2}$	$0.1137^{+0.0095}_{-0.011}$	$n_{\rm s,0.002}$	0.957 ± 0.019	$H(2.33)$	231.3 ± 8.5
$\boldsymbol{100\theta_{MC}}$	1.038 ± 0.013	$Y_{\rm P}$	0.2435 ± 0.0038	$D_{\rm M}(2.33)$	5855 ± 190
$\boldsymbol{N_{eff}}$	2.92 ± 0.26	$Y_{\rm P}^{\rm BBN}$	0.2448 ± 0.0038	$f\sigma_8(0.15)$	0.449 ± 0.015
$\boldsymbol{\ln(10^{10} A_s)}$	3.094 ± 0.087	10^5D/H	2.610 ± 0.091	$\sigma_8(0.15)$	0.748 ± 0.016
$\boldsymbol{n_s}$	0.957 ± 0.019	Age/Gyr	14.02 ± 0.45	$f\sigma_8(0.38)$	0.470 ± 0.014
H_0	67.2 ± 1.9	z_*	1089.67 ± 0.98	$\sigma_8(0.38)$	0.664 ± 0.014
Ω_Λ	0.698 ± 0.014	r_*	147.2 ± 3.9	$f\sigma_8(0.51)$	0.470 ± 0.013
$\Omega_{\rm m}$	0.302 ± 0.014	$100\theta_*$	1.039 ± 0.013	$\sigma_8(0.51)$	0.622 ± 0.013
$\Omega_{\rm m}h^2$	$0.1364^{+0.0098}_{-0.011}$	$D_{\rm M}(z_*)$/Gpc	14.17 ± 0.50	$f\sigma_8(0.61)$	0.465 ± 0.012
$\Omega_{\rm m}h^3$	$0.0918^{+0.0085}_{-0.0099}$	$z_{\rm drag}$	1058.5 ± 2.1	$\sigma_8(0.61)$	0.592 ± 0.013
σ_8	0.808 ± 0.018	$r_{\rm drag}$	150.0 ± 4.1	$f\sigma_8(2.33)$	0.2989 ± 0.0064
S_8	0.811 ± 0.030	$k_{\rm D}$	0.1382 ± 0.0038	$\sigma_8(2.33)$	0.3086 ± 0.0066
$\sigma_8\Omega_{\rm m}^{0.5}$	0.444 ± 0.016	$100\theta_{\rm D}$	0.1606 ± 0.0018	$\chi^2_{\rm lensing}$	9.5 ± 1.9
$\sigma_8\Omega_{\rm m}^{0.25}$	0.599 ± 0.017	$z_{\rm eq}$	3298^{+200}_{-230}	$\chi^2_{\rm Aver15}$	0.9 ± 1.3
$\sigma_8/h^{0.5}$	0.986 ± 0.020	$k_{\rm eq}$	$0.00998^{+0.00065}_{-0.00073}$	$\chi^2_{\rm Cooke17}$	0.95 ± 1.4
$r_{\rm drag}h$	100.7 ± 1.1	$100\theta_{\rm eq}$	0.831 ± 0.031	$\chi^2_{\rm JLA}$	1036.38 ± 0.58
$\langle d^2\rangle^{1/2}$	2.489 ± 0.049	$100\theta_{\rm s,eq}$	0.459 ± 0.016	$\chi^2_{\rm 6DF}$	0.048 ± 0.068
$z_{\rm re}$	7.70 ± 0.20	$H(0.15)$	72.3 ± 2.1	$\chi^2_{\rm MGS}$	1.88 ± 0.65
$10^9 A_{\rm s}$	$2.22^{+0.17}_{-0.20}$	$D_{\rm M}(0.15)$	647 ± 18	$\chi^2_{\rm DR12BAO}$	4.4 ± 1.5
$10^9 A_{\rm s}e^{-2\tau}$	$1.98^{+0.15}_{-0.18}$	$H(0.38)$	82.0 ± 2.4	$\chi^2_{\rm prior}$	0.95 ± 1.4
D_{40}	1334^{+110}_{-130}	$D_{\rm M}(0.38)$	1545 ± 44	$\chi^2_{\rm BAO}$	6.3 ± 1.6
D_{220}	6218^{+650}_{-790}	$H(0.51)$	88.5 ± 2.7	$\chi^2_{\rm Abund}$	1.8 ± 1.9
D_{810}	2685 ± 260	$D_{\rm M}(0.51)$	2002 ± 58		
D_{1420}	856 ± 82	$H(0.61)$	94.0 ± 2.9		

$\bar{\chi}^2_{\rm eff} = 1055.05$; $R - 1 = 0.01514$

7.109 base_nnu_lensing_lenspriors_BAO_Cooke17_Aver15_theta

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\mathbf{\Omega_b h^2}$	0.02189	0.02198 ± 0.00068	D_{1420}	845.4	843 ± 44	$D_{\rm M}(0.51)$	2003.3	1999 ± 49
$\mathbf{\Omega_c h^2}$	0.1143	$0.1152^{+0.0052}_{-0.0060}$	D_{2000}	238.2	237 ± 14	$H(0.61)$	94.01	94.3 ± 2.2
$\mathbf{100\theta_{MC}}$	1.04091	1.04089 ± 0.00061	$n_{\rm s,0.002}$	0.9551	0.954 ± 0.019	$D_{\rm M}(0.61)$	2332	2327 ± 56
$\mathbf{N_{eff}}$	2.878	2.91 ± 0.27	$Y_{\rm P}$	0.24292	0.2434 ± 0.0039	$H(2.33)$	231.8	232.5 ± 5.2
$\mathbf{ln(10^{10} A_s)}$	3.0766	3.075 ± 0.037	$Y_{\rm P}^{\rm BBN}$	0.24423	0.2447 ± 0.0039	$D_{\rm M}(2.33)$	5847	5832 ± 130
$\mathbf{n_s}$	0.9551	0.954 ± 0.019	10^5D/H	2.618	2.615 ± 0.093	$f\sigma_8(0.15)$	0.4518	0.4521 ± 0.0097
H_0	67.02	67.2 ± 1.7	Age/Gyr	13.999	13.96 ± 0.32	$\sigma_8(0.15)$	0.7483	0.749 ± 0.015
Ω_Λ	0.6952	0.6948 ± 0.0088	z_*	1089.86	1089.86 ± 0.64	$f\sigma_8(0.38)$	0.4716	0.4719 ± 0.0094
$\Omega_{\rm m}$	0.3048	0.3052 ± 0.0088	r_*	147.16	146.8 ± 3.3	$\sigma_8(0.38)$	0.6640	0.664 ± 0.014
$\Omega_{\rm m}h^2$	0.1369	$0.1378^{+0.0057}_{-0.0065}$	$100\theta_*$	1.04127	1.04122 ± 0.00065	$f\sigma_8(0.51)$	0.4710	0.4712 ± 0.0092
$\Omega_{\rm m}h^3$	0.0917	$0.0927^{+0.0056}_{-0.0067}$	$D_{\rm M}(z_*)$/Gpc	14.133	14.10 ± 0.31	$\sigma_8(0.51)$	0.6217	0.622 ± 0.013
σ_8	0.8090	0.809 ± 0.016	$z_{\rm drag}$	1058.25	1058.5 ± 2.1	$f\sigma_8(0.61)$	0.4666	0.4668 ± 0.0091
S_8	0.8154	0.816 ± 0.018	$r_{\rm drag}$	150.04	149.6 ± 3.5	$\sigma_8(0.61)$	0.5918	0.592 ± 0.012
$\sigma_8\Omega_{\rm m}^{0.5}$	0.4466	0.4470 ± 0.0099	$k_{\rm D}$	0.13809	0.1385 ± 0.0031	$f\sigma_8(2.33)$	0.2987	0.2988 ± 0.0064
$\sigma_8\Omega_{\rm m}^{0.25}$	0.6011	0.601 ± 0.012	$100\theta_{\rm D}$	0.16097	0.16096 ± 0.00073	$\sigma_8(2.33)$	0.3082	0.3083 ± 0.0067
$\sigma_8/h^{0.5}$	0.9883	0.987 ± 0.020	$z_{\rm eq}$	3330.4	3336 ± 48	$\chi^2_{\rm lensing}$	7.99	9.2 ± 1.5
$r_{\rm drag}h$	100.55	100.5 ± 1.1	$k_{\rm eq}$	0.010050	$0.01009^{+0.00026}_{-0.00029}$	$\chi^2_{\rm Aver15}$	0.027	0.95 ± 1.4
$\langle d^2\rangle^{1/2}$	2.4816	2.483 ± 0.040	$100\theta_{\rm eq}$	0.8249	0.8241 ± 0.0077	$\chi^2_{\rm Cooke17}$	0.000	0.98 ± 1.4
$z_{\rm re}$	7.747	7.74 ± 0.11	$100\theta_{\rm s,eq}$	0.45579	0.4553 ± 0.0043	$\chi^2_{\rm 6DF}$	0.0002	0.055 ± 0.079
$10^9 A_{\rm s}$	2.168	2.166 ± 0.079	$H(0.15)$	72.14	72.4 ± 1.8	$\chi^2_{\rm MGS}$	1.75	1.80 ± 0.70
$10^9 A_{\rm s}e^{-2\tau}$	1.943	1.940 ± 0.071	$D_{\rm M}(0.15)$	647.4	646 ± 16	$\chi^2_{\rm DR12BAO}$	3.37	4.3 ± 1.3
D_{40}	1305	1306 ± 57	$H(0.38)$	81.98	82.2 ± 2.0	$\chi^2_{\rm prior}$	0.06	2.0 ± 2.0
D_{220}	6027	6025 ± 240	$D_{\rm M}(0.38)$	1545.6	1542 ± 38	$\chi^2_{\rm BAO}$	5.12	6.1 ± 1.4
D_{810}	2639	2632 ± 120	$H(0.51)$	88.53	88.8 ± 2.1	$\chi^2_{\rm Abund}$	0.03	1.9 ± 2.0

Best-fit $\chi^2_{\rm eff} = 13.20$; $\bar{\chi}^2_{\rm eff} = 19.27$; $R - 1 = 0.00810$

$\chi^2_{\rm eff}$: Abund - Yp_Aver2015: 0.03 D_Cooke2017: 0.00 BAO - 6DF: 0.00 MGS: 1.75 DR12BAO: 3.37 CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8_CMBmarged: 7.99

7.110 base_nnu_lensing_lenspriors_BAO_Cooke17_Aver15_theta_post_Pantheon

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02199 ± 0.00069	D_{2000}	238 ± 14	$D_{\rm M}(0.61)$	2324 ± 56
$\boldsymbol{\Omega_c h^2}$	$0.1151^{+0.0052}_{-0.0060}$	$n_{\rm s,0.002}$	0.954 ± 0.019	$H(2.33)$	232.5 ± 5.2
$\boldsymbol{100\theta_{MC}}$	1.04089 ± 0.00062	$Y_{\rm P}$	0.2434 ± 0.0039	$D_{\rm M}(2.33)$	5829 ± 130
$\boldsymbol{N_{eff}}$	2.92 ± 0.27	$Y_{\rm P}^{\rm BBN}$	0.2448 ± 0.0039	$f\sigma_8(0.15)$	0.4517 ± 0.0096
$\boldsymbol{\ln(10^{10} A_s)}$	3.077 ± 0.036	10^5D/H	2.615 ± 0.093	$\sigma_8(0.15)$	0.749 ± 0.015
$\boldsymbol{n_s}$	0.954 ± 0.019	Age/Gyr	13.96 ± 0.32	$f\sigma_8(0.38)$	0.4717 ± 0.0094
H_0	67.3 ± 1.7	z_*	1089.84 ± 0.63	$\sigma_8(0.38)$	0.665 ± 0.014
Ω_Λ	0.6959 ± 0.0082	r_*	146.7 ± 3.3	$f\sigma_8(0.51)$	0.4712 ± 0.0092
$\Omega_{\rm m}$	0.3041 ± 0.0082	$100\theta_*$	1.04121 ± 0.00066	$\sigma_8(0.51)$	0.622 ± 0.013
$\Omega_{\rm m}h^2$	$0.1378^{+0.0056}_{-0.0065}$	$D_{\rm M}(z_*)$/Gpc	14.09 ± 0.31	$f\sigma_8(0.61)$	0.4668 ± 0.0091
$\Omega_{\rm m}h^3$	$0.0928^{+0.0057}_{-0.0067}$	$z_{\rm drag}$	1058.6 ± 2.1	$\sigma_8(0.61)$	0.593 ± 0.012
σ_8	0.810 ± 0.016	$r_{\rm drag}$	149.6 ± 3.6	$f\sigma_8(2.33)$	0.2991 ± 0.0063
S_8	0.815 ± 0.018	$k_{\rm D}$	0.1385 ± 0.0031	$\sigma_8(2.33)$	0.3087 ± 0.0067
$\sigma_8\Omega_{\rm m}^{0.5}$	0.4465 ± 0.0098	$100\theta_{\rm D}$	0.16097 ± 0.00073	$\chi^2_{\rm lensing}$	9.2 ± 1.5
$\sigma_8\Omega_{\rm m}^{0.25}$	0.601 ± 0.012	$z_{\rm eq}$	3332 ± 47	$\chi^2_{\rm Aver15}$	0.9 ± 1.4
$\sigma_8/h^{0.5}$	0.987 ± 0.020	$k_{\rm eq}$	$0.01008^{+0.00026}_{-0.00029}$	$\chi^2_{\rm Cooke17}$	0.98 ± 1.4
$r_{\rm drag}h$	100.6 ± 1.1	$100\theta_{\rm eq}$	0.8249 ± 0.0074	$\chi^2_{\rm JLA}$	1036.18 ± 0.28
$\langle d^2\rangle^{1/2}$	2.484 ± 0.040	$100\theta_{\rm s,eq}$	0.4557 ± 0.0041	$\chi^2_{\rm 6DF}$	0.049 ± 0.069
$z_{\rm re}$	7.74 ± 0.11	$H(0.15)$	72.4 ± 1.8	$\chi^2_{\rm MGS}$	1.87 ± 0.66
$10^9 A_{\rm s}$	2.170 ± 0.078	$D_{\rm M}(0.15)$	645 ± 16	$\chi^2_{\rm DR12BAO}$	4.1 ± 1.1
$10^9 A_{\rm s}e^{-2\tau}$	1.944 ± 0.069	$H(0.38)$	82.3 ± 1.9	$\chi^2_{\rm prior}$	2.0 ± 2.0
D_{40}	1309 ± 57	$D_{\rm M}(0.38)$	1540 ± 38	$\chi^2_{\rm BAO}$	6.0 ± 1.2
D_{220}	6040 ± 230	$H(0.51)$	88.9 ± 2.1	$\chi^2_{\rm Abund}$	1.9 ± 1.9
D_{810}	2638 ± 120	$D_{\rm M}(0.51)$	1996 ± 48		
D_{1420}	844 ± 44	$H(0.61)$	94.4 ± 2.2		

$\bar{\chi}^2_{\rm eff} = 1055.37$; $R - 1 = 0.00944$

7.111 base_nnu_BAO_Cooke17_Aver15

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02208 ± 0.00072	r_*	130.7 ± 9.1	$H(0.51)$	$102.8^{+7.5}_{-9.5}$
$\boldsymbol{\Omega_c h^2}$	$0.192^{+0.037}_{-0.057}$	$100\theta_*$	1.113 ± 0.037	$D_{\rm M}(0.51)$	1787 ± 120
$\boldsymbol{100\theta_{MC}}$	1.113 ± 0.037	$D_{\rm M}(z_*)$/Gpc	11.8 ± 1.2	$H(0.61)$	$110.1^{+8.4}_{-11}$
$\boldsymbol{N_{eff}}$	2.96 ± 0.28	$z_{\rm drag}$	1063.7 ± 3.7	$D_{\rm M}(0.61)$	2071 ± 150
H_0	$73.2^{+3.7}_{-4.4}$	$r_{\rm drag}$	133.1 ± 9.4	$H(2.33)$	286^{+28}_{-35}
Ω_Λ	$0.604^{+0.057}_{-0.046}$	$k_{\rm D}$	$0.157^{+0.010}_{-0.012}$	$D_{\rm M}(2.33)$	5009 ± 440
$\Omega_{\rm m}$	$0.396^{+0.046}_{-0.057}$	$100\theta_{\rm D}$	0.1708 ± 0.0053	$\chi^2_{\rm Aver15}$	1.0 ± 1.4
$\Omega_{\rm m}h^2$	$0.215^{+0.037}_{-0.058}$	$z_{\rm eq}$	5183^{+900}_{-1000}	$\chi^2_{\rm Cooke17}$	1.1 ± 1.5
$\Omega_{\rm m}h^3$	$0.159^{+0.031}_{-0.053}$	$k_{\rm eq}$	$0.0157^{+0.0027}_{-0.0042}$	$\chi^2_{\rm 6DF}$	0.44 ± 0.45
$r_{\rm drag}h$	97.1 ± 2.1	$100\theta_{\rm eq}$	$0.657^{+0.074}_{-0.088}$	$\chi^2_{\rm MGS}$	0.69 ± 0.65
$Y_{\rm P}$	0.2440 ± 0.0041	$100\theta_{\rm s,eq}$	$0.368^{+0.040}_{-0.046}$	$\chi^2_{\rm DR12BAO}$	4.0 ± 1.8
$Y_{\rm P}^{\rm BBN}$	0.2453 ± 0.0041	$H(0.15)$	$80.4^{+4.6}_{-5.7}$	$\chi^2_{\rm BAO}$	5.1 ± 2.0
10^5D/H	2.611 ± 0.096	$D_{\rm M}(0.15)$	589 ± 35	$\chi^2_{\rm Abund}$	2.1 ± 2.1
Age/Gyr	12.0 ± 1.1	$H(0.38)$	$93.9^{+6.4}_{-8.0}$		
z_*	$1095.7^{+3.0}_{-3.9}$	$D_{\rm M}(0.38)$	1387 ± 91		

$\bar{\chi}^2_{\rm eff} = 7.19$; $R-1 = 0.02751$

7.112 base_nnu_BAO_Cooke17_Aver15_Pantheon

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02202 ± 0.00066	r_*	144.6 ± 4.6	$H(0.51)$	$90.6^{+2.9}_{-3.7}$
$\boldsymbol{\Omega_c h^2}$	$0.123^{+0.012}_{-0.016}$	$100\theta_*$	1.050 ± 0.016	$D_{\rm M}(0.51)$	1966 ± 67
$\boldsymbol{100\theta_{MC}}$	1.050 ± 0.016	$D_{\rm M}(z_*)$/Gpc	13.77 ± 0.61	$H(0.61)$	$96.3^{+3.2}_{-4.1}$
$\boldsymbol{N_{eff}}$	2.95 ± 0.27	$z_{\rm drag}$	1059.2 ± 2.3	$D_{\rm M}(0.61)$	2288 ± 79
H_0	$68.1^{+2.0}_{-2.3}$	$r_{\rm drag}$	147.4 ± 4.9	$H(2.33)$	$238.7^{+9.7}_{-12}$
Ω_Λ	$0.686^{+0.018}_{-0.016}$	$k_{\rm D}$	$0.1408^{+0.0041}_{-0.0052}$	$D_{\rm M}(2.33)$	5715 ± 230
$\Omega_{\rm m}$	$0.314^{+0.016}_{-0.018}$	$100\theta_{\rm D}$	0.1622 ± 0.0023	$\chi^2_{\rm Aver15}$	0.9 ± 1.3
$\Omega_{\rm m}h^2$	$0.146^{+0.012}_{-0.016}$	$z_{\rm eq}$	3518^{+260}_{-340}	$\chi^2_{\rm Cooke17}$	0.96 ± 1.3
$\Omega_{\rm m}h^3$	$0.0997^{+0.0098}_{-0.014}$	$k_{\rm eq}$	$0.01066^{+0.00082}_{-0.0011}$	$\chi^2_{\rm JLA}$	1037.1 ± 1.5
$r_{\rm drag}h$	100.3 ± 1.1	$100\theta_{\rm eq}$	0.803 ± 0.040	$\chi^2_{\rm 6DF}$	0.051 ± 0.072
$Y_{\rm P}$	0.2438 ± 0.0038	$100\theta_{\rm s,eq}$	0.444 ± 0.021	$\chi^2_{\rm MGS}$	1.76 ± 0.66
$Y_{\rm P}^{\rm BBN}$	0.2451 ± 0.0038	$H(0.15)$	$73.5^{+2.2}_{-2.7}$	$\chi^2_{\rm DR12BAO}$	3.9 ± 1.4
10^5D/H	2.618 ± 0.092	$D_{\rm M}(0.15)$	637 ± 21	$\chi^2_{\rm BAO}$	5.7 ± 1.6
Age/Gyr	13.68 ± 0.55	$H(0.38)$	$83.8^{+2.6}_{-3.3}$	$\chi^2_{\rm Abund}$	1.9 ± 1.8
z_*	1090.5 ± 1.3	$D_{\rm M}(0.38)$	1518 ± 51		

$\bar{\chi}^2_{\rm eff} = 1044.64$; $R-1 = 0.02512$

7.113 base_nnu_BAO_Cooke17_Aver15_theta

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	$0.02201^{+0.00065}_{-0.00074}$	r_*	146.5 ± 3.4	$H(0.51)$	89.0 ± 2.2
$\boldsymbol{\Omega_c h^2}$	0.1158 ± 0.0059	$100\theta_*$	1.04120 ± 0.00066	$D_{\rm M}(0.51)$	1995 ± 51
$\boldsymbol{100\theta_{MC}}$	1.04090 ± 0.00059	$D_{\rm M}(z_*)$/Gpc	14.07 ± 0.32	$H(0.61)$	94.5 ± 2.3
$\boldsymbol{N_{eff}}$	2.94 ± 0.28	$z_{\rm drag}$	1058.7 ± 2.1	$D_{\rm M}(0.61)$	2323 ± 58
H_0	67.3 ± 1.8	$r_{\rm drag}$	149.3 ± 3.7	$H(2.33)$	233.0 ± 5.3
Ω_Λ	0.6943 ± 0.0093	$k_{\rm D}$	0.1388 ± 0.0032	$D_{\rm M}(2.33)$	5821 ± 140
$\Omega_{\rm m}$	0.3057 ± 0.0093	$100\theta_{\rm D}$	0.16100 ± 0.00075	$\chi^2_{\rm Aver15}$	1.0 ± 1.4
$\Omega_{\rm m}h^2$	0.1385 ± 0.0064	$z_{\rm eq}$	3341 ± 48	$\chi^2_{\rm Cooke17}$	1.0 ± 1.4
$\Omega_{\rm m}h^3$	$0.0933^{+0.0060}_{-0.0070}$	$k_{\rm eq}$	0.01012 ± 0.00029	$\chi^2_{\rm 6DF}$	0.059 ± 0.084
$r_{\rm drag}h$	100.4 ± 1.2	$100\theta_{\rm eq}$	0.8235 ± 0.0079	$\chi^2_{\rm MGS}$	1.75 ± 0.72
$Y_{\rm P}$	0.2437 ± 0.0041	$100\theta_{\rm s,eq}$	0.4550 ± 0.0043	$\chi^2_{\rm DR12BAO}$	4.4 ± 1.5
$Y_{\rm P}^{\rm BBN}$	0.2450 ± 0.0041	$H(0.15)$	72.5 ± 1.9	$\chi^2_{\rm prior}$	0.98 ± 1.4
10^5D/H	2.619 ± 0.095	$D_{\rm M}(0.15)$	645 ± 17	$\chi^2_{\rm BAO}$	6.2 ± 1.5
Age/Gyr	13.94 ± 0.33	$H(0.38)$	82.4 ± 2.0	$\chi^2_{\rm Abund}$	2.0 ± 2.0
z_*	1089.91 ± 0.65	$D_{\rm M}(0.38)$	1540 ± 40		

$\bar{\chi}^2_{\rm eff} = 9.22$; $R-1 = 0.01015$

7.114 base_nnu_BAO_Cooke17_Aver15_Pantheon_theta

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02207 ± 0.00070	r_*	146.3 ± 3.4	$H(0.51)$	89.1 ± 2.1
$\boldsymbol{\Omega_c h^2}$	0.1160 ± 0.0058	$100\theta_*$	1.04118 ± 0.00066	$D_{\rm M}(0.51)$	1991 ± 49
$\boldsymbol{100\theta_{MC}}$	1.04090 ± 0.00061	$D_{\rm M}(z_*)$/Gpc	14.05 ± 0.32	$H(0.61)$	94.6 ± 2.2
$\boldsymbol{N_{eff}}$	2.96 ± 0.27	$z_{\rm drag}$	1058.8 ± 2.1	$D_{\rm M}(0.61)$	2318 ± 56
H_0	67.5 ± 1.7	$r_{\rm drag}$	149.1 ± 3.6	$H(2.33)$	233.2 ± 5.3
Ω_Λ	0.6954 ± 0.0082	$k_{\rm D}$	0.1390 ± 0.0032	$D_{\rm M}(2.33)$	5811 ± 130
$\Omega_{\rm m}$	0.3046 ± 0.0082	$100\theta_{\rm D}$	0.16097 ± 0.00072	$\chi^2_{\rm Aver15}$	0.98 ± 1.3
$\Omega_{\rm m}h^2$	0.1387 ± 0.0063	$z_{\rm eq}$	3339 ± 47	$\chi^2_{\rm Cooke17}$	0.97 ± 1.4
$\Omega_{\rm m}h^3$	$0.0937^{+0.0060}_{-0.0069}$	$k_{\rm eq}$	0.01013 ± 0.00029	$\chi^2_{\rm JLA}$	1036.20 ± 0.29
$r_{\rm drag}h$	100.5 ± 1.1	$100\theta_{\rm eq}$	0.8239 ± 0.0075	$\chi^2_{\rm 6DF}$	0.048 ± 0.069
$Y_{\rm P}$	0.2440 ± 0.0039	$100\theta_{\rm s,eq}$	0.4552 ± 0.0041	$\chi^2_{\rm MGS}$	1.82 ± 0.66
$Y_{\rm P}^{\rm BBN}$	0.2453 ± 0.0040	$H(0.15)$	72.6 ± 1.8	$\chi^2_{\rm DR12BAO}$	4.2 ± 1.2
10^5D/H	2.613 ± 0.092	$D_{\rm M}(0.15)$	643 ± 16	$\chi^2_{\rm prior}$	1.0 ± 1.5
Age/Gyr	13.91 ± 0.32	$H(0.38)$	82.5 ± 2.0	$\chi^2_{\rm BAO}$	6.0 ± 1.2
z_*	1089.86 ± 0.63	$D_{\rm M}(0.38)$	1536 ± 38	$\chi^2_{\rm Abund}$	2.0 ± 1.9

$\bar{\chi}^2_{\rm eff} = 1045.22$; $R - 1 = 0.00577$

7.115 base_nnu_BAO_Cooke17Marc_Aver15

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02184 ± 0.00054	r_*	131.4 ± 8.8	$H(0.51)$	$102.0^{+7.1}_{-9.2}$
$\boldsymbol{\Omega_c h^2}$	$0.188^{+0.036}_{-0.055}$	$100\theta_*$	$1.110^{+0.039}_{-0.035}$	$D_{\rm M}(0.51)$	1798 ± 120
$\boldsymbol{100\theta_{MC}}$	$1.110^{+0.039}_{-0.035}$	$D_{\rm M}(z_*)$/Gpc	$11.9^{+1.1}_{-1.3}$	$H(0.61)$	$109.2^{+8.0}_{-10}$
$\boldsymbol{N_{eff}}$	2.97 ± 0.27	$z_{\rm drag}$	$1062.9^{+3.1}_{-3.6}$	$D_{\rm M}(0.61)$	2084 ± 140
H_0	$72.8^{+3.4}_{-4.3}$	$r_{\rm drag}$	134.0 ± 9.1	$H(2.33)$	283^{+27}_{-34}
Ω_Λ	$0.608^{+0.054}_{-0.048}$	$k_{\rm D}$	$0.1560^{+0.0098}_{-0.012}$	$D_{\rm M}(2.33)$	5048 ± 430
$\Omega_{\rm m}$	$0.392^{+0.048}_{-0.054}$	$100\theta_{\rm D}$	0.1708 ± 0.0053	$\chi^2_{\rm Cooke17Marc}$	0.99 ± 1.4
$\Omega_{\rm m}h^2$	$0.211^{+0.036}_{-0.055}$	$z_{\rm eq}$	5067^{+900}_{-1000}	$\chi^2_{\rm Aver15}$	0.97 ± 1.3
$\Omega_{\rm m}h^3$	$0.155^{+0.029}_{-0.050}$	$k_{\rm eq}$	$0.0154^{+0.0026}_{-0.0040}$	$\chi^2_{\rm 6DF}$	0.42 ± 0.42
$r_{\rm drag}h$	97.2 ± 2.1	$100\theta_{\rm eq}$	$0.665^{+0.071}_{-0.091}$	$\chi^2_{\rm MGS}$	0.72 ± 0.66
$Y_{\rm P}$	0.2441 ± 0.0039	$100\theta_{\rm s,eq}$	$0.372^{+0.038}_{-0.048}$	$\chi^2_{\rm DR12BAO}$	3.8 ± 1.7
$Y_{\rm P}^{\rm BBN}$	0.2454 ± 0.0039	$H(0.15)$	$79.9^{+4.3}_{-5.5}$	$\chi^2_{\rm BAO}$	5.0 ± 1.9
10^5D/H	2.660 ± 0.043	$D_{\rm M}(0.15)$	592 ± 34	$\chi^2_{\rm Abund}$	2.0 ± 1.9
Age/Gyr	12.1 ± 1.0	$H(0.38)$	$93.3^{+6.0}_{-7.8}$		
z_*	$1095.8^{+3.0}_{-3.7}$	$D_{\rm M}(0.38)$	1396 ± 88		

$\bar{\chi}^2_{\rm eff} = 6.92$; $R - 1 = 0.01290$

7.116 base_nnu_BAO_Cooke17Marc_Aver15_Pantheon

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02183 ± 0.00054	r_*	144.6 ± 5.3	$H(0.51)$	$90.6^{+3.7}_{-4.2}$
$\boldsymbol{\Omega_c h^2}$	$0.124^{+0.014}_{-0.018}$	$100\theta_*$	1.050 ± 0.020	$D_{\rm M}(0.51)$	1968 ± 76
$\boldsymbol{100\theta_{MC}}$	1.050 ± 0.020	$D_{\rm M}(z_*)$/Gpc	13.78 ± 0.72	$H(0.61)$	$96.3^{+4.0}_{-4.6}$
$\boldsymbol{N_{eff}}$	2.97 ± 0.27	$z_{\rm drag}$	1058.8 ± 2.3	$D_{\rm M}(0.61)$	2289 ± 91
H_0	$68.1^{+2.2}_{-2.5}$	$r_{\rm drag}$	147.5 ± 5.5	$H(2.33)$	239^{+12}_{-14}
Ω_Λ	0.686 ± 0.020	$k_{\rm D}$	$0.1406^{+0.0050}_{-0.0057}$	$D_{\rm M}(2.33)$	5718 ± 260
$\Omega_{\rm m}$	0.314 ± 0.020	$100\theta_{\rm D}$	0.1625 ± 0.0026	$\chi^2_{\rm Cooke17Marc}$	1.0 ± 1.4
$\Omega_{\rm m}h^2$	$0.146^{+0.015}_{-0.019}$	$z_{\rm eq}$	3512^{+330}_{-400}	$\chi^2_{\rm Aver15}$	0.97 ± 1.4
$\Omega_{\rm m}h^3$	$0.0999^{+0.012}_{-0.017}$	$k_{\rm eq}$	$0.0107^{+0.0010}_{-0.0013}$	$\chi^2_{\rm JLA}$	1037.3 ± 1.7
$r_{\rm drag}h$	100.3 ± 1.2	$100\theta_{\rm eq}$	$0.805^{+0.044}_{-0.050}$	$\chi^2_{\rm 6DF}$	0.051 ± 0.073
$Y_{\rm P}$	0.2440 ± 0.0039	$100\theta_{\rm s,eq}$	0.445 ± 0.025	$\chi^2_{\rm MGS}$	1.76 ± 0.66
$Y_{\rm P}^{\rm BBN}$	0.2453 ± 0.0039	$H(0.15)$	$73.5^{+2.6}_{-2.9}$	$\chi^2_{\rm DR12BAO}$	4.0 ± 1.6
10^5D/H	2.661 ± 0.043	$D_{\rm M}(0.15)$	637 ± 23	$\chi^2_{\rm BAO}$	5.8 ± 1.8
Age/Gyr	13.69 ± 0.64	$H(0.38)$	$83.7^{+3.2}_{-3.7}$	$\chi^2_{\rm Abund}$	2.0 ± 2.0
z_*	1090.8 ± 1.4	$D_{\rm M}(0.38)$	1519 ± 58		

$\bar{\chi}^2_{\rm eff} = 1045.04$; $R - 1 = 0.00461$

7.117 base_nnu_BAO_Cooke17Marc_Aver15_theta

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02179 ± 0.00054	r_*	146.5 ± 3.3	$H(0.51)$	88.9 ± 2.1
$\boldsymbol{\Omega_c h^2}$	$0.1160^{+0.0054}_{-0.0061}$	$100\theta_*$	1.04123 ± 0.00064	$D_{\rm M}(0.51)$	1998 ± 49
$\boldsymbol{100\theta_{MC}}$	1.04091 ± 0.00059	$D_{\rm M}(z_*)$/Gpc	14.07 ± 0.32	$H(0.61)$	94.4 ± 2.2
$\boldsymbol{N_{eff}}$	2.95 ± 0.28	$z_{\rm drag}$	1058.2 ± 1.9	$D_{\rm M}(0.61)$	2326 ± 56
H_0	67.2 ± 1.7	$r_{\rm drag}$	149.4 ± 3.6	$H(2.33)$	233.0 ± 5.3
Ω_Λ	0.6933 ± 0.0092	$k_{\rm D}$	0.1385 ± 0.0030	$D_{\rm M}(2.33)$	5826 ± 130
$\Omega_{\rm m}$	0.3067 ± 0.0092	$100\theta_{\rm D}$	0.16133 ± 0.00038	$\chi^2_{\rm Cooke17Marc}$	1.0 ± 1.4
$\Omega_{\rm m}h^2$	$0.1384^{+0.0059}_{-0.0066}$	$z_{\rm eq}$	3335 ± 47	$\chi^2_{\rm Aver15}$	0.98 ± 1.4
$\Omega_{\rm m}h^3$	$0.0931^{+0.0059}_{-0.0067}$	$k_{\rm eq}$	0.01011 ± 0.00029	$\chi^2_{\rm 6DF}$	0.061 ± 0.086
$r_{\rm drag}h$	100.3 ± 1.2	$100\theta_{\rm eq}$	0.8239 ± 0.0079	$\chi^2_{\rm MGS}$	1.71 ± 0.72
$Y_{\rm P}$	0.2438 ± 0.0040	$100\theta_{\rm s,eq}$	0.4553 ± 0.0043	$\chi^2_{\rm DR12BAO}$	4.4 ± 1.6
$Y_{\rm P}^{\rm BBN}$	0.2451 ± 0.0040	$H(0.15)$	72.4 ± 1.8	$\chi^2_{\rm prior}$	0.98 ± 1.5
10^5D/H	2.662 ± 0.043	$D_{\rm M}(0.15)$	646 ± 16	$\chi^2_{\rm BAO}$	6.2 ± 1.5
Age/Gyr	13.95 ± 0.32	$H(0.38)$	82.3 ± 2.0	$\chi^2_{\rm Abund}$	2.0 ± 2.0
z_*	1090.20 ± 0.35	$D_{\rm M}(0.38)$	1542 ± 38		

$\bar{\chi}^2_{\rm eff} = 9.16$; $R - 1 = 0.00593$

7.118 base_nnu_BAO_Cooke17Marc_Aver15_Pantheon_theta

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02183 ± 0.00055	r_*	146.5 ± 3.4	$H(0.51)$	89.0 ± 2.1
$\boldsymbol{\Omega_c h^2}$	$0.1159^{+0.0055}_{-0.0062}$	$100\theta_*$	1.04120 ± 0.00066	$D_{\rm M}(0.51)$	1994 ± 49
$\boldsymbol{100\theta_{MC}}$	1.04089 ± 0.00061	$D_{\rm M}(z_*)$/Gpc	14.07 ± 0.32	$H(0.61)$	94.5 ± 2.2
$\boldsymbol{N_{eff}}$	2.96 ± 0.28	$z_{\rm drag}$	1058.3 ± 1.9	$D_{\rm M}(0.61)$	2321 ± 57
H_0	67.4 ± 1.7	$r_{\rm drag}$	149.4 ± 3.7	$H(2.33)$	233.0 ± 5.4
Ω_Λ	0.6950 ± 0.0085	$k_{\rm D}$	0.1385 ± 0.0031	$D_{\rm M}(2.33)$	5820 ± 140
$\Omega_{\rm m}$	0.3050 ± 0.0085	$100\theta_{\rm D}$	0.16133 ± 0.00038	$\chi^2_{\rm Cooke17Marc}$	1.0 ± 1.4
$\Omega_{\rm m}h^2$	$0.1384^{+0.0060}_{-0.0068}$	$z_{\rm eq}$	3329 ± 45	$\chi^2_{\rm Aver15}$	1.0 ± 1.5
$\Omega_{\rm m}h^3$	$0.0933^{+0.0060}_{-0.0070}$	$k_{\rm eq}$	0.01010 ± 0.00029	$\chi^2_{\rm JLA}$	1036.21 ± 0.33
$r_{\rm drag}h$	100.6 ± 1.1	$100\theta_{\rm eq}$	0.8251 ± 0.0075	$\chi^2_{\rm 6DF}$	0.051 ± 0.075
$Y_{\rm P}$	0.2439 ± 0.0040	$100\theta_{\rm s,eq}$	0.4559 ± 0.0041	$\chi^2_{\rm MGS}$	1.83 ± 0.68
$Y_{\rm P}^{\rm BBN}$	0.2452 ± 0.0041	$H(0.15)$	72.5 ± 1.8	$\chi^2_{\rm DR12BAO}$	4.2 ± 1.2
10^5D/H	2.659 ± 0.043	$D_{\rm M}(0.15)$	644 ± 16	$\chi^2_{\rm prior}$	1.0 ± 1.5
Age/Gyr	13.93 ± 0.33	$H(0.38)$	82.4 ± 2.0	$\chi^2_{\rm BAO}$	6.1 ± 1.3
z_*	1090.16 ± 0.34	$D_{\rm M}(0.38)$	1539 ± 38	$\chi^2_{\rm Abund}$	2.0 ± 2.0

$\bar{\chi}^2_{\rm eff} = 1045.34$; $R - 1 = 0.00970$

7.119 base_nnu_BAO_Cooke17Adel_Aver15

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02254 ± 0.00064	r_*	130.6 ± 9.1	$H(0.51)$	$102.8^{+7.3}_{-9.7}$
$\boldsymbol{\Omega_c h^2}$	$0.191^{+0.036}_{-0.058}$	$100\theta_*$	1.112 ± 0.038	$D_{\rm M}(0.51)$	1784 ± 120
$\boldsymbol{100\theta_{MC}}$	1.112 ± 0.038	$D_{\rm M}(z_*)$/Gpc	$11.8^{+1.1}_{-1.3}$	$H(0.61)$	$110.1^{+8.2}_{-11}$
$\boldsymbol{N_{eff}}$	2.95 ± 0.28	$z_{\rm drag}$	1064.6 ± 3.6	$D_{\rm M}(0.61)$	2068 ± 150
H_0	$73.4^{+3.6}_{-4.4}$	$r_{\rm drag}$	132.9 ± 9.4	$H(2.33)$	285^{+27}_{-36}
Ω_Λ	$0.608^{+0.057}_{-0.047}$	$k_{\rm D}$	$0.158^{+0.010}_{-0.013}$	$D_{\rm M}(2.33)$	5009 ± 440
$\Omega_{\rm m}$	$0.392^{+0.047}_{-0.057}$	$100\theta_{\rm D}$	0.1699 ± 0.0053	$\chi^2_{\rm Cooke17Adel}$	1.0 ± 1.4
$\Omega_{\rm m}h^2$	$0.214^{+0.036}_{-0.058}$	$z_{\rm eq}$	5170^{+900}_{-1000}	$\chi^2_{\rm Aver15}$	1.0 ± 1.5
$\Omega_{\rm m}h^3$	$0.159^{+0.030}_{-0.054}$	$k_{\rm eq}$	$0.0157^{+0.0026}_{-0.0042}$	$\chi^2_{\rm 6DF}$	0.42 ± 0.43
$r_{\rm drag}h$	97.2 ± 2.1	$100\theta_{\rm eq}$	$0.659^{+0.074}_{-0.092}$	$\chi^2_{\rm MGS}$	0.72 ± 0.66
$Y_{\rm P}$	0.2441 ± 0.0040	$100\theta_{\rm s,eq}$	$0.368^{+0.040}_{-0.048}$	$\chi^2_{\rm DR12BAO}$	3.9 ± 1.7
$Y_{\rm P}^{\rm BBN}$	0.2454 ± 0.0041	$H(0.15)$	$80.6^{+4.5}_{-5.8}$	$\chi^2_{\rm BAO}$	5.0 ± 1.9
10^5D/H	2.523 ± 0.067	$D_{\rm M}(0.15)$	587 ± 35	$\chi^2_{\rm Abund}$	2.0 ± 2.1
Age/Gyr	12.0 ± 1.1	$H(0.38)$	$94.0^{+6.2}_{-8.2}$		
z_*	$1095.0^{+3.0}_{-3.8}$	$D_{\rm M}(0.38)$	1385 ± 91		

$\bar{\chi}^2_{\rm eff} = 7.04$; $R - 1 = 0.00760$

7.120 base_nnu_BAO_Cooke17Adel_Aver15_Pantheon

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02253 ± 0.00062	r_*	143.7 ± 5.3	$H(0.51)$	91.3 ± 4.0
$\boldsymbol{\Omega_c h^2}$	$0.125^{+0.015}_{-0.019}$	$100\theta_*$	1.052 ± 0.020	$D_{\rm M}(0.51)$	1952 ± 77
$\boldsymbol{100\theta_{MC}}$	1.052 ± 0.020	$D_{\rm M}(z_*)$/Gpc	$13.67^{+0.67}_{-0.77}$	$H(0.61)$	97.0 ± 4.4
$\boldsymbol{N_{eff}}$	2.94 ± 0.27	$z_{\rm drag}$	1060.6 ± 2.3	$D_{\rm M}(0.61)$	2272 ± 91
H_0	68.6 ± 2.4	$r_{\rm drag}$	146.3 ± 5.5	$H(2.33)$	241 ± 14
Ω_Λ	0.686 ± 0.020	$k_{\rm D}$	0.1424 ± 0.0055	$D_{\rm M}(2.33)$	5672^{+250}_{-280}
$\Omega_{\rm m}$	0.314 ± 0.020	$100\theta_{\rm D}$	0.1618 ± 0.0027	$\chi^2_{\rm Cooke17Adel}$	1.0 ± 1.5
$\Omega_{\rm m}h^2$	$0.149^{+0.016}_{-0.019}$	$z_{\rm eq}$	3584^{+350}_{-410}	$\chi^2_{\rm Aver15}$	0.97 ± 1.4
$\Omega_{\rm m}h^3$	$0.102^{+0.013}_{-0.017}$	$k_{\rm eq}$	$0.0109^{+0.0011}_{-0.0013}$	$\chi^2_{\rm JLA}$	1037.3 ± 1.7
$r_{\rm drag}h$	100.3 ± 1.2	$100\theta_{\rm eq}$	$0.796^{+0.044}_{-0.051}$	$\chi^2_{\rm 6DF}$	0.051 ± 0.071
$Y_{\rm P}$	0.2440 ± 0.0039	$100\theta_{\rm s,eq}$	$0.441^{+0.023}_{-0.026}$	$\chi^2_{\rm MGS}$	1.75 ± 0.66
$Y_{\rm P}^{\rm BBN}$	0.2453 ± 0.0039	$H(0.15)$	74.1 ± 2.8	$\chi^2_{\rm DR12BAO}$	4.0 ± 1.6
10^5D/H	2.523 ± 0.067	$D_{\rm M}(0.15)$	632 ± 23	$\chi^2_{\rm BAO}$	5.8 ± 1.8
Age/Gyr	$13.58^{+0.60}_{-0.67}$	$H(0.38)$	84.4 ± 3.5	$\chi^2_{\rm Abund}$	2.0 ± 2.0
z_*	1090.1 ± 1.4	$D_{\rm M}(0.38)$	1507 ± 58		

$\bar{\chi}^2_{\rm eff} = 1045.10$; $R - 1 = 0.00642$

7.121 base_nnu_BAO_Cooke17Adel_Aver15_theta

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02250 ± 0.00065	r_*	146.1 ± 3.5	$H(0.51)$	89.2 ± 2.2
$\boldsymbol{\Omega_c h^2}$	0.1159 ± 0.0061	$100\theta_*$	1.04115 ± 0.00066	$D_{\rm M}(0.51)$	1988 ± 51
$\boldsymbol{100\theta_{MC}}$	1.04089 ± 0.00061	$D_{\rm M}(z_*)$/Gpc	14.03 ± 0.33	$H(0.61)$	94.8 ± 2.3
$\boldsymbol{N_{eff}}$	2.93 ± 0.29	$z_{\rm drag}$	1059.8 ± 2.1	$D_{\rm M}(0.61)$	2315 ± 59
H_0	67.6 ± 1.8	$r_{\rm drag}$	148.7 ± 3.7	$H(2.33)$	233.5 ± 5.5
Ω_Λ	0.6955 ± 0.0089	$k_{\rm D}$	0.1398 ± 0.0032	$D_{\rm M}(2.33)$	5804 ± 140
$\Omega_{\rm m}$	0.3045 ± 0.0089	$100\theta_{\rm D}$	0.16028 ± 0.00055	$\chi^2_{\rm Cooke17Adel}$	0.99 ± 1.4
$\Omega_{\rm m}h^2$	0.1391 ± 0.0066	$z_{\rm eq}$	3358 ± 49	$\chi^2_{\rm Aver15}$	1.1 ± 1.5
$\Omega_{\rm m}h^3$	$0.0941^{+0.0062}_{-0.0071}$	$k_{\rm eq}$	0.01017 ± 0.00030	$\chi^2_{\rm 6DF}$	0.056 ± 0.079
$r_{\rm drag}h$	100.5 ± 1.2	$100\theta_{\rm eq}$	0.8216 ± 0.0079	$\chi^2_{\rm MGS}$	1.76 ± 0.71
$Y_{\rm P}$	0.2438 ± 0.0041	$100\theta_{\rm s,eq}$	0.4536 ± 0.0043	$\chi^2_{\rm DR12BAO}$	4.4 ± 1.4
$Y_{\rm P}^{\rm BBN}$	0.2451 ± 0.0041	$H(0.15)$	72.7 ± 1.9	$\chi^2_{\rm prior}$	1.0 ± 1.5
10^5D/H	2.524 ± 0.067	$D_{\rm M}(0.15)$	643 ± 17	$\chi^2_{\rm BAO}$	6.2 ± 1.4
Age/Gyr	13.90 ± 0.34	$H(0.38)$	82.6 ± 2.1	$\chi^2_{\rm Abund}$	2.1 ± 2.1
z_*	1089.28 ± 0.48	$D_{\rm M}(0.38)$	1534 ± 40		

$\bar{\chi}^2_{\rm eff} = 9.33$; $R - 1 = 0.00415$

7.122 base_nnu_BAO_Cooke17Adel_Aver15_Pantheon_theta

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02251 ± 0.00063	r_*	146.0 ± 3.4	$H(0.51)$	89.3 ± 2.1
$\boldsymbol{\Omega_c h^2}$	$0.1159^{+0.0055}_{-0.0062}$	$100\theta_*$	1.04114 ± 0.00066	$D_{\rm M}(0.51)$	1985 ± 49
$\boldsymbol{100\theta_{MC}}$	1.04090 ± 0.00061	$D_{\rm M}(z_*)$/Gpc	14.03 ± 0.32	$H(0.61)$	94.8 ± 2.2
$\boldsymbol{N_{eff}}$	2.94 ± 0.28	$z_{\rm drag}$	1059.8 ± 2.0	$D_{\rm M}(0.61)$	2311 ± 57
H_0	67.7 ± 1.8	$r_{\rm drag}$	148.7 ± 3.6	$H(2.33)$	233.6 ± 5.4
Ω_Λ	0.6965 ± 0.0084	$k_{\rm D}$	0.1398 ± 0.0031	$D_{\rm M}(2.33)$	5799 ± 140
$\Omega_{\rm m}$	0.3035 ± 0.0084	$100\theta_{\rm D}$	0.16030 ± 0.00055	$\chi^2_{\rm Cooke17Adel}$	0.99 ± 1.4
$\Omega_{\rm m}h^2$	$0.1391^{+0.0060}_{-0.0068}$	$z_{\rm eq}$	3354 ± 47	$\chi^2_{\rm Aver15}$	1.0 ± 1.4
$\Omega_{\rm m}h^3$	$0.0942^{+0.0060}_{-0.0069}$	$k_{\rm eq}$	0.01016 ± 0.00029	$\chi^2_{\rm JLA}$	1036.17 ± 0.28
$r_{\rm drag}h$	100.6 ± 1.1	$100\theta_{\rm eq}$	0.8223 ± 0.0076	$\chi^2_{\rm 6DF}$	0.051 ± 0.070
$Y_{\rm P}$	0.2439 ± 0.0040	$100\theta_{\rm s,eq}$	0.4540 ± 0.0042	$\chi^2_{\rm MGS}$	1.84 ± 0.68
$Y_{\rm P}^{\rm BBN}$	0.2453 ± 0.0040	$H(0.15)$	72.8 ± 1.8	$\chi^2_{\rm DR12BAO}$	4.3 ± 1.2
10^5D/H	2.525 ± 0.067	$D_{\rm M}(0.15)$	641 ± 16	$\chi^2_{\rm prior}$	1.0 ± 1.5
Age/Gyr	13.89 ± 0.32	$H(0.38)$	82.7 ± 2.0	$\chi^2_{\rm BAO}$	6.1 ± 1.3
z_*	1089.28 ± 0.48	$D_{\rm M}(0.38)$	1532 ± 38	$\chi^2_{\rm Abund}$	2.0 ± 2.0

$\bar{\chi}^2_{\rm eff} = 1045.35$; $R - 1 = 0.00580$

8 nnu+meffsterile

8.1 base_nnu_meffsterile_plikHM_TT_lowl_lowE

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022161	0.02223 ± 0.00023	S_8	0.8374	$0.816^{+0.030}_{-0.026}$	$100\theta_{s,eq}$	0.4490	$0.4547^{+0.0044}_{-0.0080}$
$\boldsymbol{\Omega_c h^2}$	0.12031	$0.1215^{+0.0041}_{-0.0032}$	$\sigma_8\Omega_m^{0.5}$	0.4587	$0.447^{+0.017}_{-0.014}$	$H(0.15)$	72.33	$72.52^{+0.85}_{-1.4}$
$\boldsymbol{100\theta_{MC}}$	1.04072	1.04053 ± 0.00051	$\sigma_8\Omega_m^{0.25}$	0.6101	$0.591^{+0.023}_{-0.015}$	$D_M(0.15)$	646.8	$646^{+13}_{-9.3}$
$\boldsymbol{\tau}$	0.0529	0.0525 ± 0.0080	$\sigma_8/h^{0.5}$	0.9918	$0.953^{+0.039}_{-0.023}$	$H(0.38)$	82.57	$83.02^{+0.54}_{-1.2}$
$\boldsymbol{m^{eff}_{\nu,sterile}}$ [eV]	0.011	< 0.335	$r_{drag}h$	98.58	97.5 ± 2.1	$D_M(0.38)$	1540.7	1537^{+28}_{-18}
$\boldsymbol{N_{eff}}$	3.046	$3.223^{+0.041}_{-0.18}$	$\langle d^2\rangle^{1/2}$	2.4513	2.448 ± 0.041	$H(0.51)$	89.36	$89.97^{+0.40}_{-1.1}$
$\boldsymbol{\ln(10^{10}A_s)}$	3.0415	3.047 ± 0.017	z_{re}	7.59	7.60 ± 0.83	$D_M(0.51)$	1994.6	1988^{+34}_{-20}
$\boldsymbol{n_s}$	0.9637	$0.9657^{+0.0071}_{-0.0096}$	$10^9 A_s$	2.0936	2.105 ± 0.037	$H(0.61)$	95.04	$95.77^{+0.33}_{-1.1}$
$\boldsymbol{y_{cal}}$	1.00030	1.0005 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.8833	1.895 ± 0.016	$D_M(0.61)$	2320.0	2311^{+38}_{-21}
$\boldsymbol{A^{CIB}_{217}}$	48.9	49 ± 7	D_{40}	1231.0	1228 ± 19	$H(2.33)$	236.62	$239.8^{+1.9}_{-3.0}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.30	—	D_{220}	5711.9	5712 ± 41	$D_M(2.33)$	5776.1	5729^{+62}_{-19}
$\boldsymbol{A^{tSZ}_{143}}$	7.00	4.8 ± 2.0	D_{810}	2537.4	2539 ± 14	$f\sigma_8(0.15)$	0.4626	$0.451^{+0.017}_{-0.013}$
$\boldsymbol{A^{PS}_{100}}$	254.4	269 ± 28	D_{1420}	815.1	813.2 ± 5.2	$\sigma_8(0.15)$	0.7492	$0.719^{+0.033}_{-0.018}$
$\boldsymbol{A^{PS}_{143}}$	49.4	52 ± 8	D_{2000}	229.95	228.2 ± 2.0	$f\sigma_8(0.38)$	0.4792	$0.465^{+0.018}_{-0.012}$
$\boldsymbol{A^{PS}_{143\times217}}$	46.5	45^{+9}_{-10}	$n_{s,0.002}$	0.9637	$0.9657^{+0.0071}_{-0.0096}$	$\sigma_8(0.38)$	0.6632	$0.636^{+0.030}_{-0.017}$
$\boldsymbol{A^{PS}_{217}}$	119.0	116 ± 10	Y_P	0.24531	$0.24765^{+0.00069}_{-0.0023}$	$f\sigma_8(0.51)$	0.4769	$0.461^{+0.018}_{-0.011}$
$\boldsymbol{A^{kSZ}}$	0.02	< 5.54	Y_P^{BBN}	0.24664	$0.24899^{+0.00070}_{-0.0023}$	$\sigma_8(0.51)$	0.6203	$0.595^{+0.029}_{-0.016}$
$\boldsymbol{A^{dustTT}_{100}}$	8.78	9.0 ± 1.8	10^5D/H	2.625	$2.675^{+0.047}_{-0.056}$	$f\sigma_8(0.61)$	0.4712	$0.455^{+0.019}_{-0.011}$
$\boldsymbol{A^{dustTT}_{143}}$	10.77	10.8 ± 1.8	Age/Gyr	13.826	$13.71^{+0.15}_{-0.045}$	$\sigma_8(0.61)$	0.5900	$0.565^{+0.028}_{-0.016}$
$\boldsymbol{A^{dustTT}_{143\times217}}$	19.31	18.4 ± 3.3	z_*	1090.224	1090.63 ± 0.47	$f\sigma_8(2.33)$	0.2972	$0.285^{+0.014}_{-0.0080}$
$\boldsymbol{A^{dustTT}_{217}}$	94.4	93.1 ± 7.4	r_*	144.48	$142.8^{+1.7}_{-0.84}$	$\sigma_8(2.33)$	0.3060	$0.293^{+0.015}_{-0.0088}$
$\boldsymbol{c_{100}}$	0.99962	0.99960 ± 0.00061	$100\theta_*$	1.04093	1.04064 ± 0.00054	f^{143}_{2000}	30.40	33.1 ± 3.2
$\boldsymbol{c_{217}}$	0.99823	0.99829 ± 0.00062	$D_M(z_*)$/Gpc	13.880	$13.72^{+0.15}_{-0.079}$	$f^{143\times217}_{2000}$	33.22	35.1 ± 2.3
H_0	66.97	$67.0^{+1.1}_{-1.5}$	z_{drag}	1059.47	$1060.03^{+0.56}_{-0.71}$	f^{217}_{2000}	107.62	109.5 ± 2.1
Ω_Λ	0.6806	$0.671^{+0.019}_{-0.016}$	r_{drag}	147.21	$145.5^{+1.7}_{-0.86}$	χ^2_{small}	395.94	397.0 ± 1.8
Ω_m	0.3194	$0.329^{+0.016}_{-0.019}$	k_D	0.14058	$0.14192^{+0.00080}_{-0.0013}$	χ^2_{lowl}	23.58	23.5 ± 1.6
$\Omega_m h^2$	0.14324	$0.1474^{+0.0027}_{-0.0041}$	$100\theta_D$	0.161005	$0.16135^{+0.00031}_{-0.00047}$	χ^2_{plik}	758.8	774.5 ± 5.9
$\Omega_\nu h^2$	0.00077	$0.00372^{+0.00083}_{-0.0031}$	z_{eq}	3405	3355^{+73}_{-47}	χ^2_{prior}	1.36	7.4 ± 3.7
$\Omega_m h^3$	0.09592	$0.09878^{+0.00095}_{-0.0031}$	k_{eq}	0.010393	$0.01039^{+0.00022}_{-0.00016}$	χ^2_{CMB}	1178.3	1195.0 ± 5.9
σ_8	0.8116	$0.780^{+0.035}_{-0.019}$	$100\theta_{eq}$	0.8122	$0.8232^{+0.0085}_{-0.015}$			

Best-fit $\chi^2_{eff} = 1179.66$; $\Delta\chi^2_{eff} = 0.08$; $\bar{\chi}^2_{eff} = 1202.36$; $\Delta\bar{\chi}^2_{eff} = 2.79$; $R - 1 = 0.01778$

χ^2_{eff}: CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.94 (Δ 0.06) commander_dx12_v3_2_29: 23.58 (Δ -0.02) plik_rd12_HM_v22_TT: 758.77 (Δ 0.03)

8.2 base_nnu_meffsterile_plikHM_TT_lowl_lowE_post_lensing

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022210	0.02221 ± 0.00022	S_8	0.8311	$0.819^{+0.023}_{-0.018}$	$100\theta_{s,eq}$	0.46004	$0.4541^{+0.0030}_{-0.0067}$
$\boldsymbol{\Omega_c h^2}$	0.11605	$0.1216^{+0.0038}_{-0.0029}$	$\sigma_8\Omega_m^{0.5}$	0.4552	$0.448^{+0.013}_{-0.010}$	$H(0.15)$	72.55	$72.37^{+0.69}_{-1.1}$
$\boldsymbol{100\theta_{MC}}$	1.04082	1.04053 ± 0.00050	$\sigma_8\Omega_m^{0.25}$	0.6073	$0.592^{+0.019}_{-0.012}$	$D_M(0.15)$	644.5	$647^{+11}_{-7.6}$
$\boldsymbol{\tau}$	0.0541	0.0529 ± 0.0077	$\sigma_8/h^{0.5}$	0.9880	$0.955^{+0.032}_{-0.018}$	$H(0.38)$	82.74	$82.89^{+0.43}_{-0.98}$
$\boldsymbol{m^{eff}_{\nu,\,sterile}}$ [eV]	0.361	< 0.333	$r_{drag}h$	99.03	$97.3^{+1.9}_{-1.7}$	$D_M(0.38)$	1536.1	1539^{+23}_{-14}
$\boldsymbol{N_{eff}}$	3.047	$3.210^{+0.039}_{-0.16}$	$\langle d^2\rangle^{1/2}$	2.4443	2.453 ± 0.029	$H(0.51)$	89.49	$89.85^{+0.32}_{-0.92}$
$\boldsymbol{\ln(10^{10}A_s)}$	3.0425	3.048 ± 0.016	z_{re}	7.70	7.63 ± 0.80	$D_M(0.51)$	1989.2	1991^{+28}_{-16}
$\boldsymbol{n_s}$	0.9653	$0.9647^{+0.0061}_{-0.0079}$	$10^9 A_s$	2.0958	$2.107^{+0.031}_{-0.035}$	$H(0.61)$	95.14	$95.65^{+0.28}_{-0.91}$
$\boldsymbol{y_{cal}}$	1.00022	1.0005 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.8808	$1.895^{+0.013}_{-0.016}$	$D_M(0.61)$	2314.2	2315^{+31}_{-17}
$\boldsymbol{A^{CIB}_{217}}$	48.4	49 ± 7	D_{40}	1227.7	1230 ± 15	$H(2.33)$	236.32	$239.7^{+1.7}_{-2.9}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.34	—	D_{220}	5713.1	5714 ± 41	$D_M(2.33)$	5771.4	5735^{+52}_{-16}
$\boldsymbol{A^{tSZ}_{143}}$	7.00	4.8 ± 2.0	D_{810}	2536.9	2539 ± 14	$f\sigma_8(0.15)$	0.4595	$0.452^{+0.013}_{-0.0096}$
$\boldsymbol{A^{PS}_{100}}$	253.0	269 ± 28	D_{1420}	815.6	813.3 ± 5.2	$\sigma_8(0.15)$	0.7481	$0.720^{+0.029}_{-0.017}$
$\boldsymbol{A^{PS}_{143}}$	49.0	52 ± 8	D_{2000}	230.21	228.3 ± 2.0	$f\sigma_8(0.38)$	0.4768	$0.465^{+0.015}_{-0.0091}$
$\boldsymbol{A^{PS}_{143\times217}}$	47.0	45^{+9}_{-10}	$n_{s,0.002}$	0.9653	$0.9647^{+0.0061}_{-0.0079}$	$\sigma_8(0.38)$	0.6627	$0.636^{+0.027}_{-0.016}$
$\boldsymbol{A^{PS}_{217}}$	119.3	116 ± 10	Y_P	0.24535	$0.24748^{+0.00065}_{-0.0020}$	$f\sigma_8(0.51)$	0.4749	$0.462^{+0.015}_{-0.0090}$
$\boldsymbol{A^{kSZ}}$	0.02	< 5.46	Y_P^{BBN}	0.24667	$0.24881^{+0.00065}_{-0.0020}$	$\sigma_8(0.51)$	0.6200	$0.595^{+0.025}_{-0.016}$
$\boldsymbol{A^{dustTT}_{100}}$	8.90	9.0 ± 1.8	10^5D/H	2.616	$2.673^{+0.046}_{-0.056}$	$f\sigma_8(0.61)$	0.4696	$0.456^{+0.016}_{-0.0090}$
$\boldsymbol{A^{dustTT}_{143}}$	10.87	10.8 ± 1.8	Age/Gyr	13.816	$13.73^{+0.12}_{-0.039}$	$\sigma_8(0.61)$	0.5898	$0.565^{+0.024}_{-0.015}$
$\boldsymbol{A^{dustTT}_{143\times217}}$	19.37	18.4 ± 3.3	z_*	1090.112	$1090.63^{+0.40}_{-0.47}$	$f\sigma_8(2.33)$	0.2972	$0.285^{+0.012}_{-0.0078}$
$\boldsymbol{A^{dustTT}_{217}}$	94.5	93.2 ± 7.4	r_*	144.58	$142.9^{+1.6}_{-0.78}$	$\sigma_8(2.33)$	0.3062	$0.293^{+0.013}_{-0.0086}$
$\boldsymbol{c_{100}}$	0.99964	0.99960 ± 0.00061	$100\theta_*$	1.04102	1.04065 ± 0.00053	f^{143}_{2000}	29.97	33.0 ± 3.2
$\boldsymbol{c_{217}}$	0.99824	0.99829 ± 0.00062	$D_M(z_*)$/Gpc	13.888	$13.73^{+0.14}_{-0.073}$	$f^{143\times217}_{2000}$	32.94	35.0 ± 2.2
H_0	67.23	$66.84^{+0.87}_{-1.2}$	z_{drag}	1059.55	$1059.99^{+0.54}_{-0.65}$	f^{217}_{2000}	107.36	109.5 ± 2.1
Ω_Λ	0.6842	$0.670^{+0.017}_{-0.013}$	r_{drag}	147.30	$145.5^{+1.6}_{-0.80}$	$\chi^2_{lensing}$	8.88	9.27 ± 0.94
Ω_m	0.3158	$0.330^{+0.013}_{-0.017}$	k_D	0.14052	$0.14187^{+0.00075}_{-0.0013}$	χ^2_{simall}	396	502 ± 200
$\Omega_m h^2$	0.14274	$0.1474^{+0.0024}_{-0.0040}$	$100\theta_D$	0.160971	$0.16132^{+0.00030}_{-0.00044}$	χ^2_{lowl}	23.29	23.6 ± 1.3
$\Omega_\nu h^2$	0.00449	$0.00366^{+0.00080}_{-0.0030}$	z_{eq}	3303.3	3362^{+62}_{-33}	χ^2_{plik}	759	668 ± 200
$\Omega_m h^3$	0.09597	$0.09853^{+0.00091}_{-0.0027}$	k_{eq}	0.010152	$0.01041^{+0.00020}_{-0.00013}$	χ^2_{prior}	1.35	7.3 ± 3.7
σ_8	0.8101	$0.781^{+0.030}_{-0.018}$	$100\theta_{eq}$	0.8333	$0.8219^{+0.0059}_{-0.013}$	χ^2_{CMB}	1187.2	1203.6 ± 5.9

Best-fit $\chi^2_{eff} = 1188.51$; $\Delta\chi^2_{eff} = -0.06$; $\bar{\chi}^2_{eff} = 1210.94$; $\Delta\bar{\chi}^2_{eff} = 2.53$; $R - 1 = 0.01963$

χ^2_{eff}: CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.88 (Δ -0.02) simall_100x143_offlike5_EE_Aplanck_B: 396.04 (Δ 0.18) commander_dx12_v3_2_29: 23.29 (Δ 0.06) plik_rd12_HM_v22_TT: 758.94 (Δ -0.38)

8.3 base_nnu_meffsterile_plikHM_TT_lowl_lowE_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02223 ± 0.00023	S_8	$0.817^{+0.030}_{-0.026}$	$100\theta_{s,eq}$	$0.4549^{+0.0043}_{-0.0079}$
$\boldsymbol{\Omega_c h^2}$	$0.1215^{+0.0041}_{-0.0032}$	$\sigma_8\Omega_m^{0.5}$	$0.447^{+0.016}_{-0.014}$	$H(0.15)$	$72.56^{+0.86}_{-1.4}$
$\boldsymbol{100\theta_{MC}}$	1.04053 ± 0.00051	$\sigma_8\Omega_m^{0.25}$	$0.591^{+0.023}_{-0.015}$	$D_M(0.15)$	$646^{+13}_{-9.4}$
$\boldsymbol{\tau}$	$0.0539^{+0.0050}_{-0.0082}$	$\sigma_8/h^{0.5}$	$0.954^{+0.038}_{-0.022}$	$H(0.38)$	$83.06^{+0.54}_{-1.2}$
$\boldsymbol{m^{eff}_{\nu,\,sterile}}$ [eV]	< 0.331	$r_{drag}h$	97.5 ± 2.1	$D_M(0.38)$	1536^{+28}_{-18}
$\boldsymbol{N_{eff}}$	$3.225^{+0.042}_{-0.18}$	$\langle d^2\rangle^{1/2}$	2.449 ± 0.041	$H(0.51)$	$90.00^{+0.40}_{-1.2}$
$\boldsymbol{\ln(10^{10}A_s)}$	$3.049^{+0.013}_{-0.017}$	z_{re}	$7.75^{+0.56}_{-0.82}$	$D_M(0.51)$	1987^{+35}_{-20}
$\boldsymbol{n_s}$	$0.9661^{+0.0070}_{-0.0096}$	$10^9 A_s$	$2.111^{+0.027}_{-0.037}$	$H(0.61)$	$95.80^{+0.34}_{-1.1}$
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.895 ± 0.016	$D_M(0.61)$	2310^{+38}_{-21}
$\boldsymbol{A^{CIB}_{217}}$	49 ± 7	D_{40}	1227 ± 19	$H(2.33)$	$239.8^{+1.9}_{-3.0}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{220}	5712 ± 41	$D_M(2.33)$	5728^{+63}_{-19}
$\boldsymbol{A^{tSZ}_{143}}$	4.8 ± 2.0	D_{810}	2539 ± 14	$f\sigma_8(0.15)$	$0.451^{+0.016}_{-0.013}$
$\boldsymbol{A^{PS}_{100}}$	268 ± 28	D_{1420}	813.2 ± 5.2	$\sigma_8(0.15)$	$0.721^{+0.033}_{-0.018}$
$\boldsymbol{A^{PS}_{143}}$	52 ± 8	D_{2000}	228.2 ± 2.0	$f\sigma_8(0.38)$	$0.465^{+0.018}_{-0.012}$
$\boldsymbol{A^{PS}_{143\times217}}$	45^{+9}_{-10}	$n_{s,0.002}$	$0.9661^{+0.0070}_{-0.0096}$	$\sigma_8(0.38)$	$0.637^{+0.030}_{-0.017}$
$\boldsymbol{A^{PS}_{217}}$	116 ± 10	Y_P	$0.24769^{+0.00072}_{-0.0023}$	$f\sigma_8(0.51)$	$0.462^{+0.018}_{-0.011}$
$\boldsymbol{A^{kSZ}}$	< 5.51	Y_P^{BBN}	$0.24902^{+0.00072}_{-0.0023}$	$\sigma_8(0.51)$	$0.596^{+0.029}_{-0.016}$
$\boldsymbol{A^{dust TT}_{100}}$	9.0 ± 1.8	10^5D/H	$2.674^{+0.048}_{-0.057}$	$f\sigma_8(0.61)$	$0.456^{+0.018}_{-0.011}$
$\boldsymbol{A^{dust TT}_{143}}$	10.8 ± 1.8	Age/Gyr	$13.71^{+0.15}_{-0.046}$	$\sigma_8(0.61)$	$0.566^{+0.028}_{-0.015}$
$\boldsymbol{A^{dust TT}_{143\times217}}$	18.3 ± 3.3	z_*	1090.62 ± 0.47	$f\sigma_8(2.33)$	$0.286^{+0.014}_{-0.0079}$
$\boldsymbol{A^{dust TT}_{217}}$	93.1 ± 7.4	r_*	$142.8^{+1.7}_{-0.85}$	$\sigma_8(2.33)$	$0.293^{+0.015}_{-0.0086}$
$\boldsymbol{c_{100}}$	0.99960 ± 0.00061	$100\theta_*$	$1.04064^{+0.00057}_{-0.00051}$	f^{143}_{2000}	33.0 ± 3.2
$\boldsymbol{c_{217}}$	0.99828 ± 0.00062	$D_M(z_*)$/Gpc	$13.72^{+0.16}_{-0.080}$	$f^{143\times217}_{2000}$	35.1 ± 2.3
H_0	$67.1^{+1.1}_{-1.5}$	z_{drag}	$1060.04^{+0.56}_{-0.71}$	f^{217}_{2000}	109.5 ± 2.1
Ω_Λ	$0.672^{+0.019}_{-0.016}$	r_{drag}	$145.5^{+1.7}_{-0.87}$	χ^2_{simall}	396.9 ± 1.8
Ω_m	$0.328^{+0.016}_{-0.019}$	k_D	$0.14192^{+0.00081}_{-0.0013}$	χ^2_{lowl}	23.4 ± 1.6
$\Omega_m h^2$	$0.1474^{+0.0027}_{-0.0041}$	$100\theta_D$	$0.16136^{+0.00031}_{-0.00047}$	χ^2_{plik}	774.4 ± 5.9
$\Omega_\nu h^2$	$0.00369^{+0.00084}_{-0.0031}$	z_{eq}	3354^{+72}_{-46}	χ^2_{prior}	7.4 ± 3.7
$\Omega_m h^3$	$0.09883^{+0.00097}_{-0.0031}$	k_{eq}	$0.01039^{+0.00022}_{-0.00016}$	χ^2_{CMB}	1194.8 ± 5.9
σ_8	$0.781^{+0.035}_{-0.019}$	$100\theta_{eq}$	$0.8235^{+0.0084}_{-0.015}$		

$\bar{\chi}^2_{eff} = 1202.13$; $\Delta\bar{\chi}^2_{eff} = 2.81$; $R - 1 = 0.02055$

8.4 base_nnu_meffsterile_plikHM_TT_lowl_lowE_post_lensing_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02222 ± 0.00022	S_8	$0.819^{+0.023}_{-0.018}$	$100\theta_{s,eq}$	$0.4542^{+0.0029}_{-0.0067}$
$\boldsymbol{\Omega_c h^2}$	$0.1215^{+0.0038}_{-0.0029}$	$\sigma_8\Omega_m^{0.5}$	$0.448^{+0.013}_{-0.010}$	$H(0.15)$	$72.42^{+0.68}_{-1.1}$
$\boldsymbol{100\theta_{MC}}$	1.04054 ± 0.00050	$\sigma_8\Omega_m^{0.25}$	$0.592^{+0.019}_{-0.012}$	$D_M(0.15)$	$647^{+11}_{-7.5}$
$\boldsymbol{\tau}$	$0.0540^{+0.0051}_{-0.0080}$	$\sigma_8/h^{0.5}$	$0.955^{+0.032}_{-0.018}$	$H(0.38)$	$82.93^{+0.42}_{-0.98}$
$\boldsymbol{m^{eff}_{\nu,\,sterile}}$ [eV]	< 0.331	$r_{drag}h$	$97.4^{+1.9}_{-1.7}$	$D_M(0.38)$	1538^{+23}_{-14}
$\boldsymbol{N_{eff}}$	$3.212^{+0.040}_{-0.16}$	$\langle d^2\rangle^{1/2}$	2.454 ± 0.029	$H(0.51)$	$89.88^{+0.31}_{-0.93}$
$\boldsymbol{\ln(10^{10}A_s)}$	$3.050^{+0.012}_{-0.016}$	z_{re}	$7.76^{+0.57}_{-0.80}$	$D_M(0.51)$	1990^{+28}_{-16}
$\boldsymbol{n_s}$	$0.9651^{+0.0059}_{-0.0079}$	$10^9 A_s$	$2.111^{+0.025}_{-0.035}$	$H(0.61)$	$95.68^{+0.27}_{-0.92}$
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	$10^9 A_s e^{-2\tau}$	$1.895^{+0.013}_{-0.016}$	$D_M(0.61)$	2313^{+31}_{-16}
$\boldsymbol{A^{CIB}_{217}}$	49 ± 7	D_{40}	1229 ± 15	$H(2.33)$	$239.7^{+1.7}_{-2.9}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{220}	5714 ± 41	$D_M(2.33)$	5734^{+53}_{-16}
$\boldsymbol{A^{tSZ}_{143}}$	4.8 ± 2.0	D_{810}	2539 ± 14	$f\sigma_8(0.15)$	$0.452^{+0.013}_{-0.0096}$
$\boldsymbol{A^{PS}_{100}}$	268 ± 28	D_{1420}	813.3 ± 5.2	$\sigma_8(0.15)$	$0.720^{+0.029}_{-0.017}$
$\boldsymbol{A^{PS}_{143}}$	52 ± 8	D_{2000}	228.3 ± 2.0	$f\sigma_8(0.38)$	$0.466^{+0.015}_{-0.0091}$
$\boldsymbol{A^{PS}_{143\times217}}$	45^{+9}_{-10}	$n_{s,0.002}$	$0.9651^{+0.0059}_{-0.0079}$	$\sigma_8(0.38)$	$0.637^{+0.027}_{-0.016}$
$\boldsymbol{A^{PS}_{217}}$	116 ± 10	Y_P	$0.24751^{+0.00067}_{-0.0021}$	$f\sigma_8(0.51)$	$0.462^{+0.015}_{-0.0090}$
$\boldsymbol{A^{kSZ}}$	< 5.41	Y_P^{BBN}	$0.24884^{+0.00067}_{-0.0021}$	$\sigma_8(0.51)$	$0.595^{+0.025}_{-0.015}$
$\boldsymbol{A^{dust TT}_{100}}$	9.0 ± 1.8	10^5D/H	$2.672^{+0.046}_{-0.056}$	$f\sigma_8(0.61)$	$0.456^{+0.016}_{-0.0090}$
$\boldsymbol{A^{dust TT}_{143}}$	10.8 ± 1.8	Age/Gyr	$13.72^{+0.13}_{-0.039}$	$\sigma_8(0.61)$	$0.566^{+0.024}_{-0.015}$
$\boldsymbol{A^{dust TT}_{143\times217}}$	18.4 ± 3.3	z_*	$1090.62^{+0.40}_{-0.47}$	$f\sigma_8(2.33)$	$0.285^{+0.012}_{-0.0078}$
$\boldsymbol{A^{dust TT}_{217}}$	93.2 ± 7.4	r_*	$142.9^{+1.6}_{-0.79}$	$\sigma_8(2.33)$	$0.293^{+0.013}_{-0.0086}$
$\boldsymbol{c_{100}}$	0.99960 ± 0.00061	$100\theta_*$	1.04066 ± 0.00053	f^{143}_{2000}	33.0 ± 3.2
$\boldsymbol{c_{217}}$	0.99828 ± 0.00062	$D_M(z_*)$/Gpc	$13.73^{+0.15}_{-0.074}$	$f^{143\times217}_{2000}$	35.0 ± 2.2
H_0	$66.90^{+0.87}_{-1.2}$	z_{drag}	$1060.00^{+0.54}_{-0.65}$	f^{217}_{2000}	109.4 ± 2.1
Ω_Λ	$0.670^{+0.017}_{-0.013}$	r_{drag}	$145.5^{+1.6}_{-0.81}$	$\chi^2_{lensing}$	9.25 ± 0.93
Ω_m	$0.330^{+0.013}_{-0.017}$	k_D	$0.14187^{+0.00076}_{-0.0013}$	χ^2_{simall}	501 ± 200
$\Omega_m h^2$	$0.1474^{+0.0024}_{-0.0040}$	$100\theta_D$	$0.16132^{+0.00031}_{-0.00045}$	χ^2_{lowl}	23.5 ± 1.3
$\Omega_\nu h^2$	$0.00364^{+0.00077}_{-0.0030}$	z_{eq}	3360^{+61}_{-31}	χ^2_{plik}	669 ± 200
$\Omega_m h^3$	$0.09857^{+0.00093}_{-0.0028}$	k_{eq}	$0.01040^{+0.00020}_{-0.00013}$	χ^2_{prior}	7.3 ± 3.7
σ_8	$0.781^{+0.030}_{-0.018}$	$100\theta_{eq}$	$0.8223^{+0.0056}_{-0.013}$	χ^2_{CMB}	1203.4 ± 5.8

$\bar{\chi}^2_{eff} = 1210.72$; $\Delta\bar{\chi}^2_{eff} = 2.56$; $R - 1 = 0.02178$

8.5 base_nnu_meffsterile_plikHM_TTTEEE_lowl_lowE

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022445	0.02243 ± 0.00016	$\Omega_m h^2$	0.14339	$0.1459^{+0.0017}_{-0.0028}$	k_{eq}	0.010384	$0.01035^{+0.00019}_{-0.00010}$
$\boldsymbol{\Omega_c h^2}$	0.12030	$0.1199^{+0.0035}_{-0.0021}$	$\Omega_\nu h^2$	0.00065	$0.00353^{+0.00063}_{-0.0029}$	$100\theta_{eq}$	0.8150	$0.8239^{+0.0055}_{-0.014}$
$\boldsymbol{100\theta_{MC}}$	1.040883	$1.04074^{+0.00035}_{-0.00031}$	$\Omega_m h^3$	0.09713	$0.09795^{+0.00059}_{-0.0018}$	$100\theta_{s,eq}$	0.4502	$0.4549^{+0.0028}_{-0.0075}$
$\boldsymbol{\tau}$	0.0602	0.0546 ± 0.0079	σ_8	0.8174	$0.783^{+0.030}_{-0.017}$	$H(0.15)$	73.05	$72.58^{+0.54}_{-0.76}$
$\boldsymbol{m^{eff}_{\nu,\,sterile}}$ [eV]	0.000	< 0.323	S_8	0.8342	$0.813^{+0.027}_{-0.019}$	$D_M(0.15)$	639.9	$644.9^{+7.4}_{-5.8}$
$\boldsymbol{N_{eff}}$	3.084	$3.152^{+0.024}_{-0.11}$	$\sigma_8\Omega_m^{0.5}$	0.4569	$0.445^{+0.015}_{-0.010}$	$H(0.38)$	83.215	$82.97^{+0.33}_{-0.63}$
$\boldsymbol{\ln(10^{10}A_s)}$	3.0581	3.049 ± 0.017	$\sigma_8\Omega_m^{0.25}$	0.6111	$0.590^{+0.021}_{-0.012}$	$D_M(0.38)$	1525.9	1535^{+15}_{-11}
$\boldsymbol{n_s}$	0.9687	$0.9655^{+0.0049}_{-0.0059}$	$\sigma_8/h^{0.5}$	0.9932	$0.955^{+0.035}_{-0.018}$	$H(0.51)$	89.965	$89.86^{+0.25}_{-0.58}$
$\boldsymbol{y_{cal}}$	1.00100	1.0008 ± 0.0025	$r_{drag}h$	99.40	$98.0^{+1.5}_{-1.2}$	$D_M(0.51)$	1976.5	1987^{+18}_{-12}
$\boldsymbol{A^{CIB}_{217}}$	45.5	47 ± 7	$\langle d^2\rangle^{1/2}$	2.4513	2.448 ± 0.028	$H(0.61)$	95.611	$95.60^{+0.21}_{-0.57}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.74	—	z_{re}	8.27	7.74 ± 0.80	$D_M(0.61)$	2299.8	2310^{+20}_{-13}
$\boldsymbol{A^{tSZ}_{143}}$	7.03	5.3 ± 2.0	$10^9 A_s$	2.1288	$2.110^{+0.032}_{-0.036}$	$H(2.33)$	236.96	$238.7^{+1.2}_{-2.1}$
$\boldsymbol{A^{PS}_{100}}$	247.5	261 ± 28	$10^9 A_s e^{-2\tau}$	1.8872	1.891 ± 0.013	$D_M(2.33)$	5744.7	5740^{+33}_{-11}
$\boldsymbol{A^{PS}_{143}}$	51.8	48 ± 8	D_{40}	1227.2	1230 ± 14	$f\sigma_8(0.15)$	0.4615	$0.449^{+0.015}_{-0.010}$
$\boldsymbol{A^{PS}_{143\times217}}$	55.4	43 ± 9	D_{220}	5734.8	5733 ± 39	$\sigma_8(0.15)$	0.7552	$0.722^{+0.029}_{-0.016}$
$\boldsymbol{A^{PS}_{217}}$	122.9	116 ± 10	D_{810}	2544.6	2542 ± 14	$f\sigma_8(0.38)$	0.4797	$0.464^{+0.016}_{-0.0096}$
$\boldsymbol{A^{kSZ}}$	0.00	< 4.66	D_{1420}	819.33	816.6 ± 4.8	$\sigma_8(0.38)$	0.6694	$0.639^{+0.026}_{-0.014}$
$\boldsymbol{A^{dust TT}_{100}}$	8.81	9.0 ± 1.8	D_{2000}	231.71	230.0 ± 1.7	$f\sigma_8(0.51)$	0.4782	$0.461^{+0.016}_{-0.0094}$
$\boldsymbol{A^{dust TT}_{143}}$	11.02	11.0 ± 1.8	$n_{s,0.002}$	0.9687	$0.9655^{+0.0049}_{-0.0059}$	$\sigma_8(0.51)$	0.6264	$0.598^{+0.025}_{-0.013}$
$\boldsymbol{A^{dust TT}_{143\times217}}$	20.27	18.8 ± 3.3	Y_P	0.24593	$0.24681^{+0.00044}_{-0.0013}$	$f\sigma_8(0.61)$	0.4731	$0.456^{+0.017}_{-0.0092}$
$\boldsymbol{A^{dust TT}_{217}}$	95.7	93.8 ± 7.3	Y_P^{BBN}	0.24726	$0.24815^{+0.00044}_{-0.0013}$	$\sigma_8(0.61)$	0.5960	$0.568^{+0.024}_{-0.013}$
$\boldsymbol{A^{dust TE}_{100}}$	0.1137	0.114 ± 0.038	10^5D/H	2.5849	$2.612^{+0.029}_{-0.034}$	$f\sigma_8(2.33)$	0.3004	$0.286^{+0.012}_{-0.0066}$
$\boldsymbol{A^{dust TE}_{100\times143}}$	0.1350	0.134 ± 0.029	Age/Gyr	13.753	$13.740^{+0.080}_{-0.026}$	$\sigma_8(2.33)$	0.3097	$0.295^{+0.013}_{-0.0071}$
$\boldsymbol{A^{dust TE}_{100\times217}}$	0.480	0.480 ± 0.085	z_*	1089.891	$1090.16^{+0.29}_{-0.33}$	f^{143}_{2000}	28.47	30.8 ± 2.8
$\boldsymbol{A^{dust TE}_{143}}$	0.225	0.224 ± 0.054	r_*	144.11	$143.3^{+1.1}_{-0.53}$	$f^{143\times217}_{2000}$	31.89	33.2 ± 1.9
$\boldsymbol{A^{dust TE}_{143\times217}}$	0.665	0.666 ± 0.080	$100\theta_*$	1.041033	$1.04087^{+0.00037}_{-0.00032}$	f^{217}_{2000}	106.43	108.0 ± 1.9
$\boldsymbol{A^{dust TE}_{217}}$	2.081	2.09 ± 0.27	$D_M(z_*)$/Gpc	13.843	$13.77^{+0.10}_{-0.050}$	χ^2_{simall}	397.59	397.2 ± 2.0
$\boldsymbol{c_{100}}$	0.99974	0.99966 ± 0.00061	z_{drag}	1060.162	$1060.33^{+0.35}_{-0.49}$	χ^2_{lowl}	23.02	23.4 ± 1.1
$\boldsymbol{c_{217}}$	0.99817	0.99821 ± 0.00062	r_{drag}	146.74	$146.0^{+1.1}_{-0.54}$	χ^2_{plik}	2344.4	2362.4 ± 6.2
H_0	67.74	$67.14^{+0.68}_{-0.85}$	k_D	0.14115	$0.14178^{+0.00050}_{-0.00092}$	χ^2_{prior}	1.64	11.7 ± 4.7
Ω_Λ	0.6875	$0.676^{+0.013}_{-0.0094}$	$100\theta_D$	0.160784	$0.16090^{+0.00019}_{-0.00025}$	χ^2_{CMB}	2765.0	2783.1 ± 6.3
Ω_m	0.3125	$0.3239^{+0.0094}_{-0.013}$	z_{eq}	3393.7	3355^{+68}_{-30}			

Best-fit $\chi^2_{eff} = 2766.68$; $\Delta\chi^2_{eff} = 0.91$; $\bar{\chi}^2_{eff} = 2794.77$; $\Delta\bar{\chi}^2_{eff} = 3.00$; $R - 1 = 0.01444$

χ^2_{eff}: CMB - simall_100x143_offlike5_EE_Aplanck_B: 397.59 (Δ 1.54) commander_dx12_v3_2_29: 23.02 (Δ -0.24) plik_rd12_HM_v22b_TTTEEE: 2344.43 (Δ -0.22)

8.6 base_nnu_meffsterile_plikHM_TTTEEE_lowl_lowE_post_lensing

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022389	$0.02242^{+0.00014}_{-0.00016}$	$\Omega_m h^2$	0.14291	$0.1459^{+0.0017}_{-0.0027}$	k_{eq}	0.009249	$0.01035^{+0.00017}_{-0.000097}$
$\boldsymbol{\Omega_c h^2}$	0.09952	$0.1200^{+0.0032}_{-0.0020}$	$\Omega_\nu h^2$	0.02100	$0.00338^{+0.00084}_{-0.0027}$	$100\theta_{eq}$	0.9283	$0.8230^{+0.0051}_{-0.013}$
$\boldsymbol{100\theta_{MC}}$	1.040940	$1.04074^{+0.00033}_{-0.00029}$	$\Omega_m h^3$	0.09635	$0.09787^{+0.00055}_{-0.0017}$	$100\theta_{s,eq}$	0.50955	$0.4545^{+0.0026}_{-0.0066}$
$\boldsymbol{\tau}$	0.0543	$0.0552^{+0.0070}_{-0.0079}$	σ_8	0.8065	$0.784^{+0.026}_{-0.016}$	$H(0.15)$	72.74	$72.56^{+0.50}_{-0.70}$
$\boldsymbol{m^{eff}_{\nu,\,sterile}}$ [eV]	1.915	< 0.319	S_8	0.8256	$0.815^{+0.022}_{-0.016}$	$D_M(0.15)$	642.8	$645.2^{+6.8}_{-5.3}$
$\boldsymbol{N_{eff}}$	3.054	$3.147^{+0.023}_{-0.10}$	$\sigma_8\Omega_m^{0.5}$	0.4522	$0.446^{+0.012}_{-0.0087}$	$H(0.38)$	82.906	$82.95^{+0.31}_{-0.57}$
$\boldsymbol{\ln(10^{10}A_s)}$	3.0438	$3.050^{+0.014}_{-0.016}$	$\sigma_8\Omega_m^{0.25}$	0.6039	$0.591^{+0.017}_{-0.011}$	$D_M(0.38)$	1532.4	1536^{+14}_{-10}
$\boldsymbol{n_s}$	0.9660	$0.9652^{+0.0045}_{-0.0056}$	$\sigma_8/h^{0.5}$	0.9822	$0.957^{+0.029}_{-0.017}$	$H(0.51)$	89.658	$89.83^{+0.23}_{-0.53}$
$\boldsymbol{y_{cal}}$	1.00046	1.0009 ± 0.0025	$r_{drag}h$	99.18	$98.0^{+1.4}_{-1.2}$	$D_M(0.51)$	1984.6	1987^{+17}_{-11}
$\boldsymbol{A^{CIB}_{217}}$	47.7	47 ± 7	$\langle d^2\rangle^{1/2}$	2.4444	2.451 ± 0.023	$H(0.61)$	95.304	$95.58^{+0.18}_{-0.52}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.33	—	z_{re}	7.68	7.80 ± 0.76	$D_M(0.61)$	2309.0	2311^{+18}_{-12}
$\boldsymbol{A^{tSZ}_{143}}$	7.30	5.3 ± 2.0	$10^9 A_s$	2.0984	$2.112^{+0.029}_{-0.034}$	$H(2.33)$	236.50	$238.6^{+1.2}_{-2.0}$
$\boldsymbol{A^{PS}_{100}}$	250.6	262 ± 27	$10^9 A_s e^{-2\tau}$	1.8823	1.891 ± 0.012	$D_M(2.33)$	5762.3	$5742^{+31}_{-9.7}$
$\boldsymbol{A^{PS}_{143}}$	45.9	48 ± 8	D_{40}	1228.4	1231 ± 13	$f\sigma_8(0.15)$	0.4565	$0.450^{+0.012}_{-0.0086}$
$\boldsymbol{A^{PS}_{143\times217}}$	44.8	43 ± 9	D_{220}	5729.5	5734 ± 39	$\sigma_8(0.15)$	0.7449	$0.723^{+0.024}_{-0.016}$
$\boldsymbol{A^{PS}_{217}}$	118.6	116 ± 10	D_{810}	2539.8	2542 ± 14	$f\sigma_8(0.38)$	0.4741	$0.465^{+0.013}_{-0.0087}$
$\boldsymbol{A^{kSZ}}$	0.00	< 4.57	D_{1420}	817.6	816.6 ± 4.9	$\sigma_8(0.38)$	0.6600	$0.640^{+0.022}_{-0.014}$
$\boldsymbol{A^{dust TT}_{100}}$	8.90	9.0 ± 1.8	D_{2000}	231.22	230.1 ± 1.7	$f\sigma_8(0.51)$	0.4724	$0.462^{+0.014}_{-0.0087}$
$\boldsymbol{A^{dust TT}_{143}}$	11.04	11.0 ± 1.8	$n_{s,0.002}$	0.9660	$0.9652^{+0.0045}_{-0.0056}$	$\sigma_8(0.51)$	0.6175	$0.598^{+0.021}_{-0.014}$
$\boldsymbol{A^{dust TT}_{143\times217}}$	19.71	18.8 ± 3.2	Y_P	0.24551	$0.24675^{+0.00043}_{-0.0013}$	$f\sigma_8(0.61)$	0.4672	$0.456^{+0.014}_{-0.0087}$
$\boldsymbol{A^{dust TT}_{217}}$	95.0	93.9 ± 7.3	Y_P^{BBN}	0.24683	$0.24809^{+0.00043}_{-0.0013}$	$\sigma_8(0.61)$	0.5875	$0.569^{+0.020}_{-0.013}$
$\boldsymbol{A^{dust TE}_{100}}$	0.1142	0.115 ± 0.038	10^5D/H	2.5846	$2.611^{+0.029}_{-0.034}$	$f\sigma_8(2.33)$	0.2961	$0.287^{+0.010}_{-0.0068}$
$\boldsymbol{A^{dust TE}_{100\times143}}$	0.1351	0.134 ± 0.029	Age/Gyr	13.7944	$13.744^{+0.073}_{-0.023}$	$\sigma_8(2.33)$	0.3052	$0.295^{+0.011}_{-0.0074}$
$\boldsymbol{A^{dust TE}_{100\times217}}$	0.482	0.477 ± 0.084	z_*	1089.890	$1090.16^{+0.28}_{-0.32}$	f^{143}_{2000}	28.90	30.8 ± 2.8
$\boldsymbol{A^{dust TE}_{143}}$	0.225	0.224 ± 0.054	r_*	144.45	$143.4^{+1.0}_{-0.53}$	$f^{143\times217}_{2000}$	31.96	$33.2^{+1.8}_{-2.1}$
$\boldsymbol{A^{dust TE}_{143\times217}}$	0.664	0.664 ± 0.081	$100\theta_*$	1.041114	$1.04087^{+0.00036}_{-0.00030}$	f^{217}_{2000}	106.62	108.0 ± 1.9
$\boldsymbol{A^{dust TE}_{217}}$	2.077	2.08 ± 0.27	$D_M(z_*)$/Gpc	13.874	$13.775^{+0.096}_{-0.050}$	$\chi^2_{lensing}$	8.958	9.03 ± 0.70
$\boldsymbol{c_{100}}$	0.99972	0.99966 ± 0.00061	z_{drag}	1059.971	$1060.31^{+0.34}_{-0.47}$	χ^2_{simall}	396	1646 ± 900
$\boldsymbol{c_{217}}$	0.99819	0.99822 ± 0.00062	r_{drag}	147.10	$146.0^{+1.1}_{-0.54}$	χ^2_{lowl}	23.22	23.5 ± 1.0
H_0	67.42	$67.11^{+0.63}_{-0.79}$	k_D	0.14087	$0.14176^{+0.00051}_{-0.00088}$	χ^2_{plik}	2344	1113 ± 900
Ω_Λ	0.6856	$0.676^{+0.012}_{-0.0093}$	$100\theta_D$	0.160743	$0.16089^{+0.00019}_{-0.00024}$	χ^2_{prior}	1.81	11.6 ± 4.7
Ω_m	0.3144	$0.3240^{+0.0093}_{-0.012}$	z_{eq}	2910.2	3359^{+60}_{-27}	χ^2_{CMB}	2772.3	2791.6 ± 6.3

Best-fit $\chi^2_{eff} = 2774.15$; $\Delta\chi^2_{eff} = -0.49$; $\bar{\chi}^2_{eff} = 2803.21$; $\Delta\bar{\chi}^2_{eff} = 2.51$; $R - 1 = 0.04894$

χ^2_{eff}: CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.96 (Δ 0.09) simall_100x143_offlike5_EE_Aplanck_B: 396.02 (Δ -0.03) commander_dx12_v3_2_29: 23.22 (Δ -0.03) plik_rd12_HM_v22b_TTTEEE: 2344.13 (Δ -0.80)

8.7 base_nnu_meffsterile_plikHM_TTTEEE_lowl_lowE_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02243 ± 0.00016	$\Omega_m h^2$	$0.1459^{+0.0017}_{-0.0029}$	k_{eq}	$0.01035^{+0.00019}_{-0.00010}$
$\boldsymbol{\Omega_c h^2}$	$0.1200^{+0.0035}_{-0.0021}$	$\Omega_\nu h^2$	$0.00351^{+0.00062}_{-0.0029}$	$100\theta_{eq}$	$0.8239^{+0.0056}_{-0.014}$
$\boldsymbol{100\theta_{MC}}$	1.04074 ± 0.00033	$\Omega_m h^3$	$0.09797^{+0.00059}_{-0.0018}$	$100\theta_{s,eq}$	$0.4549^{+0.0028}_{-0.0074}$
$\boldsymbol{\tau}$	$0.0556^{+0.0056}_{-0.0082}$	σ_8	$0.784^{+0.030}_{-0.016}$	$H(0.15)$	$72.60^{+0.53}_{-0.76}$
$\boldsymbol{m^{eff}_{\nu,\,sterile}}$ [eV]	< 0.321	S_8	$0.814^{+0.027}_{-0.019}$	$D_M(0.15)$	$644.8^{+7.4}_{-5.7}$
$\boldsymbol{N_{eff}}$	$3.152^{+0.024}_{-0.11}$	$\sigma_8\Omega_m^{0.5}$	$0.446^{+0.015}_{-0.010}$	$H(0.38)$	$82.98^{+0.33}_{-0.64}$
$\boldsymbol{\ln(10^{10}A_s)}$	$3.051^{+0.013}_{-0.017}$	$\sigma_8\Omega_m^{0.25}$	$0.591^{+0.021}_{-0.012}$	$D_M(0.38)$	1535^{+15}_{-11}
$\boldsymbol{n_s}$	$0.9656^{+0.0049}_{-0.0059}$	$\sigma_8/h^{0.5}$	$0.956^{+0.035}_{-0.018}$	$H(0.51)$	$89.87^{+0.25}_{-0.59}$
$\boldsymbol{y_{cal}}$	1.0008 ± 0.0025	$r_{drag}h$	$98.0^{+1.5}_{-1.2}$	$D_M(0.51)$	1986^{+18}_{-12}
$\boldsymbol{A^{CIB}_{217}}$	47 ± 7	$\langle d^2\rangle^{1/2}$	2.450 ± 0.028	$H(0.61)$	$95.61^{+0.21}_{-0.58}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	z_{re}	$7.84^{+0.62}_{-0.81}$	$D_M(0.61)$	2310^{+20}_{-13}
$\boldsymbol{A^{tSZ}_{143}}$	5.3 ± 2.0	10^9A_s	$2.113^{+0.026}_{-0.036}$	$H(2.33)$	$238.7^{+1.2}_{-2.1}$
$\boldsymbol{A^{PS}_{100}}$	261 ± 28	$10^9A_se^{-2\tau}$	1.891 ± 0.013	$D_M(2.33)$	5740^{+34}_{-11}
$\boldsymbol{A^{PS}_{143}}$	48 ± 8	D_{40}	1230 ± 14	$f\sigma_8(0.15)$	$0.449^{+0.015}_{-0.0099}$
$\boldsymbol{A^{PS}_{143\times217}}$	43 ± 9	D_{220}	5732 ± 39	$\sigma_8(0.15)$	$0.723^{+0.029}_{-0.015}$
$\boldsymbol{A^{PS}_{217}}$	116 ± 10	D_{810}	2542 ± 14	$f\sigma_8(0.38)$	$0.464^{+0.016}_{-0.0095}$
$\boldsymbol{A^{kSZ}}$	< 4.62	D_{1420}	816.6 ± 4.8	$\sigma_8(0.38)$	$0.640^{+0.026}_{-0.014}$
$\boldsymbol{A^{dust}_{100}}$	9.0 ± 1.8	D_{2000}	230.0 ± 1.7	$f\sigma_8(0.51)$	$0.462^{+0.016}_{-0.0092}$
$\boldsymbol{A^{dust}_{143}}$	11.0 ± 1.8	$n_{s,0.002}$	$0.9656^{+0.0049}_{-0.0059}$	$\sigma_8(0.51)$	$0.598^{+0.025}_{-0.013}$
$\boldsymbol{A^{dust}_{143\times217}}$	18.7 ± 3.3	Y_P	$0.24683^{+0.00044}_{-0.0014}$	$f\sigma_8(0.61)$	$0.456^{+0.017}_{-0.0091}$
$\boldsymbol{A^{dust}_{217}}$	93.8 ± 7.3	Y_P^{BBN}	$0.24816^{+0.00044}_{-0.0014}$	$\sigma_8(0.61)$	$0.569^{+0.024}_{-0.013}$
$\boldsymbol{A^{dust}_{100}}$	0.114 ± 0.038	10^5D/H	$2.611^{+0.029}_{-0.034}$	$f\sigma_8(2.33)$	$0.287^{+0.012}_{-0.0065}$
$\boldsymbol{A^{dust}_{100\times143}}$	0.134 ± 0.029	Age/Gyr	$13.739^{+0.080}_{-0.027}$	$\sigma_8(2.33)$	$0.295^{+0.013}_{-0.0069}$
$\boldsymbol{A^{dust}_{100\times217}}$	0.480 ± 0.085	z_*	$1090.16^{+0.29}_{-0.32}$	f^{143}_{2000}	30.7 ± 2.8
$\boldsymbol{A^{dust}_{143}}$	0.224 ± 0.054	r_*	$143.3^{+1.1}_{-0.53}$	$f^{143\times217}_{2000}$	33.2 ± 1.9
$\boldsymbol{A^{dust}_{143\times217}}$	0.666 ± 0.081	$100\theta_*$	$1.04087^{+0.00037}_{-0.00032}$	f^{217}_{2000}	107.9 ± 1.9
$\boldsymbol{A^{dust}_{217}}$	2.09 ± 0.27	$D_M(z_*)$/Gpc	$13.77^{+0.10}_{-0.050}$	χ^2_{small}	397.2 ± 2.0
$\boldsymbol{c_{100}}$	0.99966 ± 0.00061	z_{drag}	$1060.33^{+0.35}_{-0.49}$	χ^2_{lowl}	23.4 ± 1.1
$\boldsymbol{c_{217}}$	0.99821 ± 0.00062	r_{drag}	$146.0^{+1.1}_{-0.54}$	χ^2_{plik}	2362.2 ± 6.2
H_0	$67.15^{+0.67}_{-0.85}$	k_D	$0.14179^{+0.00050}_{-0.00093}$	χ^2_{prior}	11.7 ± 4.7
Ω_Λ	$0.676^{+0.013}_{-0.0093}$	$100\theta_D$	$0.16089^{+0.00019}_{-0.00025}$	χ^2_{CMB}	2782.9 ± 6.2
Ω_m	$0.3238^{+0.0093}_{-0.013}$	z_{eq}	3355^{+67}_{-30}		

$\bar{\chi}^2_{eff} = 2794.57$; $\Delta\bar{\chi}^2_{eff} = 3.04$; $R - 1 = 0.01250$

8.8 base_nnu_meffsterile_plikHM_TTTEEE_lowl_lowE_post_lensing_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	$0.02243^{+0.00014}_{-0.00016}$	$\Omega_m h^2$	$0.1458^{+0.0017}_{-0.0027}$	k_{eq}	$0.01035^{+0.00017}_{-0.000097}$
$\boldsymbol{\Omega_c h^2}$	$0.1200^{+0.0032}_{-0.0020}$	$\Omega_\nu h^2$	$0.00339^{+0.00084}_{-0.0027}$	$100\theta_{eq}$	$0.8232^{+0.0050}_{-0.013}$
$\boldsymbol{100\theta_{MC}}$	$1.04075^{+0.00033}_{-0.00029}$	$\Omega_m h^3$	$0.09789^{+0.00056}_{-0.0017}$	$100\theta_{s,eq}$	$0.4546^{+0.0026}_{-0.0065}$
$\boldsymbol{\tau}$	$0.0559^{+0.0058}_{-0.0080}$	σ_8	$0.784^{+0.026}_{-0.016}$	$H(0.15)$	$72.57^{+0.50}_{-0.70}$
$\boldsymbol{m^{eff}_{\nu,\,sterile}}$ [eV]	< 0.320	S_8	$0.815^{+0.022}_{-0.016}$	$D_M(0.15)$	$645.0^{+6.8}_{-5.3}$
$\boldsymbol{N_{eff}}$	$3.148^{+0.023}_{-0.10}$	$\sigma_8\Omega_m^{0.5}$	$0.446^{+0.012}_{-0.0087}$	$H(0.38)$	$82.96^{+0.31}_{-0.57}$
$\boldsymbol{\ln(10^{10}A_s)}$	$3.051^{+0.012}_{-0.016}$	$\sigma_8\Omega_m^{0.25}$	$0.592^{+0.017}_{-0.011}$	$D_M(0.38)$	1535^{+14}_{-10}
$\boldsymbol{n_s}$	$0.9654^{+0.0045}_{-0.0056}$	$\sigma_8/h^{0.5}$	$0.957^{+0.029}_{-0.017}$	$H(0.51)$	$89.84^{+0.23}_{-0.53}$
$\boldsymbol{y_{cal}}$	1.0009 ± 0.0026	$r_{drag}h$	$98.0^{+1.4}_{-1.2}$	$D_M(0.51)$	1987^{+17}_{-11}
$\boldsymbol{A^{CIB}_{217}}$	47 ± 7	$\langle d^2\rangle^{1/2}$	2.451 ± 0.022	$H(0.61)$	$95.59^{+0.18}_{-0.53}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	z_{re}	$7.86^{+0.63}_{-0.79}$	$D_M(0.61)$	2311^{+18}_{-12}
$\boldsymbol{A^{tSZ}_{143}}$	$5.3^{+2.1}_{-1.9}$	$10^9 A_s$	$2.115^{+0.025}_{-0.034}$	$H(2.33)$	$238.6^{+1.2}_{-2.0}$
$\boldsymbol{A^{PS}_{100}}$	262 ± 28	$10^9 A_s e^{-2\tau}$	1.891 ± 0.012	$D_M(2.33)$	$5741^{+31}_{-9.8}$
$\boldsymbol{A^{PS}_{143}}$	48 ± 8	D_{40}	1231 ± 13	$f\sigma_8(0.15)$	$0.450^{+0.012}_{-0.0086}$
$\boldsymbol{A^{PS}_{143\times217}}$	43 ± 9	D_{220}	5734 ± 39	$\sigma_8(0.15)$	$0.724^{+0.025}_{-0.015}$
$\boldsymbol{A^{PS}_{217}}$	116 ± 10	D_{810}	2542 ± 14	$f\sigma_8(0.38)$	$0.465^{+0.013}_{-0.0086}$
$\boldsymbol{A^{kSZ}}$	< 4.54	D_{1420}	816.6 ± 4.9	$\sigma_8(0.38)$	$0.640^{+0.022}_{-0.014}$
$\boldsymbol{A^{dust TT}_{100}}$	9.0 ± 1.8	D_{2000}	230.1 ± 1.7	$f\sigma_8(0.51)$	$0.462^{+0.014}_{-0.0086}$
$\boldsymbol{A^{dust TT}_{143}}$	11.0 ± 1.8	$n_{s,0.002}$	$0.9654^{+0.0045}_{-0.0056}$	$\sigma_8(0.51)$	$0.599^{+0.021}_{-0.014}$
$\boldsymbol{A^{dust TT}_{143\times217}}$	18.8 ± 3.2	Y_P	$0.24677^{+0.00044}_{-0.0013}$	$f\sigma_8(0.61)$	$0.457^{+0.014}_{-0.0086}$
$\boldsymbol{A^{dust TT}_{217}}$	93.9 ± 7.2	Y_P^{BBN}	$0.24810^{+0.00044}_{-0.0013}$	$\sigma_8(0.61)$	$0.569^{+0.020}_{-0.013}$
$\boldsymbol{A^{dust TE}_{100}}$	0.115 ± 0.038	10^5D/H	$2.611^{+0.029}_{-0.034}$	$f\sigma_8(2.33)$	$0.287^{+0.010}_{-0.0068}$
$\boldsymbol{A^{dust TE}_{100\times143}}$	0.134 ± 0.029	Age/Gyr	$13.742^{+0.073}_{-0.023}$	$\sigma_8(2.33)$	$0.295^{+0.011}_{-0.0073}$
$\boldsymbol{A^{dust TE}_{100\times217}}$	0.477 ± 0.084	z_*	$1090.16^{+0.28}_{-0.32}$	f^{143}_{2000}	30.8 ± 2.8
$\boldsymbol{A^{dust TE}_{143}}$	0.224 ± 0.054	r_*	$143.4^{+1.0}_{-0.54}$	$f^{143\times217}_{2000}$	$33.2^{+1.8}_{-2.0}$
$\boldsymbol{A^{dust TE}_{143\times217}}$	0.664 ± 0.082	$100\theta_*$	$1.04088^{+0.00036}_{-0.00030}$	f^{217}_{2000}	108.0 ± 1.9
$\boldsymbol{A^{dust TE}_{217}}$	2.08 ± 0.27	$D_M(z_*)$/Gpc	$13.775^{+0.097}_{-0.051}$	$\chi^2_{lensing}$	9.01 ± 0.68
$\boldsymbol{c_{100}}$	0.99966 ± 0.00061	z_{drag}	$1060.32^{+0.35}_{-0.47}$	χ^2_{simall}	1645 ± 900
$\boldsymbol{c_{217}}$	0.99822 ± 0.00061	r_{drag}	$146.0^{+1.1}_{-0.55}$	χ^2_{lowl}	23.5 ± 1.0
H_0	$67.13^{+0.63}_{-0.78}$	k_D	$0.14176^{+0.00052}_{-0.00088}$	χ^2_{plik}	1114 ± 900
Ω_Λ	$0.676^{+0.012}_{-0.0092}$	$100\theta_D$	$0.16089^{+0.00019}_{-0.00024}$	χ^2_{prior}	11.6 ± 4.7
Ω_m	$0.3238^{+0.0092}_{-0.012}$	z_{eq}	3358^{+60}_{-27}	χ^2_{CMB}	2791.5 ± 6.2

$\bar{\chi}^2_{eff} = 2803.10$; $\Delta\bar{\chi}^2_{eff} = 2.59$; $R - 1 = 0.04623$

8.9 base_nnu_meffsterile_CamSpecHM_TTTEEE_lowl_lowE

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022298	0.02237 ± 0.00017	$\Omega_m h^3$	0.09691	$0.09813^{+0.00067}_{-0.0022}$	$100\theta_{eq}$	0.8160	$0.8265^{+0.0054}_{-0.014}$
$\boldsymbol{\Omega_c h^2}$	0.12021	$0.1198^{+0.0036}_{-0.0025}$	σ_8	0.8114	$0.778^{+0.031}_{-0.017}$	$100\theta_{s,eq}$	0.45084	$0.4563^{+0.0028}_{-0.0072}$
$\boldsymbol{100\theta_{MC}}$	1.040842	$1.04068^{+0.00038}_{-0.00034}$	S_8	0.8281	$0.805^{+0.027}_{-0.019}$	$H(0.15)$	73.00	$72.79^{+0.56}_{-0.87}$
$\boldsymbol{\tau}$	0.0547	0.0528 ± 0.0080	$\sigma_8\Omega_m^{0.5}$	0.4536	$0.441^{+0.015}_{-0.010}$	$D_M(0.15)$	640.4	$642.9^{+8.2}_{-6.0}$
$\boldsymbol{m^{eff}_{\nu,\,sterile}}$ [eV]	0.001	< 0.319	$\sigma_8\Omega_m^{0.25}$	0.6067	$0.586^{+0.021}_{-0.013}$	$H(0.38)$	83.15	$83.14^{+0.35}_{-0.75}$
$\boldsymbol{N_{eff}}$	3.089	< 3.21	$\sigma_8/h^{0.5}$	0.9862	$0.948^{+0.035}_{-0.019}$	$D_M(0.38)$	1527.0	1531^{+17}_{-11}
$\boldsymbol{\ln(10^{10}A_s)}$	3.0445	3.043 ± 0.017	$r_{drag}h$	99.44	$98.3^{+1.6}_{-1.3}$	$H(0.51)$	89.898	$90.00^{+0.26}_{-0.72}$
$\boldsymbol{n_s}$	0.9671	$0.9674^{+0.0051}_{-0.0067}$	$\langle d^2\rangle^{1/2}$	2.4372	2.430 ± 0.030	$D_M(0.51)$	1978.0	1982^{+21}_{-13}
$\boldsymbol{y_{cal}}$	1.00062	1.0005 ± 0.0026	z_{re}	7.75	7.56 ± 0.82	$H(0.61)$	95.539	$95.73^{+0.23}_{-0.71}$
$\boldsymbol{A^{PS}_{100}}$	238.8	244 ± 25	$10^9 A_s$	2.1000	2.096 ± 0.036	$D_M(0.61)$	2301.5	2305^{+23}_{-13}
$\boldsymbol{A^{PS}_{143}}$	44.7	42 ± 8	$10^9 A_s e^{-2\tau}$	1.8822	$1.886^{+0.013}_{-0.014}$	$H(2.33)$	236.77	$238.6^{+1.3}_{-2.4}$
$\boldsymbol{A^{PS}_{217}}$	102.0	101 ± 10	D_{40}	1225.7	1222 ± 15	$D_M(2.33)$	5749.0	5734^{+41}_{-13}
$\boldsymbol{A^{CIB}_{217}}$	42.1	41 ± 7	D_{220}	5718.9	5717 ± 40	$f\sigma_8(0.15)$	0.4581	$0.445^{+0.015}_{-0.010}$
$\boldsymbol{A^{tSZ}_{143}}$	4.79	$3.7^{+1.7}_{-2.7}$	D_{810}	2536.7	2536 ± 14	$\sigma_8(0.15)$	0.7497	$0.718^{+0.029}_{-0.016}$
$\boldsymbol{r^{PS}_{143\times217}}$	0.682	0.65 ± 0.12	D_{1420}	815.34	814.4 ± 5.0	$f\sigma_8(0.38)$	0.4762	$0.460^{+0.016}_{-0.0098}$
$\boldsymbol{r^{CIB}_{143\times217}}$	0.695	$0.58^{+0.40}_{-0.14}$	D_{2000}	229.99	229.0 ± 1.8	$\sigma_8(0.38)$	0.6645	$0.636^{+0.026}_{-0.015}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.55	—	$n_{s,0.002}$	0.9671	$0.9674^{+0.0051}_{-0.0067}$	$f\sigma_8(0.51)$	0.4747	$0.458^{+0.016}_{-0.0097}$
$\boldsymbol{A^{kSZ}}$	3.0	—	Y_P	0.24594	$0.24711^{+0.00054}_{-0.0017}$	$\sigma_8(0.51)$	0.6218	$0.595^{+0.025}_{-0.014}$
$\boldsymbol{A^{dust}_{100}}$	1.006	1.01 ± 0.20	Y_P^{BBN}	0.24727	$0.24844^{+0.00054}_{-0.0017}$	$f\sigma_8(0.61)$	0.4697	$0.453^{+0.016}_{-0.0097}$
$\boldsymbol{A^{dust}_{143}}$	0.969	0.97 ± 0.17	10^5D/H	2.6141	$2.632^{+0.034}_{-0.045}$	$\sigma_8(0.61)$	0.5916	$0.566^{+0.024}_{-0.014}$
$\boldsymbol{A^{dust}_{217}}$	0.966	0.97 ± 0.10	Age/Gyr	13.763	$13.726^{+0.098}_{-0.031}$	$f\sigma_8(2.33)$	0.2983	$0.285^{+0.012}_{-0.0071}$
$\boldsymbol{A^{dust}_{143\times217}}$	1.021	1.03 ± 0.16	z_*	1090.071	$1090.25^{+0.32}_{-0.39}$	$\sigma_8(2.33)$	0.3075	$0.293^{+0.013}_{-0.0075}$
$\boldsymbol{c_{100}}$	0.99762	0.9975 ± 0.0010	r_*	144.22	$143.3^{+1.3}_{-0.60}$	f^{143}_{2000}	30.60	31.4 ± 3.1
$\boldsymbol{c_{217}}$	1.00124	1.0012 ± 0.0016	$100\theta_*$	1.041009	$1.04080^{+0.00043}_{-0.00034}$	f^{217}_{2000}	107.24	108.0 ± 2.1
$\boldsymbol{c_{TE}}$	0.99690	0.9975 ± 0.0050	$D_M(z_*)$/Gpc	13.853	$13.77^{+0.12}_{-0.056}$	$f^{143\times217}_{2000}$	32.81	33.5 ± 2.2
$\boldsymbol{c_{EE}}$	0.9933	0.9932 ± 0.0052	z_{drag}	1059.818	$1060.19^{+0.39}_{-0.53}$	χ^2_{simall}	396.18	397.0 ± 1.8
H_0	67.69	$67.37^{+0.71}_{-0.95}$	r_{drag}	146.90	$146.0^{+1.3}_{-0.61}$	χ^2_{lowl}	23.00	22.9 ± 1.1
Ω_Λ	0.6876	$0.679^{+0.013}_{-0.010}$	k_D	0.14085	$0.14163^{+0.00056}_{-0.0010}$	$\chi^2_{CamSpec}$	11500.0	11517.5 ± 6.2
Ω_m	0.3124	$0.321^{+0.010}_{-0.013}$	$100\theta_D$	0.161005	$0.16107^{+0.00022}_{-0.00035}$	χ^2_{prior}	2.23	7.9 ± 3.5
$\Omega_m h^2$	0.14316	$0.1457^{+0.0019}_{-0.0032}$	z_{eq}	3385.9	3339^{+64}_{-29}	χ^2_{CMB}	11919.1	11937.4 ± 6.2
$\Omega_\nu h^2$	0.00065	$0.00349^{+0.00065}_{-0.0028}$	k_{eq}	0.010364	$0.01031^{+0.00019}_{-0.00011}$			

Best-fit $\chi^2_{eff} = 11921.37$; $\Delta\chi^2_{eff} = 0.61$; $\bar{\chi}^2_{eff} = 11945.34$; $\Delta\bar{\chi}^2_{eff} = 2.88$; $R - 1 = 0.02481$

χ^2_{eff}: CMB - simall_100x143_offlike5_EE_Aplanck_B: 396.18 (Δ 0.28) commander_dx12_v3_2_29: 23.00 (Δ 0.00) CamSpec like_10.7HM_1400_unified: 11499.96 (Δ 0.31)

8.10 base_nnu_meffsterile_CamSpecHM_TTTEEE_lowl_lowE_post_lensing

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02234 ± 0.00016	$\Omega_m h^3$	$0.09796^{+0.00058}_{-0.0020}$	$100\theta_{eq}$	$0.8241^{+0.0046}_{-0.012}$
$\boldsymbol{\Omega_c h^2}$	$0.1201^{+0.0033}_{-0.0024}$	σ_8	$0.783^{+0.025}_{-0.016}$	$100\theta_{s,eq}$	$0.4551^{+0.0024}_{-0.0062}$
$\boldsymbol{100\theta_{MC}}$	$1.04066^{+0.00037}_{-0.00033}$	S_8	$0.812^{+0.021}_{-0.015}$	$H(0.15)$	$72.65^{+0.51}_{-0.79}$
$\boldsymbol{\tau}$	$0.0544^{+0.0069}_{-0.0078}$	$\sigma_8\Omega_m^{0.5}$	$0.445^{+0.011}_{-0.0084}$	$D_M(0.15)$	$644.3^{+7.5}_{-5.5}$
$\boldsymbol{m^{eff}_{\nu,\,sterile}}$ [eV]	< 0.299	$\sigma_8\Omega_m^{0.25}$	$0.590^{+0.017}_{-0.011}$	$H(0.38)$	$83.02^{+0.31}_{-0.68}$
$\boldsymbol{N_{eff}}$	< 3.19	$\sigma_8/h^{0.5}$	$0.955^{+0.028}_{-0.017}$	$D_M(0.38)$	1534^{+16}_{-10}
$\boldsymbol{\ln(10^{10}A_s)}$	3.047 ± 0.016	$r_{drag}h$	$98.1^{+1.5}_{-1.2}$	$H(0.51)$	$89.89^{+0.22}_{-0.65}$
$\boldsymbol{n_s}$	$0.9663^{+0.0049}_{-0.0062}$	$\langle d^2\rangle^{1/2}$	2.441 ± 0.024	$D_M(0.51)$	1985^{+19}_{-12}
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0025	z_{re}	7.73 ± 0.78	$H(0.61)$	$95.64^{+0.19}_{-0.65}$
$\boldsymbol{A^{PS}_{100}}$	244 ± 25	$10^9 A_s$	$2.105^{+0.030}_{-0.034}$	$D_M(0.61)$	2309^{+21}_{-12}
$\boldsymbol{A^{PS}_{143}}$	42 ± 8	$10^9 A_s e^{-2\tau}$	$1.888^{+0.012}_{-0.014}$	$H(2.33)$	$238.6^{+1.2}_{-2.3}$
$\boldsymbol{A^{PS}_{217}}$	102 ± 10	D_{40}	1226 ± 13	$D_M(2.33)$	5739^{+38}_{-10}
$\boldsymbol{A^{CIB}_{217}}$	41 ± 7	D_{220}	5720 ± 39	$f\sigma_8(0.15)$	$0.449^{+0.012}_{-0.0082}$
$\boldsymbol{A^{tSZ}_{143}}$	$3.7^{+1.7}_{-2.7}$	D_{810}	2538 ± 14	$\sigma_8(0.15)$	$0.723^{+0.024}_{-0.015}$
$\boldsymbol{r^{PS}_{143\times217}}$	0.66 ± 0.12	D_{1420}	814.7 ± 5.0	$f\sigma_8(0.38)$	$0.464^{+0.013}_{-0.0083}$
$\boldsymbol{r^{CIB}_{143\times217}}$	$0.57^{+0.39}_{-0.16}$	D_{2000}	229.2 ± 1.8	$\sigma_8(0.38)$	$0.639^{+0.022}_{-0.014}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$n_{s,0.002}$	$0.9663^{+0.0049}_{-0.0062}$	$f\sigma_8(0.51)$	$0.461^{+0.013}_{-0.0085}$
$\boldsymbol{A^{kSZ}}$	—	Y_P	$0.24696^{+0.00047}_{-0.0015}$	$\sigma_8(0.51)$	$0.598^{+0.021}_{-0.014}$
$\boldsymbol{A^{dust}_{100}}$	1.01 ± 0.19	Y_P^{BBN}	$0.24829^{+0.00047}_{-0.0015}$	$f\sigma_8(0.61)$	$0.456^{+0.014}_{-0.0085}$
$\boldsymbol{A^{dust}_{143}}$	0.97 ± 0.17	10^5D/H	$2.632^{+0.033}_{-0.044}$	$\sigma_8(0.61)$	$0.569^{+0.020}_{-0.013}$
$\boldsymbol{A^{dust}_{217}}$	0.97 ± 0.10	Age/Gyr	$13.737^{+0.090}_{-0.025}$	$f\sigma_8(2.33)$	$0.287^{+0.010}_{-0.0068}$
$\boldsymbol{A^{dust}_{143\times217}}$	1.03 ± 0.16	z_*	$1090.28^{+0.30}_{-0.38}$	$\sigma_8(2.33)$	$0.295^{+0.011}_{-0.0073}$
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	r_*	$143.4^{+1.2}_{-0.55}$	f^{143}_{2000}	31.2 ± 3.1
$\boldsymbol{c_{217}}$	1.0012 ± 0.0016	$100\theta_*$	$1.04079^{+0.00042}_{-0.00033}$	f^{217}_{2000}	108.0 ± 2.1
$\boldsymbol{c_{TE}}$	0.9972 ± 0.0050	$D_M(z_*)$/Gpc	$13.77^{+0.11}_{-0.051}$	$f^{143\times217}_{2000}$	33.4 ± 2.2
$\boldsymbol{c_{EE}}$	0.9931 ± 0.0051	z_{drag}	$1060.14^{+0.37}_{-0.49}$	$\chi^2_{lensing}$	9.25 ± 0.93
H_0	$67.22^{+0.65}_{-0.86}$	r_{drag}	$146.0^{+1.2}_{-0.55}$	χ^2_{simall}	397.1 ± 1.9
Ω_Λ	$0.677^{+0.012}_{-0.0094}$	k_D	$0.14161^{+0.00052}_{-0.00097}$	χ^2_{lowl}	23.2 ± 1.0
Ω_m	$0.3228^{+0.0094}_{-0.012}$	$100\theta_D$	$0.16106^{+0.00021}_{-0.00034}$	$\chi^2_{CamSpec}$	11516.6 ± 5.8
$\Omega_m h^2$	$0.1458^{+0.0018}_{-0.0030}$	z_{eq}	3351^{+56}_{-25}	χ^2_{prior}	7.9 ± 3.5
$\Omega_\nu h^2$	$0.00329^{+0.00064}_{-0.0026}$	k_{eq}	$0.01034^{+0.00017}_{-0.00010}$	χ^2_{CMB}	11946.1 ± 6.1

$\bar{\chi}^2_{eff} = 11954.00$; $\Delta\bar{\chi}^2_{eff} = 2.56$; $R - 1 = 0.02353$

8.11 base_nnu_meffsterile_CamSpecHM_TTTEEE_lowl_lowE_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02237 ± 0.00017	$\Omega_m h^3$	$0.09816^{+0.00069}_{-0.0022}$	$100\theta_{eq}$	$0.8266^{+0.0054}_{-0.014}$
$\boldsymbol{\Omega_c h^2}$	$0.1198^{+0.0036}_{-0.0025}$	σ_8	$0.779^{+0.031}_{-0.017}$	$100\theta_{s,eq}$	$0.4564^{+0.0028}_{-0.0071}$
$\boldsymbol{100\theta_{MC}}$	$1.04068^{+0.00039}_{-0.00034}$	S_8	$0.806^{+0.027}_{-0.019}$	$H(0.15)$	$72.81^{+0.56}_{-0.87}$
$\boldsymbol{\tau}$	$0.0543^{+0.0048}_{-0.0082}$	$\sigma_8\Omega_m^{0.5}$	$0.441^{+0.015}_{-0.010}$	$D_M(0.15)$	$642.7^{+8.3}_{-6.1}$
$\boldsymbol{m^{eff}_{\nu,\,sterile}}$ [eV]	< 0.318	$\sigma_8\Omega_m^{0.25}$	$0.586^{+0.021}_{-0.012}$	$H(0.38)$	$83.16^{+0.35}_{-0.76}$
$\boldsymbol{N_{eff}}$	< 3.21	$\sigma_8/h^{0.5}$	$0.949^{+0.035}_{-0.019}$	$D_M(0.38)$	1531^{+18}_{-11}
$\boldsymbol{\ln(10^{10}A_s)}$	$3.046^{+0.012}_{-0.017}$	$r_{drag}h$	$98.4^{+1.6}_{-1.3}$	$H(0.51)$	$90.01^{+0.26}_{-0.73}$
$\boldsymbol{n_s}$	$0.9676^{+0.0051}_{-0.0067}$	$\langle d^2\rangle^{1/2}$	2.433 ± 0.029	$D_M(0.51)$	1981^{+21}_{-13}
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0026	z_{re}	$7.72^{+0.54}_{-0.83}$	$H(0.61)$	$95.74^{+0.23}_{-0.72}$
$\boldsymbol{A^{PS}_{100}}$	244 ± 25	$10^9 A_s$	$2.102^{+0.025}_{-0.036}$	$D_M(0.61)$	2304^{+24}_{-13}
$\boldsymbol{A^{PS}_{143}}$	42 ± 8	$10^9 A_s e^{-2\tau}$	1.886 ± 0.014	$H(2.33)$	$238.6^{+1.4}_{-2.4}$
$\boldsymbol{A^{PS}_{217}}$	101 ± 10	D_{40}	1222 ± 15	$D_M(2.33)$	5733^{+42}_{-13}
$\boldsymbol{A^{CIB}_{217}}$	41 ± 7	D_{220}	5717 ± 40	$f\sigma_8(0.15)$	$0.445^{+0.015}_{-0.0099}$
$\boldsymbol{A^{tSZ}_{143}}$	$3.7^{+1.7}_{-2.7}$	D_{810}	2536 ± 14	$\sigma_8(0.15)$	$0.719^{+0.029}_{-0.016}$
$\boldsymbol{r^{PS}_{143\times217}}$	0.65 ± 0.12	D_{1420}	814.4 ± 5.0	$f\sigma_8(0.38)$	$0.461^{+0.016}_{-0.0097}$
$\boldsymbol{r^{CIB}_{143\times217}}$	$0.58^{+0.40}_{-0.14}$	D_{2000}	229.1 ± 1.8	$\sigma_8(0.38)$	$0.637^{+0.026}_{-0.015}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$n_{s,0.002}$	$0.9676^{+0.0051}_{-0.0067}$	$f\sigma_8(0.51)$	$0.459^{+0.016}_{-0.0096}$
$\boldsymbol{A^{kSZ}}$	—	Y_P	$0.24713^{+0.00055}_{-0.0017}$	$\sigma_8(0.51)$	$0.595^{+0.025}_{-0.014}$
$\boldsymbol{A^{dust}_{100}}$	1.01 ± 0.20	Y_P^{BBN}	$0.24847^{+0.00055}_{-0.0017}$	$f\sigma_8(0.61)$	$0.453^{+0.016}_{-0.0095}$
$\boldsymbol{A^{dust}_{143}}$	0.97 ± 0.17	10^5D/H	$2.632^{+0.034}_{-0.045}$	$\sigma_8(0.61)$	$0.566^{+0.024}_{-0.013}$
$\boldsymbol{A^{dust}_{217}}$	0.97 ± 0.10	Age/Gyr	$13.72^{+0.10}_{-0.031}$	$f\sigma_8(2.33)$	$0.286^{+0.012}_{-0.0069}$
$\boldsymbol{A^{dust}_{143\times217}}$	1.03 ± 0.16	z_*	$1090.24^{+0.32}_{-0.39}$	$\sigma_8(2.33)$	$0.294^{+0.013}_{-0.0074}$
$\boldsymbol{c_{100}}$	0.9975 ± 0.0010	r_*	$143.3^{+1.3}_{-0.62}$	f^{143}_{2000}	31.4 ± 3.1
$\boldsymbol{c_{217}}$	1.0012 ± 0.0016	$100\theta_*$	$1.04080^{+0.00043}_{-0.00034}$	f^{217}_{2000}	108.0 ± 2.1
$\boldsymbol{c_{TE}}$	0.9974 ± 0.0050	$D_M(z_*)$/Gpc	$13.77^{+0.12}_{-0.058}$	$f^{143\times217}_{2000}$	33.5 ± 2.2
$\boldsymbol{c_{EE}}$	0.9932 ± 0.0052	z_{drag}	$1060.20^{+0.40}_{-0.53}$	χ^2_{simall}	396.9 ± 1.8
H_0	$67.39^{+0.71}_{-0.96}$	r_{drag}	$146.0^{+1.3}_{-0.63}$	χ^2_{lowl}	22.9 ± 1.1
Ω_Λ	$0.679^{+0.013}_{-0.010}$	k_D	$0.14164^{+0.00058}_{-0.0010}$	$\chi^2_{CamSpec}$	11517.4 ± 6.1
Ω_m	$0.321^{+0.010}_{-0.013}$	$100\theta_D$	$0.16107^{+0.00022}_{-0.00035}$	χ^2_{prior}	7.9 ± 3.5
$\Omega_m h^2$	$0.1457^{+0.0020}_{-0.0032}$	z_{eq}	3339^{+63}_{-29}	χ^2_{CMB}	11937.2 ± 6.1
$\Omega_\nu h^2$	$0.00348^{+0.00065}_{-0.0028}$	k_{eq}	$0.01031^{+0.00019}_{-0.00011}$		

$\bar{\chi}^2_{eff} = 11945.16$; $\Delta\bar{\chi}^2_{eff} = 2.97$; $R - 1 = 0.02558$

8.12 base_nnu_meffsterile_CamSpecHM_TTTEEE_lowl_lowE_post_lensing_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02235 ± 0.00016	$\Omega_m h^3$	$0.09799^{+0.00060}_{-0.0020}$	$100\theta_{eq}$	$0.8243^{+0.0046}_{-0.012}$
$\boldsymbol{\Omega_c h^2}$	$0.1201^{+0.0033}_{-0.0024}$	σ_8	$0.784^{+0.026}_{-0.016}$	$100\theta_{s,eq}$	$0.4552^{+0.0023}_{-0.0062}$
$\boldsymbol{100\theta_{MC}}$	$1.04066^{+0.00038}_{-0.00033}$	S_8	$0.812^{+0.021}_{-0.015}$	$H(0.15)$	$72.67^{+0.51}_{-0.79}$
$\boldsymbol{\tau}$	$0.0553^{+0.0053}_{-0.0080}$	$\sigma_8\Omega_m^{0.5}$	$0.445^{+0.012}_{-0.0083}$	$D_M(0.15)$	$644.1^{+7.5}_{-5.5}$
$\boldsymbol{m^{eff}_{\nu,\,sterile}}$ [eV]	< 0.298	$\sigma_8\Omega_m^{0.25}$	$0.590^{+0.017}_{-0.011}$	$H(0.38)$	$83.04^{+0.30}_{-0.68}$
$\boldsymbol{N_{eff}}$	< 3.19	$\sigma_8/h^{0.5}$	$0.955^{+0.028}_{-0.016}$	$D_M(0.38)$	1533^{+16}_{-10}
$\boldsymbol{\ln(10^{10}A_s)}$	$3.049^{+0.012}_{-0.016}$	$r_{drag}h$	$98.2^{+1.5}_{-1.2}$	$H(0.51)$	$89.91^{+0.22}_{-0.65}$
$\boldsymbol{n_s}$	$0.9665^{+0.0048}_{-0.0062}$	$\langle d^2\rangle^{1/2}$	2.442 ± 0.023	$D_M(0.51)$	1985^{+19}_{-11}
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0025	z_{re}	$7.82^{+0.58}_{-0.81}$	$H(0.61)$	$95.65^{+0.18}_{-0.65}$
$\boldsymbol{A^{PS}_{100}}$	244 ± 25	$10^9 A_s$	$2.109^{+0.025}_{-0.034}$	$D_M(0.61)$	2308^{+21}_{-12}
$\boldsymbol{A^{PS}_{143}}$	42 ± 8	$10^9 A_s e^{-2\tau}$	$1.888^{+0.012}_{-0.014}$	$H(2.33)$	$238.6^{+1.2}_{-2.3}$
$\boldsymbol{A^{PS}_{217}}$	102 ± 10	D_{40}	1226 ± 13	$D_M(2.33)$	5738^{+38}_{-10}
$\boldsymbol{A^{CIB}_{217}}$	41 ± 7	D_{220}	5720 ± 39	$f\sigma_8(0.15)$	$0.449^{+0.012}_{-0.0081}$
$\boldsymbol{A^{tSZ}_{143}}$	$3.7^{+1.7}_{-2.7}$	D_{810}	2538 ± 14	$\sigma_8(0.15)$	$0.723^{+0.024}_{-0.015}$
$\boldsymbol{r^{PS}_{143\times217}}$	0.66 ± 0.12	D_{1420}	814.7 ± 5.0	$f\sigma_8(0.38)$	$0.464^{+0.013}_{-0.0082}$
$\boldsymbol{r^{CIB}_{143\times217}}$	$0.57^{+0.39}_{-0.16}$	D_{2000}	229.2 ± 1.8	$\sigma_8(0.38)$	$0.640^{+0.022}_{-0.014}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$n_{s,0.002}$	$0.9665^{+0.0048}_{-0.0062}$	$f\sigma_8(0.51)$	$0.462^{+0.013}_{-0.0083}$
$\boldsymbol{A^{kSZ}}$	—	Y_P	$0.24698^{+0.00049}_{-0.0015}$	$\sigma_8(0.51)$	$0.598^{+0.021}_{-0.013}$
$\boldsymbol{A^{dust}_{100}}$	1.01 ± 0.19	Y_P^{BBN}	$0.24831^{+0.00049}_{-0.0015}$	$f\sigma_8(0.61)$	$0.456^{+0.014}_{-0.0084}$
$\boldsymbol{A^{dust}_{143}}$	0.97 ± 0.17	10^5D/H	$2.632^{+0.033}_{-0.044}$	$\sigma_8(0.61)$	$0.569^{+0.020}_{-0.013}$
$\boldsymbol{A^{dust}_{217}}$	0.97 ± 0.10	Age/Gyr	$13.735^{+0.090}_{-0.025}$	$f\sigma_8(2.33)$	$0.287^{+0.010}_{-0.0067}$
$\boldsymbol{A^{dust}_{143\times217}}$	1.03 ± 0.16	z_*	$1090.27^{+0.30}_{-0.38}$	$\sigma_8(2.33)$	$0.295^{+0.011}_{-0.0072}$
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	r_*	$143.4^{+1.2}_{-0.56}$	f^{143}_{2000}	31.2 ± 3.1
$\boldsymbol{c_{217}}$	1.0012 ± 0.0016	$100\theta_*$	$1.04079^{+0.00042}_{-0.00033}$	f^{217}_{2000}	107.9 ± 2.1
$\boldsymbol{c_{TE}}$	0.9972 ± 0.0050	$D_M(z_*)$/Gpc	$13.77^{+0.11}_{-0.052}$	$f^{143\times217}_{2000}$	33.4 ± 2.2
$\boldsymbol{c_{EE}}$	0.9930 ± 0.0051	z_{drag}	$1060.15^{+0.37}_{-0.49}$	$\chi^2_{lensing}$	9.21 ± 0.88
H_0	$67.24^{+0.64}_{-0.86}$	r_{drag}	$146.0^{+1.2}_{-0.57}$	χ^2_{simall}	397.1 ± 1.9
Ω_Λ	$0.677^{+0.012}_{-0.0093}$	k_D	$0.14162^{+0.00053}_{-0.00098}$	χ^2_{lowl}	23.2 ± 1.0
Ω_m	$0.3226^{+0.0093}_{-0.012}$	$100\theta_D$	$0.16106^{+0.00021}_{-0.00034}$	$\chi^2_{CamSpec}$	11516.5 ± 5.8
$\Omega_m h^2$	$0.1457^{+0.0018}_{-0.0031}$	z_{eq}	3350^{+56}_{-25}	χ^2_{prior}	7.9 ± 3.5
$\Omega_\nu h^2$	$0.00329^{+0.00065}_{-0.0026}$	k_{eq}	$0.01034^{+0.00017}_{-0.00010}$	χ^2_{CMB}	11946.0 ± 6.1

$\bar{\chi}^2_{eff} = 11953.86$; $\Delta\bar{\chi}^2_{eff} = 2.61$; $R - 1 = 0.02344$

8.13 base_nnu_meffsterile_plikHM_TT_lowl_lowE_BAO

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022314	0.02235 ± 0.00021	$\sigma_8\Omega_m^{0.5}$	0.4502	$0.441^{+0.015}_{-0.010}$	$D_M(0.15)$	636.1	$633^{+12}_{-6.0}$
$\boldsymbol{\Omega_c h^2}$	0.11991	$0.1203^{+0.0044}_{-0.0035}$	$\sigma_8\Omega_m^{0.25}$	0.6047	$0.591^{+0.020}_{-0.012}$	$H(0.38)$	83.52	$83.98^{+0.54}_{-1.3}$
$\boldsymbol{100\theta_{MC}}$	1.04093	$1.04074^{+0.00054}_{-0.00047}$	$\sigma_8/h^{0.5}$	0.9835	$0.957^{+0.031}_{-0.016}$	$D_M(0.38)$	1518.2	1511^{+26}_{-13}
$\boldsymbol{\tau}$	0.0557	0.0548 ± 0.0082	$r_{drag}h$	100.10	99.8 ± 1.0	$H(0.51)$	90.23	$90.75^{+0.51}_{-1.3}$
$\boldsymbol{m^{eff}_{\nu,\,sterile}}$ [eV]	0.001	< 0.165	$\langle d^2\rangle^{1/2}$	2.4279	2.412 ± 0.030	$D_M(0.51)$	1967.3	1958^{+33}_{-15}
$\boldsymbol{N_{eff}}$	3.118	< 3.30	z_{re}	7.85	7.77 ± 0.84	$H(0.61)$	95.84	$96.41^{+0.50}_{-1.4}$
$\boldsymbol{\ln(10^{10}A_s)}$	3.0484	3.048 ± 0.019	$10^9 A_s$	2.1083	$2.107^{+0.036}_{-0.040}$	$D_M(0.61)$	2289.7	2279^{+38}_{-17}
$\boldsymbol{n_s}$	0.9701	$0.9728^{+0.0061}_{-0.0088}$	$10^9 A_s e^{-2\tau}$	1.8858	$1.888^{+0.013}_{-0.019}$	$H(2.33)$	236.69	$238.5^{+1.4}_{-3.1}$
$\boldsymbol{y_{cal}}$	1.00131	1.0006 ± 0.0025	D_{40}	1223.1	1215 ± 16	$D_M(2.33)$	5734	5699^{+78}_{-28}
$\boldsymbol{A^{CIB}_{217}}$	49.8	49 ± 7	D_{220}	5730.6	5720 ± 40	$f\sigma_8(0.15)$	0.4552	$0.446^{+0.015}_{-0.0098}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.20	—	D_{810}	2543.0	2538 ± 14	$\sigma_8(0.15)$	0.7509	$0.732^{+0.025}_{-0.015}$
$\boldsymbol{A^{tSZ}_{143}}$	7.10	4.9 ± 2.0	D_{1420}	817.5	814.3 ± 5.0	$f\sigma_8(0.38)$	0.4745	$0.464^{+0.016}_{-0.0095}$
$\boldsymbol{A^{PS}_{100}}$	255.9	267 ± 28	D_{2000}	230.48	228.7 ± 1.9	$\sigma_8(0.38)$	0.6660	$0.649^{+0.023}_{-0.014}$
$\boldsymbol{A^{PS}_{143}}$	48.0	51 ± 8	$n_{s,0.002}$	0.9701	$0.9728^{+0.0061}_{-0.0088}$	$f\sigma_8(0.51)$	0.4736	$0.463^{+0.016}_{-0.0093}$
$\boldsymbol{A^{PS}_{143\times217}}$	43.9	44^{+9}_{-10}	Y_P	0.24634	$0.24796^{+0.00086}_{-0.0026}$	$\sigma_8(0.51)$	0.6235	$0.607^{+0.021}_{-0.013}$
$\boldsymbol{A^{PS}_{217}}$	118.0	115 ± 10	Y_P^{BBN}	0.24767	$0.24930^{+0.00086}_{-0.0026}$	$f\sigma_8(0.61)$	0.4689	$0.458^{+0.015}_{-0.0091}$
$\boldsymbol{A^{kSZ}}$	0.01	< 5.56	10^5D/H	2.621	$2.658^{+0.046}_{-0.065}$	$\sigma_8(0.61)$	0.5934	$0.578^{+0.020}_{-0.012}$
$\boldsymbol{A^{dustTT}_{100}}$	8.89	9.1 ± 1.9	Age/Gyr	13.728	$13.64^{+0.19}_{-0.067}$	$f\sigma_8(2.33)$	0.2993	$0.292^{+0.010}_{-0.0063}$
$\boldsymbol{A^{dustTT}_{143}}$	10.79	10.8 ± 1.8	z_*	1090.053	$1090.29^{+0.35}_{-0.45}$	$\sigma_8(2.33)$	0.3088	$0.301^{+0.011}_{-0.0067}$
$\boldsymbol{A^{dustTT}_{143\times217}}$	19.20	18.4 ± 3.3	r_*	144.14	$143.1^{+1.9}_{-0.73}$	f^{143}_{2000}	30.59	32.6 ± 3.2
$\boldsymbol{A^{dustTT}_{217}}$	94.2	93.3 ± 7.3	$100\theta_*$	1.04108	$1.04083^{+0.00063}_{-0.00049}$	$f^{143\times217}_{2000}$	33.32	34.7 ± 2.2
$\boldsymbol{c_{100}}$	0.99967	0.99961 ± 0.00061	$D_M(z_*)$/Gpc	13.845	$13.75^{+0.18}_{-0.069}$	f^{217}_{2000}	107.92	109.1 ± 2.1
$\boldsymbol{c_{217}}$	0.99826	0.99829 ± 0.00062	z_{drag}	1059.86	$1060.16^{+0.54}_{-0.76}$	χ^2_{simall}	396.28	397.2 ± 2.0
H_0	68.18	$68.47^{+0.67}_{-1.3}$	r_{drag}	146.82	$145.8^{+2.0}_{-0.77}$	χ^2_{lowl}	22.61	22.3 ± 1.1
Ω_Λ	0.6927	0.6903 ± 0.0079	k_D	0.14084	$0.14157^{+0.00068}_{-0.0015}$	χ^2_{plik}	760.1	775.2 ± 6.0
Ω_m	0.3073	0.3097 ± 0.0079	$100\theta_D$	0.161116	$0.16141^{+0.00036}_{-0.00058}$	χ^2_{6DF}	0.0062	0.063 ± 0.082
$\Omega_m h^2$	0.14288	$0.1451^{+0.0018}_{-0.0038}$	z_{eq}	3366.1	3321^{+59}_{-25}	χ^2_{MGS}	1.47	1.36 ± 0.56
$\Omega_\nu h^2$	0.00065	$0.002500^{+0.000091}_{-0.0019}$	k_{eq}	0.010323	$0.01029^{+0.00021}_{-0.00013}$	$\chi^2_{DR12BAO}$	3.79	4.9 ± 1.8
$\Omega_m h^3$	0.09741	$0.0994^{+0.0013}_{-0.0039}$	$100\theta_{eq}$	0.8197	$0.8294^{+0.0042}_{-0.013}$	χ^2_{prior}	1.65	7.4 ± 3.7
σ_8	0.8121	$0.792^{+0.027}_{-0.016}$	$100\theta_{s,eq}$	0.45278	$0.4578^{+0.0021}_{-0.0065}$	χ^2_{BAO}	5.27	6.3 ± 1.5
S_8	0.8220	$0.804^{+0.027}_{-0.019}$	$H(0.15)$	73.44	$73.79^{+0.61}_{-1.3}$	χ^2_{CMB}	1179.0	1194.7 ± 5.8

Best-fit $\chi^2_{eff} = 1185.94$; $\Delta\chi^2_{eff} = 0.20$; $\bar{\chi}^2_{eff} = 1208.40$; $\Delta\bar{\chi}^2_{eff} = 2.37$; $R - 1 = 0.03028$

χ^2_{eff}: BAO - 6DF: 0.01 (Δ -0.02) MGS: 1.47 (Δ 0.19) DR12BAO: 3.79 (Δ -0.40) CMB - simall_100x143_offlike5_EE_Aplanck_B: 396.28 (Δ 0.39) commander_dx12_v3_2_29: 22.61 (Δ -0.22) plik_rd12_HM_v22_TT: 760.13 (Δ 0.03)

8.14 base_nnu_meffsterile_plikHM_TT_lowl_lowE_BAO_post_Pantheon

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022325	0.02236 ± 0.00021	$\sigma_8\Omega_m^{0.25}$	0.6058	$0.591^{+0.019}_{-0.012}$	$D_M(0.38)$	1514.0	1509^{+27}_{-13}
$\boldsymbol{\Omega_c h^2}$	0.12045	$0.1204^{+0.0044}_{-0.0036}$	$\sigma_8/h^{0.5}$	0.9843	$0.957^{+0.030}_{-0.016}$	$H(0.51)$	90.45	$90.84^{+0.55}_{-1.4}$
$\boldsymbol{100\theta_{MC}}$	1.04084	$1.04074^{+0.00054}_{-0.00047}$	$r_{drag}h$	100.17	99.94 ± 0.95	$D_M(0.51)$	1962.0	1955^{+34}_{-16}
$\boldsymbol{\tau}$	0.0566	0.0549 ± 0.0082	$\langle d^2\rangle^{1/2}$	2.4266	2.409 ± 0.029	$H(0.61)$	96.07	$96.50^{+0.54}_{-1.4}$
$\boldsymbol{m^{eff}_{\nu,\,sterile}}$ [eV]	0.000	< 0.154	z_{re}	7.95	7.78 ± 0.84	$D_M(0.61)$	2283.6	2275^{+38}_{-18}
$\boldsymbol{N_{eff}}$	3.153	< 3.31	$10^9 A_s$	2.1120	$2.107^{+0.036}_{-0.041}$	$H(2.33)$	237.16	$238.5^{+1.4}_{-3.2}$
$\boldsymbol{\ln(10^{10}A_s)}$	3.0502	3.048 ± 0.019	$10^9 A_s e^{-2\tau}$	1.8858	$1.888^{+0.014}_{-0.019}$	$D_M(2.33)$	5720	5695^{+81}_{-31}
$\boldsymbol{n_s}$	0.9715	$0.9735^{+0.0061}_{-0.0088}$	D_{40}	1219.4	1214 ± 15	$f\sigma_8(0.15)$	0.4558	$0.445^{+0.015}_{-0.0096}$
$\boldsymbol{y_{cal}}$	1.00076	1.0006 ± 0.0025	D_{220}	5720.1	5720 ± 40	$\sigma_8(0.15)$	0.7526	$0.733^{+0.024}_{-0.015}$
$\boldsymbol{A^{CIB}_{217}}$	50.0	49 ± 7	D_{810}	2540.1	2538 ± 14	$f\sigma_8(0.38)$	0.4753	$0.464^{+0.015}_{-0.0093}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.19	—	D_{1420}	816.2	814.3 ± 5.0	$\sigma_8(0.38)$	0.6677	$0.650^{+0.022}_{-0.014}$
$\boldsymbol{A^{tSZ}_{143}}$	7.08	4.9 ± 2.0	D_{2000}	230.01	228.7 ± 2.0	$f\sigma_8(0.51)$	0.4744	$0.463^{+0.015}_{-0.0092}$
$\boldsymbol{A^{PS}_{100}}$	256.5	267 ± 28	$n_{s,0.002}$	0.9715	$0.9735^{+0.0061}_{-0.0088}$	$\sigma_8(0.51)$	0.6251	$0.609^{+0.021}_{-0.013}$
$\boldsymbol{A^{PS}_{143}}$	48.0	51 ± 8	Y_P	0.24680	$0.24808^{+0.00094}_{-0.0027}$	$f\sigma_8(0.61)$	0.4698	$0.458^{+0.015}_{-0.0090}$
$\boldsymbol{A^{PS}_{143\times217}}$	43.6	44^{+9}_{-10}	Y_P^{BBN}	0.24814	$0.24941^{+0.00094}_{-0.0027}$	$\sigma_8(0.61)$	0.5949	$0.579^{+0.020}_{-0.012}$
$\boldsymbol{A^{PS}_{217}}$	117.6	115 ± 10	10^5D/H	2.631	$2.659^{+0.047}_{-0.066}$	$f\sigma_8(2.33)$	0.3001	$0.2927^{+0.0099}_{-0.0062}$
$\boldsymbol{A^{kSZ}}$	0.00	< 5.56	Age/Gyr	13.695	$13.63^{+0.19}_{-0.074}$	$\sigma_8(2.33)$	0.3096	$0.302^{+0.010}_{-0.0066}$
$\boldsymbol{A^{dust TT}_{100}}$	8.91	9.1 ± 1.9	z_*	1090.122	$1090.28^{+0.35}_{-0.46}$	f^{143}_{2000}	30.74	32.6 ± 3.2
$\boldsymbol{A^{dust TT}_{143}}$	10.81	10.8 ± 1.8	r_*	143.82	$143.1^{+2.0}_{-0.79}$	$f^{143\times217}_{2000}$	33.46	34.7 ± 2.3
$\boldsymbol{A^{dust TT}_{143\times217}}$	19.17	18.4 ± 3.3	$100\theta_*$	1.04096	$1.04082^{+0.00064}_{-0.00050}$	f^{217}_{2000}	107.96	109.1 ± 2.1
$\boldsymbol{A^{dust TT}_{217}}$	94.0	93.3 ± 7.3	$D_M(z_*)$/Gpc	13.816	$13.75^{+0.19}_{-0.074}$	χ^2_{simall}	396	308 ± 200
$\boldsymbol{c_{100}}$	0.99966	0.99961 ± 0.00061	z_{drag}	1059.93	$1060.20^{+0.54}_{-0.78}$	χ^2_{lowl}	22	112 ± 200
$\boldsymbol{c_{217}}$	0.99828	0.99829 ± 0.00062	r_{drag}	146.49	$145.7^{+2.1}_{-0.83}$	χ^2_{plik}	760.3	775.3 ± 5.9
H_0	68.38	$68.60^{+0.68}_{-1.3}$	k_D	0.14106	$0.14161^{+0.00072}_{-0.0015}$	χ^2_{JLA}	1036.125	1036.31 ± 0.35
Ω_Λ	0.6933	0.6915 ± 0.0074	$100\theta_D$	0.161200	$0.16142^{+0.00038}_{-0.00059}$	χ^2_{6DF}	0.004	0.38 ± 0.64
Ω_m	0.3067	0.3085 ± 0.0074	z_{eq}	3363.3	3319^{+57}_{-24}	χ^2_{MGS}	1.54	1.12 ± 0.76
$\Omega_m h^2$	0.14342	$0.1451^{+0.0019}_{-0.0039}$	k_{eq}	0.010339	$0.01029^{+0.00020}_{-0.00013}$	$\chi^2_{DR12BAO}$	3.73	4.6 ± 1.5
$\Omega_\nu h^2$	0.00065	$0.002386^{+0.000073}_{-0.0018}$	$100\theta_{eq}$	0.8202	$0.8296^{+0.0041}_{-0.012}$	χ^2_{prior}	1.49	7.4 ± 3.7
$\Omega_m h^3$	0.09807	$0.0996^{+0.0014}_{-0.0041}$	$100\theta_{s,eq}$	0.45302	$0.4579^{+0.0021}_{-0.0062}$	χ^2_{BAO}	5.27	6.1 ± 1.2
σ_8	0.8140	$0.793^{+0.026}_{-0.016}$	$H(0.15)$	73.65	$73.90^{+0.63}_{-1.3}$	χ^2_{CMB}	1179.2	1194.7 ± 5.8
S_8	0.8230	$0.804^{+0.027}_{-0.018}$	$D_M(0.15)$	634.3	$632^{+12}_{-6.1}$			
$\sigma_8\Omega_m^{0.5}$	0.4508	$0.440^{+0.015}_{-0.0099}$	$H(0.38)$	83.74	$84.08^{+0.57}_{-1.4}$			

Best-fit $\chi^2_{eff} = 2222.09$; $\bar{\chi}^2_{eff} = 2244.58$; $R - 1 = 0.03271$

χ^2_{eff}: BAO - 6DF: 0.00 MGS: 1.54 DR12BAO: 3.73 CMB - simall_100x143_offlike5_EE_Aplanck_B: 396.47 commander_dx12_v3_2_29: 22.43 plik_rd12_HM_v22_TT: 760.30 SN - JLA Pantheon: 1036.12

8.15 base_nnu_meffsterile_plikHM_TT_lowl_lowE_BAO_post_Aver15

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02230 ± 0.00020	$\sigma_8\Omega_m^{0.25}$	$0.588^{+0.020}_{-0.012}$	$D_M(0.38)$	$1520^{+18}_{-9.9}$
$\boldsymbol{\Omega_c h^2}$	$0.1187^{+0.0040}_{-0.0026}$	$\sigma_8/h^{0.5}$	$0.955^{+0.031}_{-0.016}$	$H(0.51)$	$90.25^{+0.30}_{-0.87}$
$\boldsymbol{100\theta_{MC}}$	1.04086 ± 0.00046	$r_{drag}h$	99.66 ± 0.97	$D_M(0.51)$	1969^{+22}_{-12}
$\boldsymbol{\tau}$	0.0544 ± 0.0081	$\langle d^2\rangle^{1/2}$	2.417 ± 0.029	$H(0.61)$	$95.90^{+0.27}_{-0.87}$
$\boldsymbol{m^{eff}_{\nu,\,sterile}}$ [eV]	< 0.203	z_{re}	7.71 ± 0.83	$D_M(0.61)$	2292^{+25}_{-12}
$\boldsymbol{N_{eff}}$	< 3.19	$10^9 A_s$	2.099 ± 0.037	$H(2.33)$	$237.39^{+0.97}_{-2.1}$
$\boldsymbol{\ln(10^{10}A_s)}$	3.044 ± 0.017	$10^9 A_s e^{-2\tau}$	$1.883^{+0.012}_{-0.015}$	$D_M(2.33)$	5729^{+50}_{-15}
$\boldsymbol{n_s}$	$0.9699^{+0.0052}_{-0.0067}$	D_{40}	1219 ± 14	$f\sigma_8(0.15)$	$0.444^{+0.015}_{-0.0098}$
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0025	D_{220}	5720 ± 40	$\sigma_8(0.15)$	$0.728^{+0.024}_{-0.013}$
$\boldsymbol{A^{CIB}_{217}}$	48 ± 7	D_{810}	2537 ± 14	$f\sigma_8(0.38)$	$0.462^{+0.015}_{-0.0092}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{1420}	814.6 ± 5.0	$\sigma_8(0.38)$	$0.645^{+0.022}_{-0.012}$
$\boldsymbol{A^{tSZ}_{143}}$	5.0 ± 2.0	D_{2000}	229.1 ± 1.8	$f\sigma_8(0.51)$	$0.461^{+0.015}_{-0.0088}$
$\boldsymbol{A^{PS}_{100}}$	265 ± 28	$n_{s,0.002}$	$0.9699^{+0.0052}_{-0.0067}$	$\sigma_8(0.51)$	$0.604^{+0.020}_{-0.011}$
$\boldsymbol{A^{PS}_{143}}$	50 ± 8	Y_P	$0.24694^{+0.00040}_{-0.0016}$	$f\sigma_8(0.61)$	$0.456^{+0.015}_{-0.0085}$
$\boldsymbol{A^{PS}_{143\times217}}$	44^{+9}_{-10}	Y_P^{BBN}	$0.24827^{+0.00040}_{-0.0016}$	$\sigma_8(0.61)$	$0.575^{+0.020}_{-0.011}$
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	10^5D/H	$2.640^{+0.040}_{-0.051}$	$f\sigma_8(2.33)$	$0.2902^{+0.0099}_{-0.0054}$
$\boldsymbol{A^{kSZ}}$	< 5.28	Age/Gyr	$13.72^{+0.12}_{-0.035}$	$\sigma_8(2.33)$	$0.299^{+0.010}_{-0.0057}$
$\boldsymbol{A^{dustTT}_{100}}$	9.0 ± 1.9	z_*	$1090.17^{+0.32}_{-0.37}$	f^{143}_{2000}	32.0 ± 3.0
$\boldsymbol{A^{dustTT}_{143}}$	10.8 ± 1.8	r_*	$143.8^{+1.2}_{-0.43}$	$f^{143\times217}_{2000}$	34.2 ± 2.1
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.4 ± 3.3	$100\theta_*$	$1.04099^{+0.00052}_{-0.00044}$	f^{217}_{2000}	108.7 ± 2.0
$\boldsymbol{A^{dustTT}_{217}}$	93.4 ± 7.3	$D_M(z_*)$/Gpc	$13.81^{+0.11}_{-0.042}$	χ^2_{simall}	310 ± 200
$\boldsymbol{c_{100}}$	0.99960 ± 0.00061	z_{drag}	$1059.92^{+0.49}_{-0.57}$	χ^2_{lowl}	109 ± 200
$\boldsymbol{c_{217}}$	0.99828 ± 0.00062	r_{drag}	$146.5^{+1.3}_{-0.46}$	χ^2_{plik}	774.3 ± 5.7
H_0	$68.04^{+0.57}_{-0.91}$	k_D	$0.14106^{+0.00053}_{-0.00097}$	χ^2_{Aver15}	0.84 ± 0.83
Ω_Λ	0.6891 ± 0.0076	$100\theta_D$	$0.16122^{+0.00029}_{-0.00043}$	χ^2_{6DF}	0.34 ± 0.57
Ω_m	0.3109 ± 0.0076	z_{eq}	3317^{+69}_{-24}	χ^2_{MGS}	1.02 ± 0.70
$\Omega_m h^2$	$0.1439^{+0.0014}_{-0.0026}$	k_{eq}	$0.01023^{+0.00021}_{-0.00011}$	$\chi^2_{DR12BAO}$	5.0 ± 1.8
$\Omega_\nu h^2$	$0.002830^{+0.000013}_{-0.0022}$	$100\theta_{eq}$	$0.8303^{+0.0040}_{-0.015}$	χ^2_{prior}	7.4 ± 3.7
$\Omega_m h^3$	$0.09788^{+0.00065}_{-0.0024}$	$100\theta_{s,eq}$	$0.4583^{+0.0020}_{-0.0077}$	χ^2_{BAO}	6.4 ± 1.5
σ_8	$0.787^{+0.026}_{-0.015}$	$H(0.15)$	$73.34^{+0.49}_{-0.89}$	χ^2_{CMB}	1194.1 ± 5.7
S_8	$0.802^{+0.027}_{-0.019}$	$D_M(0.15)$	$637.3^{+8.0}_{-4.9}$		
$\sigma_8\Omega_m^{0.5}$	$0.439^{+0.015}_{-0.010}$	$H(0.38)$	$83.50^{+0.36}_{-0.87}$		

$\bar{\chi}^2_{eff} = 1208.67$; $R - 1 = 0.03995$

8.16 base_nnu_meffsterile_plikHM_TT_lowl_lowE_BAO_post_Cooke17_Aver15

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02231 ± 0.00019	$\sigma_8\Omega_m^{0.25}$	$0.587^{+0.020}_{-0.011}$	$D_M(0.38)$	$1521^{+17}_{-9.6}$
$\boldsymbol{\Omega_c h^2}$	$0.1185^{+0.0039}_{-0.0024}$	$\sigma_8/h^{0.5}$	$0.954^{+0.031}_{-0.016}$	$H(0.51)$	$90.20^{+0.28}_{-0.80}$
$\boldsymbol{100\theta_{MC}}$	1.04088 ± 0.00045	$r_{drag}h$	99.66 ± 0.96	$D_M(0.51)$	1970^{+21}_{-11}
$\boldsymbol{\tau}$	0.0545 ± 0.0081	$\langle d^2\rangle^{1/2}$	2.417 ± 0.029	$H(0.61)$	$95.84^{+0.25}_{-0.80}$
$\boldsymbol{m^{eff}_{\nu,\,sterile}}$ [eV]	< 0.212	z_{re}	7.71 ± 0.83	$D_M(0.61)$	2293^{+24}_{-12}
$\boldsymbol{N_{eff}}$	< 3.17	$10^9 A_s$	2.099 ± 0.037	$H(2.33)$	$237.24^{+0.95}_{-1.9}$
$\boldsymbol{\ln(10^{10}A_s)}$	3.044 ± 0.017	$10^9 A_s e^{-2\tau}$	$1.882^{+0.012}_{-0.014}$	$D_M(2.33)$	5732^{+45}_{-14}
$\boldsymbol{n_s}$	$0.9696^{+0.0051}_{-0.0065}$	D_{40}	1220 ± 14	$f\sigma_8(0.15)$	$0.443^{+0.015}_{-0.0097}$
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0025	D_{220}	5721 ± 39	$\sigma_8(0.15)$	$0.727^{+0.025}_{-0.013}$
$\boldsymbol{A^{CIB}_{217}}$	48 ± 7	D_{810}	2537 ± 14	$f\sigma_8(0.38)$	$0.461^{+0.015}_{-0.0090}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{1420}	814.8 ± 4.9	$\sigma_8(0.38)$	$0.645^{+0.022}_{-0.012}$
$\boldsymbol{A^{tSZ}_{143}}$	5.0 ± 2.0	D_{2000}	229.2 ± 1.7	$f\sigma_8(0.51)$	$0.460^{+0.015}_{-0.0086}$
$\boldsymbol{A^{PS}_{100}}$	265 ± 28	$n_{s,0.002}$	$0.9696^{+0.0051}_{-0.0065}$	$\sigma_8(0.51)$	$0.603^{+0.021}_{-0.011}$
$\boldsymbol{A^{PS}_{143}}$	50 ± 8	Y_P	$0.24680^{+0.00035}_{-0.0014}$	$f\sigma_8(0.61)$	$0.455^{+0.015}_{-0.0084}$
$\boldsymbol{A^{PS}_{143\times217}}$	44^{+9}_{-10}	Y_P^{BBN}	$0.24813^{+0.00035}_{-0.0015}$	$\sigma_8(0.61)$	$0.574^{+0.020}_{-0.010}$
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	10^5D/H	$2.634^{+0.037}_{-0.044}$	$f\sigma_8(2.33)$	$0.290^{+0.010}_{-0.0053}$
$\boldsymbol{A^{kSZ}}$	< 5.20	Age/Gyr	$13.72^{+0.11}_{-0.032}$	$\sigma_8(2.33)$	$0.299^{+0.010}_{-0.0056}$
$\boldsymbol{A^{dustTT}_{100}}$	9.0 ± 1.9	z_*	1090.14 ± 0.31	f^{143}_{2000}	31.8 ± 2.9
$\boldsymbol{A^{dustTT}_{143}}$	10.8 ± 1.8	r_*	$143.9^{+1.1}_{-0.41}$	$f^{143\times217}_{2000}$	34.1 ± 2.0
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.4 ± 3.3	$100\theta_*$	$1.04102^{+0.00049}_{-0.00043}$	f^{217}_{2000}	108.6 ± 1.9
$\boldsymbol{A^{dustTT}_{217}}$	93.4 ± 7.3	$D_M(z_*)$/Gpc	$13.82^{+0.10}_{-0.040}$	χ^2_{simall}	313 ± 200
$\boldsymbol{c_{100}}$	0.99960 ± 0.00061	z_{drag}	$1059.92^{+0.46}_{-0.55}$	χ^2_{lowl}	107 ± 200
$\boldsymbol{c_{217}}$	0.99828 ± 0.00062	r_{drag}	$146.6^{+1.2}_{-0.44}$	χ^2_{plik}	774.2 ± 5.7
H_0	$68.00^{+0.55}_{-0.86}$	k_D	$0.14101^{+0.00051}_{-0.00091}$	χ^2_{Aver15}	0.76 ± 0.71
Ω_Λ	0.6892 ± 0.0075	$100\theta_D$	$0.16118^{+0.00027}_{-0.00037}$	$\chi^2_{Cooke17}$	0.22 ± 0.34
Ω_m	0.3108 ± 0.0075	z_{eq}	3316^{+71}_{-24}	χ^2_{6DF}	0.33 ± 0.56
$\Omega_m h^2$	$0.1437^{+0.0014}_{-0.0024}$	k_{eq}	$0.01022^{+0.00021}_{-0.00010}$	χ^2_{MGS}	1.03 ± 0.69
$\Omega_\nu h^2$	$0.00290^{+0.00017}_{-0.0023}$	$100\theta_{eq}$	$0.8306^{+0.0040}_{-0.015}$	$\chi^2_{DR12BAO}$	5.0 ± 1.8
$\Omega_m h^3$	$0.09770^{+0.00060}_{-0.0022}$	$100\theta_{s,eq}$	$0.4585^{+0.0021}_{-0.0078}$	χ^2_{prior}	7.4 ± 3.7
σ_8	$0.787^{+0.026}_{-0.014}$	$H(0.15)$	$73.30^{+0.47}_{-0.83}$	χ^2_{BAO}	6.4 ± 1.5
S_8	$0.801^{+0.027}_{-0.018}$	$D_M(0.15)$	$637.7^{+7.6}_{-4.8}$	χ^2_{CMB}	1194.0 ± 5.6
$\sigma_8\Omega_m^{0.5}$	$0.438^{+0.015}_{-0.010}$	$H(0.38)$	$83.45^{+0.34}_{-0.80}$	χ^2_{Abund}	0.98 ± 0.93

$\bar{\chi}^2_{eff} = 1208.67$; $R - 1 = 0.03900$

8.17 base_nnu_meffsterile_plikHM_TT_lowl_lowE_BAO_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02235 ± 0.00021	$\sigma_8\Omega_m^{0.5}$	$0.441^{+0.015}_{-0.010}$	$D_M(0.15)$	$633^{+12}_{-6.0}$
$\boldsymbol{\Omega_c h^2}$	$0.1203^{+0.0044}_{-0.0035}$	$\sigma_8\Omega_m^{0.25}$	$0.591^{+0.020}_{-0.012}$	$H(0.38)$	$83.99^{+0.54}_{-1.3}$
$\boldsymbol{100\theta_{MC}}$	$1.04074^{+0.00054}_{-0.00047}$	$\sigma_8/h^{0.5}$	$0.958^{+0.031}_{-0.016}$	$D_M(0.38)$	1511^{+26}_{-13}
$\boldsymbol{\tau}$	$0.0559^{+0.0057}_{-0.0086}$	$r_{drag}h$	99.8 ± 1.0	$H(0.51)$	$90.77^{+0.51}_{-1.4}$
$\boldsymbol{m^{eff}_{\nu,\,sterile}}$ [eV]	< 0.165	$\langle d^2\rangle^{1/2}$	2.414 ± 0.029	$D_M(0.51)$	1957^{+33}_{-15}
$\boldsymbol{N_{eff}}$	< 3.30	z_{re}	$7.88^{+0.64}_{-0.85}$	$H(0.61)$	$96.43^{+0.50}_{-1.4}$
$\boldsymbol{\ln(10^{10}A_s)}$	$3.050^{+0.014}_{-0.019}$	$10^9 A_s$	$2.111^{+0.030}_{-0.041}$	$D_M(0.61)$	2278^{+38}_{-17}
$\boldsymbol{n_s}$	$0.9730^{+0.0061}_{-0.0088}$	$10^9 A_s e^{-2\tau}$	$1.888^{+0.014}_{-0.019}$	$H(2.33)$	$238.5^{+1.4}_{-3.1}$
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0025	D_{40}	1215 ± 16	$D_M(2.33)$	5698^{+79}_{-29}
$\boldsymbol{A^{CIB}_{217}}$	49 ± 7	D_{220}	5720 ± 40	$f\sigma_8(0.15)$	$0.446^{+0.015}_{-0.0096}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{810}	2538 ± 14	$\sigma_8(0.15)$	$0.733^{+0.025}_{-0.015}$
$\boldsymbol{A^{tSZ}_{143}}$	4.9 ± 2.0	D_{1420}	814.3 ± 5.0	$f\sigma_8(0.38)$	$0.464^{+0.016}_{-0.0092}$
$\boldsymbol{A^{PS}_{100}}$	267 ± 28	D_{2000}	228.7 ± 2.0	$\sigma_8(0.38)$	$0.650^{+0.022}_{-0.013}$
$\boldsymbol{A^{PS}_{143}}$	51 ± 8	$n_{s,0.002}$	$0.9730^{+0.0061}_{-0.0088}$	$f\sigma_8(0.51)$	$0.463^{+0.015}_{-0.0090}$
$\boldsymbol{A^{PS}_{143\times217}}$	44^{+9}_{-10}	Y_P	$0.24799^{+0.00087}_{-0.0026}$	$\sigma_8(0.51)$	$0.608^{+0.021}_{-0.013}$
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	Y_P^{BBN}	$0.24933^{+0.00087}_{-0.0026}$	$f\sigma_8(0.61)$	$0.459^{+0.015}_{-0.0089}$
$\boldsymbol{A^{kSZ}}$	< 5.54	10^5D/H	$2.658^{+0.046}_{-0.065}$	$\sigma_8(0.61)$	$0.579^{+0.020}_{-0.012}$
$\boldsymbol{A^{dust TT}_{100}}$	9.1 ± 1.9	Age/Gyr	$13.64^{+0.19}_{-0.068}$	$f\sigma_8(2.33)$	$0.292^{+0.010}_{-0.0061}$
$\boldsymbol{A^{dust TT}_{143}}$	10.8 ± 1.8	z_*	$1090.29^{+0.35}_{-0.45}$	$\sigma_8(2.33)$	$0.301^{+0.011}_{-0.0066}$
$\boldsymbol{A^{dust TT}_{143\times217}}$	18.4 ± 3.3	r_*	$143.1^{+1.9}_{-0.74}$	f^{143}_{2000}	32.6 ± 3.2
$\boldsymbol{A^{dust TT}_{217}}$	93.3 ± 7.3	$100\theta_*$	$1.04082^{+0.00063}_{-0.00049}$	$f^{143\times217}_{2000}$	34.7 ± 2.2
$\boldsymbol{c_{100}}$	0.99961 ± 0.00061	$D_M(z_*)$/Gpc	$13.75^{+0.18}_{-0.070}$	f^{217}_{2000}	109.1 ± 2.1
$\boldsymbol{c_{217}}$	0.99829 ± 0.00062	z_{drag}	$1060.18^{+0.53}_{-0.77}$	χ^2_{simall}	397.2 ± 2.0
H_0	$68.49^{+0.68}_{-1.3}$	r_{drag}	$145.7^{+2.0}_{-0.78}$	χ^2_{lowl}	22.3 ± 1.1
Ω_Λ	0.6904 ± 0.0079	k_D	$0.14159^{+0.00069}_{-0.0015}$	χ^2_{plik}	775.0 ± 5.9
Ω_m	0.3096 ± 0.0079	$100\theta_D$	$0.16141^{+0.00037}_{-0.00058}$	χ^2_{6DF}	0.062 ± 0.081
$\Omega_m h^2$	$0.1452^{+0.0019}_{-0.0038}$	z_{eq}	3320^{+59}_{-24}	χ^2_{MGS}	1.37 ± 0.56
$\Omega_\nu h^2$	$0.002495^{+0.000085}_{-0.0019}$	k_{eq}	$0.01029^{+0.00021}_{-0.00013}$	$\chi^2_{DR12BAO}$	4.9 ± 1.7
$\Omega_m h^3$	$0.0994^{+0.0013}_{-0.0039}$	$100\theta_{eq}$	$0.8294^{+0.0041}_{-0.012}$	χ^2_{prior}	7.4 ± 3.7
σ_8	$0.793^{+0.027}_{-0.016}$	$100\theta_{s,eq}$	$0.4578^{+0.0021}_{-0.0065}$	χ^2_{BAO}	6.3 ± 1.4
S_8	$0.805^{+0.027}_{-0.018}$	$H(0.15)$	$73.81^{+0.61}_{-1.3}$	χ^2_{CMB}	1194.5 ± 5.8

$\bar{\chi}^2_{eff} = 1208.20$; $\Delta\bar{\chi}^2_{eff} = 2.44$; $R - 1 = 0.02851$

8.18 base_nnu_meffsterile_plikHM_TT_lowl_lowE_BAO_post_Pantheon_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02237 ± 0.00021	$\sigma_8\Omega_m^{0.25}$	$0.591^{+0.019}_{-0.012}$	$D_M(0.38)$	1508^{+26}_{-13}
$\boldsymbol{\Omega_c h^2}$	$0.1204^{+0.0043}_{-0.0036}$	$\sigma_8/h^{0.5}$	$0.958^{+0.030}_{-0.015}$	$H(0.51)$	$90.86^{+0.55}_{-1.4}$
$\boldsymbol{100\theta_{MC}}$	$1.04074^{+0.00054}_{-0.00047}$	$r_{drag}h$	99.95 ± 0.95	$D_M(0.51)$	1955^{+33}_{-16}
$\boldsymbol{\tau}$	$0.0559^{+0.0058}_{-0.0085}$	$\langle d^2\rangle^{1/2}$	2.411 ± 0.029	$H(0.61)$	$96.52^{+0.54}_{-1.4}$
$\boldsymbol{m^{eff}_{\nu,\,sterile}}$ [eV]	< 0.153	z_{re}	$7.89^{+0.64}_{-0.85}$	$D_M(0.61)$	2275^{+38}_{-18}
$\boldsymbol{N_{eff}}$	< 3.31	$10^9 A_s$	$2.112^{+0.030}_{-0.041}$	$H(2.33)$	$238.5^{+1.5}_{-3.3}$
$\boldsymbol{\ln(10^{10}A_s)}$	$3.050^{+0.015}_{-0.019}$	$10^9 A_s e^{-2\tau}$	$1.888^{+0.014}_{-0.020}$	$D_M(2.33)$	5694^{+82}_{-31}
$\boldsymbol{n_s}$	$0.9737^{+0.0062}_{-0.0087}$	D_{40}	1214 ± 15	$f\sigma_8(0.15)$	$0.446^{+0.015}_{-0.0095}$
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0025	D_{220}	5720 ± 40	$\sigma_8(0.15)$	$0.734^{+0.024}_{-0.015}$
$\boldsymbol{A^{CIB}_{217}}$	49 ± 7	D_{810}	2538 ± 14	$f\sigma_8(0.38)$	$0.464^{+0.015}_{-0.0092}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{1420}	814.3 ± 5.0	$\sigma_8(0.38)$	$0.651^{+0.022}_{-0.013}$
$\boldsymbol{A^{tSZ}_{143}}$	4.9 ± 2.0	D_{2000}	228.7 ± 2.0	$f\sigma_8(0.51)$	$0.463^{+0.015}_{-0.0090}$
$\boldsymbol{A^{PS}_{100}}$	267 ± 28	$n_{s,0.002}$	$0.9737^{+0.0062}_{-0.0087}$	$\sigma_8(0.51)$	$0.609^{+0.020}_{-0.013}$
$\boldsymbol{A^{PS}_{143}}$	51 ± 8	Y_P	$0.24811^{+0.00095}_{-0.0027}$	$f\sigma_8(0.61)$	$0.459^{+0.015}_{-0.0089}$
$\boldsymbol{A^{PS}_{143\times217}}$	44^{+9}_{-10}	Y_P^{BBN}	$0.24944^{+0.00095}_{-0.0027}$	$\sigma_8(0.61)$	$0.580^{+0.020}_{-0.012}$
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	10^5D/H	$2.659^{+0.047}_{-0.066}$	$f\sigma_8(2.33)$	$0.2930^{+0.0099}_{-0.0061}$
$\boldsymbol{A^{kSZ}}$	< 5.54	Age/Gyr	$13.63^{+0.19}_{-0.074}$	$\sigma_8(2.33)$	$0.302^{+0.010}_{-0.0065}$
$\boldsymbol{A^{dustTT}_{100}}$	9.1 ± 1.9	z_*	$1090.28^{+0.35}_{-0.46}$	f^{143}_{2000}	32.6 ± 3.2
$\boldsymbol{A^{dustTT}_{143}}$	10.8 ± 1.8	r_*	$143.0^{+2.0}_{-0.80}$	$f^{143\times217}_{2000}$	34.7 ± 2.3
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.5 ± 3.3	$100\theta_*$	$1.04082^{+0.00064}_{-0.00050}$	f^{217}_{2000}	109.1 ± 2.1
$\boldsymbol{A^{dustTT}_{217}}$	93.3 ± 7.3	$D_M(z_*)$/Gpc	$13.74^{+0.19}_{-0.076}$	χ^2_{simall}	308 ± 200
$\boldsymbol{c_{100}}$	0.99961 ± 0.00061	z_{drag}	$1060.21^{+0.54}_{-0.78}$	χ^2_{lowl}	112 ± 200
$\boldsymbol{c_{217}}$	0.99829 ± 0.00062	r_{drag}	$145.7^{+2.1}_{-0.84}$	χ^2_{plik}	775.2 ± 5.9
H_0	$68.61^{+0.69}_{-1.3}$	k_D	$0.14162^{+0.00073}_{-0.0015}$	χ^2_{JLA}	1036.30 ± 0.35
Ω_Λ	0.6916 ± 0.0074	$100\theta_D$	$0.16142^{+0.00038}_{-0.00059}$	χ^2_{6DF}	0.38 ± 0.64
Ω_m	0.3084 ± 0.0074	z_{eq}	3319^{+56}_{-24}	χ^2_{MGS}	1.12 ± 0.77
$\Omega_m h^2$	$0.1452^{+0.0019}_{-0.0040}$	k_{eq}	$0.01029^{+0.00020}_{-0.00013}$	$\chi^2_{DR12BAO}$	4.6 ± 1.5
$\Omega_\nu h^2$	$0.002380^{+0.000074}_{-0.0018}$	$100\theta_{eq}$	$0.8296^{+0.0041}_{-0.012}$	χ^2_{prior}	7.4 ± 3.7
$\Omega_m h^3$	$0.0996^{+0.0014}_{-0.0041}$	$100\theta_{s,eq}$	$0.4579^{+0.0021}_{-0.0062}$	χ^2_{BAO}	6.1 ± 1.2
σ_8	$0.794^{+0.026}_{-0.016}$	$H(0.15)$	$73.92^{+0.64}_{-1.3}$	χ^2_{CMB}	1194.6 ± 5.7
S_8	$0.804^{+0.026}_{-0.018}$	$D_M(0.15)$	$632^{+12}_{-6.2}$		
$\sigma_8\Omega_m^{0.5}$	$0.441^{+0.014}_{-0.0098}$	$H(0.38)$	$84.10^{+0.58}_{-1.4}$		

$\bar{\chi}^2_{eff} = 2244.39$; $R - 1 = 0.03118$

8.19 base_nnu_meffsterile_plikHM_TT_lowl_lowE_BAO_post_Aver15_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02231 ± 0.00020	$\sigma_8\Omega_m^{0.25}$	$0.589^{+0.020}_{-0.011}$	$D_M(0.38)$	$1520^{+18}_{-9.9}$
$\boldsymbol{\Omega_c h^2}$	$0.1187^{+0.0040}_{-0.0026}$	$\sigma_8/h^{0.5}$	$0.956^{+0.031}_{-0.016}$	$H(0.51)$	$90.27^{+0.30}_{-0.87}$
$\boldsymbol{100\theta_{MC}}$	1.04086 ± 0.00046	$r_{drag}h$	99.68 ± 0.97	$D_M(0.51)$	1969^{+22}_{-12}
$\boldsymbol{\tau}$	$0.0556^{+0.0056}_{-0.0084}$	$\langle d^2\rangle^{1/2}$	2.419 ± 0.028	$H(0.61)$	$95.91^{+0.27}_{-0.88}$
$\boldsymbol{m^{eff}_{\nu,\,sterile}}$ [eV]	< 0.201	z_{re}	$7.83^{+0.62}_{-0.85}$	$D_M(0.61)$	2291^{+25}_{-12}
$\boldsymbol{N_{eff}}$	< 3.19	$10^9 A_s$	$2.104^{+0.028}_{-0.037}$	$H(2.33)$	$237.40^{+0.99}_{-2.1}$
$\boldsymbol{\ln(10^{10}A_s)}$	$3.046^{+0.014}_{-0.018}$	$10^9 A_s e^{-2\tau}$	$1.883^{+0.012}_{-0.015}$	$D_M(2.33)$	5728^{+50}_{-15}
$\boldsymbol{n_s}$	$0.9701^{+0.0052}_{-0.0067}$	D_{40}	1219 ± 14	$f\sigma_8(0.15)$	$0.444^{+0.015}_{-0.0097}$
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0025	D_{220}	5720 ± 40	$\sigma_8(0.15)$	$0.729^{+0.024}_{-0.013}$
$\boldsymbol{A^{CIB}_{217}}$	48 ± 7	D_{810}	2537 ± 14	$f\sigma_8(0.38)$	$0.462^{+0.015}_{-0.0090}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{1420}	814.6 ± 5.0	$\sigma_8(0.38)$	$0.646^{+0.022}_{-0.012}$
$\boldsymbol{A^{tSZ}_{143}}$	5.0 ± 2.0	D_{2000}	229.1 ± 1.8	$f\sigma_8(0.51)$	$0.461^{+0.015}_{-0.0086}$
$\boldsymbol{A^{PS}_{100}}$	265 ± 28	$n_{s,0.002}$	$0.9701^{+0.0052}_{-0.0067}$	$\sigma_8(0.51)$	$0.605^{+0.020}_{-0.011}$
$\boldsymbol{A^{PS}_{143}}$	50 ± 8	Y_P	$0.24696^{+0.00041}_{-0.0016}$	$f\sigma_8(0.61)$	$0.456^{+0.015}_{-0.0083}$
$\boldsymbol{A^{PS}_{143\times217}}$	44^{+9}_{-10}	Y_P^{BBN}	$0.24829^{+0.00041}_{-0.0016}$	$\sigma_8(0.61)$	$0.575^{+0.019}_{-0.011}$
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	10^5D/H	$2.639^{+0.040}_{-0.052}$	$f\sigma_8(2.33)$	$0.2905^{+0.0098}_{-0.0053}$
$\boldsymbol{A^{kSZ}}$	< 5.26	Age/Gyr	$13.71^{+0.12}_{-0.035}$	$\sigma_8(2.33)$	$0.299^{+0.010}_{-0.0056}$
$\boldsymbol{A^{dustTT}_{100}}$	9.0 ± 1.9	z_*	$1090.17^{+0.32}_{-0.37}$	f^{143}_{2000}	32.0 ± 3.0
$\boldsymbol{A^{dustTT}_{143}}$	10.8 ± 1.8	r_*	$143.8^{+1.2}_{-0.44}$	$f^{143\times217}_{2000}$	34.2 ± 2.1
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.4 ± 3.3	$100\theta_*$	$1.04099^{+0.00052}_{-0.00044}$	f^{217}_{2000}	108.7 ± 2.0
$\boldsymbol{A^{dustTT}_{217}}$	93.4 ± 7.3	$D_M(z_*)$/Gpc	$13.81^{+0.12}_{-0.043}$	χ^2_{simall}	311 ± 200
$\boldsymbol{c_{100}}$	0.99960 ± 0.00061	z_{drag}	$1059.93^{+0.49}_{-0.57}$	χ^2_{lowl}	109 ± 200
$\boldsymbol{c_{217}}$	0.99828 ± 0.00062	r_{drag}	$146.5^{+1.3}_{-0.47}$	χ^2_{plik}	774.2 ± 5.7
H_0	$68.06^{+0.57}_{-0.91}$	k_D	$0.14107^{+0.00054}_{-0.00097}$	χ^2_{Aver15}	0.85 ± 0.84
Ω_Λ	0.6893 ± 0.0076	$100\theta_D$	$0.16122^{+0.00030}_{-0.00043}$	χ^2_{6DF}	0.35 ± 0.57
Ω_m	0.3107 ± 0.0076	z_{eq}	3316^{+69}_{-23}	χ^2_{MGS}	1.02 ± 0.70
$\Omega_m h^2$	$0.1439^{+0.0015}_{-0.0026}$	k_{eq}	$0.01023^{+0.00021}_{-0.00011}$	$\chi^2_{DR12BAO}$	5.0 ± 1.8
$\Omega_\nu h^2$	$0.0028251^{-0.0000012}_{-0.0022}$	$100\theta_{eq}$	$0.8304^{+0.0039}_{-0.015}$	χ^2_{prior}	7.4 ± 3.7
$\Omega_m h^3$	$0.09791^{+0.00066}_{-0.0024}$	$100\theta_{s,eq}$	$0.4584^{+0.0020}_{-0.0076}$	χ^2_{BAO}	6.4 ± 1.5
σ_8	$0.788^{+0.026}_{-0.014}$	$H(0.15)$	$73.36^{+0.49}_{-0.89}$	χ^2_{CMB}	1193.9 ± 5.6
S_8	$0.802^{+0.027}_{-0.018}$	$D_M(0.15)$	$637.2^{+8.1}_{-4.9}$		
$\sigma_8\Omega_m^{0.5}$	$0.439^{+0.015}_{-0.010}$	$H(0.38)$	$83.52^{+0.36}_{-0.87}$		

$\bar{\chi}^2_{eff} = 1208.49$; $R - 1 = 0.03891$

8.20 base_nnu_meffsterile_plikHM_TT_lowl_lowE_BAO_post_Cooke17_Aver15_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02232 ± 0.00019	$\sigma_8\Omega_m^{0.25}$	$0.588^{+0.020}_{-0.011}$	$D_M(0.38)$	$1521^{+17}_{-9.5}$
$\boldsymbol{\Omega_c h^2}$	$0.1185^{+0.0039}_{-0.0024}$	$\sigma_8/h^{0.5}$	$0.955^{+0.031}_{-0.016}$	$H(0.51)$	$90.21^{+0.28}_{-0.80}$
$\boldsymbol{100\theta_{MC}}$	1.04089 ± 0.00045	$r_{drag}h$	99.68 ± 0.96	$D_M(0.51)$	1970^{+21}_{-11}
$\boldsymbol{\tau}$	$0.0556^{+0.0056}_{-0.0084}$	$\langle d^2\rangle^{1/2}$	2.419 ± 0.028	$H(0.61)$	$95.85^{+0.25}_{-0.80}$
$\boldsymbol{m^{eff}_{\nu,\,sterile}}$ [eV]	< 0.210	z_{re}	$7.83^{+0.62}_{-0.85}$	$D_M(0.61)$	2292^{+24}_{-12}
$\boldsymbol{N_{eff}}$	< 3.17	$10^9 A_s$	$2.103^{+0.028}_{-0.037}$	$H(2.33)$	$237.25^{+0.96}_{-1.9}$
$\boldsymbol{\ln(10^{10}A_s)}$	$3.046^{+0.013}_{-0.018}$	$10^9 A_s e^{-2\tau}$	$1.882^{+0.012}_{-0.014}$	$D_M(2.33)$	5731^{+46}_{-14}
$\boldsymbol{n_s}$	$0.9697^{+0.0051}_{-0.0065}$	D_{40}	1220 ± 14	$f\sigma_8(0.15)$	$0.444^{+0.015}_{-0.0096}$
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0025	D_{220}	5721 ± 39	$\sigma_8(0.15)$	$0.728^{+0.024}_{-0.013}$
$\boldsymbol{A^{CIB}_{217}}$	48 ± 7	D_{810}	2537 ± 14	$f\sigma_8(0.38)$	$0.462^{+0.015}_{-0.0088}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{1420}	814.8 ± 4.9	$\sigma_8(0.38)$	$0.645^{+0.022}_{-0.011}$
$\boldsymbol{A^{tSZ}_{143}}$	5.0 ± 2.0	D_{2000}	229.2 ± 1.8	$f\sigma_8(0.51)$	$0.460^{+0.015}_{-0.0084}$
$\boldsymbol{A^{PS}_{100}}$	265 ± 28	$n_{s,0.002}$	$0.9697^{+0.0051}_{-0.0065}$	$\sigma_8(0.51)$	$0.604^{+0.020}_{-0.011}$
$\boldsymbol{A^{PS}_{143}}$	50 ± 8	Y_P	$0.24682^{+0.00037}_{-0.0015}$	$f\sigma_8(0.61)$	$0.456^{+0.015}_{-0.0082}$
$\boldsymbol{A^{PS}_{143\times217}}$	44 ± 9	Y_P^{BBN}	$0.24815^{+0.00037}_{-0.0015}$	$\sigma_8(0.61)$	$0.575^{+0.019}_{-0.010}$
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	10^5D/H	$2.634^{+0.037}_{-0.044}$	$f\sigma_8(2.33)$	$0.2902^{+0.0098}_{-0.0051}$
$\boldsymbol{A^{kSZ}}$	< 5.19	Age/Gyr	$13.72^{+0.11}_{-0.032}$	$\sigma_8(2.33)$	$0.299^{+0.010}_{-0.0054}$
$\boldsymbol{A^{dustTT}_{100}}$	9.0 ± 1.9	z_*	1090.13 ± 0.31	f^{143}_{2000}	31.8 ± 2.9
$\boldsymbol{A^{dustTT}_{143}}$	10.8 ± 1.8	r_*	$143.9^{+1.1}_{-0.42}$	$f^{143\times217}_{2000}$	34.1 ± 2.0
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.4 ± 3.3	$100\theta_*$	$1.04102^{+0.00049}_{-0.00043}$	f^{217}_{2000}	108.6 ± 1.9
$\boldsymbol{A^{dustTT}_{217}}$	93.4 ± 7.3	$D_M(z_*)$/Gpc	$13.82^{+0.11}_{-0.041}$	χ^2_{simall}	313 ± 200
$\boldsymbol{c_{100}}$	0.99960 ± 0.00061	z_{drag}	$1059.93^{+0.46}_{-0.56}$	χ^2_{lowl}	107 ± 200
$\boldsymbol{c_{217}}$	0.99828 ± 0.00062	r_{drag}	$146.6^{+1.2}_{-0.45}$	χ^2_{plik}	774.0 ± 5.6
H_0	$68.01^{+0.55}_{-0.87}$	k_D	$0.14102^{+0.00052}_{-0.00091}$	χ^2_{Aver15}	0.77 ± 0.72
Ω_Λ	0.6893 ± 0.0075	$100\theta_D$	$0.16118^{+0.00027}_{-0.00037}$	$\chi^2_{Cooke17}$	0.22 ± 0.34
Ω_m	0.3107 ± 0.0075	z_{eq}	3315^{+70}_{-24}	χ^2_{6DF}	0.34 ± 0.57
$\Omega_m h^2$	$0.1437^{+0.0014}_{-0.0024}$	k_{eq}	$0.01022^{+0.00021}_{-0.00010}$	χ^2_{MGS}	1.03 ± 0.70
$\Omega_\nu h^2$	$0.00290^{+0.00016}_{-0.0023}$	$100\theta_{eq}$	$0.8307^{+0.0039}_{-0.015}$	$\chi^2_{DR12BAO}$	5.0 ± 1.8
$\Omega_m h^3$	$0.09773^{+0.00061}_{-0.0022}$	$100\theta_{s,eq}$	$0.4585^{+0.0020}_{-0.0078}$	χ^2_{prior}	7.4 ± 3.7
σ_8	$0.787^{+0.026}_{-0.014}$	$H(0.15)$	$73.32^{+0.47}_{-0.84}$	χ^2_{BAO}	6.3 ± 1.5
S_8	$0.801^{+0.027}_{-0.018}$	$D_M(0.15)$	$637.5^{+7.6}_{-4.8}$	χ^2_{CMB}	1193.8 ± 5.6
$\sigma_8\Omega_m^{0.5}$	$0.439^{+0.015}_{-0.010}$	$H(0.38)$	$83.47^{+0.34}_{-0.81}$	χ^2_{Abund}	0.99 ± 0.93

$\bar{\chi}^2_{eff} = 1208.48$; $R - 1 = 0.03789$

8.21 base_nnu_meffsterile_plikHM_TTTEEE_lowl_lowE_BAO

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022412	0.02250 ± 0.00015	$\Omega_\nu h^2$	0.00386	$0.00272^{+0.00050}_{-0.0022}$	$100\theta_{s,eq}$	0.45952	$0.4565^{+0.0019}_{-0.0070}$
$\boldsymbol{\Omega_c h^2}$	0.11606	$0.1187^{+0.0034}_{-0.0022}$	$\Omega_m h^3$	0.09632	$0.09773^{+0.00033}_{-0.0017}$	$H(0.15)$	72.95	$73.21^{+0.38}_{-0.67}$
$\boldsymbol{100\theta_{MC}}$	1.041014	1.04091 ± 0.00032	σ_8	0.8085	$0.792^{+0.023}_{-0.014}$	$D_M(0.15)$	640.7	$638.6^{+6.2}_{-3.9}$
$\boldsymbol{\tau}$	0.0546	$0.0564^{+0.0069}_{-0.0083}$	S_8	0.8229	$0.808^{+0.023}_{-0.016}$	$H(0.38)$	83.056	$83.39^{+0.25}_{-0.64}$
$\boldsymbol{m^{eff}_{\nu,\,sterile}}$ [eV]	0.302	< 0.220	$\sigma_8\Omega_m^{0.5}$	0.4507	$0.443^{+0.013}_{-0.0087}$	$D_M(0.38)$	1528.1	$1523^{+14}_{-7.6}$
$\boldsymbol{N_{eff}}$	3.0471	< 3.14	$\sigma_8\Omega_m^{0.25}$	0.6037	$0.592^{+0.017}_{-0.010}$	$H(0.51)$	89.770	$90.15^{+0.19}_{-0.62}$
$\boldsymbol{\ln(10^{10}A_s)}$	3.0434	$3.049^{+0.015}_{-0.017}$	$\sigma_8/h^{0.5}$	0.9828	$0.961^{+0.027}_{-0.015}$	$D_M(0.51)$	1979.7	$1972^{+17}_{-8.7}$
$\boldsymbol{n_s}$	0.96775	$0.9687^{+0.0043}_{-0.0056}$	$r_{drag}h$	99.64	99.42 ± 0.83	$H(0.61)$	95.387	$95.81^{+0.16}_{-0.62}$
$\boldsymbol{y_{cal}}$	1.00074	1.0008 ± 0.0025	$\langle d^2\rangle^{1/2}$	2.4324	2.430 ± 0.025	$D_M(0.61)$	2303.7	$2295^{+19}_{-9.3}$
$\boldsymbol{A^{CIB}_{217}}$	47.9	47 ± 7	z_{re}	7.69	7.87 ± 0.79	$H(2.33)$	236.13	$237.42^{+0.71}_{-1.6}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.33	—	$10^9 A_s$	2.0976	$2.110^{+0.032}_{-0.036}$	$D_M(2.33)$	5759.0	$5733^{+35}_{-8.0}$
$\boldsymbol{A^{tSZ}_{143}}$	7.17	5.4 ± 2.0	$10^9 A_s e^{-2\tau}$	1.8806	1.885 ± 0.012	$f\sigma_8(0.15)$	0.4554	$0.447^{+0.013}_{-0.0084}$
$\boldsymbol{A^{PS}_{100}}$	251.0	260 ± 28	D_{40}	1225.0	1225 ± 13	$\sigma_8(0.15)$	0.7472	$0.732^{+0.022}_{-0.013}$
$\boldsymbol{A^{PS}_{143}}$	45.9	47 ± 8	D_{220}	5731.6	5738 ± 39	$f\sigma_8(0.38)$	0.4738	$0.465^{+0.013}_{-0.0082}$
$\boldsymbol{A^{PS}_{143\times217}}$	44.5	43 ± 9	D_{810}	2541.0	2541 ± 13	$\sigma_8(0.38)$	0.6624	$0.648^{+0.019}_{-0.011}$
$\boldsymbol{A^{PS}_{217}}$	118.3	115 ± 10	D_{1420}	818.57	817.3 ± 4.7	$f\sigma_8(0.51)$	0.4725	$0.463^{+0.013}_{-0.0080}$
$\boldsymbol{A^{kSZ}}$	0.00	< 4.45	D_{2000}	231.47	230.6 ± 1.6	$\sigma_8(0.51)$	0.6199	$0.607^{+0.018}_{-0.011}$
$\boldsymbol{A^{dust\,TT}_{100}}$	8.91	9.0 ± 1.8	$n_{s,0.002}$	0.96775	$0.9687^{+0.0043}_{-0.0056}$	$f\sigma_8(0.61)$	0.4676	$0.459^{+0.013}_{-0.0078}$
$\boldsymbol{A^{dust\,TT}_{143}}$	10.97	11.0 ± 1.8	Y_P	0.24543	$0.24655^{+0.00022}_{-0.0011}$	$\sigma_8(0.61)$	0.5899	$0.577^{+0.017}_{-0.010}$
$\boldsymbol{A^{dust\,TT}_{143\times217}}$	19.48	18.7 ± 3.2	Y_P^{BBN}	0.24675	$0.24788^{+0.00022}_{-0.0011}$	$f\sigma_8(2.33)$	0.2974	$0.2914^{+0.0088}_{-0.0053}$
$\boldsymbol{A^{dust\,TT}_{217}}$	94.6	93.7 ± 7.3	10^5D/H	2.5782	$2.591^{+0.025}_{-0.032}$	$\sigma_8(2.33)$	0.3067	$0.3002^{+0.0092}_{-0.0056}$
$\boldsymbol{A^{dust\,TE}_{100}}$	0.1123	0.114 ± 0.038	Age/Gyr	13.787	$13.725^{+0.083}_{-0.019}$	f^{143}_{2000}	28.79	30.1 ± 2.8
$\boldsymbol{A^{dust\,TE}_{100\times143}}$	0.1341	0.135 ± 0.029	z_*	1089.804	$1089.89^{+0.23}_{-0.26}$	$f^{143\times217}_{2000}$	31.88	32.6 ± 1.9
$\boldsymbol{A^{dust\,TE}_{100\times217}}$	0.482	0.481 ± 0.085	r_*	144.59	$143.83^{+0.90}_{-0.28}$	f^{217}_{2000}	106.57	107.4 ± 1.8
$\boldsymbol{A^{dust\,TE}_{143}}$	0.223	0.224 ± 0.054	$100\theta_*$	1.041192	$1.04104^{+0.00036}_{-0.00030}$	χ^2_{simall}	396.05	397.4 ± 2.2
$\boldsymbol{A^{dust\,TE}_{143\times217}}$	0.663	0.664 ± 0.081	$D_M(z_*)$/Gpc	13.887	$13.816^{+0.084}_{-0.027}$	χ^2_{lowl}	22.87	22.90 ± 0.92
$\boldsymbol{A^{dust\,TE}_{217}}$	2.081	2.08 ± 0.27	z_{drag}	1059.971	$1060.34^{+0.33}_{-0.45}$	χ^2_{plik}	2345.2	2362.0 ± 6.2
$\boldsymbol{c_{100}}$	0.99971	0.99966 ± 0.00061	r_{drag}	147.24	$146.44^{+0.94}_{-0.29}$	χ^2_{6DF}	0.0300	0.077 ± 0.085
$\boldsymbol{c_{217}}$	0.99820	0.99820 ± 0.00063	k_D	0.14074	$0.14138^{+0.00034}_{-0.00076}$	χ^2_{MGS}	1.217	1.15 ± 0.43
H_0	67.67	$67.89^{+0.45}_{-0.70}$	$100\theta_D$	0.160740	$0.16084^{+0.00017}_{-0.00027}$	$\chi^2_{DR12BAO}$	4.44	5.4 ± 1.8
Ω_Λ	0.6892	0.6876 ± 0.0066	z_{eq}	3308.6	3337^{+63}_{-21}	χ^2_{prior}	1.83	11.7 ± 4.6
Ω_m	0.3108	0.3124 ± 0.0066	k_{eq}	0.010157	$0.01027^{+0.00018}_{-0.000096}$	χ^2_{BAO}	5.68	6.6 ± 1.5
$\Omega_m h^2$	0.14233	$0.1440^{+0.0011}_{-0.0020}$	$100\theta_{eq}$	0.8326	$0.8269^{+0.0037}_{-0.013}$	χ^2_{CMB}	2764.1	2782.3 ± 6.1

Best-fit $\chi^2_{eff} = 2771.63$; $\Delta\chi^2_{eff} = -0.28$; $\bar{\chi}^2_{eff} = 2800.57$; $\Delta\bar{\chi}^2_{eff} = 2.66$; $R - 1 = 0.01553$

χ^2_{eff}: BAO - 6DF: 0.03 (Δ 0.00) MGS: 1.22 (Δ 0.00) DR12BAO: 4.44 (Δ 0.02) CMB - simall_100x143_offlike5_EE_Aplanck_B: 396.05 (Δ -0.15) commander_dx12_v3_2_29: 22.87 (Δ 0.00) plik_rd12_HM_v22b_TTTEEE: 2345.20 (Δ -0.30)

8.22 base_nnu_meffsterile_plikHM_TTTEEE_lowl_lowE_BAO_post_Pantheon

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022424	0.02251 ± 0.00015	$\Omega_m h^3$	0.09635	$0.09782^{+0.00032}_{-0.0018}$	$D_M(0.15)$	640.5	$637.6^{+6.4}_{-3.7}$
$\boldsymbol{\Omega_c h^2}$	0.11903	$0.1187^{+0.0035}_{-0.0023}$	σ_8	0.8128	$0.792^{+0.023}_{-0.014}$	$H(0.38)$	83.069	$83.47^{+0.24}_{-0.67}$
$\boldsymbol{100\theta_{MC}}$	1.041036	1.04092 ± 0.00032	S_8	0.8271	$0.807^{+0.023}_{-0.016}$	$D_M(0.38)$	1527.8	$1521^{+14}_{-7.2}$
$\boldsymbol{\tau}$	0.0594	$0.0566^{+0.0069}_{-0.0083}$	$\sigma_8 \Omega_m^{0.5}$	0.4530	$0.442^{+0.013}_{-0.0085}$	$H(0.51)$	89.783	$90.22^{+0.18}_{-0.66}$
$\boldsymbol{m^{eff}_{\nu,\,sterile}}$ [eV]	0.024	< 0.210	$\sigma_8 \Omega_m^{0.25}$	0.6068	$0.592^{+0.017}_{-0.010}$	$D_M(0.51)$	1979.3	$1970^{+17}_{-8.3}$
$\boldsymbol{N_{eff}}$	3.0461	< 3.14	$\sigma_8/h^{0.5}$	0.9879	$0.961^{+0.027}_{-0.015}$	$H(0.61)$	95.400	$95.87^{+0.15}_{-0.66}$
$\boldsymbol{\ln(10^{10} A_s)}$	3.0530	$3.049^{+0.015}_{-0.017}$	$r_{drag} h$	99.65	99.58 ± 0.80	$D_M(0.61)$	2303.3	$2292^{+20}_{-8.8}$
$\boldsymbol{n_s}$	0.96719	$0.9692^{+0.0042}_{-0.0056}$	$\langle d^2 \rangle^{1/2}$	2.4446	2.428 ± 0.024	$H(2.33)$	236.15	$237.37^{+0.69}_{-1.6}$
$\boldsymbol{y_{cal}}$	1.00063	1.0007 ± 0.0025	z_{re}	8.16	7.89 ± 0.78	$D_M(2.33)$	5758.3	$5730^{+37}_{-7.8}$
$\boldsymbol{A^{CIB}_{217}}$	47.4	47 ± 7	$10^9 A_s$	2.1180	$2.110^{+0.032}_{-0.037}$	$f\sigma_8(0.15)$	0.4577	$0.447^{+0.013}_{-0.0083}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.43	—	$10^9 A_s e^{-2\tau}$	1.8808	$1.884^{+0.012}_{-0.013}$	$\sigma_8(0.15)$	0.7511	$0.732^{+0.022}_{-0.013}$
$\boldsymbol{A^{tSZ}_{143}}$	7.20	$5.4^{+2.2}_{-2.0}$	D_{40}	1228.2	1224 ± 13	$f\sigma_8(0.38)$	0.4763	$0.465^{+0.013}_{-0.0081}$
$\boldsymbol{A^{PS}_{100}}$	250.7	260 ± 28	D_{220}	5736.3	5739 ± 39	$\sigma_8(0.38)$	0.6659	$0.649^{+0.019}_{-0.012}$
$\boldsymbol{A^{PS}_{143}}$	47.6	47 ± 8	D_{810}	2540.5	2540 ± 13	$f\sigma_8(0.51)$	0.4750	$0.463^{+0.013}_{-0.0080}$
$\boldsymbol{A^{PS}_{143\times217}}$	47.5	43 ± 9	D_{1420}	818.15	817.3 ± 4.7	$\sigma_8(0.51)$	0.6232	$0.607^{+0.018}_{-0.011}$
$\boldsymbol{A^{PS}_{217}}$	119.4	115 ± 10	D_{2000}	231.39	230.6 ± 1.6	$f\sigma_8(0.61)$	0.4700	$0.458^{+0.013}_{-0.0079}$
$\boldsymbol{A^{kSZ}}$	0.00	< 4.51	$n_{s,0.002}$	0.96719	$0.9692^{+0.0042}_{-0.0056}$	$\sigma_8(0.61)$	0.5930	$0.578^{+0.017}_{-0.011}$
$\boldsymbol{A^{dust TT}_{100}}$	8.82	9.0 ± 1.8	Y_P	0.24542	$0.24660^{+0.00021}_{-0.0012}$	$f\sigma_8(2.33)$	0.2990	$0.2917^{+0.0088}_{-0.0054}$
$\boldsymbol{A^{dust TT}_{143}}$	11.04	11.0 ± 1.8	Y_P^{BBN}	0.24674	$0.24794^{+0.00021}_{-0.0012}$	$\sigma_8(2.33)$	0.3083	$0.3006^{+0.0092}_{-0.0057}$
$\boldsymbol{A^{dust TT}_{143\times217}}$	19.83	18.6 ± 3.3	10^5D/H	2.5755	$2.590^{+0.025}_{-0.033}$	f^{143}_{2000}	28.87	30.1 ± 2.8
$\boldsymbol{A^{dust TT}_{217}}$	95.0	93.6 ± 7.3	Age/Gyr	13.786	$13.718^{+0.088}_{-0.018}$	$f^{143\times217}_{2000}$	32.00	32.6 ± 1.9
$\boldsymbol{A^{dust TE}_{100}}$	0.1140	0.113 ± 0.038	z_*	1089.788	$1089.87^{+0.22}_{-0.27}$	f^{217}_{2000}	106.59	107.4 ± 1.8
$\boldsymbol{A^{dust TE}_{100\times143}}$	0.1342	0.135 ± 0.030	r_*	144.58	$143.83^{+0.94}_{-0.28}$	χ^2_{simall}	397	291 ± 200
$\boldsymbol{A^{dust TE}_{100\times217}}$	0.480	0.480 ± 0.084	$100\theta_*$	1.041209	$1.04105^{+0.00036}_{-0.00030}$	χ^2_{lowl}	23	129 ± 200
$\boldsymbol{A^{dust TE}_{143}}$	0.224	0.224 ± 0.054	$D_M(z_*)$/Gpc	13.885	$13.816^{+0.088}_{-0.026}$	χ^2_{plik}	2344.2	2362.3 ± 6.3
$\boldsymbol{A^{dust TE}_{143\times217}}$	0.666	0.663 ± 0.082	z_{drag}	1060.009	$1060.36^{+0.32}_{-0.47}$	χ^2_{JLA}	1036.298	1036.40 ± 0.35
$\boldsymbol{A^{dust TE}_{217}}$	2.081	2.07 ± 0.27	r_{drag}	147.22	$146.44^{+0.98}_{-0.29}$	χ^2_{6DF}	0.029	0.40 ± 0.59
$\boldsymbol{c_{100}}$	0.99972	0.99966 ± 0.00061	k_D	0.14077	$0.14138^{+0.00034}_{-0.00079}$	χ^2_{MGS}	1.22	0.89 ± 0.64
$\boldsymbol{c_{217}}$	0.99818	0.99820 ± 0.00063	$100\theta_D$	0.160724	$0.16084^{+0.00018}_{-0.00028}$	$\chi^2_{DR12BAO}$	4.42	5.0 ± 1.6
H_0	67.69	$68.00^{+0.43}_{-0.72}$	z_{eq}	3380.3	3334^{+63}_{-19}	χ^2_{prior}	1.71	11.7 ± 4.6
Ω_Λ	0.6893	0.6889 ± 0.0063	k_{eq}	0.010322	$0.01026^{+0.00019}_{-0.000095}$	χ^2_{BAO}	5.67	6.3 ± 1.3
Ω_m	0.3107	0.3111 ± 0.0063	$100\theta_{eq}$	0.8176	$0.8275^{+0.0034}_{-0.013}$	χ^2_{CMB}	2764.7	2782.5 ± 6.1
$\Omega_m h^2$	0.14235	$0.1438^{+0.0011}_{-0.0021}$	$100\theta_{s,eq}$	0.45161	$0.4567^{+0.0017}_{-0.0069}$			
$\Omega_\nu h^2$	0.00090	$0.00266^{+0.00045}_{-0.0022}$	$H(0.15)$	72.96	$73.31^{+0.36}_{-0.70}$			

Best-fit $\chi^2_{eff} = 3808.38$; $\bar{\chi}^2_{eff} = 3836.96$; $R - 1 = 0.01629$

χ^2_{eff}: BAO - 6DF: 0.03 MGS: 1.22 DR12BAO: 4.42 CMB - simall_100x143_offlike5_EE_Aplanck_B: 397.28 commander_dx12_v3_2_29: 23.18 plik_rd12_HM_v22b_TTTEEE: 2344.24 SN - JLA Pantheon: 1036.30

8.23 base_nnu_meffsterile_plikHM_TTTEEE_lowl_lowE_BAO_post_Aver15

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02249 ± 0.00014	$\Omega_m h^3$	$0.09743^{+0.00026}_{-0.0013}$	$D_M(0.15)$	$639.2^{+5.4}_{-3.9}$
$\boldsymbol{\Omega_c h^2}$	$0.1183^{+0.0034}_{-0.0020}$	σ_8	$0.790^{+0.023}_{-0.013}$	$H(0.38)$	$83.30^{+0.26}_{-0.52}$
$\boldsymbol{100\theta_{MC}}$	1.04094 ± 0.00030	S_8	$0.807^{+0.023}_{-0.016}$	$D_M(0.38)$	$1524^{+12}_{-7.7}$
$\boldsymbol{\tau}$	$0.0562^{+0.0069}_{-0.0082}$	$\sigma_8\Omega_m^{0.5}$	$0.442^{+0.013}_{-0.0087}$	$H(0.51)$	$90.06^{+0.20}_{-0.51}$
$\boldsymbol{m^{eff}_{\nu,\,sterile}}$ [eV]	< 0.242	$\sigma_8\Omega_m^{0.25}$	$0.591^{+0.017}_{-0.010}$	$D_M(0.51)$	$1974^{+14}_{-8.9}$
$\boldsymbol{N_{eff}}$	$3.1146^{+0.0072}_{-0.068}$	$\sigma_8/h^{0.5}$	$0.960^{+0.027}_{-0.015}$	$H(0.61)$	$95.71^{+0.15}_{-0.50}$
$\boldsymbol{\ln(10^{10}A_s)}$	3.048 ± 0.016	$r_{drag}h$	99.41 ± 0.82	$D_M(0.61)$	$2297^{+16}_{-9.5}$
$\boldsymbol{n_s}$	$0.9681^{+0.0042}_{-0.0050}$	$\langle d^2\rangle^{1/2}$	2.431 ± 0.025	$H(2.33)$	$237.18^{+0.70}_{-1.3}$
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0025	z_{re}	7.85 ± 0.77	$D_M(2.33)$	$5739^{+28}_{-7.2}$
$\boldsymbol{A^{CIB}_{217}}$	47 ± 7	$10^9 A_s$	$2.108^{+0.031}_{-0.036}$	$f\sigma_8(0.15)$	$0.446^{+0.013}_{-0.0085}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$10^9 A_s e^{-2\tau}$	1.883 ± 0.012	$\sigma_8(0.15)$	$0.730^{+0.021}_{-0.013}$
$\boldsymbol{A^{tSZ}_{143}}$	$5.4^{+2.2}_{-2.0}$	D_{40}	1225 ± 13	$f\sigma_8(0.38)$	$0.464^{+0.013}_{-0.0082}$
$\boldsymbol{A^{PS}_{100}}$	259 ± 28	D_{220}	5738 ± 39	$\sigma_8(0.38)$	$0.647^{+0.019}_{-0.011}$
$\boldsymbol{A^{PS}_{143}}$	47 ± 8	D_{810}	2540 ± 13	$f\sigma_8(0.51)$	$0.463^{+0.013}_{-0.0080}$
$\boldsymbol{A^{PS}_{143\times217}}$	43 ± 9	D_{1420}	817.3 ± 4.7	$\sigma_8(0.51)$	$0.606^{+0.018}_{-0.011}$
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	D_{2000}	230.6 ± 1.6	$f\sigma_8(0.61)$	$0.458^{+0.013}_{-0.0078}$
$\boldsymbol{A^{kSZ}}$	< 4.44	$n_{s,0.002}$	$0.9681^{+0.0042}_{-0.0050}$	$\sigma_8(0.61)$	$0.576^{+0.017}_{-0.010}$
$\boldsymbol{A^{dust\,TT}_{100}}$	9.0 ± 1.8	Y_P	$0.24635^{+0.00017}_{-0.00090}$	$f\sigma_8(2.33)$	$0.2908^{+0.0087}_{-0.0052}$
$\boldsymbol{A^{dust\,TT}_{143}}$	10.9 ± 1.8	Y_P^{BBN}	$0.24768^{+0.00017}_{-0.00090}$	$\sigma_8(2.33)$	$0.2996^{+0.0090}_{-0.0054}$
$\boldsymbol{A^{dust\,TT}_{143\times217}}$	18.6 ± 3.3	10^5D/H	$2.588^{+0.025}_{-0.030}$	f^{143}_{2000}	30.0 ± 2.8
$\boldsymbol{A^{dust\,TT}_{217}}$	93.6 ± 7.3	Age/Gyr	$13.739^{+0.067}_{-0.016}$	$f^{143\times217}_{2000}$	32.6 ± 1.9
$\boldsymbol{A^{dust\,TE}_{100}}$	0.114 ± 0.038	z_*	$1089.87^{+0.22}_{-0.25}$	f^{217}_{2000}	107.4 ± 1.8
$\boldsymbol{A^{dust\,TE}_{100\times143}}$	0.135 ± 0.030	r_*	$143.98^{+0.74}_{-0.26}$	χ^2_{simall}	292 ± 200
$\boldsymbol{A^{dust\,TE}_{100\times217}}$	0.480 ± 0.084	$100\theta_*$	1.04108 ± 0.00032	χ^2_{lowl}	129 ± 200
$\boldsymbol{A^{dust\,TE}_{143}}$	0.224 ± 0.054	$D_M(z_*)$/Gpc	$13.830^{+0.069}_{-0.025}$	χ^2_{plik}	2361.8 ± 6.1
$\boldsymbol{A^{dust\,TE}_{143\times217}}$	0.664 ± 0.082	z_{drag}	$1060.28^{+0.32}_{-0.40}$	χ^2_{Aver15}	0.53 ± 0.40
$\boldsymbol{A^{dust\,TE}_{217}}$	2.08 ± 0.27	r_{drag}	$146.60^{+0.77}_{-0.27}$	χ^2_{6DF}	0.39 ± 0.55
$\boldsymbol{c_{100}}$	0.99966 ± 0.00061	k_D	$0.14127^{+0.00033}_{-0.00063}$	χ^2_{MGS}	0.84 ± 0.60
$\boldsymbol{c_{217}}$	0.99820 ± 0.00063	$100\theta_D$	$0.16081^{+0.00017}_{-0.00024}$	$\chi^2_{DR12BAO}$	5.3 ± 1.8
H_0	$67.82^{+0.46}_{-0.61}$	z_{eq}	3334^{+67}_{-22}	χ^2_{prior}	11.7 ± 4.6
Ω_Λ	0.6875 ± 0.0065	k_{eq}	$0.01025^{+0.00019}_{-0.000090}$	χ^2_{BAO}	6.6 ± 1.5
Ω_m	0.3125 ± 0.0065	$100\theta_{eq}$	$0.8277^{+0.0040}_{-0.014}$	χ^2_{CMB}	2782.1 ± 6.0
$\Omega_m h^2$	$0.1437^{+0.0011}_{-0.0017}$	$100\theta_{s,eq}$	$0.4569^{+0.0021}_{-0.0074}$		
$\Omega_\nu h^2$	$0.00287^{+0.00058}_{-0.0024}$	$H(0.15)$	$73.13^{+0.38}_{-0.57}$		

$\bar{\chi}^2_{eff} = 2800.91$; $R - 1 = 0.01503$

8.24 base_nnu_meffsterile_plikHM_TTTEEE_lowl_lowE_BAO_post_Cooke17_Aver15

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02248 ± 0.00014	$\Omega_m h^3$	$0.09744^{+0.00028}_{-0.0014}$	$D_M(0.15)$	$639.4^{+5.4}_{-3.9}$
$\boldsymbol{\Omega_c h^2}$	$0.1184^{+0.0034}_{-0.0019}$	σ_8	$0.791^{+0.023}_{-0.013}$	$H(0.38)$	$83.30^{+0.26}_{-0.53}$
$\boldsymbol{100\theta_{MC}}$	1.04093 ± 0.00030	S_8	$0.807^{+0.023}_{-0.016}$	$D_M(0.38)$	$1525^{+12}_{-7.6}$
$\boldsymbol{\tau}$	$0.0562^{+0.0069}_{-0.0082}$	$\sigma_8\Omega_m^{0.5}$	$0.442^{+0.013}_{-0.0087}$	$H(0.51)$	$90.05^{+0.19}_{-0.52}$
$\boldsymbol{m^{eff}_{\nu,\,sterile}}$ [eV]	< 0.240	$\sigma_8\Omega_m^{0.25}$	$0.591^{+0.017}_{-0.010}$	$D_M(0.51)$	$1975^{+14}_{-8.8}$
$\boldsymbol{N_{eff}}$	$3.1160^{+0.0079}_{-0.069}$	$\sigma_8/h^{0.5}$	$0.960^{+0.027}_{-0.015}$	$H(0.61)$	$95.71^{+0.15}_{-0.51}$
$\boldsymbol{\ln(10^{10}A_s)}$	3.048 ± 0.016	$r_{drag}h$	99.39 ± 0.82	$D_M(0.61)$	$2298^{+16}_{-9.4}$
$\boldsymbol{n_s}$	$0.9681^{+0.0042}_{-0.0050}$	$\langle d^2\rangle^{1/2}$	2.431 ± 0.025	$H(2.33)$	$237.21^{+0.71}_{-1.3}$
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0025	z_{re}	7.84 ± 0.77	$D_M(2.33)$	$5739^{+29}_{-7.3}$
$\boldsymbol{A^{CIB}_{217}}$	47 ± 7	$10^9 A_s$	$2.107^{+0.031}_{-0.036}$	$f\sigma_8(0.15)$	$0.447^{+0.013}_{-0.0085}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$10^9 A_s e^{-2\tau}$	1.883 ± 0.012	$\sigma_8(0.15)$	$0.730^{+0.021}_{-0.013}$
$\boldsymbol{A^{tSZ}_{143}}$	$5.4^{+2.2}_{-2.0}$	D_{40}	1225 ± 13	$f\sigma_8(0.38)$	$0.464^{+0.013}_{-0.0082}$
$\boldsymbol{A^{PS}_{100}}$	260 ± 28	D_{220}	5737 ± 38	$\sigma_8(0.38)$	$0.647^{+0.019}_{-0.011}$
$\boldsymbol{A^{PS}_{143}}$	47 ± 8	D_{810}	2540 ± 13	$f\sigma_8(0.51)$	$0.463^{+0.013}_{-0.0080}$
$\boldsymbol{A^{PS}_{143\times217}}$	43 ± 9	D_{1420}	817.2 ± 4.7	$\sigma_8(0.51)$	$0.606^{+0.018}_{-0.011}$
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	D_{2000}	230.5 ± 1.6	$f\sigma_8(0.61)$	$0.458^{+0.013}_{-0.0078}$
$\boldsymbol{A^{kSZ}}$	< 4.46	$n_{s,0.002}$	$0.9681^{+0.0042}_{-0.0050}$	$\sigma_8(0.61)$	$0.576^{+0.017}_{-0.010}$
$\boldsymbol{A^{dust\,TT}_{100}}$	9.0 ± 1.8	Y_P	$0.24636^{+0.00018}_{-0.00092}$	$f\sigma_8(2.33)$	$0.2908^{+0.0087}_{-0.0052}$
$\boldsymbol{A^{dust\,TT}_{143}}$	10.9 ± 1.8	Y_P^{BBN}	$0.24769^{+0.00018}_{-0.00092}$	$\sigma_8(2.33)$	$0.2996^{+0.0091}_{-0.0054}$
$\boldsymbol{A^{dust\,TT}_{143\times217}}$	18.6 ± 3.3	10^5D/H	$2.590^{+0.024}_{-0.029}$	f^{143}_{2000}	30.1 ± 2.8
$\boldsymbol{A^{dust\,TT}_{217}}$	93.6 ± 7.3	Age/Gyr	$13.739^{+0.068}_{-0.017}$	$f^{143\times217}_{2000}$	32.6 ± 1.9
$\boldsymbol{A^{dust\,TE}_{100}}$	0.114 ± 0.038	z_*	1089.89 ± 0.23	f^{217}_{2000}	107.4 ± 1.8
$\boldsymbol{A^{dust\,TE}_{100\times143}}$	0.135 ± 0.030	r_*	$143.97^{+0.75}_{-0.27}$	χ^2_{simall}	290 ± 200
$\boldsymbol{A^{dust\,TE}_{100\times217}}$	0.480 ± 0.084	$100\theta_*$	1.04107 ± 0.00032	χ^2_{lowl}	130 ± 200
$\boldsymbol{A^{dust\,TE}_{143}}$	0.224 ± 0.054	$D_M(z_*)$/Gpc	$13.829^{+0.070}_{-0.026}$	χ^2_{plik}	2361.7 ± 6.1
$\boldsymbol{A^{dust\,TE}_{143\times217}}$	0.664 ± 0.082	z_{drag}	$1060.26^{+0.32}_{-0.40}$	χ^2_{Aver15}	0.54 ± 0.40
$\boldsymbol{A^{dust\,TE}_{217}}$	2.08 ± 0.27	r_{drag}	$146.59^{+0.78}_{-0.28}$	$\chi^2_{Cooke17}$	0.17 ± 0.19
$\boldsymbol{c_{100}}$	0.99966 ± 0.00061	k_D	$0.14127^{+0.00034}_{-0.00065}$	χ^2_{6DF}	0.39 ± 0.55
$\boldsymbol{c_{217}}$	0.99820 ± 0.00063	$100\theta_D$	$0.16082^{+0.00017}_{-0.00023}$	χ^2_{MGS}	0.82 ± 0.59
H_0	$67.80^{+0.45}_{-0.62}$	z_{eq}	3335^{+67}_{-21}	$\chi^2_{DR12BAO}$	5.4 ± 1.8
Ω_Λ	0.6873 ± 0.0064	k_{eq}	$0.01026^{+0.00019}_{-0.000089}$	χ^2_{prior}	11.7 ± 4.6
Ω_m	0.3127 ± 0.0064	$100\theta_{eq}$	$0.8275^{+0.0039}_{-0.014}$	χ^2_{BAO}	6.6 ± 1.5
$\Omega_m h^2$	$0.1437^{+0.0011}_{-0.0017}$	$100\theta_{s,eq}$	$0.4568^{+0.0020}_{-0.0074}$	χ^2_{CMB}	2782.0 ± 6.0
$\Omega_\nu h^2$	$0.00285^{+0.00058}_{-0.0024}$	$H(0.15)$	$73.12^{+0.38}_{-0.58}$	χ^2_{Abund}	0.70 ± 0.42

$\bar{\chi}^2_{eff} = 2801.05$; $R - 1 = 0.01420$

8.25 base_nnu_meffsterile_plikHM_TTTEEE_lowl_lowE_BAO_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02250 ± 0.00015	$\Omega_\nu h^2$	$0.00272^{+0.00048}_{-0.0022}$	$100\theta_{s,eq}$	$0.4565^{+0.0019}_{-0.0070}$
$\boldsymbol{\Omega_c h^2}$	$0.1187^{+0.0034}_{-0.0022}$	$\Omega_m h^3$	$0.09775^{+0.00033}_{-0.0017}$	$H(0.15)$	$73.22^{+0.38}_{-0.67}$
$\boldsymbol{100\theta_{MC}}$	1.04091 ± 0.00032	σ_8	$0.792^{+0.023}_{-0.013}$	$D_M(0.15)$	$638.5^{+6.2}_{-3.9}$
$\boldsymbol{\tau}$	$0.0570^{+0.0057}_{-0.0085}$	S_8	$0.808^{+0.023}_{-0.016}$	$H(0.38)$	$83.40^{+0.25}_{-0.64}$
$\boldsymbol{m^{eff}_{\nu,\,sterile}}$ [eV]	< 0.219	$\sigma_8\Omega_m^{0.5}$	$0.443^{+0.013}_{-0.0086}$	$D_M(0.38)$	$1523^{+14}_{-7.6}$
$\boldsymbol{N_{eff}}$	< 3.14	$\sigma_8\Omega_m^{0.25}$	$0.592^{+0.017}_{-0.010}$	$H(0.51)$	$90.16^{+0.19}_{-0.63}$
$\boldsymbol{\ln(10^{10}A_s)}$	$3.050^{+0.013}_{-0.017}$	$\sigma_8/h^{0.5}$	$0.961^{+0.027}_{-0.014}$	$D_M(0.51)$	$1972^{+17}_{-8.7}$
$\boldsymbol{n_s}$	$0.9688^{+0.0043}_{-0.0056}$	$r_{drag}h$	99.43 ± 0.83	$H(0.61)$	$95.82^{+0.16}_{-0.62}$
$\boldsymbol{y_{cal}}$	1.0008 ± 0.0025	$\langle d^2\rangle^{1/2}$	2.432 ± 0.024	$D_M(0.61)$	$2295^{+19}_{-9.3}$
$\boldsymbol{A^{CIB}_{217}}$	47 ± 7	z_{re}	$7.93^{+0.63}_{-0.83}$	$H(2.33)$	$237.43^{+0.72}_{-1.6}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$10^9 A_s$	$2.112^{+0.028}_{-0.037}$	$D_M(2.33)$	$5733^{+35}_{-8.1}$
$\boldsymbol{A^{tSZ}_{143}}$	$5.4^{+2.2}_{-1.9}$	$10^9 A_s e^{-2\tau}$	1.885 ± 0.012	$f\sigma_8(0.15)$	$0.447^{+0.013}_{-0.0083}$
$\boldsymbol{A^{PS}_{100}}$	260 ± 28	D_{40}	1225 ± 13	$\sigma_8(0.15)$	$0.732^{+0.022}_{-0.012}$
$\boldsymbol{A^{PS}_{143}}$	47 ± 8	D_{220}	5738 ± 39	$f\sigma_8(0.38)$	$0.465^{+0.013}_{-0.0080}$
$\boldsymbol{A^{PS}_{143\times217}}$	43 ± 9	D_{810}	2541 ± 13	$\sigma_8(0.38)$	$0.649^{+0.019}_{-0.011}$
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	D_{1420}	817.3 ± 4.7	$f\sigma_8(0.51)$	$0.464^{+0.013}_{-0.0078}$
$\boldsymbol{A^{kSZ}}$	< 4.43	D_{2000}	230.6 ± 1.6	$\sigma_8(0.51)$	$0.607^{+0.018}_{-0.011}$
$\boldsymbol{A^{dust TT}_{100}}$	9.0 ± 1.8	$n_{s,0.002}$	$0.9688^{+0.0043}_{-0.0056}$	$f\sigma_8(0.61)$	$0.459^{+0.013}_{-0.0077}$
$\boldsymbol{A^{dust TT}_{143}}$	10.9 ± 1.8	Y_P	$0.24656^{+0.00022}_{-0.0011}$	$\sigma_8(0.61)$	$0.578^{+0.017}_{-0.010}$
$\boldsymbol{A^{dust TT}_{143\times217}}$	18.7 ± 3.2	Y_P^{BBN}	$0.24789^{+0.00022}_{-0.0011}$	$f\sigma_8(2.33)$	$0.2916^{+0.0088}_{-0.0052}$
$\boldsymbol{A^{dust TT}_{217}}$	93.7 ± 7.3	10^5D/H	$2.591^{+0.025}_{-0.033}$	$\sigma_8(2.33)$	$0.3004^{+0.0091}_{-0.0055}$
$\boldsymbol{A^{dust TE}_{100}}$	0.114 ± 0.038	Age/Gyr	$13.724^{+0.084}_{-0.019}$	f^{143}_{2000}	30.0 ± 2.8
$\boldsymbol{A^{dust TE}_{100\times143}}$	0.135 ± 0.029	z_*	$1089.89^{+0.23}_{-0.26}$	$f^{143\times217}_{2000}$	32.6 ± 1.9
$\boldsymbol{A^{dust TE}_{100\times217}}$	0.481 ± 0.085	r_*	$143.83^{+0.91}_{-0.28}$	f^{217}_{2000}	107.4 ± 1.8
$\boldsymbol{A^{dust TE}_{143}}$	0.224 ± 0.054	$100\theta_*$	$1.04104^{+0.00036}_{-0.00030}$	χ^2_{simall}	397.4 ± 2.3
$\boldsymbol{A^{dust TE}_{143\times217}}$	0.664 ± 0.081	$D_M(z_*)$/Gpc	$13.816^{+0.085}_{-0.027}$	χ^2_{lowl}	22.90 ± 0.92
$\boldsymbol{A^{dust TE}_{217}}$	2.08 ± 0.27	z_{drag}	$1060.34^{+0.33}_{-0.45}$	χ^2_{plik}	2361.9 ± 6.2
$\boldsymbol{c_{100}}$	0.99966 ± 0.00061	r_{drag}	$146.44^{+0.94}_{-0.30}$	χ^2_{6DF}	0.076 ± 0.084
$\boldsymbol{c_{217}}$	0.99820 ± 0.00063	k_D	$0.14139^{+0.00034}_{-0.00076}$	χ^2_{MGS}	1.15 ± 0.44
H_0	$67.90^{+0.45}_{-0.70}$	$100\theta_D$	$0.16084^{+0.00017}_{-0.00027}$	$\chi^2_{DR12BAO}$	5.3 ± 1.8
Ω_Λ	0.6877 ± 0.0066	z_{eq}	3337^{+63}_{-21}	χ^2_{prior}	11.7 ± 4.6
Ω_m	0.3123 ± 0.0066	k_{eq}	$0.01027^{+0.00019}_{-0.000096}$	χ^2_{BAO}	6.6 ± 1.5
$\Omega_m h^2$	$0.1440^{+0.0011}_{-0.0020}$	$100\theta_{eq}$	$0.8270^{+0.0037}_{-0.013}$	χ^2_{CMB}	2782.2 ± 6.1

$\bar{\chi}^2_{eff} = 2800.45$; $\Delta\bar{\chi}^2_{eff} = 2.74$; $R - 1 = 0.01583$

8.26 base_nnu_meffsterile_plikHM_TTTEEE_lowl_lowE_BAO_post_Pantheon_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02251 ± 0.00015	$\Omega_m h^3$	$0.09783^{+0.00033}_{-0.0018}$	$D_M(0.15)$	$637.5^{+6.4}_{-3.7}$
$\boldsymbol{\Omega_c h^2}$	$0.1187^{+0.0035}_{-0.0023}$	σ_8	$0.793^{+0.023}_{-0.014}$	$H(0.38)$	$83.48^{+0.24}_{-0.67}$
$\boldsymbol{100\theta_{MC}}$	1.04092 ± 0.00032	S_8	$0.807^{+0.023}_{-0.015}$	$D_M(0.38)$	$1521^{+14}_{-7.2}$
$\boldsymbol{\tau}$	$0.0572^{+0.0058}_{-0.0085}$	$\sigma_8\Omega_m^{0.5}$	$0.442^{+0.013}_{-0.0085}$	$H(0.51)$	$90.23^{+0.18}_{-0.66}$
$\boldsymbol{m^{eff}_{\nu,\,sterile}}$ [eV]	< 0.209	$\sigma_8\Omega_m^{0.25}$	$0.592^{+0.017}_{-0.010}$	$D_M(0.51)$	$1970^{+18}_{-8.3}$
$\boldsymbol{N_{eff}}$	< 3.14	$\sigma_8/h^{0.5}$	$0.961^{+0.027}_{-0.014}$	$H(0.61)$	$95.88^{+0.15}_{-0.66}$
$\boldsymbol{\ln(10^{10}A_s)}$	$3.050^{+0.014}_{-0.017}$	$r_{drag}h$	99.59 ± 0.80	$D_M(0.61)$	$2292^{+20}_{-8.8}$
$\boldsymbol{n_s}$	$0.9693^{+0.0042}_{-0.0056}$	$\langle d^2\rangle^{1/2}$	2.429 ± 0.024	$H(2.33)$	$237.37^{+0.69}_{-1.6}$
$\boldsymbol{y_{cal}}$	1.0008 ± 0.0025	z_{re}	$7.94^{+0.64}_{-0.83}$	$D_M(2.33)$	$5730^{+37}_{-7.9}$
$\boldsymbol{A^{CIB}_{217}}$	47 ± 7	$10^9 A_s$	$2.112^{+0.028}_{-0.037}$	$f\sigma_8(0.15)$	$0.447^{+0.013}_{-0.0083}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$10^9 A_s e^{-2\tau}$	1.884 ± 0.013	$\sigma_8(0.15)$	$0.732^{+0.022}_{-0.013}$
$\boldsymbol{A^{tSZ}_{143}}$	$5.4^{+2.2}_{-2.0}$	D_{40}	1224 ± 13	$f\sigma_8(0.38)$	$0.465^{+0.013}_{-0.0080}$
$\boldsymbol{A^{PS}_{100}}$	260 ± 28	D_{220}	5739 ± 39	$\sigma_8(0.38)$	$0.649^{+0.019}_{-0.011}$
$\boldsymbol{A^{PS}_{143}}$	47 ± 8	D_{810}	2540 ± 13	$f\sigma_8(0.51)$	$0.464^{+0.013}_{-0.0079}$
$\boldsymbol{A^{PS}_{143\times217}}$	43 ± 9	D_{1420}	817.3 ± 4.7	$\sigma_8(0.51)$	$0.608^{+0.018}_{-0.011}$
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	D_{2000}	230.6 ± 1.6	$f\sigma_8(0.61)$	$0.459^{+0.013}_{-0.0077}$
$\boldsymbol{A^{kSZ}}$	< 4.48	$n_{s,0.002}$	$0.9693^{+0.0042}_{-0.0056}$	$\sigma_8(0.61)$	$0.578^{+0.017}_{-0.010}$
$\boldsymbol{A^{dust\,TT}_{100}}$	9.0 ± 1.8	Y_P	$0.24662^{+0.00022}_{-0.0012}$	$f\sigma_8(2.33)$	$0.2919^{+0.0088}_{-0.0053}$
$\boldsymbol{A^{dust\,TT}_{143}}$	10.9 ± 1.8	Y_P^{BBN}	$0.24795^{+0.00022}_{-0.0012}$	$\sigma_8(2.33)$	$0.3008^{+0.0092}_{-0.0056}$
$\boldsymbol{A^{dust\,TT}_{143\times217}}$	18.6 ± 3.3	10^5D/H	$2.590^{+0.025}_{-0.033}$	f^{143}_{2000}	30.0 ± 2.8
$\boldsymbol{A^{dust\,TT}_{217}}$	93.6 ± 7.3	Age/Gyr	$13.718^{+0.088}_{-0.018}$	$f^{143\times217}_{2000}$	32.6 ± 1.9
$\boldsymbol{A^{dust\,TE}_{100}}$	0.113 ± 0.038	z_*	$1089.87^{+0.22}_{-0.27}$	f^{217}_{2000}	107.4 ± 1.8
$\boldsymbol{A^{dust\,TE}_{100\times143}}$	0.135 ± 0.030	r_*	$143.83^{+0.95}_{-0.28}$	χ^2_{simall}	292 ± 200
$\boldsymbol{A^{dust\,TE}_{100\times217}}$	0.480 ± 0.084	$100\theta_*$	$1.04104^{+0.00036}_{-0.00030}$	χ^2_{lowl}	128 ± 200
$\boldsymbol{A^{dust\,TE}_{143}}$	0.224 ± 0.054	$D_M(z_*)$/Gpc	$13.816^{+0.089}_{-0.027}$	χ^2_{plik}	2362.2 ± 6.2
$\boldsymbol{A^{dust\,TE}_{143\times217}}$	0.663 ± 0.082	z_{drag}	$1060.37^{+0.32}_{-0.47}$	χ^2_{JLA}	1036.39 ± 0.35
$\boldsymbol{A^{dust\,TE}_{217}}$	2.07 ± 0.27	r_{drag}	$146.43^{+0.98}_{-0.29}$	χ^2_{6DF}	0.40 ± 0.59
$\boldsymbol{c_{100}}$	0.99966 ± 0.00061	k_D	$0.14139^{+0.00034}_{-0.00079}$	χ^2_{MGS}	0.90 ± 0.64
$\boldsymbol{c_{217}}$	0.99819 ± 0.00063	$100\theta_D$	$0.16084^{+0.00018}_{-0.00028}$	$\chi^2_{DR12BAO}$	5.0 ± 1.5
H_0	$68.01^{+0.43}_{-0.72}$	z_{eq}	3334^{+63}_{-19}	χ^2_{prior}	11.7 ± 4.6
Ω_Λ	0.6889 ± 0.0063	k_{eq}	$0.01026^{+0.00019}_{-0.000095}$	χ^2_{BAO}	6.3 ± 1.3
Ω_m	0.3111 ± 0.0063	$100\theta_{eq}$	$0.8276^{+0.0033}_{-0.013}$	χ^2_{CMB}	2782.4 ± 6.1
$\Omega_m h^2$	$0.1438^{+0.0011}_{-0.0021}$	$100\theta_{s,eq}$	$0.4568^{+0.0017}_{-0.0070}$		
$\Omega_\nu h^2$	$0.00266^{+0.00044}_{-0.0022}$	$H(0.15)$	$73.32^{+0.36}_{-0.70}$		

$\bar{\chi}^2_{eff} = 3836.84$; $R - 1 = 0.01691$

8.27 base_nnu_meffsterile_plikHM_TTTEEE_lowl_lowE_BAO_post_Aver15_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02249 ± 0.00014	$\Omega_m h^3$	$0.09744^{+0.00027}_{-0.0013}$	$D_M(0.15)$	$639.2^{+5.4}_{-3.9}$
$\boldsymbol{\Omega_c h^2}$	$0.1183^{+0.0034}_{-0.0020}$	σ_8	$0.791^{+0.023}_{-0.013}$	$H(0.38)$	$83.31^{+0.26}_{-0.52}$
$\boldsymbol{100\theta_{MC}}$	1.04094 ± 0.00030	S_8	$0.807^{+0.023}_{-0.016}$	$D_M(0.38)$	$1524^{+12}_{-7.7}$
$\boldsymbol{\tau}$	$0.0568^{+0.0058}_{-0.0084}$	$\sigma_8\Omega_m^{0.5}$	$0.442^{+0.013}_{-0.0087}$	$H(0.51)$	$90.06^{+0.20}_{-0.51}$
$\boldsymbol{m^{eff}_{\nu,\,sterile}}$ [eV]	< 0.241	$\sigma_8\Omega_m^{0.25}$	$0.591^{+0.017}_{-0.010}$	$D_M(0.51)$	$1974^{+14}_{-8.9}$
$\boldsymbol{N_{eff}}$	$3.1151^{+0.0073}_{-0.068}$	$\sigma_8/h^{0.5}$	$0.960^{+0.027}_{-0.015}$	$H(0.61)$	$95.72^{+0.16}_{-0.50}$
$\boldsymbol{\ln(10^{10}A_s)}$	$3.049^{+0.013}_{-0.017}$	$r_{drag}h$	99.42 ± 0.82	$D_M(0.61)$	$2297^{+16}_{-9.5}$
$\boldsymbol{n_s}$	$0.9682^{+0.0041}_{-0.0050}$	$\langle d^2\rangle^{1/2}$	2.432 ± 0.024	$H(2.33)$	$237.18^{+0.70}_{-1.3}$
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0025	z_{re}	$7.91^{+0.63}_{-0.82}$	$D_M(2.33)$	$5739^{+28}_{-7.3}$
$\boldsymbol{A^{CIB}_{217}}$	47 ± 7	$10^9 A_s$	$2.110^{+0.027}_{-0.036}$	$f\sigma_8(0.15)$	$0.447^{+0.013}_{-0.0084}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$10^9 A_s e^{-2\tau}$	1.883 ± 0.012	$\sigma_8(0.15)$	$0.731^{+0.021}_{-0.012}$
$\boldsymbol{A^{tSZ}_{143}}$	$5.4^{+2.2}_{-2.0}$	D_{40}	1225 ± 13	$f\sigma_8(0.38)$	$0.464^{+0.013}_{-0.0081}$
$\boldsymbol{A^{PS}_{100}}$	259 ± 28	D_{220}	5738 ± 39	$\sigma_8(0.38)$	$0.648^{+0.019}_{-0.011}$
$\boldsymbol{A^{PS}_{143}}$	47 ± 8	D_{810}	2540 ± 13	$f\sigma_8(0.51)$	$0.463^{+0.013}_{-0.0079}$
$\boldsymbol{A^{PS}_{143\times217}}$	43 ± 9	D_{1420}	817.3 ± 4.7	$\sigma_8(0.51)$	$0.606^{+0.018}_{-0.010}$
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	D_{2000}	230.6 ± 1.6	$f\sigma_8(0.61)$	$0.458^{+0.013}_{-0.0077}$
$\boldsymbol{A^{kSZ}}$	< 4.42	$n_{s,0.002}$	$0.9682^{+0.0041}_{-0.0050}$	$\sigma_8(0.61)$	$0.577^{+0.017}_{-0.0099}$
$\boldsymbol{A^{dust\,TT}_{100}}$	9.0 ± 1.8	Y_P	$0.24636^{+0.00017}_{-0.00090}$	$f\sigma_8(2.33)$	$0.2910^{+0.0087}_{-0.0051}$
$\boldsymbol{A^{dust\,TT}_{143}}$	10.9 ± 1.8	Y_P^{BBN}	$0.24769^{+0.00017}_{-0.00091}$	$\sigma_8(2.33)$	$0.2998^{+0.0090}_{-0.0053}$
$\boldsymbol{A^{dust\,TT}_{143\times217}}$	18.6 ± 3.3	10^5D/H	$2.588^{+0.025}_{-0.030}$	f^{143}_{2000}	30.0 ± 2.8
$\boldsymbol{A^{dust\,TT}_{217}}$	93.6 ± 7.3	Age/Gyr	$13.739^{+0.067}_{-0.016}$	$f^{143\times217}_{2000}$	32.6 ± 1.9
$\boldsymbol{A^{dust\,TE}_{100}}$	0.114 ± 0.038	z_*	$1089.87^{+0.22}_{-0.25}$	f^{217}_{2000}	107.3 ± 1.8
$\boldsymbol{A^{dust\,TE}_{100\times143}}$	0.135 ± 0.030	r_*	$143.98^{+0.74}_{-0.26}$	χ^2_{simall}	292 ± 200
$\boldsymbol{A^{dust\,TE}_{100\times217}}$	0.481 ± 0.084	$100\theta_*$	1.04108 ± 0.00032	χ^2_{lowl}	128 ± 200
$\boldsymbol{A^{dust\,TE}_{143}}$	0.224 ± 0.054	$D_M(z_*)$/Gpc	$13.830^{+0.070}_{-0.025}$	χ^2_{plik}	2361.7 ± 6.1
$\boldsymbol{A^{dust\,TE}_{143\times217}}$	0.663 ± 0.082	z_{drag}	$1060.28^{+0.32}_{-0.40}$	χ^2_{Aver15}	0.53 ± 0.40
$\boldsymbol{A^{dust\,TE}_{217}}$	2.08 ± 0.27	r_{drag}	$146.59^{+0.77}_{-0.27}$	χ^2_{6DF}	0.39 ± 0.55
$\boldsymbol{c_{100}}$	0.99966 ± 0.00061	k_D	$0.14127^{+0.00033}_{-0.00064}$	χ^2_{MGS}	0.84 ± 0.60
$\boldsymbol{c_{217}}$	0.99819 ± 0.00063	$100\theta_D$	$0.16080^{+0.00017}_{-0.00024}$	$\chi^2_{DR12BAO}$	5.3 ± 1.8
H_0	$67.82^{+0.46}_{-0.61}$	z_{eq}	3333^{+68}_{-21}	χ^2_{prior}	11.7 ± 4.6
Ω_Λ	0.6876 ± 0.0065	k_{eq}	$0.01025^{+0.00019}_{-0.000090}$	χ^2_{BAO}	6.6 ± 1.5
Ω_m	0.3124 ± 0.0065	$100\theta_{eq}$	$0.8278^{+0.0040}_{-0.014}$	χ^2_{CMB}	2782.0 ± 6.0
$\Omega_m h^2$	$0.1437^{+0.0011}_{-0.0017}$	$100\theta_{s,eq}$	$0.4569^{+0.0020}_{-0.0075}$		
$\Omega_\nu h^2$	$0.00287^{+0.00057}_{-0.0024}$	$H(0.15)$	$73.14^{+0.38}_{-0.57}$		

$\bar{\chi}^2_{eff} = 2800.77$; $R - 1 = 0.01526$

8.28 base_nnu_meffsterile_plikHM_TTTEEE_lowl_lowE_BAO_post_Cooke17_Aver15_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02248 ± 0.00014	$\Omega_m h^3$	$0.09745^{+0.00028}_{-0.0014}$	$D_M(0.15)$	$639.3^{+5.4}_{-3.9}$
$\boldsymbol{\Omega_c h^2}$	$0.1184^{+0.0034}_{-0.0019}$	σ_8	$0.791^{+0.023}_{-0.013}$	$H(0.38)$	$83.30^{+0.26}_{-0.53}$
$\boldsymbol{100\theta_{MC}}$	1.04093 ± 0.00030	S_8	$0.807^{+0.023}_{-0.016}$	$D_M(0.38)$	$1524^{+12}_{-7.6}$
$\boldsymbol{\tau}$	$0.0568^{+0.0057}_{-0.0083}$	$\sigma_8\Omega_m^{0.5}$	$0.442^{+0.013}_{-0.0086}$	$H(0.51)$	$90.06^{+0.20}_{-0.52}$
$\boldsymbol{m^{eff}_{\nu,\,sterile}}$ [eV]	< 0.240	$\sigma_8\Omega_m^{0.25}$	$0.591^{+0.017}_{-0.010}$	$D_M(0.51)$	$1975^{+14}_{-8.8}$
$\boldsymbol{N_{eff}}$	$3.1165^{+0.0080}_{-0.070}$	$\sigma_8/h^{0.5}$	$0.961^{+0.027}_{-0.015}$	$H(0.61)$	$95.71^{+0.15}_{-0.51}$
$\boldsymbol{\ln(10^{10}A_s)}$	$3.049^{+0.013}_{-0.017}$	$r_{drag}h$	99.39 ± 0.82	$D_M(0.61)$	$2298^{+16}_{-9.4}$
$\boldsymbol{n_s}$	$0.9682^{+0.0041}_{-0.0050}$	$\langle d^2\rangle^{1/2}$	2.432 ± 0.024	$H(2.33)$	$237.21^{+0.72}_{-1.3}$
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0025	z_{re}	$7.91^{+0.63}_{-0.82}$	$D_M(2.33)$	$5739^{+29}_{-7.4}$
$\boldsymbol{A^{CIB}_{217}}$	47 ± 7	$10^9 A_s$	$2.110^{+0.027}_{-0.036}$	$f\sigma_8(0.15)$	$0.447^{+0.013}_{-0.0084}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$10^9 A_s e^{-2\tau}$	1.883 ± 0.012	$\sigma_8(0.15)$	$0.731^{+0.021}_{-0.012}$
$\boldsymbol{A^{tSZ}_{143}}$	$5.4^{+2.2}_{-2.0}$	D_{40}	1225 ± 13	$f\sigma_8(0.38)$	$0.464^{+0.013}_{-0.0081}$
$\boldsymbol{A^{PS}_{100}}$	260 ± 28	D_{220}	5737 ± 39	$\sigma_8(0.38)$	$0.648^{+0.019}_{-0.011}$
$\boldsymbol{A^{PS}_{143}}$	47 ± 8	D_{810}	2540 ± 13	$f\sigma_8(0.51)$	$0.463^{+0.013}_{-0.0078}$
$\boldsymbol{A^{PS}_{143\times217}}$	43 ± 9	D_{1420}	817.2 ± 4.7	$\sigma_8(0.51)$	$0.606^{+0.018}_{-0.010}$
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	D_{2000}	230.5 ± 1.6	$f\sigma_8(0.61)$	$0.458^{+0.013}_{-0.0076}$
$\boldsymbol{A^{kSZ}}$	< 4.44	$n_{s,0.002}$	$0.9682^{+0.0041}_{-0.0050}$	$\sigma_8(0.61)$	$0.577^{+0.017}_{-0.0099}$
$\boldsymbol{A^{dust\,TT}_{100}}$	9.0 ± 1.8	Y_P	$0.24637^{+0.00018}_{-0.00092}$	$f\sigma_8(2.33)$	$0.2910^{+0.0087}_{-0.0051}$
$\boldsymbol{A^{dust\,TT}_{143}}$	10.9 ± 1.8	Y_P^{BBN}	$0.24770^{+0.00018}_{-0.00093}$	$\sigma_8(2.33)$	$0.2998^{+0.0091}_{-0.0053}$
$\boldsymbol{A^{dust\,TT}_{143\times217}}$	18.6 ± 3.3	10^5D/H	$2.590^{+0.024}_{-0.029}$	f^{143}_{2000}	30.0 ± 2.8
$\boldsymbol{A^{dust\,TT}_{217}}$	93.6 ± 7.3	Age/Gyr	$13.739^{+0.069}_{-0.017}$	$f^{143\times217}_{2000}$	32.6 ± 1.9
$\boldsymbol{A^{dust\,TE}_{100}}$	0.114 ± 0.038	z_*	$1089.89^{+0.22}_{-0.24}$	f^{217}_{2000}	107.4 ± 1.8
$\boldsymbol{A^{dust\,TE}_{100\times143}}$	0.135 ± 0.030	r_*	$143.96^{+0.75}_{-0.27}$	χ^2_{simall}	290 ± 200
$\boldsymbol{A^{dust\,TE}_{100\times217}}$	0.481 ± 0.084	$100\theta_*$	1.04107 ± 0.00032	χ^2_{lowl}	130 ± 200
$\boldsymbol{A^{dust\,TE}_{143}}$	0.225 ± 0.054	$D_M(z_*)$/Gpc	$13.828^{+0.071}_{-0.026}$	χ^2_{plik}	2361.6 ± 6.1
$\boldsymbol{A^{dust\,TE}_{143\times217}}$	0.664 ± 0.082	z_{drag}	$1060.27^{+0.32}_{-0.40}$	χ^2_{Aver15}	0.54 ± 0.41
$\boldsymbol{A^{dust\,TE}_{217}}$	2.08 ± 0.27	r_{drag}	$146.58^{+0.79}_{-0.28}$	$\chi^2_{Cooke17}$	0.17 ± 0.19
$\boldsymbol{c_{100}}$	0.99966 ± 0.00061	k_D	$0.14127^{+0.00034}_{-0.00065}$	χ^2_{6DF}	0.39 ± 0.55
$\boldsymbol{c_{217}}$	0.99820 ± 0.00063	$100\theta_D$	$0.16082^{+0.00017}_{-0.00023}$	χ^2_{MGS}	0.83 ± 0.59
H_0	$67.81^{+0.45}_{-0.62}$	z_{eq}	3334^{+67}_{-21}	$\chi^2_{DR12BAO}$	5.4 ± 1.8
Ω_Λ	0.6874 ± 0.0064	k_{eq}	$0.01026^{+0.00019}_{-0.000089}$	χ^2_{prior}	11.7 ± 4.6
Ω_m	0.3126 ± 0.0064	$100\theta_{eq}$	$0.8276^{+0.0039}_{-0.014}$	χ^2_{BAO}	6.6 ± 1.5
$\Omega_m h^2$	$0.1437^{+0.0011}_{-0.0017}$	$100\theta_{s,eq}$	$0.4568^{+0.0020}_{-0.0074}$	χ^2_{CMB}	2781.9 ± 6.0
$\Omega_\nu h^2$	$0.00286^{+0.00057}_{-0.0024}$	$H(0.15)$	$73.12^{+0.38}_{-0.58}$	χ^2_{Abund}	0.71 ± 0.42

$\bar{\chi}^2_{eff} = 2800.91$; $R - 1 = 0.01453$

8.29 base_nnu_meffsterile_CamSpecHM_TTTEEE_lowl_lowE_BAO

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022350	0.02243 ± 0.00016	σ_8	0.8062	$0.788^{+0.025}_{-0.015}$	$H(0.15)$	73.00	$73.42^{+0.38}_{-0.86}$
$\boldsymbol{\Omega_c h^2}$	0.11484	$0.1187^{+0.0039}_{-0.0027}$	S_8	0.8184	$0.801^{+0.024}_{-0.016}$	$D_M(0.15)$	640.1	$636.6^{+7.8}_{-4.0}$
$\boldsymbol{100\theta_{MC}}$	1.040969	$1.04082^{+0.00038}_{-0.00032}$	$\sigma_8\Omega_m^{0.5}$	0.4483	$0.439^{+0.013}_{-0.0089}$	$H(0.38)$	83.07	$83.57^{+0.27}_{-0.85}$
$\boldsymbol{\tau}$	0.0538	0.0545 ± 0.0078	$\sigma_8\Omega_m^{0.25}$	0.6012	$0.588^{+0.018}_{-0.011}$	$D_M(0.38)$	1527.2	$1519^{+17}_{-7.8}$
$\boldsymbol{m^{eff}_{\nu,\,sterile}}$ [eV]	0.380	< 0.210	$\sigma_8/h^{0.5}$	0.9795	$0.955^{+0.028}_{-0.015}$	$H(0.51)$	89.76	$90.32^{+0.22}_{-0.84}$
$\boldsymbol{N_{eff}}$	3.047	< 3.18	$r_{drag}h$	99.86	99.70 ± 0.87	$D_M(0.51)$	1978.7	$1967^{+22}_{-9.0}$
$\boldsymbol{\ln(10^{10}A_s)}$	3.0404	$3.044^{+0.016}_{-0.018}$	$\langle d^2\rangle^{1/2}$	2.4251	2.415 ± 0.026	$H(0.61)$	95.36	$95.97^{+0.20}_{-0.84}$
$\boldsymbol{n_s}$	0.9680	$0.9704^{+0.0048}_{-0.0064}$	z_{re}	7.62	7.70 ± 0.80	$D_M(0.61)$	2302.8	$2290^{+25}_{-9.6}$
$\boldsymbol{y_{cal}}$	1.00091	1.0006 ± 0.0025	$10^9 A_s$	2.0913	$2.098^{+0.032}_{-0.037}$	$H(2.33)$	235.81	$237.47^{+0.82}_{-2.0}$
$\boldsymbol{A^{PS}_{100}}$	234.6	243 ± 25	$10^9 A_s e^{-2\tau}$	1.8778	$1.881^{+0.012}_{-0.015}$	$D_M(2.33)$	5761.3	5725^{+47}_{-11}
$\boldsymbol{A^{PS}_{143}}$	43.8	41 ± 8	D_{40}	1222.9	1218 ± 13	$f\sigma_8(0.15)$	0.4530	$0.444^{+0.013}_{-0.0087}$
$\boldsymbol{A^{PS}_{217}}$	104.5	102 ± 10	D_{220}	5725.8	5723 ± 39	$\sigma_8(0.15)$	0.7452	$0.728^{+0.023}_{-0.014}$
$\boldsymbol{A^{CIB}_{217}}$	41.8	41 ± 7	D_{810}	2538.5	2536 ± 14	$f\sigma_8(0.38)$	0.4718	$0.462^{+0.014}_{-0.0086}$
$\boldsymbol{A^{tSZ}_{143}}$	5.70	$3.8^{+1.8}_{-2.6}$	D_{1420}	817.40	815.2 ± 4.9	$\sigma_8(0.38)$	0.6609	$0.646^{+0.020}_{-0.012}$
$\boldsymbol{r^{PS}_{143\times217}}$	0.693	0.65 ± 0.13	D_{2000}	230.94	229.5 ± 1.7	$f\sigma_8(0.51)$	0.4707	$0.461^{+0.014}_{-0.0084}$
$\boldsymbol{r^{CIB}_{143\times217}}$	0.709	$0.58^{+0.41}_{-0.13}$	$n_{s,0.002}$	0.9680	$0.9704^{+0.0048}_{-0.0064}$	$\sigma_8(0.51)$	0.6186	$0.604^{+0.019}_{-0.012}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.48	—	Y_P	0.24540	$0.24694^{+0.00037}_{-0.0015}$	$f\sigma_8(0.61)$	0.4659	$0.456^{+0.014}_{-0.0083}$
$\boldsymbol{A^{kSZ}}$	1.2	—	Y_P^{BBN}	0.24673	$0.24827^{+0.00037}_{-0.0015}$	$\sigma_8(0.61)$	0.5886	$0.575^{+0.018}_{-0.011}$
$\boldsymbol{A^{dust}_{100}}$	1.010	1.02 ± 0.20	10^5D/H	2.5898	$2.615^{+0.029}_{-0.042}$	$f\sigma_8(2.33)$	0.2969	$0.2904^{+0.0094}_{-0.0057}$
$\boldsymbol{A^{dust}_{143}}$	0.958	0.97 ± 0.17	Age/Gyr	13.793	$13.71^{+0.11}_{-0.027}$	$\sigma_8(2.33)$	0.3062	$0.2992^{+0.0098}_{-0.0061}$
$\boldsymbol{A^{dust}_{217}}$	0.975	0.97 ± 0.10	z_*	1089.848	$1090.01^{+0.25}_{-0.31}$	f^{143}_{2000}	29.45	30.8 ± 3.0
$\boldsymbol{A^{dust}_{143\times217}}$	1.030	1.03 ± 0.16	r_*	144.74	$143.7^{+1.2}_{-0.38}$	f^{217}_{2000}	106.55	107.6 ± 2.0
$\boldsymbol{c_{100}}$	0.99777	0.9975 ± 0.0011	$100\theta_*$	1.041155	$1.04094^{+0.00044}_{-0.00031}$	$f^{143\times217}_{2000}$	31.94	33.0 ± 2.1
$\boldsymbol{c_{217}}$	1.00120	1.0012 ± 0.0016	$D_M(z_*)$/Gpc	13.901	$13.81^{+0.11}_{-0.036}$	χ^2_{simall}	395.95	397.1 ± 1.8
$\boldsymbol{c_{TE}}$	0.99685	0.9975 ± 0.0050	z_{drag}	1059.818	$1060.20^{+0.37}_{-0.53}$	χ^2_{lowl}	22.71	22.47 ± 0.90
$\boldsymbol{c_{EE}}$	0.9925	0.9936 ± 0.0052	r_{drag}	147.41	$146.4^{+1.2}_{-0.40}$	$\chi^2_{CamSpec}$	11500.3	11517.3 ± 6.1
H_0	67.75	$68.11^{+0.46}_{-0.88}$	k_D	0.14051	$0.14129^{+0.00040}_{-0.00096}$	χ^2_{6DF}	0.0162	0.058 ± 0.072
Ω_Λ	0.6909	0.6897 ± 0.0068	$100\theta_D$	0.160831	$0.16104^{+0.00021}_{-0.00037}$	χ^2_{MGS}	1.343	1.30 ± 0.48
Ω_m	0.3091	0.3103 ± 0.0068	z_{eq}	3277.8	3321^{+64}_{-18}	$\chi^2_{DR12BAO}$	4.08	4.9 ± 1.6
$\Omega_m h^2$	0.14188	$0.1439^{+0.0012}_{-0.0026}$	k_{eq}	0.010078	$0.01024^{+0.00020}_{-0.00010}$	χ^2_{prior}	2.07	7.9 ± 3.5
$\Omega_\nu h^2$	0.00469	$0.00280^{+0.00020}_{-0.0022}$	$100\theta_{eq}$	0.8388	$0.8298^{+0.0031}_{-0.014}$	χ^2_{BAO}	5.44	6.2 ± 1.3
$\Omega_m h^3$	0.09612	$0.09804^{+0.00051}_{-0.0023}$	$100\theta_{s,eq}$	0.46280	$0.4580^{+0.0016}_{-0.0072}$	χ^2_{CMB}	11919.0	11936.9 ± 6.1

Best-fit $\chi^2_{eff} = 11926.47$; $\bar{\chi}^2_{eff} = 11950.99$; $\Delta\bar{\chi}^2_{eff} = 2.71$; $R - 1 = 0.01562$

χ^2_{eff}: BAO - 6DF: 0.02 MGS: 1.34 DR12BAO: 4.08 CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.95 commander_dx12_v3_2_29: 22.71 CamSpec like_10.7HM_1400_unified: 11500.30

8.30 base_nnu_meffsterile_CamSpecHM_TTTEEE_lowl_lowE_BAO_post_Pantheon

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	$0.02243^{+0.00015}_{-0.00016}$	S_8	$0.800^{+0.024}_{-0.016}$	$H(0.38)$	$83.63^{+0.27}_{-0.86}$
$\boldsymbol{\Omega_c h^2}$	$0.1186^{+0.0040}_{-0.0028}$	$\sigma_8\Omega_m^{0.5}$	$0.438^{+0.013}_{-0.0087}$	$D_M(0.38)$	$1517^{+18}_{-7.6}$
$\boldsymbol{100\theta_{MC}}$	$1.04083^{+0.00038}_{-0.00032}$	$\sigma_8\Omega_m^{0.25}$	$0.588^{+0.017}_{-0.011}$	$H(0.51)$	$90.37^{+0.23}_{-0.86}$
$\boldsymbol{\tau}$	0.0547 ± 0.0078	$\sigma_8/h^{0.5}$	$0.955^{+0.028}_{-0.015}$	$D_M(0.51)$	$1966^{+22}_{-8.8}$
$\boldsymbol{m^{eff}_{\nu,\,sterile}}$ [eV]	< 0.200	$r_{drag}h$	99.83 ± 0.83	$H(0.61)$	$96.01^{+0.21}_{-0.86}$
$\boldsymbol{N_{eff}}$	< 3.18	$\langle d^2\rangle^{1/2}$	2.413 ± 0.025	$D_M(0.61)$	$2288^{+25}_{-9.4}$
$\boldsymbol{\ln(10^{10}A_s)}$	$3.044^{+0.016}_{-0.018}$	z_{re}	7.71 ± 0.79	$H(2.33)$	$237.40^{+0.79}_{-2.1}$
$\boldsymbol{n_s}$	$0.9708^{+0.0048}_{-0.0064}$	$10^9 A_s$	$2.099^{+0.032}_{-0.037}$	$D_M(2.33)$	5723^{+48}_{-12}
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0025	$10^9 A_s e^{-2\tau}$	$1.881^{+0.012}_{-0.015}$	$f\sigma_8(0.15)$	$0.443^{+0.013}_{-0.0085}$
$\boldsymbol{A^{PS}_{100}}$	243 ± 25	D_{40}	1218 ± 13	$\sigma_8(0.15)$	$0.729^{+0.023}_{-0.013}$
$\boldsymbol{A^{PS}_{143}}$	41 ± 8	D_{220}	5724 ± 39	$f\sigma_8(0.38)$	$0.462^{+0.014}_{-0.0084}$
$\boldsymbol{A^{PS}_{217}}$	102 ± 10	D_{810}	2536 ± 14	$\sigma_8(0.38)$	$0.646^{+0.020}_{-0.012}$
$\boldsymbol{A^{CIB}_{217}}$	41 ± 7	D_{1420}	815.3 ± 4.9	$f\sigma_8(0.51)$	$0.461^{+0.014}_{-0.0082}$
$\boldsymbol{A^{tSZ}_{143}}$	$3.7^{+1.8}_{-2.6}$	D_{2000}	229.6 ± 1.7	$\sigma_8(0.51)$	$0.605^{+0.019}_{-0.012}$
$\boldsymbol{r^{PS}_{143\times217}}$	0.65 ± 0.13	$n_{s,0.002}$	$0.9708^{+0.0048}_{-0.0064}$	$f\sigma_8(0.61)$	$0.456^{+0.014}_{-0.0081}$
$\boldsymbol{r^{CIB}_{143\times217}}$	$0.58^{+0.41}_{-0.13}$	Y_P	$0.24697^{+0.00037}_{-0.0016}$	$\sigma_8(0.61)$	$0.576^{+0.018}_{-0.011}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	$0.24830^{+0.00037}_{-0.0016}$	$f\sigma_8(2.33)$	$0.2907^{+0.0093}_{-0.0056}$
$\boldsymbol{A^{kSZ}}$	—	10^5D/H	$2.614^{+0.029}_{-0.042}$	$\sigma_8(2.33)$	$0.2996^{+0.0097}_{-0.0059}$
$\boldsymbol{A^{dust}_{100}}$	1.02 ± 0.20	Age/Gyr	$13.70^{+0.11}_{-0.028}$	f^{143}_{2000}	30.8 ± 3.0
$\boldsymbol{A^{dust}_{143}}$	0.96 ± 0.17	z_*	$1089.99^{+0.25}_{-0.32}$	f^{217}_{2000}	107.6 ± 2.0
$\boldsymbol{A^{dust}_{217}}$	0.97 ± 0.10	r_*	$143.7^{+1.2}_{-0.38}$	$f^{143\times217}_{2000}$	33.0 ± 2.1
$\boldsymbol{A^{dust}_{143\times217}}$	1.03 ± 0.16	$100\theta_*$	$1.04095^{+0.00044}_{-0.00032}$	χ^2_{simall}	397.1 ± 1.8
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	$D_M(z_*)$/Gpc	$13.81^{+0.11}_{-0.035}$	χ^2_{lowl}	22.41 ± 0.88
$\boldsymbol{c_{217}}$	1.0012 ± 0.0016	z_{drag}	$1060.21^{+0.36}_{-0.54}$	$\chi^2_{CamSpec}$	11517.4 ± 6.1
$\boldsymbol{c_{TE}}$	0.9975 ± 0.0050	r_{drag}	$146.4^{+1.3}_{-0.39}$	χ^2_{JLA}	1036.31 ± 0.32
$\boldsymbol{c_{EE}}$	0.9937 ± 0.0052	k_D	$0.14127^{+0.00039}_{-0.00099}$	χ^2_{6DF}	0.047 ± 0.061
H_0	$68.20^{+0.45}_{-0.88}$	$100\theta_D$	$0.16104^{+0.00021}_{-0.00038}$	χ^2_{MGS}	1.37 ± 0.47
Ω_Λ	0.6908 ± 0.0065	z_{eq}	3319^{+64}_{-17}	$\chi^2_{DR12BAO}$	4.6 ± 1.4
Ω_m	0.3092 ± 0.0065	k_{eq}	$0.01024^{+0.00020}_{-0.00010}$	χ^2_{prior}	7.8 ± 3.5
$\Omega_m h^2$	$0.1438^{+0.0012}_{-0.0026}$	$100\theta_{eq}$	$0.8302^{+0.0029}_{-0.014}$	χ^2_{BAO}	6.1 ± 1.1
$\Omega_\nu h^2$	$0.00274^{+0.00021}_{-0.0021}$	$100\theta_{s,eq}$	$0.4582^{+0.0015}_{-0.0071}$	χ^2_{CMB}	11936.9 ± 6.1
$\Omega_m h^3$	$0.09809^{+0.00053}_{-0.0023}$	$H(0.15)$	$73.49^{+0.38}_{-0.87}$		
σ_8	$0.788^{+0.024}_{-0.014}$	$D_M(0.15)$	$635.9^{+7.8}_{-3.9}$		

$\bar{\chi}^2_{eff} = 12987.13$; $R - 1 = 0.01586$

8.31 base_nnu_meffsterile_CamSpecHM_TTTEEE_lowl_lowE_BAO_post_Aver15

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02241 ± 0.00015	S_8	$0.799^{+0.024}_{-0.016}$	$H(0.38)$	$83.38^{+0.26}_{-0.61}$
$\boldsymbol{\Omega_c h^2}$	$0.1179^{+0.0038}_{-0.0022}$	$\sigma_8\Omega_m^{0.5}$	$0.438^{+0.013}_{-0.0089}$	$D_M(0.38)$	$1522^{+13}_{-7.7}$
$\boldsymbol{100\theta_{MC}}$	1.04087 ± 0.00033	$\sigma_8\Omega_m^{0.25}$	$0.587^{+0.018}_{-0.011}$	$H(0.51)$	$90.12^{+0.20}_{-0.60}$
$\boldsymbol{\tau}$	0.0544 ± 0.0078	$\sigma_8/h^{0.5}$	$0.953^{+0.028}_{-0.016}$	$D_M(0.51)$	$1972^{+16}_{-8.9}$
$\boldsymbol{m^{eff}_{\nu,\,sterile}}$ [eV]	< 0.245	$r_{drag}h$	99.67 ± 0.84	$H(0.61)$	$95.76^{+0.15}_{-0.60}$
$\boldsymbol{N_{eff}}$	< 3.14	$\langle d^2\rangle^{1/2}$	2.417 ± 0.025	$D_M(0.61)$	$2295^{+18}_{-9.4}$
$\boldsymbol{\ln(10^{10}A_s)}$	3.042 ± 0.017	z_{re}	7.68 ± 0.80	$H(2.33)$	$237.00^{+0.70}_{-1.6}$
$\boldsymbol{n_s}$	$0.9693^{+0.0045}_{-0.0054}$	$10^9 A_s$	$2.095^{+0.032}_{-0.036}$	$D_M(2.33)$	$5737^{+34}_{-7.5}$
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0025	$10^9 A_s e^{-2\tau}$	$1.879^{+0.011}_{-0.013}$	$f\sigma_8(0.15)$	$0.443^{+0.013}_{-0.0087}$
$\boldsymbol{A^{PS}_{100}}$	242 ± 25	D_{40}	1220 ± 13	$\sigma_8(0.15)$	$0.726^{+0.022}_{-0.013}$
$\boldsymbol{A^{PS}_{143}}$	41 ± 8	D_{220}	5723 ± 39	$f\sigma_8(0.38)$	$0.461^{+0.014}_{-0.0084}$
$\boldsymbol{A^{PS}_{217}}$	102 ± 10	D_{810}	2536 ± 14	$\sigma_8(0.38)$	$0.644^{+0.020}_{-0.012}$
$\boldsymbol{A^{CIB}_{217}}$	40 ± 7	D_{1420}	815.3 ± 4.9	$f\sigma_8(0.51)$	$0.459^{+0.014}_{-0.0082}$
$\boldsymbol{A^{tSZ}_{143}}$	$3.8^{+1.8}_{-2.6}$	D_{2000}	229.7 ± 1.7	$\sigma_8(0.51)$	$0.603^{+0.019}_{-0.011}$
$\boldsymbol{r^{PS}_{143\times217}}$	0.65 ± 0.13	$n_{s,0.002}$	$0.9693^{+0.0045}_{-0.0054}$	$f\sigma_8(0.61)$	$0.455^{+0.014}_{-0.0081}$
$\boldsymbol{r^{CIB}_{143\times217}}$	$0.58^{+0.42}_{-0.13}$	Y_P	$0.24651^{+0.00020}_{-0.0011}$	$\sigma_8(0.61)$	$0.573^{+0.018}_{-0.010}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	$0.24785^{+0.00020}_{-0.0011}$	$f\sigma_8(2.33)$	$0.2895^{+0.0092}_{-0.0053}$
$\boldsymbol{A^{kSZ}}$	4.9 ± 2.7	10^5D/H	$2.608^{+0.028}_{-0.035}$	$\sigma_8(2.33)$	$0.2983^{+0.0096}_{-0.0056}$
$\boldsymbol{A^{dust}_{100}}$	1.02 ± 0.20	Age/Gyr	$13.735^{+0.081}_{-0.017}$	f^{143}_{2000}	30.6 ± 2.9
$\boldsymbol{A^{dust}_{143}}$	0.96 ± 0.17	z_*	$1089.96^{+0.24}_{-0.28}$	f^{217}_{2000}	107.4 ± 2.0
$\boldsymbol{A^{dust}_{217}}$	0.97 ± 0.10	r_*	$144.03^{+0.89}_{-0.27}$	$f^{143\times217}_{2000}$	32.8 ± 2.1
$\boldsymbol{A^{dust}_{143\times217}}$	1.03 ± 0.16	$100\theta_*$	$1.04101^{+0.00037}_{-0.00030}$	χ^2_{simall}	397.1 ± 1.8
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	$D_M(z_*)$/Gpc	$13.836^{+0.083}_{-0.026}$	χ^2_{lowl}	22.60 ± 0.88
$\boldsymbol{c_{217}}$	1.0012 ± 0.0016	z_{drag}	$1060.09^{+0.34}_{-0.45}$	$\chi^2_{CamSpec}$	11516.9 ± 6.0
$\boldsymbol{c_{TE}}$	0.9973 ± 0.0050	r_{drag}	$146.68^{+0.92}_{-0.28}$	χ^2_{Aver15}	0.61 ± 0.54
$\boldsymbol{c_{EE}}$	0.9932 ± 0.0050	k_D	$0.14106^{+0.00034}_{-0.00074}$	χ^2_{6DF}	0.058 ± 0.071
H_0	$67.95^{+0.46}_{-0.69}$	$100\theta_D$	$0.16097^{+0.00020}_{-0.00029}$	χ^2_{MGS}	1.29 ± 0.46
Ω_Λ	0.6894 ± 0.0066	z_{eq}	3316^{+71}_{-21}	$\chi^2_{DR12BAO}$	4.9 ± 1.5
Ω_m	0.3106 ± 0.0066	k_{eq}	$0.01021^{+0.00020}_{-0.000095}$	χ^2_{prior}	7.8 ± 3.5
$\Omega_m h^2$	$0.1434^{+0.0011}_{-0.0020}$	$100\theta_{eq}$	$0.8308^{+0.0037}_{-0.015}$	χ^2_{BAO}	6.2 ± 1.3
$\Omega_\nu h^2$	$0.00303^{+0.00027}_{-0.0024}$	$100\theta_{s,eq}$	$0.4585^{+0.0019}_{-0.0080}$	χ^2_{CMB}	11936.5 ± 6.0
$\Omega_m h^3$	$0.09742^{+0.00031}_{-0.0016}$	$H(0.15)$	$73.25^{+0.38}_{-0.65}$		
σ_8	$0.786^{+0.024}_{-0.014}$	$D_M(0.15)$	$638.1^{+6.0}_{-3.9}$		

$\bar{\chi}^2_{eff} = 11951.21$; $R - 1 = 0.01810$

8.32 base_nnu_meffsterile_CamSpecHM_TTTEEE_lowl_lowE_BAO_post_Cooke17_Aver15

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02240 ± 0.00015	S_8	$0.799^{+0.024}_{-0.016}$	$H(0.38)$	$83.37^{+0.26}_{-0.61}$
$\boldsymbol{\Omega_c h^2}$	$0.1179^{+0.0038}_{-0.0021}$	$\sigma_8\Omega_m^{0.5}$	$0.438^{+0.013}_{-0.0088}$	$D_M(0.38)$	$1522^{+13}_{-7.6}$
$\boldsymbol{100\theta_{MC}}$	1.04087 ± 0.00032	$\sigma_8\Omega_m^{0.25}$	$0.587^{+0.017}_{-0.011}$	$H(0.51)$	$90.11^{+0.20}_{-0.60}$
$\boldsymbol{\tau}$	0.0544 ± 0.0078	$\sigma_8/h^{0.5}$	$0.953^{+0.028}_{-0.015}$	$D_M(0.51)$	$1972^{+16}_{-8.8}$
$\boldsymbol{m^{eff}_{\nu,\,sterile}}$ [eV]	< 0.245	$r_{drag}h$	99.66 ± 0.83	$H(0.61)$	$95.74^{+0.16}_{-0.59}$
$\boldsymbol{N_{eff}}$	< 3.14	$\langle d^2\rangle^{1/2}$	2.417 ± 0.025	$D_M(0.61)$	$2295^{+18}_{-9.3}$
$\boldsymbol{\ln(10^{10}A_s)}$	3.042 ± 0.017	z_{re}	7.67 ± 0.80	$H(2.33)$	$236.98^{+0.71}_{-1.5}$
$\boldsymbol{n_s}$	$0.9692^{+0.0045}_{-0.0054}$	$10^9 A_s$	$2.095^{+0.032}_{-0.036}$	$D_M(2.33)$	$5738^{+34}_{-7.6}$
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0025	$10^9 A_s e^{-2\tau}$	$1.879^{+0.011}_{-0.013}$	$f\sigma_8(0.15)$	$0.443^{+0.013}_{-0.0086}$
$\boldsymbol{A^{PS}_{100}}$	243 ± 25	D_{40}	1220 ± 13	$\sigma_8(0.15)$	$0.726^{+0.023}_{-0.013}$
$\boldsymbol{A^{PS}_{143}}$	41 ± 8	D_{220}	5722 ± 39	$f\sigma_8(0.38)$	$0.461^{+0.014}_{-0.0083}$
$\boldsymbol{A^{PS}_{217}}$	102 ± 10	D_{810}	2535 ± 14	$\sigma_8(0.38)$	$0.644^{+0.020}_{-0.011}$
$\boldsymbol{A^{CIB}_{217}}$	40 ± 7	D_{1420}	815.3 ± 4.9	$f\sigma_8(0.51)$	$0.459^{+0.014}_{-0.0081}$
$\boldsymbol{A^{tSZ}_{143}}$	$3.8^{+1.8}_{-2.6}$	D_{2000}	229.7 ± 1.7	$\sigma_8(0.51)$	$0.603^{+0.019}_{-0.011}$
$\boldsymbol{r^{PS}_{143\times217}}$	0.65 ± 0.13	$n_{s,0.002}$	$0.9692^{+0.0045}_{-0.0054}$	$f\sigma_8(0.61)$	$0.455^{+0.014}_{-0.0080}$
$\boldsymbol{r^{CIB}_{143\times217}}$	$0.58^{+0.42}_{-0.13}$	Y_P	$0.24650^{+0.00021}_{-0.0011}$	$\sigma_8(0.61)$	$0.573^{+0.018}_{-0.010}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	$0.24783^{+0.00022}_{-0.0011}$	$f\sigma_8(2.33)$	$0.2894^{+0.0092}_{-0.0052}$
$\boldsymbol{A^{kSZ}}$	—	10^5D/H	$2.609^{+0.027}_{-0.033}$	$\sigma_8(2.33)$	$0.2982^{+0.0096}_{-0.0055}$
$\boldsymbol{A^{dust}_{100}}$	1.02 ± 0.20	Age/Gyr	$13.737^{+0.079}_{-0.017}$	f^{143}_{2000}	30.6 ± 2.9
$\boldsymbol{A^{dust}_{143}}$	0.96 ± 0.17	z_*	1089.97 ± 0.25	f^{217}_{2000}	107.5 ± 1.9
$\boldsymbol{A^{dust}_{217}}$	0.97 ± 0.10	r_*	$144.05^{+0.87}_{-0.28}$	$f^{143\times217}_{2000}$	32.8 ± 2.0
$\boldsymbol{A^{dust}_{143\times217}}$	1.03 ± 0.16	$100\theta_*$	$1.04102^{+0.00036}_{-0.00030}$	χ^2_{simall}	397.1 ± 1.8
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	$D_M(z_*)$/Gpc	$13.837^{+0.081}_{-0.026}$	χ^2_{lowl}	22.61 ± 0.88
$\boldsymbol{c_{217}}$	1.0012 ± 0.0016	z_{drag}	$1060.08^{+0.34}_{-0.44}$	$\chi^2_{CamSpec}$	11516.8 ± 5.9
$\boldsymbol{c_{TE}}$	0.9973 ± 0.0050	r_{drag}	$146.69^{+0.91}_{-0.29}$	χ^2_{Aver15}	0.60 ± 0.51
$\boldsymbol{c_{EE}}$	0.9933 ± 0.0050	k_D	$0.14105^{+0.00034}_{-0.00073}$	$\chi^2_{Cooke17}$	0.12 ± 0.17
H_0	$67.94^{+0.45}_{-0.68}$	$100\theta_D$	$0.16097^{+0.00019}_{-0.00028}$	χ^2_{6DF}	0.058 ± 0.071
Ω_Λ	0.6893 ± 0.0065	z_{eq}	3317^{+71}_{-21}	χ^2_{MGS}	1.28 ± 0.46
Ω_m	0.3107 ± 0.0065	k_{eq}	$0.01021^{+0.00020}_{-0.000092}$	$\chi^2_{DR12BAO}$	4.9 ± 1.5
$\Omega_m h^2$	$0.1434^{+0.0011}_{-0.0020}$	$100\theta_{eq}$	$0.8308^{+0.0037}_{-0.015}$	χ^2_{prior}	7.8 ± 3.5
$\Omega_\nu h^2$	$0.00303^{+0.00027}_{-0.0024}$	$100\theta_{s,eq}$	$0.4585^{+0.0019}_{-0.0080}$	χ^2_{BAO}	6.2 ± 1.3
$\Omega_m h^3$	$0.09739^{+0.00033}_{-0.0016}$	$H(0.15)$	$73.23^{+0.38}_{-0.65}$	χ^2_{CMB}	11936.5 ± 6.0
σ_8	$0.786^{+0.024}_{-0.014}$	$D_M(0.15)$	$638.3^{+6.0}_{-3.8}$	χ^2_{Abund}	0.72 ± 0.57

$\bar{\chi}^2_{eff} = 11951.25$; $R - 1 = 0.01822$

8.33 base_nnu_meffsterile_CamSpecHM_TTTEEE_lowl_lowE_BAO_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02243 ± 0.00016	σ_8	$0.789^{+0.024}_{-0.015}$	$H(0.15)$	$73.43^{+0.38}_{-0.86}$
$\boldsymbol{\Omega_c h^2}$	$0.1187^{+0.0039}_{-0.0027}$	S_8	$0.802^{+0.024}_{-0.016}$	$D_M(0.15)$	$636.5^{+7.8}_{-3.9}$
$\boldsymbol{100\theta_{MC}}$	$1.04082^{+0.00038}_{-0.00031}$	$\sigma_8\Omega_m^{0.5}$	$0.439^{+0.013}_{-0.0089}$	$H(0.38)$	$83.58^{+0.27}_{-0.85}$
$\boldsymbol{\tau}$	$0.0556^{+0.0056}_{-0.0080}$	$\sigma_8\Omega_m^{0.25}$	$0.589^{+0.017}_{-0.011}$	$D_M(0.38)$	$1518^{+17}_{-7.7}$
$\boldsymbol{m^{eff}_{\nu,\,sterile}}$ [eV]	< 0.209	$\sigma_8/h^{0.5}$	$0.956^{+0.028}_{-0.015}$	$H(0.51)$	$90.33^{+0.22}_{-0.85}$
$\boldsymbol{N_{eff}}$	< 3.18	$r_{drag}h$	99.71 ± 0.87	$D_M(0.51)$	$1967^{+22}_{-8.9}$
$\boldsymbol{\ln(10^{10}A_s)}$	$3.046^{+0.012}_{-0.018}$	$\langle d^2\rangle^{1/2}$	2.417 ± 0.025	$H(0.61)$	$95.97^{+0.20}_{-0.84}$
$\boldsymbol{n_s}$	$0.9705^{+0.0048}_{-0.0064}$	z_{re}	$7.81^{+0.61}_{-0.80}$	$D_M(0.61)$	$2289^{+25}_{-9.5}$
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0025	10^9A_s	$2.103^{+0.026}_{-0.037}$	$H(2.33)$	$237.47^{+0.83}_{-2.1}$
$\boldsymbol{A^{PS}_{100}}$	243 ± 25	$10^9A_se^{-2\tau}$	$1.881^{+0.012}_{-0.015}$	$D_M(2.33)$	5725^{+47}_{-11}
$\boldsymbol{A^{PS}_{143}}$	41 ± 8	D_{40}	1218 ± 13	$f\sigma_8(0.15)$	$0.444^{+0.013}_{-0.0087}$
$\boldsymbol{A^{PS}_{217}}$	102 ± 10	D_{220}	5723 ± 39	$\sigma_8(0.15)$	$0.729^{+0.023}_{-0.014}$
$\boldsymbol{A^{CIB}_{217}}$	41 ± 7	D_{810}	2536 ± 14	$f\sigma_8(0.38)$	$0.462^{+0.014}_{-0.0085}$
$\boldsymbol{A^{tSZ}_{143}}$	$3.8^{+1.8}_{-2.7}$	D_{1420}	815.2 ± 4.9	$\sigma_8(0.38)$	$0.646^{+0.020}_{-0.012}$
$\boldsymbol{r^{PS}_{143\times217}}$	0.65 ± 0.13	D_{2000}	229.6 ± 1.7	$f\sigma_8(0.51)$	$0.461^{+0.014}_{-0.0084}$
$\boldsymbol{r^{CIB}_{143\times217}}$	$0.58^{+0.40}_{-0.14}$	$n_{s,0.002}$	$0.9705^{+0.0048}_{-0.0064}$	$\sigma_8(0.51)$	$0.605^{+0.019}_{-0.012}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P	$0.24695^{+0.00037}_{-0.0015}$	$f\sigma_8(0.61)$	$0.456^{+0.014}_{-0.0083}$
$\boldsymbol{A^{kSZ}}$	—	Y_P^{BBN}	$0.24828^{+0.00037}_{-0.0016}$	$\sigma_8(0.61)$	$0.576^{+0.018}_{-0.011}$
$\boldsymbol{A^{dust}_{100}}$	1.02 ± 0.20	10^5D/H	$2.615^{+0.029}_{-0.042}$	$f\sigma_8(2.33)$	$0.2907^{+0.0093}_{-0.0057}$
$\boldsymbol{A^{dust}_{143}}$	0.97 ± 0.17	Age/Gyr	$13.71^{+0.11}_{-0.027}$	$\sigma_8(2.33)$	$0.2995^{+0.0097}_{-0.0061}$
$\boldsymbol{A^{dust}_{217}}$	0.97 ± 0.10	z_*	$1090.01^{+0.25}_{-0.31}$	f^{143}_{2000}	30.8 ± 3.0
$\boldsymbol{A^{dust}_{143\times217}}$	1.03 ± 0.16	r_*	$143.7^{+1.2}_{-0.38}$	f^{217}_{2000}	107.6 ± 2.0
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	$100\theta_*$	$1.04094^{+0.00044}_{-0.00031}$	$f^{143\times217}_{2000}$	33.0 ± 2.1
$\boldsymbol{c_{217}}$	1.0012 ± 0.0016	$D_M(z_*)$/Gpc	$13.81^{+0.11}_{-0.036}$	χ^2_{simall}	397.0 ± 1.8
$\boldsymbol{c_{TE}}$	0.9974 ± 0.0050	z_{drag}	$1060.20^{+0.37}_{-0.53}$	χ^2_{lowl}	22.48 ± 0.90
$\boldsymbol{c_{EE}}$	0.9936 ± 0.0052	r_{drag}	$146.4^{+1.2}_{-0.40}$	$\chi^2_{CamSpec}$	11517.2 ± 6.0
H_0	$68.13^{+0.46}_{-0.88}$	k_D	$0.14129^{+0.00040}_{-0.00097}$	χ^2_{6DF}	0.057 ± 0.072
Ω_Λ	0.6898 ± 0.0068	$100\theta_D$	$0.16104^{+0.00021}_{-0.00037}$	χ^2_{MGS}	1.31 ± 0.48
Ω_m	0.3102 ± 0.0068	z_{eq}	3321^{+64}_{-18}	$\chi^2_{DR12BAO}$	4.9 ± 1.6
$\Omega_m h^2$	$0.1439^{+0.0012}_{-0.0026}$	k_{eq}	$0.01024^{+0.00020}_{-0.00010}$	χ^2_{prior}	7.9 ± 3.5
$\Omega_\nu h^2$	$0.00278^{+0.00032}_{-0.0023}$	$100\theta_{eq}$	$0.8298^{+0.0032}_{-0.014}$	χ^2_{BAO}	6.2 ± 1.3
$\Omega_m h^3$	$0.09806^{+0.00052}_{-0.0023}$	$100\theta_{s,eq}$	$0.4580^{+0.0016}_{-0.0071}$	χ^2_{CMB}	11936.7 ± 6.0

$\bar{\chi}^2_{eff} = 11950.77$; $\Delta\bar{\chi}^2_{eff} = 2.78$; $R - 1 = 0.01713$

8.34 base_nnu_meffsterile_CamSpecHM_TTTEEE_lowl_lowE_BAO_post_Pantheon_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02244 ± 0.00016	S_8	$0.801^{+0.023}_{-0.016}$	$H(0.38)$	$83.64^{+0.27}_{-0.86}$
$\boldsymbol{\Omega_c h^2}$	$0.1187^{+0.0039}_{-0.0028}$	$\sigma_8\Omega_m^{0.5}$	$0.439^{+0.013}_{-0.0087}$	$D_M(0.38)$	$1517^{+18}_{-7.5}$
$\boldsymbol{100\theta_{MC}}$	$1.04083^{+0.00038}_{-0.00032}$	$\sigma_8\Omega_m^{0.25}$	$0.589^{+0.017}_{-0.011}$	$H(0.51)$	$90.38^{+0.23}_{-0.86}$
$\boldsymbol{\tau}$	$0.0558^{+0.0056}_{-0.0079}$	$\sigma_8/h^{0.5}$	$0.956^{+0.027}_{-0.015}$	$D_M(0.51)$	$1965^{+22}_{-8.8}$
$\boldsymbol{m^{eff}_{\nu,\,sterile}}$ [eV]	< 0.200	$r_{drag}h$	99.84 ± 0.83	$H(0.61)$	$96.02^{+0.21}_{-0.86}$
$\boldsymbol{N_{eff}}$	< 3.19	$\langle d^2\rangle^{1/2}$	2.415 ± 0.024	$D_M(0.61)$	$2287^{+25}_{-9.4}$
$\boldsymbol{\ln(10^{10}A_s)}$	$3.046^{+0.013}_{-0.018}$	z_{re}	$7.82^{+0.61}_{-0.79}$	$H(2.33)$	$237.41^{+0.80}_{-2.1}$
$\boldsymbol{n_s}$	$0.9710^{+0.0048}_{-0.0064}$	$10^9 A_s$	$2.103^{+0.026}_{-0.037}$	$D_M(2.33)$	5722^{+49}_{-12}
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0025	$10^9 A_s e^{-2\tau}$	$1.881^{+0.012}_{-0.015}$	$f\sigma_8(0.15)$	$0.444^{+0.013}_{-0.0085}$
$\boldsymbol{A^{PS}_{100}}$	243 ± 25	D_{40}	1218 ± 13	$\sigma_8(0.15)$	$0.730^{+0.022}_{-0.013}$
$\boldsymbol{A^{PS}_{143}}$	41 ± 8	D_{220}	5724 ± 39	$f\sigma_8(0.38)$	$0.462^{+0.014}_{-0.0084}$
$\boldsymbol{A^{PS}_{217}}$	102 ± 10	D_{810}	2536 ± 14	$\sigma_8(0.38)$	$0.647^{+0.020}_{-0.012}$
$\boldsymbol{A^{CIB}_{217}}$	41 ± 7	D_{1420}	815.3 ± 4.9	$f\sigma_8(0.51)$	$0.461^{+0.014}_{-0.0082}$
$\boldsymbol{A^{tSZ}_{143}}$	$3.8^{+1.8}_{-2.6}$	D_{2000}	229.6 ± 1.7	$\sigma_8(0.51)$	$0.606^{+0.019}_{-0.011}$
$\boldsymbol{r^{PS}_{143\times217}}$	0.65 ± 0.13	$n_{s,0.002}$	$0.9710^{+0.0048}_{-0.0064}$	$f\sigma_8(0.61)$	$0.456^{+0.014}_{-0.0081}$
$\boldsymbol{r^{CIB}_{143\times217}}$	$0.58^{+0.40}_{-0.14}$	Y_P	$0.24698^{+0.00038}_{-0.0016}$	$\sigma_8(0.61)$	$0.576^{+0.018}_{-0.011}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	$0.24831^{+0.00038}_{-0.0016}$	$f\sigma_8(2.33)$	$0.2911^{+0.0092}_{-0.0056}$
$\boldsymbol{A^{kSZ}}$	—	10^5D/H	$2.614^{+0.029}_{-0.042}$	$\sigma_8(2.33)$	$0.3000^{+0.0096}_{-0.0059}$
$\boldsymbol{A^{dust}_{100}}$	1.02 ± 0.19	Age/Gyr	$13.70^{+0.12}_{-0.028}$	f^{143}_{2000}	30.8 ± 3.0
$\boldsymbol{A^{dust}_{143}}$	0.96 ± 0.17	z_*	$1089.99^{+0.25}_{-0.32}$	f^{217}_{2000}	107.6 ± 2.0
$\boldsymbol{A^{dust}_{217}}$	0.97 ± 0.10	r_*	$143.7^{+1.2}_{-0.38}$	$f^{143\times217}_{2000}$	32.9 ± 2.1
$\boldsymbol{A^{dust}_{143\times217}}$	1.03 ± 0.16	$100\theta_*$	$1.04095^{+0.00044}_{-0.00032}$	χ^2_{simall}	397.0 ± 1.8
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	$D_M(z_*)$/Gpc	$13.81^{+0.11}_{-0.036}$	χ^2_{lowl}	22.42 ± 0.89
$\boldsymbol{c_{217}}$	1.0012 ± 0.0016	z_{drag}	$1060.22^{+0.37}_{-0.54}$	$\chi^2_{CamSpec}$	11517.3 ± 6.0
$\boldsymbol{c_{TE}}$	0.9974 ± 0.0050	r_{drag}	$146.4^{+1.3}_{-0.40}$	χ^2_{JLA}	1036.31 ± 0.32
$\boldsymbol{c_{EE}}$	0.9937 ± 0.0052	k_D	$0.14128^{+0.00039}_{-0.00099}$	χ^2_{6DF}	0.047 ± 0.061
H_0	$68.21^{+0.45}_{-0.89}$	$100\theta_D$	$0.16104^{+0.00021}_{-0.00038}$	χ^2_{MGS}	1.38 ± 0.47
Ω_Λ	0.6909 ± 0.0065	z_{eq}	3319^{+63}_{-17}	$\chi^2_{DR12BAO}$	4.6 ± 1.4
Ω_m	0.3091 ± 0.0065	k_{eq}	$0.01024^{+0.00020}_{-0.00010}$	χ^2_{prior}	7.8 ± 3.5
$\Omega_m h^2$	$0.1438^{+0.0012}_{-0.0026}$	$100\theta_{eq}$	$0.8302^{+0.0030}_{-0.013}$	χ^2_{BAO}	6.0 ± 1.1
$\Omega_\nu h^2$	$0.00272^{+0.00028}_{-0.0022}$	$100\theta_{s,eq}$	$0.4582^{+0.0015}_{-0.0070}$	χ^2_{CMB}	11936.7 ± 6.0
$\Omega_m h^3$	$0.09811^{+0.00055}_{-0.0023}$	$H(0.15)$	$73.50^{+0.37}_{-0.87}$		
σ_8	$0.789^{+0.024}_{-0.014}$	$D_M(0.15)$	$635.8^{+7.9}_{-3.8}$		

$\bar{\chi}^2_{eff} = 12986.91$; $R - 1 = 0.01794$

8.35 base_nnu_meffsterile_CamSpecHM_TTTEEE_lowl_lowE_BAO_post_Aver15_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02241 ± 0.00015	S_8	$0.800^{+0.024}_{-0.016}$	$H(0.38)$	$83.39^{+0.26}_{-0.61}$
$\boldsymbol{\Omega_c h^2}$	$0.1179^{+0.0038}_{-0.0023}$	$\sigma_8\Omega_m^{0.5}$	$0.438^{+0.013}_{-0.0089}$	$D_M(0.38)$	$1522^{+13}_{-7.6}$
$\boldsymbol{100\theta_{MC}}$	$1.04087^{+0.00034}_{-0.00031}$	$\sigma_8\Omega_m^{0.25}$	$0.587^{+0.017}_{-0.011}$	$H(0.51)$	$90.13^{+0.20}_{-0.60}$
$\boldsymbol{\tau}$	$0.0556^{+0.0055}_{-0.0079}$	$\sigma_8/h^{0.5}$	$0.954^{+0.028}_{-0.016}$	$D_M(0.51)$	$1972^{+16}_{-8.8}$
$\boldsymbol{m^{eff}_{\nu,\,sterile}}$ [eV]	< 0.244	$r_{drag}h$	99.68 ± 0.84	$H(0.61)$	$95.76^{+0.16}_{-0.60}$
$\boldsymbol{N_{eff}}$	< 3.14	$\langle d^2\rangle^{1/2}$	2.419 ± 0.024	$D_M(0.61)$	$2294^{+18}_{-9.4}$
$\boldsymbol{\ln(10^{10}A_s)}$	$3.044^{+0.012}_{-0.017}$	z_{re}	$7.80^{+0.60}_{-0.79}$	$H(2.33)$	$237.00^{+0.70}_{-1.6}$
$\boldsymbol{n_s}$	$0.9694^{+0.0045}_{-0.0054}$	$10^9 A_s$	$2.100^{+0.025}_{-0.036}$	$D_M(2.33)$	$5737^{+34}_{-7.5}$
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0025	$10^9 A_s e^{-2\tau}$	$1.879^{+0.011}_{-0.013}$	$f\sigma_8(0.15)$	$0.443^{+0.013}_{-0.0087}$
$\boldsymbol{A^{PS}_{100}}$	242 ± 25	D_{40}	1220 ± 13	$\sigma_8(0.15)$	$0.727^{+0.022}_{-0.013}$
$\boldsymbol{A^{PS}_{143}}$	41 ± 8	D_{220}	5722 ± 39	$f\sigma_8(0.38)$	$0.461^{+0.014}_{-0.0085}$
$\boldsymbol{A^{PS}_{217}}$	102 ± 10	D_{810}	2535 ± 14	$\sigma_8(0.38)$	$0.645^{+0.020}_{-0.012}$
$\boldsymbol{A^{CIB}_{217}}$	40 ± 7	D_{1420}	815.3 ± 4.9	$f\sigma_8(0.51)$	$0.460^{+0.014}_{-0.0082}$
$\boldsymbol{A^{tSZ}_{143}}$	$3.8^{+1.8}_{-2.6}$	D_{2000}	229.7 ± 1.7	$\sigma_8(0.51)$	$0.603^{+0.019}_{-0.011}$
$\boldsymbol{r^{PS}_{143\times217}}$	0.65 ± 0.13	$n_{s,0.002}$	$0.9694^{+0.0045}_{-0.0054}$	$f\sigma_8(0.61)$	$0.455^{+0.014}_{-0.0080}$
$\boldsymbol{r^{CIB}_{143\times217}}$	$0.58^{+0.40}_{-0.15}$	Y_P	$0.24652^{+0.00021}_{-0.0011}$	$\sigma_8(0.61)$	$0.574^{+0.018}_{-0.010}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	$0.24785^{+0.00021}_{-0.0011}$	$f\sigma_8(2.33)$	$0.2898^{+0.0091}_{-0.0053}$
$\boldsymbol{A^{kSZ}}$	—	10^5D/H	$2.608^{+0.028}_{-0.035}$	$\sigma_8(2.33)$	$0.2986^{+0.0095}_{-0.0056}$
$\boldsymbol{A^{dust}_{100}}$	1.02 ± 0.20	Age/Gyr	$13.734^{+0.081}_{-0.017}$	f^{143}_{2000}	30.6 ± 2.9
$\boldsymbol{A^{dust}_{143}}$	0.96 ± 0.17	z_*	$1089.96^{+0.24}_{-0.28}$	f^{217}_{2000}	107.4 ± 2.0
$\boldsymbol{A^{dust}_{217}}$	0.97 ± 0.10	r_*	$144.03^{+0.90}_{-0.27}$	$f^{143\times217}_{2000}$	32.8 ± 2.1
$\boldsymbol{A^{dust}_{143\times217}}$	1.03 ± 0.16	$100\theta_*$	$1.04101^{+0.00037}_{-0.00030}$	χ^2_{simall}	397.0 ± 1.8
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	$D_M(z_*)$/Gpc	$13.836^{+0.084}_{-0.026}$	χ^2_{lowl}	22.61 ± 0.88
$\boldsymbol{c_{217}}$	1.0012 ± 0.0016	z_{drag}	$1060.10^{+0.35}_{-0.44}$	$\chi^2_{CamSpec}$	11516.7 ± 5.9
$\boldsymbol{c_{TE}}$	0.9972 ± 0.0050	r_{drag}	$146.68^{+0.93}_{-0.28}$	χ^2_{Aver15}	0.62 ± 0.54
$\boldsymbol{c_{EE}}$	0.9932 ± 0.0050	k_D	$0.14107^{+0.00035}_{-0.00074}$	χ^2_{6DF}	0.057 ± 0.070
H_0	$67.96^{+0.45}_{-0.69}$	$100\theta_D$	$0.16097^{+0.00020}_{-0.00029}$	χ^2_{MGS}	1.29 ± 0.46
Ω_Λ	0.6895 ± 0.0066	z_{eq}	3316^{+71}_{-21}	$\chi^2_{DR12BAO}$	4.9 ± 1.5
Ω_m	0.3105 ± 0.0066	k_{eq}	$0.01021^{+0.00020}_{-0.000096}$	χ^2_{prior}	7.8 ± 3.5
$\Omega_m h^2$	$0.1434^{+0.0011}_{-0.0020}$	$100\theta_{eq}$	$0.8308^{+0.0037}_{-0.015}$	χ^2_{BAO}	6.2 ± 1.2
$\Omega_\nu h^2$	$0.00301^{+0.00027}_{-0.0024}$	$100\theta_{s,eq}$	$0.4585^{+0.0019}_{-0.0079}$	χ^2_{CMB}	11936.3 ± 5.9
$\Omega_m h^3$	$0.09744^{+0.00032}_{-0.0016}$	$H(0.15)$	$73.26^{+0.38}_{-0.65}$		
σ_8	$0.787^{+0.024}_{-0.014}$	$D_M(0.15)$	$638.0^{+6.0}_{-3.9}$		

$\bar{\chi}^2_{eff} = 11950.98$; $R - 1 = 0.01936$

8.36 base_nnu_meffsterile_CamSpecHM_TTTEEE_lowl_lowE_BAO_post_Cooke17_Aver15_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02240 ± 0.00015	S_8	$0.800^{+0.023}_{-0.016}$	$H(0.38)$	$83.38^{+0.26}_{-0.61}$
$\boldsymbol{\Omega_c h^2}$	$0.1179^{+0.0038}_{-0.0022}$	$\sigma_8\Omega_m^{0.5}$	$0.438^{+0.013}_{-0.0088}$	$D_M(0.38)$	$1522^{+13}_{-7.5}$
$\boldsymbol{100\theta_{MC}}$	1.04087 ± 0.00032	$\sigma_8\Omega_m^{0.25}$	$0.587^{+0.017}_{-0.011}$	$H(0.51)$	$90.12^{+0.20}_{-0.60}$
$\boldsymbol{\tau}$	$0.0555^{+0.0055}_{-0.0079}$	$\sigma_8/h^{0.5}$	$0.954^{+0.028}_{-0.015}$	$D_M(0.51)$	$1972^{+16}_{-8.7}$
$\boldsymbol{m^{eff}_{\nu,\,sterile}}$ [eV]	< 0.244	$r_{drag}h$	99.67 ± 0.83	$H(0.61)$	$95.75^{+0.16}_{-0.60}$
$\boldsymbol{N_{eff}}$	< 3.14	$\langle d^2\rangle^{1/2}$	2.419 ± 0.024	$D_M(0.61)$	$2295^{+18}_{-9.3}$
$\boldsymbol{\ln(10^{10}A_s)}$	$3.044^{+0.012}_{-0.017}$	z_{re}	$7.80^{+0.60}_{-0.79}$	$H(2.33)$	$236.98^{+0.72}_{-1.5}$
$\boldsymbol{n_s}$	$0.9693^{+0.0045}_{-0.0054}$	$10^9 A_s$	$2.100^{+0.025}_{-0.036}$	$D_M(2.33)$	$5737^{+34}_{-7.7}$
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0025	$10^9 A_s e^{-2\tau}$	$1.879^{+0.011}_{-0.013}$	$f\sigma_8(0.15)$	$0.443^{+0.013}_{-0.0086}$
$\boldsymbol{A^{PS}_{100}}$	242 ± 25	D_{40}	1220 ± 13	$\sigma_8(0.15)$	$0.727^{+0.022}_{-0.013}$
$\boldsymbol{A^{PS}_{143}}$	41 ± 8	D_{220}	5722 ± 39	$f\sigma_8(0.38)$	$0.461^{+0.014}_{-0.0083}$
$\boldsymbol{A^{PS}_{217}}$	102 ± 10	D_{810}	2535 ± 14	$\sigma_8(0.38)$	$0.645^{+0.020}_{-0.011}$
$\boldsymbol{A^{CIB}_{217}}$	40 ± 7	D_{1420}	815.3 ± 4.9	$f\sigma_8(0.51)$	$0.460^{+0.014}_{-0.0081}$
$\boldsymbol{A^{tSZ}_{143}}$	$3.8^{+1.8}_{-2.6}$	D_{2000}	229.7 ± 1.7	$\sigma_8(0.51)$	$0.603^{+0.019}_{-0.011}$
$\boldsymbol{r^{PS}_{143\times217}}$	0.65 ± 0.13	$n_{s,0.002}$	$0.9693^{+0.0045}_{-0.0054}$	$f\sigma_8(0.61)$	$0.455^{+0.014}_{-0.0080}$
$\boldsymbol{r^{CIB}_{143\times217}}$	$0.58^{+0.40}_{-0.14}$	Y_P	$0.24651^{+0.00022}_{-0.0011}$	$\sigma_8(0.61)$	$0.574^{+0.018}_{-0.010}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	$0.24784^{+0.00022}_{-0.0011}$	$f\sigma_8(2.33)$	$0.2898^{+0.0091}_{-0.0052}$
$\boldsymbol{A^{kSZ}}$	—	10^5D/H	$2.608^{+0.027}_{-0.033}$	$\sigma_8(2.33)$	$0.2986^{+0.0095}_{-0.0055}$
$\boldsymbol{A^{dust}_{100}}$	1.02 ± 0.20	Age/Gyr	$13.736^{+0.080}_{-0.018}$	f^{143}_{2000}	30.6 ± 2.9
$\boldsymbol{A^{dust}_{143}}$	0.96 ± 0.17	z_*	$1089.96^{+0.23}_{-0.26}$	f^{217}_{2000}	107.4 ± 1.9
$\boldsymbol{A^{dust}_{217}}$	0.97 ± 0.10	r_*	$144.04^{+0.88}_{-0.28}$	$f^{143\times217}_{2000}$	32.8 ± 2.0
$\boldsymbol{A^{dust}_{143\times217}}$	1.03 ± 0.16	$100\theta_*$	$1.04101^{+0.00036}_{-0.00030}$	χ^2_{simall}	397.0 ± 1.8
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	$D_M(z_*)$/Gpc	$13.837^{+0.082}_{-0.027}$	χ^2_{lowl}	22.62 ± 0.88
$\boldsymbol{c_{217}}$	1.0012 ± 0.0016	z_{drag}	$1060.08^{+0.34}_{-0.44}$	$\chi^2_{CamSpec}$	11516.6 ± 5.9
$\boldsymbol{c_{TE}}$	0.9972 ± 0.0050	r_{drag}	$146.69^{+0.92}_{-0.29}$	χ^2_{Aver15}	0.61 ± 0.51
$\boldsymbol{c_{EE}}$	0.9932 ± 0.0050	k_D	$0.14105^{+0.00035}_{-0.00073}$	$\chi^2_{Cooke17}$	0.12 ± 0.17
H_0	$67.95^{+0.45}_{-0.68}$	$100\theta_D$	$0.16097^{+0.00019}_{-0.00028}$	χ^2_{6DF}	0.057 ± 0.070
Ω_Λ	0.6894 ± 0.0065	z_{eq}	3317^{+71}_{-21}	χ^2_{MGS}	1.29 ± 0.46
Ω_m	0.3106 ± 0.0065	k_{eq}	$0.01021^{+0.00020}_{-0.000093}$	$\chi^2_{DR12BAO}$	4.9 ± 1.5
$\Omega_m h^2$	$0.1434^{+0.0011}_{-0.0020}$	$100\theta_{eq}$	$0.8308^{+0.0037}_{-0.015}$	χ^2_{prior}	7.8 ± 3.5
$\Omega_\nu h^2$	$0.00301^{+0.00027}_{-0.0024}$	$100\theta_{s,eq}$	$0.4585^{+0.0019}_{-0.0079}$	χ^2_{BAO}	6.2 ± 1.2
$\Omega_m h^3$	$0.09740^{+0.00034}_{-0.0016}$	$H(0.15)$	$73.24^{+0.37}_{-0.65}$	χ^2_{CMB}	11936.2 ± 5.9
σ_8	$0.787^{+0.024}_{-0.014}$	$D_M(0.15)$	$638.2^{+6.0}_{-3.8}$	χ^2_{Abund}	0.73 ± 0.57

$\bar{\chi}^2_{eff} = 11951.02$; $R - 1 = 0.01932$

8.37 base_nnu_meffsterile_plikHM_TT_lowl_lowE_lensing_BAO

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022264	0.02232 ± 0.00021	$\sigma_8\Omega_m^{0.25}$	0.6054	$0.596^{+0.015}_{-0.0093}$	$D_M(0.38)$	1526.2	1516^{+24}_{-12}
$\boldsymbol{\Omega_c h^2}$	0.11957	$0.1204^{+0.0038}_{-0.0034}$	$\sigma_8/h^{0.5}$	0.9853	$0.966^{+0.022}_{-0.012}$	$H(0.51)$	89.86	$90.53^{+0.45}_{-1.2}$
$\boldsymbol{100\theta_{MC}}$	1.040912	1.04076 ± 0.00049	$r_{drag}h$	99.73	99.51 ± 0.93	$D_M(0.51)$	1977.3	1964^{+30}_{-14}
$\boldsymbol{\tau}$	0.0558	0.0566 ± 0.0078	$\langle d^2\rangle^{1/2}$	2.4345	2.427 ± 0.023	$H(0.61)$	95.48	$96.20^{+0.44}_{-1.2}$
$\boldsymbol{m^{eff}_{\nu,\,sterile}}$ [eV]	0.000	< 0.149	z_{re}	7.85	7.96 ± 0.78	$D_M(0.61)$	2301.0	2285^{+35}_{-15}
$\boldsymbol{N_{eff}}$	3.077	< 3.26	$10^9 A_s$	2.1047	$2.116^{+0.032}_{-0.037}$	$H(2.33)$	236.27	$238.3^{+1.2}_{-2.7}$
$\boldsymbol{\ln(10^{10}A_s)}$	3.0467	3.052 ± 0.017	$10^9 A_s e^{-2\tau}$	1.8825	$1.890^{+0.012}_{-0.017}$	$D_M(2.33)$	5753.7	5710^{+69}_{-25}
$\boldsymbol{n_s}$	0.9679	$0.9709^{+0.0057}_{-0.0080}$	D_{40}	1225.4	1221 ± 14	$f\sigma_8(0.15)$	0.4565	$0.450^{+0.011}_{-0.0072}$
$\boldsymbol{y_{cal}}$	1.00095	1.0008 ± 0.0025	D_{220}	5725.1	5724 ± 40	$\sigma_8(0.15)$	0.7496	$0.737^{+0.020}_{-0.013}$
$\boldsymbol{A^{CIB}_{217}}$	48.8	49 ± 7	D_{810}	2540.4	2540 ± 14	$f\sigma_8(0.38)$	0.4751	$0.468^{+0.012}_{-0.0072}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.30	—	D_{1420}	816.78	814.9 ± 5.0	$\sigma_8(0.38)$	0.6646	$0.653^{+0.018}_{-0.012}$
$\boldsymbol{A^{tSZ}_{143}}$	7.05	4.9 ± 2.0	D_{2000}	230.43	229.1 ± 1.9	$f\sigma_8(0.51)$	0.4739	$0.467^{+0.012}_{-0.0072}$
$\boldsymbol{A^{PS}_{100}}$	254.5	267 ± 28	$n_{s,0.002}$	0.9679	$0.9709^{+0.0057}_{-0.0080}$	$\sigma_8(0.51)$	0.6220	$0.612^{+0.017}_{-0.012}$
$\boldsymbol{A^{PS}_{143}}$	49.2	51 ± 8	Y_P	0.24576	$0.24756^{+0.00071}_{-0.0022}$	$f\sigma_8(0.61)$	0.4690	$0.462^{+0.012}_{-0.0073}$
$\boldsymbol{A^{PS}_{143\times217}}$	46.2	44^{+9}_{-10}	Y_P^{BBN}	0.24709	$0.24889^{+0.00071}_{-0.0022}$	$\sigma_8(0.61)$	0.5919	$0.582^{+0.016}_{-0.011}$
$\boldsymbol{A^{PS}_{217}}$	119.1	115 ± 10	10^5D/H	2.616	$2.653^{+0.043}_{-0.059}$	$f\sigma_8(2.33)$	0.2985	$0.2938^{+0.0083}_{-0.0057}$
$\boldsymbol{A^{kSZ}}$	0.00	< 5.21	Age/Gyr	13.775	$13.67^{+0.16}_{-0.059}$	$\sigma_8(2.33)$	0.3078	$0.3026^{+0.0087}_{-0.0062}$
$\boldsymbol{A^{dustTT}_{100}}$	8.86	9.0 ± 1.8	z_*	1090.047	$1090.30^{+0.33}_{-0.41}$	f^{143}_{2000}	30.39	32.3 ± 3.1
$\boldsymbol{A^{dustTT}_{143}}$	10.78	10.7 ± 1.8	r_*	144.47	$143.3^{+1.7}_{-0.63}$	$f^{143\times217}_{2000}$	33.18	34.4 ± 2.2
$\boldsymbol{A^{dustTT}_{143\times217}}$	19.42	18.3 ± 3.3	$100\theta_*$	1.04109	$1.04086^{+0.00059}_{-0.00049}$	f^{217}_{2000}	107.69	108.9 ± 2.0
$\boldsymbol{A^{dustTT}_{217}}$	94.7	93.2 ± 7.4	$D_M(z_*)$/Gpc	13.877	$13.76^{+0.16}_{-0.059}$	$\chi^2_{lensing}$	8.84	9.5 ± 1.0
$\boldsymbol{c_{100}}$	0.99965	0.99961 ± 0.00062	z_{drag}	1059.67	$1060.08^{+0.51}_{-0.71}$	χ^2_{simall}	396.34	397.5 ± 2.2
$\boldsymbol{c_{217}}$	0.99826	0.99828 ± 0.00062	r_{drag}	147.17	$145.9^{+1.7}_{-0.66}$	χ^2_{lowl}	22.91	22.6 ± 1.0
H_0	67.77	$68.20^{+0.63}_{-1.2}$	k_D	0.14059	$0.14148^{+0.00061}_{-0.0013}$	χ^2_{plik}	759.6	773.6 ± 5.6
Ω_Λ	0.6897	0.6881 ± 0.0074	$100\theta_D$	0.161035	$0.16134^{+0.00033}_{-0.00052}$	χ^2_{6DF}	0.0236	0.076 ± 0.090
Ω_m	0.3103	0.3119 ± 0.0074	z_{eq}	3375.6	3337^{+49}_{-23}	χ^2_{MGS}	1.279	1.21 ± 0.50
$\Omega_m h^2$	0.14248	$0.1450^{+0.0016}_{-0.0033}$	k_{eq}	0.010324	$0.01032^{+0.00018}_{-0.00012}$	$\chi^2_{DR12BAO}$	4.25	5.3 ± 1.9
$\Omega_\nu h^2$	0.00065	$0.0022471^{+0.0000082}_{-0.0016}$	$100\theta_{eq}$	0.8178	$0.8261^{+0.0038}_{-0.010}$	χ^2_{prior}	1.49	7.3 ± 3.7
$\Omega_m h^3$	0.09656	$0.0989^{+0.0011}_{-0.0034}$	$100\theta_{s,eq}$	0.45181	$0.4561^{+0.0019}_{-0.0054}$	χ^2_{CMB}	1187.7	1203.3 ± 5.8
σ_8	0.8111	$0.798^{+0.021}_{-0.014}$	$H(0.15)$	73.04	$73.53^{+0.56}_{-1.2}$	χ^2_{BAO}	5.56	6.5 ± 1.6
S_8	0.8249	$0.813^{+0.020}_{-0.014}$	$D_M(0.15)$	639.8	$636^{+11}_{-5.6}$			
$\sigma_8\Omega_m^{0.5}$	0.4518	$0.445^{+0.011}_{-0.0074}$	$H(0.38)$	83.15	$83.74^{+0.48}_{-1.2}$			

Best-fit $\chi^2_{eff} = 1194.69$; $\Delta\chi^2_{eff} = 0.01$; $\bar{\chi}^2_{eff} = 1217.17$; $\Delta\bar{\chi}^2_{eff} = 2.44$; $R - 1 = 0.01959$

χ^2_{eff}: BAO - 6DF: 0.02 (Δ -0.01) MGS: 1.28 (Δ 0.06) DR12BAO: 4.25 (Δ -0.12) CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.84 (Δ -0.04) simall_100x143_offlike5_EE_Aplanc
396.34 (Δ 0.24) commander_dx12_v3_2_29: 22.91 (Δ -0.05) plik_rd12_HM_v22_TT: 759.57 (Δ -0.24)

8.38 base_nnu_meffsterile_plikHM_TT_lowl_lowE_lensing_BAO_post_Pantheon

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022251	0.02234 ± 0.00021	$\sigma_8\Omega_m^{0.25}$	0.6018	$0.596^{+0.015}_{-0.0091}$	$D_M(0.38)$	1528.3	1514^{+25}_{-12}
$\boldsymbol{\Omega_c h^2}$	0.10923	$0.1205^{+0.0039}_{-0.0035}$	$\sigma_8/h^{0.5}$	0.9808	$0.966^{+0.023}_{-0.012}$	$H(0.51)$	89.71	$90.63^{+0.49}_{-1.3}$
$\boldsymbol{100\theta_{MC}}$	1.041024	1.04076 ± 0.00049	$r_{drag}h$	99.86	99.66 ± 0.90	$D_M(0.51)$	1980.1	1961^{+31}_{-15}
$\boldsymbol{\tau}$	0.0556	0.0571 ± 0.0077	$\langle d^2\rangle^{1/2}$	2.4305	2.426 ± 0.023	$H(0.61)$	95.30	$96.30^{+0.48}_{-1.3}$
$\boldsymbol{m^{eff}_{\nu,\,sterile}}$ [eV]	0.906	< 0.139	z_{re}	7.83	8.01 ± 0.77	$D_M(0.61)$	2304.4	2282^{+36}_{-16}
$\boldsymbol{N_{eff}}$	3.049	< 3.27	$10^9 A_s$	2.0978	2.119 ± 0.035	$H(2.33)$	235.70	$238.3^{+1.2}_{-2.9}$
$\boldsymbol{\ln(10^{10}A_s)}$	3.0435	3.053 ± 0.016	$10^9 A_s e^{-2\tau}$	1.8768	$1.890^{+0.013}_{-0.018}$	$D_M(2.33)$	5765	5705^{+73}_{-27}
$\boldsymbol{n_s}$	0.9677	$0.9716^{+0.0057}_{-0.0081}$	D_{40}	1223.0	1220 ± 14	$f\sigma_8(0.15)$	0.4536	$0.450^{+0.011}_{-0.0070}$
$\boldsymbol{y_{cal}}$	1.00039	1.0008 ± 0.0025	D_{220}	5716.6	5725 ± 40	$\sigma_8(0.15)$	0.7459	$0.738^{+0.020}_{-0.013}$
$\boldsymbol{A^{CIB}_{217}}$	48.9	49 ± 7	D_{810}	2536.6	2540 ± 14	$f\sigma_8(0.38)$	0.4723	$0.468^{+0.012}_{-0.0070}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.24	—	D_{1420}	816.14	814.9 ± 5.1	$\sigma_8(0.38)$	0.6614	$0.655^{+0.018}_{-0.012}$
$\boldsymbol{A^{tSZ}_{143}}$	7.03	4.9 ± 2.0	D_{2000}	230.45	229.1 ± 1.9	$f\sigma_8(0.51)$	0.4712	$0.467^{+0.012}_{-0.0071}$
$\boldsymbol{A^{PS}_{100}}$	254.3	267 ± 28	$n_{s,0.002}$	0.9677	$0.9716^{+0.0057}_{-0.0081}$	$\sigma_8(0.51)$	0.6190	$0.613^{+0.017}_{-0.011}$
$\boldsymbol{A^{PS}_{143}}$	47.2	51 ± 8	Y_P	0.24539	$0.24769^{+0.00079}_{-0.0024}$	$f\sigma_8(0.61)$	0.4664	$0.462^{+0.012}_{-0.0071}$
$\boldsymbol{A^{PS}_{143\times217}}$	44.0	44 ± 9	Y_P^{BBN}	0.24671	$0.24902^{+0.00079}_{-0.0024}$	$\sigma_8(0.61)$	0.5891	$0.583^{+0.016}_{-0.011}$
$\boldsymbol{A^{PS}_{217}}$	118.1	115 ± 10	10^5D/H	2.609	$2.653^{+0.044}_{-0.061}$	$f\sigma_8(2.33)$	0.2971	$0.2944^{+0.0084}_{-0.0057}$
$\boldsymbol{A^{kSZ}}$	0.03	< 5.23	Age/Gyr	13.801	$13.66^{+0.17}_{-0.064}$	$\sigma_8(2.33)$	0.3064	$0.3033^{+0.0088}_{-0.0062}$
$\boldsymbol{A^{dustTT}_{100}}$	8.90	9.0 ± 1.8	z_*	1089.972	$1090.28^{+0.34}_{-0.41}$	f^{143}_{2000}	29.94	32.3 ± 3.1
$\boldsymbol{A^{dustTT}_{143}}$	10.81	10.7 ± 1.8	r_*	144.82	$143.2^{+1.8}_{-0.68}$	$f^{143\times217}_{2000}$	32.83	34.4 ± 2.2
$\boldsymbol{A^{dustTT}_{143\times217}}$	19.17	18.3 ± 3.3	$100\theta_*$	1.04122	$1.04085^{+0.00060}_{-0.00049}$	f^{217}_{2000}	107.36	108.9 ± 2.0
$\boldsymbol{A^{dustTT}_{217}}$	94.4	93.2 ± 7.4	$D_M(z_*)$/Gpc	13.908	$13.76^{+0.16}_{-0.064}$	$\chi^2_{lensing}$	8.91	9.6 ± 1.0
$\boldsymbol{c_{100}}$	0.99965	0.99962 ± 0.00061	z_{drag}	1059.59	$1060.13^{+0.53}_{-0.73}$	χ^2_{simall}	396	290 ± 200
$\boldsymbol{c_{217}}$	0.99825	0.99828 ± 0.00063	r_{drag}	147.52	$145.9^{+1.8}_{-0.72}$	χ^2_{lowl}	23	130 ± 200
H_0	67.69	$68.33^{+0.64}_{-1.2}$	k_D	0.14032	$0.14152^{+0.00063}_{-0.0014}$	χ^2_{plik}	759.6	773.8 ± 5.6
Ω_Λ	0.6906	0.6893 ± 0.0071	$100\theta_D$	0.160977	$0.16135^{+0.00035}_{-0.00054}$	χ^2_{JLA}	1036.234	1036.40 ± 0.39
Ω_m	0.3094	0.3107 ± 0.0071	z_{eq}	3140.7	3334^{+49}_{-22}	χ^2_{6DF}	0.016	0.41 ± 0.62
$\Omega_m h^2$	0.14176	$0.1450^{+0.0017}_{-0.0035}$	k_{eq}	0.009761	$0.01031^{+0.00018}_{-0.00012}$	χ^2_{MGS}	1.34	0.94 ± 0.69
$\Omega_\nu h^2$	0.01028	$0.002201^{-0.000053}_{-0.0016}$	$100\theta_{eq}$	0.8694	$0.8266^{+0.0037}_{-0.010}$	$\chi^2_{DR12BAO}$	4.05	4.9 ± 1.7
$\Omega_m h^3$	0.09596	$0.0991^{+0.0012}_{-0.0036}$	$100\theta_{s,eq}$	0.47896	$0.4564^{+0.0018}_{-0.0053}$	χ^2_{prior}	1.39	7.3 ± 3.7
σ_8	0.8069	$0.799^{+0.021}_{-0.014}$	$H(0.15)$	72.95	$73.66^{+0.58}_{-1.2}$	χ^2_{CMB}	1187.6	1203.5 ± 5.9
S_8	0.8194	$0.813^{+0.020}_{-0.013}$	$D_M(0.15)$	640.6	$635^{+11}_{-5.7}$	χ^2_{BAO}	5.41	6.3 ± 1.3
$\sigma_8\Omega_m^{0.5}$	0.4488	$0.445^{+0.011}_{-0.0072}$	$H(0.38)$	83.01	$83.86^{+0.51}_{-1.3}$			

Best-fit $\chi^2_{eff} = 2230.68$; $\Delta\chi^2_{eff} = -0.32$; $\bar{\chi}^2_{eff} = 2253.51$; $\Delta\bar{\chi}^2_{eff} = 2.45$; $R - 1 = 0.01859$

χ^2_{eff}: BAO - 6DF: 0.02 (Δ 0.00) MGS: 1.34 (Δ 0.00) DR12BAO: 4.05 (Δ 0.02) CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.91 (Δ 0.04) simall_100x143_offlike5_EE_Aplanck_B 396.28 (Δ -0.16) commander_dx12_v3_2_29: 22.84 (Δ -0.00) plik_rd12_HM_v22_TT: 759.61 (Δ -0.24) SN - JLA Pantheon: 1036.23 (Δ 0.01)

8.39 base_nnu_meffsterile_plikHM_TT_lowl_lowE_lensing_BAO_post_Aver15

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02229 ± 0.00020	$\sigma_8\Omega_m^{0.25}$	$0.594^{+0.015}_{-0.0092}$	$D_M(0.38)$	$1524^{+17}_{-9.1}$
$\boldsymbol{\Omega_c h^2}$	$0.1192^{+0.0035}_{-0.0027}$	$\sigma_8/h^{0.5}$	$0.964^{+0.024}_{-0.013}$	$H(0.51)$	$90.13^{+0.27}_{-0.81}$
$\boldsymbol{100\theta_{MC}}$	1.04086 ± 0.00045	$r_{drag}h$	99.38 ± 0.90	$D_M(0.51)$	1973^{+21}_{-11}
$\boldsymbol{\tau}$	0.0565 ± 0.0077	$\langle d^2\rangle^{1/2}$	2.432 ± 0.022	$H(0.61)$	$95.79^{+0.24}_{-0.81}$
$\boldsymbol{m^{eff}_{\nu,\,sterile}}$ [eV]	< 0.195	z_{re}	7.93 ± 0.77	$D_M(0.61)$	2296^{+24}_{-11}
$\boldsymbol{N_{eff}}$	< 3.17	$10^9 A_s$	2.111 ± 0.033	$H(2.33)$	$237.46^{+0.88}_{-1.9}$
$\boldsymbol{\ln(10^{10}A_s)}$	3.050 ± 0.016	$10^9 A_s e^{-2\tau}$	$1.885^{+0.011}_{-0.014}$	$D_M(2.33)$	5734^{+46}_{-13}
$\boldsymbol{n_s}$	$0.9685^{+0.0049}_{-0.0064}$	D_{40}	1224 ± 13	$f\sigma_8(0.15)$	$0.449^{+0.012}_{-0.0074}$
$\boldsymbol{y_{cal}}$	1.0008 ± 0.0025	D_{220}	5724 ± 40	$\sigma_8(0.15)$	$0.733^{+0.020}_{-0.012}$
$\boldsymbol{A^{CIB}_{217}}$	48 ± 7	D_{810}	2539 ± 13	$f\sigma_8(0.38)$	$0.466^{+0.012}_{-0.0072}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{1420}	815.1 ± 5.0	$\sigma_8(0.38)$	$0.650^{+0.018}_{-0.011}$
$\boldsymbol{A^{tSZ}_{143}}$	5.0 ± 2.0	D_{2000}	229.4 ± 1.8	$f\sigma_8(0.51)$	$0.465^{+0.012}_{-0.0071}$
$\boldsymbol{A^{PS}_{100}}$	265 ± 28	$n_{s,0.002}$	$0.9685^{+0.0049}_{-0.0064}$	$\sigma_8(0.51)$	$0.608^{+0.017}_{-0.011}$
$\boldsymbol{A^{PS}_{143}}$	50 ± 8	Y_P	$0.24675^{+0.00034}_{-0.0014}$	$f\sigma_8(0.61)$	$0.460^{+0.012}_{-0.0071}$
$\boldsymbol{A^{PS}_{143\times217}}$	44 ± 9	Y_P^{BBN}	$0.24808^{+0.00035}_{-0.0014}$	$\sigma_8(0.61)$	$0.579^{+0.016}_{-0.010}$
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	10^5D/H	$2.639^{+0.040}_{-0.048}$	$f\sigma_8(2.33)$	$0.2920^{+0.0081}_{-0.0054}$
$\boldsymbol{A^{kSZ}}$	< 5.03	Age/Gyr	$13.73^{+0.11}_{-0.031}$	$\sigma_8(2.33)$	$0.3008^{+0.0084}_{-0.0057}$
$\boldsymbol{A^{dustTT}_{100}}$	8.9 ± 1.8	z_*	1090.20 ± 0.33	f^{143}_{2000}	31.8 ± 3.0
$\boldsymbol{A^{dustTT}_{143}}$	10.7 ± 1.8	r_*	$143.8^{+1.1}_{-0.39}$	$f^{143\times217}_{2000}$	34.1 ± 2.1
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.3 ± 3.3	$100\theta_*$	$1.04100^{+0.00050}_{-0.00044}$	f^{217}_{2000}	108.6 ± 1.9
$\boldsymbol{A^{dustTT}_{217}}$	93.2 ± 7.4	$D_M(z_*)$/Gpc	$13.82^{+0.11}_{-0.037}$	$\chi^2_{lensing}$	9.42 ± 0.96
$\boldsymbol{c_{100}}$	0.99962 ± 0.00061	z_{drag}	$1059.88^{+0.49}_{-0.57}$	χ^2_{simall}	291 ± 200
$\boldsymbol{c_{217}}$	0.99827 ± 0.00063	r_{drag}	$146.5^{+1.2}_{-0.42}$	χ^2_{lowl}	129 ± 200
H_0	$67.84^{+0.52}_{-0.87}$	k_D	$0.14107^{+0.00050}_{-0.00092}$	χ^2_{plik}	773.1 ± 5.5
Ω_Λ	0.6870 ± 0.0072	$100\theta_D$	$0.16120^{+0.00029}_{-0.00040}$	χ^2_{Aver15}	0.75 ± 0.74
Ω_m	0.3130 ± 0.0072	z_{eq}	3332^{+58}_{-23}	χ^2_{6DF}	0.39 ± 0.55
$\Omega_m h^2$	$0.1440^{+0.0013}_{-0.0023}$	k_{eq}	$0.01027^{+0.00018}_{-0.00011}$	χ^2_{MGS}	0.84 ± 0.62
$\Omega_\nu h^2$	$0.00259^{+0.00017}_{-0.0020}$	$100\theta_{eq}$	$0.8271^{+0.0040}_{-0.012}$	$\chi^2_{DR12BAO}$	5.4 ± 2.0
$\Omega_m h^3$	$0.09772^{+0.00057}_{-0.0022}$	$100\theta_{s,eq}$	$0.4567^{+0.0020}_{-0.0065}$	χ^2_{prior}	7.3 ± 3.7
σ_8	$0.794^{+0.021}_{-0.013}$	$H(0.15)$	$73.17^{+0.45}_{-0.85}$	χ^2_{CMB}	1202.9 ± 5.8
S_8	$0.811^{+0.021}_{-0.014}$	$D_M(0.15)$	$639.0^{+7.7}_{-4.5}$	χ^2_{BAO}	6.7 ± 1.7
$\sigma_8\Omega_m^{0.5}$	$0.444^{+0.011}_{-0.0076}$	$H(0.38)$	$83.36^{+0.33}_{-0.82}$		

$\bar{\chi}^2_{eff} = 1217.61$; $R - 1 = 0.02031$

8.40 base_nnu_meffsterile_plikHM_TT_lowl_lowE_lensing_BAO_post_Cooke17_Aver15

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02229 ± 0.00019	$\sigma_8/h^{0.5}$	$0.963^{+0.024}_{-0.013}$	$D_M(0.51)$	1974^{+20}_{-10}
$\boldsymbol{\Omega_c h^2}$	$0.1189^{+0.0035}_{-0.0025}$	$r_{drag}h$	99.38 ± 0.90	$H(0.61)$	$95.74^{+0.22}_{-0.75}$
$\boldsymbol{100\theta_{MC}}$	1.04088 ± 0.00044	$\langle d^2\rangle^{1/2}$	2.432 ± 0.022	$D_M(0.61)$	2297^{+23}_{-11}
$\boldsymbol{\tau}$	0.0565 ± 0.0077	z_{re}	7.93 ± 0.77	$H(2.33)$	$237.33^{+0.87}_{-1.7}$
$\boldsymbol{m^{eff}_{\nu,\,sterile}}$ [eV]	< 0.208	$10^9 A_s$	2.110 ± 0.033	$D_M(2.33)$	5737^{+43}_{-12}
$\boldsymbol{N_{eff}}$	< 3.16	$10^9 A_s e^{-2\tau}$	$1.885^{+0.011}_{-0.013}$	$f\sigma_8(0.15)$	$0.448^{+0.012}_{-0.0073}$
$\boldsymbol{\ln(10^{10} A_s)}$	3.049 ± 0.016	D_{40}	1225 ± 13	$\sigma_8(0.15)$	$0.733^{+0.020}_{-0.012}$
$\boldsymbol{n_s}$	$0.9682^{+0.0049}_{-0.0062}$	D_{220}	5726 ± 39	$f\sigma_8(0.38)$	$0.466^{+0.012}_{-0.0071}$
$\boldsymbol{y_{cal}}$	1.0008 ± 0.0024	D_{810}	2539 ± 13	$\sigma_8(0.38)$	$0.649^{+0.018}_{-0.011}$
$\boldsymbol{A^{CIB}_{217}}$	48 ± 7	D_{1420}	815.3 ± 4.9	$f\sigma_8(0.51)$	$0.464^{+0.012}_{-0.0071}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{2000}	229.5 ± 1.7	$\sigma_8(0.51)$	$0.608^{+0.017}_{-0.011}$
$\boldsymbol{A^{tSZ}_{143}}$	5.0 ± 2.0	$n_{s,0.002}$	$0.9682^{+0.0049}_{-0.0062}$	$f\sigma_8(0.61)$	$0.459^{+0.012}_{-0.0070}$
$\boldsymbol{A^{PS}_{100}}$	265 ± 28	Y_P	$0.24663^{+0.00029}_{-0.0013}$	$\sigma_8(0.61)$	$0.578^{+0.016}_{-0.010}$
$\boldsymbol{A^{PS}_{143}}$	50 ± 8	Y_P^{BBN}	$0.24796^{+0.00029}_{-0.0013}$	$f\sigma_8(2.33)$	$0.2917^{+0.0081}_{-0.0053}$
$\boldsymbol{A^{PS}_{143\times217}}$	44 ± 9	10^5D/H	$2.634^{+0.037}_{-0.042}$	$\sigma_8(2.33)$	$0.3005^{+0.0085}_{-0.0057}$
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	Age/Gyr	$13.73^{+0.10}_{-0.028}$	f^{143}_{2000}	31.7 ± 2.9
$\boldsymbol{A^{kSZ}}$	< 4.97	z_*	1090.17 ± 0.30	$f^{143\times217}_{2000}$	33.9 ± 2.0
$\boldsymbol{A^{dustTT}_{100}}$	8.9 ± 1.8	r_*	$143.9^{+1.0}_{-0.37}$	f^{217}_{2000}	108.5 ± 1.9
$\boldsymbol{A^{dustTT}_{143}}$	10.7 ± 1.8	$100\theta_*$	1.04102 ± 0.00046	$\chi^2_{lensing}$	9.40 ± 0.96
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.3 ± 3.3	$D_M(z_*)$/Gpc	$13.823^{+0.098}_{-0.035}$	χ^2_{simall}	289 ± 200
$\boldsymbol{A^{dustTT}_{217}}$	93.3 ± 7.4	z_{drag}	$1059.89^{+0.46}_{-0.55}$	χ^2_{lowl}	132 ± 200
$\boldsymbol{c_{100}}$	0.99962 ± 0.00061	r_{drag}	$146.6^{+1.1}_{-0.40}$	χ^2_{plik}	772.9 ± 5.4
$\boldsymbol{c_{217}}$	0.99827 ± 0.00063	k_D	$0.14103^{+0.00048}_{-0.00087}$	χ^2_{Aver15}	0.68 ± 0.64
H_0	$67.81^{+0.52}_{-0.83}$	$100\theta_D$	$0.16116^{+0.00027}_{-0.00035}$	$\chi^2_{Cooke17}$	0.21 ± 0.31
Ω_Λ	0.6870 ± 0.0071	z_{eq}	3331^{+60}_{-23}	χ^2_{6DF}	0.39 ± 0.56
Ω_m	0.3130 ± 0.0071	k_{eq}	$0.01026^{+0.00018}_{-0.00010}$	χ^2_{MGS}	0.83 ± 0.62
$\Omega_m h^2$	$0.1439^{+0.0013}_{-0.0022}$	$100\theta_{eq}$	$0.8275^{+0.0041}_{-0.013}$	$\chi^2_{DR12BAO}$	5.4 ± 2.0
$\Omega_\nu h^2$	$0.00268^{+0.00023}_{-0.0021}$	$100\theta_{s,eq}$	$0.4569^{+0.0021}_{-0.0067}$	χ^2_{prior}	7.3 ± 3.7
$\Omega_m h^3$	$0.09756^{+0.00050}_{-0.0020}$	$H(0.15)$	$73.13^{+0.44}_{-0.80}$	χ^2_{CMB}	1202.7 ± 5.8
σ_8	$0.793^{+0.021}_{-0.013}$	$D_M(0.15)$	$639.3^{+7.3}_{-4.5}$	χ^2_{BAO}	6.7 ± 1.7
S_8	$0.810^{+0.021}_{-0.014}$	$H(0.38)$	$83.31^{+0.32}_{-0.76}$	χ^2_{Abund}	0.89 ± 0.84
$\sigma_8\Omega_m^{0.5}$	$0.444^{+0.011}_{-0.0075}$	$D_M(0.38)$	$1524^{+16}_{-8.9}$		
$\sigma_8\Omega_m^{0.25}$	$0.593^{+0.015}_{-0.0091}$	$H(0.51)$	$90.08^{+0.26}_{-0.75}$		

$\bar{\chi}^2_{eff} = 1217.59$; $R - 1 = 0.02034$

8.41 base_nnu_meffsterile_plikHM_TT_lowl_lowE_lensing_BAO_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02232 ± 0.00021	$\sigma_8\Omega_m^{0.25}$	$0.596^{+0.015}_{-0.0093}$	$D_M(0.38)$	1516^{+24}_{-11}
$\boldsymbol{\Omega_c h^2}$	$0.1204^{+0.0038}_{-0.0034}$	$\sigma_8/h^{0.5}$	$0.966^{+0.022}_{-0.012}$	$H(0.51)$	$90.54^{+0.45}_{-1.2}$
$\boldsymbol{100\theta_{MC}}$	1.04076 ± 0.00049	$r_{drag}h$	99.53 ± 0.93	$D_M(0.51)$	1964^{+30}_{-14}
$\boldsymbol{\tau}$	$0.0571^{+0.0061}_{-0.0082}$	$\langle d^2\rangle^{1/2}$	2.428 ± 0.023	$H(0.61)$	$96.21^{+0.44}_{-1.2}$
$\boldsymbol{m^{eff}_{\nu,\,sterile}}$ [eV]	< 0.150	z_{re}	$8.01^{+0.66}_{-0.80}$	$D_M(0.61)$	2285^{+35}_{-15}
$\boldsymbol{N_{eff}}$	< 3.26	$10^9 A_s$	$2.118^{+0.029}_{-0.037}$	$H(2.33)$	$238.3^{+1.2}_{-2.7}$
$\boldsymbol{\ln(10^{10}A_s)}$	$3.053^{+0.014}_{-0.017}$	$10^9 A_s e^{-2\tau}$	$1.890^{+0.012}_{-0.017}$	$D_M(2.33)$	5710^{+69}_{-25}
$\boldsymbol{n_s}$	$0.9711^{+0.0056}_{-0.0080}$	D_{40}	1221 ± 14	$f\sigma_8(0.15)$	$0.450^{+0.011}_{-0.0072}$
$\boldsymbol{y_{cal}}$	1.0008 ± 0.0025	D_{220}	5724 ± 40	$\sigma_8(0.15)$	$0.737^{+0.020}_{-0.013}$
$\boldsymbol{A^{CIB}_{217}}$	49 ± 7	D_{810}	2540 ± 14	$f\sigma_8(0.38)$	$0.468^{+0.012}_{-0.0072}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{1420}	814.9 ± 5.0	$\sigma_8(0.38)$	$0.654^{+0.018}_{-0.012}$
$\boldsymbol{A^{tSZ}_{143}}$	4.9 ± 2.0	D_{2000}	229.1 ± 1.9	$f\sigma_8(0.51)$	$0.467^{+0.012}_{-0.0072}$
$\boldsymbol{A^{PS}_{100}}$	267 ± 28	$n_{s,0.002}$	$0.9711^{+0.0056}_{-0.0080}$	$\sigma_8(0.51)$	$0.612^{+0.017}_{-0.012}$
$\boldsymbol{A^{PS}_{143}}$	51 ± 8	Y_P	$0.24757^{+0.00072}_{-0.0022}$	$f\sigma_8(0.61)$	$0.462^{+0.012}_{-0.0073}$
$\boldsymbol{A^{PS}_{143\times217}}$	44^{+9}_{-10}	Y_P^{BBN}	$0.24891^{+0.00072}_{-0.0022}$	$\sigma_8(0.61)$	$0.582^{+0.016}_{-0.011}$
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	10^5D/H	$2.653^{+0.043}_{-0.060}$	$f\sigma_8(2.33)$	$0.2939^{+0.0083}_{-0.0057}$
$\boldsymbol{A^{kSZ}}$	< 5.21	Age/Gyr	$13.67^{+0.16}_{-0.059}$	$\sigma_8(2.33)$	$0.3028^{+0.0086}_{-0.0062}$
$\boldsymbol{A^{dustTT}_{100}}$	9.0 ± 1.8	z_*	$1090.29^{+0.33}_{-0.41}$	f^{143}_{2000}	32.2 ± 3.1
$\boldsymbol{A^{dustTT}_{143}}$	10.7 ± 1.8	r_*	$143.3^{+1.7}_{-0.63}$	$f^{143\times217}_{2000}$	34.4 ± 2.2
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.3 ± 3.3	$100\theta_*$	$1.04086^{+0.00059}_{-0.00048}$	f^{217}_{2000}	108.9 ± 2.0
$\boldsymbol{A^{dustTT}_{217}}$	93.2 ± 7.4	$D_M(z_*)$/Gpc	$13.76^{+0.16}_{-0.059}$	$\chi^2_{lensing}$	9.52 ± 0.99
$\boldsymbol{c_{100}}$	0.99961 ± 0.00062	z_{drag}	$1060.08^{+0.52}_{-0.70}$	χ^2_{simall}	397.5 ± 2.2
$\boldsymbol{c_{217}}$	0.99828 ± 0.00062	r_{drag}	$145.9^{+1.7}_{-0.67}$	χ^2_{lowl}	22.6 ± 1.0
H_0	$68.21^{+0.61}_{-1.2}$	k_D	$0.14148^{+0.00062}_{-0.0013}$	χ^2_{plik}	773.6 ± 5.6
Ω_Λ	0.6883 ± 0.0073	$100\theta_D$	$0.16134^{+0.00033}_{-0.00053}$	χ^2_{6DF}	0.074 ± 0.087
Ω_m	0.3117 ± 0.0073	z_{eq}	3336^{+49}_{-22}	χ^2_{MGS}	1.22 ± 0.50
$\Omega_m h^2$	$0.1450^{+0.0016}_{-0.0033}$	k_{eq}	$0.01031^{+0.00018}_{-0.00012}$	$\chi^2_{DR12BAO}$	5.2 ± 1.9
$\Omega_\nu h^2$	$0.002255^{+0.000012}_{-0.0016}$	$100\theta_{eq}$	$0.8262^{+0.0037}_{-0.010}$	χ^2_{prior}	7.3 ± 3.7
$\Omega_m h^3$	$0.0989^{+0.0011}_{-0.0034}$	$100\theta_{s,eq}$	$0.4562^{+0.0019}_{-0.0054}$	χ^2_{CMB}	1203.2 ± 5.8
σ_8	$0.798^{+0.021}_{-0.014}$	$H(0.15)$	$73.55^{+0.55}_{-1.2}$	χ^2_{BAO}	6.5 ± 1.5
S_8	$0.813^{+0.020}_{-0.014}$	$D_M(0.15)$	$636^{+11}_{-5.5}$		
$\sigma_8\Omega_m^{0.5}$	$0.445^{+0.011}_{-0.0074}$	$H(0.38)$	$83.76^{+0.47}_{-1.2}$		

$\bar{\chi}^2_{eff} = 1217.05$; $\Delta\bar{\chi}^2_{eff} = 2.48$; $R - 1 = 0.01947$

8.42 base_nnu_meffsterile_plikHM_TT_lowl_lowE_lensing_BAO_post_Pantheon_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02234 ± 0.00021	$\sigma_8\Omega_m^{0.25}$	$0.596^{+0.015}_{-0.0090}$	$D_M(0.38)$	1514^{+25}_{-12}
$\boldsymbol{\Omega_c h^2}$	$0.1205^{+0.0040}_{-0.0034}$	$\sigma_8/h^{0.5}$	$0.966^{+0.023}_{-0.012}$	$H(0.51)$	$90.64^{+0.49}_{-1.3}$
$\boldsymbol{100\theta_{MC}}$	1.04076 ± 0.00049	$r_{drag}h$	99.68 ± 0.90	$D_M(0.51)$	1961^{+31}_{-14}
$\boldsymbol{\tau}$	$0.0576^{+0.0064}_{-0.0080}$	$\langle d^2\rangle^{1/2}$	2.427 ± 0.022	$H(0.61)$	$96.31^{+0.48}_{-1.3}$
$\boldsymbol{m^{eff}_{\nu,\,sterile}}$ [eV]	< 0.140	z_{re}	$8.06^{+0.67}_{-0.79}$	$D_M(0.61)$	2282^{+36}_{-16}
$\boldsymbol{N_{eff}}$	< 3.27	$10^9 A_s$	$2.121^{+0.030}_{-0.036}$	$H(2.33)$	$238.3^{+1.3}_{-2.9}$
$\boldsymbol{\ln(10^{10}A_s)}$	$3.054^{+0.015}_{-0.017}$	$10^9 A_s e^{-2\tau}$	$1.890^{+0.013}_{-0.018}$	$D_M(2.33)$	5705^{+73}_{-27}
$\boldsymbol{n_s}$	$0.9717^{+0.0057}_{-0.0080}$	D_{40}	1220 ± 14	$f\sigma_8(0.15)$	$0.450^{+0.011}_{-0.0070}$
$\boldsymbol{y_{cal}}$	1.0008 ± 0.0025	D_{220}	5725 ± 40	$\sigma_8(0.15)$	$0.738^{+0.020}_{-0.013}$
$\boldsymbol{A^{CIB}_{217}}$	49 ± 7	D_{810}	2540 ± 14	$f\sigma_8(0.38)$	$0.468^{+0.012}_{-0.0070}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{1420}	814.9 ± 5.1	$\sigma_8(0.38)$	$0.655^{+0.018}_{-0.012}$
$\boldsymbol{A^{tSZ}_{143}}$	4.9 ± 2.0	D_{2000}	229.1 ± 1.9	$f\sigma_8(0.51)$	$0.467^{+0.012}_{-0.0070}$
$\boldsymbol{A^{PS}_{100}}$	267 ± 28	$n_{s,0.002}$	$0.9717^{+0.0057}_{-0.0080}$	$\sigma_8(0.51)$	$0.613^{+0.017}_{-0.011}$
$\boldsymbol{A^{PS}_{143}}$	51 ± 8	Y_P	$0.24770^{+0.00080}_{-0.0024}$	$f\sigma_8(0.61)$	$0.462^{+0.012}_{-0.0071}$
$\boldsymbol{A^{PS}_{143\times217}}$	44 ± 9	Y_P^{BBN}	$0.24903^{+0.00080}_{-0.0024}$	$\sigma_8(0.61)$	$0.583^{+0.016}_{-0.011}$
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	10^5D/H	$2.653^{+0.044}_{-0.061}$	$f\sigma_8(2.33)$	$0.2945^{+0.0085}_{-0.0056}$
$\boldsymbol{A^{kSZ}}$	< 5.22	Age/Gyr	$13.66^{+0.17}_{-0.064}$	$\sigma_8(2.33)$	$0.3034^{+0.0088}_{-0.0061}$
$\boldsymbol{A^{dustTT}_{100}}$	9.0 ± 1.8	z_*	$1090.28^{+0.34}_{-0.41}$	f^{143}_{2000}	32.3 ± 3.1
$\boldsymbol{A^{dustTT}_{143}}$	10.7 ± 1.8	r_*	$143.2^{+1.8}_{-0.69}$	$f^{143\times217}_{2000}$	34.4 ± 2.2
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.3 ± 3.3	$100\theta_*$	$1.04085^{+0.00060}_{-0.00049}$	f^{217}_{2000}	108.9 ± 2.0
$\boldsymbol{A^{dustTT}_{217}}$	93.2 ± 7.4	$D_M(z_*)$/Gpc	$13.76^{+0.16}_{-0.064}$	$\chi^2_{lensing}$	9.6 ± 1.0
$\boldsymbol{c_{100}}$	0.99962 ± 0.00061	z_{drag}	$1060.13^{+0.53}_{-0.73}$	χ^2_{simall}	290 ± 200
$\boldsymbol{c_{217}}$	0.99828 ± 0.00063	r_{drag}	$145.9^{+1.8}_{-0.72}$	χ^2_{lowl}	130 ± 200
H_0	$68.35^{+0.63}_{-1.2}$	k_D	$0.14152^{+0.00064}_{-0.0014}$	χ^2_{plik}	773.7 ± 5.6
Ω_Λ	0.6895 ± 0.0071	$100\theta_D$	$0.16135^{+0.00035}_{-0.00054}$	χ^2_{JLA}	1036.39 ± 0.38
Ω_m	0.3105 ± 0.0071	z_{eq}	3333^{+49}_{-21}	χ^2_{6DF}	0.41 ± 0.63
$\Omega_m h^2$	$0.1450^{+0.0017}_{-0.0035}$	k_{eq}	$0.01031^{+0.00018}_{-0.00012}$	χ^2_{MGS}	0.94 ± 0.69
$\Omega_\nu h^2$	$0.002211^{-0.000050}_{-0.0016}$	$100\theta_{eq}$	$0.8268^{+0.0036}_{-0.010}$	$\chi^2_{DR12BAO}$	4.9 ± 1.6
$\Omega_m h^3$	$0.0991^{+0.0012}_{-0.0036}$	$100\theta_{s,eq}$	$0.4565^{+0.0018}_{-0.0053}$	χ^2_{prior}	7.3 ± 3.7
σ_8	$0.799^{+0.022}_{-0.014}$	$H(0.15)$	$73.67^{+0.58}_{-1.2}$	χ^2_{CMB}	1203.4 ± 5.8
S_8	$0.813^{+0.020}_{-0.013}$	$D_M(0.15)$	$635^{+11}_{-5.6}$	χ^2_{BAO}	6.3 ± 1.3
$\sigma_8\Omega_m^{0.5}$	$0.445^{+0.011}_{-0.0072}$	$H(0.38)$	$83.87^{+0.51}_{-1.3}$		

$\bar{\chi}^2_{eff} = 2253.40$; $\Delta\bar{\chi}^2_{eff} = 2.50$; $R - 1 = 0.01819$

8.43 base_nnu_meffsterile_plikHM_TT_lowl_lowE_lensing_BAO_post_Aver15_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02229 ± 0.00020	$\sigma_8\Omega_m^{0.25}$	$0.594^{+0.015}_{-0.0091}$	$D_M(0.38)$	$1523^{+17}_{-8.9}$
$\boldsymbol{\Omega_c h^2}$	$0.1191^{+0.0035}_{-0.0027}$	$\sigma_8/h^{0.5}$	$0.964^{+0.024}_{-0.013}$	$H(0.51)$	$90.14^{+0.27}_{-0.81}$
$\boldsymbol{100\theta_{MC}}$	1.04086 ± 0.00045	$r_{drag}h$	99.41 ± 0.90	$D_M(0.51)$	1973^{+21}_{-10}
$\boldsymbol{\tau}$	$0.0571^{+0.0062}_{-0.0079}$	$\langle d^2\rangle^{1/2}$	2.432 ± 0.022	$H(0.61)$	$95.80^{+0.24}_{-0.81}$
$\boldsymbol{m^{eff}_{\nu,\,sterile}}$ [eV]	< 0.196	z_{re}	$7.99^{+0.65}_{-0.78}$	$D_M(0.61)$	2296^{+24}_{-11}
$\boldsymbol{N_{eff}}$	< 3.17	$10^9 A_s$	$2.113^{+0.028}_{-0.034}$	$H(2.33)$	$237.45^{+0.88}_{-1.9}$
$\boldsymbol{\ln(10^{10}A_s)}$	$3.051^{+0.014}_{-0.016}$	$10^9 A_s e^{-2\tau}$	$1.885^{+0.011}_{-0.014}$	$D_M(2.33)$	5734^{+46}_{-13}
$\boldsymbol{n_s}$	$0.9687^{+0.0049}_{-0.0063}$	D_{40}	1224 ± 13	$f\sigma_8(0.15)$	$0.449^{+0.012}_{-0.0074}$
$\boldsymbol{y_{cal}}$	1.0008 ± 0.0025	D_{220}	5724 ± 40	$\sigma_8(0.15)$	$0.734^{+0.020}_{-0.012}$
$\boldsymbol{A^{CIB}_{217}}$	48 ± 7	D_{810}	2539 ± 13	$f\sigma_8(0.38)$	$0.466^{+0.012}_{-0.0072}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{1420}	815.1 ± 5.0	$\sigma_8(0.38)$	$0.650^{+0.018}_{-0.011}$
$\boldsymbol{A^{tSZ}_{143}}$	5.0 ± 2.0	D_{2000}	229.4 ± 1.8	$f\sigma_8(0.51)$	$0.465^{+0.012}_{-0.0071}$
$\boldsymbol{A^{PS}_{100}}$	265 ± 28	$n_{s,0.002}$	$0.9687^{+0.0049}_{-0.0063}$	$\sigma_8(0.51)$	$0.608^{+0.017}_{-0.011}$
$\boldsymbol{A^{PS}_{143}}$	50 ± 8	Y_P	$0.24676^{+0.00035}_{-0.0014}$	$f\sigma_8(0.61)$	$0.460^{+0.012}_{-0.0071}$
$\boldsymbol{A^{PS}_{143\times217}}$	44 ± 9	Y_P^{BBN}	$0.24809^{+0.00035}_{-0.0014}$	$\sigma_8(0.61)$	$0.579^{+0.016}_{-0.010}$
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	10^5D/H	$2.638^{+0.039}_{-0.049}$	$f\sigma_8(2.33)$	$0.2921^{+0.0081}_{-0.0053}$
$\boldsymbol{A^{kSZ}}$	< 5.02	Age/Gyr	$13.73^{+0.11}_{-0.031}$	$\sigma_8(2.33)$	$0.3009^{+0.0084}_{-0.0057}$
$\boldsymbol{A^{dustTT}_{100}}$	8.9 ± 1.8	z_*	1090.20 ± 0.33	f^{143}_{2000}	31.8 ± 3.0
$\boldsymbol{A^{dustTT}_{143}}$	10.7 ± 1.8	r_*	$143.8^{+1.1}_{-0.39}$	$f^{143\times217}_{2000}$	34.0 ± 2.1
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.3 ± 3.3	$100\theta_*$	$1.04100^{+0.00050}_{-0.00044}$	f^{217}_{2000}	108.6 ± 1.9
$\boldsymbol{A^{dustTT}_{217}}$	93.2 ± 7.4	$D_M(z_*)$/Gpc	$13.82^{+0.11}_{-0.037}$	$\chi^2_{lensing}$	9.38 ± 0.93
$\boldsymbol{c_{100}}$	0.99962 ± 0.00061	z_{drag}	$1059.89^{+0.49}_{-0.57}$	χ^2_{simall}	292 ± 200
$\boldsymbol{c_{217}}$	0.99827 ± 0.00063	r_{drag}	$146.5^{+1.2}_{-0.42}$	χ^2_{lowl}	129 ± 200
H_0	$67.86^{+0.51}_{-0.87}$	k_D	$0.14107^{+0.00050}_{-0.00092}$	χ^2_{plik}	773.1 ± 5.5
Ω_Λ	0.6872 ± 0.0071	$100\theta_D$	$0.16120^{+0.00029}_{-0.00040}$	χ^2_{Aver15}	0.75 ± 0.75
Ω_m	0.3128 ± 0.0071	z_{eq}	3331^{+58}_{-23}	χ^2_{6DF}	0.39 ± 0.56
$\Omega_m h^2$	$0.1440^{+0.0013}_{-0.0024}$	k_{eq}	$0.01027^{+0.00018}_{-0.00011}$	χ^2_{MGS}	0.85 ± 0.62
$\Omega_\nu h^2$	$0.00260^{+0.00017}_{-0.0020}$	$100\theta_{eq}$	$0.8273^{+0.0039}_{-0.012}$	$\chi^2_{DR12BAO}$	5.4 ± 1.9
$\Omega_m h^3$	$0.09773^{+0.00057}_{-0.0022}$	$100\theta_{s,eq}$	$0.4568^{+0.0020}_{-0.0065}$	χ^2_{prior}	7.3 ± 3.7
σ_8	$0.794^{+0.021}_{-0.013}$	$H(0.15)$	$73.18^{+0.44}_{-0.84}$	χ^2_{CMB}	1202.8 ± 5.8
S_8	$0.811^{+0.021}_{-0.014}$	$D_M(0.15)$	$638.9^{+7.7}_{-4.4}$	χ^2_{BAO}	6.6 ± 1.6
$\sigma_8\Omega_m^{0.5}$	$0.444^{+0.011}_{-0.0076}$	$H(0.38)$	$83.37^{+0.32}_{-0.82}$		

$\bar{\chi}^2_{eff} = 1217.49$; $R - 1 = 0.01945$

8.44 base_nnu_meffsterile_plikHM_TT_lowl_lowE_lensing_BAO_post_Cooke17_Aver15_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02230 ± 0.00019	$\sigma_8/h^{0.5}$	$0.963^{+0.024}_{-0.013}$	$D_M(0.51)$	1974^{+20}_{-10}
$\boldsymbol{\Omega_c h^2}$	$0.1189^{+0.0035}_{-0.0025}$	$r_{drag}h$	99.41 ± 0.90	$H(0.61)$	$95.74^{+0.22}_{-0.75}$
$\boldsymbol{100\theta_{MC}}$	1.04088 ± 0.00044	$\langle d^2\rangle^{1/2}$	2.433 ± 0.022	$D_M(0.61)$	2297^{+23}_{-11}
$\boldsymbol{\tau}$	$0.0571^{+0.0061}_{-0.0080}$	z_{re}	$7.99^{+0.65}_{-0.78}$	$H(2.33)$	$237.32^{+0.86}_{-1.8}$
$\boldsymbol{m^{eff}_{\nu,\,sterile}}$ [eV]	< 0.209	$10^9 A_s$	$2.113^{+0.028}_{-0.034}$	$D_M(2.33)$	5737^{+43}_{-12}
$\boldsymbol{N_{eff}}$	< 3.16	$10^9 A_s e^{-2\tau}$	$1.885^{+0.011}_{-0.013}$	$f\sigma_8(0.15)$	$0.448^{+0.012}_{-0.0073}$
$\boldsymbol{\ln(10^{10} A_s)}$	$3.050^{+0.013}_{-0.016}$	D_{40}	1224 ± 13	$\sigma_8(0.15)$	$0.733^{+0.020}_{-0.012}$
$\boldsymbol{n_s}$	$0.9684^{+0.0048}_{-0.0061}$	D_{220}	5725 ± 39	$f\sigma_8(0.38)$	$0.466^{+0.012}_{-0.0071}$
$\boldsymbol{y_{cal}}$	1.0008 ± 0.0025	D_{810}	2539 ± 13	$\sigma_8(0.38)$	$0.649^{+0.018}_{-0.011}$
$\boldsymbol{A^{CIB}_{217}}$	48 ± 7	D_{1420}	815.3 ± 4.9	$f\sigma_8(0.51)$	$0.464^{+0.012}_{-0.0070}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{2000}	229.5 ± 1.7	$\sigma_8(0.51)$	$0.608^{+0.017}_{-0.011}$
$\boldsymbol{A^{tSZ}_{143}}$	5.0 ± 2.0	$n_{s,0.002}$	$0.9684^{+0.0048}_{-0.0061}$	$f\sigma_8(0.61)$	$0.459^{+0.012}_{-0.0070}$
$\boldsymbol{A^{PS}_{100}}$	265 ± 28	Y_P	$0.24664^{+0.00030}_{-0.0013}$	$\sigma_8(0.61)$	$0.578^{+0.016}_{-0.010}$
$\boldsymbol{A^{PS}_{143}}$	50 ± 8	Y_P^{BBN}	$0.24797^{+0.00030}_{-0.0013}$	$f\sigma_8(2.33)$	$0.2918^{+0.0081}_{-0.0053}$
$\boldsymbol{A^{PS}_{143\times217}}$	44 ± 9	10^5D/H	$2.633^{+0.036}_{-0.042}$	$\sigma_8(2.33)$	$0.3006^{+0.0085}_{-0.0057}$
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	Age/Gyr	$13.73^{+0.10}_{-0.028}$	f^{143}_{2000}	31.7 ± 2.9
$\boldsymbol{A^{kSZ}}$	< 4.97	z_*	1090.17 ± 0.30	$f^{143\times217}_{2000}$	33.9 ± 2.0
$\boldsymbol{A^{dustTT}_{100}}$	8.9 ± 1.8	r_*	$143.9^{+1.0}_{-0.37}$	f^{217}_{2000}	108.5 ± 1.9
$\boldsymbol{A^{dustTT}_{143}}$	10.7 ± 1.8	$100\theta_*$	$1.04103^{+0.00048}_{-0.00043}$	$\chi^2_{lensing}$	9.36 ± 0.93
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.3 ± 3.3	$D_M(z_*)$/Gpc	$13.823^{+0.098}_{-0.035}$	χ^2_{simall}	289 ± 200
$\boldsymbol{A^{dustTT}_{217}}$	93.3 ± 7.4	z_{drag}	$1059.89^{+0.46}_{-0.55}$	χ^2_{lowl}	131 ± 200
$\boldsymbol{c_{100}}$	0.99962 ± 0.00061	r_{drag}	$146.6^{+1.1}_{-0.40}$	χ^2_{plik}	772.9 ± 5.4
$\boldsymbol{c_{217}}$	0.99827 ± 0.00063	k_D	$0.14103^{+0.00048}_{-0.00087}$	χ^2_{Aver15}	0.69 ± 0.65
H_0	$67.82^{+0.51}_{-0.83}$	$100\theta_D$	$0.16116^{+0.00027}_{-0.00035}$	$\chi^2_{Cooke17}$	0.21 ± 0.31
Ω_Λ	0.6872 ± 0.0071	z_{eq}	3330^{+60}_{-23}	χ^2_{6DF}	0.39 ± 0.56
Ω_m	0.3128 ± 0.0071	k_{eq}	$0.01026^{+0.00018}_{-0.00010}$	χ^2_{MGS}	0.84 ± 0.62
$\Omega_m h^2$	$0.1439^{+0.0013}_{-0.0022}$	$100\theta_{eq}$	$0.8277^{+0.0040}_{-0.013}$	$\chi^2_{DR12BAO}$	5.4 ± 1.9
$\Omega_\nu h^2$	$0.00269^{+0.00023}_{-0.0021}$	$100\theta_{s,eq}$	$0.4570^{+0.0020}_{-0.0067}$	χ^2_{prior}	7.3 ± 3.7
$\Omega_m h^3$	$0.09757^{+0.00050}_{-0.0020}$	$H(0.15)$	$73.14^{+0.43}_{-0.80}$	χ^2_{CMB}	1202.6 ± 5.7
σ_8	$0.793^{+0.021}_{-0.013}$	$D_M(0.15)$	$639.2^{+7.3}_{-4.4}$	χ^2_{BAO}	6.6 ± 1.6
S_8	$0.810^{+0.021}_{-0.014}$	$H(0.38)$	$83.33^{+0.31}_{-0.76}$	χ^2_{Abund}	0.89 ± 0.84
$\sigma_8\Omega_m^{0.5}$	$0.444^{+0.011}_{-0.0075}$	$D_M(0.38)$	$1524^{+16}_{-8.7}$		
$\sigma_8\Omega_m^{0.25}$	$0.593^{+0.015}_{-0.0091}$	$H(0.51)$	$90.09^{+0.25}_{-0.75}$		

$\bar{\chi}^2_{eff} = 1217.47$; $R - 1 = 0.01988$

8.45 base_nnu_meffsterile_plikHM_TTTEEE_lowl_lowE_lensing_BAO

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022461	$0.02249^{+0.00014}_{-0.00015}$	$\Omega_m h^3$	0.09644	$0.09765^{+0.00023}_{-0.0016}$	$D_M(0.15)$	640.31	$639.2^{+6.0}_{-3.5}$
$\boldsymbol{\Omega_c h^2}$	0.11343	$0.1187^{+0.0033}_{-0.0022}$	σ_8	0.8100	$0.793^{+0.021}_{-0.012}$	$H(0.38)$	83.098	$83.34^{+0.23}_{-0.60}$
$\boldsymbol{100\theta_{MC}}$	1.041059	$1.04091^{+0.00033}_{-0.00029}$	S_8	0.8242	$0.810^{+0.021}_{-0.013}$	$D_M(0.38)$	1527.3	$1524^{+13}_{-6.8}$
$\boldsymbol{\tau}$	0.0564	$0.0577^{+0.0068}_{-0.0079}$	$\sigma_8\Omega_m^{0.5}$	0.4514	$0.444^{+0.011}_{-0.0073}$	$H(0.51)$	89.813	$90.10^{+0.16}_{-0.59}$
$\boldsymbol{m^{eff}_{\nu,\,sterile}}$ [eV]	0.555	< 0.223	$\sigma_8\Omega_m^{0.25}$	0.6047	$0.593^{+0.015}_{-0.0089}$	$D_M(0.51)$	1978.6	$1974^{+16}_{-7.8}$
$\boldsymbol{N_{eff}}$	3.0479	$3.1252^{+0.0051}_{-0.078}$	$\sigma_8/h^{0.5}$	0.9843	$0.963^{+0.024}_{-0.013}$	$H(0.61)$	95.431	$95.76^{+0.12}_{-0.58}$
$\boldsymbol{\ln(10^{10}A_s)}$	3.0481	$3.052^{+0.014}_{-0.016}$	$r_{drag}h$	99.65	99.32 ± 0.81	$D_M(0.61)$	2302.5	$2297^{+18}_{-8.3}$
$\boldsymbol{n_s}$	0.96739	$0.9683^{+0.0041}_{-0.0055}$	$\langle d^2\rangle^{1/2}$	2.4392	2.437 ± 0.021	$H(2.33)$	236.22	$237.42^{+0.65}_{-1.5}$
$\boldsymbol{y_{cal}}$	1.00108	1.0009 ± 0.0024	z_{re}	7.86	8.00 ± 0.74	$D_M(2.33)$	5756.4	$5735^{+33}_{-5.7}$
$\boldsymbol{A^{CIB}_{217}}$	47.2	47 ± 7	$10^9 A_s$	2.1075	$2.116^{+0.029}_{-0.034}$	$f\sigma_8(0.15)$	0.4561	$0.448^{+0.011}_{-0.0072}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.46	—	$10^9 A_s e^{-2\tau}$	1.8828	$1.886^{+0.011}_{-0.012}$	$\sigma_8(0.15)$	0.7485	$0.733^{+0.020}_{-0.012}$
$\boldsymbol{A^{tSZ}_{143}}$	7.20	5.4 ± 2.0	D_{40}	1228.2	1227 ± 12	$f\sigma_8(0.38)$	0.4746	$0.466^{+0.012}_{-0.0071}$
$\boldsymbol{A^{PS}_{100}}$	250.4	260 ± 28	D_{220}	5743.5	5741 ± 37	$\sigma_8(0.38)$	0.6636	$0.650^{+0.018}_{-0.011}$
$\boldsymbol{A^{PS}_{143}}$	47.6	47 ± 8	D_{810}	2543.4	2542 ± 13	$f\sigma_8(0.51)$	0.4733	$0.465^{+0.012}_{-0.0070}$
$\boldsymbol{A^{PS}_{143\times217}}$	48.0	43 ± 9	D_{1420}	819.38	817.6 ± 4.6	$\sigma_8(0.51)$	0.6211	$0.608^{+0.016}_{-0.010}$
$\boldsymbol{A^{PS}_{217}}$	119.4	115 ± 10	D_{2000}	231.83	230.7 ± 1.6	$f\sigma_8(0.61)$	0.4684	$0.460^{+0.012}_{-0.0069}$
$\boldsymbol{A^{kSZ}}$	0.00	< 4.39	$n_{s,0.002}$	0.96739	$0.9683^{+0.0041}_{-0.0055}$	$\sigma_8(0.61)$	0.5910	$0.578^{+0.016}_{-0.0098}$
$\boldsymbol{A^{dust TT}_{100}}$	8.81	8.9 ± 1.8	Y_P	0.24546	$0.24649^{+0.00014}_{-0.0010}$	$f\sigma_8(2.33)$	0.2980	$0.2918^{+0.0080}_{-0.0051}$
$\boldsymbol{A^{dust TT}_{143}}$	11.04	10.9 ± 1.8	Y_P^{BBN}	0.24678	$0.24782^{+0.00014}_{-0.0010}$	$\sigma_8(2.33)$	0.3073	$0.3006^{+0.0083}_{-0.0054}$
$\boldsymbol{A^{dust TT}_{143\times217}}$	19.83	18.7 ± 3.3	10^5D/H	2.5695	$2.591^{+0.024}_{-0.032}$	f^{143}_{2000}	28.64	30.0 ± 2.8
$\boldsymbol{A^{dust TT}_{217}}$	95.1	93.7 ± 7.3	Age/Gyr	13.7813	$13.731^{+0.078}_{-0.013}$	$f^{143\times217}_{2000}$	31.82	32.6 ± 1.9
$\boldsymbol{A^{dust TE}_{100}}$	0.1138	0.114 ± 0.038	z_*	1089.747	1089.90 ± 0.24	f^{217}_{2000}	106.47	107.4 ± 1.8
$\boldsymbol{A^{dust TE}_{100\times143}}$	0.1346	0.135 ± 0.029	r_*	144.54	$143.85^{+0.85}_{-0.24}$	$\chi^2_{lensing}$	8.748	9.14 ± 0.77
$\boldsymbol{A^{dust TE}_{100\times217}}$	0.483	0.481 ± 0.085	$100\theta_*$	1.041231	$1.04104^{+0.00036}_{-0.00029}$	χ^2_{simall}	396.42	397.6 ± 2.3
$\boldsymbol{A^{dust TE}_{143}}$	0.224	0.224 ± 0.054	$D_M(z_*)$/Gpc	13.881	$13.818^{+0.079}_{-0.023}$	χ^2_{lowl}	23.05	23.03 ± 0.90
$\boldsymbol{A^{dust TE}_{143\times217}}$	0.665	0.664 ± 0.080	z_{drag}	1060.085	$1060.32^{+0.31}_{-0.45}$	χ^2_{plik}	2344.6	2361.3 ± 6.1
$\boldsymbol{A^{dust TE}_{217}}$	2.069	2.08 ± 0.27	r_{drag}	147.17	$146.46^{+0.88}_{-0.25}$	χ^2_{6DF}	0.029	0.084 ± 0.089
$\boldsymbol{c_{100}}$	0.99971	0.99967 ± 0.00061	k_D	0.14085	$0.14137^{+0.00031}_{-0.00072}$	χ^2_{MGS}	1.217	1.10 ± 0.42
$\boldsymbol{c_{217}}$	0.99818	0.99821 ± 0.00062	$100\theta_D$	0.160677	$0.16083^{+0.00017}_{-0.00026}$	$\chi^2_{DR12BAO}$	4.42	5.5 ± 1.9
H_0	67.71	$67.82^{+0.41}_{-0.69}$	z_{eq}	3246.4	3339^{+63}_{-19}	χ^2_{prior}	1.87	11.6 ± 4.6
Ω_Λ	0.6894	0.6869 ± 0.0064	k_{eq}	0.010016	$0.01027^{+0.00018}_{-0.000093}$	χ^2_{CMB}	2772.9	2791.1 ± 6.2
Ω_m	0.3106	0.3131 ± 0.0064	$100\theta_{eq}$	0.8464	$0.8266^{+0.0034}_{-0.013}$	χ^2_{BAO}	5.67	6.7 ± 1.6
$\Omega_m h^2$	0.14243	$0.1440^{+0.0010}_{-0.0019}$	$100\theta_{s,eq}$	0.46672	$0.4563^{+0.0017}_{-0.0069}$			
$\Omega_\nu h^2$	0.00654	$0.00277^{+0.00033}_{-0.0021}$	$H(0.15)$	72.990	$73.14^{+0.34}_{-0.65}$			

Best-fit $\chi^2_{eff} = 2780.39$; $\Delta\chi^2_{eff} = -0.30$; $\bar{\chi}^2_{eff} = 2809.48$; $\Delta\bar{\chi}^2_{eff} = 2.64$; $R - 1 = 0.02379$

χ^2_{eff}: BAO - 6DF: 0.03 (Δ 0.00) MGS: 1.22 (Δ 0.00) DR12BAO: 4.42 (Δ 0.00) CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.75 (Δ 0.02) simall_100x143_offlike5_EE_Aplanck_B 396.43 (Δ -0.10) commander_dx12_v3_2_29: 23.05 (Δ 0.16) plik_rd12_HM_v22b_TTTEEE: 2344.63 (Δ -0.69)

8.46 base_nnu_meffsterile_plikHM_TTTEEE_lowl_lowE_lensing_BAO_post_Pantheon

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022438	$0.02250^{+0.00014}_{-0.00015}$	$\Omega_m h^3$	0.09636	$0.09775^{+0.00022}_{-0.0017}$	$D_M(0.15)$	640.01	$638.3^{+6.3}_{-3.2}$
$\boldsymbol{\Omega_c h^2}$	0.10782	$0.1188^{+0.0033}_{-0.0023}$	σ_8	0.8078	$0.795^{+0.020}_{-0.013}$	$H(0.38)$	83.108	$83.41^{+0.19}_{-0.65}$
$\boldsymbol{100\theta_{MC}}$	1.041037	$1.04091^{+0.00033}_{-0.00030}$	S_8	0.8209	$0.810^{+0.020}_{-0.013}$	$D_M(0.38)$	1526.8	$1522^{+14}_{-6.0}$
$\boldsymbol{\tau}$	0.0561	$0.0576^{+0.0068}_{-0.0078}$	$\sigma_8\Omega_m^{0.5}$	0.4496	$0.444^{+0.011}_{-0.0073}$	$H(0.51)$	89.813	$90.17^{+0.14}_{-0.63}$
$\boldsymbol{m^{eff}_{\nu,\,sterile}}$ [eV]	1.066	< 0.201	$\sigma_8\Omega_m^{0.25}$	0.6027	$0.594^{+0.015}_{-0.0090}$	$D_M(0.51)$	1978.1	$1972^{+17}_{-6.8}$
$\boldsymbol{N_{eff}}$	3.0502	< 3.13	$\sigma_8/h^{0.5}$	0.9814	$0.964^{+0.023}_{-0.013}$	$H(0.61)$	95.424	$95.82^{+0.11}_{-0.63}$
$\boldsymbol{\ln(10^{10}A_s)}$	3.0467	$3.052^{+0.014}_{-0.016}$	$r_{drag}h$	99.75	99.46 ± 0.77	$D_M(0.61)$	2302.0	$2294^{+19}_{-7.2}$
$\boldsymbol{n_s}$	0.96819	$0.9688^{+0.0040}_{-0.0055}$	$\langle d^2\rangle^{1/2}$	2.4350	2.434 ± 0.021	$H(2.33)$	236.07	$237.40^{+0.61}_{-1.6}$
$\boldsymbol{y_{cal}}$	1.00081	1.0009 ± 0.0024	z_{re}	7.84	7.99 ± 0.74	$D_M(2.33)$	5757.3	$5732^{+35}_{-5.4}$
$\boldsymbol{A^{CIB}_{217}}$	46.4	47 ± 7	$10^9 A_s$	2.1045	$2.116^{+0.030}_{-0.035}$	$f\sigma_8(0.15)$	0.4543	$0.449^{+0.011}_{-0.0072}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.61	—	$10^9 A_s e^{-2\tau}$	1.8810	$1.886^{+0.011}_{-0.013}$	$\sigma_8(0.15)$	0.7466	$0.734^{+0.019}_{-0.012}$
$\boldsymbol{A^{tSZ}_{143}}$	7.12	5.4 ± 2.0	D_{40}	1225.2	1226 ± 12	$f\sigma_8(0.38)$	0.4730	$0.466^{+0.011}_{-0.0071}$
$\boldsymbol{A^{PS}_{100}}$	248.2	259 ± 28	D_{220}	5735.8	5741 ± 37	$\sigma_8(0.38)$	0.6620	$0.651^{+0.017}_{-0.011}$
$\boldsymbol{A^{PS}_{143}}$	49.6	47 ± 8	D_{810}	2542.0	2542 ± 13	$f\sigma_8(0.51)$	0.4718	$0.465^{+0.011}_{-0.0070}$
$\boldsymbol{A^{PS}_{143\times217}}$	51.7	43 ± 9	D_{1420}	819.07	817.7 ± 4.6	$\sigma_8(0.51)$	0.6196	$0.609^{+0.016}_{-0.010}$
$\boldsymbol{A^{PS}_{217}}$	120.9	115 ± 10	D_{2000}	231.74	230.7 ± 1.6	$f\sigma_8(0.61)$	0.4670	$0.460^{+0.011}_{-0.0070}$
$\boldsymbol{A^{kSZ}}$	0.00	< 4.40	$n_{s,0.002}$	0.96819	$0.9688^{+0.0040}_{-0.0055}$	$\sigma_8(0.61)$	0.5896	$0.580^{+0.015}_{-0.0098}$
$\boldsymbol{A^{dust\,TT}_{100}}$	8.86	9.0 ± 1.8	Y_P	0.24548	$0.24654^{+0.00012}_{-0.0011}$	$f\sigma_8(2.33)$	0.2973	$0.2925^{+0.0077}_{-0.0051}$
$\boldsymbol{A^{dust\,TT}_{143}}$	11.06	10.9 ± 1.8	Y_P^{BBN}	0.24680	$0.24787^{+0.00012}_{-0.0011}$	$\sigma_8(2.33)$	0.3066	$0.3014^{+0.0080}_{-0.0054}$
$\boldsymbol{A^{dust\,TT}_{143\times217}}$	20.15	18.7 ± 3.3	10^5D/H	2.5744	$2.590^{+0.024}_{-0.032}$	f^{143}_{2000}	28.44	30.0 ± 2.8
$\boldsymbol{A^{dust\,TT}_{217}}$	95.4	93.8 ± 7.3	Age/Gyr	13.7836	$13.724^{+0.083}_{-0.012}$	$f^{143\times217}_{2000}$	31.78	32.6 ± 1.9
$\boldsymbol{A^{dust\,TE}_{100}}$	0.1148	0.114 ± 0.038	z_*	1089.761	$1089.88^{+0.21}_{-0.25}$	f^{217}_{2000}	106.35	107.4 ± 1.8
$\boldsymbol{A^{dust\,TE}_{100\times143}}$	0.1353	0.135 ± 0.030	r_*	144.60	$143.84^{+0.90}_{-0.22}$	$\chi^2_{lensing}$	8.787	9.19 ± 0.80
$\boldsymbol{A^{dust\,TE}_{100\times217}}$	0.481	0.483 ± 0.085	$100\theta_*$	1.041208	$1.04104^{+0.00037}_{-0.00030}$	χ^2_{simall}	396	265 ± 200
$\boldsymbol{A^{dust\,TE}_{143}}$	0.226	0.223 ± 0.055	$D_M(z_*)$/Gpc	13.888	$13.817^{+0.085}_{-0.021}$	χ^2_{lowl}	23	155 ± 200
$\boldsymbol{A^{dust\,TE}_{143\times217}}$	0.664	0.664 ± 0.080	z_{drag}	1060.047	$1060.34^{+0.30}_{-0.47}$	χ^2_{plik}	2345.0	2361.5 ± 6.0
$\boldsymbol{A^{dust\,TE}_{217}}$	2.081	2.08 ± 0.27	r_{drag}	147.24	$146.45^{+0.94}_{-0.23}$	χ^2_{JLA}	1036.257	1036.44 ± 0.36
$\boldsymbol{c_{100}}$	0.99974	0.99968 ± 0.00061	k_D	0.14076	$0.14138^{+0.00029}_{-0.00078}$	χ^2_{6DF}	0.022	0.47 ± 0.59
$\boldsymbol{c_{217}}$	0.99821	0.99821 ± 0.00062	$100\theta_D$	0.160712	$0.16083^{+0.00017}_{-0.00028}$	χ^2_{MGS}	1.28	0.77 ± 0.62
H_0	67.75	$67.92^{+0.38}_{-0.72}$	z_{eq}	3110.8	3340^{+59}_{-18}	$\chi^2_{DR12BAO}$	4.26	5.2 ± 1.6
Ω_Λ	0.6901	0.6880 ± 0.0061	k_{eq}	0.009701	$0.01028^{+0.00018}_{-0.000094}$	χ^2_{prior}	1.67	11.6 ± 4.5
Ω_m	0.3099	0.3120 ± 0.0061	$100\theta_{eq}$	0.8774	$0.8264^{+0.0032}_{-0.012}$	χ^2_{CMB}	2773.0	2791.2 ± 6.2
$\Omega_m h^2$	0.14223	$0.14391^{+0.00097}_{-0.0020}$	$100\theta_{s,eq}$	0.48295	$0.4562^{+0.0016}_{-0.0065}$	χ^2_{BAO}	5.56	6.4 ± 1.3
$\Omega_\nu h^2$	0.01197	$0.00259^{+0.00024}_{-0.0020}$	$H(0.15)$	73.017	$73.24^{+0.30}_{-0.69}$			

Best-fit $\chi^2_{eff} = 3816.45$; $\Delta\chi^2_{eff} = -0.51$; $\bar{\chi}^2_{eff} = 3845.71$; $\Delta\bar{\chi}^2_{eff} = 2.57$; $R - 1 = 0.02387$

χ^2_{eff}: BAO - 6DF: 0.02 (Δ -0.00) MGS: 1.28 (Δ 0.00) DR12BAO: 4.26 (Δ -0.01) CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.79 (Δ 0.05) simall_100x143_offlike5_EE_Aplanck
396.35 (Δ -0.11) commander_dx12_v3_2_29: 22.86 (Δ -0.02) plik_rd12_HM_v22b_TTTEEE: 2344.97 (Δ -0.45) SN - JLA Pantheon: 1036.26 (Δ -0.00)

8.47 base_nnu_meffsterile_plikHM_TTTEEE_lowl_lowE_lensing_BAO_post_Aver15

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02248 ± 0.00014	$\Omega_m h^3$	$0.09736^{+0.00023}_{-0.0013}$	$D_M(0.15)$	$640.0^{+5.1}_{-3.5}$
$\boldsymbol{\Omega_c h^2}$	$0.1185^{+0.0032}_{-0.0020}$	σ_8	$0.793^{+0.020}_{-0.012}$	$H(0.38)$	$83.24^{+0.23}_{-0.49}$
$\boldsymbol{100\theta_{MC}}$	1.04093 ± 0.00030	S_8	$0.810^{+0.020}_{-0.014}$	$D_M(0.38)$	$1526^{+11}_{-6.8}$
$\boldsymbol{\tau}$	$0.0571^{+0.0068}_{-0.0077}$	$\sigma_8\Omega_m^{0.5}$	$0.444^{+0.011}_{-0.0075}$	$H(0.51)$	$90.01^{+0.17}_{-0.47}$
$\boldsymbol{m^{eff}_{\nu,\,sterile}}$ [eV]	< 0.231	$\sigma_8\Omega_m^{0.25}$	$0.593^{+0.014}_{-0.0090}$	$D_M(0.51)$	$1976^{+13}_{-7.8}$
$\boldsymbol{N_{eff}}$	$3.1098^{+0.0051}_{-0.062}$	$\sigma_8/h^{0.5}$	$0.963^{+0.023}_{-0.013}$	$H(0.61)$	$95.66^{+0.13}_{-0.46}$
$\boldsymbol{\ln(10^{10}A_s)}$	3.051 ± 0.015	$r_{drag}h$	99.30 ± 0.78	$D_M(0.61)$	$2299^{+15}_{-8.3}$
$\boldsymbol{n_s}$	$0.9676^{+0.0041}_{-0.0048}$	$\langle d^2\rangle^{1/2}$	2.437 ± 0.021	$H(2.33)$	$237.21^{+0.64}_{-1.3}$
$\boldsymbol{y_{cal}}$	1.0009 ± 0.0024	z_{re}	7.94 ± 0.73	$D_M(2.33)$	$5741^{+26}_{-6.1}$
$\boldsymbol{A^{CIB}_{217}}$	47 ± 7	$10^9 A_s$	$2.113^{+0.029}_{-0.033}$	$f\sigma_8(0.15)$	$0.448^{+0.011}_{-0.0073}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$10^9 A_s e^{-2\tau}$	$1.885^{+0.010}_{-0.012}$	$\sigma_8(0.15)$	$0.733^{+0.018}_{-0.011}$
$\boldsymbol{A^{tSZ}_{143}}$	5.4 ± 2.0	D_{40}	1227 ± 12	$f\sigma_8(0.38)$	$0.466^{+0.011}_{-0.0071}$
$\boldsymbol{A^{PS}_{100}}$	259 ± 28	D_{220}	5740 ± 37	$\sigma_8(0.38)$	$0.649^{+0.016}_{-0.010}$
$\boldsymbol{A^{PS}_{143}}$	47 ± 8	D_{810}	2541 ± 13	$f\sigma_8(0.51)$	$0.464^{+0.011}_{-0.0070}$
$\boldsymbol{A^{PS}_{143\times217}}$	43 ± 9	D_{1420}	817.6 ± 4.6	$\sigma_8(0.51)$	$0.607^{+0.015}_{-0.0097}$
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	D_{2000}	230.7 ± 1.5	$f\sigma_8(0.61)$	$0.459^{+0.011}_{-0.0069}$
$\boldsymbol{A^{kSZ}}$	< 4.37	$n_{s,0.002}$	$0.9676^{+0.0041}_{-0.0048}$	$\sigma_8(0.61)$	$0.578^{+0.015}_{-0.0093}$
$\boldsymbol{A^{dust\,TT}_{100}}$	8.9 ± 1.8	Y_P	$0.24628^{+0.00013}_{-0.00083}$	$f\sigma_8(2.33)$	$0.2916^{+0.0075}_{-0.0048}$
$\boldsymbol{A^{dust\,TT}_{143}}$	10.9 ± 1.8	Y_P^{BBN}	$0.24761^{+0.00013}_{-0.00083}$	$\sigma_8(2.33)$	$0.3004^{+0.0078}_{-0.0051}$
$\boldsymbol{A^{dust\,TT}_{143\times217}}$	18.7 ± 3.3	10^5D/H	$2.589^{+0.024}_{-0.028}$	f^{143}_{2000}	29.9 ± 2.8
$\boldsymbol{A^{dust\,TT}_{217}}$	93.8 ± 7.3	Age/Gyr	$13.745^{+0.062}_{-0.014}$	$f^{143\times217}_{2000}$	32.5 ± 1.9
$\boldsymbol{A^{dust\,TE}_{100}}$	0.114 ± 0.038	z_*	1089.89 ± 0.23	f^{217}_{2000}	107.3 ± 1.8
$\boldsymbol{A^{dust\,TE}_{100\times143}}$	0.135 ± 0.030	r_*	$143.98^{+0.70}_{-0.23}$	$\chi^2_{lensing}$	9.13 ± 0.77
$\boldsymbol{A^{dust\,TE}_{100\times217}}$	0.482 ± 0.085	$100\theta_*$	$1.04107^{+0.00033}_{-0.00029}$	χ^2_{simall}	269 ± 200
$\boldsymbol{A^{dust\,TE}_{143}}$	0.224 ± 0.055	$D_M(z_*)$/Gpc	$13.830^{+0.066}_{-0.022}$	χ^2_{lowl}	152 ± 200
$\boldsymbol{A^{dust\,TE}_{143\times217}}$	0.664 ± 0.080	z_{drag}	$1060.26^{+0.30}_{-0.40}$	χ^2_{plik}	2361.0 ± 5.9
$\boldsymbol{A^{dust\,TE}_{217}}$	2.08 ± 0.27	r_{drag}	$146.60^{+0.73}_{-0.24}$	χ^2_{Aver15}	0.50 ± 0.39
$\boldsymbol{c_{100}}$	0.99968 ± 0.00061	k_D	$0.14127^{+0.00030}_{-0.00062}$	χ^2_{6DF}	0.44 ± 0.54
$\boldsymbol{c_{217}}$	0.99820 ± 0.00062	$100\theta_D$	$0.16080^{+0.00017}_{-0.00023}$	χ^2_{MGS}	0.73 ± 0.58
H_0	$67.73^{+0.41}_{-0.59}$	z_{eq}	3340^{+63}_{-21}	$\chi^2_{DR12BAO}$	5.5 ± 1.8
Ω_Λ	0.6866 ± 0.0062	k_{eq}	$0.01027^{+0.00017}_{-0.000089}$	χ^2_{prior}	11.6 ± 4.5
Ω_m	0.3134 ± 0.0062	$100\theta_{eq}$	$0.8265^{+0.0038}_{-0.013}$	χ^2_{CMB}	2790.7 ± 6.0
$\Omega_m h^2$	$0.1437^{+0.0010}_{-0.0017}$	$100\theta_{s,eq}$	$0.4562^{+0.0020}_{-0.0069}$	χ^2_{BAO}	6.7 ± 1.6
$\Omega_\nu h^2$	$0.00278^{+0.00041}_{-0.0022}$	$H(0.15)$	$73.06^{+0.34}_{-0.54}$		

$\bar{\chi}^2_{eff} = 2809.56$; $R - 1 = 0.02106$

8.48 base_nnu_meffsterile_plikHM_TTTEEE_lowl_lowE_lensing_BAO_post_Cooke17_Aver15

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02247 ± 0.00014	σ_8	$0.793^{+0.020}_{-0.012}$	$D_M(0.38)$	$1526^{+11}_{-6.7}$
$\boldsymbol{\Omega_c h^2}$	$0.1185^{+0.0032}_{-0.0019}$	S_8	$0.811^{+0.020}_{-0.014}$	$H(0.51)$	$90.00^{+0.17}_{-0.48}$
$\boldsymbol{100\theta_{MC}}$	1.04092 ± 0.00030	$\sigma_8\Omega_m^{0.5}$	$0.444^{+0.011}_{-0.0074}$	$D_M(0.51)$	$1977^{+13}_{-7.7}$
$\boldsymbol{\tau}$	$0.0571^{+0.0067}_{-0.0077}$	$\sigma_8\Omega_m^{0.25}$	$0.593^{+0.014}_{-0.0089}$	$H(0.61)$	$95.66^{+0.13}_{-0.47}$
$\boldsymbol{m^{eff}_{\nu,\,sterile}}$ [eV]	< 0.230	$\sigma_8/h^{0.5}$	$0.964^{+0.023}_{-0.013}$	$D_M(0.61)$	$2300^{+15}_{-8.2}$
$\boldsymbol{N_{eff}}$	$3.1109^{+0.0057}_{-0.063}$	$r_{drag}h$	99.27 ± 0.78	$H(2.33)$	$237.24^{+0.64}_{-1.3}$
$\boldsymbol{\ln(10^{10}A_s)}$	3.051 ± 0.015	$\langle d^2\rangle^{1/2}$	2.437 ± 0.021	$D_M(2.33)$	$5741^{+27}_{-6.1}$
$\boldsymbol{n_s}$	$0.9676^{+0.0041}_{-0.0048}$	z_{re}	7.94 ± 0.73	$f\sigma_8(0.15)$	$0.448^{+0.011}_{-0.0072}$
$\boldsymbol{y_{cal}}$	1.0009 ± 0.0024	$10^9 A_s$	$2.113^{+0.029}_{-0.033}$	$\sigma_8(0.15)$	$0.733^{+0.019}_{-0.011}$
$\boldsymbol{A^{CIB}_{217}}$	47 ± 7	$10^9 A_s e^{-2\tau}$	$1.885^{+0.010}_{-0.012}$	$f\sigma_8(0.38)$	$0.466^{+0.011}_{-0.0071}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{40}	1227 ± 12	$\sigma_8(0.38)$	$0.649^{+0.017}_{-0.010}$
$\boldsymbol{A^{tSZ}_{143}}$	5.4 ± 2.0	D_{220}	5739 ± 37	$f\sigma_8(0.51)$	$0.464^{+0.011}_{-0.0069}$
$\boldsymbol{A^{PS}_{100}}$	259 ± 28	D_{810}	2541 ± 13	$\sigma_8(0.51)$	$0.607^{+0.016}_{-0.0097}$
$\boldsymbol{A^{PS}_{143}}$	47 ± 8	D_{1420}	817.5 ± 4.5	$f\sigma_8(0.61)$	$0.459^{+0.011}_{-0.0068}$
$\boldsymbol{A^{PS}_{143\times217}}$	43 ± 9	D_{2000}	230.7 ± 1.5	$\sigma_8(0.61)$	$0.578^{+0.015}_{-0.0093}$
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	$n_{s,0.002}$	$0.9676^{+0.0041}_{-0.0048}$	$f\sigma_8(2.33)$	$0.2916^{+0.0076}_{-0.0048}$
$\boldsymbol{A^{kSZ}}$	< 4.38	Y_P	$0.24629^{+0.00014}_{-0.00085}$	$\sigma_8(2.33)$	$0.3004^{+0.0079}_{-0.0051}$
$\boldsymbol{A^{dust}_{100}}$	8.9 ± 1.8	Y_P^{BBN}	$0.24762^{+0.00014}_{-0.00085}$	f^{143}_{2000}	30.0 ± 2.7
$\boldsymbol{A^{dust}_{143}}$	10.9 ± 1.8	10^5D/H	$2.590^{+0.023}_{-0.027}$	$f^{143\times217}_{2000}$	32.6 ± 1.9
$\boldsymbol{A^{dust}_{143\times217}}$	18.7 ± 3.3	Age/Gyr	$13.745^{+0.063}_{-0.014}$	f^{217}_{2000}	107.4 ± 1.8
$\boldsymbol{A^{dust}_{217}}$	93.8 ± 7.3	z_*	1089.90 ± 0.22	$\chi^2_{lensing}$	9.14 ± 0.77
$\boldsymbol{A^{dust}_{100}}$	0.114 ± 0.038	r_*	$143.97^{+0.71}_{-0.23}$	χ^2_{simall}	270 ± 200
$\boldsymbol{A^{dust}_{100\times143}}$	0.135 ± 0.030	$100\theta_*$	$1.04107^{+0.00033}_{-0.00029}$	χ^2_{lowl}	151 ± 200
$\boldsymbol{A^{dust}_{100\times217}}$	0.482 ± 0.085	$D_M(z_*)$/Gpc	$13.829^{+0.066}_{-0.023}$	χ^2_{plik}	2360.9 ± 5.9
$\boldsymbol{A^{dust}_{143}}$	0.224 ± 0.055	z_{drag}	$1060.24^{+0.30}_{-0.40}$	χ^2_{Aver15}	0.51 ± 0.39
$\boldsymbol{A^{dust}_{143\times217}}$	0.664 ± 0.080	r_{drag}	$146.60^{+0.74}_{-0.24}$	$\chi^2_{Cooke17}$	0.16 ± 0.19
$\boldsymbol{A^{dust}_{217}}$	2.08 ± 0.27	k_D	$0.14126^{+0.00030}_{-0.00062}$	χ^2_{6DF}	0.43 ± 0.53
$\boldsymbol{c_{100}}$	0.99968 ± 0.00061	$100\theta_D$	$0.16081^{+0.00017}_{-0.00022}$	χ^2_{MGS}	0.73 ± 0.57
$\boldsymbol{c_{217}}$	0.99821 ± 0.00062	z_{eq}	3340^{+63}_{-20}	$\chi^2_{DR12BAO}$	5.6 ± 1.8
H_0	$67.72^{+0.40}_{-0.59}$	k_{eq}	$0.01027^{+0.00017}_{-0.000087}$	χ^2_{prior}	11.6 ± 4.5
Ω_Λ	0.6864 ± 0.0062	$100\theta_{eq}$	$0.8263^{+0.0037}_{-0.013}$	χ^2_{CMB}	2790.7 ± 6.0
Ω_m	0.3136 ± 0.0062	$100\theta_{s,eq}$	$0.4562^{+0.0019}_{-0.0069}$	χ^2_{BAO}	6.8 ± 1.6
$\Omega_m h^2$	$0.1438^{+0.0010}_{-0.0017}$	$H(0.15)$	$73.04^{+0.33}_{-0.55}$	χ^2_{Abund}	0.67 ± 0.41
$\Omega_\nu h^2$	$0.00277^{+0.00042}_{-0.0022}$	$D_M(0.15)$	$640.1^{+5.2}_{-3.4}$		
$\Omega_m h^3$	$0.09736^{+0.00023}_{-0.0013}$	$H(0.38)$	$83.24^{+0.23}_{-0.49}$		

$\bar{\chi}^2_{eff} = 2809.72$; $R - 1 = 0.02079$

8.49 base_nnu_meffsterile_plikHM_TTTEEE_lowl_lowE_lensing_BAO_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	$0.02249^{+0.00014}_{-0.00015}$	$\Omega_m h^3$	$0.09766^{+0.00023}_{-0.0016}$	$D_M(0.15)$	$639.1^{+6.0}_{-3.5}$
$\boldsymbol{\Omega_c h^2}$	$0.1187^{+0.0033}_{-0.0022}$	σ_8	$0.794^{+0.021}_{-0.012}$	$H(0.38)$	$83.34^{+0.22}_{-0.60}$
$\boldsymbol{100\theta_{MC}}$	$1.04091^{+0.00033}_{-0.00029}$	S_8	$0.811^{+0.021}_{-0.013}$	$D_M(0.38)$	$1524^{+13}_{-6.8}$
$\boldsymbol{\tau}$	$0.0580^{+0.0061}_{-0.0080}$	$\sigma_8\Omega_m^{0.5}$	$0.444^{+0.011}_{-0.0073}$	$H(0.51)$	$90.11^{+0.16}_{-0.59}$
$\boldsymbol{m^{eff}_{\nu,\,sterile}}$ [eV]	< 0.222	$\sigma_8\Omega_m^{0.25}$	$0.594^{+0.015}_{-0.0089}$	$D_M(0.51)$	$1974^{+16}_{-7.8}$
$\boldsymbol{N_{eff}}$	$3.1258^{+0.0053}_{-0.079}$	$\sigma_8/h^{0.5}$	$0.964^{+0.024}_{-0.013}$	$H(0.61)$	$95.77^{+0.12}_{-0.59}$
$\boldsymbol{\ln(10^{10}A_s)}$	$3.053^{+0.013}_{-0.016}$	$r_{drag}h$	99.33 ± 0.81	$D_M(0.61)$	$2297^{+18}_{-8.3}$
$\boldsymbol{n_s}$	$0.9683^{+0.0041}_{-0.0055}$	$\langle d^2\rangle^{1/2}$	2.437 ± 0.021	$H(2.33)$	$237.43^{+0.66}_{-1.5}$
$\boldsymbol{y_{cal}}$	1.0009 ± 0.0024	z_{re}	$8.04^{+0.64}_{-0.78}$	$D_M(2.33)$	$5735^{+33}_{-5.8}$
$\boldsymbol{A^{CIB}_{217}}$	47 ± 7	$10^9 A_s$	$2.118^{+0.027}_{-0.035}$	$f\sigma_8(0.15)$	$0.449^{+0.011}_{-0.0071}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$10^9 A_s e^{-2\tau}$	$1.886^{+0.011}_{-0.012}$	$\sigma_8(0.15)$	$0.733^{+0.020}_{-0.012}$
$\boldsymbol{A^{tSZ}_{143}}$	5.4 ± 2.0	D_{40}	1226 ± 12	$f\sigma_8(0.38)$	$0.466^{+0.012}_{-0.0070}$
$\boldsymbol{A^{PS}_{100}}$	260 ± 28	D_{220}	5740 ± 37	$\sigma_8(0.38)$	$0.650^{+0.018}_{-0.011}$
$\boldsymbol{A^{PS}_{143}}$	47 ± 8	D_{810}	2542 ± 13	$f\sigma_8(0.51)$	$0.465^{+0.012}_{-0.0069}$
$\boldsymbol{A^{PS}_{143\times217}}$	43 ± 9	D_{1420}	817.6 ± 4.6	$\sigma_8(0.51)$	$0.608^{+0.016}_{-0.010}$
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	D_{2000}	230.7 ± 1.6	$f\sigma_8(0.61)$	$0.460^{+0.012}_{-0.0069}$
$\boldsymbol{A^{kSZ}}$	< 4.39	$n_{s,0.002}$	$0.9683^{+0.0041}_{-0.0055}$	$\sigma_8(0.61)$	$0.579^{+0.016}_{-0.0097}$
$\boldsymbol{A^{dust\,TT}_{100}}$	8.9 ± 1.8	Y_P	$0.24650^{+0.00014}_{-0.0011}$	$f\sigma_8(2.33)$	$0.2919^{+0.0080}_{-0.0050}$
$\boldsymbol{A^{dust\,TT}_{143}}$	10.9 ± 1.8	Y_P^{BBN}	$0.24783^{+0.00015}_{-0.0011}$	$\sigma_8(2.33)$	$0.3007^{+0.0083}_{-0.0054}$
$\boldsymbol{A^{dust\,TT}_{143\times217}}$	18.6 ± 3.3	10^5D/H	$2.591^{+0.024}_{-0.032}$	f^{143}_{2000}	30.0 ± 2.8
$\boldsymbol{A^{dust\,TT}_{217}}$	93.7 ± 7.3	Age/Gyr	$13.730^{+0.078}_{-0.013}$	$f^{143\times217}_{2000}$	32.6 ± 1.9
$\boldsymbol{A^{dust\,TE}_{100}}$	0.114 ± 0.038	z_*	1089.90 ± 0.24	f^{217}_{2000}	107.4 ± 1.8
$\boldsymbol{A^{dust\,TE}_{100\times143}}$	0.135 ± 0.029	r_*	$143.84^{+0.85}_{-0.24}$	$\chi^2_{lensing}$	9.12 ± 0.73
$\boldsymbol{A^{dust\,TE}_{100\times217}}$	0.481 ± 0.085	$100\theta_*$	$1.04104^{+0.00036}_{-0.00029}$	χ^2_{simall}	397.6 ± 2.3
$\boldsymbol{A^{dust\,TE}_{143}}$	0.224 ± 0.054	$D_M(z_*)$/Gpc	$13.817^{+0.080}_{-0.023}$	χ^2_{lowl}	23.03 ± 0.90
$\boldsymbol{A^{dust\,TE}_{143\times217}}$	0.664 ± 0.081	z_{drag}	$1060.32^{+0.31}_{-0.45}$	χ^2_{plik}	2361.3 ± 6.1
$\boldsymbol{A^{dust\,TE}_{217}}$	2.08 ± 0.27	r_{drag}	$146.46^{+0.89}_{-0.26}$	χ^2_{6DF}	0.084 ± 0.088
$\boldsymbol{c_{100}}$	0.99967 ± 0.00061	k_D	$0.14138^{+0.00031}_{-0.00073}$	χ^2_{MGS}	1.10 ± 0.42
$\boldsymbol{c_{217}}$	0.99821 ± 0.00062	$100\theta_D$	$0.16083^{+0.00017}_{-0.00026}$	$\chi^2_{DR12BAO}$	5.5 ± 1.9
H_0	$67.82^{+0.41}_{-0.69}$	z_{eq}	3339^{+62}_{-19}	χ^2_{prior}	11.6 ± 4.6
Ω_Λ	0.6869 ± 0.0064	k_{eq}	$0.01027^{+0.00018}_{-0.000093}$	χ^2_{CMB}	2791.1 ± 6.2
Ω_m	0.3131 ± 0.0064	$100\theta_{eq}$	$0.8266^{+0.0034}_{-0.013}$	χ^2_{BAO}	6.7 ± 1.6
$\Omega_m h^2$	$0.1440^{+0.0010}_{-0.0019}$	$100\theta_{s,eq}$	$0.4563^{+0.0017}_{-0.0069}$		
$\Omega_\nu h^2$	$0.00276^{+0.00034}_{-0.0021}$	$H(0.15)$	$73.15^{+0.34}_{-0.65}$		

$\bar{\chi}^2_{eff} = 2809.40$; $\Delta\bar{\chi}^2_{eff} = 2.68$; $R - 1 = 0.02345$

8.50 base_nnu_meffsterile_plikHM_TTTEEE_lowl_lowE_lensing_BAO_post_Pantheon_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	$0.02250^{+0.00014}_{-0.00015}$	$\Omega_m h^3$	$0.09776^{+0.00022}_{-0.0017}$	$D_M(0.15)$	$638.3^{+6.3}_{-3.2}$
$\boldsymbol{\Omega_c h^2}$	$0.1188^{+0.0033}_{-0.0023}$	σ_8	$0.795^{+0.020}_{-0.012}$	$H(0.38)$	$83.42^{+0.19}_{-0.65}$
$\boldsymbol{100\theta_{MC}}$	$1.04091^{+0.00033}_{-0.00030}$	S_8	$0.811^{+0.020}_{-0.013}$	$D_M(0.38)$	$1522^{+14}_{-6.0}$
$\boldsymbol{\tau}$	$0.0580^{+0.0061}_{-0.0079}$	$\sigma_8\Omega_m^{0.5}$	$0.444^{+0.011}_{-0.0073}$	$H(0.51)$	$90.18^{+0.14}_{-0.63}$
$\boldsymbol{m^{eff}_{\nu,\,sterile}}$ [eV]	< 0.200	$\sigma_8\Omega_m^{0.25}$	$0.594^{+0.015}_{-0.0089}$	$D_M(0.51)$	$1972^{+17}_{-6.8}$
$\boldsymbol{N_{eff}}$	< 3.13	$\sigma_8/h^{0.5}$	$0.965^{+0.023}_{-0.013}$	$H(0.61)$	$95.83^{+0.11}_{-0.63}$
$\boldsymbol{\ln(10^{10}A_s)}$	$3.053^{+0.013}_{-0.016}$	$r_{drag}h$	99.47 ± 0.77	$D_M(0.61)$	$2294^{+19}_{-7.2}$
$\boldsymbol{n_s}$	$0.9688^{+0.0040}_{-0.0055}$	$\langle d^2\rangle^{1/2}$	2.435 ± 0.021	$H(2.33)$	$237.40^{+0.61}_{-1.6}$
$\boldsymbol{y_{cal}}$	1.0009 ± 0.0024	z_{re}	$8.03^{+0.64}_{-0.77}$	$D_M(2.33)$	$5732^{+35}_{-5.4}$
$\boldsymbol{A^{CIB}_{217}}$	47 ± 7	$10^9 A_s$	$2.118^{+0.027}_{-0.035}$	$f\sigma_8(0.15)$	$0.449^{+0.011}_{-0.0071}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$10^9 A_s e^{-2\tau}$	$1.885^{+0.011}_{-0.013}$	$\sigma_8(0.15)$	$0.735^{+0.019}_{-0.012}$
$\boldsymbol{A^{tSZ}_{143}}$	5.4 ± 2.0	D_{40}	1226 ± 12	$f\sigma_8(0.38)$	$0.467^{+0.011}_{-0.0070}$
$\boldsymbol{A^{PS}_{100}}$	259 ± 28	D_{220}	5741 ± 37	$\sigma_8(0.38)$	$0.651^{+0.017}_{-0.011}$
$\boldsymbol{A^{PS}_{143}}$	47 ± 8	D_{810}	2542 ± 13	$f\sigma_8(0.51)$	$0.465^{+0.012}_{-0.0069}$
$\boldsymbol{A^{PS}_{143\times217}}$	43 ± 9	D_{1420}	817.7 ± 4.6	$\sigma_8(0.51)$	$0.609^{+0.016}_{-0.010}$
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	D_{2000}	230.7 ± 1.6	$f\sigma_8(0.61)$	$0.460^{+0.011}_{-0.0069}$
$\boldsymbol{A^{kSZ}}$	< 4.41	$n_{s,0.002}$	$0.9688^{+0.0040}_{-0.0055}$	$\sigma_8(0.61)$	$0.580^{+0.015}_{-0.0097}$
$\boldsymbol{A^{dust TT}_{100}}$	9.0 ± 1.8	Y_P	$0.24655^{+0.00013}_{-0.0011}$	$f\sigma_8(2.33)$	$0.2926^{+0.0077}_{-0.0050}$
$\boldsymbol{A^{dust TT}_{143}}$	10.9 ± 1.8	Y_P^{BBN}	$0.24788^{+0.00013}_{-0.0011}$	$\sigma_8(2.33)$	$0.3015^{+0.0080}_{-0.0054}$
$\boldsymbol{A^{dust TT}_{143\times217}}$	18.7 ± 3.3	10^5D/H	$2.590^{+0.024}_{-0.032}$	f^{143}_{2000}	30.0 ± 2.8
$\boldsymbol{A^{dust TT}_{217}}$	93.8 ± 7.3	Age/Gyr	$13.723^{+0.084}_{-0.012}$	$f^{143\times217}_{2000}$	32.6 ± 1.9
$\boldsymbol{A^{dust TE}_{100}}$	0.114 ± 0.038	z_*	$1089.88^{+0.21}_{-0.25}$	f^{217}_{2000}	107.4 ± 1.8
$\boldsymbol{A^{dust TE}_{100\times143}}$	0.135 ± 0.030	r_*	$143.83^{+0.91}_{-0.22}$	$\chi^2_{lensing}$	9.16 ± 0.76
$\boldsymbol{A^{dust TE}_{100\times217}}$	0.483 ± 0.085	$100\theta_*$	$1.04104^{+0.00037}_{-0.00030}$	χ^2_{simall}	265 ± 200
$\boldsymbol{A^{dust TE}_{143}}$	0.223 ± 0.055	$D_M(z_*)$/Gpc	$13.816^{+0.085}_{-0.022}$	χ^2_{lowl}	155 ± 200
$\boldsymbol{A^{dust TE}_{143\times217}}$	0.664 ± 0.080	z_{drag}	$1060.35^{+0.30}_{-0.47}$	χ^2_{plik}	2361.4 ± 6.0
$\boldsymbol{A^{dust TE}_{217}}$	2.08 ± 0.27	r_{drag}	$146.44^{+0.95}_{-0.24}$	χ^2_{JLA}	1036.44 ± 0.36
$\boldsymbol{c_{100}}$	0.99968 ± 0.00061	k_D	$0.14138^{+0.00029}_{-0.00078}$	χ^2_{6DF}	0.47 ± 0.59
$\boldsymbol{c_{217}}$	0.99820 ± 0.00062	$100\theta_D$	$0.16083^{+0.00017}_{-0.00028}$	χ^2_{MGS}	0.77 ± 0.62
H_0	$67.93^{+0.37}_{-0.72}$	z_{eq}	3340^{+59}_{-18}	$\chi^2_{DR12BAO}$	5.2 ± 1.6
Ω_Λ	0.6880 ± 0.0061	k_{eq}	$0.01028^{+0.00018}_{-0.000094}$	χ^2_{prior}	11.6 ± 4.5
Ω_m	0.3120 ± 0.0061	$100\theta_{eq}$	$0.8264^{+0.0032}_{-0.012}$	χ^2_{CMB}	2791.1 ± 6.2
$\Omega_m h^2$	$0.14391^{+0.00098}_{-0.0020}$	$100\theta_{s,eq}$	$0.4562^{+0.0016}_{-0.0065}$	χ^2_{BAO}	6.4 ± 1.3
$\Omega_\nu h^2$	$0.00259^{+0.00024}_{-0.0020}$	$H(0.15)$	$73.24^{+0.30}_{-0.69}$		

$\bar{\chi}^2_{eff} = 3845.64$; $\Delta\bar{\chi}^2_{eff} = 2.62$; $R - 1 = 0.02541$

8.51 base_nnu_meffsterile_plikHM_TTTEEE_lowl_lowE_lensing_BAO_post_Aver15_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02248 ± 0.00014	$\Omega_m h^3$	$0.09737^{+0.00023}_{-0.0013}$	$D_M(0.15)$	$639.9^{+5.1}_{-3.5}$
$\boldsymbol{\Omega_c h^2}$	$0.1185^{+0.0032}_{-0.0020}$	σ_8	$0.793^{+0.020}_{-0.012}$	$H(0.38)$	$83.25^{+0.23}_{-0.49}$
$\boldsymbol{100\theta_{MC}}$	1.04093 ± 0.00030	S_8	$0.810^{+0.020}_{-0.014}$	$D_M(0.38)$	$1526^{+11}_{-6.7}$
$\boldsymbol{\tau}$	$0.0576^{+0.0060}_{-0.0078}$	$\sigma_8\Omega_m^{0.5}$	$0.444^{+0.011}_{-0.0075}$	$H(0.51)$	$90.01^{+0.17}_{-0.47}$
$\boldsymbol{m^{eff}_{\nu,\,sterile}}$ [eV]	< 0.231	$\sigma_8\Omega_m^{0.25}$	$0.593^{+0.014}_{-0.0090}$	$D_M(0.51)$	$1976^{+13}_{-7.8}$
$\boldsymbol{N_{eff}}$	$3.1102^{+0.0052}_{-0.062}$	$\sigma_8/h^{0.5}$	$0.964^{+0.023}_{-0.013}$	$H(0.61)$	$95.67^{+0.13}_{-0.46}$
$\boldsymbol{\ln(10^{10}A_s)}$	$3.051^{+0.013}_{-0.016}$	$r_{drag}h$	99.31 ± 0.78	$D_M(0.61)$	$2299^{+15}_{-8.3}$
$\boldsymbol{n_s}$	$0.9677^{+0.0040}_{-0.0047}$	$\langle d^2\rangle^{1/2}$	2.438 ± 0.021	$H(2.33)$	$237.21^{+0.64}_{-1.3}$
$\boldsymbol{y_{cal}}$	1.0009 ± 0.0024	z_{re}	$7.99^{+0.63}_{-0.76}$	$D_M(2.33)$	$5741^{+26}_{-6.2}$
$\boldsymbol{A^{CIB}_{217}}$	47 ± 7	$10^9 A_s$	$2.115^{+0.027}_{-0.034}$	$f\sigma_8(0.15)$	$0.448^{+0.011}_{-0.0073}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$10^9 A_s e^{-2\tau}$	$1.885^{+0.010}_{-0.012}$	$\sigma_8(0.15)$	$0.733^{+0.018}_{-0.011}$
$\boldsymbol{A^{tSZ}_{143}}$	5.4 ± 2.0	D_{40}	1227 ± 12	$f\sigma_8(0.38)$	$0.466^{+0.011}_{-0.0071}$
$\boldsymbol{A^{PS}_{100}}$	259 ± 28	D_{220}	5740 ± 37	$\sigma_8(0.38)$	$0.649^{+0.017}_{-0.010}$
$\boldsymbol{A^{PS}_{143}}$	47 ± 8	D_{810}	2541 ± 13	$f\sigma_8(0.51)$	$0.464^{+0.011}_{-0.0069}$
$\boldsymbol{A^{PS}_{143\times217}}$	43 ± 9	D_{1420}	817.6 ± 4.6	$\sigma_8(0.51)$	$0.608^{+0.016}_{-0.0096}$
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	D_{2000}	230.7 ± 1.5	$f\sigma_8(0.61)$	$0.459^{+0.011}_{-0.0068}$
$\boldsymbol{A^{kSZ}}$	< 4.37	$n_{s,0.002}$	$0.9677^{+0.0040}_{-0.0047}$	$\sigma_8(0.61)$	$0.578^{+0.015}_{-0.0092}$
$\boldsymbol{A^{dust\,TT}_{100}}$	8.9 ± 1.8	Y_P	$0.24629^{+0.00013}_{-0.00083}$	$f\sigma_8(2.33)$	$0.2917^{+0.0075}_{-0.0047}$
$\boldsymbol{A^{dust\,TT}_{143}}$	10.9 ± 1.8	Y_P^{BBN}	$0.24762^{+0.00013}_{-0.00084}$	$\sigma_8(2.33)$	$0.3005^{+0.0078}_{-0.0051}$
$\boldsymbol{A^{dust\,TT}_{143\times217}}$	18.7 ± 3.3	10^5D/H	$2.588^{+0.024}_{-0.028}$	f^{143}_{2000}	29.9 ± 2.8
$\boldsymbol{A^{dust\,TT}_{217}}$	93.8 ± 7.3	Age/Gyr	$13.744^{+0.062}_{-0.014}$	$f^{143\times217}_{2000}$	32.5 ± 1.9
$\boldsymbol{A^{dust\,TE}_{100}}$	0.114 ± 0.038	z_*	1089.89 ± 0.23	f^{217}_{2000}	107.3 ± 1.8
$\boldsymbol{A^{dust\,TE}_{100\times143}}$	0.135 ± 0.030	r_*	$143.98^{+0.70}_{-0.23}$	$\chi^2_{lensing}$	9.11 ± 0.73
$\boldsymbol{A^{dust\,TE}_{100\times217}}$	0.482 ± 0.086	$100\theta_*$	$1.04107^{+0.00033}_{-0.00029}$	χ^2_{simall}	268 ± 200
$\boldsymbol{A^{dust\,TE}_{143}}$	0.224 ± 0.055	$D_M(z_*)$/Gpc	$13.830^{+0.066}_{-0.022}$	χ^2_{lowl}	152 ± 200
$\boldsymbol{A^{dust\,TE}_{143\times217}}$	0.664 ± 0.080	z_{drag}	$1060.26^{+0.30}_{-0.40}$	χ^2_{plik}	2360.9 ± 5.9
$\boldsymbol{A^{dust\,TE}_{217}}$	2.08 ± 0.27	r_{drag}	$146.60^{+0.73}_{-0.24}$	χ^2_{Aver15}	0.51 ± 0.39
$\boldsymbol{c_{100}}$	0.99968 ± 0.00061	k_D	$0.14127^{+0.00031}_{-0.00062}$	χ^2_{6DF}	0.44 ± 0.54
$\boldsymbol{c_{217}}$	0.99820 ± 0.00062	$100\theta_D$	$0.16080^{+0.00017}_{-0.00023}$	χ^2_{MGS}	0.73 ± 0.58
H_0	$67.74^{+0.40}_{-0.59}$	z_{eq}	3339^{+63}_{-21}	$\chi^2_{DR12BAO}$	5.5 ± 1.8
Ω_Λ	0.6867 ± 0.0062	k_{eq}	$0.01027^{+0.00017}_{-0.000089}$	χ^2_{prior}	11.6 ± 4.5
Ω_m	0.3133 ± 0.0062	$100\theta_{eq}$	$0.8265^{+0.0038}_{-0.013}$	χ^2_{CMB}	2790.6 ± 6.0
$\Omega_m h^2$	$0.1437^{+0.0010}_{-0.0017}$	$100\theta_{s,eq}$	$0.4563^{+0.0020}_{-0.0069}$	χ^2_{BAO}	6.7 ± 1.5
$\Omega_\nu h^2$	$0.00278^{+0.00041}_{-0.0022}$	$H(0.15)$	$73.06^{+0.34}_{-0.54}$		

$\bar{\chi}^2_{eff} = 2809.47$; $R - 1 = 0.02226$

8.52 base_nnu_meffsterile_plikHM_TTTEEE_lowl_lowE_lensing_BAO_post_Cooke17_Aver15_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02247 ± 0.00014	σ_8	$0.793^{+0.020}_{-0.012}$	$D_M(0.38)$	$1526^{+11}_{-6.6}$
$\boldsymbol{\Omega_c h^2}$	$0.1185^{+0.0032}_{-0.0019}$	S_8	$0.811^{+0.020}_{-0.013}$	$H(0.51)$	$90.01^{+0.17}_{-0.48}$
$\boldsymbol{100\theta_{MC}}$	1.04092 ± 0.00030	$\sigma_8\Omega_m^{0.5}$	$0.444^{+0.011}_{-0.0074}$	$D_M(0.51)$	$1976^{+14}_{-7.7}$
$\boldsymbol{\tau}$	$0.0575^{+0.0060}_{-0.0078}$	$\sigma_8\Omega_m^{0.25}$	$0.594^{+0.014}_{-0.0088}$	$H(0.61)$	$95.66^{+0.13}_{-0.47}$
$\boldsymbol{m^{eff}_{\nu,\,sterile}}$ [eV]	< 0.229	$\sigma_8/h^{0.5}$	$0.964^{+0.023}_{-0.013}$	$D_M(0.61)$	$2300^{+15}_{-8.2}$
$\boldsymbol{N_{eff}}$	$3.1113^{+0.0057}_{-0.064}$	$r_{drag}h$	99.28 ± 0.77	$H(2.33)$	$237.24^{+0.65}_{-1.3}$
$\boldsymbol{\ln(10^{10}A_s)}$	$3.051^{+0.013}_{-0.016}$	$\langle d^2\rangle^{1/2}$	2.438 ± 0.021	$D_M(2.33)$	$5741^{+27}_{-6.1}$
$\boldsymbol{n_s}$	$0.9676^{+0.0040}_{-0.0048}$	z_{re}	$7.98^{+0.63}_{-0.76}$	$f\sigma_8(0.15)$	$0.449^{+0.011}_{-0.0072}$
$\boldsymbol{y_{cal}}$	1.0009 ± 0.0024	$10^9 A_s$	$2.114^{+0.027}_{-0.034}$	$\sigma_8(0.15)$	$0.733^{+0.019}_{-0.011}$
$\boldsymbol{A^{CIB}_{217}}$	47 ± 7	$10^9 A_s e^{-2\tau}$	$1.885^{+0.010}_{-0.012}$	$f\sigma_8(0.38)$	$0.466^{+0.011}_{-0.0070}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{40}	1227 ± 12	$\sigma_8(0.38)$	$0.649^{+0.017}_{-0.010}$
$\boldsymbol{A^{tSZ}_{143}}$	5.4 ± 2.0	D_{220}	5739 ± 37	$f\sigma_8(0.51)$	$0.465^{+0.011}_{-0.0069}$
$\boldsymbol{A^{PS}_{100}}$	259 ± 28	D_{810}	2541 ± 13	$\sigma_8(0.51)$	$0.608^{+0.016}_{-0.0096}$
$\boldsymbol{A^{PS}_{143}}$	47 ± 8	D_{1420}	817.4 ± 4.5	$f\sigma_8(0.61)$	$0.460^{+0.011}_{-0.0068}$
$\boldsymbol{A^{PS}_{143\times217}}$	43 ± 9	D_{2000}	230.7 ± 1.5	$\sigma_8(0.61)$	$0.578^{+0.015}_{-0.0092}$
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	$n_{s,0.002}$	$0.9676^{+0.0040}_{-0.0048}$	$f\sigma_8(2.33)$	$0.2917^{+0.0076}_{-0.0048}$
$\boldsymbol{A^{kSZ}}$	< 4.39	Y_P	$0.24630^{+0.00014}_{-0.00085}$	$\sigma_8(2.33)$	$0.3005^{+0.0079}_{-0.0051}$
$\boldsymbol{A^{dust\,TT}_{100}}$	8.9 ± 1.8	Y_P^{BBN}	$0.24763^{+0.00014}_{-0.00085}$	f^{143}_{2000}	30.0 ± 2.8
$\boldsymbol{A^{dust\,TT}_{143}}$	10.9 ± 1.8	10^5D/H	$2.590^{+0.023}_{-0.027}$	$f^{143\times217}_{2000}$	32.6 ± 1.9
$\boldsymbol{A^{dust\,TT}_{143\times217}}$	18.7 ± 3.3	Age/Gyr	$13.744^{+0.064}_{-0.014}$	f^{217}_{2000}	107.4 ± 1.8
$\boldsymbol{A^{dust\,TT}_{217}}$	93.8 ± 7.3	z_*	1089.90 ± 0.22	$\chi^2_{lensing}$	9.11 ± 0.73
$\boldsymbol{A^{dust\,TE}_{100}}$	0.114 ± 0.038	r_*	$143.97^{+0.71}_{-0.24}$	χ^2_{simall}	270 ± 200
$\boldsymbol{A^{dust\,TE}_{100\times143}}$	0.135 ± 0.030	$100\theta_*$	$1.04107^{+0.00033}_{-0.00029}$	χ^2_{lowl}	151 ± 200
$\boldsymbol{A^{dust\,TE}_{100\times217}}$	0.482 ± 0.086	$D_M(z_*)$/Gpc	$13.829^{+0.067}_{-0.023}$	χ^2_{plik}	2360.9 ± 5.9
$\boldsymbol{A^{dust\,TE}_{143}}$	0.224 ± 0.055	z_{drag}	$1060.25^{+0.30}_{-0.40}$	χ^2_{Aver15}	0.51 ± 0.39
$\boldsymbol{A^{dust\,TE}_{143\times217}}$	0.664 ± 0.080	r_{drag}	$146.59^{+0.74}_{-0.25}$	$\chi^2_{Cooke17}$	0.16 ± 0.19
$\boldsymbol{A^{dust\,TE}_{217}}$	2.08 ± 0.27	k_D	$0.14127^{+0.00031}_{-0.00063}$	χ^2_{6DF}	0.43 ± 0.53
$\boldsymbol{c_{100}}$	0.99967 ± 0.00062	$100\theta_D$	$0.16081^{+0.00017}_{-0.00022}$	χ^2_{MGS}	0.73 ± 0.57
$\boldsymbol{c_{217}}$	0.99821 ± 0.00062	z_{eq}	3340^{+63}_{-20}	$\chi^2_{DR12BAO}$	5.6 ± 1.8
H_0	$67.73^{+0.40}_{-0.59}$	k_{eq}	$0.01027^{+0.00017}_{-0.000087}$	χ^2_{prior}	11.6 ± 4.5
Ω_Λ	0.6865 ± 0.0061	$100\theta_{eq}$	$0.8264^{+0.0037}_{-0.013}$	χ^2_{CMB}	2790.6 ± 6.0
Ω_m	0.3135 ± 0.0061	$100\theta_{s,eq}$	$0.4562^{+0.0019}_{-0.0069}$	χ^2_{BAO}	6.7 ± 1.6
$\Omega_m h^2$	$0.1438^{+0.0010}_{-0.0017}$	$H(0.15)$	$73.05^{+0.33}_{-0.55}$	χ^2_{Abund}	0.67 ± 0.41
$\Omega_\nu h^2$	$0.00277^{+0.00042}_{-0.0022}$	$D_M(0.15)$	$640.0^{+5.2}_{-3.4}$		
$\Omega_m h^3$	$0.09737^{+0.00024}_{-0.0013}$	$H(0.38)$	$83.24^{+0.23}_{-0.50}$		

$\bar{\chi}^2_{eff} = 2809.63$; $R - 1 = 0.02220$

8.53 base_nnu_meffsterile_CamSpecHM_TTTEEE_lowl_lowE_lensing_BAO

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022343	$0.02241^{+0.00015}_{-0.00016}$	S_8	0.8223	$0.809^{+0.019}_{-0.013}$	$H(0.38)$	83.003	$83.44^{+0.24}_{-0.75}$
$\boldsymbol{\Omega_c h^2}$	0.11905	$0.1192^{+0.0031}_{-0.0025}$	$\sigma_8\Omega_m^{0.5}$	0.4504	$0.443^{+0.011}_{-0.0070}$	$D_M(0.38)$	1529.1	$1522^{+16}_{-7.2}$
$\boldsymbol{100\theta_{MC}}$	1.040943	$1.04081^{+0.00036}_{-0.00032}$	$\sigma_8\Omega_m^{0.25}$	0.6032	$0.593^{+0.014}_{-0.0085}$	$H(0.51)$	89.714	$90.20^{+0.18}_{-0.75}$
$\boldsymbol{\tau}$	0.0546	$0.0564^{+0.0067}_{-0.0078}$	$\sigma_8/h^{0.5}$	0.9824	$0.963^{+0.022}_{-0.012}$	$D_M(0.51)$	1980.9	$1971^{+20}_{-8.2}$
$\boldsymbol{m^{eff}_{\nu,\,sterile}}$ [eV]	0.011	< 0.174	$r_{drag}h$	99.64	99.47 ± 0.84	$H(0.61)$	95.328	$95.85^{+0.16}_{-0.74}$
$\boldsymbol{N_{eff}}$	3.046	< 3.16	$\langle d^2\rangle^{1/2}$	2.4294	2.427 ± 0.021	$D_M(0.61)$	2305.2	$2294^{+22}_{-8.7}$
$\boldsymbol{\ln(10^{10}A_s)}$	3.0410	$3.048^{+0.014}_{-0.016}$	z_{re}	7.70	7.90 ± 0.74	$H(2.33)$	235.99	$237.48^{+0.74}_{-1.9}$
$\boldsymbol{n_s}$	0.9673	$0.9693^{+0.0045}_{-0.0060}$	$10^9 A_s$	2.0926	$2.109^{+0.030}_{-0.034}$	$D_M(2.33)$	5762.6	$5731^{+42}_{-9.0}$
$\boldsymbol{y_{cal}}$	1.00024	1.0008 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.8762	$1.883^{+0.012}_{-0.014}$	$f\sigma_8(0.15)$	0.4550	$0.448^{+0.011}_{-0.0068}$
$\boldsymbol{A^{PS}_{100}}$	235.8	243 ± 25	D_{40}	1223.1	1222 ± 13	$\sigma_8(0.15)$	0.7466	$0.733^{+0.019}_{-0.011}$
$\boldsymbol{A^{PS}_{143}}$	47.5	41 ± 8	D_{220}	5717.3	5726 ± 39	$f\sigma_8(0.38)$	0.4735	$0.466^{+0.011}_{-0.0067}$
$\boldsymbol{A^{PS}_{217}}$	103.5	102 ± 10	D_{810}	2535.0	2538 ± 13	$\sigma_8(0.38)$	0.6619	$0.650^{+0.017}_{-0.010}$
$\boldsymbol{A^{CIB}_{217}}$	39.8	40 ± 7	D_{1420}	816.09	815.6 ± 4.8	$f\sigma_8(0.51)$	0.4722	$0.465^{+0.011}_{-0.0066}$
$\boldsymbol{A^{tSZ}_{143}}$	4.40	$3.8^{+1.8}_{-2.5}$	D_{2000}	230.54	229.8 ± 1.7	$\sigma_8(0.51)$	0.6194	$0.608^{+0.016}_{-0.0098}$
$\boldsymbol{r^{PS}_{143\times217}}$	0.725	0.65 ± 0.13	$n_{s,0.002}$	0.9673	$0.9693^{+0.0045}_{-0.0060}$	$f\sigma_8(0.61)$	0.4672	$0.460^{+0.011}_{-0.0066}$
$\boldsymbol{r^{CIB}_{143\times217}}$	0.726	$0.57^{+0.40}_{-0.15}$	Y_P	0.24539	$0.24675^{+0.00025}_{-0.0014}$	$\sigma_8(0.61)$	0.5894	$0.579^{+0.015}_{-0.0094}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.94	—	Y_P^{BBN}	0.24671	$0.24808^{+0.00025}_{-0.0014}$	$f\sigma_8(2.33)$	0.2972	$0.2922^{+0.0077}_{-0.0049}$
$\boldsymbol{A^{kSZ}}$	3.41	4.9 ± 2.7	10^5D/H	2.5905	$2.615^{+0.029}_{-0.041}$	$\sigma_8(2.33)$	0.3064	$0.3010^{+0.0081}_{-0.0052}$
$\boldsymbol{A^{dust}_{100}}$	1.022	1.01 ± 0.20	Age/Gyr	13.796	$13.72^{+0.10}_{-0.021}$	f^{143}_{2000}	29.69	30.5 ± 3.0
$\boldsymbol{A^{dust}_{143}}$	0.975	0.96 ± 0.17	z_*	1089.881	$1090.04^{+0.24}_{-0.31}$	f^{217}_{2000}	106.44	107.5 ± 2.0
$\boldsymbol{A^{dust}_{217}}$	0.982	0.97 ± 0.10	r_*	144.66	$143.8^{+1.1}_{-0.31}$	$f^{143\times217}_{2000}$	31.97	32.8 ± 2.1
$\boldsymbol{A^{dust}_{143\times217}}$	1.019	1.03 ± 0.16	$100\theta_*$	1.041131	$1.04094^{+0.00041}_{-0.00032}$	$\chi^2_{lensing}$	8.94	9.5 ± 1.0
$\boldsymbol{c_{100}}$	0.99765	0.9976 ± 0.0011	$D_M(z_*)$/Gpc	13.895	$13.81^{+0.10}_{-0.030}$	χ^2_{simall}	396.07	397.3 ± 2.0
$\boldsymbol{c_{217}}$	1.00128	1.0012 ± 0.0016	z_{drag}	1059.818	$1060.15^{+0.35}_{-0.49}$	χ^2_{lowl}	22.86	22.72 ± 0.89
$\boldsymbol{c_{TE}}$	0.99640	0.9971 ± 0.0049	r_{drag}	147.34	$146.4^{+1.1}_{-0.33}$	$\chi^2_{CamSpec}$	11500.0	11516.1 ± 5.8
$\boldsymbol{c_{EE}}$	0.9920	0.9934 ± 0.0051	k_D	0.14058	$0.14127^{+0.00037}_{-0.00087}$	χ^2_{6DF}	0.0297	0.073 ± 0.082
H_0	67.63	$67.94^{+0.43}_{-0.80}$	$100\theta_D$	0.160825	$0.16102^{+0.00019}_{-0.00035}$	χ^2_{MGS}	1.217	1.18 ± 0.44
Ω_Λ	0.6892	0.6879 ± 0.0066	z_{eq}	3378.9	3338^{+51}_{-19}	$\chi^2_{DR12BAO}$	4.42	5.2 ± 1.8
Ω_m	0.3108	0.3121 ± 0.0066	k_{eq}	0.010315	$0.01028^{+0.00016}_{-0.000097}$	χ^2_{prior}	2.13	7.8 ± 3.4
$\Omega_m h^2$	0.14216	$0.1440^{+0.0011}_{-0.0024}$	$100\theta_{eq}$	0.8175	$0.8262^{+0.0033}_{-0.011}$	χ^2_{CMB}	11927.8	11945.6 ± 6.0
$\Omega_\nu h^2$	0.00077	$0.00240^{+0.00029}_{-0.0018}$	$100\theta_{s,eq}$	0.45160	$0.4561^{+0.0016}_{-0.0057}$	χ^2_{BAO}	5.67	6.5 ± 1.5
$\Omega_m h^3$	0.09614	$0.09784^{+0.00039}_{-0.0020}$	$H(0.15)$	72.90	$73.26^{+0.35}_{-0.78}$			
σ_8	0.8079	$0.794^{+0.020}_{-0.012}$	$D_M(0.15)$	641.1	$638.2^{+7.1}_{-3.7}$			

Best-fit $\chi^2_{eff} = 11935.63$; $\bar{\chi}^2_{eff} = 11959.89$; $\Delta\bar{\chi}^2_{eff} = 2.49$; $R - 1 = 0.03604$

χ^2_{eff}: BAO - 6DF: 0.03 MGS: 1.22 DR12BAO: 4.42 CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.94 simall_100x143_offlike5_EE_Aplanck_B: 396.07 commander_dx12_v3_2_29: 22.86 CamSpec like_10.7HM_1400_unified: 11499.95

8.54 base_nnu_meffsterile_CamSpecHM_TTTEEE_lowl_lowE_lensing_BAO_post_Pantheon

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	$0.02242^{+0.00015}_{-0.00016}$	S_8	$0.809^{+0.019}_{-0.013}$	$H(0.38)$	$83.50^{+0.24}_{-0.78}$
$\boldsymbol{\Omega_c h^2}$	$0.1192^{+0.0030}_{-0.0026}$	$\sigma_8\Omega_m^{0.5}$	$0.443^{+0.010}_{-0.0069}$	$D_M(0.38)$	$1520^{+16}_{-7.1}$
$\boldsymbol{100\theta_{MC}}$	$1.04082^{+0.00037}_{-0.00032}$	$\sigma_8\Omega_m^{0.25}$	$0.593^{+0.014}_{-0.0085}$	$H(0.51)$	$90.26^{+0.19}_{-0.78}$
$\boldsymbol{\tau}$	$0.0568^{+0.0067}_{-0.0078}$	$\sigma_8/h^{0.5}$	$0.964^{+0.022}_{-0.011}$	$D_M(0.51)$	$1969^{+20}_{-8.2}$
$\boldsymbol{m^{eff}_{\nu,\,sterile}}$ [eV]	< 0.162	$r_{drag}h$	99.61 ± 0.80	$H(0.61)$	$95.90^{+0.18}_{-0.77}$
$\boldsymbol{N_{eff}}$	< 3.16	$\langle d^2\rangle^{1/2}$	2.426 ± 0.021	$D_M(0.61)$	$2292^{+23}_{-8.7}$
$\boldsymbol{\ln(10^{10}A_s)}$	$3.049^{+0.015}_{-0.016}$	z_{re}	7.93 ± 0.74	$H(2.33)$	$237.42^{+0.71}_{-1.9}$
$\boldsymbol{n_s}$	$0.9698^{+0.0045}_{-0.0060}$	$10^9 A_s$	$2.110^{+0.030}_{-0.034}$	$D_M(2.33)$	$5728^{+44}_{-9.8}$
$\boldsymbol{y_{cal}}$	1.0008 ± 0.0025	$10^9 A_s e^{-2\tau}$	$1.883^{+0.012}_{-0.014}$	$f\sigma_8(0.15)$	$0.448^{+0.010}_{-0.0068}$
$\boldsymbol{A^{PS}_{100}}$	243 ± 25	D_{40}	1221 ± 13	$\sigma_8(0.15)$	$0.735^{+0.018}_{-0.011}$
$\boldsymbol{A^{PS}_{143}}$	41 ± 8	D_{220}	5727 ± 39	$f\sigma_8(0.38)$	$0.466^{+0.011}_{-0.0067}$
$\boldsymbol{A^{PS}_{217}}$	102 ± 10	D_{810}	2538 ± 13	$\sigma_8(0.38)$	$0.651^{+0.016}_{-0.010}$
$\boldsymbol{A^{CIB}_{217}}$	40 ± 7	D_{1420}	815.7 ± 4.8	$f\sigma_8(0.51)$	$0.465^{+0.011}_{-0.0066}$
$\boldsymbol{A^{tSZ}_{143}}$	$3.7^{+1.8}_{-2.5}$	D_{2000}	229.8 ± 1.7	$\sigma_8(0.51)$	$0.609^{+0.015}_{-0.0097}$
$\boldsymbol{r^{PS}_{143\times217}}$	0.65 ± 0.13	$n_{s,0.002}$	$0.9698^{+0.0045}_{-0.0060}$	$f\sigma_8(0.61)$	$0.460^{+0.011}_{-0.0066}$
$\boldsymbol{r^{CIB}_{143\times217}}$	$0.57^{+0.41}_{-0.14}$	Y_P	$0.24679^{+0.00025}_{-0.0014}$	$\sigma_8(0.61)$	$0.580^{+0.015}_{-0.0093}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	$0.24812^{+0.00025}_{-0.0014}$	$f\sigma_8(2.33)$	$0.2927^{+0.0075}_{-0.0048}$
$\boldsymbol{A^{kSZ}}$	4.9 ± 2.7	10^5D/H	$2.613^{+0.028}_{-0.042}$	$\sigma_8(2.33)$	$0.3016^{+0.0079}_{-0.0052}$
$\boldsymbol{A^{dust}_{100}}$	1.01 ± 0.20	Age/Gyr	$13.71^{+0.10}_{-0.023}$	f^{143}_{2000}	30.5 ± 3.0
$\boldsymbol{A^{dust}_{143}}$	0.96 ± 0.18	z_*	$1090.02^{+0.23}_{-0.31}$	f^{217}_{2000}	107.4 ± 2.0
$\boldsymbol{A^{dust}_{217}}$	0.97 ± 0.10	r_*	$143.8^{+1.1}_{-0.30}$	$f^{143\times217}_{2000}$	32.7 ± 2.1
$\boldsymbol{A^{dust}_{143\times217}}$	1.03 ± 0.16	$100\theta_*$	$1.04094^{+0.00042}_{-0.00032}$	$\chi^2_{lensing}$	9.5 ± 1.0
$\boldsymbol{c_{100}}$	0.9976 ± 0.0011	$D_M(z_*)$/Gpc	$13.81^{+0.10}_{-0.029}$	χ^2_{simall}	397.4 ± 2.1
$\boldsymbol{c_{217}}$	1.0012 ± 0.0016	z_{drag}	$1060.17^{+0.35}_{-0.50}$	χ^2_{lowl}	22.66 ± 0.88
$\boldsymbol{c_{TE}}$	0.9972 ± 0.0050	r_{drag}	$146.4^{+1.2}_{-0.32}$	$\chi^2_{CamSpec}$	11516.2 ± 5.8
$\boldsymbol{c_{EE}}$	0.9934 ± 0.0051	k_D	$0.14126^{+0.00037}_{-0.00090}$	χ^2_{JLA}	1036.39 ± 0.35
H_0	$68.04^{+0.42}_{-0.82}$	$100\theta_D$	$0.16102^{+0.00019}_{-0.00036}$	χ^2_{6DF}	0.059 ± 0.070
Ω_Λ	0.6891 ± 0.0063	z_{eq}	3337^{+50}_{-18}	χ^2_{MGS}	1.25 ± 0.44
Ω_m	0.3109 ± 0.0063	k_{eq}	$0.01028^{+0.00016}_{-0.000099}$	$\chi^2_{DR12BAO}$	4.9 ± 1.5
$\Omega_m h^2$	$0.1439^{+0.0011}_{-0.0024}$	$100\theta_{eq}$	$0.8264^{+0.0032}_{-0.010}$	χ^2_{prior}	7.8 ± 3.5
$\Omega_\nu h^2$	$0.00231^{+0.00025}_{-0.0018}$	$100\theta_{s,eq}$	$0.4562^{+0.0016}_{-0.0055}$	χ^2_{CMB}	11945.8 ± 6.1
$\Omega_m h^3$	$0.09791^{+0.00041}_{-0.0021}$	$H(0.15)$	$73.34^{+0.35}_{-0.80}$	χ^2_{BAO}	6.3 ± 1.2
σ_8	$0.795^{+0.019}_{-0.012}$	$D_M(0.15)$	$637.3^{+7.2}_{-3.6}$		

$\bar{\chi}^2_{eff} = 12996.19$; $\Delta\bar{\chi}^2_{eff} = 2.52$; $R - 1 = 0.03814$

8.55 base_nnu_meffsterile_CamSpecHM_TTTEEE_lowl_lowE_lensing_BAO_post_Aver15

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02239 ± 0.00015	S_8	$0.808^{+0.019}_{-0.013}$	$H(0.38)$	$83.28^{+0.25}_{-0.57}$
$\boldsymbol{\Omega_c h^2}$	$0.1186^{+0.0030}_{-0.0020}$	$\sigma_8\Omega_m^{0.5}$	$0.443^{+0.010}_{-0.0071}$	$D_M(0.38)$	$1525^{+12}_{-7.2}$
$\boldsymbol{100\theta_{MC}}$	1.04085 ± 0.00032	$\sigma_8\Omega_m^{0.25}$	$0.592^{+0.014}_{-0.0083}$	$H(0.51)$	$90.03^{+0.18}_{-0.55}$
$\boldsymbol{\tau}$	$0.0563^{+0.0067}_{-0.0077}$	$\sigma_8/h^{0.5}$	$0.962^{+0.022}_{-0.012}$	$D_M(0.51)$	$1975^{+15}_{-8.3}$
$\boldsymbol{m^{eff}_{\nu,\,sterile}}$ [eV]	< 0.191	$r_{drag}h$	99.44 ± 0.81	$H(0.61)$	$95.68^{+0.15}_{-0.55}$
$\boldsymbol{N_{eff}}$	< 3.13	$\langle d^2\rangle^{1/2}$	2.429 ± 0.021	$D_M(0.61)$	$2298^{+17}_{-8.9}$
$\boldsymbol{\ln(10^{10}A_s)}$	3.047 ± 0.015	z_{re}	7.87 ± 0.74	$H(2.33)$	$237.10^{+0.70}_{-1.5}$
$\boldsymbol{n_s}$	$0.9684^{+0.0044}_{-0.0052}$	$10^9 A_s$	$2.106^{+0.030}_{-0.033}$	$D_M(2.33)$	$5741^{+31}_{-7.3}$
$\boldsymbol{y_{cal}}$	1.0008 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.881 ± 0.012	$f\sigma_8(0.15)$	$0.447^{+0.011}_{-0.0069}$
$\boldsymbol{A^{PS}_{100}}$	242 ± 25	D_{40}	1223 ± 13	$\sigma_8(0.15)$	$0.732^{+0.018}_{-0.010}$
$\boldsymbol{A^{PS}_{143}}$	41 ± 8	D_{220}	5726 ± 39	$f\sigma_8(0.38)$	$0.465^{+0.011}_{-0.0066}$
$\boldsymbol{A^{PS}_{217}}$	102 ± 10	D_{810}	2537 ± 13	$\sigma_8(0.38)$	$0.649^{+0.016}_{-0.0095}$
$\boldsymbol{A^{CIB}_{217}}$	40 ± 7	D_{1420}	815.7 ± 4.8	$f\sigma_8(0.51)$	$0.464^{+0.011}_{-0.0064}$
$\boldsymbol{A^{tSZ}_{143}}$	$3.7^{+1.8}_{-2.5}$	D_{2000}	229.9 ± 1.6	$\sigma_8(0.51)$	$0.607^{+0.015}_{-0.0090}$
$\boldsymbol{r^{PS}_{143\times217}}$	0.65 ± 0.13	$n_{s,0.002}$	$0.9684^{+0.0044}_{-0.0052}$	$f\sigma_8(0.61)$	$0.459^{+0.011}_{-0.0063}$
$\boldsymbol{r^{CIB}_{143\times217}}$	$0.57^{+0.40}_{-0.16}$	Y_P	$0.24641^{+0.00018}_{-0.0010}$	$\sigma_8(0.61)$	$0.578^{+0.015}_{-0.0086}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	$0.24774^{+0.00018}_{-0.0010}$	$f\sigma_8(2.33)$	$0.2915^{+0.0075}_{-0.0045}$
$\boldsymbol{A^{kSZ}}$	$4.9^{+2.8}_{-3.5}$	10^5D/H	$2.609^{+0.027}_{-0.035}$	$\sigma_8(2.33)$	$0.3004^{+0.0078}_{-0.0048}$
$\boldsymbol{A^{dust}_{100}}$	1.01 ± 0.20	Age/Gyr	$13.743^{+0.074}_{-0.017}$	f^{143}_{2000}	30.3 ± 2.9
$\boldsymbol{A^{dust}_{143}}$	0.96 ± 0.18	z_*	$1090.00^{+0.23}_{-0.27}$	f^{217}_{2000}	107.3 ± 2.0
$\boldsymbol{A^{dust}_{217}}$	0.97 ± 0.10	r_*	$144.02^{+0.83}_{-0.27}$	$f^{143\times217}_{2000}$	32.6 ± 2.0
$\boldsymbol{A^{dust}_{143\times217}}$	1.02 ± 0.16	$100\theta_*$	$1.04100^{+0.00036}_{-0.00031}$	$\chi^2_{lensing}$	9.4 ± 1.0
$\boldsymbol{c_{100}}$	0.9976 ± 0.0011	$D_M(z_*)$/Gpc	$13.834^{+0.077}_{-0.026}$	χ^2_{simall}	397.3 ± 2.0
$\boldsymbol{c_{217}}$	1.0012 ± 0.0016	z_{drag}	$1060.06^{+0.34}_{-0.41}$	χ^2_{lowl}	22.83 ± 0.87
$\boldsymbol{c_{TE}}$	0.9970 ± 0.0049	r_{drag}	$146.67^{+0.86}_{-0.29}$	$\chi^2_{CamSpec}$	11515.7 ± 5.7
$\boldsymbol{c_{EE}}$	0.9930 ± 0.0050	k_D	$0.14109^{+0.00036}_{-0.00068}$	χ^2_{Aver15}	0.56 ± 0.48
H_0	$67.80^{+0.43}_{-0.65}$	$100\theta_D$	$0.16096^{+0.00019}_{-0.00028}$	χ^2_{6DF}	0.074 ± 0.081
Ω_Λ	0.6876 ± 0.0064	z_{eq}	3336^{+55}_{-20}	χ^2_{MGS}	1.16 ± 0.43
Ω_m	0.3124 ± 0.0064	k_{eq}	$0.01026^{+0.00016}_{-0.000089}$	$\chi^2_{DR12BAO}$	5.3 ± 1.7
$\Omega_m h^2$	$0.1436^{+0.0011}_{-0.0019}$	$100\theta_{eq}$	$0.8266^{+0.0035}_{-0.012}$	χ^2_{prior}	7.8 ± 3.5
$\Omega_\nu h^2$	$0.00252^{+0.00019}_{-0.0019}$	$100\theta_{s,eq}$	$0.4564^{+0.0018}_{-0.0061}$	χ^2_{CMB}	11945.3 ± 6.0
$\Omega_m h^3$	$0.09734^{+0.00032}_{-0.0015}$	$H(0.15)$	$73.11^{+0.36}_{-0.62}$	χ^2_{BAO}	6.5 ± 1.5
σ_8	$0.792^{+0.019}_{-0.011}$	$D_M(0.15)$	$639.4^{+5.7}_{-3.7}$		

$\bar{\chi}^2_{eff} = 11960.11$; $R - 1 = 0.03672$

8.56 base_nnu_meffsterile_CamSpecHM_TTTEEE_lowl_lowE_lensing_BAO_post_Cooke17_Aver15

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02238 ± 0.00015	$\sigma_8\Omega_m^{0.5}$	$0.443^{+0.010}_{-0.0070}$	$H(0.51)$	$90.02^{+0.18}_{-0.55}$
$\boldsymbol{\Omega_c h^2}$	$0.1186^{+0.0030}_{-0.0020}$	$\sigma_8\Omega_m^{0.25}$	$0.592^{+0.014}_{-0.0082}$	$D_M(0.51)$	$1975^{+15}_{-8.2}$
$\boldsymbol{100\theta_{MC}}$	1.04085 ± 0.00032	$\sigma_8/h^{0.5}$	$0.962^{+0.022}_{-0.012}$	$H(0.61)$	$95.67^{+0.15}_{-0.54}$
$\boldsymbol{\tau}$	$0.0562^{+0.0068}_{-0.0077}$	$r_{drag}h$	99.43 ± 0.81	$D_M(0.61)$	$2298^{+17}_{-8.7}$
$\boldsymbol{m^{eff}_{\nu,\,sterile}}$ [eV]	< 0.192	$\langle d^2\rangle^{1/2}$	2.429 ± 0.021	$H(2.33)$	$237.09^{+0.71}_{-1.4}$
$\boldsymbol{N_{eff}}$	< 3.13	z_{re}	7.87 ± 0.74	$D_M(2.33)$	$5741^{+31}_{-7.4}$
$\boldsymbol{\ln(10^{10}A_s)}$	3.047 ± 0.015	$10^9 A_s$	$2.105^{+0.030}_{-0.033}$	$f\sigma_8(0.15)$	$0.447^{+0.011}_{-0.0068}$
$\boldsymbol{n_s}$	$0.9683^{+0.0044}_{-0.0052}$	$10^9 A_s e^{-2\tau}$	1.881 ± 0.012	$\sigma_8(0.15)$	$0.732^{+0.018}_{-0.010}$
$\boldsymbol{y_{cal}}$	1.0008 ± 0.0025	D_{40}	1223 ± 13	$f\sigma_8(0.38)$	$0.465^{+0.011}_{-0.0065}$
$\boldsymbol{A^{PS}_{100}}$	242 ± 25	D_{220}	5725 ± 39	$\sigma_8(0.38)$	$0.649^{+0.016}_{-0.0095}$
$\boldsymbol{A^{PS}_{143}}$	41 ± 8	D_{810}	2537 ± 13	$f\sigma_8(0.51)$	$0.464^{+0.011}_{-0.0064}$
$\boldsymbol{A^{PS}_{217}}$	102 ± 10	D_{1420}	815.7 ± 4.7	$\sigma_8(0.51)$	$0.607^{+0.015}_{-0.0090}$
$\boldsymbol{A^{CIB}_{217}}$	40 ± 7	D_{2000}	229.9 ± 1.6	$f\sigma_8(0.61)$	$0.459^{+0.011}_{-0.0063}$
$\boldsymbol{A^{tSZ}_{143}}$	$3.7^{+1.8}_{-2.5}$	$n_{s,0.002}$	$0.9683^{+0.0044}_{-0.0052}$	$\sigma_8(0.61)$	$0.578^{+0.015}_{-0.0086}$
$\boldsymbol{r^{PS}_{143\times217}}$	0.65 ± 0.13	Y_P	$0.24639^{+0.00019}_{-0.00099}$	$f\sigma_8(2.33)$	$0.2915^{+0.0075}_{-0.0045}$
$\boldsymbol{r^{CIB}_{143\times217}}$	$0.57^{+0.40}_{-0.16}$	Y_P^{BBN}	$0.24772^{+0.00019}_{-0.00099}$	$\sigma_8(2.33)$	$0.3003^{+0.0078}_{-0.0048}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	10^5D/H	$2.609^{+0.027}_{-0.033}$	f^{143}_{2000}	30.4 ± 2.9
$\boldsymbol{A^{kSZ}}$	$4.9^{+2.8}_{-3.5}$	Age/Gyr	$13.745^{+0.072}_{-0.017}$	f^{217}_{2000}	107.4 ± 2.0
$\boldsymbol{A^{dust}_{100}}$	1.01 ± 0.20	z_*	$1090.00^{+0.22}_{-0.26}$	$f^{143\times217}_{2000}$	32.6 ± 2.0
$\boldsymbol{A^{dust}_{143}}$	0.96 ± 0.18	r_*	$144.03^{+0.81}_{-0.28}$	$\chi^2_{lensing}$	9.4 ± 1.0
$\boldsymbol{A^{dust}_{217}}$	0.97 ± 0.10	$100\theta_*$	$1.04100^{+0.00036}_{-0.00031}$	χ^2_{simall}	397.3 ± 2.0
$\boldsymbol{A^{dust}_{143\times217}}$	1.02 ± 0.16	$D_M(z_*)$/Gpc	$13.835^{+0.076}_{-0.027}$	χ^2_{lowl}	22.84 ± 0.87
$\boldsymbol{c_{100}}$	0.9976 ± 0.0011	z_{drag}	$1060.05^{+0.34}_{-0.41}$	$\chi^2_{CamSpec}$	11515.6 ± 5.7
$\boldsymbol{c_{217}}$	1.0012 ± 0.0016	r_{drag}	$146.68^{+0.84}_{-0.30}$	χ^2_{Aver15}	0.55 ± 0.45
$\boldsymbol{c_{TE}}$	0.9970 ± 0.0049	k_D	$0.14107^{+0.00036}_{-0.00068}$	$\chi^2_{Cooke17}$	0.12 ± 0.16
$\boldsymbol{c_{EE}}$	0.9930 ± 0.0050	$100\theta_D$	$0.16096^{+0.00018}_{-0.00027}$	χ^2_{6DF}	0.074 ± 0.081
H_0	$67.79^{+0.43}_{-0.65}$	z_{eq}	3336^{+55}_{-19}	χ^2_{MGS}	1.16 ± 0.42
Ω_Λ	0.6875 ± 0.0064	k_{eq}	$0.01026^{+0.00016}_{-0.000087}$	$\chi^2_{DR12BAO}$	5.3 ± 1.7
Ω_m	0.3125 ± 0.0064	$100\theta_{eq}$	$0.8266^{+0.0035}_{-0.012}$	χ^2_{prior}	7.8 ± 3.5
$\Omega_m h^2$	$0.1435^{+0.0011}_{-0.0019}$	$100\theta_{s,eq}$	$0.4564^{+0.0018}_{-0.0061}$	χ^2_{CMB}	11945.2 ± 5.9
$\Omega_\nu h^2$	$0.00254^{+0.00019}_{-0.0019}$	$H(0.15)$	$73.10^{+0.35}_{-0.61}$	χ^2_{BAO}	6.5 ± 1.4
$\Omega_m h^3$	$0.09731^{+0.00034}_{-0.0015}$	$D_M(0.15)$	$639.5^{+5.7}_{-3.6}$	χ^2_{Abund}	0.67 ± 0.51
σ_8	$0.792^{+0.019}_{-0.011}$	$H(0.38)$	$83.27^{+0.24}_{-0.56}$		
S_8	$0.808^{+0.019}_{-0.013}$	$D_M(0.38)$	$1525^{+12}_{-7.1}$		

$\bar{\chi}^2_{eff} = 11960.15$; $R - 1 = 0.03562$

8.57 base_nnu_meffsterile_CamSpecHM_TTTEEE_lowl_lowE_lensing_BAO_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	$0.02241^{+0.00015}_{-0.00016}$	S_8	$0.810^{+0.019}_{-0.013}$	$H(0.38)$	$83.44^{+0.24}_{-0.76}$
$\boldsymbol{\Omega_c h^2}$	$0.1192^{+0.0031}_{-0.0025}$	$\sigma_8\Omega_m^{0.5}$	$0.443^{+0.011}_{-0.0070}$	$D_M(0.38)$	$1522^{+16}_{-7.2}$
$\boldsymbol{100\theta_{MC}}$	$1.04081^{+0.00036}_{-0.00032}$	$\sigma_8\Omega_m^{0.25}$	$0.593^{+0.014}_{-0.0085}$	$H(0.51)$	$90.21^{+0.19}_{-0.75}$
$\boldsymbol{\tau}$	$0.0569^{+0.0058}_{-0.0079}$	$\sigma_8/h^{0.5}$	$0.963^{+0.022}_{-0.011}$	$D_M(0.51)$	$1971^{+20}_{-8.2}$
$\boldsymbol{m^{eff}_{\nu,\,sterile}}$ [eV]	< 0.174	$r_{drag}h$	99.48 ± 0.83	$H(0.61)$	$95.86^{+0.16}_{-0.75}$
$\boldsymbol{N_{eff}}$	< 3.16	$\langle d^2\rangle^{1/2}$	2.428 ± 0.021	$D_M(0.61)$	$2293^{+22}_{-8.7}$
$\boldsymbol{\ln(10^{10}A_s)}$	$3.049^{+0.013}_{-0.016}$	z_{re}	$7.95^{+0.62}_{-0.78}$	$H(2.33)$	$237.48^{+0.75}_{-1.9}$
$\boldsymbol{n_s}$	$0.9694^{+0.0045}_{-0.0060}$	$10^9 A_s$	$2.110^{+0.027}_{-0.035}$	$D_M(2.33)$	$5730^{+42}_{-9.2}$
$\boldsymbol{y_{cal}}$	1.0008 ± 0.0025	$10^9 A_s e^{-2\tau}$	$1.883^{+0.012}_{-0.014}$	$f\sigma_8(0.15)$	$0.448^{+0.011}_{-0.0068}$
$\boldsymbol{A^{PS}_{100}}$	243 ± 25	D_{40}	1222 ± 13	$\sigma_8(0.15)$	$0.734^{+0.019}_{-0.011}$
$\boldsymbol{A^{PS}_{143}}$	41 ± 8	D_{220}	5726 ± 39	$f\sigma_8(0.38)$	$0.466^{+0.011}_{-0.0066}$
$\boldsymbol{A^{PS}_{217}}$	102 ± 10	D_{810}	2538 ± 13	$\sigma_8(0.38)$	$0.650^{+0.017}_{-0.010}$
$\boldsymbol{A^{CIB}_{217}}$	40 ± 7	D_{1420}	815.6 ± 4.8	$f\sigma_8(0.51)$	$0.465^{+0.011}_{-0.0066}$
$\boldsymbol{A^{tSZ}_{143}}$	$3.8^{+1.8}_{-2.5}$	D_{2000}	229.8 ± 1.7	$\sigma_8(0.51)$	$0.609^{+0.016}_{-0.0097}$
$\boldsymbol{r^{PS}_{143\times217}}$	0.65 ± 0.13	$n_{s,0.002}$	$0.9694^{+0.0045}_{-0.0060}$	$f\sigma_8(0.61)$	$0.460^{+0.011}_{-0.0065}$
$\boldsymbol{r^{CIB}_{143\times217}}$	$0.57^{+0.40}_{-0.15}$	Y_P	$0.24676^{+0.00026}_{-0.0014}$	$\sigma_8(0.61)$	$0.579^{+0.015}_{-0.0093}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	$0.24809^{+0.00026}_{-0.0014}$	$f\sigma_8(2.33)$	$0.2923^{+0.0077}_{-0.0048}$
$\boldsymbol{A^{kSZ}}$	4.9 ± 2.7	10^5D/H	$2.614^{+0.029}_{-0.041}$	$\sigma_8(2.33)$	$0.3012^{+0.0081}_{-0.0052}$
$\boldsymbol{A^{dust}_{100}}$	1.01 ± 0.20	Age/Gyr	$13.72^{+0.10}_{-0.022}$	f^{143}_{2000}	30.5 ± 3.0
$\boldsymbol{A^{dust}_{143}}$	0.96 ± 0.17	z_*	$1090.04^{+0.24}_{-0.31}$	f^{217}_{2000}	107.5 ± 2.0
$\boldsymbol{A^{dust}_{217}}$	0.97 ± 0.10	r_*	$143.8^{+1.1}_{-0.32}$	$f^{143\times217}_{2000}$	32.8 ± 2.1
$\boldsymbol{A^{dust}_{143\times217}}$	1.03 ± 0.16	$100\theta_*$	$1.04094^{+0.00041}_{-0.00032}$	$\chi^2_{lensing}$	9.46 ± 0.99
$\boldsymbol{c_{100}}$	0.9976 ± 0.0010	$D_M(z_*)$/Gpc	$13.81^{+0.10}_{-0.030}$	χ^2_{simall}	397.3 ± 2.1
$\boldsymbol{c_{217}}$	1.0012 ± 0.0016	z_{drag}	$1060.15^{+0.35}_{-0.49}$	χ^2_{lowl}	22.72 ± 0.89
$\boldsymbol{c_{TE}}$	0.9971 ± 0.0049	r_{drag}	$146.4^{+1.1}_{-0.34}$	$\chi^2_{CamSpec}$	11516.0 ± 5.8
$\boldsymbol{c_{EE}}$	0.9933 ± 0.0051	k_D	$0.14127^{+0.00038}_{-0.00088}$	χ^2_{6DF}	0.071 ± 0.081
H_0	$67.95^{+0.43}_{-0.80}$	$100\theta_D$	$0.16102^{+0.00020}_{-0.00035}$	χ^2_{MGS}	1.19 ± 0.44
Ω_Λ	0.6880 ± 0.0066	z_{eq}	3338^{+51}_{-18}	$\chi^2_{DR12BAO}$	5.2 ± 1.7
Ω_m	0.3120 ± 0.0066	k_{eq}	$0.01028^{+0.00016}_{-0.000096}$	χ^2_{prior}	7.8 ± 3.4
$\Omega_m h^2$	$0.1440^{+0.0011}_{-0.0024}$	$100\theta_{eq}$	$0.8263^{+0.0032}_{-0.011}$	χ^2_{CMB}	11945.5 ± 6.0
$\Omega_\nu h^2$	$0.00240^{+0.00029}_{-0.0018}$	$100\theta_{s,eq}$	$0.4562^{+0.0016}_{-0.0056}$	χ^2_{BAO}	6.5 ± 1.4
$\Omega_m h^3$	$0.09786^{+0.00041}_{-0.0021}$	$H(0.15)$	$73.27^{+0.35}_{-0.78}$		
σ_8	$0.794^{+0.020}_{-0.012}$	$D_M(0.15)$	$638.1^{+7.1}_{-3.7}$		

$\bar{\chi}^2_{eff} = 11959.80$; $\Delta\bar{\chi}^2_{eff} = 2.54$; $R - 1 = 0.03599$

8.58 base_nnu_meffsterile_CamSpecHM_TTTEEE_lowl_lowE_lensing_BAO_post_Pantheon_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	$0.02242^{+0.00015}_{-0.00016}$	S_8	$0.809^{+0.019}_{-0.013}$	$H(0.38)$	$83.51^{+0.24}_{-0.78}$
$\boldsymbol{\Omega_c h^2}$	$0.1192^{+0.0030}_{-0.0026}$	$\sigma_8\Omega_m^{0.5}$	$0.443^{+0.010}_{-0.0069}$	$D_M(0.38)$	$1520^{+16}_{-7.1}$
$\boldsymbol{100\theta_{MC}}$	$1.04082^{+0.00037}_{-0.00032}$	$\sigma_8\Omega_m^{0.25}$	$0.594^{+0.014}_{-0.0084}$	$H(0.51)$	$90.26^{+0.20}_{-0.78}$
$\boldsymbol{\tau}$	$0.0572^{+0.0059}_{-0.0079}$	$\sigma_8/h^{0.5}$	$0.964^{+0.022}_{-0.011}$	$D_M(0.51)$	$1969^{+20}_{-8.2}$
$\boldsymbol{m^{eff}_{\nu,\,sterile}}$ [eV]	< 0.162	$r_{drag}h$	99.62 ± 0.80	$H(0.61)$	$95.91^{+0.18}_{-0.78}$
$\boldsymbol{N_{eff}}$	< 3.16	$\langle d^2\rangle^{1/2}$	2.426 ± 0.021	$D_M(0.61)$	$2291^{+23}_{-8.8}$
$\boldsymbol{\ln(10^{10}A_s)}$	$3.050^{+0.013}_{-0.016}$	z_{re}	$7.98^{+0.62}_{-0.78}$	$H(2.33)$	$237.42^{+0.72}_{-1.9}$
$\boldsymbol{n_s}$	$0.9699^{+0.0045}_{-0.0061}$	$10^9 A_s$	$2.112^{+0.027}_{-0.035}$	$D_M(2.33)$	5728^{+44}_{-10}
$\boldsymbol{y_{cal}}$	1.0008 ± 0.0025	$10^9 A_s e^{-2\tau}$	$1.883^{+0.012}_{-0.014}$	$f\sigma_8(0.15)$	$0.448^{+0.010}_{-0.0067}$
$\boldsymbol{A^{PS}_{100}}$	243 ± 25	D_{40}	1221 ± 13	$\sigma_8(0.15)$	$0.735^{+0.018}_{-0.011}$
$\boldsymbol{A^{PS}_{143}}$	41 ± 8	D_{220}	5727 ± 39	$f\sigma_8(0.38)$	$0.466^{+0.011}_{-0.0066}$
$\boldsymbol{A^{PS}_{217}}$	102 ± 10	D_{810}	2538 ± 13	$\sigma_8(0.38)$	$0.651^{+0.016}_{-0.010}$
$\boldsymbol{A^{CIB}_{217}}$	40 ± 7	D_{1420}	815.7 ± 4.8	$f\sigma_8(0.51)$	$0.465^{+0.011}_{-0.0066}$
$\boldsymbol{A^{tSZ}_{143}}$	$3.7^{+1.8}_{-2.5}$	D_{2000}	229.8 ± 1.7	$\sigma_8(0.51)$	$0.610^{+0.015}_{-0.0096}$
$\boldsymbol{r^{PS}_{143\times217}}$	0.65 ± 0.13	$n_{s,0.002}$	$0.9699^{+0.0045}_{-0.0061}$	$f\sigma_8(0.61)$	$0.460^{+0.011}_{-0.0065}$
$\boldsymbol{r^{CIB}_{143\times217}}$	$0.57^{+0.41}_{-0.14}$	Y_P	$0.24680^{+0.00026}_{-0.0014}$	$\sigma_8(0.61)$	$0.580^{+0.015}_{-0.0092}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	$0.24813^{+0.00026}_{-0.0014}$	$f\sigma_8(2.33)$	$0.2929^{+0.0075}_{-0.0048}$
$\boldsymbol{A^{kSZ}}$	4.9 ± 2.7	10^5D/H	$2.613^{+0.028}_{-0.042}$	$\sigma_8(2.33)$	$0.3018^{+0.0079}_{-0.0051}$
$\boldsymbol{A^{dust}_{100}}$	1.01 ± 0.20	Age/Gyr	$13.71^{+0.10}_{-0.024}$	f^{143}_{2000}	30.5 ± 3.0
$\boldsymbol{A^{dust}_{143}}$	0.96 ± 0.17	z_*	$1090.02^{+0.23}_{-0.31}$	f^{217}_{2000}	107.4 ± 2.0
$\boldsymbol{A^{dust}_{217}}$	0.97 ± 0.10	r_*	$143.8^{+1.1}_{-0.31}$	$f^{143\times217}_{2000}$	32.7 ± 2.1
$\boldsymbol{A^{dust}_{143\times217}}$	1.03 ± 0.16	$100\theta_*$	$1.04094^{+0.00042}_{-0.00032}$	$\chi^2_{lensing}$	9.5 ± 1.0
$\boldsymbol{c_{100}}$	0.9976 ± 0.0010	$D_M(z_*)$/Gpc	$13.81^{+0.11}_{-0.029}$	χ^2_{simall}	397.4 ± 2.1
$\boldsymbol{c_{217}}$	1.0012 ± 0.0016	z_{drag}	$1060.17^{+0.35}_{-0.50}$	χ^2_{lowl}	22.65 ± 0.88
$\boldsymbol{c_{TE}}$	0.9971 ± 0.0050	r_{drag}	$146.4^{+1.2}_{-0.33}$	$\chi^2_{CamSpec}$	11516.2 ± 5.8
$\boldsymbol{c_{EE}}$	0.9934 ± 0.0051	k_D	$0.14126^{+0.00037}_{-0.00091}$	χ^2_{JLA}	1036.38 ± 0.35
H_0	$68.05^{+0.42}_{-0.82}$	$100\theta_D$	$0.16102^{+0.00019}_{-0.00036}$	χ^2_{6DF}	0.058 ± 0.069
Ω_Λ	0.6892 ± 0.0063	z_{eq}	3336^{+49}_{-18}	χ^2_{MGS}	1.26 ± 0.44
Ω_m	0.3108 ± 0.0063	k_{eq}	$0.01028^{+0.00016}_{-0.000099}$	$\chi^2_{DR12BAO}$	4.9 ± 1.5
$\Omega_m h^2$	$0.1439^{+0.0011}_{-0.0024}$	$100\theta_{eq}$	$0.8265^{+0.0031}_{-0.010}$	χ^2_{prior}	7.8 ± 3.5
$\Omega_\nu h^2$	$0.00230^{+0.00025}_{-0.0017}$	$100\theta_{s,eq}$	$0.4563^{+0.0016}_{-0.0055}$	χ^2_{CMB}	11945.7 ± 6.1
$\Omega_m h^3$	$0.09792^{+0.00042}_{-0.0021}$	$H(0.15)$	$73.35^{+0.35}_{-0.80}$	χ^2_{BAO}	6.2 ± 1.2
σ_8	$0.795^{+0.019}_{-0.012}$	$D_M(0.15)$	$637.2^{+7.3}_{-3.6}$		

$\bar{\chi}^2_{eff} = 12996.10$; $\Delta\bar{\chi}^2_{eff} = 2.57$; $R - 1 = 0.03799$

8.59 base_nnu_meffsterile_CamSpecHM_TTTEEE_lowl_lowE_lensing_BAO_post_Aver15_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02239 ± 0.00015	S_8	$0.809^{+0.019}_{-0.013}$	$H(0.38)$	$83.29^{+0.25}_{-0.57}$
$\boldsymbol{\Omega_c h^2}$	$0.1186^{+0.0029}_{-0.0020}$	$\sigma_8\Omega_m^{0.5}$	$0.443^{+0.010}_{-0.0071}$	$D_M(0.38)$	$1525^{+12}_{-7.2}$
$\boldsymbol{100\theta_{MC}}$	1.04085 ± 0.00032	$\sigma_8\Omega_m^{0.25}$	$0.592^{+0.014}_{-0.0083}$	$H(0.51)$	$90.04^{+0.19}_{-0.56}$
$\boldsymbol{\tau}$	$0.0568^{+0.0058}_{-0.0078}$	$\sigma_8/h^{0.5}$	$0.962^{+0.022}_{-0.012}$	$D_M(0.51)$	$1975^{+15}_{-8.4}$
$\boldsymbol{m^{eff}_{\nu,\,sterile}}$ [eV]	< 0.191	$r_{drag}h$	99.45 ± 0.81	$H(0.61)$	$95.69^{+0.15}_{-0.55}$
$\boldsymbol{N_{eff}}$	< 3.13	$\langle d^2\rangle^{1/2}$	2.429 ± 0.020	$D_M(0.61)$	$2298^{+17}_{-8.9}$
$\boldsymbol{\ln(10^{10}A_s)}$	$3.048^{+0.013}_{-0.016}$	z_{re}	$7.93^{+0.62}_{-0.77}$	$H(2.33)$	$237.10^{+0.70}_{-1.5}$
$\boldsymbol{n_s}$	$0.9685^{+0.0044}_{-0.0052}$	$10^9 A_s$	$2.108^{+0.026}_{-0.033}$	$D_M(2.33)$	$5740^{+31}_{-7.4}$
$\boldsymbol{y_{cal}}$	1.0008 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.881 ± 0.012	$f\sigma_8(0.15)$	$0.447^{+0.011}_{-0.0068}$
$\boldsymbol{A^{PS}_{100}}$	242 ± 25	D_{40}	1223 ± 13	$\sigma_8(0.15)$	$0.732^{+0.018}_{-0.010}$
$\boldsymbol{A^{PS}_{143}}$	41 ± 8	D_{220}	5726 ± 39	$f\sigma_8(0.38)$	$0.465^{+0.011}_{-0.0066}$
$\boldsymbol{A^{PS}_{217}}$	102 ± 10	D_{810}	2537 ± 13	$\sigma_8(0.38)$	$0.649^{+0.016}_{-0.0094}$
$\boldsymbol{A^{CIB}_{217}}$	40 ± 7	D_{1420}	815.7 ± 4.7	$f\sigma_8(0.51)$	$0.464^{+0.011}_{-0.0064}$
$\boldsymbol{A^{tSZ}_{143}}$	$3.7^{+1.8}_{-2.5}$	D_{2000}	229.9 ± 1.6	$\sigma_8(0.51)$	$0.607^{+0.015}_{-0.0089}$
$\boldsymbol{r^{PS}_{143\times217}}$	0.65 ± 0.13	$n_{s,0.002}$	$0.9685^{+0.0044}_{-0.0052}$	$f\sigma_8(0.61)$	$0.459^{+0.011}_{-0.0063}$
$\boldsymbol{r^{CIB}_{143\times217}}$	$0.57^{+0.40}_{-0.16}$	Y_P	$0.24641^{+0.00019}_{-0.0010}$	$\sigma_8(0.61)$	$0.578^{+0.015}_{-0.0085}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	$0.24774^{+0.00019}_{-0.0010}$	$f\sigma_8(2.33)$	$0.2917^{+0.0074}_{-0.0044}$
$\boldsymbol{A^{kSZ}}$	4.9 ± 2.7	10^5D/H	$2.609^{+0.028}_{-0.035}$	$\sigma_8(2.33)$	$0.3005^{+0.0078}_{-0.0047}$
$\boldsymbol{A^{dust}_{100}}$	1.01 ± 0.20	Age/Gyr	$13.743^{+0.074}_{-0.017}$	f^{143}_{2000}	30.3 ± 2.9
$\boldsymbol{A^{dust}_{143}}$	0.96 ± 0.17	z_*	$1090.00^{+0.23}_{-0.27}$	f^{217}_{2000}	107.3 ± 2.0
$\boldsymbol{A^{dust}_{217}}$	0.97 ± 0.10	r_*	$144.01^{+0.83}_{-0.27}$	$f^{143\times217}_{2000}$	32.6 ± 2.0
$\boldsymbol{A^{dust}_{143\times217}}$	1.02 ± 0.16	$100\theta_*$	$1.04099^{+0.00037}_{-0.00031}$	$\chi^2_{lensing}$	9.41 ± 0.96
$\boldsymbol{c_{100}}$	0.9976 ± 0.0010	$D_M(z_*)$/Gpc	$13.834^{+0.078}_{-0.027}$	χ^2_{simall}	397.3 ± 2.0
$\boldsymbol{c_{217}}$	1.0012 ± 0.0016	z_{drag}	$1060.07^{+0.35}_{-0.42}$	χ^2_{lowl}	22.83 ± 0.87
$\boldsymbol{c_{TE}}$	0.9970 ± 0.0049	r_{drag}	$146.66^{+0.87}_{-0.29}$	$\chi^2_{CamSpec}$	11515.7 ± 5.7
$\boldsymbol{c_{EE}}$	0.9930 ± 0.0050	k_D	$0.14109^{+0.00037}_{-0.00069}$	χ^2_{Aver15}	0.57 ± 0.48
H_0	$67.81^{+0.43}_{-0.65}$	$100\theta_D$	$0.16096^{+0.00019}_{-0.00029}$	χ^2_{6DF}	0.072 ± 0.080
Ω_Λ	0.6877 ± 0.0064	z_{eq}	3336^{+54}_{-19}	χ^2_{MGS}	1.17 ± 0.43
Ω_m	0.3123 ± 0.0064	k_{eq}	$0.01026^{+0.00016}_{-0.000088}$	$\chi^2_{DR12BAO}$	5.2 ± 1.7
$\Omega_m h^2$	$0.1436^{+0.0011}_{-0.0019}$	$100\theta_{eq}$	$0.8267^{+0.0034}_{-0.011}$	χ^2_{prior}	7.8 ± 3.5
$\Omega_\nu h^2$	$0.00253^{+0.00019}_{-0.0019}$	$100\theta_{s,eq}$	$0.4564^{+0.0018}_{-0.0060}$	χ^2_{CMB}	11945.2 ± 5.9
$\Omega_m h^3$	$0.09735^{+0.00033}_{-0.0015}$	$H(0.15)$	$73.12^{+0.36}_{-0.62}$	χ^2_{BAO}	6.5 ± 1.4
σ_8	$0.793^{+0.019}_{-0.011}$	$D_M(0.15)$	$639.3^{+5.7}_{-3.7}$		

$\bar{\chi}^2_{eff} = 11960.01$; $R - 1 = 0.03614$

8.60 base_nnu_meffsterile_CamSpecHM_TTTEEE_lowl_lowE_lensing_BAO_post_Cooke17_Aver15_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02239 ± 0.00015	$\sigma_8\Omega_m^{0.5}$	$0.443^{+0.010}_{-0.0070}$	$H(0.51)$	$90.03^{+0.18}_{-0.55}$
$\boldsymbol{\Omega_c h^2}$	$0.1186^{+0.0030}_{-0.0020}$	$\sigma_8\Omega_m^{0.25}$	$0.592^{+0.014}_{-0.0082}$	$D_M(0.51)$	$1975^{+15}_{-8.2}$
$\boldsymbol{100\theta_{MC}}$	1.04085 ± 0.00032	$\sigma_8/h^{0.5}$	$0.962^{+0.022}_{-0.012}$	$H(0.61)$	$95.68^{+0.15}_{-0.54}$
$\boldsymbol{\tau}$	$0.0567^{+0.0058}_{-0.0078}$	$r_{drag}h$	99.44 ± 0.81	$D_M(0.61)$	$2298^{+17}_{-8.8}$
$\boldsymbol{m^{eff}_{\nu,\,sterile}}$ [eV]	< 0.192	$\langle d^2\rangle^{1/2}$	2.430 ± 0.020	$H(2.33)$	$237.08^{+0.71}_{-1.4}$
$\boldsymbol{N_{eff}}$	< 3.13	z_{re}	$7.92^{+0.62}_{-0.77}$	$D_M(2.33)$	$5741^{+31}_{-7.5}$
$\boldsymbol{\ln(10^{10}A_s)}$	$3.048^{+0.013}_{-0.016}$	$10^9 A_s$	$2.107^{+0.026}_{-0.033}$	$f\sigma_8(0.15)$	$0.447^{+0.010}_{-0.0068}$
$\boldsymbol{n_s}$	$0.9684^{+0.0044}_{-0.0052}$	$10^9 A_s e^{-2\tau}$	1.881 ± 0.012	$\sigma_8(0.15)$	$0.732^{+0.018}_{-0.010}$
$\boldsymbol{y_{cal}}$	1.0008 ± 0.0025	D_{40}	1223 ± 13	$f\sigma_8(0.38)$	$0.465^{+0.011}_{-0.0065}$
$\boldsymbol{A^{PS}_{100}}$	242 ± 25	D_{220}	5725 ± 39	$\sigma_8(0.38)$	$0.649^{+0.016}_{-0.0094}$
$\boldsymbol{A^{PS}_{143}}$	41 ± 8	D_{810}	2537 ± 13	$f\sigma_8(0.51)$	$0.464^{+0.011}_{-0.0063}$
$\boldsymbol{A^{PS}_{217}}$	102 ± 10	D_{1420}	815.7 ± 4.7	$\sigma_8(0.51)$	$0.607^{+0.015}_{-0.0089}$
$\boldsymbol{A^{CIB}_{217}}$	40 ± 7	D_{2000}	229.9 ± 1.6	$f\sigma_8(0.61)$	$0.459^{+0.011}_{-0.0062}$
$\boldsymbol{A^{tSZ}_{143}}$	$3.7^{+1.8}_{-2.5}$	$n_{s,0.002}$	$0.9684^{+0.0044}_{-0.0052}$	$\sigma_8(0.61)$	$0.578^{+0.015}_{-0.0085}$
$\boldsymbol{r^{PS}_{143\times217}}$	0.65 ± 0.13	Y_P	$0.24640^{+0.00020}_{-0.0010}$	$f\sigma_8(2.33)$	$0.2916^{+0.0075}_{-0.0044}$
$\boldsymbol{r^{CIB}_{143\times217}}$	$0.57^{+0.40}_{-0.16}$	Y_P^{BBN}	$0.24773^{+0.00020}_{-0.0010}$	$\sigma_8(2.33)$	$0.3004^{+0.0078}_{-0.0047}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	10^5D/H	$2.609^{+0.027}_{-0.033}$	f^{143}_{2000}	30.3 ± 2.9
$\boldsymbol{A^{kSZ}}$	4.9 ± 2.7	Age/Gyr	$13.744^{+0.073}_{-0.017}$	f^{217}_{2000}	107.3 ± 2.0
$\boldsymbol{A^{dust}_{100}}$	1.01 ± 0.20	z_*	$1090.00^{+0.22}_{-0.26}$	$f^{143\times217}_{2000}$	32.6 ± 2.0
$\boldsymbol{A^{dust}_{143}}$	0.96 ± 0.17	r_*	$144.03^{+0.82}_{-0.28}$	$\chi^2_{lensing}$	9.40 ± 0.96
$\boldsymbol{A^{dust}_{217}}$	0.97 ± 0.10	$100\theta_*$	$1.04100^{+0.00036}_{-0.00031}$	χ^2_{simall}	397.3 ± 2.0
$\boldsymbol{A^{dust}_{143\times217}}$	1.02 ± 0.16	$D_M(z_*)$/Gpc	$13.835^{+0.077}_{-0.027}$	χ^2_{lowl}	22.84 ± 0.87
$\boldsymbol{c_{100}}$	0.9976 ± 0.0010	z_{drag}	$1060.05^{+0.34}_{-0.41}$	$\chi^2_{CamSpec}$	11515.6 ± 5.7
$\boldsymbol{c_{217}}$	1.0012 ± 0.0016	r_{drag}	$146.68^{+0.85}_{-0.30}$	χ^2_{Aver15}	0.56 ± 0.46
$\boldsymbol{c_{TE}}$	0.9970 ± 0.0049	k_D	$0.14108^{+0.00037}_{-0.00068}$	$\chi^2_{Cooke17}$	0.12 ± 0.16
$\boldsymbol{c_{EE}}$	0.9930 ± 0.0050	$100\theta_D$	$0.16096^{+0.00018}_{-0.00027}$	χ^2_{6DF}	0.073 ± 0.080
H_0	$67.80^{+0.42}_{-0.65}$	z_{eq}	3336^{+55}_{-19}	χ^2_{MGS}	1.16 ± 0.42
Ω_Λ	0.6876 ± 0.0063	k_{eq}	$0.01026^{+0.00016}_{-0.000086}$	$\chi^2_{DR12BAO}$	5.3 ± 1.7
Ω_m	0.3124 ± 0.0063	$100\theta_{eq}$	$0.8267^{+0.0034}_{-0.012}$	χ^2_{prior}	7.8 ± 3.5
$\Omega_m h^2$	$0.1435^{+0.0011}_{-0.0019}$	$100\theta_{s,eq}$	$0.4564^{+0.0017}_{-0.0061}$	χ^2_{CMB}	11945.1 ± 5.9
$\Omega_\nu h^2$	$0.00254^{+0.00032}_{-0.0019}$	$H(0.15)$	$73.11^{+0.35}_{-0.61}$	χ^2_{BAO}	6.5 ± 1.4
$\Omega_m h^3$	$0.09732^{+0.00034}_{-0.0015}$	$D_M(0.15)$	$639.4^{+5.7}_{-3.6}$	χ^2_{Abund}	0.67 ± 0.52
σ_8	$0.792^{+0.019}_{-0.011}$	$H(0.38)$	$83.28^{+0.24}_{-0.57}$		
S_8	$0.808^{+0.019}_{-0.013}$	$D_M(0.38)$	$1525^{+12}_{-7.1}$		

$\bar{\chi}^2_{eff} = 11960.05$; $R - 1 = 0.03510$

9 nnu+mnu

9.1 base_nnu_mnu_plikHM_TT_lowl_lowE

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022041	$0.02194^{+0.00040}_{-0.00035}$	S_8	0.8449	0.836 ± 0.026	$100\theta_{s,eq}$	0.4468	0.4458 ± 0.0067
$\boldsymbol{\Omega_c h^2}$	0.11871	0.1199 ± 0.0040	$\sigma_8\Omega_m^{0.5}$	0.4628	0.458 ± 0.014	$H(0.15)$	71.78	$70.2^{+3.7}_{-2.6}$
$\boldsymbol{100\theta_{MC}}$	1.04101	1.04075 ± 0.00060	$\sigma_8\Omega_m^{0.25}$	0.6159	$0.597^{+0.027}_{-0.012}$	$D_M(0.15)$	651.7	670^{+22}_{-41}
$\boldsymbol{\tau}$	0.0517	0.0510 ± 0.0081	$\sigma_8/h^{0.5}$	1.0056	$0.970^{+0.045}_{-0.017}$	$H(0.38)$	81.92	$80.8^{+3.2}_{-2.5}$
$\boldsymbol{\Sigma m_\nu}$ [eV]	0.000	< 0.220	$r_{drag}h$	98.71	$95.7^{+5.0}_{-2.4}$	$D_M(0.38)$	1553	1589^{+50}_{-86}
$\boldsymbol{N_{eff}}$	2.908	2.95 ± 0.29	$\langle d^2\rangle^{1/2}$	2.4702	2.459 ± 0.047	$H(0.51)$	88.65	$87.8^{+3.0}_{-2.4}$
$\boldsymbol{\ln(10^{10}A_s)}$	3.0351	3.035 ± 0.021	z_{re}	7.44	7.41 ± 0.85	$D_M(0.51)$	2010	2052^{+62}_{-100}
$\boldsymbol{n_s}$	0.9586	$0.956^{+0.016}_{-0.014}$	$10^9 A_s$	2.0803	2.080 ± 0.044	$H(0.61)$	94.27	$93.6^{+2.8}_{-2.4}$
$\boldsymbol{y_{cal}}$	1.00047	1.0005 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.8759	$1.879^{+0.024}_{-0.021}$	$D_M(0.61)$	2338	2383^{+70}_{-110}
$\boldsymbol{A^{CIB}_{217}}$	47.3	48 ± 7	D_{40}	1238.2	1240 ± 23	$H(2.33)$	234.60	236.6 ± 3.7
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.47	—	D_{220}	5711.0	5710 ± 41	$D_M(2.33)$	5823	5862^{+130}_{-170}
$\boldsymbol{A^{tSZ}_{143}}$	6.97	5.1 ± 2.0	D_{810}	2536.3	2536 ± 14	$f\sigma_8(0.15)$	0.4660	$0.460^{+0.014}_{-0.013}$
$\boldsymbol{A^{PS}_{100}}$	250.1	263 ± 29	D_{1420}	816.2	814.7 ± 5.2	$\sigma_8(0.15)$	0.7567	$0.718^{+0.052}_{-0.015}$
$\boldsymbol{A^{PS}_{143}}$	49.6	49 ± 9	D_{2000}	230.86	229.6 ± 2.3	$f\sigma_8(0.38)$	0.4828	$0.471^{+0.019}_{-0.0095}$
$\boldsymbol{A^{PS}_{143\times217}}$	49.4	44 ± 9	$n_{s,0.002}$	0.9586	$0.956^{+0.016}_{-0.014}$	$\sigma_8(0.38)$	0.6698	$0.633^{+0.049}_{-0.014}$
$\boldsymbol{A^{PS}_{217}}$	120.4	115 ± 10	Y_P	0.24340	0.2438 ± 0.0041	$f\sigma_8(0.51)$	0.4804	$0.466^{+0.021}_{-0.0082}$
$\boldsymbol{A^{kSZ}}$	0.00	< 4.90	Y_P^{BBN}	0.24472	0.2451 ± 0.0041	$\sigma_8(0.51)$	0.6264	$0.592^{+0.047}_{-0.014}$
$\boldsymbol{A^{dustTT}_{100}}$	8.78	8.9 ± 1.8	10^5D/H	2.600	2.632 ± 0.070	$f\sigma_8(0.61)$	0.4748	$0.459^{+0.023}_{-0.0077}$
$\boldsymbol{A^{dustTT}_{143}}$	10.72	10.7 ± 1.8	Age/Gyr	13.939	$14.03^{+0.31}_{-0.41}$	$\sigma_8(0.61)$	0.5957	$0.562^{+0.046}_{-0.013}$
$\boldsymbol{A^{dustTT}_{143\times217}}$	19.47	18.3 ± 3.3	z_*	1090.08	$1090.40^{+0.51}_{-0.57}$	$f\sigma_8(2.33)$	0.2991	$0.284^{+0.022}_{-0.0066}$
$\boldsymbol{A^{dustTT}_{217}}$	94.9	93.4 ± 7.3	r_*	145.72	145.3 ± 2.6	$\sigma_8(2.33)$	0.3085	$0.291^{+0.025}_{-0.0078}$
$\boldsymbol{c_{100}}$	0.99963	0.99959 ± 0.00062	$100\theta_*$	1.04128	1.04111 ± 0.00072	f^{143}_{2000}	29.26	31 ± 4
$\boldsymbol{c_{217}}$	0.99823	0.99825 ± 0.00062	$D_M(z_*)$/Gpc	13.995	13.96 ± 0.24	$f^{143\times217}_{2000}$	32.40	33.6 ± 2.6
H_0	66.47	$64.6^{+4.1}_{-2.6}$	z_{drag}	1058.98	$1058.9^{+1.3}_{-1.2}$	f^{217}_{2000}	106.89	108.2 ± 2.4
Ω_Λ	0.6814	$0.652^{+0.048}_{-0.017}$	r_{drag}	148.51	148.1 ± 2.7	χ^2_{simall}	395.82	396.9 ± 1.7
Ω_m	0.3186	$0.348^{+0.017}_{-0.048}$	k_D	0.13965	0.1399 ± 0.0019	χ^2_{lowl}	24.42	24.8 ± 2.5
$\Omega_m h^2$	0.14075	$0.1440^{+0.0043}_{-0.0048}$	$100\theta_D$	0.16075	0.16092 ± 0.00067	χ^2_{plik}	757.1	772.7 ± 6.1
$\Omega_\nu h^2$	0.00000	< 0.00236	z_{eq}	3427	3439^{+67}_{-75}	χ^2_{prior}	1.34	7.3 ± 3.7
$\Omega_m h^3$	0.0936	0.0931 ± 0.0062	k_{eq}	0.010362	0.01042 ± 0.00016	χ^2_{CMB}	1177.4	1194.5 ± 6.1
σ_8	0.8198	$0.780^{+0.053}_{-0.016}$	$100\theta_{eq}$	0.8079	0.806 ± 0.013			

Best-fit $\chi^2_{eff} = 1178.71$; $\Delta\chi^2_{eff} = -0.87$; $\bar{\chi}^2_{eff} = 1201.81$; $\Delta\bar{\chi}^2_{eff} = 2.23$; $R - 1 = 0.00798$
χ^2_{eff}: CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.82 (Δ -0.06) commander_dx12_v3_2_29: 24.42 (Δ 0.82) plik_rd12_HM_v22_TT: 757.13 (Δ -1.61)

9.2 base_nnu_mnu_plikHM_TT_lowl_lowE_post_lensing

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022037	$0.02191^{+0.00038}_{-0.00034}$	S_8	0.8339	0.839 ± 0.017	$100\theta_{s,eq}$	0.4482	$0.4451^{+0.0066}_{-0.0057}$
$\boldsymbol{\Omega_c h^2}$	0.11684	0.1194 ± 0.0039	$\sigma_8\Omega_m^{0.5}$	0.4568	0.4593 ± 0.0094	$H(0.15)$	71.63	$70.0^{+3.4}_{-2.6}$
$\boldsymbol{100\theta_{MC}}$	1.04115	1.04081 ± 0.00060	$\sigma_8\Omega_m^{0.25}$	0.6096	$0.599^{+0.016}_{-0.0096}$	$D_M(0.15)$	652.8	672^{+23}_{-38}
$\boldsymbol{\tau}$	0.0517	0.0512 ± 0.0080	$\sigma_8/h^{0.5}$	0.9987	$0.974^{+0.029}_{-0.013}$	$H(0.38)$	81.67	$80.6^{+2.9}_{-2.5}$
$\boldsymbol{\Sigma m_\nu}$ [eV]	0.000	< 0.217	$r_{drag}h$	99.17	$95.7^{+4.8}_{-2.4}$	$D_M(0.38)$	1556	1593^{+51}_{-79}
$\boldsymbol{N_{eff}}$	2.841	2.90 ± 0.28	$\langle d^2\rangle^{1/2}$	2.4579	$2.465^{+0.033}_{-0.039}$	$H(0.51)$	88.33	$87.5^{+2.7}_{-2.4}$
$\boldsymbol{\ln(10^{10}A_s)}$	3.0299	3.034 ± 0.021	z_{re}	7.41	7.42 ± 0.84	$D_M(0.51)$	2015	2057^{+64}_{-95}
$\boldsymbol{n_s}$	0.9581	$0.954^{+0.015}_{-0.013}$	$10^9 A_s$	2.0696	2.079 ± 0.043	$H(0.61)$	93.90	93.3 ± 2.5
$\boldsymbol{y_{cal}}$	1.00032	1.0005 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.8661	1.876 ± 0.022	$D_M(0.61)$	2344	2389^{+72}_{-100}
$\boldsymbol{A_{217}^{CIB}}$	46.4	47 ± 7	D_{40}	1236.2	1244 ± 21	$H(2.33)$	233.13	235.9 ± 3.7
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.60	—	D_{220}	5712.0	5711 ± 41	$D_M(2.33)$	5848	5879^{+130}_{-160}
$\boldsymbol{A_{143}^{tSZ}}$	6.95	5.1 ± 2.0	D_{810}	2533.4	2535 ± 14	$f\sigma_8(0.15)$	0.4603	0.4620 ± 0.0082
$\boldsymbol{A_{100}^{PS}}$	248.3	262 ± 29	D_{1420}	816.6	814.9 ± 5.2	$\sigma_8(0.15)$	0.7514	$0.720^{+0.042}_{-0.018}$
$\boldsymbol{A_{143}^{PS}}$	50.2	49 ± 9	D_{2000}	231.24	229.9 ± 2.3	$f\sigma_8(0.38)$	0.4777	$0.472^{+0.011}_{-0.0069}$
$\boldsymbol{A_{143\times217}^{PS}}$	52.0	43 ± 9	$n_{s,0.002}$	0.9581	$0.954^{+0.015}_{-0.013}$	$\sigma_8(0.38)$	0.6654	$0.635^{+0.041}_{-0.018}$
$\boldsymbol{A_{217}^{PS}}$	121.1	115 ± 10	Y_P	0.24247	0.2431 ± 0.0040	$f\sigma_8(0.51)$	0.4758	$0.468^{+0.014}_{-0.0069}$
$\boldsymbol{A^{kSZ}}$	0.00	< 4.75	Y_P^{BBN}	0.24379	0.2444 ± 0.0040	$\sigma_8(0.51)$	0.6225	$0.593^{+0.040}_{-0.017}$
$\boldsymbol{A_{100}^{dustTT}}$	8.86	8.9 ± 1.8	10^5D/H	2.577	2.620 ± 0.069	$f\sigma_8(0.61)$	0.4704	$0.460^{+0.016}_{-0.0073}$
$\boldsymbol{A_{143}^{dustTT}}$	10.78	10.7 ± 1.8	Age/Gyr	13.999	$14.07^{+0.32}_{-0.37}$	$\sigma_8(0.61)$	0.5921	$0.564^{+0.038}_{-0.017}$
$\boldsymbol{A_{143\times217}^{dustTT}}$	19.60	18.3 ± 3.3	z_*	1089.85	$1090.32^{+0.48}_{-0.58}$	$f\sigma_8(2.33)$	0.2974	$0.285^{+0.018}_{-0.0084}$
$\boldsymbol{A_{217}^{dustTT}}$	95.1	93.5 ± 7.3	r_*	146.57	145.7 ± 2.5	$\sigma_8(2.33)$	0.3069	$0.292^{+0.022}_{-0.0098}$
$\boldsymbol{c_{100}}$	0.99965	0.99960 ± 0.00062	$100\theta_*$	1.04147	1.04120 ± 0.00071	f_{2000}^{143}	28.63	31 ± 3
$\boldsymbol{c_{217}}$	0.99822	0.99825 ± 0.00062	$D_M(z_*)$/Gpc	14.074	14.00 ± 0.24	$f_{2000}^{143\times217}$	31.96	33.3 ± 2.6
H_0	66.39	$64.5^{+3.7}_{-2.7}$	z_{drag}	1058.75	1058.7 ± 1.2	f_{2000}^{217}	106.42	107.9 ± 2.4
Ω_Λ	0.6849	$0.653^{+0.045}_{-0.018}$	r_{drag}	149.38	148.6 ± 2.7	$\chi^2_{lensing}$	8.77	9.2 ± 1.1
Ω_m	0.3151	$0.347^{+0.018}_{-0.045}$	k_D	0.13902	0.1396 ± 0.0019	χ^2_{simall}	396	571 ± 200
$\Omega_m h^2$	0.13887	$0.1432^{+0.0042}_{-0.0047}$	$100\theta_D$	0.16057	0.16081 ± 0.00064	χ^2_{lowl}	24.29	25.2 ± 2.4
$\Omega_\nu h^2$	0.00000	< 0.00233	z_{eq}	3413	3446^{+58}_{-73}	χ^2_{plik}	758	597 ± 200
$\Omega_m h^3$	0.0922	0.0923 ± 0.0058	k_{eq}	0.010271	$0.01041^{+0.00014}_{-0.00016}$	χ^2_{prior}	1.24	7.3 ± 3.7
σ_8	0.8137	$0.782^{+0.043}_{-0.019}$	$100\theta_{eq}$	0.8105	$0.805^{+0.013}_{-0.011}$	χ^2_{CMB}	1186.5	1203.1 ± 5.9

Best-fit $\chi^2_{eff} = 1187.79$; $\Delta\chi^2_{eff} = -0.78$; $\bar{\chi}^2_{eff} = 1210.34$; $\Delta\bar{\chi}^2_{eff} = 1.92$; $R - 1 = 0.00949$

χ^2_{eff}: CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.77 (Δ -0.13) simall_100x143_offlike5_EE_Aplanck_B: 395.79 (Δ -0.08) commander_dx12_v3_2_29: 24.29 (Δ 1.06) plik_rd12_HM_v22_TT: 757.70 (Δ -1.62)

9.3 base_nnu_mnu_plikHM_TT_lowl_lowE_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	$0.02196^{+0.00039}_{-0.00034}$	S_8	0.836 ± 0.026	$100\theta_{s,eq}$	0.4463 ± 0.0066
$\boldsymbol{\Omega_c h^2}$	0.1201 ± 0.0040	$\sigma_8\Omega_m^{0.5}$	0.458 ± 0.014	$H(0.15)$	$70.4^{+3.7}_{-2.5}$
$\boldsymbol{100\theta_{MC}}$	1.04074 ± 0.00059	$\sigma_8\Omega_m^{0.25}$	$0.598^{+0.027}_{-0.013}$	$D_M(0.15)$	668^{+22}_{-40}
$\boldsymbol{\tau}$	$0.0530^{+0.0043}_{-0.0083}$	$\sigma_8/h^{0.5}$	$0.971^{+0.045}_{-0.017}$	$H(0.38)$	$81.0^{+3.2}_{-2.5}$
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 0.219	$r_{drag}h$	$95.9^{+4.9}_{-2.4}$	$D_M(0.38)$	1584^{+49}_{-84}
$\boldsymbol{N_{eff}}$	2.97 ± 0.29	$\langle d^2\rangle^{1/2}$	2.460 ± 0.047	$H(0.51)$	$88.0^{+3.0}_{-2.4}$
$\boldsymbol{\ln(10^{10}A_s)}$	$3.039^{+0.017}_{-0.020}$	z_{re}	$7.63^{+0.47}_{-0.87}$	$D_M(0.51)$	2047^{+62}_{-100}
$\boldsymbol{n_s}$	$0.957^{+0.015}_{-0.013}$	$10^9 A_s$	$2.090^{+0.034}_{-0.042}$	$H(0.61)$	$93.8^{+2.8}_{-2.4}$
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	$10^9 A_s e^{-2\tau}$	$1.879^{+0.024}_{-0.021}$	$D_M(0.61)$	2377^{+70}_{-110}
$\boldsymbol{A_{217}^{CIB}}$	48 ± 7	D_{40}	1238 ± 22	$H(2.33)$	236.7 ± 3.7
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{220}	5710 ± 41	$D_M(2.33)$	5852^{+130}_{-170}
$\boldsymbol{A_{143}^{tSZ}}$	5.0 ± 2.0	D_{810}	2536 ± 14	$f\sigma_8(0.15)$	$0.461^{+0.014}_{-0.013}$
$\boldsymbol{A_{100}^{PS}}$	263 ± 29	D_{1420}	814.6 ± 5.2	$\sigma_8(0.15)$	$0.720^{+0.051}_{-0.015}$
$\boldsymbol{A_{143}^{PS}}$	49 ± 9	D_{2000}	229.6 ± 2.3	$f\sigma_8(0.38)$	$0.471^{+0.019}_{-0.0095}$
$\boldsymbol{A_{143\times217}^{PS}}$	44 ± 9	$n_{s,0.002}$	$0.957^{+0.015}_{-0.013}$	$\sigma_8(0.38)$	$0.635^{+0.049}_{-0.014}$
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	Y_P	0.2440 ± 0.0041	$f\sigma_8(0.51)$	$0.467^{+0.021}_{-0.0082}$
$\boldsymbol{A^{kSZ}}$	< 4.92	Y_P^{BBN}	0.2454 ± 0.0041	$\sigma_8(0.51)$	$0.593^{+0.047}_{-0.013}$
$\boldsymbol{A_{100}^{dustTT}}$	8.9 ± 1.8	10^5D/H	2.634 ± 0.070	$f\sigma_8(0.61)$	$0.460^{+0.022}_{-0.0076}$
$\boldsymbol{A_{143}^{dustTT}}$	10.7 ± 1.8	Age/Gyr	$14.01^{+0.31}_{-0.40}$	$\sigma_8(0.61)$	$0.564^{+0.045}_{-0.013}$
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.3 ± 3.3	z_*	$1090.40^{+0.50}_{-0.57}$	$f\sigma_8(2.33)$	$0.285^{+0.022}_{-0.0064}$
$\boldsymbol{A_{217}^{dustTT}}$	93.4 ± 7.3	r_*	145.1 ± 2.6	$\sigma_8(2.33)$	$0.292^{+0.025}_{-0.0076}$
$\boldsymbol{c_{100}}$	0.99959 ± 0.00062	$100\theta_*$	1.04108 ± 0.00071	f_{2000}^{143}	31 ± 4
$\boldsymbol{c_{217}}$	0.99826 ± 0.00062	$D_M(z_*)$/Gpc	13.94 ± 0.24	$f_{2000}^{143\times217}$	33.6 ± 2.6
H_0	$64.9^{+4.0}_{-2.6}$	z_{drag}	1058.9 ± 1.2	f_{2000}^{217}	108.2 ± 2.4
Ω_Λ	$0.654^{+0.047}_{-0.016}$	r_{drag}	148.0 ± 2.7	χ^2_{simall}	396.8 ± 1.7
Ω_m	$0.346^{+0.016}_{-0.047}$	k_D	0.1400 ± 0.0019	χ^2_{lowl}	24.7 ± 2.5
$\Omega_m h^2$	$0.1442^{+0.0043}_{-0.0048}$	$100\theta_D$	0.16095 ± 0.00066	χ^2_{plik}	772.7 ± 6.1
$\Omega_\nu h^2$	< 0.00235	z_{eq}	3434^{+66}_{-73}	χ^2_{prior}	7.3 ± 3.7
$\Omega_m h^3$	0.0935 ± 0.0061	k_{eq}	0.01042 ± 0.00016	χ^2_{CMB}	1194.2 ± 6.0
σ_8	$0.782^{+0.053}_{-0.015}$	$100\theta_{eq}$	0.807 ± 0.013		

$\bar{\chi}^2_{eff} = 1201.51$; $\Delta\bar{\chi}^2_{eff} = 2.20$; $R - 1 = 0.00985$

9.4 base_nnu_mnu_plikHM_TT_lowl_lowE_post_lensing_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	$0.02194^{+0.00038}_{-0.00033}$	S_8	0.838 ± 0.017	$100\theta_{s,eq}$	$0.4457^{+0.0065}_{-0.0056}$
$\boldsymbol{\Omega_c h^2}$	0.1195 ± 0.0039	$\sigma_8\Omega_m^{0.5}$	0.4589 ± 0.0093	$H(0.15)$	$70.2^{+3.4}_{-2.6}$
$\boldsymbol{100\theta_{MC}}$	1.04079 ± 0.00060	$\sigma_8\Omega_m^{0.25}$	$0.599^{+0.017}_{-0.0097}$	$D_M(0.15)$	670^{+23}_{-37}
$\boldsymbol{\tau}$	$0.0531^{+0.0045}_{-0.0081}$	$\sigma_8/h^{0.5}$	$0.974^{+0.029}_{-0.013}$	$H(0.38)$	$80.7^{+2.9}_{-2.4}$
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 0.220	$r_{drag}h$	$95.9^{+4.8}_{-2.4}$	$D_M(0.38)$	1589^{+51}_{-78}
$\boldsymbol{N_{eff}}$	2.92 ± 0.28	$\langle d^2\rangle^{1/2}$	$2.465^{+0.033}_{-0.039}$	$H(0.51)$	$87.7^{+2.7}_{-2.4}$
$\boldsymbol{\ln(10^{10}A_s)}$	$3.038^{+0.016}_{-0.020}$	z_{re}	$7.63^{+0.47}_{-0.86}$	$D_M(0.51)$	2053^{+63}_{-94}
$\boldsymbol{n_s}$	$0.956^{+0.014}_{-0.013}$	$10^9 A_s$	$2.087^{+0.032}_{-0.041}$	$H(0.61)$	93.5 ± 2.4
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.877 ± 0.022	$D_M(0.61)$	2384^{+72}_{-100}
$\boldsymbol{A^{CIB}_{217}}$	47 ± 7	D_{40}	1242 ± 20	$H(2.33)$	236.0 ± 3.6
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{220}	5712 ± 41	$D_M(2.33)$	5869^{+130}_{-160}
$\boldsymbol{A^{tSZ}_{143}}$	5.1 ± 2.0	D_{810}	2536 ± 14	$f\sigma_8(0.15)$	0.4618 ± 0.0082
$\boldsymbol{A^{PS}_{100}}$	262 ± 29	D_{1420}	814.9 ± 5.2	$\sigma_8(0.15)$	$0.721^{+0.043}_{-0.018}$
$\boldsymbol{A^{PS}_{143}}$	49 ± 9	D_{2000}	229.8 ± 2.2	$f\sigma_8(0.38)$	$0.473^{+0.011}_{-0.0069}$
$\boldsymbol{A^{PS}_{143\times217}}$	43 ± 9	$n_{s,0.002}$	$0.956^{+0.014}_{-0.013}$	$\sigma_8(0.38)$	$0.636^{+0.041}_{-0.018}$
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	Y_P	0.2434 ± 0.0039	$f\sigma_8(0.51)$	$0.468^{+0.014}_{-0.0069}$
$\boldsymbol{A^{kSZ}}$	< 4.81	Y_P^{BBN}	0.2447 ± 0.0039	$\sigma_8(0.51)$	$0.595^{+0.040}_{-0.017}$
$\boldsymbol{A^{dustTT}_{100}}$	8.9 ± 1.8	10^5D/H	2.623 ± 0.069	$f\sigma_8(0.61)$	$0.461^{+0.016}_{-0.0072}$
$\boldsymbol{A^{dustTT}_{143}}$	10.7 ± 1.8	Age/Gyr	$14.05^{+0.31}_{-0.37}$	$\sigma_8(0.61)$	$0.565^{+0.039}_{-0.017}$
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.3 ± 3.3	z_*	$1090.32^{+0.48}_{-0.58}$	$f\sigma_8(2.33)$	$0.285^{+0.019}_{-0.0082}$
$\boldsymbol{A^{dustTT}_{217}}$	93.5 ± 7.3	r_*	145.6 ± 2.5	$\sigma_8(2.33)$	$0.292^{+0.022}_{-0.0097}$
$\boldsymbol{c_{100}}$	0.99960 ± 0.00062	$100\theta_*$	1.04117 ± 0.00071	f^{143}_{2000}	31 ± 3
$\boldsymbol{c_{217}}$	0.99825 ± 0.00062	$D_M(z_*)$/Gpc	13.98 ± 0.23	$f^{143\times217}_{2000}$	33.3 ± 2.5
H_0	$64.6^{+3.7}_{-2.6}$	z_{drag}	1058.8 ± 1.2	f^{217}_{2000}	107.9 ± 2.4
Ω_Λ	$0.654^{+0.045}_{-0.018}$	r_{drag}	148.4 ± 2.6	$\chi^2_{lensing}$	9.2 ± 1.1
Ω_m	$0.346^{+0.018}_{-0.045}$	k_D	0.1397 ± 0.0019	χ^2_{simall}	571 ± 200
$\Omega_m h^2$	$0.1434^{+0.0042}_{-0.0048}$	$100\theta_D$	0.16085 ± 0.00063	χ^2_{lowl}	25.0 ± 2.3
$\Omega_\nu h^2$	< 0.00236	z_{eq}	3440^{+57}_{-71}	χ^2_{plik}	598 ± 200
$\Omega_m h^3$	0.0927 ± 0.0057	k_{eq}	$0.01041^{+0.00014}_{-0.00016}$	χ^2_{prior}	7.2 ± 3.7
σ_8	$0.783^{+0.043}_{-0.018}$	$100\theta_{eq}$	$0.806^{+0.013}_{-0.011}$	χ^2_{CMB}	1202.8 ± 5.8

$\bar{\chi}^2_{eff} = 1210.04$; $\Delta\bar{\chi}^2_{eff} = 1.88$; $R - 1 = 0.01229$

9.5 base_nnu_mnu_plikHM_TTTEEE_lowl_lowE

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022217	0.02224 ± 0.00023	$\Omega_m h^2$	0.13920	0.1418 ± 0.0033	k_{eq}	0.010303	0.01035 ± 0.00012
$\boldsymbol{\Omega_c h^2}$	0.11695	0.1185 ± 0.0030	$\Omega_\nu h^2$	0.00003	< 0.00122	$100\theta_{eq}$	0.8086	0.8097 ± 0.0070
$\boldsymbol{100\theta_{MC}}$	1.041299	1.04108 ± 0.00045	$\Omega_m h^3$	0.09237	0.0937 ± 0.0039	$100\theta_{s,eq}$	0.44704	0.4476 ± 0.0035
$\boldsymbol{\tau}$	0.0526	0.0537 ± 0.0077	σ_8	0.8152	$0.800^{+0.026}_{-0.012}$	$H(0.15)$	71.62	$71.5^{+1.8}_{-1.5}$
$\boldsymbol{\Sigma m_\nu}$ [eV]	0.003	< 0.114	S_8	0.8368	0.832 ± 0.017	$D_M(0.15)$	653.0	656^{+14}_{-18}
$\boldsymbol{N_{eff}}$	2.826	2.92 ± 0.19	$\sigma_8 \Omega_m^{0.5}$	0.4583	0.4556 ± 0.0092	$H(0.38)$	81.68	81.7 ± 1.6
$\boldsymbol{\ln(10^{10} A_s)}$	3.0335	3.039 ± 0.018	$\sigma_8 \Omega_m^{0.25}$	0.6112	$0.603^{+0.014}_{-0.0094}$	$D_M(0.38)$	1556.2	1560^{+31}_{-39}
$\boldsymbol{n_s}$	0.9583	0.9595 ± 0.0088	$\sigma_8/h^{0.5}$	1.0007	$0.984^{+0.023}_{-0.013}$	$H(0.51)$	88.35	88.5 ± 1.6
$\boldsymbol{y_{cal}}$	1.00050	1.0007 ± 0.0025	$r_{drag} h$	99.02	$98.0^{+2.2}_{-1.4}$	$D_M(0.51)$	2015.1	2019^{+39}_{-48}
$\boldsymbol{A_{217}^{CIB}}$	43.2	46 ± 7	$\langle d^2 \rangle^{1/2}$	2.4638	2.453 ± 0.030	$H(0.61)$	93.93	94.2 ± 1.5
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.997	—	z_{re}	7.45	7.60 ± 0.79	$D_M(0.61)$	2344.3	2347^{+44}_{-54}
$\boldsymbol{A_{143}^{tSZ}}$	6.92	$5.6^{+2.2}_{-1.8}$	$10^9 A_s$	2.0769	2.089 ± 0.038	$H(2.33)$	233.36	235.2 ± 2.7
$\boldsymbol{A_{100}^{PS}}$	241.0	256 ± 28	$10^9 A_s e^{-2\tau}$	1.8697	1.876 ± 0.018	$D_M(2.33)$	5846	5829 ± 91
$\boldsymbol{A_{143}^{PS}}$	51.5	45 ± 8	D_{40}	1238.7	1239 ± 16	$f\sigma_8(0.15)$	0.4618	0.4595 ± 0.0087
$\boldsymbol{A_{143\times217}^{PS}}$	58.9	42 ± 9	D_{220}	5730.1	5733 ± 39	$\sigma_8(0.15)$	0.7527	$0.738^{+0.025}_{-0.012}$
$\boldsymbol{A_{217}^{PS}}$	124.4	115 ± 10	D_{810}	2539.2	2539 ± 14	$f\sigma_8(0.38)$	0.4790	$0.4747^{+0.0099}_{-0.0073}$
$\boldsymbol{A^{kSZ}}$	0.00	< 3.95	D_{1420}	819.94	818.0 ± 4.9	$\sigma_8(0.38)$	0.6665	$0.653^{+0.023}_{-0.011}$
$\boldsymbol{A_{100}^{dust TT}}$	8.64	8.8 ± 1.8	D_{2000}	232.77	231.5 ± 1.8	$f\sigma_8(0.51)$	0.4770	$0.472^{+0.011}_{-0.0068}$
$\boldsymbol{A_{143}^{dust TT}}$	10.83	10.8 ± 1.8	$n_{s,0.002}$	0.9583	0.9595 ± 0.0088	$\sigma_8(0.51)$	0.6234	$0.610^{+0.022}_{-0.010}$
$\boldsymbol{A_{143\times217}^{dust TT}}$	20.12	18.5 ± 3.3	Y_P	0.24234	0.2436 ± 0.0027	$f\sigma_8(0.61)$	0.4716	$0.466^{+0.011}_{-0.0066}$
$\boldsymbol{A_{217}^{dust TT}}$	95.8	93.9 ± 7.4	Y_P^{BBN}	0.24366	0.2449 ± 0.0027	$\sigma_8(0.61)$	0.5930	$0.580^{+0.022}_{-0.0099}$
$\boldsymbol{A_{100}^{dust TE}}$	0.1143	0.114 ± 0.038	10^5D/H	2.5379	2.567 ± 0.046	$f\sigma_8(2.33)$	0.2979	$0.293^{+0.010}_{-0.0050}$
$\boldsymbol{A_{100\times143}^{dust TE}}$	0.1340	0.135 ± 0.030	Age/Gyr	13.993	13.95 ± 0.22	$\sigma_8(2.33)$	0.3073	$0.301^{+0.012}_{-0.0056}$
$\boldsymbol{A_{100\times217}^{dust TE}}$	0.481	0.481 ± 0.085	z_*	1089.621	1089.83 ± 0.36	f_{2000}^{143}	26.55	28.8 ± 3.0
$\boldsymbol{A_{143}^{dust TE}}$	0.225	0.226 ± 0.054	r_*	146.48	145.6 ± 1.9	$f_{2000}^{143\times217}$	30.48	31.7 ± 2.1
$\boldsymbol{A_{143\times217}^{dust TE}}$	0.666	0.665 ± 0.081	$100\theta_*$	1.04161	1.04138 ± 0.00055	f_{2000}^{217}	105.06	106.6 ± 2.0
$\boldsymbol{A_{217}^{dust TE}}$	2.089	2.09 ± 0.27	$D_M(z_*)$/Gpc	14.063	13.98 ± 0.17	χ^2_{simall}	395.83	397.1 ± 1.8
$\boldsymbol{c_{100}}$	0.99976	0.99967 ± 0.00061	z_{drag}	1059.17	1059.41 ± 0.81	χ^2_{lowl}	24.41	24.3 ± 1.5
$\boldsymbol{c_{217}}$	0.99815	0.99820 ± 0.00062	r_{drag}	149.22	148.3 ± 1.9	χ^2_{plik}	2342.1	2360.0 ± 6.3
H_0	66.36	$66.1^{+1.9}_{-1.6}$	k_D	0.13938	0.1400 ± 0.0014	χ^2_{prior}	1.37	11.6 ± 4.5
Ω_Λ	0.6839	$0.675^{+0.019}_{-0.011}$	$100\theta_D$	0.160282	0.16053 ± 0.00042	χ^2_{CMB}	2762.4	2781.4 ± 6.3
Ω_m	0.3161	$0.325^{+0.011}_{-0.019}$	z_{eq}	3426.8	3421 ± 37			

Best-fit $\chi^2_{eff} = 2763.73$; $\Delta\chi^2_{eff} = -2.04$; $\bar{\chi}^2_{eff} = 2792.99$; $\Delta\bar{\chi}^2_{eff} = 1.23$; $R - 1 = 0.01243$

χ^2_{eff}: CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.83 (Δ -0.22) commander_dx12_v3_2_29: 24.41 (Δ 1.15) plik_rd12_HM_v22b_TTTEEE: 2342.13 (Δ -2.52)

9.6 base_nnu_mnu_plikHM_TTTEEE_lowl_lowE_post_lensing

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022237	0.02223 ± 0.00023	$\Omega_m h^2$	0.13865	0.1413 ± 0.0033	k_{eq}	0.010268	0.01033 ± 0.00011
$\boldsymbol{\Omega_c h^2}$	0.11641	0.1180 ± 0.0029	$\Omega_\nu h^2$	0.00001	< 0.00124	$100\theta_{eq}$	0.8105	0.8097 ± 0.0067
$\boldsymbol{100\theta_{MC}}$	1.041380	1.04113 ± 0.00044	$\Omega_m h^3$	0.09225	0.0933 ± 0.0038	$100\theta_{s,eq}$	0.44804	0.4476 ± 0.0034
$\boldsymbol{\tau}$	0.0528	0.0539 ± 0.0075	σ_8	0.8134	$0.799^{+0.022}_{-0.012}$	$H(0.15)$	71.76	$71.4^{+1.7}_{-1.6}$
$\boldsymbol{\Sigma m_\nu}$ [eV]	0.000	< 0.116	S_8	0.8311	0.831 ± 0.013	$D_M(0.15)$	651.4	656^{+14}_{-18}
$\boldsymbol{N_{eff}}$	2.821	2.90 ± 0.19	$\sigma_8 \Omega_m^{0.5}$	0.4552	0.4551 ± 0.0070	$H(0.38)$	81.77	81.6 ± 1.6
$\boldsymbol{\ln(10^{10} A_s)}$	3.0322	3.038 ± 0.017	$\sigma_8 \Omega_m^{0.25}$	0.6085	$0.603^{+0.010}_{-0.0078}$	$D_M(0.38)$	1553.2	1562^{+32}_{-38}
$\boldsymbol{n_s}$	0.9591	0.9587 ± 0.0086	$\sigma_8/h^{0.5}$	0.9972	$0.984^{+0.017}_{-0.011}$	$H(0.51)$	88.41	88.4 ± 1.5
$\boldsymbol{y_{cal}}$	1.00046	1.0007 ± 0.0025	$r_{drag} h$	99.39	$98.0^{+2.2}_{-1.4}$	$D_M(0.51)$	2011.8	2022^{+40}_{-47}
$\boldsymbol{A_{217}^{CIB}}$	43.2	46 ± 7	$\langle d^2 \rangle^{1/2}$	2.4558	2.454 ± 0.024	$H(0.61)$	93.97	94.0 ± 1.5
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.987	> 0.375	z_{re}	7.46	7.60 ± 0.76	$D_M(0.61)$	2340.7	2351^{+45}_{-52}
$\boldsymbol{A_{143}^{tSZ}}$	6.88	$5.6^{+2.2}_{-1.9}$	$10^9 A_s$	2.0743	2.087 ± 0.036	$H(2.33)$	233.00	234.8 ± 2.7
$\boldsymbol{A_{100}^{PS}}$	242.5	255 ± 30	$10^9 A_s e^{-2\tau}$	1.8666	1.874 ± 0.017	$D_M(2.33)$	5845	5838 ± 89
$\boldsymbol{A_{143}^{PS}}$	51.6	44 ± 8	D_{40}	1236.2	1240 ± 15	$f\sigma_8(0.15)$	0.4589	0.4590 ± 0.0065
$\boldsymbol{A_{143\times217}^{PS}}$	58.6	42 ± 9	D_{220}	5730.0	5736 ± 38	$\sigma_8(0.15)$	0.7513	$0.737^{+0.021}_{-0.012}$
$\boldsymbol{A_{217}^{PS}}$	124.2	115 ± 10	D_{810}	2538.0	2538 ± 14	$f\sigma_8(0.38)$	0.4767	$0.4742^{+0.0069}_{-0.0059}$
$\boldsymbol{A^{kSZ}}$	0.01	< 3.95	D_{1420}	819.91	818.1 ± 4.8	$\sigma_8(0.38)$	0.6656	$0.652^{+0.020}_{-0.011}$
$\boldsymbol{A_{100}^{dustTT}}$	8.68	8.8 ± 1.9	D_{2000}	232.79	231.6 ± 1.8	$f\sigma_8(0.51)$	0.4751	$0.4714^{+0.0078}_{-0.0059}$
$\boldsymbol{A_{143}^{dustTT}}$	10.89	10.8 ± 1.8	$n_{s,0.002}$	0.9591	0.9587 ± 0.0086	$\sigma_8(0.51)$	0.6227	$0.610^{+0.020}_{-0.011}$
$\boldsymbol{A_{143\times217}^{dustTT}}$	20.23	18.5 ± 3.3	Y_P	0.24228	0.2433 ± 0.0027	$f\sigma_8(0.61)$	0.4699	$0.4655^{+0.0085}_{-0.0059}$
$\boldsymbol{A_{217}^{dustTT}}$	96.1	94.0 ± 7.3	Y_P^{BBN}	0.24359	0.2446 ± 0.0027	$\sigma_8(0.61)$	0.5924	$0.580^{+0.019}_{-0.011}$
$\boldsymbol{A_{100}^{dustTE}}$	0.1144	0.114 ± 0.038	10^5D/H	2.5324	2.560 ± 0.045	$f\sigma_8(2.33)$	0.2977	$0.2925^{+0.0088}_{-0.0054}$
$\boldsymbol{A_{100\times143}^{dustTE}}$	0.1342	0.135 ± 0.030	Age/Gyr	13.992	13.97 ± 0.21	$\sigma_8(2.33)$	0.3072	$0.301^{+0.010}_{-0.0061}$
$\boldsymbol{A_{100\times217}^{dustTE}}$	0.483	0.480 ± 0.085	z_*	1089.543	$1089.78^{+0.33}_{-0.37}$	f_{2000}^{143}	26.67	28.6 ± 3.0
$\boldsymbol{A_{143}^{dustTE}}$	0.223	0.225 ± 0.054	r_*	146.64	145.8 ± 1.8	$f_{2000}^{143\times217}$	30.49	31.5 ± 2.1
$\boldsymbol{A_{143\times217}^{dustTE}}$	0.669	0.665 ± 0.080	$100\theta_*$	1.04168	1.04145 ± 0.00054	f_{2000}^{217}	105.08	106.5 ± 2.0
$\boldsymbol{A_{217}^{dustTE}}$	2.090	2.08 ± 0.27	$D_M(z_*)$/Gpc	14.077	14.00 ± 0.17	$\chi^2_{lensing}$	8.72	9.08 ± 0.80
$\boldsymbol{c_{100}}$	0.99975	0.99966 ± 0.00062	z_{drag}	1059.17	$1059.34^{+0.83}_{-0.76}$	χ^2_{simall}	395.84	397.0 ± 1.8
$\boldsymbol{c_{217}}$	0.99816	0.99821 ± 0.00062	r_{drag}	149.37	148.6 ± 1.9	χ^2_{lowl}	24.16	24.4 ± 1.5
H_0	66.54	$66.0^{+1.8}_{-1.6}$	k_D	0.13926	0.1398 ± 0.0014	χ^2_{plik}	2342.5	2359.5 ± 6.1
Ω_Λ	0.6868	$0.675^{+0.019}_{-0.011}$	$100\theta_D$	0.160263	0.16047 ± 0.00041	χ^2_{prior}	1.34	11.6 ± 4.5
Ω_m	0.3132	$0.325^{+0.011}_{-0.019}$	z_{eq}	3416.4	3421 ± 35	χ^2_{CMB}	2771.2	2790.0 ± 6.3

Best-fit $\chi^2_{eff} = 2772.57$; $\Delta\chi^2_{eff} = -2.07$; $\bar{\chi}^2_{eff} = 2801.64$; $\Delta\bar{\chi}^2_{eff} = 0.95$; $R - 1 = 0.01329$

χ^2_{eff}: CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.72 (Δ -0.15) simall_100x143_offlike5_EE_Aplanck_B: 395.84 (Δ -0.21) commander_dx12_v3_2_29: 24.16 (Δ 0.91) plik_rd12_HM_v22b_TTTEEE: 2342.50 (Δ -2.43)

9.7 base_nnu_mnu_plikHM_TTTEEE_lowl_lowE_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02224 ± 0.00023	$\Omega_m h^2$	0.1418 ± 0.0033	k_{eq}	0.01035 ± 0.00012
$\boldsymbol{\Omega_c h^2}$	0.1185 ± 0.0030	$\Omega_\nu h^2$	< 0.00124	$100\theta_{eq}$	0.8100 ± 0.0069
$\boldsymbol{100\theta_{MC}}$	1.04108 ± 0.00045	$\Omega_m h^3$	0.0938 ± 0.0039	$100\theta_{s,eq}$	0.4477 ± 0.0035
$\boldsymbol{\tau}$	$0.0550^{+0.0050}_{-0.0080}$	σ_8	$0.800^{+0.026}_{-0.012}$	$H(0.15)$	$71.5^{+1.8}_{-1.5}$
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 0.115	S_8	0.832 ± 0.017	$D_M(0.15)$	655^{+14}_{-18}
$\boldsymbol{N_{eff}}$	2.92 ± 0.19	$\sigma_8 \Omega_m^{0.5}$	0.4559 ± 0.0092	$H(0.38)$	81.7 ± 1.6
$\boldsymbol{\ln(10^{10} A_s)}$	$3.041^{+0.015}_{-0.018}$	$\sigma_8 \Omega_m^{0.25}$	$0.604^{+0.014}_{-0.0092}$	$D_M(0.38)$	1559^{+31}_{-39}
$\boldsymbol{n_s}$	0.9598 ± 0.0087	$\sigma_8/h^{0.5}$	$0.984^{+0.023}_{-0.012}$	$H(0.51)$	88.5 ± 1.6
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0025	$r_{drag} h$	$98.0^{+2.2}_{-1.4}$	$D_M(0.51)$	2018^{+39}_{-48}
$\boldsymbol{A_{217}^{CIB}}$	46 ± 7	$\langle d^2 \rangle^{1/2}$	2.455 ± 0.030	$H(0.61)$	94.2 ± 1.5
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	z_{re}	$7.73^{+0.56}_{-0.79}$	$D_M(0.61)$	2346^{+44}_{-54}
$\boldsymbol{A_{143}^{tSZ}}$	$5.6^{+2.2}_{-1.8}$	$10^9 A_s$	$2.094^{+0.031}_{-0.037}$	$H(2.33)$	235.3 ± 2.7
$\boldsymbol{A_{100}^{PS}}$	256 ± 28	$10^9 A_s e^{-2\tau}$	1.876 ± 0.018	$D_M(2.33)$	5827 ± 91
$\boldsymbol{A_{143}^{PS}}$	45 ± 8	D_{40}	1239 ± 16	$f\sigma_8(0.15)$	0.4598 ± 0.0087
$\boldsymbol{A_{143\times217}^{PS}}$	42 ± 9	D_{220}	5733 ± 39	$\sigma_8(0.15)$	$0.738^{+0.025}_{-0.011}$
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	D_{810}	2538 ± 14	$f\sigma_8(0.38)$	$0.4751^{+0.0098}_{-0.0072}$
$\boldsymbol{A^{kSZ}}$	< 3.93	D_{1420}	817.9 ± 4.8	$\sigma_8(0.38)$	$0.653^{+0.023}_{-0.010}$
$\boldsymbol{A_{100}^{dust TT}}$	8.8 ± 1.8	D_{2000}	231.5 ± 1.8	$f\sigma_8(0.51)$	$0.472^{+0.011}_{-0.0066}$
$\boldsymbol{A_{143}^{dust TT}}$	10.8 ± 1.8	$n_{s,0.002}$	0.9598 ± 0.0087	$\sigma_8(0.51)$	$0.611^{+0.022}_{-0.010}$
$\boldsymbol{A_{143\times217}^{dust TT}}$	18.5 ± 3.3	Y_P	0.2437 ± 0.0027	$f\sigma_8(0.61)$	$0.466^{+0.011}_{-0.0063}$
$\boldsymbol{A_{217}^{dust TT}}$	93.9 ± 7.4	Y_P^{BBN}	0.2450 ± 0.0027	$\sigma_8(0.61)$	$0.581^{+0.022}_{-0.0097}$
$\boldsymbol{A_{100}^{dust TE}}$	0.114 ± 0.038	10^5D/H	2.567 ± 0.046	$f\sigma_8(2.33)$	$0.2931^{+0.0099}_{-0.0049}$
$\boldsymbol{A_{100\times143}^{dust TE}}$	0.135 ± 0.030	Age/Gyr	13.95 ± 0.22	$\sigma_8(2.33)$	$0.301^{+0.012}_{-0.0055}$
$\boldsymbol{A_{100\times217}^{dust TE}}$	0.481 ± 0.085	z_*	1089.83 ± 0.36	f_{2000}^{143}	28.8 ± 3.0
$\boldsymbol{A_{143}^{dust TE}}$	0.226 ± 0.054	r_*	145.6 ± 1.8	$f_{2000}^{143\times217}$	31.6 ± 2.1
$\boldsymbol{A_{143\times217}^{dust TE}}$	0.665 ± 0.081	$100\theta_*$	1.04138 ± 0.00055	f_{2000}^{217}	106.6 ± 2.0
$\boldsymbol{A_{217}^{dust TE}}$	2.09 ± 0.27	$D_M(z_*)$/Gpc	13.98 ± 0.17	χ^2_{simall}	397.0 ± 1.9
$\boldsymbol{c_{100}}$	0.99967 ± 0.00061	z_{drag}	1059.44 ± 0.80	χ^2_{lowl}	24.3 ± 1.5
$\boldsymbol{c_{217}}$	0.99819 ± 0.00062	r_{drag}	148.3 ± 1.9	χ^2_{plik}	2359.8 ± 6.3
H_0	$66.1^{+1.9}_{-1.6}$	k_D	0.1400 ± 0.0014	χ^2_{prior}	11.6 ± 4.5
Ω_Λ	$0.675^{+0.019}_{-0.011}$	$100\theta_D$	0.16054 ± 0.00042	χ^2_{CMB}	2781.2 ± 6.2
Ω_m	$0.325^{+0.011}_{-0.019}$	z_{eq}	3420 ± 37		

$\bar{\chi}^2_{eff} = 2792.76$; $\Delta\bar{\chi}^2_{eff} = 1.23$; $R - 1 = 0.01471$

9.8 base_nnu_mnu_plikHM_TTTEEE_lowl_lowE_post_lensing_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02224 ± 0.00023	$\Omega_m h^2$	0.1413 ± 0.0033	k_{eq}	0.01033 ± 0.00011
$\boldsymbol{\Omega_c h^2}$	0.1180 ± 0.0030	$\Omega_\nu h^2$	< 0.00127	$100\theta_{eq}$	0.8100 ± 0.0066
$\boldsymbol{100\theta_{MC}}$	1.04113 ± 0.00045	$\Omega_m h^3$	0.0933 ± 0.0038	$100\theta_{s,eq}$	0.4478 ± 0.0033
$\boldsymbol{\tau}$	$0.0549^{+0.0051}_{-0.0077}$	σ_8	$0.799^{+0.022}_{-0.012}$	$H(0.15)$	$71.4^{+1.7}_{-1.6}$
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 0.118	S_8	0.831 ± 0.013	$D_M(0.15)$	656^{+14}_{-18}
$\boldsymbol{N_{eff}}$	2.90 ± 0.19	$\sigma_8 \Omega_m^{0.5}$	0.4551 ± 0.0069	$H(0.38)$	81.6 ± 1.6
$\boldsymbol{\ln(10^{10} A_s)}$	$3.040^{+0.014}_{-0.017}$	$\sigma_8 \Omega_m^{0.25}$	$0.603^{+0.010}_{-0.0078}$	$D_M(0.38)$	1561^{+32}_{-38}
$\boldsymbol{n_s}$	0.9591 ± 0.0086	$\sigma_8/h^{0.5}$	$0.984^{+0.017}_{-0.010}$	$H(0.51)$	88.4 ± 1.5
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0025	$r_{drag} h$	$98.0^{+2.2}_{-1.4}$	$D_M(0.51)$	2021^{+39}_{-46}
$\boldsymbol{A_{217}^{CIB}}$	46 ± 7	$\langle d^2 \rangle^{1/2}$	2.455 ± 0.024	$H(0.61)$	94.1 ± 1.5
$\boldsymbol{\xi^{tSZ\times CIB}}$	> 0.375	z_{re}	$7.72^{+0.56}_{-0.77}$	$D_M(0.61)$	2350^{+45}_{-52}
$\boldsymbol{A_{143}^{tSZ}}$	$5.6^{+2.2}_{-1.9}$	$10^9 A_s$	$2.091^{+0.030}_{-0.036}$	$H(2.33)$	234.9 ± 2.7
$\boldsymbol{A_{100}^{PS}}$	255 ± 30	$10^9 A_s e^{-2\tau}$	1.874 ± 0.017	$D_M(2.33)$	5836 ± 89
$\boldsymbol{A_{143}^{PS}}$	44 ± 8	D_{40}	1240 ± 15	$f\sigma_8(0.15)$	0.4591 ± 0.0065
$\boldsymbol{A_{143\times217}^{PS}}$	42 ± 9	D_{220}	5736 ± 38	$\sigma_8(0.15)$	$0.737^{+0.022}_{-0.012}$
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	D_{810}	2538 ± 14	$f\sigma_8(0.38)$	$0.4744^{+0.0070}_{-0.0059}$
$\boldsymbol{A^{kSZ}}$	< 3.94	D_{1420}	818.1 ± 4.8	$\sigma_8(0.38)$	$0.653^{+0.021}_{-0.011}$
$\boldsymbol{A_{100}^{dust TT}}$	8.8 ± 1.9	D_{2000}	231.6 ± 1.8	$f\sigma_8(0.51)$	$0.4716^{+0.0079}_{-0.0058}$
$\boldsymbol{A_{143}^{dust TT}}$	10.8 ± 1.8	$n_{s,0.002}$	0.9591 ± 0.0086	$\sigma_8(0.51)$	$0.610^{+0.020}_{-0.011}$
$\boldsymbol{A_{143\times217}^{dust TT}}$	18.5 ± 3.3	Y_P	0.2433 ± 0.0027	$f\sigma_8(0.61)$	$0.4657^{+0.0086}_{-0.0058}$
$\boldsymbol{A_{217}^{dust TT}}$	94.0 ± 7.3	Y_P^{BBN}	0.2447 ± 0.0027	$\sigma_8(0.61)$	$0.580^{+0.019}_{-0.011}$
$\boldsymbol{A_{100}^{dust TE}}$	0.115 ± 0.038	10^5D/H	2.560 ± 0.045	$f\sigma_8(2.33)$	$0.2927^{+0.0089}_{-0.0053}$
$\boldsymbol{A_{100\times143}^{dust TE}}$	0.135 ± 0.030	Age/Gyr	13.97 ± 0.21	$\sigma_8(2.33)$	$0.301^{+0.010}_{-0.0060}$
$\boldsymbol{A_{100\times217}^{dust TE}}$	0.480 ± 0.085	z_*	$1089.78^{+0.33}_{-0.37}$	f_{2000}^{143}	28.6 ± 3.0
$\boldsymbol{A_{143}^{dust TE}}$	0.225 ± 0.054	r_*	145.8 ± 1.8	$f_{2000}^{143\times217}$	31.5 ± 2.1
$\boldsymbol{A_{143\times217}^{dust TE}}$	0.665 ± 0.080	$100\theta_*$	1.04144 ± 0.00054	f_{2000}^{217}	106.5 ± 2.0
$\boldsymbol{A_{217}^{dust TE}}$	2.08 ± 0.27	$D_M(z_*)$/Gpc	14.00 ± 0.17	$\chi^2_{lensing}$	9.07 ± 0.79
$\boldsymbol{c_{100}}$	0.99966 ± 0.00061	z_{drag}	$1059.36^{+0.83}_{-0.75}$	χ^2_{simall}	397.0 ± 1.8
$\boldsymbol{c_{217}}$	0.99820 ± 0.00062	r_{drag}	148.5 ± 1.9	χ^2_{lowl}	24.4 ± 1.5
H_0	$66.0^{+1.8}_{-1.6}$	k_D	0.1398 ± 0.0014	χ^2_{plik}	2359.4 ± 6.0
Ω_Λ	$0.675^{+0.019}_{-0.011}$	$100\theta_D$	0.16048 ± 0.00041	χ^2_{prior}	11.6 ± 4.5
Ω_m	$0.325^{+0.011}_{-0.019}$	z_{eq}	3419 ± 35	χ^2_{CMB}	2789.8 ± 6.2

$\bar{\chi}^2_{eff} = 2801.45$; $\Delta\bar{\chi}^2_{eff} = 0.95$; $R - 1 = 0.01584$

9.9 base_nnu_mnu_CamSpecHM_TTTEEE_lowl_lowE

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022220	0.02217 ± 0.00023	$\Omega_m h^3$	0.09374	$0.0930^{+0.0040}_{-0.0046}$	$100\theta_{eq}$	0.8130	0.8116 ± 0.0075
$\boldsymbol{\Omega_c h^2}$	0.11748	0.1177 ± 0.0034	σ_8	0.8148	$0.789^{+0.032}_{-0.015}$	$100\theta_{s,eq}$	0.44935	0.4487 ± 0.0038
$\boldsymbol{100\theta_{MC}}$	1.041162	1.04106 ± 0.00049	S_8	0.8288	0.822 ± 0.017	$H(0.15)$	72.32	$71.2^{+2.0}_{-1.8}$
$\boldsymbol{\tau}$	0.0522	0.0520 ± 0.0079	$\sigma_8\Omega_m^{0.5}$	0.4539	0.4503 ± 0.0095	$D_M(0.15)$	646.2	658^{+16}_{-21}
$\boldsymbol{\Sigma m_\nu}$ [eV]	0.001	< 0.146	$\sigma_8\Omega_m^{0.25}$	0.6082	$0.596^{+0.017}_{-0.010}$	$H(0.38)$	82.32	81.4 ± 1.8
$\boldsymbol{N_{eff}}$	2.908	2.90 ± 0.22	$\sigma_8/h^{0.5}$	0.9948	$0.972^{+0.028}_{-0.014}$	$D_M(0.38)$	1541.5	1566^{+37}_{-45}
$\boldsymbol{\ln(10^{10}A_s)}$	3.0318	3.032 ± 0.019	$r_{drag}h$	99.73	$97.8^{+2.6}_{-1.6}$	$H(0.51)$	88.97	88.2 ± 1.8
$\boldsymbol{n_s}$	0.9617	0.9600 ± 0.0094	$\langle d^2\rangle^{1/2}$	2.4459	2.436 ± 0.031	$D_M(0.51)$	1997	2026^{+46}_{-55}
$\boldsymbol{y_{cal}}$	1.00030	1.0005 ± 0.0025	z_{re}	7.43	7.42 ± 0.82	$H(0.61)$	94.54	93.9 ± 1.8
$\boldsymbol{A_{100}^{PS}}$	232.5	238 ± 25	$10^9 A_s$	2.0735	2.073 ± 0.040	$D_M(0.61)$	2324	2355^{+52}_{-61}
$\boldsymbol{A_{143}^{PS}}$	38.1	38 ± 9	$10^9 A_s e^{-2\tau}$	1.8680	1.868 ± 0.020	$H(2.33)$	233.97	234.7 ± 3.1
$\boldsymbol{A_{217}^{PS}}$	104.1	103 ± 10	D_{40}	1230.2	1233 ± 16	$D_M(2.33)$	5811	5846 ± 100
$\boldsymbol{A_{217}^{CIB}}$	41.6	39 ± 7	D_{220}	5715.4	5717 ± 39	$f\sigma_8(0.15)$	0.4579	$0.4544^{+0.0095}_{-0.0086}$
$\boldsymbol{A_{143}^{tSZ}}$	5.84	$3.9^{+1.9}_{-2.5}$	D_{810}	2532.5	2533 ± 14	$\sigma_8(0.15)$	0.7529	$0.728^{+0.031}_{-0.014}$
$\boldsymbol{r_{143\times217}^{PS}}$	0.633	0.66 ± 0.13	D_{1420}	816.6	816.7 ± 5.1	$f\sigma_8(0.38)$	0.4764	$0.469^{+0.012}_{-0.0076}$
$\boldsymbol{r_{143\times217}^{CIB}}$	0.673	$0.54^{+0.38}_{-0.21}$	D_{2000}	231.22	230.9 ± 2.1	$\sigma_8(0.38)$	0.6673	$0.644^{+0.029}_{-0.013}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.19	—	$n_{s,0.002}$	0.9617	0.9600 ± 0.0094	$f\sigma_8(0.51)$	0.4750	$0.466^{+0.013}_{-0.0073}$
$\boldsymbol{A^{kSZ}}$	0.82	$4.6^{+1.6}_{-4.5}$	Y_P	0.24347	0.2433 ± 0.0031	$\sigma_8(0.51)$	0.6244	$0.602^{+0.027}_{-0.013}$
$\boldsymbol{A_{100}^{dust}}$	1.022	1.01 ± 0.20	Y_P^{BBN}	0.24478	0.2446 ± 0.0031	$f\sigma_8(0.61)$	0.4701	$0.460^{+0.014}_{-0.0072}$
$\boldsymbol{A_{143}^{dust}}$	0.959	0.96 ± 0.18	10^5D/H	2.566	2.574 ± 0.058	$\sigma_8(0.61)$	0.5941	$0.572^{+0.026}_{-0.012}$
$\boldsymbol{A_{217}^{dust}}$	0.975	0.98 ± 0.10	Age/Gyr	13.912	13.99 ± 0.25	$f\sigma_8(2.33)$	0.2986	$0.289^{+0.012}_{-0.0062}$
$\boldsymbol{A_{143\times217}^{dust}}$	1.023	1.02 ± 0.16	z_*	1089.745	1089.84 ± 0.43	$\sigma_8(2.33)$	0.3084	$0.297^{+0.014}_{-0.0070}$
$\boldsymbol{c_{100}}$	0.99765	0.9975 ± 0.0011	r_*	145.91	145.9 ± 2.1	f_{2000}^{143}	28.56	29 ± 3
$\boldsymbol{c_{217}}$	1.00106	1.0010 ± 0.0016	$100\theta_*$	1.04141	1.04139 ± 0.00061	f_{2000}^{217}	105.85	106.3 ± 2.3
$\boldsymbol{c_{TE}}$	0.9954	0.9962 ± 0.0052	$D_M(z_*)$/Gpc	14.011	14.01 ± 0.19	$f_{2000}^{143\times217}$	31.04	31.5 ± 2.5
$\boldsymbol{c_{EE}}$	0.9905	0.9905 ± 0.0057	z_{drag}	1059.28	1059.18 ± 0.84	χ^2_{simall}	395.80	396.9 ± 1.7
H_0	67.09	$65.8^{+2.1}_{-1.8}$	r_{drag}	148.65	148.7 ± 2.2	χ^2_{lowl}	23.65	23.8 ± 1.5
Ω_Λ	0.6896	$0.673^{+0.023}_{-0.012}$	k_D	0.13966	0.1396 ± 0.0015	$\chi^2_{CamSpec}$	11498.1	11515.3 ± 6.1
Ω_m	0.3104	$0.327^{+0.012}_{-0.023}$	$100\theta_D$	0.16056	0.16057 ± 0.00053	χ^2_{prior}	2.10	7.9 ± 3.5
$\Omega_m h^2$	0.13971	$0.1412^{+0.0035}_{-0.0039}$	z_{eq}	3401.6	3409 ± 40	χ^2_{CMB}	11917.6	11936.0 ± 6.1
$\Omega_\nu h^2$	0.00001	< 0.00157	k_{eq}	0.010285	0.01030 ± 0.00013			

Best-fit $\chi^2_{eff} = 11919.69$; $\Delta\chi^2_{eff} = -1.08$; $\bar{\chi}^2_{eff} = 11943.90$; $\Delta\bar{\chi}^2_{eff} = 1.45$; $R - 1 = 0.01090$

χ^2_{eff}: CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.80 (Δ -0.10) commander_dx12_v3_2_29: 23.65 (Δ 0.64) CamSpec like_10.7HM_1400_unified: 11498.15 (Δ -1.50)

9.10 base_nnu_mnu_CamSpecHM_TTTEEE_lowl_lowE_post_lensing

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02215 ± 0.00022	$\Omega_m h^3$	$0.0926^{+0.0039}_{-0.0044}$	$100\theta_{eq}$	0.8104 ± 0.0072
$\boldsymbol{\Omega_c h^2}$	0.1174 ± 0.0033	σ_8	$0.795^{+0.022}_{-0.014}$	$100\theta_{s,eq}$	0.4480 ± 0.0036
$\boldsymbol{100\theta_{MC}}$	1.04110 ± 0.00048	S_8	0.827 ± 0.013	$H(0.15)$	71.2 ± 1.8
$\boldsymbol{\tau}$	0.0530 ± 0.0075	$\sigma_8\Omega_m^{0.5}$	0.4532 ± 0.0070	$D_M(0.15)$	658^{+16}_{-19}
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 0.116	$\sigma_8\Omega_m^{0.25}$	$0.600^{+0.011}_{-0.0080}$	$H(0.38)$	81.4 ± 1.7
$\boldsymbol{N_{eff}}$	2.87 ± 0.22	$\sigma_8/h^{0.5}$	$0.980^{+0.018}_{-0.011}$	$D_M(0.38)$	1566 ± 39
$\boldsymbol{\ln(10^{10}A_s)}$	3.033 ± 0.018	$r_{drag}h$	$98.0^{+2.2}_{-1.5}$	$H(0.51)$	88.2 ± 1.7
$\boldsymbol{n_s}$	0.9586 ± 0.0092	$\langle d^2\rangle^{1/2}$	2.447 ± 0.025	$D_M(0.51)$	2026 ± 48
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0025	z_{re}	7.52 ± 0.77	$H(0.61)$	93.8 ± 1.7
$\boldsymbol{A^{PS}_{100}}$	236 ± 25	$10^9 A_s$	2.077 ± 0.037	$D_M(0.61)$	2356 ± 54
$\boldsymbol{A^{PS}_{143}}$	37 ± 9	$10^9 A_s e^{-2\tau}$	1.868 ± 0.019	$H(2.33)$	234.3 ± 3.0
$\boldsymbol{A^{PS}_{217}}$	103 ± 10	D_{40}	1237 ± 16	$D_M(2.33)$	5852 ± 99
$\boldsymbol{A^{CIB}_{217}}$	39 ± 7	D_{220}	5721 ± 39	$f\sigma_8(0.15)$	0.4571 ± 0.0066
$\boldsymbol{A^{tSZ}_{143}}$	$3.9^{+2.0}_{-2.5}$	D_{810}	2534 ± 14	$\sigma_8(0.15)$	$0.734^{+0.022}_{-0.013}$
$\boldsymbol{r^{PS}_{143\times217}}$	0.67 ± 0.13	D_{1420}	817.0 ± 5.1	$f\sigma_8(0.38)$	$0.4722^{+0.0073}_{-0.0060}$
$\boldsymbol{r^{CIB}_{143\times217}}$	$0.54^{+0.37}_{-0.22}$	D_{2000}	231.3 ± 2.1	$\sigma_8(0.38)$	$0.649^{+0.021}_{-0.013}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$n_{s,0.002}$	0.9586 ± 0.0092	$f\sigma_8(0.51)$	$0.4694^{+0.0082}_{-0.0060}$
$\boldsymbol{A^{kSZ}}$	< 5.97	Y_P	0.2429 ± 0.0030	$\sigma_8(0.51)$	$0.607^{+0.020}_{-0.012}$
$\boldsymbol{A^{dust}_{100}}$	1.00 ± 0.20	Y_P^{BBN}	0.2442 ± 0.0030	$f\sigma_8(0.61)$	$0.4635^{+0.0088}_{-0.0062}$
$\boldsymbol{A^{dust}_{143}}$	0.95 ± 0.18	10^5D/H	2.566 ± 0.056	$\sigma_8(0.61)$	$0.577^{+0.019}_{-0.012}$
$\boldsymbol{A^{dust}_{217}}$	0.98 ± 0.10	Age/Gyr	14.01 ± 0.23	$f\sigma_8(2.33)$	$0.2913^{+0.0090}_{-0.0060}$
$\boldsymbol{A^{dust}_{143\times217}}$	1.02 ± 0.16	z_*	1089.80 ± 0.41	$\sigma_8(2.33)$	$0.299^{+0.011}_{-0.0067}$
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	r_*	146.2 ± 2.1	f^{143}_{2000}	29 ± 3
$\boldsymbol{c_{217}}$	1.0010 ± 0.0016	$100\theta_*$	1.04144 ± 0.00060	f^{217}_{2000}	106.1 ± 2.2
$\boldsymbol{c_{TE}}$	0.9958 ± 0.0051	$D_M(z_*)$/Gpc	14.04 ± 0.19	$f^{143\times217}_{2000}$	31.2 ± 2.5
$\boldsymbol{c_{EE}}$	0.9900 ± 0.0056	z_{drag}	1059.11 ± 0.82	$\chi^2_{lensing}$	9.20 ± 0.93
H_0	65.8 ± 1.9	r_{drag}	148.9 ± 2.1	χ^2_{simall}	396.9 ± 1.7
Ω_Λ	$0.675^{+0.019}_{-0.012}$	k_D	0.1395 ± 0.0015	χ^2_{lowl}	24.2 ± 1.5
Ω_m	$0.325^{+0.012}_{-0.019}$	$100\theta_D$	0.16050 ± 0.00051	$\chi^2_{CamSpec}$	11514.2 ± 5.7
$\Omega_m h^2$	$0.1407^{+0.0033}_{-0.0037}$	z_{eq}	3416 ± 38	χ^2_{prior}	7.9 ± 3.5
$\Omega_\nu h^2$	< 0.00125	k_{eq}	0.01030 ± 0.00012	χ^2_{CMB}	11944.5 ± 6.0

$\bar{\chi}^2_{eff} = 11952.40$; $\Delta\bar{\chi}^2_{eff} = 0.95$; $R - 1 = 0.01735$

9.11 base_nnu_mnu_CamSpecHM_TTTEEE_lowl_lowE_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02218 ± 0.00023	$\Omega_m h^3$	$0.0931^{+0.0040}_{-0.0046}$	$100\theta_{eq}$	0.8120 ± 0.0075
$\boldsymbol{\Omega_c h^2}$	0.1178 ± 0.0034	σ_8	$0.790^{+0.032}_{-0.014}$	$100\theta_{s,eq}$	0.4488 ± 0.0038
$\boldsymbol{100\theta_{MC}}$	1.04105 ± 0.00049	S_8	0.823 ± 0.017	$H(0.15)$	$71.3^{+2.0}_{-1.8}$
$\boldsymbol{\tau}$	$0.0538^{+0.0043}_{-0.0080}$	$\sigma_8\Omega_m^{0.5}$	0.4507 ± 0.0095	$D_M(0.15)$	658^{+16}_{-21}
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 0.148	$\sigma_8\Omega_m^{0.25}$	$0.597^{+0.017}_{-0.0098}$	$H(0.38)$	81.5 ± 1.8
$\boldsymbol{N_{eff}}$	$2.91^{+0.20}_{-0.23}$	$\sigma_8/h^{0.5}$	$0.973^{+0.028}_{-0.013}$	$D_M(0.38)$	1565^{+37}_{-44}
$\boldsymbol{\ln(10^{10}A_s)}$	$3.035^{+0.015}_{-0.018}$	$r_{drag}h$	$97.9^{+2.6}_{-1.6}$	$H(0.51)$	88.3 ± 1.8
$\boldsymbol{n_s}$	0.9605 ± 0.0093	$\langle d^2\rangle^{1/2}$	2.439 ± 0.031	$D_M(0.51)$	2024^{+46}_{-54}
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	z_{re}	$7.61^{+0.47}_{-0.83}$	$H(0.61)$	94.0 ± 1.7
$\boldsymbol{A^{PS}_{100}}$	238 ± 25	$10^9 A_s$	$2.081^{+0.030}_{-0.039}$	$D_M(0.61)$	2354^{+52}_{-61}
$\boldsymbol{A^{PS}_{143}}$	38 ± 9	$10^9 A_s e^{-2\tau}$	1.868 ± 0.020	$H(2.33)$	234.8 ± 3.1
$\boldsymbol{A^{PS}_{217}}$	103 ± 10	D_{40}	1232 ± 16	$D_M(2.33)$	5842 ± 100
$\boldsymbol{A^{CIB}_{217}}$	39 ± 7	D_{220}	5717 ± 39	$f\sigma_8(0.15)$	$0.4548^{+0.0095}_{-0.0085}$
$\boldsymbol{A^{tSZ}_{143}}$	$3.9^{+1.9}_{-2.5}$	D_{810}	2533 ± 14	$\sigma_8(0.15)$	$0.729^{+0.031}_{-0.014}$
$\boldsymbol{r^{PS}_{143\times217}}$	0.66 ± 0.13	D_{1420}	816.6 ± 5.1	$f\sigma_8(0.38)$	$0.470^{+0.012}_{-0.0075}$
$\boldsymbol{r^{CIB}_{143\times217}}$	$0.54^{+0.38}_{-0.21}$	D_{2000}	230.9 ± 2.1	$\sigma_8(0.38)$	$0.645^{+0.029}_{-0.013}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$n_{s,0.002}$	0.9605 ± 0.0093	$f\sigma_8(0.51)$	$0.467^{+0.013}_{-0.0071}$
$\boldsymbol{A^{kSZ}}$	< 6.12	Y_P	0.2434 ± 0.0031	$\sigma_8(0.51)$	$0.603^{+0.027}_{-0.013}$
$\boldsymbol{A^{dust}_{100}}$	1.01 ± 0.20	Y_P^{BBN}	0.2447 ± 0.0031	$f\sigma_8(0.61)$	$0.461^{+0.014}_{-0.0070}$
$\boldsymbol{A^{dust}_{143}}$	0.96 ± 0.18	10^5D/H	2.574 ± 0.058	$\sigma_8(0.61)$	$0.573^{+0.026}_{-0.012}$
$\boldsymbol{A^{dust}_{217}}$	0.98 ± 0.10	Age/Gyr	13.98 ± 0.24	$f\sigma_8(2.33)$	$0.290^{+0.012}_{-0.0060}$
$\boldsymbol{A^{dust}_{143\times217}}$	1.02 ± 0.16	z_*	1089.84 ± 0.43	$\sigma_8(2.33)$	$0.297^{+0.014}_{-0.0068}$
$\boldsymbol{c_{100}}$	0.9975 ± 0.0010	r_*	145.9 ± 2.1	f^{143}_{2000}	29 ± 3
$\boldsymbol{c_{217}}$	1.0010 ± 0.0016	$100\theta_*$	1.04138 ± 0.00061	f^{217}_{2000}	106.3 ± 2.3
$\boldsymbol{c_{TE}}$	0.9962 ± 0.0052	$D_M(z_*)$/Gpc	14.01 ± 0.19	$f^{143\times217}_{2000}$	31.5 ± 2.5
$\boldsymbol{c_{EE}}$	0.9905 ± 0.0057	z_{drag}	1059.22 ± 0.83	χ^2_{simall}	396.8 ± 1.7
H_0	$65.9^{+2.1}_{-1.8}$	r_{drag}	148.6 ± 2.2	χ^2_{lowl}	23.8 ± 1.5
Ω_Λ	$0.674^{+0.023}_{-0.012}$	k_D	0.1397 ± 0.0015	$\chi^2_{CamSpec}$	11515.1 ± 6.0
Ω_m	$0.326^{+0.012}_{-0.023}$	$100\theta_D$	0.16058 ± 0.00052	χ^2_{prior}	7.9 ± 3.5
$\Omega_m h^2$	$0.1413^{+0.0035}_{-0.0039}$	z_{eq}	3407 ± 40	χ^2_{CMB}	11935.7 ± 6.0
$\Omega_\nu h^2$	< 0.00160	k_{eq}	0.01030 ± 0.00013		

$\bar{\chi}^2_{eff} = 11943.60$; $\Delta\bar{\chi}^2_{eff} = 1.41$; $R - 1 = 0.01059$

9.12 base_nnu_mnu_CamSpecHM_TTTEEE_lowl_lowE_post_lensing_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02216 ± 0.00022	$\Omega_m h^3$	$0.0927^{+0.0039}_{-0.0044}$	$100\theta_{eq}$	0.8108 ± 0.0071
$\boldsymbol{\Omega_c h^2}$	0.1175 ± 0.0032	σ_8	$0.796^{+0.023}_{-0.013}$	$100\theta_{s,eq}$	0.4482 ± 0.0036
$\boldsymbol{100\theta_{MC}}$	1.04110 ± 0.00048	S_8	0.827 ± 0.013	$H(0.15)$	71.2 ± 1.8
$\boldsymbol{\tau}$	$0.0543^{+0.0046}_{-0.0079}$	$\sigma_8\Omega_m^{0.5}$	0.4532 ± 0.0071	$D_M(0.15)$	658^{+16}_{-19}
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 0.119	$\sigma_8\Omega_m^{0.25}$	$0.601^{+0.011}_{-0.0079}$	$H(0.38)$	81.4 ± 1.7
$\boldsymbol{N_{eff}}$	2.88 ± 0.21	$\sigma_8/h^{0.5}$	$0.981^{+0.018}_{-0.011}$	$D_M(0.38)$	1565 ± 39
$\boldsymbol{\ln(10^{10} A_s)}$	$3.036^{+0.014}_{-0.018}$	$r_{drag}h$	$98.1^{+2.2}_{-1.5}$	$H(0.51)$	88.2 ± 1.7
$\boldsymbol{n_s}$	0.9590 ± 0.0092	$\langle d^2\rangle^{1/2}$	2.448 ± 0.025	$D_M(0.51)$	2025 ± 48
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0025	z_{re}	$7.65^{+0.50}_{-0.82}$	$H(0.61)$	93.9 ± 1.7
$\boldsymbol{A^{PS}_{100}}$	237 ± 25	$10^9 A_s$	$2.082^{+0.030}_{-0.038}$	$D_M(0.61)$	2355 ± 54
$\boldsymbol{A^{PS}_{143}}$	37 ± 9	$10^9 A_s e^{-2\tau}$	1.868 ± 0.019	$H(2.33)$	234.4 ± 3.0
$\boldsymbol{A^{PS}_{217}}$	103 ± 10	D_{40}	1236 ± 15	$D_M(2.33)$	5849 ± 98
$\boldsymbol{A^{CIB}_{217}}$	39 ± 7	D_{220}	5721 ± 39	$f\sigma_8(0.15)$	0.4571 ± 0.0066
$\boldsymbol{A^{tSZ}_{143}}$	$3.9^{+2.0}_{-2.5}$	D_{810}	2534 ± 14	$\sigma_8(0.15)$	$0.734^{+0.022}_{-0.013}$
$\boldsymbol{r^{PS}_{143\times217}}$	0.67 ± 0.13	D_{1420}	816.9 ± 5.0	$f\sigma_8(0.38)$	$0.4724^{+0.0073}_{-0.0060}$
$\boldsymbol{r^{CIB}_{143\times217}}$	$0.54^{+0.37}_{-0.22}$	D_{2000}	231.2 ± 2.1	$\sigma_8(0.38)$	$0.650^{+0.021}_{-0.012}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$n_{s,0.002}$	0.9590 ± 0.0092	$f\sigma_8(0.51)$	$0.4696^{+0.0082}_{-0.0060}$
$\boldsymbol{A^{kSZ}}$	< 5.99	Y_P	0.2430 ± 0.0030	$\sigma_8(0.51)$	$0.608^{+0.020}_{-0.012}$
$\boldsymbol{A^{dust}_{100}}$	1.00 ± 0.20	Y_P^{BBN}	0.2443 ± 0.0030	$f\sigma_8(0.61)$	$0.4638^{+0.0089}_{-0.0061}$
$\boldsymbol{A^{dust}_{143}}$	0.96 ± 0.18	10^5D/H	2.566 ± 0.056	$\sigma_8(0.61)$	$0.578^{+0.020}_{-0.012}$
$\boldsymbol{A^{dust}_{217}}$	0.98 ± 0.10	Age/Gyr	14.00 ± 0.23	$f\sigma_8(2.33)$	$0.2915^{+0.0092}_{-0.0058}$
$\boldsymbol{A^{dust}_{143\times217}}$	1.02 ± 0.16	z_*	1089.80 ± 0.41	$\sigma_8(2.33)$	$0.300^{+0.011}_{-0.0066}$
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	r_*	146.1 ± 2.0	f^{143}_{2000}	29 ± 3
$\boldsymbol{c_{217}}$	1.0010 ± 0.0016	$100\theta_*$	1.04143 ± 0.00060	f^{217}_{2000}	106.1 ± 2.2
$\boldsymbol{c_{TE}}$	0.9957 ± 0.0051	$D_M(z_*)$/Gpc	14.03 ± 0.19	$f^{143\times217}_{2000}$	31.2 ± 2.4
$\boldsymbol{c_{EE}}$	0.9901 ± 0.0056	z_{drag}	1059.14 ± 0.82	$\chi^2_{lensing}$	9.17 ± 0.90
H_0	65.9 ± 1.9	r_{drag}	148.9 ± 2.1	χ^2_{simall}	396.8 ± 1.7
Ω_Λ	$0.675^{+0.020}_{-0.012}$	k_D	0.1395 ± 0.0015	χ^2_{lowl}	24.2 ± 1.5
Ω_m	$0.325^{+0.012}_{-0.020}$	$100\theta_D$	0.16051 ± 0.00051	$\chi^2_{CamSpec}$	11514.1 ± 5.7
$\Omega_m h^2$	$0.1407^{+0.0033}_{-0.0037}$	z_{eq}	3414 ± 38	χ^2_{prior}	7.9 ± 3.4
$\Omega_\nu h^2$	< 0.00128	k_{eq}	0.01030 ± 0.00012	χ^2_{CMB}	11944.3 ± 6.0

$\bar{\chi}^2_{eff} = 11952.23$; $\Delta\bar{\chi}^2_{eff} = 0.98$; $R - 1 = 0.01593$

9.13 base_nnu_mnu_plikHM_TT_lowl_lowE_BAO

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022197	0.02226 ± 0.00023	$\sigma_8\Omega_m^{0.5}$	0.4555	0.451 ± 0.010	$D_M(0.15)$	639.2	637 ± 13
$\boldsymbol{\Omega_c h^2}$	0.11940	0.1205 ± 0.0039	$\sigma_8\Omega_m^{0.25}$	0.6116	$0.605^{+0.014}_{-0.011}$	$H(0.38)$	83.13	83.6 ± 1.5
$\boldsymbol{100\theta_{MC}}$	1.04098	1.04083 ± 0.00057	$\sigma_8/h^{0.5}$	0.9970	$0.983^{+0.021}_{-0.014}$	$D_M(0.38)$	1525.4	1519 ± 30
$\boldsymbol{\tau}$	0.0530	0.0539 ± 0.0079	$r_{drag}h$	100.08	99.9 ± 1.1	$H(0.51)$	89.81	90.3 ± 1.6
$\boldsymbol{\Sigma m_\nu}$ [eV]	0.00096	< 0.0822	$\langle d^2\rangle^{1/2}$	2.4436	$2.425^{+0.035}_{-0.031}$	$D_M(0.51)$	1976.6	1968 ± 38
$\boldsymbol{N_{eff}}$	3.037	3.14 ± 0.24	z_{re}	7.56	7.67 ± 0.82	$H(0.61)$	95.39	95.9 ± 1.6
$\boldsymbol{\ln(10^{10}A_s)}$	3.0390	3.044 ± 0.020	$10^9 A_s$	2.0885	2.099 ± 0.041	$D_M(0.61)$	2300.6	2290 ± 43
$\boldsymbol{n_s}$	0.9656	0.9694 ± 0.0090	$10^9 A_s e^{-2\tau}$	1.8785	1.884 ± 0.021	$H(2.33)$	235.64	237.1 ± 3.5
$\boldsymbol{y_{cal}}$	1.00021	1.0005 ± 0.0025	D_{40}	1226.6	1223 ± 16	$D_M(2.33)$	5760	5730 ± 95
$\boldsymbol{A_{217}^{CIB}}$	49.8	48 ± 7	D_{220}	5712.7	5718 ± 41	$f\sigma_8(0.15)$	0.4596	0.4559 ± 0.0097
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.13	—	D_{810}	2535.0	2537 ± 14	$\sigma_8(0.15)$	0.7591	$0.750^{+0.018}_{-0.014}$
$\boldsymbol{A_{143}^{tSZ}}$	7.13	5.0 ± 2.0	D_{1420}	815.2	814.7 ± 5.2	$f\sigma_8(0.38)$	0.4789	$0.475^{+0.010}_{-0.0087}$
$\boldsymbol{A_{100}^{PS}}$	255.5	265 ± 29	D_{2000}	230.07	229.3 ± 2.2	$\sigma_8(0.38)$	0.6731	$0.665^{+0.016}_{-0.013}$
$\boldsymbol{A_{143}^{PS}}$	46.1	50 ± 9	$n_{s,0.002}$	0.9656	0.9694 ± 0.0090	$f\sigma_8(0.51)$	0.4779	$0.4738^{+0.0099}_{-0.0085}$
$\boldsymbol{A_{143\times217}^{PS}}$	41.6	44 ± 9	Y_P	0.24521	0.2466 ± 0.0032	$\sigma_8(0.51)$	0.6300	$0.623^{+0.015}_{-0.012}$
$\boldsymbol{A_{217}^{PS}}$	117.0	115 ± 10	Y_P^{BBN}	0.24653	0.2479 ± 0.0032	$f\sigma_8(0.61)$	0.4731	$0.4690^{+0.0098}_{-0.0083}$
$\boldsymbol{A^{kSZ}}$	0.01	< 5.15	10^5D/H	2.616	2.641 ± 0.068	$\sigma_8(0.61)$	0.5995	$0.593^{+0.014}_{-0.011}$
$\boldsymbol{A_{100}^{dustTT}}$	8.93	9.0 ± 1.8	Age/Gyr	13.791	13.72 ± 0.23	$f\sigma_8(2.33)$	0.3015	$0.2990^{+0.0067}_{-0.0056}$
$\boldsymbol{A_{143}^{dustTT}}$	10.82	10.8 ± 1.8	z_*	1090.074	1090.20 ± 0.49	$\sigma_8(2.33)$	0.3114	$0.3083^{+0.0074}_{-0.0061}$
$\boldsymbol{A_{143\times217}^{dustTT}}$	19.04	18.4 ± 3.3	r_*	144.77	144.0 ± 2.2	f_{2000}^{143}	30.28	31.7 ± 3.4
$\boldsymbol{A_{217}^{dustTT}}$	94.1	93.3 ± 7.4	$100\theta_*$	1.04116	1.04097 ± 0.00069	$f_{2000}^{143\times217}$	33.06	34.0 ± 2.5
$\boldsymbol{c_{100}}$	0.99964	0.99961 ± 0.00062	$D_M(z_*)$/Gpc	13.905	13.83 ± 0.21	f_{2000}^{217}	107.57	108.5 ± 2.3
$\boldsymbol{c_{217}}$	0.99824	0.99828 ± 0.00062	z_{drag}	1059.47	1059.78 ± 0.88	χ^2_{simall}	395.86	397.1 ± 1.8
H_0	67.85	68.2 ± 1.5	r_{drag}	147.50	146.7 ± 2.3	χ^2_{lowl}	23.26	22.9 ± 1.3
Ω_Λ	0.6924	0.6910 ± 0.0084	k_D	0.14034	0.1409 ± 0.0017	χ^2_{plik}	758.5	773.3 ± 5.9
Ω_m	0.3076	0.3090 ± 0.0084	$100\theta_D$	0.16100	0.16125 ± 0.00059	χ^2_{6DF}	0.0068	0.059 ± 0.083
$\Omega_m h^2$	0.14160	0.1435 ± 0.0041	z_{eq}	3387.6	3368 ± 35	χ^2_{MGS}	1.47	1.45 ± 0.59
$\Omega_\nu h^2$	0.000010	< 0.000884	k_{eq}	0.010333	0.01034 ± 0.00015	$\chi^2_{DR12BAO}$	3.80	4.7 ± 1.7
$\Omega_m h^3$	0.09608	0.0978 ± 0.0046	$100\theta_{eq}$	0.8154	0.8192 ± 0.0067	χ^2_{prior}	1.48	7.4 ± 3.8
σ_8	0.8213	$0.811^{+0.019}_{-0.015}$	$100\theta_{s,eq}$	0.45063	0.4525 ± 0.0034	χ^2_{BAO}	5.28	6.2 ± 1.4
S_8	0.8315	0.823 ± 0.019	$H(0.15)$	73.09	73.4 ± 1.5	χ^2_{CMB}	1177.6	1193.2 ± 5.8

Best-fit $\chi^2_{eff} = 1184.40$; $\Delta\chi^2_{eff} = -1.35$; $\bar{\chi}^2_{eff} = 1206.80$; $\Delta\bar{\chi}^2_{eff} = 0.78$; $R - 1 = 0.00789$

χ^2_{eff}: BAO - 6DF: 0.01 (Δ -0.01) MGS: 1.47 (Δ 0.19) DR12BAO: 3.80 (Δ -0.39) CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.86 (Δ -0.03) commander_dx12_v3_2_29: 23.26 (Δ 0.44) plik_rd12_HM_v22_TT: 758.52 (Δ -1.58)

9.14 base_nnu_mnu_plikHM_TT_lowl_lowE_BAO_post_Pantheon

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022186	0.02228 ± 0.00023	$\sigma_8\Omega_m^{0.25}$	0.6112	$0.605^{+0.013}_{-0.011}$	$D_M(0.38)$	1526.0	1515 ± 29
$\boldsymbol{\Omega_c h^2}$	0.11923	0.1206 ± 0.0039	$\sigma_8/h^{0.5}$	0.9967	$0.983^{+0.020}_{-0.014}$	$H(0.51)$	89.76	90.4 ± 1.5
$\boldsymbol{100\theta_{MC}}$	1.04099	1.04082 ± 0.00057	$r_{drag}h$	100.11	100.10 ± 0.98	$D_M(0.51)$	1977.4	1964 ± 37
$\boldsymbol{\tau}$	0.0530	0.0541 ± 0.0079	$\langle d^2\rangle^{1/2}$	2.4441	$2.423^{+0.034}_{-0.031}$	$H(0.61)$	95.35	96.1 ± 1.6
$\boldsymbol{\Sigma m_\nu}$ [eV]	0.0012	< 0.0804	z_{re}	7.56	7.69 ± 0.82	$D_M(0.61)$	2301.6	2285 ± 42
$\boldsymbol{N_{eff}}$	3.031	3.16 ± 0.24	$10^9 A_s$	2.0885	2.101 ± 0.041	$H(2.33)$	235.49	237.2 ± 3.5
$\boldsymbol{\ln(10^{10}A_s)}$	3.0390	3.045 ± 0.019	$10^9 A_s e^{-2\tau}$	1.8786	1.885 ± 0.021	$D_M(2.33)$	5763	5722 ± 94
$\boldsymbol{n_s}$	0.9652	0.9702 ± 0.0088	D_{40}	1227.9	1221 ± 16	$f\sigma_8(0.15)$	0.4593	0.4554 ± 0.0095
$\boldsymbol{y_{cal}}$	1.00032	1.0005 ± 0.0025	D_{220}	5716.7	5719 ± 41	$\sigma_8(0.15)$	0.7588	$0.751^{+0.017}_{-0.014}$
$\boldsymbol{A_{217}^{CIB}}$	49.3	48 ± 7	D_{810}	2535.7	2537 ± 14	$f\sigma_8(0.38)$	0.4786	$0.4747^{+0.0099}_{-0.0086}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.21	—	D_{1420}	815.3	814.7 ± 5.2	$\sigma_8(0.38)$	0.6728	$0.666^{+0.016}_{-0.012}$
$\boldsymbol{A_{143}^{tSZ}}$	7.10	5.0 ± 2.0	D_{2000}	230.10	229.3 ± 2.2	$f\sigma_8(0.51)$	0.4776	$0.4737^{+0.0098}_{-0.0084}$
$\boldsymbol{A_{100}^{PS}}$	255.0	265 ± 29	$n_{s,0.002}$	0.9652	0.9702 ± 0.0088	$\sigma_8(0.51)$	0.6297	$0.624^{+0.015}_{-0.012}$
$\boldsymbol{A_{143}^{PS}}$	47.5	50 ± 8	Y_P	0.24512	0.2468 ± 0.0032	$f\sigma_8(0.61)$	0.4729	$0.4691^{+0.0097}_{-0.0083}$
$\boldsymbol{A_{143\times217}^{PS}}$	43.9	44 ± 9	Y_P^{BBN}	0.24644	0.2481 ± 0.0032	$\sigma_8(0.61)$	0.5992	$0.593^{+0.014}_{-0.011}$
$\boldsymbol{A_{217}^{PS}}$	118.0	115 ± 11	10^5D/H	2.615	2.642 ± 0.068	$f\sigma_8(2.33)$	0.3013	$0.2995^{+0.0065}_{-0.0055}$
$\boldsymbol{A^{kSZ}}$	0.00	< 5.20	Age/Gyr	13.798	13.70 ± 0.22	$\sigma_8(2.33)$	0.3113	$0.3088^{+0.0072}_{-0.0059}$
$\boldsymbol{A_{100}^{dustTT}}$	8.85	9.0 ± 1.8	z_*	1090.068	1090.19 ± 0.49	f_{2000}^{143}	30.31	31.8 ± 3.4
$\boldsymbol{A_{143}^{dustTT}}$	10.84	10.8 ± 1.8	r_*	144.85	143.8 ± 2.2	$f_{2000}^{143\times217}$	33.13	34.0 ± 2.5
$\boldsymbol{A_{143\times217}^{dustTT}}$	19.26	18.4 ± 3.3	$100\theta_*$	1.04117	1.04095 ± 0.00069	f_{2000}^{217}	107.62	108.5 ± 2.3
$\boldsymbol{A_{217}^{dustTT}}$	94.3	93.3 ± 7.4	$D_M(z_*)$/Gpc	13.913	13.82 ± 0.21	χ^2_{simall}	395.86	397.1 ± 1.8
$\boldsymbol{c_{100}}$	0.99964	0.99960 ± 0.00062	z_{drag}	1059.44	1059.84 ± 0.87	χ^2_{lowl}	23.35	22.7 ± 1.2
$\boldsymbol{c_{217}}$	0.99824	0.99828 ± 0.00063	r_{drag}	147.58	146.5 ± 2.3	χ^2_{plik}	758.5	773.5 ± 5.9
H_0	67.83	68.3 ± 1.4	k_D	0.14026	0.1410 ± 0.0017	χ^2_{JLA}	1036.150	1036.28 ± 0.36
Ω_Λ	0.6926	0.6924 ± 0.0078	$100\theta_D$	0.16099	0.16128 ± 0.00059	χ^2_{6DF}	0.0060	0.047 ± 0.066
Ω_m	0.3074	0.3076 ± 0.0078	z_{eq}	3386.3	3364 ± 34	χ^2_{MGS}	1.47	1.54 ± 0.57
$\Omega_m h^2$	0.14143	0.1436 ± 0.0041	k_{eq}	0.010325	0.01034 ± 0.00015	$\chi^2_{DR12BAO}$	3.77	4.4 ± 1.4
$\Omega_\nu h^2$	0.000013	< 0.000864	$100\theta_{eq}$	0.8156	$0.8200^{+0.0059}_{-0.0066}$	χ^2_{prior}	1.41	7.4 ± 3.8
$\Omega_m h^3$	0.09593	0.0982 ± 0.0046	$100\theta_{s,eq}$	0.45074	$0.4529^{+0.0030}_{-0.0034}$	χ^2_{BAO}	5.25	6.0 ± 1.1
σ_8	0.8208	$0.812^{+0.019}_{-0.015}$	$H(0.15)$	73.06	73.6 ± 1.4	χ^2_{CMB}	1177.7	1193.3 ± 5.8
S_8	0.8309	0.822 ± 0.018	$D_M(0.15)$	639.4	635 ± 13			
$\sigma_8\Omega_m^{0.5}$	0.4551	0.450 ± 0.010	$H(0.38)$	83.09	83.7 ± 1.5			

Best-fit $\chi^2_{eff} = 2220.56$; $\bar{\chi}^2_{eff} = 2242.99$; $R - 1 = 0.00861$

χ^2_{eff}: BAO - 6DF: 0.01 MGS: 1.47 DR12BAO: 3.77 CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.86 commander_dx12_v3_2_29: 23.35 plik_rd12_HM_v22_TT: 758.53 SN - JLA Pantheon: 1036.15

9.15 base_nnu_mnu_plikHM_TT_lowl_lowE_BAO_post_Aver15

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02221 ± 0.00022	$\sigma_8\Omega_m^{0.25}$	$0.603^{+0.013}_{-0.011}$	$D_M(0.38)$	1529 ± 25
$\boldsymbol{\Omega_c h^2}$	0.1191 ± 0.0032	$\sigma_8/h^{0.5}$	$0.983^{+0.020}_{-0.014}$	$H(0.51)$	89.7 ± 1.2
$\boldsymbol{100\theta_{MC}}$	1.04096 ± 0.00052	$r_{drag}h$	99.8 ± 1.0	$D_M(0.51)$	1981 ± 31
$\boldsymbol{\tau}$	0.0538 ± 0.0079	$\langle d^2\rangle^{1/2}$	$2.429^{+0.034}_{-0.030}$	$H(0.61)$	95.3 ± 1.3
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 0.0759	z_{re}	7.63 ± 0.81	$D_M(0.61)$	2305 ± 35
$\boldsymbol{N_{eff}}$	3.06 ± 0.18	$10^9 A_s$	2.092 ± 0.038	$H(2.33)$	235.9 ± 2.8
$\boldsymbol{\ln(10^{10}A_s)}$	3.040 ± 0.018	$10^9 A_s e^{-2\tau}$	1.878 ± 0.018	$D_M(2.33)$	5764 ± 76
$\boldsymbol{n_s}$	0.9665 ± 0.0075	D_{40}	1226 ± 15	$f\sigma_8(0.15)$	0.4551 ± 0.0094
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	D_{220}	5719 ± 41	$\sigma_8(0.15)$	$0.747^{+0.017}_{-0.012}$
$\boldsymbol{A_{217}^{CIB}}$	48 ± 7	D_{810}	2535 ± 14	$f\sigma_8(0.38)$	$0.4737^{+0.0095}_{-0.0083}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{1420}	815.1 ± 5.1	$\sigma_8(0.38)$	$0.663^{+0.015}_{-0.011}$
$\boldsymbol{A_{143}^{tSZ}}$	5.1 ± 2.0	D_{2000}	229.8 ± 2.1	$f\sigma_8(0.51)$	$0.4725^{+0.0093}_{-0.0079}$
$\boldsymbol{A_{100}^{PS}}$	263 ± 29	$n_{s,0.002}$	0.9665 ± 0.0075	$\sigma_8(0.51)$	$0.620^{+0.014}_{-0.010}$
$\boldsymbol{A_{143}^{PS}}$	49 ± 8	Y_P	0.2454 ± 0.0025	$f\sigma_8(0.61)$	$0.4676^{+0.0092}_{-0.0077}$
$\boldsymbol{A_{143\times217}^{PS}}$	43 ± 9	Y_P^{BBN}	0.2467 ± 0.0025	$\sigma_8(0.61)$	$0.590^{+0.013}_{-0.0099}$
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	10^5D/H	2.620 ± 0.058	$f\sigma_8(2.33)$	$0.2977^{+0.0061}_{-0.0049}$
$\boldsymbol{A^{kSZ}}$	< 4.91	Age/Gyr	13.80 ± 0.18	$\sigma_8(2.33)$	$0.3069^{+0.0068}_{-0.0053}$
$\boldsymbol{A_{100}^{dustTT}}$	9.0 ± 1.8	z_*	1090.06 ± 0.43	f_{2000}^{143}	31.0 ± 3.2
$\boldsymbol{A_{143}^{dustTT}}$	10.8 ± 1.8	r_*	144.8 ± 1.8	$f_{2000}^{143\times217}$	33.4 ± 2.3
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.3 ± 3.3	$100\theta_*$	1.04116 ± 0.00060	f_{2000}^{217}	108.0 ± 2.1
$\boldsymbol{A_{217}^{dustTT}}$	93.4 ± 7.4	$D_M(z_*)$/Gpc	13.90 ± 0.17	χ^2_{simall}	397.0 ± 1.8
$\boldsymbol{c_{100}}$	0.99960 ± 0.00062	z_{drag}	1059.49 ± 0.74	χ^2_{lowl}	23.2 ± 1.2
$\boldsymbol{c_{217}}$	0.99827 ± 0.00063	r_{drag}	147.5 ± 1.9	χ^2_{plik}	772.5 ± 5.7
H_0	67.7 ± 1.2	k_D	0.1403 ± 0.0014	χ^2_{Aver15}	0.61 ± 0.79
Ω_Λ	$0.6897^{+0.0085}_{-0.0077}$	$100\theta_D$	0.16106 ± 0.00049	χ^2_{6DF}	0.064 ± 0.088
Ω_m	0.3103 ± 0.0082	z_{eq}	3374 ± 34	χ^2_{MGS}	1.37 ± 0.57
$\Omega_m h^2$	0.1420 ± 0.0033	k_{eq}	0.01030 ± 0.00013	$\chi^2_{DR12BAO}$	4.8 ± 1.8
$\Omega_\nu h^2$	< 0.000816	$100\theta_{eq}$	0.8180 ± 0.0063	χ^2_{prior}	7.4 ± 3.7
$\Omega_m h^3$	0.0961 ± 0.0036	$100\theta_{s,eq}$	0.4520 ± 0.0032	χ^2_{BAO}	6.3 ± 1.5
σ_8	$0.809^{+0.018}_{-0.013}$	$H(0.15)$	72.9 ± 1.2	χ^2_{CMB}	1192.7 ± 5.6
S_8	0.822 ± 0.018	$D_M(0.15)$	641 ± 11		
$\sigma_8\Omega_m^{0.5}$	0.4504 ± 0.0099	$H(0.38)$	83.0 ± 1.2		

$\bar{\chi}^2_{eff} = 1206.94$; $R - 1 = 0.00884$

9.16 base_nnu_mnu_plikHM_TT_lowl_lowE_BAO_post_Cooke17_Aver15

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02221 ± 0.00022	$\sigma_8\Omega_m^{0.25}$	$0.603^{+0.013}_{-0.010}$	$D_M(0.38)$	1529 ± 23
$\boldsymbol{\Omega_c h^2}$	0.1191 ± 0.0029	$\sigma_8/h^{0.5}$	$0.983^{+0.020}_{-0.014}$	$H(0.51)$	89.7 ± 1.2
$\boldsymbol{100\theta_{MC}}$	1.04096 ± 0.00050	$r_{drag}h$	99.8 ± 1.0	$D_M(0.51)$	1981 ± 30
$\boldsymbol{\tau}$	0.0538 ± 0.0078	$\langle d^2\rangle^{1/2}$	$2.429^{+0.034}_{-0.030}$	$H(0.61)$	95.3 ± 1.2
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 0.0760	z_{re}	7.64 ± 0.81	$D_M(0.61)$	2305 ± 34
$\boldsymbol{N_{eff}}$	3.05 ± 0.17	$10^9 A_s$	2.091 ± 0.038	$H(2.33)$	235.8 ± 2.5
$\boldsymbol{\ln(10^{10}A_s)}$	3.040 ± 0.018	$10^9 A_s e^{-2\tau}$	1.878 ± 0.017	$D_M(2.33)$	5764 ± 71
$\boldsymbol{n_s}$	0.9665 ± 0.0072	D_{40}	1226 ± 15	$f\sigma_8(0.15)$	0.4551 ± 0.0092
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	D_{220}	5719 ± 40	$\sigma_8(0.15)$	$0.747^{+0.016}_{-0.012}$
$\boldsymbol{A_{217}^{CIB}}$	48 ± 7	D_{810}	2535 ± 14	$f\sigma_8(0.38)$	$0.4737^{+0.0094}_{-0.0080}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{1420}	815.2 ± 5.0	$\sigma_8(0.38)$	$0.663^{+0.015}_{-0.011}$
$\boldsymbol{A_{143}^{tSZ}}$	5.1 ± 2.0	D_{2000}	229.8 ± 1.9	$f\sigma_8(0.51)$	$0.4724^{+0.0092}_{-0.0076}$
$\boldsymbol{A_{100}^{PS}}$	262 ± 28	$n_{s,0.002}$	0.9665 ± 0.0072	$\sigma_8(0.51)$	$0.620^{+0.014}_{-0.0099}$
$\boldsymbol{A_{143}^{PS}}$	49 ± 8	Y_P	0.2454 ± 0.0023	$f\sigma_8(0.61)$	$0.4676^{+0.0091}_{-0.0074}$
$\boldsymbol{A_{143\times217}^{PS}}$	43 ± 9	Y_P^{BBN}	0.2467 ± 0.0023	$\sigma_8(0.61)$	$0.590^{+0.013}_{-0.0095}$
$\boldsymbol{A_{217}^{PS}}$	115 ± 11	10^5D/H	2.619 ± 0.049	$f\sigma_8(2.33)$	$0.2977^{+0.0060}_{-0.0047}$
$\boldsymbol{A^{kSZ}}$	< 4.88	Age/Gyr	13.80 ± 0.17	$\sigma_8(2.33)$	$0.3069^{+0.0067}_{-0.0050}$
$\boldsymbol{A_{100}^{dustTT}}$	8.9 ± 1.8	z_*	1090.05 ± 0.37	f_{2000}^{143}	31.0 ± 3.1
$\boldsymbol{A_{143}^{dustTT}}$	10.8 ± 1.8	r_*	144.8 ± 1.6	$f_{2000}^{143\times217}$	33.4 ± 2.2
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.3 ± 3.3	$100\theta_*$	1.04116 ± 0.00056	f_{2000}^{217}	108.0 ± 2.0
$\boldsymbol{A_{217}^{dustTT}}$	93.4 ± 7.4	$D_M(z_*)$/Gpc	13.91 ± 0.15	χ^2_{simall}	397.0 ± 1.8
$\boldsymbol{c_{100}}$	0.99960 ± 0.00062	z_{drag}	1059.49 ± 0.73	χ^2_{lowl}	23.2 ± 1.2
$\boldsymbol{c_{217}}$	0.99827 ± 0.00063	r_{drag}	147.5 ± 1.7	χ^2_{plik}	772.3 ± 5.6
H_0	67.7 ± 1.2	k_D	0.1403 ± 0.0013	χ^2_{Aver15}	0.54 ± 0.69
Ω_Λ	$0.6898^{+0.0085}_{-0.0078}$	$100\theta_D$	0.16105 ± 0.00042	$\chi^2_{Cooke17}$	0.27 ± 0.39
Ω_m	0.3102 ± 0.0082	z_{eq}	3374 ± 33	χ^2_{6DF}	0.064 ± 0.088
$\Omega_m h^2$	0.1420 ± 0.0030	k_{eq}	0.01030 ± 0.00012	χ^2_{MGS}	1.37 ± 0.57
$\Omega_\nu h^2$	< 0.000818	$100\theta_{eq}$	0.8180 ± 0.0062	$\chi^2_{DR12BAO}$	4.8 ± 1.8
$\Omega_m h^3$	0.0961 ± 0.0033	$100\theta_{s,eq}$	0.4520 ± 0.0032	χ^2_{prior}	7.4 ± 3.7
σ_8	$0.809^{+0.018}_{-0.013}$	$H(0.15)$	72.9 ± 1.1	χ^2_{BAO}	6.3 ± 1.5
S_8	0.822 ± 0.018	$D_M(0.15)$	641 ± 10	χ^2_{CMB}	1192.5 ± 5.6
$\sigma_8\Omega_m^{0.5}$	0.4503 ± 0.0098	$H(0.38)$	83.0 ± 1.2	χ^2_{Abund}	0.82 ± 0.91

$\bar{\chi}^2_{eff} = 1206.93$; $R - 1 = 0.00910$

9.17 base_nnu_mnu_plikHM_TT_lowl_lowE_BAO_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02226 ± 0.00023	$\sigma_8\Omega_m^{0.5}$	0.451 ± 0.010	$D_M(0.15)$	636 ± 13
$\boldsymbol{\Omega_c h^2}$	0.1205 ± 0.0039	$\sigma_8\Omega_m^{0.25}$	$0.605^{+0.014}_{-0.011}$	$H(0.38)$	83.6 ± 1.5
$\boldsymbol{100\theta_{MC}}$	1.04083 ± 0.00057	$\sigma_8/h^{0.5}$	$0.984^{+0.021}_{-0.014}$	$D_M(0.38)$	1518 ± 30
$\boldsymbol{\tau}$	$0.0551^{+0.0051}_{-0.0083}$	$r_{drag}h$	99.9 ± 1.1	$H(0.51)$	90.3 ± 1.6
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 0.0837	$\langle d^2\rangle^{1/2}$	$2.427^{+0.034}_{-0.031}$	$D_M(0.51)$	1967 ± 38
$\boldsymbol{N_{eff}}$	3.15 ± 0.24	z_{re}	$7.80^{+0.57}_{-0.84}$	$H(0.61)$	95.9 ± 1.6
$\boldsymbol{\ln(10^{10}A_s)}$	$3.046^{+0.016}_{-0.019}$	$10^9 A_s$	$2.104^{+0.032}_{-0.040}$	$D_M(0.61)$	2289 ± 43
$\boldsymbol{n_s}$	0.9697 ± 0.0089	$10^9 A_s e^{-2\tau}$	1.884 ± 0.021	$H(2.33)$	237.2 ± 3.5
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	D_{40}	1222 ± 16	$D_M(2.33)$	5728 ± 94
$\boldsymbol{A_{217}^{CIB}}$	48 ± 7	D_{220}	5718 ± 41	$f\sigma_8(0.15)$	0.4563 ± 0.0096
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{810}	2537 ± 14	$\sigma_8(0.15)$	$0.751^{+0.018}_{-0.014}$
$\boldsymbol{A_{143}^{tSZ}}$	5.0 ± 2.0	D_{1420}	814.7 ± 5.2	$f\sigma_8(0.38)$	$0.4753^{+0.0099}_{-0.0086}$
$\boldsymbol{A_{100}^{PS}}$	265 ± 29	D_{2000}	229.3 ± 2.2	$\sigma_8(0.38)$	$0.666^{+0.016}_{-0.012}$
$\boldsymbol{A_{143}^{PS}}$	50 ± 9	$n_{s,0.002}$	0.9697 ± 0.0089	$f\sigma_8(0.51)$	$0.4743^{+0.0098}_{-0.0084}$
$\boldsymbol{A_{143\times217}^{PS}}$	44 ± 9	Y_P	0.2466 ± 0.0032	$\sigma_8(0.51)$	$0.623^{+0.015}_{-0.012}$
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	Y_P^{BBN}	0.2480 ± 0.0032	$f\sigma_8(0.61)$	$0.4695^{+0.0097}_{-0.0082}$
$\boldsymbol{A^{kSZ}}$	< 5.14	10^5D/H	2.641 ± 0.068	$\sigma_8(0.61)$	$0.593^{+0.014}_{-0.011}$
$\boldsymbol{A_{100}^{dustTT}}$	9.0 ± 1.8	Age/Gyr	13.71 ± 0.22	$f\sigma_8(2.33)$	$0.2994^{+0.0066}_{-0.0055}$
$\boldsymbol{A_{143}^{dustTT}}$	10.8 ± 1.8	z_*	1090.20 ± 0.49	$\sigma_8(2.33)$	$0.3087^{+0.0073}_{-0.0059}$
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.3 ± 3.3	r_*	143.9 ± 2.2	f_{2000}^{143}	31.7 ± 3.4
$\boldsymbol{A_{217}^{dustTT}}$	93.3 ± 7.4	$100\theta_*$	1.04096 ± 0.00069	$f_{2000}^{143\times217}$	34.0 ± 2.5
$\boldsymbol{c_{100}}$	0.99961 ± 0.00062	$D_M(z_*)$/Gpc	13.83 ± 0.21	f_{2000}^{217}	108.5 ± 2.3
$\boldsymbol{c_{217}}$	0.99828 ± 0.00062	z_{drag}	1059.80 ± 0.87	χ^2_{small}	397.0 ± 1.8
H_0	68.2 ± 1.4	r_{drag}	146.6 ± 2.3	χ^2_{lowl}	22.8 ± 1.3
Ω_Λ	0.6912 ± 0.0084	k_D	0.1409 ± 0.0017	χ^2_{plik}	773.2 ± 5.9
Ω_m	0.3088 ± 0.0084	$100\theta_D$	0.16126 ± 0.00059	χ^2_{6DF}	0.058 ± 0.081
$\Omega_m h^2$	0.1435 ± 0.0041	z_{eq}	3367 ± 35	χ^2_{MGS}	1.46 ± 0.60
$\Omega_\nu h^2$	< 0.000900	k_{eq}	0.01034 ± 0.00015	$\chi^2_{DR12BAO}$	4.7 ± 1.7
$\Omega_m h^3$	0.0979 ± 0.0046	$100\theta_{eq}$	0.8194 ± 0.0066	χ^2_{prior}	7.4 ± 3.8
σ_8	$0.812^{+0.019}_{-0.015}$	$100\theta_{s,eq}$	0.4526 ± 0.0034	χ^2_{BAO}	6.2 ± 1.4
S_8	0.824 ± 0.019	$H(0.15)$	73.5 ± 1.5	χ^2_{CMB}	1193.0 ± 5.7

$\bar{\chi}^2_{eff} = 1206.60$; $\Delta\bar{\chi}^2_{eff} = 0.84$; $R - 1 = 0.00711$

9.18 base_nnu_mnu_plikHM_TT_lowl_lowE_BAO_post_Pantheon_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02228 ± 0.00023	$\sigma_8\Omega_m^{0.25}$	$0.605^{+0.013}_{-0.011}$	$D_M(0.38)$	1515 ± 29
$\boldsymbol{\Omega_c h^2}$	0.1206 ± 0.0039	$\sigma_8/h^{0.5}$	$0.983^{+0.020}_{-0.014}$	$H(0.51)$	90.5 ± 1.5
$\boldsymbol{100\theta_{MC}}$	1.04082 ± 0.00057	$r_{drag}h$	100.12 ± 0.98	$D_M(0.51)$	1963 ± 37
$\boldsymbol{\tau}$	$0.0553^{+0.0052}_{-0.0083}$	$\langle d^2\rangle^{1/2}$	$2.425^{+0.034}_{-0.030}$	$H(0.61)$	96.1 ± 1.6
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 0.0818	z_{re}	$7.81^{+0.58}_{-0.84}$	$D_M(0.61)$	2285 ± 42
$\boldsymbol{N_{eff}}$	3.16 ± 0.24	$10^9 A_s$	$2.105^{+0.033}_{-0.040}$	$H(2.33)$	237.3 ± 3.5
$\boldsymbol{\ln(10^{10} A_s)}$	$3.047^{+0.016}_{-0.019}$	$10^9 A_s e^{-2\tau}$	1.885 ± 0.021	$D_M(2.33)$	5721 ± 93
$\boldsymbol{n_s}$	0.9705 ± 0.0087	D_{40}	1221 ± 16	$f\sigma_8(0.15)$	0.4557 ± 0.0095
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	D_{220}	5719 ± 41	$\sigma_8(0.15)$	$0.752^{+0.017}_{-0.013}$
$\boldsymbol{A_{217}^{CIB}}$	48 ± 7	D_{810}	2537 ± 14	$f\sigma_8(0.38)$	$0.4751^{+0.0098}_{-0.0085}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{1420}	814.6 ± 5.2	$\sigma_8(0.38)$	$0.667^{+0.015}_{-0.012}$
$\boldsymbol{A_{143}^{tSZ}}$	5.0 ± 2.0	D_{2000}	229.3 ± 2.2	$f\sigma_8(0.51)$	$0.4742^{+0.0097}_{-0.0083}$
$\boldsymbol{A_{100}^{PS}}$	265 ± 29	$n_{s,0.002}$	0.9705 ± 0.0087	$\sigma_8(0.51)$	$0.624^{+0.015}_{-0.011}$
$\boldsymbol{A_{143}^{PS}}$	50 ± 8	Y_P	0.2468 ± 0.0031	$f\sigma_8(0.61)$	$0.4695^{+0.0096}_{-0.0081}$
$\boldsymbol{A_{143\times217}^{PS}}$	44 ± 9	Y_P^{BBN}	0.2482 ± 0.0032	$\sigma_8(0.61)$	$0.594^{+0.014}_{-0.011}$
$\boldsymbol{A_{217}^{PS}}$	115 ± 11	10^5D/H	2.642 ± 0.068	$f\sigma_8(2.33)$	$0.2998^{+0.0064}_{-0.0054}$
$\boldsymbol{A^{kSZ}}$	< 5.19	Age/Gyr	13.70 ± 0.22	$\sigma_8(2.33)$	$0.3092^{+0.0071}_{-0.0058}$
$\boldsymbol{A_{100}^{dustTT}}$	9.0 ± 1.8	z_*	1090.20 ± 0.49	f_{2000}^{143}	31.8 ± 3.4
$\boldsymbol{A_{143}^{dustTT}}$	10.8 ± 1.8	r_*	143.8 ± 2.2	$f_{2000}^{143\times217}$	34.0 ± 2.5
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.4 ± 3.3	$100\theta_*$	1.04095 ± 0.00068	f_{2000}^{217}	108.5 ± 2.3
$\boldsymbol{A_{217}^{dustTT}}$	93.3 ± 7.3	$D_M(z_*)$/Gpc	13.82 ± 0.21	χ^2_{simall}	397.0 ± 1.8
$\boldsymbol{c_{100}}$	0.99960 ± 0.00062	z_{drag}	1059.86 ± 0.86	χ^2_{lowl}	22.7 ± 1.2
$\boldsymbol{c_{217}}$	0.99828 ± 0.00063	r_{drag}	146.5 ± 2.3	χ^2_{plik}	773.4 ± 5.9
H_0	68.4 ± 1.4	k_D	0.1410 ± 0.0017	χ^2_{JLA}	1036.27 ± 0.35
Ω_Λ	0.6925 ± 0.0078	$100\theta_D$	0.16128 ± 0.00059	χ^2_{6DF}	0.046 ± 0.065
Ω_m	0.3075 ± 0.0078	z_{eq}	3363 ± 34	χ^2_{MGS}	1.55 ± 0.57
$\Omega_m h^2$	0.1436 ± 0.0041	k_{eq}	0.01034 ± 0.00015	$\chi^2_{DR12BAO}$	4.4 ± 1.4
$\Omega_\nu h^2$	< 0.000879	$100\theta_{eq}$	$0.8201^{+0.0059}_{-0.0067}$	χ^2_{prior}	7.4 ± 3.8
$\Omega_m h^3$	0.0982 ± 0.0046	$100\theta_{s,eq}$	$0.4530^{+0.0030}_{-0.0034}$	χ^2_{BAO}	6.0 ± 1.1
σ_8	$0.813^{+0.019}_{-0.014}$	$H(0.15)$	73.6 ± 1.4	χ^2_{CMB}	1193.1 ± 5.7
S_8	0.823 ± 0.018	$D_M(0.15)$	635 ± 13		
$\sigma_8\Omega_m^{0.5}$	0.451 ± 0.010	$H(0.38)$	83.7 ± 1.5		

$\bar{\chi}^2_{eff} = 2242.78$; $R - 1 = 0.00897$

9.19 base_nnu_mnu_plikHM_TT_lowl_lowE_BAO_post_Aver15_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02221 ± 0.00022	$\sigma_8\Omega_m^{0.25}$	$0.604^{+0.013}_{-0.010}$	$D_M(0.38)$	1528 ± 24
$\boldsymbol{\Omega_c h^2}$	0.1192 ± 0.0032	$\sigma_8/h^{0.5}$	$0.984^{+0.020}_{-0.014}$	$H(0.51)$	89.7 ± 1.2
$\boldsymbol{100\theta_{MC}}$	1.04096 ± 0.00052	$r_{drag}h$	99.8 ± 1.0	$D_M(0.51)$	1980 ± 31
$\boldsymbol{\tau}$	$0.0550^{+0.0051}_{-0.0081}$	$\langle d^2\rangle^{1/2}$	2.431 ± 0.032	$H(0.61)$	95.3 ± 1.3
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 0.0775	z_{re}	$7.77^{+0.56}_{-0.82}$	$D_M(0.61)$	2304 ± 35
$\boldsymbol{N_{eff}}$	3.06 ± 0.18	$10^9 A_s$	$2.097^{+0.030}_{-0.037}$	$H(2.33)$	235.9 ± 2.8
$\boldsymbol{\ln(10^{10}A_s)}$	$3.043^{+0.015}_{-0.018}$	$10^9 A_s e^{-2\tau}$	1.878 ± 0.018	$D_M(2.33)$	5763 ± 75
$\boldsymbol{n_s}$	0.9667 ± 0.0075	D_{40}	1226 ± 15	$f\sigma_8(0.15)$	0.4555 ± 0.0093
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	D_{220}	5719 ± 41	$\sigma_8(0.15)$	$0.748^{+0.017}_{-0.012}$
$\boldsymbol{A_{217}^{CIB}}$	48 ± 7	D_{810}	2535 ± 14	$f\sigma_8(0.38)$	$0.4742^{+0.0095}_{-0.0082}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{1420}	815.1 ± 5.1	$\sigma_8(0.38)$	$0.663^{+0.015}_{-0.011}$
$\boldsymbol{A_{143}^{tSZ}}$	5.1 ± 2.0	D_{2000}	229.8 ± 2.1	$f\sigma_8(0.51)$	$0.4729^{+0.0093}_{-0.0078}$
$\boldsymbol{A_{100}^{PS}}$	262 ± 28	$n_{s,0.002}$	0.9667 ± 0.0075	$\sigma_8(0.51)$	$0.621^{+0.014}_{-0.010}$
$\boldsymbol{A_{143}^{PS}}$	49 ± 8	Y_P	0.2455 ± 0.0025	$f\sigma_8(0.61)$	$0.4681^{+0.0092}_{-0.0076}$
$\boldsymbol{A_{143\times217}^{PS}}$	43 ± 9	Y_P^{BBN}	0.2468 ± 0.0025	$\sigma_8(0.61)$	$0.591^{+0.013}_{-0.0096}$
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	10^5D/H	2.620 ± 0.058	$f\sigma_8(2.33)$	$0.2981^{+0.0060}_{-0.0048}$
$\boldsymbol{A^{kSZ}}$	< 4.90	Age/Gyr	13.80 ± 0.18	$\sigma_8(2.33)$	$0.3073^{+0.0068}_{-0.0051}$
$\boldsymbol{A_{100}^{dustTT}}$	9.0 ± 1.9	z_*	1090.06 ± 0.42	f_{2000}^{143}	31.0 ± 3.2
$\boldsymbol{A_{143}^{dustTT}}$	10.8 ± 1.8	r_*	144.7 ± 1.8	$f_{2000}^{143\times217}$	33.4 ± 2.3
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.3 ± 3.3	$100\theta_*$	1.04116 ± 0.00060	f_{2000}^{217}	108.0 ± 2.1
$\boldsymbol{A_{217}^{dustTT}}$	93.4 ± 7.3	$D_M(z_*)$/Gpc	13.90 ± 0.17	χ^2_{simall}	397.0 ± 1.8
$\boldsymbol{c_{100}}$	0.99961 ± 0.00062	z_{drag}	1059.51 ± 0.74	χ^2_{lowl}	23.2 ± 1.2
$\boldsymbol{c_{217}}$	0.99827 ± 0.00063	r_{drag}	147.5 ± 1.8	χ^2_{plik}	772.4 ± 5.6
H_0	67.7 ± 1.2	k_D	0.1403 ± 0.0014	χ^2_{Aver15}	0.61 ± 0.80
Ω_Λ	0.6899 ± 0.0082	$100\theta_D$	0.16106 ± 0.00049	χ^2_{6DF}	0.063 ± 0.086
Ω_m	0.3101 ± 0.0082	z_{eq}	3373 ± 33	χ^2_{MGS}	1.38 ± 0.57
$\Omega_m h^2$	0.1421 ± 0.0033	k_{eq}	0.01030 ± 0.00013	$\chi^2_{DR12BAO}$	4.8 ± 1.8
$\Omega_\nu h^2$	< 0.000833	$100\theta_{eq}$	0.8182 ± 0.0063	χ^2_{prior}	7.3 ± 3.7
$\Omega_m h^3$	0.0962 ± 0.0036	$100\theta_{s,eq}$	0.4520 ± 0.0032	χ^2_{BAO}	6.3 ± 1.5
σ_8	$0.809^{+0.018}_{-0.013}$	$H(0.15)$	73.0 ± 1.2	χ^2_{CMB}	1192.5 ± 5.6
S_8	0.823 ± 0.018	$D_M(0.15)$	641 ± 11		
$\sigma_8\Omega_m^{0.5}$	0.4507 ± 0.0099	$H(0.38)$	83.0 ± 1.2		

$\bar{\chi}^2_{eff} = 1206.72$; $R - 1 = 0.01021$

9.20 base_nnu_mnu_plikHM_TT_lowl_lowE_BAO_post_Cooke17_Aver15_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02221 ± 0.00022	$\sigma_8\Omega_m^{0.25}$	$0.604^{+0.013}_{-0.010}$	$D_M(0.38)$	1529 ± 23
$\boldsymbol{\Omega_c h^2}$	0.1191 ± 0.0029	$\sigma_8/h^{0.5}$	$0.984^{+0.020}_{-0.014}$	$H(0.51)$	89.7 ± 1.2
$\boldsymbol{100\theta_{MC}}$	1.04096 ± 0.00050	$r_{drag}h$	99.8 ± 1.0	$D_M(0.51)$	1980 ± 29
$\boldsymbol{\tau}$	$0.0551^{+0.0051}_{-0.0081}$	$\langle d^2\rangle^{1/2}$	2.431 ± 0.032	$H(0.61)$	95.3 ± 1.2
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 0.0775	z_{re}	$7.77^{+0.56}_{-0.81}$	$D_M(0.61)$	2305 ± 34
$\boldsymbol{N_{eff}}$	3.06 ± 0.17	$10^9 A_s$	$2.097^{+0.030}_{-0.037}$	$H(2.33)$	235.9 ± 2.5
$\boldsymbol{\ln(10^{10} A_s)}$	$3.043^{+0.014}_{-0.017}$	$10^9 A_s e^{-2\tau}$	1.878 ± 0.017	$D_M(2.33)$	5763 ± 71
$\boldsymbol{n_s}$	0.9667 ± 0.0072	D_{40}	1226 ± 15	$f\sigma_8(0.15)$	0.4555 ± 0.0092
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	D_{220}	5719 ± 40	$\sigma_8(0.15)$	$0.748^{+0.016}_{-0.011}$
$\boldsymbol{A_{217}^{CIB}}$	48 ± 7	D_{810}	2535 ± 14	$f\sigma_8(0.38)$	$0.4741^{+0.0094}_{-0.0079}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{1420}	815.2 ± 5.0	$\sigma_8(0.38)$	$0.663^{+0.015}_{-0.010}$
$\boldsymbol{A_{143}^{tSZ}}$	5.1 ± 2.0	D_{2000}	229.8 ± 1.9	$f\sigma_8(0.51)$	$0.4729^{+0.0092}_{-0.0075}$
$\boldsymbol{A_{100}^{PS}}$	262 ± 28	$n_{s,0.002}$	0.9667 ± 0.0072	$\sigma_8(0.51)$	$0.621^{+0.014}_{-0.0096}$
$\boldsymbol{A_{143}^{PS}}$	49 ± 8	Y_P	0.2454 ± 0.0023	$f\sigma_8(0.61)$	$0.4680^{+0.0090}_{-0.0072}$
$\boldsymbol{A_{143\times217}^{PS}}$	43 ± 9	Y_P^{BBN}	0.2468 ± 0.0023	$\sigma_8(0.61)$	$0.591^{+0.013}_{-0.0092}$
$\boldsymbol{A_{217}^{PS}}$	115 ± 11	10^5D/H	2.619 ± 0.049	$f\sigma_8(2.33)$	$0.2980^{+0.0059}_{-0.0045}$
$\boldsymbol{A^{kSZ}}$	< 4.88	Age/Gyr	13.80 ± 0.17	$\sigma_8(2.33)$	$0.3072^{+0.0067}_{-0.0049}$
$\boldsymbol{A_{100}^{dustTT}}$	8.9 ± 1.9	z_*	1090.05 ± 0.37	f_{2000}^{143}	31.0 ± 3.0
$\boldsymbol{A_{143}^{dustTT}}$	10.8 ± 1.8	r_*	144.8 ± 1.6	$f_{2000}^{143\times217}$	33.4 ± 2.2
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.3 ± 3.3	$100\theta_*$	1.04116 ± 0.00056	f_{2000}^{217}	108.0 ± 2.0
$\boldsymbol{A_{217}^{dustTT}}$	93.4 ± 7.3	$D_M(z_*)$/Gpc	13.90 ± 0.15	χ^2_{simall}	397.0 ± 1.8
$\boldsymbol{c_{100}}$	0.99960 ± 0.00062	z_{drag}	1059.51 ± 0.73	χ^2_{lowl}	23.2 ± 1.2
$\boldsymbol{c_{217}}$	0.99827 ± 0.00063	r_{drag}	147.5 ± 1.7	χ^2_{plik}	772.2 ± 5.6
H_0	67.7 ± 1.1	k_D	0.1403 ± 0.0013	χ^2_{Aver15}	0.55 ± 0.70
Ω_Λ	0.6899 ± 0.0082	$100\theta_D$	0.16105 ± 0.00042	$\chi^2_{Cooke17}$	0.27 ± 0.39
Ω_m	0.3101 ± 0.0082	z_{eq}	3373 ± 33	χ^2_{6DF}	0.063 ± 0.086
$\Omega_m h^2$	0.1420 ± 0.0030	k_{eq}	0.01030 ± 0.00012	χ^2_{MGS}	1.38 ± 0.57
$\Omega_\nu h^2$	< 0.000834	$100\theta_{eq}$	0.8182 ± 0.0062	$\chi^2_{DR12BAO}$	4.8 ± 1.8
$\Omega_m h^3$	0.0961 ± 0.0033	$100\theta_{s,eq}$	0.4520 ± 0.0032	χ^2_{prior}	7.4 ± 3.7
σ_8	$0.809^{+0.018}_{-0.012}$	$H(0.15)$	72.9 ± 1.1	χ^2_{BAO}	6.3 ± 1.5
S_8	0.823 ± 0.018	$D_M(0.15)$	641 ± 10	χ^2_{CMB}	1192.3 ± 5.5
$\sigma_8\Omega_m^{0.5}$	0.4507 ± 0.0098	$H(0.38)$	83.0 ± 1.1	χ^2_{Abund}	0.82 ± 0.91

$\bar{\chi}^2_{eff} = 1206.73$; $R - 1 = 0.01058$

9.21 base_nnu_mnu_plikHM_TTTEEE_lowl_lowE_BAO

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022325	0.02238 ± 0.00019	$\Omega_\nu h^2$	0.000005	< 0.000638	$100\theta_{s,eq}$	0.44943	0.4504 ± 0.0025
$\boldsymbol{\Omega_c h^2}$	0.11751	0.1185 ± 0.0030	$\Omega_m h^3$	0.09406	0.0954 ± 0.0035	$H(0.15)$	72.48	72.7 ± 1.2
$\boldsymbol{100\theta_{MC}}$	1.041208	1.04111 ± 0.00044	σ_8	0.8174	$0.811^{+0.014}_{-0.012}$	$D_M(0.15)$	644.7	643 ± 11
$\boldsymbol{\tau}$	0.0545	0.0552 ± 0.0080	S_8	0.8296	0.826 ± 0.014	$H(0.38)$	82.48	82.8 ± 1.2
$\boldsymbol{\Sigma m_\nu}$ [eV]	0.0004	< 0.0593	$\sigma_8 \Omega_m^{0.5}$	0.4544	0.4522 ± 0.0078	$D_M(0.38)$	1538.1	1534 ± 24
$\boldsymbol{N_{eff}}$	2.914	2.99 ± 0.18	$\sigma_8 \Omega_m^{0.25}$	0.6094	$0.606^{+0.010}_{-0.0091}$	$H(0.51)$	89.12	89.5 ± 1.2
$\boldsymbol{\ln(10^{10} A_s)}$	3.0381	3.042 ± 0.019	$\sigma_8/h^{0.5}$	0.9966	$0.988^{+0.015}_{-0.012}$	$D_M(0.51)$	1992.9	1987 ± 31
$\boldsymbol{n_s}$	0.9634	0.9649 ± 0.0073	$r_{drag} h$	99.88	99.67 ± 0.90	$H(0.61)$	94.68	95.1 ± 1.3
$\boldsymbol{y_{cal}}$	1.00014	1.0007 ± 0.0025	$\langle d^2 \rangle^{1/2}$	2.4485	2.440 ± 0.027	$D_M(0.61)$	2319.3	2312 ± 35
$\boldsymbol{A_{217}^{CIB}}$	43.6	46 ± 7	z_{re}	7.65	7.72 ± 0.81	$H(2.33)$	234.12	235.3 ± 2.7
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.96	—	$10^9 A_s$	2.0866	2.096 ± 0.039	$D_M(2.33)$	5803	5779 ± 75
$\boldsymbol{A_{143}^{tSZ}}$	6.92	$5.6^{+2.1}_{-1.9}$	$10^9 A_s e^{-2\tau}$	1.8711	1.877 ± 0.018	$f\sigma_8(0.15)$	0.4584	0.4568 ± 0.0075
$\boldsymbol{A_{100}^{PS}}$	242.6	257 ± 28	D_{40}	1229.7	1231 ± 14	$\sigma_8(0.15)$	0.7554	$0.750^{+0.013}_{-0.012}$
$\boldsymbol{A_{143}^{PS}}$	52.0	45 ± 8	D_{220}	5726.2	5737 ± 38	$f\sigma_8(0.38)$	0.4773	0.4752 ± 0.0073
$\boldsymbol{A_{143\times217}^{PS}}$	58.6	42 ± 9	D_{810}	2537.4	2539 ± 14	$\sigma_8(0.38)$	0.6696	$0.665^{+0.012}_{-0.011}$
$\boldsymbol{A_{217}^{PS}}$	124.1	115 ± 10	D_{1420}	819.07	818.2 ± 4.8	$f\sigma_8(0.51)$	0.4761	0.4739 ± 0.0072
$\boldsymbol{A^{kSZ}}$	0.00	< 3.98	D_{2000}	232.23	231.5 ± 1.8	$\sigma_8(0.51)$	0.6267	$0.622^{+0.011}_{-0.010}$
$\boldsymbol{A_{100}^{dust TT}}$	8.78	8.9 ± 1.8	$n_{s,0.002}$	0.9634	0.9649 ± 0.0073	$f\sigma_8(0.61)$	0.4712	0.4690 ± 0.0072
$\boldsymbol{A_{143}^{dust TT}}$	11.00	10.8 ± 1.8	Y_P	0.24360	0.2446 ± 0.0025	$\sigma_8(0.61)$	0.5963	$0.592^{+0.011}_{-0.0096}$
$\boldsymbol{A_{143\times217}^{dust TT}}$	20.31	18.5 ± 3.3	Y_P^{BBN}	0.24492	0.2459 ± 0.0025	$f\sigma_8(2.33)$	0.29977	0.2983 ± 0.0051
$\boldsymbol{A_{217}^{dust TT}}$	95.9	93.7 ± 7.3	10^5D/H	2.5482	2.566 ± 0.045	$\sigma_8(2.33)$	0.3096	$0.3076^{+0.0058}_{-0.0052}$
$\boldsymbol{A_{100}^{dust TE}}$	0.1144	0.115 ± 0.039	Age/Gyr	13.893	13.84 ± 0.18	f_{2000}^{143}	27.08	28.8 ± 3.0
$\boldsymbol{A_{100\times143}^{dust TE}}$	0.1344	0.135 ± 0.029	z_*	1089.624	1089.72 ± 0.34	$f_{2000}^{143\times217}$	30.86	31.6 ± 2.1
$\boldsymbol{A_{100\times217}^{dust TE}}$	0.482	0.481 ± 0.085	r_*	145.79	145.1 ± 1.8	f_{2000}^{217}	105.37	106.6 ± 1.9
$\boldsymbol{A_{143}^{dust TE}}$	0.222	0.225 ± 0.053	$100\theta_*$	1.04145	1.04133 ± 0.00054	χ^2_{simall}	396.05	397.3 ± 2.0
$\boldsymbol{A_{143\times217}^{dust TE}}$	0.666	0.665 ± 0.080	$D_M(z_*)$/Gpc	13.999	13.94 ± 0.16	χ^2_{lowl}	23.57	23.5 ± 1.2
$\boldsymbol{A_{217}^{dust TE}}$	2.086	2.08 ± 0.26	z_{drag}	1059.55	1059.79 ± 0.72	χ^2_{plik}	2343.1	2359.8 ± 6.3
$\boldsymbol{c_{100}}$	0.99973	0.99968 ± 0.00061	r_{drag}	148.49	147.8 ± 1.8	χ^2_{6DF}	0.0155	0.061 ± 0.077
$\boldsymbol{c_{217}}$	0.99815	0.99818 ± 0.00062	k_D	0.13988	0.1404 ± 0.0014	χ^2_{MGS}	1.343	1.29 ± 0.49
H_0	67.26	67.5 ± 1.2	$100\theta_D$	0.160441	0.16062 ± 0.00040	$\chi^2_{DR12BAO}$	4.06	4.9 ± 1.6
Ω_Λ	0.6909	0.6891 ± 0.0073	z_{eq}	3401.7	3392 ± 26	χ^2_{prior}	1.39	11.5 ± 4.6
Ω_m	0.3091	0.3109 ± 0.0073	k_{eq}	0.010290	0.01031 ± 0.00012	χ^2_{BAO}	5.41	6.2 ± 1.3
$\Omega_m h^2$	0.13984	0.1414 ± 0.0032	$100\theta_{eq}$	0.81333	0.8153 ± 0.0049	χ^2_{CMB}	2762.7	2780.6 ± 6.1

Best-fit $\chi^2_{eff} = 2769.49$; $\Delta\chi^2_{eff} = -2.43$; $\bar{\chi}^2_{eff} = 2798.34$; $\Delta\bar{\chi}^2_{eff} = 0.43$; $R - 1 = 0.00725$

χ^2_{eff}: BAO - 6DF: 0.02 (Δ -0.01) MGS: 1.34 (Δ 0.13) DR12BAO: 4.06 (Δ -0.36) CMB - simall_100x143_offlike5_EE_Aplanck_B: 396.05 (Δ -0.15) commander_dx12_v3_2_29: 23.57 (Δ 0.70) plik_rd12_HM_v22b_TTTEEE: 2343.07 (Δ -2.44)

9.22 base_nnu_mnu_plikHM_TTTEEE_lowl_lowE_BAO_post_Pantheon

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022344	0.02240 ± 0.00019	$\Omega_m h^3$	0.09443	0.0957 ± 0.0035	$D_M(0.15)$	643.4	642 ± 10
$\boldsymbol{\Omega_c h^2}$	0.11772	0.1186 ± 0.0030	σ_8	0.8180	$0.812^{+0.014}_{-0.012}$	$H(0.38)$	82.62	82.9 ± 1.2
$\boldsymbol{100\theta_{MC}}$	1.041226	1.04110 ± 0.00044	S_8	0.8292	0.825 ± 0.014	$D_M(0.38)$	1535.1	1531 ± 24
$\boldsymbol{\tau}$	0.0544	0.0554 ± 0.0080	$\sigma_8 \Omega_m^{0.5}$	0.4542	0.4518 ± 0.0077	$H(0.51)$	89.26	89.6 ± 1.2
$\boldsymbol{\Sigma m_\nu}$ [eV]	0.0015	< 0.0569	$\sigma_8 \Omega_m^{0.25}$	0.6095	$0.606^{+0.010}_{-0.0090}$	$D_M(0.51)$	1989.2	1983 ± 30
$\boldsymbol{N_{eff}}$	2.932	3.00 ± 0.18	$\sigma_8/h^{0.5}$	0.9963	$0.988^{+0.014}_{-0.012}$	$H(0.61)$	94.82	95.2 ± 1.2
$\boldsymbol{\ln(10^{10} A_s)}$	3.0392	3.043 ± 0.019	$r_{drag} h$	99.98	99.83 ± 0.86	$D_M(0.61)$	2315.1	2308 ± 34
$\boldsymbol{n_s}$	0.9638	0.9656 ± 0.0071	$\langle d^2 \rangle^{1/2}$	2.4478	2.438 ± 0.027	$H(2.33)$	234.34	235.4 ± 2.7
$\boldsymbol{y_{cal}}$	1.00054	1.0007 ± 0.0025	z_{re}	7.64	7.74 ± 0.81	$D_M(2.33)$	5794	5773 ± 74
$\boldsymbol{A_{217}^{CIB}}$	44.7	46 ± 7	$10^9 A_s$	2.0888	2.097 ± 0.039	$f\sigma_8(0.15)$	0.4583	0.4564 ± 0.0074
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.74	—	$10^9 A_s e^{-2\tau}$	1.8735	1.877 ± 0.018	$\sigma_8(0.15)$	0.7560	$0.750^{+0.013}_{-0.012}$
$\boldsymbol{A_{143}^{tSZ}}$	7.02	$5.6^{+2.1}_{-1.9}$	D_{40}	1230.4	1230 ± 14	$f\sigma_8(0.38)$	0.4773	0.4751 ± 0.0073
$\boldsymbol{A_{100}^{PS}}$	244.6	257 ± 28	D_{220}	5732.4	5738 ± 38	$\sigma_8(0.38)$	0.6703	$0.665^{+0.012}_{-0.010}$
$\boldsymbol{A_{143}^{PS}}$	49.8	45 ± 8	D_{810}	2539.2	2539 ± 14	$f\sigma_8(0.51)$	0.4762	0.4739 ± 0.0072
$\boldsymbol{A_{143\times217}^{PS}}$	53.9	42 ± 9	D_{1420}	819.39	818.2 ± 4.8	$\sigma_8(0.51)$	0.6273	$0.623^{+0.011}_{-0.0099}$
$\boldsymbol{A_{217}^{PS}}$	122.6	115 ± 10	D_{2000}	232.24	231.5 ± 1.8	$f\sigma_8(0.61)$	0.4714	0.4691 ± 0.0071
$\boldsymbol{A^{kSZ}}$	0.00	< 3.94	$n_{s,0.002}$	0.9638	0.9656 ± 0.0071	$\sigma_8(0.61)$	0.5970	$0.593^{+0.011}_{-0.0095}$
$\boldsymbol{A_{100}^{dust TT}}$	8.72	8.9 ± 1.8	Y_P	0.24384	0.2448 ± 0.0024	$f\sigma_8(2.33)$	0.30015	0.2987 ± 0.0050
$\boldsymbol{A_{143}^{dust TT}}$	10.90	10.9 ± 1.8	Y_P^{BBN}	0.24516	0.2461 ± 0.0024	$\sigma_8(2.33)$	0.3100	0.3081 ± 0.0055
$\boldsymbol{A_{143\times217}^{dust TT}}$	19.99	18.5 ± 3.3	10^5D/H	2.5507	2.566 ± 0.045	f_{2000}^{143}	27.53	28.8 ± 3.0
$\boldsymbol{A_{217}^{dust TT}}$	95.6	93.7 ± 7.4	Age/Gyr	13.873	13.82 ± 0.18	$f_{2000}^{143\times217}$	31.07	31.7 ± 2.1
$\boldsymbol{A_{100}^{dust TE}}$	0.1140	0.114 ± 0.039	z_*	1089.635	1089.72 ± 0.34	f_{2000}^{217}	105.71	106.6 ± 1.9
$\boldsymbol{A_{100\times143}^{dust TE}}$	0.1337	0.135 ± 0.029	r_*	145.63	145.0 ± 1.8	χ^2_{simall}	396.03	397.3 ± 2.0
$\boldsymbol{A_{100\times217}^{dust TE}}$	0.479	0.480 ± 0.086	$100\theta_*$	1.04146	1.04131 ± 0.00054	χ^2_{lowl}	23.52	23.4 ± 1.1
$\boldsymbol{A_{143}^{dust TE}}$	0.224	0.224 ± 0.053	$D_M(z_*)$/Gpc	13.983	13.93 ± 0.16	χ^2_{plik}	2343.1	2360.0 ± 6.3
$\boldsymbol{A_{143\times217}^{dust TE}}$	0.668	0.665 ± 0.080	z_{drag}	1059.63	1059.85 ± 0.71	χ^2_{JLA}	1036.185	1036.34 ± 0.36
$\boldsymbol{A_{217}^{dust TE}}$	2.093	2.08 ± 0.27	r_{drag}	148.32	147.7 ± 1.8	χ^2_{6DF}	0.0107	0.049 ± 0.064
$\boldsymbol{c_{100}}$	0.99970	0.99968 ± 0.00061	k_D	0.14000	0.1404 ± 0.0013	χ^2_{MGS}	1.407	1.38 ± 0.48
$\boldsymbol{c_{217}}$	0.99814	0.99818 ± 0.00062	$100\theta_D$	0.160478	0.16063 ± 0.00039	$\chi^2_{DR12BAO}$	3.93	4.6 ± 1.4
H_0	67.41	67.6 ± 1.1	z_{eq}	3399.3	3388 ± 25	χ^2_{prior}	1.54	11.6 ± 4.5
Ω_Λ	0.6917	0.6904 ± 0.0069	k_{eq}	0.010295	0.01031 ± 0.00012	χ^2_{BAO}	5.34	6.0 ± 1.1
Ω_m	0.3083	0.3096 ± 0.0069	$100\theta_{eq}$	0.81383	0.8160 ± 0.0047	χ^2_{CMB}	2762.6	2780.7 ± 6.2
$\Omega_m h^2$	0.14008	0.1415 ± 0.0032	$100\theta_{s,eq}$	0.44968	0.4508 ± 0.0024			
$\Omega_\nu h^2$	0.000016	< 0.000612	$H(0.15)$	72.62	72.9 ± 1.1			

Best-fit $\chi^2_{eff} = 3805.70$; $\bar{\chi}^2_{eff} = 3834.62$; $R - 1 = 0.00986$

χ^2_{eff}: BAO - 6DF: 0.01 MGS: 1.41 DR12BAO: 3.93 CMB - simall_100x143_offlike5_EE_Aplanck_B: 396.03 commander_dx12_v3_2_29: 23.52 plik_rd12_HM_v22b_TTTEEE: 2343.08 SN - JLA Pantheon: 1036.18

9.23 base_nnu_mnu_plikHM_TTTEEE_lowl_lowE_BAO_post_Aver15

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02236 ± 0.00018	$\Omega_m h^3$	0.0950 ± 0.0030	$D_M(0.15)$	644.1 ± 9.5
$\boldsymbol{\Omega_c h^2}$	0.1182 ± 0.0026	σ_8	$0.810^{+0.014}_{-0.011}$	$H(0.38)$	82.6 ± 1.0
$\boldsymbol{100\theta_{MC}}$	1.04115 ± 0.00041	S_8	0.825 ± 0.014	$D_M(0.38)$	1536 ± 21
$\boldsymbol{\tau}$	0.0551 ± 0.0080	$\sigma_8\Omega_m^{0.5}$	0.4520 ± 0.0077	$H(0.51)$	89.3 ± 1.1
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 0.0589	$\sigma_8\Omega_m^{0.25}$	$0.6051^{+0.0099}_{-0.0087}$	$D_M(0.51)$	1990 ± 27
$\boldsymbol{N_{eff}}$	2.97 ± 0.15	$\sigma_8/h^{0.5}$	$0.987^{+0.015}_{-0.012}$	$H(0.61)$	94.9 ± 1.1
$\boldsymbol{\ln(10^{10}A_s)}$	3.041 ± 0.018	$r_{drag}h$	99.64 ± 0.89	$D_M(0.61)$	2316 ± 31
$\boldsymbol{n_s}$	0.9641 ± 0.0065	$\langle d^2\rangle^{1/2}$	2.441 ± 0.027	$H(2.33)$	235.0 ± 2.3
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0025	z_{re}	7.70 ± 0.81	$D_M(2.33)$	5788 ± 65
$\boldsymbol{A_{217}^{CIB}}$	46 ± 7	$10^9 A_s$	2.094 ± 0.038	$f\sigma_8(0.15)$	0.4565 ± 0.0073
$\boldsymbol{\xi^{tSZ\times CIB}}$	> 0.374	$10^9 A_s e^{-2\tau}$	1.875 ± 0.016	$\sigma_8(0.15)$	$0.749^{+0.013}_{-0.011}$
$\boldsymbol{A_{143}^{tSZ}}$	$5.6^{+2.1}_{-1.9}$	D_{40}	1232 ± 13	$f\sigma_8(0.38)$	0.4748 ± 0.0071
$\boldsymbol{A_{100}^{PS}}$	256 ± 28	D_{220}	5737 ± 38	$\sigma_8(0.38)$	$0.664^{+0.012}_{-0.0097}$
$\boldsymbol{A_{143}^{PS}}$	45 ± 8	D_{810}	2538 ± 14	$f\sigma_8(0.51)$	$0.4735^{+0.0072}_{-0.0065}$
$\boldsymbol{A_{143\times217}^{PS}}$	42 ± 9	D_{1420}	818.3 ± 4.8	$\sigma_8(0.51)$	$0.621^{+0.011}_{-0.0092}$
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	D_{2000}	231.6 ± 1.8	$f\sigma_8(0.61)$	$0.4685^{+0.0072}_{-0.0064}$
$\boldsymbol{A^{kSZ}}$	< 3.86	$n_{s,0.002}$	0.9641 ± 0.0065	$\sigma_8(0.61)$	$0.591^{+0.011}_{-0.0088}$
$\boldsymbol{A_{100}^{dust TT}}$	8.9 ± 1.8	Y_P	0.2443 ± 0.0021	$f\sigma_8(2.33)$	$0.2979^{+0.0049}_{-0.0044}$
$\boldsymbol{A_{143}^{dust TT}}$	10.8 ± 1.8	Y_P^{BBN}	0.2457 ± 0.0021	$\sigma_8(2.33)$	$0.3071^{+0.0055}_{-0.0047}$
$\boldsymbol{A_{143\times217}^{dust TT}}$	18.5 ± 3.3	10^5D/H	2.561 ± 0.040	f_{2000}^{143}	28.7 ± 2.9
$\boldsymbol{A_{217}^{dust TT}}$	93.7 ± 7.4	Age/Gyr	13.86 ± 0.15	$f_{2000}^{143\times217}$	31.5 ± 2.0
$\boldsymbol{A_{100}^{dust TE}}$	0.114 ± 0.039	z_*	1089.69 ± 0.31	f_{2000}^{217}	106.5 ± 1.9
$\boldsymbol{A_{100\times143}^{dust TE}}$	0.135 ± 0.030	r_*	145.3 ± 1.5	χ^2_{simall}	397.2 ± 2.0
$\boldsymbol{A_{100\times217}^{dust TE}}$	0.480 ± 0.086	$100\theta_*$	1.04138 ± 0.00049	χ^2_{lowl}	23.6 ± 1.1
$\boldsymbol{A_{143}^{dust TE}}$	0.225 ± 0.053	$D_M(z_*)$/Gpc	13.96 ± 0.14	χ^2_{plik}	2359.5 ± 6.1
$\boldsymbol{A_{143\times217}^{dust TE}}$	0.665 ± 0.080	z_{drag}	1059.72 ± 0.63	χ^2_{Aver15}	0.32 ± 0.44
$\boldsymbol{A_{217}^{dust TE}}$	2.08 ± 0.26	r_{drag}	148.0 ± 1.6	χ^2_{6DF}	0.063 ± 0.078
$\boldsymbol{c_{100}}$	0.99969 ± 0.00061	k_D	0.1402 ± 0.0012	χ^2_{MGS}	1.28 ± 0.48
$\boldsymbol{c_{217}}$	0.99818 ± 0.00062	$100\theta_D$	0.16057 ± 0.00035	$\chi^2_{DR12BAO}$	4.9 ± 1.6
H_0	67.3 ± 1.0	z_{eq}	3393 ± 25	χ^2_{prior}	11.5 ± 4.5
Ω_Λ	0.6888 ± 0.0072	k_{eq}	0.01030 ± 0.00011	χ^2_{BAO}	6.3 ± 1.3
Ω_m	0.3112 ± 0.0072	$100\theta_{eq}$	0.8150 ± 0.0048	χ^2_{CMB}	2780.3 ± 6.0
$\Omega_m h^2$	0.1410 ± 0.0028	$100\theta_{s,eq}$	0.4503 ± 0.0024		
$\Omega_\nu h^2$	< 0.000633	$H(0.15)$	72.6 ± 1.0		

$\bar{\chi}^2_{eff} = 2798.41$; $R - 1 = 0.01021$

9.24 base_nnu_mnu_plikHM_TTTEEE_lowl_lowE_BAO_post_Cooke17_Aver15

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02236 ± 0.00018	$\Omega_m h^3$	0.0955 ± 0.0029	$D_M(0.15)$	642.9 ± 9.2
$\boldsymbol{\Omega_c h^2}$	0.1186 ± 0.0025	σ_8	$0.812^{+0.014}_{-0.011}$	$H(0.38)$	82.8 ± 1.0
$\boldsymbol{100\theta_{MC}}$	1.04108 ± 0.00040	S_8	0.826 ± 0.014	$D_M(0.38)$	1533 ± 21
$\boldsymbol{\tau}$	0.0550 ± 0.0080	$\sigma_8\Omega_m^{0.5}$	0.4527 ± 0.0076	$H(0.51)$	89.5 ± 1.0
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 0.0595	$\sigma_8\Omega_m^{0.25}$	$0.6061^{+0.0098}_{-0.0084}$	$D_M(0.51)$	1986 ± 26
$\boldsymbol{N_{eff}}$	3.00 ± 0.15	$\sigma_8/h^{0.5}$	$0.988^{+0.015}_{-0.011}$	$H(0.61)$	95.1 ± 1.1
$\boldsymbol{\ln(10^{10}A_s)}$	3.042 ± 0.018	$r_{drag}h$	99.63 ± 0.89	$D_M(0.61)$	2312 ± 30
$\boldsymbol{n_s}$	0.9649 ± 0.0064	$\langle d^2\rangle^{1/2}$	2.441 ± 0.027	$H(2.33)$	235.4 ± 2.2
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0025	z_{re}	7.70 ± 0.81	$D_M(2.33)$	5778 ± 62
$\boldsymbol{A^{CIB}_{217}}$	47 ± 7	$10^9 A_s$	2.096 ± 0.038	$f\sigma_8(0.15)$	0.4572 ± 0.0072
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$10^9 A_s e^{-2\tau}$	1.877 ± 0.016	$\sigma_8(0.15)$	$0.750^{+0.013}_{-0.010}$
$\boldsymbol{A^{tSZ}_{143}}$	$5.6^{+2.1}_{-1.9}$	D_{40}	1231 ± 13	$f\sigma_8(0.38)$	$0.4756^{+0.0073}_{-0.0065}$
$\boldsymbol{A^{PS}_{100}}$	257 ± 28	D_{220}	5735 ± 38	$\sigma_8(0.38)$	$0.665^{+0.012}_{-0.0094}$
$\boldsymbol{A^{PS}_{143}}$	45 ± 8	D_{810}	2539 ± 14	$f\sigma_8(0.51)$	$0.4742^{+0.0072}_{-0.0063}$
$\boldsymbol{A^{PS}_{143\times217}}$	42 ± 9	D_{1420}	818.0 ± 4.8	$\sigma_8(0.51)$	$0.622^{+0.011}_{-0.0089}$
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	D_{2000}	231.4 ± 1.7	$f\sigma_8(0.61)$	$0.4693^{+0.0071}_{-0.0062}$
$\boldsymbol{A^{kSZ}}$	< 3.95	$n_{s,0.002}$	0.9649 ± 0.0064	$\sigma_8(0.61)$	$0.592^{+0.010}_{-0.0086}$
$\boldsymbol{A^{dustTT}_{100}}$	8.9 ± 1.8	Y_P	0.2447 ± 0.0020	$f\sigma_8(2.33)$	$0.2983^{+0.0049}_{-0.0043}$
$\boldsymbol{A^{dustTT}_{143}}$	10.9 ± 1.8	Y_P^{BBN}	0.2460 ± 0.0020	$\sigma_8(2.33)$	$0.3076^{+0.0055}_{-0.0047}$
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.5 ± 3.3	10^5D/H	2.570 ± 0.037	f^{143}_{2000}	29.0 ± 2.9
$\boldsymbol{A^{dustTT}_{217}}$	93.7 ± 7.4	Age/Gyr	13.83 ± 0.15	$f^{143\times217}_{2000}$	31.8 ± 2.0
$\boldsymbol{A^{dustTE}_{100}}$	0.114 ± 0.039	z_*	1089.76 ± 0.29	f^{217}_{2000}	106.7 ± 1.8
$\boldsymbol{A^{dustTE}_{100\times143}}$	0.135 ± 0.030	r_*	145.1 ± 1.4	χ^2_{simall}	397.2 ± 2.0
$\boldsymbol{A^{dustTE}_{100\times217}}$	0.480 ± 0.086	$100\theta_*$	1.04130 ± 0.00047	χ^2_{lowl}	23.5 ± 1.1
$\boldsymbol{A^{dustTE}_{143}}$	0.225 ± 0.053	$D_M(z_*)$/Gpc	13.93 ± 0.13	χ^2_{plik}	2359.5 ± 6.1
$\boldsymbol{A^{dustTE}_{143\times217}}$	0.665 ± 0.080	z_{drag}	1059.77 ± 0.63	χ^2_{Aver15}	0.33 ± 0.45
$\boldsymbol{A^{dustTE}_{217}}$	2.08 ± 0.26	r_{drag}	147.7 ± 1.5	$\chi^2_{Cooke17}$	0.42 ± 0.46
$\boldsymbol{c_{100}}$	0.99968 ± 0.00061	k_D	0.1404 ± 0.0011	χ^2_{6DF}	0.063 ± 0.078
$\boldsymbol{c_{217}}$	0.99818 ± 0.00062	$100\theta_D$	0.16065 ± 0.00032	χ^2_{MGS}	1.27 ± 0.48
H_0	67.4 ± 1.0	z_{eq}	3392 ± 25	$\chi^2_{DR12BAO}$	4.9 ± 1.6
Ω_Λ	0.6888 ± 0.0071	k_{eq}	0.01032 ± 0.00010	χ^2_{prior}	11.6 ± 4.5
Ω_m	0.3112 ± 0.0071	$100\theta_{eq}$	0.8151 ± 0.0048	χ^2_{BAO}	6.3 ± 1.3
$\Omega_m h^2$	0.1415 ± 0.0026	$100\theta_{s,eq}$	0.4503 ± 0.0024	χ^2_{CMB}	2780.2 ± 6.0
$\Omega_\nu h^2$	< 0.000639	$H(0.15)$	72.7 ± 1.0	χ^2_{Abund}	0.75 ± 0.58

$\bar{\chi}^2_{eff} = 2798.76$; $R - 1 = 0.00954$

9.25 base_nnu_mnu_plikHM_TTTEEE_lowl_lowE_BAO_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02238 ± 0.00019	$\Omega_\nu h^2$	< 0.000645	$100\theta_{\rm s,eq}$	0.4505 ± 0.0025
$\boldsymbol{\Omega_c h^2}$	0.1185 ± 0.0030	$\Omega_{\rm m} h^3$	0.0955 ± 0.0035	$H(0.15)$	72.7 ± 1.2
$\boldsymbol{100\theta_{MC}}$	1.04111 ± 0.00044	σ_8	$0.812^{+0.014}_{-0.012}$	$D_{\rm M}(0.15)$	643 ± 11
$\boldsymbol{\tau}$	$0.0563^{+0.0056}_{-0.0083}$	S_8	0.826 ± 0.014	$H(0.38)$	82.8 ± 1.2
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 0.0600	$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4526 ± 0.0077	$D_{\rm M}(0.38)$	1533 ± 24
$\boldsymbol{N_{eff}}$	2.99 ± 0.18	$\sigma_8 \Omega_{\rm m}^{0.25}$	$0.6063^{+0.0099}_{-0.0089}$	$H(0.51)$	89.5 ± 1.2
$\boldsymbol{\ln(10^{10} A_s)}$	$3.045^{+0.015}_{-0.019}$	$\sigma_8/h^{0.5}$	$0.989^{+0.014}_{-0.011}$	$D_{\rm M}(0.51)$	1986 ± 30
$\boldsymbol{n_s}$	0.9651 ± 0.0072	$r_{\rm drag} h$	99.69 ± 0.90	$H(0.61)$	95.1 ± 1.3
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0025	$\langle d^2 \rangle^{1/2}$	2.442 ± 0.026	$D_{\rm M}(0.61)$	2311 ± 35
$\boldsymbol{A_{217}^{CIB}}$	46 ± 7	$z_{\rm re}$	$7.83^{+0.61}_{-0.83}$	$H(2.33)$	235.4 ± 2.7
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$10^9 A_{\rm s}$	$2.101^{+0.031}_{-0.039}$	$D_{\rm M}(2.33)$	5778 ± 75
$\boldsymbol{A_{143}^{tSZ}}$	$5.6^{+2.1}_{-1.9}$	$10^9 A_{\rm s} e^{-2\tau}$	1.877 ± 0.018	$f\sigma_8(0.15)$	0.4572 ± 0.0073
$\boldsymbol{A_{100}^{PS}}$	257 ± 28	D_{40}	1231 ± 14	$\sigma_8(0.15)$	$0.750^{+0.013}_{-0.011}$
$\boldsymbol{A_{143}^{PS}}$	45 ± 8	D_{220}	5737 ± 38	$f\sigma_8(0.38)$	0.4757 ± 0.0071
$\boldsymbol{A_{143\times217}^{PS}}$	42 ± 9	D_{810}	2539 ± 14	$\sigma_8(0.38)$	$0.665^{+0.012}_{-0.010}$
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	D_{1420}	818.2 ± 4.9	$f\sigma_8(0.51)$	0.4744 ± 0.0070
$\boldsymbol{A^{kSZ}}$	< 3.96	D_{2000}	231.5 ± 1.8	$\sigma_8(0.51)$	$0.623^{+0.011}_{-0.0098}$
$\boldsymbol{A_{100}^{dust TT}}$	8.9 ± 1.8	$n_{\rm s,0.002}$	0.9651 ± 0.0072	$f\sigma_8(0.61)$	0.4695 ± 0.0070
$\boldsymbol{A_{143}^{dust TT}}$	10.8 ± 1.8	$Y_{\rm P}$	0.2447 ± 0.0025	$\sigma_8(0.61)$	$0.592^{+0.011}_{-0.0094}$
$\boldsymbol{A_{143\times217}^{dust TT}}$	18.5 ± 3.3	$Y_{\rm P}^{\rm BBN}$	0.2460 ± 0.0025	$f\sigma_8(2.33)$	0.2986 ± 0.0049
$\boldsymbol{A_{217}^{dust TT}}$	93.7 ± 7.3	10^5D/H	2.566 ± 0.045	$\sigma_8(2.33)$	0.3079 ± 0.0054
$\boldsymbol{A_{100}^{dust TE}}$	0.114 ± 0.039	Age/Gyr	13.83 ± 0.18	f_{2000}^{143}	28.8 ± 3.0
$\boldsymbol{A_{100\times143}^{dust TE}}$	0.135 ± 0.029	z_*	1089.72 ± 0.34	$f_{2000}^{143\times217}$	31.6 ± 2.1
$\boldsymbol{A_{100\times217}^{dust TE}}$	0.481 ± 0.085	r_*	145.1 ± 1.8	f_{2000}^{217}	106.6 ± 1.9
$\boldsymbol{A_{143}^{dust TE}}$	0.225 ± 0.053	$100\theta_*$	1.04132 ± 0.00054	$\chi^2_{\rm simall}$	397.2 ± 2.1
$\boldsymbol{A_{143\times217}^{dust TE}}$	0.665 ± 0.080	$D_{\rm M}(z_*)/{\rm Gpc}$	13.93 ± 0.16	$\chi^2_{\rm lowl}$	23.5 ± 1.2
$\boldsymbol{A_{217}^{dust TE}}$	2.08 ± 0.26	$z_{\rm drag}$	1059.81 ± 0.72	$\chi^2_{\rm plik}$	2359.6 ± 6.3
$\boldsymbol{c_{100}}$	0.99968 ± 0.00061	$r_{\rm drag}$	147.8 ± 1.8	$\chi^2_{\rm 6DF}$	0.060 ± 0.076
$\boldsymbol{c_{217}}$	0.99818 ± 0.00062	$k_{\rm D}$	0.1404 ± 0.0013	$\chi^2_{\rm MGS}$	1.30 ± 0.49
H_0	67.5 ± 1.2	$100\theta_{\rm D}$	0.16062 ± 0.00040	$\chi^2_{\rm DR12BAO}$	4.9 ± 1.6
Ω_Λ	0.6892 ± 0.0072	$z_{\rm eq}$	3391 ± 26	$\chi^2_{\rm prior}$	11.5 ± 4.6
$\Omega_{\rm m}$	0.3108 ± 0.0072	$k_{\rm eq}$	0.01031 ± 0.00012	$\chi^2_{\rm BAO}$	6.2 ± 1.3
$\Omega_{\rm m} h^2$	0.1415 ± 0.0032	$100\theta_{\rm eq}$	0.8154 ± 0.0049	$\chi^2_{\rm CMB}$	2780.4 ± 6.1

$\bar{\chi}^2_{\rm eff} = 2798.12$; $\Delta\bar{\chi}^2_{\rm eff} = 0.40$; $R - 1 = 0.00701$

9.26 base_nnu_mnu_plikHM_TTTEEE_lowl_lowE_BAO_post_Pantheon_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02240 ± 0.00019	$\Omega_m h^3$	0.0957 ± 0.0035	$D_M(0.15)$	641 ± 10
$\boldsymbol{\Omega_c h^2}$	0.1186 ± 0.0030	σ_8	$0.813^{+0.014}_{-0.012}$	$H(0.38)$	82.9 ± 1.2
$\boldsymbol{100\theta_{MC}}$	1.04110 ± 0.00044	S_8	0.826 ± 0.014	$D_M(0.38)$	1530 ± 23
$\boldsymbol{\tau}$	$0.0565^{+0.0058}_{-0.0083}$	$\sigma_8 \Omega_m^{0.5}$	0.4521 ± 0.0076	$H(0.51)$	89.6 ± 1.2
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 0.0575	$\sigma_8 \Omega_m^{0.25}$	$0.6062^{+0.0098}_{-0.0089}$	$D_M(0.51)$	1982 ± 30
$\boldsymbol{N_{eff}}$	3.01 ± 0.18	$\sigma_8/h^{0.5}$	$0.988^{+0.014}_{-0.011}$	$H(0.61)$	95.2 ± 1.2
$\boldsymbol{\ln(10^{10} A_s)}$	$3.045^{+0.015}_{-0.019}$	$r_{drag} h$	99.84 ± 0.86	$D_M(0.61)$	2307 ± 34
$\boldsymbol{n_s}$	0.9658 ± 0.0071	$\langle d^2 \rangle^{1/2}$	2.440 ± 0.026	$H(2.33)$	235.5 ± 2.7
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0025	z_{re}	$7.85^{+0.62}_{-0.83}$	$D_M(2.33)$	5771 ± 74
$\boldsymbol{A_{217}^{CIB}}$	46 ± 7	$10^9 A_s$	$2.102^{+0.031}_{-0.039}$	$f\sigma_8(0.15)$	0.4568 ± 0.0072
$\boldsymbol{\xi^{tSZ\times CIB}}$	> 0.373	$10^9 A_s e^{-2\tau}$	1.877 ± 0.018	$\sigma_8(0.15)$	$0.751^{+0.013}_{-0.011}$
$\boldsymbol{A_{143}^{tSZ}}$	$5.6^{+2.1}_{-1.9}$	D_{40}	1230 ± 14	$f\sigma_8(0.38)$	0.4756 ± 0.0071
$\boldsymbol{A_{100}^{PS}}$	257 ± 28	D_{220}	5738 ± 38	$\sigma_8(0.38)$	$0.666^{+0.012}_{-0.010}$
$\boldsymbol{A_{143}^{PS}}$	45 ± 8	D_{810}	2539 ± 14	$f\sigma_8(0.51)$	0.4744 ± 0.0070
$\boldsymbol{A_{143\times217}^{PS}}$	42 ± 9	D_{1420}	818.2 ± 4.9	$\sigma_8(0.51)$	$0.623^{+0.011}_{-0.0097}$
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	D_{2000}	231.5 ± 1.8	$f\sigma_8(0.61)$	0.4696 ± 0.0069
$\boldsymbol{A^{kSZ}}$	< 3.93	$n_{s,0.002}$	0.9658 ± 0.0071	$\sigma_8(0.61)$	$0.593^{+0.010}_{-0.0093}$
$\boldsymbol{A_{100}^{dust TT}}$	8.9 ± 1.8	Y_P	0.2449 ± 0.0024	$f\sigma_8(2.33)$	0.2990 ± 0.0049
$\boldsymbol{A_{143}^{dust TT}}$	10.8 ± 1.8	Y_P^{BBN}	0.2462 ± 0.0024	$\sigma_8(2.33)$	0.3085 ± 0.0053
$\boldsymbol{A_{143\times217}^{dust TT}}$	18.5 ± 3.3	10^5D/H	2.567 ± 0.045	f_{2000}^{143}	28.8 ± 3.0
$\boldsymbol{A_{217}^{dust TT}}$	93.7 ± 7.4	Age/Gyr	13.82 ± 0.18	$f_{2000}^{143\times217}$	31.7 ± 2.1
$\boldsymbol{A_{100}^{dust TE}}$	0.114 ± 0.039	z_*	1089.72 ± 0.34	f_{2000}^{217}	106.6 ± 1.9
$\boldsymbol{A_{100\times143}^{dust TE}}$	0.135 ± 0.029	r_*	145.0 ± 1.7	χ^2_{simall}	397.3 ± 2.1
$\boldsymbol{A_{100\times217}^{dust TE}}$	0.481 ± 0.086	$100\theta_*$	1.04130 ± 0.00054	χ^2_{lowl}	23.4 ± 1.1
$\boldsymbol{A_{143}^{dust TE}}$	0.224 ± 0.053	$D_M(z_*)$/Gpc	13.92 ± 0.16	χ^2_{plik}	2359.8 ± 6.3
$\boldsymbol{A_{143\times217}^{dust TE}}$	0.665 ± 0.080	z_{drag}	1059.87 ± 0.70	χ^2_{JLA}	1036.33 ± 0.35
$\boldsymbol{A_{217}^{dust TE}}$	2.08 ± 0.27	r_{drag}	147.7 ± 1.8	χ^2_{6DF}	0.048 ± 0.063
$\boldsymbol{c_{100}}$	0.99968 ± 0.00061	k_D	0.1405 ± 0.0013	χ^2_{MGS}	1.38 ± 0.48
$\boldsymbol{c_{217}}$	0.99818 ± 0.00062	$100\theta_D$	0.16064 ± 0.00039	$\chi^2_{DR12BAO}$	4.6 ± 1.4
H_0	67.6 ± 1.1	z_{eq}	3388 ± 25	χ^2_{prior}	11.6 ± 4.5
Ω_Λ	0.6905 ± 0.0069	k_{eq}	0.01031 ± 0.00012	χ^2_{BAO}	6.0 ± 1.1
Ω_m	0.3095 ± 0.0069	$100\theta_{eq}$	0.8161 ± 0.0047	χ^2_{CMB}	2780.5 ± 6.1
$\Omega_m h^2$	0.1415 ± 0.0032	$100\theta_{s,eq}$	0.4508 ± 0.0024		
$\Omega_\nu h^2$	< 0.000618	$H(0.15)$	72.9 ± 1.1		

$\bar{\chi}^2_{eff} = 3834.37$; $R - 1 = 0.00998$

9.27 base_nnu_mnu_plikHM_TTTEEE_lowl_lowE_BAO_post_Aver15_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02237 ± 0.00018	$\Omega_m h^3$	0.0950 ± 0.0030	$D_M(0.15)$	643.9 ± 9.4
$\boldsymbol{\Omega_c h^2}$	0.1182 ± 0.0026	σ_8	$0.811^{+0.014}_{-0.011}$	$H(0.38)$	82.7 ± 1.0
$\boldsymbol{100\theta_{MC}}$	1.04114 ± 0.00041	S_8	0.826 ± 0.014	$D_M(0.38)$	1536 ± 21
$\boldsymbol{\tau}$	$0.0562^{+0.0056}_{-0.0082}$	$\sigma_8 \Omega_m^{0.5}$	0.4524 ± 0.0076	$H(0.51)$	89.4 ± 1.1
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 0.0598	$\sigma_8 \Omega_m^{0.25}$	$0.6057^{+0.0096}_{-0.0085}$	$D_M(0.51)$	1989 ± 27
$\boldsymbol{N_{eff}}$	2.97 ± 0.15	$\sigma_8/h^{0.5}$	$0.988^{+0.014}_{-0.011}$	$H(0.61)$	94.9 ± 1.1
$\boldsymbol{\ln(10^{10} A_s)}$	$3.044^{+0.014}_{-0.018}$	$r_{drag} h$	99.65 ± 0.89	$D_M(0.61)$	2315 ± 31
$\boldsymbol{n_s}$	0.9643 ± 0.0065	$\langle d^2 \rangle^{1/2}$	2.443 ± 0.026	$H(2.33)$	235.1 ± 2.3
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0025	z_{re}	$7.82^{+0.60}_{-0.82}$	$D_M(2.33)$	5787 ± 65
$\boldsymbol{A^{CIB}_{217}}$	46 ± 7	$10^9 A_s$	$2.099^{+0.030}_{-0.038}$	$f\sigma_8(0.15)$	0.4569 ± 0.0072
$\boldsymbol{\xi^{tSZ\times CIB}}$	> 0.374	$10^9 A_s e^{-2\tau}$	1.875 ± 0.016	$\sigma_8(0.15)$	$0.750^{+0.013}_{-0.010}$
$\boldsymbol{A^{tSZ}_{143}}$	$5.6^{+2.1}_{-1.8}$	D_{40}	1232 ± 13	$f\sigma_8(0.38)$	0.4753 ± 0.0069
$\boldsymbol{A^{PS}_{100}}$	256 ± 28	D_{220}	5737 ± 38	$\sigma_8(0.38)$	$0.664^{+0.011}_{-0.0094}$
$\boldsymbol{A^{PS}_{143}}$	45 ± 8	D_{810}	2538 ± 14	$f\sigma_8(0.51)$	0.4739 ± 0.0068
$\boldsymbol{A^{PS}_{143\times217}}$	42 ± 9	D_{1420}	818.3 ± 4.8	$\sigma_8(0.51)$	$0.622^{+0.011}_{-0.0089}$
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	D_{2000}	231.6 ± 1.8	$f\sigma_8(0.61)$	$0.4690^{+0.0069}_{-0.0063}$
$\boldsymbol{A^{kSZ}}$	< 3.84	$n_{s,0.002}$	0.9643 ± 0.0065	$\sigma_8(0.61)$	$0.592^{+0.010}_{-0.0085}$
$\boldsymbol{A^{dust TT}_{100}}$	8.9 ± 1.8	Y_P	0.2444 ± 0.0021	$f\sigma_8(2.33)$	0.2982 ± 0.0046
$\boldsymbol{A^{dust TT}_{143}}$	10.8 ± 1.8	Y_P^{BBN}	0.2457 ± 0.0021	$\sigma_8(2.33)$	$0.3075^{+0.0053}_{-0.0046}$
$\boldsymbol{A^{dust TT}_{143\times217}}$	18.5 ± 3.3	10^5D/H	2.561 ± 0.040	f^{143}_{2000}	28.6 ± 2.9
$\boldsymbol{A^{dust TT}_{217}}$	93.7 ± 7.4	Age/Gyr	13.85 ± 0.15	$f^{143\times217}_{2000}$	31.5 ± 2.0
$\boldsymbol{A^{dust TE}_{100}}$	0.114 ± 0.039	z_*	1089.69 ± 0.31	f^{217}_{2000}	106.5 ± 1.9
$\boldsymbol{A^{dust TE}_{100\times143}}$	0.135 ± 0.029	r_*	145.3 ± 1.5	χ^2_{simall}	397.2 ± 2.0
$\boldsymbol{A^{dust TE}_{100\times217}}$	0.481 ± 0.086	$100\theta_*$	1.04137 ± 0.00049	χ^2_{lowl}	23.6 ± 1.1
$\boldsymbol{A^{dust TE}_{143}}$	0.225 ± 0.053	$D_M(z_*)$/Gpc	13.95 ± 0.14	χ^2_{plik}	2359.3 ± 6.1
$\boldsymbol{A^{dust TE}_{143\times217}}$	0.665 ± 0.080	z_{drag}	1059.73 ± 0.63	χ^2_{Aver15}	0.32 ± 0.44
$\boldsymbol{A^{dust TE}_{217}}$	2.08 ± 0.26	r_{drag}	148.0 ± 1.6	χ^2_{6DF}	0.062 ± 0.077
$\boldsymbol{c_{100}}$	0.99969 ± 0.00061	k_D	0.1402 ± 0.0012	χ^2_{MGS}	1.28 ± 0.49
$\boldsymbol{c_{217}}$	0.99818 ± 0.00062	$100\theta_D$	0.16058 ± 0.00035	$\chi^2_{DR12BAO}$	4.9 ± 1.6
H_0	67.4 ± 1.0	z_{eq}	3393 ± 25	χ^2_{prior}	11.5 ± 4.5
Ω_Λ	0.6889 ± 0.0072	k_{eq}	0.01030 ± 0.00011	χ^2_{BAO}	6.2 ± 1.3
Ω_m	0.3111 ± 0.0072	$100\theta_{eq}$	0.8151 ± 0.0048	χ^2_{CMB}	2780.1 ± 6.0
$\Omega_m h^2$	0.1411 ± 0.0028	$100\theta_{s,eq}$	0.4504 ± 0.0024		
$\Omega_\nu h^2$	< 0.000643	$H(0.15)$	72.6 ± 1.0		

$\bar{\chi}^2_{eff} = 2798.15$; $R - 1 = 0.01006$

9.28 base_nnu_mnu_plikHM_TTTEEE_lowl_lowE_BAO_post_Cooke17_Aver15_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02237 ± 0.00018	$\Omega_m h^3$	0.0955 ± 0.0029	$D_M(0.15)$	642.8 ± 9.2
$\boldsymbol{\Omega_c h^2}$	0.1187 ± 0.0025	σ_8	$0.812^{+0.014}_{-0.011}$	$H(0.38)$	82.8 ± 1.0
$\boldsymbol{100\theta_{MC}}$	1.04108 ± 0.00039	S_8	0.827 ± 0.014	$D_M(0.38)$	1533 ± 21
$\boldsymbol{\tau}$	$0.0561^{+0.0056}_{-0.0082}$	$\sigma_8\Omega_m^{0.5}$	0.4531 ± 0.0075	$H(0.51)$	89.5 ± 1.0
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 0.0605	$\sigma_8\Omega_m^{0.25}$	$0.6067^{+0.0096}_{-0.0082}$	$D_M(0.51)$	1986 ± 26
$\boldsymbol{N_{eff}}$	3.00 ± 0.15	$\sigma_8/h^{0.5}$	$0.989^{+0.014}_{-0.011}$	$H(0.61)$	95.1 ± 1.1
$\boldsymbol{\ln(10^{10} A_s)}$	$3.045^{+0.014}_{-0.018}$	$r_{drag}h$	99.65 ± 0.89	$D_M(0.61)$	2311 ± 30
$\boldsymbol{n_s}$	0.9651 ± 0.0064	$\langle d^2\rangle^{1/2}$	2.443 ± 0.026	$H(2.33)$	235.5 ± 2.2
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0025	z_{re}	$7.82^{+0.60}_{-0.82}$	$D_M(2.33)$	5777 ± 62
$\boldsymbol{A_{217}^{CIB}}$	47 ± 7	$10^9 A_s$	$2.101^{+0.029}_{-0.038}$	$f\sigma_8(0.15)$	0.4576 ± 0.0071
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$10^9 A_s e^{-2\tau}$	1.877 ± 0.016	$\sigma_8(0.15)$	$0.751^{+0.013}_{-0.010}$
$\boldsymbol{A_{143}^{tSZ}}$	$5.6^{+2.1}_{-1.9}$	D_{40}	1231 ± 13	$f\sigma_8(0.38)$	0.4761 ± 0.0068
$\boldsymbol{A_{100}^{PS}}$	257 ± 27	D_{220}	5735 ± 38	$\sigma_8(0.38)$	$0.665^{+0.011}_{-0.0091}$
$\boldsymbol{A_{143}^{PS}}$	45 ± 8	D_{810}	2539 ± 14	$f\sigma_8(0.51)$	$0.4747^{+0.0069}_{-0.0062}$
$\boldsymbol{A_{143\times217}^{PS}}$	42 ± 9	D_{1420}	818.0 ± 4.8	$\sigma_8(0.51)$	$0.623^{+0.011}_{-0.0087}$
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	D_{2000}	231.4 ± 1.7	$f\sigma_8(0.61)$	$0.4697^{+0.0069}_{-0.0060}$
$\boldsymbol{A^{kSZ}}$	< 3.94	$n_{s,0.002}$	0.9651 ± 0.0064	$\sigma_8(0.61)$	$0.593^{+0.010}_{-0.0083}$
$\boldsymbol{A_{100}^{dust TT}}$	8.9 ± 1.8	Y_P	0.2447 ± 0.0020	$f\sigma_8(2.33)$	$0.2987^{+0.0047}_{-0.0042}$
$\boldsymbol{A_{143}^{dust TT}}$	10.8 ± 1.8	Y_P^{BBN}	0.2461 ± 0.0020	$\sigma_8(2.33)$	$0.3080^{+0.0053}_{-0.0046}$
$\boldsymbol{A_{143\times217}^{dust TT}}$	18.5 ± 3.3	10^5D/H	2.570 ± 0.037	f_{2000}^{143}	28.9 ± 2.9
$\boldsymbol{A_{217}^{dust TT}}$	93.7 ± 7.4	Age/Gyr	13.83 ± 0.15	$f_{2000}^{143\times217}$	31.7 ± 2.0
$\boldsymbol{A_{100}^{dust TE}}$	0.114 ± 0.039	z_*	1089.76 ± 0.29	f_{2000}^{217}	106.7 ± 1.8
$\boldsymbol{A_{100\times143}^{dust TE}}$	0.135 ± 0.029	r_*	145.0 ± 1.4	χ^2_{small}	397.2 ± 2.0
$\boldsymbol{A_{100\times217}^{dust TE}}$	0.481 ± 0.086	$100\theta_*$	1.04129 ± 0.00047	χ^2_{lowl}	23.5 ± 1.1
$\boldsymbol{A_{143}^{dust TE}}$	0.225 ± 0.053	$D_M(z_*)$/Gpc	13.93 ± 0.13	χ^2_{plik}	2359.3 ± 6.1
$\boldsymbol{A_{143\times217}^{dust TE}}$	0.665 ± 0.080	z_{drag}	1059.79 ± 0.62	χ^2_{Aver15}	0.34 ± 0.45
$\boldsymbol{A_{217}^{dust TE}}$	2.08 ± 0.26	r_{drag}	147.7 ± 1.5	$\chi^2_{Cooke17}$	0.42 ± 0.46
$\boldsymbol{c_{100}}$	0.99969 ± 0.00061	k_D	0.1404 ± 0.0011	χ^2_{6DF}	0.062 ± 0.077
$\boldsymbol{c_{217}}$	0.99818 ± 0.00061	$100\theta_D$	0.16065 ± 0.00032	χ^2_{MGS}	1.28 ± 0.48
H_0	67.5 ± 1.0	z_{eq}	3392 ± 25	$\chi^2_{DR12BAO}$	4.9 ± 1.6
Ω_Λ	0.6889 ± 0.0071	k_{eq}	0.01032 ± 0.00010	χ^2_{prior}	11.5 ± 4.5
Ω_m	0.3111 ± 0.0071	$100\theta_{eq}$	0.8152 ± 0.0047	χ^2_{BAO}	6.3 ± 1.3
$\Omega_m h^2$	0.1416 ± 0.0026	$100\theta_{s,eq}$	0.4504 ± 0.0024	χ^2_{CMB}	2779.9 ± 5.9
$\Omega_\nu h^2$	< 0.000650	$H(0.15)$	72.7 ± 1.0	χ^2_{Abund}	0.75 ± 0.57

$\bar{\chi}^2_{eff} = 2798.49$; $R - 1 = 0.00945$

9.29 base_nnu_mnu_CamSpecHM_TTTEEE_lowl_lowE_BAO

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022282	0.02232 ± 0.00019	σ_8	0.8150	$0.806^{+0.016}_{-0.013}$	$H(0.15)$	72.69	72.8 ± 1.3
$\boldsymbol{\Omega_c h^2}$	0.11735	0.1183 ± 0.0034	S_8	0.8239	0.819 ± 0.015	$D_{\rm M}(0.15)$	642.7	642 ± 12
$\boldsymbol{100\theta_{MC}}$	1.041167	$1.04104^{+0.00045}_{-0.00050}$	$\sigma_8\Omega_{\rm m}^{0.5}$	0.4513	0.4484 ± 0.0082	$H(0.38)$	82.64	82.8 ± 1.3
$\boldsymbol{\tau}$	0.0533	0.0534 ± 0.0076	$\sigma_8\Omega_{\rm m}^{0.25}$	0.6064	0.601 ± 0.010	$D_{\rm M}(0.38)$	1534.0	1533 ± 26
$\boldsymbol{\Sigma m_\nu}$ [eV]	0.0014	< 0.0738	$\sigma_8/h^{0.5}$	0.9920	$0.980^{+0.017}_{-0.012}$	$H(0.51)$	89.27	89.5 ± 1.4
$\boldsymbol{N_{eff}}$	2.933	3.01 ± 0.20	$r_{\rm drag}h$	100.21	99.81 ± 0.93	$D_{\rm M}(0.51)$	1987.9	1986 ± 33
$\boldsymbol{\ln(10^{10}A_s)}$	3.0342	3.036 ± 0.018	$\langle d^2\rangle^{1/2}$	2.4377	2.425 ± 0.028	$H(0.61)$	94.81	95.1 ± 1.4
$\boldsymbol{n_s}$	0.9642	0.9661 ± 0.0077	$z_{\rm re}$	7.53	7.55 ± 0.78	$D_{\rm M}(0.61)$	2313.8	2311 ± 38
$\boldsymbol{y_{cal}}$	1.00031	1.0005 ± 0.0025	$10^9 A_{\rm s}$	2.0785	$2.083^{+0.035}_{-0.040}$	$H(2.33)$	234.04	235.2 ± 3.0
$\boldsymbol{A^{PS}_{100}}$	232.6	239 ± 25	$10^9 A_{\rm s}e^{-2\tau}$	1.8685	1.872 ± 0.019	$D_{\rm M}(2.33)$	5796	5779 ± 84
$\boldsymbol{A^{PS}_{143}}$	46.2	39 ± 9	D_{40}	1226.4	1225 ± 14	$f\sigma_8(0.15)$	0.4555	0.4532 ± 0.0078
$\boldsymbol{A^{PS}_{217}}$	107.5	102 ± 10	D_{220}	5719.2	5721 ± 39	$\sigma_8(0.15)$	0.7535	$0.745^{+0.015}_{-0.012}$
$\boldsymbol{A^{CIB}_{217}}$	37.5	40 ± 7	D_{810}	2533.8	2534 ± 14	$f\sigma_8(0.38)$	0.4749	0.4718 ± 0.0078
$\boldsymbol{A^{tSZ}_{143}}$	4.55	$3.9^{+1.9}_{-2.5}$	D_{1420}	817.3	816.3 ± 5.1	$\sigma_8(0.38)$	0.6682	$0.660^{+0.013}_{-0.011}$
$\boldsymbol{r^{PS}_{143\times217}}$	0.769	0.66 ± 0.13	D_{2000}	231.42	230.7 ± 2.1	$f\sigma_8(0.51)$	0.4740	0.4706 ± 0.0077
$\boldsymbol{r^{CIB}_{143\times217}}$	0.610	$0.56^{+0.41}_{-0.16}$	$n_{\rm s,0.002}$	0.9642	0.9661 ± 0.0077	$\sigma_8(0.51)$	0.6255	$0.618^{+0.013}_{-0.010}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.99	—	$Y_{\rm P}$	0.24384	0.2448 ± 0.0028	$f\sigma_8(0.61)$	0.4693	0.4658 ± 0.0077
$\boldsymbol{A^{kSZ}}$	2.91	< 6.12	$Y_{\rm P}^{\rm BBN}$	0.24516	0.2461 ± 0.0028	$\sigma_8(0.61)$	0.5952	$0.588^{+0.012}_{-0.010}$
$\boldsymbol{A^{dust}_{100}}$	1.006	1.01 ± 0.20	10^5D/H	2.563	2.582 ± 0.057	$f\sigma_8(2.33)$	0.2993	$0.2966^{+0.0057}_{-0.0050}$
$\boldsymbol{A^{dust}_{143}}$	0.948	0.96 ± 0.18	Age/Gyr	13.877	13.84 ± 0.20	$\sigma_8(2.33)$	0.3093	$0.3058^{+0.0063}_{-0.0054}$
$\boldsymbol{A^{dust}_{217}}$	0.984	0.98 ± 0.10	z_*	1089.682	1089.79 ± 0.41	f^{143}_{2000}	28.28	29 ± 3
$\boldsymbol{A^{dust}_{143\times217}}$	1.045	1.03 ± 0.16	r_*	145.77	145.2 ± 2.0	f^{217}_{2000}	105.58	106.5 ± 2.3
$\boldsymbol{c_{100}}$	0.99779	0.9975 ± 0.0011	$100\theta_*$	1.04140	1.04126 ± 0.00059	$f^{143\times217}_{2000}$	31.08	31.7 ± 2.5
$\boldsymbol{c_{217}}$	1.00094	1.0011 ± 0.0016	$D_{\rm M}(z_*)$/Gpc	13.997	13.94 ± 0.18	$\chi^2_{\rm simall}$	395.85	396.9 ± 1.7
$\boldsymbol{c_{TE}}$	0.9959	0.9965 ± 0.0051	$z_{\rm drag}$	1059.44	1059.65 ± 0.74	$\chi^2_{\rm lowl}$	23.27	23.1 ± 1.1
$\boldsymbol{c_{EE}}$	0.9911	0.9918 ± 0.0056	$r_{\rm drag}$	148.48	147.9 ± 2.0	$\chi^2_{\rm CamSpec}$	11499.0	11515.3 ± 6.0
H_0	67.49	67.5 ± 1.3	$k_{\rm D}$	0.13978	0.1402 ± 0.0015	$\chi^2_{\rm 6DF}$	0.0031	0.056 ± 0.073
Ω_Λ	0.6934	0.6900 ± 0.0075	$100\theta_{\rm D}$	0.160575	0.16075 ± 0.00050	$\chi^2_{\rm MGS}$	1.54	1.37 ± 0.52
$\Omega_{\rm m}$	0.3066	0.3100 ± 0.0075	$z_{\rm eq}$	3388.1	3379 ± 28	$\chi^2_{\rm DR12BAO}$	3.67	4.7 ± 1.5
$\Omega_{\rm m}h^2$	0.13965	0.1413 ± 0.0036	$k_{\rm eq}$	0.010262	0.01028 ± 0.00012	$\chi^2_{\rm prior}$	1.87	7.9 ± 3.4
$\Omega_\nu h^2$	0.000015	< 0.000794	$100\theta_{\rm eq}$	0.8156	0.8174 ± 0.0054	$\chi^2_{\rm BAO}$	5.21	6.1 ± 1.2
$\Omega_{\rm m}h^3$	0.09425	0.0954 ± 0.0040	$100\theta_{\rm s,eq}$	0.45067	0.4516 ± 0.0027	$\chi^2_{\rm CMB}$	11918.1	11935.2 ± 5.9

Best-fit $\chi^2_{\rm eff} = 11925.22$; $\bar{\chi}^2_{\rm eff} = 11949.21$; $\Delta\bar{\chi}^2_{\rm eff} = 0.93$; $R - 1 = 0.01937$

$\chi^2_{\rm eff}$: BAO - 6DF: 0.00 MGS: 1.54 DR12BAO: 3.67 CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.85 commander_dx12_v3_2_29: 23.27 CamSpec like_10.7HM_1400_unified: 11499.01

9.30 base_nnu_mnu_CamSpecHM_TTTEEE_lowl_lowE_BAO_post_Pantheon

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02233 ± 0.00019	S_8	0.818 ± 0.015	$H(0.38)$	83.0 ± 1.3
$\boldsymbol{\Omega_c h^2}$	0.1184 ± 0.0034	$\sigma_8 \Omega_m^{0.5}$	0.4481 ± 0.0080	$D_M(0.38)$	1530 ± 26
$\boldsymbol{100\theta_{MC}}$	$1.04103^{+0.00045}_{-0.00050}$	$\sigma_8 \Omega_m^{0.25}$	0.601 ± 0.010	$H(0.51)$	89.6 ± 1.3
$\boldsymbol{\tau}$	0.0536 ± 0.0076	$\sigma_8/h^{0.5}$	$0.980^{+0.016}_{-0.012}$	$D_M(0.51)$	1982 ± 33
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 0.0701	$r_{drag} h$	99.96 ± 0.89	$H(0.61)$	95.2 ± 1.4
$\boldsymbol{N_{eff}}$	3.02 ± 0.20	$\langle d^2 \rangle^{1/2}$	2.423 ± 0.028	$D_M(0.61)$	2307 ± 38
$\boldsymbol{\ln(10^{10} A_s)}$	3.037 ± 0.018	z_{re}	7.56 ± 0.78	$H(2.33)$	235.3 ± 3.0
$\boldsymbol{n_s}$	0.9667 ± 0.0076	$10^9 A_s$	$2.085^{+0.036}_{-0.040}$	$D_M(2.33)$	5772 ± 82
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.873 ± 0.019	$f\sigma_8(0.15)$	0.4529 ± 0.0077
$\boldsymbol{A^{PS}_{100}}$	239 ± 25	D_{40}	1224 ± 14	$\sigma_8(0.15)$	$0.746^{+0.014}_{-0.012}$
$\boldsymbol{A^{PS}_{143}}$	39 ± 9	D_{220}	5722 ± 39	$f\sigma_8(0.38)$	0.4717 ± 0.0076
$\boldsymbol{A^{PS}_{217}}$	102^{+10}_{-10}	D_{810}	2534 ± 14	$\sigma_8(0.38)$	$0.661^{+0.013}_{-0.011}$
$\boldsymbol{A^{CIB}_{217}}$	40^{+7}_{-8}	D_{1420}	816.2 ± 5.1	$f\sigma_8(0.51)$	0.4707 ± 0.0076
$\boldsymbol{A^{tSZ}_{143}}$	$3.9^{+1.8}_{-2.5}$	D_{2000}	230.6 ± 2.1	$\sigma_8(0.51)$	$0.619^{+0.012}_{-0.010}$
$\boldsymbol{r^{PS}_{143\times217}}$	0.66 ± 0.13	$n_{s,0.002}$	0.9667 ± 0.0076	$f\sigma_8(0.61)$	0.4660 ± 0.0075
$\boldsymbol{r^{CIB}_{143\times217}}$	$0.56^{+0.42}_{-0.16}$	Y_P	0.2450 ± 0.0028	$\sigma_8(0.61)$	$0.589^{+0.012}_{-0.010}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	0.2463 ± 0.0028	$f\sigma_8(2.33)$	0.2971 ± 0.0053
$\boldsymbol{A^{kSZ}}$	< 6.13	10^5D/H	2.583 ± 0.056	$\sigma_8(2.33)$	$0.3064^{+0.0061}_{-0.0054}$
$\boldsymbol{A^{dust}_{100}}$	1.01 ± 0.20	Age/Gyr	13.82 ± 0.20	f^{143}_{2000}	29 ± 3
$\boldsymbol{A^{dust}_{143}}$	0.96 ± 0.18	z_*	1089.79 ± 0.41	f^{217}_{2000}	106.6 ± 2.3
$\boldsymbol{A^{dust}_{217}}$	0.97 ± 0.10	r_*	145.1 ± 2.0	$f^{143\times217}_{2000}$	31.8 ± 2.5
$\boldsymbol{A^{dust}_{143\times217}}$	1.02 ± 0.16	$100\theta_*$	1.04124 ± 0.00058	χ^2_{simall}	396.9 ± 1.7
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	$D_M(z_*)$/Gpc	13.93 ± 0.18	χ^2_{lowl}	23.0 ± 1.1
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	z_{drag}	1059.70 ± 0.73	$\chi^2_{CamSpec}$	11515.4 ± 6.0
$\boldsymbol{c_{TE}}$	0.9966 ± 0.0051	r_{drag}	147.7 ± 2.0	χ^2_{JLA}	1036.30 ± 0.34
$\boldsymbol{c_{EE}}$	0.9920 ± 0.0056	k_D	0.1403 ± 0.0015	χ^2_{6DF}	0.044 ± 0.060
H_0	67.7 ± 1.2	$100\theta_D$	0.16077 ± 0.00050	χ^2_{MGS}	1.45 ± 0.51
Ω_Λ	0.6913 ± 0.0071	z_{eq}	3376 ± 27	$\chi^2_{DR12BAO}$	4.4 ± 1.3
Ω_m	0.3087 ± 0.0071	k_{eq}	0.01028 ± 0.00012	χ^2_{prior}	7.9 ± 3.4
$\Omega_m h^2$	0.1413 ± 0.0036	$100\theta_{eq}$	$0.8180^{+0.0048}_{-0.0054}$	χ^2_{BAO}	5.9 ± 1.0
$\Omega_\nu h^2$	< 0.000754	$100\theta_{s,eq}$	$0.4519^{+0.0024}_{-0.0027}$	χ^2_{CMB}	11935.3 ± 5.9
$\Omega_m h^3$	0.0957 ± 0.0039	$H(0.15)$	72.9 ± 1.2		
σ_8	$0.807^{+0.015}_{-0.013}$	$D_M(0.15)$	641 ± 11		

$\bar{\chi}^2_{eff} = 12985.40$; $R - 1 = 0.02041$

9.31 base_nnu_mnu_CamSpecHM_TTTEEE_lowl_lowE_BAO_post_Aver15

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02230 ± 0.00018	S_8	0.818 ± 0.015	$H(0.38)$	82.6 ± 1.1
$\boldsymbol{\Omega_c h^2}$	0.1178 ± 0.0028	$\sigma_8\Omega_m^{0.5}$	0.4482 ± 0.0081	$D_M(0.38)$	1536 ± 23
$\boldsymbol{100\theta_{MC}}$	1.04109 ± 0.00043	$\sigma_8\Omega_m^{0.25}$	$0.601^{+0.010}_{-0.0093}$	$H(0.51)$	89.3 ± 1.1
$\boldsymbol{\tau}$	0.0533 ± 0.0076	$\sigma_8/h^{0.5}$	$0.981^{+0.016}_{-0.012}$	$D_M(0.51)$	1990 ± 28
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 0.0711	$r_{drag}h$	99.76 ± 0.91	$H(0.61)$	94.9 ± 1.2
$\boldsymbol{N_{eff}}$	2.98 ± 0.17	$\langle d^2\rangle^{1/2}$	2.426 ± 0.028	$D_M(0.61)$	2316 ± 32
$\boldsymbol{\ln(10^{10}A_s)}$	3.035 ± 0.017	z_{re}	7.53 ± 0.77	$H(2.33)$	234.8 ± 2.5
$\boldsymbol{n_s}$	0.9651 ± 0.0067	$10^9 A_s$	$2.081^{+0.034}_{-0.038}$	$D_M(2.33)$	5790 ± 69
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.870 ± 0.017	$f\sigma_8(0.15)$	0.4529 ± 0.0077
$\boldsymbol{A_{100}^{PS}}$	238 ± 25	D_{40}	1226 ± 14	$\sigma_8(0.15)$	$0.744^{+0.014}_{-0.011}$
$\boldsymbol{A_{143}^{PS}}$	38 ± 9	D_{220}	5721 ± 39	$f\sigma_8(0.38)$	0.4714 ± 0.0075
$\boldsymbol{A_{217}^{PS}}$	102 ± 10	D_{810}	2533 ± 14	$\sigma_8(0.38)$	$0.659^{+0.013}_{-0.010}$
$\boldsymbol{A_{217}^{CIB}}$	39 ± 7	D_{1420}	816.5 ± 5.0	$f\sigma_8(0.51)$	0.4701 ± 0.0074
$\boldsymbol{A_{143}^{tSZ}}$	$3.9^{+1.8}_{-2.5}$	D_{2000}	230.8 ± 2.0	$\sigma_8(0.51)$	$0.617^{+0.012}_{-0.0096}$
$\boldsymbol{r_{143\times217}^{PS}}$	0.66 ± 0.13	$n_{s,0.002}$	0.9651 ± 0.0067	$f\sigma_8(0.61)$	0.4653 ± 0.0073
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.55^{+0.40}_{-0.18}$	Y_P	0.2444 ± 0.0023	$\sigma_8(0.61)$	$0.587^{+0.012}_{-0.0092}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	0.2457 ± 0.0023	$f\sigma_8(2.33)$	$0.2962^{+0.0053}_{-0.0046}$
$\boldsymbol{A^{kSZ}}$	< 6.02	10^5D/H	2.575 ± 0.049	$\sigma_8(2.33)$	$0.3053^{+0.0060}_{-0.0049}$
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.20	Age/Gyr	13.86 ± 0.17	f_{2000}^{143}	29.0 ± 3.2
$\boldsymbol{A_{143}^{dust}}$	0.96 ± 0.18	z_*	1089.75 ± 0.37	f_{2000}^{217}	106.3 ± 2.1
$\boldsymbol{A_{217}^{dust}}$	0.98 ± 0.10	r_*	145.4 ± 1.6	$f_{2000}^{143\times217}$	31.5 ± 2.3
$\boldsymbol{A_{143\times217}^{dust}}$	1.02 ± 0.16	$100\theta_*$	1.04133 ± 0.00052	χ^2_{simall}	396.9 ± 1.7
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	$D_M(z_*)$/Gpc	13.97 ± 0.15	χ^2_{lowl}	23.2 ± 1.1
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	z_{drag}	1059.55 ± 0.64	$\chi^2_{CamSpec}$	11514.9 ± 5.9
$\boldsymbol{c_{TE}}$	0.9964 ± 0.0051	r_{drag}	148.1 ± 1.7	χ^2_{Aver15}	0.38 ± 0.52
$\boldsymbol{c_{EE}}$	0.9915 ± 0.0054	k_D	0.1400 ± 0.0012	χ^2_{6DF}	0.057 ± 0.074
H_0	67.4 ± 1.1	$100\theta_D$	0.16068 ± 0.00043	χ^2_{MGS}	1.35 ± 0.51
Ω_Λ	0.6896 ± 0.0073	z_{eq}	3381 ± 27	$\chi^2_{DR12BAO}$	4.7 ± 1.5
Ω_m	0.3104 ± 0.0073	k_{eq}	0.01027 ± 0.00011	χ^2_{prior}	7.9 ± 3.4
$\Omega_m h^2$	0.1408 ± 0.0030	$100\theta_{eq}$	0.8170 ± 0.0051	χ^2_{BAO}	6.1 ± 1.3
$\Omega_\nu h^2$	< 0.000764	$100\theta_{s,eq}$	0.4514 ± 0.0026	χ^2_{CMB}	11934.9 ± 5.8
$\Omega_m h^3$	0.0948 ± 0.0032	$H(0.15)$	72.6 ± 1.1		
σ_8	$0.805^{+0.015}_{-0.012}$	$D_M(0.15)$	644 ± 10		

$\bar{\chi}^2_{eff} = 11949.25$; $R - 1 = 0.02221$

9.32 base_nnu_mnu_CamSpecHM_TTTEEE_lowl_lowE_BAO_post_Cooke17_Aver15

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02230 ± 0.00018	S_8	0.819 ± 0.015	$H(0.38)$	82.8 ± 1.1
$\boldsymbol{\Omega_c h^2}$	0.1183 ± 0.0026	$\sigma_8\Omega_m^{0.5}$	0.4488 ± 0.0080	$D_M(0.38)$	1533 ± 22
$\boldsymbol{100\theta_{MC}}$	1.04103 ± 0.00040	$\sigma_8\Omega_m^{0.25}$	$0.601^{+0.010}_{-0.0091}$	$H(0.51)$	89.5 ± 1.1
$\boldsymbol{\tau}$	0.0533 ± 0.0076	$\sigma_8/h^{0.5}$	$0.981^{+0.016}_{-0.012}$	$D_M(0.51)$	1986 ± 27
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 0.0722	$r_{drag}h$	99.77 ± 0.92	$H(0.61)$	95.1 ± 1.1
$\boldsymbol{N_{eff}}$	3.00 ± 0.16	$\langle d^2\rangle^{1/2}$	2.426 ± 0.028	$D_M(0.61)$	2312 ± 31
$\boldsymbol{\ln(10^{10}A_s)}$	3.036 ± 0.017	z_{re}	7.54 ± 0.77	$H(2.33)$	235.2 ± 2.3
$\boldsymbol{n_s}$	0.9658 ± 0.0065	$10^9 A_s$	$2.083^{+0.034}_{-0.037}$	$D_M(2.33)$	5780 ± 65
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.872 ± 0.016	$f\sigma_8(0.15)$	0.4535 ± 0.0076
$\boldsymbol{A^{PS}_{100}}$	239 ± 25	D_{40}	1225 ± 13	$\sigma_8(0.15)$	$0.745^{+0.014}_{-0.011}$
$\boldsymbol{A^{PS}_{143}}$	39 ± 8	D_{220}	5719 ± 39	$f\sigma_8(0.38)$	0.4720 ± 0.0074
$\boldsymbol{A^{PS}_{217}}$	102 ± 10	D_{810}	2533 ± 14	$\sigma_8(0.38)$	$0.660^{+0.013}_{-0.0099}$
$\boldsymbol{A^{CIB}_{217}}$	40 ± 7	D_{1420}	816.1 ± 5.0	$f\sigma_8(0.51)$	$0.4708^{+0.0075}_{-0.0068}$
$\boldsymbol{A^{tSZ}_{143}}$	$3.9^{+1.8}_{-2.5}$	D_{2000}	230.6 ± 1.9	$\sigma_8(0.51)$	$0.618^{+0.012}_{-0.0093}$
$\boldsymbol{r^{PS}_{143\times217}}$	0.66 ± 0.13	$n_{s,0.002}$	0.9658 ± 0.0065	$f\sigma_8(0.61)$	$0.4659^{+0.0075}_{-0.0066}$
$\boldsymbol{r^{CIB}_{143\times217}}$	$0.56^{+0.41}_{-0.17}$	Y_P	0.2447 ± 0.0021	$\sigma_8(0.61)$	$0.588^{+0.012}_{-0.0089}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	0.2461 ± 0.0021	$f\sigma_8(2.33)$	$0.2966^{+0.0053}_{-0.0044}$
$\boldsymbol{A^{kSZ}}$	< 6.12	10^5D/H	2.584 ± 0.044	$\sigma_8(2.33)$	$0.3058^{+0.0060}_{-0.0047}$
$\boldsymbol{A^{dust}_{100}}$	1.01 ± 0.20	Age/Gyr	13.84 ± 0.15	f^{143}_{2000}	29.3 ± 3.1
$\boldsymbol{A^{dust}_{143}}$	0.96 ± 0.18	z_*	1089.81 ± 0.33	f^{217}_{2000}	106.6 ± 2.1
$\boldsymbol{A^{dust}_{217}}$	0.97 ± 0.10	r_*	145.2 ± 1.5	$f^{143\times217}_{2000}$	31.8 ± 2.2
$\boldsymbol{A^{dust}_{143\times217}}$	1.03 ± 0.16	$100\theta_*$	1.04125 ± 0.00048	χ^2_{simall}	396.9 ± 1.6
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	$D_M(z_*)$/Gpc	13.94 ± 0.14	χ^2_{lowl}	23.1 ± 1.1
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	z_{drag}	1059.60 ± 0.63	$\chi^2_{CamSpec}$	11514.8 ± 5.8
$\boldsymbol{c_{TE}}$	0.9966 ± 0.0050	r_{drag}	147.9 ± 1.6	χ^2_{Aver15}	0.37 ± 0.50
$\boldsymbol{c_{EE}}$	0.9920 ± 0.0052	k_D	0.1402 ± 0.0011	$\chi^2_{Cooke17}$	0.35 ± 0.45
H_0	67.5 ± 1.0	$100\theta_D$	0.16076 ± 0.00038	χ^2_{6DF}	0.056 ± 0.074
Ω_Λ	0.6897 ± 0.0073	z_{eq}	3380 ± 27	χ^2_{MGS}	1.35 ± 0.51
Ω_m	0.3103 ± 0.0073	k_{eq}	0.01028 ± 0.00010	$\chi^2_{DR12BAO}$	4.7 ± 1.5
$\Omega_m h^2$	0.1412 ± 0.0028	$100\theta_{eq}$	0.8172 ± 0.0051	χ^2_{prior}	7.8 ± 3.4
$\Omega_\nu h^2$	< 0.000776	$100\theta_{s,eq}$	0.4515 ± 0.0026	χ^2_{BAO}	6.1 ± 1.3
$\Omega_m h^3$	0.0953 ± 0.0030	$H(0.15)$	72.7 ± 1.0	χ^2_{CMB}	11934.7 ± 5.8
σ_8	$0.806^{+0.015}_{-0.012}$	$D_M(0.15)$	642.8 ± 9.6	χ^2_{Abund}	0.72 ± 0.67

$\bar{\chi}^2_{eff} = 11949.41$; $R - 1 = 0.02215$

9.33 base_nnu_mnu_CamSpecHM_TTTEEE_lowl_lowE_BAO_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02232 ± 0.00019	σ_8	$0.806^{+0.016}_{-0.013}$	$H(0.15)$	72.8 ± 1.3
$\boldsymbol{\Omega_c h^2}$	0.1183 ± 0.0034	S_8	0.819 ± 0.015	$D_{\rm M}(0.15)$	642 ± 12
$\boldsymbol{100\theta_{MC}}$	$1.04104^{+0.00045}_{-0.00050}$	$\sigma_8\Omega_{\rm m}^{0.5}$	0.4488 ± 0.0081	$H(0.38)$	82.8 ± 1.3
$\boldsymbol{\tau}$	$0.0547^{+0.0049}_{-0.0079}$	$\sigma_8\Omega_{\rm m}^{0.25}$	0.602 ± 0.010	$D_{\rm M}(0.38)$	1532 ± 27
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 0.0749	$\sigma_8/h^{0.5}$	$0.981^{+0.017}_{-0.012}$	$H(0.51)$	89.5 ± 1.4
$\boldsymbol{N_{eff}}$	3.01 ± 0.21	$r_{\rm drag}h$	99.82 ± 0.94	$D_{\rm M}(0.51)$	1985 ± 34
$\boldsymbol{\ln(10^{10}A_s)}$	$3.039^{+0.015}_{-0.018}$	$\langle d^2\rangle^{1/2}$	2.427 ± 0.027	$H(0.61)$	95.1 ± 1.4
$\boldsymbol{n_s}$	0.9662 ± 0.0077	$z_{\rm re}$	$7.68^{+0.54}_{-0.80}$	$D_{\rm M}(0.61)$	2310 ± 38
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	$10^9 A_{\rm s}$	$2.089^{+0.030}_{-0.039}$	$H(2.33)$	235.2 ± 3.0
$\boldsymbol{A^{PS}_{100}}$	239 ± 25	$10^9 A_{\rm s}e^{-2\tau}$	1.872 ± 0.019	$D_{\rm M}(2.33)$	5778 ± 84
$\boldsymbol{A^{PS}_{143}}$	38 ± 9	D_{40}	1225 ± 14	$f\sigma_8(0.15)$	0.4536 ± 0.0077
$\boldsymbol{A^{PS}_{217}}$	102 ± 10	D_{220}	5721 ± 39	$\sigma_8(0.15)$	$0.745^{+0.015}_{-0.012}$
$\boldsymbol{A^{CIB}_{217}}$	40^{+7}_{-8}	D_{810}	2534 ± 14	$f\sigma_8(0.38)$	0.4722 ± 0.0077
$\boldsymbol{A^{tSZ}_{143}}$	$3.9^{+1.9}_{-2.5}$	D_{1420}	816.3 ± 5.1	$\sigma_8(0.38)$	$0.661^{+0.013}_{-0.011}$
$\boldsymbol{r^{PS}_{143\times217}}$	0.66 ± 0.13	D_{2000}	230.7 ± 2.1	$f\sigma_8(0.51)$	0.4710 ± 0.0076
$\boldsymbol{r^{CIB}_{143\times217}}$	$0.56^{+0.42}_{-0.16}$	$n_{\rm s,0.002}$	0.9662 ± 0.0077	$\sigma_8(0.51)$	$0.619^{+0.013}_{-0.010}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$Y_{\rm P}$	0.2448 ± 0.0028	$f\sigma_8(0.61)$	0.4662 ± 0.0076
$\boldsymbol{A^{kSZ}}$	< 6.10	$Y_{\rm P}^{\rm BBN}$	0.2461 ± 0.0028	$\sigma_8(0.61)$	$0.589^{+0.012}_{-0.0099}$
$\boldsymbol{A^{dust}_{100}}$	1.01 ± 0.20	10^5D/H	2.582 ± 0.057	$f\sigma_8(2.33)$	$0.2969^{+0.0056}_{-0.0049}$
$\boldsymbol{A^{dust}_{143}}$	0.96 ± 0.18	Age/Gyr	13.83 ± 0.20	$\sigma_8(2.33)$	$0.3061^{+0.0063}_{-0.0054}$
$\boldsymbol{A^{dust}_{217}}$	0.97 ± 0.10	z_*	1089.79 ± 0.41	f^{143}_{2000}	29 ± 3
$\boldsymbol{A^{dust}_{143\times217}}$	1.02 ± 0.16	r_*	145.2 ± 2.0	f^{217}_{2000}	106.5 ± 2.3
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	$100\theta_*$	$1.04126^{+0.00056}_{-0.00062}$	$f^{143\times217}_{2000}$	31.7 ± 2.5
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	$D_{\rm M}(z_*)$/Gpc	13.94 ± 0.18	$\chi^2_{\rm simall}$	396.8 ± 1.7
$\boldsymbol{c_{TE}}$	0.9964 ± 0.0051	$z_{\rm drag}$	1059.66 ± 0.74	$\chi^2_{\rm lowl}$	23.1 ± 1.2
$\boldsymbol{c_{EE}}$	0.9918 ± 0.0056	$r_{\rm drag}$	147.8 ± 2.1	$\chi^2_{\rm CamSpec}$	11515.1 ± 6.0
H_0	67.5 ± 1.3	$k_{\rm D}$	0.1402 ± 0.0015	$\chi^2_{\rm 6DF}$	0.055 ± 0.073
Ω_Λ	0.6901 ± 0.0075	$100\theta_{\rm D}$	0.16075 ± 0.00050	$\chi^2_{\rm MGS}$	1.38 ± 0.52
$\Omega_{\rm m}$	0.3099 ± 0.0075	$z_{\rm eq}$	3378 ± 28	$\chi^2_{\rm DR12BAO}$	4.7 ± 1.5
$\Omega_{\rm m}h^2$	0.1413 ± 0.0036	$k_{\rm eq}$	0.01028 ± 0.00012	$\chi^2_{\rm prior}$	7.9 ± 3.4
$\Omega_\nu h^2$	< 0.000806	$100\theta_{\rm eq}$	0.8176 ± 0.0054	$\chi^2_{\rm BAO}$	6.1 ± 1.2
$\Omega_{\rm m}h^3$	0.0954 ± 0.0040	$100\theta_{\rm s,eq}$	0.4516 ± 0.0027	$\chi^2_{\rm CMB}$	11935.0 ± 5.9

$\bar{\chi}^2_{\rm eff} = 11949.04$; $\Delta\bar{\chi}^2_{\rm eff} = 1.05$; $R - 1 = 0.02046$

9.34 base_nnu_mnu_CamSpecHM_TTTEEE_lowl_lowE_BAO_post_Pantheon_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02234 ± 0.00019	S_8	0.819 ± 0.015	$H(0.38)$	83.0 ± 1.3
$\boldsymbol{\Omega_c h^2}$	0.1184 ± 0.0034	$\sigma_8\Omega_m^{0.5}$	0.4484 ± 0.0080	$D_M(0.38)$	1529 ± 26
$\boldsymbol{100\theta_{MC}}$	$1.04103^{+0.00044}_{-0.00051}$	$\sigma_8\Omega_m^{0.25}$	0.602 ± 0.010	$H(0.51)$	89.6 ± 1.3
$\boldsymbol{\tau}$	$0.0548^{+0.0050}_{-0.0079}$	$\sigma_8/h^{0.5}$	$0.981^{+0.016}_{-0.012}$	$D_M(0.51)$	1982 ± 33
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 0.0715	$r_{drag}h$	99.97 ± 0.89	$H(0.61)$	95.2 ± 1.4
$\boldsymbol{N_{eff}}$	3.02 ± 0.20	$\langle d^2\rangle^{1/2}$	2.425 ± 0.027	$D_M(0.61)$	2306 ± 38
$\boldsymbol{\ln(10^{10}A_s)}$	$3.039^{+0.015}_{-0.018}$	z_{re}	$7.70^{+0.55}_{-0.81}$	$H(2.33)$	235.3 ± 3.0
$\boldsymbol{n_s}$	0.9669 ± 0.0076	$10^9 A_s$	$2.090^{+0.030}_{-0.039}$	$D_M(2.33)$	5771 ± 83
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.873 ± 0.019	$f\sigma_8(0.15)$	0.4533 ± 0.0076
$\boldsymbol{A^{PS}_{100}}$	239 ± 25	D_{40}	1224 ± 14	$\sigma_8(0.15)$	$0.746^{+0.014}_{-0.012}$
$\boldsymbol{A^{PS}_{143}}$	39 ± 9	D_{220}	5721 ± 39	$f\sigma_8(0.38)$	0.4722 ± 0.0076
$\boldsymbol{A^{PS}_{217}}$	102 ± 10	D_{810}	2534 ± 14	$\sigma_8(0.38)$	$0.662^{+0.013}_{-0.011}$
$\boldsymbol{A^{CIB}_{217}}$	40 ± 7	D_{1420}	816.2 ± 5.1	$f\sigma_8(0.51)$	0.4711 ± 0.0075
$\boldsymbol{A^{tSZ}_{143}}$	$3.9^{+1.9}_{-2.5}$	D_{2000}	230.6 ± 2.1	$\sigma_8(0.51)$	$0.620^{+0.012}_{-0.010}$
$\boldsymbol{r^{PS}_{143\times217}}$	0.66 ± 0.13	$n_{s,0.002}$	0.9669 ± 0.0076	$f\sigma_8(0.61)$	0.4664 ± 0.0074
$\boldsymbol{r^{CIB}_{143\times217}}$	$0.56^{+0.42}_{-0.15}$	Y_P	0.2450 ± 0.0028	$\sigma_8(0.61)$	$0.590^{+0.012}_{-0.0098}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	0.2463 ± 0.0028	$f\sigma_8(2.33)$	$0.2974^{+0.0054}_{-0.0049}$
$\boldsymbol{A^{kSZ}}$	< 6.10	10^5D/H	2.583 ± 0.056	$\sigma_8(2.33)$	$0.3067^{+0.0061}_{-0.0053}$
$\boldsymbol{A^{dust}_{100}}$	1.01 ± 0.20	Age/Gyr	13.82 ± 0.20	f^{143}_{2000}	29 ± 3
$\boldsymbol{A^{dust}_{143}}$	0.96 ± 0.18	z_*	1089.79 ± 0.41	f^{217}_{2000}	106.5 ± 2.3
$\boldsymbol{A^{dust}_{217}}$	0.97 ± 0.10	r_*	145.1 ± 2.0	$f^{143\times217}_{2000}$	31.8 ± 2.5
$\boldsymbol{A^{dust}_{143\times217}}$	1.02 ± 0.16	$100\theta_*$	$1.04123^{+0.00055}_{-0.00062}$	χ^2_{simall}	396.8 ± 1.7
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	$D_M(z_*)$/Gpc	13.93 ± 0.18	χ^2_{lowl}	23.0 ± 1.1
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	z_{drag}	1059.71 ± 0.74	$\chi^2_{CamSpec}$	11515.3 ± 6.0
$\boldsymbol{c_{TE}}$	0.9966 ± 0.0051	r_{drag}	147.7 ± 2.0	χ^2_{JLA}	1036.30 ± 0.34
$\boldsymbol{c_{EE}}$	0.9920 ± 0.0056	k_D	0.1403 ± 0.0015	χ^2_{6DF}	0.044 ± 0.060
H_0	67.7 ± 1.2	$100\theta_D$	0.16077 ± 0.00050	χ^2_{MGS}	1.46 ± 0.51
Ω_Λ	0.6913 ± 0.0071	z_{eq}	3375 ± 27	$\chi^2_{DR12BAO}$	4.4 ± 1.3
Ω_m	0.3087 ± 0.0071	k_{eq}	0.01028 ± 0.00012	χ^2_{prior}	7.9 ± 3.4
$\Omega_m h^2$	0.1413 ± 0.0036	$100\theta_{eq}$	$0.8182^{+0.0048}_{-0.0054}$	χ^2_{BAO}	5.9 ± 1.0
$\Omega_\nu h^2$	< 0.000768	$100\theta_{s,eq}$	$0.4520^{+0.0024}_{-0.0028}$	χ^2_{CMB}	11935.1 ± 5.9
$\Omega_m h^3$	0.0957 ± 0.0039	$H(0.15)$	72.9 ± 1.3		
σ_8	$0.807^{+0.015}_{-0.013}$	$D_M(0.15)$	641 ± 11		

$\bar{\chi}^2_{eff} = 12985.22$; $R - 1 = 0.02268$

9.35 base_nnu_mnu_CamSpecHM_TTTEEE_lowl_lowE_BAO_post_Aver15_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02230 ± 0.00018	S_8	0.819 ± 0.015	$H(0.38)$	82.6 ± 1.1
$\boldsymbol{\Omega_c h^2}$	0.1178 ± 0.0028	$\sigma_8\Omega_m^{0.5}$	0.4487 ± 0.0080	$D_M(0.38)$	1536 ± 23
$\boldsymbol{100\theta_{MC}}$	1.04109 ± 0.00043	$\sigma_8\Omega_m^{0.25}$	$0.601^{+0.010}_{-0.0092}$	$H(0.51)$	89.3 ± 1.1
$\boldsymbol{\tau}$	$0.0546^{+0.0049}_{-0.0079}$	$\sigma_8/h^{0.5}$	$0.981^{+0.016}_{-0.012}$	$D_M(0.51)$	1990 ± 28
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 0.0725	$r_{drag}h$	99.77 ± 0.92	$H(0.61)$	94.9 ± 1.2
$\boldsymbol{N_{eff}}$	2.98 ± 0.17	$\langle d^2\rangle^{1/2}$	2.428 ± 0.027	$D_M(0.61)$	2315 ± 33
$\boldsymbol{\ln(10^{10}A_s)}$	$3.038^{+0.014}_{-0.018}$	z_{re}	$7.67^{+0.53}_{-0.81}$	$H(2.33)$	234.8 ± 2.5
$\boldsymbol{n_s}$	0.9653 ± 0.0067	$10^9 A_s$	$2.086^{+0.028}_{-0.037}$	$D_M(2.33)$	5790 ± 70
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.870 ± 0.017	$f\sigma_8(0.15)$	0.4534 ± 0.0076
$\boldsymbol{A^{PS}_{100}}$	238 ± 25	D_{40}	1226 ± 14	$\sigma_8(0.15)$	$0.744^{+0.014}_{-0.011}$
$\boldsymbol{A^{PS}_{143}}$	38 ± 9	D_{220}	5721 ± 39	$f\sigma_8(0.38)$	0.4719 ± 0.0074
$\boldsymbol{A^{PS}_{217}}$	102 ± 10	D_{810}	2533 ± 14	$\sigma_8(0.38)$	$0.660^{+0.013}_{-0.010}$
$\boldsymbol{A^{CIB}_{217}}$	39 ± 7	D_{1420}	816.4 ± 5.1	$f\sigma_8(0.51)$	0.4706 ± 0.0073
$\boldsymbol{A^{tSZ}_{143}}$	$3.9^{+1.9}_{-2.5}$	D_{2000}	230.8 ± 2.0	$\sigma_8(0.51)$	$0.618^{+0.012}_{-0.0094}$
$\boldsymbol{r^{PS}_{143\times217}}$	0.66 ± 0.13	$n_{s,0.002}$	0.9653 ± 0.0067	$f\sigma_8(0.61)$	0.4658 ± 0.0072
$\boldsymbol{r^{CIB}_{143\times217}}$	$0.55^{+0.41}_{-0.17}$	Y_P	0.2444 ± 0.0023	$\sigma_8(0.61)$	$0.588^{+0.011}_{-0.0090}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	0.2457 ± 0.0023	$f\sigma_8(2.33)$	$0.2965^{+0.0052}_{-0.0045}$
$\boldsymbol{A^{kSZ}}$	< 5.99	10^5D/H	2.575 ± 0.049	$\sigma_8(2.33)$	$0.3057^{+0.0060}_{-0.0048}$
$\boldsymbol{A^{dust}_{100}}$	1.01 ± 0.20	Age/Gyr	13.86 ± 0.17	f^{143}_{2000}	29.0 ± 3.2
$\boldsymbol{A^{dust}_{143}}$	0.96 ± 0.18	z_*	1089.74 ± 0.36	f^{217}_{2000}	106.3 ± 2.2
$\boldsymbol{A^{dust}_{217}}$	0.98 ± 0.10	r_*	145.4 ± 1.6	$f^{143\times217}_{2000}$	31.5 ± 2.3
$\boldsymbol{A^{dust}_{143\times217}}$	1.02 ± 0.16	$100\theta_*$	1.04132 ± 0.00052	χ^2_{simall}	396.8 ± 1.7
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	$D_M(z_*)$/Gpc	13.97 ± 0.15	χ^2_{lowl}	23.2 ± 1.1
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	z_{drag}	1059.56 ± 0.64	$\chi^2_{CamSpec}$	11514.7 ± 5.8
$\boldsymbol{c_{TE}}$	0.9963 ± 0.0051	r_{drag}	148.1 ± 1.7	χ^2_{Aver15}	0.38 ± 0.52
$\boldsymbol{c_{EE}}$	0.9915 ± 0.0054	k_D	0.1400 ± 0.0012	χ^2_{6DF}	0.056 ± 0.074
H_0	67.4 ± 1.1	$100\theta_D$	0.16068 ± 0.00043	χ^2_{MGS}	1.35 ± 0.51
Ω_Λ	0.6897 ± 0.0073	z_{eq}	3380 ± 27	$\chi^2_{DR12BAO}$	4.7 ± 1.5
Ω_m	0.3103 ± 0.0073	k_{eq}	0.01027 ± 0.00011	χ^2_{prior}	7.9 ± 3.4
$\Omega_m h^2$	0.1408 ± 0.0030	$100\theta_{eq}$	0.8171 ± 0.0051	χ^2_{BAO}	6.1 ± 1.3
$\Omega_\nu h^2$	< 0.000779	$100\theta_{s,eq}$	0.4514 ± 0.0026	χ^2_{CMB}	11934.7 ± 5.8
$\Omega_m h^3$	0.0948 ± 0.0032	$H(0.15)$	72.6 ± 1.1		
σ_8	$0.806^{+0.015}_{-0.012}$	$D_M(0.15)$	644 ± 10		

$\bar{\chi}^2_{eff} = 11949.09$; $R - 1 = 0.02281$

9.36 base_nnu_mnu_CamSpecHM_TTTEEE_lowl_lowE_BAO_post_Cooke17_Aver15_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02230 ± 0.00018	S_8	0.820 ± 0.014	$H(0.38)$	82.8 ± 1.1
$\boldsymbol{\Omega_c h^2}$	0.1183 ± 0.0026	$\sigma_8\Omega_m^{0.5}$	0.4492 ± 0.0079	$D_M(0.38)$	1533 ± 22
$\boldsymbol{100\theta_{MC}}$	$1.04103^{+0.00038}_{-0.00043}$	$\sigma_8\Omega_m^{0.25}$	$0.602^{+0.010}_{-0.0089}$	$H(0.51)$	89.5 ± 1.1
$\boldsymbol{\tau}$	$0.0545^{+0.0049}_{-0.0079}$	$\sigma_8/h^{0.5}$	$0.982^{+0.016}_{-0.012}$	$D_M(0.51)$	1986 ± 27
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 0.0735	$r_{drag}h$	99.78 ± 0.92	$H(0.61)$	95.1 ± 1.1
$\boldsymbol{N_{eff}}$	3.00 ± 0.16	$\langle d^2\rangle^{1/2}$	2.428 ± 0.027	$D_M(0.61)$	2311 ± 31
$\boldsymbol{\ln(10^{10}A_s)}$	$3.039^{+0.013}_{-0.017}$	z_{re}	$7.67^{+0.53}_{-0.80}$	$H(2.33)$	235.2 ± 2.3
$\boldsymbol{n_s}$	0.9660 ± 0.0065	$10^9 A_s$	$2.088^{+0.027}_{-0.037}$	$D_M(2.33)$	5780 ± 65
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.872 ± 0.016	$f\sigma_8(0.15)$	0.4539 ± 0.0075
$\boldsymbol{A^{PS}_{100}}$	239 ± 25	D_{40}	1225 ± 13	$\sigma_8(0.15)$	$0.746^{+0.014}_{-0.011}$
$\boldsymbol{A^{PS}_{143}}$	39 ± 8	D_{220}	5719 ± 39	$f\sigma_8(0.38)$	0.4725 ± 0.0073
$\boldsymbol{A^{PS}_{217}}$	102 ± 10	D_{810}	2533 ± 14	$\sigma_8(0.38)$	$0.661^{+0.013}_{-0.0097}$
$\boldsymbol{A^{CIB}_{217}}$	40 ± 7	D_{1420}	816.1 ± 5.0	$f\sigma_8(0.51)$	$0.4712^{+0.0074}_{-0.0066}$
$\boldsymbol{A^{tSZ}_{143}}$	$3.9^{+1.8}_{-2.6}$	D_{2000}	230.6 ± 1.9	$\sigma_8(0.51)$	$0.619^{+0.012}_{-0.0091}$
$\boldsymbol{r^{PS}_{143\times217}}$	0.66 ± 0.13	$n_{s,0.002}$	0.9660 ± 0.0065	$f\sigma_8(0.61)$	$0.4664^{+0.0074}_{-0.0065}$
$\boldsymbol{r^{CIB}_{143\times217}}$	$0.56^{+0.41}_{-0.16}$	Y_P	0.2448 ± 0.0021	$\sigma_8(0.61)$	$0.589^{+0.011}_{-0.0087}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	0.2461 ± 0.0021	$f\sigma_8(2.33)$	$0.2969^{+0.0052}_{-0.0043}$
$\boldsymbol{A^{kSZ}}$	< 6.09	10^5D/H	2.584 ± 0.043	$\sigma_8(2.33)$	$0.3061^{+0.0059}_{-0.0046}$
$\boldsymbol{A^{dust}_{100}}$	1.01 ± 0.20	Age/Gyr	13.84 ± 0.15	f^{143}_{2000}	29.3 ± 3.1
$\boldsymbol{A^{dust}_{143}}$	0.96 ± 0.18	z_*	1089.81 ± 0.33	f^{217}_{2000}	106.5 ± 2.1
$\boldsymbol{A^{dust}_{217}}$	0.97 ± 0.10	r_*	145.2 ± 1.5	$f^{143\times217}_{2000}$	31.8 ± 2.2
$\boldsymbol{A^{dust}_{143\times217}}$	1.03 ± 0.16	$100\theta_*$	$1.04125^{+0.00046}_{-0.00051}$	χ^2_{simall}	396.8 ± 1.7
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	$D_M(z_*)$/Gpc	13.94 ± 0.14	χ^2_{lowl}	23.1 ± 1.1
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	z_{drag}	1059.61 ± 0.62	$\chi^2_{CamSpec}$	11514.6 ± 5.8
$\boldsymbol{c_{TE}}$	0.9965 ± 0.0050	r_{drag}	147.9 ± 1.6	χ^2_{Aver15}	0.37 ± 0.51
$\boldsymbol{c_{EE}}$	0.9920 ± 0.0053	k_D	0.1402 ± 0.0011	$\chi^2_{Cooke17}$	0.35 ± 0.45
H_0	67.5 ± 1.0	$100\theta_D$	0.16076 ± 0.00038	χ^2_{6DF}	0.056 ± 0.074
Ω_Λ	0.6898 ± 0.0073	z_{eq}	3379 ± 27	χ^2_{MGS}	1.35 ± 0.51
Ω_m	0.3102 ± 0.0073	k_{eq}	0.01028 ± 0.00010	$\chi^2_{DR12BAO}$	4.7 ± 1.5
$\Omega_m h^2$	0.1412 ± 0.0028	$100\theta_{eq}$	0.8173 ± 0.0051	χ^2_{prior}	7.9 ± 3.4
$\Omega_\nu h^2$	< 0.000791	$100\theta_{s,eq}$	0.4515 ± 0.0026	χ^2_{BAO}	6.1 ± 1.3
$\Omega_m h^3$	0.0953 ± 0.0030	$H(0.15)$	72.7 ± 1.0	χ^2_{CMB}	11934.5 ± 5.8
σ_8	$0.807^{+0.015}_{-0.012}$	$D_M(0.15)$	642.7 ± 9.6	χ^2_{Abund}	0.72 ± 0.67

$\bar{\chi}^2_{eff} = 11949.25$; $R - 1 = 0.02282$

9.37 base_nnu_mnu_plikHM_TT_lowl_lowE_lensing_BAO

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022158	0.02224 ± 0.00024	$\sigma_8\Omega_m^{0.25}$	0.6088	0.6066 ± 0.0088	$D_M(0.38)$	1535.5	1523 ± 30
$\boldsymbol{\Omega_c h^2}$	0.11792	0.1200 ± 0.0037	$\sigma_8/h^{0.5}$	0.9952	$0.987^{+0.013}_{-0.010}$	$H(0.51)$	89.25	90.1 ± 1.6
$\boldsymbol{100\theta_{MC}}$	1.04112	1.04089 ± 0.00057	$r_{drag}h$	99.99	99.9 ± 1.0	$D_M(0.51)$	1989.6	1973 ± 38
$\boldsymbol{\tau}$	0.0529	0.0544 ± 0.0076	$\langle d^2\rangle^{1/2}$	2.4452	2.433 ± 0.024	$H(0.61)$	94.81	95.7 ± 1.6
$\boldsymbol{\Sigma m_\nu}$ [eV]	0.0020	< 0.0682	z_{re}	7.53	7.71 ± 0.77	$D_M(0.61)$	2315.5	2296 ± 43
$\boldsymbol{N_{eff}}$	2.952	3.10 ± 0.23	$10^9 A_s$	2.0812	$2.099^{+0.035}_{-0.039}$	$H(2.33)$	234.35	236.6 ± 3.4
$\boldsymbol{\ln(10^{10}A_s)}$	3.0355	3.044 ± 0.018	$10^9 A_s e^{-2\tau}$	1.8722	1.883 ± 0.020	$D_M(2.33)$	5795	5744 ± 94
$\boldsymbol{n_s}$	0.9629	0.9677 ± 0.0087	D_{40}	1230.3	1226 ± 15	$f\sigma_8(0.15)$	0.4578	0.4571 ± 0.0069
$\boldsymbol{y_{cal}}$	1.00032	1.0006 ± 0.0025	D_{220}	5718.1	5722 ± 41	$\sigma_8(0.15)$	0.7551	$0.752^{+0.013}_{-0.012}$
$\boldsymbol{A_{217}^{CIB}}$	48.5	48 ± 7	D_{810}	2534.5	2537 ± 14	$f\sigma_8(0.38)$	0.4768	0.4760 ± 0.0067
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.29	—	D_{1420}	816.0	815.1 ± 5.3	$\sigma_8(0.38)$	0.6694	$0.667^{+0.012}_{-0.011}$
$\boldsymbol{A_{143}^{tSZ}}$	7.08	5.0 ± 2.0	D_{2000}	230.66	229.7 ± 2.2	$f\sigma_8(0.51)$	0.4757	0.4749 ± 0.0066
$\boldsymbol{A_{100}^{PS}}$	253.0	264 ± 29	$n_{s,0.002}$	0.9629	0.9677 ± 0.0087	$\sigma_8(0.51)$	0.6265	0.624 ± 0.011
$\boldsymbol{A_{143}^{PS}}$	47.2	49 ± 9	Y_P	0.24404	0.2461 ± 0.0031	$f\sigma_8(0.61)$	0.4709	0.4700 ± 0.0066
$\boldsymbol{A_{143\times217}^{PS}}$	44.8	43 ± 9	Y_P^{BBN}	0.24536	0.2474 ± 0.0031	$\sigma_8(0.61)$	0.5961	0.594 ± 0.011
$\boldsymbol{A_{217}^{PS}}$	118.3	115 ± 10	10^5D/H	2.593	2.629 ± 0.066	$f\sigma_8(2.33)$	0.2997	0.2995 ± 0.0052
$\boldsymbol{A^{kSZ}}$	0.00	< 4.99	Age/Gyr	13.874	13.75 ± 0.22	$\sigma_8(2.33)$	0.3096	0.3088 ± 0.0058
$\boldsymbol{A_{100}^{dustTT}}$	8.88	9.0 ± 1.8	z_*	1089.909	1090.14 ± 0.47	f_{2000}^{143}	29.57	31.3 ± 3.4
$\boldsymbol{A_{143}^{dustTT}}$	10.77	10.7 ± 1.8	r_*	145.62	144.3 ± 2.2	$f_{2000}^{143\times217}$	32.56	33.6 ± 2.5
$\boldsymbol{A_{143\times217}^{dustTT}}$	19.23	18.3 ± 3.3	$100\theta_*$	1.04136	1.04105 ± 0.00068	f_{2000}^{217}	107.09	108.2 ± 2.3
$\boldsymbol{A_{217}^{dustTT}}$	94.5	93.3 ± 7.3	$D_M(z_*)$/Gpc	13.983	13.86 ± 0.20	$\chi^2_{lensing}$	8.76	9.55 ± 0.90
$\boldsymbol{c_{100}}$	0.99965	0.99961 ± 0.00062	z_{drag}	1059.21	1059.68 ± 0.87	χ^2_{simall}	395.86	397.0 ± 1.8
$\boldsymbol{c_{217}}$	0.99825	0.99826 ± 0.00062	r_{drag}	148.37	147.0 ± 2.3	χ^2_{lowl}	23.61	23.1 ± 1.3
H_0	67.39	68.0 ± 1.4	k_D	0.13972	0.1407 ± 0.0016	χ^2_{plik}	758.3	772.4 ± 5.5
Ω_Λ	0.6915	0.6906 ± 0.0084	$100\theta_D$	0.16079	0.16114 ± 0.00058	χ^2_{6DF}	0.0103	0.061 ± 0.084
Ω_m	0.3085	0.3094 ± 0.0084	z_{eq}	3390.3	3375 ± 31	χ^2_{MGS}	1.41	1.42 ± 0.59
$\Omega_m h^2$	0.14010	0.1429 ± 0.0040	k_{eq}	0.010282	0.01034 ± 0.00013	$\chi^2_{DR12BAO}$	3.88	4.8 ± 1.7
$\Omega_\nu h^2$	0.000022	< 0.000733	$100\theta_{eq}$	0.8149	0.8179 ± 0.0059	χ^2_{prior}	1.40	7.3 ± 3.7
$\Omega_m h^3$	0.09442	0.0972 ± 0.0045	$100\theta_{s,eq}$	0.45037	0.4519 ± 0.0030	χ^2_{CMB}	1186.5	1202.1 ± 5.7
σ_8	0.8169	$0.813^{+0.014}_{-0.012}$	$H(0.15)$	72.61	73.2 ± 1.5	χ^2_{BAO}	5.30	6.2 ± 1.4
S_8	0.8284	0.826 ± 0.013	$D_M(0.15)$	643.5	638 ± 13			
$\sigma_8\Omega_m^{0.5}$	0.4537	0.4524 ± 0.0072	$H(0.38)$	82.61	83.3 ± 1.5			

Best-fit $\chi^2_{eff} = 1193.25$; $\Delta\chi^2_{eff} = -1.44$; $\bar{\chi}^2_{eff} = 1215.64$; $\Delta\bar{\chi}^2_{eff} = 0.91$; $R - 1 = 0.00853$

χ^2_{eff}: BAO - 6DF: 0.01 (Δ -0.02) MGS: 1.41 (Δ 0.19) DR12BAO: 3.88 (Δ -0.49) CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.76 (Δ -0.12) simall_100x143_offlike5_EE_Aplanc
395.86 (Δ -0.24) commander_dx12_v3_2_29: 23.61 (Δ 0.66) plik_rd12_HM_v22_TT: 758.32 (Δ -1.48)

9.38 base_nnu_mnu_plikHM_TT_lowl_lowE_lensing_BAO_post_Pantheon

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022187	0.02226 ± 0.00023	$\sigma_8 \Omega_m^{0.25}$	0.6090	0.6067 ± 0.0088	$D_M(0.38)$	1529.6	1519 ± 29
$\boldsymbol{\Omega_c h^2}$	0.11832	0.1202 ± 0.0037	$\sigma_8/h^{0.5}$	0.9947	$0.987^{+0.013}_{-0.010}$	$H(0.51)$	89.53	90.2 ± 1.5
$\boldsymbol{100\theta_{MC}}$	1.04108	1.04088 ± 0.00056	$r_{drag} h$	100.20	100.06 ± 0.98	$D_M(0.51)$	1982.2	1968 ± 36
$\boldsymbol{\tau}$	0.0530	0.0547 ± 0.0076	$\langle d^2 \rangle^{1/2}$	2.4401	2.431 ± 0.024	$H(0.61)$	95.09	95.8 ± 1.6
$\boldsymbol{\Sigma m_\nu}$ [eV]	0.0015	< 0.0651	z_{re}	7.55	7.74 ± 0.77	$D_M(0.61)$	2307.2	2291 ± 42
$\boldsymbol{N_{eff}}$	2.988	3.12 ± 0.23	$10^9 A_s$	2.0842	$2.102^{+0.035}_{-0.039}$	$H(2.33)$	234.76	236.7 ± 3.3
$\boldsymbol{\ln(10^{10} A_s)}$	3.0370	3.045 ± 0.018	$10^9 A_s e^{-2\tau}$	1.8744	1.884 ± 0.020	$D_M(2.33)$	5779	5735 ± 91
$\boldsymbol{n_s}$	0.9651	0.9686 ± 0.0085	D_{40}	1226.4	1225 ± 15	$f\sigma_8(0.15)$	0.4575	0.4567 ± 0.0068
$\boldsymbol{y_{cal}}$	1.00023	1.0006 ± 0.0025	D_{220}	5715.0	5723 ± 40	$\sigma_8(0.15)$	0.7565	$0.753^{+0.013}_{-0.011}$
$\boldsymbol{A_{217}^{CIB}}$	47.2	48 ± 7	D_{810}	2535.6	2538 ± 14	$f\sigma_8(0.38)$	0.4769	0.4760 ± 0.0066
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.48	—	D_{1420}	816.4	815.2 ± 5.3	$\sigma_8(0.38)$	0.6709	0.668 ± 0.011
$\boldsymbol{A_{143}^{tSZ}}$	6.99	5.0 ± 2.0	D_{2000}	230.66	229.6 ± 2.2	$f\sigma_8(0.51)$	0.4759	0.4750 ± 0.0066
$\boldsymbol{A_{100}^{PS}}$	250.6	264 ± 29	$n_{s,0.002}$	0.9651	0.9686 ± 0.0085	$\sigma_8(0.51)$	0.6279	0.625 ± 0.011
$\boldsymbol{A_{143}^{PS}}$	50.0	49 ± 9	Y_P	0.24454	0.2463 ± 0.0031	$f\sigma_8(0.61)$	0.4713	0.4703 ± 0.0066
$\boldsymbol{A_{143\times217}^{PS}}$	50.1	43^{+9}_{-10}	Y_P^{BBN}	0.24586	0.2476 ± 0.0031	$\sigma_8(0.61)$	0.5976	0.595 ± 0.010
$\boldsymbol{A_{217}^{PS}}$	120.8	115 ± 10	10^5D/H	2.600	2.631 ± 0.066	$f\sigma_8(2.33)$	0.30051	0.3000 ± 0.0050
$\boldsymbol{A^{kSZ}}$	0.00	< 5.03	Age/Gyr	13.836	13.73 ± 0.22	$\sigma_8(2.33)$	0.3105	0.3095 ± 0.0055
$\boldsymbol{A_{100}^{dustTT}}$	8.83	8.9 ± 1.8	z_*	1089.941	1090.14 ± 0.47	f_{2000}^{143}	29.38	31.3 ± 3.4
$\boldsymbol{A_{143}^{dustTT}}$	10.74	10.7 ± 1.8	r_*	145.31	144.1 ± 2.2	$f_{2000}^{143\times217}$	32.53	33.7 ± 2.5
$\boldsymbol{A_{143\times217}^{dustTT}}$	19.45	18.2 ± 3.3	$100\theta_*$	1.04129	1.04103 ± 0.00067	f_{2000}^{217}	106.98	108.3 ± 2.3
$\boldsymbol{A_{217}^{dustTT}}$	94.8	93.2 ± 7.3	$D_M(z_*)$/Gpc	13.955	13.85 ± 0.20	$\chi^2_{lensing}$	8.82	9.57 ± 0.90
$\boldsymbol{c_{100}}$	0.99967	0.99962 ± 0.00062	z_{drag}	1059.32	1059.75 ± 0.85	χ^2_{simall}	396	229 ± 200
$\boldsymbol{c_{217}}$	0.99823	0.99826 ± 0.00062	r_{drag}	148.05	146.8 ± 2.2	χ^2_{lowl}	23	191 ± 200
H_0	67.68	68.2 ± 1.4	k_D	0.13994	0.1408 ± 0.0016	χ^2_{plik}	758.9	772.5 ± 5.5
Ω_Λ	0.6932	0.6920 ± 0.0078	$100\theta_D$	0.16087	0.16117 ± 0.00057	χ^2_{JLA}	1036.127	1036.29 ± 0.37
Ω_m	0.3068	0.3080 ± 0.0078	z_{eq}	3384.1	3371 ± 30	χ^2_{6DF}	0.00	0.71 ± 0.82
$\Omega_m h^2$	0.14052	0.1430 ± 0.0039	k_{eq}	0.010288	0.01034 ± 0.00013	χ^2_{MGS}	1.54	0.86 ± 0.85
$\Omega_\nu h^2$	0.000016	< 0.000700	$100\theta_{eq}$	0.8161	0.8187 ± 0.0056	$\chi^2_{DR12BAO}$	3.67	4.4 ± 1.4
$\Omega_m h^3$	0.09511	0.0975 ± 0.0044	$100\theta_{s,eq}$	0.45096	0.4523 ± 0.0029	χ^2_{prior}	1.24	7.3 ± 3.7
σ_8	0.8183	$0.814^{+0.013}_{-0.012}$	$H(0.15)$	72.89	73.4 ± 1.4	χ^2_{CMB}	1186.8	1202.2 ± 5.7
S_8	0.8275	0.825 ± 0.013	$D_M(0.15)$	640.9	637 ± 13	χ^2_{BAO}	5.21	6.0 ± 1.1
$\sigma_8 \Omega_m^{0.5}$	0.4532	0.4519 ± 0.0071	$H(0.38)$	82.88	83.5 ± 1.5			

Best-fit $\chi^2_{eff} = 2229.40$; $\Delta\chi^2_{eff} = -1.59$; $\bar{\chi}^2_{eff} = 2251.75$; $\Delta\bar{\chi}^2_{eff} = 0.70$; $R - 1 = 0.01073$

χ^2_{eff}: BAO - 6DF: 0.00 (Δ -0.01) MGS: 1.54 (Δ 0.20) DR12BAO: 3.67 (Δ -0.36) CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.82 (Δ -0.05) simall_100x143_offlike5_EE_Aplanc
395.85 (Δ -0.59) commander_dx12_v3_2_29: 23.26 (Δ 0.42) plik_rd12_HM_v22_TT: 758.89 (Δ -0.95) SN - JLA Pantheon: 1036.13 (Δ -0.10)

9.39 base_nnu_mnu_plikHM_TT_lowl_lowE_lensing_BAO_post_Aver15

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02220 ± 0.00022	$\sigma_8\Omega_m^{0.25}$	0.6055 ± 0.0084	$D_M(0.38)$	1531 ± 25
$\boldsymbol{\Omega_c h^2}$	0.1190 ± 0.0030	$\sigma_8/h^{0.5}$	$0.987^{+0.013}_{-0.010}$	$H(0.51)$	89.6 ± 1.2
$\boldsymbol{100\theta_{MC}}$	1.04100 ± 0.00052	$r_{drag}h$	99.8 ± 1.0	$D_M(0.51)$	1983 ± 31
$\boldsymbol{\tau}$	0.0542 ± 0.0076	$\langle d^2\rangle^{1/2}$	2.436 ± 0.024	$H(0.61)$	95.2 ± 1.3
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 0.0628	z_{re}	7.67 ± 0.76	$D_M(0.61)$	2308 ± 35
$\boldsymbol{N_{eff}}$	3.03 ± 0.18	$10^9 A_s$	$2.093^{+0.033}_{-0.037}$	$H(2.33)$	235.6 ± 2.7
$\boldsymbol{\ln(10^{10}A_s)}$	3.041 ± 0.017	$10^9 A_s e^{-2\tau}$	1.878 ± 0.017	$D_M(2.33)$	5771 ± 75
$\boldsymbol{n_s}$	0.9654 ± 0.0074	D_{40}	1229 ± 14	$f\sigma_8(0.15)$	0.4565 ± 0.0067
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0025	D_{220}	5722 ± 40	$\sigma_8(0.15)$	$0.750^{+0.012}_{-0.010}$
$\boldsymbol{A_{217}^{CIB}}$	48 ± 7	D_{810}	2536 ± 14	$f\sigma_8(0.38)$	0.4751 ± 0.0063
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{1420}	815.6 ± 5.2	$\sigma_8(0.38)$	$0.665^{+0.011}_{-0.0094}$
$\boldsymbol{A_{143}^{tSZ}}$	5.1 ± 2.0	D_{2000}	230.1 ± 2.1	$f\sigma_8(0.51)$	0.4738 ± 0.0062
$\boldsymbol{A_{100}^{PS}}$	262 ± 29	$n_{s,0.002}$	0.9654 ± 0.0074	$\sigma_8(0.51)$	$0.622^{+0.010}_{-0.0090}$
$\boldsymbol{A_{143}^{PS}}$	48 ± 8	Y_P	0.2451 ± 0.0025	$f\sigma_8(0.61)$	0.4689 ± 0.0061
$\boldsymbol{A_{143\times217}^{PS}}$	43^{+9}_{-10}	Y_P^{BBN}	0.2465 ± 0.0025	$\sigma_8(0.61)$	$0.5919^{+0.0099}_{-0.0087}$
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	10^5D/H	2.613 ± 0.057	$f\sigma_8(2.33)$	0.2984 ± 0.0046
$\boldsymbol{A^{kSZ}}$	< 4.76	Age/Gyr	13.82 ± 0.18	$\sigma_8(2.33)$	0.3077 ± 0.0051
$\boldsymbol{A_{100}^{dustTT}}$	8.9 ± 1.8	z_*	1090.03 ± 0.41	f_{2000}^{143}	30.8 ± 3.3
$\boldsymbol{A_{143}^{dustTT}}$	10.7 ± 1.8	r_*	144.9 ± 1.7	$f_{2000}^{143\times217}$	33.2 ± 2.3
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.2 ± 3.3	$100\theta_*$	1.04121 ± 0.00060	f_{2000}^{217}	107.8 ± 2.1
$\boldsymbol{A_{217}^{dustTT}}$	93.4 ± 7.3	$D_M(z_*)$/Gpc	13.92 ± 0.16	$\chi^2_{lensing}$	9.42 ± 0.86
$\boldsymbol{c_{100}}$	0.99962 ± 0.00062	z_{drag}	1059.46 ± 0.74	χ^2_{simall}	229 ± 200
$\boldsymbol{c_{217}}$	0.99825 ± 0.00062	r_{drag}	147.6 ± 1.8	χ^2_{lowl}	191 ± 200
H_0	67.6 ± 1.2	k_D	0.1402 ± 0.0013	χ^2_{plik}	771.9 ± 5.4
Ω_Λ	0.6895 ± 0.0081	$100\theta_D$	0.16099 ± 0.00049	χ^2_{Aver15}	0.54 ± 0.72
Ω_m	0.3105 ± 0.0081	z_{eq}	3380 ± 29	χ^2_{6DF}	0.64 ± 0.74
$\Omega_m h^2$	0.1417 ± 0.0032	k_{eq}	0.01031 ± 0.00012	χ^2_{MGS}	0.78 ± 0.77
$\Omega_\nu h^2$	< 0.000675	$100\theta_{eq}$	0.8169 ± 0.0055	$\chi^2_{DR12BAO}$	4.8 ± 1.8
$\Omega_m h^3$	0.0958 ± 0.0035	$100\theta_{s,eq}$	0.4514 ± 0.0028	χ^2_{prior}	7.3 ± 3.7
σ_8	$0.811^{+0.013}_{-0.011}$	$H(0.15)$	72.8 ± 1.2	χ^2_{CMB}	1201.7 ± 5.6
S_8	0.825 ± 0.013	$D_M(0.15)$	642 ± 11	χ^2_{BAO}	6.3 ± 1.5
$\sigma_8\Omega_m^{0.5}$	0.4519 ± 0.0071	$H(0.38)$	82.9 ± 1.2		

$\bar{\chi}^2_{eff} = 1215.73$; $R - 1 = 0.01036$

9.40 base_nnu_mnu_plikHM_TT_lowl_lowE_lensing_BAO_post_Cooke17_Aver15

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02220 ± 0.00022	$\sigma_8/h^{0.5}$	$0.987^{+0.013}_{-0.010}$	$D_M(0.51)$	1983 ± 30
$\boldsymbol{\Omega_c h^2}$	0.1190 ± 0.0028	$r_{drag}h$	99.8 ± 1.0	$H(0.61)$	95.2 ± 1.2
$\boldsymbol{100\theta_{MC}}$	1.04099 ± 0.00050	$\langle d^2\rangle^{1/2}$	2.436 ± 0.024	$D_M(0.61)$	2307 ± 34
$\boldsymbol{\tau}$	0.0542 ± 0.0076	z_{re}	7.67 ± 0.77	$H(2.33)$	235.7 ± 2.5
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 0.0626	$10^9 A_s$	$2.093^{+0.033}_{-0.037}$	$D_M(2.33)$	5769 ± 71
$\boldsymbol{N_{eff}}$	3.04 ± 0.17	$10^9 A_s e^{-2\tau}$	1.878 ± 0.017	$f\sigma_8(0.15)$	0.4566 ± 0.0066
$\boldsymbol{\ln(10^{10} A_s)}$	3.041 ± 0.017	D_{40}	1228 ± 14	$\sigma_8(0.15)$	$0.750^{+0.012}_{-0.0099}$
$\boldsymbol{n_s}$	0.9655 ± 0.0071	D_{220}	5722 ± 40	$f\sigma_8(0.38)$	0.4752 ± 0.0062
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0025	D_{810}	2536 ± 14	$\sigma_8(0.38)$	$0.665^{+0.011}_{-0.0091}$
$\boldsymbol{A_{217}^{CIB}}$	48 ± 7	D_{1420}	815.5 ± 5.1	$f\sigma_8(0.51)$	0.4739 ± 0.0060
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{2000}	230.0 ± 1.9	$\sigma_8(0.51)$	$0.622^{+0.010}_{-0.0087}$
$\boldsymbol{A_{143}^{tSZ}}$	5.1 ± 2.0	$n_{s,0.002}$	0.9655 ± 0.0071	$f\sigma_8(0.61)$	0.4690 ± 0.0060
$\boldsymbol{A_{100}^{PS}}$	262 ± 28	Y_P	0.2452 ± 0.0023	$\sigma_8(0.61)$	$0.5920^{+0.0097}_{-0.0084}$
$\boldsymbol{A_{143}^{PS}}$	48 ± 8	Y_P^{BBN}	0.2465 ± 0.0023	$f\sigma_8(2.33)$	0.2985 ± 0.0045
$\boldsymbol{A_{143\times217}^{PS}}$	43^{+9}_{-10}	10^5D/H	2.614 ± 0.049	$\sigma_8(2.33)$	$0.3078^{+0.0052}_{-0.0047}$
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	Age/Gyr	13.81 ± 0.17	f_{2000}^{143}	30.8 ± 3.1
$\boldsymbol{A^{kSZ}}$	< 4.76	z_*	1090.04 ± 0.36	$f_{2000}^{143\times217}$	33.2 ± 2.2
$\boldsymbol{A_{100}^{dustTT}}$	8.9 ± 1.8	r_*	144.9 ± 1.6	f_{2000}^{217}	107.8 ± 2.0
$\boldsymbol{A_{143}^{dustTT}}$	10.7 ± 1.8	$100\theta_*$	1.04120 ± 0.00056	$\chi^2_{lensing}$	9.42 ± 0.84
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.2 ± 3.3	$D_M(z_*)$/Gpc	13.92 ± 0.15	χ^2_{simall}	227 ± 200
$\boldsymbol{A_{217}^{dustTT}}$	93.4 ± 7.3	z_{drag}	1059.46 ± 0.73	χ^2_{lowl}	193 ± 200
$\boldsymbol{c_{100}}$	0.99962 ± 0.00062	r_{drag}	147.6 ± 1.7	χ^2_{plik}	771.7 ± 5.4
$\boldsymbol{c_{217}}$	0.99825 ± 0.00062	k_D	0.1402 ± 0.0013	χ^2_{Aver15}	0.49 ± 0.64
H_0	67.6 ± 1.2	$100\theta_D$	0.16100 ± 0.00042	$\chi^2_{Cooke17}$	0.27 ± 0.39
Ω_Λ	0.6896 ± 0.0080	z_{eq}	3380 ± 29	χ^2_{6DF}	0.65 ± 0.74
Ω_m	0.3104 ± 0.0080	k_{eq}	0.01031 ± 0.00011	χ^2_{MGS}	0.78 ± 0.77
$\Omega_m h^2$	0.1418 ± 0.0030	$100\theta_{eq}$	0.8170 ± 0.0055	$\chi^2_{DR12BAO}$	4.8 ± 1.8
$\Omega_\nu h^2$	< 0.000673	$100\theta_{s,eq}$	0.4514 ± 0.0028	χ^2_{prior}	7.3 ± 3.7
$\Omega_m h^3$	0.0959 ± 0.0033	$H(0.15)$	72.9 ± 1.1	χ^2_{CMB}	1201.5 ± 5.6
σ_8	$0.811^{+0.012}_{-0.010}$	$D_M(0.15)$	642 ± 10	χ^2_{BAO}	6.3 ± 1.5
S_8	0.825 ± 0.013	$H(0.38)$	82.9 ± 1.2	χ^2_{Abund}	0.76 ± 0.84
$\sigma_8\Omega_m^{0.5}$	0.4520 ± 0.0070	$D_M(0.38)$	1530 ± 24		
$\sigma_8\Omega_m^{0.25}$	0.6056 ± 0.0082	$H(0.51)$	89.6 ± 1.2		

$\bar{\chi}^2_{eff} = 1215.73$; $R - 1 = 0.01103$

9.41 base_nnu_mnu_plikHM_TT_lowl_lowE_lensing_BAO_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02225 ± 0.00024	$\sigma_8\Omega_m^{0.25}$	0.6068 ± 0.0088	$D_M(0.38)$	1522^{+28}_{-31}
$\boldsymbol{\Omega_c h^2}$	0.1200 ± 0.0037	$\sigma_8/h^{0.5}$	$0.987^{+0.013}_{-0.010}$	$H(0.51)$	90.1 ± 1.6
$\boldsymbol{100\theta_{MC}}$	1.04089 ± 0.00057	$r_{drag}h$	99.9 ± 1.0	$D_M(0.51)$	1972^{+35}_{-39}
$\boldsymbol{\tau}$	$0.0553^{+0.0054}_{-0.0079}$	$\langle d^2\rangle^{1/2}$	2.434 ± 0.024	$H(0.61)$	95.7 ± 1.6
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 0.0696	z_{re}	$7.80^{+0.59}_{-0.79}$	$D_M(0.61)$	2295^{+40}_{-45}
$\boldsymbol{N_{eff}}$	3.11 ± 0.23	$10^9 A_s$	$2.103^{+0.031}_{-0.039}$	$H(2.33)$	236.6 ± 3.4
$\boldsymbol{\ln(10^{10}A_s)}$	$3.046^{+0.015}_{-0.018}$	$10^9 A_s e^{-2\tau}$	1.883 ± 0.020	$D_M(2.33)$	5742 ± 94
$\boldsymbol{n_s}$	0.9679 ± 0.0087	D_{40}	1226 ± 15	$f\sigma_8(0.15)$	0.4572 ± 0.0069
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0025	D_{220}	5722 ± 41	$\sigma_8(0.15)$	$0.752^{+0.013}_{-0.012}$
$\boldsymbol{A_{217}^{CIB}}$	48 ± 7	D_{810}	2537 ± 14	$f\sigma_8(0.38)$	0.4762 ± 0.0067
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{1420}	815.1 ± 5.3	$\sigma_8(0.38)$	$0.667^{+0.012}_{-0.011}$
$\boldsymbol{A_{143}^{tSZ}}$	5.0 ± 2.0	D_{2000}	229.7 ± 2.2	$f\sigma_8(0.51)$	0.4750 ± 0.0066
$\boldsymbol{A_{100}^{PS}}$	264 ± 29	$n_{s,0.002}$	0.9679 ± 0.0087	$\sigma_8(0.51)$	$0.624^{+0.011}_{-0.010}$
$\boldsymbol{A_{143}^{PS}}$	49 ± 9	Y_P	0.2461 ± 0.0031	$f\sigma_8(0.61)$	0.4702 ± 0.0066
$\boldsymbol{A_{143\times217}^{PS}}$	43 ± 9	Y_P^{BBN}	0.2474 ± 0.0031	$\sigma_8(0.61)$	$0.594^{+0.011}_{-0.0098}$
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	10^5D/H	2.629 ± 0.066	$f\sigma_8(2.33)$	0.2997 ± 0.0052
$\boldsymbol{A^{kSZ}}$	< 4.99	Age/Gyr	13.75 ± 0.22	$\sigma_8(2.33)$	0.3090 ± 0.0057
$\boldsymbol{A_{100}^{dustTT}}$	9.0 ± 1.8	z_*	1090.13 ± 0.47	f_{2000}^{143}	31.3 ± 3.4
$\boldsymbol{A_{143}^{dustTT}}$	10.7 ± 1.8	r_*	144.3 ± 2.2	$f_{2000}^{143\times217}$	33.6 ± 2.5
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.3 ± 3.3	$100\theta_*$	1.04105 ± 0.00068	f_{2000}^{217}	108.2 ± 2.3
$\boldsymbol{A_{217}^{dustTT}}$	93.3 ± 7.3	$D_M(z_*)$/Gpc	13.86 ± 0.20	$\chi^2_{lensing}$	9.52 ± 0.88
$\boldsymbol{c_{100}}$	0.99961 ± 0.00062	z_{drag}	1059.70 ± 0.87	χ^2_{simall}	397.0 ± 1.8
$\boldsymbol{c_{217}}$	0.99826 ± 0.00062	r_{drag}	147.0 ± 2.3	χ^2_{lowl}	23.1 ± 1.3
H_0	68.0 ± 1.4	k_D	0.1407 ± 0.0016	χ^2_{plik}	772.3 ± 5.5
Ω_Λ	0.6908 ± 0.0084	$100\theta_D$	0.16115 ± 0.00058	χ^2_{6DF}	0.059 ± 0.082
Ω_m	0.3092 ± 0.0084	z_{eq}	3374 ± 31	χ^2_{MGS}	1.44 ± 0.59
$\Omega_m h^2$	0.1429 ± 0.0040	k_{eq}	0.01034 ± 0.00013	$\chi^2_{DR12BAO}$	4.7 ± 1.7
$\Omega_\nu h^2$	< 0.000749	$100\theta_{eq}$	0.8181 ± 0.0058	χ^2_{prior}	7.3 ± 3.7
$\Omega_m h^3$	0.0972 ± 0.0045	$100\theta_{s,eq}$	0.4520 ± 0.0029	χ^2_{CMB}	1201.9 ± 5.7
σ_8	$0.814^{+0.014}_{-0.012}$	$H(0.15)$	73.3 ± 1.5	χ^2_{BAO}	6.2 ± 1.4
S_8	0.826 ± 0.013	$D_M(0.15)$	638^{+12}_{-14}		
$\sigma_8\Omega_m^{0.5}$	0.4524 ± 0.0072	$H(0.38)$	83.4 ± 1.5		

$\bar{\chi}^2_{eff} = 1215.48$; $\Delta\bar{\chi}^2_{eff} = 0.90$; $R - 1 = 0.00878$

9.42 base_nnu_mnu_plikHM_TT_lowl_lowE_lensing_BAO_post_Pantheon_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02227 ± 0.00023	$\sigma_8\Omega_m^{0.25}$	0.6068 ± 0.0088	$D_M(0.38)$	1519 ± 29
$\boldsymbol{\Omega_c h^2}$	0.1202 ± 0.0037	$\sigma_8/h^{0.5}$	$0.987^{+0.013}_{-0.010}$	$H(0.51)$	90.2 ± 1.5
$\boldsymbol{100\theta_{MC}}$	1.04088 ± 0.00056	$r_{drag}h$	100.09 ± 0.97	$D_M(0.51)$	1968 ± 36
$\boldsymbol{\tau}$	$0.0555^{+0.0055}_{-0.0079}$	$\langle d^2\rangle^{1/2}$	2.432 ± 0.024	$H(0.61)$	95.9 ± 1.6
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 0.0664	z_{re}	$7.82^{+0.60}_{-0.78}$	$D_M(0.61)$	2290 ± 42
$\boldsymbol{N_{eff}}$	3.12 ± 0.23	$10^9 A_s$	$2.105^{+0.031}_{-0.039}$	$H(2.33)$	236.8 ± 3.3
$\boldsymbol{\ln(10^{10} A_s)}$	$3.047^{+0.015}_{-0.018}$	$10^9 A_s e^{-2\tau}$	1.883 ± 0.020	$D_M(2.33)$	5734 ± 91
$\boldsymbol{n_s}$	0.9688 ± 0.0085	D_{40}	1224 ± 15	$f\sigma_8(0.15)$	0.4568 ± 0.0068
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0025	D_{220}	5723 ± 41	$\sigma_8(0.15)$	$0.753^{+0.013}_{-0.011}$
$\boldsymbol{A_{217}^{CIB}}$	48 ± 7	D_{810}	2537 ± 14	$f\sigma_8(0.38)$	0.4761 ± 0.0066
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{1420}	815.1 ± 5.3	$\sigma_8(0.38)$	$0.668^{+0.011}_{-0.010}$
$\boldsymbol{A_{143}^{tSZ}}$	5.0 ± 2.0	D_{2000}	229.6 ± 2.2	$f\sigma_8(0.51)$	0.4752 ± 0.0066
$\boldsymbol{A_{100}^{PS}}$	264 ± 29	$n_{s,0.002}$	0.9688 ± 0.0085	$\sigma_8(0.51)$	0.625 ± 0.011
$\boldsymbol{A_{143}^{PS}}$	49 ± 9	Y_P	0.2463 ± 0.0031	$f\sigma_8(0.61)$	0.4705 ± 0.0066
$\boldsymbol{A_{143\times217}^{PS}}$	43^{+9}_{-10}	Y_P^{BBN}	0.2476 ± 0.0031	$\sigma_8(0.61)$	0.595 ± 0.010
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	10^5D/H	2.631 ± 0.066	$f\sigma_8(2.33)$	0.3002 ± 0.0050
$\boldsymbol{A^{kSZ}}$	< 5.02	Age/Gyr	13.73 ± 0.22	$\sigma_8(2.33)$	0.3097 ± 0.0055
$\boldsymbol{A_{100}^{dustTT}}$	8.9 ± 1.8	z_*	1090.13 ± 0.47	f_{2000}^{143}	31.3 ± 3.4
$\boldsymbol{A_{143}^{dustTT}}$	10.7 ± 1.8	r_*	144.1 ± 2.2	$f_{2000}^{143\times217}$	33.7 ± 2.5
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.3 ± 3.3	$100\theta_*$	1.04103 ± 0.00067	f_{2000}^{217}	108.2 ± 2.3
$\boldsymbol{A_{217}^{dustTT}}$	93.2 ± 7.3	$D_M(z_*)$/Gpc	13.85 ± 0.20	$\chi^2_{lensing}$	9.54 ± 0.88
$\boldsymbol{c_{100}}$	0.99962 ± 0.00062	z_{drag}	1059.77 ± 0.85	χ^2_{simall}	228 ± 200
$\boldsymbol{c_{217}}$	0.99826 ± 0.00062	r_{drag}	146.8 ± 2.2	χ^2_{lowl}	192 ± 200
H_0	68.2 ± 1.4	k_D	0.1408 ± 0.0016	χ^2_{plik}	772.5 ± 5.5
Ω_Λ	0.6923 ± 0.0078	$100\theta_D$	0.16117 ± 0.00057	χ^2_{JLA}	1036.28 ± 0.36
Ω_m	0.3077 ± 0.0078	z_{eq}	3370 ± 29	χ^2_{6DF}	0.72 ± 0.83
$\Omega_m h^2$	0.1430 ± 0.0040	k_{eq}	0.01033 ± 0.00013	χ^2_{MGS}	0.86 ± 0.85
$\Omega_\nu h^2$	< 0.000714	$100\theta_{eq}$	0.8189 ± 0.0056	$\chi^2_{DR12BAO}$	4.4 ± 1.3
$\Omega_m h^3$	0.0976 ± 0.0044	$100\theta_{s,eq}$	0.4524 ± 0.0028	χ^2_{prior}	7.3 ± 3.7
σ_8	$0.815^{+0.013}_{-0.012}$	$H(0.15)$	73.4 ± 1.4	χ^2_{CMB}	1202.0 ± 5.7
S_8	0.825 ± 0.013	$D_M(0.15)$	636 ± 13	χ^2_{BAO}	6.0 ± 1.1
$\sigma_8\Omega_m^{0.5}$	0.4519 ± 0.0071	$H(0.38)$	83.5 ± 1.5		

$\bar{\chi}^2_{eff} = 2251.59$; $\Delta\bar{\chi}^2_{eff} = 0.68$; $R - 1 = 0.01121$

9.43 base_nnu_mnu_plikHM_TT_lowl_lowE_lensing_BAO_post_Aver15_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02221 ± 0.00022	$\sigma_8\Omega_m^{0.25}$	0.6056 ± 0.0084	$D_M(0.38)$	1530 ± 25
$\boldsymbol{\Omega_c h^2}$	0.1190 ± 0.0030	$\sigma_8/h^{0.5}$	$0.987^{+0.013}_{-0.010}$	$H(0.51)$	89.6 ± 1.2
$\boldsymbol{100\theta_{MC}}$	1.04100 ± 0.00052	$r_{drag}h$	99.8 ± 1.0	$D_M(0.51)$	1983 ± 31
$\boldsymbol{\tau}$	$0.0552^{+0.0054}_{-0.0078}$	$\langle d^2\rangle^{1/2}$	2.437 ± 0.024	$H(0.61)$	95.2 ± 1.3
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 0.0642	z_{re}	$7.77^{+0.58}_{-0.78}$	$D_M(0.61)$	2307 ± 35
$\boldsymbol{N_{eff}}$	3.04 ± 0.18	$10^9 A_s$	$2.097^{+0.028}_{-0.036}$	$H(2.33)$	235.6 ± 2.7
$\boldsymbol{\ln(10^{10}A_s)}$	$3.043^{+0.014}_{-0.017}$	$10^9 A_s e^{-2\tau}$	1.878 ± 0.018	$D_M(2.33)$	5770 ± 75
$\boldsymbol{n_s}$	0.9656 ± 0.0074	D_{40}	1228 ± 14	$f\sigma_8(0.15)$	0.4566 ± 0.0068
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0025	D_{220}	5722 ± 41	$\sigma_8(0.15)$	$0.750^{+0.012}_{-0.010}$
$\boldsymbol{A_{217}^{CIB}}$	48 ± 7	D_{810}	2536 ± 14	$f\sigma_8(0.38)$	0.4753 ± 0.0064
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{1420}	815.5 ± 5.2	$\sigma_8(0.38)$	$0.665^{+0.011}_{-0.0093}$
$\boldsymbol{A_{143}^{tSZ}}$	5.1 ± 2.0	D_{2000}	230.1 ± 2.1	$f\sigma_8(0.51)$	0.4740 ± 0.0062
$\boldsymbol{A_{100}^{PS}}$	262 ± 29	$n_{s,0.002}$	0.9656 ± 0.0074	$\sigma_8(0.51)$	$0.622^{+0.010}_{-0.0089}$
$\boldsymbol{A_{143}^{PS}}$	48 ± 8	Y_P	0.2451 ± 0.0025	$f\sigma_8(0.61)$	0.4691 ± 0.0061
$\boldsymbol{A_{143\times217}^{PS}}$	43^{+9}_{-10}	Y_P^{BBN}	0.2465 ± 0.0025	$\sigma_8(0.61)$	$0.5923^{+0.0099}_{-0.0085}$
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	10^5D/H	2.613 ± 0.057	$f\sigma_8(2.33)$	0.2986 ± 0.0046
$\boldsymbol{A^{kSZ}}$	< 4.76	Age/Gyr	13.81 ± 0.18	$\sigma_8(2.33)$	$0.3079^{+0.0053}_{-0.0047}$
$\boldsymbol{A_{100}^{dustTT}}$	8.9 ± 1.8	z_*	1090.02 ± 0.41	f_{2000}^{143}	30.7 ± 3.3
$\boldsymbol{A_{143}^{dustTT}}$	10.7 ± 1.8	r_*	144.9 ± 1.8	$f_{2000}^{143\times217}$	33.2 ± 2.3
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.2 ± 3.3	$100\theta_*$	1.04121 ± 0.00060	f_{2000}^{217}	107.8 ± 2.1
$\boldsymbol{A_{217}^{dustTT}}$	93.4 ± 7.3	$D_M(z_*)$/Gpc	13.92 ± 0.16	$\chi^2_{lensing}$	9.39 ± 0.84
$\boldsymbol{c_{100}}$	0.99962 ± 0.00062	z_{drag}	1059.47 ± 0.74	χ^2_{simall}	228 ± 200
$\boldsymbol{c_{217}}$	0.99825 ± 0.00062	r_{drag}	147.6 ± 1.8	χ^2_{lowl}	193 ± 200
H_0	67.6 ± 1.2	k_D	0.1402 ± 0.0013	χ^2_{plik}	771.8 ± 5.4
Ω_Λ	0.6898 ± 0.0080	$100\theta_D$	0.16099 ± 0.00049	χ^2_{Aver15}	0.54 ± 0.72
Ω_m	0.3102 ± 0.0080	z_{eq}	3378 ± 29	χ^2_{6DF}	0.65 ± 0.75
$\Omega_m h^2$	0.1417 ± 0.0032	k_{eq}	0.01030 ± 0.00012	χ^2_{MGS}	0.79 ± 0.78
$\Omega_\nu h^2$	< 0.000691	$100\theta_{eq}$	0.8172 ± 0.0054	$\chi^2_{DR12BAO}$	4.8 ± 1.7
$\Omega_m h^3$	0.0958 ± 0.0035	$100\theta_{s,eq}$	0.4515 ± 0.0028	χ^2_{prior}	7.3 ± 3.7
σ_8	$0.812^{+0.013}_{-0.011}$	$H(0.15)$	72.9 ± 1.2	χ^2_{CMB}	1201.5 ± 5.6
S_8	0.825 ± 0.013	$D_M(0.15)$	642 ± 11	χ^2_{BAO}	6.2 ± 1.4
$\sigma_8\Omega_m^{0.5}$	0.4520 ± 0.0072	$H(0.38)$	82.9 ± 1.2		

$\bar{\chi}^2_{eff} = 1215.55$; $R - 1 = 0.01108$

9.44 base_nnu_mnu_plikHM_TT_lowl_lowE_lensing_BAO_post_Cooke17_Aver15_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02221 ± 0.00022	$\sigma_8/h^{0.5}$	$0.987^{+0.013}_{-0.010}$	$D_M(0.51)$	1982 ± 30
$\boldsymbol{\Omega_c h^2}$	0.1190 ± 0.0028	$r_{drag}h$	99.8 ± 1.0	$H(0.61)$	95.3 ± 1.2
$\boldsymbol{100\theta_{MC}}$	1.04099 ± 0.00050	$\langle d^2\rangle^{1/2}$	2.437 ± 0.023	$D_M(0.61)$	2307 ± 34
$\boldsymbol{\tau}$	$0.0552^{+0.0054}_{-0.0078}$	z_{re}	$7.77^{+0.58}_{-0.78}$	$H(2.33)$	235.7 ± 2.5
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 0.0640	$10^9 A_s$	$2.097^{+0.028}_{-0.036}$	$D_M(2.33)$	5769 ± 71
$\boldsymbol{N_{eff}}$	3.04 ± 0.17	$10^9 A_s e^{-2\tau}$	1.878 ± 0.017	$f\sigma_8(0.15)$	0.4567 ± 0.0066
$\boldsymbol{\ln(10^{10} A_s)}$	$3.043^{+0.014}_{-0.017}$	D_{40}	1228 ± 14	$\sigma_8(0.15)$	$0.750^{+0.012}_{-0.0098}$
$\boldsymbol{n_s}$	0.9657 ± 0.0071	D_{220}	5722 ± 40	$f\sigma_8(0.38)$	0.4753 ± 0.0062
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0025	D_{810}	2536 ± 14	$\sigma_8(0.38)$	$0.665^{+0.011}_{-0.0090}$
$\boldsymbol{A_{217}^{CIB}}$	48 ± 7	D_{1420}	815.5 ± 5.1	$f\sigma_8(0.51)$	0.4741 ± 0.0060
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{2000}	230.0 ± 1.9	$\sigma_8(0.51)$	$0.623^{+0.010}_{-0.0085}$
$\boldsymbol{A_{143}^{tSZ}}$	5.1 ± 2.0	$n_{s,0.002}$	0.9657 ± 0.0071	$f\sigma_8(0.61)$	0.4692 ± 0.0059
$\boldsymbol{A_{100}^{PS}}$	262 ± 28	Y_P	0.2452 ± 0.0023	$\sigma_8(0.61)$	$0.5924^{+0.0098}_{-0.0082}$
$\boldsymbol{A_{143}^{PS}}$	48 ± 8	Y_P^{BBN}	0.2465 ± 0.0023	$f\sigma_8(2.33)$	0.2987 ± 0.0044
$\boldsymbol{A_{143\times217}^{PS}}$	43^{+9}_{-10}	10^5D/H	2.614 ± 0.049	$\sigma_8(2.33)$	$0.3080^{+0.0052}_{-0.0046}$
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	Age/Gyr	13.81 ± 0.17	f_{2000}^{143}	30.8 ± 3.1
$\boldsymbol{A^{kSZ}}$	< 4.76	z_*	1090.03 ± 0.36	$f_{2000}^{143\times217}$	33.2 ± 2.2
$\boldsymbol{A_{100}^{dustTT}}$	8.9 ± 1.8	r_*	144.9 ± 1.6	f_{2000}^{217}	107.8 ± 2.0
$\boldsymbol{A_{143}^{dustTT}}$	10.7 ± 1.8	$100\theta_*$	1.04120 ± 0.00056	$\chi^2_{lensing}$	9.39 ± 0.82
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.2 ± 3.3	$D_M(z_*)$/Gpc	13.92 ± 0.15	χ^2_{simall}	226 ± 200
$\boldsymbol{A_{217}^{dustTT}}$	93.4 ± 7.3	z_{drag}	1059.47 ± 0.74	χ^2_{lowl}	194 ± 200
$\boldsymbol{c_{100}}$	0.99962 ± 0.00062	r_{drag}	147.6 ± 1.7	χ^2_{plik}	771.6 ± 5.4
$\boldsymbol{c_{217}}$	0.99825 ± 0.00062	k_D	0.1402 ± 0.0013	χ^2_{Aver15}	0.49 ± 0.65
H_0	67.6 ± 1.2	$100\theta_D$	0.16100 ± 0.00042	$\chi^2_{Cooke17}$	0.27 ± 0.39
Ω_Λ	0.6899 ± 0.0080	z_{eq}	3378 ± 29	χ^2_{6DF}	0.66 ± 0.75
Ω_m	0.3101 ± 0.0080	k_{eq}	0.01030 ± 0.00011	χ^2_{MGS}	0.78 ± 0.78
$\Omega_m h^2$	0.1418 ± 0.0030	$100\theta_{eq}$	0.8172 ± 0.0054	$\chi^2_{DR12BAO}$	4.8 ± 1.7
$\Omega_\nu h^2$	< 0.000688	$100\theta_{s,eq}$	0.4516 ± 0.0028	χ^2_{prior}	7.3 ± 3.7
$\Omega_m h^3$	0.0959 ± 0.0033	$H(0.15)$	72.9 ± 1.1	χ^2_{CMB}	1201.3 ± 5.5
σ_8	$0.812^{+0.012}_{-0.010}$	$D_M(0.15)$	641 ± 11	χ^2_{BAO}	6.2 ± 1.4
S_8	0.825 ± 0.013	$H(0.38)$	83.0 ± 1.2	χ^2_{Abund}	0.77 ± 0.84
$\sigma_8\Omega_m^{0.5}$	0.4520 ± 0.0070	$D_M(0.38)$	1530 ± 24		
$\sigma_8\Omega_m^{0.25}$	0.6057 ± 0.0082	$H(0.51)$	89.7 ± 1.2		

$\bar{\chi}^2_{eff} = 1215.55$; $R - 1 = 0.01166$

9.45 base_nnu_mnu_plikHM_TTTEEE_lowl_lowE_lensing_BAO

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022321	0.02236 ± 0.00018	$\Omega_m h^3$	0.09363	0.0949 ± 0.0034	$D_M(0.15)$	645.2	644 ± 10
$\boldsymbol{\Omega_c h^2}$	0.11697	0.1180 ± 0.0029	σ_8	0.8156	0.810 ± 0.011	$H(0.38)$	82.38	82.6 ± 1.2
$\boldsymbol{100\theta_{MC}}$	1.041297	1.04116 ± 0.00042	S_8	0.8268	0.825 ± 0.011	$D_M(0.38)$	1539.6	1536 ± 24
$\boldsymbol{\tau}$	0.0543	0.0551 ± 0.0074	$\sigma_8\Omega_m^{0.5}$	0.4529	0.4518 ± 0.0062	$H(0.51)$	89.01	89.3 ± 1.2
$\boldsymbol{\Sigma m_\nu}$ [eV]	0.0011	< 0.0561	$\sigma_8\Omega_m^{0.25}$	0.6077	0.6051 ± 0.0076	$D_M(0.51)$	1994.9	1990 ± 30
$\boldsymbol{N_{eff}}$	2.892	2.96 ± 0.17	$\sigma_8/h^{0.5}$	0.9948	$0.988^{+0.011}_{-0.0096}$	$H(0.61)$	94.56	94.9 ± 1.2
$\boldsymbol{\ln(10^{10}A_s)}$	3.0371	3.041 ± 0.016	$r_{drag}h$	99.98	99.69 ± 0.88	$D_M(0.61)$	2321.7	2316 ± 34
$\boldsymbol{n_s}$	0.9623	0.9637 ± 0.0070	$\langle d^2\rangle^{1/2}$	2.4478	2.442 ± 0.022	$H(2.33)$	233.69	234.9 ± 2.6
$\boldsymbol{y_{cal}}$	1.00049	1.0007 ± 0.0024	z_{re}	7.62	7.71 ± 0.74	$D_M(2.33)$	5811	5790 ± 73
$\boldsymbol{A_{217}^{CIB}}$	44.5	46 ± 7	$10^9 A_s$	2.0845	2.093 ± 0.034	$f\sigma_8(0.15)$	0.4570	0.4563 ± 0.0060
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.813	> 0.384	$10^9 A_s e^{-2\tau}$	1.8698	1.875 ± 0.017	$\sigma_8(0.15)$	0.7538	0.749 ± 0.011
$\boldsymbol{A_{143}^{tSZ}}$	7.03	$5.5^{+2.1}_{-1.9}$	D_{40}	1232.4	1232 ± 13	$f\sigma_8(0.38)$	0.4760	0.4748 ± 0.0058
$\boldsymbol{A_{100}^{PS}}$	244.9	256 ± 28	D_{220}	5735.3	5740 ± 39	$\sigma_8(0.38)$	0.6683	0.6639 ± 0.0098
$\boldsymbol{A_{143}^{PS}}$	50.4	45 ± 8	D_{810}	2538.2	2538 ± 13	$f\sigma_8(0.51)$	0.4748	0.4734 ± 0.0057
$\boldsymbol{A_{143\times217}^{PS}}$	55.2	42 ± 9	D_{1420}	819.39	818.3 ± 4.8	$\sigma_8(0.51)$	0.6255	0.6214 ± 0.0093
$\boldsymbol{A_{217}^{PS}}$	122.5	115 ± 10	D_{2000}	232.37	231.6 ± 1.8	$f\sigma_8(0.61)$	0.4700	0.4685 ± 0.0057
$\boldsymbol{A^{kSZ}}$	0.01	< 3.93	$n_{s,0.002}$	0.9623	0.9637 ± 0.0070	$\sigma_8(0.61)$	0.5952	0.5912 ± 0.0089
$\boldsymbol{A_{100}^{dust TT}}$	8.73	8.9 ± 1.8	Y_P	0.24329	0.2442 ± 0.0024	$f\sigma_8(2.33)$	0.29925	0.2979 ± 0.0044
$\boldsymbol{A_{143}^{dust TT}}$	10.98	10.8 ± 1.8	Y_P^{BBN}	0.24461	0.2456 ± 0.0024	$\sigma_8(2.33)$	0.30909	0.3073 ± 0.0048
$\boldsymbol{A_{143\times217}^{dust TT}}$	20.21	18.5 ± 3.3	10^5D/H	2.5412	2.559 ± 0.045	f_{2000}^{143}	27.34	28.6 ± 3.0
$\boldsymbol{A_{217}^{dust TT}}$	95.8	93.7 ± 7.3	Age/Gyr	13.912	13.86 ± 0.17	$f_{2000}^{143\times217}$	30.91	31.5 ± 2.1
$\boldsymbol{A_{100}^{dust TE}}$	0.1145	0.114 ± 0.038	z_*	1089.558	1089.67 ± 0.33	f_{2000}^{217}	105.50	106.4 ± 1.9
$\boldsymbol{A_{100\times143}^{dust TE}}$	0.1345	0.135 ± 0.030	r_*	146.05	145.4 ± 1.7	$\chi^2_{lensing}$	8.653	9.13 ± 0.68
$\boldsymbol{A_{100\times217}^{dust TE}}$	0.483	0.482 ± 0.085	$100\theta_*$	1.04155	1.04140 ± 0.00052	χ^2_{simall}	396.03	397.1 ± 1.8
$\boldsymbol{A_{143}^{dust TE}}$	0.223	0.225 ± 0.054	$D_M(z_*)$/Gpc	14.023	13.96 ± 0.16	χ^2_{lowl}	23.73	23.7 ± 1.1
$\boldsymbol{A_{143\times217}^{dust TE}}$	0.663	0.665 ± 0.080	z_{drag}	1059.47	1059.70 ± 0.69	χ^2_{plik}	2343.0	2359.3 ± 5.9
$\boldsymbol{A_{217}^{dust TE}}$	2.073	2.08 ± 0.27	r_{drag}	148.75	148.1 ± 1.8	χ^2_{6DF}	0.0105	0.059 ± 0.073
$\boldsymbol{c_{100}}$	0.99974	0.99969 ± 0.00061	k_D	0.13968	0.1402 ± 0.0013	χ^2_{MGS}	1.407	1.30 ± 0.48
$\boldsymbol{c_{217}}$	0.99816	0.99817 ± 0.00062	$100\theta_D$	0.160391	0.16055 ± 0.00040	$\chi^2_{DR12BAO}$	3.91	4.8 ± 1.5
H_0	67.21	67.3 ± 1.1	z_{eq}	3398.9	3393 ± 24	χ^2_{prior}	1.48	11.4 ± 4.5
Ω_Λ	0.6917	0.6892 ± 0.0071	k_{eq}	0.010266	0.01030 ± 0.00011	χ^2_{CMB}	2771.4	2789.1 ± 6.0
Ω_m	0.3083	0.3108 ± 0.0071	$100\theta_{eq}$	0.81386	0.8151 ± 0.0046	χ^2_{BAO}	5.32	6.2 ± 1.2
$\Omega_m h^2$	0.13930	0.1409 ± 0.0031	$100\theta_{s,eq}$	0.44972	0.4503 ± 0.0023			
$\Omega_\nu h^2$	0.000012	< 0.000603	$H(0.15)$	72.42	72.6 ± 1.1			

Best-fit $\chi^2_{eff} = 2778.20$; $\Delta\chi^2_{eff} = -2.50$; $\bar{\chi}^2_{eff} = 2806.73$; $\Delta\bar{\chi}^2_{eff} = -0.12$; $R - 1 = 0.01039$

χ^2_{eff}: BAO - 6DF: 0.01 (Δ -0.02) MGS: 1.41 (Δ 0.19) DR12BAO: 3.91 (Δ -0.51) CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.65 (Δ -0.08) simall_100x143_offlike5_EE_Aplanc
396.02 (Δ -0.50) commander_dx12_v3_2_29: 23.73 (Δ 0.83) plik_rd12_HM_v22b_TTTEEE: 2342.98 (Δ -2.34)

9.46 base_nnu_mnu_plikHM_TTTEEE_lowl_lowE_lensing_BAO_post_Pantheon

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022322	0.02238 ± 0.00018	$\Omega_m h^3$	0.09358	0.0951 ± 0.0034	$D_M(0.15)$	645.3	643 ± 10
$\boldsymbol{\Omega_c h^2}$	0.11691	0.1181 ± 0.0029	σ_8	0.8157	0.811 ± 0.011	$H(0.38)$	82.37	82.8 ± 1.1
$\boldsymbol{100\theta_{MC}}$	1.041292	1.04115 ± 0.00042	S_8	0.8268	0.824 ± 0.011	$D_M(0.38)$	1539.8	1533 ± 23
$\boldsymbol{\tau}$	0.0547	$0.0554^{+0.0067}_{-0.0077}$	$\sigma_8\Omega_m^{0.5}$	0.4529	0.4514 ± 0.0062	$H(0.51)$	89.00	89.4 ± 1.2
$\boldsymbol{\Sigma m_\nu}$ [eV]	0.0007	< 0.0531	$\sigma_8\Omega_m^{0.25}$	0.6078	0.6052 ± 0.0076	$D_M(0.51)$	1995.1	1987 ± 29
$\boldsymbol{N_{eff}}$	2.890	2.98 ± 0.17	$\sigma_8/h^{0.5}$	0.9949	$0.988^{+0.011}_{-0.0096}$	$H(0.61)$	94.54	95.0 ± 1.2
$\boldsymbol{\ln(10^{10}A_s)}$	3.0371	3.042 ± 0.016	$r_{drag}h$	99.99	99.83 ± 0.83	$D_M(0.61)$	2322.0	2312 ± 33
$\boldsymbol{n_s}$	0.9630	0.9645 ± 0.0068	$\langle d^2\rangle^{1/2}$	2.4463	2.440 ± 0.021	$H(2.33)$	233.64	235.0 ± 2.6
$\boldsymbol{y_{cal}}$	1.00032	1.0007 ± 0.0024	z_{re}	7.65	7.73 ± 0.74	$D_M(2.33)$	5812	5783 ± 72
$\boldsymbol{A_{217}^{CIB}}$	43.6	46 ± 7	$10^9 A_s$	2.0845	2.095 ± 0.034	$f\sigma_8(0.15)$	0.4570	0.4560 ± 0.0059
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.949	> 0.386	$10^9 A_s e^{-2\tau}$	1.8686	1.875 ± 0.017	$\sigma_8(0.15)$	0.7539	0.750 ± 0.010
$\boldsymbol{A_{143}^{tSZ}}$	7.01	$5.6^{+2.2}_{-1.9}$	D_{40}	1230.0	1231 ± 13	$f\sigma_8(0.38)$	0.4760	0.4747 ± 0.0058
$\boldsymbol{A_{100}^{PS}}$	241.3	256 ± 28	D_{220}	5728.8	5740 ± 39	$\sigma_8(0.38)$	0.6684	0.6649 ± 0.0096
$\boldsymbol{A_{143}^{PS}}$	51.5	45 ± 8	D_{810}	2537.4	2539 ± 13	$f\sigma_8(0.51)$	0.4749	0.4735 ± 0.0058
$\boldsymbol{A_{143\times217}^{PS}}$	58.1	42 ± 9	D_{1420}	819.47	818.3 ± 4.8	$\sigma_8(0.51)$	0.6256	0.6223 ± 0.0091
$\boldsymbol{A_{217}^{PS}}$	123.8	115 ± 10	D_{2000}	232.46	231.6 ± 1.8	$f\sigma_8(0.61)$	0.4701	0.4687 ± 0.0057
$\boldsymbol{A^{kSZ}}$	0.00	< 3.94	$n_{s,0.002}$	0.9630	0.9645 ± 0.0068	$\sigma_8(0.61)$	0.5952	0.5922 ± 0.0087
$\boldsymbol{A_{100}^{dust TT}}$	8.81	8.9 ± 1.8	Y_P	0.24326	0.2444 ± 0.0024	$f\sigma_8(2.33)$	0.29928	0.2984 ± 0.0043
$\boldsymbol{A_{143}^{dust TT}}$	11.00	10.8 ± 1.8	Y_P^{BBN}	0.24458	0.2457 ± 0.0024	$\sigma_8(2.33)$	0.30913	0.3078 ± 0.0047
$\boldsymbol{A_{143\times217}^{dust TT}}$	20.45	18.5 ± 3.3	10^5D/H	2.5403	2.560 ± 0.045	f_{2000}^{143}	26.96	28.7 ± 3.0
$\boldsymbol{A_{217}^{dust TT}}$	96.2	93.8 ± 7.3	Age/Gyr	13.914	13.85 ± 0.17	$f_{2000}^{143\times217}$	30.71	31.5 ± 2.1
$\boldsymbol{A_{100}^{dust TE}}$	0.1141	0.114 ± 0.037	z_*	1089.550	1089.67 ± 0.33	f_{2000}^{217}	105.25	106.4 ± 1.9
$\boldsymbol{A_{100\times143}^{dust TE}}$	0.1353	0.135 ± 0.030	r_*	146.08	145.3 ± 1.7	$\chi^2_{lensing}$	8.660	9.14 ± 0.68
$\boldsymbol{A_{100\times217}^{dust TE}}$	0.482	0.483 ± 0.085	$100\theta_*$	1.04155	1.04138 ± 0.00051	χ^2_{simall}	396.05	397.1 ± 1.9
$\boldsymbol{A_{143}^{dust TE}}$	0.226	0.226 ± 0.054	$D_M(z_*)$/Gpc	14.025	13.95 ± 0.16	χ^2_{lowl}	23.57	23.5 ± 1.1
$\boldsymbol{A_{143\times217}^{dust TE}}$	0.666	0.664 ± 0.080	z_{drag}	1059.47	1059.76 ± 0.68	χ^2_{plik}	2343.1	2359.4 ± 5.8
$\boldsymbol{A_{217}^{dust TE}}$	2.072	2.07 ± 0.27	r_{drag}	148.78	148.0 ± 1.8	χ^2_{JLA}	1036.185	1036.33 ± 0.35
$\boldsymbol{c_{100}}$	0.99972	0.99969 ± 0.00060	k_D	0.13966	0.1402 ± 0.0013	χ^2_{6DF}	0.0102	0.047 ± 0.061
$\boldsymbol{c_{217}}$	0.99815	0.99818 ± 0.00062	$100\theta_D$	0.160383	0.16057 ± 0.00039	χ^2_{MGS}	1.407	1.38 ± 0.47
H_0	67.21	67.5 ± 1.1	z_{eq}	3398.6	3390 ± 23	$\chi^2_{DR12BAO}$	3.90	4.6 ± 1.3
Ω_Λ	0.6917	0.6904 ± 0.0067	k_{eq}	0.010263	0.01030 ± 0.00011	χ^2_{prior}	1.48	11.4 ± 4.5
Ω_m	0.3083	0.3096 ± 0.0067	$100\theta_{eq}$	0.81391	0.8157 ± 0.0044	χ^2_{CMB}	2771.4	2789.2 ± 6.0
$\Omega_m h^2$	0.13924	0.1410 ± 0.0031	$100\theta_{s,eq}$	0.44974	0.4506 ± 0.0022	χ^2_{BAO}	5.315	6.0 ± 1.0
$\Omega_\nu h^2$	0.000008	< 0.000571	$H(0.15)$	72.41	72.7 ± 1.1			

Best-fit $\chi^2_{eff} = 3814.36$; $\Delta\chi^2_{eff} = -2.60$; $\bar{\chi}^2_{eff} = 3842.94$; $\Delta\bar{\chi}^2_{eff} = -0.19$; $R - 1 = 0.01428$

χ^2_{eff}: BAO - 6DF: 0.01 (Δ -0.01) MGS: 1.41 (Δ 0.13) DR12BAO: 3.90 (Δ -0.37) CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.66 (Δ -0.07) simall_100x143_offlike5_EE_Aplanc
396.05 (Δ -0.41) commander_dx12_v3_2_29: 23.57 (Δ 0.69) plik_rd12_HM_v22b_TTTEEE: 2343.09 (Δ -2.32) SN - JLA Pantheon: 1036.18 (Δ -0.08)

9.47 base_nnu_mnu_plikHM_TTTEEE_lowl_lowE_lensing_BAO_post_Aver15

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02235 ± 0.00017	$\Omega_m h^3$	0.0946 ± 0.0029	$D_M(0.15)$	644.8 ± 9.2
$\boldsymbol{\Omega_c h^2}$	0.1178 ± 0.0025	σ_8	0.810 ± 0.011	$H(0.38)$	82.5 ± 1.0
$\boldsymbol{100\theta_{MC}}$	1.04119 ± 0.00039	S_8	0.825 ± 0.011	$D_M(0.38)$	1538 ± 21
$\boldsymbol{\tau}$	$0.0551^{+0.0067}_{-0.0077}$	$\sigma_8\Omega_m^{0.5}$	0.4517 ± 0.0062	$H(0.51)$	89.2 ± 1.0
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 0.0556	$\sigma_8\Omega_m^{0.25}$	0.6049 ± 0.0074	$D_M(0.51)$	1992 ± 26
$\boldsymbol{N_{eff}}$	2.95 ± 0.15	$\sigma_8/h^{0.5}$	$0.988^{+0.011}_{-0.0097}$	$H(0.61)$	94.8 ± 1.1
$\boldsymbol{\ln(10^{10}A_s)}$	3.041 ± 0.016	$r_{drag}h$	99.67 ± 0.86	$D_M(0.61)$	2318 ± 30
$\boldsymbol{n_s}$	0.9633 ± 0.0063	$\langle d^2\rangle^{1/2}$	2.442 ± 0.021	$H(2.33)$	234.7 ± 2.3
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0024	z_{re}	7.70 ± 0.74	$D_M(2.33)$	5795 ± 63
$\boldsymbol{A_{217}^{CIB}}$	46 ± 7	$10^9 A_s$	2.092 ± 0.033	$f\sigma_8(0.15)$	0.4562 ± 0.0059
$\boldsymbol{\xi^{tSZ\times CIB}}$	> 0.394	$10^9 A_s e^{-2\tau}$	1.874 ± 0.016	$\sigma_8(0.15)$	0.749 ± 0.010
$\boldsymbol{A_{143}^{tSZ}}$	$5.5^{+2.1}_{-1.8}$	D_{40}	1233 ± 13	$f\sigma_8(0.38)$	0.4746 ± 0.0056
$\boldsymbol{A_{100}^{PS}}$	256 ± 28	D_{220}	5740 ± 39	$\sigma_8(0.38)$	0.6636 ± 0.0092
$\boldsymbol{A_{143}^{PS}}$	44 ± 8	D_{810}	2538 ± 13	$f\sigma_8(0.51)$	0.4732 ± 0.0055
$\boldsymbol{A_{143\times217}^{PS}}$	42 ± 9	D_{1420}	818.4 ± 4.8	$\sigma_8(0.51)$	0.6210 ± 0.0087
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	D_{2000}	231.7 ± 1.8	$f\sigma_8(0.61)$	0.4683 ± 0.0055
$\boldsymbol{A^{kSZ}}$	< 3.89	$n_{s,0.002}$	0.9633 ± 0.0063	$\sigma_8(0.61)$	0.5909 ± 0.0084
$\boldsymbol{A_{100}^{dust TT}}$	8.9 ± 1.8	Y_P	0.2441 ± 0.0021	$f\sigma_8(2.33)$	0.2977 ± 0.0041
$\boldsymbol{A_{143}^{dust TT}}$	10.8 ± 1.8	Y_P^{BBN}	0.2454 ± 0.0021	$\sigma_8(2.33)$	0.3071 ± 0.0045
$\boldsymbol{A_{143\times217}^{dust TT}}$	18.5 ± 3.3	10^5D/H	2.556 ± 0.040	f_{2000}^{143}	28.5 ± 2.9
$\boldsymbol{A_{217}^{dust TT}}$	93.8 ± 7.3	Age/Gyr	13.87 ± 0.15	$f_{2000}^{143\times217}$	31.4 ± 2.0
$\boldsymbol{A_{100}^{dust TE}}$	0.114 ± 0.037	z_*	1089.65 ± 0.31	f_{2000}^{217}	106.3 ± 1.9
$\boldsymbol{A_{100\times143}^{dust TE}}$	0.135 ± 0.030	r_*	145.5 ± 1.5	$\chi^2_{lensing}$	9.10 ± 0.66
$\boldsymbol{A_{100\times217}^{dust TE}}$	0.483 ± 0.085	$100\theta_*$	1.04143 ± 0.00047	χ^2_{simall}	397.1 ± 1.8
$\boldsymbol{A_{143}^{dust TE}}$	0.226 ± 0.054	$D_M(z_*)$/Gpc	13.97 ± 0.14	χ^2_{lowl}	23.7 ± 1.1
$\boldsymbol{A_{143\times217}^{dust TE}}$	0.664 ± 0.080	z_{drag}	1059.65 ± 0.61	χ^2_{plik}	2359.0 ± 5.8
$\boldsymbol{A_{217}^{dust TE}}$	2.08 ± 0.27	r_{drag}	148.2 ± 1.5	χ^2_{Aver15}	0.28 ± 0.40
$\boldsymbol{c_{100}}$	0.99969 ± 0.00061	k_D	0.1401 ± 0.0011	χ^2_{6DF}	0.058 ± 0.073
$\boldsymbol{c_{217}}$	0.99818 ± 0.00062	$100\theta_D$	0.16053 ± 0.00035	χ^2_{MGS}	1.29 ± 0.47
H_0	67.3 ± 1.0	z_{eq}	3394 ± 23	$\chi^2_{DR12BAO}$	4.8 ± 1.5
Ω_Λ	0.6890 ± 0.0069	k_{eq}	0.01029 ± 0.00010	χ^2_{prior}	11.4 ± 4.5
Ω_m	0.3110 ± 0.0069	$100\theta_{eq}$	0.8149 ± 0.0044	χ^2_{CMB}	2788.9 ± 5.9
$\Omega_m h^2$	$0.1406^{+0.0025}_{-0.0028}$	$100\theta_{s,eq}$	0.4502 ± 0.0023	χ^2_{BAO}	6.2 ± 1.2
$\Omega_\nu h^2$	< 0.000598	$H(0.15)$	72.5 ± 1.0		

$\bar{\chi}^2_{eff} = 2806.77$; $R - 1 = 0.01486$

9.48 base_nnu_mnu_plikHM_TTTEEE_lowl_lowE_lensing_BAO_post_Cooke17_Aver15

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02235 ± 0.00017	σ_8	$0.811^{+0.011}_{-0.010}$	$D_M(0.38)$	1535 ± 20
$\boldsymbol{\Omega_c h^2}$	0.1183 ± 0.0024	S_8	0.826 ± 0.011	$H(0.51)$	89.4 ± 1.0
$\boldsymbol{100\theta_{MC}}$	1.04112 ± 0.00038	$\sigma_8\Omega_m^{0.5}$	0.4523 ± 0.0061	$D_M(0.51)$	1988 ± 25
$\boldsymbol{\tau}$	$0.0550^{+0.0067}_{-0.0077}$	$\sigma_8\Omega_m^{0.25}$	0.6058 ± 0.0073	$H(0.61)$	95.0 ± 1.0
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 0.0564	$\sigma_8/h^{0.5}$	$0.988^{+0.011}_{-0.0097}$	$D_M(0.61)$	2314 ± 29
$\boldsymbol{N_{eff}}$	2.98 ± 0.14	$r_{drag}h$	99.67 ± 0.86	$H(2.33)$	235.1 ± 2.2
$\boldsymbol{\ln(10^{10}A_s)}$	3.042 ± 0.016	$\langle d^2\rangle^{1/2}$	2.442 ± 0.021	$D_M(2.33)$	5784 ± 61
$\boldsymbol{n_s}$	0.9641 ± 0.0062	z_{re}	7.70 ± 0.74	$f\sigma_8(0.15)$	0.4568 ± 0.0058
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0024	$10^9 A_s$	2.094 ± 0.033	$\sigma_8(0.15)$	$0.750^{+0.010}_{-0.0094}$
$\boldsymbol{A^{CIB}_{217}}$	46 ± 7	$10^9 A_s e^{-2\tau}$	1.876 ± 0.015	$f\sigma_8(0.38)$	0.4753 ± 0.0055
$\boldsymbol{\xi^{tSZ\times CIB}}$	> 0.390	D_{40}	1232 ± 13	$\sigma_8(0.38)$	$0.6646^{+0.0096}_{-0.0086}$
$\boldsymbol{A^{tSZ}_{143}}$	$5.5^{+2.1}_{-1.9}$	D_{220}	5737 ± 39	$f\sigma_8(0.51)$	0.4739 ± 0.0054
$\boldsymbol{A^{PS}_{100}}$	257 ± 28	D_{810}	2538 ± 13	$\sigma_8(0.51)$	$0.6219^{+0.0091}_{-0.0082}$
$\boldsymbol{A^{PS}_{143}}$	45 ± 8	D_{1420}	818.0 ± 4.7	$f\sigma_8(0.61)$	0.4690 ± 0.0054
$\boldsymbol{A^{PS}_{143\times217}}$	42 ± 9	D_{2000}	231.5 ± 1.7	$\sigma_8(0.61)$	$0.5918^{+0.0087}_{-0.0079}$
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	$n_{s,0.002}$	0.9641 ± 0.0062	$f\sigma_8(2.33)$	0.2982 ± 0.0040
$\boldsymbol{A^{kSZ}}$	< 4.02	Y_P	0.2445 ± 0.0020	$\sigma_8(2.33)$	0.3076 ± 0.0045
$\boldsymbol{A^{dustTT}_{100}}$	8.9 ± 1.8	Y_P^{BBN}	0.2458 ± 0.0020	f^{143}_{2000}	28.9 ± 2.8
$\boldsymbol{A^{dustTT}_{143}}$	10.8 ± 1.8	10^5D/H	2.565 ± 0.038	$f^{143\times217}_{2000}$	31.7 ± 2.0
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.5 ± 3.3	Age/Gyr	13.85 ± 0.14	f^{217}_{2000}	106.6 ± 1.8
$\boldsymbol{A^{dustTT}_{217}}$	93.8 ± 7.4	z_*	1089.72 ± 0.29	$\chi^2_{lensing}$	9.15 ± 0.66
$\boldsymbol{A^{dustTE}_{100}}$	0.114 ± 0.037	r_*	145.3 ± 1.4	χ^2_{simall}	397.1 ± 1.8
$\boldsymbol{A^{dustTE}_{100\times143}}$	0.136 ± 0.030	$100\theta_*$	1.04135 ± 0.00045	χ^2_{lowl}	23.6 ± 1.0
$\boldsymbol{A^{dustTE}_{100\times217}}$	0.483 ± 0.085	$D_M(z_*)$/Gpc	13.95 ± 0.13	χ^2_{plik}	2359.1 ± 5.8
$\boldsymbol{A^{dustTE}_{143}}$	0.226 ± 0.054	z_{drag}	1059.71 ± 0.60	χ^2_{Aver15}	0.29 ± 0.40
$\boldsymbol{A^{dustTE}_{143\times217}}$	0.664 ± 0.080	r_{drag}	147.9 ± 1.5	$\chi^2_{Cooke17}$	0.47 ± 0.49
$\boldsymbol{A^{dustTE}_{217}}$	2.08 ± 0.27	k_D	0.1402 ± 0.0011	χ^2_{6DF}	0.058 ± 0.073
$\boldsymbol{c_{100}}$	0.99969 ± 0.00060	$100\theta_D$	0.16061 ± 0.00033	χ^2_{MGS}	1.29 ± 0.47
$\boldsymbol{c_{217}}$	0.99818 ± 0.00062	z_{eq}	3393 ± 23	$\chi^2_{DR12BAO}$	4.8 ± 1.5
H_0	67.38 ± 0.98	k_{eq}	0.010306 ± 0.000097	χ^2_{prior}	11.4 ± 4.5
Ω_Λ	0.6890 ± 0.0069	$100\theta_{eq}$	0.8151 ± 0.0044	χ^2_{CMB}	2788.9 ± 5.9
Ω_m	0.3110 ± 0.0069	$100\theta_{s,eq}$	0.4503 ± 0.0022	χ^2_{BAO}	6.2 ± 1.2
$\Omega_m h^2$	0.1412 ± 0.0026	$H(0.15)$	72.64 ± 0.97	χ^2_{Abund}	0.77 ± 0.58
$\Omega_\nu h^2$	< 0.000607	$D_M(0.15)$	643.5 ± 9.0		
$\Omega_m h^3$	0.0951 ± 0.0028	$H(0.38)$	82.70 ± 0.98		

$\bar{\chi}^2_{eff} = 2807.25$; $R - 1 = 0.01513$

9.49 base_nnu_mnu_plikHM_TTTEEE_lowl_lowE_lensing_BAO_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02236 ± 0.00018	$\Omega_m h^3$	0.0949 ± 0.0034	$D_M(0.15)$	644 ± 10
$\boldsymbol{\Omega_c h^2}$	0.1180 ± 0.0029	σ_8	0.811 ± 0.011	$H(0.38)$	82.6 ± 1.2
$\boldsymbol{100\theta_{MC}}$	1.04116 ± 0.00042	S_8	0.825 ± 0.011	$D_M(0.38)$	1536 ± 24
$\boldsymbol{\tau}$	$0.0559^{+0.0054}_{-0.0077}$	$\sigma_8 \Omega_m^{0.5}$	0.4519 ± 0.0062	$H(0.51)$	89.3 ± 1.2
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 0.0570	$\sigma_8 \Omega_m^{0.25}$	0.6054 ± 0.0076	$D_M(0.51)$	1990 ± 30
$\boldsymbol{N_{eff}}$	2.96 ± 0.17	$\sigma_8/h^{0.5}$	$0.988^{+0.011}_{-0.0094}$	$H(0.61)$	94.9 ± 1.2
$\boldsymbol{\ln(10^{10} A_s)}$	$3.043^{+0.014}_{-0.017}$	$r_{drag} h$	99.71 ± 0.88	$D_M(0.61)$	2316 ± 34
$\boldsymbol{n_s}$	0.9639 ± 0.0069	$\langle d^2 \rangle^{1/2}$	2.443 ± 0.021	$H(2.33)$	234.9 ± 2.6
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0024	z_{re}	$7.79^{+0.58}_{-0.76}$	$D_M(2.33)$	5789 ± 73
$\boldsymbol{A^{CIB}_{217}}$	46 ± 7	$10^9 A_s$	$2.096^{+0.029}_{-0.035}$	$f\sigma_8(0.15)$	0.4565 ± 0.0059
$\boldsymbol{\xi^{tSZ\times CIB}}$	> 0.382	$10^9 A_s e^{-2\tau}$	1.875 ± 0.017	$\sigma_8(0.15)$	0.749 ± 0.011
$\boldsymbol{A^{tSZ}_{143}}$	$5.5^{+2.1}_{-1.9}$	D_{40}	1232 ± 13	$f\sigma_8(0.38)$	0.4750 ± 0.0057
$\boldsymbol{A^{PS}_{100}}$	256 ± 28	D_{220}	5739 ± 39	$\sigma_8(0.38)$	0.6644 ± 0.0097
$\boldsymbol{A^{PS}_{143}}$	45 ± 8	D_{810}	2538 ± 13	$f\sigma_8(0.51)$	0.4737 ± 0.0057
$\boldsymbol{A^{PS}_{143\times217}}$	42 ± 9	D_{1420}	818.3 ± 4.8	$\sigma_8(0.51)$	0.6217 ± 0.0092
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	D_{2000}	231.6 ± 1.8	$f\sigma_8(0.61)$	0.4687 ± 0.0057
$\boldsymbol{A^{kSZ}}$	< 3.93	$n_{s,0.002}$	0.9639 ± 0.0069	$\sigma_8(0.61)$	0.5916 ± 0.0088
$\boldsymbol{A^{dust TT}_{100}}$	8.9 ± 1.8	Y_P	0.2443 ± 0.0024	$f\sigma_8(2.33)$	0.2982 ± 0.0043
$\boldsymbol{A^{dust TT}_{143}}$	10.8 ± 1.8	Y_P^{BBN}	0.2456 ± 0.0024	$\sigma_8(2.33)$	0.3075 ± 0.0048
$\boldsymbol{A^{dust TT}_{143\times217}}$	18.5 ± 3.3	10^5D/H	2.559 ± 0.044	f^{143}_{2000}	28.6 ± 3.0
$\boldsymbol{A^{dust TT}_{217}}$	93.7 ± 7.3	Age/Gyr	13.86 ± 0.17	$f^{143\times217}_{2000}$	31.5 ± 2.1
$\boldsymbol{A^{dust TE}_{100}}$	0.114 ± 0.038	z_*	1089.67 ± 0.33	f^{217}_{2000}	106.4 ± 1.9
$\boldsymbol{A^{dust TE}_{100\times143}}$	0.135 ± 0.030	r_*	145.4 ± 1.7	$\chi^2_{lensing}$	9.11 ± 0.67
$\boldsymbol{A^{dust TE}_{100\times217}}$	0.482 ± 0.085	$100\theta_*$	1.04140 ± 0.00052	χ^2_{simall}	397.1 ± 1.9
$\boldsymbol{A^{dust TE}_{143}}$	0.225 ± 0.054	$D_M(z_*)$/Gpc	13.96 ± 0.16	χ^2_{lowl}	23.6 ± 1.1
$\boldsymbol{A^{dust TE}_{143\times217}}$	0.664 ± 0.080	z_{drag}	1059.71 ± 0.69	χ^2_{plik}	2359.2 ± 5.9
$\boldsymbol{A^{dust TE}_{217}}$	2.08 ± 0.27	r_{drag}	148.1 ± 1.8	χ^2_{6DF}	0.057 ± 0.073
$\boldsymbol{c_{100}}$	0.99969 ± 0.00061	k_D	0.1402 ± 0.0013	χ^2_{MGS}	1.31 ± 0.48
$\boldsymbol{c_{217}}$	0.99817 ± 0.00062	$100\theta_D$	0.16056 ± 0.00039	$\chi^2_{DR12BAO}$	4.8 ± 1.5
H_0	67.3 ± 1.1	z_{eq}	3392 ± 24	χ^2_{prior}	11.4 ± 4.5
Ω_Λ	0.6893 ± 0.0071	k_{eq}	0.01030 ± 0.00011	χ^2_{CMB}	2789.0 ± 5.9
Ω_m	0.3107 ± 0.0071	$100\theta_{eq}$	0.8152 ± 0.0045	χ^2_{BAO}	6.2 ± 1.2
$\Omega_m h^2$	0.1409 ± 0.0031	$100\theta_{s,eq}$	0.4504 ± 0.0023		
$\Omega_\nu h^2$	< 0.000613	$H(0.15)$	72.6 ± 1.1		

$\bar{\chi}^2_{eff} = 2806.56$; $\Delta\bar{\chi}^2_{eff} = -0.16$; $R - 1 = 0.01169$

9.50 base_nnu_mnu_plikHM_TTTEEE_lowl_lowE_lensing_BAO_post_Pantheon_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02238 ± 0.00018	$\Omega_m h^3$	0.0952 ± 0.0034	$D_M(0.15)$	643 ± 10
$\boldsymbol{\Omega_c h^2}$	0.1181 ± 0.0029	σ_8	0.812 ± 0.011	$H(0.38)$	82.8 ± 1.1
$\boldsymbol{100\theta_{MC}}$	1.04115 ± 0.00042	S_8	0.824 ± 0.011	$D_M(0.38)$	1533 ± 23
$\boldsymbol{\tau}$	$0.0561^{+0.0055}_{-0.0078}$	$\sigma_8 \Omega_m^{0.5}$	0.4516 ± 0.0062	$H(0.51)$	89.4 ± 1.2
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 0.0539	$\sigma_8 \Omega_m^{0.25}$	0.6054 ± 0.0076	$D_M(0.51)$	1986 ± 29
$\boldsymbol{N_{eff}}$	2.98 ± 0.17	$\sigma_8/h^{0.5}$	$0.988^{+0.011}_{-0.0094}$	$H(0.61)$	95.0 ± 1.2
$\boldsymbol{\ln(10^{10} A_s)}$	$3.043^{+0.014}_{-0.016}$	$r_{drag} h$	99.85 ± 0.83	$D_M(0.61)$	2312 ± 33
$\boldsymbol{n_s}$	0.9646 ± 0.0068	$\langle d^2 \rangle^{1/2}$	2.441 ± 0.021	$H(2.33)$	235.0 ± 2.6
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0024	z_{re}	$7.80^{+0.59}_{-0.77}$	$D_M(2.33)$	5783 ± 72
$\boldsymbol{A_{217}^{CIB}}$	46 ± 7	$10^9 A_s$	$2.098^{+0.029}_{-0.035}$	$f\sigma_8(0.15)$	0.4561 ± 0.0059
$\boldsymbol{\xi^{tSZ\times CIB}}$	> 0.386	$10^9 A_s e^{-2\tau}$	1.875 ± 0.017	$\sigma_8(0.15)$	0.750 ± 0.010
$\boldsymbol{A_{143}^{tSZ}}$	$5.5^{+2.2}_{-1.9}$	D_{40}	1231 ± 13	$f\sigma_8(0.38)$	0.4749 ± 0.0058
$\boldsymbol{A_{100}^{PS}}$	256 ± 28	D_{220}	5740 ± 39	$\sigma_8(0.38)$	0.6653 ± 0.0095
$\boldsymbol{A_{143}^{PS}}$	45 ± 8	D_{810}	2538 ± 13	$f\sigma_8(0.51)$	0.4737 ± 0.0057
$\boldsymbol{A_{143\times217}^{PS}}$	42 ± 9	D_{1420}	818.3 ± 4.8	$\sigma_8(0.51)$	0.6226 ± 0.0090
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	D_{2000}	231.6 ± 1.8	$f\sigma_8(0.61)$	0.4689 ± 0.0057
$\boldsymbol{A^{kSZ}}$	< 3.95	$n_{s,0.002}$	0.9646 ± 0.0068	$\sigma_8(0.61)$	0.5925 ± 0.0087
$\boldsymbol{A_{100}^{dust TT}}$	8.9 ± 1.8	Y_P	0.2444 ± 0.0024	$f\sigma_8(2.33)$	0.2986 ± 0.0042
$\boldsymbol{A_{143}^{dust TT}}$	10.8 ± 1.8	Y_P^{BBN}	0.2458 ± 0.0024	$\sigma_8(2.33)$	0.3080 ± 0.0047
$\boldsymbol{A_{143\times217}^{dust TT}}$	18.5 ± 3.3	10^5D/H	2.560 ± 0.044	f_{2000}^{143}	28.6 ± 3.0
$\boldsymbol{A_{217}^{dust TT}}$	93.8 ± 7.3	Age/Gyr	13.84 ± 0.17	$f_{2000}^{143\times217}$	31.5 ± 2.1
$\boldsymbol{A_{100}^{dust TE}}$	0.114 ± 0.037	z_*	1089.67 ± 0.33	f_{2000}^{217}	106.4 ± 1.9
$\boldsymbol{A_{100\times143}^{dust TE}}$	0.135 ± 0.030	r_*	145.3 ± 1.7	$\chi^2_{lensing}$	9.13 ± 0.67
$\boldsymbol{A_{100\times217}^{dust TE}}$	0.483 ± 0.085	$100\theta_*$	1.04137 ± 0.00052	χ^2_{simall}	397.1 ± 1.9
$\boldsymbol{A_{143}^{dust TE}}$	0.225 ± 0.054	$D_M(z_*)$/Gpc	13.95 ± 0.16	χ^2_{lowl}	23.5 ± 1.1
$\boldsymbol{A_{143\times217}^{dust TE}}$	0.663 ± 0.080	z_{drag}	1059.77 ± 0.68	χ^2_{plik}	2359.3 ± 5.8
$\boldsymbol{A_{217}^{dust TE}}$	2.08 ± 0.27	r_{drag}	148.0 ± 1.8	χ^2_{JLA}	1036.33 ± 0.34
$\boldsymbol{c_{100}}$	0.99969 ± 0.00060	k_D	0.1402 ± 0.0013	χ^2_{6DF}	0.046 ± 0.060
$\boldsymbol{c_{217}}$	0.99817 ± 0.00062	$100\theta_D$	0.16058 ± 0.00039	χ^2_{MGS}	1.39 ± 0.47
H_0	67.5 ± 1.1	z_{eq}	3389 ± 23	$\chi^2_{DR12BAO}$	4.5 ± 1.3
Ω_Λ	0.6905 ± 0.0067	k_{eq}	0.01029 ± 0.00011	χ^2_{prior}	11.4 ± 4.5
Ω_m	0.3095 ± 0.0067	$100\theta_{eq}$	0.8158 ± 0.0044	χ^2_{CMB}	2789.0 ± 5.9
$\Omega_m h^2$	0.1410 ± 0.0031	$100\theta_{s,eq}$	0.4507 ± 0.0022	χ^2_{BAO}	6.0 ± 1.0
$\Omega_\nu h^2$	< 0.000580	$H(0.15)$	72.7 ± 1.1		

$\bar{\chi}^2_{eff} = 3842.77$; $\Delta\bar{\chi}^2_{eff} = -0.25$; $R - 1 = 0.01513$

9.51 base_nnu_mnu_plikHM_TTTEEE_lowl_lowE_lensing_BAO_post_Aver15_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02235 ± 0.00017	$\Omega_m h^3$	0.0946 ± 0.0029	$D_M(0.15)$	644.6 ± 9.2
$\boldsymbol{\Omega_c h^2}$	0.1178 ± 0.0025	σ_8	0.810 ± 0.011	$H(0.38)$	82.6 ± 1.0
$\boldsymbol{100\theta_{MC}}$	1.04119 ± 0.00039	S_8	0.825 ± 0.011	$D_M(0.38)$	1538 ± 21
$\boldsymbol{\tau}$	$0.0559^{+0.0054}_{-0.0078}$	$\sigma_8 \Omega_m^{0.5}$	0.4518 ± 0.0062	$H(0.51)$	89.2 ± 1.0
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 0.0565	$\sigma_8 \Omega_m^{0.25}$	0.6051 ± 0.0074	$D_M(0.51)$	1992 ± 26
$\boldsymbol{N_{eff}}$	2.95 ± 0.15	$\sigma_8/h^{0.5}$	$0.988^{+0.011}_{-0.0096}$	$H(0.61)$	94.8 ± 1.1
$\boldsymbol{\ln(10^{10} A_s)}$	$3.042^{+0.013}_{-0.016}$	$r_{drag} h$	99.69 ± 0.85	$D_M(0.61)$	2318 ± 30
$\boldsymbol{n_s}$	0.9635 ± 0.0062	$\langle d^2 \rangle^{1/2}$	2.443 ± 0.021	$H(2.33)$	234.7 ± 2.3
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0024	z_{re}	$7.78^{+0.57}_{-0.78}$	$D_M(2.33)$	5794 ± 63
$\boldsymbol{A_{217}^{CIB}}$	46 ± 7	$10^9 A_s$	$2.095^{+0.028}_{-0.034}$	$f\sigma_8(0.15)$	0.4563 ± 0.0059
$\boldsymbol{\xi^{tSZ\times CIB}}$	> 0.393	$10^9 A_s e^{-2\tau}$	1.874 ± 0.016	$\sigma_8(0.15)$	$0.749^{+0.010}_{-0.0095}$
$\boldsymbol{A_{143}^{tSZ}}$	$5.5^{+2.1}_{-1.8}$	D_{40}	1233 ± 13	$f\sigma_8(0.38)$	0.4748 ± 0.0056
$\boldsymbol{A_{100}^{PS}}$	256 ± 28	D_{220}	5739 ± 39	$\sigma_8(0.38)$	$0.6639^{+0.0096}_{-0.0087}$
$\boldsymbol{A_{143}^{PS}}$	44 ± 8	D_{810}	2538 ± 13	$f\sigma_8(0.51)$	0.4734 ± 0.0055
$\boldsymbol{A_{143\times217}^{PS}}$	42 ± 9	D_{1420}	818.4 ± 4.8	$\sigma_8(0.51)$	$0.6214^{+0.0091}_{-0.0082}$
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	D_{2000}	231.7 ± 1.8	$f\sigma_8(0.61)$	0.4685 ± 0.0054
$\boldsymbol{A^{kSZ}}$	< 3.90	$n_{s,0.002}$	0.9635 ± 0.0062	$\sigma_8(0.61)$	$0.5912^{+0.0087}_{-0.0079}$
$\boldsymbol{A_{100}^{dust TT}}$	8.9 ± 1.8	Y_P	0.2441 ± 0.0021	$f\sigma_8(2.33)$	0.2979 ± 0.0040
$\boldsymbol{A_{143}^{dust TT}}$	10.8 ± 1.8	Y_P^{BBN}	0.2454 ± 0.0021	$\sigma_8(2.33)$	0.3073 ± 0.0045
$\boldsymbol{A_{143\times217}^{dust TT}}$	18.5 ± 3.3	10^5D/H	2.556 ± 0.040	f_{2000}^{143}	28.5 ± 2.9
$\boldsymbol{A_{217}^{dust TT}}$	93.8 ± 7.3	Age/Gyr	13.87 ± 0.15	$f_{2000}^{143\times217}$	31.4 ± 2.0
$\boldsymbol{A_{100}^{dust TE}}$	0.114 ± 0.037	z_*	1089.65 ± 0.31	f_{2000}^{217}	106.3 ± 1.9
$\boldsymbol{A_{100\times143}^{dust TE}}$	0.135 ± 0.030	r_*	145.5 ± 1.5	$\chi^2_{lensing}$	9.09 ± 0.65
$\boldsymbol{A_{100\times217}^{dust TE}}$	0.483 ± 0.085	$100\theta_*$	1.04143 ± 0.00047	χ^2_{simall}	397.1 ± 1.9
$\boldsymbol{A_{143}^{dust TE}}$	0.226 ± 0.054	$D_M(z_*)$/Gpc	13.97 ± 0.14	χ^2_{lowl}	23.7 ± 1.1
$\boldsymbol{A_{143\times217}^{dust TE}}$	0.664 ± 0.080	z_{drag}	1059.66 ± 0.61	χ^2_{plik}	2358.9 ± 5.7
$\boldsymbol{A_{217}^{dust TE}}$	2.08 ± 0.27	r_{drag}	148.2 ± 1.5	χ^2_{Aver15}	0.28 ± 0.40
$\boldsymbol{c_{100}}$	0.99969 ± 0.00061	k_D	0.1401 ± 0.0011	χ^2_{6DF}	0.057 ± 0.071
$\boldsymbol{c_{217}}$	0.99817 ± 0.00062	$100\theta_D$	0.16053 ± 0.00035	χ^2_{MGS}	1.30 ± 0.47
H_0	67.3 ± 1.0	z_{eq}	3393 ± 23	$\chi^2_{DR12BAO}$	4.8 ± 1.5
Ω_Λ	0.6891 ± 0.0069	k_{eq}	0.01029 ± 0.00010	χ^2_{prior}	11.4 ± 4.5
Ω_m	0.3109 ± 0.0069	$100\theta_{eq}$	0.8151 ± 0.0044	χ^2_{CMB}	2788.7 ± 5.9
$\Omega_m h^2$	$0.1406^{+0.0025}_{-0.0028}$	$100\theta_{s,eq}$	0.4503 ± 0.0022	χ^2_{BAO}	6.1 ± 1.2
$\Omega_\nu h^2$	< 0.000607	$H(0.15)$	72.52 ± 0.99		

$\bar{\chi}^2_{eff} = 2806.59$; $R - 1 = 0.01574$

9.52 base_nnu_mnu_plikHM_TTTEEE_lowl_lowE_lensing_BAO_post_Cooke17_Aver15_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02236 ± 0.00017	σ_8	$0.812^{+0.011}_{-0.0098}$	$D_M(0.38)$	1535 ± 20
$\boldsymbol{\Omega_c h^2}$	0.1183 ± 0.0024	S_8	0.826 ± 0.011	$H(0.51)$	89.4 ± 1.0
$\boldsymbol{100\theta_{MC}}$	1.04112 ± 0.00038	$\sigma_8\Omega_m^{0.5}$	0.4525 ± 0.0061	$D_M(0.51)$	1988 ± 25
$\boldsymbol{\tau}$	$0.0558^{+0.0054}_{-0.0078}$	$\sigma_8\Omega_m^{0.25}$	0.6060 ± 0.0073	$H(0.61)$	95.0 ± 1.0
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 0.0576	$\sigma_8/h^{0.5}$	$0.989^{+0.011}_{-0.0095}$	$D_M(0.61)$	2313 ± 29
$\boldsymbol{N_{eff}}$	2.98 ± 0.14	$r_{drag}h$	99.69 ± 0.85	$H(2.33)$	235.1 ± 2.2
$\boldsymbol{\ln(10^{10}A_s)}$	$3.043^{+0.013}_{-0.016}$	$\langle d^2\rangle^{1/2}$	2.443 ± 0.021	$D_M(2.33)$	5784 ± 61
$\boldsymbol{n_s}$	0.9643 ± 0.0061	z_{re}	$7.78^{+0.58}_{-0.78}$	$f\sigma_8(0.15)$	0.4570 ± 0.0058
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0024	$10^9 A_s$	$2.097^{+0.027}_{-0.034}$	$\sigma_8(0.15)$	$0.750^{+0.010}_{-0.0092}$
$\boldsymbol{A_{217}^{CIB}}$	46 ± 7	$10^9 A_s e^{-2\tau}$	1.876 ± 0.015	$f\sigma_8(0.38)$	0.4755 ± 0.0055
$\boldsymbol{\xi^{tSZ\times CIB}}$	> 0.390	D_{40}	1232 ± 13	$\sigma_8(0.38)$	$0.6650^{+0.0096}_{-0.0084}$
$\boldsymbol{A_{143}^{tSZ}}$	$5.5^{+2.1}_{-1.9}$	D_{220}	5737 ± 39	$f\sigma_8(0.51)$	0.4742 ± 0.0054
$\boldsymbol{A_{100}^{PS}}$	257 ± 28	D_{810}	2538 ± 13	$\sigma_8(0.51)$	$0.6223^{+0.0091}_{-0.0080}$
$\boldsymbol{A_{143}^{PS}}$	45 ± 8	D_{1420}	818.0 ± 4.7	$f\sigma_8(0.61)$	0.4692 ± 0.0053
$\boldsymbol{A_{143\times217}^{PS}}$	42 ± 9	D_{2000}	231.5 ± 1.7	$\sigma_8(0.61)$	$0.5922^{+0.0087}_{-0.0077}$
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	$n_{s,0.002}$	0.9643 ± 0.0061	$f\sigma_8(2.33)$	0.2984 ± 0.0039
$\boldsymbol{A^{kSZ}}$	< 4.02	Y_P	0.2445 ± 0.0020	$\sigma_8(2.33)$	0.3078 ± 0.0044
$\boldsymbol{A_{100}^{dustTT}}$	8.9 ± 1.8	Y_P^{BBN}	0.2458 ± 0.0020	f_{2000}^{143}	28.8 ± 2.8
$\boldsymbol{A_{143}^{dustTT}}$	10.8 ± 1.8	10^5D/H	2.565 ± 0.037	$f_{2000}^{143\times217}$	31.6 ± 2.0
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.5 ± 3.3	Age/Gyr	13.85 ± 0.14	f_{2000}^{217}	106.5 ± 1.8
$\boldsymbol{A_{217}^{dustTT}}$	93.8 ± 7.4	z_*	1089.72 ± 0.29	$\chi^2_{lensing}$	9.14 ± 0.65
$\boldsymbol{A_{100}^{dustTE}}$	0.114 ± 0.037	r_*	145.2 ± 1.4	χ^2_{simall}	397.1 ± 1.9
$\boldsymbol{A_{100\times143}^{dustTE}}$	0.135 ± 0.030	$100\theta_*$	1.04135 ± 0.00045	χ^2_{lowl}	23.6 ± 1.0
$\boldsymbol{A_{100\times217}^{dustTE}}$	0.483 ± 0.085	$D_M(z_*)$/Gpc	13.95 ± 0.13	χ^2_{plik}	2358.9 ± 5.7
$\boldsymbol{A_{143}^{dustTE}}$	0.226 ± 0.054	z_{drag}	1059.72 ± 0.60	χ^2_{Aver15}	0.30 ± 0.41
$\boldsymbol{A_{143\times217}^{dustTE}}$	0.664 ± 0.080	r_{drag}	147.9 ± 1.5	$\chi^2_{Cooke17}$	0.47 ± 0.49
$\boldsymbol{A_{217}^{dustTE}}$	2.08 ± 0.27	k_D	0.1403 ± 0.0011	χ^2_{6DF}	0.057 ± 0.072
$\boldsymbol{c_{100}}$	0.99969 ± 0.00060	$100\theta_D$	0.16061 ± 0.00033	χ^2_{MGS}	1.30 ± 0.47
$\boldsymbol{c_{217}}$	0.99818 ± 0.00062	z_{eq}	3392 ± 23	$\chi^2_{DR12BAO}$	4.8 ± 1.5
H_0	67.40 ± 0.98	k_{eq}	0.010305 ± 0.000097	χ^2_{prior}	11.4 ± 4.5
Ω_Λ	0.6892 ± 0.0069	$100\theta_{eq}$	0.8152 ± 0.0044	χ^2_{CMB}	2788.7 ± 5.9
Ω_m	0.3108 ± 0.0069	$100\theta_{s,eq}$	0.4504 ± 0.0022	χ^2_{BAO}	6.2 ± 1.2
$\Omega_m h^2$	0.1412 ± 0.0026	$H(0.15)$	72.65 ± 0.97	χ^2_{Abund}	0.77 ± 0.58
$\Omega_\nu h^2$	< 0.000619	$D_M(0.15)$	643.4 ± 9.0		
$\Omega_m h^3$	0.0952 ± 0.0028	$H(0.38)$	82.72 ± 0.98		

$\bar{\chi}^2_{eff} = 2807.07$; $R - 1 = 0.01599$

9.53 base_nnu_mnu_CamSpecHM_TTTEEE_lowl_lowE_lensing_BAO

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022225	0.02229 ± 0.00019	S_8	0.8239	0.822 ± 0.011	$H(0.38)$	82.17	82.7 ± 1.4
$\boldsymbol{\Omega_c h^2}$	0.11637	0.1180 ± 0.0033	$\sigma_8 \Omega_m^{0.5}$	0.4513	0.4505 ± 0.0063	$D_M(0.38)$	1543.7	1536 ± 27
$\boldsymbol{100\theta_{MC}}$	1.041290	1.04108 ± 0.00048	$\sigma_8 \Omega_m^{0.25}$	0.6055	0.6035 ± 0.0079	$H(0.51)$	88.78	89.3 ± 1.4
$\boldsymbol{\tau}$	0.0531	0.0547 ± 0.0073	$\sigma_8/h^{0.5}$	0.9923	$0.985^{+0.012}_{-0.0094}$	$D_M(0.51)$	2000.2	1990 ± 35
$\boldsymbol{\Sigma m_\nu}$ [eV]	0.0022	< 0.0602	$r_{drag} h$	99.99	99.74 ± 0.95	$H(0.61)$	94.31	94.9 ± 1.4
$\boldsymbol{N_{eff}}$	2.865	2.98 ± 0.21	$\langle d^2 \rangle^{1/2}$	2.4425	2.435 ± 0.023	$D_M(0.61)$	2327.9	2316 ± 39
$\boldsymbol{\ln(10^{10} A_s)}$	3.0320	3.039 ± 0.017	z_{re}	7.50	7.68 ± 0.74	$H(2.33)$	233.11	234.9 ± 3.0
$\boldsymbol{n_s}$	0.9616	0.9645 ± 0.0078	$10^9 A_s$	2.0739	2.089 ± 0.036	$D_M(2.33)$	5826	5790 ± 85
$\boldsymbol{y_{cal}}$	1.00067	1.0007 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.8648	1.872 ± 0.018	$f\sigma_8(0.15)$	0.4553	0.4550 ± 0.0060
$\boldsymbol{A_{100}^{PS}}$	230.8	238 ± 25	D_{40}	1230.5	1228 ± 14	$\sigma_8(0.15)$	0.7509	$0.747^{+0.012}_{-0.011}$
$\boldsymbol{A_{143}^{PS}}$	45.3	38 ± 9	D_{220}	5723.3	5725 ± 38	$f\sigma_8(0.38)$	0.4742	0.4736 ± 0.0060
$\boldsymbol{A_{217}^{PS}}$	108.3	103 ± 10	D_{810}	2534.7	2535 ± 13	$\sigma_8(0.38)$	0.6657	$0.662^{+0.011}_{-0.0099}$
$\boldsymbol{A_{217}^{CIB}}$	37.2	39^{+7}_{-8}	D_{1420}	818.2	816.6 ± 5.1	$f\sigma_8(0.51)$	0.4731	0.4723 ± 0.0060
$\boldsymbol{A_{143}^{tSZ}}$	4.74	$3.9^{+1.9}_{-2.5}$	D_{2000}	231.95	230.9 ± 2.1	$\sigma_8(0.51)$	0.6230	$0.620^{+0.011}_{-0.0094}$
$\boldsymbol{r_{143\times217}^{PS}}$	0.782	0.66 ± 0.13	$n_{s,0.002}$	0.9616	0.9645 ± 0.0078	$f\sigma_8(0.61)$	0.4683	0.4674 ± 0.0061
$\boldsymbol{r_{143\times217}^{CIB}}$	0.584	$0.55^{+0.40}_{-0.18}$	Y_P	0.24288	0.2444 ± 0.0028	$\sigma_8(0.61)$	0.5928	$0.590^{+0.010}_{-0.0091}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.98	—	Y_P^{BBN}	0.24420	0.2457 ± 0.0029	$f\sigma_8(2.33)$	0.29809	0.2974 ± 0.0048
$\boldsymbol{A^{kSZ}}$	2.61	$4.6^{+1.5}_{-4.6}$	10^5D/H	2.550	2.576 ± 0.057	$\sigma_8(2.33)$	0.3079	0.3067 ± 0.0054
$\boldsymbol{A_{100}^{dust}}$	1.006	1.01 ± 0.20	Age/Gyr	13.948	13.86 ± 0.20	f_{2000}^{143}	27.77	29 ± 3
$\boldsymbol{A_{143}^{dust}}$	0.953	0.96 ± 0.17	z_*	1089.598	1089.77 ± 0.41	f_{2000}^{217}	105.33	106.4 ± 2.3
$\boldsymbol{A_{217}^{dust}}$	0.982	0.98 ± 0.10	r_*	146.42	145.4 ± 2.0	$f_{2000}^{143\times217}$	30.74	31.5 ± 2.5
$\boldsymbol{A_{143\times217}^{dust}}$	1.054	1.02 ± 0.16	$100\theta_*$	1.04157	1.04132 ± 0.00059	$\chi^2_{lensing}$	8.59	9.30 ± 0.84
$\boldsymbol{c_{100}}$	0.99778	0.9976 ± 0.0011	$D_M(z_*)$/Gpc	14.058	13.96 ± 0.18	χ^2_{simall}	395.85	397.0 ± 1.8
$\boldsymbol{c_{217}}$	1.00079	1.0011 ± 0.0016	z_{drag}	1059.17	1059.55 ± 0.74	χ^2_{lowl}	23.61	23.4 ± 1.2
$\boldsymbol{c_{TE}}$	0.9955	0.9962 ± 0.0051	r_{drag}	149.17	148.1 ± 2.1	$\chi^2_{CamSpec}$	11498.6	11514.2 ± 5.8
$\boldsymbol{c_{EE}}$	0.9904	0.9914 ± 0.0056	k_D	0.13929	0.1400 ± 0.0015	χ^2_{6DF}	0.0102	0.061 ± 0.083
H_0	67.03	67.4 ± 1.3	$100\theta_D$	0.160439	0.16068 ± 0.00051	χ^2_{MGS}	1.41	1.34 ± 0.52
Ω_Λ	0.6915	$0.6895^{+0.0081}_{-0.0072}$	z_{eq}	3394.4	3385 ± 27	$\chi^2_{DR12BAO}$	3.87	4.8 ± 1.7
Ω_m	0.3085	$0.3105^{+0.0072}_{-0.0081}$	k_{eq}	0.010233	0.01028 ± 0.00012	χ^2_{prior}	1.93	7.8 ± 3.4
$\Omega_m h^2$	0.13862	$0.1408^{+0.0033}_{-0.0037}$	$100\theta_{eq}$	0.8144	0.8162 ± 0.0051	χ^2_{CMB}	11926.7	11943.8 ± 6.1
$\Omega_\nu h^2$	0.000024	< 0.000647	$100\theta_{s,eq}$	0.45005	0.4510 ± 0.0026	χ^2_{BAO}	5.29	6.2 ± 1.4
$\Omega_m h^3$	0.09292	0.0949 ± 0.0040	$H(0.15)$	72.22	72.6 ± 1.3			
σ_8	0.8124	$0.809^{+0.013}_{-0.011}$	$D_M(0.15)$	647.0	644 ± 12			

Best-fit $\chi^2_{eff} = 11933.91$; $\bar{\chi}^2_{eff} = 11957.86$; $\Delta\bar{\chi}^2_{eff} = 0.46$; $R - 1 = 0.01952$

χ^2_{eff}: BAO - 6DF: 0.01 MGS: 1.41 DR12BAO: 3.87 CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.59 simall_100x143_offlike5_EE_Aplanck_B: 395.85 commander_dx12_v3_2_29: 23.61 CamSpec like_10.7HM_1400_unified: 11498.63

9.54 base_nnu_mnu_CamSpecHM_TTTEEE_lowl_lowE_lensing_BAO_post_Pantheon

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02231 ± 0.00019	S_8	0.822 ± 0.011	$H(0.38)$	82.8 ± 1.3
$\boldsymbol{\Omega_c h^2}$	$0.1181^{+0.0030}_{-0.0034}$	$\sigma_8\Omega_m^{0.5}$	0.4501 ± 0.0062	$D_M(0.38)$	1532 ± 26
$\boldsymbol{100\theta_{MC}}$	1.04107 ± 0.00047	$\sigma_8\Omega_m^{0.25}$	0.6037 ± 0.0078	$H(0.51)$	89.5 ± 1.4
$\boldsymbol{\tau}$	$0.0550^{+0.0066}_{-0.0074}$	$\sigma_8/h^{0.5}$	$0.985^{+0.011}_{-0.0092}$	$D_M(0.51)$	1985 ± 33
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 0.0567	$r_{drag}h$	99.91 ± 0.89	$H(0.61)$	95.1 ± 1.4
$\boldsymbol{N_{eff}}$	2.99 ± 0.20	$\langle d^2\rangle^{1/2}$	2.433 ± 0.022	$D_M(0.61)$	2311 ± 38
$\boldsymbol{\ln(10^{10}A_s)}$	3.040 ± 0.017	z_{re}	7.71 ± 0.74	$H(2.33)$	235.0 ± 3.0
$\boldsymbol{n_s}$	0.9653 ± 0.0076	$10^9 A_s$	2.090 ± 0.036	$D_M(2.33)$	5781 ± 83
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.873 ± 0.018	$f\sigma_8(0.15)$	0.4547 ± 0.0059
$\boldsymbol{A^{PS}_{100}}$	238 ± 25	D_{40}	1227 ± 14	$\sigma_8(0.15)$	$0.748^{+0.012}_{-0.011}$
$\boldsymbol{A^{PS}_{143}}$	38 ± 9	D_{220}	5726 ± 38	$f\sigma_8(0.38)$	0.4736 ± 0.0059
$\boldsymbol{A^{PS}_{217}}$	103 ± 10	D_{810}	2535 ± 14	$\sigma_8(0.38)$	$0.664^{+0.011}_{-0.0097}$
$\boldsymbol{A^{CIB}_{217}}$	39^{+7}_{-8}	D_{1420}	816.6 ± 5.1	$f\sigma_8(0.51)$	0.4725 ± 0.0059
$\boldsymbol{A^{tSZ}_{143}}$	$3.9^{+1.9}_{-2.5}$	D_{2000}	230.9 ± 2.1	$\sigma_8(0.51)$	$0.621^{+0.010}_{-0.0092}$
$\boldsymbol{r^{PS}_{143\times217}}$	0.66 ± 0.13	$n_{s,0.002}$	0.9653 ± 0.0076	$f\sigma_8(0.61)$	0.4677 ± 0.0060
$\boldsymbol{r^{CIB}_{143\times217}}$	$0.56^{+0.42}_{-0.16}$	Y_P	0.2446 ± 0.0028	$\sigma_8(0.61)$	0.5911 ± 0.0095
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	0.2459 ± 0.0028	$f\sigma_8(2.33)$	0.2980 ± 0.0047
$\boldsymbol{A^{kSZ}}$	$4.6^{+1.6}_{-4.4}$	10^5D/H	2.578 ± 0.056	$\sigma_8(2.33)$	0.3074 ± 0.0052
$\boldsymbol{A^{dust}_{100}}$	1.01 ± 0.20	Age/Gyr	13.84 ± 0.20	f^{143}_{2000}	29 ± 3
$\boldsymbol{A^{dust}_{143}}$	0.96 ± 0.17	z_*	1089.77 ± 0.40	f^{217}_{2000}	106.4 ± 2.3
$\boldsymbol{A^{dust}_{217}}$	0.98 ± 0.10	r_*	145.3 ± 2.0	$f^{143\times217}_{2000}$	31.6 ± 2.5
$\boldsymbol{A^{dust}_{143\times217}}$	1.02 ± 0.17	$100\theta_*$	1.04129 ± 0.00059	$\chi^2_{lensing}$	9.32 ± 0.85
$\boldsymbol{c_{100}}$	0.9976 ± 0.0011	$D_M(z_*)$/Gpc	13.95 ± 0.18	χ^2_{simall}	397.0 ± 1.8
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	z_{drag}	1059.62 ± 0.73	χ^2_{lowl}	23.3 ± 1.1
$\boldsymbol{c_{TE}}$	0.9963 ± 0.0050	r_{drag}	148.0 ± 2.0	$\chi^2_{CamSpec}$	11514.3 ± 5.8
$\boldsymbol{c_{EE}}$	0.9916 ± 0.0055	k_D	0.1401 ± 0.0014	χ^2_{JLA}	1036.32 ± 0.37
H_0	67.5 ± 1.3	$100\theta_D$	0.16071 ± 0.00050	χ^2_{6DF}	0.047 ± 0.065
Ω_Λ	$0.6909^{+0.0075}_{-0.0067}$	z_{eq}	3381 ± 26	χ^2_{MGS}	1.43 ± 0.50
Ω_m	$0.3091^{+0.0067}_{-0.0075}$	k_{eq}	0.01028 ± 0.00012	$\chi^2_{DR12BAO}$	4.5 ± 1.4
$\Omega_m h^2$	$0.1410^{+0.0032}_{-0.0036}$	$100\theta_{eq}$	0.8170 ± 0.0049	χ^2_{prior}	7.8 ± 3.4
$\Omega_\nu h^2$	< 0.000609	$100\theta_{s,eq}$	0.4513 ± 0.0025	χ^2_{CMB}	11943.9 ± 6.1
$\Omega_m h^3$	$0.0952^{+0.0036}_{-0.0041}$	$H(0.15)$	72.8 ± 1.3	χ^2_{BAO}	6.0 ± 1.1
σ_8	$0.810^{+0.012}_{-0.011}$	$D_M(0.15)$	642 ± 12		

$\bar{\chi}^2_{eff} = 12994.00$; $\Delta\bar{\chi}^2_{eff} = 0.33$; $R - 1 = 0.02222$

9.55 base_nnu_mnu_CamSpecHM_TTTEEE_lowl_lowE_lensing_BAO_post_Aver15

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02228 ± 0.00018	S_8	0.822 ± 0.011	$H(0.38)$	82.5 ± 1.1
$\boldsymbol{\Omega_c h^2}$	0.1177 ± 0.0027	$\sigma_8\Omega_m^{0.5}$	0.4504 ± 0.0062	$D_M(0.38)$	1538 ± 23
$\boldsymbol{100\theta_{MC}}$	1.04112 ± 0.00042	$\sigma_8\Omega_m^{0.25}$	0.6032 ± 0.0076	$H(0.51)$	89.2 ± 1.1
$\boldsymbol{\tau}$	0.0547 ± 0.0073	$\sigma_8/h^{0.5}$	$0.985^{+0.012}_{-0.0094}$	$D_M(0.51)$	1993 ± 29
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 0.0582	$r_{drag}h$	99.71 ± 0.92	$H(0.61)$	94.8 ± 1.2
$\boldsymbol{N_{eff}}$	2.95 ± 0.17	$\langle d^2\rangle^{1/2}$	2.436 ± 0.022	$D_M(0.61)$	2319 ± 33
$\boldsymbol{\ln(10^{10}A_s)}$	3.038 ± 0.016	z_{re}	7.67 ± 0.73	$H(2.33)$	234.6 ± 2.4
$\boldsymbol{n_s}$	0.9639 ± 0.0066	$10^9 A_s$	2.087 ± 0.034	$D_M(2.33)$	5798 ± 69
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.870 ± 0.016	$f\sigma_8(0.15)$	0.4549 ± 0.0059
$\boldsymbol{A_{100}^{PS}}$	238 ± 25	D_{40}	1229 ± 13	$\sigma_8(0.15)$	$0.747^{+0.011}_{-0.0096}$
$\boldsymbol{A_{143}^{PS}}$	38 ± 8	D_{220}	5726 ± 38	$f\sigma_8(0.38)$	0.4733 ± 0.0057
$\boldsymbol{A_{217}^{PS}}$	103 ± 10	D_{810}	2534 ± 13	$\sigma_8(0.38)$	$0.662^{+0.011}_{-0.0088}$
$\boldsymbol{A_{217}^{CIB}}$	39^{+7}_{-8}	D_{1420}	816.8 ± 5.0	$f\sigma_8(0.51)$	0.4720 ± 0.0057
$\boldsymbol{A_{143}^{tSZ}}$	$3.9^{+1.9}_{-2.5}$	D_{2000}	231.1 ± 1.9	$\sigma_8(0.51)$	$0.619^{+0.010}_{-0.0084}$
$\boldsymbol{r_{143\times217}^{PS}}$	0.66 ± 0.13	$n_{s,0.002}$	0.9639 ± 0.0066	$f\sigma_8(0.61)$	0.4671 ± 0.0057
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.55^{+0.41}_{-0.18}$	Y_P	0.2441 ± 0.0023	$\sigma_8(0.61)$	$0.5895^{+0.0096}_{-0.0081}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	0.2454 ± 0.0023	$f\sigma_8(2.33)$	$0.2971^{+0.0046}_{-0.0041}$
$\boldsymbol{A^{kSZ}}$	< 5.92	10^5D/H	2.571 ± 0.049	$\sigma_8(2.33)$	$0.3064^{+0.0051}_{-0.0045}$
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.20	Age/Gyr	13.88 ± 0.16	f_{2000}^{143}	28.8 ± 3.2
$\boldsymbol{A_{143}^{dust}}$	0.96 ± 0.17	z_*	1089.73 ± 0.35	f_{2000}^{217}	106.2 ± 2.1
$\boldsymbol{A_{217}^{dust}}$	0.98 ± 0.10	r_*	145.6 ± 1.6	$f_{2000}^{143\times217}$	31.4 ± 2.3
$\boldsymbol{A_{143\times217}^{dust}}$	1.02 ± 0.16	$100\theta_*$	1.04136 ± 0.00051	$\chi^2_{lensing}$	9.26 ± 0.81
$\boldsymbol{c_{100}}$	0.9976 ± 0.0011	$D_M(z_*)$/Gpc	13.98 ± 0.15	χ^2_{simall}	397.0 ± 1.8
$\boldsymbol{c_{217}}$	1.0010 ± 0.0016	z_{drag}	1059.48 ± 0.63	χ^2_{lowl}	23.4 ± 1.1
$\boldsymbol{c_{TE}}$	0.9961 ± 0.0050	r_{drag}	148.3 ± 1.7	$\chi^2_{CamSpec}$	11513.7 ± 5.7
$\boldsymbol{c_{EE}}$	0.9912 ± 0.0053	k_D	0.1399 ± 0.0012	χ^2_{Aver15}	0.34 ± 0.50
H_0	67.2 ± 1.1	$100\theta_D$	0.16064 ± 0.00042	χ^2_{6DF}	0.060 ± 0.080
Ω_Λ	$0.6892^{+0.0078}_{-0.0068}$	z_{eq}	3387 ± 25	χ^2_{MGS}	1.32 ± 0.50
Ω_m	$0.3108^{+0.0068}_{-0.0078}$	k_{eq}	0.01027 ± 0.00010	$\chi^2_{DR12BAO}$	4.8 ± 1.7
$\Omega_m h^2$	0.1405 ± 0.0029	$100\theta_{eq}$	0.8159 ± 0.0048	χ^2_{prior}	7.8 ± 3.4
$\Omega_\nu h^2$	< 0.000625	$100\theta_{s,eq}$	0.4508 ± 0.0024	χ^2_{CMB}	11943.4 ± 5.9
$\Omega_m h^3$	0.0945 ± 0.0032	$H(0.15)$	72.5 ± 1.1	χ^2_{BAO}	6.2 ± 1.4
σ_8	$0.808^{+0.012}_{-0.010}$	$D_M(0.15)$	645 ± 10		

$\bar{\chi}^2_{eff} = 11957.77$; $R - 1 = 0.02068$

9.56 base_nnu_mnu_CamSpecHM_TTTEEE_lowl_lowE_lensing_BAO_post_Cooke17_Aver15

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02228 ± 0.00017	$\sigma_8\Omega_m^{0.5}$	0.4508 ± 0.0062	$H(0.51)$	89.4 ± 1.1
$\boldsymbol{\Omega_c h^2}$	0.1181 ± 0.0025	$\sigma_8\Omega_m^{0.25}$	0.6039 ± 0.0075	$D_M(0.51)$	1989 ± 27
$\boldsymbol{100\theta_{MC}}$	1.04105 ± 0.00040	$\sigma_8/h^{0.5}$	$0.986^{+0.012}_{-0.0094}$	$H(0.61)$	94.9 ± 1.1
$\boldsymbol{\tau}$	0.0545 ± 0.0073	$r_{drag}h$	99.73 ± 0.92	$D_M(0.61)$	2315 ± 31
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 0.0590	$\langle d^2\rangle^{1/2}$	2.435 ± 0.022	$H(2.33)$	235.0 ± 2.3
$\boldsymbol{N_{eff}}$	2.98 ± 0.15	z_{re}	7.67 ± 0.74	$D_M(2.33)$	5787 ± 64
$\boldsymbol{\ln(10^{10}A_s)}$	3.039 ± 0.016	$10^9 A_s$	2.089 ± 0.034	$f\sigma_8(0.15)$	0.4554 ± 0.0058
$\boldsymbol{n_s}$	0.9646 ± 0.0064	$10^9 A_s e^{-2\tau}$	1.873 ± 0.015	$\sigma_8(0.15)$	$0.748^{+0.011}_{-0.0093}$
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0025	D_{40}	1228 ± 13	$f\sigma_8(0.38)$	0.4739 ± 0.0056
$\boldsymbol{A_{100}^{PS}}$	238 ± 25	D_{220}	5724 ± 38	$\sigma_8(0.38)$	$0.663^{+0.010}_{-0.0085}$
$\boldsymbol{A_{143}^{PS}}$	39 ± 8	D_{810}	2535 ± 13	$f\sigma_8(0.51)$	0.4726 ± 0.0056
$\boldsymbol{A_{217}^{PS}}$	103 ± 10	D_{1420}	816.5 ± 4.9	$\sigma_8(0.51)$	$0.6203^{+0.0099}_{-0.0081}$
$\boldsymbol{A_{217}^{CIB}}$	39^{+7}_{-8}	D_{2000}	230.8 ± 1.8	$f\sigma_8(0.61)$	0.4677 ± 0.0056
$\boldsymbol{A_{143}^{tSZ}}$	$3.9^{+1.9}_{-2.5}$	$n_{s,0.002}$	0.9646 ± 0.0064	$\sigma_8(0.61)$	$0.5903^{+0.0096}_{-0.0078}$
$\boldsymbol{r_{143\times217}^{PS}}$	0.66 ± 0.13	Y_P	0.2445 ± 0.0021	$f\sigma_8(2.33)$	$0.2975^{+0.0045}_{-0.0040}$
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.55^{+0.41}_{-0.17}$	Y_P^{BBN}	0.2458 ± 0.0021	$\sigma_8(2.33)$	$0.3068^{+0.0051}_{-0.0043}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	10^5D/H	2.580 ± 0.043	f_{2000}^{143}	29.2 ± 3.1
$\boldsymbol{A^{kSZ}}$	$4.6^{+1.6}_{-4.4}$	Age/Gyr	13.86 ± 0.15	f_{2000}^{217}	106.5 ± 2.1
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.20	z_*	1089.80 ± 0.32	$f_{2000}^{143\times217}$	31.7 ± 2.2
$\boldsymbol{A_{143}^{dust}}$	0.96 ± 0.17	r_*	145.3 ± 1.5	$\chi^2_{lensing}$	9.29 ± 0.79
$\boldsymbol{A_{217}^{dust}}$	0.98 ± 0.10	$100\theta_*$	1.04129 ± 0.00047	χ^2_{simall}	397.0 ± 1.8
$\boldsymbol{A_{143\times217}^{dust}}$	1.02 ± 0.17	$D_M(z_*)$/Gpc	13.96 ± 0.14	χ^2_{lowl}	23.3 ± 1.0
$\boldsymbol{c_{100}}$	0.9976 ± 0.0011	z_{drag}	1059.54 ± 0.61	$\chi^2_{CamSpec}$	11513.7 ± 5.6
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	r_{drag}	148.0 ± 1.5	χ^2_{Aver15}	0.33 ± 0.47
$\boldsymbol{c_{TE}}$	0.9963 ± 0.0050	k_D	0.1401 ± 0.0011	$\chi^2_{Cooke17}$	0.37 ± 0.47
$\boldsymbol{c_{EE}}$	0.9917 ± 0.0052	$100\theta_D$	0.16072 ± 0.00038	χ^2_{6DF}	0.059 ± 0.080
H_0	67.4 ± 1.1	z_{eq}	3385 ± 25	χ^2_{MGS}	1.33 ± 0.50
Ω_Λ	$0.6894^{+0.0079}_{-0.0068}$	k_{eq}	0.010286 ± 0.000096	$\chi^2_{DR12BAO}$	4.8 ± 1.7
Ω_m	$0.3106^{+0.0068}_{-0.0079}$	$100\theta_{eq}$	0.8162 ± 0.0047	χ^2_{prior}	7.8 ± 3.4
$\Omega_m h^2$	0.1409 ± 0.0027	$100\theta_{s,eq}$	0.4510 ± 0.0024	χ^2_{CMB}	11943.3 ± 5.9
$\Omega_\nu h^2$	< 0.000634	$H(0.15)$	72.6 ± 1.0	χ^2_{BAO}	6.2 ± 1.4
$\Omega_m h^3$	0.0950 ± 0.0030	$D_M(0.15)$	643.7 ± 9.6	χ^2_{Abund}	0.70 ± 0.68
σ_8	$0.809^{+0.012}_{-0.0098}$	$H(0.38)$	82.7 ± 1.0		
S_8	0.823 ± 0.011	$D_M(0.38)$	1535 ± 22		

$\bar{\chi}^2_{eff} = 11958.03$; $R - 1 = 0.02297$

9.57 base_nnu_mnu_CamSpecHM_TTTEEE_lowl_lowE_lensing_BAO_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02230 ± 0.00019	S_8	0.823 ± 0.011	$H(0.38)$	82.7 ± 1.3
$\boldsymbol{\Omega_c h^2}$	0.1180 ± 0.0033	$\sigma_8\Omega_m^{0.5}$	0.4506 ± 0.0063	$D_M(0.38)$	1536 ± 27
$\boldsymbol{100\theta_{MC}}$	1.04108 ± 0.00048	$\sigma_8\Omega_m^{0.25}$	0.6038 ± 0.0079	$H(0.51)$	89.3 ± 1.4
$\boldsymbol{\tau}$	$0.0556^{+0.0052}_{-0.0076}$	$\sigma_8/h^{0.5}$	$0.986^{+0.012}_{-0.0093}$	$D_M(0.51)$	1989 ± 34
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 0.0614	$r_{drag}h$	99.76 ± 0.95	$H(0.61)$	94.9 ± 1.4
$\boldsymbol{N_{eff}}$	2.98 ± 0.21	$\langle d^2\rangle^{1/2}$	2.436 ± 0.022	$D_M(0.61)$	2315 ± 39
$\boldsymbol{\ln(10^{10}A_s)}$	$3.041^{+0.014}_{-0.017}$	z_{re}	$7.77^{+0.55}_{-0.76}$	$H(2.33)$	234.9 ± 3.0
$\boldsymbol{n_s}$	0.9647 ± 0.0077	$10^9 A_s$	$2.092^{+0.029}_{-0.037}$	$D_M(2.33)$	5789 ± 85
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.872 ± 0.018	$f\sigma_8(0.15)$	0.4552 ± 0.0060
$\boldsymbol{A^{PS}_{100}}$	238 ± 25	D_{40}	1228 ± 14	$\sigma_8(0.15)$	$0.748^{+0.012}_{-0.011}$
$\boldsymbol{A^{PS}_{143}}$	38 ± 9	D_{220}	5725 ± 38	$f\sigma_8(0.38)$	0.4738 ± 0.0059
$\boldsymbol{A^{PS}_{217}}$	103 ± 10	D_{810}	2534 ± 13	$\sigma_8(0.38)$	$0.663^{+0.011}_{-0.0097}$
$\boldsymbol{A^{CIB}_{217}}$	39^{+7}_{-8}	D_{1420}	816.6 ± 5.1	$f\sigma_8(0.51)$	0.4725 ± 0.0060
$\boldsymbol{A^{tSZ}_{143}}$	$3.9^{+1.9}_{-2.5}$	D_{2000}	230.9 ± 2.1	$\sigma_8(0.51)$	$0.620^{+0.011}_{-0.0093}$
$\boldsymbol{r^{PS}_{143\times217}}$	0.66 ± 0.13	$n_{s,0.002}$	0.9647 ± 0.0077	$f\sigma_8(0.61)$	0.4676 ± 0.0060
$\boldsymbol{r^{CIB}_{143\times217}}$	$0.55^{+0.40}_{-0.18}$	Y_P	0.2444 ± 0.0028	$\sigma_8(0.61)$	$0.590^{+0.010}_{-0.0089}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	0.2457 ± 0.0029	$f\sigma_8(2.33)$	0.2976 ± 0.0048
$\boldsymbol{A^{kSZ}}$	< 6.02	10^5D/H	2.575 ± 0.057	$\sigma_8(2.33)$	$0.3069^{+0.0055}_{-0.0050}$
$\boldsymbol{A^{dust}_{100}}$	1.01 ± 0.20	Age/Gyr	13.86 ± 0.20	f^{143}_{2000}	29 ± 3
$\boldsymbol{A^{dust}_{143}}$	0.96 ± 0.17	z_*	1089.76 ± 0.41	f^{217}_{2000}	106.4 ± 2.3
$\boldsymbol{A^{dust}_{217}}$	0.98 ± 0.10	r_*	145.4 ± 2.0	$f^{143\times217}_{2000}$	31.5 ± 2.5
$\boldsymbol{A^{dust}_{143\times217}}$	1.02 ± 0.16	$100\theta_*$	1.04132 ± 0.00060	$\chi^2_{lensing}$	9.26 ± 0.80
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	$D_M(z_*)$/Gpc	13.96 ± 0.18	χ^2_{simall}	397.0 ± 1.8
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	z_{drag}	1059.56 ± 0.74	χ^2_{lowl}	23.4 ± 1.2
$\boldsymbol{c_{TE}}$	0.9962 ± 0.0051	r_{drag}	148.1 ± 2.1	$\chi^2_{CamSpec}$	11514.1 ± 5.8
$\boldsymbol{c_{EE}}$	0.9914 ± 0.0056	k_D	0.1401 ± 0.0015	χ^2_{6DF}	0.059 ± 0.082
H_0	67.4 ± 1.3	$100\theta_D$	0.16068 ± 0.00051	χ^2_{MGS}	1.35 ± 0.52
Ω_Λ	$0.6896^{+0.0080}_{-0.0072}$	z_{eq}	3384 ± 27	$\chi^2_{DR12BAO}$	4.8 ± 1.7
Ω_m	0.3104 ± 0.0077	k_{eq}	0.01028 ± 0.00012	χ^2_{prior}	7.8 ± 3.4
$\Omega_m h^2$	0.1409 ± 0.0035	$100\theta_{eq}$	0.8164 ± 0.0050	χ^2_{CMB}	11943.7 ± 6.0
$\Omega_\nu h^2$	< 0.000660	$100\theta_{s,eq}$	0.4511 ± 0.0026	χ^2_{BAO}	6.2 ± 1.4
$\Omega_m h^3$	0.0949 ± 0.0040	$H(0.15)$	72.6 ± 1.3		
σ_8	$0.809^{+0.013}_{-0.011}$	$D_M(0.15)$	644 ± 12		

$\bar{\chi}^2_{eff} = 11957.73$; $\Delta\bar{\chi}^2_{eff} = 0.47$; $R - 1 = 0.02034$

9.58 base_nnu_mnu_CamSpecHM_TTTEEE_lowl_lowE_lensing_BAO_post_Pantheon_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02232 ± 0.00018	S_8	0.822 ± 0.011	$H(0.38)$	82.8 ± 1.3
$\boldsymbol{\Omega_c h^2}$	$0.1181^{+0.0030}_{-0.0034}$	$\sigma_8\Omega_m^{0.5}$	0.4502 ± 0.0062	$D_M(0.38)$	1532 ± 26
$\boldsymbol{100\theta_{MC}}$	1.04106 ± 0.00048	$\sigma_8\Omega_m^{0.25}$	0.6039 ± 0.0078	$H(0.51)$	89.5 ± 1.4
$\boldsymbol{\tau}$	$0.0557^{+0.0052}_{-0.0076}$	$\sigma_8/h^{0.5}$	$0.986^{+0.011}_{-0.0090}$	$D_M(0.51)$	1985 ± 33
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 0.0577	$r_{drag}h$	99.93 ± 0.89	$H(0.61)$	95.1 ± 1.4
$\boldsymbol{N_{eff}}$	2.99 ± 0.20	$\langle d^2\rangle^{1/2}$	2.434 ± 0.022	$D_M(0.61)$	2310 ± 38
$\boldsymbol{\ln(10^{10}A_s)}$	$3.041^{+0.014}_{-0.017}$	z_{re}	$7.79^{+0.56}_{-0.76}$	$H(2.33)$	235.0 ± 3.0
$\boldsymbol{n_s}$	0.9655 ± 0.0076	$10^9 A_s$	$2.094^{+0.029}_{-0.036}$	$D_M(2.33)$	5780 ± 83
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.873 ± 0.018	$f\sigma_8(0.15)$	0.4549 ± 0.0059
$\boldsymbol{A^{PS}_{100}}$	238 ± 25	D_{40}	1227 ± 14	$\sigma_8(0.15)$	$0.749^{+0.012}_{-0.010}$
$\boldsymbol{A^{PS}_{143}}$	38 ± 9	D_{220}	5726 ± 38	$f\sigma_8(0.38)$	0.4738 ± 0.0059
$\boldsymbol{A^{PS}_{217}}$	103 ± 10	D_{810}	2535 ± 14	$\sigma_8(0.38)$	$0.664^{+0.011}_{-0.0095}$
$\boldsymbol{A^{CIB}_{217}}$	39^{+7}_{-8}	D_{1420}	816.6 ± 5.1	$f\sigma_8(0.51)$	0.4727 ± 0.0059
$\boldsymbol{A^{tSZ}_{143}}$	$3.9^{+1.9}_{-2.5}$	D_{2000}	230.9 ± 2.1	$\sigma_8(0.51)$	$0.621^{+0.010}_{-0.0091}$
$\boldsymbol{r^{PS}_{143\times217}}$	0.66 ± 0.13	$n_{s,0.002}$	0.9655 ± 0.0076	$f\sigma_8(0.61)$	0.4679 ± 0.0059
$\boldsymbol{r^{CIB}_{143\times217}}$	$0.55^{+0.42}_{-0.16}$	Y_P	0.2446 ± 0.0028	$\sigma_8(0.61)$	$0.5914^{+0.0097}_{-0.0087}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	0.2460 ± 0.0028	$f\sigma_8(2.33)$	0.2982 ± 0.0046
$\boldsymbol{A^{kSZ}}$	< 6.01	10^5D/H	2.578 ± 0.057	$\sigma_8(2.33)$	0.3075 ± 0.0051
$\boldsymbol{A^{dust}_{100}}$	1.01 ± 0.20	Age/Gyr	13.84 ± 0.20	f^{143}_{2000}	29 ± 3
$\boldsymbol{A^{dust}_{143}}$	0.96 ± 0.17	z_*	1089.77 ± 0.40	f^{217}_{2000}	106.4 ± 2.3
$\boldsymbol{A^{dust}_{217}}$	0.98 ± 0.10	r_*	145.3 ± 2.0	$f^{143\times217}_{2000}$	31.6 ± 2.5
$\boldsymbol{A^{dust}_{143\times217}}$	1.02 ± 0.17	$100\theta_*$	1.04128 ± 0.00059	$\chi^2_{lensing}$	9.28 ± 0.80
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	$D_M(z_*)$/Gpc	13.95 ± 0.18	χ^2_{simall}	397.0 ± 1.9
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	z_{drag}	1059.63 ± 0.73	χ^2_{lowl}	23.3 ± 1.1
$\boldsymbol{c_{TE}}$	0.9962 ± 0.0050	r_{drag}	148.0 ± 2.0	$\chi^2_{CamSpec}$	11514.2 ± 5.8
$\boldsymbol{c_{EE}}$	0.9916 ± 0.0056	k_D	0.1401 ± 0.0014	χ^2_{JLA}	1036.32 ± 0.36
H_0	67.6 ± 1.3	$100\theta_D$	0.16071 ± 0.00050	χ^2_{6DF}	0.046 ± 0.064
Ω_Λ	$0.6910^{+0.0075}_{-0.0068}$	z_{eq}	3381 ± 26	χ^2_{MGS}	1.44 ± 0.50
Ω_m	$0.3090^{+0.0068}_{-0.0075}$	k_{eq}	0.01028 ± 0.00012	$\chi^2_{DR12BAO}$	4.5 ± 1.4
$\Omega_m h^2$	$0.1410^{+0.0032}_{-0.0036}$	$100\theta_{eq}$	0.8171 ± 0.0049	χ^2_{prior}	7.9 ± 3.4
$\Omega_\nu h^2$	< 0.000620	$100\theta_{s,eq}$	0.4514 ± 0.0025	χ^2_{CMB}	11943.8 ± 6.0
$\Omega_m h^3$	$0.0953^{+0.0036}_{-0.0041}$	$H(0.15)$	72.8 ± 1.3	χ^2_{BAO}	6.0 ± 1.1
σ_8	$0.810^{+0.012}_{-0.011}$	$D_M(0.15)$	642 ± 12		

$\bar{\chi}^2_{eff} = 12993.88$; $\Delta\bar{\chi}^2_{eff} = 0.35$; $R - 1 = 0.02273$

9.59 base_nnu_mnu_CamSpecHM_TTTEEE_lowl_lowE_lensing_BAO_post_Aver15_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02229 ± 0.00017	S_8	0.822 ± 0.011	$H(0.38)$	82.5 ± 1.1
$\boldsymbol{\Omega_c h^2}$	0.1177 ± 0.0027	$\sigma_8\Omega_m^{0.5}$	0.4505 ± 0.0062	$D_M(0.38)$	1538 ± 23
$\boldsymbol{100\theta_{MC}}$	1.04111 ± 0.00043	$\sigma_8\Omega_m^{0.25}$	0.6034 ± 0.0076	$H(0.51)$	89.2 ± 1.1
$\boldsymbol{\tau}$	$0.0555^{+0.0052}_{-0.0075}$	$\sigma_8/h^{0.5}$	$0.986^{+0.012}_{-0.0092}$	$D_M(0.51)$	1992 ± 29
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 0.0593	$r_{drag}h$	99.73 ± 0.92	$H(0.61)$	94.8 ± 1.2
$\boldsymbol{N_{eff}}$	2.96 ± 0.17	$\langle d^2\rangle^{1/2}$	2.437 ± 0.021	$D_M(0.61)$	2319 ± 33
$\boldsymbol{\ln(10^{10}A_s)}$	$3.040^{+0.014}_{-0.016}$	z_{re}	$7.76^{+0.55}_{-0.75}$	$H(2.33)$	234.6 ± 2.4
$\boldsymbol{n_s}$	0.9640 ± 0.0066	$10^9 A_s$	$2.090^{+0.028}_{-0.034}$	$D_M(2.33)$	5797 ± 69
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.870 ± 0.016	$f\sigma_8(0.15)$	0.4550 ± 0.0059
$\boldsymbol{A^{PS}_{100}}$	238 ± 25	D_{40}	1229 ± 13	$\sigma_8(0.15)$	$0.747^{+0.011}_{-0.0094}$
$\boldsymbol{A^{PS}_{143}}$	38 ± 8	D_{220}	5726 ± 38	$f\sigma_8(0.38)$	0.4735 ± 0.0057
$\boldsymbol{A^{PS}_{217}}$	103 ± 10	D_{810}	2534 ± 13	$\sigma_8(0.38)$	$0.662^{+0.011}_{-0.0086}$
$\boldsymbol{A^{CIB}_{217}}$	39^{+7}_{-8}	D_{1420}	816.8 ± 5.0	$f\sigma_8(0.51)$	0.4722 ± 0.0056
$\boldsymbol{A^{tSZ}_{143}}$	$3.9^{+1.9}_{-2.5}$	D_{2000}	231.1 ± 1.9	$\sigma_8(0.51)$	$0.620^{+0.010}_{-0.0082}$
$\boldsymbol{r^{PS}_{143\times217}}$	0.66 ± 0.13	$n_{s,0.002}$	0.9640 ± 0.0066	$f\sigma_8(0.61)$	0.4673 ± 0.0056
$\boldsymbol{r^{CIB}_{143\times217}}$	$0.55^{+0.41}_{-0.18}$	Y_P	0.2441 ± 0.0023	$\sigma_8(0.61)$	$0.5898^{+0.0096}_{-0.0079}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	0.2454 ± 0.0023	$f\sigma_8(2.33)$	$0.2973^{+0.0045}_{-0.0040}$
$\boldsymbol{A^{kSZ}}$	< 5.91	10^5D/H	2.570 ± 0.049	$\sigma_8(2.33)$	$0.3066^{+0.0051}_{-0.0044}$
$\boldsymbol{A^{dust}_{100}}$	1.01 ± 0.20	Age/Gyr	13.88 ± 0.16	f^{143}_{2000}	28.8 ± 3.2
$\boldsymbol{A^{dust}_{143}}$	0.96 ± 0.17	z_*	1089.73 ± 0.35	f^{217}_{2000}	106.2 ± 2.1
$\boldsymbol{A^{dust}_{217}}$	0.98 ± 0.10	r_*	145.6 ± 1.6	$f^{143\times217}_{2000}$	31.4 ± 2.3
$\boldsymbol{A^{dust}_{143\times217}}$	1.02 ± 0.17	$100\theta_*$	1.04136 ± 0.00051	$\chi^2_{lensing}$	9.22 ± 0.77
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	$D_M(z_*)$/Gpc	13.98 ± 0.15	χ^2_{simall}	397.0 ± 1.8
$\boldsymbol{c_{217}}$	1.0010 ± 0.0016	z_{drag}	1059.49 ± 0.62	χ^2_{lowl}	23.4 ± 1.1
$\boldsymbol{c_{TE}}$	0.9960 ± 0.0050	r_{drag}	148.3 ± 1.7	$\chi^2_{CamSpec}$	11513.7 ± 5.6
$\boldsymbol{c_{EE}}$	0.9911 ± 0.0054	k_D	0.1399 ± 0.0012	χ^2_{Aver15}	0.35 ± 0.50
H_0	67.3 ± 1.1	$100\theta_D$	0.16064 ± 0.00042	χ^2_{6DF}	0.059 ± 0.079
Ω_Λ	$0.6894^{+0.0078}_{-0.0069}$	z_{eq}	3386 ± 25	χ^2_{MGS}	1.33 ± 0.50
Ω_m	$0.3106^{+0.0069}_{-0.0078}$	k_{eq}	0.01027 ± 0.00010	$\chi^2_{DR12BAO}$	4.8 ± 1.7
$\Omega_m h^2$	0.1405 ± 0.0029	$100\theta_{eq}$	0.8161 ± 0.0047	χ^2_{prior}	7.8 ± 3.4
$\Omega_\nu h^2$	< 0.000638	$100\theta_{s,eq}$	0.4509 ± 0.0024	χ^2_{CMB}	11943.3 ± 5.9
$\Omega_m h^3$	0.0945 ± 0.0032	$H(0.15)$	72.5 ± 1.1	χ^2_{BAO}	6.2 ± 1.4
σ_8	$0.808^{+0.012}_{-0.0099}$	$D_M(0.15)$	645 ± 10		

$\bar{\chi}^2_{eff} = 11957.63$; $R - 1 = 0.02144$

9.60 base_nnu_mnu_CamSpecHM_TTTEEE_lowl_lowE_lensing_BAO_post_Cooke17_Aver15_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02228 ± 0.00017	$\sigma_8\Omega_m^{0.5}$	0.4510 ± 0.0062	$H(0.51)$	89.4 ± 1.1
$\boldsymbol{\Omega_c h^2}$	0.1181 ± 0.0025	$\sigma_8\Omega_m^{0.25}$	0.6042 ± 0.0075	$D_M(0.51)$	1989 ± 27
$\boldsymbol{100\theta_{MC}}$	1.04105 ± 0.00040	$\sigma_8/h^{0.5}$	$0.986^{+0.012}_{-0.0092}$	$H(0.61)$	95.0 ± 1.1
$\boldsymbol{\tau}$	$0.0554^{+0.0051}_{-0.0076}$	$r_{drag}h$	99.75 ± 0.92	$D_M(0.61)$	2314 ± 31
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 0.0602	$\langle d^2\rangle^{1/2}$	2.436 ± 0.021	$H(2.33)$	235.0 ± 2.3
$\boldsymbol{N_{eff}}$	2.98 ± 0.15	z_{re}	$7.75^{+0.55}_{-0.75}$	$D_M(2.33)$	5786 ± 64
$\boldsymbol{\ln(10^{10}A_s)}$	$3.041^{+0.013}_{-0.016}$	$10^9 A_s$	$2.092^{+0.027}_{-0.034}$	$f\sigma_8(0.15)$	0.4555 ± 0.0058
$\boldsymbol{n_s}$	0.9648 ± 0.0064	$10^9 A_s e^{-2\tau}$	1.873 ± 0.015	$\sigma_8(0.15)$	$0.748^{+0.011}_{-0.0090}$
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0025	D_{40}	1228 ± 13	$f\sigma_8(0.38)$	0.4741 ± 0.0056
$\boldsymbol{A_{100}^{PS}}$	238 ± 25	D_{220}	5724 ± 38	$\sigma_8(0.38)$	$0.663^{+0.010}_{-0.0083}$
$\boldsymbol{A_{143}^{PS}}$	39 ± 8	D_{810}	2534 ± 13	$f\sigma_8(0.51)$	0.4728 ± 0.0055
$\boldsymbol{A_{217}^{PS}}$	103 ± 10	D_{1420}	816.4 ± 4.9	$\sigma_8(0.51)$	$0.6207^{+0.0099}_{-0.0079}$
$\boldsymbol{A_{217}^{CIB}}$	39^{+7}_{-8}	D_{2000}	230.8 ± 1.8	$f\sigma_8(0.61)$	0.4679 ± 0.0055
$\boldsymbol{A_{143}^{tSZ}}$	$3.9^{+1.9}_{-2.5}$	$n_{s,0.002}$	0.9648 ± 0.0064	$\sigma_8(0.61)$	$0.5906^{+0.0095}_{-0.0076}$
$\boldsymbol{r_{143\times217}^{PS}}$	0.66 ± 0.13	Y_P	0.2445 ± 0.0021	$f\sigma_8(2.33)$	$0.2977^{+0.0045}_{-0.0038}$
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.55^{+0.42}_{-0.16}$	Y_P^{BBN}	0.2458 ± 0.0021	$\sigma_8(2.33)$	$0.3070^{+0.0051}_{-0.0042}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	10^5D/H	2.580 ± 0.043	f_{2000}^{143}	29.1 ± 3.1
$\boldsymbol{A^{kSZ}}$	$4.6^{+1.6}_{-4.4}$	Age/Gyr	13.85 ± 0.15	f_{2000}^{217}	106.5 ± 2.1
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.20	z_*	1089.80 ± 0.32	$f_{2000}^{143\times217}$	31.6 ± 2.2
$\boldsymbol{A_{143}^{dust}}$	0.96 ± 0.17	r_*	145.3 ± 1.5	$\chi^2_{lensing}$	9.26 ± 0.75
$\boldsymbol{A_{217}^{dust}}$	0.98 ± 0.10	$100\theta_*$	1.04128 ± 0.00048	χ^2_{simall}	396.9 ± 1.8
$\boldsymbol{A_{143\times217}^{dust}}$	1.02 ± 0.17	$D_M(z_*)$/Gpc	13.96 ± 0.14	χ^2_{lowl}	23.3 ± 1.0
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	z_{drag}	1059.55 ± 0.61	$\chi^2_{CamSpec}$	11513.7 ± 5.6
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	r_{drag}	148.0 ± 1.5	χ^2_{Aver15}	0.33 ± 0.48
$\boldsymbol{c_{TE}}$	0.9963 ± 0.0050	k_D	0.1401 ± 0.0011	$\chi^2_{Cooke17}$	0.37 ± 0.47
$\boldsymbol{c_{EE}}$	0.9917 ± 0.0052	$100\theta_D$	0.16072 ± 0.00038	χ^2_{6DF}	0.058 ± 0.079
H_0	67.4 ± 1.0	z_{eq}	3384 ± 25	χ^2_{MGS}	1.34 ± 0.50
Ω_Λ	$0.6895^{+0.0078}_{-0.0069}$	k_{eq}	0.010284 ± 0.000096	$\chi^2_{DR12BAO}$	4.8 ± 1.6
Ω_m	$0.3105^{+0.0069}_{-0.0078}$	$100\theta_{eq}$	0.8164 ± 0.0047	χ^2_{prior}	7.8 ± 3.4
$\Omega_m h^2$	0.1410 ± 0.0027	$100\theta_{s,eq}$	0.4510 ± 0.0024	χ^2_{CMB}	11943.2 ± 5.8
$\Omega_\nu h^2$	< 0.000647	$H(0.15)$	72.6 ± 1.0	χ^2_{BAO}	6.2 ± 1.3
$\Omega_m h^3$	0.0950 ± 0.0030	$D_M(0.15)$	643.5 ± 9.6	χ^2_{Abund}	0.71 ± 0.68
σ_8	$0.809^{+0.012}_{-0.0095}$	$H(0.38)$	82.7 ± 1.0		
S_8	0.823 ± 0.011	$D_M(0.38)$	1535 ± 22		

$\bar{\chi}^2_{eff} = 11957.89$; $R - 1 = 0.02385$

9.61 base_nnu_mnu_lensing_lenspriors_BAO_Cooke17_Aver15

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02201	0.02214 ± 0.00069	D_{810}	2491	2145 ± 500	$D_{\rm M}(0.51)$	1917	1856 ± 89
$\boldsymbol{\Omega_c h^2}$	0.1382	$0.156^{+0.022}_{-0.028}$	D_{1420}	761	623^{+200}_{-200}	$H(0.61)$	100.7	$105.5^{+5.9}_{-7.4}$
$\boldsymbol{100\theta_{MC}}$	1.0878	$1.111^{+0.035}_{-0.032}$	D_{2000}	222	181^{+50}_{-60}	$D_{\rm M}(0.61)$	2225	2151 ± 110
$\boldsymbol{\Sigma m_\nu}$ [eV]	0.97	$1.62^{+0.59}_{-1.1}$	$n_{\rm s,0.002}$	0.9601	0.960 ± 0.020	$H(2.33)$	256.9	274^{+21}_{-25}
$\boldsymbol{N_{\rm eff}}$	2.933	2.99 ± 0.28	$Y_{\rm P}$	0.24372	0.2444 ± 0.0040	$D_{\rm M}(2.33)$	5439	5206 ± 330
$\boldsymbol{\ln(10^{10} A_s)}$	3.088	3.02 ± 0.11	$Y_{\rm P}^{\rm BBN}$	0.24504	0.2457 ± 0.0040	$f\sigma_8(0.15)$	0.4587	0.458 ± 0.017
$\boldsymbol{n_s}$	0.9601	0.960 ± 0.020	10^5D/H	2.615	2.611 ± 0.093	$\sigma_8(0.15)$	0.6923	0.669 ± 0.039
H_0	68.69	$70.4^{+2.4}_{-2.9}$	Age/Gyr	13.01	12.46 ± 0.80	$f\sigma_8(0.38)$	0.4665	$0.460^{+0.018}_{-0.016}$
Ω_Λ	0.6386	$0.607^{+0.049}_{-0.044}$	z_*	1092.14	$1093.8^{+2.1}_{-2.7}$	$\sigma_8(0.38)$	0.6101	0.587 ± 0.037
$\Omega_{\rm m}$	0.3614	$0.393^{+0.044}_{-0.049}$	r_*	140.3	135.8 ± 6.5	$f\sigma_8(0.51)$	0.4604	$0.451^{+0.020}_{-0.017}$
$\Omega_{\rm m}h^2$	0.1705	$0.196^{+0.028}_{-0.039}$	$100\theta_*$	1.0884	$1.111^{+0.036}_{-0.032}$	$\sigma_8(0.51)$	0.5697	0.548 ± 0.035
$\Omega_\nu h^2$	0.0104	$0.0175^{+0.0063}_{-0.012}$	$D_{\rm M}(z_*)$/Gpc	12.89	$12.25^{+0.88}_{-0.99}$	$f\sigma_8(0.61)$	0.4526	$0.442^{+0.021}_{-0.018}$
$\Omega_{\rm m}h^3$	0.1172	$0.139^{+0.022}_{-0.034}$	$z_{\rm drag}$	1060.54	1062.3 ± 2.9	$\sigma_8(0.61)$	0.5413	0.520 ± 0.034
σ_8	0.7530	0.730 ± 0.039	$r_{\rm drag}$	143.0	138.3 ± 6.8	$f\sigma_8(2.33)$	0.2789	0.267 ± 0.018
S_8	0.8265	0.832 ± 0.035	$k_{\rm D}$	0.1457	$0.1515^{+0.0071}_{-0.0089}$	$\sigma_8(2.33)$	0.2813	0.268 ± 0.020
$\sigma_8\Omega_{\rm m}^{0.5}$	0.4527	0.456 ± 0.019	$100\theta_{\rm D}$	0.16725	0.1701 ± 0.0044	$\chi^2_{\rm lensing}$	7.59	9.9 ± 2.0
$\sigma_8\Omega_{\rm m}^{0.25}$	0.5839	0.577 ± 0.022	$z_{\rm eq}$	3886	4295^{+500}_{-700}	$\chi^2_{\rm Aver15}$	0.00	1.0 ± 1.5
$\sigma_8/h^{0.5}$	0.909	0.871 ± 0.055	$k_{\rm eq}$	0.01179	$0.0131^{+0.0016}_{-0.0021}$	$\chi^2_{\rm Cooke17}$	0.001	1.0 ± 1.4
$r_{\rm drag}h$	98.23	97.2 ± 1.9	$100\theta_{\rm eq}$	0.7715	$0.742^{+0.046}_{-0.052}$	$\chi^2_{\rm 6DF}$	0.139	0.41 ± 0.39
$\langle d^2\rangle^{1/2}$	2.516	2.501 ± 0.052	$100\theta_{\rm s,eq}$	0.4288	$0.414^{+0.024}_{-0.027}$	$\chi^2_{\rm MGS}$	0.820	0.69 ± 0.61
$z_{\rm re}$	8.32	$8.67^{+0.48}_{-0.55}$	$H(0.15)$	74.88	$77.3^{+3.0}_{-3.8}$	$\chi^2_{\rm DR12BAO}$	2.12	3.7 ± 1.6
$10^9 A_{\rm s}$	2.193	$2.06^{+0.22}_{-0.25}$	$D_{\rm M}(0.15)$	627.6	612 ± 25	$\chi^2_{\rm prior}$	0.00	1.0 ± 1.4
$10^9 A_{\rm s}e^{-2\tau}$	1.964	$1.85^{+0.19}_{-0.22}$	$H(0.38)$	86.58	$90.1^{+4.3}_{-5.5}$	$\chi^2_{\rm BAO}$	3.07	4.8 ± 1.7
D_{40}	1247	1147^{+100}_{-200}	$D_{\rm M}(0.38)$	1485	1441 ± 65	$\chi^2_{\rm Abund}$	0.00	2.0 ± 2.0
D_{220}	5537	4949^{+900}_{-1000}	$H(0.51)$	94.3	$98.5^{+5.2}_{-6.5}$			

Best-fit $\chi^2_{\rm eff} = 10.67$; $\bar{\chi}^2_{\rm eff} = 17.77$; $R - 1 = 0.00998$

$\chi^2_{\rm eff}$: Abund - Yp_Aver2015: 0.00 D_Cooke2017: 0.00 BAO - 6DF: 0.14 MGS: 0.82 DR12BAO: 2.12 CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8_CMBmarged: 7.59

9.62 base_nnu_mnu_lensing_lenspriors_BAO_Cooke17_Aver15_post_Pantheon

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02217 ± 0.00067	D_{810}	2822^{+270}_{-310}	$D_{\rm M}(0.51)$	1967^{+57}_{-67}
$\boldsymbol{\Omega_c h^2}$	0.120 ± 0.012	D_{1420}	895 ± 100	$H(0.61)$	96.5 ± 3.6
$\boldsymbol{100\theta_{MC}}$	1.056 ± 0.018	D_{2000}	256^{+27}_{-31}	$D_{\rm M}(0.61)$	2288^{+68}_{-79}
$\boldsymbol{\Sigma m_\nu}$ [eV]	$0.49^{+0.17}_{-0.42}$	$n_{\rm s,0.002}$	0.962 ± 0.020	$H(2.33)$	240 ± 11
$\boldsymbol{N_{\rm eff}}$	3.00 ± 0.27	$Y_{\rm P}$	0.2446 ± 0.0039	$D_{\rm M}(2.33)$	5699^{+200}_{-220}
$\boldsymbol{\ln(10^{10} A_s)}$	3.155 ± 0.086	$Y_{\rm P}^{\rm BBN}$	0.2459 ± 0.0039	$f\sigma_8(0.15)$	0.447 ± 0.016
$\boldsymbol{n_s}$	0.962 ± 0.020	10^5D/H	2.608 ± 0.090	$\sigma_8(0.15)$	0.719 ± 0.028
H_0	68.0 ± 2.0	Age/Gyr	$13.64^{+0.47}_{-0.54}$	$f\sigma_8(0.38)$	0.464 ± 0.015
Ω_Λ	0.681 ± 0.019	z_*	1090.3 ± 1.1	$\sigma_8(0.38)$	$0.638^{+0.027}_{-0.024}$
$\Omega_{\rm m}$	0.319 ± 0.019	r_*	$144.7^{+4.0}_{-4.4}$	$f\sigma_8(0.51)$	0.462 ± 0.015
$\Omega_{\rm m} h^2$	$0.148^{+0.013}_{-0.015}$	$100\theta_*$	1.056 ± 0.018	$\sigma_8(0.51)$	0.597 ± 0.024
$\Omega_\nu h^2$	$0.0052^{+0.0019}_{-0.0045}$	$D_{\rm M}(z_*)$/Gpc	13.71 ± 0.59	$f\sigma_8(0.61)$	0.457 ± 0.015
$\Omega_{\rm m} h^3$	$0.101^{+0.011}_{-0.013}$	$z_{\rm drag}$	1059.5 ± 2.2	$\sigma_8(0.61)$	$0.568^{+0.024}_{-0.022}$
σ_8	0.778 ± 0.030	$r_{\rm drag}$	$147.5^{+4.2}_{-4.7}$	$f\sigma_8(2.33)$	$0.291^{+0.011}_{-0.0092}$
S_8	0.802 ± 0.031	$k_{\rm D}$	0.1407 ± 0.0044	$\sigma_8(2.33)$	$0.297^{+0.013}_{-0.011}$
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.439 ± 0.017	$100\theta_{\rm D}$	0.1630 ± 0.0025	$\chi^2_{\rm lensing}$	9.4 ± 2.0
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.585 ± 0.021	$z_{\rm eq}$	3431 ± 250	$\chi^2_{\rm Aver15}$	1.0 ± 1.4
$\sigma_8/h^{0.5}$	$0.944^{+0.040}_{-0.035}$	$k_{\rm eq}$	0.01044 ± 0.00081	$\chi^2_{\rm Cooke17}$	0.9 ± 1.3
$r_{\rm drag} h$	100.2 ± 1.1	$100\theta_{\rm eq}$	$0.822^{+0.028}_{-0.034}$	$\chi^2_{\rm JLA}$	1037.6 ± 1.9
$\langle d^2 \rangle^{1/2}$	2.522 ± 0.051	$100\theta_{\rm s,eq}$	$0.455^{+0.014}_{-0.018}$	$\chi^2_{\rm 6DF}$	0.051 ± 0.068
$z_{\rm re}$	7.88 ± 0.24	$H(0.15)$	73.4 ± 2.3	$\chi^2_{\rm MGS}$	1.71 ± 0.65
$10^9 A_{\rm s}$	$2.35^{+0.18}_{-0.22}$	$D_{\rm M}(0.15)$	638^{+18}_{-21}	$\chi^2_{\rm DR12BAO}$	3.8 ± 1.5
$10^9 A_{\rm s} e^{-2\tau}$	$2.11^{+0.17}_{-0.20}$	$H(0.38)$	83.8 ± 2.9	$\chi^2_{\rm prior}$	1.0 ± 1.4
D_{40}	1383^{+110}_{-130}	$D_{\rm M}(0.38)$	1519^{+43}_{-51}	$\chi^2_{\rm BAO}$	5.5 ± 1.8
D_{220}	6429^{+640}_{-820}	$H(0.51)$	90.7 ± 3.3	$\chi^2_{\rm Abund}$	1.9 ± 1.9

$\bar{\chi}^2_{\rm eff} = 1055.46$; $R - 1 = 0.06058$

9.63 base_nnu_mnu_lensing_lenspriors_BAO_Cooke17_Aver15_theta

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\mathbf{\Omega_b h^2}$	0.02190	0.02206 ± 0.00069	D_{810}	2918	2934^{+220}_{-310}	$D_{\rm M}(0.51)$	2015.4	2006 ± 50
$\mathbf{\Omega_c h^2}$	0.1113	$0.1122^{+0.0057}_{-0.0064}$	D_{1420}	935	939^{+74}_{-100}	$H(0.61)$	93.54	94.0 ± 2.2
$\mathbf{100\theta_{MC}}$	1.04096	1.04092 ± 0.00060	D_{2000}	263.6	265^{+22}_{-30}	$D_{\rm M}(0.61)$	2346	2334 ± 57
$\mathbf{\Sigma m_\nu}$ [eV]	0.265	$0.29^{+0.13}_{-0.23}$	$n_{\rm s,0.002}$	0.9623	0.962 ± 0.019	$H(2.33)$	231.0	232.1 ± 5.2
$\mathbf{N_{eff}}$	2.901	2.97 ± 0.28	$Y_{\rm P}$	0.24324	0.2441 ± 0.0040	$D_{\rm M}(2.33)$	5875	5848 ± 140
$\mathbf{ln(10^{10} A_s)}$	3.172	$3.175^{+0.077}_{-0.093}$	$Y_{\rm P}^{\rm BBN}$	0.24455	0.2455 ± 0.0040	$f\sigma_8(0.15)$	0.4449	$0.442^{+0.014}_{-0.012}$
$\mathbf{n_s}$	0.9623	0.962 ± 0.019	10^5D/H	2.624	2.618 ± 0.091	$\sigma_8(0.15)$	0.7301	$0.726^{+0.025}_{-0.022}$
H_0	66.56	66.9 ± 1.8	Age/Gyr	14.066	14.00 ± 0.32	$f\sigma_8(0.38)$	0.4643	$0.462^{+0.014}_{-0.012}$
Ω_Λ	0.6929	$0.6933^{+0.0095}_{-0.0085}$	z_*	1089.63	1089.59 ± 0.64	$\sigma_8(0.38)$	0.6483	$0.645^{+0.022}_{-0.019}$
$\Omega_{\rm m}$	0.3071	$0.3067^{+0.0085}_{-0.0095}$	r_*	147.82	147.2 ± 3.4	$f\sigma_8(0.51)$	0.4637	$0.461^{+0.014}_{-0.012}$
$\Omega_{\rm m}h^2$	0.1361	0.1374 ± 0.0062	$100\theta_*$	1.04140	1.04132 ± 0.00065	$\sigma_8(0.51)$	0.6072	$0.604^{+0.021}_{-0.018}$
$\Omega_\nu h^2$	0.00285	$0.0031^{+0.0014}_{-0.0025}$	$D_{\rm M}(z_*)$/Gpc	14.195	14.13 ± 0.32	$f\sigma_8(0.61)$	0.4594	$0.457^{+0.014}_{-0.012}$
$\Omega_{\rm m}h^3$	0.0906	$0.0921^{+0.0058}_{-0.0066}$	$z_{\rm drag}$	1058.10	1058.6 ± 2.1	$\sigma_8(0.61)$	0.5781	$0.575^{+0.020}_{-0.017}$
σ_8	0.7892	$0.785^{+0.027}_{-0.023}$	$r_{\rm drag}$	150.71	150.0 ± 3.6	$f\sigma_8(2.33)$	0.2951	0.2936 ± 0.0081
S_8	0.7985	$0.793^{+0.027}_{-0.024}$	$k_{\rm D}$	0.13735	0.1380 ± 0.0031	$\sigma_8(2.33)$	0.3025	$0.3010^{+0.0097}_{-0.0086}$
$\sigma_8\Omega_{\rm m}^{0.5}$	0.4374	$0.435^{+0.015}_{-0.013}$	$100\theta_{\rm D}$	0.16114	0.16112 ± 0.00072	$\chi^2_{\rm lensing}$	7.50	9.2 ± 1.8
$\sigma_8\Omega_{\rm m}^{0.25}$	0.5875	$0.584^{+0.020}_{-0.017}$	$z_{\rm eq}$	3246	3243^{+91}_{-80}	$\chi^2_{\rm Aver15}$	0.007	1.0 ± 1.5
$\sigma_8/h^{0.5}$	0.9673	$0.959^{+0.032}_{-0.027}$	$k_{\rm eq}$	0.009813	0.00985 ± 0.00033	$\chi^2_{\rm Cooke17}$	0.005	0.9 ± 1.4
$r_{\rm drag}h$	100.31	100.3 ± 1.2	$100\theta_{\rm eq}$	0.8412	$0.843^{+0.014}_{-0.019}$	$\chi^2_{\rm 6DF}$	0.0010	0.058 ± 0.081
$\langle d^2\rangle^{1/2}$	2.521	$2.524^{+0.049}_{-0.055}$	$100\theta_{\rm s,eq}$	0.4643	$0.4651^{+0.0075}_{-0.0098}$	$\chi^2_{\rm MGS}$	1.61	1.71 ± 0.70
$z_{\rm re}$	7.726	7.72 ± 0.11	$H(0.15)$	71.69	72.1 ± 1.8	$\chi^2_{\rm DR12BAO}$	3.45	4.4 ± 1.5
$10^9 A_{\rm s}$	2.385	$2.40^{+0.17}_{-0.24}$	$D_{\rm M}(0.15)$	651.7	648 ± 17	$\chi^2_{\rm prior}$	0.02	2.0 ± 2.0
$10^9 A_{\rm s}e^{-2\tau}$	2.137	$2.15^{+0.15}_{-0.21}$	$H(0.38)$	81.53	82.0 ± 2.0	$\chi^2_{\rm BAO}$	5.05	6.1 ± 1.4
D_{40}	1423	1432^{+100}_{-130}	$D_{\rm M}(0.38)$	1555.3	1548 ± 39	$\chi^2_{\rm Abund}$	0.01	1.9 ± 2.0
D_{220}	6690	6757^{+510}_{-740}	$H(0.51)$	88.07	88.5 ± 2.1			

Best-fit $\chi^2_{\rm eff} = 12.59$; $\bar{\chi}^2_{\rm eff} = 19.25$; $R - 1 = 0.00530$

$\chi^2_{\rm eff}$: Abund - Yp_Aver2015: 0.01 D_Cooke2017: 0.01 BAO - 6DF: 0.00 MGS: 1.61 DR12BAO: 3.44 CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8_CMBmarged: 7.50

9.64 base_nnu_mnu_lensing_lenspriors_BAO_Cooke17_Aver15_theta_post_Pantheon

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02208 ± 0.00069	D_{810}	2936^{+220}_{-310}	$D_M(0.51)$	2003 ± 49
$\boldsymbol{\Omega_c h^2}$	$0.1122^{+0.0055}_{-0.0064}$	D_{1420}	940^{+75}_{-100}	$H(0.61)$	94.1 ± 2.2
$\boldsymbol{100\theta_{MC}}$	1.04091 ± 0.00060	D_{2000}	265^{+22}_{-30}	$D_M(0.61)$	2331 ± 56
$\boldsymbol{\Sigma m_\nu}$ [eV]	$0.29^{+0.12}_{-0.23}$	$n_{s,0.002}$	0.962 ± 0.019	$H(2.33)$	232.1 ± 5.2
$\boldsymbol{N_{eff}}$	2.97 ± 0.27	Y_P	0.2442 ± 0.0039	$D_M(2.33)$	5844 ± 130
$\boldsymbol{\ln(10^{10} A_s)}$	$3.176^{+0.078}_{-0.092}$	Y_P^{BBN}	0.2455 ± 0.0039	$f\sigma_8(0.15)$	$0.442^{+0.014}_{-0.012}$
$\boldsymbol{n_s}$	0.962 ± 0.019	10^5D/H	2.617 ± 0.091	$\sigma_8(0.15)$	$0.727^{+0.025}_{-0.022}$
H_0	67.1 ± 1.7	Age/Gyr	13.99 ± 0.32	$f\sigma_8(0.38)$	$0.461^{+0.014}_{-0.012}$
Ω_Λ	0.6945 ± 0.0084	z_*	1089.57 ± 0.64	$\sigma_8(0.38)$	$0.646^{+0.022}_{-0.019}$
Ω_m	0.3055 ± 0.0084	r_*	147.1 ± 3.3	$f\sigma_8(0.51)$	$0.461^{+0.014}_{-0.012}$
$\Omega_m h^2$	0.1373 ± 0.0062	$100\theta_*$	1.04130 ± 0.00065	$\sigma_8(0.51)$	$0.605^{+0.021}_{-0.018}$
$\Omega_\nu h^2$	$0.0031^{+0.0013}_{-0.0025}$	$D_M(z_*)$/Gpc	14.13 ± 0.32	$f\sigma_8(0.61)$	$0.457^{+0.014}_{-0.012}$
$\Omega_m h^3$	$0.0922^{+0.0057}_{-0.0067}$	z_{drag}	1058.6 ± 2.1	$\sigma_8(0.61)$	$0.576^{+0.020}_{-0.017}$
σ_8	$0.786^{+0.027}_{-0.023}$	r_{drag}	150.0 ± 3.6	$f\sigma_8(2.33)$	0.2940 ± 0.0080
S_8	$0.793^{+0.027}_{-0.023}$	k_D	0.1381 ± 0.0031	$\sigma_8(2.33)$	$0.3015^{+0.0095}_{-0.0086}$
$\sigma_8 \Omega_m^{0.5}$	$0.434^{+0.015}_{-0.013}$	$100\theta_D$	0.16112 ± 0.00071	$\chi^2_{lensing}$	9.2 ± 1.7
$\sigma_8 \Omega_m^{0.25}$	$0.584^{+0.020}_{-0.017}$	z_{eq}	3240^{+91}_{-78}	χ^2_{Aver15}	0.99 ± 1.4
$\sigma_8/h^{0.5}$	$0.960^{+0.032}_{-0.027}$	k_{eq}	0.00984 ± 0.00033	$\chi^2_{Cooke17}$	0.9 ± 1.3
$r_{drag} h$	100.5 ± 1.1	$100\theta_{eq}$	$0.844^{+0.014}_{-0.019}$	χ^2_{JLA}	1036.22 ± 0.33
$\langle d^2 \rangle^{1/2}$	2.524 ± 0.052	$100\theta_{s,eq}$	$0.4654^{+0.0074}_{-0.0098}$	χ^2_{6DF}	0.049 ± 0.070
z_{re}	7.71 ± 0.11	$H(0.15)$	72.2 ± 1.8	χ^2_{MGS}	1.80 ± 0.66
$10^9 A_s$	$2.40^{+0.17}_{-0.24}$	$D_M(0.15)$	647 ± 16	$\chi^2_{DR12BAO}$	4.2 ± 1.2
$10^9 A_s e^{-2\tau}$	$2.15^{+0.15}_{-0.21}$	$H(0.38)$	82.1 ± 2.0	χ^2_{prior}	2.0 ± 2.0
D_{40}	1433^{+100}_{-120}	$D_M(0.38)$	1545 ± 38	χ^2_{BAO}	6.0 ± 1.2
D_{220}	6767^{+520}_{-730}	$H(0.51)$	88.6 ± 2.1	χ^2_{Abund}	1.9 ± 1.9

$\bar{\chi}^2_{eff} = 1055.28$; $R - 1 = 0.00450$

9.65 base_nnu_mnu_BAO_Cooke17_Aver15

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02207 ± 0.00069	Age/Gyr	13.0 ± 1.3	$H(0.38)$	$87.0^{+6.1}_{-9.1}$
$\boldsymbol{\Omega_c h^2}$	$0.132^{+0.036}_{-0.062}$	z_*	$1092.4^{+2.9}_{-4.7}$	$D_M(0.38)$	1493 ± 110
$\boldsymbol{100\theta_{MC}}$	$1.098^{+0.050}_{-0.055}$	r_*	141 ± 11	$H(0.51)$	$95.0^{+7.1}_{-11}$
$\boldsymbol{\Sigma m_\nu}$ [eV]	—	$100\theta_*$	$1.099^{+0.049}_{-0.056}$	$D_M(0.51)$	1925 ± 150
$\boldsymbol{N_{eff}}$	2.96 ± 0.28	$D_M(z_*)$/Gpc	$12.9^{+1.4}_{-1.7}$	$H(0.61)$	$101.6^{+7.9}_{-12}$
H_0	$68.4^{+3.8}_{-5.0}$	z_{drag}	$1060.9^{+3.6}_{-4.0}$	$D_M(0.61)$	2233 ± 180
Ω_Λ	$0.622^{+0.064}_{-0.050}$	r_{drag}	144 ± 11	$H(2.33)$	261^{+25}_{-41}
Ω_m	$0.378^{+0.050}_{-0.064}$	k_D	$0.147^{+0.010}_{-0.015}$	$D_M(2.33)$	5444 ± 540
$\Omega_m h^2$	$0.180^{+0.028}_{-0.061}$	$100\theta_D$	$0.1683^{+0.0054}_{-0.0065}$	χ^2_{Aver15}	0.99 ± 1.4
$\Omega_\nu h^2$	< 0.0343	z_{eq}	3733^{+900}_{-1000}	$\chi^2_{Cooke17}$	0.98 ± 1.4
$\Omega_m h^3$	$0.125^{+0.022}_{-0.052}$	k_{eq}	$0.0115^{+0.0024}_{-0.0045}$	χ^2_{6DF}	0.35 ± 0.40
$r_{drag} h$	97.7 ± 2.3	$100\theta_{eq}$	$0.87^{+0.12}_{-0.24}$	χ^2_{MGS}	0.89 ± 0.77
Y_P	0.2440 ± 0.0040	$100\theta_{s,eq}$	$0.479^{+0.066}_{-0.12}$	$\chi^2_{DR12BAO}$	3.9 ± 1.7
Y_P^{BBN}	0.2453 ± 0.0040	$H(0.15)$	$74.9^{+4.6}_{-6.4}$	χ^2_{BAO}	5.1 ± 2.0
10^5D/H	2.614 ± 0.093	$D_M(0.15)$	632 ± 43	χ^2_{Abund}	2.0 ± 2.0

$\bar{\chi}^2_{\rm eff} = 7.10$; $R-1 = 0.03405$

9.66 base_nnu_mnu_BAO_Cooke17_Aver15_Pantheon

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02207 ± 0.00068	z_*	$1088.2^{+1.3}_{-1.8}$	$H(0.51)$	$85.5^{+3.7}_{-4.8}$
$\boldsymbol{\Omega_c h^2}$	$0.080^{+0.024}_{-0.030}$	r_*	153.4 ± 6.8	$D_{\rm M}(0.51)$	2086 ± 96
$\boldsymbol{100\theta_{MC}}$	1.048 ± 0.018	$100\theta_*$	1.049 ± 0.017	$H(0.61)$	$90.8^{+4.0}_{-5.2}$
$\boldsymbol{\Sigma m_\nu}$ [eV]	—	$D_{\rm M}(z_*)$/Gpc	14.63 ± 0.81	$D_{\rm M}(0.61)$	2427 ± 110
$\boldsymbol{N_{\rm eff}}$	2.96 ± 0.28	$z_{\rm drag}$	1057.5 ± 2.5	$H(2.33)$	225^{+11}_{-15}
H_0	$64.3^{+2.5}_{-3.2}$	$r_{\rm drag}$	156.3 ± 7.0	$D_{\rm M}(2.33)$	6064 ± 310
Ω_Λ	$0.687^{+0.020}_{-0.017}$	$k_{\rm D}$	$0.1332^{+0.0052}_{-0.0066}$	$\chi^2_{\rm Aver15}$	1.0 ± 1.4
$\Omega_{\rm m}$	$0.313^{+0.017}_{-0.020}$	$100\theta_{\rm D}$	$0.1616^{+0.0022}_{-0.0025}$	$\chi^2_{\rm Cooke17}$	0.97 ± 1.4
$\Omega_{\rm m}h^2$	$0.130^{+0.013}_{-0.018}$	$z_{\rm eq}$	2477^{+600}_{-700}	$\chi^2_{\rm JLA}$	1037.1 ± 1.5
$\Omega_\nu h^2$	0.027 ± 0.016	$k_{\rm eq}$	$0.0077^{+0.0016}_{-0.0020}$	$\chi^2_{\rm 6DF}$	0.051 ± 0.072
$\Omega_{\rm m}h^3$	$0.084^{+0.010}_{-0.016}$	$100\theta_{\rm eq}$	$1.11^{+0.17}_{-0.28}$	$\chi^2_{\rm MGS}$	1.75 ± 0.66
$r_{\rm drag}h$	100.3 ± 1.1	$100\theta_{\rm s,eq}$	$0.600^{+0.089}_{-0.14}$	$\chi^2_{\rm DR12BAO}$	4.0 ± 1.4
$Y_{\rm P}$	0.2440 ± 0.0040	$H(0.15)$	$69.4^{+2.8}_{-3.5}$	$\chi^2_{\rm BAO}$	5.8 ± 1.7
$Y_{\rm P}^{\rm BBN}$	0.2453 ± 0.0040	$D_{\rm M}(0.15)$	675 ± 30	$\chi^2_{\rm Abund}$	2.0 ± 1.9
10^5D/H	2.613 ± 0.092	$H(0.38)$	$79.0^{+3.3}_{-4.3}$		
Age/Gyr	14.52 ± 0.74	$D_{\rm M}(0.38)$	1610 ± 73		

$\bar{\chi}^2_{\rm eff} = 1044.82$; $R-1 = 0.08609$

9.67 base_nnu_mnu_BAO_Cooke17_Aver15_theta

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	$0.02201^{+0.00064}_{-0.00071}$	z_*	$1087.81^{+0.89}_{-1.3}$	$H(0.51)$	$84.2^{+2.7}_{-3.6}$
$\boldsymbol{\Omega_c h^2}$	$0.076^{+0.021}_{-0.029}$	r_*	$154.9^{+6.1}_{-5.3}$	$D_{\rm M}(0.51)$	2111^{+86}_{-75}
$\boldsymbol{100\theta_{MC}}$	1.04090 ± 0.00060	$100\theta_*$	1.04175 ± 0.00068	$H(0.61)$	$89.4^{+2.8}_{-3.8}$
$\boldsymbol{\Sigma m_\nu}$ [eV]	—	$D_{\rm M}(z_*)$/Gpc	$14.87^{+0.58}_{-0.50}$	$D_{\rm M}(0.61)$	2457^{+99}_{-87}
$\boldsymbol{N_{\rm eff}}$	$2.94^{+0.26}_{-0.29}$	$z_{\rm drag}$	1057.0 ± 2.2	$H(2.33)$	$220.9^{+6.9}_{-9.1}$
H_0	$63.6^{+2.1}_{-2.8}$	$r_{\rm drag}$	$157.9^{+6.4}_{-5.5}$	$D_{\rm M}(2.33)$	6152^{+240}_{-210}
Ω_Λ	0.6925 ± 0.0090	$k_{\rm D}$	$0.1316^{+0.0037}_{-0.0052}$	$\chi^2_{\rm Aver15}$	0.99 ± 1.4
$\Omega_{\rm m}$	0.3075 ± 0.0090	$100\theta_{\rm D}$	0.16071 ± 0.00084	$\chi^2_{\rm Cooke17}$	0.99 ± 1.4
$\Omega_{\rm m}h^2$	$0.1246^{+0.0074}_{-0.011}$	$z_{\rm eq}$	2386 ± 500	$\chi^2_{\rm 6DF}$	0.056 ± 0.081
$\Omega_\nu h^2$	$0.026^{+0.021}_{-0.025}$	$k_{\rm eq}$	$0.0074^{+0.0012}_{-0.0020}$	$\chi^2_{\rm MGS}$	1.71 ± 0.69
$\Omega_{\rm m}h^3$	$0.0795^{+0.0067}_{-0.010}$	$100\theta_{\rm eq}$	$1.12^{+0.11}_{-0.30}$	$\chi^2_{\rm DR12BAO}$	4.3 ± 1.5
$r_{\rm drag}h$	100.3 ± 1.2	$100\theta_{\rm s,eq}$	$0.608^{+0.060}_{-0.15}$	$\chi^2_{\rm prior}$	1.0 ± 1.4
$Y_{\rm P}$	0.2437 ± 0.0040	$H(0.15)$	$68.5^{+2.2}_{-3.0}$	$\chi^2_{\rm BAO}$	6.0 ± 1.4
$Y_{\rm P}^{\rm BBN}$	0.2450 ± 0.0040	$D_{\rm M}(0.15)$	683^{+28}_{-25}	$\chi^2_{\rm Abund}$	2.0 ± 2.0
10^5D/H	2.617 ± 0.093	$H(0.38)$	$77.9^{+2.5}_{-3.3}$		
Age/Gyr	$14.73^{+0.58}_{-0.50}$	$D_{\rm M}(0.38)$	1629^{+66}_{-58}		

$\bar{\chi}^2_{\rm eff} = 9.03$; $R-1 = 0.00383$

9.68 base_nnu_mnu_BAO_Cooke17_Aver15_Pantheon_theta

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02207 ± 0.00069	z_*	$1087.77^{+0.87}_{-1.4}$	$H(0.51)$	$84.4^{+2.7}_{-3.6}$
$\boldsymbol{\Omega_c h^2}$	$0.076^{+0.020}_{-0.031}$	r_*	$154.7^{+6.3}_{-5.4}$	$D_{\rm M}(0.51)$	2106^{+87}_{-75}
$\boldsymbol{100\theta_{MC}}$	1.04089 ± 0.00059	$100\theta_*$	1.04173 ± 0.00068	$H(0.61)$	$89.6^{+2.9}_{-3.8}$
$\boldsymbol{\Sigma m_\nu}$ [eV]	—	$D_{\rm M}(z_*)$/Gpc	$14.85^{+0.60}_{-0.51}$	$D_{\rm M}(0.61)$	2451^{+100}_{-87}
$\boldsymbol{N_{\rm eff}}$	2.96 ± 0.28	$z_{\rm drag}$	$1057.1^{+2.1}_{-2.4}$	$H(2.33)$	$221.0^{+7.0}_{-9.3}$
H_0	$63.8^{+2.1}_{-2.8}$	$r_{\rm drag}$	$157.7^{+6.5}_{-5.6}$	$D_{\rm M}(2.33)$	6142^{+250}_{-210}
Ω_Λ	0.6940 ± 0.0083	$k_{\rm D}$	$0.1318^{+0.0037}_{-0.0053}$	$\chi^2_{\rm Aver15}$	1.0 ± 1.4
$\Omega_{\rm m}$	0.3060 ± 0.0083	$100\theta_{\rm D}$	0.16070 ± 0.00085	$\chi^2_{\rm Cooke17}$	0.99 ± 1.4
$\Omega_{\rm m}h^2$	$0.1247^{+0.0076}_{-0.011}$	$z_{\rm eq}$	2374^{+500}_{-800}	$\chi^2_{\rm JLA}$	1036.24 ± 0.34
$\Omega_\nu h^2$	< 0.0362	$k_{\rm eq}$	$0.0074^{+0.0012}_{-0.0021}$	$\chi^2_{\rm 6DF}$	0.049 ± 0.069
$\Omega_{\rm m}h^3$	$0.0798^{+0.0069}_{-0.011}$	$100\theta_{\rm eq}$	$1.13^{+0.12}_{-0.31}$	$\chi^2_{\rm MGS}$	1.81 ± 0.66
$r_{\rm drag}h$	100.5 ± 1.1	$100\theta_{\rm s,eq}$	$0.611^{+0.064}_{-0.16}$	$\chi^2_{\rm DR12BAO}$	4.1 ± 1.2
$Y_{\rm P}$	0.2440 ± 0.0040	$H(0.15)$	$68.7^{+2.3}_{-3.0}$	$\chi^2_{\rm prior}$	0.98 ± 1.4
$Y_{\rm P}^{\rm BBN}$	0.2453 ± 0.0040	$D_{\rm M}(0.15)$	681^{+28}_{-25}	$\chi^2_{\rm BAO}$	6.0 ± 1.3
10^5D/H	2.613 ± 0.093	$H(0.38)$	$78.1^{+2.5}_{-3.4}$	$\chi^2_{\rm Abund}$	2.0 ± 2.0
Age/Gyr	$14.71^{+0.59}_{-0.51}$	$D_{\rm M}(0.38)$	1625^{+67}_{-58}		

$\bar{\chi}^2_{\rm eff} = 1045.16$; $R - 1 = 0.00638$

9.69 base_nnu_mnu_BAO_Cooke17Marc_Aver15

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02184 ± 0.00053	Age/Gyr	$12.8^{+1.1}_{-1.4}$	$H(0.38)$	$88.4^{+7.0}_{-8.2}$
$\boldsymbol{\Omega_c h^2}$	$0.142^{+0.044}_{-0.059}$	z_*	$1093.5^{+3.5}_{-3.9}$	$D_{\rm M}(0.38)$	1474^{+100}_{-120}
$\boldsymbol{100\theta_{MC}}$	$1.108^{+0.044}_{-0.036}$	r_*	139^{+10}_{-12}	$H(0.51)$	$96.7^{+8.2}_{-9.6}$
$\boldsymbol{\Sigma m_\nu}$ [eV]	—	$100\theta_*$	$1.108^{+0.043}_{-0.036}$	$D_{\rm M}(0.51)$	1900^{+140}_{-160}
$\boldsymbol{N_{\rm eff}}$	2.97 ± 0.27	$D_{\rm M}(z_*)$/Gpc	$12.6^{+1.2}_{-1.6}$	$H(0.61)$	$103.5^{+9.1}_{-11}$
H_0	$69.0^{+4.1}_{-4.7}$	$z_{\rm drag}$	1061.1 ± 3.6	$D_{\rm M}(0.61)$	2202^{+160}_{-190}
Ω_Λ	0.609 ± 0.054	$r_{\rm drag}$	142^{+10}_{-12}	$H(2.33)$	268^{+30}_{-30}
$\Omega_{\rm m}$	0.391 ± 0.054	$k_{\rm D}$	0.148 ± 0.012	$D_{\rm M}(2.33)$	5340^{+460}_{-580}
$\Omega_{\rm m}h^2$	$0.190^{+0.037}_{-0.054}$	$100\theta_{\rm D}$	0.1699 ± 0.0056	$\chi^2_{\rm Cooke17Marc}$	0.99 ± 1.4
$\Omega_\nu h^2$	< 0.0359	$z_{\rm eq}$	3942^{+1000}_{-1000}	$\chi^2_{\rm Aver15}$	0.96 ± 1.4
$\Omega_{\rm m}h^3$	$0.133^{+0.028}_{-0.048}$	$k_{\rm eq}$	$0.0121^{+0.0030}_{-0.0042}$	$\chi^2_{\rm 6DF}$	0.42 ± 0.44
$r_{\rm drag}h$	97.3 ± 2.2	$100\theta_{\rm eq}$	$0.843^{+0.092}_{-0.23}$	$\chi^2_{\rm MGS}$	0.75 ± 0.71
$Y_{\rm P}$	0.2440 ± 0.0039	$100\theta_{\rm s,eq}$	$0.466^{+0.051}_{-0.12}$	$\chi^2_{\rm DR12BAO}$	4.0 ± 1.8
$Y_{\rm P}^{\rm BBN}$	0.2453 ± 0.0039	$H(0.15)$	$75.8^{+5.1}_{-6.0}$	$\chi^2_{\rm BAO}$	5.1 ± 2.1
10^5D/H	2.660 ± 0.043	$D_{\rm M}(0.15)$	625^{+40}_{-45}	$\chi^2_{\rm Abund}$	1.9 ± 2.0

$\bar{\chi}^2_{\rm eff} = 7.07$; $R - 1 = 0.01447$

9.70 base_nnu_mnu_BAO_Cooke17Marc_Aver15_Pantheon

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02184 ± 0.00055	z_*	$1088.7^{+1.5}_{-1.8}$	$H(0.51)$	$85.8^{+4.3}_{-4.8}$
$\boldsymbol{\Omega_c h^2}$	$0.084^{+0.027}_{-0.030}$	r_*	152.8 ± 7.2	$D_{\rm M}(0.51)$	2079 ± 100
$\boldsymbol{100\theta_{MC}}$	1.050 ± 0.020	$100\theta_*$	1.051 ± 0.020	$H(0.61)$	$91.2^{+4.7}_{-5.2}$
$\boldsymbol{\Sigma m_\nu}$ [eV]	—	$D_{\rm M}(z_*)$/Gpc	$14.55^{+0.83}_{-0.93}$	$D_{\rm M}(0.61)$	2419 ± 120
$\boldsymbol{N_{\rm eff}}$	2.97 ± 0.28	$z_{\rm drag}$	1057.1 ± 2.4	$H(2.33)$	227 ± 14
H_0	$64.5^{+2.8}_{-3.2}$	$r_{\rm drag}$	155.8 ± 7.5	$D_{\rm M}(2.33)$	6037 ± 330
Ω_Λ	0.685 ± 0.020	$k_{\rm D}$	$0.1335^{+0.0059}_{-0.0067}$	$\chi^2_{\rm Cooke17Marc}$	1.0 ± 1.4
$\Omega_{\rm m}$	0.315 ± 0.020	$100\theta_{\rm D}$	0.1622 ± 0.0026	$\chi^2_{\rm Aver15}$	1.0 ± 1.4
$\Omega_{\rm m}h^2$	$0.132^{+0.015}_{-0.019}$	$z_{\rm eq}$	2545^{+600}_{-700}	$\chi^2_{\rm JLA}$	1037.4 ± 1.8
$\Omega_\nu h^2$	< 0.0358	$k_{\rm eq}$	$0.0079^{+0.0017}_{-0.0021}$	$\chi^2_{\rm 6DF}$	0.055 ± 0.078
$\Omega_{\rm m}h^3$	$0.085^{+0.012}_{-0.017}$	$100\theta_{\rm eq}$	$1.09^{+0.12}_{-0.30}$	$\chi^2_{\rm MGS}$	1.74 ± 0.68
$r_{\rm drag}h$	100.3 ± 1.2	$100\theta_{\rm s,eq}$	$0.590^{+0.064}_{-0.15}$	$\chi^2_{\rm DR12BAO}$	4.0 ± 1.6
$Y_{\rm P}$	0.2440 ± 0.0040	$H(0.15)$	$69.6^{+3.1}_{-3.6}$	$\chi^2_{\rm BAO}$	5.8 ± 1.9
$Y_{\rm P}^{\rm BBN}$	0.2453 ± 0.0040	$D_{\rm M}(0.15)$	673 ± 32	$\chi^2_{\rm Abund}$	2.0 ± 2.0
10^5D/H	2.660 ± 0.043	$H(0.38)$	$79.4^{+3.8}_{-4.3}$		
Age/Gyr	14.45 ± 0.80	$D_{\rm M}(0.38)$	1605 ± 77		

$\bar{\chi}^2_{\rm eff} = 1045.20$; $R - 1 = 0.00367$

9.71 base_nnu_mnu_BAO_Cooke17Marc_Aver15_theta

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02179 ± 0.00056	z_*	$1088.03^{+0.63}_{-1.3}$	$H(0.51)$	$84.0^{+2.7}_{-3.5}$
$\boldsymbol{\Omega_c h^2}$	$0.075^{+0.019}_{-0.030}$	r_*	$155.3^{+6.2}_{-5.3}$	$D_{\rm M}(0.51)$	2117^{+84}_{-75}
$\boldsymbol{100\theta_{MC}}$	1.04090 ± 0.00060	$100\theta_*$	$1.04179^{+0.00071}_{-0.00063}$	$H(0.61)$	$89.2^{+2.8}_{-3.7}$
$\boldsymbol{\Sigma m_\nu}$ [eV]	—	$D_{\rm M}(z_*)$/Gpc	$14.90^{+0.59}_{-0.51}$	$D_{\rm M}(0.61)$	2464^{+98}_{-87}
$\boldsymbol{N_{\rm eff}}$	2.95 ± 0.28	$z_{\rm drag}$	1056.4 ± 2.1	$H(2.33)$	$220.4^{+7.0}_{-9.2}$
H_0	$63.4^{+2.1}_{-2.7}$	$r_{\rm drag}$	$158.4^{+6.4}_{-5.6}$	$D_{\rm M}(2.33)$	6169^{+240}_{-210}
Ω_Λ	0.6918 ± 0.0092	$k_{\rm D}$	$0.1311^{+0.0037}_{-0.0051}$	$\chi^2_{\rm Cooke17Marc}$	1.0 ± 1.4
$\Omega_{\rm m}$	0.3082 ± 0.0092	$100\theta_{\rm D}$	$0.16102^{+0.00067}_{-0.00052}$	$\chi^2_{\rm Aver15}$	1.0 ± 1.5
$\Omega_{\rm m}h^2$	$0.1240^{+0.0075}_{-0.011}$	$z_{\rm eq}$	2344^{+400}_{-700}	$\chi^2_{\rm 6DF}$	0.061 ± 0.085
$\Omega_\nu h^2$	$0.027^{+0.021}_{-0.014}$	$k_{\rm eq}$	$0.0073^{+0.0011}_{-0.0020}$	$\chi^2_{\rm MGS}$	1.69 ± 0.71
$\Omega_{\rm m}h^3$	$0.0789^{+0.0068}_{-0.010}$	$100\theta_{\rm eq}$	$1.14^{+0.13}_{-0.31}$	$\chi^2_{\rm DR12BAO}$	4.3 ± 1.5
$r_{\rm drag}h$	100.3 ± 1.2	$100\theta_{\rm s,eq}$	$0.616^{+0.095}_{-0.16}$	$\chi^2_{\rm prior}$	1.0 ± 1.4
$Y_{\rm P}$	0.2437 ± 0.0041	$H(0.15)$	$68.3^{+2.3}_{-2.9}$	$\chi^2_{\rm BAO}$	6.1 ± 1.5
$Y_{\rm P}^{\rm BBN}$	0.2450 ± 0.0041	$D_{\rm M}(0.15)$	685^{+28}_{-25}	$\chi^2_{\rm Abund}$	2.1 ± 2.1
10^5D/H	2.661 ± 0.044	$H(0.38)$	$77.7^{+2.5}_{-3.3}$		
Age/Gyr	$14.77^{+0.58}_{-0.51}$	$D_{\rm M}(0.38)$	1634^{+65}_{-59}		

$\bar{\chi}^2_{\rm eff} = 9.16$; $R - 1 = 0.00531$

9.72 base_nnu_mnu_BAO_Cooke17Marc_Aver15_Pantheon_theta

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02183 ± 0.00054	z_*	$1088.05^{+0.64}_{-1.3}$	$H(0.51)$	$84.2^{+2.7}_{-3.6}$
$\boldsymbol{\Omega_c h^2}$	$0.076^{+0.020}_{-0.030}$	r_*	$154.9^{+6.1}_{-5.5}$	$D_{\rm M}(0.51)$	2110^{+85}_{-76}
$\boldsymbol{100\theta_{MC}}$	1.04090 ± 0.00060	$100\theta_*$	1.04177 ± 0.00068	$H(0.61)$	$89.4^{+2.9}_{-3.8}$
$\boldsymbol{\Sigma m_\nu}$ [eV]	—	$D_{\rm M}(z_*)$/Gpc	$14.87^{+0.59}_{-0.52}$	$D_{\rm M}(0.61)$	2456^{+99}_{-88}
$\boldsymbol{N_{\rm eff}}$	2.96 ± 0.28	$z_{\rm drag}$	1056.6 ± 2.0	$H(2.33)$	$220.7^{+7.2}_{-9.2}$
H_0	$63.7^{+2.1}_{-2.8}$	$r_{\rm drag}$	$158.0^{+6.3}_{-5.7}$	$D_{\rm M}(2.33)$	6152^{+240}_{-220}
Ω_Λ	0.6935 ± 0.0084	$k_{\rm D}$	$0.1313^{+0.0038}_{-0.0052}$	$\chi^2_{\rm Cooke17Marc}$	0.98 ± 1.4
$\Omega_{\rm m}$	0.3065 ± 0.0084	$100\theta_{\rm D}$	$0.16105^{+0.00066}_{-0.00052}$	$\chi^2_{\rm Aver15}$	0.99 ± 1.4
$\Omega_{\rm m}h^2$	$0.1244^{+0.0077}_{-0.011}$	$z_{\rm eq}$	2362 ± 500	$\chi^2_{\rm JLA}$	1036.26 ± 0.36
$\Omega_\nu h^2$	< 0.0363	$k_{\rm eq}$	$0.0074^{+0.0012}_{-0.0021}$	$\chi^2_{\rm 6DF}$	0.050 ± 0.071
$\Omega_{\rm m}h^3$	$0.0794^{+0.0070}_{-0.010}$	$100\theta_{\rm eq}$	$1.13^{+0.12}_{-0.31}$	$\chi^2_{\rm MGS}$	1.81 ± 0.67
$r_{\rm drag}h$	100.5 ± 1.1	$100\theta_{\rm s,eq}$	$0.613^{+0.065}_{-0.16}$	$\chi^2_{\rm DR12BAO}$	4.1 ± 1.2
$Y_{\rm P}$	0.2439 ± 0.0040	$H(0.15)$	$68.6^{+2.3}_{-3.0}$	$\chi^2_{\rm prior}$	1.0 ± 1.5
$Y_{\rm P}^{\rm BBN}$	0.2453 ± 0.0040	$D_{\rm M}(0.15)$	682^{+28}_{-25}	$\chi^2_{\rm BAO}$	5.9 ± 1.3
10^5D/H	2.660 ± 0.042	$H(0.38)$	$78.0^{+2.5}_{-3.3}$	$\chi^2_{\rm Abund}$	2.0 ± 2.0
Age/Gyr	$14.73^{+0.58}_{-0.52}$	$D_{\rm M}(0.38)$	1628^{+66}_{-59}		

$\bar{\chi}^2_{\rm eff} = 1045.19$; $R - 1 = 0.00991$

9.73 base_nnu_mnu_BAO_Cooke17Adel_Aver15

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02251 ± 0.00063	Age/Gyr	$12.6^{+1.1}_{-1.2}$	$H(0.38)$	$89.2^{+6.3}_{-8.0}$
$\boldsymbol{\Omega_c h^2}$	$0.145^{+0.041}_{-0.058}$	z_*	$1092.8^{+3.1}_{-3.7}$	$D_{\rm M}(0.38)$	1460 ± 100
$\boldsymbol{100\theta_{MC}}$	$1.111^{+0.039}_{-0.035}$	r_*	138 ± 10	$H(0.51)$	$97.6^{+7.4}_{-9.3}$
$\boldsymbol{\Sigma m_\nu}$ [eV]	—	$100\theta_*$	1.112 ± 0.036	$D_{\rm M}(0.51)$	1880 ± 140
$\boldsymbol{N_{\rm eff}}$	2.94 ± 0.28	$D_{\rm M}(z_*)$/Gpc	$12.4^{+1.2}_{-1.4}$	$H(0.61)$	$104.5^{+8.2}_{-10}$
H_0	$69.7^{+3.8}_{-4.6}$	$z_{\rm drag}$	$1062.8^{+3.2}_{-3.7}$	$D_{\rm M}(0.61)$	2180 ± 160
Ω_Λ	$0.608^{+0.054}_{-0.046}$	$r_{\rm drag}$	140 ± 10	$H(2.33)$	271^{+27}_{-34}
$\Omega_{\rm m}$	$0.392^{+0.046}_{-0.054}$	$k_{\rm D}$	$0.151^{+0.010}_{-0.013}$	$D_{\rm M}(2.33)$	5279^{+450}_{-520}
$\Omega_{\rm m}h^2$	$0.193^{+0.033}_{-0.053}$	$100\theta_{\rm D}$	0.1692 ± 0.0049	$\chi^2_{\rm Cooke17Adel}$	0.97 ± 1.4
$\Omega_\nu h^2$	< 0.0350	$z_{\rm eq}$	4050^{+1000}_{-1000}	$\chi^2_{\rm Aver15}$	0.99 ± 1.4
$\Omega_{\rm m}h^3$	$0.136^{+0.026}_{-0.047}$	$k_{\rm eq}$	$0.0124^{+0.0028}_{-0.0041}$	$\chi^2_{\rm 6DF}$	0.41 ± 0.42
$r_{\rm drag}h$	97.2 ± 2.1	$100\theta_{\rm eq}$	$0.820^{+0.094}_{-0.21}$	$\chi^2_{\rm MGS}$	0.71 ± 0.65
$Y_{\rm P}$	0.2440 ± 0.0040	$100\theta_{\rm s,eq}$	$0.453^{+0.051}_{-0.11}$	$\chi^2_{\rm DR12BAO}$	3.8 ± 1.7
$Y_{\rm P}^{\rm BBN}$	0.2453 ± 0.0040	$H(0.15)$	$76.5^{+4.7}_{-5.8}$	$\chi^2_{\rm BAO}$	4.9 ± 1.9
10^5D/H	2.525 ± 0.066	$D_{\rm M}(0.15)$	619 ± 39	$\chi^2_{\rm Abund}$	2.0 ± 2.0

$\bar{\chi}^2_{\rm eff} = 6.89$; $R - 1 = 0.00901$

9.74 base_nnu_mnu_BAO_Cooke17Adel_Aver15_Pantheon

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02254 ± 0.00063	z_*	$1087.9^{+1.5}_{-1.8}$	$H(0.51)$	$86.4^{+4.1}_{-4.9}$
$\boldsymbol{\Omega_c h^2}$	$0.084^{+0.025}_{-0.030}$	r_*	152.1 ± 6.9	$D_{\rm M}(0.51)$	2066 ± 98
$\boldsymbol{100\theta_{MC}}$	1.051 ± 0.020	$100\theta_*$	1.052 ± 0.020	$H(0.61)$	$91.8^{+4.4}_{-5.4}$
$\boldsymbol{\Sigma m_\nu}$ [eV]	—	$D_{\rm M}(z_*)$/Gpc	14.47 ± 0.85	$D_{\rm M}(0.61)$	2403 ± 120
$\boldsymbol{N_{eff}}$	2.96 ± 0.28	$z_{\rm drag}$	1058.8 ± 2.4	$H(2.33)$	228^{+13}_{-16}
H_0	$64.9^{+2.7}_{-3.2}$	$r_{\rm drag}$	154.8 ± 7.2	$D_{\rm M}(2.33)$	6001 ± 320
Ω_Λ	0.685 ± 0.020	$k_{\rm D}$	$0.1349^{+0.0057}_{-0.0069}$	$\chi^2_{\rm Cooke17Adel}$	0.97 ± 1.4
$\Omega_{\rm m}$	0.315 ± 0.020	$100\theta_{\rm D}$	0.1614 ± 0.0025	$\chi^2_{\rm Aver15}$	1.0 ± 1.4
$\Omega_{\rm m}h^2$	$0.133^{+0.014}_{-0.020}$	$z_{\rm eq}$	2571^{+600}_{-700}	$\chi^2_{\rm JLA}$	1037.3 ± 1.7
$\Omega_\nu h^2$	0.027 ± 0.015	$k_{\rm eq}$	$0.0080^{+0.0016}_{-0.0021}$	$\chi^2_{\rm 6DF}$	0.054 ± 0.076
$\Omega_{\rm m}h^3$	$0.087^{+0.012}_{-0.017}$	$100\theta_{\rm eq}$	$1.08^{+0.13}_{-0.28}$	$\chi^2_{\rm MGS}$	1.76 ± 0.68
$r_{\rm drag}h$	100.3 ± 1.2	$100\theta_{\rm s,eq}$	$0.586^{+0.067}_{-0.14}$	$\chi^2_{\rm DR12BAO}$	4.0 ± 1.5
$Y_{\rm P}$	0.2442 ± 0.0040	$H(0.15)$	$70.0^{+3.0}_{-3.6}$	$\chi^2_{\rm BAO}$	5.8 ± 1.8
$Y_{\rm P}^{\rm BBN}$	0.2455 ± 0.0040	$D_{\rm M}(0.15)$	669 ± 30	$\chi^2_{\rm Abund}$	2.0 ± 2.0
10^5D/H	2.524 ± 0.066	$H(0.38)$	$79.8^{+3.7}_{-4.4}$		
Age/Gyr	14.37 ± 0.77	$D_{\rm M}(0.38)$	1595 ± 75		

$\bar{\chi}^2_{\rm eff} = 1045.11$; $R - 1 = 0.00907$

9.75 base_nnu_mnu_BAO_Cooke17Adel_Aver15_theta

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02248 ± 0.00062	z_*	$1087.24^{+0.75}_{-1.3}$	$H(0.51)$	$84.4^{+2.8}_{-3.5}$
$\boldsymbol{\Omega_c h^2}$	$0.076^{+0.022}_{-0.028}$	r_*	$154.6^{+6.0}_{-5.4}$	$D_{\rm M}(0.51)$	2104 ± 78
$\boldsymbol{100\theta_{MC}}$	1.04091 ± 0.00061	$100\theta_*$	1.04170 ± 0.00068	$H(0.61)$	$89.7^{+2.9}_{-3.7}$
$\boldsymbol{\Sigma m_\nu}$ [eV]	—	$D_{\rm M}(z_*)$/Gpc	14.84 ± 0.53	$D_{\rm M}(0.61)$	2449 ± 91
$\boldsymbol{N_{eff}}$	2.93 ± 0.28	$z_{\rm drag}$	1058.1 ± 2.1	$H(2.33)$	$221.3^{+7.2}_{-8.9}$
H_0	$63.9^{+2.2}_{-2.8}$	$r_{\rm drag}$	157.4 ± 5.8	$D_{\rm M}(2.33)$	6136 ± 220
Ω_Λ	0.6938 ± 0.0089	$k_{\rm D}$	$0.1325^{+0.0038}_{-0.0051}$	$\chi^2_{\rm Cooke17Adel}$	0.96 ± 1.3
$\Omega_{\rm m}$	0.3062 ± 0.0089	$100\theta_{\rm D}$	$0.16003^{+0.00072}_{-0.00063}$	$\chi^2_{\rm Aver15}$	0.99 ± 1.3
$\Omega_{\rm m}h^2$	$0.1250^{+0.0078}_{-0.010}$	$z_{\rm eq}$	2395^{+600}_{-700}	$\chi^2_{\rm 6DF}$	0.056 ± 0.078
$\Omega_\nu h^2$	$0.026^{+0.020}_{-0.025}$	$k_{\rm eq}$	$0.0075^{+0.0012}_{-0.0020}$	$\chi^2_{\rm MGS}$	1.73 ± 0.70
$\Omega_{\rm m}h^3$	$0.0800^{+0.0071}_{-0.010}$	$100\theta_{\rm eq}$	$1.12^{+0.19}_{-0.30}$	$\chi^2_{\rm DR12BAO}$	4.3 ± 1.4
$r_{\rm drag}h$	100.4 ± 1.2	$100\theta_{\rm s,eq}$	$0.606^{+0.097}_{-0.15}$	$\chi^2_{\rm prior}$	1.0 ± 1.4
$Y_{\rm P}$	0.2437 ± 0.0040	$H(0.15)$	$68.8^{+2.3}_{-2.9}$	$\chi^2_{\rm BAO}$	6.1 ± 1.4
$Y_{\rm P}^{\rm BBN}$	0.2451 ± 0.0040	$D_{\rm M}(0.15)$	680 ± 26	$\chi^2_{\rm Abund}$	1.9 ± 1.9
10^5D/H	2.525 ± 0.066	$H(0.38)$	$78.2^{+2.6}_{-3.3}$		
Age/Gyr	14.69 ± 0.53	$D_{\rm M}(0.38)$	1624 ± 61		

$\bar{\chi}^2_{\rm eff} = 9.11$; $R - 1 = 0.01588$

9.76 base_nnu_mnu_BAO_Cooke17Adel_Aver15_Pantheon_theta

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02250 ± 0.00064	z_*	$1087.23^{+0.75}_{-1.3}$	$H(0.51)$	$84.5^{+2.8}_{-3.5}$
$\boldsymbol{\Omega_c h^2}$	$0.076^{+0.021}_{-0.030}$	r_*	$154.5^{+6.1}_{-5.4}$	$D_{\rm M}(0.51)$	2101 ± 78
$\boldsymbol{100\theta_{MC}}$	1.04090 ± 0.00060	$100\theta_*$	1.04168 ± 0.00068	$H(0.61)$	$89.8^{+2.9}_{-3.7}$
$\boldsymbol{\Sigma m_\nu}$ [eV]	—	$D_{\rm M}(z_*)$/Gpc	$14.83^{+0.58}_{-0.52}$	$D_{\rm M}(0.61)$	2446 ± 91
$\boldsymbol{N_{\rm eff}}$	2.94 ± 0.28	$z_{\rm drag}$	1058.1 ± 2.2	$H(2.33)$	$221.3^{+7.2}_{-9.1}$
H_0	$64.0^{+2.2}_{-2.8}$	$r_{\rm drag}$	$157.3^{+6.3}_{-5.7}$	$D_{\rm M}(2.33)$	6131^{+240}_{-220}
Ω_Λ	$0.6950^{+0.0085}_{-0.0077}$	$k_{\rm D}$	$0.1325^{+0.0039}_{-0.0052}$	$\chi^2_{\rm Cooke17Adel}$	1.0 ± 1.5
$\Omega_{\rm m}$	0.3050 ± 0.0081	$100\theta_{\rm D}$	$0.16005^{+0.00074}_{-0.00067}$	$\chi^2_{\rm Aver15}$	1.0 ± 1.4
$\Omega_{\rm m}h^2$	$0.1250^{+0.0078}_{-0.011}$	$z_{\rm eq}$	2385^{+400}_{-800}	$\chi^2_{\rm JLA}$	1036.20 ± 0.31
$\Omega_\nu h^2$	< 0.0364	$k_{\rm eq}$	$0.0075^{+0.0012}_{-0.0020}$	$\chi^2_{\rm 6DF}$	0.047 ± 0.065
$\Omega_{\rm m}h^3$	$0.0802^{+0.0071}_{-0.010}$	$100\theta_{\rm eq}$	$1.13^{+0.13}_{-0.31}$	$\chi^2_{\rm MGS}$	1.81 ± 0.65
$r_{\rm drag}h$	100.5 ± 1.1	$100\theta_{\rm s,eq}$	$0.609^{+0.068}_{-0.15}$	$\chi^2_{\rm DR12BAO}$	4.1 ± 1.1
$Y_{\rm P}$	0.2439 ± 0.0040	$H(0.15)$	$68.9^{+2.3}_{-2.9}$	$\chi^2_{\rm prior}$	1.0 ± 1.4
$Y_{\rm P}^{\rm BBN}$	0.2452 ± 0.0040	$D_{\rm M}(0.15)$	679 ± 26	$\chi^2_{\rm BAO}$	6.0 ± 1.2
10^5D/H	2.526 ± 0.068	$H(0.38)$	$78.3^{+2.6}_{-3.3}$	$\chi^2_{\rm Abund}$	2.0 ± 2.1
Age/Gyr	$14.68^{+0.58}_{-0.52}$	$D_{\rm M}(0.38)$	1621 ± 60		

$\bar{\chi}^2_{\rm eff} = 1045.24$; $R - 1 = 0.00618$

10 nnu+nrun

10.1 base_nnu_nrun_plikHM_TTTEEE_lowl_lowE

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022135	0.02216 ± 0.00023	$\Omega_m h^2$	0.13853	0.1390 ± 0.0034	$100\theta_{eq}$	0.8044	0.8049 ± 0.0077
$\boldsymbol{\Omega_c h^2}$	0.11575	0.1162 ± 0.0032	$\Omega_m h^3$	0.08991	$0.0906^{+0.0039}_{-0.0044}$	$100\theta_{s,eq}$	0.44490	0.4452 ± 0.0039
$\boldsymbol{100\theta_{MC}}$	1.041436	1.04139 ± 0.00048	σ_8	0.7989	0.800 ± 0.012	$H(0.15)$	70.25	70.5 ± 1.6
$\boldsymbol{\tau}$	0.0548	0.0549 ± 0.0079	S_8	0.8365	0.836 ± 0.016	$D_M(0.15)$	666.7	665 ± 16
$\boldsymbol{N_{eff}}$	2.711	2.74 ± 0.22	$\sigma_8\Omega_m^{0.5}$	0.4582	0.4579 ± 0.0089	$H(0.38)$	80.43	80.7 ± 1.6
$\boldsymbol{\ln(10^{10}A_s)}$	3.0364	3.037 ± 0.018	$\sigma_8\Omega_m^{0.25}$	0.6050	0.6051 ± 0.0088	$D_M(0.38)$	1585.6	1582 ± 36
$\boldsymbol{n_s}$	0.9500	0.950 ± 0.011	$\sigma_8/h^{0.5}$	0.9917	0.991 ± 0.012	$H(0.51)$	87.17	87.4 ± 1.6
$\boldsymbol{dn_s/d\ln k}$	−0.0105	-0.0119 ± 0.0079	$r_{drag}h$	97.52	97.6 ± 1.4	$D_M(0.51)$	2051.3	2046 ± 45
$\boldsymbol{y_{cal}}$	1.00054	1.0005 ± 0.0025	$\langle d^2\rangle^{1/2}$	2.4579	2.455 ± 0.030	$H(0.61)$	92.79	93.0 ± 1.6
$\boldsymbol{A_{217}^{CIB}}$	46.8	47 ± 7	z_{re}	7.68	7.66 ± 0.79	$D_M(0.61)$	2385	2379 ± 51
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.49	—	10^9A_s	2.0830	2.085 ± 0.039	$H(2.33)$	232.43	232.9 ± 3.0
$\boldsymbol{A_{143}^{tSZ}}$	7.06	5.2 ± 2.0	$10^9A_se^{-2\tau}$	1.8666	1.868 ± 0.019	$D_M(2.33)$	5912	5899 ± 100
$\boldsymbol{A_{100}^{PS}}$	249.9	261 ± 28	D_{40}	1225.2	1223 ± 19	$f\sigma_8(0.15)$	0.4613	0.4611 ± 0.0082
$\boldsymbol{A_{143}^{PS}}$	48.8	47 ± 8	D_{220}	5729.1	5729 ± 39	$\sigma_8(0.15)$	0.7366	0.737 ± 0.011
$\boldsymbol{A_{143\times217}^{PS}}$	49.0	42 ± 9	D_{810}	2540.0	2539 ± 14	$f\sigma_8(0.38)$	0.4755	0.4755 ± 0.0070
$\boldsymbol{A_{217}^{PS}}$	120.4	115 ± 10	D_{1420}	817.62	816.0 ± 5.0	$\sigma_8(0.38)$	0.6511	0.652 ± 0.010
$\boldsymbol{A^{kSZ}}$	0.00	< 4.56	D_{2000}	231.55	230.8 ± 1.9	$f\sigma_8(0.51)$	0.4721	0.4722 ± 0.0066
$\boldsymbol{A_{100}^{dustTT}}$	8.71	8.8 ± 1.8	$n_{s,0.002}$	0.9838	0.988 ± 0.021	$\sigma_8(0.51)$	0.6086	0.609 ± 0.010
$\boldsymbol{A_{143}^{dustTT}}$	10.87	10.8 ± 1.8	Y_P	0.24071	0.2411 ± 0.0031	$f\sigma_8(0.61)$	0.4659	0.4660 ± 0.0064
$\boldsymbol{A_{143\times217}^{dustTT}}$	19.76	18.5 ± 3.3	Y_P^{BBN}	0.24202	0.2424 ± 0.0031	$\sigma_8(0.61)$	0.5787	0.5793 ± 0.0097
$\boldsymbol{A_{217}^{dustTT}}$	95.1	93.6 ± 7.3	10^5D/H	2.513	2.520 ± 0.053	$f\sigma_8(2.33)$	0.2912	0.2915 ± 0.0051
$\boldsymbol{A_{100}^{dustTE}}$	0.1152	0.114 ± 0.038	Age/Gyr	14.148	14.12 ± 0.24	$\sigma_8(2.33)$	0.2994	0.2998 ± 0.0056
$\boldsymbol{A_{100\times143}^{dustTE}}$	0.1350	0.134 ± 0.030	z_*	1089.507	1089.55 ± 0.38	f_{2000}^{143}	28.82	30.1 ± 3.1
$\boldsymbol{A_{100\times217}^{dustTE}}$	0.484	0.481 ± 0.085	r_*	147.47	147.2 ± 2.1	$f_{2000}^{143\times217}$	31.94	32.5 ± 2.2
$\boldsymbol{A_{143}^{dustTE}}$	0.224	0.224 ± 0.054	$100\theta_*$	1.04186	1.04180 ± 0.00061	f_{2000}^{217}	106.53	107.3 ± 2.0
$\boldsymbol{A_{143\times217}^{dustTE}}$	0.665	0.665 ± 0.081	$D_M(z_*)$/Gpc	14.154	14.13 ± 0.20	χ^2_{simall}	396.09	397.1 ± 1.7
$\boldsymbol{A_{217}^{dustTE}}$	2.087	2.08 ± 0.27	z_{drag}	1058.83	1058.92 ± 0.85	χ^2_{lowl}	22.41	22.5 ± 1.5
$\boldsymbol{c_{100}}$	0.99976	0.99971 ± 0.00061	r_{drag}	150.24	150.0 ± 2.2	χ^2_{plik}	2343.2	2360.1 ± 6.1
$\boldsymbol{c_{217}}$	0.99818	0.99821 ± 0.00063	k_D	0.13872	0.1389 ± 0.0015	χ^2_{prior}	1.51	11.4 ± 4.5
H_0	64.90	65.1 ± 1.7	$100\theta_D$	0.16000	0.16007 ± 0.00050	χ^2_{CMB}	2761.7	2779.7 ± 6.1
Ω_Λ	0.6712	0.672 ± 0.012	z_{eq}	3450.0	3448 ± 42			
Ω_m	0.3288	0.328 ± 0.012	k_{eq}	0.010290	0.01031 ± 0.00012			

Best-fit $\chi^2_{eff} = 2763.19$; $\Delta\chi^2_{eff} = -2.59$; $\bar{\chi}^2_{eff} = 2791.11$; $\Delta\bar{\chi}^2_{eff} = -0.66$; $R - 1 = 0.01356$

χ^2_{eff}: CMB - simall_100x143_offlike5_EE_Aplanck_B: 396.09 (Δ 0.04) commander_dx12_v3_2_29: 22.41 (Δ -0.85) plik_rd12_HM_v22b_TTTEEE: 2343.18 (Δ -1.47)

10.2 base_nnu_nrun_plikHM_TTTEEE_lowl_lowE_post_BAO

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022331	0.02236 ± 0.00018	$\Omega_m h^3$	0.09294	$0.0937^{+0.0035}_{-0.0041}$	$H(0.15)$	71.85	72.1 ± 1.3
$\boldsymbol{\Omega_c h^2}$	0.11659	$0.1172^{+0.0030}_{-0.0035}$	σ_8	0.8022	0.803 ± 0.012	$D_M(0.15)$	650.8	649 ± 12
$\boldsymbol{100\theta_{MC}}$	1.041312	1.04127 ± 0.00048	S_8	0.8217	0.822 ± 0.013	$H(0.38)$	81.90	82.1 ± 1.3
$\boldsymbol{\tau}$	0.0568	0.0566 ± 0.0077	$\sigma_8 \Omega_m^{0.5}$	0.4500	0.4501 ± 0.0073	$D_M(0.38)$	1551.3	1547 ± 27
$\boldsymbol{N_{eff}}$	2.870	$2.91^{+0.18}_{-0.21}$	$\sigma_8 \Omega_m^{0.25}$	0.6008	0.6012 ± 0.0086	$H(0.51)$	88.58	88.8 ± 1.4
$\boldsymbol{\ln(10^{10} A_s)}$	3.0423	3.043 ± 0.018	$\sigma_8/h^{0.5}$	0.9830	0.982 ± 0.010	$D_M(0.51)$	2009.1	2003 ± 34
$\boldsymbol{n_s}$	0.9605	0.9602 ± 0.0083	$r_{drag} h$	99.19	99.25 ± 0.87	$H(0.61)$	94.16	94.4 ± 1.4
$\boldsymbol{dn_s/d\ln k}$	−0.0064	-0.0080 ± 0.0075	$\langle d^2 \rangle^{1/2}$	2.4329	2.431 ± 0.026	$D_M(0.61)$	2337.4	2331 ± 39
$\boldsymbol{y_{cal}}$	1.00065	1.0006 ± 0.0025	z_{re}	7.86	7.83 ± 0.77	$H(2.33)$	233.71	$234.3^{+2.7}_{-3.0}$
$\boldsymbol{A_{217}^{CIB}}$	47.1	47 ± 7	$10^9 A_s$	2.0954	$2.098^{+0.035}_{-0.040}$	$D_M(2.33)$	5832	5817 ± 84
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.51	—	$10^9 A_s e^{-2\tau}$	1.8705	1.873 ± 0.018	$f\sigma_8(0.15)$	0.4543	0.4545 ± 0.0070
$\boldsymbol{A_{143}^{tSZ}}$	7.11	5.3 ± 2.0	D_{40}	1219.0	1217 ± 19	$\sigma_8(0.15)$	0.7409	0.742 ± 0.011
$\boldsymbol{A_{100}^{PS}}$	249.2	262 ± 28	D_{220}	5734.6	5738 ± 39	$f\sigma_8(0.38)$	0.4718	0.4720 ± 0.0067
$\boldsymbol{A_{143}^{PS}}$	48.7	47 ± 8	D_{810}	2540.2	2539 ± 14	$\sigma_8(0.38)$	0.6564	0.657 ± 0.010
$\boldsymbol{A_{143\times217}^{PS}}$	49.4	42 ± 9	D_{1420}	818.51	817.0 ± 4.9	$f\sigma_8(0.51)$	0.4700	0.4703 ± 0.0066
$\boldsymbol{A_{217}^{PS}}$	120.0	115 ± 10	D_{2000}	231.61	230.8 ± 1.8	$\sigma_8(0.51)$	0.6142	0.6150 ± 0.0095
$\boldsymbol{A^{kSZ}}$	0.00	< 4.71	$n_{s,0.002}$	0.9812	0.986 ± 0.021	$f\sigma_8(0.61)$	0.4648	0.4652 ± 0.0065
$\boldsymbol{A_{100}^{dust TT}}$	8.80	8.8 ± 1.8	Y_P	0.24299	0.2435 ± 0.0027	$\sigma_8(0.61)$	0.5843	0.5851 ± 0.0091
$\boldsymbol{A_{143}^{dust TT}}$	10.95	10.9 ± 1.8	Y_P^{BBN}	0.24431	0.2448 ± 0.0027	$f\sigma_8(2.33)$	0.29451	0.2949 ± 0.0047
$\boldsymbol{A_{143\times217}^{dust TT}}$	19.78	18.5 ± 3.2	10^5D/H	2.532	2.539 ± 0.052	$\sigma_8(2.33)$	0.3035	0.3039 ± 0.0050
$\boldsymbol{A_{217}^{dust TT}}$	94.8	93.5 ± 7.3	Age/Gyr	13.962	13.93 ± 0.20	f_{2000}^{143}	28.68	30.0 ± 3.1
$\boldsymbol{A_{100}^{dust TE}}$	0.1141	0.115 ± 0.038	z_*	1089.496	1089.55 ± 0.38	$f_{2000}^{143\times217}$	31.90	32.6 ± 2.2
$\boldsymbol{A_{100\times143}^{dust TE}}$	0.1343	0.134 ± 0.029	r_*	146.25	145.9 ± 2.0	f_{2000}^{217}	106.47	107.3 ± 2.0
$\boldsymbol{A_{100\times217}^{dust TE}}$	0.479	0.479 ± 0.085	$100\theta_*$	1.04162	1.04155 ± 0.00059	χ^2_{small}	396.37	397.2 ± 1.9
$\boldsymbol{A_{143}^{dust TE}}$	0.224	0.224 ± 0.055	$D_M(z_*)$/Gpc	14.041	14.01 ± 0.18	χ^2_{lowl}	22.08	22.2 ± 1.5
$\boldsymbol{A_{143\times217}^{dust TE}}$	0.664	0.661 ± 0.082	z_{drag}	1059.47	1059.60 ± 0.73	χ^2_{plik}	2344.7	2361.1 ± 6.2
$\boldsymbol{A_{217}^{dust TE}}$	2.071	2.06 ± 0.27	r_{drag}	148.95	148.6 ± 2.0	χ^2_{6DF}	0.070	0.095 ± 0.10
$\boldsymbol{c_{100}}$	0.99975	0.99969 ± 0.00061	k_D	0.13957	0.1399 ± 0.0014	χ^2_{MGS}	0.982	1.07 ± 0.44
$\boldsymbol{c_{217}}$	0.99820	0.99819 ± 0.00063	$100\theta_D$	0.160307	0.16038 ± 0.00047	$\chi^2_{DR12BAO}$	5.26	5.6 ± 2.0
H_0	66.59	66.8 ± 1.3	z_{eq}	3400.4	3399 ± 26	χ^2_{prior}	1.58	11.6 ± 4.6
Ω_Λ	0.6852	0.6857 ± 0.0072	k_{eq}	0.010255	$0.01028^{+0.00011}_{-0.00013}$	χ^2_{BAO}	6.31	6.8 ± 1.7
Ω_m	0.3148	0.3143 ± 0.0072	$100\theta_{eq}$	0.81369	0.8140 ± 0.0049	χ^2_{CMB}	2763.1	2780.6 ± 6.2
$\Omega_m h^2$	0.13957	$0.1402^{+0.0031}_{-0.0036}$	$100\theta_{s,eq}$	0.44962	0.4497 ± 0.0025			

Best-fit $\chi^2_{eff} = 2770.98$; $\Delta\chi^2_{eff} = -0.93$; $\bar{\chi}^2_{eff} = 2798.94$; $\Delta\bar{\chi}^2_{eff} = 1.03$; $R - 1 = 0.03824$

χ^2_{eff}: BAO - 6DF: 0.07 (Δ 0.04) MGS: 0.98 (Δ -0.24) DR12BAO: 5.26 (Δ 0.85) CMB - simall_100x143_offlike5_EE_Aplanck_B: 396.37 (Δ 0.16) commander_dx12_v3_2_29: 22.08 (Δ -0.79) plik_rd12_HM_v22b_TTTEEE: 2344.66 (Δ -0.85)

10.3 base_nnu_nrun_plikHM_TTTEEE_lowl_lowE_post_lensing

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022113	0.02216 ± 0.00022	$\Omega_m h^2$	0.13764	0.1385 ± 0.0033	$100\theta_{eq}$	0.8049	0.8060 ± 0.0069
$\boldsymbol{\Omega_c h^2}$	0.11489	0.1157 ± 0.0032	$\Omega_m h^3$	0.08913	0.0903 ± 0.0041	$100\theta_{s,eq}$	0.44518	0.4457 ± 0.0035
$\boldsymbol{100\theta_{MC}}$	1.041532	1.04144 ± 0.00048	σ_8	0.7952	0.797 ± 0.011	$H(0.15)$	70.08	70.5 ± 1.6
$\boldsymbol{\tau}$	0.0536	0.0540 ± 0.0074	S_8	0.8317	0.831 ± 0.013	$D_M(0.15)$	668.2	665 ± 15
$\boldsymbol{N_{eff}}$	2.672	2.73 ± 0.22	$\sigma_8 \Omega_m^{0.5}$	0.4556	0.4554 ± 0.0070	$H(0.38)$	80.22	80.6 ± 1.6
$\boldsymbol{\ln(10^{10} A_s)}$	3.0309	3.034 ± 0.017	$\sigma_8 \Omega_m^{0.25}$	0.6019	0.6025 ± 0.0072	$D_M(0.38)$	1589.5	1581 ± 35
$\boldsymbol{n_s}$	0.9494	0.950 ± 0.011	$\sigma_8/h^{0.5}$	0.9881	0.9876 ± 0.0090	$H(0.51)$	86.94	87.4 ± 1.6
$\boldsymbol{dn_s/d\ln k}$	-0.0098	-0.0111 ± 0.0079	$r_{drag} h$	97.61	97.8 ± 1.2	$D_M(0.51)$	2056.4	2046 ± 43
$\boldsymbol{y_{cal}}$	1.00027	1.0004 ± 0.0025	$\langle d^2 \rangle^{1/2}$	2.4525	2.450 ± 0.024	$H(0.61)$	92.54	93.0 ± 1.6
$\boldsymbol{A_{217}^{CIB}}$	45.6	47 ± 7	z_{re}	7.53	7.57 ± 0.74	$D_M(0.61)$	2390.7	2379 ± 49
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.68	—	$10^9 A_s$	2.0716	2.078 ± 0.035	$H(2.33)$	231.70	232.5 ± 2.9
$\boldsymbol{A_{143}^{tSZ}}$	6.95	5.2 ± 2.0	$10^9 A_s e^{-2\tau}$	1.8611	1.865 ± 0.018	$D_M(2.33)$	5928	5903 ± 98
$\boldsymbol{A_{100}^{PS}}$	247.2	261 ± 28	D_{40}	1225.8	1223 ± 19	$f\sigma_8(0.15)$	0.4587	0.4587 ± 0.0064
$\boldsymbol{A_{143}^{PS}}$	50.6	46 ± 8	D_{220}	5727.1	5731 ± 39	$\sigma_8(0.15)$	0.7332	0.735 ± 0.011
$\boldsymbol{A_{143\times217}^{PS}}$	53.1	42 ± 9	D_{810}	2538.1	2537 ± 14	$f\sigma_8(0.38)$	0.4730	0.4734 ± 0.0057
$\boldsymbol{A_{217}^{PS}}$	121.8	115 ± 10	D_{1420}	817.9	816.1 ± 5.0	$\sigma_8(0.38)$	0.6482	0.650 ± 0.010
$\boldsymbol{A^{kSZ}}$	0.00	< 4.56	D_{2000}	231.82	230.9 ± 1.9	$f\sigma_8(0.51)$	0.4697	0.4703 ± 0.0056
$\boldsymbol{A_{100}^{dust TT}}$	8.72	8.8 ± 1.8	$n_{s,0.002}$	0.9809	0.986 ± 0.021	$\sigma_8(0.51)$	0.6059	0.6078 ± 0.0098
$\boldsymbol{A_{143}^{dust TT}}$	10.90	10.8 ± 1.8	Y_P	0.24014	0.2410 ± 0.0031	$f\sigma_8(0.61)$	0.4636	0.4643 ± 0.0056
$\boldsymbol{A_{143\times217}^{dust TT}}$	20.00	18.5 ± 3.2	Y_P^{BBN}	0.24145	0.2423 ± 0.0031	$\sigma_8(0.61)$	0.5761	0.5779 ± 0.0095
$\boldsymbol{A_{217}^{dust TT}}$	95.4	93.5 ± 7.3	10^5D/H	2.503	2.515 ± 0.052	$f\sigma_8(2.33)$	0.2899	0.2909 ± 0.0050
$\boldsymbol{A_{100}^{dust TE}}$	0.1134	0.115 ± 0.038	Age/Gyr	14.188	14.13 ± 0.23	$\sigma_8(2.33)$	0.2981	0.2993 ± 0.0055
$\boldsymbol{A_{100\times143}^{dust TE}}$	0.1346	0.134 ± 0.030	z_*	1089.420	1089.49 ± 0.37	f_{2000}^{143}	28.30	29.9 ± 3.1
$\boldsymbol{A_{100\times217}^{dust TE}}$	0.479	0.482 ± 0.084	r_*	147.93	147.4 ± 2.1	$f_{2000}^{143\times217}$	31.60	32.4 ± 2.2
$\boldsymbol{A_{143}^{dust TE}}$	0.226	0.225 ± 0.054	$100\theta_*$	1.04198	1.04185 ± 0.00061	f_{2000}^{217}	106.09	107.1 ± 2.0
$\boldsymbol{A_{143\times217}^{dust TE}}$	0.664	0.665 ± 0.081	$D_M(z_*)$/Gpc	14.197	14.15 ± 0.19	$\chi^2_{lensing}$	8.63	9.17 ± 0.81
$\boldsymbol{A_{217}^{dust TE}}$	2.074	2.07 ± 0.27	z_{drag}	1058.67	1058.88 ± 0.84	χ^2_{simall}	395.91	396.8 ± 1.5
$\boldsymbol{c_{100}}$	0.99976	0.99971 ± 0.00061	r_{drag}	150.72	150.2 ± 2.2	χ^2_{lowl}	22.56	22.6 ± 1.5
$\boldsymbol{c_{217}}$	0.99817	0.99820 ± 0.00063	k_D	0.13837	0.1388 ± 0.0015	χ^2_{plik}	2343.4	2359.8 ± 5.9
H_0	64.76	65.2 ± 1.6	$100\theta_D$	0.159919	0.16004 ± 0.00050	χ^2_{prior}	1.39	11.4 ± 4.5
Ω_Λ	0.6718	0.673 ± 0.011	z_{eq}	3446.9	3441 ± 37	χ^2_{CMB}	2770.6	2788.4 ± 6.1
Ω_m	0.3282	0.327 ± 0.011	k_{eq}	0.010253	0.01028 ± 0.00011			

Best-fit $\chi^2_{eff} = 2771.94$; $\Delta\chi^2_{eff} = -2.70$; $\bar{\chi}^2_{eff} = 2799.77$; $\Delta\bar{\chi}^2_{eff} = -0.92$; $R - 1 = 0.01835$

χ^2_{eff}: CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.63 (Δ -0.24) simall_100x143_offlike5_EE_Aplanck_B: 395.92 (Δ -0.13) commander_dx12_v3_2_29: 22.56 (Δ -0.70) plik_rd12_HM_v22b_TTTEEE: 2343.45 (Δ -1.48)

10.4 base_nnu_nrun_plikHM_TTTEEE_lowl_lowE_post_BAO_lensing

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02235 ± 0.00018	$\Omega_m h^3$	$0.0934^{+0.0036}_{-0.0040}$	$H(0.15)$	71.9 ± 1.3
$\boldsymbol{\Omega_c h^2}$	$0.1169^{+0.0030}_{-0.0033}$	σ_8	0.803 ± 0.011	$D_M(0.15)$	650 ± 12
$\boldsymbol{100\theta_{MC}}$	1.04130 ± 0.00048	S_8	0.822 ± 0.011	$H(0.38)$	82.0 ± 1.3
$\boldsymbol{\tau}$	0.0571 ± 0.0072	$\sigma_8 \Omega_m^{0.5}$	0.4503 ± 0.0060	$D_M(0.38)$	1550 ± 27
$\boldsymbol{N_{eff}}$	2.89 ± 0.19	$\sigma_8 \Omega_m^{0.25}$	0.6012 ± 0.0073	$H(0.51)$	88.7 ± 1.3
$\boldsymbol{\ln(10^{10} A_s)}$	3.044 ± 0.016	$\sigma_8/h^{0.5}$	0.9830 ± 0.0084	$D_M(0.51)$	2007 ± 34
$\boldsymbol{n_s}$	0.9593 ± 0.0083	$r_{drag} h$	99.20 ± 0.84	$H(0.61)$	94.3 ± 1.4
$\boldsymbol{dn_s/d\ln k}$	-0.0077 ± 0.0075	$\langle d^2 \rangle^{1/2}$	2.434 ± 0.022	$D_M(0.61)$	2335 ± 39
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0025	z_{re}	7.88 ± 0.71	$H(2.33)$	234.0 ± 2.8
$\boldsymbol{A_{217}^{CIB}}$	47 ± 7	$10^9 A_s$	2.099 ± 0.034	$D_M(2.33)$	5826 ± 83
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$10^9 A_s e^{-2\tau}$	1.872 ± 0.017	$f\sigma_8(0.15)$	0.4546 ± 0.0058
$\boldsymbol{A_{143}^{tSZ}}$	5.3 ± 2.0	D_{40}	1220 ± 19	$\sigma_8(0.15)$	0.741 ± 0.010
$\boldsymbol{A_{100}^{PS}}$	261 ± 28	D_{220}	5741 ± 39	$f\sigma_8(0.38)$	0.4720 ± 0.0057
$\boldsymbol{A_{143}^{PS}}$	46 ± 8	D_{810}	2540 ± 14	$\sigma_8(0.38)$	0.6569 ± 0.0093
$\boldsymbol{A_{143\times217}^{PS}}$	42 ± 9	D_{1420}	817.2 ± 4.9	$f\sigma_8(0.51)$	0.4703 ± 0.0057
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	D_{2000}	231.0 ± 1.8	$\sigma_8(0.51)$	0.6146 ± 0.0089
$\boldsymbol{A^{kSZ}}$	< 4.62	$n_{s,0.002}$	0.984 ± 0.021	$f\sigma_8(0.61)$	0.4651 ± 0.0057
$\boldsymbol{A_{100}^{dust TT}}$	8.8 ± 1.8	Y_P	0.2432 ± 0.0027	$\sigma_8(0.61)$	0.5847 ± 0.0086
$\boldsymbol{A_{143}^{dust TT}}$	10.9 ± 1.7	Y_P^{BBN}	0.2445 ± 0.0027	$f\sigma_8(2.33)$	0.2947 ± 0.0045
$\boldsymbol{A_{143\times217}^{dust TT}}$	18.5 ± 3.2	10^5D/H	2.535 ± 0.051	$\sigma_8(2.33)$	0.3037 ± 0.0048
$\boldsymbol{A_{217}^{dust TT}}$	93.6 ± 7.3	Age/Gyr	13.95 ± 0.20	f_{2000}^{143}	29.9 ± 3.1
$\boldsymbol{A_{100}^{dust TE}}$	0.115 ± 0.038	z_*	1089.52 ± 0.37	$f_{2000}^{143\times217}$	32.4 ± 2.2
$\boldsymbol{A_{100\times143}^{dust TE}}$	0.134 ± 0.030	r_*	146.1 ± 1.9	f_{2000}^{217}	107.2 ± 2.0
$\boldsymbol{A_{100\times217}^{dust TE}}$	0.480 ± 0.084	$100\theta_*$	1.04159 ± 0.00059	$\chi^2_{lensing}$	9.09 ± 0.64
$\boldsymbol{A_{143}^{dust TE}}$	0.225 ± 0.055	$D_M(z_*)$/Gpc	14.03 ± 0.18	χ^2_{simall}	397.2 ± 1.8
$\boldsymbol{A_{143\times217}^{dust TE}}$	0.661 ± 0.081	z_{drag}	1059.53 ± 0.73	χ^2_{lowl}	22.4 ± 1.5
$\boldsymbol{A_{217}^{dust TE}}$	2.06 ± 0.27	r_{drag}	148.8 ± 2.0	χ^2_{plik}	2360.6 ± 6.1
$\boldsymbol{c_{100}}$	0.99970 ± 0.00061	k_D	0.1397 ± 0.0014	χ^2_{6DF}	0.099 ± 0.098
$\boldsymbol{c_{217}}$	0.99818 ± 0.00062	$100\theta_D$	0.16033 ± 0.00046	χ^2_{MGS}	1.04 ± 0.42
H_0	66.7 ± 1.3	z_{eq}	3401 ± 25	$\chi^2_{DR12BAO}$	5.7 ± 1.9
Ω_Λ	0.6853 ± 0.0070	k_{eq}	$0.01027^{+0.00011}_{-0.00012}$	χ^2_{prior}	11.5 ± 4.6
Ω_m	0.3147 ± 0.0070	$100\theta_{eq}$	0.8137 ± 0.0047	χ^2_{CMB}	2789.2 ± 6.2
$\Omega_m h^2$	$0.1399^{+0.0031}_{-0.0034}$	$100\theta_{s,eq}$	0.4496 ± 0.0024	χ^2_{BAO}	6.8 ± 1.7

$\bar{\chi}^2_{eff} = 2807.63$; $\Delta\bar{\chi}^2_{eff} = 0.78$; $R - 1 = 0.03868$

10.5 base_nnu_nrun_plikHM_TTTEEE_lowl_lowE_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02216 ± 0.00022	$\Omega_m h^2$	0.1390 ± 0.0034	$100\theta_{eq}$	0.8051 ± 0.0077
$\boldsymbol{\Omega_c h^2}$	0.1162 ± 0.0032	$\Omega_m h^3$	0.0906 ± 0.0042	$100\theta_{s,eq}$	0.4452 ± 0.0039
$\boldsymbol{100\theta_{MC}}$	1.04140 ± 0.00048	σ_8	0.800 ± 0.011	$H(0.15)$	70.5 ± 1.6
$\boldsymbol{\tau}$	$0.0559^{+0.0054}_{-0.0084}$	S_8	0.837 ± 0.016	$D_M(0.15)$	665 ± 16
$\boldsymbol{N_{eff}}$	2.75 ± 0.22	$\sigma_8 \Omega_m^{0.5}$	0.4582 ± 0.0089	$H(0.38)$	80.7 ± 1.6
$\boldsymbol{\ln(10^{10} A_s)}$	$3.039^{+0.015}_{-0.019}$	$\sigma_8 \Omega_m^{0.25}$	0.6056 ± 0.0087	$D_M(0.38)$	1581 ± 36
$\boldsymbol{n_s}$	0.950 ± 0.011	$\sigma_8/h^{0.5}$	0.992 ± 0.012	$H(0.51)$	87.4 ± 1.6
$\boldsymbol{dn_s/d\ln k}$	-0.0121 ± 0.0080	$r_{drag} h$	97.6 ± 1.4	$D_M(0.51)$	2045 ± 45
$\boldsymbol{y_{cal}}$	1.0004 ± 0.0025	$\langle d^2 \rangle^{1/2}$	2.457 ± 0.030	$H(0.61)$	93.1 ± 1.6
$\boldsymbol{A_{217}^{CIB}}$	47 ± 7	z_{re}	$7.78^{+0.58}_{-0.83}$	$D_M(0.61)$	2378 ± 51
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$10^9 A_s$	$2.089^{+0.031}_{-0.039}$	$H(2.33)$	232.9 ± 3.0
$\boldsymbol{A_{143}^{tSZ}}$	5.2 ± 2.0	$10^9 A_s e^{-2\tau}$	1.868 ± 0.018	$D_M(2.33)$	5898 ± 100
$\boldsymbol{A_{100}^{PS}}$	261 ± 28	D_{40}	1222 ± 19	$f\sigma_8(0.15)$	0.4614 ± 0.0082
$\boldsymbol{A_{143}^{PS}}$	47 ± 8	D_{220}	5729 ± 39	$\sigma_8(0.15)$	0.738 ± 0.011
$\boldsymbol{A_{143\times217}^{PS}}$	42 ± 9	D_{810}	2538 ± 14	$f\sigma_8(0.38)$	0.4758 ± 0.0069
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	D_{1420}	816.0 ± 5.0	$\sigma_8(0.38)$	0.652 ± 0.010
$\boldsymbol{A^{kSZ}}$	< 4.54	D_{2000}	230.8 ± 1.9	$f\sigma_8(0.51)$	0.4726 ± 0.0065
$\boldsymbol{A_{100}^{dust TT}}$	8.8 ± 1.8	$n_{s,0.002}$	0.989 ± 0.021	$\sigma_8(0.51)$	0.6099 ± 0.0098
$\boldsymbol{A_{143}^{dust TT}}$	10.8 ± 1.8	Y_P	0.2412 ± 0.0031	$f\sigma_8(0.61)$	0.4664 ± 0.0063
$\boldsymbol{A_{143\times217}^{dust TT}}$	18.5 ± 3.3	Y_P^{BBN}	0.2425 ± 0.0031	$\sigma_8(0.61)$	0.5799 ± 0.0094
$\boldsymbol{A_{217}^{dust TT}}$	93.6 ± 7.3	10^5D/H	2.519 ± 0.053	$f\sigma_8(2.33)$	0.2918 ± 0.0050
$\boldsymbol{A_{100}^{dust TE}}$	0.114 ± 0.038	Age/Gyr	14.12 ± 0.24	$\sigma_8(2.33)$	0.3002 ± 0.0054
$\boldsymbol{A_{100\times143}^{dust TE}}$	0.134 ± 0.030	z_*	1089.55 ± 0.38	f_{2000}^{143}	30.1 ± 3.1
$\boldsymbol{A_{100\times217}^{dust TE}}$	0.481 ± 0.085	r_*	147.2 ± 2.1	$f_{2000}^{143\times217}$	32.5 ± 2.2
$\boldsymbol{A_{143}^{dust TE}}$	0.224 ± 0.054	$100\theta_*$	1.04180 ± 0.00061	f_{2000}^{217}	107.3 ± 2.0
$\boldsymbol{A_{143\times217}^{dust TE}}$	0.665 ± 0.081	$D_M(z_*)$/Gpc	14.13 ± 0.20	χ^2_{simall}	397.0 ± 1.8
$\boldsymbol{A_{217}^{dust TE}}$	2.08 ± 0.27	z_{drag}	1058.94 ± 0.85	χ^2_{lowl}	22.5 ± 1.5
$\boldsymbol{c_{100}}$	0.99971 ± 0.00062	r_{drag}	149.9 ± 2.2	χ^2_{plik}	2360.0 ± 6.1
$\boldsymbol{c_{217}}$	0.99821 ± 0.00063	k_D	0.1390 ± 0.0015	χ^2_{prior}	11.4 ± 4.5
H_0	65.1 ± 1.7	$100\theta_D$	0.16007 ± 0.00050	χ^2_{CMB}	2779.5 ± 6.0
Ω_Λ	0.672 ± 0.012	z_{eq}	3447 ± 42		
Ω_m	0.328 ± 0.012	k_{eq}	0.01030 ± 0.00012		

$\bar{\chi}^2_{eff} = 2790.91$; $\Delta\bar{\chi}^2_{eff} = -0.63$; $R - 1 = 0.01332$

10.6 base_nnu_nrun_plikHM_TTTEEE_lowl_lowE_post_BAO_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02236 ± 0.00018	$\Omega_m h^3$	$0.0937^{+0.0035}_{-0.0041}$	$H(0.15)$	72.1 ± 1.3
$\boldsymbol{\Omega_c h^2}$	$0.1172^{+0.0030}_{-0.0035}$	σ_8	0.803 ± 0.012	$D_M(0.15)$	649 ± 12
$\boldsymbol{100\theta_{MC}}$	1.04128 ± 0.00048	S_8	0.822 ± 0.013	$H(0.38)$	82.1 ± 1.3
$\boldsymbol{\tau}$	$0.0573^{+0.0062}_{-0.0080}$	$\sigma_8 \Omega_m^{0.5}$	0.4503 ± 0.0072	$D_M(0.38)$	1547 ± 27
$\boldsymbol{N_{eff}}$	$2.91^{+0.18}_{-0.21}$	$\sigma_8 \Omega_m^{0.25}$	0.6015 ± 0.0085	$H(0.51)$	88.8 ± 1.4
$\boldsymbol{\ln(10^{10} A_s)}$	$3.045^{+0.015}_{-0.019}$	$\sigma_8/h^{0.5}$	0.983 ± 0.010	$D_M(0.51)$	2003 ± 34
$\boldsymbol{n_s}$	0.9602 ± 0.0083	$r_{drag} h$	99.26 ± 0.87	$H(0.61)$	94.4 ± 1.4
$\boldsymbol{dn_s/d\ln k}$	-0.0081 ± 0.0075	$\langle d^2 \rangle^{1/2}$	2.432 ± 0.025	$D_M(0.61)$	2331 ± 39
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0025	z_{re}	$7.90^{+0.64}_{-0.80}$	$H(2.33)$	$234.2^{+2.7}_{-3.0}$
$\boldsymbol{A_{217}^{CIB}}$	47 ± 7	$10^9 A_s$	$2.100^{+0.032}_{-0.039}$	$D_M(2.33)$	5818 ± 84
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$10^9 A_s e^{-2\tau}$	1.873 ± 0.018	$f\sigma_8(0.15)$	0.4547 ± 0.0070
$\boldsymbol{A_{143}^{tSZ}}$	5.2 ± 2.0	D_{40}	1217 ± 19	$\sigma_8(0.15)$	0.742 ± 0.011
$\boldsymbol{A_{100}^{PS}}$	262 ± 28	D_{220}	5737 ± 39	$f\sigma_8(0.38)$	0.4723 ± 0.0067
$\boldsymbol{A_{143}^{PS}}$	47 ± 8	D_{810}	2539 ± 14	$\sigma_8(0.38)$	0.6576 ± 0.0099
$\boldsymbol{A_{143\times217}^{PS}}$	42 ± 9	D_{1420}	816.9 ± 4.8	$f\sigma_8(0.51)$	0.4706 ± 0.0065
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	D_{2000}	230.8 ± 1.8	$\sigma_8(0.51)$	0.6153 ± 0.0094
$\boldsymbol{A^{kSZ}}$	< 4.70	$n_{s,0.002}$	0.986 ± 0.021	$f\sigma_8(0.61)$	0.4654 ± 0.0065
$\boldsymbol{A_{100}^{dust TT}}$	8.8 ± 1.8	Y_P	0.2435 ± 0.0027	$\sigma_8(0.61)$	0.5854 ± 0.0090
$\boldsymbol{A_{143}^{dust TT}}$	10.9 ± 1.8	Y_P^{BBN}	0.2448 ± 0.0027	$f\sigma_8(2.33)$	0.2951 ± 0.0046
$\boldsymbol{A_{143\times217}^{dust TT}}$	18.6 ± 3.2	10^5D/H	2.539 ± 0.052	$\sigma_8(2.33)$	0.3041 ± 0.0049
$\boldsymbol{A_{217}^{dust TT}}$	93.6 ± 7.3	Age/Gyr	13.93 ± 0.20	f_{2000}^{143}	30.1 ± 3.1
$\boldsymbol{A_{100}^{dust TE}}$	0.115 ± 0.038	z_*	1089.54 ± 0.38	$f_{2000}^{143\times217}$	32.6 ± 2.2
$\boldsymbol{A_{100\times143}^{dust TE}}$	0.134 ± 0.030	r_*	145.9 ± 1.9	f_{2000}^{217}	107.3 ± 2.0
$\boldsymbol{A_{100\times217}^{dust TE}}$	0.479 ± 0.085	$100\theta_*$	1.04155 ± 0.00059	χ^2_{simall}	397.2 ± 1.9
$\boldsymbol{A_{143}^{dust TE}}$	0.224 ± 0.055	$D_M(z_*)$/Gpc	14.01 ± 0.18	χ^2_{lowl}	22.2 ± 1.5
$\boldsymbol{A_{143\times217}^{dust TE}}$	0.661 ± 0.082	z_{drag}	1059.60 ± 0.73	χ^2_{plik}	2361.0 ± 6.2
$\boldsymbol{A_{217}^{dust TE}}$	2.06 ± 0.27	r_{drag}	148.6 ± 2.0	χ^2_{6DF}	0.094 ± 0.099
$\boldsymbol{c_{100}}$	0.99970 ± 0.00062	k_D	0.1398 ± 0.0014	χ^2_{MGS}	1.08 ± 0.44
$\boldsymbol{c_{217}}$	0.99819 ± 0.00063	$100\theta_D$	0.16037 ± 0.00047	$\chi^2_{DR12BAO}$	5.6 ± 2.0
H_0	66.8 ± 1.3	z_{eq}	3399 ± 26	χ^2_{prior}	11.6 ± 4.6
Ω_Λ	0.6858 ± 0.0072	k_{eq}	$0.01028^{+0.00011}_{-0.00013}$	χ^2_{BAO}	6.8 ± 1.7
Ω_m	0.3142 ± 0.0072	$100\theta_{eq}$	0.8140 ± 0.0049	χ^2_{CMB}	2780.4 ± 6.1
$\Omega_m h^2$	$0.1402^{+0.0031}_{-0.0036}$	$100\theta_{s,eq}$	0.4498 ± 0.0025		

$\bar{\chi}^2_{eff} = 2798.78$; $\Delta\bar{\chi}^2_{eff} = 1.06$; $R - 1 = 0.04433$

10.7 base_nnu_nrun_plikHM_TTTEEE_lowl_lowE_post_lensing_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02217 ± 0.00022	$\Omega_m h^2$	0.1385 ± 0.0033	$100\theta_{eq}$	0.8064 ± 0.0069
$\boldsymbol{\Omega_c h^2}$	0.1157 ± 0.0032	$\Omega_m h^3$	0.0904 ± 0.0041	$100\theta_{s,eq}$	0.4459 ± 0.0035
$\boldsymbol{100\theta_{MC}}$	1.04145 ± 0.00048	σ_8	0.798 ± 0.011	$H(0.15)$	70.5 ± 1.6
$\boldsymbol{\tau}$	$0.0551^{+0.0051}_{-0.0077}$	S_8	0.832 ± 0.013	$D_M(0.15)$	664 ± 15
$\boldsymbol{N_{eff}}$	2.73 ± 0.22	$\sigma_8 \Omega_m^{0.5}$	0.4555 ± 0.0070	$H(0.38)$	80.7 ± 1.6
$\boldsymbol{\ln(10^{10} A_s)}$	$3.036^{+0.014}_{-0.017}$	$\sigma_8 \Omega_m^{0.25}$	0.6028 ± 0.0072	$D_M(0.38)$	1580 ± 34
$\boldsymbol{n_s}$	0.950 ± 0.010	$\sigma_8/h^{0.5}$	0.9881 ± 0.0089	$H(0.51)$	87.4 ± 1.6
$\boldsymbol{dn_s/d\ln k}$	-0.0112 ± 0.0079	$r_{drag} h$	97.9 ± 1.2	$D_M(0.51)$	2045 ± 43
$\boldsymbol{y_{cal}}$	1.0004 ± 0.0025	$\langle d^2 \rangle^{1/2}$	2.451 ± 0.024	$H(0.61)$	93.0 ± 1.6
$\boldsymbol{A_{217}^{CIB}}$	47 ± 7	z_{re}	$7.69^{+0.54}_{-0.77}$	$D_M(0.61)$	2377 ± 49
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$10^9 A_s$	$2.082^{+0.029}_{-0.035}$	$H(2.33)$	232.5 ± 2.9
$\boldsymbol{A_{143}^{tSZ}}$	5.2 ± 2.0	$10^9 A_s e^{-2\tau}$	1.865 ± 0.018	$D_M(2.33)$	5901 ± 98
$\boldsymbol{A_{100}^{PS}}$	261 ± 28	D_{40}	1223 ± 18	$f\sigma_8(0.15)$	0.4588 ± 0.0065
$\boldsymbol{A_{143}^{PS}}$	46 ± 8	D_{220}	5731 ± 38	$\sigma_8(0.15)$	0.736 ± 0.010
$\boldsymbol{A_{143\times217}^{PS}}$	42 ± 9	D_{810}	2537 ± 14	$f\sigma_8(0.38)$	0.4736 ± 0.0057
$\boldsymbol{A_{217}^{PS}}$	114 ± 10	D_{1420}	816.1 ± 5.0	$\sigma_8(0.38)$	0.6508 ± 0.0099
$\boldsymbol{A^{kSZ}}$	< 4.53	D_{2000}	230.9 ± 1.8	$f\sigma_8(0.51)$	0.4706 ± 0.0055
$\boldsymbol{A_{100}^{dust TT}}$	8.8 ± 1.8	$n_{s,0.002}$	0.986 ± 0.021	$\sigma_8(0.51)$	0.6085 ± 0.0095
$\boldsymbol{A_{143}^{dust TT}}$	10.8 ± 1.8	Y_P	0.2410 ± 0.0031	$f\sigma_8(0.61)$	0.4646 ± 0.0055
$\boldsymbol{A_{143\times217}^{dust TT}}$	18.5 ± 3.2	Y_P^{BBN}	0.2423 ± 0.0031	$\sigma_8(0.61)$	0.5786 ± 0.0092
$\boldsymbol{A_{217}^{dust TT}}$	93.5 ± 7.3	10^5D/H	2.514 ± 0.052	$f\sigma_8(2.33)$	0.2912 ± 0.0049
$\boldsymbol{A_{100}^{dust TE}}$	0.115 ± 0.038	Age/Gyr	14.12 ± 0.23	$\sigma_8(2.33)$	0.2997 ± 0.0054
$\boldsymbol{A_{100\times143}^{dust TE}}$	0.134 ± 0.030	z_*	1089.48 ± 0.37	f_{2000}^{143}	29.9 ± 3.1
$\boldsymbol{A_{100\times217}^{dust TE}}$	0.481 ± 0.084	r_*	147.4 ± 2.1	$f_{2000}^{143\times217}$	32.4 ± 2.2
$\boldsymbol{A_{143}^{dust TE}}$	0.225 ± 0.055	$100\theta_*$	1.04185 ± 0.00061	f_{2000}^{217}	107.1 ± 2.0
$\boldsymbol{A_{143\times217}^{dust TE}}$	0.665 ± 0.081	$D_M(z_*)$/Gpc	14.14 ± 0.19	$\chi^2_{lensing}$	9.18 ± 0.82
$\boldsymbol{A_{217}^{dust TE}}$	2.07 ± 0.27	z_{drag}	1058.90 ± 0.83	χ^2_{simall}	396.8 ± 1.5
$\boldsymbol{c_{100}}$	0.99971 ± 0.00061	r_{drag}	150.1 ± 2.2	χ^2_{lowl}	22.6 ± 1.5
$\boldsymbol{c_{217}}$	0.99821 ± 0.00063	k_D	0.1388 ± 0.0015	χ^2_{plik}	2359.6 ± 5.9
H_0	65.2 ± 1.6	$100\theta_D$	0.16004 ± 0.00050	χ^2_{prior}	11.4 ± 4.5
Ω_Λ	0.674 ± 0.011	z_{eq}	3440 ± 37	χ^2_{CMB}	2788.2 ± 6.0
Ω_m	0.326 ± 0.011	k_{eq}	0.01027 ± 0.00011		

$\bar{\chi}^2_{eff} = 2799.54$; $\Delta\bar{\chi}^2_{eff} = -0.96$; $R - 1 = 0.01748$

10.8 base_nnu_nrun_plikHM_TTTEEE_lowl_lowE_post_BAO_lensing_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02235 ± 0.00018	$\Omega_m h^3$	$0.0933^{+0.0036}_{-0.0040}$	$H(0.15)$	72.0 ± 1.3
$\boldsymbol{\Omega_c h^2}$	$0.1169^{+0.0030}_{-0.0033}$	σ_8	0.803 ± 0.011	$D_M(0.15)$	650 ± 12
$\boldsymbol{100\theta_{MC}}$	1.04130 ± 0.00048	S_8	0.822 ± 0.011	$H(0.38)$	82.0 ± 1.3
$\boldsymbol{\tau}$	$0.0575^{+0.0063}_{-0.0074}$	$\sigma_8 \Omega_m^{0.5}$	0.4503 ± 0.0060	$D_M(0.38)$	1550 ± 27
$\boldsymbol{N_{eff}}$	2.89 ± 0.19	$\sigma_8 \Omega_m^{0.25}$	0.6013 ± 0.0073	$H(0.51)$	88.7 ± 1.3
$\boldsymbol{\ln(10^{10} A_s)}$	$3.045^{+0.015}_{-0.016}$	$\sigma_8/h^{0.5}$	0.9832 ± 0.0083	$D_M(0.51)$	2007 ± 34
$\boldsymbol{n_s}$	0.9593 ± 0.0083	$r_{drag} h$	99.21 ± 0.84	$H(0.61)$	94.3 ± 1.4
$\boldsymbol{dn_s/d\ln k}$	-0.0078 ± 0.0075	$\langle d^2 \rangle^{1/2}$	2.435 ± 0.022	$D_M(0.61)$	2335 ± 39
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0025	z_{re}	$7.92^{+0.64}_{-0.73}$	$H(2.33)$	234.0 ± 2.8
$\boldsymbol{A_{217}^{CIB}}$	47 ± 7	$10^9 A_s$	$2.100^{+0.030}_{-0.035}$	$D_M(2.33)$	5826 ± 83
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$10^9 A_s e^{-2\tau}$	1.872 ± 0.017	$f\sigma_8(0.15)$	0.4546 ± 0.0058
$\boldsymbol{A_{143}^{tSZ}}$	5.3 ± 2.0	D_{40}	1219 ± 19	$\sigma_8(0.15)$	0.742 ± 0.010
$\boldsymbol{A_{100}^{PS}}$	261 ± 28	D_{220}	5741 ± 39	$f\sigma_8(0.38)$	0.4721 ± 0.0057
$\boldsymbol{A_{143}^{PS}}$	46 ± 8	D_{810}	2539 ± 14	$\sigma_8(0.38)$	0.6571 ± 0.0093
$\boldsymbol{A_{143\times217}^{PS}}$	42 ± 9	D_{1420}	817.1 ± 4.8	$f\sigma_8(0.51)$	0.4704 ± 0.0057
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	D_{2000}	231.0 ± 1.8	$\sigma_8(0.51)$	0.6148 ± 0.0088
$\boldsymbol{A^{kSZ}}$	< 4.61	$n_{s,0.002}$	0.984 ± 0.021	$f\sigma_8(0.61)$	0.4652 ± 0.0057
$\boldsymbol{A_{100}^{dustTT}}$	8.8 ± 1.8	Y_P	0.2432 ± 0.0027	$\sigma_8(0.61)$	0.5849 ± 0.0085
$\boldsymbol{A_{143}^{dustTT}}$	10.9 ± 1.7	Y_P^{BBN}	0.2445 ± 0.0027	$f\sigma_8(2.33)$	0.2948 ± 0.0044
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.6 ± 3.2	10^5D/H	2.535 ± 0.051	$\sigma_8(2.33)$	0.3038 ± 0.0048
$\boldsymbol{A_{217}^{dustTT}}$	93.6 ± 7.3	Age/Gyr	13.95 ± 0.20	f_{2000}^{143}	29.9 ± 3.1
$\boldsymbol{A_{100}^{dustTE}}$	0.115 ± 0.038	z_*	1089.52 ± 0.37	$f_{2000}^{143\times217}$	32.4 ± 2.2
$\boldsymbol{A_{100\times143}^{dustTE}}$	0.134 ± 0.030	r_*	146.1 ± 1.9	f_{2000}^{217}	107.2 ± 2.0
$\boldsymbol{A_{100\times217}^{dustTE}}$	0.479 ± 0.084	$100\theta_*$	1.04159 ± 0.00059	$\chi^2_{lensing}$	9.07 ± 0.62
$\boldsymbol{A_{143}^{dustTE}}$	0.224 ± 0.055	$D_M(z_*)$/Gpc	14.03 ± 0.18	χ^2_{simall}	397.2 ± 1.8
$\boldsymbol{A_{143\times217}^{dustTE}}$	0.661 ± 0.081	z_{drag}	1059.53 ± 0.72	χ^2_{lowl}	22.4 ± 1.5
$\boldsymbol{A_{217}^{dustTE}}$	2.06 ± 0.27	r_{drag}	148.8 ± 2.0	χ^2_{plik}	2360.5 ± 6.1
$\boldsymbol{c_{100}}$	0.99970 ± 0.00061	k_D	0.1397 ± 0.0014	χ^2_{6DF}	0.097 ± 0.096
$\boldsymbol{c_{217}}$	0.99818 ± 0.00062	$100\theta_D$	0.16033 ± 0.00046	χ^2_{MGS}	1.05 ± 0.42
H_0	66.7 ± 1.3	z_{eq}	3401 ± 25	$\chi^2_{DR12BAO}$	5.7 ± 1.9
Ω_Λ	0.6853 ± 0.0069	k_{eq}	$0.01027^{+0.00011}_{-0.00012}$	χ^2_{prior}	11.5 ± 4.6
Ω_m	0.3147 ± 0.0069	$100\theta_{eq}$	0.8137 ± 0.0047	χ^2_{CMB}	2789.2 ± 6.2
$\Omega_m h^2$	0.1399 ± 0.0033	$100\theta_{s,eq}$	0.4496 ± 0.0024	χ^2_{BAO}	6.8 ± 1.6

$\bar{\chi}^2_{eff} = 2807.49$; $\Delta\bar{\chi}^2_{eff} = 0.77$; $R - 1 = 0.04192$

11 nnu+yhe

11.1 base_nnu_yhe_plikHM_TT_lowl_lowE

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.021996	0.02207 ± 0.00032	S_8	0.8463	0.841 ± 0.025	$100\theta_{s,eq}$	0.4442	0.4467 ± 0.0075
$\boldsymbol{\Omega_c h^2}$	0.1168	$0.1190^{+0.0063}_{-0.0083}$	$\sigma_8\Omega_m^{0.5}$	0.4635	0.461 ± 0.014	$H(0.15)$	70.22	$71.5^{+3.0}_{-3.6}$
$\boldsymbol{100\theta_{MC}}$	1.04151	1.0413 ± 0.0020	$\sigma_8\Omega_m^{0.25}$	0.6107	0.610 ± 0.012	$D_M(0.15)$	667.1	657 ± 32
$\boldsymbol{\tau}$	0.0521	0.0516 ± 0.0081	$\sigma_8/h^{0.5}$	0.9994	0.994 ± 0.017	$H(0.38)$	80.47	$81.7^{+3.0}_{-3.6}$
$\boldsymbol{N_{eff}}$	2.74	$2.92^{+0.44}_{-0.58}$	$r_{drag}h$	97.18	98.0 ± 2.4	$D_M(0.38)$	1586	1562 ± 71
$\boldsymbol{Y_P}$	0.2526	$0.251^{+0.033}_{-0.029}$	$\langle d^2\rangle^{1/2}$	2.4737	2.459 ± 0.046	$H(0.51)$	87.25	$88.5^{+3.0}_{-3.7}$
$\boldsymbol{\ln(10^{10}A_s)}$	3.0334	3.036 ± 0.023	z_{re}	7.50	7.44 ± 0.85	$D_M(0.51)$	2051	2022 ± 89
$\boldsymbol{n_s}$	0.9561	0.960 ± 0.014	$10^9 A_s$	2.0768	2.082 ± 0.047	$H(0.61)$	92.91	$94.1^{+3.1}_{-3.8}$
$\boldsymbol{y_{cal}}$	1.00053	1.0005 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.8713	1.878 ± 0.027	$D_M(0.61)$	2384	2351 ± 100
$\boldsymbol{A_{217}^{CIB}}$	47.0	48 ± 7	D_{40}	1240.3	1236 ± 23	$H(2.33)$	233.1	$235.1^{+5.7}_{-7.2}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.57	—	D_{220}	5708.2	5712 ± 42	$D_M(2.33)$	5903	5837 ± 210
$\boldsymbol{A_{143}^{tSZ}}$	6.89	5.0 ± 2.0	D_{810}	2537.2	2536 ± 14	$f\sigma_8(0.15)$	0.4664	0.464 ± 0.012
$\boldsymbol{A_{100}^{PS}}$	250.5	264 ± 29	D_{1420}	816.5	814.3 ± 5.3	$\sigma_8(0.15)$	0.7417	0.745 ± 0.017
$\boldsymbol{A_{143}^{PS}}$	51.7	50 ± 9	D_{2000}	230.78	229.5 ± 2.4	$f\sigma_8(0.38)$	0.4801	0.4790 ± 0.0098
$\boldsymbol{A_{143\times217}^{PS}}$	52.6	44 ± 9	$n_{s,0.002}$	0.9561	0.960 ± 0.014	$\sigma_8(0.38)$	0.6553	0.659 ± 0.016
$\boldsymbol{A_{217}^{PS}}$	121.7	115 ± 10	Y_P	0.2526	$0.251^{+0.033}_{-0.029}$	$f\sigma_8(0.51)$	0.4763	0.4761 ± 0.0091
$\boldsymbol{A^{kSZ}}$	0.01	< 4.96	Y_P^{BBN}	0.2540	$0.253^{+0.033}_{-0.029}$	$\sigma_8(0.51)$	0.6124	0.616 ± 0.015
$\boldsymbol{A_{100}^{dustTT}}$	8.82	8.9 ± 1.8	Age/Gyr	14.127	13.97 ± 0.49	$f\sigma_8(0.61)$	0.4698	0.4701 ± 0.0088
$\boldsymbol{A_{143}^{dustTT}}$	10.74	10.7 ± 1.8	z_*	1090.28	1090.41 ± 0.72	$\sigma_8(0.61)$	0.5822	0.586 ± 0.015
$\boldsymbol{A_{143\times217}^{dustTT}}$	19.63	18.3 ± 3.3	r_*	147.06	$145.7^{+4.8}_{-4.3}$	$f\sigma_8(2.33)$	0.2928	0.2950 ± 0.0080
$\boldsymbol{A_{217}^{dustTT}}$	95.0	93.4 ± 7.3	$100\theta_*$	1.04163	1.0414 ± 0.0014	$\sigma_8(2.33)$	0.3010	0.3037 ± 0.0089
$\boldsymbol{c_{100}}$	0.99965	0.99960 ± 0.00062	$D_M(z_*)$/Gpc	14.118	$13.99^{+0.44}_{-0.40}$	f_{2000}^{143}	29.44	31 ± 4
$\boldsymbol{c_{217}}$	0.99824	0.99826 ± 0.00062	z_{drag}	1058.98	1059.3 ± 1.2	$f_{2000}^{143\times217}$	32.67	33.8 ± 2.8
H_0	64.84	$66.1^{+3.0}_{-3.6}$	r_{drag}	149.89	$148.5^{+4.9}_{-4.4}$	f_{2000}^{217}	107.11	108.3 ± 2.6
Ω_Λ	0.6682	$0.675^{+0.021}_{-0.019}$	k_D	0.13838	$0.1395^{+0.0037}_{-0.0046}$	χ^2_{simall}	395.90	396.9 ± 1.6
Ω_m	0.3318	0.325 ± 0.020	$100\theta_D$	0.16080	0.16110 ± 0.00075	χ^2_{lowl}	24.59	24.3 ± 2.3
$\Omega_m h^2$	0.1395	$0.1417^{+0.0063}_{-0.0084}$	z_{eq}	3457	3432 ± 84	χ^2_{plik}	757.4	772.6 ± 6.1
$\Omega_m h^3$	0.0904	$0.0938^{+0.0076}_{-0.011}$	k_{eq}	0.010337	$0.01037^{+0.00019}_{-0.00024}$	χ^2_{prior}	1.26	7.3 ± 3.6
σ_8	0.8047	0.808 ± 0.017	$100\theta_{eq}$	0.8028	0.808 ± 0.015	χ^2_{CMB}	1177.9	1193.8 ± 5.9

Best-fit $\chi^2_{eff} = 1179.18$; $\Delta\chi^2_{eff} = -0.40$; $\bar{\chi}^2_{eff} = 1201.13$; $\Delta\bar{\chi}^2_{eff} = 1.55$; $R - 1 = 0.01463$

χ^2_{eff}: CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.90 (Δ 0.02) commander_dx12_v3_2_29: 24.59 (Δ 0.99) plik_rd12_HM_v22_TT: 757.43 (Δ -1.32)

11.2 base_nnu_yhe_plikHM_TT_lowl_lowE_post_BAO

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022258	0.02226 ± 0.00024	$\sigma_8\Omega_m^{0.25}$	0.6026	0.606 ± 0.011	$D_M(0.38)$	1526.0	1516 ± 47
$\boldsymbol{\Omega_c h^2}$	0.1192	$0.1212^{+0.0062}_{-0.0081}$	$\sigma_8/h^{0.5}$	0.9814	0.983 ± 0.012	$H(0.51)$	89.83	$90.5^{+2.3}_{-2.9}$
$\boldsymbol{100\theta_{MC}}$	1.04105	1.0408 ± 0.0019	$r_{drag}h$	99.88	99.9 ± 1.1	$D_M(0.51)$	1977	1964 ± 60
$\boldsymbol{\tau}$	0.0533	0.0539 ± 0.0079	$\langle d^2\rangle^{1/2}$	2.4231	2.426 ± 0.028	$H(0.61)$	95.44	$96.1^{+2.4}_{-3.0}$
$\boldsymbol{N_{eff}}$	3.065	$3.18^{+0.39}_{-0.51}$	z_{re}	7.60	7.66 ± 0.82	$D_M(0.61)$	2301	2286 ± 69
$\boldsymbol{Y_P}$	0.2473	$0.245^{+0.033}_{-0.029}$	$10^9 A_s$	2.0910	2.100 ± 0.042	$H(2.33)$	236.0	$237.6^{+5.4}_{-6.7}$
$\boldsymbol{\ln(10^{10}A_s)}$	3.0402	3.044 ± 0.020	$10^9 A_s e^{-2\tau}$	1.8797	1.886 ± 0.024	$D_M(2.33)$	5757	5721^{+170}_{-150}
$\boldsymbol{n_s}$	0.9685	0.9697 ± 0.0087	D_{40}	1221.8	1222 ± 17	$f\sigma_8(0.15)$	0.4541	0.4562 ± 0.0090
$\boldsymbol{y_{cal}}$	1.00045	1.0006 ± 0.0025	D_{220}	5718.4	5719 ± 41	$\sigma_8(0.15)$	0.7469	0.751 ± 0.015
$\boldsymbol{A_{217}^{CIB}}$	50.2	48 ± 7	D_{810}	2537.1	2537 ± 14	$f\sigma_8(0.38)$	0.4729	0.4752 ± 0.0089
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.11	—	D_{1420}	815.9	814.8 ± 5.4	$\sigma_8(0.38)$	0.6623	0.666 ± 0.014
$\boldsymbol{A_{143}^{tSZ}}$	7.13	5.0 ± 2.0	D_{2000}	229.94	229.3 ± 2.4	$f\sigma_8(0.51)$	0.4718	0.4741 ± 0.0089
$\boldsymbol{A_{100}^{PS}}$	256.4	266 ± 29	$n_{s,0.002}$	0.9685	0.9697 ± 0.0087	$\sigma_8(0.51)$	0.6199	0.623 ± 0.013
$\boldsymbol{A_{143}^{PS}}$	46.6	50 ± 9	Y_P	0.2473	$0.245^{+0.033}_{-0.029}$	$f\sigma_8(0.61)$	0.4670	0.4694 ± 0.0088
$\boldsymbol{A_{143\times217}^{PS}}$	41.4	44^{+9}_{-10}	Y_P^{BBN}	0.2487	$0.246^{+0.033}_{-0.029}$	$\sigma_8(0.61)$	0.5899	0.593 ± 0.013
$\boldsymbol{A_{217}^{PS}}$	116.9	115 ± 10	Age/Gyr	13.782	$13.70^{+0.40}_{-0.36}$	$f\sigma_8(2.33)$	0.2975	0.2993 ± 0.0064
$\boldsymbol{A^{kSZ}}$	0.00	< 5.09	z_*	1090.08	1090.21 ± 0.68	$\sigma_8(2.33)$	0.3068	0.3087 ± 0.0069
$\boldsymbol{A_{100}^{dustTT}}$	8.95	9.0 ± 1.8	r_*	144.62	$143.7^{+4.1}_{-3.7}$	f_{2000}^{143}	30.68	32 ± 4
$\boldsymbol{A_{143}^{dustTT}}$	10.80	10.8 ± 1.8	$100\theta_*$	1.04118	1.0409 ± 0.0013	$f_{2000}^{143\times217}$	33.37	34.0 ± 2.9
$\boldsymbol{A_{143\times217}^{dustTT}}$	19.14	18.4 ± 3.3	$D_M(z_*)$/Gpc	13.890	$13.81^{+0.38}_{-0.34}$	f_{2000}^{217}	107.90	108.4 ± 2.6
$\boldsymbol{A_{217}^{dustTT}}$	94.1	93.4 ± 7.4	z_{drag}	1059.70	1059.8 ± 1.1	χ^2_{simall}	395.88	397.0 ± 1.8
$\boldsymbol{c_{100}}$	0.99964	0.99962 ± 0.00061	r_{drag}	147.32	$146.4^{+4.2}_{-3.8}$	χ^2_{lowl}	22.69	22.8 ± 1.3
$\boldsymbol{c_{217}}$	0.99827	0.99828 ± 0.00062	k_D	0.14040	$0.1412^{+0.0034}_{-0.0042}$	χ^2_{plik}	760.2	774.2 ± 5.9
H_0	67.80	$68.3^{+2.0}_{-2.4}$	$100\theta_D$	0.16110	0.16125 ± 0.00074	χ^2_{6DF}	0.0154	0.059 ± 0.080
Ω_Λ	0.6908	0.6913 ± 0.0086	z_{eq}	3372.3	3368 ± 44	χ^2_{MGS}	1.34	1.45 ± 0.60
Ω_m	0.3092	0.3087 ± 0.0086	k_{eq}	0.010306	$0.01037^{+0.00020}_{-0.00025}$	$\chi^2_{DR12BAO}$	4.04	4.7 ± 1.6
$\Omega_m h^2$	0.1421	$0.1441^{+0.0062}_{-0.0081}$	$100\theta_{eq}$	0.8185	0.8192 ± 0.0074	χ^2_{prior}	1.52	7.3 ± 3.6
$\Omega_m h^3$	0.0964	$0.0986^{+0.0066}_{-0.0091}$	$100\theta_{s,eq}$	0.45217	0.4525 ± 0.0038	χ^2_{BAO}	5.39	6.2 ± 1.4
σ_8	0.8080	0.813 ± 0.016	$H(0.15)$	73.06	$73.6^{+2.1}_{-2.5}$	χ^2_{CMB}	1178.8	1194.0 ± 5.9
S_8	0.8204	0.824 ± 0.017	$D_M(0.15)$	639.6	635 ± 20			
$\sigma_8\Omega_m^{0.5}$	0.4493	0.4514 ± 0.0092	$H(0.38)$	83.13	$83.7^{+2.2}_{-2.7}$			

Best-fit $\chi^2_{eff} = 1185.69$; $\Delta\chi^2_{eff} = -0.05$; $\bar{\chi}^2_{eff} = 1207.58$; $\Delta\bar{\chi}^2_{eff} = 1.55$; $R - 1 = 0.02042$

χ^2_{eff}: BAO - 6DF: 0.01 (Δ -0.01) MGS: 1.34 (Δ 0.06) DR12BAO: 4.04 (Δ -0.15) CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.88 (Δ -0.01) commander_dx12_v3_2_29: 22.69 (Δ -0.14) plik_rd12_HM_v22_TT: 760.21 (Δ 0.11)

11.3 base_nnu_yhe_plikHM_TT_lowl_lowE_post_lensing

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022005	0.02207 ± 0.00030	$\sigma_8\Omega_m^{0.5}$	0.4582	0.4576 ± 0.0090	$D_M(0.15)$	671.6	661 ± 29
$\boldsymbol{\Omega_c h^2}$	0.1145	$0.1170^{+0.0060}_{-0.0077}$	$\sigma_8\Omega_m^{0.25}$	0.6043	0.6061 ± 0.0089	$H(0.38)$	79.90	$81.1^{+2.8}_{-3.3}$
$\boldsymbol{100\theta_{MC}}$	1.04200	1.0417 ± 0.0019	$\sigma_8/h^{0.5}$	0.9930	0.992 ± 0.012	$D_M(0.38)$	1597	1573 ± 66
$\boldsymbol{\tau}$	0.0502	0.0514 ± 0.0080	$r_{drag}h$	97.35	98.0 ± 1.9	$H(0.51)$	86.62	$87.8^{+2.9}_{-3.4}$
$\boldsymbol{N_{eff}}$	2.627	$2.81^{+0.43}_{-0.54}$	$\langle d^2\rangle^{1/2}$	2.4621	2.455 ± 0.032	$D_M(0.51)$	2066	2036 ± 83
$\boldsymbol{Y_P}$	0.2565	$0.256^{+0.032}_{-0.028}$	z_{re}	7.27	7.40 ± 0.83	$H(0.61)$	92.22	$93.5^{+2.9}_{-3.4}$
$\boldsymbol{\ln(10^{10}A_s)}$	3.0242	3.031 ± 0.022	$10^9 A_s$	2.0578	2.073 ± 0.046	$D_M(0.61)$	2401	2367 ± 94
$\boldsymbol{n_s}$	0.9547	0.959 ± 0.012	$10^9 A_s e^{-2\tau}$	1.8613	1.871 ± 0.026	$H(2.33)$	231.3	$233.4^{+5.5}_{-6.7}$
$\boldsymbol{y_{cal}}$	1.00029	1.0004 ± 0.0025	D_{40}	1239.1	1235 ± 19	$D_M(2.33)$	5948	5878 ± 200
$\boldsymbol{A_{217}^{CIB}}$	46.5	48 ± 7	D_{220}	5710.9	5714 ± 42	$f\sigma_8(0.15)$	0.4612	0.4610 ± 0.0081
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.62	—	D_{810}	2534.9	2535 ± 14	$\sigma_8(0.15)$	0.7346	0.741 ± 0.016
$\boldsymbol{A_{143}^{tSZ}}$	6.87	5.0 ± 2.0	D_{1420}	816.6	814.5 ± 5.4	$f\sigma_8(0.38)$	0.4750	0.4762 ± 0.0070
$\boldsymbol{A_{100}^{PS}}$	250.2	263 ± 29	D_{2000}	230.93	229.6 ± 2.4	$\sigma_8(0.38)$	0.6492	0.655 ± 0.015
$\boldsymbol{A_{143}^{PS}}$	52.2	49 ± 9	$n_{s,0.002}$	0.9547	0.959 ± 0.012	$f\sigma_8(0.51)$	0.4714	0.4732 ± 0.0070
$\boldsymbol{A_{143\times217}^{PS}}$	53.5	44 ± 9	Y_P	0.2565	$0.256^{+0.032}_{-0.028}$	$\sigma_8(0.51)$	0.6067	0.613 ± 0.015
$\boldsymbol{A_{217}^{PS}}$	122.2	115 ± 10	Y_P^{BBN}	0.2579	$0.257^{+0.032}_{-0.028}$	$f\sigma_8(0.61)$	0.4651	0.4673 ± 0.0073
$\boldsymbol{A^{kSZ}}$	0.00	< 4.92	Age/Gyr	14.234	14.07 ± 0.47	$\sigma_8(0.61)$	0.5768	0.583 ± 0.014
$\boldsymbol{A_{100}^{dustTT}}$	8.83	8.9 ± 1.8	z_*	1090.17	1090.36 ± 0.70	$f\sigma_8(2.33)$	0.2902	0.2933 ± 0.0076
$\boldsymbol{A_{143}^{dustTT}}$	10.81	10.7 ± 1.8	r_*	148.29	146.8 ± 4.4	$\sigma_8(2.33)$	0.2983	0.3018 ± 0.0085
$\boldsymbol{A_{143\times217}^{dustTT}}$	19.83	18.3 ± 3.3	$100\theta_*$	1.04205	1.0417 ± 0.0013	f_{2000}^{143}	29.35	31 ± 4
$\boldsymbol{A_{217}^{dustTT}}$	95.4	93.4 ± 7.2	$D_M(z_*)$/Gpc	14.231	14.09 ± 0.40	$f_{2000}^{143\times217}$	32.56	33.7 ± 2.8
$\boldsymbol{c_{100}}$	0.99966	0.99959 ± 0.00062	z_{drag}	1058.90	1059.3 ± 1.2	f_{2000}^{217}	106.95	108.2 ± 2.6
$\boldsymbol{c_{217}}$	0.99822	0.99827 ± 0.00062	r_{drag}	151.14	149.6 ± 4.5	$\chi^2_{lensing}$	8.48	9.3 ± 1.0
H_0	64.41	$65.6^{+2.8}_{-3.2}$	k_D	0.13737	$0.1385^{+0.0036}_{-0.0043}$	χ^2_{smallI}	395.70	396.8 ± 1.5
Ω_Λ	0.6694	$0.675^{+0.018}_{-0.016}$	$100\theta_D$	0.16070	0.16105 ± 0.00074	χ^2_{lowl}	24.56	24.3 ± 2.0
Ω_m	0.3306	0.325 ± 0.017	z_{eq}	3457	3435 ± 72	χ^2_{plik}	757.9	772.0 ± 5.8
$\Omega_m h^2$	0.1372	$0.1397^{+0.0061}_{-0.0077}$	k_{eq}	0.010251	$0.01031^{+0.00017}_{-0.00021}$	χ^2_{prior}	1.16	7.3 ± 3.6
$\Omega_m h^3$	0.0884	$0.0918^{+0.0072}_{-0.0096}$	$100\theta_{eq}$	0.8031	0.807 ± 0.012	χ^2_{CMB}	1186.7	1202.4 ± 5.9
σ_8	0.7969	0.803 ± 0.016	$100\theta_{s,eq}$	0.4443	0.4465 ± 0.0064			
S_8	0.8366	0.836 ± 0.017	$H(0.15)$	69.74	$70.9^{+2.8}_{-3.2}$			

Best-fit $\chi^2_{eff} = 1187.84$; $\Delta\chi^2_{eff} = -0.73$; $\bar{\chi}^2_{eff} = 1209.69$; $\Delta\bar{\chi}^2_{eff} = 1.28$; $R - 1 = 0.01748$

χ^2_{eff}: CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.48 (Δ -0.42) simall_100x143_offlike5_EE_Aplanck_B: 395.70 (Δ -0.16) commander_dx12_v3_2_29: 24.56 (Δ 1.32) plik_rd12_HM_v22_TT: 757.94 (Δ -1.38)

11.4 base_nnu_yhe_plikHM_TT_lowl_lowE_post_BAO_lensing

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022245	0.02226 ± 0.00024	$\sigma_8\Omega_m^{0.5}$	0.4511	0.4517 ± 0.0071	$D_M(0.15)$	641.9	639 ± 20
$\boldsymbol{\Omega_c h^2}$	0.1190	$0.1200^{+0.0058}_{-0.0072}$	$\sigma_8\Omega_m^{0.25}$	0.6040	0.6053 ± 0.0089	$H(0.38)$	82.90	$83.3^{+2.1}_{-2.5}$
$\boldsymbol{100\theta_{MC}}$	1.04108	1.0410 ± 0.0018	$\sigma_8/h^{0.5}$	0.9842	0.9847 ± 0.0095	$D_M(0.38)$	1531.0	1525 ± 45
$\boldsymbol{\tau}$	0.0544	0.0550 ± 0.0073	$r_{drag}h$	99.65	99.8 ± 1.0	$H(0.51)$	89.61	$90.0^{+2.2}_{-2.6}$
$\boldsymbol{N_{eff}}$	3.036	$3.10^{+0.37}_{-0.46}$	$\langle d^2\rangle^{1/2}$	2.4306	2.432 ± 0.023	$D_M(0.51)$	1983	1976 ± 58
$\boldsymbol{Y_P}$	0.2473	$0.247^{+0.031}_{-0.028}$	z_{re}	7.71	7.77 ± 0.74	$H(0.61)$	95.22	$95.6^{+2.3}_{-2.7}$
$\boldsymbol{\ln(10^{10}A_s)}$	3.0425	3.045 ± 0.017	$10^9 A_s$	2.0957	2.102 ± 0.036	$D_M(0.61)$	2308	2299 ± 66
$\boldsymbol{n_s}$	0.9675	0.9682 ± 0.0085	$10^9 A_s e^{-2\tau}$	1.8796	1.883 ± 0.022	$H(2.33)$	235.8	$236.6^{+5.0}_{-6.0}$
$\boldsymbol{y_{cal}}$	1.00046	1.0007 ± 0.0025	D_{40}	1224.0	1225 ± 17	$D_M(2.33)$	5769	5749 ± 150
$\boldsymbol{A_{217}^{CIB}}$	48.4	48 ± 7	D_{220}	5720.0	5723 ± 41	$f\sigma_8(0.15)$	0.4557	0.4564 ± 0.0069
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.34	—	D_{810}	2538.3	2538 ± 14	$\sigma_8(0.15)$	0.7475	0.750 ± 0.013
$\boldsymbol{A_{143}^{tSZ}}$	7.06	5.0 ± 2.0	D_{1420}	816.5	815.2 ± 5.4	$f\sigma_8(0.38)$	0.4741	0.4751 ± 0.0070
$\boldsymbol{A_{100}^{PS}}$	252.8	266 ± 29	D_{2000}	230.28	229.6 ± 2.4	$\sigma_8(0.38)$	0.6626	0.665 ± 0.012
$\boldsymbol{A_{143}^{PS}}$	49.2	50 ± 9	$n_{s,0.002}$	0.9675	0.9682 ± 0.0085	$f\sigma_8(0.51)$	0.4728	0.4738 ± 0.0070
$\boldsymbol{A_{143\times217}^{PS}}$	47.3	44 ± 9	Y_P	0.2473	$0.247^{+0.031}_{-0.028}$	$\sigma_8(0.51)$	0.6201	0.622 ± 0.011
$\boldsymbol{A_{217}^{PS}}$	119.8	115 ± 10	Y_P^{BBN}	0.2487	$0.249^{+0.031}_{-0.029}$	$f\sigma_8(0.61)$	0.4678	0.4690 ± 0.0071
$\boldsymbol{A^{kSZ}}$	0.00	< 5.01	Age/Gyr	13.812	13.76 ± 0.36	$\sigma_8(0.61)$	0.5901	0.592 ± 0.011
$\boldsymbol{A_{100}^{dustTT}}$	8.90	8.9 ± 1.8	z_*	1090.07	1090.19 ± 0.68	$f\sigma_8(2.33)$	0.2975	0.2986 ± 0.0057
$\boldsymbol{A_{143}^{dustTT}}$	10.75	10.7 ± 1.8	r_*	144.83	144.4 ± 3.7	$\sigma_8(2.33)$	0.3068	0.3079 ± 0.0062
$\boldsymbol{A_{143\times217}^{dustTT}}$	19.37	18.3 ± 3.3	$100\theta_*$	1.04123	1.0411 ± 0.0012	$\chi^2_{lensing}$	8.87	9.43 ± 0.85
$\boldsymbol{A_{217}^{dustTT}}$	94.6	93.3 ± 7.5	$D_M(z_*)$/Gpc	13.909	13.87 ± 0.34	χ^2_{simall}	396.08	397.1 ± 1.7
$\boldsymbol{c_{100}}$	0.99968	0.99962 ± 0.00061	z_{drag}	1059.63	1059.8 ± 1.1	χ^2_{lowl}	22.88	23.0 ± 1.3
$\boldsymbol{c_{217}}$	0.99826	0.99828 ± 0.00062	r_{drag}	147.54	147.1 ± 3.7	χ^2_{plik}	759.9	773.4 ± 5.8
H_0	67.54	$67.9^{+1.9}_{-2.3}$	k_D	0.14025	$0.1406^{+0.0032}_{-0.0038}$	χ^2_{6DF}	0.0290	0.064 ± 0.084
Ω_Λ	0.6890	0.6898 ± 0.0083	$100\theta_D$	0.16104	0.16120 ± 0.00074	χ^2_{MGS}	1.22	1.36 ± 0.56
Ω_m	0.3110	0.3102 ± 0.0083	z_{eq}	3379.7	3376 ± 44	$\chi^2_{DR12BAO}$	4.36	4.9 ± 1.7
$\Omega_m h^2$	0.1419	$0.1429^{+0.0058}_{-0.0072}$	k_{eq}	0.010308	$0.01034^{+0.00018}_{-0.00021}$	χ^2_{prior}	1.32	7.3 ± 3.7
$\Omega_m h^3$	0.0958	$0.0972^{+0.0063}_{-0.0082}$	$100\theta_{eq}$	0.8171	0.8179 ± 0.0072	χ^2_{CMB}	1187.7	1202.9 ± 5.9
σ_8	0.8088	0.811 ± 0.014	$100\theta_{s,eq}$	0.45146	0.4518 ± 0.0037	χ^2_{BAO}	5.61	6.3 ± 1.4
S_8	0.8236	0.825 ± 0.013	$H(0.15)$	72.81	$73.2^{+2.0}_{-2.4}$			

Best-fit $\chi^2_{eff} = 1194.67$; $\Delta\chi^2_{eff} = -0.01$; $\bar{\chi}^2_{eff} = 1216.49$; $\Delta\bar{\chi}^2_{eff} = 1.76$; $R - 1 = 0.01644$

χ^2_{eff}: BAO - 6DF: 0.03 (Δ 0.00) MGS: 1.22 (Δ 0.00) DR12BAO: 4.36 (Δ -0.01) CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.87 (Δ -0.01) simall_100x143_offlike5_EE_Aplanck 396.08 (Δ -0.01) commander_dx12_v3_2_29: 22.88 (Δ -0.08) plik_rd12_HM_v22_TT: 759.91 (Δ 0.10)

11.5 base_nnu_yhe_plikHM_TT_lowl_lowE_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02210 ± 0.00032	S_8	0.841 ± 0.025	$100\theta_{s,eq}$	0.4472 ± 0.0074
$\boldsymbol{\Omega_c h^2}$	$0.1191^{+0.0062}_{-0.0083}$	$\sigma_8\Omega_m^{0.5}$	0.460 ± 0.014	$H(0.15)$	$71.6^{+2.9}_{-3.6}$
$\boldsymbol{100\theta_{MC}}$	1.0413 ± 0.0020	$\sigma_8\Omega_m^{0.25}$	0.611 ± 0.012	$D_M(0.15)$	655 ± 31
$\boldsymbol{\tau}$	$0.0535^{+0.0044}_{-0.0085}$	$\sigma_8/h^{0.5}$	0.995 ± 0.017	$H(0.38)$	$81.9^{+2.9}_{-3.6}$
$\boldsymbol{N_{eff}}$	$2.94^{+0.44}_{-0.58}$	$r_{drag}h$	98.2 ± 2.3	$D_M(0.38)$	1558 ± 70
$\boldsymbol{Y_P}$	$0.251^{+0.033}_{-0.029}$	$\langle d^2\rangle^{1/2}$	2.460 ± 0.046	$H(0.51)$	$88.7^{+3.0}_{-3.7}$
$\boldsymbol{\ln(10^{10}A_s)}$	3.040 ± 0.020	z_{re}	$7.65^{+0.49}_{-0.87}$	$D_M(0.51)$	2017 ± 88
$\boldsymbol{n_s}$	0.961 ± 0.013	$10^9 A_s$	$2.091^{+0.038}_{-0.043}$	$H(0.61)$	$94.3^{+3.0}_{-3.8}$
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.879 ± 0.027	$D_M(0.61)$	2345 ± 100
$\boldsymbol{A^{CIB}_{217}}$	48 ± 7	D_{40}	1235 ± 22	$H(2.33)$	$235.3^{+5.7}_{-7.2}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{220}	5712 ± 42	$D_M(2.33)$	5827 ± 210
$\boldsymbol{A^{tSZ}_{143}}$	5.0 ± 2.0	D_{810}	2536 ± 14	$f\sigma_8(0.15)$	0.464 ± 0.012
$\boldsymbol{A^{PS}_{100}}$	264 ± 29	D_{1420}	814.3 ± 5.3	$\sigma_8(0.15)$	$0.747^{+0.015}_{-0.017}$
$\boldsymbol{A^{PS}_{143}}$	50 ± 9	D_{2000}	229.5 ± 2.4	$f\sigma_8(0.38)$	0.4795 ± 0.0098
$\boldsymbol{A^{PS}_{143\times217}}$	44^{+9}_{-10}	$n_{s,0.002}$	0.961 ± 0.013	$\sigma_8(0.38)$	$0.661^{+0.014}_{-0.016}$
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	Y_P	$0.251^{+0.033}_{-0.029}$	$f\sigma_8(0.51)$	0.4767 ± 0.0090
$\boldsymbol{A^{kSZ}}$	< 4.97	Y_P^{BBN}	$0.253^{+0.033}_{-0.029}$	$\sigma_8(0.51)$	$0.618^{+0.014}_{-0.015}$
$\boldsymbol{A^{dustTT}_{100}}$	8.9 ± 1.8	Age/Gyr	13.95 ± 0.49	$f\sigma_8(0.61)$	0.4708 ± 0.0087
$\boldsymbol{A^{dustTT}_{143}}$	10.7 ± 1.8	z_*	1090.40 ± 0.72	$\sigma_8(0.61)$	$0.588^{+0.013}_{-0.015}$
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.3 ± 3.3	r_*	$145.6^{+4.8}_{-4.3}$	$f\sigma_8(2.33)$	$0.2959^{+0.0071}_{-0.0080}$
$\boldsymbol{A^{dustTT}_{217}}$	93.4 ± 7.3	$100\theta_*$	1.0413 ± 0.0014	$\sigma_8(2.33)$	$0.3046^{+0.0079}_{-0.0089}$
$\boldsymbol{c_{100}}$	0.99960 ± 0.00062	$D_M(z_*)$/Gpc	$13.98^{+0.44}_{-0.39}$	f^{143}_{2000}	31 ± 4
$\boldsymbol{c_{217}}$	0.99826 ± 0.00062	z_{drag}	1059.4 ± 1.2	$f^{143\times217}_{2000}$	33.8 ± 2.9
H_0	$66.3^{+3.0}_{-3.6}$	r_{drag}	$148.4^{+4.9}_{-4.4}$	f^{217}_{2000}	108.3 ± 2.6
Ω_Λ	0.676 ± 0.020	k_D	$0.1396^{+0.0037}_{-0.0046}$	χ^2_{simall}	396.8 ± 1.6
Ω_m	0.324 ± 0.020	$100\theta_D$	0.16112 ± 0.00075	χ^2_{lowl}	24.2 ± 2.3
$\Omega_m h^2$	$0.1419^{+0.0063}_{-0.0084}$	z_{eq}	3427 ± 83	χ^2_{plik}	772.5 ± 6.2
$\Omega_m h^3$	$0.0942^{+0.0075}_{-0.011}$	k_{eq}	$0.01037^{+0.00019}_{-0.00024}$	χ^2_{prior}	7.3 ± 3.6
σ_8	$0.810^{+0.015}_{-0.017}$	$100\theta_{eq}$	0.809 ± 0.014	χ^2_{CMB}	1193.5 ± 5.8

$\bar{\chi}^2_{eff} = 1200.83$; $\Delta\bar{\chi}^2_{eff} = 1.51$; $R - 1 = 0.01329$

11.6 base_nnu_yhe_plikHM_TT_lowl_lowE_post_BAO_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02227 ± 0.00024	$\sigma_8\Omega_m^{0.25}$	$0.606^{+0.010}_{-0.012}$	$D_M(0.38)$	1516 ± 47
$\boldsymbol{\Omega_c h^2}$	$0.1211^{+0.0062}_{-0.0080}$	$\sigma_8/h^{0.5}$	0.984 ± 0.011	$H(0.51)$	$90.5^{+2.3}_{-2.8}$
$\boldsymbol{100\theta_{MC}}$	1.0408 ± 0.0019	$r_{drag}h$	99.96 ± 1.1	$D_M(0.51)$	1964 ± 60
$\boldsymbol{\tau}$	$0.0551^{+0.0056}_{-0.0078}$	$\langle d^2\rangle^{1/2}$	2.429 ± 0.027	$H(0.61)$	$96.1^{+2.4}_{-3.0}$
$\boldsymbol{N_{eff}}$	$3.18^{+0.39}_{-0.50}$	z_{re}	$7.79^{+0.59}_{-0.81}$	$D_M(0.61)$	2286 ± 69
$\boldsymbol{Y_P}$	$0.245^{+0.032}_{-0.029}$	$10^9 A_s$	$2.105^{+0.033}_{-0.041}$	$H(2.33)$	$237.5^{+5.4}_{-6.6}$
$\boldsymbol{\ln(10^{10}A_s)}$	$3.047^{+0.016}_{-0.019}$	$10^9 A_s e^{-2\tau}$	1.886 ± 0.024	$D_M(2.33)$	5721 ± 160
$\boldsymbol{n_s}$	0.9699 ± 0.0087	D_{40}	1222 ± 17	$f\sigma_8(0.15)$	$0.4566^{+0.0083}_{-0.0093}$
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0025	D_{220}	5719 ± 41	$\sigma_8(0.15)$	$0.752^{+0.014}_{-0.016}$
$\boldsymbol{A_{217}^{CIB}}$	48 ± 7	D_{810}	2537 ± 14	$f\sigma_8(0.38)$	$0.4757^{+0.0081}_{-0.0093}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{1420}	814.8 ± 5.4	$\sigma_8(0.38)$	$0.667^{+0.012}_{-0.014}$
$\boldsymbol{A_{143}^{tSZ}}$	5.0 ± 2.0	D_{2000}	229.3 ± 2.4	$f\sigma_8(0.51)$	$0.4746^{+0.0080}_{-0.0092}$
$\boldsymbol{A_{100}^{PS}}$	266 ± 29	$n_{s,0.002}$	0.9699 ± 0.0087	$\sigma_8(0.51)$	$0.624^{+0.012}_{-0.013}$
$\boldsymbol{A_{143}^{PS}}$	50 ± 9	Y_P	$0.245^{+0.032}_{-0.029}$	$f\sigma_8(0.61)$	$0.4699^{+0.0079}_{-0.0092}$
$\boldsymbol{A_{143\times217}^{PS}}$	44^{+9}_{-10}	Y_P^{BBN}	$0.247^{+0.032}_{-0.029}$	$\sigma_8(0.61)$	$0.594^{+0.011}_{-0.013}$
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	Age/Gyr	13.70 ± 0.38	$f\sigma_8(2.33)$	$0.2997^{+0.0058}_{-0.0066}$
$\boldsymbol{A^{kSZ}}$	< 5.05	z_*	1090.21 ± 0.68	$\sigma_8(2.33)$	$0.3091^{+0.0062}_{-0.0071}$
$\boldsymbol{A_{100}^{dustTT}}$	9.0 ± 1.8	r_*	143.7 ± 3.9	f_{2000}^{143}	32 ± 4
$\boldsymbol{A_{143}^{dustTT}}$	10.8 ± 1.8	$100\theta_*$	1.0409 ± 0.0013	$f_{2000}^{143\times217}$	33.9 ± 2.9
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.4 ± 3.3	$D_M(z_*)$/Gpc	$13.81^{+0.38}_{-0.34}$	f_{2000}^{217}	108.4 ± 2.6
$\boldsymbol{A_{217}^{dustTT}}$	93.4 ± 7.4	z_{drag}	1059.8 ± 1.1	χ^2_{simall}	397.0 ± 1.8
$\boldsymbol{c_{100}}$	0.99962 ± 0.00061	r_{drag}	146.4 ± 4.0	χ^2_{lowl}	22.8 ± 1.3
$\boldsymbol{c_{217}}$	0.99828 ± 0.00062	k_D	$0.1412^{+0.0034}_{-0.0041}$	χ^2_{plik}	774.0 ± 5.9
H_0	$68.3^{+2.0}_{-2.4}$	$100\theta_D$	0.16126 ± 0.00074	χ^2_{6DF}	0.058 ± 0.079
Ω_Λ	0.6915 ± 0.0086	z_{eq}	3368 ± 44	χ^2_{MGS}	1.47 ± 0.60
Ω_m	0.3085 ± 0.0086	k_{eq}	$0.01036^{+0.00020}_{-0.00024}$	$\chi^2_{DR12BAO}$	4.7 ± 1.6
$\Omega_m h^2$	$0.1440^{+0.0062}_{-0.0080}$	$100\theta_{eq}$	0.8193 ± 0.0074	χ^2_{prior}	7.3 ± 3.6
$\Omega_m h^3$	$0.0986^{+0.0067}_{-0.0090}$	$100\theta_{s,eq}$	0.4526 ± 0.0038	χ^2_{BAO}	6.2 ± 1.3
σ_8	$0.813^{+0.014}_{-0.017}$	$H(0.15)$	$73.6^{+2.1}_{-2.5}$	χ^2_{CMB}	1193.8 ± 5.8
S_8	$0.825^{+0.016}_{-0.017}$	$D_M(0.15)$	635 ± 20		
$\sigma_8\Omega_m^{0.5}$	$0.4518^{+0.0085}_{-0.0095}$	$H(0.38)$	$83.8^{+2.2}_{-2.7}$		

$\bar{\chi}^2_{eff} = 1207.34$; $\Delta\bar{\chi}^2_{eff} = 1.58$; $R - 1 = 0.02392$

11.7 base_nnu_yhe_plikHM_TT_lowl_lowE_post_lensing_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02210 ± 0.00029	$\sigma_8\Omega_m^{0.5}$	0.4572 ± 0.0090	$D_M(0.15)$	659 ± 28
$\boldsymbol{\Omega_c h^2}$	$0.1171^{+0.0060}_{-0.0076}$	$\sigma_8\Omega_m^{0.25}$	0.6065 ± 0.0089	$H(0.38)$	$81.3^{+2.7}_{-3.2}$
$\boldsymbol{100\theta_{MC}}$	1.0416 ± 0.0019	$\sigma_8/h^{0.5}$	0.992 ± 0.012	$D_M(0.38)$	1568 ± 64
$\boldsymbol{\tau}$	$0.0533^{+0.0045}_{-0.0082}$	$r_{drag}h$	98.3 ± 1.9	$H(0.51)$	$88.0^{+2.8}_{-3.3}$
$\boldsymbol{N_{eff}}$	$2.83^{+0.42}_{-0.53}$	$\langle d^2\rangle^{1/2}$	2.455 ± 0.032	$D_M(0.51)$	2030 ± 81
$\boldsymbol{Y_P}$	$0.255^{+0.032}_{-0.028}$	z_{re}	$7.61^{+0.47}_{-0.86}$	$H(0.61)$	$93.7^{+2.9}_{-3.4}$
$\boldsymbol{\ln(10^{10}A_s)}$	3.036 ± 0.019	$10^9 A_s$	2.082 ± 0.041	$D_M(0.61)$	2360 ± 92
$\boldsymbol{n_s}$	0.960 ± 0.012	$10^9 A_s e^{-2\tau}$	1.871 ± 0.026	$H(2.33)$	$233.6^{+5.5}_{-6.6}$
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	D_{40}	1234 ± 19	$D_M(2.33)$	5866 ± 190
$\boldsymbol{A_{217}^{CIB}}$	48 ± 7	D_{220}	5714 ± 42	$f\sigma_8(0.15)$	0.4608 ± 0.0081
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{810}	2535 ± 14	$\sigma_8(0.15)$	0.742 ± 0.015
$\boldsymbol{A_{143}^{tSZ}}$	5.0 ± 2.0	D_{1420}	814.5 ± 5.4	$f\sigma_8(0.38)$	0.4764 ± 0.0070
$\boldsymbol{A_{100}^{PS}}$	264 ± 29	D_{2000}	229.6 ± 2.4	$\sigma_8(0.38)$	0.657 ± 0.014
$\boldsymbol{A_{143}^{PS}}$	49 ± 9	$n_{s,0.002}$	0.960 ± 0.012	$f\sigma_8(0.51)$	0.4737 ± 0.0069
$\boldsymbol{A_{143\times217}^{PS}}$	44 ± 9	Y_P	$0.255^{+0.032}_{-0.028}$	$\sigma_8(0.51)$	0.614 ± 0.014
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	Y_P^{BBN}	$0.257^{+0.032}_{-0.029}$	$f\sigma_8(0.61)$	0.4679 ± 0.0071
$\boldsymbol{A^{kSZ}}$	< 4.93	Age/Gyr	14.04 ± 0.46	$\sigma_8(0.61)$	0.584 ± 0.014
$\boldsymbol{A_{100}^{dust TT}}$	8.9 ± 1.8	z_*	1090.34 ± 0.70	$f\sigma_8(2.33)$	0.2942 ± 0.0073
$\boldsymbol{A_{143}^{dust TT}}$	10.7 ± 1.8	r_*	146.6 ± 4.3	$\sigma_8(2.33)$	0.3028 ± 0.0081
$\boldsymbol{A_{143\times217}^{dust TT}}$	18.3 ± 3.3	$100\theta_*$	1.0416 ± 0.0013	f_{2000}^{143}	31 ± 4
$\boldsymbol{A_{217}^{dust TT}}$	93.4 ± 7.2	$D_M(z_*)$/Gpc	14.08 ± 0.40	$f_{2000}^{143\times217}$	33.7 ± 2.8
$\boldsymbol{c_{100}}$	0.99960 ± 0.00062	z_{drag}	1059.4 ± 1.2	f_{2000}^{217}	108.2 ± 2.6
$\boldsymbol{c_{217}}$	0.99827 ± 0.00062	r_{drag}	149.4 ± 4.4	$\chi^2_{lensing}$	9.3 ± 1.0
H_0	$65.8^{+2.7}_{-3.1}$	k_D	$0.1387^{+0.0036}_{-0.0043}$	χ^2_{simall}	396.7 ± 1.5
Ω_Λ	0.677 ± 0.016	$100\theta_D$	0.16107 ± 0.00074	χ^2_{lowl}	24.1 ± 1.9
Ω_m	0.323 ± 0.016	z_{eq}	3428 ± 70	χ^2_{plik}	772.0 ± 5.8
$\Omega_m h^2$	$0.1398^{+0.0061}_{-0.0077}$	k_{eq}	$0.01030^{+0.00017}_{-0.00021}$	χ^2_{prior}	7.3 ± 3.6
$\Omega_m h^3$	$0.0923^{+0.0072}_{-0.0095}$	$100\theta_{eq}$	0.809 ± 0.012	χ^2_{CMB}	1202.1 ± 5.8
σ_8	0.805 ± 0.015	$100\theta_{s,eq}$	0.4471 ± 0.0062		
S_8	0.835 ± 0.016	$H(0.15)$	$71.2^{+2.7}_{-3.2}$		

$\bar{\chi}^2_{eff} = 1209.43$; $\Delta\bar{\chi}^2_{eff} = 1.27$; $R - 1 = 0.01928$

11.8 base_nnu_yhe_plikHM_TT_lowl_lowE_post_BAO_lensing_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02226 ± 0.00024	$\sigma_8\Omega_m^{0.25}$	0.6055 ± 0.0089	$D_M(0.38)$	1525 ± 45
$\boldsymbol{\Omega_c h^2}$	$0.1199^{+0.0058}_{-0.0071}$	$\sigma_8/h^{0.5}$	0.9851 ± 0.0093	$H(0.51)$	$90.0^{+2.2}_{-2.6}$
$\boldsymbol{100\theta_{MC}}$	1.0410 ± 0.0018	$r_{drag}h$	99.8 ± 1.0	$D_M(0.51)$	1976 ± 57
$\boldsymbol{\tau}$	$0.0557^{+0.0059}_{-0.0074}$	$\langle d^2\rangle^{1/2}$	2.433 ± 0.022	$H(0.61)$	$95.6^{+2.3}_{-2.7}$
$\boldsymbol{N_{eff}}$	$3.10^{+0.37}_{-0.46}$	z_{re}	$7.85^{+0.62}_{-0.75}$	$D_M(0.61)$	2299 ± 66
$\boldsymbol{Y_P}$	0.248 ± 0.030	$10^9 A_s$	$2.105^{+0.031}_{-0.035}$	$H(2.33)$	$236.5^{+5.0}_{-5.9}$
$\boldsymbol{\ln(10^{10}A_s)}$	$3.047^{+0.015}_{-0.017}$	$10^9 A_s e^{-2\tau}$	1.883 ± 0.022	$D_M(2.33)$	5750 ± 150
$\boldsymbol{n_s}$	0.9683 ± 0.0085	D_{40}	1225 ± 17	$f\sigma_8(0.15)$	0.4565 ± 0.0069
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0025	D_{220}	5723 ± 41	$\sigma_8(0.15)$	0.750 ± 0.013
$\boldsymbol{A_{217}^{CIB}}$	48 ± 7	D_{810}	2538 ± 14	$f\sigma_8(0.38)$	0.4752 ± 0.0069
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{1420}	815.2 ± 5.4	$\sigma_8(0.38)$	0.665 ± 0.012
$\boldsymbol{A_{143}^{tSZ}}$	5.0 ± 2.0	D_{2000}	229.6 ± 2.4	$f\sigma_8(0.51)$	0.4740 ± 0.0070
$\boldsymbol{A_{100}^{PS}}$	266 ± 29	$n_{s,0.002}$	0.9683 ± 0.0085	$\sigma_8(0.51)$	0.622 ± 0.011
$\boldsymbol{A_{143}^{PS}}$	50 ± 9	Y_P	0.248 ± 0.030	$f\sigma_8(0.61)$	0.4691 ± 0.0070
$\boldsymbol{A_{143\times217}^{PS}}$	44 ± 9	Y_P^{BBN}	0.249 ± 0.030	$\sigma_8(0.61)$	0.592 ± 0.011
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	Age/Gyr	13.77 ± 0.36	$f\sigma_8(2.33)$	0.2987 ± 0.0057
$\boldsymbol{A^{kSZ}}$	< 4.99	z_*	1090.19 ± 0.68	$\sigma_8(2.33)$	0.3081 ± 0.0061
$\boldsymbol{A_{100}^{dustTT}}$	8.9 ± 1.8	r_*	144.4 ± 3.6	f_{2000}^{143}	32 ± 4
$\boldsymbol{A_{143}^{dustTT}}$	10.7 ± 1.8	$100\theta_*$	1.0411 ± 0.0012	$f_{2000}^{143\times217}$	33.8 ± 2.9
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.3 ± 3.3	$D_M(z_*)$/Gpc	13.87 ± 0.33	f_{2000}^{217}	108.3 ± 2.6
$\boldsymbol{A_{217}^{dustTT}}$	93.3 ± 7.5	z_{drag}	1059.8 ± 1.1	$\chi^2_{lensing}$	9.39 ± 0.81
$\boldsymbol{c_{100}}$	0.99962 ± 0.00061	r_{drag}	147.1 ± 3.7	χ^2_{simall}	397.0 ± 1.8
$\boldsymbol{c_{217}}$	0.99828 ± 0.00062	k_D	$0.1406^{+0.0032}_{-0.0038}$	χ^2_{lowl}	23.0 ± 1.3
H_0	$67.9^{+1.9}_{-2.3}$	$100\theta_D$	0.16120 ± 0.00074	χ^2_{plik}	773.3 ± 5.8
Ω_Λ	0.6900 ± 0.0083	z_{eq}	3376 ± 44	χ^2_{6DF}	0.062 ± 0.082
Ω_m	0.3100 ± 0.0083	k_{eq}	$0.01033^{+0.00018}_{-0.00021}$	χ^2_{MGS}	1.37 ± 0.56
$\Omega_m h^2$	$0.1428^{+0.0058}_{-0.0071}$	$100\theta_{eq}$	0.8180 ± 0.0072	$\chi^2_{DR12BAO}$	4.8 ± 1.7
$\Omega_m h^3$	$0.0971^{+0.0063}_{-0.0081}$	$100\theta_{s,eq}$	0.4519 ± 0.0037	χ^2_{prior}	7.3 ± 3.7
σ_8	0.812 ± 0.013	$H(0.15)$	$73.2^{+2.0}_{-2.3}$	χ^2_{CMB}	1202.8 ± 5.8
S_8	0.825 ± 0.013	$D_M(0.15)$	639 ± 19	χ^2_{BAO}	6.2 ± 1.4
$\sigma_8\Omega_m^{0.5}$	0.4518 ± 0.0071	$H(0.38)$	$83.3^{+2.1}_{-2.5}$		

$\bar{\chi}^2_{eff} = 1216.32$; $\Delta\bar{\chi}^2_{eff} = 1.75$; $R - 1 = 0.01882$

11.9 base_nnu_yhe_plikHM_TTTEEE_lowl_lowE

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022215	0.02225 ± 0.00022	Ω_m	0.3227	0.321 ± 0.011	k_{eq}	0.010297	0.01033 ± 0.00016
$\boldsymbol{\Omega_c h^2}$	0.11668	$0.1179^{+0.0045}_{-0.0050}$	$\Omega_m h^2$	0.13954	$0.1408^{+0.0045}_{-0.0051}$	$100\theta_{eq}$	0.8083	0.8094 ± 0.0079
$\boldsymbol{100\theta_{MC}}$	1.04140	1.0413 ± 0.0012	$\Omega_m h^3$	0.0918	$0.0934^{+0.0050}_{-0.0060}$	$100\theta_{s,eq}$	0.44689	0.4474 ± 0.0040
$\boldsymbol{\tau}$	0.0539	0.0536 ± 0.0079	σ_8	0.8029	0.806 ± 0.013	$H(0.15)$	71.08	$71.6^{+1.7}_{-2.0}$
$\boldsymbol{N_{eff}}$	2.807	$2.89^{+0.29}_{-0.33}$	S_8	0.8327	0.833 ± 0.017	$D_M(0.15)$	658.4	654 ± 18
$\boldsymbol{Y_P}$	0.2449	0.246 ± 0.018	$\sigma_8\Omega_m^{0.5}$	0.4561	0.4564 ± 0.0092	$H(0.38)$	81.22	$81.7^{+1.8}_{-2.0}$
$\boldsymbol{\ln(10^{10}A_s)}$	3.0357	3.038 ± 0.019	$\sigma_8\Omega_m^{0.25}$	0.6051	0.6063 ± 0.0096	$D_M(0.38)$	1567.6	1558 ± 40
$\boldsymbol{n_s}$	0.9584	0.9597 ± 0.0086	$\sigma_8/h^{0.5}$	0.9901	0.990 ± 0.012	$H(0.51)$	87.95	$88.5^{+1.8}_{-2.1}$
$\boldsymbol{y_{cal}}$	1.00047	1.0007 ± 0.0025	$r_{drag}h$	98.23	98.4 ± 1.3	$D_M(0.51)$	2029	2017 ± 50
$\boldsymbol{A_{217}^{CIB}}$	43.8	46 ± 7	$\langle d^2\rangle^{1/2}$	2.4575	2.456 ± 0.031	$H(0.61)$	93.57	$94.1^{+1.9}_{-2.2}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.89	—	z_{re}	7.60	7.58 ± 0.81	$D_M(0.61)$	2359	2345 ± 57
$\boldsymbol{A_{143}^{tSZ}}$	6.90	$5.5^{+2.2}_{-1.9}$	10^9A_s	2.0815	2.086 ± 0.040	$H(2.33)$	233.45	234.5 ± 4.1
$\boldsymbol{A_{100}^{PS}}$	243.8	257 ± 28	$10^9A_se^{-2\tau}$	1.8689	1.874 ± 0.020	$D_M(2.33)$	5865	5834 ± 120
$\boldsymbol{A_{143}^{PS}}$	51.4	45 ± 8	D_{40}	1238.1	1238 ± 16	$f\sigma_8(0.15)$	0.4597	0.4602 ± 0.0086
$\boldsymbol{A_{143\times217}^{PS}}$	57.2	42 ± 9	D_{220}	5729.7	5733 ± 38	$\sigma_8(0.15)$	0.7408	0.743 ± 0.012
$\boldsymbol{A_{217}^{PS}}$	124.0	115 ± 10	D_{810}	2539.1	2538 ± 14	$f\sigma_8(0.38)$	0.4754	0.4762 ± 0.0076
$\boldsymbol{A^{kSZ}}$	0.00	< 3.97	D_{1420}	819.66	817.9 ± 4.7	$\sigma_8(0.38)$	0.6555	0.658 ± 0.011
$\boldsymbol{A_{100}^{dust}}$	8.69	8.9 ± 1.8	D_{2000}	232.45	231.5 ± 1.8	$f\sigma_8(0.51)$	0.4727	0.4737 ± 0.0073
$\boldsymbol{A_{143}^{dust}}$	10.86	10.8 ± 1.8	$n_{s,0.002}$	0.9584	0.9597 ± 0.0086	$\sigma_8(0.51)$	0.6130	0.615 ± 0.011
$\boldsymbol{A_{143\times217}^{dust}}$	20.06	18.5 ± 3.3	Y_P	0.2449	0.246 ± 0.018	$f\sigma_8(0.61)$	0.4669	0.4681 ± 0.0071
$\boldsymbol{A_{217}^{dust}}$	95.8	93.9 ± 7.3	Y_P^{BBN}	0.2463	0.247 ± 0.018	$\sigma_8(0.61)$	0.5829	0.585 ± 0.010
$\boldsymbol{A_{100}^{dustTE}}$	0.1149	0.115 ± 0.038	Age/Gyr	14.039	13.97 ± 0.29	$f\sigma_8(2.33)$	0.2935	0.2948 ± 0.0053
$\boldsymbol{A_{100\times143}^{dustTE}}$	0.1340	0.135 ± 0.029	z_*	1089.700	1089.85 ± 0.45	$\sigma_8(2.33)$	0.3021	0.3035 ± 0.0058
$\boldsymbol{A_{100\times217}^{dustTE}}$	0.482	0.483 ± 0.084	r_*	146.63	145.9 ± 2.8	f_{2000}^{143}	27.20	28.9 ± 3.1
$\boldsymbol{A_{143}^{dustTE}}$	0.222	0.225 ± 0.054	$100\theta_*$	1.04168	1.04153 ± 0.00094	$f_{2000}^{143\times217}$	30.92	31.7 ± 2.2
$\boldsymbol{A_{143\times217}^{dustTE}}$	0.665	0.667 ± 0.080	$D_M(z_*)$/Gpc	14.077	14.01 ± 0.26	f_{2000}^{217}	105.51	106.6 ± 2.1
$\boldsymbol{A_{217}^{dustTE}}$	2.094	2.09 ± 0.27	z_{drag}	1059.25	1059.48 ± 0.84	χ^2_{simall}	396.03	397.1 ± 1.8
$\boldsymbol{c_{100}}$	0.99974	0.99967 ± 0.00061	r_{drag}	149.38	148.7 ± 2.9	χ^2_{lowl}	24.26	24.3 ± 1.6
$\boldsymbol{c_{217}}$	0.99814	0.99818 ± 0.00063	k_D	0.13918	$0.1397^{+0.0024}_{-0.0027}$	χ^2_{plik}	2343.1	2360.3 ± 6.2
H_0	65.76	$66.2^{+1.7}_{-2.0}$	$100\theta_D$	0.160354	0.16056 ± 0.00048	χ^2_{prior}	1.37	11.5 ± 4.5
Ω_Λ	0.6773	0.679 ± 0.011	z_{eq}	3429.1	3424 ± 44	χ^2_{CMB}	2763.3	2781.7 ± 6.1

Best-fit $\chi^2_{eff} = 2764.72$; $\Delta\chi^2_{eff} = -1.05$; $\bar{\chi}^2_{eff} = 2793.18$; $\Delta\bar{\chi}^2_{eff} = 1.41$; $R - 1 = 0.01243$

χ^2_{eff}: CMB - simall_100x143_offlike5_EE_Aplanck_B: 396.03 (Δ -0.02) commander_dx12_v3_2_29: 24.26 (Δ 1.00) plik_rd12_HM_v22b_TTTEEE: 2343.05 (Δ -1.59)

11.10 base_nnu_yhe_plikHM_TTTEEE_lowl_lowE_post_BAO

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022350	0.02239 ± 0.00019	$\Omega_m h^3$	0.0946	0.0956 ± 0.0054	$D_M(0.15)$	645.7	643 ± 15
$\boldsymbol{\Omega_c h^2}$	0.11794	0.1186 ± 0.0048	σ_8	0.8053	0.807 ± 0.013	$H(0.38)$	82.48	82.8 ± 1.7
$\boldsymbol{100\theta_{MC}}$	1.04108	1.0411 ± 0.0012	S_8	0.8222	0.823 ± 0.014	$D_M(0.38)$	1539.7	1534 ± 34
$\boldsymbol{\tau}$	0.0551	0.0555 ± 0.0079	$\sigma_8 \Omega_m^{0.5}$	0.4503	0.4508 ± 0.0079	$H(0.51)$	89.17	89.5 ± 1.8
$\boldsymbol{N_{eff}}$	2.962	3.01 ± 0.30	$\sigma_8 \Omega_m^{0.25}$	0.6022	0.6033 ± 0.0096	$D_M(0.51)$	1994.3	1987 ± 43
$\boldsymbol{Y_P}$	0.2422	0.244 ± 0.018	$\sigma_8/h^{0.5}$	0.9829	0.983 ± 0.011	$H(0.61)$	94.77	95.1 ± 1.9
$\boldsymbol{\ln(10^{10} A_s)}$	3.0401	3.043 ± 0.019	$r_{drag} h$	99.42	99.55 ± 0.88	$D_M(0.61)$	2320	2313 ± 50
$\boldsymbol{n_s}$	0.9648	0.9652 ± 0.0072	$\langle d^2 \rangle^{1/2}$	2.4350	2.437 ± 0.026	$H(2.33)$	234.91	235.5 ± 4.1
$\boldsymbol{y_{cal}}$	1.00029	1.0007 ± 0.0024	z_{re}	7.71	7.75 ± 0.80	$D_M(2.33)$	5796	5779 ± 110
$\boldsymbol{A_{217}^{CIB}}$	44.5	46 ± 7	$10^9 A_s$	2.0908	2.097 ± 0.040	$f\sigma_8(0.15)$	0.4548	0.4553 ± 0.0077
$\boldsymbol{\xi^{tSZ \times CIB}}$	0.82	—	$10^9 A_s e^{-2\tau}$	1.8726	1.877 ± 0.020	$\sigma_8(0.15)$	0.7440	0.746 ± 0.012
$\boldsymbol{A_{143}^{tSZ}}$	7.03	$5.6^{+2.2}_{-1.9}$	D_{40}	1227.9	1230 ± 14	$f\sigma_8(0.38)$	0.4728	0.4735 ± 0.0075
$\boldsymbol{A_{100}^{PS}}$	244.5	257 ± 28	D_{220}	5729.3	5738 ± 38	$\sigma_8(0.38)$	0.6594	0.661 ± 0.011
$\boldsymbol{A_{143}^{PS}}$	50.7	45 ± 8	D_{810}	2538.4	2539 ± 14	$f\sigma_8(0.51)$	0.4712	0.4721 ± 0.0074
$\boldsymbol{A_{143\times217}^{PS}}$	55.6	42 ± 9	D_{1420}	819.43	818.2 ± 4.8	$\sigma_8(0.51)$	0.6170	0.619 ± 0.010
$\boldsymbol{A_{217}^{PS}}$	122.8	115.0 ± 9.9	D_{2000}	232.14	231.4 ± 1.8	$f\sigma_8(0.61)$	0.4662	0.4671 ± 0.0073
$\boldsymbol{A^{kSZ}}$	0.01	< 4.03	$n_{s,0.002}$	0.9648	0.9652 ± 0.0072	$\sigma_8(0.61)$	0.5871	0.589 ± 0.010
$\boldsymbol{A_{100}^{dust TT}}$	8.83	8.9 ± 1.8	Y_P	0.2422	0.244 ± 0.018	$f\sigma_8(2.33)$	0.2960	0.2969 ± 0.0052
$\boldsymbol{A_{143}^{dust TT}}$	10.99	10.9 ± 1.8	Y_P^{BBN}	0.2435	0.246 ± 0.018	$\sigma_8(2.33)$	0.3051	0.3061 ± 0.0055
$\boldsymbol{A_{143\times217}^{dust TT}}$	20.28	18.6 ± 3.2	Age/Gyr	13.874	13.83 ± 0.27	f_{2000}^{143}	27.46	29.0 ± 3.1
$\boldsymbol{A_{217}^{dust TT}}$	95.9	93.8 ± 7.1	z_*	1089.600	1089.73 ± 0.43	$f_{2000}^{143\times217}$	31.06	31.8 ± 2.2
$\boldsymbol{A_{100}^{dust TE}}$	0.1142	0.114 ± 0.038	r_*	145.42	145.1 ± 2.7	f_{2000}^{217}	105.56	106.7 ± 2.1
$\boldsymbol{A_{100\times143}^{dust TE}}$	0.1341	0.135 ± 0.029	$100\theta_*$	1.04138	1.04133 ± 0.00092	χ^2_{simall}	396.16	397.3 ± 2.0
$\boldsymbol{A_{100\times217}^{dust TE}}$	0.483	0.481 ± 0.085	$D_M(z_*)$/Gpc	13.964	13.93 ± 0.25	χ^2_{lowl}	23.25	23.4 ± 1.2
$\boldsymbol{A_{143}^{dust TE}}$	0.225	0.225 ± 0.055	z_{drag}	1059.59	1059.83 ± 0.78	χ^2_{plik}	2344.8	2361.2 ± 6.2
$\boldsymbol{A_{143\times217}^{dust TE}}$	0.667	0.664 ± 0.081	r_{drag}	148.10	147.7 ± 2.8	χ^2_{6DF}	0.0474	0.069 ± 0.082
$\boldsymbol{A_{217}^{dust TE}}$	2.081	2.08 ± 0.27	k_D	0.14020	0.1405 ± 0.0025	χ^2_{MGS}	1.097	1.23 ± 0.47
$\boldsymbol{c_{100}}$	0.99974	0.99966 ± 0.00061	$100\theta_D$	0.160470	0.16063 ± 0.00047	$\chi^2_{DR12BAO}$	4.80	5.1 ± 1.7
$\boldsymbol{c_{217}}$	0.99817	0.99817 ± 0.00063	z_{eq}	3390.9	3389 ± 33	χ^2_{prior}	1.48	11.6 ± 4.5
H_0	67.13	67.4 ± 1.6	k_{eq}	0.010291	0.01031 ± 0.00016	χ^2_{BAO}	5.94	6.4 ± 1.4
Ω_Λ	0.6873	0.6882 ± 0.0072	$100\theta_{eq}$	0.8153	0.8158 ± 0.0056	χ^2_{CMB}	2764.2	2781.9 ± 6.0
Ω_m	0.3127	0.3118 ± 0.0072	$100\theta_{s,eq}$	0.45045	0.4507 ± 0.0029			
$\Omega_m h^2$	0.14094	0.1417 ± 0.0049	$H(0.15)$	72.40	72.7 ± 1.6			

Best-fit $\chi^2_{eff} = 2771.61$; $\Delta\chi^2_{eff} = -0.31$; $\bar{\chi}^2_{eff} = 2799.87$; $\Delta\bar{\chi}^2_{eff} = 1.96$; $R - 1 = 0.02630$

χ^2_{eff}: BAO - 6DF: 0.05 (Δ 0.02) MGS: 1.10 (Δ -0.12) DR12BAO: 4.80 (Δ 0.39) CMB - simall_100x143_offlike5_EE_Aplanck_B: 396.16 (Δ -0.04) commander_dx12_v3_2_29: 23.25 (Δ 0.38) plik_rd12_HM_v22b_TTTEEE: 2344.78 (Δ -0.73)

11.11 base_nnu_yhe_plikHM_TTTEEE_lowl_lowE_post_lensing

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022215	0.02224 ± 0.00022	$\Omega_m h^2$	0.13914	$0.1400^{+0.0042}_{-0.0049}$	$100\theta_{s,eq}$	0.44698	0.4474 ± 0.0038
$\boldsymbol{\Omega_c h^2}$	0.11628	$0.1171^{+0.0042}_{-0.0049}$	$\Omega_m h^3$	0.0914	$0.0925^{+0.0048}_{-0.0059}$	$H(0.15)$	71.01	$71.3^{+1.7}_{-1.9}$
$\boldsymbol{100\theta_{MC}}$	1.04151	1.0415 ± 0.0012	σ_8	0.8019	0.803 ± 0.011	$D_M(0.15)$	659.0	656 ± 17
$\boldsymbol{\tau}$	0.0539	0.0535 ± 0.0076	S_8	0.8312	0.831 ± 0.013	$H(0.38)$	81.14	$81.5^{+1.7}_{-2.0}$
$\boldsymbol{N_{eff}}$	2.787	$2.84^{+0.27}_{-0.32}$	$\sigma_8\Omega_m^{0.5}$	0.4552	0.4552 ± 0.0071	$D_M(0.38)$	1569.1	1563 ± 39
$\boldsymbol{Y_P}$	0.2458	0.247 ± 0.018	$\sigma_8\Omega_m^{0.25}$	0.6042	0.6046 ± 0.0076	$H(0.51)$	87.85	$88.2^{+1.8}_{-2.0}$
$\boldsymbol{\ln(10^{10}A_s)}$	3.0349	3.036 ± 0.018	$\sigma_8/h^{0.5}$	0.9893	0.9886 ± 0.0095	$D_M(0.51)$	2030.9	2023 ± 49
$\boldsymbol{n_s}$	0.9583	0.9589 ± 0.0085	$r_{drag}h$	98.28	98.4 ± 1.2	$H(0.61)$	93.46	$93.8^{+1.8}_{-2.1}$
$\boldsymbol{y_{cal}}$	1.00046	1.0007 ± 0.0024	$\langle d^2\rangle^{1/2}$	2.4559	2.454 ± 0.024	$D_M(0.61)$	2362	2353 ± 56
$\boldsymbol{A_{217}^{CIB}}$	44.0	46 ± 7	z_{re}	7.60	7.55 ± 0.77	$H(2.33)$	233.12	$233.8^{+3.7}_{-4.2}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.89	—	$10^9 A_s$	2.0799	2.082 ± 0.037	$D_M(2.33)$	5872	5853 ± 120
$\boldsymbol{A_{143}^{tSZ}}$	6.95	$5.6^{+2.1}_{-1.9}$	$10^9 A_s e^{-2\tau}$	1.8673	1.871 ± 0.019	$f\sigma_8(0.15)$	0.4589	0.4589 ± 0.0067
$\boldsymbol{A_{100}^{PS}}$	243.8	256 ± 28	D_{40}	1237.7	1238 ± 16	$\sigma_8(0.15)$	0.7399	0.741 ± 0.011
$\boldsymbol{A_{143}^{PS}}$	51.6	45 ± 8	D_{220}	5729.7	5734 ± 38	$f\sigma_8(0.38)$	0.4747	0.4749 ± 0.0060
$\boldsymbol{A_{143\times217}^{PS}}$	57.1	42 ± 9	D_{810}	2538.7	2538 ± 13	$\sigma_8(0.38)$	0.6547	0.656 ± 0.010
$\boldsymbol{A_{217}^{PS}}$	123.5	115 ± 10	D_{1420}	819.62	817.9 ± 4.7	$f\sigma_8(0.51)$	0.4720	0.4724 ± 0.0059
$\boldsymbol{A^{kSZ}}$	0.00	< 3.96	D_{2000}	232.44	231.6 ± 1.8	$\sigma_8(0.51)$	0.6123	0.614 ± 0.010
$\boldsymbol{A_{100}^{dust TT}}$	8.71	8.9 ± 1.8	$n_{s,0.002}$	0.9583	0.9589 ± 0.0085	$f\sigma_8(0.61)$	0.4663	0.4667 ± 0.0059
$\boldsymbol{A_{143}^{dust TT}}$	10.92	10.8 ± 1.8	Y_P	0.2458	0.247 ± 0.018	$\sigma_8(0.61)$	0.5823	0.5836 ± 0.0097
$\boldsymbol{A_{143\times217}^{dust TT}}$	20.27	18.5 ± 3.3	Y_P^{BBN}	0.2472	0.249 ± 0.018	$f\sigma_8(2.33)$	0.2932	0.2939 ± 0.0051
$\boldsymbol{A_{217}^{dust TT}}$	96.0	93.9 ± 7.2	Age/Gyr	14.056	14.01 ± 0.28	$\sigma_8(2.33)$	0.3018	0.3026 ± 0.0056
$\boldsymbol{A_{100}^{dust TE}}$	0.1139	0.115 ± 0.038	z_*	1089.692	1089.82 ± 0.44	f_{2000}^{143}	27.34	28.8 ± 3.1
$\boldsymbol{A_{100\times143}^{dust TE}}$	0.1353	0.135 ± 0.029	r_*	146.84	146.4 ± 2.7	$f_{2000}^{143\times217}$	30.98	31.6 ± 2.2
$\boldsymbol{A_{100\times217}^{dust TE}}$	0.483	0.483 ± 0.084	$100\theta_*$	1.04177	1.04166 ± 0.00092	f_{2000}^{217}	105.51	106.6 ± 2.1
$\boldsymbol{A_{143}^{dust TE}}$	0.227	0.225 ± 0.054	$D_M(z_*)$/Gpc	14.096	14.05 ± 0.25	$\chi^2_{lensing}$	8.49	9.01 ± 0.75
$\boldsymbol{A_{143\times217}^{dust TE}}$	0.667	0.667 ± 0.080	z_{drag}	1059.25	1059.42 ± 0.84	χ^2_{simall}	396.03	396.9 ± 1.6
$\boldsymbol{A_{217}^{dust TE}}$	2.090	2.09 ± 0.27	r_{drag}	149.59	149.1 ± 2.8	χ^2_{lowl}	24.24	24.3 ± 1.5
$\boldsymbol{c_{100}}$	0.99974	0.99968 ± 0.00061	k_D	0.13899	$0.1393^{+0.0023}_{-0.0026}$	χ^2_{plik}	2343.0	2359.9 ± 6.0
$\boldsymbol{c_{217}}$	0.99817	0.99817 ± 0.00063	$100\theta_D$	0.160353	0.16052 ± 0.00048	χ^2_{prior}	1.47	11.5 ± 4.5
H_0	65.70	$66.0^{+1.7}_{-1.9}$	z_{eq}	3428.5	3425 ± 42	χ^2_{CMB}	2771.8	2790.2 ± 6.2
Ω_Λ	0.6777	0.679 ± 0.010	k_{eq}	0.010281	$0.01030^{+0.00013}_{-0.00015}$			
Ω_m	0.3223	0.321 ± 0.010	$100\theta_{eq}$	0.8085	0.8092 ± 0.0074			

Best-fit $\chi^2_{eff} = 2773.24$; $\Delta\chi^2_{eff} = -1.39$; $\bar{\chi}^2_{eff} = 2801.64$; $\Delta\bar{\chi}^2_{eff} = 0.95$; $R - 1 = 0.01539$

χ^2_{eff}: CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.49 (Δ -0.37) simall_100x143_offlike5_EE_Aplanck_B: 396.03 (Δ -0.02) commander_dx12_v3_2_29: 24.23 (Δ 0.98) plik_rd12_HM_v22b_TTTEEE: 2343.02 (Δ -1.91)

11.12 base_nnu_yhe_plikHM_TTTEEE_lowl_lowE_post_BAO_lensing

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022358	0.02238 ± 0.00019	$\Omega_m h^2$	0.14037	0.1412 ± 0.0046	$100\theta_{s,eq}$	0.45028	0.4504 ± 0.0028
$\boldsymbol{\Omega_c h^2}$	0.11736	0.1182 ± 0.0045	$\Omega_m h^3$	0.0940	$0.0950^{+0.0048}_{-0.0054}$	$H(0.15)$	72.24	72.5 ± 1.6
$\boldsymbol{100\theta_{MC}}$	1.04126	1.0412 ± 0.0012	σ_8	0.8054	0.807 ± 0.011	$D_M(0.15)$	647.1	645 ± 14
$\boldsymbol{\tau}$	0.0563	0.0562 ± 0.0073	S_8	0.8225	0.824 ± 0.012	$H(0.38)$	82.30	82.6 ± 1.7
$\boldsymbol{N_{eff}}$	2.926	2.97 ± 0.29	$\sigma_8 \Omega_m^{0.5}$	0.4505	0.4511 ± 0.0063	$D_M(0.38)$	1543.0	1538 ± 33
$\boldsymbol{Y_P}$	0.2443	0.245 ± 0.018	$\sigma_8 \Omega_m^{0.25}$	0.6024	0.6033 ± 0.0077	$H(0.51)$	88.98	89.3 ± 1.7
$\boldsymbol{\ln(10^{10} A_s)}$	3.0426	3.044 ± 0.017	$\sigma_8/h^{0.5}$	0.9841	0.9843 ± 0.0090	$D_M(0.51)$	1998.6	1993 ± 42
$\boldsymbol{n_s}$	0.9644	0.9644 ± 0.0071	$r_{drag} h$	99.42	99.46 ± 0.85	$H(0.61)$	94.57	94.9 ± 1.8
$\boldsymbol{y_{cal}}$	1.00073	1.0008 ± 0.0024	$\langle d^2 \rangle^{1/2}$	2.4386	2.440 ± 0.021	$D_M(0.61)$	2325.5	2319 ± 49
$\boldsymbol{A_{217}^{CIB}}$	44.4	46 ± 7	z_{re}	7.83	7.82 ± 0.73	$H(2.33)$	234.43	235.1 ± 3.9
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.80	—	$10^9 A_s$	2.0959	2.099 ± 0.035	$D_M(2.33)$	5808	5791 ± 110
$\boldsymbol{A_{143}^{tSZ}}$	7.00	$5.6^{+2.1}_{-1.9}$	$10^9 A_s e^{-2\tau}$	1.8727	1.875 ± 0.019	$f\sigma_8(0.15)$	0.4550	0.4556 ± 0.0062
$\boldsymbol{A_{100}^{PS}}$	244.8	257 ± 28	D_{40}	1229.6	1231 ± 14	$\sigma_8(0.15)$	0.7441	0.746 ± 0.011
$\boldsymbol{A_{143}^{PS}}$	50.5	45 ± 8	D_{220}	5736.6	5741 ± 37	$f\sigma_8(0.38)$	0.4729	0.4736 ± 0.0060
$\boldsymbol{A_{143\times217}^{PS}}$	55.2	42 ± 9	D_{810}	2540.5	2539 ± 13	$\sigma_8(0.38)$	0.6595	0.6609 ± 0.0098
$\boldsymbol{A_{217}^{PS}}$	123.0	115.2 ± 9.8	D_{1420}	820.11	818.4 ± 4.7	$f\sigma_8(0.51)$	0.4713	0.4721 ± 0.0060
$\boldsymbol{A^{kSZ}}$	0.00	< 3.94	D_{2000}	232.36	231.5 ± 1.8	$\sigma_8(0.51)$	0.6171	0.6184 ± 0.0094
$\boldsymbol{A_{100}^{dust TT}}$	8.82	8.9 ± 1.8	$n_{s,0.002}$	0.9644	0.9644 ± 0.0071	$f\sigma_8(0.61)$	0.4663	0.4671 ± 0.0060
$\boldsymbol{A_{143}^{dust TT}}$	10.98	10.8 ± 1.8	Y_P	0.2443	0.245 ± 0.018	$\sigma_8(0.61)$	0.5871	0.5884 ± 0.0090
$\boldsymbol{A_{143\times217}^{dust TT}}$	20.22	18.6 ± 3.2	Y_P^{BBN}	0.2456	0.246 ± 0.018	$f\sigma_8(2.33)$	0.29600	0.2967 ± 0.0047
$\boldsymbol{A_{217}^{dust TT}}$	96.0	93.9 ± 7.2	Age/Gyr	13.904	13.86 ± 0.26	$\sigma_8(2.33)$	0.3051	0.3058 ± 0.0050
$\boldsymbol{A_{100}^{dust TE}}$	0.1152	0.114 ± 0.038	z_*	1089.607	1089.71 ± 0.43	$\chi^2_{lensing}$	8.56	9.06 ± 0.70
$\boldsymbol{A_{100\times143}^{dust TE}}$	0.1336	0.135 ± 0.030	r_*	145.73	145.3 ± 2.6	χ^2_{simall}	396.43	397.3 ± 1.9
$\boldsymbol{A_{100\times217}^{dust TE}}$	0.484	0.482 ± 0.085	$100\theta_*$	1.04150	1.04141 ± 0.00089	χ^2_{lowl}	23.32	23.5 ± 1.2
$\boldsymbol{A_{143}^{dust TE}}$	0.223	0.224 ± 0.054	$D_M(z_*)$/Gpc	13.993	13.96 ± 0.24	χ^2_{plik}	2344.5	2360.6 ± 6.0
$\boldsymbol{A_{143\times217}^{dust TE}}$	0.665	0.664 ± 0.081	z_{drag}	1059.63	1059.78 ± 0.78	χ^2_{6DF}	0.0477	0.074 ± 0.083
$\boldsymbol{A_{217}^{dust TE}}$	2.080	2.08 ± 0.27	r_{drag}	148.42	148.0 ± 2.7	χ^2_{MGS}	1.097	1.18 ± 0.45
$\boldsymbol{c_{100}}$	0.99975	0.99967 ± 0.00061	k_D	0.13991	0.1402 ± 0.0024	$\chi^2_{DR12BAO}$	4.79	5.2 ± 1.7
$\boldsymbol{c_{217}}$	0.99816	0.99816 ± 0.00063	$100\theta_D$	0.160471	0.16060 ± 0.00047	χ^2_{prior}	1.48	11.6 ± 4.5
H_0	66.98	67.2 ± 1.6	z_{eq}	3393.4	3393 ± 32	χ^2_{CMB}	2772.8	2790.5 ± 6.0
Ω_Λ	0.6872	0.6875 ± 0.0071	k_{eq}	0.010274	0.01030 ± 0.00014	χ^2_{BAO}	5.94	6.4 ± 1.4
Ω_m	0.3128	0.3125 ± 0.0071	$100\theta_{eq}$	0.8150	0.8152 ± 0.0055			

Best-fit $\chi^2_{eff} = 2780.20$; $\Delta\chi^2_{eff} = -0.50$; $\bar{\chi}^2_{eff} = 2808.46$; $\Delta\bar{\chi}^2_{eff} = 1.62$; $R - 1 = 0.02254$

χ^2_{eff}: BAO - 6DF: 0.05 (Δ 0.02) MGS: 1.10 (Δ -0.12) DR12BAO: 4.79 (Δ 0.37) CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.56 (Δ -0.17) simall_100x143_offlike5_EE_Aplanck 396.44 (Δ -0.09) commander_dx12_v3_2_29: 23.32 (Δ 0.42) plik_rd12_HM_v22b_TTTEEE: 2344.47 (Δ -0.85)

11.13 base_nnu_yhe_plikHM_TTTEEE_lowl_lowE_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02226 ± 0.00022	Ω_m	0.321 ± 0.011	k_{eq}	0.01033 ± 0.00016
$\boldsymbol{\Omega_c h^2}$	$0.1179^{+0.0045}_{-0.0050}$	$\Omega_m h^2$	$0.1409^{+0.0045}_{-0.0051}$	$100\theta_{eq}$	0.8097 ± 0.0078
$\boldsymbol{100\theta_{MC}}$	1.0413 ± 0.0012	$\Omega_m h^3$	$0.0935^{+0.0050}_{-0.0060}$	$100\theta_{s,eq}$	0.4476 ± 0.0040
$\boldsymbol{\tau}$	$0.0550^{+0.0051}_{-0.0083}$	σ_8	0.807 ± 0.012	$H(0.15)$	$71.6^{+1.7}_{-2.0}$
$\boldsymbol{N_{eff}}$	$2.89^{+0.29}_{-0.33}$	S_8	0.834 ± 0.017	$D_M(0.15)$	654 ± 17
$\boldsymbol{Y_P}$	0.246 ± 0.018	$\sigma_8 \Omega_m^{0.5}$	0.4567 ± 0.0091	$H(0.38)$	$81.8^{+1.8}_{-2.0}$
$\boldsymbol{\ln(10^{10} A_s)}$	$3.041^{+0.015}_{-0.019}$	$\sigma_8 \Omega_m^{0.25}$	0.6070 ± 0.0095	$D_M(0.38)$	1557 ± 39
$\boldsymbol{n_s}$	0.9601 ± 0.0085	$\sigma_8/h^{0.5}$	0.991 ± 0.012	$H(0.51)$	$88.5^{+1.8}_{-2.1}$
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0025	$r_{drag} h$	98.5 ± 1.3	$D_M(0.51)$	2015 ± 50
$\boldsymbol{A^{CIB}_{217}}$	46 ± 7	$\langle d^2 \rangle^{1/2}$	2.458 ± 0.030	$H(0.61)$	$94.2^{+1.9}_{-2.1}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	z_{re}	$7.72^{+0.57}_{-0.82}$	$D_M(0.61)$	2344 ± 57
$\boldsymbol{A^{tSZ}_{143}}$	$5.5^{+2.1}_{-1.9}$	$10^9 A_s$	$2.092^{+0.032}_{-0.040}$	$H(2.33)$	234.6 ± 4.1
$\boldsymbol{A^{PS}_{100}}$	256 ± 28	$10^9 A_s e^{-2\tau}$	1.874 ± 0.020	$D_M(2.33)$	5832 ± 120
$\boldsymbol{A^{PS}_{143}}$	45 ± 8	D_{40}	1238 ± 16	$f\sigma_8(0.15)$	0.4605 ± 0.0085
$\boldsymbol{A^{PS}_{143\times217}}$	42 ± 9	D_{220}	5733 ± 38	$\sigma_8(0.15)$	0.745 ± 0.012
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	D_{810}	2538 ± 14	$f\sigma_8(0.38)$	0.4767 ± 0.0075
$\boldsymbol{A^{kSZ}}$	< 3.97	D_{1420}	817.8 ± 4.8	$\sigma_8(0.38)$	0.659 ± 0.011
$\boldsymbol{A^{dust TT}_{100}}$	8.9 ± 1.8	D_{2000}	231.5 ± 1.8	$f\sigma_8(0.51)$	0.4743 ± 0.0071
$\boldsymbol{A^{dust TT}_{143}}$	10.8 ± 1.8	$n_{s,0.002}$	0.9601 ± 0.0085	$\sigma_8(0.51)$	0.616 ± 0.010
$\boldsymbol{A^{dust TT}_{143\times217}}$	18.5 ± 3.3	Y_P	0.246 ± 0.018	$f\sigma_8(0.61)$	0.4686 ± 0.0069
$\boldsymbol{A^{dust TT}_{217}}$	93.9 ± 7.3	Y_P^{BBN}	0.248 ± 0.018	$\sigma_8(0.61)$	0.5862 ± 0.0099
$\boldsymbol{A^{dust TE}_{100}}$	0.115 ± 0.038	Age/Gyr	13.96 ± 0.29	$f\sigma_8(2.33)$	0.2953 ± 0.0051
$\boldsymbol{A^{dust TE}_{100\times143}}$	0.135 ± 0.029	z_*	1089.85 ± 0.45	$\sigma_8(2.33)$	0.3040 ± 0.0056
$\boldsymbol{A^{dust TE}_{100\times217}}$	0.483 ± 0.084	r_*	145.9 ± 2.8	f^{143}_{2000}	28.9 ± 3.1
$\boldsymbol{A^{dust TE}_{143}}$	0.224 ± 0.054	$100\theta_*$	1.04152 ± 0.00094	$f^{143\times217}_{2000}$	31.7 ± 2.2
$\boldsymbol{A^{dust TE}_{143\times217}}$	0.667 ± 0.080	$D_M(z_*)$/Gpc	14.01 ± 0.26	f^{217}_{2000}	106.6 ± 2.1
$\boldsymbol{A^{dust TE}_{217}}$	2.09 ± 0.27	z_{drag}	1059.51 ± 0.83	χ^2_{simall}	397.0 ± 1.8
$\boldsymbol{c_{100}}$	0.99967 ± 0.00061	r_{drag}	148.6 ± 2.9	χ^2_{lowl}	24.3 ± 1.5
$\boldsymbol{c_{217}}$	0.99818 ± 0.00063	k_D	$0.1397^{+0.0024}_{-0.0027}$	χ^2_{plik}	2360.1 ± 6.1
H_0	$66.3^{+1.7}_{-2.0}$	$100\theta_D$	0.16057 ± 0.00047	χ^2_{prior}	11.5 ± 4.5
Ω_Λ	0.679 ± 0.011	z_{eq}	3422 ± 44	χ^2_{CMB}	2781.4 ± 6.1

$\bar{\chi}^2_{eff} = 2792.90$; $\Delta\bar{\chi}^2_{eff} = 1.36$; $R - 1 = 0.01223$

11.14 base_nnu_yhe_plikHM_TTTEEE_lowl_lowE_post_BAO_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02239 ± 0.00019	$\Omega_m h^3$	0.0956 ± 0.0054	$D_M(0.15)$	643 ± 15
$\boldsymbol{\Omega_c h^2}$	0.1186 ± 0.0048	σ_8	0.808 ± 0.013	$H(0.38)$	82.8 ± 1.7
$\boldsymbol{100\theta_{MC}}$	1.0411 ± 0.0012	S_8	0.824 ± 0.014	$D_M(0.38)$	1534 ± 34
$\boldsymbol{\tau}$	$0.0564^{+0.0059}_{-0.0082}$	$\sigma_8\Omega_m^{0.5}$	0.4511 ± 0.0078	$H(0.51)$	89.5 ± 1.8
$\boldsymbol{N_{eff}}$	3.01 ± 0.30	$\sigma_8\Omega_m^{0.25}$	0.6038 ± 0.0093	$D_M(0.51)$	1987 ± 43
$\boldsymbol{Y_P}$	0.244 ± 0.018	$\sigma_8/h^{0.5}$	0.984 ± 0.011	$H(0.61)$	95.1 ± 1.9
$\boldsymbol{\ln(10^{10}A_s)}$	$3.045^{+0.016}_{-0.019}$	$r_{drag}h$	99.56 ± 0.88	$D_M(0.61)$	2312 ± 49
$\boldsymbol{n_s}$	0.9653 ± 0.0071	$\langle d^2\rangle^{1/2}$	2.439 ± 0.025	$H(2.33)$	235.5 ± 4.1
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0024	z_{re}	$7.85^{+0.64}_{-0.82}$	$D_M(2.33)$	5778 ± 110
$\boldsymbol{A^{CIB}_{217}}$	46 ± 7	$10^9 A_s$	$2.101^{+0.033}_{-0.041}$	$f\sigma_8(0.15)$	0.4557 ± 0.0076
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$10^9 A_s e^{-2\tau}$	1.877 ± 0.020	$\sigma_8(0.15)$	0.747 ± 0.012
$\boldsymbol{A^{tSZ}_{143}}$	$5.6^{+2.2}_{-1.9}$	D_{40}	1230 ± 14	$f\sigma_8(0.38)$	0.4739 ± 0.0073
$\boldsymbol{A^{PS}_{100}}$	257 ± 28	D_{220}	5738 ± 38	$\sigma_8(0.38)$	0.662 ± 0.011
$\boldsymbol{A^{PS}_{143}}$	45 ± 8	D_{810}	2539 ± 14	$f\sigma_8(0.51)$	0.4725 ± 0.0072
$\boldsymbol{A^{PS}_{143\times217}}$	42 ± 9	D_{1420}	818.1 ± 4.8	$\sigma_8(0.51)$	0.619 ± 0.010
$\boldsymbol{A^{PS}_{217}}$	115.0 ± 9.9	D_{2000}	231.4 ± 1.8	$f\sigma_8(0.61)$	0.4676 ± 0.0071
$\boldsymbol{A^{kSZ}}$	< 4.03	$n_{s,0.002}$	0.9653 ± 0.0071	$\sigma_8(0.61)$	0.5895 ± 0.0098
$\boldsymbol{A^{dust TT}_{100}}$	8.9 ± 1.8	Y_P	0.244 ± 0.018	$f\sigma_8(2.33)$	0.2972 ± 0.0050
$\boldsymbol{A^{dust TT}_{143}}$	10.9 ± 1.8	Y_P^{BBN}	0.246 ± 0.018	$\sigma_8(2.33)$	0.3064 ± 0.0053
$\boldsymbol{A^{dust TT}_{143\times217}}$	18.6 ± 3.2	Age/Gyr	13.83 ± 0.27	f^{143}_{2000}	29.0 ± 3.1
$\boldsymbol{A^{dust TT}_{217}}$	93.8 ± 7.1	z_*	1089.73 ± 0.44	$f^{143\times217}_{2000}$	31.8 ± 2.2
$\boldsymbol{A^{dust TE}_{100}}$	0.114 ± 0.038	r_*	145.0 ± 2.7	f^{217}_{2000}	106.7 ± 2.1
$\boldsymbol{A^{dust TE}_{100\times143}}$	0.135 ± 0.029	$100\theta_*$	1.04133 ± 0.00092	χ^2_{simall}	397.3 ± 2.0
$\boldsymbol{A^{dust TE}_{100\times217}}$	0.481 ± 0.085	$D_M(z_*)$/Gpc	13.93 ± 0.25	χ^2_{lowl}	23.4 ± 1.2
$\boldsymbol{A^{dust TE}_{143}}$	0.224 ± 0.054	z_{drag}	1059.84 ± 0.78	χ^2_{plik}	2361.0 ± 6.1
$\boldsymbol{A^{dust TE}_{143\times217}}$	0.664 ± 0.081	r_{drag}	147.7 ± 2.8	χ^2_{6DF}	0.068 ± 0.080
$\boldsymbol{A^{dust TE}_{217}}$	2.08 ± 0.27	k_D	0.1405 ± 0.0025	χ^2_{MGS}	1.23 ± 0.47
$\boldsymbol{c_{100}}$	0.99966 ± 0.00061	$100\theta_D$	0.16064 ± 0.00047	$\chi^2_{DR12BAO}$	5.1 ± 1.7
$\boldsymbol{c_{217}}$	0.99817 ± 0.00064	z_{eq}	3389 ± 33	χ^2_{prior}	11.6 ± 4.5
H_0	67.4 ± 1.6	k_{eq}	0.01031 ± 0.00016	χ^2_{BAO}	6.3 ± 1.4
Ω_Λ	0.6883 ± 0.0072	$100\theta_{eq}$	0.8159 ± 0.0056	χ^2_{CMB}	2781.7 ± 6.0
Ω_m	0.3117 ± 0.0072	$100\theta_{s,eq}$	0.4507 ± 0.0029		
$\Omega_m h^2$	0.1417 ± 0.0048	$H(0.15)$	72.7 ± 1.6		

$\bar{\chi}^2_{eff} = 2799.64$; $\Delta\bar{\chi}^2_{eff} = 1.93$; $R - 1 = 0.02640$

11.15 base_nnu_yhe_plikHM_TTTEEE_lowl_lowE_post_lensing_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02225 ± 0.00022	$\Omega_m h^2$	$0.1400^{+0.0042}_{-0.0049}$	$100\theta_{s,eq}$	0.4476 ± 0.0037
$\boldsymbol{\Omega_c h^2}$	$0.1171^{+0.0042}_{-0.0048}$	$\Omega_m h^3$	$0.0926^{+0.0048}_{-0.0058}$	$H(0.15)$	$71.4^{+1.7}_{-1.9}$
$\boldsymbol{100\theta_{MC}}$	1.0415 ± 0.0012	σ_8	0.804 ± 0.011	$D_M(0.15)$	656 ± 17
$\boldsymbol{\tau}$	$0.0547^{+0.0050}_{-0.0078}$	S_8	0.831 ± 0.013	$H(0.38)$	$81.5^{+1.7}_{-2.0}$
$\boldsymbol{N_{eff}}$	$2.85^{+0.27}_{-0.32}$	$\sigma_8\Omega_m^{0.5}$	0.4552 ± 0.0071	$D_M(0.38)$	1561 ± 39
$\boldsymbol{Y_P}$	0.248 ± 0.018	$\sigma_8\Omega_m^{0.25}$	0.6050 ± 0.0076	$H(0.51)$	$88.3^{+1.8}_{-2.0}$
$\boldsymbol{\ln(10^{10}A_s)}$	$3.038^{+0.014}_{-0.017}$	$\sigma_8/h^{0.5}$	0.9892 ± 0.0093	$D_M(0.51)$	2021 ± 49
$\boldsymbol{n_s}$	0.9594 ± 0.0083	$r_{drag}h$	98.5 ± 1.2	$H(0.61)$	$93.9^{+1.8}_{-2.1}$
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0024	$\langle d^2\rangle^{1/2}$	2.455 ± 0.024	$D_M(0.61)$	2351 ± 56
$\boldsymbol{A_{217}^{CIB}}$	46 ± 7	z_{re}	$7.68^{+0.54}_{-0.79}$	$H(2.33)$	$233.8^{+3.7}_{-4.2}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	10^9A_s	$2.087^{+0.030}_{-0.037}$	$D_M(2.33)$	5850 ± 120
$\boldsymbol{A_{143}^{tSZ}}$	$5.6^{+2.1}_{-1.9}$	$10^9A_se^{-2\tau}$	1.870 ± 0.019	$f\sigma_8(0.15)$	0.4590 ± 0.0067
$\boldsymbol{A_{100}^{PS}}$	256 ± 28	D_{40}	1238 ± 15	$\sigma_8(0.15)$	0.742 ± 0.011
$\boldsymbol{A_{143}^{PS}}$	45 ± 8	D_{220}	5734 ± 38	$f\sigma_8(0.38)$	0.4752 ± 0.0060
$\boldsymbol{A_{143\times217}^{PS}}$	42 ± 9	D_{810}	2537 ± 13	$\sigma_8(0.38)$	0.657 ± 0.010
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	D_{1420}	817.9 ± 4.7	$f\sigma_8(0.51)$	0.4728 ± 0.0058
$\boldsymbol{A^{kSZ}}$	< 3.96	D_{2000}	231.5 ± 1.8	$\sigma_8(0.51)$	0.6144 ± 0.0097
$\boldsymbol{A_{100}^{dust}}$	8.9 ± 1.8	$n_{s,0.002}$	0.9594 ± 0.0083	$f\sigma_8(0.61)$	0.4671 ± 0.0058
$\boldsymbol{A_{143}^{dust}}$	10.8 ± 1.8	Y_P	0.248 ± 0.018	$\sigma_8(0.61)$	0.5844 ± 0.0094
$\boldsymbol{A_{143\times217}^{dust}}$	18.5 ± 3.2	Y_P^{BBN}	0.249 ± 0.018	$f\sigma_8(2.33)$	0.2944 ± 0.0049
$\boldsymbol{A_{217}^{dust}}$	93.9 ± 7.2	Age/Gyr	14.00 ± 0.28	$\sigma_8(2.33)$	0.3031 ± 0.0054
$\boldsymbol{A_{100}^{dustTE}}$	0.115 ± 0.038	z_*	1089.81 ± 0.44	f_{2000}^{143}	28.8 ± 3.1
$\boldsymbol{A_{100\times143}^{dustTE}}$	0.135 ± 0.029	r_*	146.4 ± 2.7	$f_{2000}^{143\times217}$	31.6 ± 2.2
$\boldsymbol{A_{100\times217}^{dustTE}}$	0.483 ± 0.084	$100\theta_*$	1.04166 ± 0.00092	f_{2000}^{217}	106.5 ± 2.1
$\boldsymbol{A_{143}^{dustTE}}$	0.225 ± 0.054	$D_M(z_*)$/Gpc	14.05 ± 0.25	$\chi^2_{lensing}$	9.00 ± 0.75
$\boldsymbol{A_{143\times217}^{dustTE}}$	0.666 ± 0.080	z_{drag}	1059.46 ± 0.83	χ^2_{simall}	396.9 ± 1.7
$\boldsymbol{A_{217}^{dustTE}}$	2.09 ± 0.27	r_{drag}	149.1 ± 2.8	χ^2_{lowl}	24.3 ± 1.5
$\boldsymbol{c_{100}}$	0.99967 ± 0.00061	k_D	$0.1393^{+0.0023}_{-0.0026}$	χ^2_{plik}	2359.7 ± 6.0
$\boldsymbol{c_{217}}$	0.99817 ± 0.00063	$100\theta_D$	0.16053 ± 0.00048	χ^2_{prior}	11.4 ± 4.5
H_0	$66.1^{+1.7}_{-1.9}$	z_{eq}	3423 ± 41	χ^2_{CMB}	2789.9 ± 6.1
Ω_Λ	0.679 ± 0.010	k_{eq}	0.01030 ± 0.00014		
Ω_m	0.321 ± 0.010	$100\theta_{eq}$	0.8097 ± 0.0072		

$\bar{\chi}^2_{eff} = 2801.36$; $\Delta\bar{\chi}^2_{eff} = 0.85$; $R - 1 = 0.01489$

11.16 base_nnu_yhe_plikHM_TTTEEE_lowl_lowE_post_BAO_lensing_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02238 ± 0.00019	$\Omega_m h^3$	0.0950 ± 0.0051	$D_M(0.15)$	645 ± 14
$\boldsymbol{\Omega_c h^2}$	0.1181 ± 0.0045	σ_8	0.807 ± 0.011	$H(0.38)$	82.6 ± 1.7
$\boldsymbol{100\theta_{MC}}$	1.0412 ± 0.0012	S_8	0.824 ± 0.011	$D_M(0.38)$	1538 ± 33
$\boldsymbol{\tau}$	$0.0568^{+0.0060}_{-0.0076}$	$\sigma_8\Omega_m^{0.5}$	0.4512 ± 0.0063	$H(0.51)$	89.3 ± 1.7
$\boldsymbol{N_{eff}}$	2.97 ± 0.29	$\sigma_8\Omega_m^{0.25}$	0.6036 ± 0.0076	$D_M(0.51)$	1993 ± 42
$\boldsymbol{Y_P}$	0.245 ± 0.018	$\sigma_8/h^{0.5}$	0.9847 ± 0.0088	$H(0.61)$	94.9 ± 1.8
$\boldsymbol{\ln(10^{10}A_s)}$	$3.045^{+0.015}_{-0.017}$	$r_{drag}h$	99.48 ± 0.84	$D_M(0.61)$	2318 ± 49
$\boldsymbol{n_s}$	0.9645 ± 0.0071	$\langle d^2\rangle^{1/2}$	2.441 ± 0.021	$H(2.33)$	235.1 ± 3.9
$\boldsymbol{y_{cal}}$	1.0008 ± 0.0024	z_{re}	$7.88^{+0.64}_{-0.74}$	$D_M(2.33)$	5791 ± 110
$\boldsymbol{A^{CIB}_{217}}$	46 ± 7	$10^9 A_s$	$2.101^{+0.030}_{-0.036}$	$f\sigma_8(0.15)$	0.4557 ± 0.0061
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$10^9 A_s e^{-2\tau}$	1.875 ± 0.019	$\sigma_8(0.15)$	0.746 ± 0.011
$\boldsymbol{A^{tSZ}_{143}}$	$5.6^{+2.1}_{-1.9}$	D_{40}	1231 ± 14	$f\sigma_8(0.38)$	0.4738 ± 0.0060
$\boldsymbol{A^{PS}_{100}}$	257 ± 28	D_{220}	5740 ± 37	$\sigma_8(0.38)$	0.6612 ± 0.0097
$\boldsymbol{A^{PS}_{143}}$	45 ± 8	D_{810}	2539 ± 13	$f\sigma_8(0.51)$	0.4723 ± 0.0060
$\boldsymbol{A^{PS}_{143\times217}}$	42 ± 9	D_{1420}	818.3 ± 4.7	$\sigma_8(0.51)$	0.6187 ± 0.0093
$\boldsymbol{A^{PS}_{217}}$	115.2 ± 9.9	D_{2000}	231.5 ± 1.8	$f\sigma_8(0.61)$	0.4673 ± 0.0060
$\boldsymbol{A^{kSZ}}$	< 3.95	$n_{s,0.002}$	0.9645 ± 0.0071	$\sigma_8(0.61)$	0.5887 ± 0.0089
$\boldsymbol{A^{dustTT}_{100}}$	8.9 ± 1.8	Y_P	0.245 ± 0.018	$f\sigma_8(2.33)$	0.2968 ± 0.0046
$\boldsymbol{A^{dustTT}_{143}}$	10.8 ± 1.8	Y_P^{BBN}	0.247 ± 0.018	$\sigma_8(2.33)$	0.3060 ± 0.0050
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.6 ± 3.2	Age/Gyr	13.86 ± 0.26	f^{143}_{2000}	28.9 ± 3.1
$\boldsymbol{A^{dustTT}_{217}}$	93.9 ± 7.2	z_*	1089.71 ± 0.43	$f^{143\times217}_{2000}$	31.7 ± 2.2
$\boldsymbol{A^{dustTE}_{100}}$	0.114 ± 0.038	r_*	145.3 ± 2.6	f^{217}_{2000}	106.6 ± 2.1
$\boldsymbol{A^{dustTE}_{100\times143}}$	0.134 ± 0.030	$100\theta_*$	1.04141 ± 0.00089	$\chi^2_{lensing}$	9.03 ± 0.66
$\boldsymbol{A^{dustTE}_{100\times217}}$	0.481 ± 0.085	$D_M(z_*)$/Gpc	13.96 ± 0.24	χ^2_{simall}	397.3 ± 1.9
$\boldsymbol{A^{dustTE}_{143}}$	0.224 ± 0.054	z_{drag}	1059.79 ± 0.78	χ^2_{lowl}	23.5 ± 1.2
$\boldsymbol{A^{dustTE}_{143\times217}}$	0.665 ± 0.081	r_{drag}	148.0 ± 2.7	χ^2_{plik}	2360.5 ± 6.0
$\boldsymbol{A^{dustTE}_{217}}$	2.08 ± 0.27	k_D	0.1402 ± 0.0024	χ^2_{6DF}	0.072 ± 0.081
$\boldsymbol{c_{100}}$	0.99967 ± 0.00061	$100\theta_D$	0.16060 ± 0.00047	χ^2_{MGS}	1.19 ± 0.44
$\boldsymbol{c_{217}}$	0.99816 ± 0.00063	z_{eq}	3392 ± 32	$\chi^2_{DR12BAO}$	5.1 ± 1.7
H_0	67.2 ± 1.6	k_{eq}	0.01030 ± 0.00014	χ^2_{prior}	11.6 ± 4.5
Ω_Λ	0.6876 ± 0.0070	$100\theta_{eq}$	0.8153 ± 0.0055	χ^2_{CMB}	2790.3 ± 6.0
Ω_m	0.3124 ± 0.0070	$100\theta_{s,eq}$	0.4504 ± 0.0028	χ^2_{BAO}	6.4 ± 1.4
$\Omega_m h^2$	0.1412 ± 0.0046	$H(0.15)$	72.5 ± 1.6		

$\bar{\chi}^2_{eff} = 2808.31$; $\Delta\bar{\chi}^2_{eff} = 1.59$; $R - 1 = 0.02301$

11.17 base_nnu_yhe_CamSpecHM_TTTEEE_lowl_lowE

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022190	0.02222 ± 0.00023	$\Omega_m h^3$	0.0905	$0.0915^{+0.0049}_{-0.0059}$	$100\theta_{eq}$	0.8098	0.8107 ± 0.0079
$\boldsymbol{\Omega_c h^2}$	0.11508	$0.1157^{+0.0044}_{-0.0050}$	σ_8	0.7983	0.800 ± 0.013	$100\theta_{s,eq}$	0.44771	0.4481 ± 0.0040
$\boldsymbol{100\theta_{MC}}$	1.04185	1.0419 ± 0.0014	S_8	0.8246	0.824 ± 0.016	$H(0.15)$	70.90	71.2 ± 1.9
$\boldsymbol{\tau}$	0.0527	0.0525 ± 0.0080	$\sigma_8\Omega_m^{0.5}$	0.4516	0.4515 ± 0.0089	$D_M(0.15)$	659.9	657 ± 18
$\boldsymbol{N_{eff}}$	2.738	$2.78^{+0.28}_{-0.33}$	$\sigma_8\Omega_m^{0.25}$	0.6004	0.6009 ± 0.0094	$H(0.38)$	80.96	81.3 ± 1.9
$\boldsymbol{Y_P}$	0.2548	$0.256^{+0.024}_{-0.021}$	$\sigma_8/h^{0.5}$	0.9853	0.985 ± 0.012	$D_M(0.38)$	1571.6	1566 ± 41
$\boldsymbol{\ln(10^{10}A_s)}$	3.0295	3.031 ± 0.020	$r_{drag}h$	98.58	98.8 ± 1.3	$H(0.51)$	87.63	$88.0^{+1.8}_{-2.1}$
$\boldsymbol{n_s}$	0.9609	0.9620 ± 0.0097	$\langle d^2\rangle^{1/2}$	2.4401	2.438 ± 0.031	$D_M(0.51)$	2034	2027 ± 51
$\boldsymbol{y_{cal}}$	1.00029	1.0005 ± 0.0025	z_{re}	7.50	7.47 ± 0.83	$H(0.61)$	93.20	$93.5^{+1.9}_{-2.1}$
$\boldsymbol{A^{PS}_{100}}$	232.0	240 ± 26	$10^9 A_s$	2.0687	2.072 ± 0.041	$D_M(0.61)$	2366	2358 ± 58
$\boldsymbol{A^{PS}_{143}}$	44.4	40 ± 9	$10^9 A_s e^{-2\tau}$	1.8617	1.865 ± 0.021	$H(2.33)$	232.16	$232.7^{+3.9}_{-4.4}$
$\boldsymbol{A^{PS}_{217}}$	106.8	102 ± 10	D_{40}	1228.2	1228 ± 18	$D_M(2.33)$	5889	5872 ± 120
$\boldsymbol{A^{CIB}_{217}}$	39.8	40 ± 7	D_{220}	5711.3	5715 ± 39	$f\sigma_8(0.15)$	0.4555	0.4555 ± 0.0084
$\boldsymbol{A^{tSZ}_{143}}$	5.46	$3.8^{+1.9}_{-2.5}$	D_{810}	2533.2	2533 ± 14	$\sigma_8(0.15)$	0.7368	0.738 ± 0.012
$\boldsymbol{r^{PS}_{143\times217}}$	0.731	0.66 ± 0.13	D_{1420}	816.8	815.7 ± 5.2	$f\sigma_8(0.38)$	0.4716	0.4719 ± 0.0075
$\boldsymbol{r^{CIB}_{143\times217}}$	0.649	$0.56^{+0.39}_{-0.17}$	D_{2000}	230.99	230.4 ± 2.3	$\sigma_8(0.38)$	0.6522	0.654 ± 0.011
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.62	—	$n_{s,0.002}$	0.9609	0.9620 ± 0.0097	$f\sigma_8(0.51)$	0.4693	0.4697 ± 0.0072
$\boldsymbol{A^{kSZ}}$	1.62	$4.7^{+2.0}_{-4.2}$	Y_P	0.2548	$0.256^{+0.024}_{-0.021}$	$\sigma_8(0.51)$	0.6100	0.611 ± 0.011
$\boldsymbol{A^{dust}_{100}}$	0.994	1.01 ± 0.20	Y_P^{BBN}	0.2561	$0.258^{+0.024}_{-0.021}$	$f\sigma_8(0.61)$	0.4637	0.4642 ± 0.0070
$\boldsymbol{A^{dust}_{143}}$	0.963	0.96 ± 0.17	Age/Gyr	14.097	14.06 ± 0.30	$\sigma_8(0.61)$	0.5802	0.582 ± 0.010
$\boldsymbol{A^{dust}_{217}}$	0.978	0.97 ± 0.10	z_*	1089.96	1090.08 ± 0.61	$f\sigma_8(2.33)$	0.2922	0.2930 ± 0.0055
$\boldsymbol{A^{dust}_{143\times217}}$	1.046	1.02 ± 0.16	r_*	147.41	147.1 ± 2.9	$\sigma_8(2.33)$	0.3009	0.3018 ± 0.0059
$\boldsymbol{c_{100}}$	0.99771	0.9975 ± 0.0011	$100\theta_*$	1.04190	1.04188 ± 0.00099	f^{143}_{2000}	28.99	30 ± 4
$\boldsymbol{c_{217}}$	1.00096	1.0011 ± 0.0016	$D_M(z_*)$/Gpc	14.149	14.12 ± 0.27	f^{217}_{2000}	106.16	107.0 ± 2.6
$\boldsymbol{c_{TE}}$	0.9966	0.9970 ± 0.0055	z_{drag}	1059.36	1059.5 ± 1.0	$f^{143\times217}_{2000}$	31.73	32.3 ± 2.9
$\boldsymbol{c_{EE}}$	0.9917	0.9926 ± 0.0066	r_{drag}	150.19	149.8 ± 3.0	χ^2_{simall}	395.87	396.9 ± 1.7
H_0	65.64	65.9 ± 1.9	k_D	0.13817	$0.1384^{+0.0024}_{-0.0028}$	χ^2_{lowl}	23.44	23.5 ± 1.6
Ω_Λ	0.6799	$0.681^{+0.012}_{-0.010}$	$100\theta_D$	0.16070	0.16087 ± 0.00070	$\chi^2_{CamSpec}$	11498.8	11515.3 ± 6.1
Ω_m	0.3201	$0.319^{+0.010}_{-0.012}$	z_{eq}	3421.7	3418 ± 44	χ^2_{prior}	1.94	7.9 ± 3.5
$\Omega_m h^2$	0.13791	$0.1386^{+0.0045}_{-0.0051}$	k_{eq}	0.010225	0.01024 ± 0.00016	χ^2_{CMB}	11918.1	11935.7 ± 6.2

Best-fit $\chi^2_{eff} = 11920.00$; $\Delta\chi^2_{eff} = -0.76$; $\bar{\chi}^2_{eff} = 11943.57$; $\Delta\bar{\chi}^2_{eff} = 1.12$; $R - 1 = 0.00989$

χ^2_{eff}: CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.87 (Δ -0.03) commander_dx12_v3_2_29: 23.44 (Δ 0.44) CamSpec like_10.7HM_1400_unified: 11498.75 (Δ -0.90)

11.18 base_nnu_yhe_CamSpecHM_TTTEEE_lowl_lowE_post_BAO

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02233 ± 0.00020	S_8	0.816 ± 0.014	$H(0.38)$	$82.2^{+1.6}_{-1.8}$
$\boldsymbol{\Omega_c h^2}$	$0.1164^{+0.0045}_{-0.0051}$	$\sigma_8\Omega_m^{0.5}$	0.4472 ± 0.0075	$D_M(0.38)$	1545 ± 34
$\boldsymbol{100\theta_{MC}}$	1.0418 ± 0.0014	$\sigma_8\Omega_m^{0.25}$	0.5988 ± 0.0091	$H(0.51)$	$88.8^{+1.7}_{-1.9}$
$\boldsymbol{\tau}$	0.0541 ± 0.0077	$\sigma_8/h^{0.5}$	0.980 ± 0.011	$D_M(0.51)$	2002 ± 44
$\boldsymbol{N_{eff}}$	$2.88^{+0.27}_{-0.32}$	$r_{drag}h$	99.70 ± 0.89	$H(0.61)$	$94.4^{+1.8}_{-2.0}$
$\boldsymbol{Y_P}$	0.257 ± 0.022	$\langle d^2\rangle^{1/2}$	2.422 ± 0.026	$D_M(0.61)$	2330 ± 50
$\boldsymbol{\ln(10^{10}A_s)}$	3.036 ± 0.019	z_{re}	7.63 ± 0.78	$H(2.33)$	233.6 ± 4.1
$\boldsymbol{n_s}$	0.9672 ± 0.0078	$10^9 A_s$	2.082 ± 0.039	$D_M(2.33)$	5823 ± 110
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.869 ± 0.020	$f\sigma_8(0.15)$	0.4518 ± 0.0073
$\boldsymbol{A_{100}^{PS}}$	242 ± 26	D_{40}	1220 ± 16	$\sigma_8(0.15)$	0.741 ± 0.012
$\boldsymbol{A_{143}^{PS}}$	40 ± 9	D_{220}	5719 ± 39	$f\sigma_8(0.38)$	0.4700 ± 0.0072
$\boldsymbol{A_{217}^{PS}}$	102 ± 10	D_{810}	2534 ± 14	$\sigma_8(0.38)$	0.657 ± 0.011
$\boldsymbol{A_{217}^{CIB}}$	40^{+7}_{-8}	D_{1420}	815.7 ± 5.2	$f\sigma_8(0.51)$	0.4687 ± 0.0071
$\boldsymbol{A_{143}^{tSZ}}$	$3.8^{+1.8}_{-2.6}$	D_{2000}	230.1 ± 2.3	$\sigma_8(0.51)$	0.615 ± 0.010
$\boldsymbol{r_{143\times217}^{PS}}$	0.65 ± 0.13	$n_{s,0.002}$	0.9672 ± 0.0078	$f\sigma_8(0.61)$	0.4639 ± 0.0070
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.57^{+0.41}_{-0.14}$	Y_P	0.257 ± 0.022	$\sigma_8(0.61)$	0.5851 ± 0.0098
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	0.258 ± 0.022	$f\sigma_8(2.33)$	0.2951 ± 0.0050
$\boldsymbol{A^{kSZ}}$	—	Age/Gyr	13.94 ± 0.27	$\sigma_8(2.33)$	0.3042 ± 0.0054
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.20	z_*	1090.05 ± 0.59	f_{2000}^{143}	30 ± 4
$\boldsymbol{A_{143}^{dust}}$	0.97 ± 0.18	r_*	146.3 ± 2.8	f_{2000}^{217}	107.3 ± 2.6
$\boldsymbol{A_{217}^{dust}}$	0.97 ± 0.10	$100\theta_*$	1.04170 ± 0.00097	$f_{2000}^{143\times217}$	32.6 ± 2.8
$\boldsymbol{A_{143\times217}^{dust}}$	1.03 ± 0.16	$D_M(z_*)$/Gpc	14.04 ± 0.26	χ^2_{simall}	397.0 ± 1.8
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	z_{drag}	1059.91 ± 0.90	χ^2_{lowl}	22.7 ± 1.2
$\boldsymbol{c_{217}}$	1.0012 ± 0.0016	r_{drag}	149.0 ± 2.9	$\chi^2_{CamSpec}$	11516.0 ± 6.0
$\boldsymbol{c_{TE}}$	0.9975 ± 0.0053	k_D	$0.1390^{+0.0024}_{-0.0028}$	χ^2_{6DF}	0.058 ± 0.073
$\boldsymbol{c_{EE}}$	0.9937 ± 0.0064	$100\theta_D$	0.16102 ± 0.00066	χ^2_{MGS}	1.32 ± 0.49
H_0	$67.0^{+1.5}_{-1.7}$	z_{eq}	3390 ± 33	$\chi^2_{DR12BAO}$	4.8 ± 1.5
Ω_Λ	0.6891 ± 0.0073	k_{eq}	0.01023 ± 0.00016	χ^2_{prior}	7.9 ± 3.5
Ω_m	0.3109 ± 0.0073	$100\theta_{eq}$	0.8160 ± 0.0056	χ^2_{BAO}	6.1 ± 1.2
$\Omega_m h^2$	$0.1394^{+0.0045}_{-0.0051}$	$100\theta_{s,eq}$	0.4508 ± 0.0029	χ^2_{CMB}	11935.7 ± 6.1
$\Omega_m h^3$	$0.0934^{+0.0048}_{-0.0057}$	$H(0.15)$	$72.2^{+1.5}_{-1.7}$		
σ_8	0.802 ± 0.013	$D_M(0.15)$	648 ± 15		

$\bar{\chi}^2_{eff} = 11949.72$; $\Delta\bar{\chi}^2_{eff} = 1.44$; $R - 1 = 0.01974$

11.19 base_nnu_yhe_CamSpecHM_TTTEEE_lowl_lowE_post_lensing

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02220 ± 0.00023	σ_8	0.800 ± 0.011	$H(0.15)$	$71.0^{+1.7}_{-2.0}$
$\boldsymbol{\Omega_c h^2}$	$0.1156^{+0.0041}_{-0.0049}$	S_8	0.827 ± 0.013	$D_{\rm M}(0.15)$	659 ± 18
$\boldsymbol{100\theta_{MC}}$	1.0419 ± 0.0014	$\sigma_8\Omega_{\rm m}^{0.5}$	0.4530 ± 0.0072	$H(0.38)$	$81.1^{+1.7}_{-2.0}$
$\boldsymbol{\tau}$	0.0536 ± 0.0074	$\sigma_8\Omega_{\rm m}^{0.25}$	0.6021 ± 0.0076	$D_{\rm M}(0.38)$	1570 ± 40
$\boldsymbol{N_{\rm eff}}$	$2.76^{+0.27}_{-0.33}$	$\sigma_8/h^{0.5}$	0.9873 ± 0.0096	$H(0.51)$	$87.8^{+1.8}_{-2.1}$
$\boldsymbol{Y_P}$	0.255 ± 0.022	$r_{\rm drag}h$	98.6 ± 1.3	$D_{\rm M}(0.51)$	2033 ± 51
$\boldsymbol{\ln(10^{10}A_s)}$	3.033 ± 0.018	$\langle d^2\rangle^{1/2}$	2.446 ± 0.025	$H(0.61)$	$93.4^{+1.8}_{-2.1}$
$\boldsymbol{n_s}$	0.9606 ± 0.0094	$z_{\rm re}$	7.58 ± 0.75	$D_{\rm M}(0.61)$	2364 ± 58
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0025	$10^9 A_{\rm s}$	2.075 ± 0.037	$H(2.33)$	$232.5^{+3.7}_{-4.3}$
$\boldsymbol{A^{PS}_{100}}$	239 ± 26	$10^9 A_{\rm s}e^{-2\tau}$	1.864 ± 0.020	$D_{\rm M}(2.33)$	5883 ± 120
$\boldsymbol{A^{PS}_{143}}$	39 ± 9	D_{40}	1231 ± 17	$f\sigma_8(0.15)$	0.4568 ± 0.0067
$\boldsymbol{A^{PS}_{217}}$	103 ± 10	D_{220}	5717 ± 39	$\sigma_8(0.15)$	0.739 ± 0.011
$\boldsymbol{A^{CIB}_{217}}$	40 ± 7	D_{810}	2534 ± 14	$f\sigma_8(0.38)$	0.4729 ± 0.0060
$\boldsymbol{A^{tSZ}_{143}}$	$3.8^{+1.9}_{-2.5}$	D_{1420}	816.1 ± 5.1	$\sigma_8(0.38)$	0.654 ± 0.010
$\boldsymbol{r^{PS}_{143\times217}}$	0.66 ± 0.13	D_{2000}	230.6 ± 2.3	$f\sigma_8(0.51)$	0.4705 ± 0.0059
$\boldsymbol{r^{CIB}_{143\times217}}$	$0.55^{+0.39}_{-0.19}$	$n_{\rm s,0.002}$	0.9606 ± 0.0094	$\sigma_8(0.51)$	0.612 ± 0.010
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$Y_{\rm P}$	0.255 ± 0.022	$f\sigma_8(0.61)$	0.4649 ± 0.0059
$\boldsymbol{A^{kSZ}}$	$4.6^{+1.7}_{-4.3}$	$Y_{\rm P}^{\rm BBN}$	0.257 ± 0.022	$\sigma_8(0.61)$	0.5817 ± 0.0098
$\boldsymbol{A^{dust}_{100}}$	1.01 ± 0.19	Age/Gyr	14.08 ± 0.29	$f\sigma_8(2.33)$	0.2930 ± 0.0052
$\boldsymbol{A^{dust}_{143}}$	0.96 ± 0.17	z_*	1090.04 ± 0.59	$\sigma_8(2.33)$	0.3017 ± 0.0057
$\boldsymbol{A^{dust}_{217}}$	0.97 ± 0.10	r_*	147.2 ± 2.8	f^{143}_{2000}	30 ± 4
$\boldsymbol{A^{dust}_{143\times217}}$	1.02 ± 0.16	$100\theta_*$	1.04190 ± 0.00097	f^{217}_{2000}	106.8 ± 2.6
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	$D_{\rm M}(z_*)/{\rm Gpc}$	14.13 ± 0.26	$f^{143\times217}_{2000}$	32.0 ± 2.9
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	$z_{\rm drag}$	1059.45 ± 0.99	$\chi^2_{\rm lensing}$	9.05 ± 0.78
$\boldsymbol{c_{TE}}$	0.9966 ± 0.0054	$r_{\rm drag}$	150.0 ± 2.9	$\chi^2_{\rm simall}$	396.9 ± 1.6
$\boldsymbol{c_{EE}}$	0.9920 ± 0.0065	$k_{\rm D}$	$0.1383^{+0.0024}_{-0.0027}$	$\chi^2_{\rm lowl}$	23.8 ± 1.5
H_0	$65.7^{+1.7}_{-1.9}$	$100\theta_{\rm D}$	0.16079 ± 0.00069	$\chi^2_{\rm CamSpec}$	11514.7 ± 5.9
Ω_Λ	0.679 ± 0.011	$z_{\rm eq}$	3424 ± 44	$\chi^2_{\rm prior}$	7.8 ± 3.4
$\Omega_{\rm m}$	0.321 ± 0.011	$k_{\rm eq}$	0.01024 ± 0.00014	$\chi^2_{\rm CMB}$	11944.4 ± 6.1
$\Omega_{\rm m}h^2$	$0.1384^{+0.0042}_{-0.0050}$	$100\theta_{\rm eq}$	0.8096 ± 0.0076		
$\Omega_{\rm m}h^3$	$0.0910^{+0.0047}_{-0.0059}$	$100\theta_{\rm s,eq}$	0.4476 ± 0.0039		

$\bar{\chi}^2_{\rm eff} = 11952.22$; $\Delta\bar{\chi}^2_{\rm eff} = 0.78$; $R - 1 = 0.01363$

11.20 base_nnu_yhe_CamSpecHM_TTTEEE_lowl_lowE_post_BAO_lensing

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02232 ± 0.00019	S_8	0.820 ± 0.011	$H(0.38)$	82.1 ± 1.7
$\boldsymbol{\Omega_c h^2}$	$0.1164^{+0.0043}_{-0.0048}$	$\sigma_8\Omega_m^{0.5}$	0.4491 ± 0.0062	$D_M(0.38)$	1548 ± 34
$\boldsymbol{100\theta_{MC}}$	1.0417 ± 0.0014	$\sigma_8\Omega_m^{0.25}$	0.6009 ± 0.0075	$H(0.51)$	88.7 ± 1.8
$\boldsymbol{\tau}$	0.0559 ± 0.0072	$\sigma_8/h^{0.5}$	0.9835 ± 0.0089	$D_M(0.51)$	2005 ± 43
$\boldsymbol{N_{eff}}$	$2.88^{+0.27}_{-0.31}$	$r_{drag}h$	99.54 ± 0.86	$H(0.61)$	94.3 ± 1.8
$\boldsymbol{Y_P}$	0.256 ± 0.022	$\langle d^2\rangle^{1/2}$	2.432 ± 0.022	$D_M(0.61)$	2333 ± 49
$\boldsymbol{\ln(10^{10}A_s)}$	3.040 ± 0.016	z_{re}	7.82 ± 0.72	$H(2.33)$	233.6 ± 4.0
$\boldsymbol{n_s}$	0.9661 ± 0.0078	$10^9 A_s$	2.091 ± 0.034	$D_M(2.33)$	5828 ± 110
$\boldsymbol{y_{cal}}$	1.0008 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.870 ± 0.019	$f\sigma_8(0.15)$	0.4537 ± 0.0060
$\boldsymbol{A_{100}^{PS}}$	242 ± 26	D_{40}	1224 ± 15	$\sigma_8(0.15)$	0.743 ± 0.010
$\boldsymbol{A_{143}^{PS}}$	40 ± 9	D_{220}	5724 ± 39	$f\sigma_8(0.38)$	0.4717 ± 0.0059
$\boldsymbol{A_{217}^{PS}}$	102 ± 10	D_{810}	2536 ± 14	$\sigma_8(0.38)$	0.6583 ± 0.0097
$\boldsymbol{A_{217}^{CIB}}$	40^{+7}_{-8}	D_{1420}	816.2 ± 5.2	$f\sigma_8(0.51)$	0.4702 ± 0.0059
$\boldsymbol{A_{143}^{tSZ}}$	$3.8^{+1.8}_{-2.6}$	D_{2000}	230.3 ± 2.3	$\sigma_8(0.51)$	0.6161 ± 0.0092
$\boldsymbol{r_{143\times217}^{PS}}$	0.66 ± 0.13	$n_{s,0.002}$	0.9661 ± 0.0078	$f\sigma_8(0.61)$	0.4652 ± 0.0059
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.56^{+0.42}_{-0.15}$	Y_P	0.256 ± 0.022	$\sigma_8(0.61)$	0.5862 ± 0.0089
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	0.257 ± 0.022	$f\sigma_8(2.33)$	0.2956 ± 0.0046
$\boldsymbol{A^{kSZ}}$	—	Age/Gyr	13.95 ± 0.26	$\sigma_8(2.33)$	0.3047 ± 0.0050
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.20	z_*	1090.03 ± 0.60	f_{2000}^{143}	30 ± 4
$\boldsymbol{A_{143}^{dust}}$	0.96 ± 0.18	r_*	146.3 ± 2.7	f_{2000}^{217}	107.2 ± 2.6
$\boldsymbol{A_{217}^{dust}}$	0.97 ± 0.10	$100\theta_*$	1.04170 ± 0.00095	$f_{2000}^{143\times217}$	32.4 ± 2.9
$\boldsymbol{A_{143\times217}^{dust}}$	1.03 ± 0.16	$D_M(z_*)$/Gpc	14.04 ± 0.25	$\chi^2_{lensing}$	9.27 ± 0.86
$\boldsymbol{c_{100}}$	0.9976 ± 0.0011	z_{drag}	1059.86 ± 0.90	χ^2_{simall}	397.2 ± 1.8
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	r_{drag}	149.0 ± 2.7	χ^2_{lowl}	23.0 ± 1.2
$\boldsymbol{c_{TE}}$	0.9972 ± 0.0053	k_D	$0.1390^{+0.0023}_{-0.0027}$	$\chi^2_{CamSpec}$	11515.3 ± 6.0
$\boldsymbol{c_{EE}}$	0.9934 ± 0.0064	$100\theta_D$	0.16097 ± 0.00067	χ^2_{6DF}	0.068 ± 0.079
H_0	66.8 ± 1.6	z_{eq}	3395 ± 33	χ^2_{MGS}	1.22 ± 0.46
Ω_Λ	0.6877 ± 0.0071	k_{eq}	0.01024 ± 0.00015	$\chi^2_{DR12BAO}$	5.0 ± 1.6
Ω_m	0.3123 ± 0.0071	$100\theta_{eq}$	0.8151 ± 0.0056	χ^2_{prior}	7.8 ± 3.5
$\Omega_m h^2$	$0.1394^{+0.0043}_{-0.0049}$	$100\theta_{s,eq}$	0.4504 ± 0.0029	χ^2_{CMB}	11944.7 ± 6.2
$\Omega_m h^3$	$0.0932^{+0.0047}_{-0.0055}$	$H(0.15)$	72.1 ± 1.6	χ^2_{BAO}	6.3 ± 1.3
σ_8	0.804 ± 0.011	$D_M(0.15)$	649 ± 15		

$\bar{\chi}^2_{eff} = 11958.81$; $\Delta\bar{\chi}^2_{eff} = 1.41$; $R - 1 = 0.01792$

11.21 base_nnu_yhe_CamSpecHM_TTTEEE_lowl_lowE_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02223 ± 0.00023	$\Omega_m h^3$	$0.0915^{+0.0049}_{-0.0059}$	$100\theta_{eq}$	0.8110 ± 0.0078
$\boldsymbol{\Omega_c h^2}$	$0.1157^{+0.0044}_{-0.0050}$	σ_8	0.801 ± 0.012	$100\theta_{s,eq}$	0.4483 ± 0.0040
$\boldsymbol{100\theta_{MC}}$	1.0419 ± 0.0014	S_8	0.825 ± 0.016	$H(0.15)$	71.3 ± 1.9
$\boldsymbol{\tau}$	$0.0542^{+0.0046}_{-0.0083}$	$\sigma_8\Omega_m^{0.5}$	0.4518 ± 0.0089	$D_M(0.15)$	657 ± 18
$\boldsymbol{N_{eff}}$	$2.78^{+0.28}_{-0.33}$	$\sigma_8\Omega_m^{0.25}$	0.6016 ± 0.0093	$H(0.38)$	81.3 ± 1.9
$\boldsymbol{Y_P}$	$0.257^{+0.024}_{-0.021}$	$\sigma_8/h^{0.5}$	0.986 ± 0.012	$D_M(0.38)$	1565 ± 40
$\boldsymbol{\ln(10^{10}A_s)}$	$3.034^{+0.016}_{-0.019}$	$r_{drag}h$	98.8 ± 1.3	$H(0.51)$	88.0 ± 2.0
$\boldsymbol{n_s}$	0.9625 ± 0.0096	$\langle d^2\rangle^{1/2}$	2.440 ± 0.030	$D_M(0.51)$	2026 ± 51
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	z_{re}	$7.65^{+0.50}_{-0.86}$	$H(0.61)$	93.6 ± 2.0
$\boldsymbol{A^{PS}_{100}}$	240 ± 26	$10^9 A_s$	$2.078^{+0.032}_{-0.041}$	$D_M(0.61)$	2357 ± 58
$\boldsymbol{A^{PS}_{143}}$	40 ± 9	$10^9 A_s e^{-2\tau}$	1.865 ± 0.021	$H(2.33)$	232.7 ± 4.2
$\boldsymbol{A^{PS}_{217}}$	102 ± 10	D_{40}	1227 ± 18	$D_M(2.33)$	5871 ± 120
$\boldsymbol{A^{CIB}_{217}}$	40 ± 7	D_{220}	5715 ± 39	$f\sigma_8(0.15)$	0.4558 ± 0.0084
$\boldsymbol{A^{tSZ}_{143}}$	$3.9^{+1.9}_{-2.5}$	D_{810}	2533 ± 14	$\sigma_8(0.15)$	0.740 ± 0.012
$\boldsymbol{r^{PS}_{143\times217}}$	0.66 ± 0.13	D_{1420}	815.7 ± 5.2	$f\sigma_8(0.38)$	0.4724 ± 0.0074
$\boldsymbol{r^{CIB}_{143\times217}}$	$0.56^{+0.39}_{-0.18}$	D_{2000}	230.4 ± 2.3	$\sigma_8(0.38)$	0.655 ± 0.011
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$n_{s,0.002}$	0.9625 ± 0.0096	$f\sigma_8(0.51)$	0.4703 ± 0.0071
$\boldsymbol{A^{kSZ}}$	$4.7^{+1.8}_{-4.3}$	Y_P	$0.257^{+0.024}_{-0.021}$	$\sigma_8(0.51)$	0.613 ± 0.011
$\boldsymbol{A^{dust}_{100}}$	1.01 ± 0.20	Y_P^{BBN}	$0.258^{+0.024}_{-0.021}$	$f\sigma_8(0.61)$	0.4649 ± 0.0069
$\boldsymbol{A^{dust}_{143}}$	0.96 ± 0.17	Age/Gyr	14.05 ± 0.30	$\sigma_8(0.61)$	0.583 ± 0.010
$\boldsymbol{A^{dust}_{217}}$	0.97 ± 0.10	z_*	1090.08 ± 0.61	$f\sigma_8(2.33)$	0.2936 ± 0.0053
$\boldsymbol{A^{dust}_{143\times217}}$	1.02 ± 0.16	r_*	147.1 ± 2.9	$\sigma_8(2.33)$	0.3024 ± 0.0058
$\boldsymbol{c_{100}}$	0.9975 ± 0.0010	$100\theta_*$	1.04188 ± 0.00099	f^{143}_{2000}	30 ± 4
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	$D_M(z_*)$/Gpc	14.11 ± 0.27	f^{217}_{2000}	107.0 ± 2.6
$\boldsymbol{c_{TE}}$	0.9969 ± 0.0055	z_{drag}	1059.6 ± 1.0	$f^{143\times217}_{2000}$	32.3 ± 2.9
$\boldsymbol{c_{EE}}$	0.9926 ± 0.0066	r_{drag}	149.8 ± 3.0	χ^2_{simall}	396.8 ± 1.7
H_0	66.0 ± 1.9	k_D	$0.1384^{+0.0024}_{-0.0028}$	χ^2_{lowl}	23.5 ± 1.6
Ω_Λ	0.682 ± 0.011	$100\theta_D$	0.16088 ± 0.00071	$\chi^2_{CamSpec}$	11515.2 ± 6.1
Ω_m	0.318 ± 0.011	z_{eq}	3417 ± 44	χ^2_{prior}	7.9 ± 3.5
$\Omega_m h^2$	$0.1385^{+0.0045}_{-0.0051}$	k_{eq}	0.01024 ± 0.00016	χ^2_{CMB}	11935.4 ± 6.1

$\bar{\chi}^2_{eff} = 11943.30$; $\Delta\bar{\chi}^2_{eff} = 1.12$; $R - 1 = 0.00937$

11.22 base_nnu_yhe_CamSpecHM_TTTEEE_lowl_lowE_post_BAO_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02233 ± 0.00020	S_8	0.817 ± 0.014	$H(0.38)$	$82.2^{+1.6}_{-1.8}$
$\boldsymbol{\Omega_c h^2}$	$0.1164^{+0.0044}_{-0.0051}$	$\sigma_8\Omega_m^{0.5}$	0.4476 ± 0.0075	$D_M(0.38)$	1545 ± 34
$\boldsymbol{100\theta_{MC}}$	1.0418 ± 0.0014	$\sigma_8\Omega_m^{0.25}$	0.5994 ± 0.0089	$H(0.51)$	$88.8^{+1.7}_{-1.9}$
$\boldsymbol{\tau}$	$0.0552^{+0.0053}_{-0.0078}$	$\sigma_8/h^{0.5}$	$0.9812^{+0.0096}_{-0.011}$	$D_M(0.51)$	2002 ± 44
$\boldsymbol{N_{eff}}$	$2.88^{+0.27}_{-0.32}$	$r_{drag}h$	99.72 ± 0.89	$H(0.61)$	$94.4^{+1.7}_{-2.0}$
$\boldsymbol{Y_P}$	$0.257^{+0.023}_{-0.021}$	$\langle d^2\rangle^{1/2}$	2.424 ± 0.025	$D_M(0.61)$	2329 ± 50
$\boldsymbol{\ln(10^{10}A_s)}$	$3.038^{+0.016}_{-0.018}$	z_{re}	$7.75^{+0.57}_{-0.80}$	$H(2.33)$	$233.6^{+3.9}_{-4.3}$
$\boldsymbol{n_s}$	0.9674 ± 0.0079	$10^9 A_s$	$2.087^{+0.033}_{-0.038}$	$D_M(2.33)$	5823 ± 110
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.869 ± 0.020	$f\sigma_8(0.15)$	0.4522 ± 0.0072
$\boldsymbol{A^{PS}_{100}}$	242 ± 26	D_{40}	1220 ± 16	$\sigma_8(0.15)$	0.742 ± 0.012
$\boldsymbol{A^{PS}_{143}}$	40 ± 9	D_{220}	5719 ± 39	$f\sigma_8(0.38)$	0.4705 ± 0.0070
$\boldsymbol{A^{PS}_{217}}$	102 ± 10	D_{810}	2534 ± 14	$\sigma_8(0.38)$	0.658 ± 0.011
$\boldsymbol{A^{CIB}_{217}}$	40^{+7}_{-8}	D_{1420}	815.7 ± 5.2	$f\sigma_8(0.51)$	0.4692 ± 0.0069
$\boldsymbol{A^{tSZ}_{143}}$	$3.8^{+1.8}_{-2.6}$	D_{2000}	230.1 ± 2.3	$\sigma_8(0.51)$	0.616 ± 0.010
$\boldsymbol{r^{PS}_{143\times217}}$	0.65 ± 0.13	$n_{s,0.002}$	0.9674 ± 0.0079	$f\sigma_8(0.61)$	0.4643 ± 0.0068
$\boldsymbol{r^{CIB}_{143\times217}}$	$0.57^{+0.42}_{-0.14}$	Y_P	$0.257^{+0.023}_{-0.021}$	$\sigma_8(0.61)$	0.5858 ± 0.0096
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	$0.258^{+0.023}_{-0.021}$	$f\sigma_8(2.33)$	0.2954 ± 0.0049
$\boldsymbol{A^{kSZ}}$	—	Age/Gyr	13.94 ± 0.27	$\sigma_8(2.33)$	0.3046 ± 0.0052
$\boldsymbol{A^{dust}_{100}}$	1.01 ± 0.20	z_*	1090.05 ± 0.59	f^{143}_{2000}	30 ± 4
$\boldsymbol{A^{dust}_{143}}$	0.97 ± 0.18	r_*	146.3 ± 2.8	f^{217}_{2000}	107.3 ± 2.6
$\boldsymbol{A^{dust}_{217}}$	0.97 ± 0.11	$100\theta_*$	1.04171 ± 0.00097	$f^{143\times217}_{2000}$	32.6 ± 2.8
$\boldsymbol{A^{dust}_{143\times217}}$	1.03 ± 0.17	$D_M(z_*)$/Gpc	14.04 ± 0.25	χ^2_{simall}	396.9 ± 1.8
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	z_{drag}	1059.92 ± 0.90	χ^2_{lowl}	22.8 ± 1.2
$\boldsymbol{c_{217}}$	1.0012 ± 0.0016	r_{drag}	149.0 ± 2.8	$\chi^2_{CamSpec}$	11515.8 ± 6.0
$\boldsymbol{c_{TE}}$	0.9975 ± 0.0053	k_D	$0.1390^{+0.0024}_{-0.0028}$	χ^2_{6DF}	0.057 ± 0.071
$\boldsymbol{c_{EE}}$	0.9936 ± 0.0064	$100\theta_D$	0.16102 ± 0.00067	χ^2_{MGS}	1.33 ± 0.49
H_0	$67.0^{+1.5}_{-1.7}$	z_{eq}	3389 ± 33	$\chi^2_{DR12BAO}$	4.7 ± 1.5
Ω_Λ	0.6892 ± 0.0073	k_{eq}	0.01023 ± 0.00016	χ^2_{prior}	7.9 ± 3.5
Ω_m	0.3108 ± 0.0073	$100\theta_{eq}$	0.8161 ± 0.0056	χ^2_{BAO}	6.1 ± 1.2
$\Omega_m h^2$	$0.1393^{+0.0045}_{-0.0051}$	$100\theta_{s,eq}$	0.4509 ± 0.0029	χ^2_{CMB}	11935.5 ± 6.0
$\Omega_m h^3$	$0.0934^{+0.0047}_{-0.0057}$	$H(0.15)$	$72.2^{+1.5}_{-1.7}$		
σ_8	0.803 ± 0.012	$D_M(0.15)$	648 ± 15		

$\bar{\chi}^2_{eff} = 11949.50$; $\Delta\bar{\chi}^2_{eff} = 1.52$; $R - 1 = 0.02228$

11.23 base_nnu_yhe_CamSpecHM_TTTEEE_lowl_lowE_post_lensing_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02221 ± 0.00023	σ_8	0.801 ± 0.011	$H(0.15)$	$71.1^{+1.7}_{-1.9}$
$\boldsymbol{\Omega_c h^2}$	$0.1155^{+0.0041}_{-0.0049}$	S_8	0.827 ± 0.013	$D_{\rm M}(0.15)$	659 ± 18
$\boldsymbol{100\theta_{MC}}$	1.0419 ± 0.0014	$\sigma_8\Omega_{\rm m}^{0.5}$	0.4530 ± 0.0072	$H(0.38)$	$81.1^{+1.7}_{-2.0}$
$\boldsymbol{\tau}$	$0.0546^{+0.0050}_{-0.0077}$	$\sigma_8\Omega_{\rm m}^{0.25}$	0.6024 ± 0.0075	$D_{\rm M}(0.38)$	1569 ± 40
$\boldsymbol{N_{eff}}$	$2.76^{+0.27}_{-0.33}$	$\sigma_8/h^{0.5}$	0.9878 ± 0.0094	$H(0.51)$	$87.8^{+1.8}_{-2.1}$
$\boldsymbol{Y_P}$	0.256 ± 0.022	$r_{\rm drag}h$	98.6 ± 1.2	$D_{\rm M}(0.51)$	2031 ± 51
$\boldsymbol{\ln(10^{10}A_s)}$	$3.035^{+0.015}_{-0.017}$	$\langle d^2\rangle^{1/2}$	2.446 ± 0.025	$H(0.61)$	$93.4^{+1.8}_{-2.1}$
$\boldsymbol{n_s}$	0.9611 ± 0.0093	$z_{\rm re}$	$7.70^{+0.55}_{-0.78}$	$D_{\rm M}(0.61)$	2363 ± 58
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0025	$10^9 A_{\rm s}$	$2.080^{+0.031}_{-0.036}$	$H(2.33)$	$232.5^{+3.7}_{-4.3}$
$\boldsymbol{A^{PS}_{100}}$	239 ± 26	$10^9 A_{\rm s}e^{-2\tau}$	1.864 ± 0.020	$D_{\rm M}(2.33)$	5881 ± 120
$\boldsymbol{A^{PS}_{143}}$	39 ± 9	D_{40}	1230 ± 17	$f\sigma_8(0.15)$	0.4569 ± 0.0067
$\boldsymbol{A^{PS}_{217}}$	103 ± 10	D_{220}	5717 ± 39	$\sigma_8(0.15)$	0.739 ± 0.011
$\boldsymbol{A^{CIB}_{217}}$	40 ± 7	D_{810}	2534 ± 14	$f\sigma_8(0.38)$	0.4731 ± 0.0059
$\boldsymbol{A^{tSZ}_{143}}$	$3.8^{+1.8}_{-2.5}$	D_{1420}	816.1 ± 5.1	$\sigma_8(0.38)$	0.655 ± 0.010
$\boldsymbol{r^{PS}_{143\times217}}$	0.66 ± 0.13	D_{2000}	230.6 ± 2.3	$f\sigma_8(0.51)$	0.4708 ± 0.0058
$\boldsymbol{r^{CIB}_{143\times217}}$	$0.55^{+0.39}_{-0.19}$	$n_{\rm s,0.002}$	0.9611 ± 0.0093	$\sigma_8(0.51)$	0.6123 ± 0.0099
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$Y_{\rm P}$	0.256 ± 0.022	$f\sigma_8(0.61)$	0.4652 ± 0.0058
$\boldsymbol{A^{kSZ}}$	$4.6^{+1.8}_{-4.3}$	$Y_{\rm P}^{\rm BBN}$	0.257 ± 0.022	$\sigma_8(0.61)$	0.5824 ± 0.0096
$\boldsymbol{A^{dust}_{100}}$	1.01 ± 0.19	Age/Gyr	14.08 ± 0.29	$f\sigma_8(2.33)$	0.2934 ± 0.0051
$\boldsymbol{A^{dust}_{143}}$	0.96 ± 0.17	z_*	1090.04 ± 0.60	$\sigma_8(2.33)$	0.3021 ± 0.0055
$\boldsymbol{A^{dust}_{217}}$	0.97 ± 0.10	r_*	147.2 ± 2.8	f^{143}_{2000}	30 ± 4
$\boldsymbol{A^{dust}_{143\times217}}$	1.02 ± 0.16	$100\theta_*$	1.04190 ± 0.00097	f^{217}_{2000}	106.8 ± 2.6
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	$D_{\rm M}(z_*)/{\rm Gpc}$	14.13 ± 0.26	$f^{143\times217}_{2000}$	32.0 ± 2.9
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	$z_{\rm drag}$	1059.48 ± 0.98	$\chi^2_{\rm lensing}$	9.02 ± 0.75
$\boldsymbol{c_{TE}}$	0.9966 ± 0.0054	$r_{\rm drag}$	150.0 ± 2.9	$\chi^2_{\rm simall}$	396.9 ± 1.6
$\boldsymbol{c_{EE}}$	0.9921 ± 0.0065	$k_{\rm D}$	$0.1383^{+0.0024}_{-0.0027}$	$\chi^2_{\rm lowl}$	23.7 ± 1.5
H_0	$65.8^{+1.7}_{-1.9}$	$100\theta_{\rm D}$	0.16081 ± 0.00069	$\chi^2_{\rm CamSpec}$	11514.6 ± 5.9
Ω_Λ	0.680 ± 0.011	$z_{\rm eq}$	3422 ± 43	$\chi^2_{\rm prior}$	7.8 ± 3.4
$\Omega_{\rm m}$	0.320 ± 0.011	$k_{\rm eq}$	0.01024 ± 0.00014	$\chi^2_{\rm CMB}$	11944.2 ± 6.1
$\Omega_{\rm m}h^2$	$0.1384^{+0.0042}_{-0.0050}$	$100\theta_{\rm eq}$	0.8099 ± 0.0076		
$\Omega_{\rm m}h^3$	$0.0911^{+0.0047}_{-0.0059}$	$100\theta_{\rm s,eq}$	0.4477 ± 0.0039		

$\bar{\chi}^2_{\rm eff} = 11952.01$; $\Delta\bar{\chi}^2_{\rm eff} = 0.76$; $R - 1 = 0.01202$

11.24 base_nnu_yhe_CamSpecHM_TTTEEE_lowl_lowE_post_BAO_lensing_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02232 ± 0.00019	S_8	0.820 ± 0.011	$H(0.38)$	$82.1^{+1.6}_{-1.8}$
$\boldsymbol{\Omega_c h^2}$	$0.1164^{+0.0043}_{-0.0048}$	$\sigma_8\Omega_m^{0.5}$	0.4492 ± 0.0062	$D_M(0.38)$	1548 ± 34
$\boldsymbol{100\theta_{MC}}$	1.0418 ± 0.0014	$\sigma_8\Omega_m^{0.25}$	0.6011 ± 0.0075	$H(0.51)$	$88.7^{+1.7}_{-1.9}$
$\boldsymbol{\tau}$	$0.0565^{+0.0058}_{-0.0074}$	$\sigma_8/h^{0.5}$	0.9839 ± 0.0087	$D_M(0.51)$	2005 ± 43
$\boldsymbol{N_{eff}}$	$2.87^{+0.27}_{-0.31}$	$r_{drag}h$	99.55 ± 0.86	$H(0.61)$	$94.3^{+1.7}_{-1.9}$
$\boldsymbol{Y_P}$	0.256 ± 0.022	$\langle d^2\rangle^{1/2}$	2.432 ± 0.022	$D_M(0.61)$	2333 ± 49
$\boldsymbol{\ln(10^{10}A_s)}$	3.041 ± 0.015	z_{re}	$7.87^{+0.61}_{-0.74}$	$H(2.33)$	233.6 ± 4.0
$\boldsymbol{n_s}$	0.9662 ± 0.0078	$10^9 A_s$	2.093 ± 0.032	$D_M(2.33)$	5828 ± 110
$\boldsymbol{y_{cal}}$	1.0008 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.870 ± 0.019	$f\sigma_8(0.15)$	0.4538 ± 0.0060
$\boldsymbol{A_{100}^{PS}}$	241 ± 26	D_{40}	1224 ± 15	$\sigma_8(0.15)$	0.743 ± 0.010
$\boldsymbol{A_{143}^{PS}}$	40 ± 9	D_{220}	5724 ± 39	$f\sigma_8(0.38)$	0.4718 ± 0.0059
$\boldsymbol{A_{217}^{PS}}$	102 ± 10	D_{810}	2536 ± 14	$\sigma_8(0.38)$	0.6586 ± 0.0096
$\boldsymbol{A_{217}^{CIB}}$	40^{+7}_{-8}	D_{1420}	816.2 ± 5.2	$f\sigma_8(0.51)$	0.4704 ± 0.0059
$\boldsymbol{A_{143}^{tSZ}}$	$3.8^{+1.8}_{-2.6}$	D_{2000}	230.3 ± 2.3	$\sigma_8(0.51)$	0.6164 ± 0.0091
$\boldsymbol{r_{143\times217}^{PS}}$	$0.66^{+0.12}_{-0.14}$	$n_{s,0.002}$	0.9662 ± 0.0078	$f\sigma_8(0.61)$	0.4654 ± 0.0059
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.56^{+0.42}_{-0.15}$	Y_P	0.256 ± 0.022	$\sigma_8(0.61)$	0.5865 ± 0.0088
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	0.258 ± 0.022	$f\sigma_8(2.33)$	0.2957 ± 0.0046
$\boldsymbol{A^{kSZ}}$	—	Age/Gyr	13.95 ± 0.26	$\sigma_8(2.33)$	0.3048 ± 0.0049
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.20	z_*	1090.03 ± 0.60	f_{2000}^{143}	30 ± 4
$\boldsymbol{A_{143}^{dust}}$	0.96 ± 0.18	r_*	146.3 ± 2.7	f_{2000}^{217}	107.2 ± 2.6
$\boldsymbol{A_{217}^{dust}}$	0.97 ± 0.10	$100\theta_*$	1.04171 ± 0.00095	$f_{2000}^{143\times217}$	32.4 ± 2.9
$\boldsymbol{A_{143\times217}^{dust}}$	1.03 ± 0.16	$D_M(z_*)$/Gpc	14.05 ± 0.25	$\chi^2_{lensing}$	9.23 ± 0.81
$\boldsymbol{c_{100}}$	0.9976 ± 0.0011	z_{drag}	1059.87 ± 0.90	χ^2_{simall}	397.2 ± 1.9
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	r_{drag}	149.0 ± 2.7	χ^2_{lowl}	23.0 ± 1.2
$\boldsymbol{c_{TE}}$	0.9972 ± 0.0053	k_D	$0.1390^{+0.0023}_{-0.0027}$	$\chi^2_{CamSpec}$	11515.2 ± 6.0
$\boldsymbol{c_{EE}}$	0.9934 ± 0.0064	$100\theta_D$	0.16097 ± 0.00067	χ^2_{6DF}	0.067 ± 0.077
H_0	66.8 ± 1.6	z_{eq}	3394 ± 33	χ^2_{MGS}	1.23 ± 0.46
Ω_Λ	0.6879 ± 0.0071	k_{eq}	0.01024 ± 0.00015	$\chi^2_{DR12BAO}$	5.0 ± 1.6
Ω_m	0.3121 ± 0.0071	$100\theta_{eq}$	0.8152 ± 0.0056	χ^2_{prior}	7.8 ± 3.5
$\Omega_m h^2$	$0.1394^{+0.0043}_{-0.0049}$	$100\theta_{s,eq}$	0.4504 ± 0.0028	χ^2_{CMB}	11944.6 ± 6.1
$\Omega_m h^3$	$0.0932^{+0.0046}_{-0.0055}$	$H(0.15)$	72.1 ± 1.6	χ^2_{BAO}	6.3 ± 1.3
σ_8	0.804 ± 0.011	$D_M(0.15)$	649 ± 15		

$\bar{\chi}^2_{eff} = 11958.67$; $\Delta\bar{\chi}^2_{eff} = 1.41$; $R - 1 = 0.01939$

11.25 base_nnu_yhe_plikHM_TT_lowl_lowE_Aver15

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02207 ± 0.00032	$\sigma_8\Omega_m^{0.5}$	0.460 ± 0.014	$D_M(0.15)$	652 ± 25
$\boldsymbol{\Omega_c h^2}$	0.1201 ± 0.0047	$\sigma_8\Omega_m^{0.25}$	0.610 ± 0.012	$H(0.38)$	82.1 ± 2.5
$\boldsymbol{100\theta_{MC}}$	1.04082 ± 0.00076	$\sigma_8/h^{0.5}$	0.993 ± 0.016	$D_M(0.38)$	1552 ± 55
$\boldsymbol{\tau}$	0.0512 ± 0.0082	$r_{drag}h$	98.2 ± 2.3	$H(0.51)$	89.0 ± 2.5
$\boldsymbol{N_{eff}}$	3.00 ± 0.34	$\langle d^2\rangle^{1/2}$	2.458 ± 0.046	$D_M(0.51)$	2009 ± 68
$\boldsymbol{Y_P}$	0.2439 ± 0.0040	z_{re}	7.39 ± 0.86	$H(0.61)$	94.6 ± 2.5
$\boldsymbol{\ln(10^{10}A_s)}$	3.036 ± 0.022	$10^9 A_s$	2.084 ± 0.045	$D_M(0.61)$	2336 ± 77
$\boldsymbol{n_s}$	0.960 ± 0.014	$10^9 A_s e^{-2\tau}$	1.881 ± 0.024	$H(2.33)$	236.1 ± 4.2
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	D_{40}	1237 ± 22	$D_M(2.33)$	5803 ± 150
$\boldsymbol{A_{217}^{CIB}}$	48 ± 7	D_{220}	5714 ± 41	$f\sigma_8(0.15)$	0.464 ± 0.012
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{810}	2536 ± 14	$\sigma_8(0.15)$	0.747 ± 0.014
$\boldsymbol{A_{143}^{tSZ}}$	5.1 ± 2.0	D_{1420}	814.9 ± 5.0	$f\sigma_8(0.38)$	0.4794 ± 0.0095
$\boldsymbol{A_{100}^{PS}}$	262 ± 29	D_{2000}	229.9 ± 2.1	$\sigma_8(0.38)$	0.661 ± 0.014
$\boldsymbol{A_{143}^{PS}}$	48 ± 8	$n_{s,0.002}$	0.960 ± 0.014	$f\sigma_8(0.51)$	0.4765 ± 0.0085
$\boldsymbol{A_{143\times217}^{PS}}$	43 ± 9	Y_P	0.2439 ± 0.0040	$\sigma_8(0.51)$	0.618 ± 0.013
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	Y_P^{BBN}	0.2452 ± 0.0040	$f\sigma_8(0.61)$	0.4706 ± 0.0081
$\boldsymbol{A^{kSZ}}$	< 4.67	Age/Gyr	13.89 ± 0.35	$\sigma_8(0.61)$	0.588 ± 0.013
$\boldsymbol{A_{100}^{dustTT}}$	8.9 ± 1.8	z_*	1090.23 ± 0.45	$f\sigma_8(2.33)$	0.2958 ± 0.0069
$\boldsymbol{A_{143}^{dustTT}}$	10.7 ± 1.8	r_*	145.0 ± 3.0	$\sigma_8(2.33)$	0.3045 ± 0.0077
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.2 ± 3.3	$100\theta_*$	1.04108 ± 0.00083	f_{2000}^{143}	30.7 ± 3.4
$\boldsymbol{A_{217}^{dustTT}}$	93.4 ± 7.4	$D_M(z_*)$/Gpc	13.92 ± 0.28	$f_{2000}^{143\times217}$	33.2 ± 2.4
$\boldsymbol{c_{100}}$	0.99959 ± 0.00061	z_{drag}	1059.2 ± 1.1	f_{2000}^{217}	107.9 ± 2.2
$\boldsymbol{c_{217}}$	0.99825 ± 0.00062	r_{drag}	147.7 ± 3.1	χ^2_{simall}	396.9 ± 1.6
H_0	66.5 ± 2.6	k_D	0.1402 ± 0.0024	χ^2_{lowl}	24.5 ± 2.3
Ω_Λ	$0.676^{+0.020}_{-0.018}$	$100\theta_D$	0.16094 ± 0.00061	χ^2_{plik}	771.7 ± 5.9
Ω_m	$0.324^{+0.018}_{-0.020}$	z_{eq}	3421 ± 70	χ^2_{Aver15}	1.0 ± 1.4
$\Omega_m h^2$	0.1428 ± 0.0048	k_{eq}	0.01040 ± 0.00017	χ^2_{prior}	7.3 ± 3.7
$\Omega_m h^3$	$0.0950^{+0.0060}_{-0.0068}$	$100\theta_{eq}$	0.809 ± 0.013	χ^2_{CMB}	1193.0 ± 5.7
σ_8	0.809 ± 0.015	$100\theta_{s,eq}$	0.4475 ± 0.0066		
S_8	0.840 ± 0.025	$H(0.15)$	71.9 ± 2.6		

$\bar{\chi}^2_{eff} = 1201.30$; $R - 1 = 0.00666$

11.26 base_nnu_yhe_plikHM_TT_lowl_lowE_Aver15_post_BAO

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02226 ± 0.00023	$\sigma_8\Omega_m^{0.25}$	0.605 ± 0.010	$D_M(0.38)$	1515 ± 33
$\boldsymbol{\Omega_c h^2}$	0.1211 ± 0.0045	$\sigma_8/h^{0.5}$	0.983 ± 0.012	$H(0.51)$	90.5 ± 1.8
$\boldsymbol{100\theta_{MC}}$	1.04068 ± 0.00072	$r_{drag}h$	99.95 ± 1.0	$D_M(0.51)$	1963 ± 42
$\boldsymbol{\tau}$	0.0534 ± 0.0079	$\langle d^2\rangle^{1/2}$	2.425 ± 0.027	$H(0.61)$	96.1 ± 1.8
$\boldsymbol{N_{eff}}$	3.18 ± 0.27	z_{re}	7.61 ± 0.82	$D_M(0.61)$	2285 ± 48
$\boldsymbol{Y_P}$	0.2439 ± 0.0039	$10^9 A_s$	2.098 ± 0.041	$H(2.33)$	237.6 ± 3.9
$\boldsymbol{\ln(10^{10}A_s)}$	$3.044^{+0.020}_{-0.018}$	$10^9 A_s e^{-2\tau}$	1.886 ± 0.022	$D_M(2.33)$	5718 ± 110
$\boldsymbol{n_s}$	0.9694 ± 0.0084	D_{40}	1223 ± 15	$f\sigma_8(0.15)$	0.4558 ± 0.0085
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0024	D_{220}	5720 ± 41	$\sigma_8(0.15)$	0.751 ± 0.013
$\boldsymbol{A_{217}^{CIB}}$	48 ± 7	D_{810}	2537 ± 14	$f\sigma_8(0.38)$	0.4749 ± 0.0082
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{1420}	815.1 ± 5.0	$\sigma_8(0.38)$	0.666 ± 0.012
$\boldsymbol{A_{143}^{tSZ}}$	5.1 ± 2.0	D_{2000}	229.5 ± 2.1	$f\sigma_8(0.51)$	0.4738 ± 0.0080
$\boldsymbol{A_{100}^{PS}}$	265 ± 29	$n_{s,0.002}$	0.9694 ± 0.0084	$\sigma_8(0.51)$	0.623 ± 0.011
$\boldsymbol{A_{143}^{PS}}$	49 ± 8	Y_P	0.2439 ± 0.0039	$f\sigma_8(0.61)$	0.4691 ± 0.0079
$\boldsymbol{A_{143\times217}^{PS}}$	44 ± 9	Y_P^{BBN}	0.2452 ± 0.0039	$\sigma_8(0.61)$	0.593 ± 0.011
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	Age/Gyr	13.69 ± 0.25	$f\sigma_8(2.33)$	0.2991 ± 0.0056
$\boldsymbol{A^{kSZ}}$	< 4.93	z_*	$1090.14^{+0.42}_{-0.47}$	$\sigma_8(2.33)$	0.3086 ± 0.0060
$\boldsymbol{A_{100}^{dustTT}}$	9.0 ± 1.8	r_*	143.7 ± 2.5	f_{2000}^{143}	31.5 ± 3.3
$\boldsymbol{A_{143}^{dustTT}}$	10.8 ± 1.8	$100\theta_*$	1.04088 ± 0.00077	$f_{2000}^{143\times217}$	33.8 ± 2.3
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.3 ± 3.3	$D_M(z_*)$/Gpc	13.80 ± 0.23	f_{2000}^{217}	108.3 ± 2.2
$\boldsymbol{A_{217}^{dustTT}}$	93.4 ± 7.3	z_{drag}	1059.76 ± 0.81	χ^2_{simall}	397.0 ± 1.7
$\boldsymbol{c_{100}}$	0.99961 ± 0.00060	r_{drag}	146.3 ± 2.6	χ^2_{lowl}	22.8 ± 1.1
$\boldsymbol{c_{217}}$	0.99825 ± 0.00064	k_D	0.1413 ± 0.0020	χ^2_{plik}	773.2 ± 5.5
H_0	68.3 ± 1.6	$100\theta_D$	0.16119 ± 0.00054	χ^2_{Aver15}	0.96 ± 1.4
Ω_Λ	0.6915 ± 0.0083	z_{eq}	3366 ± 33	χ^2_{6DF}	0.057 ± 0.078
Ω_m	0.3085 ± 0.0083	k_{eq}	0.01036 ± 0.00016	χ^2_{MGS}	1.46 ± 0.59
$\Omega_m h^2$	0.1440 ± 0.0046	$100\theta_{eq}$	0.8194 ± 0.0060	$\chi^2_{DR12BAO}$	4.7 ± 1.6
$\Omega_m h^3$	$0.0984^{+0.0049}_{-0.0054}$	$100\theta_{s,eq}$	0.4527 ± 0.0031	χ^2_{prior}	7.3 ± 3.6
σ_8	0.812 ± 0.014	$H(0.15)$	73.6 ± 1.6	χ^2_{BAO}	6.2 ± 1.3
S_8	0.823 ± 0.016	$D_M(0.15)$	635 ± 14	χ^2_{CMB}	1193.0 ± 5.5
$\sigma_8\Omega_m^{0.5}$	0.4510 ± 0.0088	$H(0.38)$	83.7 ± 1.7		

$\bar{\chi}^2_{eff} = 1207.49$; $R - 1 = 0.02393$

11.27 base_nnu_yhe_plikHM_TT_lowl_lowE_Aver15_post_lensing

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02206 ± 0.00030	$\sigma_8\Omega_m^{0.5}$	0.4576 ± 0.0091	$D_M(0.15)$	654 ± 23
$\boldsymbol{\Omega_c h^2}$	0.1189 ± 0.0044	$\sigma_8\Omega_m^{0.25}$	0.6071 ± 0.0084	$H(0.38)$	81.9 ± 2.3
$\boldsymbol{100\theta_{MC}}$	1.04095 ± 0.00074	$\sigma_8/h^{0.5}$	0.990 ± 0.011	$D_M(0.38)$	1557 ± 50
$\boldsymbol{\tau}$	0.0511 ± 0.0082	$r_{drag}h$	98.3 ± 1.9	$H(0.51)$	88.6 ± 2.3
$\boldsymbol{N_{eff}}$	2.94 ± 0.32	$\langle d^2\rangle^{1/2}$	2.454 ± 0.032	$D_M(0.51)$	2015 ± 63
$\boldsymbol{Y_P}$	0.2439 ± 0.0040	z_{re}	7.36 ± 0.86	$H(0.61)$	94.3 ± 2.4
$\boldsymbol{\ln(10^{10}A_s)}$	3.033 ± 0.022	$10^9 A_s$	2.077 ± 0.045	$D_M(0.61)$	2343 ± 71
$\boldsymbol{n_s}$	0.959 ± 0.012	$10^9 A_s e^{-2\tau}$	1.875 ± 0.023	$H(2.33)$	235.2 ± 4.1
$\boldsymbol{y_{cal}}$	1.0004 ± 0.0024	D_{40}	1238 ± 19	$D_M(2.33)$	5824 ± 140
$\boldsymbol{A_{217}^{CIB}}$	47 ± 7	D_{220}	5716 ± 41	$f\sigma_8(0.15)$	0.4611 ± 0.0082
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{810}	2535 ± 14	$\sigma_8(0.15)$	0.743 ± 0.014
$\boldsymbol{A_{143}^{tSZ}}$	5.2 ± 2.0	D_{1420}	815.0 ± 5.0	$f\sigma_8(0.38)$	0.4768 ± 0.0067
$\boldsymbol{A_{100}^{PS}}$	262 ± 29	D_{2000}	230.1 ± 2.1	$\sigma_8(0.38)$	0.658 ± 0.013
$\boldsymbol{A_{143}^{PS}}$	48 ± 8	$n_{s,0.002}$	0.959 ± 0.012	$f\sigma_8(0.51)$	0.4742 ± 0.0065
$\boldsymbol{A_{143\times217}^{PS}}$	43 ± 9	Y_P	0.2439 ± 0.0040	$\sigma_8(0.51)$	0.615 ± 0.013
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	Y_P^{BBN}	0.2453 ± 0.0040	$f\sigma_8(0.61)$	0.4684 ± 0.0066
$\boldsymbol{A^{kSZ}}$	< 4.63	Age/Gyr	13.94 ± 0.33	$\sigma_8(0.61)$	0.585 ± 0.013
$\boldsymbol{A_{100}^{dustTT}}$	8.9 ± 1.9	z_*	$1090.11^{+0.39}_{-0.44}$	$f\sigma_8(2.33)$	0.2946 ± 0.0068
$\boldsymbol{A_{143}^{dustTT}}$	10.7 ± 1.8	r_*	145.6 ± 2.9	$\sigma_8(2.33)$	0.3033 ± 0.0075
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.2 ± 3.3	$100\theta_*$	1.04123 ± 0.00081	f_{2000}^{143}	30.5 ± 3.3
$\boldsymbol{A_{217}^{dustTT}}$	93.5 ± 7.3	$D_M(z_*)$/Gpc	13.98 ± 0.27	$f_{2000}^{143\times217}$	33.0 ± 2.4
$\boldsymbol{c_{100}}$	0.99960 ± 0.00061	z_{drag}	1059.1 ± 1.0	f_{2000}^{217}	107.7 ± 2.2
$\boldsymbol{c_{217}}$	0.99826 ± 0.00063	r_{drag}	148.3 ± 3.0	$\chi^2_{lensing}$	9.4 ± 1.0
H_0	66.3 ± 2.4	k_D	0.1398 ± 0.0023	χ^2_{simall}	396.8 ± 1.6
Ω_Λ	0.677 ± 0.016	$100\theta_D$	0.16083 ± 0.00058	χ^2_{lowl}	24.5 ± 2.0
Ω_m	0.323 ± 0.016	z_{eq}	3417 ± 57	χ^2_{plik}	771.1 ± 5.4
$\Omega_m h^2$	0.1416 ± 0.0046	k_{eq}	0.01035 ± 0.00014	χ^2_{Aver15}	0.99 ± 1.4
$\Omega_m h^3$	0.0940 ± 0.0062	$100\theta_{eq}$	0.810 ± 0.011	χ^2_{prior}	7.3 ± 3.7
σ_8	0.806 ± 0.014	$100\theta_{s,eq}$	0.4478 ± 0.0053	χ^2_{CMB}	1201.8 ± 5.6
S_8	0.835 ± 0.017	$H(0.15)$	71.6 ± 2.3		

$\bar{\chi}^2_{eff} = 1210.08$; $R - 1 = 0.01169$

11.28 base_nnu_yhe_plikHM_TT_lowl_lowE_Aver15_post_BAO_lensing

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02225 ± 0.00023	$\sigma_8\Omega_m^{0.25}$	0.6055 ± 0.0082	$D_M(0.38)$	1521 ± 32
$\boldsymbol{\Omega_c h^2}$	0.1205 ± 0.0041	$\sigma_8/h^{0.5}$	0.9840 ± 0.0089	$H(0.51)$	90.2 ± 1.7
$\boldsymbol{100\theta_{MC}}$	1.04074 ± 0.00069	$r_{drag}h$	99.80 ± 0.99	$D_M(0.51)$	1970 ± 41
$\boldsymbol{\tau}$	0.0546 ± 0.0074	$\langle d^2\rangle^{1/2}$	2.432 ± 0.023	$H(0.61)$	95.8 ± 1.7
$\boldsymbol{N_{eff}}$	3.14 ± 0.26	z_{re}	7.73 ± 0.74	$D_M(0.61)$	2293 ± 47
$\boldsymbol{Y_P}$	0.2439 ± 0.0039	$10^9 A_s$	2.102 ± 0.036	$H(2.33)$	237.0 ± 3.6
$\boldsymbol{\ln(10^{10}A_s)}$	3.045 ± 0.017	$10^9 A_s e^{-2\tau}$	1.884 ± 0.020	$D_M(2.33)$	5734 ± 100
$\boldsymbol{n_s}$	0.9679 ± 0.0082	D_{40}	1226 ± 14	$f\sigma_8(0.15)$	0.4564 ± 0.0066
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0024	D_{220}	5724 ± 40	$\sigma_8(0.15)$	0.750 ± 0.012
$\boldsymbol{A_{217}^{CIB}}$	48 ± 7	D_{810}	2538 ± 14	$f\sigma_8(0.38)$	0.4752 ± 0.0064
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{1420}	815.4 ± 5.1	$\sigma_8(0.38)$	0.665 ± 0.011
$\boldsymbol{A_{143}^{tSZ}}$	5.1 ± 2.0	D_{2000}	229.8 ± 2.1	$f\sigma_8(0.51)$	0.4740 ± 0.0064
$\boldsymbol{A_{100}^{PS}}$	264 ± 29	$n_{s,0.002}$	0.9679 ± 0.0082	$\sigma_8(0.51)$	0.623 ± 0.010
$\boldsymbol{A_{143}^{PS}}$	49 ± 8	Y_P	0.2439 ± 0.0039	$f\sigma_8(0.61)$	0.4692 ± 0.0064
$\boldsymbol{A_{143\times217}^{PS}}$	43 ± 9	Y_P^{BBN}	0.2453 ± 0.0039	$\sigma_8(0.61)$	0.5925 ± 0.0098
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	Age/Gyr	13.73 ± 0.24	$f\sigma_8(2.33)$	0.2988 ± 0.0051
$\boldsymbol{A^{kSZ}}$	< 4.82	z_*	$1090.09^{+0.39}_{-0.44}$	$\sigma_8(2.33)$	0.3082 ± 0.0055
$\boldsymbol{A_{100}^{dustTT}}$	9.0 ± 1.8	r_*	144.0 ± 2.4	f_{2000}^{143}	31.2 ± 3.3
$\boldsymbol{A_{143}^{dustTT}}$	10.7 ± 1.9	$100\theta_*$	1.04095 ± 0.00073	$f_{2000}^{143\times217}$	33.5 ± 2.3
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.3 ± 3.4	$D_M(z_*)$/Gpc	13.83 ± 0.22	f_{2000}^{217}	108.1 ± 2.2
$\boldsymbol{A_{217}^{dustTT}}$	93.3 ± 7.3	z_{drag}	1059.68 ± 0.79	$\chi^2_{lensing}$	9.43 ± 0.82
$\boldsymbol{c_{100}}$	0.99962 ± 0.00060	r_{drag}	146.7 ± 2.4	χ^2_{simall}	397.0 ± 1.7
$\boldsymbol{c_{217}}$	0.99825 ± 0.00065	k_D	0.1410 ± 0.0019	χ^2_{lowl}	23.1 ± 1.2
H_0	68.1 ± 1.6	$100\theta_D$	0.16110 ± 0.00052	χ^2_{plik}	772.4 ± 5.3
Ω_Λ	0.6902 ± 0.0080	z_{eq}	3371 ± 31	χ^2_{Aver15}	0.97 ± 1.4
Ω_m	0.3098 ± 0.0080	k_{eq}	0.01035 ± 0.00014	χ^2_{6DF}	0.060 ± 0.080
$\Omega_m h^2$	0.1434 ± 0.0042	$100\theta_{eq}$	0.8185 ± 0.0058	χ^2_{MGS}	1.37 ± 0.55
$\Omega_m h^3$	0.0977 ± 0.0049	$100\theta_{s,eq}$	0.4522 ± 0.0029	$\chi^2_{DR12BAO}$	4.8 ± 1.7
σ_8	0.812 ± 0.012	$H(0.15)$	73.3 ± 1.6	χ^2_{prior}	7.3 ± 3.7
S_8	0.825 ± 0.013	$D_M(0.15)$	637 ± 14	χ^2_{CMB}	1201.9 ± 5.4
$\sigma_8\Omega_m^{0.5}$	0.4517 ± 0.0068	$H(0.38)$	83.5 ± 1.6	χ^2_{BAO}	6.2 ± 1.4

$\bar{\chi}^2_{eff} = 1216.46$; $R - 1 = 0.02078$

11.29 base_nnu_yhe_plikHM_TT_lowl_lowE_Aver15_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02210 ± 0.00031	$\sigma_8\Omega_m^{0.5}$	0.460 ± 0.014	$D_M(0.15)$	650 ± 24
$\boldsymbol{\Omega_c h^2}$	0.1203 ± 0.0047	$\sigma_8\Omega_m^{0.25}$	0.611 ± 0.012	$H(0.38)$	82.3 ± 2.5
$\boldsymbol{100\theta_{MC}}$	1.04079 ± 0.00076	$\sigma_8/h^{0.5}$	0.994 ± 0.016	$D_M(0.38)$	1548 ± 53
$\boldsymbol{\tau}$	$0.0533^{+0.0043}_{-0.0081}$	$r_{drag}h$	98.3 ± 2.2	$H(0.51)$	89.1 ± 2.5
$\boldsymbol{N_{eff}}$	3.02 ± 0.34	$\langle d^2\rangle^{1/2}$	2.460 ± 0.046	$D_M(0.51)$	2003 ± 67
$\boldsymbol{Y_P}$	0.2439 ± 0.0040	z_{re}	$7.62^{+0.47}_{-0.86}$	$H(0.61)$	94.8 ± 2.5
$\boldsymbol{\ln(10^{10}A_s)}$	$3.041^{+0.017}_{-0.020}$	$10^9 A_s$	$2.093^{+0.035}_{-0.043}$	$D_M(0.61)$	2330 ± 75
$\boldsymbol{n_s}$	0.961 ± 0.013	$10^9 A_s e^{-2\tau}$	1.881 ± 0.023	$H(2.33)$	236.3 ± 4.2
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	D_{40}	1236 ± 22	$D_M(2.33)$	5793 ± 140
$\boldsymbol{A_{217}^{CIB}}$	48 ± 7	D_{220}	5714 ± 41	$f\sigma_8(0.15)$	0.464 ± 0.012
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{810}	2536 ± 14	$\sigma_8(0.15)$	0.749 ± 0.013
$\boldsymbol{A_{143}^{tSZ}}$	5.1 ± 2.0	D_{1420}	814.9 ± 5.0	$f\sigma_8(0.38)$	0.4799 ± 0.0094
$\boldsymbol{A_{100}^{PS}}$	262 ± 29	D_{2000}	229.9 ± 2.1	$\sigma_8(0.38)$	0.663 ± 0.013
$\boldsymbol{A_{143}^{PS}}$	49 ± 8	$n_{s,0.002}$	0.961 ± 0.013	$f\sigma_8(0.51)$	0.4773 ± 0.0084
$\boldsymbol{A_{143\times217}^{PS}}$	43 ± 9	Y_P	0.2439 ± 0.0040	$\sigma_8(0.51)$	0.620 ± 0.012
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	Y_P^{BBN}	0.2452 ± 0.0040	$f\sigma_8(0.61)$	0.4715 ± 0.0079
$\boldsymbol{A^{kSZ}}$	< 4.66	Age/Gyr	13.87 ± 0.34	$\sigma_8(0.61)$	0.589 ± 0.012
$\boldsymbol{A_{100}^{dustTT}}$	8.9 ± 1.8	z_*	1090.22 ± 0.45	$f\sigma_8(2.33)$	0.2968 ± 0.0065
$\boldsymbol{A_{143}^{dustTT}}$	10.7 ± 1.8	r_*	144.8 ± 3.0	$\sigma_8(2.33)$	0.3055 ± 0.0073
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.2 ± 3.3	$100\theta_*$	1.04105 ± 0.00082	f_{2000}^{143}	30.8 ± 3.4
$\boldsymbol{A_{217}^{dustTT}}$	93.4 ± 7.4	$D_M(z_*)$/Gpc	13.91 ± 0.27	$f_{2000}^{143\times217}$	33.2 ± 2.4
$\boldsymbol{c_{100}}$	0.99959 ± 0.00061	z_{drag}	1059.3 ± 1.0	f_{2000}^{217}	107.9 ± 2.2
$\boldsymbol{c_{217}}$	0.99826 ± 0.00063	r_{drag}	147.5 ± 3.1	χ^2_{simall}	396.7 ± 1.6
H_0	66.7 ± 2.6	k_D	0.1404 ± 0.0023	χ^2_{lowl}	24.3 ± 2.3
Ω_Λ	$0.678^{+0.020}_{-0.018}$	$100\theta_D$	0.16096 ± 0.00061	χ^2_{plik}	771.6 ± 5.9
Ω_m	$0.322^{+0.018}_{-0.020}$	z_{eq}	3415 ± 68	χ^2_{Aver15}	1.0 ± 1.4
$\Omega_m h^2$	0.1430 ± 0.0048	k_{eq}	0.01040 ± 0.00017	χ^2_{prior}	7.3 ± 3.7
$\Omega_m h^3$	$0.0955^{+0.0060}_{-0.0068}$	$100\theta_{eq}$	0.810 ± 0.013	χ^2_{CMB}	1192.7 ± 5.6
σ_8	0.811 ± 0.014	$100\theta_{s,eq}$	0.4480 ± 0.0065		
S_8	0.841 ± 0.025	$H(0.15)$	72.1 ± 2.5		

$\bar{\chi}^2_{eff} = 1200.97$; $R - 1 = 0.00742$

11.30 base_nnu_yhe_plikHM_TT_lowl_lowE_Aver15_post_BAO_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02227 ± 0.00023	$\sigma_8\Omega_m^{0.25}$	0.606 ± 0.010	$D_M(0.38)$	1514 ± 33
$\boldsymbol{\Omega_c h^2}$	0.1211 ± 0.0045	$\sigma_8/h^{0.5}$	0.984 ± 0.011	$H(0.51)$	90.5 ± 1.8
$\boldsymbol{100\theta_{MC}}$	1.04067 ± 0.00072	$r_{drag}h$	99.98 ± 1.0	$D_M(0.51)$	1962 ± 42
$\boldsymbol{\tau}$	$0.0548^{+0.0054}_{-0.0079}$	$\langle d^2\rangle^{1/2}$	2.428 ± 0.026	$H(0.61)$	96.2 ± 1.8
$\boldsymbol{N_{eff}}$	3.18 ± 0.27	z_{re}	$7.76^{+0.59}_{-0.82}$	$D_M(0.61)$	2284 ± 48
$\boldsymbol{Y_P}$	0.2439 ± 0.0039	$10^9 A_s$	2.104 ± 0.037	$H(2.33)$	237.6 ± 3.9
$\boldsymbol{\ln(10^{10}A_s)}$	3.046 ± 0.018	$10^9 A_s e^{-2\tau}$	1.886 ± 0.022	$D_M(2.33)$	5716 ± 110
$\boldsymbol{n_s}$	0.9696 ± 0.0084	D_{40}	1223 ± 15	$f\sigma_8(0.15)$	0.4564 ± 0.0084
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0024	D_{220}	5719 ± 41	$\sigma_8(0.15)$	0.752 ± 0.013
$\boldsymbol{A_{217}^{CIB}}$	48 ± 7	D_{810}	2537 ± 14	$f\sigma_8(0.38)$	0.4755 ± 0.0080
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{1420}	815.0 ± 5.0	$\sigma_8(0.38)$	0.667 ± 0.012
$\boldsymbol{A_{143}^{tSZ}}$	5.1 ± 2.0	D_{2000}	229.5 ± 2.1	$f\sigma_8(0.51)$	0.4745 ± 0.0078
$\boldsymbol{A_{100}^{PS}}$	264 ± 29	$n_{s,0.002}$	0.9696 ± 0.0084	$\sigma_8(0.51)$	0.624 ± 0.011
$\boldsymbol{A_{143}^{PS}}$	49 ± 8	Y_P	0.2439 ± 0.0039	$f\sigma_8(0.61)$	0.4697 ± 0.0077
$\boldsymbol{A_{143\times217}^{PS}}$	44 ± 9	Y_P^{BBN}	0.2452 ± 0.0039	$\sigma_8(0.61)$	0.594 ± 0.011
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	Age/Gyr	13.69 ± 0.25	$f\sigma_8(2.33)$	0.2996 ± 0.0054
$\boldsymbol{A^{kSZ}}$	< 4.87	z_*	$1090.14^{+0.42}_{-0.47}$	$\sigma_8(2.33)$	0.3091 ± 0.0058
$\boldsymbol{A_{100}^{dustTT}}$	9.0 ± 1.8	r_*	143.6 ± 2.5	f_{2000}^{143}	31.5 ± 3.3
$\boldsymbol{A_{143}^{dustTT}}$	10.8 ± 1.9	$100\theta_*$	1.04086 ± 0.00077	$f_{2000}^{143\times217}$	33.8 ± 2.3
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.3 ± 3.3	$D_M(z_*)$/Gpc	13.80 ± 0.23	f_{2000}^{217}	108.3 ± 2.2
$\boldsymbol{A_{217}^{dustTT}}$	93.4 ± 7.3	z_{drag}	1059.77 ± 0.80	χ^2_{simall}	396.9 ± 1.7
$\boldsymbol{c_{100}}$	0.99961 ± 0.00060	r_{drag}	146.3 ± 2.6	χ^2_{lowl}	22.8 ± 1.1
$\boldsymbol{c_{217}}$	0.99826 ± 0.00065	k_D	0.1413 ± 0.0020	χ^2_{plik}	773.0 ± 5.6
H_0	68.4 ± 1.6	$100\theta_D$	$0.16120^{+0.00051}_{-0.00056}$	χ^2_{Aver15}	0.97 ± 1.4
Ω_Λ	0.6917 ± 0.0083	z_{eq}	3365 ± 33	χ^2_{6DF}	0.056 ± 0.077
Ω_m	0.3083 ± 0.0083	k_{eq}	0.01036 ± 0.00016	χ^2_{MGS}	1.48 ± 0.59
$\Omega_m h^2$	0.1440 ± 0.0046	$100\theta_{eq}$	0.8196 ± 0.0061	$\chi^2_{DR12BAO}$	4.6 ± 1.6
$\Omega_m h^3$	0.0985 ± 0.0052	$100\theta_{s,eq}$	0.4527 ± 0.0031	χ^2_{prior}	7.3 ± 3.7
σ_8	0.813 ± 0.014	$H(0.15)$	73.7 ± 1.6	χ^2_{BAO}	6.2 ± 1.3
S_8	0.824 ± 0.016	$D_M(0.15)$	635 ± 14	χ^2_{CMB}	1192.8 ± 5.4
$\sigma_8\Omega_m^{0.5}$	0.4515 ± 0.0087	$H(0.38)$	83.8 ± 1.7		

$\bar{\chi}^2_{eff} = 1207.26$; $R - 1 = 0.02342$

11.31 base_nnu_yhe_plikHM_TT_lowl_lowE_Aver15_post_lensing_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02209 ± 0.00029	$\sigma_8\Omega_m^{0.5}$	0.4571 ± 0.0090	$D_M(0.15)$	652 ± 22
$\boldsymbol{\Omega_c h^2}$	0.1190 ± 0.0044	$\sigma_8\Omega_m^{0.25}$	0.6075 ± 0.0083	$H(0.38)$	82.1 ± 2.3
$\boldsymbol{100\theta_{MC}}$	1.04092 ± 0.00074	$\sigma_8/h^{0.5}$	0.990 ± 0.011	$D_M(0.38)$	1552 ± 48
$\boldsymbol{\tau}$	$0.0532^{+0.0043}_{-0.0081}$	$r_{drag}h$	98.5 ± 1.8	$H(0.51)$	88.8 ± 2.3
$\boldsymbol{N_{eff}}$	2.97 ± 0.32	$\langle d^2\rangle^{1/2}$	2.454 ± 0.032	$D_M(0.51)$	2009 ± 60
$\boldsymbol{Y_P}$	0.2440 ± 0.0040	z_{re}	$7.59^{+0.45}_{-0.87}$	$H(0.61)$	94.5 ± 2.3
$\boldsymbol{\ln(10^{10}A_s)}$	$3.038^{+0.017}_{-0.020}$	$10^9 A_s$	$2.087^{+0.034}_{-0.042}$	$D_M(0.61)$	2336 ± 69
$\boldsymbol{n_s}$	0.960 ± 0.012	$10^9 A_s e^{-2\tau}$	1.876 ± 0.023	$H(2.33)$	235.4 ± 4.1
$\boldsymbol{y_{cal}}$	1.0004 ± 0.0024	D_{40}	1236 ± 18	$D_M(2.33)$	5813 ± 140
$\boldsymbol{A_{217}^{CIB}}$	47 ± 7	D_{220}	5717 ± 41	$f\sigma_8(0.15)$	0.4609 ± 0.0081
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{810}	2535 ± 14	$\sigma_8(0.15)$	0.745 ± 0.013
$\boldsymbol{A_{143}^{tSZ}}$	5.2 ± 2.0	D_{1420}	815.0 ± 5.0	$f\sigma_8(0.38)$	0.4771 ± 0.0066
$\boldsymbol{A_{100}^{PS}}$	262 ± 29	D_{2000}	230.1 ± 2.1	$\sigma_8(0.38)$	0.660 ± 0.012
$\boldsymbol{A_{143}^{PS}}$	48 ± 8	$n_{s,0.002}$	0.960 ± 0.012	$f\sigma_8(0.51)$	0.4747 ± 0.0064
$\boldsymbol{A_{143\times217}^{PS}}$	43 ± 9	Y_P	0.2440 ± 0.0040	$\sigma_8(0.51)$	0.617 ± 0.012
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	Y_P^{BBN}	0.2453 ± 0.0040	$f\sigma_8(0.61)$	0.4690 ± 0.0064
$\boldsymbol{A^{kSZ}}$	< 4.62	Age/Gyr	13.91 ± 0.32	$\sigma_8(0.61)$	0.587 ± 0.012
$\boldsymbol{A_{100}^{dustTT}}$	8.9 ± 1.9	z_*	$1090.10^{+0.38}_{-0.43}$	$f\sigma_8(2.33)$	0.2956 ± 0.0063
$\boldsymbol{A_{143}^{dustTT}}$	10.7 ± 1.8	r_*	145.4 ± 2.9	$\sigma_8(2.33)$	0.3044 ± 0.0071
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.3 ± 3.3	$100\theta_*$	1.04119 ± 0.00080	f_{2000}^{143}	30.5 ± 3.3
$\boldsymbol{A_{217}^{dustTT}}$	93.5 ± 7.3	$D_M(z_*)$/Gpc	13.96 ± 0.27	$f_{2000}^{143\times217}$	33.0 ± 2.4
$\boldsymbol{c_{100}}$	0.99960 ± 0.00061	z_{drag}	1059.1 ± 1.0	f_{2000}^{217}	107.7 ± 2.2
$\boldsymbol{c_{217}}$	0.99826 ± 0.00063	r_{drag}	148.1 ± 3.0	$\chi^2_{lensing}$	9.4 ± 1.0
H_0	66.5 ± 2.3	k_D	0.1399 ± 0.0023	χ^2_{simall}	396.7 ± 1.5
Ω_Λ	0.679 ± 0.015	$100\theta_D$	$0.16085^{+0.00054}_{-0.00061}$	χ^2_{lowl}	24.3 ± 1.9
Ω_m	0.321 ± 0.015	z_{eq}	3410 ± 54	χ^2_{plik}	771.1 ± 5.5
$\Omega_m h^2$	0.1418 ± 0.0046	k_{eq}	0.01035 ± 0.00014	χ^2_{Aver15}	1.0 ± 1.4
$\Omega_m h^3$	$0.0944^{+0.0056}_{-0.0063}$	$100\theta_{eq}$	0.811 ± 0.010	χ^2_{prior}	7.3 ± 3.7
σ_8	0.808 ± 0.013	$100\theta_{s,eq}$	0.4485 ± 0.0051	χ^2_{CMB}	1201.5 ± 5.5
S_8	0.835 ± 0.016	$H(0.15)$	71.9 ± 2.3		

$\bar{\chi}^2_{eff} = 1209.75$; $R - 1 = 0.01470$

11.32 base_nnu_yhe_plikHM_TT_lowl_lowE_Aver15_post_BAO_lensing_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02226 ± 0.00023	$\sigma_8\Omega_m^{0.25}$	0.6058 ± 0.0081	$D_M(0.38)$	1520 ± 32
$\boldsymbol{\Omega_c h^2}$	0.1205 ± 0.0041	$\sigma_8/h^{0.5}$	0.9845 ± 0.0087	$H(0.51)$	90.2 ± 1.7
$\boldsymbol{100\theta_{MC}}$	1.04074 ± 0.00069	$r_{drag}h$	99.83 ± 0.99	$D_M(0.51)$	1970 ± 41
$\boldsymbol{\tau}$	$0.0554^{+0.0058}_{-0.0075}$	$\langle d^2\rangle^{1/2}$	2.433 ± 0.022	$H(0.61)$	95.9 ± 1.7
$\boldsymbol{N_{eff}}$	3.14 ± 0.26	z_{re}	$7.82^{+0.63}_{-0.74}$	$D_M(0.61)$	2292 ± 47
$\boldsymbol{Y_P}$	0.2440 ± 0.0039	$10^9 A_s$	2.105 ± 0.034	$H(2.33)$	237.0 ± 3.6
$\boldsymbol{\ln(10^{10}A_s)}$	3.047 ± 0.016	$10^9 A_s e^{-2\tau}$	1.884 ± 0.020	$D_M(2.33)$	5734 ± 100
$\boldsymbol{n_s}$	0.9680 ± 0.0082	D_{40}	1226 ± 14	$f\sigma_8(0.15)$	0.4566 ± 0.0066
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0024	D_{220}	5724 ± 40	$\sigma_8(0.15)$	0.751 ± 0.011
$\boldsymbol{A_{217}^{CIB}}$	48 ± 7	D_{810}	2537 ± 14	$f\sigma_8(0.38)$	0.4754 ± 0.0064
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{1420}	815.3 ± 5.0	$\sigma_8(0.38)$	0.666 ± 0.011
$\boldsymbol{A_{143}^{tSZ}}$	5.1 ± 2.0	D_{2000}	229.7 ± 2.1	$f\sigma_8(0.51)$	0.4743 ± 0.0064
$\boldsymbol{A_{100}^{PS}}$	264 ± 29	$n_{s,0.002}$	0.9680 ± 0.0082	$\sigma_8(0.51)$	0.623 ± 0.010
$\boldsymbol{A_{143}^{PS}}$	49 ± 8	Y_P	0.2440 ± 0.0039	$f\sigma_8(0.61)$	0.4694 ± 0.0064
$\boldsymbol{A_{143\times217}^{PS}}$	43 ± 9	Y_P^{BBN}	0.2453 ± 0.0039	$\sigma_8(0.61)$	0.5930 ± 0.0097
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	Age/Gyr	13.73 ± 0.24	$f\sigma_8(2.33)$	0.2991 ± 0.0050
$\boldsymbol{A^{kSZ}}$	< 4.79	z_*	$1090.09^{+0.39}_{-0.44}$	$\sigma_8(2.33)$	0.3084 ± 0.0054
$\boldsymbol{A_{100}^{dustTT}}$	9.0 ± 1.8	r_*	144.0 ± 2.4	f_{2000}^{143}	31.2 ± 3.3
$\boldsymbol{A_{143}^{dustTT}}$	10.7 ± 1.9	$100\theta_*$	1.04095 ± 0.00073	$f_{2000}^{143\times217}$	33.5 ± 2.3
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.3 ± 3.4	$D_M(z_*)$/Gpc	13.83 ± 0.22	f_{2000}^{217}	108.1 ± 2.2
$\boldsymbol{A_{217}^{dustTT}}$	93.3 ± 7.3	z_{drag}	1059.69 ± 0.78	$\chi^2_{lensing}$	9.39 ± 0.77
$\boldsymbol{c_{100}}$	0.99962 ± 0.00060	r_{drag}	146.7 ± 2.4	χ^2_{simall}	397.0 ± 1.7
$\boldsymbol{c_{217}}$	0.99825 ± 0.00065	k_D	0.1410 ± 0.0019	χ^2_{lowl}	23.1 ± 1.2
H_0	68.1 ± 1.6	$100\theta_D$	0.16110 ± 0.00052	χ^2_{plik}	772.3 ± 5.3
Ω_Λ	0.6905 ± 0.0080	z_{eq}	3370 ± 31	χ^2_{Aver15}	0.97 ± 1.4
Ω_m	0.3095 ± 0.0080	k_{eq}	0.01035 ± 0.00014	χ^2_{6DF}	0.058 ± 0.078
$\Omega_m h^2$	0.1434 ± 0.0042	$100\theta_{eq}$	0.8187 ± 0.0057	χ^2_{MGS}	1.39 ± 0.55
$\Omega_m h^3$	0.0977 ± 0.0049	$100\theta_{s,eq}$	0.4523 ± 0.0029	$\chi^2_{DR12BAO}$	4.7 ± 1.6
σ_8	0.812 ± 0.012	$H(0.15)$	73.4 ± 1.6	χ^2_{prior}	7.3 ± 3.7
S_8	0.825 ± 0.012	$D_M(0.15)$	637 ± 14	χ^2_{CMB}	1201.8 ± 5.4
$\sigma_8\Omega_m^{0.5}$	0.4518 ± 0.0068	$H(0.38)$	83.5 ± 1.6	χ^2_{BAO}	6.2 ± 1.3

$\bar{\chi}^2_{eff} = 1216.27$; $R - 1 = 0.02175$

11.33 base_nnu_yhe_plikHM_TTTEEE_lowl_lowE_Aver15

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02225 ± 0.00021	$\Omega_m h^2$	0.1412 ± 0.0037	$100\theta_{s,eq}$	0.4477 ± 0.0036
$\boldsymbol{\Omega_c h^2}$	0.1184 ± 0.0036	$\Omega_m h^3$	$0.0938^{+0.0041}_{-0.0047}$	$H(0.15)$	71.7 ± 1.6
$\boldsymbol{100\theta_{MC}}$	1.04112 ± 0.00062	σ_8	0.806 ± 0.012	$D_M(0.15)$	653 ± 15
$\boldsymbol{\tau}$	0.0532 ± 0.0078	S_8	0.833 ± 0.016	$H(0.38)$	81.9 ± 1.6
$\boldsymbol{N_{eff}}$	2.92 ± 0.23	$\sigma_8 \Omega_m^{0.5}$	0.4565 ± 0.0088	$D_M(0.38)$	1555 ± 34
$\boldsymbol{Y_P}$	0.2437 ± 0.0039	$\sigma_8 \Omega_m^{0.25}$	0.6065 ± 0.0091	$H(0.51)$	88.6 ± 1.6
$\boldsymbol{\ln(10^{10} A_s)}$	3.037 ± 0.019	$\sigma_8/h^{0.5}$	0.989 ± 0.012	$D_M(0.51)$	2013 ± 42
$\boldsymbol{n_s}$	0.9596 ± 0.0085	$r_{drag} h$	98.4 ± 1.3	$H(0.61)$	94.3 ± 1.6
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0025	$\langle d^2 \rangle^{1/2}$	2.455 ± 0.029	$D_M(0.61)$	2341 ± 48
$\boldsymbol{A_{217}^{CIB}}$	46 ± 7	z_{re}	7.53 ± 0.80	$H(2.33)$	234.9 ± 3.2
$\boldsymbol{\xi^{tSZ\times CIB}}$	> 0.380	$10^9 A_s$	2.085 ± 0.039	$D_M(2.33)$	5824 ± 98
$\boldsymbol{A_{143}^{tSZ}}$	$5.5^{+2.1}_{-1.9}$	$10^9 A_s e^{-2\tau}$	1.875 ± 0.019	$f\sigma_8(0.15)$	0.4602 ± 0.0083
$\boldsymbol{A_{100}^{PS}}$	256 ± 27	D_{40}	1239 ± 15	$\sigma_8(0.15)$	0.744 ± 0.011
$\boldsymbol{A_{143}^{PS}}$	45 ± 8	D_{220}	5733 ± 39	$f\sigma_8(0.38)$	0.4764 ± 0.0072
$\boldsymbol{A_{143\times217}^{PS}}$	42 ± 9	D_{810}	2538 ± 14	$\sigma_8(0.38)$	0.658 ± 0.010
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	D_{1420}	817.8 ± 4.9	$f\sigma_8(0.51)$	0.4739 ± 0.0069
$\boldsymbol{A^{kSZ}}$	< 3.90	D_{2000}	231.5 ± 1.8	$\sigma_8(0.51)$	0.6157 ± 0.0099
$\boldsymbol{A_{100}^{dust TT}}$	8.9 ± 1.8	$n_{s,0.002}$	0.9596 ± 0.0085	$f\sigma_8(0.61)$	0.4682 ± 0.0067
$\boldsymbol{A_{143}^{dust TT}}$	10.8 ± 1.8	Y_P	0.2437 ± 0.0039	$\sigma_8(0.61)$	0.5856 ± 0.0095
$\boldsymbol{A_{143\times217}^{dust TT}}$	18.5 ± 3.3	Y_P^{BBN}	0.2450 ± 0.0040	$f\sigma_8(2.33)$	0.2949 ± 0.0050
$\boldsymbol{A_{217}^{dust TT}}$	93.8 ± 7.3	Age/Gyr	13.94 ± 0.23	$\sigma_8(2.33)$	0.3037 ± 0.0054
$\boldsymbol{A_{100}^{dust TE}}$	0.114 ± 0.038	z_*	1089.81 ± 0.33	f_{2000}^{143}	28.7 ± 2.9
$\boldsymbol{A_{100\times143}^{dust TE}}$	0.135 ± 0.029	r_*	145.7 ± 2.2	$f_{2000}^{143\times217}$	31.6 ± 2.0
$\boldsymbol{A_{100\times217}^{dust TE}}$	0.480 ± 0.085	$100\theta_*$	1.04140 ± 0.00066	f_{2000}^{217}	106.5 ± 1.9
$\boldsymbol{A_{143}^{dust TE}}$	0.226 ± 0.054	$D_M(z_*)$/Gpc	13.99 ± 0.20	χ^2_{simall}	397.0 ± 1.7
$\boldsymbol{A_{143\times217}^{dust TE}}$	0.668 ± 0.080	z_{drag}	1059.42 ± 0.74	χ^2_{lowl}	24.3 ± 1.5
$\boldsymbol{A_{217}^{dust TE}}$	2.08 ± 0.27	r_{drag}	148.4 ± 2.3	χ^2_{plik}	2359.4 ± 6.0
$\boldsymbol{c_{100}}$	0.99967 ± 0.00061	k_D	0.1400 ± 0.0017	χ^2_{Aver15}	0.98 ± 1.4
$\boldsymbol{c_{217}}$	0.99818 ± 0.00062	$100\theta_D$	0.16051 ± 0.00039	χ^2_{prior}	11.5 ± 4.5
H_0	66.4 ± 1.6	z_{eq}	3421 ± 39	χ^2_{CMB}	2780.8 ± 6.0
Ω_Λ	$0.679^{+0.011}_{-0.010}$	k_{eq}	0.01035 ± 0.00013		
Ω_m	0.321 ± 0.011	$100\theta_{eq}$	0.8098 ± 0.0072		

$\bar{\chi}^2_{eff} = 2793.22$; $R - 1 = 0.01284$

11.34 base_nnu_yhe_plikHM_TTTEEE_lowl_lowE_Aver15_post_BAO

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02238 ± 0.00018	$\Omega_m h^3$	$0.0957^{+0.0039}_{-0.0044}$	$D_M(0.15)$	643 ± 12
$\boldsymbol{\Omega_c h^2}$	0.1188 ± 0.0036	σ_8	0.808 ± 0.012	$H(0.38)$	82.8 ± 1.4
$\boldsymbol{100\theta_{MC}}$	1.04102 ± 0.00062	S_8	0.823 ± 0.014	$D_M(0.38)$	1533 ± 27
$\boldsymbol{\tau}$	$0.0552^{+0.0073}_{-0.0081}$	$\sigma_8\Omega_m^{0.5}$	0.4508 ± 0.0075	$H(0.51)$	89.5 ± 1.4
$\boldsymbol{N_{eff}}$	3.02 ± 0.22	$\sigma_8\Omega_m^{0.25}$	0.6033 ± 0.0089	$D_M(0.51)$	1986 ± 35
$\boldsymbol{Y_P}$	0.2437 ± 0.0039	$\sigma_8/h^{0.5}$	0.983 ± 0.011	$H(0.61)$	95.2 ± 1.5
$\boldsymbol{\ln(10^{10}A_s)}$	3.043 ± 0.018	$r_{drag}h$	99.55 ± 0.86	$D_M(0.61)$	2311 ± 40
$\boldsymbol{n_s}$	0.9652 ± 0.0070	$\langle d^2\rangle^{1/2}$	2.436 ± 0.025	$H(2.33)$	235.7 ± 3.2
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0025	z_{re}	7.72 ± 0.79	$D_M(2.33)$	5774 ± 88
$\boldsymbol{A_{217}^{CIB}}$	47 ± 7	$10^9 A_s$	2.096 ± 0.039	$f\sigma_8(0.15)$	0.4553 ± 0.0073
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$10^9 A_s e^{-2\tau}$	1.877 ± 0.019	$\sigma_8(0.15)$	0.746 ± 0.011
$\boldsymbol{A_{143}^{tSZ}}$	$5.5^{+2.2}_{-1.9}$	D_{40}	1230 ± 13	$f\sigma_8(0.38)$	0.4736 ± 0.0070
$\boldsymbol{A_{100}^{PS}}$	258 ± 28	D_{220}	5737 ± 38	$\sigma_8(0.38)$	0.661 ± 0.010
$\boldsymbol{A_{143}^{PS}}$	45 ± 8	D_{810}	2538 ± 14	$f\sigma_8(0.51)$	0.4722 ± 0.0069
$\boldsymbol{A_{143\times217}^{PS}}$	42 ± 9	D_{1420}	818.1 ± 4.8	$\sigma_8(0.51)$	0.6190 ± 0.0097
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	D_{2000}	231.4 ± 1.8	$f\sigma_8(0.61)$	0.4672 ± 0.0068
$\boldsymbol{A^{kSZ}}$	< 4.11	$n_{s,0.002}$	0.9652 ± 0.0070	$\sigma_8(0.61)$	0.5890 ± 0.0093
$\boldsymbol{A_{100}^{dust TT}}$	8.9 ± 1.8	Y_P	0.2437 ± 0.0039	$f\sigma_8(2.33)$	0.2970 ± 0.0048
$\boldsymbol{A_{143}^{dust TT}}$	10.9 ± 1.8	Y_P^{BBN}	0.2450 ± 0.0040	$\sigma_8(2.33)$	0.3062 ± 0.0051
$\boldsymbol{A_{143\times217}^{dust TT}}$	18.5 ± 3.2	Age/Gyr	13.82 ± 0.21	f_{2000}^{143}	29.0 ± 2.9
$\boldsymbol{A_{217}^{dust TT}}$	93.7 ± 7.3	z_*	1089.72 ± 0.33	$f_{2000}^{143\times217}$	31.7 ± 2.0
$\boldsymbol{A_{100}^{dust TE}}$	0.114 ± 0.037	r_*	144.9 ± 2.1	f_{2000}^{217}	106.7 ± 1.9
$\boldsymbol{A_{100\times143}^{dust TE}}$	0.135 ± 0.029	$100\theta_*$	1.04126 ± 0.00065	χ^2_{simall}	397.2 ± 2.0
$\boldsymbol{A_{100\times217}^{dust TE}}$	0.476 ± 0.086	$D_M(z_*)$/Gpc	13.92 ± 0.19	χ^2_{lowl}	23.4 ± 1.1
$\boldsymbol{A_{143}^{dust TE}}$	0.225 ± 0.053	z_{drag}	1059.81 ± 0.66	χ^2_{plik}	2360.6 ± 6.3
$\boldsymbol{A_{143\times217}^{dust TE}}$	0.665 ± 0.081	r_{drag}	147.6 ± 2.2	χ^2_{Aver15}	0.98 ± 1.4
$\boldsymbol{A_{217}^{dust TE}}$	2.07 ± 0.27	k_D	0.1406 ± 0.0017	χ^2_{6DF}	0.067 ± 0.081
$\boldsymbol{c_{100}}$	0.99966 ± 0.00061	$100\theta_D$	0.16062 ± 0.00038	χ^2_{MGS}	1.23 ± 0.46
$\boldsymbol{c_{217}}$	0.99819 ± 0.00064	z_{eq}	3388 ± 26	$\chi^2_{DR12BAO}$	5.1 ± 1.7
H_0	67.5 ± 1.3	k_{eq}	0.01032 ± 0.00013	χ^2_{prior}	11.5 ± 4.5
Ω_Λ	$0.6883^{+0.0073}_{-0.0066}$	$100\theta_{eq}$	0.8160 ± 0.0049	χ^2_{BAO}	6.3 ± 1.4
Ω_m	0.3117 ± 0.0070	$100\theta_{s,eq}$	0.4508 ± 0.0025	χ^2_{CMB}	2781.2 ± 6.2
$\Omega_m h^2$	0.1418 ± 0.0037	$H(0.15)$	72.7 ± 1.3		

$\bar{\chi}^2_{eff} = 2800.04$; $R - 1 = 0.03428$

11.35 base_nnu_yhe_plikHM_TTTEEE_lowl_lowE_Aver15_post_lensing

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02223 ± 0.00021	$\Omega_m h^2$	0.1406 ± 0.0035	$100\theta_{s,eq}$	0.4477 ± 0.0034
$\boldsymbol{\Omega_c h^2}$	0.1177 ± 0.0034	$\Omega_m h^3$	$0.0931^{+0.0040}_{-0.0045}$	$H(0.15)$	71.5 ± 1.5
$\boldsymbol{100\theta_{MC}}$	1.04122 ± 0.00062	σ_8	0.804 ± 0.011	$D_M(0.15)$	654 ± 15
$\boldsymbol{\tau}$	0.0531 ± 0.0075	S_8	0.831 ± 0.013	$H(0.38)$	81.7 ± 1.6
$\boldsymbol{N_{eff}}$	2.88 ± 0.23	$\sigma_8 \Omega_m^{0.5}$	0.4553 ± 0.0071	$D_M(0.38)$	1558 ± 33
$\boldsymbol{Y_P}$	0.2438 ± 0.0040	$\sigma_8 \Omega_m^{0.25}$	0.6049 ± 0.0074	$H(0.51)$	88.4 ± 1.6
$\boldsymbol{\ln(10^{10} A_s)}$	3.036 ± 0.017	$\sigma_8/h^{0.5}$	0.9880 ± 0.0090	$D_M(0.51)$	2017 ± 42
$\boldsymbol{n_s}$	0.9587 ± 0.0084	$r_{drag} h$	98.5 ± 1.2	$H(0.61)$	94.1 ± 1.6
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	$\langle d^2 \rangle^{1/2}$	2.454 ± 0.024	$D_M(0.61)$	2346 ± 47
$\boldsymbol{A_{217}^{CIB}}$	46 ± 7	z_{re}	7.51 ± 0.76	$H(2.33)$	234.4 ± 3.1
$\boldsymbol{\xi^{tSZ\times CIB}}$	> 0.385	$10^9 A_s$	2.082 ± 0.036	$D_M(2.33)$	5837 ± 97
$\boldsymbol{A_{143}^{tSZ}}$	$5.5^{+2.1}_{-1.9}$	$10^9 A_s e^{-2\tau}$	1.872 ± 0.018	$f\sigma_8(0.15)$	0.4590 ± 0.0066
$\boldsymbol{A_{100}^{PS}}$	257 ± 27	D_{40}	1239 ± 15	$\sigma_8(0.15)$	0.742 ± 0.010
$\boldsymbol{A_{143}^{PS}}$	44 ± 8	D_{220}	5734 ± 38	$f\sigma_8(0.38)$	0.4752 ± 0.0058
$\boldsymbol{A_{143\times217}^{PS}}$	42 ± 9	D_{810}	2537 ± 14	$\sigma_8(0.38)$	0.6567 ± 0.0098
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	D_{1420}	817.8 ± 4.9	$f\sigma_8(0.51)$	0.4727 ± 0.0056
$\boldsymbol{A^{kSZ}}$	< 3.91	D_{2000}	231.6 ± 1.8	$\sigma_8(0.51)$	0.6142 ± 0.0094
$\boldsymbol{A_{100}^{dust TT}}$	8.8 ± 1.8	$n_{s,0.002}$	0.9587 ± 0.0084	$f\sigma_8(0.61)$	0.4670 ± 0.0056
$\boldsymbol{A_{143}^{dust TT}}$	10.8 ± 1.8	Y_P	0.2438 ± 0.0040	$\sigma_8(0.61)$	0.5842 ± 0.0091
$\boldsymbol{A_{143\times217}^{dust TT}}$	18.4 ± 3.2	Y_P^{BBN}	0.2451 ± 0.0040	$f\sigma_8(2.33)$	0.2942 ± 0.0048
$\boldsymbol{A_{217}^{dust TT}}$	93.7 ± 7.3	Age/Gyr	13.97 ± 0.23	$\sigma_8(2.33)$	0.3029 ± 0.0052
$\boldsymbol{A_{100}^{dust TE}}$	0.114 ± 0.038	z_*	1089.75 ± 0.32	f_{2000}^{143}	28.6 ± 2.9
$\boldsymbol{A_{100\times143}^{dust TE}}$	0.135 ± 0.030	r_*	146.0 ± 2.1	$f_{2000}^{143\times217}$	31.5 ± 2.0
$\boldsymbol{A_{100\times217}^{dust TE}}$	0.480 ± 0.085	$100\theta_*$	1.04150 ± 0.00065	f_{2000}^{217}	106.4 ± 1.9
$\boldsymbol{A_{143}^{dust TE}}$	0.226 ± 0.054	$D_M(z_*)$/Gpc	14.02 ± 0.20	$\chi^2_{lensing}$	9.01 ± 0.71
$\boldsymbol{A_{143\times217}^{dust TE}}$	0.667 ± 0.081	z_{drag}	1059.34 ± 0.73	χ^2_{simall}	396.9 ± 1.6
$\boldsymbol{A_{217}^{dust TE}}$	2.08 ± 0.27	r_{drag}	148.7 ± 2.2	χ^2_{lowl}	24.4 ± 1.4
$\boldsymbol{c_{100}}$	0.99967 ± 0.00061	k_D	0.1397 ± 0.0017	χ^2_{plik}	2359.1 ± 5.9
$\boldsymbol{c_{217}}$	0.99817 ± 0.00064	$100\theta_D$	0.16046 ± 0.00038	χ^2_{Aver15}	0.99 ± 1.4
H_0	66.2 ± 1.6	z_{eq}	3420 ± 36	χ^2_{prior}	11.5 ± 4.4
Ω_Λ	0.679 ± 0.010	k_{eq}	0.01032 ± 0.00012	χ^2_{CMB}	2789.4 ± 6.0
Ω_m	0.321 ± 0.010	$100\theta_{eq}$	0.8099 ± 0.0067		

$\bar{\chi}^2_{eff} = 2801.87$; $R - 1 = 0.01524$

11.36 base_nnu_yhe_plikHM_TTTEEE_lowl_lowE_Aver15_post_BAO_lensing

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02237 ± 0.00018	$\Omega_m h^3$	0.0953 ± 0.0040	$D_M(0.15)$	644 ± 12
$\boldsymbol{\Omega_c h^2}$	0.1185 ± 0.0035	σ_8	0.807 ± 0.011	$H(0.38)$	82.7 ± 1.4
$\boldsymbol{100\theta_{MC}}$	1.04108 ± 0.00061	S_8	0.824 ± 0.011	$D_M(0.38)$	1536 ± 27
$\boldsymbol{\tau}$	$0.0560^{+0.0068}_{-0.0078}$	$\sigma_8\Omega_m^{0.5}$	0.4511 ± 0.0061	$H(0.51)$	89.4 ± 1.4
$\boldsymbol{N_{eff}}$	2.99 ± 0.21	$\sigma_8\Omega_m^{0.25}$	0.6035 ± 0.0073	$D_M(0.51)$	1990 ± 34
$\boldsymbol{Y_P}$	0.2437 ± 0.0039	$\sigma_8/h^{0.5}$	0.9840 ± 0.0084	$H(0.61)$	95.0 ± 1.4
$\boldsymbol{\ln(10^{10}A_s)}$	3.044 ± 0.016	$r_{drag}h$	99.47 ± 0.83	$D_M(0.61)$	2315 ± 39
$\boldsymbol{n_s}$	0.9643 ± 0.0070	$\langle d^2\rangle^{1/2}$	2.440 ± 0.021	$H(2.33)$	235.4 ± 3.0
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0025	z_{re}	7.80 ± 0.73	$D_M(2.33)$	5784 ± 86
$\boldsymbol{A_{217}^{CIB}}$	46 ± 7	$10^9 A_s$	2.098 ± 0.034	$f\sigma_8(0.15)$	0.4556 ± 0.0059
$\boldsymbol{\xi^{tSZ\times CIB}}$	> 0.380	$10^9 A_s e^{-2\tau}$	1.876 ± 0.018	$\sigma_8(0.15)$	0.746 ± 0.010
$\boldsymbol{A_{143}^{tSZ}}$	$5.5^{+2.2}_{-1.9}$	D_{40}	1232 ± 13	$f\sigma_8(0.38)$	0.4737 ± 0.0057
$\boldsymbol{A_{100}^{PS}}$	257 ± 27	D_{220}	5739 ± 38	$\sigma_8(0.38)$	0.6611 ± 0.0092
$\boldsymbol{A_{143}^{PS}}$	45 ± 8	D_{810}	2538 ± 13	$f\sigma_8(0.51)$	0.4722 ± 0.0057
$\boldsymbol{A_{143\times217}^{PS}}$	42 ± 9	D_{1420}	818.2 ± 4.8	$\sigma_8(0.51)$	0.6187 ± 0.0087
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	D_{2000}	231.5 ± 1.8	$f\sigma_8(0.61)$	0.4672 ± 0.0057
$\boldsymbol{A^{kSZ}}$	< 4.06	$n_{s,0.002}$	0.9643 ± 0.0070	$\sigma_8(0.61)$	0.5887 ± 0.0084
$\boldsymbol{A_{100}^{dust TT}}$	8.9 ± 1.8	Y_P	0.2437 ± 0.0039	$f\sigma_8(2.33)$	0.2968 ± 0.0044
$\boldsymbol{A_{143}^{dust TT}}$	10.9 ± 1.8	Y_P^{BBN}	0.2450 ± 0.0040	$\sigma_8(2.33)$	0.3059 ± 0.0047
$\boldsymbol{A_{143\times217}^{dust TT}}$	18.5 ± 3.2	Age/Gyr	13.85 ± 0.20	f_{2000}^{143}	28.8 ± 2.9
$\boldsymbol{A_{217}^{dust TT}}$	93.7 ± 7.3	z_*	1089.69 ± 0.32	$f_{2000}^{143\times217}$	31.6 ± 2.0
$\boldsymbol{A_{100}^{dust TE}}$	0.114 ± 0.037	r_*	145.1 ± 2.0	f_{2000}^{217}	106.5 ± 1.9
$\boldsymbol{A_{100\times143}^{dust TE}}$	0.135 ± 0.029	$100\theta_*$	1.04133 ± 0.00064	$\chi^2_{lensing}$	9.04 ± 0.65
$\boldsymbol{A_{100\times217}^{dust TE}}$	0.476 ± 0.086	$D_M(z_*)$/Gpc	13.94 ± 0.19	χ^2_{simall}	397.3 ± 2.0
$\boldsymbol{A_{143}^{dust TE}}$	0.225 ± 0.053	z_{drag}	1059.75 ± 0.65	χ^2_{lowl}	23.5 ± 1.1
$\boldsymbol{A_{143\times217}^{dust TE}}$	0.665 ± 0.081	r_{drag}	147.8 ± 2.1	χ^2_{plik}	2359.9 ± 6.0
$\boldsymbol{A_{217}^{dust TE}}$	2.07 ± 0.27	k_D	0.1404 ± 0.0016	χ^2_{Aver15}	0.98 ± 1.4
$\boldsymbol{c_{100}}$	0.99967 ± 0.00061	$100\theta_D$	0.16058 ± 0.00037	χ^2_{6DF}	0.071 ± 0.082
$\boldsymbol{c_{217}}$	$0.99818^{+0.00061}_{-0.00067}$	z_{eq}	3390 ± 26	χ^2_{MGS}	1.18 ± 0.44
H_0	67.3 ± 1.3	k_{eq}	0.01031 ± 0.00012	$\chi^2_{DR12BAO}$	5.2 ± 1.7
Ω_Λ	$0.6877^{+0.0072}_{-0.0065}$	$100\theta_{eq}$	0.8155 ± 0.0048	χ^2_{prior}	11.5 ± 4.4
Ω_m	0.3123 ± 0.0068	$100\theta_{s,eq}$	0.4506 ± 0.0024	χ^2_{CMB}	2789.8 ± 6.1
$\Omega_m h^2$	0.1415 ± 0.0036	$H(0.15)$	72.6 ± 1.3	χ^2_{BAO}	6.4 ± 1.4

$\bar{\chi}^2_{eff} = 2808.62$; $R - 1 = 0.03124$

11.37 base_nnu_yhe_plikHM_TTTEEE_lowl_lowE_Aver15_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02226 ± 0.00021	$\Omega_m h^2$	0.1413 ± 0.0037	$100\theta_{s,eq}$	0.4478 ± 0.0036
$\boldsymbol{\Omega_c h^2}$	0.1184 ± 0.0036	$\Omega_m h^3$	$0.0940^{+0.0041}_{-0.0047}$	$H(0.15)$	71.8 ± 1.6
$\boldsymbol{100\theta_{MC}}$	1.04111 ± 0.00062	σ_8	0.807 ± 0.011	$D_M(0.15)$	652 ± 15
$\boldsymbol{\tau}$	$0.0546^{+0.0049}_{-0.0079}$	S_8	0.834 ± 0.016	$H(0.38)$	82.0 ± 1.6
$\boldsymbol{N_{eff}}$	2.92 ± 0.23	$\sigma_8\Omega_m^{0.5}$	0.4568 ± 0.0087	$D_M(0.38)$	1553 ± 33
$\boldsymbol{Y_P}$	0.2437 ± 0.0040	$\sigma_8\Omega_m^{0.25}$	0.6072 ± 0.0088	$H(0.51)$	88.7 ± 1.6
$\boldsymbol{\ln(10^{10}A_s)}$	$3.040^{+0.015}_{-0.018}$	$\sigma_8/h^{0.5}$	0.990 ± 0.011	$D_M(0.51)$	2011 ± 42
$\boldsymbol{n_s}$	0.9600 ± 0.0084	$r_{drag}h$	98.5 ± 1.3	$H(0.61)$	94.4 ± 1.6
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0025	$\langle d^2\rangle^{1/2}$	2.457 ± 0.029	$D_M(0.61)$	2338 ± 47
$\boldsymbol{A^{CIB}_{217}}$	46 ± 7	z_{re}	$7.69^{+0.53}_{-0.80}$	$H(2.33)$	235.0 ± 3.2
$\boldsymbol{\xi^{tSZ\times CIB}}$	> 0.381	10^9A_s	$2.092^{+0.030}_{-0.038}$	$D_M(2.33)$	5820 ± 97
$\boldsymbol{A^{tSZ}_{143}}$	$5.5^{+2.1}_{-1.9}$	$10^9A_se^{-2\tau}$	1.875 ± 0.019	$f\sigma_8(0.15)$	0.4607 ± 0.0081
$\boldsymbol{A^{PS}_{100}}$	256 ± 27	D_{40}	1238 ± 15	$\sigma_8(0.15)$	0.745 ± 0.011
$\boldsymbol{A^{PS}_{143}}$	45 ± 8	D_{220}	5732 ± 38	$f\sigma_8(0.38)$	0.4769 ± 0.0070
$\boldsymbol{A^{PS}_{143\times217}}$	42 ± 9	D_{810}	2538 ± 14	$\sigma_8(0.38)$	0.6595 ± 0.0098
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	D_{1420}	817.7 ± 4.8	$f\sigma_8(0.51)$	0.4745 ± 0.0066
$\boldsymbol{A^{kSZ}}$	< 3.89	D_{2000}	231.5 ± 1.8	$\sigma_8(0.51)$	0.6168 ± 0.0093
$\boldsymbol{A^{dust}_{100}}$	8.9 ± 1.8	$n_{s,0.002}$	0.9600 ± 0.0084	$f\sigma_8(0.61)$	0.4689 ± 0.0064
$\boldsymbol{A^{dust}_{143}}$	10.8 ± 1.8	Y_P	0.2437 ± 0.0040	$\sigma_8(0.61)$	0.5867 ± 0.0090
$\boldsymbol{A^{dust}_{143\times217}}$	18.5 ± 3.2	Y_P^{BBN}	0.2450 ± 0.0040	$f\sigma_8(2.33)$	0.2955 ± 0.0047
$\boldsymbol{A^{dust}_{217}}$	93.8 ± 7.3	Age/Gyr	13.93 ± 0.23	$\sigma_8(2.33)$	0.3043 ± 0.0051
$\boldsymbol{A^{dust}_{100}}$	0.114 ± 0.038	z_*	1089.81 ± 0.33	f^{143}_{2000}	28.7 ± 2.9
$\boldsymbol{A^{dust}_{100\times143}}$	0.135 ± 0.029	r_*	145.6 ± 2.2	$f^{143\times217}_{2000}$	31.5 ± 2.0
$\boldsymbol{A^{dust}_{100\times217}}$	0.480 ± 0.086	$100\theta_*$	1.04138 ± 0.00066	f^{217}_{2000}	106.5 ± 1.9
$\boldsymbol{A^{dust}_{143}}$	0.226 ± 0.054	$D_M(z_*)$/Gpc	13.98 ± 0.20	χ^2_{simall}	396.9 ± 1.8
$\boldsymbol{A^{dust}_{143\times217}}$	0.668 ± 0.081	z_{drag}	1059.46 ± 0.73	χ^2_{lowl}	24.3 ± 1.5
$\boldsymbol{A^{dust}_{217}}$	2.08 ± 0.27	r_{drag}	148.3 ± 2.2	χ^2_{plik}	2359.2 ± 6.0
$\boldsymbol{c_{100}}$	0.99967 ± 0.00061	k_D	0.1400 ± 0.0017	χ^2_{Aver15}	0.99 ± 1.4
$\boldsymbol{c_{217}}$	0.99818 ± 0.00062	$100\theta_D$	0.16052 ± 0.00038	χ^2_{prior}	11.5 ± 4.5
H_0	66.4 ± 1.6	z_{eq}	3419 ± 38	χ^2_{CMB}	2780.5 ± 5.9
Ω_Λ	0.680 ± 0.011	k_{eq}	0.01035 ± 0.00013		
Ω_m	0.320 ± 0.011	$100\theta_{eq}$	0.8102 ± 0.0071		

$\bar{\chi}^2_{eff} = 2792.93$; $R - 1 = 0.01332$

11.38 base_nnu_yhe_plikHM_TTTEEE_lowl_lowE_Aver15_post_BAO_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02239 ± 0.00018	$\Omega_m h^3$	$0.0958^{+0.0039}_{-0.0044}$	$D_M(0.15)$	642 ± 12
$\boldsymbol{\Omega_c h^2}$	0.1189 ± 0.0036	σ_8	0.808 ± 0.012	$H(0.38)$	82.9 ± 1.4
$\boldsymbol{100\theta_{MC}}$	1.04102 ± 0.00062	S_8	0.824 ± 0.013	$D_M(0.38)$	1532 ± 27
$\boldsymbol{\tau}$	$0.0561^{+0.0056}_{-0.0082}$	$\sigma_8\Omega_m^{0.5}$	0.4512 ± 0.0073	$H(0.51)$	89.6 ± 1.4
$\boldsymbol{N_{eff}}$	3.02 ± 0.22	$\sigma_8\Omega_m^{0.25}$	0.6039 ± 0.0086	$D_M(0.51)$	1985 ± 35
$\boldsymbol{Y_P}$	0.2437 ± 0.0040	$\sigma_8/h^{0.5}$	0.984 ± 0.010	$H(0.61)$	95.2 ± 1.5
$\boldsymbol{\ln(10^{10}A_s)}$	$3.045^{+0.015}_{-0.018}$	$r_{drag}h$	99.57 ± 0.85	$D_M(0.61)$	2310 ± 40
$\boldsymbol{n_s}$	0.9655 ± 0.0070	$\langle d^2\rangle^{1/2}$	2.438 ± 0.024	$H(2.33)$	235.7 ± 3.2
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0025	z_{re}	$7.82^{+0.59}_{-0.83}$	$D_M(2.33)$	5772 ± 88
$\boldsymbol{A_{217}^{CIB}}$	47 ± 7	$10^9 A_s$	$2.100^{+0.031}_{-0.039}$	$f\sigma_8(0.15)$	0.4557 ± 0.0071
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$10^9 A_s e^{-2\tau}$	1.877 ± 0.019	$\sigma_8(0.15)$	0.747 ± 0.011
$\boldsymbol{A_{143}^{tSZ}}$	$5.5^{+2.2}_{-1.9}$	D_{40}	1230 ± 13	$f\sigma_8(0.38)$	0.4740 ± 0.0068
$\boldsymbol{A_{100}^{PS}}$	258 ± 27	D_{220}	5737 ± 38	$\sigma_8(0.38)$	0.6622 ± 0.0098
$\boldsymbol{A_{143}^{PS}}$	45 ± 8	D_{810}	2538 ± 14	$f\sigma_8(0.51)$	0.4726 ± 0.0066
$\boldsymbol{A_{143\times217}^{PS}}$	42 ± 9	D_{1420}	818.0 ± 4.8	$\sigma_8(0.51)$	0.6197 ± 0.0093
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	D_{2000}	231.4 ± 1.8	$f\sigma_8(0.61)$	0.4677 ± 0.0065
$\boldsymbol{A^{kSZ}}$	< 4.13	$n_{s,0.002}$	0.9655 ± 0.0070	$\sigma_8(0.61)$	0.5897 ± 0.0089
$\boldsymbol{A_{100}^{dustTT}}$	8.9 ± 1.8	Y_P	0.2437 ± 0.0040	$f\sigma_8(2.33)$	0.2973 ± 0.0046
$\boldsymbol{A_{143}^{dustTT}}$	10.9 ± 1.8	Y_P^{BBN}	0.2450 ± 0.0040	$\sigma_8(2.33)$	0.3065 ± 0.0049
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.5 ± 3.2	Age/Gyr	13.82 ± 0.21	f_{2000}^{143}	29.0 ± 2.9
$\boldsymbol{A_{217}^{dustTT}}$	93.7 ± 7.3	z_*	1089.72 ± 0.33	$f_{2000}^{143\times217}$	31.7 ± 2.0
$\boldsymbol{A_{100}^{dustTE}}$	0.114 ± 0.037	r_*	144.9 ± 2.1	f_{2000}^{217}	106.6 ± 1.9
$\boldsymbol{A_{100\times143}^{dustTE}}$	0.135 ± 0.029	$100\theta_*$	1.04125 ± 0.00065	χ^2_{smallI}	397.2 ± 2.0
$\boldsymbol{A_{100\times217}^{dustTE}}$	0.476 ± 0.086	$D_M(z_*)$/Gpc	13.91 ± 0.19	χ^2_{lowl}	23.4 ± 1.1
$\boldsymbol{A_{143}^{dustTE}}$	0.225 ± 0.054	z_{drag}	1059.82 ± 0.66	χ^2_{plik}	2360.4 ± 6.2
$\boldsymbol{A_{143\times217}^{dustTE}}$	0.665 ± 0.081	r_{drag}	147.5 ± 2.2	χ^2_{Aver15}	0.98 ± 1.4
$\boldsymbol{A_{217}^{dustTE}}$	2.07 ± 0.27	k_D	0.1406 ± 0.0017	χ^2_{6DF}	0.066 ± 0.079
$\boldsymbol{c_{100}}$	0.99965 ± 0.00061	$100\theta_D$	0.16063 ± 0.00038	χ^2_{MGS}	1.23 ± 0.46
$\boldsymbol{c_{217}}$	0.99819 ± 0.00064	z_{eq}	3387 ± 26	$\chi^2_{DR12BAO}$	5.0 ± 1.6
H_0	67.5 ± 1.3	k_{eq}	0.01032 ± 0.00013	χ^2_{prior}	11.5 ± 4.5
Ω_Λ	0.6885 ± 0.0070	$100\theta_{eq}$	0.8161 ± 0.0049	χ^2_{BAO}	6.3 ± 1.4
Ω_m	0.3115 ± 0.0070	$100\theta_{s,eq}$	0.4508 ± 0.0025	χ^2_{CMB}	2781.0 ± 6.1
$\Omega_m h^2$	0.1419 ± 0.0037	$H(0.15)$	72.8 ± 1.3		

$\bar{\chi}^2_{eff} = 2799.83$; $R - 1 = 0.03359$

11.39 base_nnu_yhe_plikHM_TTTEEE_lowl_lowE_Aver15_post_lensing_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02225 ± 0.00021	$\Omega_m h^2$	0.1407 ± 0.0035	$100\theta_{s,eq}$	0.4479 ± 0.0033
$\boldsymbol{\Omega_c h^2}$	0.1178 ± 0.0034	$\Omega_m h^3$	$0.0933^{+0.0039}_{-0.0046}$	$H(0.15)$	$71.6^{+1.4}_{-1.6}$
$\boldsymbol{100\theta_{MC}}$	1.04120 ± 0.00062	σ_8	0.805 ± 0.010	$D_M(0.15)$	653 ± 15
$\boldsymbol{\tau}$	$0.0544^{+0.0048}_{-0.0077}$	S_8	0.831 ± 0.013	$H(0.38)$	$81.8^{+1.5}_{-1.6}$
$\boldsymbol{N_{eff}}$	$2.89^{+0.21}_{-0.24}$	$\sigma_8\Omega_m^{0.5}$	0.4553 ± 0.0070	$D_M(0.38)$	1556 ± 33
$\boldsymbol{Y_P}$	0.2438 ± 0.0040	$\sigma_8\Omega_m^{0.25}$	0.6054 ± 0.0072	$H(0.51)$	$88.5^{+1.5}_{-1.7}$
$\boldsymbol{\ln(10^{10}A_s)}$	$3.038^{+0.014}_{-0.017}$	$\sigma_8/h^{0.5}$	0.9886 ± 0.0088	$D_M(0.51)$	2015 ± 41
$\boldsymbol{n_s}$	0.9593 ± 0.0082	$r_{drag}h$	98.6 ± 1.2	$H(0.61)$	$94.1^{+1.5}_{-1.7}$
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	$\langle d^2\rangle^{1/2}$	2.455 ± 0.024	$D_M(0.61)$	2343 ± 47
$\boldsymbol{A_{217}^{CIB}}$	46 ± 7	z_{re}	$7.65^{+0.52}_{-0.78}$	$H(2.33)$	234.5 ± 3.1
$\boldsymbol{\xi^{tSZ\times CIB}}$	> 0.383	$10^9 A_s$	$2.087^{+0.029}_{-0.035}$	$D_M(2.33)$	5833 ± 96
$\boldsymbol{A_{143}^{tSZ}}$	$5.5^{+2.1}_{-1.9}$	$10^9 A_s e^{-2\tau}$	1.872 ± 0.018	$f\sigma_8(0.15)$	0.4592 ± 0.0065
$\boldsymbol{A_{100}^{PS}}$	257 ± 27	D_{40}	1239 ± 14	$\sigma_8(0.15)$	0.7430 ± 0.0099
$\boldsymbol{A_{143}^{PS}}$	44 ± 8	D_{220}	5733 ± 38	$f\sigma_8(0.38)$	0.4755 ± 0.0057
$\boldsymbol{A_{143\times217}^{PS}}$	42 ± 9	D_{810}	2537 ± 13	$\sigma_8(0.38)$	0.6577 ± 0.0093
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	D_{1420}	817.7 ± 4.9	$f\sigma_8(0.51)$	0.4731 ± 0.0055
$\boldsymbol{A^{kSZ}}$	< 3.94	D_{2000}	231.6 ± 1.8	$\sigma_8(0.51)$	0.6151 ± 0.0089
$\boldsymbol{A_{100}^{dust TT}}$	8.8 ± 1.8	$n_{s,0.002}$	0.9593 ± 0.0082	$f\sigma_8(0.61)$	0.4675 ± 0.0054
$\boldsymbol{A_{143}^{dust TT}}$	10.8 ± 1.8	Y_P	0.2438 ± 0.0040	$\sigma_8(0.61)$	0.5851 ± 0.0086
$\boldsymbol{A_{143\times217}^{dust TT}}$	18.4 ± 3.2	Y_P^{BBN}	0.2451 ± 0.0040	$f\sigma_8(2.33)$	0.2947 ± 0.0046
$\boldsymbol{A_{217}^{dust TT}}$	93.6 ± 7.3	Age/Gyr	13.96 ± 0.23	$\sigma_8(2.33)$	0.3035 ± 0.0050
$\boldsymbol{A_{100}^{dust TE}}$	0.114 ± 0.038	z_*	1089.75 ± 0.31	f_{2000}^{143}	28.5 ± 2.9
$\boldsymbol{A_{100\times143}^{dust TE}}$	0.135 ± 0.030	r_*	145.9 ± 2.1	$f_{2000}^{143\times217}$	31.4 ± 2.0
$\boldsymbol{A_{100\times217}^{dust TE}}$	0.479 ± 0.086	$100\theta_*$	1.04148 ± 0.00065	f_{2000}^{217}	106.4 ± 1.9
$\boldsymbol{A_{143}^{dust TE}}$	0.226 ± 0.054	$D_M(z_*)$/Gpc	14.01 ± 0.20	$\chi^2_{lensing}$	9.00 ± 0.70
$\boldsymbol{A_{143\times217}^{dust TE}}$	0.666 ± 0.081	z_{drag}	1059.38 ± 0.72	χ^2_{simall}	396.8 ± 1.7
$\boldsymbol{A_{217}^{dust TE}}$	2.08 ± 0.27	r_{drag}	148.7 ± 2.2	χ^2_{lowl}	24.4 ± 1.4
$\boldsymbol{c_{100}}$	0.99967 ± 0.00061	k_D	0.1397 ± 0.0017	χ^2_{plik}	2358.9 ± 5.9
$\boldsymbol{c_{217}}$	0.99817 ± 0.00064	$100\theta_D$	0.16047 ± 0.00038	χ^2_{Aver15}	1.0 ± 1.4
H_0	$66.3^{+1.5}_{-1.6}$	z_{eq}	3418 ± 35	χ^2_{prior}	11.5 ± 4.4
Ω_Λ	0.6799 ± 0.0098	k_{eq}	0.01032 ± 0.00012	χ^2_{CMB}	2789.1 ± 6.0
Ω_m	0.3201 ± 0.0098	$100\theta_{eq}$	0.8104 ± 0.0065		

$\bar{\chi}^2_{eff} = 2801.62$; $R - 1 = 0.01633$

11.40 base_nnu_yhe_plikHM_TTTEEE_lowl_lowE_Aver15_post_BAO_lensing_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02237 ± 0.00018	$\Omega_m h^3$	0.0953 ± 0.0041	$D_M(0.15)$	644 ± 12
$\boldsymbol{\Omega_c h^2}$	0.1185 ± 0.0035	σ_8	0.808 ± 0.010	$H(0.38)$	82.7 ± 1.4
$\boldsymbol{100\theta_{MC}}$	1.04108 ± 0.00061	S_8	0.824 ± 0.011	$D_M(0.38)$	1536 ± 27
$\boldsymbol{\tau}$	$0.0566^{+0.0057}_{-0.0079}$	$\sigma_8 \Omega_m^{0.5}$	0.4513 ± 0.0061	$H(0.51)$	89.4 ± 1.4
$\boldsymbol{N_{eff}}$	2.99 ± 0.21	$\sigma_8 \Omega_m^{0.25}$	0.6037 ± 0.0072	$D_M(0.51)$	1989 ± 34
$\boldsymbol{Y_P}$	0.2437 ± 0.0039	$\sigma_8/h^{0.5}$	0.9844 ± 0.0082	$H(0.61)$	95.0 ± 1.4
$\boldsymbol{\ln(10^{10} A_s)}$	$3.045^{+0.014}_{-0.016}$	$r_{drag} h$	99.50 ± 0.82	$D_M(0.61)$	2315 ± 39
$\boldsymbol{n_s}$	0.9645 ± 0.0069	$\langle d^2 \rangle^{1/2}$	2.441 ± 0.021	$H(2.33)$	235.4 ± 3.0
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0025	z_{re}	$7.86^{+0.60}_{-0.78}$	$D_M(2.33)$	5783 ± 86
$\boldsymbol{A_{217}^{CIB}}$	46 ± 7	$10^9 A_s$	$2.101^{+0.029}_{-0.035}$	$f\sigma_8(0.15)$	0.4558 ± 0.0059
$\boldsymbol{\xi^{tSZ\times CIB}}$	> 0.379	$10^9 A_s e^{-2\tau}$	1.876 ± 0.018	$\sigma_8(0.15)$	0.7464 ± 0.0098
$\boldsymbol{A_{143}^{tSZ}}$	$5.5^{+2.2}_{-1.9}$	D_{40}	1231 ± 13	$f\sigma_8(0.38)$	0.4739 ± 0.0057
$\boldsymbol{A_{100}^{PS}}$	257 ± 27	D_{220}	5739 ± 38	$\sigma_8(0.38)$	0.6615 ± 0.0090
$\boldsymbol{A_{143}^{PS}}$	45 ± 8	D_{810}	2538 ± 13	$f\sigma_8(0.51)$	0.4724 ± 0.0056
$\boldsymbol{A_{143\times217}^{PS}}$	42 ± 9	D_{1420}	818.2 ± 4.8	$\sigma_8(0.51)$	0.6191 ± 0.0086
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	D_{2000}	231.5 ± 1.8	$f\sigma_8(0.61)$	0.4674 ± 0.0056
$\boldsymbol{A^{kSZ}}$	< 4.07	$n_{s,0.002}$	0.9645 ± 0.0069	$\sigma_8(0.61)$	0.5890 ± 0.0082
$\boldsymbol{A_{100}^{dust TT}}$	8.9 ± 1.8	Y_P	0.2437 ± 0.0039	$f\sigma_8(2.33)$	0.2970 ± 0.0043
$\boldsymbol{A_{143}^{dust TT}}$	10.9 ± 1.8	Y_P^{BBN}	0.2451 ± 0.0040	$\sigma_8(2.33)$	0.3061 ± 0.0046
$\boldsymbol{A_{143\times217}^{dust TT}}$	18.5 ± 3.2	Age/Gyr	13.85 ± 0.20	f_{2000}^{143}	28.8 ± 2.9
$\boldsymbol{A_{217}^{dust TT}}$	93.7 ± 7.3	z_*	1089.69 ± 0.32	$f_{2000}^{143\times217}$	31.6 ± 2.0
$\boldsymbol{A_{100}^{dust TE}}$	0.114 ± 0.038	r_*	145.1 ± 2.0	f_{2000}^{217}	106.5 ± 1.9
$\boldsymbol{A_{100\times143}^{dust TE}}$	0.135 ± 0.029	$100\theta_*$	1.04132 ± 0.00064	$\chi^2_{lensing}$	9.02 ± 0.62
$\boldsymbol{A_{100\times217}^{dust TE}}$	0.475 ± 0.086	$D_M(z_*)$/Gpc	13.94 ± 0.19	χ^2_{simall}	397.3 ± 2.0
$\boldsymbol{A_{143}^{dust TE}}$	0.225 ± 0.053	z_{drag}	1059.75 ± 0.65	χ^2_{lowl}	23.5 ± 1.1
$\boldsymbol{A_{143\times217}^{dust TE}}$	0.665 ± 0.081	r_{drag}	147.8 ± 2.1	χ^2_{plik}	2359.8 ± 6.0
$\boldsymbol{A_{217}^{dust TE}}$	2.07 ± 0.27	k_D	0.1404 ± 0.0016	χ^2_{Aver15}	0.98 ± 1.4
$\boldsymbol{c_{100}}$	0.99966 ± 0.00061	$100\theta_D$	0.16058 ± 0.00037	χ^2_{6DF}	0.069 ± 0.080
$\boldsymbol{c_{217}}$	$0.99818^{+0.00061}_{-0.00067}$	z_{eq}	3390 ± 25	χ^2_{MGS}	1.19 ± 0.43
H_0	67.3 ± 1.3	k_{eq}	0.01031 ± 0.00012	$\chi^2_{DR12BAO}$	5.1 ± 1.6
Ω_Λ	0.6878 ± 0.0068	$100\theta_{eq}$	0.8157 ± 0.0047	χ^2_{prior}	11.5 ± 4.4
Ω_m	0.3122 ± 0.0068	$100\theta_{s,eq}$	0.4506 ± 0.0024	χ^2_{CMB}	2789.7 ± 6.1
$\Omega_m h^2$	0.1415 ± 0.0036	$H(0.15)$	72.6 ± 1.3	χ^2_{BAO}	6.4 ± 1.3

$\bar{\chi}^2_{eff} = 2808.47$; $R - 1 = 0.03303$

11.41 base_nnu_yhe_CamSpecHM_TTTEEE_lowl_lowE_Aver15

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022361	0.02219 ± 0.00022	σ_8	0.8214	0.801 ± 0.012	$H(0.15)$	73.26	71.7 ± 1.7
$\boldsymbol{\Omega_c h^2}$	0.12075	0.1174 ± 0.0038	S_8	0.8367	0.826 ± 0.016	$D_{\rm M}(0.15)$	638.0	653 ± 17
$\boldsymbol{100\theta_{MC}}$	1.04069	1.04117 ± 0.00066	$\sigma_8\Omega_{\rm m}^{0.5}$	0.4583	0.4523 ± 0.0087	$H(0.38)$	83.43	81.8 ± 1.8
$\boldsymbol{\tau}$	0.0637	0.0520 ± 0.0078	$\sigma_8\Omega_{\rm m}^{0.25}$	0.6135	0.6020 ± 0.0090	$D_{\rm M}(0.38)$	1521.5	1556 ± 37
$\boldsymbol{N_{\rm eff}}$	3.128	2.89 ± 0.25	$\sigma_8/h^{0.5}$	0.9964	0.984 ± 0.012	$H(0.51)$	90.18	88.5 ± 1.8
$\boldsymbol{Y_{\rm P}}$	0.24385	0.2440 ± 0.0039	$r_{\rm drag}h$	99.56	98.7 ± 1.3	$D_{\rm M}(0.51)$	1971.1	2014 ± 47
$\boldsymbol{\ln(10^{10}A_s)}$	3.0665	3.031 ± 0.019	$\langle d^2\rangle^{1/2}$	2.4587	2.441 ± 0.030	$H(0.61)$	95.83	94.1 ± 1.8
$\boldsymbol{n_s}$	0.9690	0.9604 ± 0.0090	$z_{\rm re}$	8.63	7.41 ± 0.80	$D_{\rm M}(0.61)$	2294	2343 ± 53
$\boldsymbol{y_{\rm cal}}$	1.00188	1.0004 ± 0.0025	$10^9 A_{\rm s}$	2.1467	2.072 ± 0.039	$H(2.33)$	237.30	234.1 ± 3.4
$\boldsymbol{A_{100}^{\rm PS}}$	233.7	237 ± 25	$10^9 A_{\rm s}e^{-2\tau}$	1.8897	1.867 ± 0.020	$D_{\rm M}(2.33)$	5732	5835 ± 110
$\boldsymbol{A_{143}^{\rm PS}}$	47.2	38 ± 9	D_{40}	1229.3	1232 ± 16	$f\sigma_8(0.15)$	0.4629	0.4562 ± 0.0082
$\boldsymbol{A_{217}^{\rm PS}}$	105.6	103 ± 10	D_{220}	5736.0	5717 ± 40	$\sigma_8(0.15)$	0.7590	0.740 ± 0.012
$\boldsymbol{A_{217}^{\rm CIB}}$	40.8	39 ± 7	D_{810}	2544.7	2532 ± 14	$f\sigma_8(0.38)$	0.4816	0.4728 ± 0.0071
$\boldsymbol{A_{143}^{\rm tSZ}}$	5.40	$3.9^{+2.0}_{-2.5}$	D_{1420}	818.8	816.4 ± 5.0	$\sigma_8(0.38)$	0.6728	0.655 ± 0.011
$\boldsymbol{r_{143\times217}^{\rm PS}}$	0.732	0.66 ± 0.13	D_{2000}	231.31	231.0 ± 2.0	$f\sigma_8(0.51)$	0.4802	0.4706 ± 0.0068
$\boldsymbol{r_{143\times217}^{\rm CIB}}$	0.735	$0.54^{+0.39}_{-0.21}$	$n_{\rm s,0.002}$	0.9690	0.9604 ± 0.0090	$\sigma_8(0.51)$	0.6297	0.613 ± 0.010
$\boldsymbol{\xi^{\rm tSZ\times CIB}}$	0.76	—	$Y_{\rm P}$	0.24385	0.2440 ± 0.0039	$f\sigma_8(0.61)$	0.4752	0.4651 ± 0.0067
$\boldsymbol{A^{\rm kSZ}}$	1.72	< 5.97	$Y_{\rm P}^{\rm BBN}$	0.24517	0.2454 ± 0.0039	$\sigma_8(0.61)$	0.5991	0.583 ± 0.010
$\boldsymbol{A_{100}^{\rm dust}}$	1.008	1.01 ± 0.20	Age/Gyr	13.724	13.97 ± 0.26	$f\sigma_8(2.33)$	0.3021	0.2937 ± 0.0053
$\boldsymbol{A_{143}^{\rm dust}}$	0.955	0.96 ± 0.18	z_*	1089.970	1089.80 ± 0.37	$\sigma_8(2.33)$	0.3115	0.3025 ± 0.0057
$\boldsymbol{A_{217}^{\rm dust}}$	0.978	0.98 ± 0.10	r_*	143.85	146.1 ± 2.4	f_{2000}^{143}	29.42	29 ± 3
$\boldsymbol{A_{143\times217}^{\rm dust}}$	1.021	1.02 ± 0.16	$100\theta_*$	1.04089	1.04146 ± 0.00071	f_{2000}^{217}	106.61	106.2 ± 2.2
$\boldsymbol{c_{100}}$	0.99783	0.9975 ± 0.0011	$D_{\rm M}(z_*)$/Gpc	13.820	14.03 ± 0.22	$f_{2000}^{143\times217}$	31.92	31.3 ± 2.4
$\boldsymbol{c_{217}}$	1.00118	1.0011 ± 0.0016	$z_{\rm drag}$	1059.93	1059.22 ± 0.78	$\chi^2_{\rm simall}$	399.05	396.8 ± 1.5
$\boldsymbol{c_{TE}}$	0.9961	0.9958 ± 0.0051	$r_{\rm drag}$	146.50	148.8 ± 2.5	$\chi^2_{\rm lowl}$	23.05	23.9 ± 1.4
$\boldsymbol{c_{EE}}$	0.9923	0.9904 ± 0.0056	$k_{\rm D}$	0.14128	0.1395 ± 0.0019	$\chi^2_{\rm CamSpec}$	11499.5	11514.4 ± 5.8
H_0	67.96	66.4 ± 1.8	$100\theta_{\rm D}$	0.160909	0.16057 ± 0.00047	$\chi^2_{\rm Aver15}$	0.005	0.96 ± 1.4
Ω_Λ	0.6887	0.681 ± 0.011	$z_{\rm eq}$	3382.8	3408 ± 42	$\chi^2_{\rm prior}$	2.43	7.9 ± 3.5
$\Omega_{\rm m}$	0.3113	0.319 ± 0.011	$k_{\rm eq}$	0.010381	0.01029 ± 0.00013	$\chi^2_{\rm CMB}$	11921.6	11935.1 ± 5.9
$\Omega_{\rm m}h^2$	0.14376	0.1402 ± 0.0039	$100\theta_{\rm eq}$	0.8166	0.8119 ± 0.0077			
$\Omega_{\rm m}h^3$	0.09770	$0.0931^{+0.0044}_{-0.0050}$	$100\theta_{\rm s,eq}$	0.45113	0.4488 ± 0.0039			

Best-fit $\chi^2_{\rm eff} = 11924.04$; $\bar{\chi}^2_{\rm eff} = 11943.94$; $R - 1 = 0.01231$

$\chi^2_{\rm eff}$: Abund - Yp_Aver2015: 0.01 CMB - simall_100x143_offlike5_EE_Aplanck_B: 399.05 commander_dx12_v3_2_29: 23.05 CamSpec like_10.7HM_1400_unified: 11499.50

11.42 base_nnu_yhe_CamSpecHM_TTTEEE_lowl_lowE_Aver15_post_BAO

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02230 ± 0.00018	S_8	0.817 ± 0.014	$H(0.38)$	82.7 ± 1.5
$\boldsymbol{\Omega_c h^2}$	0.1181 ± 0.0038	$\sigma_8\Omega_m^{0.5}$	0.4477 ± 0.0074	$D_M(0.38)$	1535 ± 30
$\boldsymbol{100\theta_{MC}}$	1.04105 ± 0.00063	$\sigma_8\Omega_m^{0.25}$	0.5997 ± 0.0088	$H(0.51)$	89.4 ± 1.5
$\boldsymbol{\tau}$	0.0531 ± 0.0077	$\sigma_8/h^{0.5}$	0.979 ± 0.011	$D_M(0.51)$	1988 ± 38
$\boldsymbol{N_{eff}}$	3.00 ± 0.23	$r_{drag}h$	99.71 ± 0.88	$H(0.61)$	95.0 ± 1.6
$\boldsymbol{Y_P}$	0.2441 ± 0.0039	$\langle d^2\rangle^{1/2}$	2.424 ± 0.025	$D_M(0.61)$	2314 ± 43
$\boldsymbol{\ln(10^{10}A_s)}$	3.035 ± 0.018	z_{re}	$7.52^{+0.81}_{-0.72}$	$H(2.33)$	235.1 ± 3.3
$\boldsymbol{n_s}$	0.9655 ± 0.0072	$10^9 A_s$	2.081 ± 0.038	$D_M(2.33)$	5785 ± 94
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.871 ± 0.020	$f\sigma_8(0.15)$	0.4523 ± 0.0072
$\boldsymbol{A_{100}^{PS}}$	238 ± 25	D_{40}	1225 ± 13	$\sigma_8(0.15)$	0.742 ± 0.011
$\boldsymbol{A_{143}^{PS}}$	38 ± 9	D_{220}	5722 ± 39	$f\sigma_8(0.38)$	0.4707 ± 0.0069
$\boldsymbol{A_{217}^{PS}}$	102 ± 10	D_{810}	2534 ± 14	$\sigma_8(0.38)$	0.658 ± 0.010
$\boldsymbol{A_{217}^{CIB}}$	39 ± 7	D_{1420}	816.4 ± 4.9	$f\sigma_8(0.51)$	0.4694 ± 0.0068
$\boldsymbol{A_{143}^{tSZ}}$	$3.9^{+2.0}_{-2.4}$	D_{2000}	230.7 ± 2.0	$\sigma_8(0.51)$	$0.6160^{+0.0091}_{-0.010}$
$\boldsymbol{r_{143\times217}^{PS}}$	0.66 ± 0.13	$n_{s,0.002}$	0.9655 ± 0.0072	$f\sigma_8(0.61)$	0.4646 ± 0.0067
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.55^{+0.43}_{-0.16}$	Y_P	0.2441 ± 0.0039	$\sigma_8(0.61)$	$0.5862^{+0.0087}_{-0.0098}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	0.2455 ± 0.0039	$f\sigma_8(2.33)$	$0.2956^{+0.0045}_{-0.0050}$
$\boldsymbol{A^{kSZ}}$	$4.6^{+2.0}_{-4.1}$	Age/Gyr	13.85 ± 0.22	$\sigma_8(2.33)$	$0.3048^{+0.0048}_{-0.0054}$
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.20	z_*	1089.77 ± 0.37	f_{2000}^{143}	29.2 ± 3.2
$\boldsymbol{A_{143}^{dust}}$	0.95 ± 0.17	r_*	145.3 ± 2.2	f_{2000}^{217}	106.5 ± 2.2
$\boldsymbol{A_{217}^{dust}}$	0.97 ± 0.10	$100\theta_*$	1.04129 ± 0.00067	$f_{2000}^{143\times217}$	31.7 ± 2.3
$\boldsymbol{A_{143\times217}^{dust}}$	1.02 ± 0.16	$D_M(z_*)$/Gpc	13.95 ± 0.20	χ^2_{simall}	396.9 ± 1.6
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	z_{drag}	1059.58 ± 0.69	χ^2_{lowl}	23.1 ± 1.0
$\boldsymbol{c_{217}}$	1.0011 ± 0.0015	r_{drag}	148.0 ± 2.3	$\chi^2_{CamSpec}$	11515.0 ± 5.7
$\boldsymbol{c_{TE}}$	0.9964 ± 0.0049	k_D	0.1401 ± 0.0018	χ^2_{Aver15}	0.97 ± 1.4
$\boldsymbol{c_{EE}}$	0.9917 ± 0.0054	$100\theta_D$	0.16072 ± 0.00044	χ^2_{6DF}	0.058 ± 0.073
H_0	67.4 ± 1.4	z_{eq}	3379 ± 28	χ^2_{MGS}	1.31 ± 0.48
Ω_Λ	0.6894 ± 0.0072	k_{eq}	0.01028 ± 0.00013	$\chi^2_{DR12BAO}$	4.8 ± 1.5
Ω_m	0.3106 ± 0.0072	$100\theta_{eq}$	0.8174 ± 0.0051	χ^2_{prior}	7.8 ± 3.4
$\Omega_m h^2$	0.1411 ± 0.0039	$100\theta_{s,eq}$	0.4516 ± 0.0026	χ^2_{BAO}	6.2 ± 1.2
$\Omega_m h^3$	$0.0951^{+0.0041}_{-0.0046}$	$H(0.15)$	72.7 ± 1.4	χ^2_{CMB}	11934.9 ± 5.6
σ_8	0.803 ± 0.012	$D_M(0.15)$	643 ± 13		

$\bar{\chi}^2_{eff} = 11949.86$; $R - 1 = 0.01509$

11.43 base_nnu_yhe_CamSpecHM_TTTEEE_lowl_lowE_Aver15_post_lensing

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02216 ± 0.00022	σ_8	0.801 ± 0.011	$H(0.15)$	71.4 ± 1.7
$\boldsymbol{\Omega_c h^2}$	0.1170 ± 0.0037	S_8	0.828 ± 0.013	$D_M(0.15)$	656 ± 16
$\boldsymbol{100\theta_{MC}}$	1.04125 ± 0.00065	$\sigma_8\Omega_m^{0.5}$	0.4534 ± 0.0069	$H(0.38)$	81.5 ± 1.7
$\boldsymbol{\tau}$	0.0526 ± 0.0074	$\sigma_8\Omega_m^{0.25}$	0.6026 ± 0.0072	$D_M(0.38)$	1562 ± 37
$\boldsymbol{N_{eff}}$	2.85 ± 0.25	$\sigma_8/h^{0.5}$	0.9856 ± 0.0089	$H(0.51)$	88.2 ± 1.7
$\boldsymbol{Y_P}$	0.2441 ± 0.0038	$r_{drag}h$	98.5 ± 1.2	$D_M(0.51)$	2022 ± 46
$\boldsymbol{\ln(10^{10}A_s)}$	3.031 ± 0.018	$\langle d^2\rangle^{1/2}$	2.448 ± 0.024	$H(0.61)$	93.8 ± 1.8
$\boldsymbol{n_s}$	0.9588 ± 0.0087	z_{re}	$7.47^{+0.78}_{-0.68}$	$D_M(0.61)$	2352 ± 52
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0025	$10^9 A_s$	2.073 ± 0.036	$H(2.33)$	233.7 ± 3.3
$\boldsymbol{A^{PS}_{100}}$	236 ± 25	$10^9 A_s e^{-2\tau}$	1.866 ± 0.020	$D_M(2.33)$	5852 ± 110
$\boldsymbol{A^{PS}_{143}}$	37 ± 9	D_{40}	1235 ± 14	$f\sigma_8(0.15)$	0.4572 ± 0.0064
$\boldsymbol{A^{PS}_{217}}$	103 ± 10	D_{220}	5719 ± 38	$\sigma_8(0.15)$	0.739 ± 0.011
$\boldsymbol{A^{CIB}_{217}}$	39 ± 7	D_{810}	2533 ± 14	$f\sigma_8(0.38)$	0.4733 ± 0.0057
$\boldsymbol{A^{tSZ}_{143}}$	$4.0^{+2.0}_{-2.4}$	D_{1420}	816.8 ± 4.9	$\sigma_8(0.38)$	0.655 ± 0.010
$\boldsymbol{r^{PS}_{143\times217}}$	0.67 ± 0.13	D_{2000}	231.3 ± 2.0	$f\sigma_8(0.51)$	0.4709 ± 0.0056
$\boldsymbol{r^{CIB}_{143\times217}}$	$0.53^{+0.39}_{-0.21}$	$n_{s,0.002}$	0.9588 ± 0.0087	$\sigma_8(0.51)$	0.6121 ± 0.0099
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P	0.2441 ± 0.0038	$f\sigma_8(0.61)$	0.4653 ± 0.0056
$\boldsymbol{A^{kSZ}}$	< 5.82	Y_P^{BBN}	0.2454 ± 0.0038	$\sigma_8(0.61)$	0.5822 ± 0.0096
$\boldsymbol{A^{dust}_{100}}$	1.01 ± 0.20	Age/Gyr	14.01 ± 0.25	$f\sigma_8(2.33)$	0.2933 ± 0.0051
$\boldsymbol{A^{dust}_{143}}$	0.95 ± 0.18	z_*	1089.78 ± 0.35	$\sigma_8(2.33)$	0.3020 ± 0.0056
$\boldsymbol{A^{dust}_{217}}$	0.98 ± 0.10	r_*	146.4 ± 2.3	f^{143}_{2000}	28 ± 3
$\boldsymbol{A^{dust}_{143\times217}}$	1.02 ± 0.16	$100\theta_*$	1.04155 ± 0.00070	f^{217}_{2000}	106.0 ± 2.2
$\boldsymbol{c_{100}}$	0.9976 ± 0.0011	$D_M(z_*)$/Gpc	14.06 ± 0.22	$f^{143\times217}_{2000}$	31.1 ± 2.3
$\boldsymbol{c_{217}}$	1.0010 ± 0.0016	z_{drag}	1059.11 ± 0.77	$\chi^2_{lensing}$	9.03 ± 0.75
$\boldsymbol{c_{TE}}$	0.9955 ± 0.0049	r_{drag}	149.2 ± 2.4	χ^2_{simall}	396.8 ± 1.5
$\boldsymbol{c_{EE}}$	0.9900 ± 0.0055	k_D	0.1393 ± 0.0018	χ^2_{lowl}	24.1 ± 1.4
H_0	66.1 ± 1.7	$100\theta_D$	0.16050 ± 0.00046	$\chi^2_{CamSpec}$	11513.6 ± 5.5
Ω_Λ	0.680 ± 0.011	z_{eq}	3415 ± 39	χ^2_{Aver15}	0.9 ± 1.4
Ω_m	0.320 ± 0.011	k_{eq}	0.01028 ± 0.00012	χ^2_{prior}	7.8 ± 3.4
$\Omega_m h^2$	0.1398 ± 0.0038	$100\theta_{eq}$	0.8106 ± 0.0072	χ^2_{CMB}	11943.6 ± 5.8
$\Omega_m h^3$	$0.0924^{+0.0043}_{-0.0048}$	$100\theta_{s,eq}$	0.4481 ± 0.0036		

$\bar{\chi}^2_{eff} = 11952.31$; $R - 1 = 0.01285$

11.44 base_nnu_yhe_CamSpecHM_TTTEEE_lowl_lowE_Aver15_post_BAO_lensing

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02229 ± 0.00018	S_8	0.821 ± 0.011	$H(0.38)$	$82.6^{+1.4}_{-1.5}$
$\boldsymbol{\Omega_c h^2}$	0.1180 ± 0.0036	$\sigma_8\Omega_m^{0.5}$	0.4496 ± 0.0061	$D_M(0.38)$	1538 ± 29
$\boldsymbol{100\theta_{MC}}$	1.04107 ± 0.00062	$\sigma_8\Omega_m^{0.25}$	0.6015 ± 0.0073	$H(0.51)$	89.2 ± 1.5
$\boldsymbol{\tau}$	0.0549 ± 0.0071	$\sigma_8/h^{0.5}$	0.9818 ± 0.0084	$D_M(0.51)$	1993 ± 37
$\boldsymbol{N_{eff}}$	$2.98^{+0.21}_{-0.23}$	$r_{drag}h$	99.53 ± 0.86	$H(0.61)$	94.8 ± 1.5
$\boldsymbol{Y_P}$	0.2441 ± 0.0039	$\langle d^2\rangle^{1/2}$	2.433 ± 0.021	$D_M(0.61)$	2319 ± 42
$\boldsymbol{\ln(10^{10}A_s)}$	3.039 ± 0.016	z_{re}	7.70 ± 0.71	$H(2.33)$	234.9 ± 3.2
$\boldsymbol{n_s}$	0.9644 ± 0.0071	$10^9 A_s$	2.089 ± 0.033	$D_M(2.33)$	5793 ± 92
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0024	$10^9 A_s e^{-2\tau}$	1.872 ± 0.019	$f\sigma_8(0.15)$	0.4541 ± 0.0059
$\boldsymbol{A^{PS}_{100}}$	237 ± 25	D_{40}	1228 ± 13	$\sigma_8(0.15)$	0.744 ± 0.010
$\boldsymbol{A^{PS}_{143}}$	38 ± 9	D_{220}	5726 ± 38	$f\sigma_8(0.38)$	0.4722 ± 0.0057
$\boldsymbol{A^{PS}_{217}}$	103 ± 10	D_{810}	2535 ± 13	$\sigma_8(0.38)$	$0.6592^{+0.0087}_{-0.0097}$
$\boldsymbol{A^{CIB}_{217}}$	39 ± 7	D_{1420}	816.9 ± 4.9	$f\sigma_8(0.51)$	0.4707 ± 0.0057
$\boldsymbol{A^{tSZ}_{143}}$	$4.0^{+2.0}_{-2.5}$	D_{2000}	230.9 ± 1.9	$\sigma_8(0.51)$	$0.6169^{+0.0083}_{-0.0093}$
$\boldsymbol{r^{PS}_{143\times217}}$	0.66 ± 0.13	$n_{s,0.002}$	0.9644 ± 0.0071	$f\sigma_8(0.61)$	0.4658 ± 0.0057
$\boldsymbol{r^{CIB}_{143\times217}}$	$0.54^{+0.42}_{-0.17}$	Y_P	0.2441 ± 0.0039	$\sigma_8(0.61)$	$0.5870^{+0.0079}_{-0.0090}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	0.2454 ± 0.0039	$f\sigma_8(2.33)$	$0.2960^{+0.0041}_{-0.0047}$
$\boldsymbol{A^{kSZ}}$	$4.5^{+1.5}_{-4.5}$	Age/Gyr	13.87 ± 0.22	$\sigma_8(2.33)$	$0.3051^{+0.0044}_{-0.0050}$
$\boldsymbol{A^{dust}_{100}}$	1.01 ± 0.20	z_*	1089.77 ± 0.35	f^{143}_{2000}	29.0 ± 3.2
$\boldsymbol{A^{dust}_{143}}$	0.95 ± 0.17	r_*	145.4 ± 2.1	f^{217}_{2000}	106.4 ± 2.1
$\boldsymbol{A^{dust}_{217}}$	0.98 ± 0.10	$100\theta_*$	1.04132 ± 0.00066	$f^{143\times217}_{2000}$	31.6 ± 2.3
$\boldsymbol{A^{dust}_{143\times217}}$	1.02 ± 0.16	$D_M(z_*)$/Gpc	13.96 ± 0.20	$\chi^2_{lensing}$	9.26 ± 0.83
$\boldsymbol{c_{100}}$	0.9976 ± 0.0011	z_{drag}	1059.53 ± 0.67	χ^2_{simall}	397.0 ± 1.6
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	r_{drag}	148.1 ± 2.2	χ^2_{lowl}	23.3 ± 1.1
$\boldsymbol{c_{TE}}$	0.9962 ± 0.0049	k_D	0.1401 ± 0.0017	$\chi^2_{CamSpec}$	11514.1 ± 5.5
$\boldsymbol{c_{EE}}$	0.9915 ± 0.0054	$100\theta_D$	0.16068 ± 0.00043	χ^2_{Aver15}	0.96 ± 1.4
H_0	67.2 ± 1.4	z_{eq}	3385 ± 27	χ^2_{6DF}	0.068 ± 0.080
Ω_Λ	0.6880 ± 0.0071	k_{eq}	0.01028 ± 0.00012	χ^2_{MGS}	1.22 ± 0.46
Ω_m	0.3120 ± 0.0071	$100\theta_{eq}$	0.8163 ± 0.0050	$\chi^2_{DR12BAO}$	5.0 ± 1.6
$\Omega_m h^2$	0.1410 ± 0.0037	$100\theta_{s,eq}$	0.4510 ± 0.0025	χ^2_{prior}	7.8 ± 3.4
$\Omega_m h^3$	$0.0948^{+0.0039}_{-0.0045}$	$H(0.15)$	$72.5^{+1.3}_{-1.5}$	χ^2_{CMB}	11943.7 ± 5.6
σ_8	0.805 ± 0.011	$D_M(0.15)$	645 ± 13	χ^2_{BAO}	6.3 ± 1.3

$\bar{\chi}^2_{eff} = 11958.76$; $R - 1 = 0.01459$

11.45 base_nnu_yhe_CamSpecHM_TTTEEE_lowl_lowE_Aver15_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02220 ± 0.00022	σ_8	0.803 ± 0.012	$H(0.15)$	71.7 ± 1.7
$\boldsymbol{\Omega_c h^2}$	0.1175 ± 0.0038	S_8	0.826 ± 0.016	$D_M(0.15)$	652 ± 16
$\boldsymbol{100\theta_{MC}}$	1.04116 ± 0.00066	$\sigma_8\Omega_m^{0.5}$	0.4527 ± 0.0087	$H(0.38)$	81.9 ± 1.7
$\boldsymbol{\tau}$	$0.0538^{+0.0044}_{-0.0078}$	$\sigma_8\Omega_m^{0.25}$	0.6028 ± 0.0088	$D_M(0.38)$	1554 ± 37
$\boldsymbol{N_{eff}}$	2.90 ± 0.25	$\sigma_8/h^{0.5}$	0.985 ± 0.011	$H(0.51)$	88.6 ± 1.8
$\boldsymbol{Y_P}$	0.2441 ± 0.0039	$r_{drag}h$	98.8 ± 1.3	$D_M(0.51)$	2012 ± 46
$\boldsymbol{\ln(10^{10}A_s)}$	$3.035^{+0.015}_{-0.018}$	$\langle d^2\rangle^{1/2}$	2.444 ± 0.029	$H(0.61)$	94.2 ± 1.8
$\boldsymbol{n_s}$	0.9609 ± 0.0089	z_{re}	$7.60^{+0.48}_{-0.79}$	$D_M(0.61)$	2341 ± 52
$\boldsymbol{y_{cal}}$	1.0004 ± 0.0025	10^9A_s	$2.079^{+0.030}_{-0.037}$	$H(2.33)$	234.2 ± 3.4
$\boldsymbol{A^{PS}_{100}}$	237 ± 25	$10^9A_se^{-2\tau}$	1.867 ± 0.020	$D_M(2.33)$	5831 ± 110
$\boldsymbol{A^{PS}_{143}}$	38 ± 9	D_{40}	1232 ± 16	$f\sigma_8(0.15)$	0.4567 ± 0.0081
$\boldsymbol{A^{PS}_{217}}$	103 ± 10	D_{220}	5716 ± 40	$\sigma_8(0.15)$	0.741 ± 0.011
$\boldsymbol{A^{CIB}_{217}}$	39 ± 7	D_{810}	2532 ± 14	$f\sigma_8(0.38)$	0.4734 ± 0.0070
$\boldsymbol{A^{tSZ}_{143}}$	$3.9^{+2.0}_{-2.5}$	D_{1420}	816.4 ± 5.0	$\sigma_8(0.38)$	$0.6564^{+0.0095}_{-0.011}$
$\boldsymbol{r^{PS}_{143\times217}}$	0.66 ± 0.13	D_{2000}	231.0 ± 2.0	$f\sigma_8(0.51)$	0.4713 ± 0.0066
$\boldsymbol{r^{CIB}_{143\times217}}$	$0.54^{+0.39}_{-0.20}$	$n_{s,0.002}$	0.9609 ± 0.0089	$\sigma_8(0.51)$	$0.6140^{+0.0091}_{-0.010}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P	0.2441 ± 0.0039	$f\sigma_8(0.61)$	0.4658 ± 0.0064
$\boldsymbol{A^{kSZ}}$	< 5.95	Y_P^{BBN}	0.2454 ± 0.0039	$\sigma_8(0.61)$	$0.5841^{+0.0088}_{-0.0098}$
$\boldsymbol{A^{dust}_{100}}$	1.01 ± 0.20	Age/Gyr	13.96 ± 0.26	$f\sigma_8(2.33)$	0.2943 ± 0.0050
$\boldsymbol{A^{dust}_{143}}$	0.96 ± 0.18	z_*	1089.80 ± 0.37	$\sigma_8(2.33)$	0.3031 ± 0.0055
$\boldsymbol{A^{dust}_{217}}$	0.98 ± 0.10	r_*	146.0 ± 2.4	f^{143}_{2000}	29 ± 3
$\boldsymbol{A^{dust}_{143\times217}}$	1.02 ± 0.16	$100\theta_*$	1.04144 ± 0.00071	f^{217}_{2000}	106.1 ± 2.2
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	$D_M(z_*)$/Gpc	14.02 ± 0.22	$f^{143\times217}_{2000}$	31.3 ± 2.4
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	z_{drag}	1059.25 ± 0.77	χ^2_{simall}	396.7 ± 1.5
$\boldsymbol{c_{TE}}$	0.9957 ± 0.0051	r_{drag}	148.8 ± 2.5	χ^2_{lowl}	23.9 ± 1.4
$\boldsymbol{c_{EE}}$	0.9904 ± 0.0056	k_D	0.1396 ± 0.0019	$\chi^2_{CamSpec}$	11514.2 ± 5.9
H_0	66.5 ± 1.7	$100\theta_D$	0.16057 ± 0.00047	χ^2_{Aver15}	0.96 ± 1.4
Ω_Λ	0.682 ± 0.011	z_{eq}	3406 ± 41	χ^2_{prior}	7.9 ± 3.5
Ω_m	0.318 ± 0.011	k_{eq}	0.01029 ± 0.00013	χ^2_{CMB}	11934.8 ± 5.8
$\Omega_m h^2$	0.1403 ± 0.0039	$100\theta_{eq}$	0.8124 ± 0.0076		
$\Omega_m h^3$	$0.0933^{+0.0044}_{-0.0050}$	$100\theta_{s,eq}$	0.4490 ± 0.0039		

$\bar{\chi}^2_{eff} = 11943.65$; $R - 1 = 0.01349$

11.46 base_nnu_yhe_CamSpecHM_TTTEEE_lowl_lowE_Aver15_post_BAO_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02230 ± 0.00018	S_8	0.818 ± 0.013	$H(0.38)$	82.7 ± 1.5
$\boldsymbol{\Omega_c h^2}$	0.1182 ± 0.0038	$\sigma_8\Omega_m^{0.5}$	0.4482 ± 0.0072	$D_M(0.38)$	1534 ± 30
$\boldsymbol{100\theta_{MC}}$	1.04104 ± 0.00064	$\sigma_8\Omega_m^{0.25}$	0.6005 ± 0.0085	$H(0.51)$	89.4 ± 1.5
$\boldsymbol{\tau}$	$0.0546^{+0.0052}_{-0.0076}$	$\sigma_8/h^{0.5}$	0.9798 ± 0.0098	$D_M(0.51)$	1988 ± 37
$\boldsymbol{N_{eff}}$	3.00 ± 0.23	$r_{drag}h$	99.73 ± 0.88	$H(0.61)$	95.0 ± 1.6
$\boldsymbol{Y_P}$	0.2441 ± 0.0039	$\langle d^2\rangle^{1/2}$	2.427 ± 0.024	$D_M(0.61)$	2313 ± 43
$\boldsymbol{\ln(10^{10}A_s)}$	$3.038^{+0.015}_{-0.018}$	z_{re}	$7.67^{+0.56}_{-0.78}$	$H(2.33)$	235.1 ± 3.3
$\boldsymbol{n_s}$	0.9657 ± 0.0072	$10^9 A_s$	$2.087^{+0.030}_{-0.037}$	$D_M(2.33)$	5784 ± 94
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0024	$10^9 A_s e^{-2\tau}$	1.871 ± 0.020	$f\sigma_8(0.15)$	0.4528 ± 0.0070
$\boldsymbol{A^{PS}_{100}}$	238 ± 25	D_{40}	1225 ± 13	$\sigma_8(0.15)$	$0.744^{+0.010}_{-0.012}$
$\boldsymbol{A^{PS}_{143}}$	38 ± 9	D_{220}	5721 ± 38	$f\sigma_8(0.38)$	0.4713 ± 0.0067
$\boldsymbol{A^{PS}_{217}}$	102 ± 10	D_{810}	2533 ± 14	$\sigma_8(0.38)$	$0.6592^{+0.0091}_{-0.011}$
$\boldsymbol{A^{CIB}_{217}}$	39 ± 7	D_{1420}	816.4 ± 4.9	$f\sigma_8(0.51)$	0.4700 ± 0.0066
$\boldsymbol{A^{tSZ}_{143}}$	$3.9^{+2.0}_{-2.4}$	D_{2000}	230.7 ± 1.9	$\sigma_8(0.51)$	$0.6170^{+0.0086}_{-0.010}$
$\boldsymbol{r^{PS}_{143\times217}}$	0.66 ± 0.13	$n_{s,0.002}$	0.9657 ± 0.0072	$f\sigma_8(0.61)$	0.4652 ± 0.0065
$\boldsymbol{r^{CIB}_{143\times217}}$	$0.55^{+0.44}_{-0.16}$	Y_P	0.2441 ± 0.0039	$\sigma_8(0.61)$	$0.5871^{+0.0083}_{-0.0096}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	0.2454 ± 0.0039	$f\sigma_8(2.33)$	$0.2961^{+0.0042}_{-0.0050}$
$\boldsymbol{A^{kSZ}}$	$4.6^{+1.9}_{-4.2}$	Age/Gyr	13.85 ± 0.22	$\sigma_8(2.33)$	$0.3053^{+0.0045}_{-0.0053}$
$\boldsymbol{A^{dust}_{100}}$	1.01 ± 0.20	z_*	1089.77 ± 0.37	f^{143}_{2000}	29.1 ± 3.2
$\boldsymbol{A^{dust}_{143}}$	0.96 ± 0.17	r_*	145.3 ± 2.2	f^{217}_{2000}	106.4 ± 2.2
$\boldsymbol{A^{dust}_{217}}$	0.97 ± 0.10	$100\theta_*$	1.04128 ± 0.00068	$f^{143\times217}_{2000}$	31.7 ± 2.3
$\boldsymbol{A^{dust}_{143\times217}}$	1.02 ± 0.16	$D_M(z_*)$/Gpc	13.95 ± 0.20	χ^2_{simall}	396.8 ± 1.6
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	z_{drag}	1059.58 ± 0.68	χ^2_{lowl}	23.1 ± 1.1
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	r_{drag}	147.9 ± 2.3	$\chi^2_{CamSpec}$	11514.8 ± 5.7
$\boldsymbol{c_{TE}}$	0.9964 ± 0.0049	k_D	0.1402 ± 0.0017	χ^2_{Aver15}	0.96 ± 1.4
$\boldsymbol{c_{EE}}$	0.9916 ± 0.0054	$100\theta_D$	0.16072 ± 0.00044	χ^2_{6DF}	0.056 ± 0.071
H_0	67.4 ± 1.4	z_{eq}	3378 ± 28	χ^2_{MGS}	1.33 ± 0.49
Ω_Λ	0.6896 ± 0.0072	k_{eq}	0.01028 ± 0.00013	$\chi^2_{DR12BAO}$	4.8 ± 1.5
Ω_m	0.3104 ± 0.0072	$100\theta_{eq}$	0.8175 ± 0.0052	χ^2_{prior}	7.8 ± 3.4
$\Omega_m h^2$	0.1411 ± 0.0039	$100\theta_{s,eq}$	0.4516 ± 0.0026	χ^2_{BAO}	6.1 ± 1.2
$\Omega_m h^3$	$0.0952^{+0.0040}_{-0.0046}$	$H(0.15)$	72.7 ± 1.4	χ^2_{CMB}	11934.7 ± 5.6
σ_8	$0.805^{+0.011}_{-0.012}$	$D_M(0.15)$	643 ± 13		

$\bar{\chi}^2_{eff} = 11949.59$; $R - 1 = 0.01728$

11.47 base_nnu_yhe_CamSpecHM_TTTEEE_lowl_lowE_Aver15_post_lensing_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02217 ± 0.00021	σ_8	0.802 ± 0.011	$H(0.15)$	71.5 ± 1.7
$\boldsymbol{\Omega_c h^2}$	0.1170 ± 0.0037	S_8	0.828 ± 0.013	$D_M(0.15)$	655 ± 16
$\boldsymbol{100\theta_{MC}}$	1.04124 ± 0.00065	$\sigma_8\Omega_m^{0.5}$	0.4534 ± 0.0068	$H(0.38)$	81.6 ± 1.7
$\boldsymbol{\tau}$	$0.0541^{+0.0049}_{-0.0072}$	$\sigma_8\Omega_m^{0.25}$	0.6030 ± 0.0071	$D_M(0.38)$	1560 ± 36
$\boldsymbol{N_{eff}}$	2.86 ± 0.25	$\sigma_8/h^{0.5}$	0.9862 ± 0.0087	$H(0.51)$	88.3 ± 1.7
$\boldsymbol{Y_P}$	0.2441 ± 0.0038	$r_{drag}h$	98.6 ± 1.2	$D_M(0.51)$	2020 ± 45
$\boldsymbol{\ln(10^{10}A_s)}$	$3.034^{+0.014}_{-0.017}$	$\langle d^2\rangle^{1/2}$	2.449 ± 0.024	$H(0.61)$	93.9 ± 1.8
$\boldsymbol{n_s}$	0.9594 ± 0.0086	z_{re}	$7.62^{+0.52}_{-0.73}$	$D_M(0.61)$	2349 ± 52
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	$10^9 A_s$	$2.079^{+0.029}_{-0.035}$	$H(2.33)$	233.8 ± 3.3
$\boldsymbol{A^{PS}_{100}}$	236 ± 25	$10^9 A_s e^{-2\tau}$	1.866 ± 0.019	$D_M(2.33)$	5848 ± 110
$\boldsymbol{A^{PS}_{143}}$	37 ± 8	D_{40}	1235 ± 14	$f\sigma_8(0.15)$	0.4573 ± 0.0064
$\boldsymbol{A^{PS}_{217}}$	103 ± 10	D_{220}	5719 ± 38	$\sigma_8(0.15)$	0.740 ± 0.010
$\boldsymbol{A^{CIB}_{217}}$	39 ± 7	D_{810}	2533 ± 13	$f\sigma_8(0.38)$	0.4736 ± 0.0056
$\boldsymbol{A^{tSZ}_{143}}$	$4.0^{+2.0}_{-2.4}$	D_{1420}	816.7 ± 4.9	$\sigma_8(0.38)$	0.6556 ± 0.0098
$\boldsymbol{r^{PS}_{143\times217}}$	0.67 ± 0.13	D_{2000}	231.2 ± 2.0	$f\sigma_8(0.51)$	0.4713 ± 0.0055
$\boldsymbol{r^{CIB}_{143\times217}}$	$0.53^{+0.39}_{-0.21}$	$n_{s,0.002}$	0.9594 ± 0.0086	$\sigma_8(0.51)$	0.6132 ± 0.0095
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P	0.2441 ± 0.0038	$f\sigma_8(0.61)$	0.4658 ± 0.0055
$\boldsymbol{A^{kSZ}}$	< 5.79	Y_P^{BBN}	0.2454 ± 0.0038	$\sigma_8(0.61)$	0.5832 ± 0.0092
$\boldsymbol{A^{dust}_{100}}$	1.01 ± 0.20	Age/Gyr	14.00 ± 0.25	$f\sigma_8(2.33)$	0.2938 ± 0.0049
$\boldsymbol{A^{dust}_{143}}$	0.95 ± 0.18	z_*	1089.77 ± 0.35	$\sigma_8(2.33)$	0.3025 ± 0.0053
$\boldsymbol{A^{dust}_{217}}$	0.98 ± 0.10	r_*	146.4 ± 2.3	f^{143}_{2000}	28 ± 3
$\boldsymbol{A^{dust}_{143\times217}}$	1.02 ± 0.16	$100\theta_*$	1.04153 ± 0.00070	f^{217}_{2000}	106.0 ± 2.2
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	$D_M(z_*)$/Gpc	14.05 ± 0.22	$f^{143\times217}_{2000}$	31.1 ± 2.3
$\boldsymbol{c_{217}}$	1.0010 ± 0.0016	z_{drag}	1059.15 ± 0.76	$\chi^2_{lensing}$	8.99 ± 0.71
$\boldsymbol{c_{TE}}$	0.9955 ± 0.0050	r_{drag}	149.1 ± 2.4	χ^2_{simall}	396.7 ± 1.5
$\boldsymbol{c_{EE}}$	0.9900 ± 0.0055	k_D	0.1393 ± 0.0018	χ^2_{lowl}	24.1 ± 1.4
H_0	$66.2^{+1.5}_{-1.7}$	$100\theta_D$	0.16051 ± 0.00045	$\chi^2_{CamSpec}$	11513.5 ± 5.6
Ω_Λ	0.680 ± 0.010	z_{eq}	3412 ± 38	χ^2_{Aver15}	0.9 ± 1.4
Ω_m	0.320 ± 0.010	k_{eq}	0.01028 ± 0.00012	χ^2_{prior}	7.8 ± 3.4
$\Omega_m h^2$	0.1398 ± 0.0038	$100\theta_{eq}$	0.8112 ± 0.0070	χ^2_{CMB}	11943.3 ± 5.7
$\Omega_m h^3$	$0.0926^{+0.0043}_{-0.0048}$	$100\theta_{s,eq}$	0.4484 ± 0.0035		

$\bar{\chi}^2_{eff} = 11952.02$; $R - 1 = 0.01312$

11.48 base_nnu_yhe_CamSpecHM_TTTEEE_lowl_lowE_Aver15_post_BAO_lensing_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02229 ± 0.00018	S_8	0.821 ± 0.011	$H(0.38)$	$82.6^{+1.4}_{-1.5}$
$\boldsymbol{\Omega_c h^2}$	0.1180 ± 0.0036	$\sigma_8\Omega_m^{0.5}$	0.4497 ± 0.0060	$D_M(0.38)$	1538 ± 29
$\boldsymbol{100\theta_{MC}}$	1.04108 ± 0.00062	$\sigma_8\Omega_m^{0.25}$	0.6018 ± 0.0072	$H(0.51)$	89.2 ± 1.5
$\boldsymbol{\tau}$	$0.0557^{+0.0057}_{-0.0071}$	$\sigma_8/h^{0.5}$	0.9822 ± 0.0082	$D_M(0.51)$	1993 ± 37
$\boldsymbol{N_{eff}}$	$2.98^{+0.21}_{-0.23}$	$r_{drag}h$	99.55 ± 0.85	$H(0.61)$	94.8 ± 1.5
$\boldsymbol{Y_P}$	0.2441 ± 0.0039	$\langle d^2\rangle^{1/2}$	2.435 ± 0.021	$D_M(0.61)$	2319 ± 42
$\boldsymbol{\ln(10^{10}A_s)}$	$3.041^{+0.014}_{-0.016}$	z_{re}	$7.78^{+0.60}_{-0.70}$	$H(2.33)$	234.9 ± 3.2
$\boldsymbol{n_s}$	0.9645 ± 0.0071	$10^9 A_s$	$2.092^{+0.029}_{-0.033}$	$D_M(2.33)$	5793 ± 92
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0024	$10^9 A_s e^{-2\tau}$	1.871 ± 0.019	$f\sigma_8(0.15)$	0.4542 ± 0.0058
$\boldsymbol{A_{100}^{PS}}$	237 ± 25	D_{40}	1228 ± 13	$\sigma_8(0.15)$	$0.7442^{+0.0093}_{-0.010}$
$\boldsymbol{A_{143}^{PS}}$	38 ± 9	D_{220}	5726 ± 38	$f\sigma_8(0.38)$	0.4724 ± 0.0057
$\boldsymbol{A_{217}^{PS}}$	103 ± 10	D_{810}	2535 ± 13	$\sigma_8(0.38)$	$0.6596^{+0.0085}_{-0.0096}$
$\boldsymbol{A_{217}^{CIB}}$	39 ± 7	D_{1420}	816.8 ± 4.9	$f\sigma_8(0.51)$	0.4709 ± 0.0056
$\boldsymbol{A_{143}^{tSZ}}$	$4.0^{+2.0}_{-2.5}$	D_{2000}	231.0 ± 1.9	$\sigma_8(0.51)$	$0.6173^{+0.0081}_{-0.0092}$
$\boldsymbol{r_{143\times217}^{PS}}$	0.66 ± 0.13	$n_{s,0.002}$	0.9645 ± 0.0071	$f\sigma_8(0.61)$	0.4660 ± 0.0056
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.54^{+0.42}_{-0.17}$	Y_P	0.2441 ± 0.0039	$\sigma_8(0.61)$	$0.5874^{+0.0078}_{-0.0089}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	0.2454 ± 0.0039	$f\sigma_8(2.33)$	$0.2962^{+0.0040}_{-0.0046}$
$\boldsymbol{A^{kSZ}}$	< 5.99	Age/Gyr	13.87 ± 0.22	$\sigma_8(2.33)$	$0.3053^{+0.0043}_{-0.0050}$
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.20	z_*	1089.76 ± 0.35	f_{2000}^{143}	28.9 ± 3.2
$\boldsymbol{A_{143}^{dust}}$	0.95 ± 0.17	r_*	145.4 ± 2.1	f_{2000}^{217}	106.4 ± 2.1
$\boldsymbol{A_{217}^{dust}}$	0.98 ± 0.10	$100\theta_*$	1.04132 ± 0.00066	$f_{2000}^{143\times217}$	31.5 ± 2.3
$\boldsymbol{A_{143\times217}^{dust}}$	1.02 ± 0.16	$D_M(z_*)$/Gpc	13.96 ± 0.20	$\chi^2_{lensing}$	9.21 ± 0.77
$\boldsymbol{c_{100}}$	0.9976 ± 0.0011	z_{drag}	1059.53 ± 0.67	χ^2_{simall}	397.0 ± 1.7
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	r_{drag}	148.1 ± 2.2	χ^2_{lowl}	23.3 ± 1.1
$\boldsymbol{c_{TE}}$	0.9962 ± 0.0049	k_D	0.1401 ± 0.0017	$\chi^2_{CamSpec}$	11514.1 ± 5.5
$\boldsymbol{c_{EE}}$	0.9914 ± 0.0054	$100\theta_D$	0.16067 ± 0.00043	χ^2_{Aver15}	0.96 ± 1.3
H_0	$67.2^{+1.3}_{-1.4}$	z_{eq}	3384 ± 27	χ^2_{6DF}	0.066 ± 0.078
Ω_Λ	0.6881 ± 0.0071	k_{eq}	0.01028 ± 0.00012	χ^2_{MGS}	1.23 ± 0.46
Ω_m	0.3119 ± 0.0071	$100\theta_{eq}$	0.8164 ± 0.0050	$\chi^2_{DR12BAO}$	5.0 ± 1.6
$\Omega_m h^2$	0.1409 ± 0.0037	$100\theta_{s,eq}$	0.4511 ± 0.0025	χ^2_{prior}	7.7 ± 3.4
$\Omega_m h^3$	$0.0948^{+0.0039}_{-0.0045}$	$H(0.15)$	$72.5^{+1.3}_{-1.5}$	χ^2_{CMB}	11943.6 ± 5.6
σ_8	0.805 ± 0.011	$D_M(0.15)$	645 ± 13	χ^2_{BAO}	6.3 ± 1.3

$\bar{\chi}^2_{eff} = 11958.57$; $R - 1 = 0.01608$

12 nrun

12.1 base_nrun_plikHM_TT_lowl_lowE

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022178	0.02216 ± 0.00023	$\sigma_8\Omega_m^{0.5}$	0.4595	0.460 ± 0.013	$100\theta_{s,eq}$	0.44832	0.4480 ± 0.0046
$\boldsymbol{\Omega_c h^2}$	0.12059	0.1208 ± 0.0021	$\sigma_8\Omega_m^{0.25}$	0.6110	0.612 ± 0.012	$H(0.15)$	72.32	72.26 ± 0.79
$\boldsymbol{100\theta_{MC}}$	1.040803	1.04078 ± 0.00047	$\sigma_8/h^{0.5}$	0.9928	0.994 ± 0.016	$D_M(0.15)$	646.9	647.7 ± 8.0
$\boldsymbol{\tau}$	0.0531	0.0534 ± 0.0083	$r_{drag}h$	98.52	98.4 ± 1.6	$H(0.38)$	82.57	82.53 ± 0.56
$\boldsymbol{\ln(10^{10}A_s)}$	3.0432	3.044 ± 0.018	$\langle d^2\rangle^{1/2}$	2.4475	2.451 ± 0.038	$D_M(0.38)$	1540.8	1542 ± 16
$\boldsymbol{n_s}$	0.9635	0.9619 ± 0.0060	z_{re}	7.60	$7.62^{+0.87}_{-0.76}$	$H(0.51)$	89.374	89.34 ± 0.44
$\boldsymbol{\mathrm{d}n_s/\mathrm{d}\ln k}$	-0.0029	-0.0043 ± 0.0075	10^9A_s	2.0971	2.100 ± 0.037	$D_M(0.51)$	1994.7	1996 ± 19
$\boldsymbol{y_{cal}}$	1.00044	1.0004 ± 0.0025	$10^9A_se^{-2\tau}$	1.8860	1.887 ± 0.014	$H(0.61)$	95.056	95.03 ± 0.35
$\boldsymbol{A_{217}^{CIB}}$	49.4	48 ± 7	D_{40}	1224.5	1225 ± 21	$D_M(0.61)$	2320.0	2322 ± 20
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.24	—	D_{220}	5711.5	5713 ± 42	$H(2.33)$	236.75	236.8 ± 1.3
$\boldsymbol{A_{143}^{tSZ}}$	7.04	4.9 ± 2.0	D_{810}	2539.2	2538 ± 14	$D_M(2.33)$	5774.7	5776 ± 17
$\boldsymbol{A_{100}^{PS}}$	256.3	266 ± 29	D_{1420}	815.3	813.9 ± 5.3	$f\sigma_8(0.15)$	0.4634	0.464 ± 0.012
$\boldsymbol{A_{143}^{PS}}$	49.3	50 ± 8	D_{2000}	229.77	229.1 ± 2.0	$\sigma_8(0.15)$	0.7498	0.7498 ± 0.0076
$\boldsymbol{A_{143\times217}^{PS}}$	45.4	44 ± 9	$n_{s,0.002}$	0.9728	0.976 ± 0.023	$f\sigma_8(0.38)$	0.4799	0.4804 ± 0.0096
$\boldsymbol{A_{217}^{PS}}$	118.7	115 ± 10	Y_P	0.245317	$0.24530^{+0.00011}_{-0.000090}$	$\sigma_8(0.38)$	0.6637	0.6636 ± 0.0061
$\boldsymbol{A^{kSZ}}$	0.02	< 5.30	Y_P^{BBN}	0.246643	$0.24663^{+0.00011}_{-0.000090}$	$f\sigma_8(0.51)$	0.4775	0.4778 ± 0.0082
$\boldsymbol{A_{100}^{dust TT}}$	8.89	9.0 ± 1.8	10^5D/H	2.6221	2.626 ± 0.044	$\sigma_8(0.51)$	0.6208	0.6206 ± 0.0055
$\boldsymbol{A_{143}^{dust TT}}$	10.86	10.8 ± 1.8	Age/Gyr	13.8228	13.826 ± 0.037	$f\sigma_8(0.61)$	0.4718	0.4721 ± 0.0073
$\boldsymbol{A_{143\times217}^{dust TT}}$	19.37	18.3 ± 3.3	z_*	1090.215	1090.26 ± 0.41	$\sigma_8(0.61)$	0.5904	0.5902 ± 0.0052
$\boldsymbol{A_{217}^{dust TT}}$	94.4	93.3 ± 7.3	r_*	144.426	144.40 ± 0.50	$f\sigma_8(2.33)$	0.29738	0.2972 ± 0.0026
$\boldsymbol{c_{100}}$	0.99963	0.99961 ± 0.00062	$100\theta_*$	1.041004	1.04098 ± 0.00046	$\sigma_8(2.33)$	0.30622	0.3060 ± 0.0027
$\boldsymbol{c_{217}}$	0.99825	0.99827 ± 0.00062	$D_M(z_*)$/Gpc	13.8737	13.872 ± 0.046	f_{2000}^{143}	30.89	32.0 ± 3.2
H_0	66.95	66.88 ± 0.92	z_{drag}	1059.55	1059.50 ± 0.50	$f_{2000}^{143\times217}$	33.62	34.2 ± 2.2
Ω_Λ	0.6801	0.679 ± 0.013	r_{drag}	147.15	147.13 ± 0.51	f_{2000}^{217}	108.00	108.6 ± 2.1
Ω_m	0.3199	0.321 ± 0.013	k_D	0.14066	0.14066 ± 0.00057	χ^2_{simall}	395.91	397.1 ± 1.7
$\Omega_m h^2$	0.14341	0.1436 ± 0.0020	$100\theta_D$	0.160990	0.16101 ± 0.00029	χ^2_{lowl}	22.74	23.1 ± 2.1
$\Omega_m h^3$	0.096015	0.09599 ± 0.00049	z_{eq}	3411.7	3415 ± 49	χ^2_{plik}	759.4	772.7 ± 5.7
σ_8	0.8123	0.8124 ± 0.0090	k_{eq}	0.010413	0.01042 ± 0.00015	χ^2_{prior}	1.43	7.3 ± 3.7
S_8	0.8389	0.841 ± 0.024	$100\theta_{eq}$	0.8110	0.8104 ± 0.0090	χ^2_{CMB}	1178.0	1192.9 ± 5.6

Best-fit $\chi^2_{eff} = 1179.45$; $\Delta\chi^2_{eff} = -0.13$; $\bar{\chi}^2_{eff} = 1200.22$; $\Delta\bar{\chi}^2_{eff} = 0.64$; $R - 1 = 0.00668$

χ^2_{eff}: CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.91 (Δ 0.03) commander_dx12_v3_2_29: 22.74 (Δ -0.86) plik_rd12_HM_v22_TT: 759.37 (Δ 0.62)

12.2 base_nrun_plikHM_TT_lowl_lowE_post_BAO

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022255	0.02225 ± 0.00022	$\sigma_8/h^{0.5}$	0.9819	0.982 ± 0.012	$D_M(0.38)$	1529.2	1529.1 ± 9.3
$\boldsymbol{\Omega_c h^2}$	0.11900	0.1190 ± 0.0012	$r_{drag}h$	99.76	99.78 ± 0.94	$H(0.51)$	89.685	89.69 ± 0.29
$\boldsymbol{100\theta_{MC}}$	1.041013	1.04100 ± 0.00043	$\langle d^2\rangle^{1/2}$	2.4235	2.424 ± 0.029	$D_M(0.51)$	1981.1	1981 ± 11
$\boldsymbol{\tau}$	0.0549	0.0550 ± 0.0082	z_{re}	7.75	$7.74^{+0.84}_{-0.76}$	$H(0.61)$	95.291	95.29 ± 0.25
$\boldsymbol{\ln(10^{10}A_s)}$	3.0428	3.043 ± 0.018	$10^9 A_s$	2.0964	2.098 ± 0.037	$D_M(0.61)$	2305.4	2305 ± 12
$\boldsymbol{n_s}$	0.96634	0.9660 ± 0.0045	$10^9 A_s e^{-2\tau}$	1.8784	1.879 ± 0.012	$H(2.33)$	235.79	235.78 ± 0.81
$\boldsymbol{dn_s/d\ln k}$	−0.0034	-0.0035 ± 0.0075	D_{40}	1216.8	1218 ± 20	$D_M(2.33)$	5765.1	5765 ± 13
$\boldsymbol{y_{cal}}$	1.00027	1.0006 ± 0.0025	D_{220}	5717.1	5721 ± 41	$f\sigma_8(0.15)$	0.4544	0.4544 ± 0.0077
$\boldsymbol{A_{217}^{CIB}}$	51.1	48 ± 7	D_{810}	2536.4	2537 ± 14	$\sigma_8(0.15)$	0.7463	0.7463 ± 0.0070
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.06	—	D_{1420}	815.0	815.0 ± 5.1	$f\sigma_8(0.38)$	0.4730	0.4729 ± 0.0065
$\boldsymbol{A_{143}^{tSZ}}$	7.16	5.0 ± 2.1	D_{2000}	229.65	229.6 ± 1.9	$\sigma_8(0.38)$	0.6617	0.6617 ± 0.0060
$\boldsymbol{A_{100}^{PS}}$	257.6	264 ± 29	$n_{s,0.002}$	0.9773	0.977 ± 0.023	$f\sigma_8(0.51)$	0.4718	0.4717 ± 0.0059
$\boldsymbol{A_{143}^{PS}}$	46.5	49 ± 8	Y_P	0.245348	$0.245345^{+0.000095}_{-0.000080}$	$\sigma_8(0.51)$	0.6193	0.6193 ± 0.0055
$\boldsymbol{A_{143\times217}^{PS}}$	40.2	43 ± 9	Y_P^{BBN}	0.246675	$0.246671^{+0.000095}_{-0.000080}$	$f\sigma_8(0.61)$	0.4669	0.4669 ± 0.0054
$\boldsymbol{A_{217}^{PS}}$	115.5	114 ± 10	10^5D/H	2.6075	2.608 ± 0.041	$\sigma_8(0.61)$	0.5893	0.5894 ± 0.0052
$\boldsymbol{A^{kSZ}}$	0.08	< 5.17	Age/Gyr	13.8023	13.802 ± 0.029	$f\sigma_8(2.33)$	0.29720	0.2972 ± 0.0026
$\boldsymbol{A_{100}^{dustTT}}$	8.98	9.0 ± 1.8	z_*	1089.978	1089.98 ± 0.31	$\sigma_8(2.33)$	0.30646	0.3065 ± 0.0027
$\boldsymbol{A_{143}^{dustTT}}$	10.79	10.8 ± 1.8	r_*	144.778	144.79 ± 0.34	f_{2000}^{143}	31.12	31.5 ± 3.2
$\boldsymbol{A_{143\times217}^{dustTT}}$	19.00	18.4 ± 3.3	$100\theta_*$	1.041204	1.04120 ± 0.00042	$f_{2000}^{143\times217}$	33.66	33.8 ± 2.2
$\boldsymbol{A_{217}^{dustTT}}$	93.6	93.4 ± 7.3	$D_M(z_*)$/Gpc	13.9049	13.906 ± 0.033	f_{2000}^{217}	108.00	108.3 ± 2.1
$\boldsymbol{c_{100}}$	0.99963	0.99961 ± 0.00061	z_{drag}	1059.589	1059.59 ± 0.49	χ^2_{simall}	396.07	397.2 ± 1.9
$\boldsymbol{c_{217}}$	0.99828	0.99827 ± 0.00063	r_{drag}	147.486	147.49 ± 0.37	χ^2_{lowl}	22.13	22.6 ± 1.8
H_0	67.64	67.65 ± 0.54	k_D	0.140363	0.14035 ± 0.00050	χ^2_{plik}	760.4	773.1 ± 5.7
Ω_Λ	0.6898	0.6899 ± 0.0073	$100\theta_D$	0.160964	0.16097 ± 0.00029	χ^2_{6DF}	0.0220	0.058 ± 0.076
Ω_m	0.3102	0.3101 ± 0.0073	z_{eq}	3375.5	3375 ± 29	χ^2_{MGS}	1.28	1.36 ± 0.52
$\Omega_m h^2$	0.14190	0.1419 ± 0.0012	k_{eq}	0.010303	0.010301 ± 0.000089	$\chi^2_{DR12BAO}$	4.20	4.8 ± 1.6
$\Omega_m h^3$	0.095980	0.09597 ± 0.00050	$100\theta_{eq}$	0.8178	0.8180 ± 0.0053	χ^2_{prior}	1.60	7.4 ± 3.7
σ_8	0.8075	0.8075 ± 0.0078	$100\theta_{s,eq}$	0.45184	0.4519 ± 0.0028	χ^2_{BAO}	5.50	6.2 ± 1.3
S_8	0.8211	0.821 ± 0.015	$H(0.15)$	72.903	72.91 ± 0.47	χ^2_{CMB}	1178.6	1192.9 ± 5.6
$\sigma_8\Omega_m^{0.5}$	0.4497	0.4497 ± 0.0081	$D_M(0.15)$	641.04	641.0 ± 4.6			
$\sigma_8\Omega_m^{0.25}$	0.6026	0.6026 ± 0.0080	$H(0.38)$	82.986	82.99 ± 0.35			

Best-fit $\chi^2_{eff} = 1185.71$; $\Delta\chi^2_{eff} = -0.04$; $\bar{\chi}^2_{eff} = 1206.47$; $\Delta\bar{\chi}^2_{eff} = 0.44$; $R - 1 = 0.01307$

χ^2_{eff}: BAO - 6DF: 0.02 (Δ 0.00) MGS: 1.28 (Δ 0.00) DR12BAO: 4.20 (Δ 0.02) CMB - simall_100x143_offlike5_EE_Aplanck_B: 396.07 (Δ 0.19) commander_dx12_v3_2_29: 22.13 (Δ -0.70) plik_rd12_HM_v22_TT: 760.40 (Δ 0.30)

12.3 base_nrun_plikHM_TT_lowl_lowE_post_lensing

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022169	0.02218 ± 0.00023	$\sigma_8\Omega_m^{0.25}$	0.6087	0.6085 ± 0.0078	$D_M(0.15)$	646.0	645.7 ± 6.3
$\boldsymbol{\Omega_c h^2}$	0.12026	0.1202 ± 0.0016	$\sigma_8/h^{0.5}$	0.9898	0.990 ± 0.011	$H(0.38)$	82.631	82.66 ± 0.46
$\boldsymbol{100\theta_{MC}}$	1.040808	1.04082 ± 0.00045	$r_{drag}h$	98.75	98.8 ± 1.2	$D_M(0.38)$	1539.0	1538 ± 13
$\boldsymbol{\tau}$	0.0527	0.0533 ± 0.0081	$\langle d^2\rangle^{1/2}$	2.4447	2.443 ± 0.027	$H(0.51)$	89.411	89.44 ± 0.37
$\boldsymbol{\ln(10^{10}A_s)}$	3.0407	3.043 ± 0.016	z_{re}	7.56	$7.60^{+0.85}_{-0.73}$	$D_M(0.51)$	1992.6	1992 ± 15
$\boldsymbol{n_s}$	0.9634	0.9631 ± 0.0051	$10^9 A_s$	2.0919	2.096 ± 0.033	$H(0.61)$	95.078	95.10 ± 0.31
$\boldsymbol{dn_s/d\ln k}$	−0.0016	-0.0030 ± 0.0074	$10^9 A_s e^{-2\tau}$	1.8827	1.884 ± 0.012	$D_M(0.61)$	2317.8	2317 ± 16
$\boldsymbol{y_{cal}}$	1.00017	1.0005 ± 0.0025	D_{40}	1227.4	1225 ± 20	$H(2.33)$	236.52	236.48 ± 0.98
$\boldsymbol{A_{217}^{CIB}}$	51.0	48 ± 7	D_{220}	5712.9	5716 ± 41	$D_M(2.33)$	5774.2	5773 ± 15
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.01	—	D_{810}	2535.9	2537 ± 14	$f\sigma_8(0.15)$	0.4612	0.4609 ± 0.0083
$\boldsymbol{A_{143}^{tSZ}}$	7.22	5.0 ± 2.1	D_{1420}	814.3	814.2 ± 5.2	$\sigma_8(0.15)$	0.7483	0.7484 ± 0.0056
$\boldsymbol{A_{100}^{PS}}$	258.2	265 ± 29	D_{2000}	229.47	229.3 ± 1.9	$f\sigma_8(0.38)$	0.4781	0.4778 ± 0.0064
$\boldsymbol{A_{143}^{PS}}$	45.8	50 ± 8	$n_{s,0.002}$	0.9684	0.973 ± 0.023	$\sigma_8(0.38)$	0.66261	0.6627 ± 0.0049
$\boldsymbol{A_{143\times217}^{PS}}$	39.3	43 ± 9	Y_P	0.245313	$0.24531^{+0.00011}_{-0.000085}$	$f\sigma_8(0.51)$	0.4759	0.4757 ± 0.0054
$\boldsymbol{A_{217}^{PS}}$	115.9	115 ± 10	Y_P^{BBN}	0.246639	$0.24664^{+0.00011}_{-0.000086}$	$\sigma_8(0.51)$	0.61979	0.6199 ± 0.0046
$\boldsymbol{A^{kSZ}}$	0.00	< 5.20	10^5D/H	2.6239	2.623 ± 0.043	$f\sigma_8(0.61)$	0.47037	0.4702 ± 0.0048
$\boldsymbol{A_{100}^{dustTT}}$	8.95	9.0 ± 1.8	Age/Gyr	13.8221	13.820 ± 0.034	$\sigma_8(0.61)$	0.58956	0.5897 ± 0.0044
$\boldsymbol{A_{143}^{dustTT}}$	10.82	10.7 ± 1.8	z_*	1090.197	1090.18 ± 0.37	$f\sigma_8(2.33)$	0.29700	0.2971 ± 0.0023
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.98	18.4 ± 3.3	r_*	144.518	144.53 ± 0.38	$\sigma_8(2.33)$	0.30591	0.3060 ± 0.0026
$\boldsymbol{A_{217}^{dustTT}}$	93.8	93.3 ± 7.3	$100\theta_*$	1.041017	1.04103 ± 0.00045	f_{2000}^{143}	31.16	31.8 ± 3.2
$\boldsymbol{c_{100}}$	0.99962	0.99961 ± 0.00062	$D_M(z_*)$/Gpc	13.8824	13.884 ± 0.036	$f_{2000}^{143\times217}$	33.71	34.0 ± 2.2
$\boldsymbol{c_{217}}$	0.99827	0.99827 ± 0.00062	z_{drag}	1059.47	1059.50 ± 0.50	f_{2000}^{217}	108.15	108.5 ± 2.1
H_0	67.06	67.10 ± 0.73	r_{drag}	147.248	147.26 ± 0.40	$\chi^2_{lensing}$	8.93	9.59 ± 0.97
Ω_Λ	0.6819	0.682 ± 0.010	k_D	0.140546	0.14054 ± 0.00050	χ^2_{simall}	395.89	397.0 ± 1.6
Ω_m	0.3181	0.318 ± 0.010	$100\theta_D$	0.161015	0.16101 ± 0.00029	χ^2_{lowl}	23.13	23.2 ± 2.1
$\Omega_m h^2$	0.14307	0.1430 ± 0.0015	z_{eq}	3403.6	3402 ± 36	χ^2_{plik}	758.9	772.1 ± 5.5
$\Omega_m h^3$	0.095947	0.09595 ± 0.00049	k_{eq}	0.010388	0.01038 ± 0.00011	χ^2_{prior}	1.60	7.3 ± 3.7
σ_8	0.8105	0.8105 ± 0.0063	$100\theta_{eq}$	0.8124	0.8128 ± 0.0068	χ^2_{CMB}	1186.9	1201.9 ± 5.6
S_8	0.8347	0.834 ± 0.016	$100\theta_{s,eq}$	0.44907	0.4493 ± 0.0035			
$\sigma_8\Omega_m^{0.5}$	0.4572	0.4569 ± 0.0090	$H(0.15)$	72.41	72.45 ± 0.62			

Best-fit $\chi^2_{eff} = 1188.47$; $\Delta\chi^2_{eff} = -0.10$; $\bar{\chi}^2_{eff} = 1209.27$; $\Delta\bar{\chi}^2_{eff} = 0.86$; $R - 1 = 0.01153$

χ^2_{eff}: CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.93 (Δ 0.03) simall_100x143_offlike5_EE_Aplanck_B: 395.89 (Δ 0.02) commander_dx12_v3_2_29: 23.13 (Δ -0.10) plik_rd12_HM_v22_TT: 758.91 (Δ -0.41)

12.4 base_nrun_plikHM_TT_lowl_lowE_post_BAO_lensing

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022258	0.02225 ± 0.00021	$\sigma_8/h^{0.5}$	0.9836	0.9841 ± 0.0089	$D_M(0.38)$	1529.3	1529.8 ± 8.7
$\boldsymbol{\Omega_c h^2}$	0.11902	0.1191 ± 0.0011	$r_{drag}h$	99.74	99.69 ± 0.84	$H(0.51)$	89.684	89.67 ± 0.28
$\boldsymbol{100\theta_{MC}}$	1.041006	1.04099 ± 0.00042	$\langle d^2\rangle^{1/2}$	2.4298	2.431 ± 0.023	$D_M(0.51)$	1981.2	1982 ± 10
$\boldsymbol{\tau}$	0.0553	0.0561 ± 0.0075	z_{re}	7.79	7.86 ± 0.75	$H(0.61)$	95.291	95.28 ± 0.24
$\boldsymbol{\ln(10^{10}A_s)}$	3.0442	3.046 ± 0.015	$10^9 A_s$	2.0992	2.104 ± 0.032	$D_M(0.61)$	2305.6	2306 ± 11
$\boldsymbol{n_s}$	0.96720	0.9657 ± 0.0043	$10^9 A_s e^{-2\tau}$	1.8795	1.880 ± 0.011	$H(2.33)$	235.81	235.85 ± 0.72
$\boldsymbol{dn_s/d\ln k}$	−0.0008	-0.0029 ± 0.0074	D_{40}	1223.0	1221 ± 19	$D_M(2.33)$	5765.1	5766 ± 13
$\boldsymbol{y_{cal}}$	1.00066	1.0007 ± 0.0025	D_{220}	5722.7	5725 ± 40	$f\sigma_8(0.15)$	0.4553	0.4556 ± 0.0061
$\boldsymbol{A_{217}^{CIB}}$	48.8	48 ± 7	D_{810}	2538.8	2538 ± 14	$\sigma_8(0.15)$	0.7476	0.7477 ± 0.0056
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.32	—	D_{1420}	816.8	815.3 ± 5.1	$f\sigma_8(0.38)$	0.4739	0.4741 ± 0.0051
$\boldsymbol{A_{143}^{tSZ}}$	7.02	5.0 ± 2.1	D_{2000}	230.43	229.8 ± 1.9	$\sigma_8(0.38)$	0.66284	0.6629 ± 0.0049
$\boldsymbol{A_{100}^{PS}}$	254.5	264 ± 28	$n_{s,0.002}$	0.9699	0.975 ± 0.023	$f\sigma_8(0.51)$	0.47261	0.4728 ± 0.0045
$\boldsymbol{A_{143}^{PS}}$	49.0	49 ± 8	Y_P	0.245350	$0.245344^{+0.000094}_{-0.000080}$	$\sigma_8(0.51)$	0.62036	0.6204 ± 0.0046
$\boldsymbol{A_{143\times217}^{PS}}$	46.7	43 ± 9	Y_P^{BBN}	0.246676	$0.246670^{+0.000094}_{-0.000080}$	$f\sigma_8(0.61)$	0.46774	0.4679 ± 0.0042
$\boldsymbol{A_{217}^{PS}}$	119.1	114 ± 10	10^5D/H	2.6067	2.609 ± 0.040	$\sigma_8(0.61)$	0.59032	0.5903 ± 0.0044
$\boldsymbol{A^{kSZ}}$	0.01	< 5.08	Age/Gyr	13.8022	13.803 ± 0.029	$f\sigma_8(2.33)$	0.29769	0.2977 ± 0.0023
$\boldsymbol{A_{100}^{dustTT}}$	8.86	9.0 ± 1.8	z_*	1089.976	1089.99 ± 0.30	$\sigma_8(2.33)$	0.30696	0.3069 ± 0.0024
$\boldsymbol{A_{143}^{dustTT}}$	10.79	10.7 ± 1.8	r_*	144.769	144.76 ± 0.30	f_{2000}^{143}	30.14	31.4 ± 3.2
$\boldsymbol{A_{143\times217}^{dustTT}}$	19.35	18.4 ± 3.3	$100\theta_*$	1.041200	1.04119 ± 0.00041	$f_{2000}^{143\times217}$	33.07	33.7 ± 2.2
$\boldsymbol{A_{217}^{dustTT}}$	94.5	93.4 ± 7.3	$D_M(z_*)$/Gpc	13.9041	13.903 ± 0.030	f_{2000}^{217}	107.56	108.2 ± 2.1
$\boldsymbol{c_{100}}$	0.99965	0.99962 ± 0.00061	z_{drag}	1059.589	1059.59 ± 0.49	$\chi^2_{lensing}$	8.883	9.35 ± 0.75
$\boldsymbol{c_{217}}$	0.99825	0.99826 ± 0.00063	r_{drag}	147.476	147.47 ± 0.34	χ^2_{simall}	396.19	397.2 ± 1.8
H_0	67.632	67.60 ± 0.50	k_D	0.140377	0.14038 ± 0.00047	χ^2_{lowl}	22.70	22.8 ± 1.9
Ω_Λ	0.6897	0.6892 ± 0.0066	$100\theta_D$	0.160958	0.16097 ± 0.00028	χ^2_{plik}	759.9	772.4 ± 5.5
Ω_m	0.3103	0.3108 ± 0.0066	z_{eq}	3376.2	3378 ± 26	χ^2_{6DF}	0.0230	0.056 ± 0.069
$\Omega_m h^2$	0.14193	0.1420 ± 0.0011	k_{eq}	0.010305	0.010309 ± 0.000079	χ^2_{MGS}	1.279	1.30 ± 0.46
$\Omega_m h^3$	0.095989	0.09598 ± 0.00049	$100\theta_{eq}$	0.81772	0.8175 ± 0.0047	$\chi^2_{DR12BAO}$	4.23	4.8 ± 1.5
σ_8	0.8089	0.8091 ± 0.0062	$100\theta_{s,eq}$	0.45178	0.4517 ± 0.0025	χ^2_{prior}	1.39	7.4 ± 3.7
S_8	0.8227	0.823 ± 0.012	$H(0.15)$	72.898	72.87 ± 0.43	χ^2_{CMB}	1187.7	1201.8 ± 5.6
$\sigma_8\Omega_m^{0.5}$	0.4506	0.4510 ± 0.0065	$D_M(0.15)$	641.09	641.4 ± 4.3	χ^2_{BAO}	5.53	6.1 ± 1.2
$\sigma_8\Omega_m^{0.25}$	0.6037	0.6041 ± 0.0062	$H(0.38)$	82.983	82.96 ± 0.33			

Best-fit $\chi^2_{eff} = 1194.63$; $\Delta\chi^2_{eff} = -0.05$; $\bar{\chi}^2_{eff} = 1215.34$; $\Delta\bar{\chi}^2_{eff} = 0.61$; $R - 1 = 0.01612$

χ^2_{eff}: BAO - 6DF: 0.02 (Δ -0.01) MGS: 1.28 (Δ 0.06) DR12BAO: 4.23 (Δ -0.15) CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.88 (Δ 0.01) simall_100x143_offlike5_EE_Aplanck 396.19 (Δ 0.09) commander_dx12_v3_2_29: 22.70 (Δ -0.26) plik_rd12_HM_v22_TT: 759.95 (Δ 0.14)

12.5 base_nrun_plikHM_TT_lowl_lowE_post_Riess18

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022390	0.02240 ± 0.00023	$\sigma_8\Omega_m^{0.25}$	0.5941	0.595 ± 0.010	$D_M(0.15)$	634.5	634.7 ± 6.4
$\boldsymbol{\Omega_c h^2}$	0.11735	0.1175 ± 0.0017	$\sigma_8/h^{0.5}$	0.9706	0.972 ± 0.014	$H(0.38)$	83.47	83.47 ± 0.49
$\boldsymbol{100\theta_{MC}}$	1.041223	1.04125 ± 0.00045	$r_{drag}h$	101.10	101.0 ± 1.3	$D_M(0.38)$	1516.0	1516 ± 13
$\boldsymbol{\tau}$	0.0562	0.0570 ± 0.0085	$\langle d^2\rangle^{1/2}$	2.3994	2.400 ± 0.034	$H(0.51)$	90.067	90.07 ± 0.40
$\boldsymbol{\ln(10^{10}A_s)}$	3.0418	3.044 ± 0.018	z_{re}	7.83	$7.89^{+0.86}_{-0.78}$	$D_M(0.51)$	1965.7	1966 ± 15
$\boldsymbol{n_s}$	0.9709	0.9699 ± 0.0054	$10^9 A_s$	2.0942	2.100 ± 0.037	$H(0.61)$	95.592	95.60 ± 0.33
$\boldsymbol{dn_s/d\ln k}$	−0.0017	-0.0041 ± 0.0076	$10^9 A_s e^{-2\tau}$	1.8716	1.873 ± 0.013	$D_M(0.61)$	2288.8	2289 ± 16
$\boldsymbol{y_{cal}}$	1.00047	1.0007 ± 0.0026	D_{40}	1212.2	1209 ± 21	$H(2.33)$	234.86	235.0 ± 1.1
$\boldsymbol{A_{217}^{CIB}}$	49.2	48 ± 7	D_{220}	5728.4	5731 ± 39	$D_M(2.33)$	5752.4	5752 ± 15
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.26	—	D_{810}	2536.5	2537 ± 14	$f\sigma_8(0.15)$	0.4451	0.446 ± 0.010
$\boldsymbol{A_{143}^{tSZ}}$	7.10	$5.2^{+2.3}_{-2.1}$	D_{1420}	817.2	816.6 ± 5.3	$\sigma_8(0.15)$	0.7430	0.7435 ± 0.0075
$\boldsymbol{A_{100}^{PS}}$	255.2	262 ± 28	D_{2000}	230.61	230.3 ± 2.0	$f\sigma_8(0.38)$	0.4659	0.4664 ± 0.0083
$\boldsymbol{A_{143}^{PS}}$	47.4	48 ± 8	$n_{s,0.002}$	0.9764	0.983 ± 0.024	$\sigma_8(0.38)$	0.6599	0.6603 ± 0.0062
$\boldsymbol{A_{143\times217}^{PS}}$	44.4	43 ± 9	Y_P	0.245403	0.245405 ± 0.000092	$f\sigma_8(0.51)$	0.4658	0.4663 ± 0.0073
$\boldsymbol{A_{217}^{PS}}$	117.6	114 ± 11	Y_P^{BBN}	0.246730	0.246731 ± 0.000092	$\sigma_8(0.51)$	0.6181	0.6184 ± 0.0057
$\boldsymbol{A^{kSZ}}$	0.00	< 4.81	10^5D/H	2.5817	2.580 ± 0.042	$f\sigma_8(0.61)$	0.4618	0.4623 ± 0.0066
$\boldsymbol{A_{100}^{dustTT}}$	8.91	9.1 ± 1.8	Age/Gyr	13.7747	13.773 ± 0.035	$\sigma_8(0.61)$	0.5884	0.5888 ± 0.0054
$\boldsymbol{A_{143}^{dustTT}}$	10.84	10.8 ± 1.8	z_*	1089.661	1089.66 ± 0.36	$f\sigma_8(2.33)$	0.29717	0.2973 ± 0.0027
$\boldsymbol{A_{143\times217}^{dustTT}}$	19.33	18.5 ± 3.3	r_*	145.106	145.07 ± 0.43	$\sigma_8(2.33)$	0.30689	0.3070 ± 0.0028
$\boldsymbol{A_{217}^{dustTT}}$	94.4	93.6 ± 7.2	$100\theta_*$	1.041414	1.04144 ± 0.00045	f_{2000}^{143}	29.95	31.0 ± 3.1
$\boldsymbol{c_{100}}$	0.99965	0.99962 ± 0.00059	$D_M(z_*)$/Gpc	13.9336	13.929 ± 0.040	$f_{2000}^{143\times217}$	32.85	33.3 ± 2.2
$\boldsymbol{c_{217}}$	0.99827	0.99823 ± 0.00064	z_{drag}	1059.780	1059.83 ± 0.51	f_{2000}^{217}	107.31	107.9 ± 2.1
H_0	68.42	68.40 ± 0.77	r_{drag}	147.776	147.73 ± 0.45	χ^2_{simall}	396.20	397.4 ± 2.0
Ω_Λ	0.7001	$0.699^{+0.011}_{-0.0093}$	k_D	0.14016	0.14022 ± 0.00055	χ^2_{lowl}	21.84	22.0 ± 1.6
Ω_m	0.2999	$0.3006^{+0.0093}_{-0.011}$	$100\theta_D$	0.160864	0.16085 ± 0.00029	χ^2_{plik}	762.8	775.9 ± 6.3
$\Omega_m h^2$	0.14038	0.1405 ± 0.0017	z_{eq}	3339.2	3343 ± 40	$\chi^2_{H073p45}$	9.20	9.5 ± 2.9
$\Omega_m h^3$	0.096042	0.09610 ± 0.00052	k_{eq}	0.010192	0.01020 ± 0.00012	χ^2_{prior}	1.43	7.5 ± 3.7
σ_8	0.8028	0.8034 ± 0.0087	$100\theta_{eq}$	0.8250	0.8246 ± 0.0075	χ^2_{CMB}	1180.9	1195.2 ± 6.1
S_8	0.8027	0.804 ± 0.020	$100\theta_{s,eq}$	0.45549	0.4552 ± 0.0039			
$\sigma_8\Omega_m^{0.5}$	0.4397	0.440 ± 0.011	$H(0.15)$	73.57	73.56 ± 0.66			

Best-fit $\chi^2_{eff} = 1191.49$; $\Delta\chi^2_{eff} = -0.08$; $\bar{\chi}^2_{eff} = 1212.16$; $\Delta\bar{\chi}^2_{eff} = 0.08$; $R - 1 = 0.05554$

χ^2_{eff}: CMB - simall_100x143_offlike5_EE_Aplanck_B: 396.20 (Δ 0.13) commander_dx12_v3_2_29: 21.84 (Δ -0.25) plik_rd12_HM_v22_TT: 762.82 (Δ -0.20) Hubble - H073p45: 9.20 (Δ 0.21)

12.6 base_nrun_plikHM_TT_lowl_lowE_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02217 ± 0.00023	$\sigma_8\Omega_m^{0.5}$	0.461 ± 0.013	$100\theta_{s,eq}$	0.4482 ± 0.0046
$\boldsymbol{\Omega_c h^2}$	0.1207 ± 0.0021	$\sigma_8\Omega_m^{0.25}$	0.612 ± 0.012	$H(0.15)$	72.29 ± 0.78
$\boldsymbol{100\theta_{MC}}$	1.04079 ± 0.00047	$\sigma_8/h^{0.5}$	0.994 ± 0.016	$D_M(0.15)$	647.3 ± 7.9
$\boldsymbol{\tau}$	$0.0549^{+0.0055}_{-0.0083}$	$r_{drag}h$	98.5 ± 1.6	$H(0.38)$	82.56 ± 0.56
$\boldsymbol{\ln(10^{10}A_s)}$	$3.047^{+0.014}_{-0.017}$	$\langle d^2\rangle^{1/2}$	2.452 ± 0.038	$D_M(0.38)$	1542 ± 16
$\boldsymbol{n_s}$	0.9621 ± 0.0059	z_{re}	$7.78^{+0.61}_{-0.81}$	$H(0.51)$	89.36 ± 0.44
$\boldsymbol{dn_s/d\ln k}$	-0.0046 ± 0.0075	10^9A_s	$2.106^{+0.028}_{-0.035}$	$D_M(0.51)$	1996 ± 18
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	$10^9A_se^{-2\tau}$	1.887 ± 0.014	$H(0.61)$	95.05 ± 0.35
$\boldsymbol{A^{CIB}_{217}}$	48 ± 7	D_{40}	1224 ± 21	$D_M(0.61)$	2321 ± 20
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{220}	5713 ± 41	$H(2.33)$	236.8 ± 1.3
$\boldsymbol{A^{tSZ}_{143}}$	4.9 ± 2.0	D_{810}	2538 ± 14	$D_M(2.33)$	5775 ± 16
$\boldsymbol{A^{PS}_{100}}$	266 ± 29	D_{1420}	813.9 ± 5.3	$f\sigma_8(0.15)$	0.464 ± 0.012
$\boldsymbol{A^{PS}_{143}}$	50 ± 8	D_{2000}	229.2 ± 1.9	$\sigma_8(0.15)$	0.7507 ± 0.0071
$\boldsymbol{A^{PS}_{143\times217}}$	44 ± 9	$n_{s,0.002}$	0.977 ± 0.023	$f\sigma_8(0.38)$	0.4807 ± 0.0096
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	Y_P	$0.24531^{+0.00011}_{-0.000089}$	$\sigma_8(0.38)$	0.6645 ± 0.0055
$\boldsymbol{A^{kSZ}}$	< 5.29	Y_P^{BBN}	$0.24663^{+0.00011}_{-0.000089}$	$f\sigma_8(0.51)$	0.4782 ± 0.0081
$\boldsymbol{A^{dustTT}_{100}}$	9.0 ± 1.8	10^5D/H	2.624 ± 0.044	$\sigma_8(0.51)$	$0.6214^{+0.0046}_{-0.0052}$
$\boldsymbol{A^{dustTT}_{143}}$	10.8 ± 1.8	Age/Gyr	13.824 ± 0.037	$f\sigma_8(0.61)$	0.4725 ± 0.0072
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.3 ± 3.3	z_*	1090.24 ± 0.41	$\sigma_8(0.61)$	$0.5911^{+0.0042}_{-0.0049}$
$\boldsymbol{A^{dustTT}_{217}}$	93.3 ± 7.3	r_*	144.41 ± 0.50	$f\sigma_8(2.33)$	$0.2977^{+0.0020}_{-0.0025}$
$\boldsymbol{c_{100}}$	0.99961 ± 0.00062	$100\theta_*$	1.04099 ± 0.00046	$\sigma_8(2.33)$	$0.3065^{+0.0020}_{-0.0026}$
$\boldsymbol{c_{217}}$	0.99827 ± 0.00062	$D_M(z_*)$/Gpc	13.872 ± 0.046	f^{143}_{2000}	32.0 ± 3.2
H_0	66.91 ± 0.91	z_{drag}	1059.52 ± 0.50	$f^{143\times217}_{2000}$	34.1 ± 2.2
Ω_Λ	0.679 ± 0.013	r_{drag}	147.14 ± 0.51	f^{217}_{2000}	108.6 ± 2.1
Ω_m	0.321 ± 0.013	k_D	0.14066 ± 0.00057	χ^2_{simall}	397.0 ± 1.7
$\Omega_m h^2$	0.1435 ± 0.0020	$100\theta_D$	0.16100 ± 0.00029	χ^2_{lowl}	23.0 ± 2.0
$\Omega_m h^3$	0.09601 ± 0.00049	z_{eq}	3414 ± 48	χ^2_{plik}	772.6 ± 5.7
σ_8	0.8134 ± 0.0086	k_{eq}	0.01042 ± 0.00015	χ^2_{prior}	7.3 ± 3.7
S_8	0.841 ± 0.024	$100\theta_{eq}$	0.8107 ± 0.0089	χ^2_{CMB}	1192.6 ± 5.5

$\bar{\chi}^2_{eff} = 1199.98$; $\Delta\bar{\chi}^2_{eff} = 0.66$; $R - 1 = 0.00614$

12.7 base_nrun_plikHM_TT_lowl_lowE_post_BAO_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_{\rm b}h^2}$	0.02226 ± 0.00021	$\sigma_8/h^{0.5}$	0.983 ± 0.011	$D_{\rm M}(0.38)$	1528.9 ± 9.3
$\boldsymbol{\Omega_{\rm c}h^2}$	0.1190 ± 0.0012	$r_{\rm drag}h$	99.79 ± 0.93	$H(0.51)$	89.70 ± 0.29
$\boldsymbol{100\theta_{\rm MC}}$	1.04101 ± 0.00042	$\langle d^2\rangle^{1/2}$	2.426 ± 0.028	$D_{\rm M}(0.51)$	1981 ± 11
$\boldsymbol{\tau}$	$0.0562^{+0.0060}_{-0.0082}$	$z_{\rm re}$	$7.86^{+0.64}_{-0.80}$	$H(0.61)$	95.30 ± 0.25
$\boldsymbol{\ln(10^{10}A_{\rm s})}$	$3.046^{+0.014}_{-0.017}$	$10^9 A_{\rm s}$	$2.103^{+0.029}_{-0.036}$	$D_{\rm M}(0.61)$	2305 ± 12
$\boldsymbol{n_{\rm s}}$	0.9661 ± 0.0045	$10^9 A_{\rm s}e^{-2\tau}$	1.879 ± 0.012	$H(2.33)$	235.78 ± 0.81
$\boldsymbol{{\rm d}n_{\rm s}/{\rm d}\ln k}$	-0.0038 ± 0.0074	D_{40}	1218 ± 20	$D_{\rm M}(2.33)$	5765 ± 13
$\boldsymbol{y_{\rm cal}}$	1.0006 ± 0.0025	D_{220}	5721 ± 41	$f\sigma_8(0.15)$	0.4548 ± 0.0075
$\boldsymbol{A_{217}^{\rm CIB}}$	48 ± 7	D_{810}	2537 ± 14	$\sigma_8(0.15)$	$0.7472^{+0.0060}_{-0.0068}$
$\boldsymbol{\xi^{\rm tSZ\times CIB}}$	—	D_{1420}	815.0 ± 5.1	$f\sigma_8(0.38)$	0.4734 ± 0.0063
$\boldsymbol{A_{143}^{\rm tSZ}}$	5.0 ± 2.1	D_{2000}	229.6 ± 1.9	$\sigma_8(0.38)$	$0.6625^{+0.0050}_{-0.0058}$
$\boldsymbol{A_{100}^{\rm PS}}$	264 ± 29	$n_{\rm s,0.002}$	0.978 ± 0.023	$f\sigma_8(0.51)$	0.4722 ± 0.0056
$\boldsymbol{A_{143}^{\rm PS}}$	49 ± 8	$Y_{\rm P}$	$0.245347^{+0.000094}_{-0.000080}$	$\sigma_8(0.51)$	$0.6200^{+0.0046}_{-0.0054}$
$\boldsymbol{A_{143\times217}^{\rm PS}}$	43 ± 9	$Y_{\rm P}^{\rm BBN}$	$0.246674^{+0.000095}_{-0.000080}$	$f\sigma_8(0.61)$	0.4673 ± 0.0052
$\boldsymbol{A_{217}^{\rm PS}}$	114 ± 10	$10^5{\rm D/H}$	2.607 ± 0.040	$\sigma_8(0.61)$	$0.5900^{+0.0043}_{-0.0051}$
$\boldsymbol{A^{\rm kSZ}}$	< 5.18	Age/Gyr	13.801 ± 0.029	$f\sigma_8(2.33)$	$0.2976^{+0.0021}_{-0.0025}$
$\boldsymbol{A_{100}^{{\rm dust}TT}}$	9.0 ± 1.8	z_*	1089.97 ± 0.31	$\sigma_8(2.33)$	$0.3068^{+0.0022}_{-0.0027}$
$\boldsymbol{A_{143}^{{\rm dust}TT}}$	10.8 ± 1.8	r_*	144.78 ± 0.34	f_{2000}^{143}	31.5 ± 3.2
$\boldsymbol{A_{143\times217}^{{\rm dust}TT}}$	18.4 ± 3.3	$100\theta_*$	1.04120 ± 0.00042	$f_{2000}^{143\times217}$	33.8 ± 2.2
$\boldsymbol{A_{217}^{{\rm dust}TT}}$	93.4 ± 7.3	$D_{\rm M}(z_*)/{\rm Gpc}$	13.905 ± 0.033	f_{2000}^{217}	108.3 ± 2.1
$\boldsymbol{c_{100}}$	0.99961 ± 0.00061	$z_{\rm drag}$	1059.61 ± 0.49	$\chi^2_{\rm simall}$	397.1 ± 1.9
$\boldsymbol{c_{217}}$	0.99827 ± 0.00063	$r_{\rm drag}$	147.49 ± 0.37	$\chi^2_{\rm lowl}$	22.6 ± 1.8
H_0	67.66 ± 0.54	$k_{\rm D}$	0.14036 ± 0.00050	$\chi^2_{\rm plik}$	773.0 ± 5.7
Ω_Λ	0.6900 ± 0.0073	$100\theta_{\rm D}$	0.16096 ± 0.00028	$\chi^2_{\rm 6DF}$	0.057 ± 0.075
$\Omega_{\rm m}$	0.3100 ± 0.0073	$z_{\rm eq}$	3375 ± 29	$\chi^2_{\rm MGS}$	1.36 ± 0.52
$\Omega_{\rm m}h^2$	0.1419 ± 0.0012	$k_{\rm eq}$	0.010301 ± 0.000089	$\chi^2_{\rm DR12BAO}$	4.7 ± 1.6
$\Omega_{\rm m}h^3$	0.09598 ± 0.00050	$100\theta_{\rm eq}$	0.8180 ± 0.0053	$\chi^2_{\rm prior}$	7.4 ± 3.7
σ_8	$0.8084^{+0.0069}_{-0.0077}$	$100\theta_{\rm s,eq}$	0.4519 ± 0.0028	$\chi^2_{\rm BAO}$	6.2 ± 1.3
S_8	0.822 ± 0.015	$H(0.15)$	72.92 ± 0.47	$\chi^2_{\rm CMB}$	1192.6 ± 5.5
$\sigma_8\Omega_{\rm m}^{0.5}$	0.4501 ± 0.0080	$D_{\rm M}(0.15)$	640.9 ± 4.6		
$\sigma_8\Omega_{\rm m}^{0.25}$	0.6032 ± 0.0077	$H(0.38)$	83.00 ± 0.35		

$\bar{\chi}^2_{\rm eff} = 1206.22$; $\Delta\bar{\chi}^2_{\rm eff} = 0.46$; $R - 1 = 0.01231$

12.8 base_nrun_plikHM_TT_lowl_lowE_post_lensing_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02219 ± 0.00023	$\sigma_8\Omega_m^{0.25}$	0.6086 ± 0.0078	$D_M(0.15)$	645.1 ± 6.1
$\boldsymbol{\Omega_c h^2}$	0.1200 ± 0.0015	$\sigma_8/h^{0.5}$	0.990 ± 0.011	$H(0.38)$	82.70 ± 0.45
$\boldsymbol{100\theta_{MC}}$	1.04084 ± 0.00045	$r_{drag}h$	98.9 ± 1.2	$D_M(0.38)$	1537 ± 12
$\boldsymbol{\tau}$	$0.0548^{+0.0055}_{-0.0081}$	$\langle d^2\rangle^{1/2}$	2.444 ± 0.027	$H(0.51)$	89.47 ± 0.36
$\boldsymbol{\ln(10^{10}A_s)}$	$3.045^{+0.012}_{-0.015}$	z_{re}	$7.76^{+0.60}_{-0.78}$	$D_M(0.51)$	1991 ± 14
$\boldsymbol{n_s}$	0.9635 ± 0.0050	$10^9 A_s$	$2.101^{+0.026}_{-0.032}$	$H(0.61)$	95.12 ± 0.30
$\boldsymbol{dn_s/d\ln k}$	-0.0033 ± 0.0074	$10^9 A_s e^{-2\tau}$	1.883 ± 0.012	$D_M(0.61)$	2316 ± 15
$\boldsymbol{y_{cal}}$	1.0004 ± 0.0025	D_{40}	1224 ± 20	$H(2.33)$	236.41 ± 0.96
$\boldsymbol{A_{217}^{CIB}}$	48 ± 7	D_{220}	5717 ± 41	$D_M(2.33)$	5772 ± 15
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{810}	2537 ± 14	$f\sigma_8(0.15)$	0.4607 ± 0.0082
$\boldsymbol{A_{143}^{tSZ}}$	5.0 ± 2.1	D_{1420}	814.2 ± 5.2	$\sigma_8(0.15)$	0.7491 ± 0.0052
$\boldsymbol{A_{100}^{PS}}$	265 ± 28	D_{2000}	229.3 ± 1.9	$f\sigma_8(0.38)$	0.4779 ± 0.0064
$\boldsymbol{A_{143}^{PS}}$	50 ± 8	$n_{s,0.002}$	0.974 ± 0.023	$\sigma_8(0.38)$	$0.6634^{+0.0042}_{-0.0047}$
$\boldsymbol{A_{143\times217}^{PS}}$	43 ± 9	Y_P	$0.24532^{+0.00011}_{-0.000085}$	$f\sigma_8(0.51)$	0.4758 ± 0.0054
$\boldsymbol{A_{217}^{PS}}$	114 ± 10	Y_P^{BBN}	$0.24664^{+0.00011}_{-0.000085}$	$\sigma_8(0.51)$	$0.6206^{+0.0038}_{-0.0044}$
$\boldsymbol{A^{kSZ}}$	< 5.19	10^5D/H	2.620 ± 0.043	$f\sigma_8(0.61)$	0.4704 ± 0.0048
$\boldsymbol{A_{100}^{dustTT}}$	9.0 ± 1.8	Age/Gyr	13.818 ± 0.033	$\sigma_8(0.61)$	$0.5904^{+0.0036}_{-0.0042}$
$\boldsymbol{A_{143}^{dustTT}}$	10.7 ± 1.8	z_*	1090.15 ± 0.36	$f\sigma_8(2.33)$	$0.2975^{+0.0019}_{-0.0023}$
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.4 ± 3.3	r_*	144.56 ± 0.38	$\sigma_8(2.33)$	$0.3065^{+0.0021}_{-0.0025}$
$\boldsymbol{A_{217}^{dustTT}}$	93.3 ± 7.3	$100\theta_*$	1.04104 ± 0.00044	f_{2000}^{143}	31.7 ± 3.2
$\boldsymbol{c_{100}}$	0.99961 ± 0.00061	$D_M(z_*)$/Gpc	13.886 ± 0.035	$f_{2000}^{143\times217}$	33.9 ± 2.2
$\boldsymbol{c_{217}}$	0.99827 ± 0.00063	z_{drag}	1059.52 ± 0.50	f_{2000}^{217}	108.4 ± 2.1
H_0	67.17 ± 0.70	r_{drag}	147.28 ± 0.40	$\chi^2_{lensing}$	9.58 ± 0.97
Ω_Λ	0.6831 ± 0.0097	k_D	0.14053 ± 0.00050	χ^2_{simall}	396.9 ± 1.6
Ω_m	0.3169 ± 0.0097	$100\theta_D$	0.16100 ± 0.00029	χ^2_{lowl}	23.1 ± 2.0
$\Omega_m h^2$	0.1429 ± 0.0015	z_{eq}	3399 ± 35	χ^2_{plik}	772.1 ± 5.5
$\Omega_m h^3$	0.09596 ± 0.00049	k_{eq}	0.01037 ± 0.00011	χ^2_{prior}	7.3 ± 3.7
σ_8	0.8112 ± 0.0060	$100\theta_{eq}$	0.8134 ± 0.0066	χ^2_{CMB}	1201.7 ± 5.5
S_8	0.834 ± 0.016	$100\theta_{s,eq}$	0.4495 ± 0.0034		
$\sigma_8\Omega_m^{0.5}$	0.4566 ± 0.0090	$H(0.15)$	72.50 ± 0.60		

$\bar{\chi}^2_{eff} = 1209.03$; $\Delta\bar{\chi}^2_{eff} = 0.87$; $R - 1 = 0.01103$

12.9 base_nrun_plikHM_TT_lowl_lowE_post_BAO_lensing_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_{\rm b}h^2}$	0.02226 ± 0.00021	$\sigma_8/h^{0.5}$	0.9844 ± 0.0088	$D_{\rm M}(0.38)$	1529.5 ± 8.6
$\boldsymbol{\Omega_{\rm c}h^2}$	0.1191 ± 0.0011	$r_{\rm drag}h$	99.72 ± 0.83	$H(0.51)$	89.68 ± 0.28
$\boldsymbol{100\theta_{\rm MC}}$	1.04099 ± 0.00042	$\langle d^2\rangle^{1/2}$	2.432 ± 0.023	$D_{\rm M}(0.51)$	1982 ± 10
$\boldsymbol{\tau}$	$0.0568^{+0.0062}_{-0.0075}$	$z_{\rm re}$	7.93 ± 0.68	$H(0.61)$	95.29 ± 0.24
$\boldsymbol{\ln(10^{10}A_{\rm s})}$	$3.047^{+0.013}_{-0.015}$	$10^9 A_{\rm s}$	$2.106^{+0.028}_{-0.032}$	$D_{\rm M}(0.61)$	2306 ± 11
$\boldsymbol{n_{\rm s}}$	0.9658 ± 0.0043	$10^9 A_{\rm s}e^{-2\tau}$	1.880 ± 0.011	$H(2.33)$	235.83 ± 0.71
$\boldsymbol{{\rm d}n_{\rm s}/{\rm d}\ln k}$	-0.0031 ± 0.0073	D_{40}	1221 ± 19	$D_{\rm M}(2.33)$	5765 ± 12
$\boldsymbol{y_{\rm cal}}$	1.0007 ± 0.0025	D_{220}	5725 ± 40	$f\sigma_8(0.15)$	0.4557 ± 0.0061
$\boldsymbol{A^{\rm CIB}_{217}}$	48 ± 7	D_{810}	2538 ± 14	$\sigma_8(0.15)$	0.7481 ± 0.0053
$\boldsymbol{\xi^{\rm tSZ\times CIB}}$	—	D_{1420}	815.3 ± 5.1	$f\sigma_8(0.38)$	0.4743 ± 0.0050
$\boldsymbol{A^{\rm tSZ}_{143}}$	5.1 ± 2.1	D_{2000}	229.8 ± 1.9	$\sigma_8(0.38)$	$0.6632^{+0.0044}_{-0.0049}$
$\boldsymbol{A^{\rm PS}_{100}}$	264 ± 28	$n_{\rm s,0.002}$	0.976 ± 0.023	$f\sigma_8(0.51)$	0.4730 ± 0.0045
$\boldsymbol{A^{\rm PS}_{143}}$	49 ± 8	$Y_{\rm P}$	$0.245345^{+0.000093}_{-0.000080}$	$\sigma_8(0.51)$	$0.6207^{+0.0041}_{-0.0046}$
$\boldsymbol{A^{\rm PS}_{143\times217}}$	43 ± 9	$Y^{\rm BBN}_{\rm P}$	$0.246672^{+0.000094}_{-0.000080}$	$f\sigma_8(0.61)$	0.4681 ± 0.0041
$\boldsymbol{A^{\rm PS}_{217}}$	114 ± 10	$10^5{\rm D/H}$	2.608 ± 0.040	$\sigma_8(0.61)$	$0.5906^{+0.0039}_{-0.0044}$
$\boldsymbol{A^{\rm kSZ}}$	< 5.08	Age/Gyr	13.803 ± 0.029	$f\sigma_8(2.33)$	$0.2979^{+0.0020}_{-0.0023}$
$\boldsymbol{A^{{\rm dust}TT}_{100}}$	9.0 ± 1.8	z_*	1089.98 ± 0.30	$\sigma_8(2.33)$	$0.3071^{+0.0021}_{-0.0024}$
$\boldsymbol{A^{{\rm dust}TT}_{143}}$	10.7 ± 1.8	r_*	144.76 ± 0.30	f^{143}_{2000}	31.4 ± 3.2
$\boldsymbol{A^{{\rm dust}TT}_{143\times217}}$	18.4 ± 3.3	$100\theta_*$	1.04119 ± 0.00041	$f^{143\times217}_{2000}$	33.7 ± 2.2
$\boldsymbol{A^{{\rm dust}TT}_{217}}$	93.4 ± 7.3	$D_{\rm M}(z_*)/{\rm Gpc}$	13.904 ± 0.030	f^{217}_{2000}	108.2 ± 2.1
$\boldsymbol{c_{100}}$	0.99962 ± 0.00061	$z_{\rm drag}$	1059.60 ± 0.49	$\chi^2_{\rm lensing}$	9.32 ± 0.71
$\boldsymbol{c_{217}}$	0.99826 ± 0.00063	$r_{\rm drag}$	147.47 ± 0.34	$\chi^2_{\rm simall}$	397.2 ± 1.8
H_0	67.62 ± 0.49	$k_{\rm D}$	0.14038 ± 0.00047	$\chi^2_{\rm lowl}$	22.8 ± 1.9
Ω_Λ	0.6894 ± 0.0065	$100\theta_{\rm D}$	0.16096 ± 0.00028	$\chi^2_{\rm plik}$	772.4 ± 5.5
$\Omega_{\rm m}$	0.3106 ± 0.0065	$z_{\rm eq}$	3377 ± 26	$\chi^2_{\rm 6DF}$	0.054 ± 0.066
$\Omega_{\rm m}h^2$	0.1420 ± 0.0011	$k_{\rm eq}$	0.010307 ± 0.000078	$\chi^2_{\rm MGS}$	1.31 ± 0.46
$\Omega_{\rm m}h^3$	0.09599 ± 0.00049	$100\theta_{\rm eq}$	0.8176 ± 0.0047	$\chi^2_{\rm DR12BAO}$	4.7 ± 1.5
σ_8	0.8095 ± 0.0059	$100\theta_{\rm s,eq}$	0.4517 ± 0.0024	$\chi^2_{\rm prior}$	7.4 ± 3.7
S_8	0.824 ± 0.012	$H(0.15)$	72.89 ± 0.43	$\chi^2_{\rm CMB}$	1201.7 ± 5.5
$\sigma_8\Omega_{\rm m}^{0.5}$	0.4511 ± 0.0065	$D_{\rm M}(0.15)$	641.2 ± 4.2	$\chi^2_{\rm BAO}$	6.1 ± 1.2
$\sigma_8\Omega_{\rm m}^{0.25}$	0.6043 ± 0.0061	$H(0.38)$	82.97 ± 0.33		

$\bar{\chi}^2_{\rm eff} = 1215.17$; $\Delta\bar{\chi}^2_{\rm eff} = 0.60$; $R - 1 = 0.01603$

12.10 base_nrun_plikHM_TT_lowl_lowE_post_Riess18_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02241 ± 0.00023	$\sigma_8\Omega_m^{0.25}$	$0.5954^{+0.0092}_{-0.010}$	$D_M(0.15)$	634.6 ± 6.4
$\boldsymbol{\Omega_c h^2}$	$0.1175^{+0.0016}_{-0.0018}$	$\sigma_8/h^{0.5}$	0.972 ± 0.014	$H(0.38)$	83.48 ± 0.49
$\boldsymbol{100\theta_{MC}}$	1.04126 ± 0.00045	$r_{drag}h$	101.1 ± 1.3	$D_M(0.38)$	1516 ± 13
$\boldsymbol{\tau}$	$0.0580^{+0.0068}_{-0.0084}$	$\langle d^2\rangle^{1/2}$	2.402 ± 0.033	$H(0.51)$	90.08 ± 0.39
$\boldsymbol{\ln(10^{10}A_s)}$	$3.046^{+0.015}_{-0.017}$	z_{re}	7.99 ± 0.73	$D_M(0.51)$	1966 ± 15
$\boldsymbol{n_s}$	0.9700 ± 0.0054	$10^9 A_s$	$2.104^{+0.032}_{-0.036}$	$H(0.61)$	95.61 ± 0.33
$\boldsymbol{dn_s/d\ln k}$	-0.0043 ± 0.0076	$10^9 A_s e^{-2\tau}$	1.874 ± 0.013	$D_M(0.61)$	2289 ± 16
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0026	D_{40}	1209 ± 21	$H(2.33)$	$234.96^{+0.99}_{-1.1}$
$\boldsymbol{A^{CIB}_{217}}$	48 ± 7	D_{220}	5731 ± 39	$D_M(2.33)$	5751 ± 15
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{810}	2537 ± 14	$f\sigma_8(0.15)$	$0.4462^{+0.0093}_{-0.011}$
$\boldsymbol{A^{tSZ}_{143}}$	$5.2^{+2.3}_{-2.1}$	D_{1420}	$816.5^{+5.6}_{-5.1}$	$\sigma_8(0.15)$	0.7442 ± 0.0069
$\boldsymbol{A^{PS}_{100}}$	262 ± 28	D_{2000}	$230.3^{+2.1}_{-1.9}$	$f\sigma_8(0.38)$	$0.4668^{+0.0076}_{-0.0085}$
$\boldsymbol{A^{PS}_{143}}$	48 ± 8	$n_{s,0.002}$	0.984 ± 0.024	$\sigma_8(0.38)$	0.6609 ± 0.0057
$\boldsymbol{A^{PS}_{143\times217}}$	43 ± 9	Y_P	0.245406 ± 0.000092	$f\sigma_8(0.51)$	0.4668 ± 0.0070
$\boldsymbol{A^{PS}_{217}}$	114 ± 11	Y_P^{BBN}	0.246733 ± 0.000092	$\sigma_8(0.51)$	0.6190 ± 0.0052
$\boldsymbol{A^{kSZ}}$	< 4.82	10^5D/H	2.580 ± 0.042	$f\sigma_8(0.61)$	0.4627 ± 0.0063
$\boldsymbol{A^{dustTT}_{100}}$	9.1 ± 1.8	Age/Gyr	13.772 ± 0.035	$\sigma_8(0.61)$	0.5893 ± 0.0049
$\boldsymbol{A^{dustTT}_{143}}$	10.8 ± 1.8	z_*	1089.65 ± 0.36	$f\sigma_8(2.33)$	0.2976 ± 0.0024
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.5 ± 3.3	r_*	145.06 ± 0.43	$\sigma_8(2.33)$	$0.3073^{+0.0024}_{-0.0027}$
$\boldsymbol{A^{dustTT}_{217}}$	93.7 ± 7.2	$100\theta_*$	1.04145 ± 0.00045	f^{143}_{2000}	31.0 ± 3.1
$\boldsymbol{c_{100}}$	0.99962 ± 0.00060	$D_M(z_*)$/Gpc	13.929 ± 0.040	$f^{143\times217}_{2000}$	33.3 ± 2.2
$\boldsymbol{c_{217}}$	0.99824 ± 0.00064	z_{drag}	1059.84 ± 0.51	f^{217}_{2000}	107.9 ± 2.1
H_0	68.40 ± 0.76	r_{drag}	147.73 ± 0.45	χ^2_{simall}	397.4 ± 2.1
Ω_Λ	$0.699^{+0.011}_{-0.0093}$	k_D	0.14023 ± 0.00055	χ^2_{lowl}	21.9 ± 1.6
Ω_m	$0.3005^{+0.0093}_{-0.011}$	$100\theta_D$	$0.16085^{+0.00027}_{-0.00030}$	χ^2_{plik}	775.7 ± 6.3
$\Omega_m h^2$	$0.1405^{+0.0015}_{-0.0017}$	z_{eq}	3343^{+37}_{-41}	$\chi^2_{H073p45}$	9.5 ± 2.8
$\Omega_m h^3$	0.09611 ± 0.00052	k_{eq}	$0.01020^{+0.00011}_{-0.00013}$	χ^2_{prior}	7.5 ± 3.8
σ_8	0.8042 ± 0.0081	$100\theta_{eq}$	0.8246 ± 0.0075	χ^2_{CMB}	1195.0 ± 6.1
S_8	$0.805^{+0.018}_{-0.021}$	$100\theta_{s,eq}$	0.4552 ± 0.0039		
$\sigma_8\Omega_m^{0.5}$	$0.4408^{+0.0099}_{-0.011}$	$H(0.15)$	73.56 ± 0.66		

$\bar{\chi}^2_{eff} = 1211.96$; $\Delta\bar{\chi}^2_{eff} = 0.15$; $R - 1 = 0.05098$

12.11 base_nrun_plikHM_TTTEEE_lowl_lowE

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022392	0.02239 ± 0.00015	$\Omega_m h^2$	0.14339	0.1434 ± 0.0013	k_{eq}	0.010411	0.010410 ± 0.000094
$\boldsymbol{\Omega_c h^2}$	0.12035	0.1203 ± 0.0014	$\Omega_m h^3$	0.096415	0.09640 ± 0.00031	$100\theta_{eq}$	0.8117	0.8119 ± 0.0058
$\boldsymbol{100\theta_{MC}}$	1.040892	1.04090 ± 0.00032	σ_8	0.8122	0.8127 ± 0.0078	$100\theta_{s,eq}$	0.44855	0.4486 ± 0.0030
$\boldsymbol{\tau}$	0.0548	0.0558 ± 0.0080	S_8	0.8351	0.836 ± 0.016	$H(0.15)$	72.58	72.59 ± 0.51
$\boldsymbol{\ln(10^{10} A_s)}$	3.0469	3.049 ± 0.017	$\sigma_8 \Omega_m^{0.5}$	0.4574	0.4577 ± 0.0090	$D_M(0.15)$	644.4	644.3 ± 5.2
$\boldsymbol{n_s}$	0.96434	0.9635 ± 0.0046	$\sigma_8 \Omega_m^{0.25}$	0.6095	0.6099 ± 0.0086	$H(0.38)$	82.806	82.81 ± 0.37
$\boldsymbol{dn_s/d\ln k}$	-0.0047	-0.0055 ± 0.0067	$\sigma_8/h^{0.5}$	0.9905	0.991 ± 0.012	$D_M(0.38)$	1535.4	1535 ± 10
$\boldsymbol{y_{cal}}$	1.00040	1.0007 ± 0.0025	$r_{drag} h$	98.82	98.8 ± 1.0	$H(0.51)$	89.588	89.59 ± 0.29
$\boldsymbol{A_{217}^{CIB}}$	48.9	48 ± 7	$\langle d^2 \rangle^{1/2}$	2.4421	2.445 ± 0.029	$D_M(0.51)$	1988.0	1988 ± 12
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.24	—	z_{re}	7.73	7.81 ± 0.80	$H(0.61)$	95.256	95.26 ± 0.24
$\boldsymbol{A_{143}^{tSZ}}$	7.28	5.2 ± 2.0	$10^9 A_s$	2.1050	2.111 ± 0.036	$D_M(0.61)$	2312.6	2313 ± 13
$\boldsymbol{A_{100}^{PS}}$	253.9	263 ± 28	$10^9 A_s e^{-2\tau}$	1.8867	1.887 ± 0.012	$H(2.33)$	236.81	236.80 ± 0.82
$\boldsymbol{A_{143}^{PS}}$	46.8	48 ± 8	D_{40}	1220.4	1221 ± 19	$D_M(2.33)$	5763.9	5764 ± 11
$\boldsymbol{A_{143\times 217}^{PS}}$	43.9	42 ± 9	D_{220}	5728.0	5733 ± 39	$f\sigma_8(0.15)$	0.4615	0.4618 ± 0.0084
$\boldsymbol{A_{217}^{PS}}$	118.2	115 ± 10	D_{810}	2541.5	2542 ± 14	$\sigma_8(0.15)$	0.7499	0.7504 ± 0.0068
$\boldsymbol{A^{kSZ}}$	0.00	< 4.86	D_{1420}	816.82	816.3 ± 4.9	$f\sigma_8(0.38)$	0.4786	0.4789 ± 0.0069
$\boldsymbol{A_{100}^{dust TT}}$	8.93	8.9 ± 1.8	D_{2000}	230.48	230.2 ± 1.8	$\sigma_8(0.38)$	0.6642	0.6646 ± 0.0057
$\boldsymbol{A_{143}^{dust TT}}$	11.07	11.0 ± 1.8	$n_{s,0.002}$	0.9794	0.981 ± 0.021	$f\sigma_8(0.51)$	0.4766	0.4768 ± 0.0061
$\boldsymbol{A_{143\times 217}^{dust TT}}$	19.67	18.6 ± 3.3	Y_P	0.245404	$0.245400^{+0.000062}_{-0.000055}$	$\sigma_8(0.51)$	0.6213	0.6217 ± 0.0053
$\boldsymbol{A_{217}^{dust TT}}$	94.5	93.4 ± 7.3	Y_P^{BBN}	0.246731	$0.246726^{+0.000062}_{-0.000055}$	$f\sigma_8(0.61)$	0.4711	0.4714 ± 0.0056
$\boldsymbol{A_{100}^{dust TE}}$	0.1137	0.115 ± 0.038	10^5D/H	2.5814	2.583 ± 0.028	$\sigma_8(0.61)$	0.59101	0.5914 ± 0.0050
$\boldsymbol{A_{100\times 143}^{dust TE}}$	0.1350	0.134 ± 0.029	Age/Gyr	13.7975	13.798 ± 0.024	$f\sigma_8(2.33)$	0.29777	0.2980 ± 0.0025
$\boldsymbol{A_{100\times 217}^{dust TE}}$	0.482	0.482 ± 0.085	z_*	1089.924	1089.93 ± 0.27	$\sigma_8(2.33)$	0.30674	0.3070 ± 0.0026
$\boldsymbol{A_{143}^{dust TE}}$	0.226	0.224 ± 0.054	r_*	144.323	144.33 ± 0.31	f_{2000}^{143}	29.94	30.7 ± 3.1
$\boldsymbol{A_{143\times 217}^{dust TE}}$	0.667	0.665 ± 0.080	$100\theta_*$	1.041072	1.04108 ± 0.00031	$f_{2000}^{143\times 217}$	32.80	33.1 ± 2.2
$\boldsymbol{A_{217}^{dust TE}}$	2.085	2.09 ± 0.27	$D_M(z_*)$/Gpc	13.8629	13.864 ± 0.028	f_{2000}^{217}	107.41	107.8 ± 2.0
$\boldsymbol{c_{100}}$	0.99972	0.99969 ± 0.00061	z_{drag}	1060.009	1060.00 ± 0.31	χ^2_{simall}	396.07	397.3 ± 2.0
$\boldsymbol{c_{217}}$	0.99820	0.99822 ± 0.00062	r_{drag}	146.974	146.99 ± 0.30	χ^2_{lowl}	22.25	22.6 ± 1.6
H_0	67.24	67.25 ± 0.60	k_D	0.141009	0.14099 ± 0.00034	χ^2_{plik}	2345.3	2360.9 ± 6.0
Ω_Λ	0.6828	0.6828 ± 0.0084	$100\theta_D$	0.160712	0.16072 ± 0.00018	χ^2_{prior}	1.81	11.5 ± 4.6
Ω_m	0.3172	0.3172 ± 0.0084	z_{eq}	3411.2	3411 ± 31	χ^2_{CMB}	2763.6	2780.7 ± 5.9

Best-fit $\chi^2_{eff} = 2765.41$; $\Delta\chi^2_{eff} = -0.36$; $\bar{\chi}^2_{eff} = 2792.22$; $\Delta\bar{\chi}^2_{eff} = 0.45$; $R - 1 = 0.01212$

χ^2_{eff}: CMB - simall_100x143_offlike5_EE_Aplanck_B: 396.07 (Δ 0.02) commander_dx12_v3_2_29: 22.25 (Δ -1.00) plik_rd12_HM_v22b_TTTEEE: 2345.28 (Δ 0.63)

12.12 base_nrun_plikHM_TTTEEE_lowl_lowE_post_BAO

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022465	0.02245 ± 0.00014	σ_8	0.8102	0.8101 ± 0.0075	$D_M(0.15)$	640.32	640.8 ± 3.8
$\boldsymbol{\Omega_c h^2}$	0.11929	0.1194 ± 0.0010	S_8	0.8243	0.825 ± 0.013	$H(0.38)$	83.094	83.06 ± 0.29
$\boldsymbol{100\theta_{MC}}$	1.041005	1.04101 ± 0.00030	$\sigma_8\Omega_m^{0.5}$	0.4515	0.4520 ± 0.0071	$D_M(0.38)$	1527.3	1528.2 ± 7.7
$\boldsymbol{\tau}$	0.0566	$0.0568^{+0.0075}_{-0.0084}$	$\sigma_8\Omega_m^{0.25}$	0.6048	0.6051 ± 0.0073	$H(0.51)$	89.808	89.78 ± 0.23
$\boldsymbol{\ln(10^{10}A_s)}$	3.0483	3.049 ± 0.017	$\sigma_8/h^{0.5}$	0.9846	0.985 ± 0.011	$D_M(0.51)$	1978.7	1979.7 ± 9.1
$\boldsymbol{n_s}$	0.96736	0.9658 ± 0.0041	$r_{drag}h$	99.66	99.58 ± 0.78	$H(0.61)$	95.425	95.41 ± 0.19
$\boldsymbol{dn_s/d\ln k}$	−0.0034	-0.0049 ± 0.0068	$\langle d^2\rangle^{1/2}$	2.4295	2.431 ± 0.026	$D_M(0.61)$	2302.6	2303.7 ± 9.8
$\boldsymbol{y_{cal}}$	1.00057	1.0007 ± 0.0025	z_{re}	7.88	7.88 ± 0.81	$H(2.33)$	236.19	236.25 ± 0.62
$\boldsymbol{A_{217}^{CIB}}$	47.4	48 ± 7	$10^9 A_s$	2.1080	2.110 ± 0.037	$D_M(2.33)$	5756.8	5757.7 ± 9.2
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.48	—	$10^9 A_s e^{-2\tau}$	1.8824	1.883 ± 0.012	$f\sigma_8(0.15)$	0.4562	0.4566 ± 0.0068
$\boldsymbol{A_{143}^{tSZ}}$	7.17	$5.2^{+2.2}_{-1.9}$	D_{40}	1218.0	1218 ± 18	$\sigma_8(0.15)$	0.7487	0.7486 ± 0.0067
$\boldsymbol{A_{100}^{PS}}$	251.3	262 ± 28	D_{220}	5734.6	5737 ± 38	$f\sigma_8(0.38)$	0.4747	0.4750 ± 0.0059
$\boldsymbol{A_{143}^{PS}}$	49.3	47 ± 8	D_{810}	2541.7	2541 ± 13	$\sigma_8(0.38)$	0.6638	0.6636 ± 0.0058
$\boldsymbol{A_{143\times217}^{PS}}$	49.4	42 ± 9	D_{1420}	818.25	816.9 ± 4.8	$f\sigma_8(0.51)$	0.4734	0.4736 ± 0.0054
$\boldsymbol{A_{217}^{PS}}$	120.2	114 ± 10	D_{2000}	231.12	230.5 ± 1.7	$\sigma_8(0.51)$	0.6212	0.6210 ± 0.0054
$\boldsymbol{A^{kSZ}}$	0.00	< 4.74	$n_{s,0.002}$	0.9784	0.982 ± 0.021	$f\sigma_8(0.61)$	0.46851	0.4686 ± 0.0050
$\boldsymbol{A_{100}^{dustTT}}$	8.86	8.9 ± 1.8	Y_P	0.245432	$0.245423^{+0.000055}_{-0.000050}$	$\sigma_8(0.61)$	0.5912	0.5909 ± 0.0051
$\boldsymbol{A_{143}^{dustTT}}$	11.05	11.0 ± 1.8	Y_P^{BBN}	0.246758	$0.246750^{+0.000055}_{-0.000050}$	$f\sigma_8(2.33)$	0.29810	0.2980 ± 0.0026
$\boldsymbol{A_{143\times217}^{dustTT}}$	19.96	18.6 ± 3.3	10^5D/H	2.5682	2.572 ± 0.026	$\sigma_8(2.33)$	0.30737	0.3072 ± 0.0026
$\boldsymbol{A_{217}^{dustTT}}$	95.0	93.4 ± 7.1	Age/Gyr	13.7823	13.784 ± 0.021	f_{2000}^{143}	29.26	30.4 ± 3.2
$\boldsymbol{A_{100}^{dustTE}}$	0.1138	0.115 ± 0.038	z_*	1089.739	1089.77 ± 0.23	$f_{2000}^{143\times217}$	32.34	32.8 ± 2.1
$\boldsymbol{A_{100\times143}^{dustTE}}$	0.1340	0.134 ± 0.030	r_*	144.543	144.53 ± 0.24	f_{2000}^{217}	106.86	107.6 ± 2.0
$\boldsymbol{A_{100\times217}^{dustTE}}$	0.484	0.480 ± 0.086	$100\theta_*$	1.041184	1.04119 ± 0.00029	χ^2_{small}	396.37	397.4 ± 2.2
$\boldsymbol{A_{143}^{dustTE}}$	0.225	0.224 ± 0.054	$D_M(z_*)$/Gpc	13.8826	13.881 ± 0.023	χ^2_{lowl}	22.10	22.3 ± 1.5
$\boldsymbol{A_{143\times217}^{dustTE}}$	0.662	0.661 ± 0.080	z_{drag}	1060.085	1060.07 ± 0.30	χ^2_{plik}	2345.8	2360.9 ± 5.9
$\boldsymbol{A_{217}^{dustTE}}$	2.081	2.08 ± 0.26	r_{drag}	147.177	147.17 ± 0.25	χ^2_{6DF}	0.0289	0.060 ± 0.069
$\boldsymbol{c_{100}}$	0.99973	0.99969 ± 0.00061	k_D	0.140851	0.14085 ± 0.00030	χ^2_{MGS}	1.217	1.23 ± 0.42
$\boldsymbol{c_{217}}$	0.99819	0.99822 ± 0.00061	$100\theta_D$	0.160664	0.16069 ± 0.00018	$\chi^2_{DR12BAO}$	4.42	5.0 ± 1.5
H_0	67.712	67.66 ± 0.45	z_{eq}	3387.4	3390 ± 23	χ^2_{prior}	1.70	11.6 ± 4.6
Ω_Λ	0.6894	0.6887 ± 0.0061	k_{eq}	0.010339	0.010345 ± 0.000070	χ^2_{BAO}	5.67	6.3 ± 1.2
Ω_m	0.3106	0.3113 ± 0.0061	$100\theta_{eq}$	0.81628	0.8159 ± 0.0043	χ^2_{CMB}	2764.3	2780.6 ± 5.8
$\Omega_m h^2$	0.14240	0.14249 ± 0.00096	$100\theta_{s,eq}$	0.45087	0.4507 ± 0.0022			
$\Omega_m h^3$	0.096420	0.09641 ± 0.00031	$H(0.15)$	72.988	72.95 ± 0.39			

Best-fit $\chi^2_{eff} = 2771.68$; $\Delta\chi^2_{eff} = -0.24$; $\bar{\chi}^2_{eff} = 2798.48$; $\Delta\bar{\chi}^2_{eff} = 0.57$; $R - 1 = 0.02043$

χ^2_{eff}: BAO - 6DF: 0.03 (Δ 0.00) MGS: 1.22 (Δ 0.00) DR12BAO: 4.42 (Δ 0.01) CMB - simall_100x143_offlike5_EE_Aplanck_B: 396.37 (Δ 0.16) commander_dx12_v3_2_29: 22.11 (Δ -0.77) plik_rd12_HM_v22b_TTTEEE: 2345.83 (Δ 0.33)

12.13 base_nrun_plikHM_TTTEEE_lowl_lowE_post_lensing

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022396	0.02240 ± 0.00015	$\Omega_m h^3$	0.096378	0.09639 ± 0.00030	$100\theta_{s,eq}$	0.44926	0.4492 ± 0.0026
$\boldsymbol{\Omega_c h^2}$	0.12003	0.1200 ± 0.0012	σ_8	0.8113	0.8113 ± 0.0061	$H(0.15)$	72.687	72.69 ± 0.45
$\boldsymbol{100\theta_{MC}}$	1.040911	1.04092 ± 0.00031	S_8	0.8317	0.832 ± 0.013	$D_M(0.15)$	643.31	643.3 ± 4.5
$\boldsymbol{\tau}$	0.0546	0.0553 ± 0.0075	$\sigma_8\Omega_m^{0.5}$	0.4555	0.4557 ± 0.0070	$H(0.38)$	82.875	82.88 ± 0.33
$\boldsymbol{\ln(10^{10}A_s)}$	3.0457	3.047 ± 0.015	$\sigma_8\Omega_m^{0.25}$	0.6079	0.6080 ± 0.0064	$D_M(0.38)$	1533.3	1533.3 ± 9.1
$\boldsymbol{n_s}$	0.96500	0.9641 ± 0.0044	$\sigma_8/h^{0.5}$	0.9885	0.9886 ± 0.0092	$H(0.51)$	89.637	89.64 ± 0.27
$\boldsymbol{dn_s/d\ln k}$	−0.0025	-0.0045 ± 0.0067	$r_{drag}h$	99.06	99.06 ± 0.91	$D_M(0.51)$	1985.7	1986 ± 11
$\boldsymbol{y_{cal}}$	1.00056	1.0007 ± 0.0025	$\langle d^2\rangle^{1/2}$	2.4413	2.441 ± 0.023	$H(0.61)$	95.290	95.30 ± 0.22
$\boldsymbol{A_{217}^{CIB}}$	48.9	48 ± 7	z_{re}	7.71	7.76 ± 0.74	$D_M(0.61)$	2310.1	2310 ± 11
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.23	—	10^9A_s	2.1024	2.106 ± 0.031	$H(2.33)$	236.61	236.62 ± 0.71
$\boldsymbol{A_{143}^{tSZ}}$	7.27	$5.2^{+2.2}_{-2.0}$	$10^9A_se^{-2\tau}$	1.8848	1.886 ± 0.011	$D_M(2.33)$	5762.7	5762 ± 10
$\boldsymbol{A_{100}^{PS}}$	253.5	263 ± 28	D_{40}	1225.1	1222 ± 18	$f\sigma_8(0.15)$	0.4598	0.4599 ± 0.0065
$\boldsymbol{A_{143}^{PS}}$	45.9	47 ± 8	D_{220}	5733.4	5735 ± 39	$\sigma_8(0.15)$	0.7493	0.7493 ± 0.0054
$\boldsymbol{A_{143\times217}^{PS}}$	42.9	42 ± 9	D_{810}	2541.0	2541 ± 13	$f\sigma_8(0.38)$	0.4773	0.4774 ± 0.0053
$\boldsymbol{A_{217}^{PS}}$	117.7	115 ± 10	D_{1420}	817.32	816.4 ± 4.9	$\sigma_8(0.38)$	0.66376	0.6638 ± 0.0048
$\boldsymbol{A^{kSZ}}$	0.00	< 4.86	D_{2000}	230.77	230.3 ± 1.8	$f\sigma_8(0.51)$	0.47547	0.4755 ± 0.0046
$\boldsymbol{A_{100}^{dustTT}}$	8.90	8.9 ± 1.8	$n_{s,0.002}$	0.9729	0.979 ± 0.021	$\sigma_8(0.51)$	0.62100	0.6210 ± 0.0045
$\boldsymbol{A_{143}^{dustTT}}$	11.01	11.0 ± 1.8	Y_P	0.245406	$0.245405^{+0.000060}_{-0.000053}$	$f\sigma_8(0.61)$	0.47019	0.4702 ± 0.0042
$\boldsymbol{A_{143\times217}^{dustTT}}$	19.55	18.6 ± 3.3	Y_P^{BBN}	0.246732	$0.246731^{+0.000060}_{-0.000053}$	$\sigma_8(0.61)$	0.59079	0.5908 ± 0.0043
$\boldsymbol{A_{217}^{dustTT}}$	94.5	93.5 ± 7.3	10^5D/H	2.5806	2.581 ± 0.027	$f\sigma_8(2.33)$	0.29773	0.2977 ± 0.0022
$\boldsymbol{A_{100}^{dustTE}}$	0.1156	0.115 ± 0.038	Age/Gyr	13.7951	13.795 ± 0.023	$\sigma_8(2.33)$	0.30678	0.3068 ± 0.0024
$\boldsymbol{A_{100\times143}^{dustTE}}$	0.1344	0.134 ± 0.029	z_*	1089.890	1089.89 ± 0.25	f_{2000}^{143}	29.67	30.6 ± 3.2
$\boldsymbol{A_{100\times217}^{dustTE}}$	0.481	0.481 ± 0.085	r_*	144.402	144.40 ± 0.26	$f_{2000}^{143\times217}$	32.55	33.0 ± 2.2
$\boldsymbol{A_{143}^{dustTE}}$	0.225	0.224 ± 0.054	$100\theta_*$	1.041095	1.04110 ± 0.00031	f_{2000}^{217}	107.20	107.7 ± 2.0
$\boldsymbol{A_{143\times217}^{dustTE}}$	0.665	0.663 ± 0.080	$D_M(z_*)$/Gpc	13.8702	13.870 ± 0.025	$\chi^2_{lensing}$	8.89	9.43 ± 0.79
$\boldsymbol{A_{217}^{dustTE}}$	2.083	2.08 ± 0.27	z_{drag}	1060.009	1060.00 ± 0.31	χ^2_{simall}	396.06	397.1 ± 1.7
$\boldsymbol{c_{100}}$	0.99971	0.99968 ± 0.00061	r_{drag}	147.052	147.05 ± 0.27	χ^2_{lowl}	22.71	22.7 ± 1.7
$\boldsymbol{c_{217}}$	0.99821	0.99823 ± 0.00061	k_D	0.140928	0.14093 ± 0.00031	χ^2_{plik}	2345.0	2360.5 ± 5.8
H_0	67.36	67.36 ± 0.53	$100\theta_D$	0.160720	0.16072 ± 0.00018	χ^2_{prior}	1.79	11.6 ± 4.6
Ω_Λ	0.6847	0.6846 ± 0.0073	z_{eq}	3403.7	3404 ± 27	χ^2_{CMB}	2772.6	2789.7 ± 5.9
Ω_m	0.3153	0.3154 ± 0.0073	k_{eq}	0.010388	0.010390 ± 0.000081			
$\Omega_m h^2$	0.14308	0.1431 ± 0.0011	$100\theta_{eq}$	0.8131	0.8131 ± 0.0050			

Best-fit $\chi^2_{eff} = 2774.42$; $\Delta\chi^2_{eff} = -0.22$; $\bar{\chi}^2_{eff} = 2801.27$; $\Delta\bar{\chi}^2_{eff} = 0.58$; $R - 1 = 0.02010$

χ^2_{eff}: CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.89 (Δ 0.02) simall_100x143_offlike5_EE_Aplanck_B: 396.06 (Δ 0.01) commander_dx12_v3_2_29: 22.71 (Δ -0.54) plik_rd12_HM_v22b_TTTEEE: 2344.96 (Δ 0.03)

12.14 base_nrun_plikHM_TTTEEE_lowl_lowE_post_BAO_lensing

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022447	0.02245 ± 0.00014	σ_8	0.8101	0.8104 ± 0.0060	$D_M(0.15)$	640.44	640.7 ± 3.6
$\boldsymbol{\Omega_c h^2}$	0.11930	0.11937 ± 0.00092	S_8	0.8245	0.825 ± 0.011	$H(0.38)$	83.082	83.07 ± 0.27
$\boldsymbol{100\theta_{MC}}$	1.041029	1.04101 ± 0.00030	$\sigma_8\Omega_m^{0.5}$	0.4516	0.4520 ± 0.0058	$D_M(0.38)$	1527.6	1528.1 ± 7.2
$\boldsymbol{\tau}$	0.0565	$0.0570^{+0.0068}_{-0.0076}$	$\sigma_8\Omega_m^{0.25}$	0.6048	0.6052 ± 0.0058	$H(0.51)$	89.798	89.79 ± 0.22
$\boldsymbol{\ln(10^{10} A_s)}$	3.0482	3.049 ± 0.015	$\sigma_8/h^{0.5}$	0.9846	0.9851 ± 0.0085	$D_M(0.51)$	1979.0	1979.6 ± 8.5
$\boldsymbol{n_s}$	0.96692	0.9659 ± 0.0040	$r_{drag}h$	99.65	99.59 ± 0.71	$H(0.61)$	95.415	95.41 ± 0.18
$\boldsymbol{dn_s/d\ln k}$	−0.0033	-0.0041 ± 0.0067	$\langle d^2\rangle^{1/2}$	2.4307	2.433 ± 0.022	$D_M(0.61)$	2302.9	2303.6 ± 9.1
$\boldsymbol{y_{cal}}$	1.00058	1.0008 ± 0.0025	z_{re}	7.88	7.91 ± 0.72	$H(2.33)$	236.19	236.23 ± 0.56
$\boldsymbol{A_{217}^{CIB}}$	48.6	47 ± 7	$10^9 A_s$	2.1077	2.111 ± 0.032	$D_M(2.33)$	5757.3	5757.7 ± 8.9
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.31	—	$10^9 A_s e^{-2\tau}$	1.8823	1.883 ± 0.011	$f\sigma_8(0.15)$	0.4562	0.4566 ± 0.0055
$\boldsymbol{A_{143}^{tSZ}}$	7.22	$5.3^{+2.3}_{-1.9}$	D_{40}	1219.2	1220 ± 18	$\sigma_8(0.15)$	0.7487	0.7489 ± 0.0055
$\boldsymbol{A_{100}^{PS}}$	252.7	262 ± 29	D_{220}	5735.2	5739 ± 38	$f\sigma_8(0.38)$	0.47474	0.4751 ± 0.0047
$\boldsymbol{A_{143}^{PS}}$	46.9	47 ± 8	D_{810}	2541.3	2541 ± 13	$\sigma_8(0.38)$	0.66374	0.6639 ± 0.0048
$\boldsymbol{A_{143\times217}^{PS}}$	44.8	42 ± 9	D_{1420}	817.87	817.1 ± 4.8	$f\sigma_8(0.51)$	0.47343	0.4737 ± 0.0042
$\boldsymbol{A_{217}^{PS}}$	118.2	114 ± 10	D_{2000}	230.96	230.6 ± 1.7	$\sigma_8(0.51)$	0.62119	0.6213 ± 0.0045
$\boldsymbol{A^{kSZ}}$	0.01	< 4.69	$n_{s,0.002}$	0.9776	0.979 ± 0.021	$f\sigma_8(0.61)$	0.46852	0.4687 ± 0.0040
$\boldsymbol{A_{100}^{dustTT}}$	8.93	8.9 ± 1.8	Y_P	0.245425	$0.245423^{+0.000055}_{-0.000049}$	$\sigma_8(0.61)$	0.59110	0.5912 ± 0.0043
$\boldsymbol{A_{143}^{dustTT}}$	11.07	11.0 ± 1.8	Y_P^{BBN}	0.246752	$0.246750^{+0.000055}_{-0.000049}$	$f\sigma_8(2.33)$	0.29807	0.2981 ± 0.0022
$\boldsymbol{A_{143\times217}^{dustTT}}$	19.70	18.6 ± 3.3	10^5D/H	2.5712	2.572 ± 0.025	$\sigma_8(2.33)$	0.30733	0.3073 ± 0.0023
$\boldsymbol{A_{217}^{dustTT}}$	94.6	93.5 ± 7.2	Age/Gyr	13.7835	13.784 ± 0.020	f_{2000}^{143}	29.48	30.3 ± 3.2
$\boldsymbol{A_{100}^{dustTE}}$	0.1152	0.115 ± 0.039	z_*	1089.762	1089.77 ± 0.22	$f_{2000}^{143\times217}$	32.45	32.7 ± 2.1
$\boldsymbol{A_{100\times143}^{dustTE}}$	0.1352	0.134 ± 0.030	r_*	144.552	144.54 ± 0.22	f_{2000}^{217}	107.07	107.5 ± 2.0
$\boldsymbol{A_{100\times217}^{dustTE}}$	0.483	0.481 ± 0.085	$100\theta_*$	1.041204	1.04118 ± 0.00029	$\chi^2_{lensing}$	8.839	9.25 ± 0.63
$\boldsymbol{A_{143}^{dustTE}}$	0.224	0.223 ± 0.054	$D_M(z_*)$/Gpc	13.8832	13.882 ± 0.021	χ^2_{simall}	396.36	397.3 ± 1.9
$\boldsymbol{A_{143\times217}^{dustTE}}$	0.663	0.661 ± 0.080	z_{drag}	1060.047	1060.07 ± 0.30	χ^2_{lowl}	22.20	22.5 ± 1.6
$\boldsymbol{A_{217}^{dustTE}}$	2.076	2.08 ± 0.26	r_{drag}	147.191	147.17 ± 0.23	χ^2_{plik}	2345.6	2360.5 ± 5.7
$\boldsymbol{c_{100}}$	0.99970	0.99968 ± 0.00061	k_D	0.140822	0.14084 ± 0.00029	χ^2_{6DF}	0.0296	0.055 ± 0.061
$\boldsymbol{c_{217}}$	0.99821	0.99822 ± 0.00061	$100\theta_D$	0.160691	0.16069 ± 0.00017	χ^2_{MGS}	1.217	1.24 ± 0.39
H_0	67.698	67.67 ± 0.42	z_{eq}	3387.4	3389 ± 21	$\chi^2_{DR12BAO}$	4.44	4.9 ± 1.3
Ω_Λ	0.6893	0.6888 ± 0.0056	k_{eq}	0.010339	0.010343 ± 0.000064	χ^2_{prior}	1.81	11.6 ± 4.6
Ω_m	0.3107	0.3112 ± 0.0056	$100\theta_{eq}$	0.81625	0.8160 ± 0.0039	χ^2_{CMB}	2773.0	2789.6 ± 5.8
$\Omega_m h^2$	0.14240	0.14246 ± 0.00087	$100\theta_{s,eq}$	0.45087	0.4507 ± 0.0020	χ^2_{BAO}	5.68	6.2 ± 1.1
$\Omega_m h^3$	0.096400	0.09640 ± 0.00030	$H(0.15)$	72.975	72.95 ± 0.36			

Best-fit $\chi^2_{eff} = 2780.51$; $\Delta\chi^2_{eff} = -0.19$; $\bar{\chi}^2_{eff} = 2807.32$; $\Delta\bar{\chi}^2_{eff} = 0.48$; $R - 1 = 0.02542$

χ^2_{eff}: BAO - 6DF: 0.03 (Δ 0.00) MGS: 1.22 (Δ 0.00) DR12BAO: 4.43 (Δ 0.01) CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.84 (Δ 0.11) simall_100x143_offlike5_EE_Aplanck_B 396.36 (Δ -0.16) commander_dx12_v3_2_29: 22.20 (Δ -0.70) plik_rd12_HM_v22b_TTTEEE: 2345.61 (Δ 0.30)

12.15 base_nrun_plikHM_TTTEEE_lowl_lowE_post_Riess18

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022521	0.02252 ± 0.00015	$\Omega_m h^3$	0.096457	0.09647 ± 0.00031	$100\theta_{s,eq}$	0.45223	0.4522 ± 0.0029
$\boldsymbol{\Omega_c h^2}$	0.11866	0.1187 ± 0.0013	σ_8	0.8083	0.8082 ± 0.0080	$H(0.15)$	73.24	$73.24^{+0.48}_{-0.54}$
$\boldsymbol{100\theta_{MC}}$	1.041104	1.04112 ± 0.00032	S_8	0.8172	0.817 ± 0.016	$D_M(0.15)$	637.79	637.9 ± 5.1
$\boldsymbol{\tau}$	0.0574	$0.0577^{+0.0072}_{-0.0086}$	$\sigma_8\Omega_m^{0.5}$	0.4476	0.4477 ± 0.0089	$H(0.38)$	83.281	$83.28^{+0.35}_{-0.40}$
$\boldsymbol{\ln(10^{10}A_s)}$	3.0487	$3.049^{+0.016}_{-0.018}$	$\sigma_8\Omega_m^{0.25}$	0.6015	0.6015 ± 0.0086	$D_M(0.38)$	1522.3	$1522^{+11}_{-9.6}$
$\boldsymbol{n_s}$	0.96853	0.9675 ± 0.0046	$\sigma_8/h^{0.5}$	0.9802	0.980 ± 0.012	$H(0.51)$	89.956	$89.96^{+0.27}_{-0.33}$
$\boldsymbol{dn_s/d\ln k}$	−0.0037	-0.0050 ± 0.0068	$r_{drag}h$	100.16	100.2 ± 1.0	$D_M(0.51)$	1972.7	1973^{+12}_{-11}
$\boldsymbol{y_{cal}}$	1.00065	1.0007 ± 0.0024	$\langle d^2\rangle^{1/2}$	2.4201	2.420 ± 0.029	$H(0.61)$	95.543	$95.55^{+0.22}_{-0.27}$
$\boldsymbol{A_{217}^{CIB}}$	48.0	47 ± 7	z_{re}	7.94	$7.95^{+0.74}_{-0.82}$	$D_M(0.61)$	2296.2	2296^{+14}_{-12}
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.34	—	10^9A_s	2.1089	$2.111^{+0.033}_{-0.039}$	$H(2.33)$	235.85	235.88 ± 0.79
$\boldsymbol{A_{143}^{tSZ}}$	7.24	5.3 ± 2.0	$10^9A_se^{-2\tau}$	1.8800	1.880 ± 0.012	$D_M(2.33)$	5751.7	5752^{+12}_{-10}
$\boldsymbol{A_{100}^{PS}}$	251.4	261 ± 28	D_{40}	1215.3	1215 ± 19	$f\sigma_8(0.15)$	0.4526	0.4526 ± 0.0084
$\boldsymbol{A_{143}^{PS}}$	46.8	46 ± 8	D_{220}	5740.6	5742 ± 38	$\sigma_8(0.15)$	0.7474	0.7473 ± 0.0071
$\boldsymbol{A_{143\times217}^{PS}}$	45.2	41 ± 9	D_{810}	2541.6	2541 ± 13	$f\sigma_8(0.38)$	0.4720	0.4719 ± 0.0070
$\boldsymbol{A_{217}^{PS}}$	118.4	114 ± 10	D_{1420}	818.56	817.5 ± 4.7	$\sigma_8(0.38)$	0.6631	$0.6629^{+0.0056}_{-0.0063}$
$\boldsymbol{A^{kSZ}}$	0.00	< 4.80	D_{2000}	231.23	230.8 ± 1.7	$f\sigma_8(0.51)$	0.4711	0.4711 ± 0.0063
$\boldsymbol{A_{100}^{dustTT}}$	8.90	9.0 ± 1.8	$n_{s,0.002}$	0.9805	0.984 ± 0.021	$\sigma_8(0.51)$	0.6208	0.6206 ± 0.0055
$\boldsymbol{A_{143}^{dustTT}}$	11.09	11.0 ± 1.8	Y_P	0.245452	0.245451 ± 0.000057	$f\sigma_8(0.61)$	0.4666	0.4665 ± 0.0057
$\boldsymbol{A_{143\times217}^{dustTT}}$	19.84	18.6 ± 3.3	Y_P^{BBN}	0.246779	0.246778 ± 0.000057	$\sigma_8(0.61)$	0.5908	$0.5906^{+0.0048}_{-0.0055}$
$\boldsymbol{A_{217}^{dustTT}}$	95.0	93.6 ± 7.2	10^5D/H	2.5582	2.559 ± 0.027	$f\sigma_8(2.33)$	0.29808	$0.2980^{+0.0023}_{-0.0027}$
$\boldsymbol{A_{100}^{dustTE}}$	0.1135	0.115 ± 0.039	Age/Gyr	13.7712	$13.771^{+0.027}_{-0.023}$	$\sigma_8(2.33)$	0.30752	$0.3074^{+0.0024}_{-0.0028}$
$\boldsymbol{A_{100\times143}^{dustTE}}$	0.1355	0.134 ± 0.030	z_*	1089.614	1089.62 ± 0.27	f_{2000}^{143}	29.21	30.0 ± 3.1
$\boldsymbol{A_{100\times217}^{dustTE}}$	0.480	0.480 ± 0.086	r_*	144.662	144.65 ± 0.30	$f_{2000}^{143\times217}$	32.18	32.5 ± 2.1
$\boldsymbol{A_{143}^{dustTE}}$	0.224	0.223 ± 0.054	$100\theta_*$	1.041268	1.04129 ± 0.00031	f_{2000}^{217}	106.82	107.4 ± 2.0
$\boldsymbol{A_{143\times217}^{dustTE}}$	0.663	0.656 ± 0.081	$D_M(z_*)$/Gpc	13.8929	13.892 ± 0.028	χ^2_{simall}	396.48	397.5 ± 2.4
$\boldsymbol{A_{217}^{dustTE}}$	2.065	2.07 ± 0.26	z_{drag}	1060.200	1060.19 ± 0.31	χ^2_{lowl}	21.87	22.1 ± 1.5
$\boldsymbol{c_{100}}$	0.99972	0.99971 ± 0.00061	r_{drag}	147.277	147.27 ± 0.30	χ^2_{plik}	2346.8	2362.4 ± 6.5
$\boldsymbol{c_{217}}$	0.99821	0.99824 ± 0.00062	k_D	0.140785	0.14079 ± 0.00033	$\chi^2_{H073p45}$	10.74	10.9 ± 2.4
H_0	68.01	68.00 ± 0.60	$100\theta_D$	0.160621	0.16063 ± 0.00018	χ^2_{prior}	1.81	11.7 ± 4.5
Ω_Λ	0.6934	0.6931 ± 0.0080	z_{eq}	3373.8	3375 ± 30	χ^2_{CMB}	2765.2	2782.1 ± 6.4
Ω_m	0.3066	0.3069 ± 0.0080	k_{eq}	0.010297	0.010300 ± 0.000091			
$\Omega_m h^2$	0.14183	0.1419 ± 0.0012	$100\theta_{eq}$	0.8190	0.8188 ± 0.0057			

Best-fit $\chi^2_{eff} = 2777.71$; $\Delta\chi^2_{eff} = -0.23$; $\bar{\chi}^2_{eff} = 2804.64$; $\Delta\bar{\chi}^2_{eff} = 0.47$; $R - 1 = 0.04323$

χ^2_{eff}: CMB - simall_100x143_offlike5_EE_Aplanck_B: 396.48 (Δ 0.01) commander_dx12_v3_2_29: 21.87 (Δ -0.67) plik_rd12_HM_v22b_TTTEEE: 2346.81 (Δ 0.05) Hubble - H073p45: 10.74 (Δ 0.15)

12.16 base_nrun_plikHM_TTTEEE_lowl_lowE_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02239 ± 0.00015	$\Omega_m h^2$	0.1434 ± 0.0013	k_{eq}	0.010408 ± 0.000094
$\boldsymbol{\Omega_c h^2}$	0.1203 ± 0.0014	$\Omega_m h^3$	0.09641 ± 0.00031	$100\theta_{eq}$	0.8120 ± 0.0057
$\boldsymbol{100\theta_{MC}}$	1.04090 ± 0.00032	σ_8	0.8133 ± 0.0074	$100\theta_{s,eq}$	0.4487 ± 0.0029
$\boldsymbol{\tau}$	$0.0567^{+0.0058}_{-0.0084}$	S_8	0.836 ± 0.016	$H(0.15)$	72.60 ± 0.51
$\boldsymbol{\ln(10^{10} A_s)}$	$3.051^{+0.014}_{-0.017}$	$\sigma_8 \Omega_m^{0.5}$	0.4579 ± 0.0090	$D_M(0.15)$	644.2 ± 5.2
$\boldsymbol{n_s}$	0.9636 ± 0.0046	$\sigma_8 \Omega_m^{0.25}$	0.6103 ± 0.0084	$H(0.38)$	82.82 ± 0.37
$\boldsymbol{dn_s/d\ln k}$	-0.0056 ± 0.0067	$\sigma_8/h^{0.5}$	0.992 ± 0.012	$D_M(0.38)$	1535 ± 10
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0025	$r_{drag} h$	98.9 ± 1.0	$H(0.51)$	89.60 ± 0.29
$\boldsymbol{A_{217}^{CIB}}$	48 ± 7	$\langle d^2 \rangle^{1/2}$	2.446 ± 0.029	$D_M(0.51)$	1988 ± 12
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	z_{re}	$7.91^{+0.63}_{-0.82}$	$H(0.61)$	95.26 ± 0.24
$\boldsymbol{A_{143}^{tSZ}}$	5.2 ± 2.0	$10^9 A_s$	$2.114^{+0.028}_{-0.036}$	$D_M(0.61)$	2312 ± 13
$\boldsymbol{A_{100}^{PS}}$	263 ± 28	$10^9 A_s e^{-2\tau}$	1.887 ± 0.012	$H(2.33)$	236.79 ± 0.82
$\boldsymbol{A_{143}^{PS}}$	48 ± 8	D_{40}	1221 ± 19	$D_M(2.33)$	5764 ± 11
$\boldsymbol{A_{143\times217}^{PS}}$	42 ± 9	D_{220}	5733 ± 39	$f\sigma_8(0.15)$	0.4621 ± 0.0084
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	D_{810}	2542 ± 14	$\sigma_8(0.15)$	0.7510 ± 0.0064
$\boldsymbol{A^{kSZ}}$	< 4.84	D_{1420}	816.2 ± 4.9	$f\sigma_8(0.38)$	0.4792 ± 0.0068
$\boldsymbol{A_{100}^{dust TT}}$	8.9 ± 1.8	D_{2000}	230.2 ± 1.8	$\sigma_8(0.38)$	$0.6651^{+0.0050}_{-0.0056}$
$\boldsymbol{A_{143}^{dust TT}}$	10.9 ± 1.8	$n_{s,0.002}$	0.982 ± 0.021	$f\sigma_8(0.51)$	0.4772 ± 0.0060
$\boldsymbol{A_{143\times217}^{dust TT}}$	18.6 ± 3.3	Y_P	$0.245401^{+0.000062}_{-0.000055}$	$\sigma_8(0.51)$	$0.6222^{+0.0045}_{-0.0052}$
$\boldsymbol{A_{217}^{dust TT}}$	93.5 ± 7.3	Y_P^{BBN}	$0.246727^{+0.000062}_{-0.000055}$	$f\sigma_8(0.61)$	0.4717 ± 0.0054
$\boldsymbol{A_{100}^{dust TE}}$	0.115 ± 0.038	10^5D/H	2.583 ± 0.028	$\sigma_8(0.61)$	$0.5919^{+0.0042}_{-0.0049}$
$\boldsymbol{A_{100\times143}^{dust TE}}$	0.134 ± 0.029	Age/Gyr	13.797 ± 0.024	$f\sigma_8(2.33)$	$0.2982^{+0.0020}_{-0.0025}$
$\boldsymbol{A_{100\times217}^{dust TE}}$	0.482 ± 0.085	z_*	1089.93 ± 0.27	$\sigma_8(2.33)$	$0.3072^{+0.0020}_{-0.0026}$
$\boldsymbol{A_{143}^{dust TE}}$	0.224 ± 0.053	r_*	144.34 ± 0.30	f_{2000}^{143}	30.7 ± 3.1
$\boldsymbol{A_{143\times217}^{dust TE}}$	0.665 ± 0.080	$100\theta_*$	1.04108 ± 0.00031	$f_{2000}^{143\times217}$	33.1 ± 2.2
$\boldsymbol{A_{217}^{dust TE}}$	2.09 ± 0.27	$D_M(z_*)$/Gpc	13.864 ± 0.028	f_{2000}^{217}	107.8 ± 2.0
$\boldsymbol{c_{100}}$	0.99969 ± 0.00061	z_{drag}	1060.00 ± 0.31	χ^2_{simall}	397.3 ± 2.0
$\boldsymbol{c_{217}}$	0.99822 ± 0.00062	r_{drag}	146.99 ± 0.30	χ^2_{lowl}	22.6 ± 1.6
H_0	67.26 ± 0.60	k_D	0.14099 ± 0.00033	χ^2_{plik}	2360.7 ± 5.9
Ω_Λ	0.6830 ± 0.0084	$100\theta_D$	0.16072 ± 0.00018	χ^2_{prior}	11.5 ± 4.5
Ω_m	0.3170 ± 0.0084	z_{eq}	3410 ± 31	χ^2_{CMB}	2780.5 ± 5.9

$\bar{\chi}^2_{eff} = 2792.02$; $\Delta\bar{\chi}^2_{eff} = 0.49$; $R - 1 = 0.01357$

12.17 base_nrun_plikHM_TTTEEE_lowl_lowE_post_BAO_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02245 ± 0.00014	σ_8	0.8107 ± 0.0071	$D_M(0.15)$	640.7 ± 3.8
$\boldsymbol{\Omega_c h^2}$	0.1194 ± 0.0010	S_8	0.826 ± 0.013	$H(0.38)$	83.07 ± 0.29
$\boldsymbol{100\theta_{MC}}$	1.04101 ± 0.00030	$\sigma_8\Omega_m^{0.5}$	0.4522 ± 0.0071	$D_M(0.38)$	1528.1 ± 7.7
$\boldsymbol{\tau}$	$0.0575^{+0.0060}_{-0.0086}$	$\sigma_8\Omega_m^{0.25}$	0.6055 ± 0.0071	$H(0.51)$	89.79 ± 0.23
$\boldsymbol{\ln(10^{10}A_s)}$	$3.050^{+0.014}_{-0.018}$	$\sigma_8/h^{0.5}$	0.986 ± 0.010	$D_M(0.51)$	1979.6 ± 9.1
$\boldsymbol{n_s}$	0.9659 ± 0.0041	$r_{drag}h$	99.59 ± 0.78	$H(0.61)$	95.41 ± 0.19
$\boldsymbol{dn_s/d\ln k}$	-0.0050 ± 0.0068	$\langle d^2\rangle^{1/2}$	2.433 ± 0.026	$D_M(0.61)$	2303.6 ± 9.8
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0025	z_{re}	$7.96^{+0.65}_{-0.84}$	$H(2.33)$	236.24 ± 0.62
$\boldsymbol{A^{CIB}_{217}}$	48 ± 7	10^9A_s	$2.113^{+0.029}_{-0.038}$	$D_M(2.33)$	5757.6 ± 9.2
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$10^9A_se^{-2\tau}$	1.883 ± 0.011	$f\sigma_8(0.15)$	0.4568 ± 0.0067
$\boldsymbol{A^{tSZ}_{143}}$	$5.2^{+2.2}_{-1.9}$	D_{40}	1218 ± 18	$\sigma_8(0.15)$	0.7491 ± 0.0064
$\boldsymbol{A^{PS}_{100}}$	262 ± 28	D_{220}	5737 ± 38	$f\sigma_8(0.38)$	0.4752 ± 0.0057
$\boldsymbol{A^{PS}_{143}}$	47 ± 8	D_{810}	2541 ± 13	$\sigma_8(0.38)$	$0.6641^{+0.0050}_{-0.0058}$
$\boldsymbol{A^{PS}_{143\times217}}$	42 ± 9	D_{1420}	816.9 ± 4.8	$f\sigma_8(0.51)$	0.4739 ± 0.0052
$\boldsymbol{A^{PS}_{217}}$	114 ± 10	D_{2000}	230.5 ± 1.7	$\sigma_8(0.51)$	$0.6215^{+0.0046}_{-0.0054}$
$\boldsymbol{A^{kSZ}}$	< 4.72	$n_{s,0.002}$	0.982 ± 0.021	$f\sigma_8(0.61)$	0.4689 ± 0.0048
$\boldsymbol{A^{dustTT}_{100}}$	8.9 ± 1.8	Y_P	$0.245424^{+0.000055}_{-0.000049}$	$\sigma_8(0.61)$	$0.5914^{+0.0043}_{-0.0051}$
$\boldsymbol{A^{dustTT}_{143}}$	11.0 ± 1.8	Y_P^{BBN}	$0.246751^{+0.000056}_{-0.000050}$	$f\sigma_8(2.33)$	$0.2982^{+0.0021}_{-0.0026}$
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.6 ± 3.3	10^5D/H	2.571 ± 0.026	$\sigma_8(2.33)$	$0.3074^{+0.0022}_{-0.0027}$
$\boldsymbol{A^{dustTT}_{217}}$	93.4 ± 7.1	Age/Gyr	13.784 ± 0.021	f^{143}_{2000}	30.4 ± 3.2
$\boldsymbol{A^{dustTE}_{100}}$	0.115 ± 0.038	z_*	1089.77 ± 0.23	$f^{143\times217}_{2000}$	32.8 ± 2.1
$\boldsymbol{A^{dustTE}_{100\times143}}$	0.134 ± 0.030	r_*	144.53 ± 0.24	f^{217}_{2000}	107.6 ± 2.0
$\boldsymbol{A^{dustTE}_{100\times217}}$	0.480 ± 0.086	$100\theta_*$	1.04119 ± 0.00029	χ^2_{simall}	397.4 ± 2.2
$\boldsymbol{A^{dustTE}_{143}}$	0.224 ± 0.054	$D_M(z_*)$/Gpc	13.881 ± 0.023	χ^2_{lowl}	22.3 ± 1.5
$\boldsymbol{A^{dustTE}_{143\times217}}$	0.662 ± 0.080	z_{drag}	1060.07 ± 0.30	χ^2_{plik}	2360.8 ± 5.9
$\boldsymbol{A^{dustTE}_{217}}$	2.08 ± 0.26	r_{drag}	147.17 ± 0.25	χ^2_{6DF}	0.059 ± 0.068
$\boldsymbol{c_{100}}$	0.99968 ± 0.00061	k_D	0.14085 ± 0.00030	χ^2_{MGS}	1.24 ± 0.42
$\boldsymbol{c_{217}}$	0.99823 ± 0.00061	$100\theta_D$	0.16068 ± 0.00018	$\chi^2_{DR12BAO}$	4.9 ± 1.5
H_0	67.67 ± 0.45	z_{eq}	3389 ± 23	χ^2_{prior}	11.6 ± 4.6
Ω_Λ	0.6888 ± 0.0061	k_{eq}	0.010345 ± 0.000070	χ^2_{BAO}	6.2 ± 1.2
Ω_m	0.3112 ± 0.0061	$100\theta_{eq}$	0.8159 ± 0.0043	χ^2_{CMB}	2780.5 ± 5.7
$\Omega_m h^2$	0.14248 ± 0.00096	$100\theta_{s,eq}$	0.4507 ± 0.0022		
$\Omega_m h^3$	0.09641 ± 0.00031	$H(0.15)$	72.95 ± 0.39		

$\bar{\chi}^2_{eff} = 2798.32$; $\Delta\bar{\chi}^2_{eff} = 0.61$; $R - 1 = 0.02163$

12.18 base_nrun_plikHM_TTTEEE_lowl_lowE_post_lensing_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02240 ± 0.00015	$\Omega_m h^3$	0.09639 ± 0.00030	$100\theta_{s,eq}$	0.4493 ± 0.0025
$\boldsymbol{\Omega_c h^2}$	0.1200 ± 0.0012	σ_8	0.8118 ± 0.0058	$H(0.15)$	72.71 ± 0.45
$\boldsymbol{100\theta_{MC}}$	1.04093 ± 0.00031	S_8	0.832 ± 0.013	$D_M(0.15)$	643.2 ± 4.5
$\boldsymbol{\tau}$	$0.0561^{+0.0055}_{-0.0078}$	$\sigma_8\Omega_m^{0.5}$	0.4557 ± 0.0070	$H(0.38)$	82.89 ± 0.33
$\boldsymbol{\ln(10^{10} A_s)}$	$3.049^{+0.012}_{-0.015}$	$\sigma_8\Omega_m^{0.25}$	0.6082 ± 0.0064	$D_M(0.38)$	1533.0 ± 9.0
$\boldsymbol{n_s}$	0.9643 ± 0.0043	$\sigma_8/h^{0.5}$	0.9890 ± 0.0090	$H(0.51)$	89.65 ± 0.26
$\boldsymbol{dn_s/d\ln k}$	-0.0045 ± 0.0067	$r_{drag}h$	99.09 ± 0.90	$D_M(0.51)$	1985 ± 11
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0025	$\langle d^2\rangle^{1/2}$	2.441 ± 0.023	$H(0.61)$	95.30 ± 0.22
$\boldsymbol{A_{217}^{CIB}}$	48 ± 7	z_{re}	$7.84^{+0.59}_{-0.76}$	$D_M(0.61)$	2310 ± 11
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$10^9 A_s$	$2.109^{+0.025}_{-0.032}$	$H(2.33)$	236.60 ± 0.70
$\boldsymbol{A_{143}^{tSZ}}$	$5.2^{+2.2}_{-2.0}$	$10^9 A_s e^{-2\tau}$	1.885 ± 0.011	$D_M(2.33)$	5762 ± 10
$\boldsymbol{A_{100}^{PS}}$	263 ± 29	D_{40}	1222 ± 18	$f\sigma_8(0.15)$	0.4600 ± 0.0065
$\boldsymbol{A_{143}^{PS}}$	47 ± 8	D_{220}	5734 ± 39	$\sigma_8(0.15)$	0.7498 ± 0.0051
$\boldsymbol{A_{143\times217}^{PS}}$	42 ± 9	D_{810}	2541 ± 13	$f\sigma_8(0.38)$	0.4775 ± 0.0052
$\boldsymbol{A_{217}^{PS}}$	114 ± 10	D_{1420}	816.4 ± 4.9	$\sigma_8(0.38)$	0.6642 ± 0.0045
$\boldsymbol{A^{kSZ}}$	< 4.84	D_{2000}	230.3 ± 1.8	$f\sigma_8(0.51)$	0.4757 ± 0.0046
$\boldsymbol{A_{100}^{dust TT}}$	8.9 ± 1.8	$n_{s,0.002}$	0.979 ± 0.021	$\sigma_8(0.51)$	$0.6214^{+0.0039}_{-0.0044}$
$\boldsymbol{A_{143}^{dust TT}}$	11.0 ± 1.8	Y_P	$0.245406^{+0.000060}_{-0.000053}$	$f\sigma_8(0.61)$	0.4704 ± 0.0041
$\boldsymbol{A_{143\times217}^{dust TT}}$	18.6 ± 3.3	Y_P^{BBN}	$0.246732^{+0.000060}_{-0.000053}$	$\sigma_8(0.61)$	$0.5912^{+0.0037}_{-0.0042}$
$\boldsymbol{A_{217}^{dust TT}}$	93.5 ± 7.3	10^5D/H	2.580 ± 0.027	$f\sigma_8(2.33)$	$0.2980^{+0.0018}_{-0.0022}$
$\boldsymbol{A_{100}^{dust TE}}$	0.115 ± 0.038	Age/Gyr	13.794 ± 0.023	$\sigma_8(2.33)$	$0.3070^{+0.0020}_{-0.0024}$
$\boldsymbol{A_{100\times143}^{dust TE}}$	0.134 ± 0.029	z_*	1089.88 ± 0.25	f_{2000}^{143}	30.6 ± 3.2
$\boldsymbol{A_{100\times217}^{dust TE}}$	0.481 ± 0.085	r_*	144.41 ± 0.26	$f_{2000}^{143\times217}$	33.0 ± 2.2
$\boldsymbol{A_{143}^{dust TE}}$	0.224 ± 0.054	$100\theta_*$	1.04111 ± 0.00031	f_{2000}^{217}	107.7 ± 2.0
$\boldsymbol{A_{143\times217}^{dust TE}}$	0.663 ± 0.080	$D_M(z_*)$/Gpc	13.871 ± 0.025	$\chi^2_{lensing}$	9.42 ± 0.79
$\boldsymbol{A_{217}^{dust TE}}$	2.08 ± 0.27	z_{drag}	1060.01 ± 0.31	χ^2_{smallI}	397.0 ± 1.8
$\boldsymbol{c_{100}}$	0.99968 ± 0.00061	r_{drag}	147.06 ± 0.27	χ^2_{lowl}	22.7 ± 1.7
$\boldsymbol{c_{217}}$	0.99823 ± 0.00061	k_D	0.14093 ± 0.00031	χ^2_{plik}	2360.4 ± 5.8
H_0	67.38 ± 0.52	$100\theta_D$	0.16072 ± 0.00018	χ^2_{prior}	11.6 ± 4.6
Ω_Λ	0.6849 ± 0.0072	z_{eq}	3403 ± 26	χ^2_{CMB}	2789.5 ± 5.9
Ω_m	0.3151 ± 0.0072	k_{eq}	0.010386 ± 0.000080		
$\Omega_m h^2$	0.1431 ± 0.0011	$100\theta_{eq}$	0.8133 ± 0.0049		

$\bar{\chi}^2_{eff} = 2801.11$; $\Delta\bar{\chi}^2_{eff} = 0.60$; $R - 1 = 0.02119$

12.19 base_nrun_plikHM_TTTEEE_lowl_lowE_post_BAO_lensing_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02245 ± 0.00014	σ_8	0.8107 ± 0.0058	$D_M(0.15)$	640.6 ± 3.5
$\boldsymbol{\Omega_c h^2}$	0.11935 ± 0.00092	S_8	0.825 ± 0.011	$H(0.38)$	83.07 ± 0.27
$\boldsymbol{100\theta_{MC}}$	1.04101 ± 0.00030	$\sigma_8\Omega_m^{0.5}$	0.4521 ± 0.0058	$D_M(0.38)$	1528.0 ± 7.1
$\boldsymbol{\tau}$	$0.0575^{+0.0059}_{-0.0078}$	$\sigma_8\Omega_m^{0.25}$	0.6054 ± 0.0057	$H(0.51)$	89.79 ± 0.22
$\boldsymbol{\ln(10^{10} A_s)}$	$3.050^{+0.013}_{-0.015}$	$\sigma_8/h^{0.5}$	0.9854 ± 0.0083	$D_M(0.51)$	1979.4 ± 8.4
$\boldsymbol{n_s}$	0.9659 ± 0.0040	$r_{drag}h$	99.61 ± 0.71	$H(0.61)$	95.41 ± 0.18
$\boldsymbol{dn_s/d\ln k}$	-0.0042 ± 0.0067	$\langle d^2\rangle^{1/2}$	2.434 ± 0.022	$D_M(0.61)$	2303.4 ± 9.1
$\boldsymbol{y_{cal}}$	1.0008 ± 0.0024	z_{re}	$7.96^{+0.62}_{-0.75}$	$H(2.33)$	236.22 ± 0.56
$\boldsymbol{A_{217}^{CIB}}$	47 ± 7	$10^9 A_s$	$2.112^{+0.027}_{-0.033}$	$D_M(2.33)$	5757.6 ± 8.9
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$10^9 A_s e^{-2\tau}$	1.883 ± 0.011	$f\sigma_8(0.15)$	0.4567 ± 0.0054
$\boldsymbol{A_{143}^{tSZ}}$	$5.3^{+2.3}_{-1.9}$	D_{40}	1220 ± 18	$\sigma_8(0.15)$	0.7491 ± 0.0053
$\boldsymbol{A_{100}^{PS}}$	262 ± 29	D_{220}	5739 ± 38	$f\sigma_8(0.38)$	0.4752 ± 0.0046
$\boldsymbol{A_{143}^{PS}}$	47 ± 8	D_{810}	2541 ± 13	$\sigma_8(0.38)$	0.6641 ± 0.0046
$\boldsymbol{A_{143\times217}^{PS}}$	42 ± 9	D_{1420}	817.1 ± 4.8	$f\sigma_8(0.51)$	0.4738 ± 0.0042
$\boldsymbol{A_{217}^{PS}}$	114 ± 10	D_{2000}	230.6 ± 1.7	$\sigma_8(0.51)$	$0.6215^{+0.0041}_{-0.0045}$
$\boldsymbol{A^{kSZ}}$	< 4.68	$n_{s,0.002}$	0.979 ± 0.021	$f\sigma_8(0.61)$	0.4689 ± 0.0039
$\boldsymbol{A_{100}^{dustTT}}$	8.9 ± 1.8	Y_P	$0.245424^{+0.000055}_{-0.000049}$	$\sigma_8(0.61)$	$0.5914^{+0.0039}_{-0.0043}$
$\boldsymbol{A_{143}^{dustTT}}$	11.0 ± 1.8	Y_P^{BBN}	$0.246750^{+0.000055}_{-0.000049}$	$f\sigma_8(2.33)$	$0.2982^{+0.0020}_{-0.0022}$
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.6 ± 3.3	10^5D/H	2.572 ± 0.025	$\sigma_8(2.33)$	$0.3075^{+0.0020}_{-0.0024}$
$\boldsymbol{A_{217}^{dustTT}}$	93.5 ± 7.1	Age/Gyr	13.784 ± 0.020	f_{2000}^{143}	30.2 ± 3.2
$\boldsymbol{A_{100}^{dustTE}}$	0.115 ± 0.039	z_*	1089.77 ± 0.22	$f_{2000}^{143\times217}$	32.7 ± 2.1
$\boldsymbol{A_{100\times143}^{dustTE}}$	0.134 ± 0.030	r_*	144.54 ± 0.22	f_{2000}^{217}	107.5 ± 2.0
$\boldsymbol{A_{100\times217}^{dustTE}}$	0.481 ± 0.085	$100\theta_*$	1.04118 ± 0.00029	$\chi^2_{lensing}$	9.23 ± 0.61
$\boldsymbol{A_{143}^{dustTE}}$	0.223 ± 0.054	$D_M(z_*)$/Gpc	13.882 ± 0.021	χ^2_{simall}	397.3 ± 1.9
$\boldsymbol{A_{143\times217}^{dustTE}}$	0.662 ± 0.080	z_{drag}	1060.07 ± 0.30	χ^2_{lowl}	22.5 ± 1.6
$\boldsymbol{A_{217}^{dustTE}}$	2.08 ± 0.26	r_{drag}	147.18 ± 0.23	χ^2_{plik}	2360.4 ± 5.7
$\boldsymbol{c_{100}}$	0.99968 ± 0.00060	k_D	0.14084 ± 0.00029	χ^2_{6DF}	0.054 ± 0.060
$\boldsymbol{c_{217}}$	0.99823 ± 0.00061	$100\theta_D$	0.16069 ± 0.00017	χ^2_{MGS}	1.24 ± 0.38
H_0	67.68 ± 0.42	z_{eq}	3389 ± 21	$\chi^2_{DR12BAO}$	4.8 ± 1.3
Ω_Λ	0.6889 ± 0.0056	k_{eq}	0.010342 ± 0.000063	χ^2_{prior}	11.6 ± 4.6
Ω_m	0.3111 ± 0.0056	$100\theta_{eq}$	0.8160 ± 0.0039	χ^2_{CMB}	2789.5 ± 5.7
$\Omega_m h^2$	0.14245 ± 0.00087	$100\theta_{s,eq}$	0.4508 ± 0.0020	χ^2_{BAO}	6.1 ± 1.1
$\Omega_m h^3$	0.09640 ± 0.00030	$H(0.15)$	72.96 ± 0.36		

$\bar{\chi}^2_{eff} = 2807.20$; $\Delta\bar{\chi}^2_{eff} = 0.48$; $R - 1 = 0.02657$

12.20 base_nrun_plikHM_TTTEEE_lowl_lowE_post_Riess18_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02252 ± 0.00015	$\Omega_m h^3$	0.09647 ± 0.00031	$100\theta_{s,eq}$	0.4522 ± 0.0029
$\boldsymbol{\Omega_c h^2}$	0.1187 ± 0.0013	σ_8	0.8086 ± 0.0078	$H(0.15)$	$73.25^{+0.48}_{-0.54}$
$\boldsymbol{100\theta_{MC}}$	1.04112 ± 0.00032	S_8	0.818 ± 0.016	$D_M(0.15)$	637.8 ± 5.1
$\boldsymbol{\tau}$	$0.0583^{+0.0061}_{-0.0086}$	$\sigma_8\Omega_m^{0.5}$	0.4478 ± 0.0089	$H(0.38)$	$83.29^{+0.35}_{-0.40}$
$\boldsymbol{\ln(10^{10} A_s)}$	$3.051^{+0.014}_{-0.018}$	$\sigma_8\Omega_m^{0.25}$	0.6017 ± 0.0086	$D_M(0.38)$	1522 ± 10
$\boldsymbol{n_s}$	0.9676 ± 0.0046	$\sigma_8/h^{0.5}$	0.980 ± 0.012	$H(0.51)$	$89.96^{+0.27}_{-0.33}$
$\boldsymbol{dn_s/d\ln k}$	-0.0050 ± 0.0068	$r_{drag}h$	100.2 ± 1.0	$D_M(0.51)$	1973^{+12}_{-11}
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0024	$\langle d^2\rangle^{1/2}$	2.421 ± 0.029	$H(0.61)$	$95.55^{+0.22}_{-0.27}$
$\boldsymbol{A_{217}^{CIB}}$	47 ± 7	z_{re}	$8.01^{+0.63}_{-0.86}$	$D_M(0.61)$	2296^{+14}_{-12}
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$10^9 A_s$	$2.113^{+0.029}_{-0.039}$	$H(2.33)$	235.87 ± 0.79
$\boldsymbol{A_{143}^{tSZ}}$	5.3 ± 2.0	$10^9 A_s e^{-2\tau}$	1.880 ± 0.012	$D_M(2.33)$	5751^{+12}_{-10}
$\boldsymbol{A_{100}^{PS}}$	261 ± 28	D_{40}	1214 ± 19	$f\sigma_8(0.15)$	0.4528 ± 0.0084
$\boldsymbol{A_{143}^{PS}}$	46 ± 8	D_{220}	5742 ± 38	$\sigma_8(0.15)$	$0.7476^{+0.0064}_{-0.0073}$
$\boldsymbol{A_{143\times217}^{PS}}$	41 ± 9	D_{810}	2541 ± 13	$f\sigma_8(0.38)$	0.4721 ± 0.0070
$\boldsymbol{A_{217}^{PS}}$	114 ± 10	D_{1420}	817.5 ± 4.7	$\sigma_8(0.38)$	$0.6633^{+0.0052}_{-0.0062}$
$\boldsymbol{A^{kSZ}}$	< 4.79	D_{2000}	230.8 ± 1.7	$f\sigma_8(0.51)$	0.4713 ± 0.0062
$\boldsymbol{A_{100}^{dustTT}}$	9.0 ± 1.8	$n_{s,0.002}$	0.984 ± 0.021	$\sigma_8(0.51)$	$0.6209^{+0.0047}_{-0.0057}$
$\boldsymbol{A_{143}^{dustTT}}$	11.0 ± 1.8	Y_P	0.245452 ± 0.000057	$f\sigma_8(0.61)$	0.4667 ± 0.0057
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.6 ± 3.3	Y_P^{BBN}	0.246778 ± 0.000057	$\sigma_8(0.61)$	$0.5909^{+0.0043}_{-0.0054}$
$\boldsymbol{A_{217}^{dustTT}}$	93.6 ± 7.2	10^5D/H	2.558 ± 0.027	$f\sigma_8(2.33)$	$0.2982^{+0.0021}_{-0.0027}$
$\boldsymbol{A_{100}^{dustTE}}$	0.114 ± 0.039	Age/Gyr	$13.770^{+0.026}_{-0.023}$	$\sigma_8(2.33)$	$0.3076^{+0.0021}_{-0.0028}$
$\boldsymbol{A_{100\times143}^{dustTE}}$	0.134 ± 0.030	z_*	1089.62 ± 0.27	f_{2000}^{143}	30.0 ± 3.1
$\boldsymbol{A_{100\times217}^{dustTE}}$	0.480 ± 0.087	r_*	144.66 ± 0.30	$f_{2000}^{143\times217}$	32.5 ± 2.1
$\boldsymbol{A_{143}^{dustTE}}$	0.223 ± 0.054	$100\theta_*$	1.04129 ± 0.00031	f_{2000}^{217}	107.4 ± 2.0
$\boldsymbol{A_{143\times217}^{dustTE}}$	0.657 ± 0.081	$D_M(z_*)$/Gpc	13.892 ± 0.028	χ^2_{simall}	397.5 ± 2.5
$\boldsymbol{A_{217}^{dustTE}}$	2.07 ± 0.27	z_{drag}	1060.19 ± 0.31	χ^2_{lowl}	22.1 ± 1.5
$\boldsymbol{c_{100}}$	0.99971 ± 0.00061	r_{drag}	147.27 ± 0.30	χ^2_{plik}	2362.4 ± 6.5
$\boldsymbol{c_{217}}$	0.99824 ± 0.00062	k_D	0.14079 ± 0.00033	$\chi^2_{H073p45}$	10.9 ± 2.4
H_0	68.01 ± 0.60	$100\theta_D$	0.16062 ± 0.00018	χ^2_{prior}	11.7 ± 4.5
Ω_Λ	0.6932 ± 0.0080	z_{eq}	3374 ± 30	χ^2_{CMB}	2782.0 ± 6.4
Ω_m	0.3068 ± 0.0080	k_{eq}	0.010299 ± 0.000091		
$\Omega_m h^2$	0.1419 ± 0.0012	$100\theta_{eq}$	0.8189 ± 0.0057		

$\bar{\chi}^2_{eff} = 2804.52$; $\Delta\bar{\chi}^2_{eff} = 0.63$; $R - 1 = 0.04836$

12.21 base_nrun_CamSpecHM_TT_lowl_lowE

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02216 ± 0.00023	$\sigma_8\Omega_m^{0.5}$	0.459 ± 0.013	$H(0.15)$	72.34 ± 0.79
$\boldsymbol{\Omega_c h^2}$	0.1206 ± 0.0021	$\sigma_8\Omega_m^{0.25}$	0.610 ± 0.012	$D_M(0.15)$	646.8 ± 8.0
$\boldsymbol{100\theta_{MC}}$	1.04084 ± 0.00048	$\sigma_8/h^{0.5}$	0.991 ± 0.016	$H(0.38)$	82.59 ± 0.57
$\boldsymbol{\tau}$	0.0530 ± 0.0085	$r_{drag}h$	98.6 ± 1.6	$D_M(0.38)$	1541 ± 16
$\boldsymbol{\ln(10^{10}A_s)}$	3.041 ± 0.018	$\langle d^2\rangle^{1/2}$	2.445 ± 0.038	$H(0.51)$	89.39 ± 0.45
$\boldsymbol{n_s}$	0.9630 ± 0.0061	z_{re}	7.57 ± 0.86	$D_M(0.51)$	1994 ± 19
$\boldsymbol{dn_s/d\ln k}$	-0.0033 ± 0.0076	10^9A_s	2.094 ± 0.037	$H(0.61)$	95.07 ± 0.36
$\boldsymbol{y_{cal}}$	1.0004 ± 0.0025	$10^9A_se^{-2\tau}$	1.883 ± 0.015	$D_M(0.61)$	2320 ± 20
$\boldsymbol{A_{100}^{PS}}$	244 ± 25	D_{40}	1223 ± 21	$H(2.33)$	236.7 ± 1.3
$\boldsymbol{A_{143}^{PS}}$	42 ± 9	D_{220}	5704 ± 41	$D_M(2.33)$	5775 ± 17
$\boldsymbol{A_{217}^{PS}}$	100 ± 10	D_{810}	2535 ± 14	$f\sigma_8(0.15)$	0.463 ± 0.012
$\boldsymbol{A_{217}^{CIB}}$	42 ± 8	D_{1420}	813.5 ± 5.4	$\sigma_8(0.15)$	0.7488 ± 0.0077
$\boldsymbol{A_{143}^{tSZ}}$	$3.7^{+1.7}_{-2.6}$	D_{2000}	229.1 ± 2.0	$f\sigma_8(0.38)$	0.4791 ± 0.0097
$\boldsymbol{r_{143\times217}^{PS}}$	0.64 ± 0.13	$n_{s,0.002}$	0.974 ± 0.023	$\sigma_8(0.38)$	0.6629 ± 0.0062
$\boldsymbol{r_{143\times217}^{CIB}}$	> 0.475	Y_P	$0.24530^{+0.00011}_{-0.000087}$	$f\sigma_8(0.51)$	0.4767 ± 0.0083
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	$0.24663^{+0.00011}_{-0.000087}$	$\sigma_8(0.51)$	0.6200 ± 0.0056
$\boldsymbol{A^{kSZ}}$	—	10^5D/H	2.626 ± 0.045	$f\sigma_8(0.61)$	0.4711 ± 0.0073
$\boldsymbol{A_{100}^{dust}}$	1.02 ± 0.20	Age/Gyr	13.823 ± 0.038	$\sigma_8(0.61)$	0.5897 ± 0.0053
$\boldsymbol{A_{143}^{dust}}$	0.98 ± 0.17	z_*	1090.24 ± 0.42	$f\sigma_8(2.33)$	0.2970 ± 0.0026
$\boldsymbol{A_{217}^{dust}}$	0.97 ± 0.10	r_*	144.45 ± 0.49	$\sigma_8(2.33)$	0.3059 ± 0.0027
$\boldsymbol{A_{143\times217}^{dust}}$	1.03 ± 0.16	$100\theta_*$	1.04105 ± 0.00047	f_{2000}^{143}	31.5 ± 3.4
$\boldsymbol{c_{100}}$	0.9975 ± 0.0010	$D_M(z_*)$/Gpc	13.876 ± 0.045	f_{2000}^{217}	108.0 ± 2.2
$\boldsymbol{c_{217}}$	1.0013 ± 0.0016	z_{drag}	1059.49 ± 0.50	$f_{2000}^{143\times217}$	33.5 ± 2.4
H_0	66.97 ± 0.93	r_{drag}	147.18 ± 0.50	χ^2_{simall}	397.0 ± 1.8
Ω_Λ	$0.680^{+0.014}_{-0.012}$	k_D	0.14061 ± 0.00056	χ^2_{lowl}	23.1 ± 2.1
Ω_m	$0.320^{+0.012}_{-0.014}$	$100\theta_D$	0.16103 ± 0.00029	$\chi^2_{CamSpec}$	7064.2 ± 5.7
$\Omega_m h^2$	0.1434 ± 0.0020	z_{eq}	3410 ± 48	χ^2_{prior}	7.7 ± 3.5
$\Omega_m h^3$	0.09599 ± 0.00049	k_{eq}	0.01041 ± 0.00015	χ^2_{CMB}	7484.4 ± 5.6
σ_8	0.8113 ± 0.0091	$100\theta_{eq}$	0.8113 ± 0.0090		
S_8	0.838 ± 0.024	$100\theta_{s,eq}$	0.4485 ± 0.0046		

$\bar{\chi}^2_{eff} = 7492.14$; $\Delta\bar{\chi}^2_{eff} = 0.60$; $R - 1 = 0.00818$

12.22 base_nrun_CamSpecHM_TT_lowl_lowE_post_BAO

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02225 ± 0.00021	$\sigma_8\Omega_m^{0.25}$	0.6020 ± 0.0080	$H(0.38)$	83.01 ± 0.36
$\boldsymbol{\Omega_c h^2}$	0.1189 ± 0.0012	$\sigma_8/h^{0.5}$	0.981 ± 0.012	$D_M(0.38)$	1528.5 ± 9.4
$\boldsymbol{100\theta_{MC}}$	1.04106 ± 0.00042	$r_{drag}h$	99.84 ± 0.94	$H(0.51)$	89.71 ± 0.30
$\boldsymbol{\tau}$	$0.0547^{+0.0077}_{-0.0086}$	$\langle d^2\rangle^{1/2}$	2.422 ± 0.028	$D_M(0.51)$	1980 ± 11
$\boldsymbol{\ln(10^{10}A_s)}$	$3.041^{+0.017}_{-0.019}$	z_{re}	7.71 ± 0.84	$H(0.61)$	95.31 ± 0.25
$\boldsymbol{n_s}$	0.9668 ± 0.0046	$10^9 A_s$	$2.093^{+0.034}_{-0.040}$	$D_M(0.61)$	2305 ± 12
$\boldsymbol{dn_s/d\ln k}$	-0.0027 ± 0.0076	$10^9 A_s e^{-2\tau}$	1.876 ± 0.012	$H(2.33)$	235.75 ± 0.78
$\boldsymbol{y_{cal}}$	1.0004 ± 0.0025	D_{40}	1217 ± 20	$D_M(2.33)$	5764 ± 13
$\boldsymbol{A_{100}^{PS}}$	243 ± 25	D_{220}	5710 ± 40	$f\sigma_8(0.15)$	0.4538 ± 0.0077
$\boldsymbol{A_{143}^{PS}}$	41 ± 9	D_{810}	2534 ± 14	$\sigma_8(0.15)$	0.7458 ± 0.0070
$\boldsymbol{A_{217}^{PS}}$	100 ± 10	D_{1420}	814.4 ± 5.2	$f\sigma_8(0.38)$	0.4724 ± 0.0065
$\boldsymbol{A_{217}^{CIB}}$	41 ± 7	D_{2000}	229.5 ± 2.0	$\sigma_8(0.38)$	$0.6613^{+0.0056}_{-0.0062}$
$\boldsymbol{A_{143}^{tSZ}}$	$3.7^{+1.8}_{-2.6}$	$n_{s,0.002}$	0.975 ± 0.023	$f\sigma_8(0.51)$	0.4712 ± 0.0059
$\boldsymbol{r_{143\times217}^{PS}}$	0.64 ± 0.13	Y_P	$0.245344^{+0.000094}_{-0.000078}$	$\sigma_8(0.51)$	$0.6190^{+0.0051}_{-0.0058}$
$\boldsymbol{r_{143\times217}^{CIB}}$	> 0.473	Y_P^{BBN}	$0.246671^{+0.000094}_{-0.000079}$	$f\sigma_8(0.61)$	0.4664 ± 0.0054
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	10^5D/H	2.608 ± 0.040	$\sigma_8(0.61)$	$0.5890^{+0.0048}_{-0.0055}$
$\boldsymbol{A^{kSZ}}$	—	Age/Gyr	13.801 ± 0.029	$f\sigma_8(2.33)$	$0.2971^{+0.0024}_{-0.0028}$
$\boldsymbol{A_{100}^{dust}}$	1.02 ± 0.20	z_*	1089.98 ± 0.31	$\sigma_8(2.33)$	$0.3063^{+0.0025}_{-0.0029}$
$\boldsymbol{A_{143}^{dust}}$	0.98 ± 0.17	r_*	144.80 ± 0.32	f_{2000}^{143}	31.0 ± 3.4
$\boldsymbol{A_{217}^{dust}}$	0.97 ± 0.10	$100\theta_*$	1.04126 ± 0.00042	f_{2000}^{217}	107.7 ± 2.2
$\boldsymbol{A_{143\times217}^{dust}}$	1.03 ± 0.17	$D_M(z_*)$/Gpc	13.906 ± 0.031	$f_{2000}^{143\times217}$	33.2 ± 2.4
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	z_{drag}	1059.58 ± 0.48	χ^2_{simall}	397.2 ± 1.9
$\boldsymbol{c_{217}}$	1.0013 ± 0.0016	r_{drag}	147.51 ± 0.36	χ^2_{lowl}	22.6 ± 1.8
H_0	67.68 ± 0.55	k_D	0.14034 ± 0.00047	$\chi^2_{CamSpec}$	7064.6 ± 5.5
Ω_Λ	0.6903 ± 0.0073	$100\theta_D$	0.16098 ± 0.00028	χ^2_{6DF}	0.054 ± 0.073
Ω_m	0.3097 ± 0.0073	z_{eq}	3374 ± 28	χ^2_{MGS}	1.39 ± 0.52
$\Omega_m h^2$	0.1418 ± 0.0012	k_{eq}	0.010297 ± 0.000087	$\chi^2_{DR12BAO}$	4.7 ± 1.6
$\Omega_m h^3$	0.09599 ± 0.00048	$100\theta_{eq}$	0.8182 ± 0.0052	χ^2_{prior}	7.7 ± 3.5
σ_8	0.8069 ± 0.0079	$100\theta_{s,eq}$	0.4520 ± 0.0027	χ^2_{BAO}	6.1 ± 1.3
S_8	0.820 ± 0.015	$H(0.15)$	72.94 ± 0.47	χ^2_{CMB}	7484.3 ± 5.5
$\sigma_8\Omega_m^{0.5}$	0.4491 ± 0.0082	$D_M(0.15)$	640.7 ± 4.7		

$\bar{\chi}^2_{eff} = 7498.15$; $\Delta\bar{\chi}^2_{eff} = 0.60$; $R - 1 = 0.01937$

12.23 base_nrun_CamSpecHM_TT_lowl_lowE_post_lensing

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02217 ± 0.00022	$\sigma_8\Omega_m^{0.5}$	0.4570 ± 0.0090	$H(0.15)$	72.44 ± 0.63
$\boldsymbol{\Omega_c h^2}$	0.1202 ± 0.0016	$\sigma_8\Omega_m^{0.25}$	0.6086 ± 0.0078	$D_M(0.15)$	645.8 ± 6.3
$\boldsymbol{100\theta_{MC}}$	1.04087 ± 0.00045	$\sigma_8/h^{0.5}$	0.990 ± 0.011	$H(0.38)$	82.65 ± 0.46
$\boldsymbol{\tau}$	0.0532 ± 0.0083	$r_{drag}h$	98.8 ± 1.2	$D_M(0.38)$	1539 ± 13
$\boldsymbol{\ln(10^{10}A_s)}$	3.041 ± 0.016	$\langle d^2\rangle^{1/2}$	2.443 ± 0.027	$H(0.51)$	89.43 ± 0.37
$\boldsymbol{n_s}$	0.9636 ± 0.0052	z_{re}	7.59 ± 0.84	$D_M(0.51)$	1992 ± 15
$\boldsymbol{dn_s/d\ln k}$	-0.0024 ± 0.0074	10^9A_s	2.093 ± 0.034	$H(0.61)$	95.10 ± 0.31
$\boldsymbol{y_{cal}}$	1.0004 ± 0.0025	$10^9A_se^{-2\tau}$	1.881 ± 0.012	$D_M(0.61)$	2317 ± 16
$\boldsymbol{A_{100}^{PS}}$	244 ± 25	D_{40}	1224 ± 20	$H(2.33)$	236.52 ± 0.98
$\boldsymbol{A_{143}^{PS}}$	42 ± 9	D_{220}	5707 ± 41	$D_M(2.33)$	5773 ± 15
$\boldsymbol{A_{217}^{PS}}$	100 ± 10	D_{810}	2534 ± 14	$f\sigma_8(0.15)$	0.4611 ± 0.0082
$\boldsymbol{A_{217}^{CIB}}$	41 ± 7	D_{1420}	813.7 ± 5.3	$\sigma_8(0.15)$	0.7483 ± 0.0057
$\boldsymbol{A_{143}^{tSZ}}$	$3.7^{+1.7}_{-2.7}$	D_{2000}	229.2 ± 2.0	$f\sigma_8(0.38)$	0.4779 ± 0.0064
$\boldsymbol{r_{143\times217}^{PS}}$	0.65 ± 0.13	$n_{s,0.002}$	0.971 ± 0.023	$\sigma_8(0.38)$	0.6626 ± 0.0050
$\boldsymbol{r_{143\times217}^{CIB}}$	> 0.475	Y_P	$0.24531^{+0.00011}_{-0.000085}$	$f\sigma_8(0.51)$	0.4758 ± 0.0054
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	$0.24663^{+0.00011}_{-0.000085}$	$\sigma_8(0.51)$	0.6198 ± 0.0047
$\boldsymbol{A^{kSZ}}$	—	10^5D/H	2.624 ± 0.043	$f\sigma_8(0.61)$	0.4703 ± 0.0048
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.19	Age/Gyr	13.820 ± 0.034	$\sigma_8(0.61)$	0.5896 ± 0.0045
$\boldsymbol{A_{143}^{dust}}$	0.98 ± 0.17	z_*	1090.20 ± 0.37	$f\sigma_8(2.33)$	0.2970 ± 0.0024
$\boldsymbol{A_{217}^{dust}}$	0.97 ± 0.10	r_*	144.52 ± 0.38	$\sigma_8(2.33)$	0.3060 ± 0.0027
$\boldsymbol{A_{143\times217}^{dust}}$	1.03 ± 0.17	$100\theta_*$	1.04107 ± 0.00044	f_{2000}^{143}	31.3 ± 3.3
$\boldsymbol{c_{100}}$	0.9975 ± 0.0010	$D_M(z_*)$/Gpc	13.882 ± 0.036	f_{2000}^{217}	107.9 ± 2.2
$\boldsymbol{c_{217}}$	1.0013 ± 0.0016	z_{drag}	1059.48 ± 0.49	$f_{2000}^{143\times217}$	33.4 ± 2.4
H_0	67.09 ± 0.73	r_{drag}	147.25 ± 0.40	$\chi^2_{lensing}$	9.61 ± 0.91
Ω_Λ	0.682 ± 0.010	k_D	0.14054 ± 0.00048	χ^2_{simall}	397.0 ± 1.7
Ω_m	0.318 ± 0.010	$100\theta_D$	0.16103 ± 0.00028	χ^2_{lowl}	23.2 ± 2.1
$\Omega_m h^2$	0.1431 ± 0.0015	z_{eq}	3403 ± 36	$\chi^2_{CamSpec}$	7063.5 ± 5.4
$\Omega_m h^3$	0.09597 ± 0.00048	k_{eq}	0.01039 ± 0.00011	χ^2_{prior}	7.7 ± 3.5
σ_8	0.8105 ± 0.0064	$100\theta_{eq}$	0.8126 ± 0.0068	χ^2_{CMB}	7493.4 ± 5.6
S_8	0.834 ± 0.016	$100\theta_{s,eq}$	0.4492 ± 0.0035		

$\bar{\chi}^2_{eff} = 7501.08$; $\Delta\bar{\chi}^2_{eff} = 0.83$; $R - 1 = 0.01225$

12.24 base_nrun_CamSpecHM_TT_lowl_lowE_post_BAO_lensing

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02225 ± 0.00021	$\sigma_8\Omega_m^{0.25}$	0.6041 ± 0.0063	$H(0.38)$	82.97 ± 0.34
$\boldsymbol{\Omega_c h^2}$	0.1191 ± 0.0011	$\sigma_8/h^{0.5}$	0.9841 ± 0.0091	$D_M(0.38)$	1529.8 ± 8.8
$\boldsymbol{100\theta_{MC}}$	1.04104 ± 0.00042	$r_{drag}h$	99.69 ± 0.85	$H(0.51)$	89.67 ± 0.28
$\boldsymbol{\tau}$	$0.0562^{+0.0072}_{-0.0081}$	$\langle d^2\rangle^{1/2}$	2.430 ± 0.023	$D_M(0.51)$	1982 ± 10
$\boldsymbol{\ln(10^{10}A_s)}$	3.045 ± 0.016	z_{re}	7.87 ± 0.77	$H(0.61)$	95.28 ± 0.25
$\boldsymbol{n_s}$	0.9663 ± 0.0045	$10^9 A_s$	$2.101^{+0.031}_{-0.035}$	$D_M(0.61)$	2306 ± 11
$\boldsymbol{dn_s/d\ln k}$	-0.0023 ± 0.0075	$10^9 A_s e^{-2\tau}$	1.878 ± 0.011	$H(2.33)$	235.87 ± 0.70
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0024	D_{40}	1220 ± 19	$D_M(2.33)$	5765 ± 13
$\boldsymbol{A_{100}^{PS}}$	243 ± 25	D_{220}	5714 ± 39	$f\sigma_8(0.15)$	0.4557 ± 0.0061
$\boldsymbol{A_{143}^{PS}}$	41 ± 9	D_{810}	2535 ± 14	$\sigma_8(0.15)$	0.7477 ± 0.0057
$\boldsymbol{A_{217}^{PS}}$	101 ± 10	D_{1420}	814.8 ± 5.2	$f\sigma_8(0.38)$	0.4742 ± 0.0051
$\boldsymbol{A_{217}^{CIB}}$	41 ± 7	D_{2000}	229.7 ± 1.9	$\sigma_8(0.38)$	0.6629 ± 0.0050
$\boldsymbol{A_{143}^{tSZ}}$	$3.7^{+1.7}_{-2.6}$	$n_{s,0.002}$	0.974 ± 0.023	$f\sigma_8(0.51)$	0.4729 ± 0.0046
$\boldsymbol{r_{143\times217}^{PS}}$	0.65 ± 0.13	Y_P	$0.245341^{+0.000094}_{-0.000078}$	$\sigma_8(0.51)$	0.6204 ± 0.0047
$\boldsymbol{r_{143\times217}^{CIB}}$	> 0.467	Y_P^{BBN}	$0.246668^{+0.000094}_{-0.000078}$	$f\sigma_8(0.61)$	0.4679 ± 0.0042
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	10^5D/H	2.610 ± 0.039	$\sigma_8(0.61)$	0.5903 ± 0.0045
$\boldsymbol{A^{kSZ}}$	—	Age/Gyr	13.803 ± 0.029	$f\sigma_8(2.33)$	$0.2977^{+0.0022}_{-0.0024}$
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.20	z_*	1090.00 ± 0.30	$\sigma_8(2.33)$	$0.3069^{+0.0023}_{-0.0026}$
$\boldsymbol{A_{143}^{dust}}$	0.98 ± 0.17	r_*	144.75 ± 0.29	f_{2000}^{143}	30.9 ± 3.3
$\boldsymbol{A_{217}^{dust}}$	0.97 ± 0.10	$100\theta_*$	1.04123 ± 0.00041	f_{2000}^{217}	107.6 ± 2.2
$\boldsymbol{A_{143\times217}^{dust}}$	1.03 ± 0.17	$D_M(z_*)$/Gpc	13.902 ± 0.029	$f_{2000}^{143\times217}$	33.1 ± 2.4
$\boldsymbol{c_{100}}$	0.9975 ± 0.0010	z_{drag}	1059.58 ± 0.48	$\chi^2_{lensing}$	9.47 ± 0.82
$\boldsymbol{c_{217}}$	1.0012 ± 0.0015	r_{drag}	147.46 ± 0.33	χ^2_{simall}	397.3 ± 2.0
H_0	67.60 ± 0.50	k_D	0.14038 ± 0.00045	χ^2_{lowl}	22.8 ± 1.9
Ω_Λ	0.6891 ± 0.0066	$100\theta_D$	0.16098 ± 0.00028	$\chi^2_{CamSpec}$	7063.8 ± 5.3
Ω_m	0.3109 ± 0.0066	z_{eq}	3378 ± 25	χ^2_{6DF}	0.057 ± 0.070
$\Omega_m h^2$	0.1420 ± 0.0011	k_{eq}	0.010311 ± 0.000077	χ^2_{MGS}	1.30 ± 0.46
$\Omega_m h^3$	0.09600 ± 0.00048	$100\theta_{eq}$	0.8174 ± 0.0047	$\chi^2_{DR12BAO}$	4.8 ± 1.5
σ_8	0.8091 ± 0.0063	$100\theta_{s,eq}$	0.4516 ± 0.0024	χ^2_{prior}	7.7 ± 3.5
S_8	0.824 ± 0.012	$H(0.15)$	72.87 ± 0.44	χ^2_{CMB}	7493.4 ± 5.5
$\sigma_8\Omega_m^{0.5}$	0.4511 ± 0.0065	$D_M(0.15)$	641.4 ± 4.3	χ^2_{BAO}	6.1 ± 1.2

$\bar{\chi}^2_{eff} = 7507.23$; $\Delta\bar{\chi}^2_{eff} = 0.75$; $R - 1 = 0.02103$

12.25 base_nrun_CamSpecHM_TT_lowl_lowE_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02217 ± 0.00023	$\sigma_8\Omega_m^{0.5}$	0.459 ± 0.013	$H(0.15)$	72.37 ± 0.79
$\boldsymbol{\Omega_c h^2}$	0.1205 ± 0.0021	$\sigma_8\Omega_m^{0.25}$	0.611 ± 0.012	$D_M(0.15)$	646.5 ± 8.0
$\boldsymbol{100\theta_{MC}}$	1.04086 ± 0.00048	$\sigma_8/h^{0.5}$	0.992 ± 0.016	$H(0.38)$	82.62 ± 0.57
$\boldsymbol{\tau}$	$0.0546^{+0.0049}_{-0.0088}$	$r_{drag}h$	98.6 ± 1.6	$D_M(0.38)$	1540 ± 16
$\boldsymbol{\ln(10^{10}A_s)}$	$3.045^{+0.013}_{-0.018}$	$\langle d^2\rangle^{1/2}$	2.447 ± 0.038	$H(0.51)$	89.41 ± 0.45
$\boldsymbol{n_s}$	0.9632 ± 0.0061	z_{re}	$7.75^{+0.55}_{-0.87}$	$D_M(0.51)$	1994 ± 19
$\boldsymbol{dn_s/d\ln k}$	-0.0036 ± 0.0076	10^9A_s	$2.100^{+0.026}_{-0.037}$	$H(0.61)$	95.08 ± 0.36
$\boldsymbol{y_{cal}}$	1.0004 ± 0.0025	$10^9A_se^{-2\tau}$	1.883 ± 0.014	$D_M(0.61)$	2319 ± 20
$\boldsymbol{A_{100}^{PS}}$	244 ± 25	D_{40}	1222 ± 21	$H(2.33)$	236.7 ± 1.3
$\boldsymbol{A_{143}^{PS}}$	42 ± 9	D_{220}	5704 ± 41	$D_M(2.33)$	5774 ± 17
$\boldsymbol{A_{217}^{PS}}$	100 ± 10	D_{810}	2535 ± 14	$f\sigma_8(0.15)$	0.463 ± 0.012
$\boldsymbol{A_{217}^{CIB}}$	42 ± 8	D_{1420}	813.5 ± 5.4	$\sigma_8(0.15)$	0.7498 ± 0.0071
$\boldsymbol{A_{143}^{tSZ}}$	$3.7^{+1.7}_{-2.6}$	D_{2000}	229.2 ± 2.0	$f\sigma_8(0.38)$	0.4795 ± 0.0096
$\boldsymbol{r_{143\times217}^{PS}}$	0.64 ± 0.13	$n_{s,0.002}$	0.975 ± 0.023	$\sigma_8(0.38)$	$0.6638^{+0.0052}_{-0.0059}$
$\boldsymbol{r_{143\times217}^{CIB}}$	> 0.473	Y_P	$0.24531^{+0.00011}_{-0.000087}$	$f\sigma_8(0.51)$	0.4772 ± 0.0082
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	$0.24664^{+0.00011}_{-0.000087}$	$\sigma_8(0.51)$	$0.6209^{+0.0045}_{-0.0054}$
$\boldsymbol{A^{kSZ}}$	—	10^5D/H	2.624 ± 0.044	$f\sigma_8(0.61)$	0.4716 ± 0.0072
$\boldsymbol{A_{100}^{dust}}$	1.02 ± 0.20	Age/Gyr	13.821 ± 0.037	$\sigma_8(0.61)$	$0.5906^{+0.0041}_{-0.0050}$
$\boldsymbol{A_{143}^{dust}}$	0.98 ± 0.17	z_*	1090.22 ± 0.41	$f\sigma_8(2.33)$	$0.2975^{+0.0019}_{-0.0026}$
$\boldsymbol{A_{217}^{dust}}$	0.97 ± 0.10	r_*	144.46 ± 0.49	$\sigma_8(2.33)$	$0.3064^{+0.0019}_{-0.0027}$
$\boldsymbol{A_{143\times217}^{dust}}$	1.03 ± 0.16	$100\theta_*$	1.04106 ± 0.00047	f_{2000}^{143}	31.5 ± 3.4
$\boldsymbol{c_{100}}$	0.9975 ± 0.0010	$D_M(z_*)$/Gpc	13.876 ± 0.045	f_{2000}^{217}	108.0 ± 2.2
$\boldsymbol{c_{217}}$	1.0013 ± 0.0016	z_{drag}	1059.51 ± 0.49	$f_{2000}^{143\times217}$	33.5 ± 2.4
H_0	67.01 ± 0.92	r_{drag}	147.19 ± 0.50	χ^2_{simall}	396.9 ± 1.8
Ω_Λ	$0.681^{+0.014}_{-0.012}$	k_D	0.14061 ± 0.00056	χ^2_{lowl}	23.0 ± 2.0
Ω_m	$0.319^{+0.012}_{-0.014}$	$100\theta_D$	0.16101 ± 0.00029	$\chi^2_{CamSpec}$	7064.2 ± 5.6
$\Omega_m h^2$	0.1433 ± 0.0020	z_{eq}	3409 ± 48	χ^2_{prior}	7.7 ± 3.5
$\Omega_m h^3$	0.09601 ± 0.00049	k_{eq}	0.01040 ± 0.00015	χ^2_{CMB}	7484.1 ± 5.6
σ_8	0.8123 ± 0.0086	$100\theta_{eq}$	0.8116 ± 0.0089		
S_8	0.838 ± 0.024	$100\theta_{s,eq}$	0.4487 ± 0.0046		

$\bar{\chi}^2_{eff} = 7491.87$; $\Delta\bar{\chi}^2_{eff} = 0.61$; $R - 1 = 0.00915$

12.26 base_nrun_CamSpecHM_TT_lowl_lowE_post_BAO_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02226 ± 0.00021	$\sigma_8\Omega_m^{0.25}$	0.6026 ± 0.0078	$H(0.38)$	83.02 ± 0.36
$\boldsymbol{\Omega_c h^2}$	0.1189 ± 0.0012	$\sigma_8/h^{0.5}$	0.982 ± 0.011	$D_M(0.38)$	1528.3 ± 9.4
$\boldsymbol{100\theta_{MC}}$	1.04107 ± 0.00042	$r_{drag}h$	99.85 ± 0.93	$H(0.51)$	89.72 ± 0.30
$\boldsymbol{\tau}$	$0.0559^{+0.0056}_{-0.0088}$	$\langle d^2\rangle^{1/2}$	2.424 ± 0.028	$D_M(0.51)$	1980 ± 11
$\boldsymbol{\ln(10^{10}A_s)}$	$3.043^{+0.013}_{-0.019}$	z_{re}	$7.84^{+0.60}_{-0.88}$	$H(0.61)$	95.32 ± 0.25
$\boldsymbol{n_s}$	0.9669 ± 0.0046	$10^9 A_s$	$2.098^{+0.027}_{-0.039}$	$D_M(0.61)$	2304 ± 12
$\boldsymbol{dn_s/d\ln k}$	-0.0030 ± 0.0075	$10^9 A_s e^{-2\tau}$	1.876 ± 0.012	$H(2.33)$	235.75 ± 0.78
$\boldsymbol{y_{cal}}$	1.0004 ± 0.0025	D_{40}	1216 ± 20	$D_M(2.33)$	5764 ± 13
$\boldsymbol{A_{100}^{PS}}$	243 ± 25	D_{220}	5710 ± 40	$f\sigma_8(0.15)$	0.4542 ± 0.0076
$\boldsymbol{A_{143}^{PS}}$	41 ± 9	D_{810}	2533 ± 14	$\sigma_8(0.15)$	$0.7467^{+0.0057}_{-0.0070}$
$\boldsymbol{A_{217}^{PS}}$	100 ± 10	D_{1420}	814.4 ± 5.2	$f\sigma_8(0.38)$	0.4729 ± 0.0063
$\boldsymbol{A_{217}^{CIB}}$	41 ± 7	D_{2000}	229.5 ± 1.9	$\sigma_8(0.38)$	$0.6621^{+0.0047}_{-0.0061}$
$\boldsymbol{A_{143}^{tSZ}}$	$3.7^{+1.7}_{-2.6}$	$n_{s,0.002}$	0.976 ± 0.023	$f\sigma_8(0.51)$	0.4717 ± 0.0057
$\boldsymbol{r_{143\times217}^{PS}}$	0.64 ± 0.13	Y_P	$0.245346^{+0.000094}_{-0.000079}$	$\sigma_8(0.51)$	$0.6197^{+0.0042}_{-0.0057}$
$\boldsymbol{r_{143\times217}^{CIB}}$	> 0.469	Y_P^{BBN}	$0.246672^{+0.000094}_{-0.000079}$	$f\sigma_8(0.61)$	0.4669 ± 0.0052
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	10^5D/H	2.607 ± 0.040	$\sigma_8(0.61)$	$0.5897^{+0.0040}_{-0.0054}$
$\boldsymbol{A^{kSZ}}$	—	Age/Gyr	13.800 ± 0.029	$f\sigma_8(2.33)$	$0.2974^{+0.0019}_{-0.0027}$
$\boldsymbol{A_{100}^{dust}}$	1.02 ± 0.20	z_*	1089.97 ± 0.31	$\sigma_8(2.33)$	$0.3067^{+0.0020}_{-0.0028}$
$\boldsymbol{A_{143}^{dust}}$	0.98 ± 0.18	r_*	144.80 ± 0.32	f_{2000}^{143}	31.1 ± 3.3
$\boldsymbol{A_{217}^{dust}}$	0.97 ± 0.10	$100\theta_*$	1.04126 ± 0.00041	f_{2000}^{217}	107.7 ± 2.2
$\boldsymbol{A_{143\times217}^{dust}}$	1.03 ± 0.17	$D_M(z_*)$/Gpc	13.906 ± 0.031	$f_{2000}^{143\times217}$	33.2 ± 2.4
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	z_{drag}	1059.59 ± 0.48	χ^2_{simall}	397.1 ± 2.0
$\boldsymbol{c_{217}}$	1.0013 ± 0.0016	r_{drag}	147.51 ± 0.36	χ^2_{lowl}	22.5 ± 1.8
H_0	67.69 ± 0.54	k_D	0.14034 ± 0.00047	$\chi^2_{CamSpec}$	7064.5 ± 5.5
Ω_Λ	0.6904 ± 0.0072	$100\theta_D$	0.16097 ± 0.00028	χ^2_{6DF}	0.053 ± 0.072
Ω_m	0.3096 ± 0.0072	z_{eq}	3374 ± 28	χ^2_{MGS}	1.40 ± 0.52
$\Omega_m h^2$	0.1418 ± 0.0012	k_{eq}	0.010297 ± 0.000086	$\chi^2_{DR12BAO}$	4.6 ± 1.5
$\Omega_m h^3$	0.09600 ± 0.00048	$100\theta_{eq}$	0.8183 ± 0.0052	χ^2_{prior}	7.8 ± 3.5
σ_8	$0.8078^{+0.0066}_{-0.0079}$	$100\theta_{s,eq}$	0.4521 ± 0.0027	χ^2_{BAO}	6.1 ± 1.3
S_8	0.821 ± 0.015	$H(0.15)$	72.95 ± 0.47	χ^2_{CMB}	7484.1 ± 5.4
$\sigma_8\Omega_m^{0.5}$	0.4495 ± 0.0080	$D_M(0.15)$	640.6 ± 4.6		

$\bar{\chi}^2_{eff} = 7497.95$; $\Delta\bar{\chi}^2_{eff} = 0.64$; $R - 1 = 0.02138$

12.27 base_nrun_CamSpecHM_TT_lowl_lowE_post_lensing_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02218 ± 0.00022	$\sigma_8\Omega_m^{0.5}$	0.4568 ± 0.0089	$H(0.15)$	72.49 ± 0.61
$\boldsymbol{\Omega_c h^2}$	0.1201 ± 0.0015	$\sigma_8\Omega_m^{0.25}$	0.6087 ± 0.0077	$D_M(0.15)$	645.2 ± 6.1
$\boldsymbol{100\theta_{MC}}$	1.04088 ± 0.00045	$\sigma_8/h^{0.5}$	0.990 ± 0.011	$H(0.38)$	82.69 ± 0.45
$\boldsymbol{\tau}$	$0.0547^{+0.0052}_{-0.0086}$	$r_{drag}h$	98.9 ± 1.2	$D_M(0.38)$	1537 ± 12
$\boldsymbol{\ln(10^{10}A_s)}$	$3.044^{+0.011}_{-0.016}$	$\langle d^2\rangle^{1/2}$	2.443 ± 0.027	$H(0.51)$	89.46 ± 0.36
$\boldsymbol{n_s}$	0.9639 ± 0.0051	z_{re}	$7.75^{+0.58}_{-0.84}$	$D_M(0.51)$	1991 ± 14
$\boldsymbol{dn_s/d\ln k}$	-0.0026 ± 0.0074	10^9A_s	$2.099^{+0.023}_{-0.034}$	$H(0.61)$	95.12 ± 0.30
$\boldsymbol{y_{cal}}$	1.0004 ± 0.0025	$10^9A_se^{-2\tau}$	1.881 ± 0.012	$D_M(0.61)$	2316 ± 15
$\boldsymbol{A_{100}^{PS}}$	244 ± 25	D_{40}	1223 ± 20	$H(2.33)$	236.44 ± 0.95
$\boldsymbol{A_{143}^{PS}}$	42 ± 9	D_{220}	5707 ± 41	$D_M(2.33)$	5772 ± 15
$\boldsymbol{A_{217}^{PS}}$	100 ± 10	D_{810}	2534 ± 14	$f\sigma_8(0.15)$	0.4609 ± 0.0082
$\boldsymbol{A_{217}^{CIB}}$	41 ± 7	D_{1420}	813.7 ± 5.3	$\sigma_8(0.15)$	$0.7490^{+0.0050}_{-0.0055}$
$\boldsymbol{A_{143}^{tSZ}}$	$3.7^{+1.7}_{-2.7}$	D_{2000}	229.3 ± 2.0	$f\sigma_8(0.38)$	0.4780 ± 0.0064
$\boldsymbol{r_{143\times217}^{PS}}$	0.65 ± 0.13	$n_{s,0.002}$	0.972 ± 0.023	$\sigma_8(0.38)$	$0.6634^{+0.0040}_{-0.0049}$
$\boldsymbol{r_{143\times217}^{CIB}}$	> 0.472	Y_P	$0.24531^{+0.00010}_{-0.000085}$	$f\sigma_8(0.51)$	0.4759 ± 0.0054
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	$0.24664^{+0.00010}_{-0.000085}$	$\sigma_8(0.51)$	$0.6206^{+0.0037}_{-0.0047}$
$\boldsymbol{A^{kSZ}}$	—	10^5D/H	2.622 ± 0.042	$f\sigma_8(0.61)$	0.4705 ± 0.0048
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.19	Age/Gyr	13.818 ± 0.033	$\sigma_8(0.61)$	$0.5903^{+0.0034}_{-0.0045}$
$\boldsymbol{A_{143}^{dust}}$	0.98 ± 0.17	z_*	1090.17 ± 0.36	$f\sigma_8(2.33)$	$0.2974^{+0.0017}_{-0.0024}$
$\boldsymbol{A_{217}^{dust}}$	0.97 ± 0.11	r_*	144.55 ± 0.37	$\sigma_8(2.33)$	$0.3064^{+0.0019}_{-0.0027}$
$\boldsymbol{A_{143\times217}^{dust}}$	1.03 ± 0.17	$100\theta_*$	1.04109 ± 0.00044	f_{2000}^{143}	31.3 ± 3.3
$\boldsymbol{c_{100}}$	0.9975 ± 0.0010	$D_M(z_*)$/Gpc	13.884 ± 0.035	f_{2000}^{217}	107.9 ± 2.2
$\boldsymbol{c_{217}}$	1.0013 ± 0.0016	z_{drag}	1059.50 ± 0.49	$f_{2000}^{143\times217}$	33.4 ± 2.4
H_0	67.15 ± 0.70	r_{drag}	147.28 ± 0.39	$\chi^2_{lensing}$	9.59 ± 0.91
Ω_Λ	0.6829 ± 0.0097	k_D	0.14053 ± 0.00048	χ^2_{simall}	396.9 ± 1.7
Ω_m	0.3171 ± 0.0097	$100\theta_D$	0.16102 ± 0.00028	χ^2_{lowl}	23.1 ± 2.0
$\Omega_m h^2$	0.1429 ± 0.0015	z_{eq}	3400 ± 35	$\chi^2_{CamSpec}$	7063.5 ± 5.4
$\Omega_m h^3$	0.09598 ± 0.00048	k_{eq}	0.01038 ± 0.00011	χ^2_{prior}	7.7 ± 3.5
σ_8	0.8112 ± 0.0061	$100\theta_{eq}$	0.8132 ± 0.0066	χ^2_{CMB}	7493.1 ± 5.6
S_8	0.834 ± 0.016	$100\theta_{s,eq}$	0.4495 ± 0.0034		

$\bar{\chi}^2_{eff} = 7500.82$; $\Delta\bar{\chi}^2_{eff} = 0.81$; $R - 1 = 0.01490$

12.28 base_nrun_CamSpecHM_TT_lowl_lowE_post_BAO_lensing_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02225 ± 0.00021	$\sigma_8\Omega_m^{0.25}$	0.6043 ± 0.0062	$H(0.38)$	82.98 ± 0.33
$\boldsymbol{\Omega_c h^2}$	0.1191 ± 0.0011	$\sigma_8/h^{0.5}$	0.9845 ± 0.0089	$D_M(0.38)$	1529.6 ± 8.7
$\boldsymbol{100\theta_{MC}}$	1.04104 ± 0.00041	$r_{drag}h$	99.71 ± 0.84	$H(0.51)$	89.68 ± 0.28
$\boldsymbol{\tau}$	$0.0569^{+0.0060}_{-0.0083}$	$\langle d^2\rangle^{1/2}$	2.431 ± 0.023	$D_M(0.51)$	1982 ± 10
$\boldsymbol{\ln(10^{10}A_s)}$	$3.046^{+0.013}_{-0.017}$	z_{re}	$7.94^{+0.65}_{-0.79}$	$H(0.61)$	95.29 ± 0.25
$\boldsymbol{n_s}$	0.9664 ± 0.0044	$10^9 A_s$	$2.104^{+0.026}_{-0.035}$	$D_M(0.61)$	2306 ± 11
$\boldsymbol{dn_s/d\ln k}$	-0.0025 ± 0.0075	$10^9 A_s e^{-2\tau}$	1.878 ± 0.011	$H(2.33)$	235.86 ± 0.70
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0024	D_{40}	1220 ± 19	$D_M(2.33)$	5765 ± 13
$\boldsymbol{A_{100}^{PS}}$	243 ± 25	D_{220}	5714 ± 40	$f\sigma_8(0.15)$	0.4558 ± 0.0061
$\boldsymbol{A_{143}^{PS}}$	41 ± 9	D_{810}	2535 ± 14	$\sigma_8(0.15)$	$0.7481^{+0.0050}_{-0.0059}$
$\boldsymbol{A_{217}^{PS}}$	100 ± 10	D_{1420}	814.7 ± 5.2	$f\sigma_8(0.38)$	0.4743 ± 0.0050
$\boldsymbol{A_{217}^{CIB}}$	41 ± 7	D_{2000}	229.7 ± 1.9	$\sigma_8(0.38)$	$0.6632^{+0.0043}_{-0.0052}$
$\boldsymbol{A_{143}^{tSZ}}$	$3.7^{+1.7}_{-2.6}$	$n_{s,0.002}$	0.974 ± 0.023	$f\sigma_8(0.51)$	0.4730 ± 0.0045
$\boldsymbol{r_{143\times217}^{PS}}$	0.65 ± 0.13	Y_P	$0.245343^{+0.000094}_{-0.000078}$	$\sigma_8(0.51)$	$0.6207^{+0.0040}_{-0.0049}$
$\boldsymbol{r_{143\times217}^{CIB}}$	> 0.466	Y_P^{BBN}	$0.246669^{+0.000094}_{-0.000078}$	$f\sigma_8(0.61)$	0.4681 ± 0.0041
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	10^5D/H	2.609 ± 0.039	$\sigma_8(0.61)$	$0.5906^{+0.0038}_{-0.0047}$
$\boldsymbol{A^{kSZ}}$	—	Age/Gyr	13.802 ± 0.029	$f\sigma_8(2.33)$	$0.2978^{+0.0019}_{-0.0025}$
$\boldsymbol{A_{100}^{dust}}$	1.02 ± 0.20	z_*	1090.00 ± 0.30	$\sigma_8(2.33)$	$0.3071^{+0.0020}_{-0.0026}$
$\boldsymbol{A_{143}^{dust}}$	0.98 ± 0.17	r_*	144.76 ± 0.29	f_{2000}^{143}	30.9 ± 3.3
$\boldsymbol{A_{217}^{dust}}$	0.97 ± 0.11	$100\theta_*$	1.04124 ± 0.00041	f_{2000}^{217}	107.7 ± 2.2
$\boldsymbol{A_{143\times217}^{dust}}$	1.03 ± 0.17	$D_M(z_*)$/Gpc	13.902 ± 0.029	$f_{2000}^{143\times217}$	33.1 ± 2.4
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	z_{drag}	1059.59 ± 0.48	$\chi^2_{lensing}$	9.43 ± 0.77
$\boldsymbol{c_{217}}$	1.0012 ± 0.0015	r_{drag}	147.47 ± 0.33	χ^2_{simall}	397.3 ± 2.0
H_0	67.61 ± 0.50	k_D	0.14038 ± 0.00045	χ^2_{lowl}	22.8 ± 1.9
Ω_Λ	0.6893 ± 0.0065	$100\theta_D$	0.16098 ± 0.00028	$\chi^2_{CamSpec}$	7063.8 ± 5.4
Ω_m	0.3107 ± 0.0065	z_{eq}	3378 ± 25	χ^2_{6DF}	0.054 ± 0.068
$\Omega_m h^2$	0.1420 ± 0.0011	k_{eq}	0.010309 ± 0.000077	χ^2_{MGS}	1.31 ± 0.46
$\Omega_m h^3$	0.09600 ± 0.00048	$100\theta_{eq}$	0.8175 ± 0.0046	$\chi^2_{DR12BAO}$	4.7 ± 1.5
σ_8	$0.8095^{+0.0056}_{-0.0064}$	$100\theta_{s,eq}$	0.4517 ± 0.0024	χ^2_{prior}	7.7 ± 3.5
S_8	0.824 ± 0.012	$H(0.15)$	72.88 ± 0.43	χ^2_{CMB}	7493.3 ± 5.5
$\sigma_8\Omega_m^{0.5}$	0.4512 ± 0.0065	$D_M(0.15)$	641.3 ± 4.3	χ^2_{BAO}	6.1 ± 1.2

$\bar{\chi}^2_{eff} = 7507.10$; $\Delta\bar{\chi}^2_{eff} = 0.78$; $R - 1 = 0.02288$

12.29 base_nrun_CamSpecHM_TTTEEE_lowl_lowE

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022296	0.02229 ± 0.00016	σ_8	0.8086	0.8080 ± 0.0076	$100\theta_{\rm eq}$	0.8148	0.8150 ± 0.0059
$\boldsymbol{\Omega_c h^2}$	0.11967	0.1196 ± 0.0014	S_8	0.8272	0.826 ± 0.016	$100\theta_{\rm s,eq}$	0.45022	0.4503 ± 0.0030
$\boldsymbol{100\theta_{MC}}$	1.040874	1.04087 ± 0.00031	$\sigma_8\Omega_{\rm m}^{0.5}$	0.4531	0.4526 ± 0.0089	$H(0.15)$	72.70	72.71 ± 0.52
$\boldsymbol{\tau}$	0.0532	0.0528 ± 0.0082	$\sigma_8\Omega_{\rm m}^{0.25}$	0.6053	0.6047 ± 0.0084	$D_{\rm M}(0.15)$	643.1	643.0 ± 5.2
$\boldsymbol{\ln(10^{10}A_s)}$	3.0394	3.039 ± 0.017	$\sigma_8/h^{0.5}$	0.9849	0.984 ± 0.012	$H(0.38)$	82.856	82.86 ± 0.37
$\boldsymbol{n_s}$	0.96599	0.9657 ± 0.0048	$r_{\rm drag}h$	99.25	99.3 ± 1.1	$D_{\rm M}(0.38)$	1533.1	1533 ± 10
$\boldsymbol{{\rm d}n_s/{\rm d}\ln k}$	-0.0007	-0.0011 ± 0.0068	$\langle d^2\rangle^{1/2}$	2.4333	2.432 ± 0.028	$H(0.51)$	89.598	89.60 ± 0.30
$\boldsymbol{y_{cal}}$	1.00030	1.0004 ± 0.0025	$z_{\rm re}$	7.57	7.52 ± 0.84	$D_{\rm M}(0.51)$	1985.6	1985 ± 12
$\boldsymbol{A_{100}^{PS}}$	236.5	241 ± 25	$10^9 A_{\rm s}$	2.0894	2.088 ± 0.036	$H(0.61)$	95.236	95.24 ± 0.24
$\boldsymbol{A_{143}^{PS}}$	42.4	40 ± 9	$10^9 A_{\rm s}e^{-2\tau}$	1.8786	1.879 ± 0.012	$D_{\rm M}(0.61)$	2310.2	2310 ± 13
$\boldsymbol{A_{217}^{PS}}$	102.5	102 ± 10	D_{40}	1223.7	1224 ± 18	$H(2.33)$	236.26	236.23 ± 0.84
$\boldsymbol{A_{217}^{CIB}}$	42.9	40 ± 7	D_{220}	5714.7	5716 ± 38	$D_{\rm M}(2.33)$	5766.6	5767 ± 11
$\boldsymbol{A_{143}^{tSZ}}$	5.59	$3.8^{+1.9}_{-2.6}$	D_{810}	2534.9	2535 ± 14	$f\sigma_8(0.15)$	0.4574	0.4570 ± 0.0083
$\boldsymbol{r_{143\times217}^{PS}}$	0.627	0.65 ± 0.13	D_{1420}	815.6	815.3 ± 5.0	$\sigma_8(0.15)$	0.7469	0.7464 ± 0.0067
$\boldsymbol{r_{143\times217}^{CIB}}$	0.775	$0.57^{+0.40}_{-0.16}$	D_{2000}	230.18	230.0 ± 1.9	$f\sigma_8(0.38)$	0.4752	0.4747 ± 0.0068
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.33	—	$n_{\rm s,0.002}$	0.9681	0.969 ± 0.021	$\sigma_8(0.38)$	0.6618	0.6614 ± 0.0057
$\boldsymbol{A^{kSZ}}$	1.54	$4.8^{+2.5}_{-3.8}$	$Y_{\rm P}$	0.245366	$0.245362^{+0.000069}_{-0.000063}$	$f\sigma_8(0.51)$	0.4735	0.4731 ± 0.0060
$\boldsymbol{A_{100}^{dust}}$	1.015	1.01 ± 0.20	$Y_{\rm P}^{\rm BBN}$	0.246692	$0.246689^{+0.000069}_{-0.000063}$	$\sigma_8(0.51)$	0.6192	0.6188 ± 0.0053
$\boldsymbol{A_{143}^{dust}}$	0.978	0.97 ± 0.18	10^5D/H	2.5994	2.601 ± 0.031	$f\sigma_8(0.61)$	0.4683	0.4679 ± 0.0055
$\boldsymbol{A_{217}^{dust}}$	0.971	0.97 ± 0.10	Age/Gyr	13.8048	13.805 ± 0.025	$\sigma_8(0.61)$	0.58915	0.5888 ± 0.0050
$\boldsymbol{A_{143\times217}^{dust}}$	0.992	1.03 ± 0.16	z_*	1089.986	1089.99 ± 0.28	$f\sigma_8(2.33)$	0.29695	0.2968 ± 0.0025
$\boldsymbol{c_{100}}$	0.99763	0.9975 ± 0.0011	r_*	144.573	144.59 ± 0.32	$\sigma_8(2.33)$	0.30604	0.3059 ± 0.0026
$\boldsymbol{c_{217}}$	1.00129	1.0011 ± 0.0016	$100\theta_*$	1.041067	1.04106 ± 0.00031	f_{2000}^{143}	30.18	30.1 ± 3.2
$\boldsymbol{c_{TE}}$	0.99655	0.9967 ± 0.0050	$D_{\rm M}(z_*)$/Gpc	13.8870	13.889 ± 0.030	f_{2000}^{217}	106.90	107.1 ± 2.2
$\boldsymbol{c_{EE}}$	0.99209	0.9922 ± 0.0050	$z_{\rm drag}$	1059.742	1059.73 ± 0.35	$f_{2000}^{143\times217}$	32.19	32.4 ± 2.3
H_0	67.40	67.41 ± 0.60	$r_{\rm drag}$	147.261	147.28 ± 0.33	$\chi^2_{\rm simall}$	395.88	396.9 ± 1.7
Ω_Λ	0.6860	0.6861 ± 0.0084	$k_{\rm D}$	0.140632	0.14061 ± 0.00038	$\chi^2_{\rm lowl}$	22.85	23.1 ± 1.9
$\Omega_{\rm m}$	0.3140	0.3139 ± 0.0084	$100\theta_{\rm D}$	0.160863	0.16087 ± 0.00020	$\chi^2_{\rm CamSpec}$	11499.9	11515.5 ± 5.9
$\Omega_{\rm m}h^2$	0.14261	0.1426 ± 0.0013	$z_{\rm eq}$	3392.5	3391 ± 31	$\chi^2_{\rm prior}$	2.17	7.8 ± 3.5
$\Omega_{\rm m}h^3$	0.096111	0.09609 ± 0.00034	$k_{\rm eq}$	0.010354	0.010351 ± 0.000096	$\chi^2_{\rm CMB}$	11918.6	11935.6 ± 5.9

Best-fit $\chi^2_{\rm eff} = 11920.76$; $\Delta\chi^2_{\rm eff} = -0.00$; $\bar{\chi}^2_{\rm eff} = 11943.38$; $\Delta\bar{\chi}^2_{\rm eff} = 0.92$; $R - 1 = 0.00835$

$\chi^2_{\rm eff}$: CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.88 (Δ -0.02) commander_dx12_v3_2_29: 22.85 (Δ -0.15) CamSpec like_10.7HM_1400_unified: 11499.86 (Δ 0.21)

12.30 base_nrun_CamSpecHM_TTTEEE_lowl_lowE_post_BAO

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02233 ± 0.00015	$\sigma_8\Omega_m^{0.5}$	0.4486 ± 0.0070	$H(0.38)$	83.04 ± 0.29
$\boldsymbol{\Omega_c h^2}$	0.1189 ± 0.0010	$\sigma_8\Omega_m^{0.25}$	0.6014 ± 0.0071	$D_M(0.38)$	1527.9 ± 7.7
$\boldsymbol{100\theta_{MC}}$	1.04095 ± 0.00030	$\sigma_8/h^{0.5}$	0.980 ± 0.010	$H(0.51)$	89.74 ± 0.23
$\boldsymbol{\tau}$	0.0536 ± 0.0081	$r_{drag}h$	99.81 ± 0.78	$D_M(0.51)$	1979.5 ± 9.1
$\boldsymbol{\ln(10^{10}A_s)}$	3.039 ± 0.017	$\langle d^2\rangle^{1/2}$	2.423 ± 0.026	$H(0.61)$	95.34 ± 0.20
$\boldsymbol{n_s}$	0.9674 ± 0.0042	z_{re}	7.58 ± 0.82	$D_M(0.61)$	2303.7 ± 9.8
$\boldsymbol{dn_s/d\ln k}$	-0.0005 ± 0.0067	10^9A_s	$2.088^{+0.033}_{-0.036}$	$H(2.33)$	235.83 ± 0.64
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	$10^9A_se^{-2\tau}$	1.876 ± 0.012	$D_M(2.33)$	5762.3 ± 9.5
$\boldsymbol{A_{100}^{PS}}$	240 ± 25	D_{40}	1222 ± 18	$f\sigma_8(0.15)$	0.4533 ± 0.0066
$\boldsymbol{A_{143}^{PS}}$	39 ± 9	D_{220}	5720 ± 38	$\sigma_8(0.15)$	0.7452 ± 0.0065
$\boldsymbol{A_{217}^{PS}}$	102 ± 10	D_{810}	2534 ± 14	$f\sigma_8(0.38)$	0.4720 ± 0.0057
$\boldsymbol{A_{217}^{CIB}}$	40^{+7}_{-8}	D_{1420}	815.9 ± 5.0	$\sigma_8(0.38)$	0.6608 ± 0.0056
$\boldsymbol{A_{143}^{tSZ}}$	$3.9^{+1.9}_{-2.5}$	D_{2000}	230.3 ± 1.8	$f\sigma_8(0.51)$	0.4708 ± 0.0052
$\boldsymbol{r_{143\times217}^{PS}}$	0.66 ± 0.13	$n_{s,0.002}$	0.969 ± 0.020	$\sigma_8(0.51)$	0.6185 ± 0.0052
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.56^{+0.41}_{-0.16}$	Y_P	$0.245379^{+0.000065}_{-0.000058}$	$f\sigma_8(0.61)$	0.4660 ± 0.0049
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	$0.246705^{+0.000065}_{-0.000059}$	$\sigma_8(0.61)$	0.5885 ± 0.0049
$\boldsymbol{A^{kSZ}}$	$4.7^{+2.2}_{-4.0}$	10^5D/H	2.593 ± 0.029	$f\sigma_8(2.33)$	0.2968 ± 0.0025
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.19	Age/Gyr	13.796 ± 0.022	$\sigma_8(2.33)$	0.3061 ± 0.0026
$\boldsymbol{A_{143}^{dust}}$	0.96 ± 0.18	z_*	1089.88 ± 0.24	f_{2000}^{143}	29.7 ± 3.2
$\boldsymbol{A_{217}^{dust}}$	0.97 ± 0.10	r_*	144.73 ± 0.26	f_{2000}^{217}	106.9 ± 2.2
$\boldsymbol{A_{143\times217}^{dust}}$	1.03 ± 0.16	$100\theta_*$	1.04114 ± 0.00029	$f_{2000}^{143\times217}$	32.1 ± 2.3
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	$D_M(z_*)$/Gpc	13.901 ± 0.024	χ^2_{simall}	397.0 ± 1.7
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	z_{drag}	1059.77 ± 0.34	χ^2_{lowl}	23.0 ± 1.8
$\boldsymbol{c_{TE}}$	0.9969 ± 0.0050	r_{drag}	147.41 ± 0.27	$\chi^2_{CamSpec}$	11515.4 ± 6.0
$\boldsymbol{c_{EE}}$	0.9925 ± 0.0049	k_D	0.14050 ± 0.00035	χ^2_{6DF}	0.045 ± 0.056
H_0	67.71 ± 0.45	$100\theta_D$	0.16085 ± 0.00020	χ^2_{MGS}	1.36 ± 0.44
Ω_Λ	0.6904 ± 0.0061	z_{eq}	3376 ± 24	$\chi^2_{DR12BAO}$	4.6 ± 1.3
Ω_m	0.3096 ± 0.0061	k_{eq}	0.010304 ± 0.000072	χ^2_{prior}	7.8 ± 3.5
$\Omega_m h^2$	0.14192 ± 0.00098	$100\theta_{eq}$	0.8179 ± 0.0044	χ^2_{BAO}	5.97 ± 0.97
$\Omega_m h^3$	0.09609 ± 0.00034	$100\theta_{s,eq}$	0.4518 ± 0.0023	χ^2_{CMB}	11935.4 ± 5.9
σ_8	0.8062 ± 0.0073	$H(0.15)$	72.97 ± 0.39		
S_8	0.819 ± 0.013	$D_M(0.15)$	640.4 ± 3.8		

$\bar{\chi}^2_{eff} = 11949.15$; $\Delta\bar{\chi}^2_{eff} = 0.86$; $R - 1 = 0.01377$

12.31 base_nrun_CamSpecHM_TTTEEE_lowl_lowE_post_lensing

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02229 ± 0.00016	S_8	0.828 ± 0.013	$H(0.15)$	72.69 ± 0.46
$\boldsymbol{\Omega_c h^2}$	0.1197 ± 0.0012	$\sigma_8\Omega_m^{0.5}$	0.4535 ± 0.0069	$D_M(0.15)$	643.2 ± 4.6
$\boldsymbol{100\theta_{MC}}$	1.04086 ± 0.00031	$\sigma_8\Omega_m^{0.25}$	0.6057 ± 0.0063	$H(0.38)$	82.85 ± 0.34
$\boldsymbol{\tau}$	0.0537 ± 0.0077	$\sigma_8/h^{0.5}$	0.9857 ± 0.0090	$D_M(0.38)$	1533.4 ± 9.2
$\boldsymbol{\ln(10^{10}A_s)}$	3.041 ± 0.015	$r_{drag}h$	99.23 ± 0.93	$H(0.51)$	89.59 ± 0.27
$\boldsymbol{n_s}$	0.9655 ± 0.0045	$\langle d^2\rangle^{1/2}$	2.437 ± 0.023	$D_M(0.51)$	1986 ± 11
$\boldsymbol{dn_s/d\ln k}$	-0.0006 ± 0.0066	z_{re}	7.61 ± 0.77	$H(0.61)$	95.23 ± 0.22
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	10^9A_s	2.093 ± 0.032	$D_M(0.61)$	2311 ± 12
$\boldsymbol{A_{100}^{PS}}$	240 ± 25	$10^9A_se^{-2\tau}$	1.879 ± 0.011	$H(2.33)$	236.27 ± 0.73
$\boldsymbol{A_{143}^{PS}}$	40 ± 9	D_{40}	1226 ± 18	$D_M(2.33)$	5767 ± 11
$\boldsymbol{A_{217}^{PS}}$	102 ± 10	D_{220}	5719 ± 39	$f\sigma_8(0.15)$	0.4579 ± 0.0064
$\boldsymbol{A_{217}^{CIB}}$	40^{+7}_{-8}	D_{810}	2535 ± 13	$\sigma_8(0.15)$	0.7473 ± 0.0054
$\boldsymbol{A_{143}^{tSZ}}$	$3.9^{+1.9}_{-2.5}$	D_{1420}	815.5 ± 5.0	$f\sigma_8(0.38)$	0.4755 ± 0.0052
$\boldsymbol{r_{143\times217}^{PS}}$	0.66 ± 0.13	D_{2000}	230.1 ± 1.8	$\sigma_8(0.38)$	0.6622 ± 0.0048
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.56^{+0.40}_{-0.17}$	$n_{s,0.002}$	0.967 ± 0.020	$f\sigma_8(0.51)$	0.4738 ± 0.0045
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P	$0.245361^{+0.000069}_{-0.000062}$	$\sigma_8(0.51)$	0.6196 ± 0.0045
$\boldsymbol{A^{kSZ}}$	$4.7^{+2.1}_{-4.1}$	Y_P^{BBN}	$0.246688^{+0.000069}_{-0.000062}$	$f\sigma_8(0.61)$	0.4686 ± 0.0041
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.19	10^5D/H	2.601 ± 0.030	$\sigma_8(0.61)$	0.5895 ± 0.0043
$\boldsymbol{A_{143}^{dust}}$	0.96 ± 0.18	Age/Gyr	13.806 ± 0.024	$f\sigma_8(2.33)$	0.2971 ± 0.0022
$\boldsymbol{A_{217}^{dust}}$	0.97 ± 0.10	z_*	1089.99 ± 0.26	$\sigma_8(2.33)$	0.3062 ± 0.0024
$\boldsymbol{A_{143\times217}^{dust}}$	1.03 ± 0.16	r_*	144.57 ± 0.28	f_{2000}^{143}	29.9 ± 3.2
$\boldsymbol{c_{100}}$	0.9976 ± 0.0011	$100\theta_*$	1.04105 ± 0.00030	f_{2000}^{217}	107.0 ± 2.2
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	$D_M(z_*)$/Gpc	13.887 ± 0.026	$f_{2000}^{143\times217}$	32.3 ± 2.3
$\boldsymbol{c_{TE}}$	0.9967 ± 0.0050	z_{drag}	1059.73 ± 0.35	$\chi^2_{lensing}$	9.33 ± 0.73
$\boldsymbol{c_{EE}}$	0.9922 ± 0.0049	r_{drag}	147.26 ± 0.29	χ^2_{simall}	396.9 ± 1.6
H_0	67.38 ± 0.53	k_D	0.14062 ± 0.00035	χ^2_{lowl}	23.4 ± 1.9
Ω_Λ	0.6858 ± 0.0073	$100\theta_D$	0.16087 ± 0.00020	$\chi^2_{CamSpec}$	11514.9 ± 5.8
Ω_m	0.3142 ± 0.0073	z_{eq}	3393 ± 27	χ^2_{prior}	7.7 ± 3.4
$\Omega_m h^2$	0.1426 ± 0.0011	k_{eq}	0.010355 ± 0.000083	χ^2_{CMB}	11944.5 ± 6.0
$\Omega_m h^3$	0.09610 ± 0.00033	$100\theta_{eq}$	0.8147 ± 0.0051		
σ_8	0.8091 ± 0.0060	$100\theta_{s,eq}$	0.4502 ± 0.0026		

$\bar{\chi}^2_{eff} = 11952.22$; $\Delta\bar{\chi}^2_{eff} = 0.78$; $R - 1 = 0.01144$

12.32 base_nrun_CamSpecHM_TTTEEE_lowl_lowE_post_BAO_lensing

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02233 ± 0.00015	$\sigma_8\Omega_m^{0.5}$	0.4504 ± 0.0058	$H(0.38)$	83.01 ± 0.27
$\boldsymbol{\Omega_c h^2}$	0.11910 ± 0.00094	$\sigma_8\Omega_m^{0.25}$	0.6034 ± 0.0057	$D_M(0.38)$	1528.9 ± 7.3
$\boldsymbol{100\theta_{MC}}$	1.04094 ± 0.00029	$\sigma_8/h^{0.5}$	0.9828 ± 0.0083	$H(0.51)$	89.71 ± 0.22
$\boldsymbol{\tau}$	$0.0552^{+0.0068}_{-0.0076}$	$r_{drag}h$	99.70 ± 0.72	$D_M(0.51)$	1980.7 ± 8.5
$\boldsymbol{\ln(10^{10}A_s)}$	$3.043^{+0.014}_{-0.015}$	$\langle d^2\rangle^{1/2}$	2.431 ± 0.021	$H(0.61)$	95.33 ± 0.19
$\boldsymbol{n_s}$	0.9669 ± 0.0040	z_{re}	7.75 ± 0.74	$D_M(0.61)$	2304.9 ± 9.2
$\boldsymbol{dn_s/d\ln k}$	-0.0002 ± 0.0066	$10^9 A_s$	$2.097^{+0.029}_{-0.033}$	$H(2.33)$	235.93 ± 0.59
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.877 ± 0.011	$D_M(2.33)$	5763.0 ± 9.3
$\boldsymbol{A_{100}^{PS}}$	240 ± 25	D_{40}	1225 ± 18	$f\sigma_8(0.15)$	0.4551 ± 0.0054
$\boldsymbol{A_{143}^{PS}}$	39 ± 9	D_{220}	5724 ± 38	$\sigma_8(0.15)$	$0.7470^{+0.0050}_{-0.0056}$
$\boldsymbol{A_{217}^{PS}}$	103 ± 10	D_{810}	2535 ± 13	$f\sigma_8(0.38)$	0.4736 ± 0.0046
$\boldsymbol{A_{217}^{CIB}}$	40^{+7}_{-8}	D_{1420}	816.1 ± 4.9	$\sigma_8(0.38)$	$0.6623^{+0.0044}_{-0.0049}$
$\boldsymbol{A_{143}^{tSZ}}$	$3.9^{+1.9}_{-2.4}$	D_{2000}	230.4 ± 1.8	$f\sigma_8(0.51)$	0.4723 ± 0.0042
$\boldsymbol{r_{143\times217}^{PS}}$	0.66 ± 0.13	$n_{s,0.002}$	0.968 ± 0.020	$\sigma_8(0.51)$	$0.6198^{+0.0041}_{-0.0046}$
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.56^{+0.39}_{-0.18}$	Y_P	$0.245377^{+0.000065}_{-0.000057}$	$f\sigma_8(0.61)$	0.4674 ± 0.0039
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	$0.246704^{+0.000066}_{-0.000058}$	$\sigma_8(0.61)$	$0.5898^{+0.0039}_{-0.0044}$
$\boldsymbol{A^{kSZ}}$	$4.6^{+2.0}_{-4.2}$	10^5D/H	2.594 ± 0.029	$f\sigma_8(2.33)$	$0.2974^{+0.0020}_{-0.0022}$
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.19	Age/Gyr	13.797 ± 0.021	$\sigma_8(2.33)$	$0.3067^{+0.0021}_{-0.0024}$
$\boldsymbol{A_{143}^{dust}}$	0.96 ± 0.18	z_*	1089.89 ± 0.23	f_{2000}^{143}	29.6 ± 3.2
$\boldsymbol{A_{217}^{dust}}$	0.97 ± 0.10	r_*	$144.70^{+0.22}_{-0.25}$	f_{2000}^{217}	106.9 ± 2.1
$\boldsymbol{A_{143\times217}^{dust}}$	1.03 ± 0.16	$100\theta_*$	1.04113 ± 0.00029	$f_{2000}^{143\times217}$	32.0 ± 2.3
$\boldsymbol{c_{100}}$	0.9976 ± 0.0011	$D_M(z_*)$/Gpc	$13.898^{+0.021}_{-0.024}$	$\chi^2_{lensing}$	9.32 ± 0.77
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	z_{drag}	1059.78 ± 0.34	χ^2_{simall}	397.1 ± 1.8
$\boldsymbol{c_{TE}}$	0.9968 ± 0.0049	r_{drag}	$147.38^{+0.24}_{-0.27}$	χ^2_{lowl}	23.2 ± 1.9
$\boldsymbol{c_{EE}}$	0.9925 ± 0.0049	k_D	0.14053 ± 0.00033	$\chi^2_{CamSpec}$	11514.8 ± 5.8
H_0	67.65 ± 0.42	$100\theta_D$	0.16085 ± 0.00020	χ^2_{6DF}	0.048 ± 0.056
Ω_Λ	0.6895 ± 0.0056	z_{eq}	3380 ± 22	χ^2_{MGS}	1.29 ± 0.40
Ω_m	0.3105 ± 0.0056	k_{eq}	0.010315 ± 0.000066	$\chi^2_{DR12BAO}$	4.7 ± 1.2
$\Omega_m h^2$	0.14207 ± 0.00090	$100\theta_{eq}$	0.8173 ± 0.0040	χ^2_{prior}	7.7 ± 3.4
$\Omega_m h^3$	$0.09610^{+0.00035}_{-0.00032}$	$100\theta_{s,eq}$	0.4515 ± 0.0021	χ^2_{CMB}	11944.4 ± 5.9
σ_8	0.8083 ± 0.0059	$H(0.15)$	72.92 ± 0.36	χ^2_{BAO}	6.02 ± 0.97
S_8	0.822 ± 0.011	$D_M(0.15)$	641.0 ± 3.6		

$\bar{\chi}^2_{eff} = 11958.12$; $\Delta\bar{\chi}^2_{eff} = 0.72$; $R - 1 = 0.01586$

12.33 base_nrun_CamSpecHM_TTTEEE_lowl_lowE_post_Riess18

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02242 ± 0.00016	S_8	0.810 ± 0.015	$H(0.15)$	73.33 ± 0.49
$\boldsymbol{\Omega_c h^2}$	0.1181 ± 0.0013	$\sigma_8 \Omega_m^{0.5}$	0.4435 ± 0.0083	$D_M(0.15)$	636.9 ± 4.8
$\boldsymbol{100\theta_{MC}}$	1.04107 ± 0.00030	$\sigma_8 \Omega_m^{0.25}$	0.5971 ± 0.0081	$H(0.38)$	83.31 ± 0.36
$\boldsymbol{\tau}$	$0.0550^{+0.0074}_{-0.0087}$	$\sigma_8/h^{0.5}$	0.974 ± 0.012	$D_M(0.38)$	1520.8 ± 9.6
$\boldsymbol{\ln(10^{10} A_s)}$	$3.040^{+0.016}_{-0.018}$	$r_{drag} h$	100.5 ± 1.0	$H(0.51)$	89.95 ± 0.29
$\boldsymbol{n_s}$	0.9696 ± 0.0046	$\langle d^2 \rangle^{1/2}$	2.410 ± 0.028	$D_M(0.51)$	1971 ± 11
$\boldsymbol{dn_s/d\ln k}$	-0.0004 ± 0.0068	z_{re}	7.69 ± 0.84	$H(0.61)$	95.51 ± 0.23
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	$10^9 A_s$	$2.090^{+0.033}_{-0.038}$	$D_M(0.61)$	2295 ± 12
$\boldsymbol{A^{PS}_{100}}$	239 ± 25	$10^9 A_s e^{-2\tau}$	1.872 ± 0.012	$H(2.33)$	235.35 ± 0.79
$\boldsymbol{A^{PS}_{143}}$	39 ± 8	D_{40}	1218 ± 18	$D_M(2.33)$	5755 ± 11
$\boldsymbol{A^{PS}_{217}}$	102 ± 10	D_{220}	5725 ± 39	$f\sigma_8(0.15)$	0.4486 ± 0.0078
$\boldsymbol{A^{CIB}_{217}}$	40^{+7}_{-8}	D_{810}	2534 ± 14	$\sigma_8(0.15)$	0.7437 ± 0.0068
$\boldsymbol{A^{tSZ}_{143}}$	$4.0^{+1.9}_{-2.5}$	D_{1420}	816.6 ± 4.9	$f\sigma_8(0.38)$	0.4684 ± 0.0066
$\boldsymbol{r^{PS}_{143\times217}}$	$0.66^{+0.14}_{-0.12}$	D_{2000}	230.6 ± 1.8	$\sigma_8(0.38)$	0.6600 ± 0.0058
$\boldsymbol{r^{CIB}_{143\times217}}$	$0.56^{+0.42}_{-0.15}$	$n_{s,0.002}$	0.971 ± 0.021	$f\sigma_8(0.51)$	0.4678 ± 0.0059
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P	$0.245411^{+0.000066}_{-0.000056}$	$\sigma_8(0.51)$	0.6180 ± 0.0054
$\boldsymbol{A^{kSZ}}$	< 6.11	Y_P^{BBN}	$0.246738^{+0.000066}_{-0.000057}$	$f\sigma_8(0.61)$	0.4635 ± 0.0054
$\boldsymbol{A^{dust}_{100}}$	1.01 ± 0.20	10^5D/H	$2.578^{+0.028}_{-0.031}$	$\sigma_8(0.61)$	0.5883 ± 0.0051
$\boldsymbol{A^{dust}_{143}}$	0.96 ± 0.18	Age/Gyr	13.780 ± 0.024	$f\sigma_8(2.33)$	0.2969 ± 0.0026
$\boldsymbol{A^{dust}_{217}}$	0.98 ± 0.11	z_*	1089.69 ± 0.27	$\sigma_8(2.33)$	0.3064 ± 0.0027
$\boldsymbol{A^{dust}_{143\times217}}$	1.03 ± 0.16	r_*	144.90 ± 0.31	f^{143}_{2000}	29.3 ± 3.2
$\boldsymbol{c_{100}}$	0.9976 ± 0.0010	$100\theta_*$	1.04125 ± 0.00030	f^{217}_{2000}	106.6 ± 2.1
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	$D_M(z_*)$/Gpc	13.916 ± 0.029	$f^{143\times217}_{2000}$	31.8 ± 2.3
$\boldsymbol{c_{TE}}$	0.9969 ± 0.0050	z_{drag}	1059.90 ± 0.35	χ^2_{simall}	397.1 ± 2.0
$\boldsymbol{c_{EE}}$	0.9923 ± 0.0049	r_{drag}	147.55 ± 0.32	χ^2_{lowl}	22.7 ± 1.7
H_0	68.13 ± 0.57	k_D	0.14042 ± 0.00037	$\chi^2_{CamSpec}$	11517.0 ± 6.4
Ω_Λ	0.6958 ± 0.0076	$100\theta_D$	0.16078 ± 0.00020	$\chi^2_{H073p45}$	10.4 ± 2.2
Ω_m	0.3042 ± 0.0076	z_{eq}	3357 ± 29	χ^2_{prior}	7.8 ± 3.5
$\Omega_m h^2$	0.1411 ± 0.0012	k_{eq}	0.010247 ± 0.000089	χ^2_{CMB}	11936.8 ± 6.3
$\Omega_m h^3$	0.09614 ± 0.00034	$100\theta_{eq}$	0.8217 ± 0.0056		
σ_8	0.8040 ± 0.0077	$100\theta_{s,eq}$	0.4537 ± 0.0029		

$\bar{\chi}^2_{eff} = 11955.07$; $\Delta\bar{\chi}^2_{eff} = 0.80$; $R - 1 = 0.04651$

12.34 base_nrun_CamSpecHM_TTTEEE_lowl_lowE_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02230 ± 0.00016	σ_8	$0.8091^{+0.0064}_{-0.0074}$	$100\theta_{\rm eq}$	0.8152 ± 0.0059
$\boldsymbol{\Omega_c h^2}$	0.1196 ± 0.0014	S_8	0.827 ± 0.016	$100\theta_{\rm s,eq}$	0.4504 ± 0.0030
$\boldsymbol{100\theta_{MC}}$	1.04088 ± 0.00031	$\sigma_8\Omega_{\rm m}^{0.5}$	0.4530 ± 0.0088	$H(0.15)$	72.73 ± 0.51
$\boldsymbol{\tau}$	$0.0544^{+0.0047}_{-0.0084}$	$\sigma_8\Omega_{\rm m}^{0.25}$	0.6054 ± 0.0082	$D_{\rm M}(0.15)$	642.8 ± 5.1
$\boldsymbol{\ln(10^{10}A_s)}$	$3.042^{+0.012}_{-0.017}$	$\sigma_8/h^{0.5}$	0.985 ± 0.011	$H(0.38)$	82.88 ± 0.37
$\boldsymbol{n_s}$	0.9658 ± 0.0048	$r_{\rm drag}h$	99.3 ± 1.1	$D_{\rm M}(0.38)$	1533 ± 10
$\boldsymbol{{\rm d}n_s/{\rm d}\ln k}$	-0.0013 ± 0.0068	$\langle d^2\rangle^{1/2}$	2.435 ± 0.028	$H(0.51)$	89.62 ± 0.29
$\boldsymbol{y_{cal}}$	1.0004 ± 0.0025	$z_{\rm re}$	$7.69^{+0.52}_{-0.84}$	$D_{\rm M}(0.51)$	1985 ± 12
$\boldsymbol{A^{PS}_{100}}$	241 ± 25	$10^9A_{\rm s}$	$2.095^{+0.024}_{-0.036}$	$H(0.61)$	95.25 ± 0.24
$\boldsymbol{A^{PS}_{143}}$	40 ± 9	$10^9A_{\rm s}e^{-2\tau}$	1.879 ± 0.012	$D_{\rm M}(0.61)$	2310 ± 13
$\boldsymbol{A^{PS}_{217}}$	102 ± 10	D_{40}	1223 ± 18	$H(2.33)$	236.21 ± 0.84
$\boldsymbol{A^{CIB}_{217}}$	40 ± 7	D_{220}	5716 ± 38	$D_{\rm M}(2.33)$	5766 ± 11
$\boldsymbol{A^{tSZ}_{143}}$	$3.8^{+1.9}_{-2.6}$	D_{810}	2535 ± 14	$f\sigma_8(0.15)$	0.4574 ± 0.0082
$\boldsymbol{r^{PS}_{143\times217}}$	0.65 ± 0.13	D_{1420}	815.2 ± 5.0	$\sigma_8(0.15)$	$0.7474^{+0.0054}_{-0.0065}$
$\boldsymbol{r^{CIB}_{143\times217}}$	$0.56^{+0.40}_{-0.16}$	D_{2000}	230.0 ± 1.8	$f\sigma_8(0.38)$	0.4753 ± 0.0067
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$n_{\rm s,0.002}$	0.970 ± 0.020	$\sigma_8(0.38)$	$0.6623^{+0.0043}_{-0.0055}$
$\boldsymbol{A^{kSZ}}$	$4.8^{+2.4}_{-3.8}$	$Y_{\rm P}$	$0.245365^{+0.000069}_{-0.000062}$	$f\sigma_8(0.51)$	0.4736 ± 0.0058
$\boldsymbol{A^{dust}_{100}}$	1.01 ± 0.20	$Y_{\rm P}^{\rm BBN}$	$0.246692^{+0.000069}_{-0.000062}$	$\sigma_8(0.51)$	$0.6197^{+0.0039}_{-0.0051}$
$\boldsymbol{A^{dust}_{143}}$	0.97 ± 0.18	10^5D/H	2.599 ± 0.030	$f\sigma_8(0.61)$	0.4685 ± 0.0053
$\boldsymbol{A^{dust}_{217}}$	0.97 ± 0.10	Age/Gyr	13.804 ± 0.025	$\sigma_8(0.61)$	$0.5896^{+0.0036}_{-0.0048}$
$\boldsymbol{A^{dust}_{143\times217}}$	1.03 ± 0.16	z_*	1089.97 ± 0.28	$f\sigma_8(2.33)$	$0.2972^{+0.0018}_{-0.0024}$
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	r_*	144.59 ± 0.32	$\sigma_8(2.33)$	$0.3063^{+0.0018}_{-0.0025}$
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	$100\theta_*$	1.04107 ± 0.00030	f^{143}_{2000}	30.0 ± 3.2
$\boldsymbol{c_{TE}}$	0.9966 ± 0.0050	$D_{\rm M}(z_*)$/Gpc	13.889 ± 0.030	f^{217}_{2000}	107.0 ± 2.2
$\boldsymbol{c_{EE}}$	0.9921 ± 0.0050	$z_{\rm drag}$	1059.74 ± 0.35	$f^{143\times217}_{2000}$	32.3 ± 2.3
H_0	67.43 ± 0.60	$r_{\rm drag}$	147.28 ± 0.33	$\chi^2_{\rm simall}$	396.8 ± 1.7
Ω_Λ	0.6864 ± 0.0083	$k_{\rm D}$	0.14061 ± 0.00038	$\chi^2_{\rm lowl}$	23.1 ± 1.9
$\Omega_{\rm m}$	0.3136 ± 0.0083	$100\theta_{\rm D}$	0.16086 ± 0.00020	$\chi^2_{\rm CamSpec}$	11515.3 ± 5.9
$\Omega_{\rm m}h^2$	0.1425 ± 0.0013	$z_{\rm eq}$	3391 ± 31	$\chi^2_{\rm prior}$	7.8 ± 3.4
$\Omega_{\rm m}h^3$	0.09610 ± 0.00033	$k_{\rm eq}$	0.010348 ± 0.000095	$\chi^2_{\rm CMB}$	11935.2 ± 5.8

$\bar{\chi}^2_{\rm eff} = 11943.05$; $\Delta\bar{\chi}^2_{\rm eff} = 0.86$; $R-1 = 0.00888$

12.35 base_nrun_CamSpecHM_TTTEEE_lowl_lowE_post_BAO_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02234 ± 0.00015	$\sigma_8\Omega_m^{0.5}$	0.4491 ± 0.0068	$H(0.38)$	83.05 ± 0.29
$\boldsymbol{\Omega_c h^2}$	0.1189 ± 0.0010	$\sigma_8\Omega_m^{0.25}$	0.6021 ± 0.0067	$D_M(0.38)$	1527.7 ± 7.7
$\boldsymbol{100\theta_{MC}}$	1.04095 ± 0.00029	$\sigma_8/h^{0.5}$	0.9810 ± 0.0097	$H(0.51)$	89.75 ± 0.23
$\boldsymbol{\tau}$	$0.0550^{+0.0049}_{-0.0083}$	$r_{drag}h$	99.82 ± 0.78	$D_M(0.51)$	1979.3 ± 9.0
$\boldsymbol{\ln(10^{10}A_s)}$	$3.042^{+0.012}_{-0.017}$	$\langle d^2\rangle^{1/2}$	2.425 ± 0.024	$H(0.61)$	95.35 ± 0.19
$\boldsymbol{n_s}$	0.9674 ± 0.0042	z_{re}	$7.73^{+0.54}_{-0.84}$	$D_M(0.61)$	2303.4 ± 9.8
$\boldsymbol{dn_s/d\ln k}$	-0.0007 ± 0.0067	10^9A_s	$2.094^{+0.024}_{-0.036}$	$H(2.33)$	235.83 ± 0.64
$\boldsymbol{y_{cal}}$	1.0004 ± 0.0025	$10^9A_se^{-2\tau}$	1.876 ± 0.012	$D_M(2.33)$	5762.0 ± 9.4
$\boldsymbol{A^{PS}_{100}}$	240 ± 25	D_{40}	1221 ± 18	$f\sigma_8(0.15)$	0.4538 ± 0.0064
$\boldsymbol{A^{PS}_{143}}$	39 ± 9	D_{220}	5719 ± 38	$\sigma_8(0.15)$	$0.7462^{+0.0050}_{-0.0064}$
$\boldsymbol{A^{PS}_{217}}$	102 ± 10	D_{810}	2534 ± 14	$f\sigma_8(0.38)$	0.4725 ± 0.0055
$\boldsymbol{A^{CIB}_{217}}$	40^{+7}_{-8}	D_{1420}	815.8 ± 4.9	$\sigma_8(0.38)$	$0.6616^{+0.0042}_{-0.0055}$
$\boldsymbol{A^{tSZ}_{143}}$	$3.9^{+1.9}_{-2.5}$	D_{2000}	230.3 ± 1.8	$f\sigma_8(0.51)$	0.4714 ± 0.0049
$\boldsymbol{r^{PS}_{143\times217}}$	0.66 ± 0.13	$n_{s,0.002}$	0.970 ± 0.020	$\sigma_8(0.51)$	$0.6193^{+0.0039}_{-0.0051}$
$\boldsymbol{r^{CIB}_{143\times217}}$	$0.56^{+0.40}_{-0.17}$	Y_P	$0.245381^{+0.000065}_{-0.000058}$	$f\sigma_8(0.61)$	0.4666 ± 0.0046
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	$0.246707^{+0.000065}_{-0.000058}$	$\sigma_8(0.61)$	$0.5893^{+0.0036}_{-0.0049}$
$\boldsymbol{A^{kSZ}}$	$4.7^{+2.2}_{-4.0}$	10^5D/H	2.592 ± 0.029	$f\sigma_8(2.33)$	$0.2972^{+0.0018}_{-0.0025}$
$\boldsymbol{A^{dust}_{100}}$	1.01 ± 0.19	Age/Gyr	13.795 ± 0.021	$\sigma_8(2.33)$	$0.3065^{+0.0018}_{-0.0025}$
$\boldsymbol{A^{dust}_{143}}$	0.96 ± 0.18	z_*	1089.87 ± 0.24	f^{143}_{2000}	29.7 ± 3.2
$\boldsymbol{A^{dust}_{217}}$	0.97 ± 0.10	r_*	144.73 ± 0.25	f^{217}_{2000}	106.9 ± 2.1
$\boldsymbol{A^{dust}_{143\times217}}$	1.03 ± 0.16	$100\theta_*$	1.04114 ± 0.00029	$f^{143\times217}_{2000}$	32.1 ± 2.3
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	$D_M(z_*)$/Gpc	13.901 ± 0.024	χ^2_{simall}	396.9 ± 1.7
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	z_{drag}	1059.78 ± 0.34	χ^2_{lowl}	23.0 ± 1.8
$\boldsymbol{c_{TE}}$	0.9968 ± 0.0049	r_{drag}	147.41 ± 0.27	$\chi^2_{CamSpec}$	11515.3 ± 6.0
$\boldsymbol{c_{EE}}$	0.9924 ± 0.0049	k_D	0.14050 ± 0.00034	χ^2_{6DF}	0.044 ± 0.055
H_0	67.72 ± 0.45	$100\theta_D$	0.16084 ± 0.00020	χ^2_{MGS}	1.37 ± 0.44
Ω_Λ	0.6905 ± 0.0061	z_{eq}	3376 ± 23	$\chi^2_{DR12BAO}$	4.5 ± 1.2
Ω_m	0.3095 ± 0.0061	k_{eq}	0.010303 ± 0.000071	χ^2_{prior}	7.8 ± 3.5
$\Omega_m h^2$	0.14191 ± 0.00098	$100\theta_{eq}$	0.8180 ± 0.0044	χ^2_{BAO}	5.96 ± 0.95
$\Omega_m h^3$	0.09610 ± 0.00033	$100\theta_{s,eq}$	0.4519 ± 0.0023	χ^2_{CMB}	11935.1 ± 5.9
σ_8	$0.8073^{+0.0058}_{-0.0071}$	$H(0.15)$	72.98 ± 0.39		
S_8	0.820 ± 0.012	$D_M(0.15)$	640.4 ± 3.8		

$\bar{\chi}^2_{eff} = 11948.86$; $\Delta\bar{\chi}^2_{eff} = 0.87$; $R - 1 = 0.01438$

12.36 base_nrun_CamSpecHM_TTTEEE_lowl_lowE_post_lensing_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02230 ± 0.00016	S_8	0.828 ± 0.013	$H(0.15)$	72.72 ± 0.45
$\boldsymbol{\Omega_c h^2}$	0.1196 ± 0.0012	$\sigma_8 \Omega_m^{0.5}$	0.4535 ± 0.0069	$D_M(0.15)$	643.0 ± 4.5
$\boldsymbol{100\theta_{MC}}$	1.04087 ± 0.00030	$\sigma_8 \Omega_m^{0.25}$	0.6060 ± 0.0063	$H(0.38)$	82.87 ± 0.33
$\boldsymbol{\tau}$	$0.0548^{+0.0050}_{-0.0079}$	$\sigma_8/h^{0.5}$	0.9862 ± 0.0088	$D_M(0.38)$	1532.9 ± 9.0
$\boldsymbol{\ln(10^{10} A_s)}$	$3.043^{+0.011}_{-0.015}$	$r_{drag} h$	99.28 ± 0.90	$H(0.51)$	89.61 ± 0.26
$\boldsymbol{n_s}$	0.9656 ± 0.0044	$\langle d^2 \rangle^{1/2}$	2.438 ± 0.022	$D_M(0.51)$	1985 ± 11
$\boldsymbol{d n_s / d \ln k}$	-0.0007 ± 0.0066	z_{re}	$7.73^{+0.54}_{-0.79}$	$H(0.61)$	95.24 ± 0.22
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0024	$10^9 A_s$	$2.097^{+0.023}_{-0.032}$	$D_M(0.61)$	2310 ± 11
$\boldsymbol{A_{100}^{PS}}$	240 ± 25	$10^9 A_s e^{-2\tau}$	1.879 ± 0.011	$H(2.33)$	236.23 ± 0.71
$\boldsymbol{A_{143}^{PS}}$	40 ± 9	D_{40}	1226 ± 18	$D_M(2.33)$	5766 ± 10
$\boldsymbol{A_{217}^{PS}}$	102 ± 10	D_{220}	5719 ± 38	$f\sigma_8(0.15)$	0.4579 ± 0.0064
$\boldsymbol{A_{217}^{CIB}}$	40 ± 7	D_{810}	2535 ± 13	$\sigma_8(0.15)$	$0.7480^{+0.0045}_{-0.0054}$
$\boldsymbol{A_{143}^{tSZ}}$	$3.9^{+1.9}_{-2.5}$	D_{1420}	815.4 ± 5.0	$f\sigma_8(0.38)$	0.4757 ± 0.0051
$\boldsymbol{r_{143\times217}^{PS}}$	0.66 ± 0.13	D_{2000}	230.1 ± 1.8	$\sigma_8(0.38)$	$0.6628^{+0.0038}_{-0.0047}$
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.56^{+0.39}_{-0.17}$	$n_{s,0.002}$	0.968 ± 0.020	$f\sigma_8(0.51)$	0.4741 ± 0.0045
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P	$0.245364^{+0.000068}_{-0.000061}$	$\sigma_8(0.51)$	$0.6201^{+0.0035}_{-0.0044}$
$\boldsymbol{A^{kSZ}}$	$4.7^{+2.2}_{-4.0}$	Y_P^{BBN}	$0.246691^{+0.000068}_{-0.000061}$	$f\sigma_8(0.61)$	0.4689 ± 0.0040
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.19	10^5D/H	2.600 ± 0.030	$\sigma_8(0.61)$	$0.5900^{+0.0033}_{-0.0043}$
$\boldsymbol{A_{143}^{dust}}$	0.96 ± 0.18	Age/Gyr	13.805 ± 0.023	$f\sigma_8(2.33)$	$0.2974^{+0.0017}_{-0.0022}$
$\boldsymbol{A_{217}^{dust}}$	0.97 ± 0.10	z_*	1089.98 ± 0.26	$\sigma_8(2.33)$	$0.3065^{+0.0018}_{-0.0024}$
$\boldsymbol{A_{143\times217}^{dust}}$	1.03 ± 0.16	r_*	144.59 ± 0.28	f_{2000}^{143}	29.9 ± 3.2
$\boldsymbol{c_{100}}$	0.9976 ± 0.0011	$100\theta_*$	1.04106 ± 0.00030	f_{2000}^{217}	107.0 ± 2.2
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	$D_M(z_*)$/Gpc	13.888 ± 0.026	$f_{2000}^{143\times217}$	32.3 ± 2.3
$\boldsymbol{c_{TE}}$	0.9966 ± 0.0050	z_{drag}	1059.74 ± 0.34	$\chi^2_{lensing}$	9.28 ± 0.68
$\boldsymbol{c_{EE}}$	0.9922 ± 0.0049	r_{drag}	147.27 ± 0.29	χ^2_{simall}	396.9 ± 1.7
H_0	67.41 ± 0.52	k_D	0.14062 ± 0.00035	χ^2_{lowl}	23.3 ± 1.9
Ω_Λ	0.6862 ± 0.0071	$100\theta_D$	0.16087 ± 0.00020	$\chi^2_{CamSpec}$	11514.7 ± 5.8
Ω_m	0.3138 ± 0.0071	z_{eq}	3391 ± 27	χ^2_{prior}	7.7 ± 3.4
$\Omega_m h^2$	0.1426 ± 0.0011	k_{eq}	0.010351 ± 0.000081	χ^2_{CMB}	11944.2 ± 5.9
$\Omega_m h^3$	0.09610 ± 0.00033	$100\theta_{eq}$	0.8150 ± 0.0050		
σ_8	$0.8097^{+0.0052}_{-0.0059}$	$100\theta_{s,eq}$	0.4503 ± 0.0026		

$\bar{\chi}^2_{eff} = 11951.93$; $\Delta\bar{\chi}^2_{eff} = 0.68$; $R - 1 = 0.01119$

12.37 base_nrun_CamSpecHM_TTTEEE_lowl_lowE_post_BAO_lensing_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02233 ± 0.00015	$\sigma_8\Omega_m^{0.5}$	0.4505 ± 0.0058	$H(0.38)$	83.02 ± 0.27
$\boldsymbol{\Omega_c h^2}$	0.11907 ± 0.00093	$\sigma_8\Omega_m^{0.25}$	0.6036 ± 0.0056	$D_M(0.38)$	1528.7 ± 7.2
$\boldsymbol{100\theta_{MC}}$	1.04094 ± 0.00029	$\sigma_8/h^{0.5}$	0.9832 ± 0.0081	$H(0.51)$	89.72 ± 0.22
$\boldsymbol{\tau}$	$0.0559^{+0.0055}_{-0.0078}$	$r_{drag}h$	99.71 ± 0.72	$D_M(0.51)$	1980.5 ± 8.5
$\boldsymbol{\ln(10^{10}A_s)}$	$3.044^{+0.012}_{-0.016}$	$\langle d^2\rangle^{1/2}$	2.432 ± 0.021	$H(0.61)$	95.33 ± 0.19
$\boldsymbol{n_s}$	0.9670 ± 0.0040	z_{re}	$7.83^{+0.58}_{-0.76}$	$D_M(0.61)$	2304.7 ± 9.2
$\boldsymbol{dn_s/d\ln k}$	-0.0003 ± 0.0066	10^9A_s	$2.099^{+0.024}_{-0.033}$	$H(2.33)$	$235.91^{+0.61}_{-0.55}$
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0025	$10^9A_se^{-2\tau}$	1.877 ± 0.011	$D_M(2.33)$	5762.7 ± 9.2
$\boldsymbol{A_{100}^{PS}}$	240 ± 25	D_{40}	1225 ± 18	$f\sigma_8(0.15)$	0.4552 ± 0.0054
$\boldsymbol{A_{143}^{PS}}$	39 ± 9	D_{220}	5723 ± 38	$\sigma_8(0.15)$	$0.7474^{+0.0045}_{-0.0056}$
$\boldsymbol{A_{217}^{PS}}$	103 ± 10	D_{810}	2535 ± 13	$f\sigma_8(0.38)$	0.4738 ± 0.0045
$\boldsymbol{A_{217}^{CIB}}$	40^{+7}_{-8}	D_{1420}	816.0 ± 4.9	$\sigma_8(0.38)$	$0.6627^{+0.0039}_{-0.0049}$
$\boldsymbol{A_{143}^{tSZ}}$	$3.9^{+1.9}_{-2.5}$	D_{2000}	230.4 ± 1.8	$f\sigma_8(0.51)$	0.4725 ± 0.0041
$\boldsymbol{r_{143\times217}^{PS}}$	0.66 ± 0.13	$n_{s,0.002}$	0.968 ± 0.020	$\sigma_8(0.51)$	$0.6202^{+0.0036}_{-0.0046}$
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.56^{+0.39}_{-0.18}$	Y_P	$0.245379^{+0.000065}_{-0.000057}$	$f\sigma_8(0.61)$	0.4676 ± 0.0038
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	$0.246705^{+0.000065}_{-0.000057}$	$\sigma_8(0.61)$	$0.5902^{+0.0034}_{-0.0044}$
$\boldsymbol{A^{kSZ}}$	$4.6^{+2.0}_{-4.2}$	10^5D/H	2.593 ± 0.028	$f\sigma_8(2.33)$	$0.2976^{+0.0017}_{-0.0022}$
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.19	Age/Gyr	13.797 ± 0.021	$\sigma_8(2.33)$	$0.3069^{+0.0018}_{-0.0024}$
$\boldsymbol{A_{143}^{dust}}$	0.96 ± 0.18	z_*	1089.89 ± 0.23	f_{2000}^{143}	29.6 ± 3.2
$\boldsymbol{A_{217}^{dust}}$	0.97 ± 0.10	r_*	$144.70^{+0.22}_{-0.25}$	f_{2000}^{217}	106.9 ± 2.1
$\boldsymbol{A_{143\times217}^{dust}}$	1.03 ± 0.16	$100\theta_*$	1.04113 ± 0.00029	$f_{2000}^{143\times217}$	32.0 ± 2.2
$\boldsymbol{c_{100}}$	0.9976 ± 0.0011	$D_M(z_*)$/Gpc	$13.898^{+0.021}_{-0.024}$	$\chi^2_{lensing}$	9.27 ± 0.70
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	z_{drag}	1059.78 ± 0.34	χ^2_{simall}	397.1 ± 1.8
$\boldsymbol{c_{TE}}$	0.9967 ± 0.0049	r_{drag}	$147.38^{+0.24}_{-0.27}$	χ^2_{lowl}	23.2 ± 1.9
$\boldsymbol{c_{EE}}$	0.9925 ± 0.0049	k_D	0.14053 ± 0.00033	$\chi^2_{CamSpec}$	11514.7 ± 5.8
H_0	67.66 ± 0.42	$100\theta_D$	0.16084 ± 0.00020	χ^2_{6DF}	0.046 ± 0.054
Ω_Λ	0.6896 ± 0.0056	z_{eq}	3379 ± 21	χ^2_{MGS}	1.30 ± 0.40
Ω_m	0.3104 ± 0.0056	k_{eq}	0.010314 ± 0.000065	$\chi^2_{DR12BAO}$	4.6 ± 1.2
$\Omega_m h^2$	0.14205 ± 0.00090	$100\theta_{eq}$	0.8174 ± 0.0040	χ^2_{prior}	7.7 ± 3.4
$\Omega_m h^3$	0.09611 ± 0.00033	$100\theta_{s,eq}$	$0.4515^{+0.0019}_{-0.0022}$	χ^2_{CMB}	11944.2 ± 5.9
σ_8	$0.8087^{+0.0051}_{-0.0061}$	$H(0.15)$	72.93 ± 0.36	χ^2_{BAO}	6.00 ± 0.93
S_8	0.823 ± 0.011	$D_M(0.15)$	640.9 ± 3.6		

$\bar{\chi}^2_{eff} = 11957.93$; $\Delta\bar{\chi}^2_{eff} = 0.67$; $R - 1 = 0.01735$

12.38 base_nrun_CamSpecHM_TTTEEE_lowl_lowE_post_Riess18_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02242 ± 0.00016	S_8	0.810 ± 0.015	$H(0.15)$	73.34 ± 0.49
$\boldsymbol{\Omega_c h^2}$	0.1181 ± 0.0013	$\sigma_8\Omega_m^{0.5}$	0.4438 ± 0.0082	$D_M(0.15)$	636.8 ± 4.8
$\boldsymbol{100\theta_{MC}}$	1.04107 ± 0.00030	$\sigma_8\Omega_m^{0.25}$	0.5977 ± 0.0078	$H(0.38)$	83.32 ± 0.36
$\boldsymbol{\tau}$	$0.0562^{+0.0053}_{-0.0088}$	$\sigma_8/h^{0.5}$	0.975 ± 0.011	$D_M(0.38)$	1520.6 ± 9.6
$\boldsymbol{\ln(10^{10}A_s)}$	$3.042^{+0.013}_{-0.018}$	$r_{drag}h$	100.5 ± 1.0	$H(0.51)$	89.96 ± 0.28
$\boldsymbol{n_s}$	0.9697 ± 0.0046	$\langle d^2\rangle^{1/2}$	2.412 ± 0.027	$D_M(0.51)$	1971 ± 11
$\boldsymbol{dn_s/d\ln k}$	-0.0005 ± 0.0068	z_{re}	$7.81^{+0.56}_{-0.89}$	$H(0.61)$	95.52 ± 0.23
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	10^9A_s	$2.095^{+0.026}_{-0.038}$	$D_M(0.61)$	2294 ± 12
$\boldsymbol{A^{PS}_{100}}$	239 ± 25	$10^9A_se^{-2\tau}$	1.872 ± 0.012	$H(2.33)$	235.34 ± 0.79
$\boldsymbol{A^{PS}_{143}}$	39 ± 8	D_{40}	1217 ± 18	$D_M(2.33)$	5755 ± 11
$\boldsymbol{A^{PS}_{217}}$	102 ± 10	D_{220}	5725 ± 39	$f\sigma_8(0.15)$	0.4490 ± 0.0077
$\boldsymbol{A^{CIB}_{217}}$	39^{+7}_{-8}	D_{810}	2534 ± 14	$\sigma_8(0.15)$	$0.7445^{+0.0056}_{-0.0068}$
$\boldsymbol{A^{tSZ}_{143}}$	$4.0^{+1.9}_{-2.5}$	D_{1420}	816.6 ± 4.9	$f\sigma_8(0.38)$	0.4688 ± 0.0064
$\boldsymbol{r^{PS}_{143\times217}}$	$0.65^{+0.14}_{-0.12}$	D_{2000}	230.7 ± 1.8	$\sigma_8(0.38)$	$0.6608^{+0.0045}_{-0.0058}$
$\boldsymbol{r^{CIB}_{143\times217}}$	$0.56^{+0.43}_{-0.15}$	$n_{s,0.002}$	0.971 ± 0.021	$f\sigma_8(0.51)$	0.4683 ± 0.0057
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P	$0.245413^{+0.000065}_{-0.000056}$	$\sigma_8(0.51)$	$0.6187^{+0.0041}_{-0.0054}$
$\boldsymbol{A^{kSZ}}$	< 6.11	Y_P^{BBN}	$0.246740^{+0.000066}_{-0.000056}$	$f\sigma_8(0.61)$	0.4640 ± 0.0052
$\boldsymbol{A^{dust}_{100}}$	1.01 ± 0.20	10^5D/H	$2.577^{+0.028}_{-0.031}$	$\sigma_8(0.61)$	$0.5889^{+0.0038}_{-0.0051}$
$\boldsymbol{A^{dust}_{143}}$	0.96 ± 0.18	Age/Gyr	13.779 ± 0.024	$f\sigma_8(2.33)$	$0.2972^{+0.0018}_{-0.0026}$
$\boldsymbol{A^{dust}_{217}}$	0.98 ± 0.11	z_*	1089.69 ± 0.27	$\sigma_8(2.33)$	$0.3068^{+0.0019}_{-0.0027}$
$\boldsymbol{A^{dust}_{143\times217}}$	1.03 ± 0.16	r_*	144.90 ± 0.31	f^{143}_{2000}	29.3 ± 3.2
$\boldsymbol{c_{100}}$	0.9976 ± 0.0010	$100\theta_*$	1.04125 ± 0.00030	f^{217}_{2000}	106.6 ± 2.1
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	$D_M(z_*)$/Gpc	13.916 ± 0.029	$f^{143\times217}_{2000}$	31.7 ± 2.2
$\boldsymbol{c_{TE}}$	0.9968 ± 0.0050	z_{drag}	1059.91 ± 0.34	χ^2_{simall}	397.1 ± 2.0
$\boldsymbol{c_{EE}}$	0.9922 ± 0.0049	r_{drag}	147.55 ± 0.32	χ^2_{lowl}	22.7 ± 1.7
H_0	68.14 ± 0.57	k_D	0.14042 ± 0.00037	$\chi^2_{CamSpec}$	11516.9 ± 6.4
Ω_Λ	0.6959 ± 0.0076	$100\theta_D$	0.16077 ± 0.00020	$\chi^2_{H073p45}$	10.4 ± 2.2
Ω_m	0.3041 ± 0.0076	z_{eq}	3357 ± 29	χ^2_{prior}	7.8 ± 3.5
$\Omega_m h^2$	0.1411 ± 0.0012	k_{eq}	0.010246 ± 0.000089	χ^2_{CMB}	11936.7 ± 6.3
$\Omega_m h^3$	0.09615 ± 0.00033	$100\theta_{eq}$	0.8218 ± 0.0056		
σ_8	$0.8049^{+0.0066}_{-0.0077}$	$100\theta_{s,eq}$	0.4538 ± 0.0029		

$\bar{\chi}^2_{eff} = 11954.85$; $\Delta\bar{\chi}^2_{eff} = 0.84$; $R - 1 = 0.05101$

12.39 base_nrun_plikHM_TE_lowE

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022504	0.02253 ± 0.00026	$r_{\rm drag} h$	101.34	101.5 ± 1.7	$100\theta_{\rm s,eq}$	0.45565	0.4561 ± 0.0049
$\boldsymbol{\Omega_c h^2}$	0.11724	0.1170 ± 0.0022	$\langle d^2 \rangle^{1/2}$	2.3973	2.395 ± 0.048	$H(0.15)$	73.76	73.85 ± 0.85
$\boldsymbol{100\theta_{\rm MC}}$	1.04145	1.04142 ± 0.00051	$z_{\rm re}$	7.07	$6.87^{+0.95}_{-0.78}$	$D_{\rm M}(0.15)$	632.7	632.0 ± 8.2
$\boldsymbol{\tau}$	0.0491	0.0475 ± 0.0086	$10^9 A_{\rm s}$	2.0347	2.027 ± 0.045	$H(0.38)$	83.64	83.70 ± 0.63
$\boldsymbol{\ln(10^{10} A_{\rm s})}$	3.0129	3.009 ± 0.022	$10^9 A_{\rm s} e^{-2\tau}$	1.8444	1.843 ± 0.021	$D_{\rm M}(0.38)$	1512.2	1511 ± 16
$\boldsymbol{n_{\rm s}}$	0.9733	0.975 ± 0.016	D_{40}	1236.3	1240 ± 50	$H(0.51)$	90.22	$90.28^{+0.47}_{-0.53}$
$\boldsymbol{{\rm d}n_{\rm s}/{\rm d}\ln k}$	0.0145	0.017 ± 0.025	D_{220}	5690	5691 ± 57	$D_{\rm M}(0.51)$	1961.0	1959 ± 19
$\boldsymbol{A_{100}^{{\rm dust}TE}}$	0.1141	0.114 ± 0.038	D_{810}	2505.6	2507 ± 25	$H(0.61)$	95.740	$95.78^{+0.38}_{-0.43}$
$\boldsymbol{A_{100\times143}^{{\rm dust}TE}}$	0.1358	0.136 ± 0.030	D_{1420}	812.7	815 ± 16	$D_{\rm M}(0.61)$	2283.6	2282 ± 21
$\boldsymbol{A_{100\times217}^{{\rm dust}TE}}$	0.477	0.479 ± 0.085	D_{2000}	230.7	231.6 ± 7.2	$H(2.33)$	234.92	234.8 ± 1.3
$\boldsymbol{A_{143}^{{\rm dust}TE}}$	0.221	0.222 ± 0.054	$n_{\rm s,0.002}$	0.927	0.920 ± 0.070	$D_{\rm M}(2.33)$	5744.5	5743^{+19}_{-17}
$\boldsymbol{A_{143\times217}^{{\rm dust}TE}}$	0.657	0.659 ± 0.080	$Y_{\rm P}$	0.245446	0.24545 ± 0.00010	$f\sigma_8(0.15)$	0.4394	0.438 ± 0.013
$\boldsymbol{A_{217}^{{\rm dust}TE}}$	2.039	2.04 ± 0.27	$Y_{\rm P}^{\rm BBN}$	0.246773	0.24678 ± 0.00010	$\sigma_8(0.15)$	0.7356	0.7345 ± 0.0099
$\boldsymbol{c_{100}}$	1.00016	1.00018 ± 0.00070	10^5D/H	2.5612	2.558 ± 0.047	$f\sigma_8(0.38)$	0.4603	0.459 ± 0.010
$\boldsymbol{c_{217}}$	0.99800	0.99798 ± 0.00065	Age/Gyr	13.7564	13.754 ± 0.040	$\sigma_8(0.38)$	0.6535	0.6527 ± 0.0084
$\boldsymbol{y_{\rm cal}}$	0.99985	1.0000 ± 0.0025	z_*	1089.513	1089.47 ± 0.44	$f\sigma_8(0.51)$	0.4605	0.4594 ± 0.0092
H_0	68.62	68.72 ± 0.99	r_*	145.05	145.09 ± 0.51	$\sigma_8(0.51)$	0.6122	0.6115 ± 0.0077
Ω_Λ	0.7019	0.703 ± 0.013	$100\theta_*$	1.04161	1.04159 ± 0.00050	$f\sigma_8(0.61)$	0.4567	0.4557 ± 0.0084
$\Omega_{\rm m}$	0.2981	0.297 ± 0.013	$D_{\rm M}(z_*)$/Gpc	13.9251	13.929 ± 0.048	$\sigma_8(0.61)$	0.5829	0.5822 ± 0.0073
$\Omega_{\rm m} h^2$	0.14039	0.1402 ± 0.0021	$z_{\rm drag}$	1060.05	1060.08 ± 0.54	$f\sigma_8(2.33)$	0.29442	0.2942 ± 0.0037
$\Omega_{\rm m} h^3$	0.09633	0.09632 ± 0.00052	$r_{\rm drag}$	147.68	147.71 ± 0.52	$\sigma_8(2.33)$	0.30414	0.3039 ± 0.0039
σ_8	0.7946	0.793 ± 0.011	$k_{\rm D}$	0.14035	0.14033 ± 0.00058	$\chi^2_{\rm simall}$	395.53	396.7 ± 1.6
S_8	0.7921	0.790 ± 0.024	$100\theta_{\rm D}$	0.160743	0.16072 ± 0.00031	$\chi^2_{\rm plikTE}$	852.47	860.4 ± 4.0
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4339	0.432 ± 0.013	$z_{\rm eq}$	3339.4	3335 ± 50	$\chi^2_{\rm prior}$	0.43	7.4 ± 3.7
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.5872	0.586 ± 0.013	$k_{\rm eq}$	0.010192	0.01018 ± 0.00015	$\chi^2_{\rm CMB}$	1248.00	1257.2 ± 4.3
$\sigma_8/h^{0.5}$	0.9592	0.957 ± 0.018	$100\theta_{\rm eq}$	0.8255	0.8265 ± 0.0096			

Best-fit $\chi^2_{\rm eff} = 1248.43$; $\Delta\chi^2_{\rm eff} = -0.56$; $\bar{\chi}^2_{\rm eff} = 1264.57$; $\Delta\bar{\chi}^2_{\rm eff} = 0.57$; $R - 1 = 0.00548$
$\chi^2_{\rm eff}$: CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.53 (Δ -0.16) plik_rd12_HM_v22_TE: 852.47 (Δ -0.38)

12.40 base_nrun_plikHM_TE_lowE_post_BAO

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022477	0.02246 ± 0.00023	$\langle d^2 \rangle^{1/2}$	2.4102	2.406 ± 0.042	$D_M(0.15)$	635.23	635.5 ± 4.7
$\boldsymbol{\Omega_c h^2}$	0.11793	0.1180 ± 0.0013	z_{re}	6.83	$6.89^{+0.96}_{-0.79}$	$H(0.38)$	83.457	83.44 ± 0.37
$\boldsymbol{100\theta_{MC}}$	1.041347	1.04131 ± 0.00046	$10^9 A_s$	2.0289	2.033 ± 0.044	$D_M(0.38)$	1517.2	1517.8 ± 9.6
$\boldsymbol{\tau}$	0.0466	$0.0474^{+0.0087}_{-0.0079}$	$10^9 A_s e^{-2\tau}$	1.8482	1.849 ± 0.019	$H(0.51)$	90.084	90.06 ± 0.31
$\boldsymbol{\ln(10^{10} A_s)}$	3.0101	3.012 ± 0.022	D_{40}	1247.0	1239 ± 49	$D_M(0.51)$	1966.9	1968 ± 11
$\boldsymbol{n_s}$	0.9727	0.971 ± 0.014	D_{220}	5695	5690 ± 58	$H(0.61)$	95.634	95.62 ± 0.27
$\boldsymbol{dn_s/d\ln k}$	0.0177	0.013 ± 0.024	D_{810}	2508.6	2507 ± 25	$D_M(0.61)$	2289.9	2291 ± 12
$\boldsymbol{y_{cal}}$	1.00007	0.99999 ± 0.0025	D_{1420}	814.5	812 ± 16	$H(2.33)$	235.35	235.34 ± 0.81
$\boldsymbol{A_{100}^{dustTE}}$	0.1139	0.115 ± 0.039	D_{2000}	231.5	230.4 ± 6.8	$D_M(2.33)$	5748.6	5750 ± 13
$\boldsymbol{A_{100\times143}^{dustTE}}$	0.1363	0.137 ± 0.030	$n_{s,0.002}$	0.916	0.929 ± 0.068	$f\sigma_8(0.15)$	0.4430	0.4429 ± 0.0084
$\boldsymbol{A_{100\times217}^{dustTE}}$	0.478	0.480 ± 0.084	Y_P	0.245436	0.245429 ± 0.000092	$\sigma_8(0.15)$	0.7368	0.7363 ± 0.0094
$\boldsymbol{A_{143}^{dustTE}}$	0.223	0.222 ± 0.054	Y_P^{BBN}	0.246763	0.246755 ± 0.000093	$f\sigma_8(0.38)$	0.4631	0.4629 ± 0.0075
$\boldsymbol{A_{143\times217}^{dustTE}}$	0.661	0.663 ± 0.080	10^5D/H	2.5660	2.569 ± 0.043	$\sigma_8(0.38)$	0.6541	0.6536 ± 0.0082
$\boldsymbol{A_{217}^{dustTE}}$	2.049	2.05 ± 0.27	Age/Gyr	13.7650	13.767 ± 0.031	$f\sigma_8(0.51)$	0.4628	0.4626 ± 0.0070
$\boldsymbol{c_{100}}$	1.00017	1.00018 ± 0.00070	z_*	1089.605	1089.63 ± 0.33	$\sigma_8(0.51)$	0.6126	0.6121 ± 0.0077
$\boldsymbol{c_{217}}$	0.99799	0.99798 ± 0.00065	r_*	144.886	144.89 ± 0.34	$f\sigma_8(0.61)$	0.4586	0.4584 ± 0.0066
H_0	68.32	68.29 ± 0.56	$100\theta_*$	1.041528	1.04149 ± 0.00045	$\sigma_8(0.61)$	0.5831	0.5826 ± 0.0073
Ω_Λ	0.6978	0.6974 ± 0.0073	$D_M(z_*)$/Gpc	13.9109	13.912 ± 0.033	$f\sigma_8(2.33)$	0.29438	0.2941 ± 0.0037
Ω_m	0.3022	0.3026 ± 0.0073	z_{drag}	1060.05	1060.00 ± 0.53	$\sigma_8(2.33)$	0.30391	0.3036 ± 0.0038
$\Omega_m h^2$	0.14105	0.1411 ± 0.0012	r_{drag}	147.520	147.53 ± 0.38	χ^2_{simall}	395.58	396.8 ± 1.5
$\Omega_m h^3$	0.09637	0.09633 ± 0.00052	k_D	0.14049	0.14047 ± 0.00051	χ^2_{plikTE}	852.58	859.9 ± 3.7
σ_8	0.7963	0.796 ± 0.010	$100\theta_D$	0.160745	0.16076 ± 0.00031	χ^2_{6DF}	0.0037	0.042 ± 0.060
S_8	0.7993	0.799 ± 0.016	z_{eq}	3355.3	3356 ± 29	χ^2_{MGS}	1.89	1.93 ± 0.61
$\sigma_8 \Omega_m^{0.5}$	0.4378	0.4378 ± 0.0088	k_{eq}	0.010241	0.010242 ± 0.000090	$\chi^2_{DR12BAO}$	3.374	3.99 ± 0.87
$\sigma_8 \Omega_m^{0.25}$	0.5904	0.5902 ± 0.0093	$100\theta_{eq}$	0.8224	0.8223 ± 0.0055	χ^2_{prior}	0.42	7.4 ± 3.7
$\sigma_8/h^{0.5}$	0.9635	0.963 ± 0.014	$100\theta_{s,eq}$	0.45406	0.4540 ± 0.0028	χ^2_{BAO}	5.27	6.0 ± 1.1
$r_{drag} h$	100.78	100.75 ± 0.96	$H(0.15)$	73.503	73.48 ± 0.49	χ^2_{CMB}	1248.15	1256.6 ± 4.0

Best-fit $\chi^2_{eff} = 1253.85$; $\Delta\chi^2_{eff} = -0.39$; $\bar{\chi}^2_{eff} = 1270.03$; $\Delta\bar{\chi}^2_{eff} = 0.61$; $R - 1 = 0.00960$

χ^2_{eff}: BAO - 6DF: 0.00 (Δ 0.00) MGS: 1.89 (Δ 0.14) DR12BAO: 3.37 (Δ -0.07) CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.58 (Δ -0.08) plik_rd12_HM_v22_TE: 852.58 (Δ -0.36)

12.41 base_nrun_plikHM_TE_lowE_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02253 ± 0.00026	$r_{\rm drag} h$	101.5 ± 1.7	$100\theta_{\rm s,eq}$	0.4560 ± 0.0050
$\boldsymbol{\Omega_c h^2}$	0.1171 ± 0.0022	$\langle d^2 \rangle^{1/2}$	2.399 ± 0.046	$H(0.15)$	73.83 ± 0.85
$\boldsymbol{100\theta_{\rm MC}}$	1.04142 ± 0.00051	$z_{\rm re}$	< 7.57	$D_{\rm M}(0.15)$	632.1 ± 8.2
$\boldsymbol{\tau}$	$0.0519^{+0.0031}_{-0.0074}$	$10^9 A_{\rm s}$	$2.048^{+0.030}_{-0.039}$	$H(0.38)$	83.70 ± 0.63
$\boldsymbol{\ln(10^{10} A_{\rm s})}$	$3.019^{+0.015}_{-0.019}$	$10^9 A_{\rm s} e^{-2\tau}$	1.846 ± 0.021	$D_{\rm M}(0.38)$	1511 ± 17
$\boldsymbol{n_{\rm s}}$	0.975 ± 0.016	D_{40}	1233 ± 48	$H(0.51)$	90.27 ± 0.50
$\boldsymbol{{\rm d}n_{\rm s}/{\rm d}\ln k}$	0.013 ± 0.024	D_{220}	5690 ± 57	$D_{\rm M}(0.51)$	1959 ± 19
$\boldsymbol{A^{{\rm dust}TE}_{100}}$	0.114 ± 0.038	D_{810}	2508 ± 25	$H(0.61)$	$95.78^{+0.38}_{-0.43}$
$\boldsymbol{A^{{\rm dust}TE}_{100\times143}}$	0.136 ± 0.030	D_{1420}	814 ± 16	$D_{\rm M}(0.61)$	2282 ± 21
$\boldsymbol{A^{{\rm dust}TE}_{100\times217}}$	0.478 ± 0.085	D_{2000}	231.2 ± 7.1	$H(2.33)$	234.9 ± 1.3
$\boldsymbol{A^{{\rm dust}TE}_{143}}$	0.222 ± 0.054	$n_{\rm s,0.002}$	0.932 ± 0.068	$D_{\rm M}(2.33)$	5743 ± 18
$\boldsymbol{A^{{\rm dust}TE}_{143\times217}}$	0.660 ± 0.080	$Y_{\rm P}$	0.24546 ± 0.00010	$f\sigma_8(0.15)$	0.440 ± 0.012
$\boldsymbol{A^{{\rm dust}TE}_{217}}$	2.04 ± 0.27	$Y_{\rm P}^{\rm BBN}$	0.24678 ± 0.00010	$\sigma_8(0.15)$	0.7375 ± 0.0089
$\boldsymbol{c_{100}}$	1.00019 ± 0.00070	$10^5{\rm D/H}$	2.557 ± 0.047	$f\sigma_8(0.38)$	0.461 ± 0.010
$\boldsymbol{c_{217}}$	0.99798 ± 0.00065	Age/Gyr	13.753 ± 0.040	$\sigma_8(0.38)$	0.6553 ± 0.0074
$\boldsymbol{y_{\rm cal}}$	1.0000 ± 0.0025	z_*	1089.47 ± 0.44	$f\sigma_8(0.51)$	0.4613 ± 0.0088
H_0	68.70 ± 0.99	r_*	145.07 ± 0.51	$\sigma_8(0.51)$	0.6139 ± 0.0068
Ω_Λ	0.703 ± 0.013	$100\theta_*$	1.04159 ± 0.00050	$f\sigma_8(0.61)$	0.4576 ± 0.0079
$\Omega_{\rm m}$	0.297 ± 0.013	$D_{\rm M}(z_*)/{\rm Gpc}$	13.927 ± 0.048	$\sigma_8(0.61)$	0.5846 ± 0.0064
$\Omega_{\rm m} h^2$	0.1403 ± 0.0021	$z_{\rm drag}$	1060.10 ± 0.54	$f\sigma_8(2.33)$	0.2953 ± 0.0032
$\Omega_{\rm m} h^3$	0.09635 ± 0.00051	$r_{\rm drag}$	147.69 ± 0.52	$\sigma_8(2.33)$	0.3051 ± 0.0034
σ_8	0.797 ± 0.010	$k_{\rm D}$	0.14036 ± 0.00058	$\chi^2_{\rm simall}$	396.4 ± 1.1
S_8	0.793 ± 0.024	$100\theta_{\rm D}$	0.16071 ± 0.00031	$\chi^2_{\rm plikTE}$	860.5 ± 4.0
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.434 ± 0.013	$z_{\rm eq}$	3336 ± 50	$\chi^2_{\rm prior}$	7.4 ± 3.7
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.588 ± 0.012	$k_{\rm eq}$	0.01018 ± 0.00015	$\chi^2_{\rm CMB}$	1256.8 ± 4.2
$\sigma_8/h^{0.5}$	0.961 ± 0.017	$100\theta_{\rm eq}$	0.8262 ± 0.0097		

$\bar{\chi}^2_{\rm eff} = 1264.22$; $\Delta\bar{\chi}^2_{\rm eff} = 0.57$; $R - 1 = 0.00681$

12.42 base_nrun_plikHM_TE_lowE_post_BAO_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02247 ± 0.00023	$\langle d^2 \rangle^{1/2}$	2.410 ± 0.040	$D_M(0.15)$	635.5 ± 4.7
$\boldsymbol{\Omega_c h^2}$	0.1180 ± 0.0013	z_{re}	< 7.60	$H(0.38)$	83.44 ± 0.37
$\boldsymbol{100\theta_{MC}}$	1.04132 ± 0.00046	$10^9 A_s$	$2.053^{+0.029}_{-0.038}$	$D_M(0.38)$	1517.8 ± 9.6
$\boldsymbol{\tau}$	$0.0518^{+0.0033}_{-0.0073}$	$10^9 A_s e^{-2\tau}$	1.851 ± 0.019	$H(0.51)$	90.07 ± 0.31
$\boldsymbol{\ln(10^{10} A_s)}$	$3.022^{+0.014}_{-0.018}$	D_{40}	1231 ± 47	$D_M(0.51)$	1968 ± 11
$\boldsymbol{n_s}$	0.971 ± 0.014	D_{220}	5689 ± 58	$H(0.61)$	95.62 ± 0.27
$\boldsymbol{dn_s/d\ln k}$	0.009 ± 0.023	D_{810}	2509 ± 25	$D_M(0.61)$	2291 ± 12
$\boldsymbol{y_{cal}}$	0.99996 ± 0.0025	D_{1420}	812 ± 15	$H(2.33)$	235.37 ± 0.80
$\boldsymbol{A_{100}^{dustTE}}$	0.114 ± 0.039	D_{2000}	230.0 ± 6.8	$D_M(2.33)$	5749 ± 13
$\boldsymbol{A_{100\times143}^{dustTE}}$	0.136 ± 0.030	$n_{s,0.002}$	0.940 ± 0.066	$f\sigma_8(0.15)$	0.4448 ± 0.0079
$\boldsymbol{A_{100\times217}^{dustTE}}$	0.479 ± 0.084	Y_P	0.245432 ± 0.000092	$\sigma_8(0.15)$	0.7392 ± 0.0082
$\boldsymbol{A_{143}^{dustTE}}$	0.221 ± 0.054	Y_P^{BBN}	0.246759 ± 0.000092	$f\sigma_8(0.38)$	0.4648 ± 0.0069
$\boldsymbol{A_{143\times217}^{dustTE}}$	0.663 ± 0.080	10^5D/H	2.568 ± 0.042	$\sigma_8(0.38)$	0.6562 ± 0.0072
$\boldsymbol{A_{217}^{dustTE}}$	2.04 ± 0.27	Age/Gyr	13.766 ± 0.030	$f\sigma_8(0.51)$	0.4644 ± 0.0064
$\boldsymbol{c_{100}}$	1.00019 ± 0.00068	z_*	1089.62 ± 0.33	$\sigma_8(0.51)$	0.6145 ± 0.0067
$\boldsymbol{c_{217}}$	0.99798 ± 0.00065	r_*	144.88 ± 0.33	$f\sigma_8(0.61)$	0.4602 ± 0.0060
H_0	68.29 ± 0.56	$100\theta_*$	1.04150 ± 0.00045	$\sigma_8(0.61)$	0.5849 ± 0.0063
Ω_Λ	0.6973 ± 0.0073	$D_M(z_*)$/Gpc	13.910 ± 0.033	$f\sigma_8(2.33)$	0.2953 ± 0.0032
Ω_m	0.3027 ± 0.0073	z_{drag}	1060.02 ± 0.52	$\sigma_8(2.33)$	0.3048 ± 0.0033
$\Omega_m h^2$	0.1411 ± 0.0012	r_{drag}	147.51 ± 0.37	χ^2_{simall}	396.4 ± 1.1
$\Omega_m h^3$	0.09635 ± 0.00051	k_D	0.14050 ± 0.00050	χ^2_{plikTE}	860.0 ± 3.7
σ_8	0.7990 ± 0.0091	$100\theta_D$	0.16075 ± 0.00031	χ^2_{6DF}	0.041 ± 0.060
S_8	0.803 ± 0.015	z_{eq}	3357 ± 29	χ^2_{MGS}	1.92 ± 0.61
$\sigma_8\Omega_m^{0.5}$	0.4396 ± 0.0083	k_{eq}	0.010245 ± 0.000089	$\chi^2_{DR12BAO}$	3.99 ± 0.88
$\sigma_8\Omega_m^{0.25}$	0.5926 ± 0.0085	$100\theta_{eq}$	0.8222 ± 0.0054	χ^2_{prior}	7.4 ± 3.7
$\sigma_8/h^{0.5}$	0.967 ± 0.013	$100\theta_{s,eq}$	0.4540 ± 0.0028	χ^2_{BAO}	6.0 ± 1.1
$r_{drag}h$	100.73 ± 0.96	$H(0.15)$	73.48 ± 0.49	χ^2_{CMB}	1256.3 ± 3.9

$\bar{\chi}^2_{eff} = 1269.67$; $\Delta\bar{\chi}^2_{eff} = 0.68$; $R - 1 = 0.01461$

12.43 base_nrun_plikHM_EE_lowE

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02363	0.0235 ± 0.0014	D_{40}	1268	1266 ± 55	$D_M(0.15)$	620.5	624 ± 23
$\boldsymbol{\Omega_c h^2}$	0.11455	0.1152 ± 0.0049	D_{220}	5901	5867 ± 220	$H(0.38)$	84.70	$84.5^{+1.9}_{-2.1}$
$\boldsymbol{100\theta_{MC}}$	1.04011	1.04009 ± 0.00088	D_{810}	2579.7	2574 ± 43	$D_M(0.38)$	1486.8	1494 ± 48
$\boldsymbol{\tau}$	0.0493	0.0491 ± 0.0096	D_{1420}	851.8	849 ± 21	$H(0.51)$	91.14	$91.0^{+1.6}_{-1.9}$
$\boldsymbol{\ln(10^{10} A_s)}$	3.0331	3.032 ± 0.032	D_{2000}	245.9	245.1 ± 9.3	$D_M(0.51)$	1931	1939 ± 57
$\boldsymbol{n_s}$	0.9929	0.993 ± 0.022	$n_{s,0.002}$	0.902	0.900 ± 0.099	$H(0.61)$	96.54	$96.4^{+1.4}_{-1.6}$
$\boldsymbol{dn_s/d\ln k}$	0.0283	0.029 ± 0.036	Y_P	0.24592	0.24582 ± 0.00055	$D_M(0.61)$	2250	2259 ± 63
$\boldsymbol{y_{cal}}$	1.00007	1.0001 ± 0.0025	Y_P^{BBN}	0.24725	0.24714 ± 0.00055	$H(2.33)$	234.16	234.4 ± 2.4
H_0	70.09	69.8 ± 2.8	10^5D/H	2.366	$2.41^{+0.20}_{-0.25}$	$D_M(2.33)$	5706	5715 ± 72
Ω_Λ	0.7174	$0.712^{+0.034}_{-0.027}$	Age/Gyr	13.670	13.69 ± 0.16	$f\sigma_8(0.15)$	0.4297	0.434 ± 0.030
Ω_m	0.2826	$0.288^{+0.027}_{-0.034}$	z_*	1087.95	$1088.3^{+1.7}_{-2.0}$	$\sigma_8(0.15)$	0.7383	$0.740^{+0.016}_{-0.014}$
$\Omega_m h^2$	0.13883	0.1393 ± 0.0041	r_*	144.88	144.85 ± 0.94	$f\sigma_8(0.38)$	0.4540	0.457 ± 0.024
$\Omega_m h^3$	0.09730	0.0971 ± 0.0021	$100\theta_*$	1.04016	1.04017 ± 0.00087	$\sigma_8(0.38)$	0.6577	$0.658^{+0.011}_{-0.0099}$
σ_8	0.7958	0.798 ± 0.019	$D_M(z_*)$/Gpc	13.929	13.926 ± 0.088	$f\sigma_8(0.51)$	0.4561	0.459 ± 0.020
S_8	0.772	$0.782^{+0.054}_{-0.062}$	z_{drag}	1062.41	1062.0 ± 2.8	$\sigma_8(0.51)$	0.6168	$0.6173^{+0.0095}_{-0.0085}$
$\sigma_8\Omega_m^{0.5}$	0.4231	$0.428^{+0.030}_{-0.034}$	r_{drag}	147.15	147.2 ± 1.1	$f\sigma_8(0.61)$	0.4535	0.456 ± 0.018
$\sigma_8\Omega_m^{0.25}$	0.5803	0.584 ± 0.028	k_D	0.14170	0.1415 ± 0.0018	$\sigma_8(0.61)$	0.5878	$0.5881^{+0.0085}_{-0.0077}$
$\sigma_8/h^{0.5}$	0.9506	0.956 ± 0.040	$100\theta_D$	0.15918	$0.1595^{+0.0014}_{-0.0017}$	$f\sigma_8(2.33)$	0.29757	0.2975 ± 0.0037
$r_{drag}h$	103.13	102.7 ± 4.2	z_{eq}	3302	3314 ± 97	$\sigma_8(2.33)$	0.30817	0.3080 ± 0.0039
$\langle d^2\rangle^{1/2}$	2.387	2.397 ± 0.081	k_{eq}	0.010078	0.01011 ± 0.00030	χ^2_{simall}	395.42	396.7 ± 1.6
z_{re}	6.83	$6.82^{+0.91}_{-0.81}$	$100\theta_{eq}$	0.8346	0.832 ± 0.021	χ^2_{plikEE}	738.36	744.2 ± 3.4
$10^9 A_s$	2.076	$2.075^{+0.061}_{-0.070}$	$100\theta_{s,eq}$	0.4595	0.458 ± 0.010	χ^2_{prior}	0.001	0.98 ± 1.4
$10^9 A_s e^{-2\tau}$	1.8814	1.880 ± 0.037	$H(0.15)$	75.08	74.8 ± 2.5	χ^2_{CMB}	1133.78	1140.9 ± 3.8

Best-fit $\chi^2_{eff} = 1133.78$; $\Delta\chi^2_{eff} = -0.78$; $\bar{\chi}^2_{eff} = 1141.92$; $\Delta\bar{\chi}^2_{eff} = 0.31$; $R - 1 = 0.00923$

χ^2_{eff}: CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.42 (Δ -0.17) plik_rd12_HM_v22_EE: 738.36 (Δ -0.60)

12.44 base_nrun_plikHM_EE_lowE_post_BAO

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02278	0.02290 ± 0.00095	D_{810}	2562.5	2564 ± 39	$D_M(0.51)$	1968.4	1966 ± 22
$\boldsymbol{\Omega_c h^2}$	0.11736	0.1174 ± 0.0015	D_{1420}	843.7	843 ± 16	$H(0.61)$	95.55	95.66 ± 0.73
$\boldsymbol{100\theta_{MC}}$	1.03984	1.03991 ± 0.00080	D_{2000}	242.8	242.3 ± 7.1	$D_M(0.61)$	2291.7	2289 ± 24
$\boldsymbol{\tau}$	0.0476	0.0479 ± 0.0094	$n_{s,0.002}$	0.883	0.896 ± 0.099	$H(2.33)$	235.12	235.3 ± 1.3
$\boldsymbol{\ln(10^{10} A_s)}$	3.0274	3.029 ± 0.032	Y_P	0.245548	$0.24560^{+0.00042}_{-0.00035}$	$D_M(2.33)$	5753.5	5748 ± 40
$\boldsymbol{n_s}$	0.9889	0.988 ± 0.018	Y_P^{BBN}	0.246875	$0.24693^{+0.00042}_{-0.00035}$	$f\sigma_8(0.15)$	0.4487	0.448 ± 0.010
$\boldsymbol{dn_s/d\ln k}$	0.0329	0.029 ± 0.035	10^5D/H	2.512	$2.50^{+0.15}_{-0.18}$	$\sigma_8(0.15)$	0.7464	0.7458 ± 0.0096
$\boldsymbol{y_{cal}}$	1.00034	1.0001 ± 0.0024	Age/Gyr	13.777	13.763 ± 0.095	$f\sigma_8(0.38)$	0.4691	0.4684 ± 0.0088
H_0	68.27	68.38 ± 0.96	z_*	1089.18	$1089.1^{+1.1}_{-1.2}$	$\sigma_8(0.38)$	0.6627	0.6622 ± 0.0082
Ω_Λ	0.6979	0.6983 ± 0.0094	r_*	144.80	144.70 ± 0.80	$f\sigma_8(0.51)$	0.4688	0.4682 ± 0.0080
Ω_m	0.3021	0.3017 ± 0.0094	$100\theta_*$	1.04000	1.04005 ± 0.00083	$\sigma_8(0.51)$	0.6206	0.6202 ± 0.0076
$\Omega_m h^2$	0.14078	0.1410 ± 0.0017	$D_M(z_*)$/Gpc	13.923	13.913 ± 0.076	$f\sigma_8(0.61)$	0.4646	0.4641 ± 0.0074
$\Omega_m h^3$	0.09611	0.0964 ± 0.0017	z_{drag}	1060.70	1060.9 ± 2.2	$\sigma_8(0.61)$	0.5908	0.5904 ± 0.0072
σ_8	0.8067	0.806 ± 0.011	r_{drag}	147.34	147.2 ± 1.1	$f\sigma_8(2.33)$	0.29825	0.2981 ± 0.0036
S_8	0.8095	0.808 ± 0.020	k_D	0.14091	0.1411 ± 0.0018	$\sigma_8(2.33)$	0.30791	0.3078 ± 0.0037
$\sigma_8 \Omega_m^{0.5}$	0.4434	0.443 ± 0.011	$100\theta_D$	0.16012	$0.1600^{+0.0012}_{-0.0013}$	χ^2_{simall}	395.50	396.8 ± 1.6
$\sigma_8 \Omega_m^{0.25}$	0.5981	0.597 ± 0.011	z_{eq}	3348.9	3353 ± 41	χ^2_{plikEE}	738.55	743.5 ± 3.1
$\sigma_8/h^{0.5}$	0.9764	0.975 ± 0.017	k_{eq}	0.010221	0.01023 ± 0.00013	χ^2_{6DF}	0.0003	0.057 ± 0.079
$r_{drag}h$	100.59	100.6 ± 1.2	$100\theta_{eq}$	0.8233	0.8229 ± 0.0066	χ^2_{MGS}	1.75	1.86 ± 0.72
$\langle d^2 \rangle^{1/2}$	2.4336	2.429 ± 0.048	$100\theta_{s,eq}$	0.45424	0.4540 ± 0.0036	$\chi^2_{DR12BAO}$	3.59	4.4 ± 1.2
z_{re}	6.86	$6.83^{+0.96}_{-0.84}$	$H(0.15)$	73.45	73.56 ± 0.89	χ^2_{prior}	0.018	0.9 ± 1.3
$10^9 A_s$	2.064	$2.069^{+0.062}_{-0.071}$	$D_M(0.15)$	635.7	634.8 ± 8.3	χ^2_{BAO}	5.33	6.3 ± 1.3
$10^9 A_s e^{-2\tau}$	1.8767	1.879 ± 0.037	$H(0.38)$	83.39	83.50 ± 0.80	χ^2_{CMB}	1134.04	1140.3 ± 3.5
D_{40}	1273	1267 ± 55	$D_M(0.38)$	1518.4	1516 ± 18			
D_{220}	5778	5789 ± 180	$H(0.51)$	90.01	90.12 ± 0.75			

Best-fit $\chi^2_{eff} = 1139.39$; $\Delta\chi^2_{eff} = -0.77$; $\bar{\chi}^2_{eff} = 1147.51$; $\Delta\bar{\chi}^2_{eff} = 0.15$; $R - 1 = 0.01371$

χ^2_{eff}: BAO - 6DF: 0.00 (Δ -0.00) MGS: 1.75 (Δ -0.14) DR12BAO: 3.59 (Δ -0.01) CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.50 (Δ -0.12) plik_rd12_HM_v22_EE: 738.54 (Δ -0.50)

12.45 base_nrun_plikHM_EE_lowE_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.0235 ± 0.0014	D_{40}	1255 ± 53	$D_{\rm M}(0.15)$	625^{+22}_{-24}
$\boldsymbol{\Omega_c h^2}$	0.1155 ± 0.0048	D_{220}	5877 ± 220	$H(0.38)$	84.5 ± 2.0
$\boldsymbol{100\theta_{MC}}$	1.04007 ± 0.00088	D_{810}	2576 ± 43	$D_{\rm M}(0.38)$	1495 ± 48
$\boldsymbol{\tau}$	$0.0540^{+0.0046}_{-0.0083}$	D_{1420}	847 ± 21	$H(0.51)$	$91.0^{+1.6}_{-1.8}$
$\boldsymbol{\ln(10^{10} A_s)}$	$3.044^{+0.026}_{-0.030}$	D_{2000}	243.8 ± 8.9	$D_{\rm M}(0.51)$	1939 ± 57
$\boldsymbol{n_s}$	0.990 ± 0.021	$n_{\rm s,0.002}$	0.922 ± 0.095	$H(0.61)$	$96.4^{+1.4}_{-1.6}$
$\boldsymbol{\mathrm{d}n_s/\mathrm{d}\ln k}$	0.021 ± 0.034	$Y_{\rm P}$	0.24584 ± 0.00055	$D_{\rm M}(0.61)$	2260 ± 62
$\boldsymbol{y_{cal}}$	1.0000 ± 0.0025	$Y_{\rm P}^{\rm BBN}$	0.24717 ± 0.00055	$H(2.33)$	234.7 ± 2.4
H_0	69.7 ± 2.8	10^5D/H	$2.40^{+0.20}_{-0.25}$	$D_{\rm M}(2.33)$	5713 ± 71
Ω_Λ	$0.711^{+0.034}_{-0.026}$	Age/Gyr	13.69 ± 0.16	$f\sigma_8(0.15)$	$0.437^{+0.028}_{-0.031}$
$\Omega_{\rm m}$	$0.289^{+0.026}_{-0.034}$	z_*	$1088.3^{+1.7}_{-2.0}$	$\sigma_8(0.15)$	0.742 ± 0.014
$\Omega_{\rm m}h^2$	0.1397 ± 0.0040	r_*	144.73 ± 0.92	$f\sigma_8(0.38)$	0.460 ± 0.024
$\Omega_{\rm m}h^3$	0.0972 ± 0.0021	$100\theta_*$	1.04014 ± 0.00086	$\sigma_8(0.38)$	0.661 ± 0.010
σ_8	0.801 ± 0.018	$D_{\rm M}(z_*)$/Gpc	13.914 ± 0.087	$f\sigma_8(0.51)$	0.461 ± 0.020
S_8	$0.787^{+0.053}_{-0.062}$	$z_{\rm drag}$	1062.2 ± 2.8	$\sigma_8(0.51)$	0.6194 ± 0.0084
$\sigma_8\Omega_{\rm m}^{0.5}$	$0.431^{+0.029}_{-0.034}$	$r_{\rm drag}$	147.0 ± 1.1	$f\sigma_8(0.61)$	0.458 ± 0.018
$\sigma_8\Omega_{\rm m}^{0.25}$	0.587 ± 0.028	$k_{\rm D}$	0.1417 ± 0.0018	$\sigma_8(0.61)$	0.5900 ± 0.0075
$\sigma_8/h^{0.5}$	0.960 ± 0.040	$100\theta_{\rm D}$	$0.1594^{+0.0013}_{-0.0017}$	$f\sigma_8(2.33)$	0.2985 ± 0.0034
$r_{\rm drag}h$	102.5 ± 4.1	$z_{\rm eq}$	3322 ± 96	$\sigma_8(2.33)$	0.3089 ± 0.0035
$\langle d^2\rangle^{1/2}$	2.401 ± 0.080	$k_{\rm eq}$	0.01014 ± 0.00029	$\chi^2_{\rm simall}$	396.5 ± 1.5
$z_{\rm re}$	< 7.52	$100\theta_{\rm eq}$	0.831 ± 0.020	$\chi^2_{\rm plikEE}$	744.1 ± 3.4
$10^9 A_{\rm s}$	$2.100^{+0.052}_{-0.064}$	$100\theta_{\rm s,eq}$	0.458 ± 0.010	$\chi^2_{\rm prior}$	0.98 ± 1.4
$10^9 A_{\rm s}e^{-2\tau}$	1.885 ± 0.037	$H(0.15)$	74.7 ± 2.5	$\chi^2_{\rm CMB}$	1140.7 ± 3.7

$\bar{\chi}^2_{\rm eff} = 1141.65$; $\Delta\bar{\chi}^2_{\rm eff} = 0.34$; $R - 1 = 0.00996$

12.46 base_nrun_plikHM_EE_lowE_post_BAO_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02302 ± 0.00093	D_{810}	2567 ± 39	$D_{\rm M}(0.51)$	1964 ± 21
$\boldsymbol{\Omega_c h^2}$	0.1175 ± 0.0015	D_{1420}	841 ± 16	$H(0.61)$	95.75 ± 0.72
$\boldsymbol{100\theta_{MC}}$	1.03991 ± 0.00081	D_{2000}	241.3 ± 6.9	$D_{\rm M}(0.61)$	2286 ± 24
$\boldsymbol{\tau}$	$0.0530^{+0.0043}_{-0.0080}$	$n_{\rm s,0.002}$	0.919 ± 0.095	$H(2.33)$	235.5 ± 1.3
$\boldsymbol{\ln(10^{10} A_s)}$	$3.042^{+0.026}_{-0.029}$	$Y_{\rm P}$	$0.24565^{+0.00041}_{-0.00033}$	$D_{\rm M}(2.33)$	5742 ± 40
$\boldsymbol{n_s}$	0.985 ± 0.018	$Y_{\rm P}^{\rm BBN}$	$0.24698^{+0.00041}_{-0.00033}$	$f\sigma_8(0.15)$	0.449 ± 0.010
$\boldsymbol{{\rm d}n_s/{\rm d}\ln k}$	0.020 ± 0.034	10^5D/H	$2.48^{+0.15}_{-0.17}$	$\sigma_8(0.15)$	0.7480 ± 0.0090
$\boldsymbol{y_{cal}}$	1.0001 ± 0.0024	Age/Gyr	13.751 ± 0.093	$f\sigma_8(0.38)$	0.4696 ± 0.0087
H_0	68.46 ± 0.95	z_*	$1088.9^{+1.0}_{-1.2}$	$\sigma_8(0.38)$	0.6642 ± 0.0076
Ω_Λ	0.6987 ± 0.0094	r_*	144.59 ± 0.79	$f\sigma_8(0.51)$	0.4695 ± 0.0078
$\Omega_{\rm m}$	0.3013 ± 0.0094	$100\theta_*$	1.04003 ± 0.00083	$\sigma_8(0.51)$	0.6221 ± 0.0070
$\Omega_{\rm m}h^2$	0.1411 ± 0.0017	$D_{\rm M}(z_*)$/Gpc	13.902 ± 0.075	$f\sigma_8(0.61)$	0.4653 ± 0.0072
$\Omega_{\rm m}h^3$	0.0966 ± 0.0017	$z_{\rm drag}$	1061.2 ± 2.1	$\sigma_8(0.61)$	0.5922 ± 0.0066
σ_8	0.808 ± 0.010	$r_{\rm drag}$	147.0 ± 1.1	$f\sigma_8(2.33)$	0.2990 ± 0.0033
S_8	0.810 ± 0.020	$k_{\rm D}$	0.1414 ± 0.0018	$\sigma_8(2.33)$	0.3087 ± 0.0034
$\sigma_8\Omega_{\rm m}^{0.5}$	0.444 ± 0.011	$100\theta_{\rm D}$	$0.1599^{+0.0011}_{-0.0013}$	$\chi^2_{\rm simall}$	396.6 ± 1.4
$\sigma_8\Omega_{\rm m}^{0.25}$	0.599 ± 0.011	$z_{\rm eq}$	3357 ± 41	$\chi^2_{\rm plikEE}$	743.5 ± 3.2
$\sigma_8/h^{0.5}$	0.977 ± 0.016	$k_{\rm eq}$	0.01025 ± 0.00013	$\chi^2_{\rm 6DF}$	0.057 ± 0.080
$r_{\rm drag}h$	100.7 ± 1.2	$100\theta_{\rm eq}$	0.8225 ± 0.0067	$\chi^2_{\rm MGS}$	1.88 ± 0.72
$\langle d^2\rangle^{1/2}$	2.430 ± 0.046	$100\theta_{\rm s,eq}$	0.4537 ± 0.0036	$\chi^2_{\rm DR12BAO}$	4.4 ± 1.3
$z_{\rm re}$	< 7.57	$H(0.15)$	73.64 ± 0.88	$\chi^2_{\rm prior}$	0.9 ± 1.4
$10^9 A_{\rm s}$	$2.096^{+0.053}_{-0.063}$	$D_{\rm M}(0.15)$	634.1 ± 8.2	$\chi^2_{\rm BAO}$	6.4 ± 1.3
$10^9 A_{\rm s}e^{-2\tau}$	1.885 ± 0.036	$H(0.38)$	83.59 ± 0.79	$\chi^2_{\rm CMB}$	1140.0 ± 3.5
D_{40}	1256 ± 53	$D_{\rm M}(0.38)$	1515 ± 18		
D_{220}	5810 ± 180	$H(0.51)$	90.21 ± 0.74		

$\bar{\chi}^2_{\rm eff} = 1147.29$; $\Delta\bar{\chi}^2_{\rm eff} = 0.23$; $R - 1 = 0.01768$

12.47 base_nrun_CleanedCamSpecHM_TT_lowl_lowE

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02215 ± 0.00023	$\sigma_8/h^{0.5}$	0.991 ± 0.016	$D_M(0.15)$	647.0 ± 7.9
$\boldsymbol{\Omega_c h^2}$	0.1205 ± 0.0021	$r_{drag} h$	98.6 ± 1.6	$H(0.38)$	82.57 ± 0.56
$\boldsymbol{100\theta_{MC}}$	1.04079 ± 0.00047	$\langle d^2 \rangle^{1/2}$	2.445 ± 0.038	$D_M(0.38)$	1541 ± 16
$\boldsymbol{\tau}$	0.0532 ± 0.0082	z_{re}	7.60 ± 0.84	$H(0.51)$	89.37 ± 0.44
$\boldsymbol{\ln(10^{10} A_s)}$	3.041 ± 0.018	$10^9 A_s$	2.094 ± 0.037	$D_M(0.51)$	1995 ± 18
$\boldsymbol{n_s}$	0.9614 ± 0.0061	$10^9 A_s e^{-2\tau}$	1.883 ± 0.014	$H(0.61)$	95.05 ± 0.35
$\boldsymbol{dn_s/d\ln k}$	-0.0047 ± 0.0077	D_{40}	1222 ± 21	$D_M(0.61)$	2320 ± 20
$\boldsymbol{y_{cal}}$	1.0003 ± 0.0025	D_{220}	5707 ± 41	$H(2.33)$	236.7 ± 1.3
$\boldsymbol{A_{100}^{PS}}$	259 ± 27	D_{810}	2533 ± 14	$D_M(2.33)$	5776 ± 16
$\boldsymbol{A_{143}^{tSZ}}$	$3.6^{+1.6}_{-2.7}$	D_{1420}	811.7 ± 5.5	$f\sigma_8(0.15)$	0.462 ± 0.012
$\boldsymbol{A^{kSZ}}$	< 4.00	D_{2000}	228.4 ± 2.1	$\sigma_8(0.15)$	0.7480 ± 0.0077
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.19	$n_{s,0.002}$	0.977 ± 0.023	$f\sigma_8(0.38)$	0.4787 ± 0.0097
$\boldsymbol{A_{143}^{power}}$	$11.0^{+2.3}_{-2.8}$	Y_P	$0.24530^{+0.00011}_{-0.000085}$	$\sigma_8(0.38)$	0.6622 ± 0.0062
$\boldsymbol{A_{217}^{power}}$	$8.7^{+1.8}_{-3.3}$	Y_P^{BBN}	$0.24663^{+0.00011}_{-0.000086}$	$f\sigma_8(0.51)$	0.4763 ± 0.0083
$\boldsymbol{A_{143\times217}^{power}}$	$4.8^{+1.8}_{-3.2}$	10^5D/H	2.627 ± 0.044	$\sigma_8(0.51)$	0.6193 ± 0.0056
$\boldsymbol{\gamma_{143}^{power}}$	$1.32^{+0.39}_{-0.52}$	Age/Gyr	13.825 ± 0.036	$f\sigma_8(0.61)$	0.4706 ± 0.0074
$\boldsymbol{\gamma_{217}^{power}}$	1.31 ± 0.61	z_*	1090.24 ± 0.41	$\sigma_8(0.61)$	0.5891 ± 0.0052
$\boldsymbol{\gamma_{143\times217}^{power}}$	$1.28^{+0.58}_{-0.70}$	r_*	144.46 ± 0.50	$f\sigma_8(2.33)$	0.2967 ± 0.0026
$\boldsymbol{c_{100}}$	0.9978 ± 0.0011	$100\theta_*$	1.04099 ± 0.00046	$\sigma_8(2.33)$	0.3055 ± 0.0027
$\boldsymbol{c_{217}}$	$0.9995^{+0.0013}_{-0.0017}$	$D_M(z_*)$/Gpc	13.877 ± 0.046	f_{2000}^{143}	24 ± 3
H_0	66.95 ± 0.91	z_{drag}	1059.47 ± 0.49	f_{2000}^{217}	17.5 ± 2.2
Ω_Λ	0.680 ± 0.013	r_{drag}	147.20 ± 0.50	$f_{2000}^{143\times217}$	$11.9^{+2.4}_{-2.6}$
Ω_m	0.320 ± 0.013	k_D	0.14059 ± 0.00057	χ^2_{simall}	397.0 ± 1.7
$\Omega_m h^2$	0.1433 ± 0.0020	$100\theta_D$	0.16103 ± 0.00029	χ^2_{lowl}	23.0 ± 2.0
$\Omega_m h^3$	0.09595 ± 0.00048	z_{eq}	3410 ± 48	$\chi^2_{CamSpec}$	6717.4 ± 5.4
σ_8	0.8104 ± 0.0092	k_{eq}	0.01041 ± 0.00015	χ^2_{prior}	5.3 ± 2.9
S_8	0.837 ± 0.024	$100\theta_{eq}$	0.8114 ± 0.0090	χ^2_{CMB}	7137.4 ± 5.4
$\sigma_8 \Omega_m^{0.5}$	0.458 ± 0.013	$100\theta_{s,eq}$	0.4485 ± 0.0046		
$\sigma_8 \Omega_m^{0.25}$	0.610 ± 0.012	$H(0.15)$	72.32 ± 0.78		

$\bar{\chi}^2_{eff} = 7142.72$; $\Delta\bar{\chi}^2_{eff} = 0.51$; $R - 1 = 0.00730$

13 nrun+nnu+w+mnu

13.1 base_nrun_nnu_w_mnu_plikHM_TTTEEE_lowl_lowE_BAO_Riess18_Pantheon_lensing

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022471	0.02248 ± 0.00019	$\Omega_\nu h^2$	0.000025	< 0.000849	$D_M(0.15)$	627.4	626.2 ± 9.2
$\boldsymbol{\Omega_c h^2}$	0.11993	0.1206 ± 0.0030	$\Omega_m h^3$	0.09884	0.1001 ± 0.0034	$H(0.38)$	83.75	83.7 ± 1.3
$\boldsymbol{100\theta_{MC}}$	1.040970	1.04090 ± 0.00044	σ_8	0.8340	0.829 ± 0.013	$D_M(0.38)$	1504.0	1503 ± 22
$\boldsymbol{\tau}$	0.0537	0.0553 ± 0.0078	S_8	0.8281	0.824 ± 0.011	$H(0.51)$	90.23	90.2 ± 1.4
$\boldsymbol{\Sigma m_\nu}$ [eV]	0.0023	< 0.0789	$\sigma_8 \Omega_m^{0.5}$	0.4536	0.4512 ± 0.0062	$D_M(0.51)$	1952.5	1952 ± 28
$\boldsymbol{w_0}$	-1.0378	$-1.056^{+0.039}_{-0.035}$	$\sigma_8 \Omega_m^{0.25}$	0.6151	0.6115 ± 0.0080	$H(0.61)$	95.71	95.7 ± 1.4
$\boldsymbol{N_{eff}}$	3.067	3.11 ± 0.19	$\sigma_8/h^{0.5}$	1.0012	$0.993^{+0.013}_{-0.011}$	$D_M(0.61)$	2275.2	2274 ± 33
$\boldsymbol{\ln(10^{10} A_s)}$	3.0440	3.048 ± 0.017	$r_{drag} h$	101.94	102.0 ± 1.2	$H(2.33)$	235.79	236.4 ± 2.9
$\boldsymbol{n_s}$	0.9674	0.9673 ± 0.0086	$\langle d^2 \rangle^{1/2}$	2.4448	2.440 ± 0.024	$D_M(2.33)$	5733	5729 ± 78
$\boldsymbol{\mathrm{d}n_s/\mathrm{d}\ln k}$	-0.0023	-0.0037 ± 0.0076	z_{re}	7.58	7.75 ± 0.78	$f\sigma_8(0.15)$	0.4616	0.4613 ± 0.0066
$\boldsymbol{y_{cal}}$	1.00058	1.0006 ± 0.0025	$10^9 A_s$	2.0989	2.108 ± 0.036	$\sigma_8(0.15)$	0.7719	0.767 ± 0.012
$\boldsymbol{A_{217}^{CIB}}$	47.4	48 ± 7	$10^9 A_s e^{-2\tau}$	1.8853	1.887 ± 0.016	$f\sigma_8(0.38)$	0.4854	0.4857 ± 0.0078
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.47	—	D_{40}	1221.0	1219 ± 18	$\sigma_8(0.38)$	0.6852	0.681 ± 0.011
$\boldsymbol{A_{143}^{tSZ}}$	7.25	5.3 ± 2.0	D_{220}	5735.4	5735 ± 39	$f\sigma_8(0.51)$	0.4858	0.4861 ± 0.0081
$\boldsymbol{A_{100}^{PS}}$	250.5	262 ± 28	D_{810}	2541.7	2541 ± 14	$\sigma_8(0.51)$	0.6414	0.637 ± 0.010
$\boldsymbol{A_{143}^{PS}}$	48.6	47 ± 8	D_{1420}	818.0	816.4 ± 5.0	$f\sigma_8(0.61)$	0.4817	0.4819 ± 0.0081
$\boldsymbol{A_{143\times217}^{PS}}$	49.1	42 ± 9	D_{2000}	231.14	230.3 ± 1.9	$\sigma_8(0.61)$	0.6104	0.6061 ± 0.0097
$\boldsymbol{A_{217}^{PS}}$	120.0	114 ± 10	$n_{s,0.002}$	0.9749	0.979 ± 0.021	$f\sigma_8(2.33)$	0.30715	0.3059 ± 0.0047
$\boldsymbol{A^{kSZ}}$	0.00	< 4.90	Y_P	0.24571	0.2462 ± 0.0026	$\sigma_8(2.33)$	0.3165	$0.3141^{+0.0052}_{-0.0047}$
$\boldsymbol{A_{100}^{dust TT}}$	8.82	9.0 ± 1.8	Y_P^{BBN}	0.24704	0.2475 ± 0.0026	f_{2000}^{143}	29.07	30.6 ± 3.1
$\boldsymbol{A_{143}^{dust TT}}$	11.08	11.0 ± 1.8	10^5D/H	2.5742	2.586 ± 0.050	$f_{2000}^{143\times217}$	32.24	33.0 ± 2.2
$\boldsymbol{A_{143\times217}^{dust TT}}$	19.98	18.7 ± 3.3	Age/Gyr	13.712	13.70 ± 0.18	f_{2000}^{217}	106.79	107.7 ± 2.0
$\boldsymbol{A_{217}^{dust TT}}$	95.1	93.6 ± 7.4	z_*	1089.801	1089.89 ± 0.36	$\chi^2_{lensing}$	9.15	9.45 ± 0.81
$\boldsymbol{A_{100}^{dust TE}}$	0.1141	0.114 ± 0.038	r_*	144.27	143.9 ± 1.8	χ^2_{simall}	395.88	397.1 ± 1.8
$\boldsymbol{A_{100\times143}^{dust TE}}$	0.1344	0.135 ± 0.029	$100\theta_*$	1.04110	1.04104 ± 0.00054	χ^2_{lowl}	22.41	22.5 ± 1.6
$\boldsymbol{A_{100\times217}^{dust TE}}$	0.483	0.481 ± 0.085	$D_M(z_*)$/Gpc	13.858	13.83 ± 0.17	χ^2_{plik}	2344.4	2361.6 ± 6.5
$\boldsymbol{A_{143}^{dust TE}}$	0.225	0.224 ± 0.054	z_{drag}	1060.16	1060.27 ± 0.71	$\chi^2_{H073p45}$	5.96	5.7 ± 3.0
$\boldsymbol{A_{143\times217}^{dust TE}}$	0.667	0.663 ± 0.080	r_{drag}	146.90	146.6 ± 1.8	χ^2_{JLA}	1036.45	1037.6 ± 1.9
$\boldsymbol{A_{217}^{dust TE}}$	2.082	2.08 ± 0.27	k_D	0.14106	0.1413 ± 0.0013	χ^2_{6DF}	0.062	0.10 ± 0.12
$\boldsymbol{c_{100}}$	0.99972	0.99967 ± 0.00061	$100\theta_D$	0.160711	0.16081 ± 0.00045	χ^2_{MGS}	2.43	2.44 ± 0.65
$\boldsymbol{c_{217}}$	0.99820	0.99821 ± 0.00062	z_{eq}	3393.5	3391 ± 29	$\chi^2_{DR12BAO}$	3.89	4.62 ± 0.89
H_0	69.40	69.6 ± 1.1	k_{eq}	0.010372	0.01039 ± 0.00011	χ^2_{prior}	1.77	11.7 ± 4.6
Ω_Λ	0.7043	0.7034 ± 0.0071	$100\theta_{eq}$	0.8151	0.8156 ± 0.0055	χ^2_{CMB}	2771.8	2790.6 ± 6.7
Ω_m	0.2957	0.2966 ± 0.0071	$100\theta_{s,eq}$	0.45027	0.4505 ± 0.0028	χ^2_{BAO}	6.38	7.2 ± 1.3
$\Omega_m h^2$	0.14243	0.1437 ± 0.0032	$H(0.15)$	74.20	74.3 ± 1.1			

Best-fit $\chi^2_{eff} = 3822.38$; $\bar{\chi}^2_{eff} = 3852.73$; $\Delta\bar{\chi}^2_{eff} = -1.63$; $R - 1 = 0.01358$

χ^2_{eff}: BAO - 6DF: 0.06 MGS: 2.43 DR12BAO: 3.89 CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 9.15 simall_100x143_offlike5_EE_Aplanck_B: 395.88 commander_dx12_v3_2_29: 22.41 plik_rd12_HM_v22b_TTTEEE: 2344.38 Hubble - H073p45: 5.96 SN - JLA Pantheon: 1036.45

13.2 base_nrun_nnu_w_mnu_plikHM_TTTEEE_lowl_lowE_BAO_Riess18_Pantheon_lensing_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02248 ± 0.00019	$\Omega_\nu h^2$	< 0.000864	$D_M(0.15)$	626.1 ± 9.2
$\boldsymbol{\Omega_c h^2}$	0.1206 ± 0.0030	$\Omega_m h^3$	0.1001 ± 0.0034	$H(0.38)$	83.7 ± 1.3
$\boldsymbol{100\theta_{MC}}$	1.04090 ± 0.00044	σ_8	0.829 ± 0.013	$D_M(0.38)$	1502 ± 22
$\boldsymbol{\tau}$	$0.0562^{+0.0055}_{-0.0081}$	S_8	0.824 ± 0.011	$H(0.51)$	90.2 ± 1.4
$\boldsymbol{\Sigma m_\nu}$ [eV]	< 0.0803	$\sigma_8 \Omega_m^{0.5}$	0.4513 ± 0.0062	$D_M(0.51)$	1951 ± 28
$\boldsymbol{w_0}$	$-1.055^{+0.038}_{-0.035}$	$\sigma_8 \Omega_m^{0.25}$	0.6117 ± 0.0081	$H(0.61)$	95.7 ± 1.4
$\boldsymbol{N_{eff}}$	3.11 ± 0.19	$\sigma_8/h^{0.5}$	$0.993^{+0.013}_{-0.011}$	$D_M(0.61)$	2274 ± 33
$\boldsymbol{\ln(10^{10} A_s)}$	$3.050^{+0.014}_{-0.017}$	$r_{drag} h$	102.0 ± 1.2	$H(2.33)$	236.5 ± 2.9
$\boldsymbol{n_s}$	0.9676 ± 0.0086	$\langle d^2 \rangle^{1/2}$	2.440 ± 0.023	$D_M(2.33)$	5728 ± 78
$\boldsymbol{dn_s/d\ln k}$	-0.0037 ± 0.0076	z_{re}	$7.84^{+0.60}_{-0.79}$	$f\sigma_8(0.15)$	0.4614 ± 0.0066
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0025	$10^9 A_s$	$2.112^{+0.029}_{-0.036}$	$\sigma_8(0.15)$	0.767 ± 0.012
$\boldsymbol{A_{217}^{CIB}}$	48 ± 7	$10^9 A_s e^{-2\tau}$	1.887 ± 0.016	$f\sigma_8(0.38)$	0.4858 ± 0.0078
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{40}	1218 ± 18	$\sigma_8(0.38)$	0.681 ± 0.011
$\boldsymbol{A_{143}^{tSZ}}$	5.3 ± 2.0	D_{220}	5735 ± 39	$f\sigma_8(0.51)$	0.4862 ± 0.0081
$\boldsymbol{A_{100}^{PS}}$	262 ± 28	D_{810}	2541 ± 14	$\sigma_8(0.51)$	$0.637^{+0.011}_{-0.0097}$
$\boldsymbol{A_{143}^{PS}}$	47 ± 8	D_{1420}	816.4 ± 5.0	$f\sigma_8(0.61)$	0.4820 ± 0.0081
$\boldsymbol{A_{143\times217}^{PS}}$	42 ± 9	D_{2000}	230.3 ± 1.9	$\sigma_8(0.61)$	$0.606^{+0.010}_{-0.0092}$
$\boldsymbol{A_{217}^{PS}}$	114 ± 10	$n_{s,0.002}$	0.980 ± 0.021	$f\sigma_8(2.33)$	0.3060 ± 0.0047
$\boldsymbol{A^{kSZ}}$	< 4.89	Y_P	0.2462 ± 0.0026	$\sigma_8(2.33)$	$0.3143^{+0.0053}_{-0.0047}$
$\boldsymbol{A_{100}^{dust TT}}$	9.0 ± 1.8	Y_P^{BBN}	0.2476 ± 0.0026	f_{2000}^{143}	30.6 ± 3.1
$\boldsymbol{A_{143}^{dust TT}}$	11.0 ± 1.8	10^5D/H	2.586 ± 0.050	$f_{2000}^{143\times217}$	33.0 ± 2.2
$\boldsymbol{A_{143\times217}^{dust TT}}$	18.7 ± 3.3	Age/Gyr	13.69 ± 0.18	f_{2000}^{217}	107.6 ± 2.0
$\boldsymbol{A_{217}^{dust TT}}$	93.6 ± 7.4	z_*	1089.88 ± 0.36	$\chi^2_{lensing}$	9.45 ± 0.81
$\boldsymbol{A_{100}^{dust TE}}$	0.114 ± 0.038	r_*	143.9 ± 1.8	χ^2_{simall}	397.0 ± 1.8
$\boldsymbol{A_{100\times143}^{dust TE}}$	0.135 ± 0.029	$100\theta_*$	1.04103 ± 0.00053	χ^2_{lowl}	22.4 ± 1.6
$\boldsymbol{A_{100\times217}^{dust TE}}$	0.481 ± 0.084	$D_M(z_*)$/Gpc	13.83 ± 0.17	χ^2_{plik}	2361.6 ± 6.5
$\boldsymbol{A_{143}^{dust TE}}$	0.224 ± 0.054	z_{drag}	1060.28 ± 0.71	$\chi^2_{H073p45}$	5.7 ± 3.0
$\boldsymbol{A_{143\times217}^{dust TE}}$	0.663 ± 0.080	r_{drag}	146.5 ± 1.9	χ^2_{JLA}	1037.6 ± 1.9
$\boldsymbol{A_{217}^{dust TE}}$	2.08 ± 0.27	k_D	0.1413 ± 0.0013	χ^2_{6DF}	0.10 ± 0.12
$\boldsymbol{c_{100}}$	0.99967 ± 0.00061	$100\theta_D$	0.16082 ± 0.00045	χ^2_{MGS}	2.44 ± 0.65
$\boldsymbol{c_{217}}$	0.99821 ± 0.00062	z_{eq}	3390 ± 28	$\chi^2_{DR12BAO}$	4.61 ± 0.89
H_0	69.6 ± 1.1	k_{eq}	0.01039 ± 0.00011	χ^2_{prior}	11.7 ± 4.6
Ω_Λ	0.7035 ± 0.0071	$100\theta_{eq}$	0.8159 ± 0.0054	χ^2_{CMB}	2790.5 ± 6.7
Ω_m	0.2965 ± 0.0071	$100\theta_{s,eq}$	0.4506 ± 0.0027	χ^2_{BAO}	7.2 ± 1.3
$\Omega_m h^2$	0.1437 ± 0.0032	$H(0.15)$	74.3 ± 1.1		

$\bar{\chi}^2_{eff} = 3852.56$; $\Delta\bar{\chi}^2_{eff} = -1.71$; $R - 1 = 0.01300$

14 nrun+nrunrun

14.1 base_nrun_nrunrun_plikHM_TTTEEE_lowl_lowE

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022332	0.02234 ± 0.00017	$\Omega_m h^2$	0.14367	0.1436 ± 0.0014	$100\theta_{eq}$	0.8103	0.8106 ± 0.0061
$\boldsymbol{\Omega_c h^2}$	0.12070	0.1206 ± 0.0015	$\Omega_m h^3$	0.096331	0.09636 ± 0.00031	$100\theta_{s,eq}$	0.44786	0.4480 ± 0.0031
$\boldsymbol{100\theta_{MC}}$	1.040823	1.04086 ± 0.00031	σ_8	0.8178	0.8169 ± 0.0087	$H(0.15)$	72.42	72.46 ± 0.56
$\boldsymbol{\tau}$	0.0570	0.0577 ± 0.0086	S_8	0.8441	0.843 ± 0.018	$D_M(0.15)$	646.0	645.7 ± 5.6
$\boldsymbol{\ln(10^{10} A_s)}$	3.0513	$3.053^{+0.016}_{-0.018}$	$\sigma_8 \Omega_m^{0.5}$	0.4623	0.4615 ± 0.0099	$H(0.38)$	82.680	82.71 ± 0.40
$\boldsymbol{n_s}$	0.9624	0.9612 ± 0.0053	$\sigma_8 \Omega_m^{0.25}$	0.6149	0.6140 ± 0.0094	$D_M(0.38)$	1538.7	1538 ± 11
$\boldsymbol{dn_s/d\ln k}$	0.0053	0.001 ± 0.010	$\sigma_8/h^{0.5}$	0.9987	0.997 ± 0.014	$H(0.51)$	89.483	89.51 ± 0.32
$\boldsymbol{d^2 n_s/d\ln k^2}$	0.0139	0.012 ± 0.013	$r_{drag} h$	98.53	98.6 ± 1.1	$D_M(0.51)$	1992.0	1991 ± 13
$\boldsymbol{y_{cal}}$	1.00047	1.0006 ± 0.0024	$\langle d^2 \rangle^{1/2}$	2.4477	2.446 ± 0.029	$H(0.61)$	95.169	95.20 ± 0.26
$\boldsymbol{A_{217}^{CIB}}$	45.2	47 ± 7	z_{re}	7.98	8.02 ± 0.85	$D_M(0.61)$	2316.9	2316 ± 14
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.70	—	$10^9 A_s$	2.1142	$2.118^{+0.034}_{-0.039}$	$H(2.33)$	236.97	236.95 ± 0.86
$\boldsymbol{A_{143}^{tSZ}}$	7.08	5.4 ± 2.0	$10^9 A_s e^{-2\tau}$	1.8864	1.887 ± 0.012	$D_M(2.33)$	5768.0	5767 ± 12
$\boldsymbol{A_{100}^{PS}}$	246.6	259 ± 29	D_{40}	1221.4	1218 ± 19	$f\sigma_8(0.15)$	0.4663	0.4655 ± 0.0092
$\boldsymbol{A_{143}^{PS}}$	49.0	45 ± 9	D_{220}	5738.6	5740 ± 39	$\sigma_8(0.15)$	0.7549	0.7541 ± 0.0077
$\boldsymbol{A_{143\times217}^{PS}}$	52.6	41 ± 9	D_{810}	2540.2	2539 ± 13	$f\sigma_8(0.38)$	0.4829	0.4822 ± 0.0076
$\boldsymbol{A_{217}^{PS}}$	121.3	114 ± 10	D_{1420}	818.87	817.0 ± 4.9	$\sigma_8(0.38)$	0.6683	0.6676 ± 0.0065
$\boldsymbol{A^{kSZ}}$	0.00	< 4.36	D_{2000}	232.19	231.2 ± 2.1	$f\sigma_8(0.51)$	0.4806	0.4799 ± 0.0068
$\boldsymbol{A_{100}^{dustTT}}$	8.80	8.9 ± 1.8	$n_{s,0.002}$	1.0171	1.019 ± 0.045	$\sigma_8(0.51)$	0.6250	0.6244 ± 0.0060
$\boldsymbol{A_{143}^{dustTT}}$	11.05	10.9 ± 1.8	Y_P	0.245380	0.245383 ± 0.000066	$f\sigma_8(0.61)$	0.4749	0.4742 ± 0.0062
$\boldsymbol{A_{143\times217}^{dustTT}}$	20.09	18.5 ± 3.3	Y_P^{BBN}	0.246707	0.246709 ± 0.000066	$\sigma_8(0.61)$	0.5945	$0.5940^{+0.0053}_{-0.0058}$
$\boldsymbol{A_{217}^{dustTT}}$	95.6	93.6 ± 7.4	10^5D/H	2.5926	2.591 ± 0.031	$f\sigma_8(2.33)$	0.29943	$0.2992^{+0.0026}_{-0.0029}$
$\boldsymbol{A_{100}^{dustTE}}$	0.1145	0.115 ± 0.038	Age/Gyr	13.8069	13.804 ± 0.026	$\sigma_8(2.33)$	0.30835	$0.3081^{+0.0027}_{-0.0031}$
$\boldsymbol{A_{100\times143}^{dustTE}}$	0.1341	0.135 ± 0.029	z_*	1090.028	1090.01 ± 0.30	f_{2000}^{143}	27.49	29 ± 3
$\boldsymbol{A_{100\times217}^{dustTE}}$	0.480	0.483 ± 0.085	r_*	144.281	144.29 ± 0.32	$f_{2000}^{143\times217}$	30.98	31.9 ± 2.5
$\boldsymbol{A_{143}^{dustTE}}$	0.225	0.226 ± 0.054	$100\theta_*$	1.041014	1.04104 ± 0.00031	f_{2000}^{217}	105.57	106.7 ± 2.3
$\boldsymbol{A_{143\times217}^{dustTE}}$	0.668	0.667 ± 0.079	$D_M(z_*)$/Gpc	13.8597	13.860 ± 0.029	χ^2_{simall}	396.42	397.5 ± 2.1
$\boldsymbol{A_{217}^{dustTE}}$	2.090	2.10 ± 0.27	z_{drag}	1059.895	1059.92 ± 0.33	χ^2_{lowl}	21.69	22.4 ± 1.5
$\boldsymbol{c_{100}}$	0.99975	0.99969 ± 0.00061	r_{drag}	146.951	146.95 ± 0.31	χ^2_{plik}	2344.6	2360.7 ± 5.9
$\boldsymbol{c_{217}}$	0.99815	0.99819 ± 0.00062	k_D	0.140987	0.14099 ± 0.00034	χ^2_{prior}	1.49	11.5 ± 4.6
H_0	67.05	67.09 ± 0.65	$100\theta_D$	0.160775	0.16077 ± 0.00019	χ^2_{CMB}	2762.7	2780.6 ± 6.1
Ω_Λ	0.6804	0.6808 ± 0.0091	z_{eq}	3418.0	3417 ± 33			
Ω_m	0.3196	0.3192 ± 0.0091	k_{eq}	0.010432	0.01043 ± 0.00010			

Best-fit $\chi^2_{eff} = 2764.20$; $\Delta\chi^2_{eff} = -1.57$; $\bar{\chi}^2_{eff} = 2792.05$; $\Delta\bar{\chi}^2_{eff} = 0.29$; $R - 1 = 0.02103$

χ^2_{eff}: CMB - simall_100x143_offlike5_EE_Aplanck_B: 396.42 (Δ 0.37) commander_dx12_v3_2_29: 21.69 (Δ -1.57) plik_rd12_HM_v22b_TTTEEE: 2344.61 (Δ -0.04)

14.2 base_nrun_nrunrun_plikHM_TTTEEE_lowl_lowE_post_BAO

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022418	0.02243 ± 0.00015	$\Omega_m h^3$	0.096385	0.09638 ± 0.00031	$H(0.15)$	72.866	72.90 ± 0.40
$\boldsymbol{\Omega_c h^2}$	0.11958	0.1195 ± 0.0010	σ_8	0.8146	$0.8137^{+0.0076}_{-0.0086}$	$D_M(0.15)$	641.53	641.2 ± 4.0
$\boldsymbol{100\theta_{MC}}$	1.041014	1.04100 ± 0.00029	S_8	0.8313	0.830 ± 0.014	$H(0.38)$	83.003	83.03 ± 0.30
$\boldsymbol{\tau}$	0.0586	$0.0592^{+0.0076}_{-0.0090}$	$\sigma_8 \Omega_m^{0.5}$	0.4553	0.4545 ± 0.0076	$D_M(0.38)$	1529.8	1529.1 ± 8.0
$\boldsymbol{\ln(10^{10} A_s)}$	3.0524	$3.053^{+0.016}_{-0.019}$	$\sigma_8 \Omega_m^{0.25}$	0.6090	0.6081 ± 0.0078	$H(0.51)$	89.735	89.75 ± 0.24
$\boldsymbol{n_s}$	0.96518	0.9644 ± 0.0045	$\sigma_8/h^{0.5}$	0.9910	0.990 ± 0.012	$D_M(0.51)$	1981.5	1980.8 ± 9.4
$\boldsymbol{dn_s/d\ln k}$	0.0033	0.000 ± 0.010	$r_{drag} h$	99.43	99.50 ± 0.80	$H(0.61)$	95.366	95.38 ± 0.20
$\boldsymbol{d^2 n_s/d\ln k^2}$	0.0112	0.009 ± 0.013	$\langle d^2 \rangle^{1/2}$	2.4325	2.432 ± 0.025	$D_M(0.61)$	2305.7	2305 ± 10
$\boldsymbol{y_{cal}}$	1.00062	1.0007 ± 0.0025	z_{re}	8.09	8.13 ± 0.84	$H(2.33)$	236.34	236.29 ± 0.63
$\boldsymbol{A_{217}^{CIB}}$	45.9	47 ± 7	$10^9 A_s$	2.1167	$2.119^{+0.032}_{-0.040}$	$D_M(2.33)$	5759.5	5758.9 ± 9.6
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.58	—	$10^9 A_s e^{-2\tau}$	1.8826	1.882 ± 0.011	$f\sigma_8(0.15)$	0.4599	0.4590 ± 0.0072
$\boldsymbol{A_{143}^{tSZ}}$	7.19	$5.5^{+2.1}_{-1.9}$	D_{40}	1216.6	1215 ± 18	$\sigma_8(0.15)$	0.7527	$0.7519^{+0.0068}_{-0.0077}$
$\boldsymbol{A_{100}^{PS}}$	247.6	259 ± 29	D_{220}	5743.7	5744 ± 39	$f\sigma_8(0.38)$	0.4781	0.4773 ± 0.0063
$\boldsymbol{A_{143}^{PS}}$	47.3	45 ± 9	D_{810}	2540.6	2540 ± 14	$\sigma_8(0.38)$	0.6671	$0.6664^{+0.0058}_{-0.0067}$
$\boldsymbol{A_{143\times217}^{PS}}$	49.7	41 ± 9	D_{1420}	819.29	817.8 ± 5.0	$f\sigma_8(0.51)$	0.4766	0.4759 ± 0.0058
$\boldsymbol{A_{217}^{PS}}$	120.5	114 ± 10	D_{2000}	232.19	231.4 ± 2.1	$\sigma_8(0.51)$	0.6242	$0.6236^{+0.0054}_{-0.0063}$
$\boldsymbol{A^{kSZ}}$	0.01	< 4.31	$n_{s,0.002}$	1.0127	1.012 ± 0.045	$f\sigma_8(0.61)$	0.4715	0.4708 ± 0.0055
$\boldsymbol{A_{100}^{dust TT}}$	8.83	8.9 ± 1.8	Y_P	0.245414	$0.245416^{+0.000061}_{-0.000054}$	$\sigma_8(0.61)$	0.5939	$0.5934^{+0.0051}_{-0.0060}$
$\boldsymbol{A_{143}^{dust TT}}$	11.06	10.9 ± 1.8	Y_P^{BBN}	0.246741	$0.246743^{+0.000061}_{-0.000054}$	$f\sigma_8(2.33)$	0.29943	$0.2992^{+0.0026}_{-0.0030}$
$\boldsymbol{A_{143\times217}^{dust TT}}$	19.94	18.5 ± 3.3	10^5D/H	2.5765	2.575 ± 0.027	$\sigma_8(2.33)$	0.30866	$0.3084^{+0.0026}_{-0.0031}$
$\boldsymbol{A_{217}^{dust TT}}$	95.4	93.5 ± 7.3	Age/Gyr	13.7882	13.787 ± 0.022	f_{2000}^{143}	27.72	29 ± 4
$\boldsymbol{A_{100}^{dust TE}}$	0.1138	0.114 ± 0.038	z_*	1089.821	1089.80 ± 0.24	$f_{2000}^{143\times217}$	31.16	31.8 ± 2.5
$\boldsymbol{A_{100\times143}^{dust TE}}$	0.1340	0.135 ± 0.030	r_*	144.503	144.52 ± 0.24	f_{2000}^{217}	105.88	106.7 ± 2.3
$\boldsymbol{A_{100\times217}^{dust TE}}$	0.481	0.481 ± 0.085	$100\theta_*$	1.041189	1.04118 ± 0.00028	χ^2_{simall}	396.62	397.7 ± 2.3
$\boldsymbol{A_{143}^{dust TE}}$	0.222	0.224 ± 0.055	$D_M(z_*)$/Gpc	13.8787	13.880 ± 0.023	χ^2_{lowl}	21.44	22.2 ± 1.6
$\boldsymbol{A_{143\times217}^{dust TE}}$	0.666	0.665 ± 0.080	z_{drag}	1060.009	1060.03 ± 0.32	χ^2_{plik}	2345.1	2360.9 ± 6.0
$\boldsymbol{A_{217}^{dust TE}}$	2.081	2.08 ± 0.26	r_{drag}	147.150	147.16 ± 0.25	χ^2_{6DF}	0.0468	0.068 ± 0.076
$\boldsymbol{c_{100}}$	0.99974	0.99969 ± 0.00061	k_D	0.140842	0.14084 ± 0.00031	χ^2_{MGS}	1.097	1.19 ± 0.43
$\boldsymbol{c_{217}}$	0.99817	0.99818 ± 0.00061	$100\theta_D$	0.160720	0.16071 ± 0.00019	$\chi^2_{DR12BAO}$	4.82	5.1 ± 1.6
H_0	67.571	67.61 ± 0.47	z_{eq}	3393.3	3391 ± 23	χ^2_{prior}	1.64	11.5 ± 4.5
Ω_Λ	0.6876	0.6881 ± 0.0063	k_{eq}	0.010357	0.010351 ± 0.000071	χ^2_{BAO}	5.97	6.4 ± 1.3
Ω_m	0.3124	0.3119 ± 0.0063	$100\theta_{eq}$	0.81509	0.8155 ± 0.0044	χ^2_{CMB}	2763.2	2780.9 ± 6.1
$\Omega_m h^2$	0.14264	0.14256 ± 0.00098	$100\theta_{s,eq}$	0.45028	0.4505 ± 0.0023			

Best-fit $\chi^2_{eff} = 2770.78$; $\Delta\chi^2_{eff} = -1.14$; $\bar{\chi}^2_{eff} = 2798.78$; $\Delta\bar{\chi}^2_{eff} = 0.87$; $R - 1 = 0.02726$

χ^2_{eff}: BAO - 6DF: 0.05 (Δ 0.02) MGS: 1.10 (Δ -0.12) DR12BAO: 4.83 (Δ 0.41) CMB - simall_100x143_offlike5_EE_Aplanck_B: 396.62 (Δ 0.42) commander_dx12_v3_2_29: 21.44 (Δ -1.43) plik_rd12_HM_v22b_TTTEEE: 2345.10 (Δ -0.40)

14.3 base_nrun_nrunrun_plikHM_TTTEEE_lowl_lowE_post_lensing

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022365	0.02237 ± 0.00016	$\Omega_m h^2$	0.14319	0.1432 ± 0.0012	$100\theta_{eq}$	0.8125	0.8125 ± 0.0052
$\boldsymbol{\Omega_c h^2}$	0.12018	0.1202 ± 0.0012	$\Omega_m h^3$	0.096342	0.09634 ± 0.00031	$100\theta_{s,eq}$	0.44899	0.4490 ± 0.0027
$\boldsymbol{100\theta_{MC}}$	1.040911	1.04090 ± 0.00030	σ_8	0.8152	0.8141 ± 0.0066	$H(0.15)$	72.620	72.62 ± 0.48
$\boldsymbol{\tau}$	0.0564	0.0565 ± 0.0079	S_8	0.8371	0.836 ± 0.014	$D_M(0.15)$	643.98	644.0 ± 4.8
$\boldsymbol{\ln(10^{10} A_s)}$	3.0482	3.049 ± 0.015	$\sigma_8 \Omega_m^{0.5}$	0.4585	0.4579 ± 0.0075	$H(0.38)$	82.823	82.83 ± 0.35
$\boldsymbol{n_s}$	0.96387	0.9625 ± 0.0048	$\sigma_8 \Omega_m^{0.25}$	0.6114	0.6106 ± 0.0069	$D_M(0.38)$	1534.7	1534.7 ± 9.7
$\boldsymbol{dn_s/d\ln k}$	0.0057	0.002 ± 0.010	$\sigma_8/h^{0.5}$	0.9939	0.993 ± 0.010	$H(0.51)$	89.594	89.60 ± 0.28
$\boldsymbol{d^2 n_s/d\ln k^2}$	0.0129	0.010 ± 0.013	$r_{drag} h$	98.94	98.94 ± 0.96	$D_M(0.51)$	1987.3	1987 ± 11
$\boldsymbol{y_{cal}}$	1.00025	1.0005 ± 0.0025	$\langle d^2 \rangle^{1/2}$	2.4386	2.439 ± 0.022	$H(0.61)$	95.254	95.26 ± 0.23
$\boldsymbol{A_{217}^{CIB}}$	45.3	47 ± 7	z_{re}	7.90	7.89 ± 0.78	$D_M(0.61)$	2311.9	2312 ± 12
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.70	—	$10^9 A_s$	2.1078	$2.110^{+0.030}_{-0.033}$	$H(2.33)$	236.67	236.68 ± 0.73
$\boldsymbol{A_{143}^{tSZ}}$	7.09	$5.5^{+2.2}_{-1.9}$	$10^9 A_s e^{-2\tau}$	1.8830	1.884 ± 0.011	$D_M(2.33)$	5764.4	5764 ± 11
$\boldsymbol{A_{100}^{PS}}$	246.3	259 ± 29	D_{40}	1220.7	1219 ± 18	$f\sigma_8(0.15)$	0.4627	0.4621 ± 0.0069
$\boldsymbol{A_{143}^{PS}}$	48.6	45 ± 9	D_{220}	5738.0	5740 ± 39	$\sigma_8(0.15)$	0.7528	0.7518 ± 0.0060
$\boldsymbol{A_{143\times217}^{PS}}$	52.4	41 ± 9	D_{810}	2538.6	2538 ± 14	$f\sigma_8(0.38)$	0.4801	0.4794 ± 0.0056
$\boldsymbol{A_{217}^{PS}}$	121.0	114 ± 10	D_{1420}	818.92	817.2 ± 5.0	$\sigma_8(0.38)$	0.6668	0.6659 ± 0.0053
$\boldsymbol{A^{kSZ}}$	0.00	< 4.41	D_{2000}	232.23	231.2 ± 2.1	$f\sigma_8(0.51)$	0.47808	0.4774 ± 0.0050
$\boldsymbol{A_{100}^{dust TT}}$	8.81	8.9 ± 1.8	$n_{s,0.002}$	1.0122	1.011 ± 0.044	$\sigma_8(0.51)$	0.62381	0.6230 ± 0.0049
$\boldsymbol{A_{143}^{dust TT}}$	10.97	10.9 ± 1.8	Y_P	0.245394	$0.245392^{+0.000067}_{-0.000060}$	$f\sigma_8(0.61)$	0.47270	0.4720 ± 0.0046
$\boldsymbol{A_{143\times217}^{dust TT}}$	20.00	18.5 ± 3.3	Y_P^{BBN}	0.246720	$0.246719^{+0.000067}_{-0.000060}$	$\sigma_8(0.61)$	0.59344	0.5926 ± 0.0047
$\boldsymbol{A_{217}^{dust TT}}$	95.4	93.6 ± 7.3	10^5D/H	2.5864	2.587 ± 0.030	$f\sigma_8(2.33)$	0.29902	0.2986 ± 0.0024
$\boldsymbol{A_{100}^{dust TE}}$	0.1146	0.114 ± 0.038	Age/Gyr	13.7990	13.799 ± 0.024	$\sigma_8(2.33)$	0.30807	0.3077 ± 0.0026
$\boldsymbol{A_{100\times143}^{dust TE}}$	0.1352	0.135 ± 0.029	z_*	1089.943	1089.94 ± 0.27	f_{2000}^{143}	27.35	29 ± 3
$\boldsymbol{A_{100\times217}^{dust TE}}$	0.484	0.483 ± 0.085	r_*	144.389	144.39 ± 0.27	$f_{2000}^{143\times217}$	30.88	31.8 ± 2.5
$\boldsymbol{A_{143}^{dust TE}}$	0.224	0.226 ± 0.054	$100\theta_*$	1.041091	1.04108 ± 0.00029	f_{2000}^{217}	105.45	106.6 ± 2.3
$\boldsymbol{A_{143\times217}^{dust TE}}$	0.668	0.666 ± 0.079	$D_M(z_*)$/Gpc	13.8691	13.869 ± 0.026	$\chi^2_{lensing}$	8.98	9.47 ± 0.89
$\boldsymbol{A_{217}^{dust TE}}$	2.092	2.09 ± 0.26	z_{drag}	1059.933	1059.94 ± 0.33	χ^2_{simall}	396.28	397.2 ± 1.7
$\boldsymbol{c_{100}}$	0.99975	0.99969 ± 0.00061	r_{drag}	147.051	147.05 ± 0.27	χ^2_{lowl}	21.70	22.5 ± 1.6
$\boldsymbol{c_{217}}$	0.99817	0.99819 ± 0.00062	k_D	0.140907	0.14091 ± 0.00032	χ^2_{plik}	2344.9	2360.5 ± 5.7
H_0	67.28	67.28 ± 0.56	$100\theta_D$	0.160757	0.16075 ± 0.00019	χ^2_{prior}	1.51	11.5 ± 4.5
Ω_Λ	0.6837	0.6836 ± 0.0077	z_{eq}	3406.3	3407 ± 28	χ^2_{CMB}	2771.8	2789.6 ± 6.1
Ω_m	0.3163	0.3164 ± 0.0077	k_{eq}	0.010396	0.010397 ± 0.000084			

Best-fit $\chi^2_{eff} = 2773.34$; $\Delta\chi^2_{eff} = -1.29$; $\bar{\chi}^2_{eff} = 2801.12$; $\Delta\bar{\chi}^2_{eff} = 0.43$; $R - 1 = 0.02893$

χ^2_{eff}: CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.98 (Δ 0.11) simall_100x143_offlike5_EE_Aplanck_B: 396.28 (Δ 0.23) commander_dx12_v3_2_29: 21.70 (Δ -1.55) plik_rd12_HM_v22b_TTTEEE: 2344.88 (Δ -0.05)

14.4 base_nrun_nrunrun_plikHM_TTTEEE_lowl_lowE_post_BAO_lensing

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02243 ± 0.00015	$\Omega_m h^3$	0.09637 ± 0.00031	$H(0.15)$	72.93 ± 0.38
$\boldsymbol{\Omega_c h^2}$	0.11939 ± 0.00096	σ_8	0.8131 ± 0.0066	$D_M(0.15)$	640.9 ± 3.7
$\boldsymbol{100\theta_{MC}}$	1.04100 ± 0.00028	S_8	0.828 ± 0.011	$H(0.38)$	83.05 ± 0.28
$\boldsymbol{\tau}$	$0.0587^{+0.0071}_{-0.0080}$	$\sigma_8\Omega_m^{0.5}$	0.4537 ± 0.0061	$D_M(0.38)$	1528.6 ± 7.5
$\boldsymbol{\ln(10^{10} A_s)}$	$3.052^{+0.014}_{-0.016}$	$\sigma_8\Omega_m^{0.25}$	0.6074 ± 0.0062	$H(0.51)$	89.77 ± 0.23
$\boldsymbol{n_s}$	0.9647 ± 0.0043	$\sigma_8/h^{0.5}$	0.9886 ± 0.0092	$D_M(0.51)$	1980.2 ± 8.8
$\boldsymbol{dn_s/d\ln k}$	0.0011 ± 0.0099	$r_{drag}h$	99.56 ± 0.74	$H(0.61)$	95.39 ± 0.19
$\boldsymbol{d^2n_s/d\ln k^2}$	0.009 ± 0.012	$\langle d^2\rangle^{1/2}$	2.431 ± 0.021	$D_M(0.61)$	2304.2 ± 9.5
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0025	z_{re}	8.09 ± 0.76	$H(2.33)$	236.23 ± 0.58
$\boldsymbol{A_{217}^{CIB}}$	47 ± 7	$10^9 A_s$	$2.117^{+0.029}_{-0.033}$	$D_M(2.33)$	5758.6 ± 9.3
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$10^9 A_s e^{-2\tau}$	1.882 ± 0.011	$f\sigma_8(0.15)$	0.4583 ± 0.0058
$\boldsymbol{A_{143}^{tSZ}}$	$5.5^{+2.1}_{-1.9}$	D_{40}	1217 ± 18	$\sigma_8(0.15)$	0.7513 ± 0.0061
$\boldsymbol{A_{100}^{PS}}$	258 ± 29	D_{220}	5745 ± 38	$f\sigma_8(0.38)$	0.4767 ± 0.0050
$\boldsymbol{A_{143}^{PS}}$	45 ± 9	D_{810}	2539 ± 14	$\sigma_8(0.38)$	0.6660 ± 0.0053
$\boldsymbol{A_{143\times217}^{PS}}$	41 ± 9	D_{1420}	817.9 ± 5.0	$f\sigma_8(0.51)$	0.4753 ± 0.0046
$\boldsymbol{A_{217}^{PS}}$	114 ± 10	D_{2000}	231.5 ± 2.1	$\sigma_8(0.51)$	0.6233 ± 0.0050
$\boldsymbol{A^{kSZ}}$	< 4.27	$n_{s,0.002}$	1.008 ± 0.044	$f\sigma_8(0.61)$	0.4704 ± 0.0043
$\boldsymbol{A_{100}^{dust TT}}$	8.9 ± 1.8	Y_P	$0.245417^{+0.000060}_{-0.000053}$	$\sigma_8(0.61)$	0.5931 ± 0.0048
$\boldsymbol{A_{143}^{dust TT}}$	10.9 ± 1.8	Y_P^{BBN}	$0.246743^{+0.000060}_{-0.000053}$	$f\sigma_8(2.33)$	$0.2990^{+0.0023}_{-0.0026}$
$\boldsymbol{A_{143\times217}^{dust TT}}$	18.5 ± 3.3	10^5D/H	2.575 ± 0.027	$\sigma_8(2.33)$	$0.3083^{+0.0024}_{-0.0027}$
$\boldsymbol{A_{217}^{dust TT}}$	93.4 ± 7.3	Age/Gyr	13.786 ± 0.021	f_{2000}^{143}	29 ± 4
$\boldsymbol{A_{100}^{dust TE}}$	0.114 ± 0.038	z_*	1089.79 ± 0.23	$f_{2000}^{143\times217}$	31.7 ± 2.5
$\boldsymbol{A_{100\times143}^{dust TE}}$	0.135 ± 0.029	r_*	144.54 ± 0.23	f_{2000}^{217}	106.6 ± 2.3
$\boldsymbol{A_{100\times217}^{dust TE}}$	0.481 ± 0.085	$100\theta_*$	1.04118 ± 0.00028	$\chi^2_{lensing}$	9.21 ± 0.63
$\boldsymbol{A_{143}^{dust TE}}$	0.224 ± 0.055	$D_M(z_*)$/Gpc	13.883 ± 0.022	χ^2_{simall}	397.5 ± 2.0
$\boldsymbol{A_{143\times217}^{dust TE}}$	0.665 ± 0.080	z_{drag}	1060.03 ± 0.32	χ^2_{lowl}	22.3 ± 1.6
$\boldsymbol{A_{217}^{dust TE}}$	2.08 ± 0.26	r_{drag}	147.19 ± 0.24	χ^2_{plik}	2360.7 ± 5.8
$\boldsymbol{c_{100}}$	0.99968 ± 0.00061	k_D	0.14081 ± 0.00030	χ^2_{6DF}	0.059 ± 0.066
$\boldsymbol{c_{217}}$	0.99818 ± 0.00062	$100\theta_D$	0.16071 ± 0.00018	χ^2_{MGS}	1.22 ± 0.40
H_0	67.64 ± 0.44	z_{eq}	3389 ± 22	$\chi^2_{DR12BAO}$	5.0 ± 1.4
Ω_Λ	0.6886 ± 0.0058	k_{eq}	0.010344 ± 0.000066	χ^2_{prior}	11.5 ± 4.4
Ω_m	0.3114 ± 0.0058	$100\theta_{eq}$	0.8159 ± 0.0041	χ^2_{CMB}	2789.8 ± 6.1
$\Omega_m h^2$	0.14247 ± 0.00091	$100\theta_{s,eq}$	0.4507 ± 0.0021	χ^2_{BAO}	6.2 ± 1.2

$\bar{\chi}^2_{eff} = 2807.58$; $\Delta\bar{\chi}^2_{eff} = 0.74$; $R - 1 = 0.02956$

14.5 base_nrun_nrunrun_plikHM_TTTEEE_lowl_lowE_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02235 ± 0.00017	$\Omega_m h^2$	0.1436 ± 0.0014	$100\theta_{eq}$	0.8107 ± 0.0061
$\boldsymbol{\Omega_c h^2}$	0.1206 ± 0.0015	$\Omega_m h^3$	0.09636 ± 0.00031	$100\theta_{s,eq}$	0.4480 ± 0.0031
$\boldsymbol{100\theta_{MC}}$	1.04086 ± 0.00031	σ_8	$0.8174^{+0.0079}_{-0.0088}$	$H(0.15)$	72.47 ± 0.56
$\boldsymbol{\tau}$	$0.0584^{+0.0065}_{-0.0089}$	S_8	0.843 ± 0.018	$D_M(0.15)$	645.6 ± 5.6
$\boldsymbol{\ln(10^{10} A_s)}$	$3.054^{+0.014}_{-0.018}$	$\sigma_8 \Omega_m^{0.5}$	0.4617 ± 0.0099	$H(0.38)$	82.72 ± 0.40
$\boldsymbol{n_s}$	0.9612 ± 0.0053	$\sigma_8 \Omega_m^{0.25}$	0.6143 ± 0.0093	$D_M(0.38)$	1538 ± 11
$\boldsymbol{dn_s/d\ln k}$	0.001 ± 0.010	$\sigma_8/h^{0.5}$	0.998 ± 0.013	$H(0.51)$	89.52 ± 0.32
$\boldsymbol{d^2 n_s/d\ln k^2}$	0.012 ± 0.013	$r_{drag} h$	98.6 ± 1.1	$D_M(0.51)$	1991 ± 13
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0024	$\langle d^2 \rangle^{1/2}$	2.447 ± 0.028	$H(0.61)$	95.20 ± 0.26
$\boldsymbol{A_{217}^{CIB}}$	47 ± 7	z_{re}	$8.09^{+0.70}_{-0.86}$	$D_M(0.61)$	2316 ± 14
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$10^9 A_s$	$2.121^{+0.029}_{-0.039}$	$H(2.33)$	236.94 ± 0.86
$\boldsymbol{A_{143}^{tSZ}}$	5.4 ± 2.0	$10^9 A_s e^{-2\tau}$	1.887 ± 0.012	$D_M(2.33)$	5767 ± 12
$\boldsymbol{A_{100}^{PS}}$	259 ± 29	D_{40}	1218 ± 18	$f\sigma_8(0.15)$	0.4657 ± 0.0092
$\boldsymbol{A_{143}^{PS}}$	45 ± 9	D_{220}	5740 ± 39	$\sigma_8(0.15)$	$0.7546^{+0.0067}_{-0.0078}$
$\boldsymbol{A_{143\times217}^{PS}}$	41 ± 9	D_{810}	2539 ± 13	$f\sigma_8(0.38)$	0.4825 ± 0.0076
$\boldsymbol{A_{217}^{PS}}$	114 ± 10	D_{1420}	817.0 ± 4.9	$\sigma_8(0.38)$	$0.6681^{+0.0055}_{-0.0066}$
$\boldsymbol{A^{kSZ}}$	< 4.33	D_{2000}	231.2 ± 2.1	$f\sigma_8(0.51)$	0.4801 ± 0.0067
$\boldsymbol{A_{100}^{dust TT}}$	8.9 ± 1.8	$n_{s,0.002}$	1.020 ± 0.044	$\sigma_8(0.51)$	$0.6248^{+0.0050}_{-0.0062}$
$\boldsymbol{A_{143}^{dust TT}}$	10.9 ± 1.8	Y_P	0.245384 ± 0.000066	$f\sigma_8(0.61)$	0.4745 ± 0.0061
$\boldsymbol{A_{143\times217}^{dust TT}}$	18.5 ± 3.3	Y_P^{BBN}	0.246710 ± 0.000066	$\sigma_8(0.61)$	$0.5943^{+0.0047}_{-0.0058}$
$\boldsymbol{A_{217}^{dust TT}}$	93.7 ± 7.3	10^5D/H	2.591 ± 0.031	$f\sigma_8(2.33)$	$0.2994^{+0.0023}_{-0.0029}$
$\boldsymbol{A_{100}^{dust TE}}$	0.115 ± 0.038	Age/Gyr	13.804 ± 0.026	$\sigma_8(2.33)$	$0.3083^{+0.0023}_{-0.0031}$
$\boldsymbol{A_{100\times143}^{dust TE}}$	0.135 ± 0.029	z_*	1090.01 ± 0.30	f_{2000}^{143}	29 ± 3
$\boldsymbol{A_{100\times217}^{dust TE}}$	0.483 ± 0.085	r_*	144.29 ± 0.32	$f_{2000}^{143\times217}$	31.9 ± 2.5
$\boldsymbol{A_{143}^{dust TE}}$	0.226 ± 0.054	$100\theta_*$	1.04105 ± 0.00031	f_{2000}^{217}	106.7 ± 2.3
$\boldsymbol{A_{143\times217}^{dust TE}}$	0.667 ± 0.079	$D_M(z_*)$/Gpc	13.860 ± 0.029	χ^2_{simall}	397.5 ± 2.1
$\boldsymbol{A_{217}^{dust TE}}$	2.10 ± 0.27	z_{drag}	1059.93 ± 0.33	χ^2_{lowl}	22.4 ± 1.4
$\boldsymbol{c_{100}}$	0.99969 ± 0.00061	r_{drag}	146.96 ± 0.31	χ^2_{plik}	2360.5 ± 5.9
$\boldsymbol{c_{217}}$	0.99819 ± 0.00062	k_D	0.14099 ± 0.00034	χ^2_{prior}	11.4 ± 4.5
H_0	67.10 ± 0.65	$100\theta_D$	0.16076 ± 0.00019	χ^2_{CMB}	2780.4 ± 6.1
Ω_Λ	0.6809 ± 0.0091	z_{eq}	3417 ± 33		
Ω_m	0.3191 ± 0.0091	k_{eq}	0.01043 ± 0.00010		

$\bar{\chi}^2_{eff} = 2791.89$; $\Delta\bar{\chi}^2_{eff} = 0.35$; $R - 1 = 0.02012$

14.6 base_nrun_nrunrun_plikHM_TTTEEE_lowl_lowE_post_BAO_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02243 ± 0.00015	$\Omega_m h^3$	0.09638 ± 0.00031	$H(0.15)$	72.90 ± 0.40
$\boldsymbol{\Omega_c h^2}$	0.1195 ± 0.0010	σ_8	$0.8141^{+0.0071}_{-0.0085}$	$D_M(0.15)$	641.2 ± 4.0
$\boldsymbol{100\theta_{MC}}$	1.04100 ± 0.00029	S_8	0.830 ± 0.014	$H(0.38)$	83.03 ± 0.30
$\boldsymbol{\tau}$	$0.0597^{+0.0067}_{-0.0091}$	$\sigma_8\Omega_m^{0.5}$	0.4546 ± 0.0075	$D_M(0.38)$	1529.1 ± 8.0
$\boldsymbol{\ln(10^{10} A_s)}$	$3.054^{+0.014}_{-0.019}$	$\sigma_8\Omega_m^{0.25}$	$0.6084^{+0.0071}_{-0.0080}$	$H(0.51)$	89.76 ± 0.24
$\boldsymbol{n_s}$	0.9644 ± 0.0045	$\sigma_8/h^{0.5}$	$0.990^{+0.010}_{-0.012}$	$D_M(0.51)$	1980.7 ± 9.4
$\boldsymbol{dn_s/d\ln k}$	0.000 ± 0.010	$r_{drag}h$	99.50 ± 0.80	$H(0.61)$	95.38 ± 0.20
$\boldsymbol{d^2n_s/d\ln k^2}$	0.0095 ± 0.013	$\langle d^2\rangle^{1/2}$	2.433 ± 0.025	$D_M(0.61)$	2305 ± 10
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0025	z_{re}	$8.18^{+0.70}_{-0.88}$	$H(2.33)$	236.29 ± 0.63
$\boldsymbol{A_{217}^{CIB}}$	47 ± 7	$10^9 A_s$	$2.121^{+0.029}_{-0.040}$	$D_M(2.33)$	5758.8 ± 9.5
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$10^9 A_s e^{-2\tau}$	1.882 ± 0.011	$f\sigma_8(0.15)$	0.4592 ± 0.0071
$\boldsymbol{A_{143}^{tSZ}}$	5.5 ± 2.0	D_{40}	1215 ± 18	$\sigma_8(0.15)$	$0.7522^{+0.0063}_{-0.0077}$
$\boldsymbol{A_{100}^{PS}}$	258 ± 29	D_{220}	5744 ± 39	$f\sigma_8(0.38)$	0.4775 ± 0.0062
$\boldsymbol{A_{143}^{PS}}$	45 ± 9	D_{810}	2539 ± 14	$\sigma_8(0.38)$	$0.6667^{+0.0054}_{-0.0067}$
$\boldsymbol{A_{143\times217}^{PS}}$	41 ± 9	D_{1420}	817.7 ± 4.9	$f\sigma_8(0.51)$	$0.4761^{+0.0052}_{-0.0059}$
$\boldsymbol{A_{217}^{PS}}$	114 ± 10	D_{2000}	231.4 ± 2.1	$\sigma_8(0.51)$	$0.6239^{+0.0050}_{-0.0063}$
$\boldsymbol{A^{kSZ}}$	< 4.28	$n_{s,0.002}$	1.013 ± 0.045	$f\sigma_8(0.61)$	$0.4710^{+0.0049}_{-0.0056}$
$\boldsymbol{A_{100}^{dust TT}}$	8.9 ± 1.8	Y_P	$0.245416^{+0.000060}_{-0.000053}$	$\sigma_8(0.61)$	$0.5937^{+0.0047}_{-0.0060}$
$\boldsymbol{A_{143}^{dust TT}}$	10.9 ± 1.8	Y_P^{BBN}	$0.246743^{+0.000060}_{-0.000053}$	$f\sigma_8(2.33)$	$0.2993^{+0.0023}_{-0.0030}$
$\boldsymbol{A_{143\times217}^{dust TT}}$	18.5 ± 3.3	10^5D/H	2.575 ± 0.027	$\sigma_8(2.33)$	$0.3086^{+0.0024}_{-0.0031}$
$\boldsymbol{A_{217}^{dust TT}}$	93.5 ± 7.3	Age/Gyr	13.787 ± 0.022	f_{2000}^{143}	29 ± 4
$\boldsymbol{A_{100}^{dust TE}}$	0.114 ± 0.038	z_*	1089.80 ± 0.24	$f_{2000}^{143\times217}$	31.8 ± 2.5
$\boldsymbol{A_{100\times143}^{dust TE}}$	0.135 ± 0.030	r_*	144.52 ± 0.24	f_{2000}^{217}	106.6 ± 2.3
$\boldsymbol{A_{100\times217}^{dust TE}}$	0.481 ± 0.085	$100\theta_*$	1.04118 ± 0.00028	χ^2_{simall}	397.7 ± 2.3
$\boldsymbol{A_{143}^{dust TE}}$	0.224 ± 0.055	$D_M(z_*)$/Gpc	13.880 ± 0.023	χ^2_{lowl}	22.2 ± 1.5
$\boldsymbol{A_{143\times217}^{dust TE}}$	0.665 ± 0.080	z_{drag}	1060.03 ± 0.32	χ^2_{plik}	2360.8 ± 6.0
$\boldsymbol{A_{217}^{dust TE}}$	2.09 ± 0.26	r_{drag}	147.16 ± 0.25	χ^2_{6DF}	0.067 ± 0.076
$\boldsymbol{c_{100}}$	0.99969 ± 0.00061	k_D	0.14084 ± 0.00031	χ^2_{MGS}	1.19 ± 0.42
$\boldsymbol{c_{217}}$	0.99818 ± 0.00061	$100\theta_D$	0.16071 ± 0.00018	$\chi^2_{DR12BAO}$	5.1 ± 1.6
H_0	67.61 ± 0.47	z_{eq}	3391 ± 23	χ^2_{prior}	11.5 ± 4.4
Ω_Λ	0.6881 ± 0.0063	k_{eq}	0.010350 ± 0.000071	χ^2_{BAO}	6.4 ± 1.3
Ω_m	0.3119 ± 0.0063	$100\theta_{eq}$	0.8155 ± 0.0044	χ^2_{CMB}	2780.8 ± 6.1
$\Omega_m h^2$	0.14256 ± 0.00098	$100\theta_{s,eq}$	0.4505 ± 0.0022		

$\bar{\chi}^2_{eff} = 2798.65$; $\Delta\bar{\chi}^2_{eff} = 0.93$; $R - 1 = 0.02773$

14.7 base_nrun_nrunrun_plikHM_TTTEEE_lowl_lowE_post_lensing_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02237 ± 0.00016	$\Omega_m h^2$	0.1432 ± 0.0011	$100\theta_{eq}$	0.8127 ± 0.0052
$\boldsymbol{\Omega_c h^2}$	0.1201 ± 0.0012	$\Omega_m h^3$	0.09634 ± 0.00031	$100\theta_{s,eq}$	0.4491 ± 0.0026
$\boldsymbol{100\theta_{MC}}$	1.04090 ± 0.00030	σ_8	0.8145 ± 0.0064	$H(0.15)$	72.64 ± 0.48
$\boldsymbol{\tau}$	$0.0572^{+0.0062}_{-0.0081}$	S_8	0.836 ± 0.014	$D_M(0.15)$	643.9 ± 4.8
$\boldsymbol{\ln(10^{10} A_s)}$	$3.050^{+0.012}_{-0.016}$	$\sigma_8 \Omega_m^{0.5}$	0.4580 ± 0.0075	$H(0.38)$	82.84 ± 0.35
$\boldsymbol{n_s}$	0.9626 ± 0.0048	$\sigma_8 \Omega_m^{0.25}$	0.6107 ± 0.0069	$D_M(0.38)$	1534.4 ± 9.6
$\boldsymbol{dn_s/d\ln k}$	0.002 ± 0.010	$\sigma_8/h^{0.5}$	0.9929 ± 0.0099	$H(0.51)$	89.61 ± 0.28
$\boldsymbol{d^2 n_s/d\ln k^2}$	0.011 ± 0.013	$r_{drag} h$	98.97 ± 0.95	$D_M(0.51)$	1987 ± 11
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	$\langle d^2 \rangle^{1/2}$	2.439 ± 0.022	$H(0.61)$	95.26 ± 0.23
$\boldsymbol{A_{217}^{CIB}}$	47 ± 7	z_{re}	$7.96^{+0.65}_{-0.78}$	$D_M(0.61)$	2312 ± 12
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$10^9 A_s$	$2.112^{+0.026}_{-0.033}$	$H(2.33)$	236.65 ± 0.73
$\boldsymbol{A_{143}^{tSZ}}$	$5.5^{+2.2}_{-1.9}$	$10^9 A_s e^{-2\tau}$	1.884 ± 0.011	$D_M(2.33)$	5764 ± 11
$\boldsymbol{A_{100}^{PS}}$	259 ± 29	D_{40}	1219 ± 18	$f\sigma_8(0.15)$	0.4622 ± 0.0069
$\boldsymbol{A_{143}^{PS}}$	45 ± 9	D_{220}	5740 ± 39	$\sigma_8(0.15)$	$0.7522^{+0.0053}_{-0.0060}$
$\boldsymbol{A_{143\times217}^{PS}}$	41 ± 9	D_{810}	2538 ± 13	$f\sigma_8(0.38)$	0.4795 ± 0.0056
$\boldsymbol{A_{217}^{PS}}$	114 ± 10	D_{1420}	817.1 ± 5.0	$\sigma_8(0.38)$	$0.6663^{+0.0045}_{-0.0053}$
$\boldsymbol{A^{kSZ}}$	< 4.41	D_{2000}	231.3 ± 2.1	$f\sigma_8(0.51)$	0.4776 ± 0.0049
$\boldsymbol{A_{100}^{dust TT}}$	8.9 ± 1.8	$n_{s,0.002}$	1.012 ± 0.044	$\sigma_8(0.51)$	$0.6233^{+0.0042}_{-0.0050}$
$\boldsymbol{A_{143}^{dust TT}}$	10.9 ± 1.8	Y_P	$0.245394^{+0.000066}_{-0.000059}$	$f\sigma_8(0.61)$	0.4722 ± 0.0045
$\boldsymbol{A_{143\times217}^{dust TT}}$	18.6 ± 3.3	Y_P^{BBN}	$0.246720^{+0.000066}_{-0.000060}$	$\sigma_8(0.61)$	$0.5930^{+0.0040}_{-0.0048}$
$\boldsymbol{A_{217}^{dust TT}}$	93.6 ± 7.3	10^5D/H	2.586 ± 0.029	$f\sigma_8(2.33)$	$0.2988^{+0.0020}_{-0.0025}$
$\boldsymbol{A_{100}^{dust TE}}$	0.114 ± 0.038	Age/Gyr	13.798 ± 0.024	$\sigma_8(2.33)$	$0.3079^{+0.0021}_{-0.0027}$
$\boldsymbol{A_{100\times143}^{dust TE}}$	0.135 ± 0.029	z_*	1089.93 ± 0.27	f_{2000}^{143}	29 ± 3
$\boldsymbol{A_{100\times217}^{dust TE}}$	0.483 ± 0.085	r_*	144.39 ± 0.27	$f_{2000}^{143\times217}$	31.8 ± 2.5
$\boldsymbol{A_{143}^{dust TE}}$	0.226 ± 0.054	$100\theta_*$	1.04109 ± 0.00029	f_{2000}^{217}	106.6 ± 2.3
$\boldsymbol{A_{143\times217}^{dust TE}}$	0.666 ± 0.079	$D_M(z_*)$/Gpc	13.870 ± 0.025	$\chi^2_{lensing}$	9.47 ± 0.90
$\boldsymbol{A_{217}^{dust TE}}$	2.09 ± 0.26	z_{drag}	1059.95 ± 0.33	χ^2_{simall}	397.2 ± 1.7
$\boldsymbol{c_{100}}$	0.99969 ± 0.00062	r_{drag}	147.05 ± 0.27	χ^2_{lowl}	22.4 ± 1.6
$\boldsymbol{c_{217}}$	0.99819 ± 0.00062	k_D	0.14091 ± 0.00032	χ^2_{plik}	2360.4 ± 5.7
H_0	67.30 ± 0.55	$100\theta_D$	0.16075 ± 0.00019	χ^2_{prior}	11.5 ± 4.5
Ω_Λ	0.6839 ± 0.0076	z_{eq}	3406 ± 27	χ^2_{CMB}	2789.5 ± 6.0
Ω_m	0.3161 ± 0.0076	k_{eq}	0.010394 ± 0.000084		

$\bar{\chi}^2_{eff} = 2800.94$; $\Delta\bar{\chi}^2_{eff} = 0.43$; $R - 1 = 0.02757$

14.8 base_nrun_nrunrun_plikHM_TTTEEE_lowl_lowE_post_BAO_lensing_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02243 ± 0.00015	$\Omega_m h^3$	0.09637 ± 0.00031	$H(0.15)$	72.93 ± 0.37
$\boldsymbol{\Omega_c h^2}$	0.11938 ± 0.00095	σ_8	0.8133 ± 0.0065	$D_M(0.15)$	640.9 ± 3.7
$\boldsymbol{100\theta_{MC}}$	1.04100 ± 0.00028	S_8	0.828 ± 0.011	$H(0.38)$	83.05 ± 0.28
$\boldsymbol{\tau}$	$0.0591^{+0.0065}_{-0.0081}$	$\sigma_8\Omega_m^{0.5}$	0.4538 ± 0.0061	$D_M(0.38)$	1528.5 ± 7.5
$\boldsymbol{\ln(10^{10} A_s)}$	$3.053^{+0.013}_{-0.016}$	$\sigma_8\Omega_m^{0.25}$	0.6075 ± 0.0061	$H(0.51)$	89.77 ± 0.23
$\boldsymbol{n_s}$	0.9647 ± 0.0043	$\sigma_8/h^{0.5}$	0.9888 ± 0.0091	$D_M(0.51)$	1980.0 ± 8.8
$\boldsymbol{dn_s/d\ln k}$	0.0011 ± 0.0099	$r_{drag}h$	99.58 ± 0.74	$H(0.61)$	95.39 ± 0.19
$\boldsymbol{d^2n_s/d\ln k^2}$	0.009 ± 0.012	$\langle d^2\rangle^{1/2}$	2.432 ± 0.021	$D_M(0.61)$	2304.0 ± 9.5
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0025	z_{re}	$8.12^{+0.67}_{-0.78}$	$H(2.33)$	236.22 ± 0.58
$\boldsymbol{A_{217}^{CIB}}$	47 ± 7	$10^9 A_s$	$2.118^{+0.027}_{-0.034}$	$D_M(2.33)$	5758.5 ± 9.2
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$10^9 A_s e^{-2\tau}$	1.882 ± 0.011	$f\sigma_8(0.15)$	0.4584 ± 0.0058
$\boldsymbol{A_{143}^{tSZ}}$	$5.5^{+2.1}_{-1.9}$	D_{40}	1217 ± 18	$\sigma_8(0.15)$	$0.7515^{+0.0055}_{-0.0061}$
$\boldsymbol{A_{100}^{PS}}$	258 ± 29	D_{220}	5745 ± 39	$f\sigma_8(0.38)$	0.4768 ± 0.0049
$\boldsymbol{A_{143}^{PS}}$	44 ± 9	D_{810}	2539 ± 14	$\sigma_8(0.38)$	$0.6662^{+0.0048}_{-0.0055}$
$\boldsymbol{A_{143\times217}^{PS}}$	41 ± 9	D_{1420}	817.8 ± 5.0	$f\sigma_8(0.51)$	0.4754 ± 0.0045
$\boldsymbol{A_{217}^{PS}}$	114 ± 10	D_{2000}	231.5 ± 2.1	$\sigma_8(0.51)$	$0.6235^{+0.0044}_{-0.0052}$
$\boldsymbol{A^{kSZ}}$	< 4.26	$n_{s,0.002}$	1.009 ± 0.044	$f\sigma_8(0.61)$	0.4705 ± 0.0042
$\boldsymbol{A_{100}^{dust TT}}$	8.9 ± 1.8	Y_P	$0.245417^{+0.000060}_{-0.000053}$	$\sigma_8(0.61)$	$0.5933^{+0.0042}_{-0.0050}$
$\boldsymbol{A_{143}^{dust TT}}$	10.9 ± 1.8	Y_P^{BBN}	$0.246744^{+0.000060}_{-0.000053}$	$f\sigma_8(2.33)$	$0.2991^{+0.0021}_{-0.0026}$
$\boldsymbol{A_{143\times217}^{dust TT}}$	18.5 ± 3.3	10^5D/H	2.575 ± 0.027	$\sigma_8(2.33)$	$0.3084^{+0.0022}_{-0.0027}$
$\boldsymbol{A_{217}^{dust TT}}$	93.4 ± 7.3	Age/Gyr	13.786 ± 0.021	f_{2000}^{143}	29 ± 4
$\boldsymbol{A_{100}^{dust TE}}$	0.114 ± 0.038	z_*	1089.79 ± 0.23	$f_{2000}^{143\times217}$	31.7 ± 2.5
$\boldsymbol{A_{100\times143}^{dust TE}}$	0.135 ± 0.029	r_*	144.55 ± 0.23	f_{2000}^{217}	106.5 ± 2.3
$\boldsymbol{A_{100\times217}^{dust TE}}$	0.481 ± 0.085	$100\theta_*$	1.04118 ± 0.00028	$\chi^2_{lensing}$	9.20 ± 0.62
$\boldsymbol{A_{143}^{dust TE}}$	0.224 ± 0.055	$D_M(z_*)$/Gpc	13.883 ± 0.022	χ^2_{simall}	397.5 ± 2.0
$\boldsymbol{A_{143\times217}^{dust TE}}$	0.665 ± 0.080	z_{drag}	1060.03 ± 0.32	χ^2_{lowl}	22.3 ± 1.6
$\boldsymbol{A_{217}^{dust TE}}$	2.09 ± 0.26	r_{drag}	147.19 ± 0.24	χ^2_{plik}	2360.7 ± 5.8
$\boldsymbol{c_{100}}$	0.99968 ± 0.00061	k_D	0.14081 ± 0.00030	χ^2_{6DF}	0.058 ± 0.065
$\boldsymbol{c_{217}}$	0.99818 ± 0.00062	$100\theta_D$	0.16071 ± 0.00018	χ^2_{MGS}	1.23 ± 0.40
H_0	67.65 ± 0.43	z_{eq}	3389 ± 22	$\chi^2_{DR12BAO}$	4.9 ± 1.4
Ω_Λ	0.6887 ± 0.0058	k_{eq}	0.010343 ± 0.000066	χ^2_{prior}	11.5 ± 4.4
Ω_m	0.3113 ± 0.0058	$100\theta_{eq}$	0.8160 ± 0.0041	χ^2_{CMB}	2789.7 ± 6.0
$\Omega_m h^2$	0.14245 ± 0.00090	$100\theta_{s,eq}$	0.4507 ± 0.0021	χ^2_{BAO}	6.2 ± 1.1

$\bar{\chi}^2_{eff} = 2807.47$; $\Delta\bar{\chi}^2_{eff} = 0.75$; $R - 1 = 0.02999$

15 nrun+r

15.1 base_nrun_r_plikHM_TT_lowl_lowE

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022169	0.02221 ± 0.00024	$\sigma_8/h^{0.5}$	0.9939	0.991 ± 0.016	$H(0.51)$	89.332	89.43 ± 0.45
$\boldsymbol{\Omega_c h^2}$	0.12080	0.1205 ± 0.0021	$r_{\rm drag} h$	98.35	98.6 ± 1.6	$D_{\rm M}(0.51)$	1996.5	1993 ± 19
$\boldsymbol{100\theta_{MC}}$	1.040762	1.04082 ± 0.00048	$\langle d^2 \rangle^{1/2}$	2.4503	2.438 ± 0.039	$H(0.61)$	95.025	95.10 ± 0.36
$\boldsymbol{\tau}$	0.0529	0.0537 ± 0.0085	$z_{\rm re}$	7.60	7.64 ± 0.86	$D_{\rm M}(0.61)$	2322.0	2318 ± 20
$\boldsymbol{\ln(10^{10} A_s)}$	3.0434	3.045 ± 0.018	$10^9 A_{\rm s}$	2.0977	2.101 ± 0.037	$H(2.33)$	236.87	236.7 ± 1.3
$\boldsymbol{n_s}$	0.9625	0.9627 ± 0.0060	$10^9 A_{\rm s} e^{-2\tau}$	1.8870	1.887 ± 0.014	$D_{\rm M}(2.33)$	5776.0	5773 ± 17
$\boldsymbol{{\rm d}n_s/{\rm d}\ln k}$	-0.0036	-0.0078 ± 0.0082	D_{40}	1224.8	1233 ± 23	$f\sigma_8(0.15)$	0.4644	0.462 ± 0.012
$\boldsymbol{r}$	0.0001	< 0.0654	D_{220}	5711.8	5711 ± 41	$\sigma_8(0.15)$	0.7500	0.7488 ± 0.0076
$\boldsymbol{y_{cal}}$	1.00039	1.0005 ± 0.0025	D_{810}	2538.8	2539 ± 14	$f\sigma_8(0.38)$	0.4806	0.4788 ± 0.0096
$\boldsymbol{A_{217}^{CIB}}$	50.9	49 ± 7	D_{1420}	814.7	813.8 ± 5.2	$\sigma_8(0.38)$	0.6638	0.6629 ± 0.0061
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.07	—	D_{2000}	229.49	229.0 ± 1.9	$f\sigma_8(0.51)$	0.4781	0.4765 ± 0.0082
$\boldsymbol{A_{143}^{tSZ}}$	7.15	4.9 ± 2.0	$n_{\rm s,0.002}$	0.9741	0.988 ± 0.026	$\sigma_8(0.51)$	0.6207	0.6201 ± 0.0056
$\boldsymbol{A_{100}^{PS}}$	257.8	267 ± 29	$Y_{\rm P}$	0.245313	$0.24533^{+0.00011}_{-0.000087}$	$f\sigma_8(0.61)$	0.4723	0.4709 ± 0.0073
$\boldsymbol{A_{143}^{PS}}$	46.9	51 ± 8	$Y_{\rm P}^{\rm BBN}$	0.246639	$0.24665^{+0.00011}_{-0.000087}$	$\sigma_8(0.61)$	0.5904	0.5898 ± 0.0052
$\boldsymbol{A_{143\times217}^{PS}}$	41.0	44 ± 9	10^5D/H	2.6238	2.616 ± 0.045	$f\sigma_8(2.33)$	0.29729	0.2971 ± 0.0026
$\boldsymbol{A_{217}^{PS}}$	116.7	115 ± 10	Age/Gyr	13.8256	13.818 ± 0.038	$\sigma_8(2.33)$	0.30608	0.3060 ± 0.0027
$\boldsymbol{A^{kSZ}}$	0.01	< 5.47	z_*	1090.246	1090.16 ± 0.42	$r_{0.002}$	0.0001	< 0.0622
$\boldsymbol{A_{100}^{dustTT}}$	8.90	9.0 ± 1.8	r_*	144.378	144.43 ± 0.49	$r_{0.01}$	0.0001	< 0.0630
$\boldsymbol{A_{143}^{dustTT}}$	10.82	10.8 ± 1.8	$100\theta_*$	1.040968	1.04102 ± 0.00047	$\ln(10^{10} A_{\rm t})$	-6.50	$-0.37^{+1.4}_{-0.64}$
$\boldsymbol{A_{143\times217}^{dustTT}}$	19.02	18.4 ± 3.3	$D_{\rm M}(z_*)$/Gpc	13.8696	13.874 ± 0.046	r_{10}	0.0000	< 0.0323
$\boldsymbol{A_{217}^{dustTT}}$	93.8	93.2 ± 7.4	$z_{\rm drag}$	1059.513	1059.60 ± 0.50	$10^9 A_{\rm t}$	0.000	< 0.137
$\boldsymbol{c_{100}}$	0.99964	0.99961 ± 0.00062	$r_{\rm drag}$	147.11	147.14 ± 0.50	$10^9 A_t e^{-2\tau}$	0.000	< 0.123
$\boldsymbol{c_{217}}$	0.99828	0.99828 ± 0.00062	$k_{\rm D}$	0.14070	0.14069 ± 0.00057	f_{2000}^{143}	31.19	32.3 ± 3.2
H_0	66.86	67.03 ± 0.93	$100\theta_{\rm D}$	0.160989	0.16095 ± 0.00029	$f_{2000}^{143\times217}$	33.81	34.4 ± 2.2
Ω_Λ	0.6787	0.681 ± 0.013	$z_{\rm eq}$	3416.5	3410 ± 48	f_{2000}^{217}	108.28	108.9 ± 2.1
$\Omega_{\rm m}$	0.3213	0.319 ± 0.013	$k_{\rm eq}$	0.010428	0.01041 ± 0.00015	$\chi^2_{\rm simall}$	395.91	397.3 ± 1.8
$\Omega_{\rm m} h^2$	0.14361	0.1433 ± 0.0020	$100\theta_{\rm eq}$	0.8101	0.8115 ± 0.0090	$\chi^2_{\rm lowl}$	22.73	23.7 ± 2.3
$\Omega_{\rm m} h^3$	0.096017	0.09606 ± 0.00050	$100\theta_{\rm s,eq}$	0.44785	0.4486 ± 0.0046	$\chi^2_{\rm plik}$	759.2	773.6 ± 5.8
σ_8	0.8127	0.8112 ± 0.0090	$H(0.15)$	72.24	72.39 ± 0.79	$\chi^2_{\rm prior}$	1.53	7.3 ± 3.7
S_8	0.8410	0.837 ± 0.024	$D_{\rm M}(0.15)$	647.7	646.3 ± 8.0	$\chi^2_{\rm CMB}$	1177.9	1194.6 ± 5.9
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4607	0.458 ± 0.013	$H(0.38)$	82.52	82.64 ± 0.57			
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.6119	0.610 ± 0.012	$D_{\rm M}(0.38)$	1542.4	1540 ± 16			

Best-fit $\chi^2_{\rm eff} = 1179.41$; $\Delta\chi^2_{\rm eff} = -0.16$; $\bar{\chi}^2_{\rm eff} = 1201.96$; $\Delta\bar{\chi}^2_{\rm eff} = 2.38$; $R - 1 = 0.00730$

$\chi^2_{\rm eff}$: CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.91 (Δ 0.03) commander_dx12_v3_2_29: 22.73 (Δ -0.87) plik_rd12_HM_v22_TT: 759.25 (Δ 0.50)

15.2 base_nrun_r_plikHM_TT_lowl_lowE_post_BAO

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022267	0.02230 ± 0.00022	$r_{\rm drag} h$	99.84	99.83 ± 0.94	$H(0.61)$	95.319	95.34 ± 0.26
$\boldsymbol{\Omega_c h^2}$	0.11893	0.1189 ± 0.0012	$\langle d^2 \rangle^{1/2}$	2.4201	2.415 ± 0.030	$D_{\rm M}(0.61)$	2304.2	2304 ± 12
$\boldsymbol{100\theta_{MC}}$	1.041065	1.04102 ± 0.00042	$z_{\rm re}$	7.64	7.76 ± 0.84	$H(2.33)$	235.76	235.80 ± 0.80
$\boldsymbol{\tau}$	0.0539	0.0553 ± 0.0084	$10^9 A_{\rm s}$	2.0907	2.100 ± 0.038	$D_{\rm M}(2.33)$	5763.8	5763 ± 13
$\boldsymbol{\ln(10^{10} A_s)}$	3.0401	3.045 ± 0.018	$10^9 A_{\rm s} e^{-2\tau}$	1.8772	1.880 ± 0.012	$f\sigma_8(0.15)$	0.4535	0.4538 ± 0.0077
$\boldsymbol{n_s}$	0.96707	0.9662 ± 0.0045	D_{40}	1217.0	1228^{+21}_{-23}	$\sigma_8(0.15)$	0.7455	0.7459 ± 0.0070
$\boldsymbol{{\rm d}n_s/{\rm d}\ln k}$	-0.0024	-0.0077 ± 0.0082	D_{220}	5715.1	5717 ± 41	$f\sigma_8(0.38)$	0.4722	0.4724 ± 0.0065
$\boldsymbol{r}$	0.0000	< 0.0722	D_{810}	2535.9	2538 ± 14	$\sigma_8(0.38)$	0.6611	0.6614 ± 0.0059
$\boldsymbol{y_{cal}}$	1.00017	1.0006 ± 0.0025	D_{1420}	815.4	814.7 ± 5.0	$f\sigma_8(0.51)$	0.4710	0.4713 ± 0.0059
$\boldsymbol{A_{217}^{CIB}}$	50.7	49 ± 7	D_{2000}	229.88	229.3 ± 1.8	$\sigma_8(0.51)$	0.6188	0.6190 ± 0.0055
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.04	—	$n_{\rm s,0.002}$	0.9750	0.991 ± 0.026	$f\sigma_8(0.61)$	0.4662	0.4664 ± 0.0054
$\boldsymbol{A_{143}^{tSZ}}$	7.24	4.9 ± 2.0	$Y_{\rm P}$	0.245354	$0.245363^{+0.000092}_{-0.000081}$	$\sigma_8(0.61)$	0.5888	0.5891 ± 0.0052
$\boldsymbol{A_{100}^{PS}}$	256.6	266 ± 28	$Y_{\rm P}^{\rm BBN}$	0.246680	$0.246690^{+0.000093}_{-0.000081}$	$f\sigma_8(2.33)$	0.29696	0.2971 ± 0.0026
$\boldsymbol{A_{143}^{PS}}$	45.3	50 ± 8	10^5D/H	2.6050	2.600 ± 0.041	$\sigma_8(2.33)$	0.30624	0.3064 ± 0.0027
$\boldsymbol{A_{143\times217}^{PS}}$	39.4	43^{+9}_{-10}	Age/Gyr	13.7992	13.797 ± 0.030	$r_{0.002}$	0.0000	< 0.0695
$\boldsymbol{A_{217}^{PS}}$	115.9	114 ± 10	z_*	1089.955	1089.92 ± 0.31	$r_{0.01}$	0.0000	< 0.0701
$\boldsymbol{A^{kSZ}}$	0.00	< 5.43	r_*	144.788	144.76 ± 0.33	$\ln(10^{10} A_{\rm t})$	-7.24	$-0.27^{+1.4}_{-0.64}$
$\boldsymbol{A_{100}^{dust TT}}$	8.96	9.0 ± 1.8	$100\theta_*$	1.041254	1.04121 ± 0.00042	r_{10}	0.0000	< 0.0361
$\boldsymbol{A_{143}^{dust TT}}$	10.79	10.8 ± 1.8	$D_{\rm M}(z_*)$/Gpc	13.9051	13.903 ± 0.032	$10^9 A_{\rm t}$	0.000	< 0.151
$\boldsymbol{A_{143\times217}^{dust TT}}$	19.00	18.4 ± 3.3	$z_{\rm drag}$	1059.628	1059.69 ± 0.49	$10^9 A_t e^{-2\tau}$	0.000	< 0.136
$\boldsymbol{A_{217}^{dust TT}}$	93.8	93.2 ± 7.3	$r_{\rm drag}$	147.490	147.45 ± 0.37	f_{2000}^{143}	30.71	32.0 ± 3.2
$\boldsymbol{c_{100}}$	0.99965	0.99960 ± 0.00061	$k_{\rm D}$	0.140367	0.14043 ± 0.00049	$f_{2000}^{143\times217}$	33.34	34.2 ± 2.2
$\boldsymbol{c_{217}}$	0.99827	0.99828 ± 0.00062	$100\theta_{\rm D}$	0.160957	0.16091 ± 0.00029	f_{2000}^{217}	107.84	108.6 ± 2.1
H_0	67.69	67.70 ± 0.55	$z_{\rm eq}$	3374.1	3375 ± 29	$\chi^2_{\rm simall}$	395.94	397.4 ± 1.9
Ω_Λ	0.6905	0.6903 ± 0.0073	$k_{\rm eq}$	0.010298	0.010302 ± 0.000088	$\chi^2_{\rm lowl}$	22.22	23.2 ± 2.1
$\Omega_{\rm m}$	0.3095	0.3097 ± 0.0073	$100\theta_{\rm eq}$	0.8182	0.8181 ± 0.0053	$\chi^2_{\rm plik}$	760.6	774.0 ± 5.7
$\Omega_{\rm m} h^2$	0.14184	0.1419 ± 0.0012	$100\theta_{\rm s,eq}$	0.45201	0.4519 ± 0.0028	$\chi^2_{\rm 6DF}$	0.0173	0.055 ± 0.072
$\Omega_{\rm m} h^3$	0.096015	0.09606 ± 0.00050	$H(0.15)$	72.950	72.96 ± 0.48	$\chi^2_{\rm MGS}$	1.34	1.38 ± 0.53
σ_8	0.8066	0.8070 ± 0.0078	$D_{\rm M}(0.15)$	640.57	640.5 ± 4.7	$\chi^2_{\rm DR12BAO}$	4.08	4.7 ± 1.6
S_8	0.8193	0.820 ± 0.015	$H(0.38)$	83.023	83.04 ± 0.36	$\chi^2_{\rm prior}$	1.54	7.4 ± 3.7
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4488	0.4491 ± 0.0082	$D_{\rm M}(0.38)$	1528.2	1528.0 ± 9.5	$\chi^2_{\rm BAO}$	5.44	6.2 ± 1.3
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.6016	0.6020 ± 0.0080	$H(0.51)$	89.718	89.73 ± 0.30	$\chi^2_{\rm CMB}$	1178.8	1194.6 ± 5.8
$\sigma_8/h^{0.5}$	0.9804	0.981 ± 0.012	$D_{\rm M}(0.51)$	1980.0	1980 ± 11			

Best-fit $\chi^2_{\rm eff} = 1185.74$; $\Delta\chi^2_{\rm eff} = -0.01$; $\bar{\chi}^2_{\rm eff} = 1208.12$; $\Delta\bar{\chi}^2_{\rm eff} = 2.09$; $R - 1 = 0.01047$

$\chi^2_{\rm eff}$: BAO - 6DF: 0.02 (Δ -0.00) MGS: 1.34 (Δ 0.06) DR12BAO: 4.08 (Δ -0.10) CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.94 (Δ 0.06) commander_dx12_v3_2_29: 22.22 (Δ -0.61) plik_rd12_HM_v22_TT: 760.60 (Δ 0.50)

15.3 base_nrun_r_plikHM_TT_lowl_lowE_post_Riess18

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022399	0.02247 ± 0.00023	$\sigma_8/h^{0.5}$	0.9706	0.968 ± 0.015	$H(0.51)$	90.075	90.20 ± 0.42
$\boldsymbol{\Omega_c h^2}$	0.11731	0.1170 ± 0.0018	$r_{\rm drag} h$	101.12	101.4 ± 1.5	$D_{\rm M}(0.51)$	1965.4	1961 ± 16
$\boldsymbol{100\theta_{MC}}$	1.041211	1.04133 ± 0.00046	$\langle d^2 \rangle^{1/2}$	2.4002	$2.385^{+0.034}_{-0.038}$	$H(0.61)$	95.599	95.71 ± 0.35
$\boldsymbol{\tau}$	0.0566	$0.0582^{+0.0082}_{-0.0093}$	$z_{\rm re}$	7.86	7.98 ± 0.86	$D_{\rm M}(0.61)$	2288.5	2284 ± 18
$\boldsymbol{\ln(10^{10} A_s)}$	3.0428	3.046 ± 0.019	$10^9 A_{\rm s}$	2.0964	2.104 ± 0.039	$H(2.33)$	234.85	234.7 ± 1.2
$\boldsymbol{n_s}$	0.9706	0.9709 ± 0.0055	$10^9 A_{\rm s} e^{-2\tau}$	1.8722	1.872 ± 0.014	$D_{\rm M}(2.33)$	5752.0	5747 ± 16
$\boldsymbol{\mathrm{d}n_s/\mathrm{d}\ln k}$	-0.0020	-0.0086 ± 0.0083	D_{40}	1212.9	1220^{+19}_{-24}	$f\sigma_8(0.15)$	0.4450	0.443 ± 0.011
$\boldsymbol{r}$	0.0001	< 0.0852	D_{220}	5732.8	5727 ± 40	$\sigma_8(0.15)$	0.7431	0.7422 ± 0.0077
$\boldsymbol{y_{cal}}$	1.00062	1.0005 ± 0.0025	D_{810}	2537.0	2537 ± 14	$f\sigma_8(0.38)$	0.4658	0.4642 ± 0.0088
$\boldsymbol{A_{217}^{CIB}}$	49.8	48 ± 7	D_{1420}	817.14	816.0 ± 4.9	$\sigma_8(0.38)$	0.6600	0.6595 ± 0.0063
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.14	—	D_{2000}	230.57	229.8 ± 1.8	$f\sigma_8(0.51)$	0.4658	0.4645 ± 0.0077
$\boldsymbol{A_{143}^{tSZ}}$	7.23	5.0 ± 2.1	$n_{\rm s,0.002}$	0.9771	$0.999^{+0.024}_{-0.027}$	$\sigma_8(0.51)$	0.6182	0.6178 ± 0.0058
$\boldsymbol{A_{100}^{PS}}$	255.3	264 ± 29	$Y_{\rm P}$	0.245407	0.245430 ± 0.000090	$f\sigma_8(0.61)$	0.4618	0.4606 ± 0.0070
$\boldsymbol{A_{143}^{PS}}$	45.8	49 ± 8	$Y_{\rm P}^{\rm BBN}$	0.246734	0.246757 ± 0.000091	$\sigma_8(0.61)$	0.5885	0.5882 ± 0.0054
$\boldsymbol{A_{143\times217}^{PS}}$	41.3	42 ± 9	10^5D/H	2.5800	2.569 ± 0.042	$f\sigma_8(2.33)$	0.29723	0.2972 ± 0.0027
$\boldsymbol{A_{217}^{PS}}$	116.5	114 ± 10	Age/Gyr	13.7740	13.762 ± 0.035	$\sigma_8(2.33)$	0.30696	0.3070 ± 0.0028
$\boldsymbol{A^{kSZ}}$	0.01	< 5.30	z_*	1089.647	1089.54 ± 0.37	$r_{0.002}$	0.0001	< 0.0844
$\boldsymbol{A_{100}^{dust TT}}$	8.93	9.0 ± 1.8	r_*	145.107	145.13 ± 0.46	$r_{0.01}$	0.0001	< 0.0837
$\boldsymbol{A_{143}^{dust TT}}$	10.81	10.8 ± 1.8	$100\theta_*$	1.041401	1.04150 ± 0.00046	$\ln(10^{10} A_{\rm t})$	-6.44	$-0.11^{+1.4}_{-0.71}$
$\boldsymbol{A_{143\times217}^{dust TT}}$	19.20	18.4 ± 3.3	$D_{\rm M}(z_*)$/Gpc	13.9338	13.935 ± 0.043	r_{10}	0.0000	< 0.0434
$\boldsymbol{A_{217}^{dust TT}}$	94.3	93.3 ± 7.2	$z_{\rm drag}$	1059.818	1059.94 ± 0.50	$10^9 A_{\rm t}$	0.000	< 0.179
$\boldsymbol{c_{100}}$	0.99966	0.99960 ± 0.00059	$r_{\rm drag}$	147.773	147.77 ± 0.48	$10^9 A_t e^{-2\tau}$	0.000	< 0.160
$\boldsymbol{c_{217}}$	0.99826	0.99829 ± 0.00064	$k_{\rm D}$	0.14017	0.14022 ± 0.00057	f_{2000}^{143}	30.17	31.4 ± 3.2
H_0	68.43	68.63 ± 0.83	$100\theta_{\rm D}$	0.160851	0.16079 ± 0.00028	$f_{2000}^{143\times217}$	32.92	33.7 ± 2.2
Ω_Λ	0.7003	$0.702^{+0.012}_{-0.010}$	$z_{\rm eq}$	3338.7	3334 ± 43	f_{2000}^{217}	107.45	108.2 ± 2.1
$\Omega_{\rm m}$	0.2997	$0.298^{+0.010}_{-0.012}$	$k_{\rm eq}$	0.010190	0.01018 ± 0.00013	$\chi^2_{\rm simall}$	396.27	397.9 ± 2.3
$\Omega_{\rm m} h^2$	0.14036	0.1402 ± 0.0018	$100\theta_{\rm eq}$	0.8251	0.8264 ± 0.0082	$\chi^2_{\rm lowl}$	21.83	22.6 ± 1.8
$\Omega_{\rm m} h^3$	0.09605	0.09617 ± 0.00051	$100\theta_{\rm s,eq}$	0.45554	0.4562 ± 0.0042	$\chi^2_{\rm plik}$	762.7	777.2 ± 6.5
σ_8	0.8029	0.8018 ± 0.0089	$H(0.15)$	73.58	73.76 ± 0.72	$\chi^2_{\rm H073p45}$	9.14	8.7 ± 3.0
S_8	0.8026	0.799 ± 0.021	$D_{\rm M}(0.15)$	634.4	632.8 ± 6.9	$\chi^2_{\rm prior}$	1.55	7.5 ± 3.8
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4396	0.438 ± 0.011	$H(0.38)$	83.48	83.63 ± 0.53	$\chi^2_{\rm CMB}$	1180.8	1197.6 ± 6.7
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.5941	0.592 ± 0.011	$D_{\rm M}(0.38)$	1515.7	1512 ± 14			

Best-fit $\chi^2_{\rm eff} = 1191.50$; $\Delta\chi^2_{\rm eff} = -0.07$; $\bar{\chi}^2_{\rm eff} = 1213.73$; $\Delta\bar{\chi}^2_{\rm eff} = 1.65$; $R - 1 = 0.05584$

$\chi^2_{\rm eff}$: CMB - simall_100x143_offlike5_EE_Aplanck_B: 396.27 (Δ 0.20) commander_dx12_v3_2_29: 21.83 (Δ -0.26) plik_rd12_HM_v22_TT: 762.71 (Δ -0.31) Hubble - H073p45: 9.14 (Δ 0.16)

15.4 base_nrun_r_plikHM_TT_lowl_lowE_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02222 ± 0.00023	$\sigma_8/h^{0.5}$	0.992 ± 0.016	$H(0.51)$	89.45 ± 0.45
$\boldsymbol{\Omega_c h^2}$	0.1204 ± 0.0021	$r_{\rm drag} h$	98.7 ± 1.6	$D_{\rm M}(0.51)$	1992 ± 19
$\boldsymbol{100\theta_{MC}}$	1.04083 ± 0.00048	$\langle d^2 \rangle^{1/2}$	2.440 ± 0.039	$H(0.61)$	95.12 ± 0.36
$\boldsymbol{\tau}$	$0.0552^{+0.0054}_{-0.0088}$	$z_{\rm re}$	$7.80^{+0.60}_{-0.85}$	$D_{\rm M}(0.61)$	2317 ± 20
$\boldsymbol{\ln(10^{10} A_s)}$	$3.048^{+0.013}_{-0.017}$	$10^9 A_{\rm s}$	$2.107^{+0.027}_{-0.037}$	$H(2.33)$	236.7 ± 1.3
$\boldsymbol{n_s}$	0.9628 ± 0.0060	$10^9 A_{\rm s} e^{-2\tau}$	1.887 ± 0.014	$D_{\rm M}(2.33)$	5772 ± 17
$\boldsymbol{{\rm d}n_s/{\rm d}\ln k}$	-0.0081 ± 0.0082	D_{40}	1233 ± 23	$f\sigma_8(0.15)$	0.462 ± 0.012
$\boldsymbol{r}$	< 0.0660	D_{220}	5711 ± 41	$\sigma_8(0.15)$	0.7497 ± 0.0071
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	D_{810}	2539 ± 14	$f\sigma_8(0.38)$	0.4791 ± 0.0096
$\boldsymbol{A_{217}^{CIB}}$	49 ± 7	D_{1420}	813.8 ± 5.1	$\sigma_8(0.38)$	0.6638 ± 0.0056
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{2000}	229.0 ± 1.9	$f\sigma_8(0.51)$	0.4769 ± 0.0082
$\boldsymbol{A_{143}^{tSZ}}$	4.9 ± 2.0	$n_{\rm s,0.002}$	0.989 ± 0.026	$\sigma_8(0.51)$	$0.6209^{+0.0046}_{-0.0053}$
$\boldsymbol{A_{100}^{PS}}$	267 ± 29	$Y_{\rm P}$	$0.24533^{+0.00011}_{-0.000087}$	$f\sigma_8(0.61)$	0.4713 ± 0.0072
$\boldsymbol{A_{143}^{PS}}$	51 ± 8	$Y_{\rm P}^{\rm BBN}$	$0.24666^{+0.00011}_{-0.000087}$	$\sigma_8(0.61)$	$0.5906^{+0.0042}_{-0.0050}$
$\boldsymbol{A_{143\times217}^{PS}}$	44 ± 9	10^5D/H	2.614 ± 0.044	$f\sigma_8(2.33)$	$0.2975^{+0.0020}_{-0.0025}$
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	Age/Gyr	13.816 ± 0.037	$\sigma_8(2.33)$	$0.3064^{+0.0020}_{-0.0027}$
$\boldsymbol{A^{kSZ}}$	< 5.47	z_*	1090.14 ± 0.41	$r_{0.002}$	< 0.0630
$\boldsymbol{A_{100}^{dust TT}}$	9.0 ± 1.8	r_*	144.44 ± 0.49	$r_{0.01}$	< 0.0638
$\boldsymbol{A_{143}^{dust TT}}$	10.8 ± 1.8	$100\theta_*$	1.04103 ± 0.00047	$\ln(10^{10} A_{\rm t})$	$-0.35^{+1.4}_{-0.64}$
$\boldsymbol{A_{143\times217}^{dust TT}}$	18.4 ± 3.3	$D_{\rm M}(z_*)/{\rm Gpc}$	13.875 ± 0.046	r_{10}	< 0.0327
$\boldsymbol{A_{217}^{dust TT}}$	93.2 ± 7.4	$z_{\rm drag}$	1059.62 ± 0.50	$10^9 A_{\rm t}$	< 0.139
$\boldsymbol{c_{100}}$	0.99961 ± 0.00062	$r_{\rm drag}$	147.15 ± 0.50	$10^9 A_t e^{-2\tau}$	< 0.125
$\boldsymbol{c_{217}}$	0.99828 ± 0.00062	$k_{\rm D}$	0.14069 ± 0.00056	f_{2000}^{143}	32.3 ± 3.2
H_0	67.07 ± 0.92	$100\theta_{\rm D}$	0.16094 ± 0.00029	$f_{2000}^{143\times217}$	34.4 ± 2.2
Ω_Λ	0.681 ± 0.013	$z_{\rm eq}$	3409 ± 48	f_{2000}^{217}	108.8 ± 2.1
$\Omega_{\rm m}$	0.319 ± 0.013	$k_{\rm eq}$	0.01040 ± 0.00015	$\chi^2_{\rm simall}$	397.2 ± 1.8
$\Omega_{\rm m} h^2$	0.1433 ± 0.0020	$100\theta_{\rm eq}$	0.8118 ± 0.0090	$\chi^2_{\rm lowl}$	23.6 ± 2.2
$\Omega_{\rm m} h^3$	0.09608 ± 0.00050	$100\theta_{\rm s,eq}$	0.4487 ± 0.0046	$\chi^2_{\rm plik}$	773.6 ± 5.8
σ_8	0.8121 ± 0.0086	$H(0.15)$	72.42 ± 0.79	$\chi^2_{\rm prior}$	7.3 ± 3.7
S_8	0.837 ± 0.024	$D_{\rm M}(0.15)$	646.0 ± 8.0	$\chi^2_{\rm CMB}$	1194.4 ± 5.9
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.459 ± 0.013	$H(0.38)$	82.66 ± 0.57		
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.610 ± 0.012	$D_{\rm M}(0.38)$	1539 ± 16		

$\bar{\chi}^2_{\rm eff} = 1201.72$; $\Delta\bar{\chi}^2_{\rm eff} = 2.40$; $R - 1 = 0.00869$

15.5 base_nrun_r_plikHM_TT_lowl_lowE_post_BAO_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02231 ± 0.00022	$r_{\rm drag} h$	99.85 ± 0.94	$H(0.61)$	95.34 ± 0.26
$\boldsymbol{\Omega_c h^2}$	0.1189 ± 0.0012	$\langle d^2 \rangle^{1/2}$	2.417 ± 0.029	$D_{\rm M}(0.61)$	2304 ± 12
$\boldsymbol{100\theta_{MC}}$	1.04102 ± 0.00042	$z_{\rm re}$	$7.87^{+0.64}_{-0.84}$	$H(2.33)$	235.80 ± 0.80
$\boldsymbol{\tau}$	$0.0564^{+0.0059}_{-0.0086}$	$10^9 A_{\rm s}$	$2.105^{+0.029}_{-0.038}$	$D_{\rm M}(2.33)$	5763 ± 13
$\boldsymbol{\ln(10^{10} A_{\rm s})}$	$3.047^{+0.014}_{-0.018}$	$10^9 A_{\rm s} e^{-2\tau}$	1.880 ± 0.012	$f\sigma_8(0.15)$	0.4541 ± 0.0076
$\boldsymbol{n_{\rm s}}$	0.9663 ± 0.0045	D_{40}	1228^{+20}_{-23}	$\sigma_8(0.15)$	$0.7466^{+0.0060}_{-0.0068}$
$\boldsymbol{{\rm d}n_{\rm s}/{\rm d}\ln k}$	-0.0079 ± 0.0082	D_{220}	5717 ± 41	$f\sigma_8(0.38)$	0.4728 ± 0.0064
$\boldsymbol{r}$	< 0.0726	D_{810}	2538 ± 14	$\sigma_8(0.38)$	$0.6621^{+0.0049}_{-0.0058}$
$\boldsymbol{y_{\rm cal}}$	1.0006 ± 0.0025	D_{1420}	814.7 ± 5.0	$f\sigma_8(0.51)$	0.4717 ± 0.0057
$\boldsymbol{A^{\rm CIB}_{217}}$	49 ± 7	D_{2000}	229.3 ± 1.8	$\sigma_8(0.51)$	$0.6197^{+0.0045}_{-0.0054}$
$\boldsymbol{\xi^{\rm tSZ\times CIB}}$	—	$n_{\rm s,0.002}$	0.992 ± 0.026	$f\sigma_8(0.61)$	0.4669 ± 0.0052
$\boldsymbol{A^{\rm tSZ}_{143}}$	4.9 ± 2.0	$Y_{\rm P}$	$0.245366^{+0.000091}_{-0.000080}$	$\sigma_8(0.61)$	$0.5897^{+0.0042}_{-0.0051}$
$\boldsymbol{A^{\rm PS}_{100}}$	266 ± 28	$Y_{\rm P}^{\rm BBN}$	$0.246692^{+0.000092}_{-0.000080}$	$f\sigma_8(2.33)$	$0.2974^{+0.0021}_{-0.0026}$
$\boldsymbol{A^{\rm PS}_{143}}$	50 ± 8	10^5D/H	2.598 ± 0.040	$\sigma_8(2.33)$	$0.3067^{+0.0021}_{-0.0027}$
$\boldsymbol{A^{\rm PS}_{143\times217}}$	43^{+9}_{-10}	Age/Gyr	13.796 ± 0.030	$r_{0.002}$	< 0.0699
$\boldsymbol{A^{\rm PS}_{217}}$	114 ± 10	z_*	1089.91 ± 0.31	$r_{0.01}$	< 0.0706
$\boldsymbol{A^{\rm kSZ}}$	< 5.44	r_*	144.76 ± 0.33	$\ln(10^{10} A_{\rm t})$	$-0.26^{+1.4}_{-0.63}$
$\boldsymbol{A^{{\rm dust}TT}_{100}}$	9.0 ± 1.8	$100\theta_*$	1.04121 ± 0.00042	r_{10}	< 0.0363
$\boldsymbol{A^{{\rm dust}TT}_{143}}$	10.8 ± 1.8	$D_{\rm M}(z_*)/{\rm Gpc}$	13.903 ± 0.032	$10^9 A_{\rm t}$	< 0.153
$\boldsymbol{A^{{\rm dust}TT}_{143\times217}}$	18.4 ± 3.3	$z_{\rm drag}$	1059.71 ± 0.49	$10^9 A_t e^{-2\tau}$	< 0.137
$\boldsymbol{A^{{\rm dust}TT}_{217}}$	93.2 ± 7.3	$r_{\rm drag}$	147.45 ± 0.37	f^{143}_{2000}	32.0 ± 3.2
$\boldsymbol{c_{100}}$	0.99960 ± 0.00061	$k_{\rm D}$	0.14044 ± 0.00049	$f^{143\times217}_{2000}$	34.2 ± 2.2
$\boldsymbol{c_{217}}$	0.99828 ± 0.00063	$100\theta_{\rm D}$	0.16090 ± 0.00028	f^{217}_{2000}	108.6 ± 2.1
H_0	67.71 ± 0.55	$z_{\rm eq}$	3375 ± 29	$\chi^2_{\rm simall}$	397.4 ± 1.9
Ω_Λ	0.6905 ± 0.0073	$k_{\rm eq}$	0.010301 ± 0.000088	$\chi^2_{\rm lowl}$	23.2 ± 2.0
$\Omega_{\rm m}$	0.3095 ± 0.0073	$100\theta_{\rm eq}$	0.8181 ± 0.0053	$\chi^2_{\rm plik}$	773.9 ± 5.7
$\Omega_{\rm m} h^2$	0.1419 ± 0.0012	$100\theta_{\rm s,eq}$	0.4519 ± 0.0028	$\chi^2_{\rm 6DF}$	0.054 ± 0.071
$\Omega_{\rm m} h^3$	0.09607 ± 0.00050	$H(0.15)$	72.97 ± 0.47	$\chi^2_{\rm MGS}$	1.39 ± 0.53
σ_8	$0.8078^{+0.0069}_{-0.0076}$	$D_{\rm M}(0.15)$	640.4 ± 4.7	$\chi^2_{\rm DR12BAO}$	4.7 ± 1.5
S_8	0.820 ± 0.015	$H(0.38)$	83.05 ± 0.36	$\chi^2_{\rm prior}$	7.4 ± 3.7
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4494 ± 0.0081	$D_{\rm M}(0.38)$	1527.8 ± 9.4	$\chi^2_{\rm BAO}$	6.1 ± 1.3
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.6025 ± 0.0078	$H(0.51)$	89.74 ± 0.30	$\chi^2_{\rm CMB}$	1194.4 ± 5.8
$\sigma_8/h^{0.5}$	0.982 ± 0.011	$D_{\rm M}(0.51)$	1979 ± 11		

$\bar{\chi}^2_{\rm eff} = 1207.94$; $\Delta\bar{\chi}^2_{\rm eff} = 2.18$; $R - 1 = 0.01172$

15.6 base_nrun_r_plikHM_TT_lowl_lowE_post_Riess18_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02247 ± 0.00023	$\sigma_8/h^{0.5}$	0.968 ± 0.015	$H(0.51)$	90.21 ± 0.42
$\boldsymbol{\Omega_c h^2}$	0.1170 ± 0.0018	$r_{\rm drag} h$	101.4 ± 1.5	$D_{\rm M}(0.51)$	1961 ± 16
$\boldsymbol{100\theta_{MC}}$	1.04133 ± 0.00046	$\langle d^2 \rangle^{1/2}$	$2.386^{+0.033}_{-0.038}$	$H(0.61)$	95.72 ± 0.35
$\boldsymbol{\tau}$	$0.0590^{+0.0068}_{-0.0093}$	$z_{\rm re}$	$8.06^{+0.70}_{-0.91}$	$D_{\rm M}(0.61)$	2284 ± 18
$\boldsymbol{\ln(10^{10} A_s)}$	$3.048^{+0.016}_{-0.018}$	$10^9 A_{\rm s}$	$2.107^{+0.034}_{-0.039}$	$H(2.33)$	234.7 ± 1.1
$\boldsymbol{n_s}$	0.9709 ± 0.0055	$10^9 A_{\rm s} e^{-2\tau}$	1.872 ± 0.014	$D_{\rm M}(2.33)$	5746 ± 16
$\boldsymbol{{\rm d}n_s/{\rm d}\ln k}$	-0.0088 ± 0.0083	D_{40}	1220^{+19}_{-24}	$f\sigma_8(0.15)$	0.443 ± 0.011
$\boldsymbol{r}$	< 0.0856	D_{220}	5727 ± 40	$\sigma_8(0.15)$	0.7427 ± 0.0074
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	D_{810}	2537 ± 14	$f\sigma_8(0.38)$	0.4645 ± 0.0088
$\boldsymbol{A_{217}^{CIB}}$	48 ± 7	D_{1420}	816.0 ± 4.9	$\sigma_8(0.38)$	0.6599 ± 0.0060
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{2000}	229.9 ± 1.8	$f\sigma_8(0.51)$	0.4647 ± 0.0077
$\boldsymbol{A_{143}^{tSZ}}$	5.0 ± 2.1	$n_{\rm s,0.002}$	$0.999^{+0.024}_{-0.027}$	$\sigma_8(0.51)$	0.6182 ± 0.0055
$\boldsymbol{A_{100}^{PS}}$	263 ± 29	$Y_{\rm P}$	0.245432 ± 0.000090	$f\sigma_8(0.61)$	0.4609 ± 0.0069
$\boldsymbol{A_{143}^{PS}}$	49 ± 8	$Y_{\rm P}^{\rm BBN}$	0.246759 ± 0.000090	$\sigma_8(0.61)$	$0.5887^{+0.0048}_{-0.0053}$
$\boldsymbol{A_{143\times217}^{PS}}$	43 ± 9	10^5D/H	2.568 ± 0.042	$f\sigma_8(2.33)$	$0.2974^{+0.0023}_{-0.0027}$
$\boldsymbol{A_{217}^{PS}}$	114 ± 10	Age/Gyr	13.762 ± 0.035	$\sigma_8(2.33)$	$0.3072^{+0.0023}_{-0.0028}$
$\boldsymbol{A^{kSZ}}$	< 5.30	z_*	1089.53 ± 0.37	$r_{0.002}$	< 0.0846
$\boldsymbol{A_{100}^{dust TT}}$	9.1 ± 1.9	r_*	145.13 ± 0.46	$r_{0.01}$	< 0.0841
$\boldsymbol{A_{143}^{dust TT}}$	10.8 ± 1.8	$100\theta_*$	1.04151 ± 0.00046	$\ln(10^{10} A_{\rm t})$	$-0.1^{+1.4}_{-0.71}$
$\boldsymbol{A_{143\times217}^{dust TT}}$	18.4 ± 3.3	$D_{\rm M}(z_*)$/Gpc	13.935 ± 0.043	r_{10}	< 0.0439
$\boldsymbol{A_{217}^{dust TT}}$	93.3 ± 7.2	$z_{\rm drag}$	1059.95 ± 0.50	$10^9 A_{\rm t}$	< 0.182
$\boldsymbol{c_{100}}$	0.99960 ± 0.00059	$r_{\rm drag}$	147.77 ± 0.48	$10^9 A_t e^{-2\tau}$	< 0.161
$\boldsymbol{c_{217}}$	0.99829 ± 0.00064	$k_{\rm D}$	0.14022 ± 0.00056	f_{2000}^{143}	31.4 ± 3.2
H_0	68.64 ± 0.83	$100\theta_{\rm D}$	0.16078 ± 0.00028	$f_{2000}^{143\times217}$	33.7 ± 2.2
Ω_Λ	$0.702^{+0.012}_{-0.010}$	$z_{\rm eq}$	3333 ± 43	f_{2000}^{217}	108.2 ± 2.1
$\Omega_{\rm m}$	$0.298^{+0.010}_{-0.012}$	$k_{\rm eq}$	0.01017 ± 0.00013	$\chi^2_{\rm simall}$	397.8 ± 2.4
$\Omega_{\rm m} h^2$	0.1401 ± 0.0018	$100\theta_{\rm eq}$	0.8265 ± 0.0082	$\chi^2_{\rm lowl}$	22.5 ± 1.8
$\Omega_{\rm m} h^3$	0.09618 ± 0.00051	$100\theta_{\rm s,eq}$	0.4562 ± 0.0042	$\chi^2_{\rm plik}$	777.1 ± 6.5
σ_8	0.8023 ± 0.0087	$H(0.15)$	73.77 ± 0.72	$\chi^2_{\rm H073p45}$	8.6 ± 2.9
S_8	0.799 ± 0.021	$D_{\rm M}(0.15)$	632.6 ± 6.9	$\chi^2_{\rm prior}$	7.5 ± 3.8
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.438 ± 0.011	$H(0.38)$	83.64 ± 0.53	$\chi^2_{\rm CMB}$	1197.5 ± 6.7
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.593 ± 0.011	$D_{\rm M}(0.38)$	1512 ± 14		

$\bar{\chi}^2_{\rm eff} = 1213.56$; $\Delta\bar{\chi}^2_{\rm eff} = 1.75$; $R - 1 = 0.05904$

15.7 base_nrun_r_plikHM_TTTEEE_lowl_lowE

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022399	0.02241 ± 0.00016	σ_8	0.8129	0.8119 ± 0.0077	$H(0.38)$	82.837	82.87 ± 0.39
$\boldsymbol{\Omega_c h^2}$	0.12022	0.1202 ± 0.0014	S_8	0.8348	0.833 ± 0.017	$D_M(0.38)$	1534.5	1534 ± 11
$\boldsymbol{100\theta_{MC}}$	1.040896	1.04091 ± 0.00032	$\sigma_8\Omega_m^{0.5}$	0.4572	0.4564 ± 0.0091	$H(0.51)$	89.610	89.64 ± 0.30
$\boldsymbol{\tau}$	0.0561	0.0563 ± 0.0082	$\sigma_8\Omega_m^{0.25}$	0.6097	0.6087 ± 0.0085	$D_M(0.51)$	1987.0	1986 ± 12
$\boldsymbol{\ln(10^{10}A_s)}$	3.0495	3.050 ± 0.017	$\sigma_8/h^{0.5}$	0.9910	0.989 ± 0.012	$H(0.61)$	95.272	95.30 ± 0.24
$\boldsymbol{n_s}$	0.96469	0.9643 ± 0.0047	$r_{drag}h$	98.92	99.0 ± 1.1	$D_M(0.61)$	2311.5	2311 ± 13
$\boldsymbol{dn_s/d\ln k}$	−0.0044	-0.0094 ± 0.0074	$\langle d^2\rangle^{1/2}$	2.4438	2.433 ± 0.030	$H(2.33)$	236.73	236.71 ± 0.84
$\boldsymbol{r}$	0.0001	< 0.0810	z_{re}	7.86	7.85 ± 0.82	$D_M(2.33)$	5763.3	5762 ± 11
$\boldsymbol{y_{cal}}$	1.00053	1.0007 ± 0.0025	10^9A_s	2.1105	2.113 ± 0.036	$f\sigma_8(0.15)$	0.4614	0.4606 ± 0.0085
$\boldsymbol{A_{217}^{CIB}}$	48.9	48 ± 7	$10^9A_se^{-2\tau}$	1.8865	1.888 ± 0.012	$\sigma_8(0.15)$	0.7507	0.7498 ± 0.0068
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.26	—	D_{40}	1221.1	1232 ± 21	$f\sigma_8(0.38)$	0.4787	0.4779 ± 0.0069
$\boldsymbol{A_{143}^{tSZ}}$	7.29	5.1 ± 2.0	D_{220}	5730.3	5726 ± 39	$\sigma_8(0.38)$	0.6649	0.6642 ± 0.0057
$\boldsymbol{A_{100}^{PS}}$	253.1	264 ± 28	D_{810}	2541.9	2543 ± 13	$f\sigma_8(0.51)$	0.4768	0.4760 ± 0.0061
$\boldsymbol{A_{143}^{PS}}$	46.8	49 ± 8	D_{1420}	817.10	816.0 ± 4.9	$\sigma_8(0.51)$	0.6220	0.6213 ± 0.0053
$\boldsymbol{A_{143\times217}^{PS}}$	44.0	43^{+9}_{-10}	D_{2000}	230.61	229.9 ± 1.8	$f\sigma_8(0.61)$	0.4714	0.4707 ± 0.0056
$\boldsymbol{A_{217}^{PS}}$	118.0	115 ± 10	$n_{s,0.002}$	0.9789	$0.995^{+0.022}_{-0.024}$	$\sigma_8(0.61)$	0.59173	0.5911 ± 0.0050
$\boldsymbol{A^{kSZ}}$	0.01	< 5.05	Y_P	0.245407	$0.245410^{+0.000062}_{-0.000056}$	$f\sigma_8(2.33)$	0.29816	0.2979 ± 0.0025
$\boldsymbol{A_{100}^{dustTT}}$	8.90	8.9 ± 1.8	Y_P^{BBN}	0.246733	$0.246737^{+0.000062}_{-0.000056}$	$\sigma_8(2.33)$	0.30718	0.3069 ± 0.0026
$\boldsymbol{A_{143}^{dustTT}}$	11.06	10.9 ± 1.8	10^5D/H	2.5802	2.578 ± 0.029	$r_{0.002}$	0.0001	< 0.0787
$\boldsymbol{A_{143\times217}^{dustTT}}$	19.72	18.6 ± 3.3	Age/Gyr	13.7963	13.794 ± 0.025	$r_{0.01}$	0.0001	< 0.0789
$\boldsymbol{A_{217}^{dustTT}}$	94.6	93.4 ± 7.3	z_*	1089.904	1089.88 ± 0.28	$\ln(10^{10}A_t)$	−6.53	$-0.12^{+1.3}_{-0.54}$
$\boldsymbol{A_{100}^{dustTE}}$	0.1138	0.116 ± 0.038	r_*	144.353	144.36 ± 0.31	r_{10}	0.0000	< 0.0410
$\boldsymbol{A_{100\times143}^{dustTE}}$	0.1349	0.136 ± 0.029	$100\theta_*$	1.041074	1.04109 ± 0.00031	10^9A_t	0.000	< 0.171
$\boldsymbol{A_{100\times217}^{dustTE}}$	0.484	0.481 ± 0.084	$D_M(z_*)$/Gpc	13.8658	13.866 ± 0.029	$10^9A_te^{-2\tau}$	0.000	< 0.153
$\boldsymbol{A_{143}^{dustTE}}$	0.226	0.227 ± 0.054	z_{drag}	1060.009	1060.05 ± 0.32	f_{2000}^{143}	29.85	31.2 ± 3.1
$\boldsymbol{A_{143\times217}^{dustTE}}$	0.666	0.664 ± 0.080	r_{drag}	147.003	147.00 ± 0.31	$f_{2000}^{143\times217}$	32.71	33.5 ± 2.2
$\boldsymbol{A_{217}^{dustTE}}$	2.089	2.08 ± 0.27	k_D	0.140983	0.14099 ± 0.00034	f_{2000}^{217}	107.32	108.1 ± 2.0
$\boldsymbol{c_{100}}$	0.99971	0.99967 ± 0.00062	$100\theta_D$	0.160708	0.16069 ± 0.00018	χ^2_{simall}	396.34	397.6 ± 2.0
$\boldsymbol{c_{217}}$	0.99821	0.99823 ± 0.00063	z_{eq}	3408.1	3407 ± 32	χ^2_{lowl}	22.29	23.3 ± 1.9
H_0	67.29	67.34 ± 0.62	k_{eq}	0.010402	0.010399 ± 0.000097	χ^2_{plik}	2344.9	2361.1 ± 6.1
Ω_Λ	0.6836	0.6840 ± 0.0086	$100\theta_{eq}$	0.8123	0.8126 ± 0.0059	χ^2_{prior}	1.85	11.6 ± 4.6
Ω_m	0.3164	0.3160 ± 0.0086	$100\theta_{s,eq}$	0.44884	0.4490 ± 0.0030	χ^2_{CMB}	2763.6	2782.0 ± 6.2
$\Omega_m h^2$	0.14326	0.1432 ± 0.0013	$H(0.15)$	72.63	72.67 ± 0.53			
$\Omega_m h^3$	0.096404	0.09643 ± 0.00031	$D_M(0.15)$	643.9	643.6 ± 5.3			

Best-fit $\chi^2_{eff} = 2765.44$; $\Delta\chi^2_{eff} = -0.33$; $\bar{\chi}^2_{eff} = 2793.62$; $\Delta\bar{\chi}^2_{eff} = 1.86$; $R - 1 = 0.01370$

χ^2_{eff}: CMB - simall_100x143_offlike5_EE_Aplanck_B: 396.35 (Δ 0.30) commander_dx12_v3_2_29: 22.29 (Δ -0.96) plik_rd12_HM_v22b_TTTEEE: 2344.95 (Δ 0.30)

15.8 base_nrun_r_plikHM_TTTEEE_lowl_lowE_post_BAO

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022443	0.02247 ± 0.00014	S_8	0.8261	0.824 ± 0.013	$H(0.51)$	89.770	89.82 ± 0.23
$\boldsymbol{\Omega_c h^2}$	0.11944	0.1193 ± 0.0010	$\sigma_8 \Omega_m^{0.5}$	0.4525	0.4511 ± 0.0071	$D_M(0.51)$	1980.2	1978.3 ± 9.1
$\boldsymbol{100\theta_{MC}}$	1.041007	1.04102 ± 0.00030	$\sigma_8 \Omega_m^{0.25}$	0.6057	0.6043 ± 0.0071	$H(0.61)$	95.395	95.44 ± 0.19
$\boldsymbol{\tau}$	0.0568	0.0574 ± 0.0082	$\sigma_8/h^{0.5}$	0.9858	0.984 ± 0.010	$D_M(0.61)$	2304.2	2302.2 ± 9.9
$\boldsymbol{\ln(10^{10} A_s)}$	3.0489	3.051 ± 0.017	$r_{drag} h$	99.54	99.68 ± 0.79	$H(2.33)$	236.27	236.19 ± 0.63
$\boldsymbol{n_s}$	0.96669	0.9665 ± 0.0040	$\langle d^2 \rangle^{1/2}$	2.4324	2.420 ± 0.027	$D_M(2.33)$	5758.2	5756.2 ± 9.2
$\boldsymbol{dn_s/d\ln k}$	-0.0038	$-0.0092^{+0.0078}_{-0.0070}$	z_{re}	7.91	7.94 ± 0.81	$f\sigma_8(0.15)$	0.4571	0.4558 ± 0.0067
$\boldsymbol{r}$	0.0009	< 0.0865	$10^9 A_s$	2.1093	2.113 ± 0.036	$\sigma_8(0.15)$	0.7491	0.7482 ± 0.0065
$\boldsymbol{y_{cal}}$	1.00054	1.0008 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.8827	1.884 ± 0.011	$f\sigma_8(0.38)$	0.4754	0.4743 ± 0.0057
$\boldsymbol{A_{217}^{CIB}}$	48.8	48 ± 7	D_{40}	1218.7	1230^{+19}_{-21}	$\sigma_8(0.38)$	0.6641	0.6634 ± 0.0056
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.25	—	D_{220}	5732.8	5729 ± 39	$f\sigma_8(0.51)$	0.4740	0.4730 ± 0.0052
$\boldsymbol{A_{143}^{tSZ}}$	7.28	5.2 ± 2.0	D_{810}	2541.1	2542 ± 14	$\sigma_8(0.51)$	0.6214	0.6209 ± 0.0052
$\boldsymbol{A_{100}^{PS}}$	253.5	263 ± 28	D_{1420}	817.65	816.6 ± 4.9	$f\sigma_8(0.61)$	0.46904	0.4682 ± 0.0049
$\boldsymbol{A_{143}^{PS}}$	45.9	48 ± 8	D_{2000}	230.87	230.2 ± 1.8	$\sigma_8(0.61)$	0.59132	0.5908 ± 0.0050
$\boldsymbol{A_{143\times217}^{PS}}$	43.2	42 ± 9	$n_{s,0.002}$	0.9788	$0.996^{+0.022}_{-0.025}$	$f\sigma_8(2.33)$	0.29815	0.2979 ± 0.0025
$\boldsymbol{A_{217}^{PS}}$	117.6	114 ± 10	Y_P	0.245424	0.245433 ± 0.000053	$\sigma_8(2.33)$	0.30737	0.3072 ± 0.0026
$\boldsymbol{A^{kSZ}}$	0.00	< 4.99	Y_P^{BBN}	0.246750	0.246760 ± 0.000054	$r_{0.002}$	0.0008	< 0.0848
$\boldsymbol{A_{100}^{dust TT}}$	8.89	8.9 ± 1.9	10^5D/H	2.5720	2.567 ± 0.026	$r_{0.01}$	0.0009	< 0.0846
$\boldsymbol{A_{143}^{dust TT}}$	11.01	11.0 ± 1.8	Age/Gyr	13.7853	13.781 ± 0.021	$\ln(10^{10} A_t)$	-3.97	$-0.05^{+1.3}_{-0.53}$
$\boldsymbol{A_{143\times217}^{dust TT}}$	19.58	18.6 ± 3.3	z_*	1089.778	1089.73 ± 0.23	r_{10}	0.0004	< 0.0441
$\boldsymbol{A_{217}^{dust TT}}$	94.5	93.4 ± 7.3	r_*	144.521	144.54 ± 0.24	$10^9 A_t$	0.002	< 0.183
$\boldsymbol{A_{100}^{dust TE}}$	0.1151	0.116 ± 0.038	$100\theta_*$	1.041178	1.04119 ± 0.00029	$10^9 A_t e^{-2\tau}$	0.002	< 0.163
$\boldsymbol{A_{100\times143}^{dust TE}}$	0.1353	0.135 ± 0.029	$D_M(z_*)$/Gpc	13.8806	13.882 ± 0.024	f_{2000}^{143}	29.52	30.9 ± 3.1
$\boldsymbol{A_{100\times217}^{dust TE}}$	0.478	0.481 ± 0.083	z_{drag}	1060.047	1060.12 ± 0.31	$f_{2000}^{143\times217}$	32.42	33.2 ± 2.1
$\boldsymbol{A_{143}^{dust TE}}$	0.225	0.225 ± 0.053	r_{drag}	147.161	147.17 ± 0.26	f_{2000}^{217}	107.07	107.9 ± 2.0
$\boldsymbol{A_{143\times217}^{dust TE}}$	0.664	0.662 ± 0.079	k_D	0.140850	0.14086 ± 0.00031	χ^2_{simall}	396.43	397.8 ± 2.1
$\boldsymbol{A_{217}^{dust TE}}$	2.074	2.07 ± 0.27	$100\theta_D$	0.160689	0.16066 ± 0.00018	χ^2_{lowl}	22.15	23.1 ± 1.8
$\boldsymbol{c_{100}}$	0.99972	0.99967 ± 0.00061	z_{eq}	3390.5	3387 ± 23	χ^2_{plik}	2345.5	2361.2 ± 6.2
$\boldsymbol{c_{217}}$	0.99821	0.99823 ± 0.00062	k_{eq}	0.010348	0.010338 ± 0.000072	χ^2_{6DF}	0.0377	0.053 ± 0.065
H_0	67.639	67.73 ± 0.46	$100\theta_{eq}$	0.81567	0.8164 ± 0.0044	χ^2_{MGS}	1.156	1.29 ± 0.43
Ω_Λ	0.6885	0.6896 ± 0.0062	$100\theta_{s,eq}$	0.45057	0.4509 ± 0.0023	$\chi^2_{DR12BAO}$	4.63	4.8 ± 1.4
Ω_m	0.3115	0.3104 ± 0.0062	$H(0.15)$	72.925	73.01 ± 0.39	χ^2_{prior}	1.79	11.6 ± 4.5
$\Omega_m h^2$	0.14252	0.14239 ± 0.00098	$D_M(0.15)$	640.94	640.2 ± 3.9	χ^2_{BAO}	5.82	6.1 ± 1.1
$\Omega_m h^3$	0.096402	0.09643 ± 0.00031	$H(0.38)$	83.047	83.11 ± 0.29	χ^2_{CMB}	2764.1	2782.0 ± 6.2
σ_8	0.8107	0.8096 ± 0.0073	$D_M(0.38)$	1528.6	1527.0 ± 7.8			

Best-fit $\chi^2_{eff} = 2771.67$; $\Delta\chi^2_{eff} = -0.25$; $\bar{\chi}^2_{eff} = 2799.74$; $\Delta\bar{\chi}^2_{eff} = 1.83$; $R - 1 = 0.01808$

χ^2_{eff}: BAO - 6DF: 0.04 (Δ 0.01) MGS: 1.16 (Δ -0.06) DR12BAO: 4.63 (Δ 0.21) CMB - simall_100x143_offlike5_EE_Aplanck_B: 396.43 (Δ 0.23) commander_dx12_v3_2_29: 22.15 (Δ -0.72) plik_rd12_HM_v22b_TTTEEE: 2345.48 (Δ -0.02)

15.9 base_nrun_r_plikHM_TTTEEE_lowl_lowE_post_Riess18

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02255 ± 0.00015	σ_8	0.8075 ± 0.0080	$H(0.38)$	83.34 ± 0.37
$\boldsymbol{\Omega_c h^2}$	0.1185 ± 0.0013	S_8	0.815 ± 0.016	$D_M(0.38)$	1520.8 ± 9.9
$\boldsymbol{100\theta_{MC}}$	1.04112 ± 0.00031	$\sigma_8\Omega_m^{0.5}$	0.4465 ± 0.0087	$H(0.51)$	90.01 ± 0.29
$\boldsymbol{\tau}$	$0.0585^{+0.0079}_{-0.0087}$	$\sigma_8\Omega_m^{0.25}$	0.6004 ± 0.0085	$D_M(0.51)$	1971 ± 12
$\boldsymbol{\ln(10^{10}A_s)}$	3.051 ± 0.018	$\sigma_8/h^{0.5}$	0.979 ± 0.012	$H(0.61)$	95.58 ± 0.24
$\boldsymbol{n_s}$	0.9684 ± 0.0046	$r_{drag}h$	100.3 ± 1.0	$D_M(0.61)$	2294 ± 13
$\boldsymbol{dn_s/d\ln k}$	$-0.0094^{+0.0080}_{-0.0070}$	$\langle d^2\rangle^{1/2}$	2.408 ± 0.031	$H(2.33)$	235.77 ± 0.80
$\boldsymbol{r}$	< 0.0929	z_{re}	8.02 ± 0.83	$D_M(2.33)$	5750 ± 11
$\boldsymbol{y_{cal}}$	1.0008 ± 0.0024	10^9A_s	2.115 ± 0.038	$f\sigma_8(0.15)$	0.4515 ± 0.0082
$\boldsymbol{A_{217}^{CIB}}$	48 ± 7	$10^9A_se^{-2\tau}$	1.881 ± 0.012	$\sigma_8(0.15)$	0.7468 ± 0.0071
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{40}	1227 ± 20	$f\sigma_8(0.38)$	$0.4710^{+0.0071}_{-0.0065}$
$\boldsymbol{A_{143}^{tSZ}}$	5.2 ± 2.0	D_{220}	5734 ± 38	$\sigma_8(0.38)$	0.6626 ± 0.0060
$\boldsymbol{A_{100}^{PS}}$	263 ± 28	D_{810}	2542 ± 13	$f\sigma_8(0.51)$	$0.4703^{+0.0064}_{-0.0058}$
$\boldsymbol{A_{143}^{PS}}$	47 ± 8	D_{1420}	817.3 ± 5.0	$\sigma_8(0.51)$	0.6204 ± 0.0055
$\boldsymbol{A_{143\times217}^{PS}}$	42 ± 9	D_{2000}	230.5 ± 1.8	$f\sigma_8(0.61)$	$0.4659^{+0.0059}_{-0.0053}$
$\boldsymbol{A_{217}^{PS}}$	114 ± 10	$n_{s,0.002}$	$0.999^{+0.021}_{-0.025}$	$\sigma_8(0.61)$	0.5905 ± 0.0052
$\boldsymbol{A^{kSZ}}$	< 4.94	Y_P	0.245461 ± 0.000057	$f\sigma_8(2.33)$	0.2980 ± 0.0026
$\boldsymbol{A_{100}^{dust}TT}$	9.0 ± 1.9	Y_P^{BBN}	0.246788 ± 0.000057	$\sigma_8(2.33)$	0.3074 ± 0.0027
$\boldsymbol{A_{143}^{dust}TT}$	11.0 ± 1.7	10^5D/H	2.554 ± 0.027	$r_{0.002}$	< 0.0917
$\boldsymbol{A_{143\times217}^{dust}TT}$	18.6 ± 3.3	Age/Gyr	13.767 ± 0.024	$r_{0.01}$	< 0.0914
$\boldsymbol{A_{217}^{dust}TT}$	93.3 ± 7.4	z_*	1089.57 ± 0.26	$\ln(10^{10}A_t)$	$0.02^{+1.3}_{-0.51}$
$\boldsymbol{A_{100}^{dust}TE}$	0.114 ± 0.038	r_*	144.69 ± 0.30	r_{10}	< 0.0477
$\boldsymbol{A_{100\times143}^{dust}TE}$	0.136 ± 0.030	$100\theta_*$	1.04129 ± 0.00031	10^9A_t	< 0.196
$\boldsymbol{A_{100\times217}^{dust}TE}$	0.482 ± 0.082	$D_M(z_*)$/Gpc	13.895 ± 0.028	$10^9A_te^{-2\tau}$	< 0.174
$\boldsymbol{A_{143}^{dust}TE}$	0.225 ± 0.054	z_{drag}	1060.24 ± 0.31	f_{2000}^{143}	30.5 ± 3.1
$\boldsymbol{A_{143\times217}^{dust}TE}$	0.661 ± 0.078	r_{drag}	147.29 ± 0.30	$f_{2000}^{143\times217}$	32.9 ± 2.2
$\boldsymbol{A_{217}^{dust}TE}$	2.06 ± 0.27	k_D	0.14079 ± 0.00034	f_{2000}^{217}	107.7 ± 2.0
$\boldsymbol{c_{100}}$	0.99969 ± 0.00061	$100\theta_D$	0.16060 ± 0.00018	χ^2_{simall}	398.0 ± 2.4
$\boldsymbol{c_{217}}$	0.99822 ± 0.00062	z_{eq}	3371 ± 30	χ^2_{lowl}	22.9 ± 1.7
H_0	68.10 ± 0.59	k_{eq}	0.010287 ± 0.000091	χ^2_{plik}	2362.7 ± 6.6
Ω_Λ	0.6943 ± 0.0079	$100\theta_{eq}$	0.8197 ± 0.0057	$\chi^2_{H073p45}$	10.5 ± 2.3
Ω_m	0.3057 ± 0.0079	$100\theta_{s,eq}$	0.4526 ± 0.0029	χ^2_{prior}	11.5 ± 4.5
$\Omega_m h^2$	0.1417 ± 0.0013	$H(0.15)$	73.32 ± 0.51	χ^2_{CMB}	2783.5 ± 6.6
$\Omega_m h^3$	0.09648 ± 0.00031	$D_M(0.15)$	637.1 ± 5.0		

$\bar{\chi}^2_{eff} = 2805.57$; $\Delta\bar{\chi}^2_{eff} = 1.41$; $R - 1 = 0.02989$

15.10 base_nrun_r_plikHM_TTTEEE_lowl_lowE_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02242 ± 0.00015	σ_8	0.8125 ± 0.0073	$H(0.38)$	82.88 ± 0.38
$\boldsymbol{\Omega_c h^2}$	0.1201 ± 0.0014	S_8	0.834 ± 0.016	$D_{\rm M}(0.38)$	1534 ± 11
$\boldsymbol{100\theta_{MC}}$	1.04091 ± 0.00032	$\sigma_8\Omega_{\rm m}^{0.5}$	0.4566 ± 0.0090	$H(0.51)$	89.64 ± 0.30
$\boldsymbol{\tau}$	$0.0571^{+0.0062}_{-0.0086}$	$\sigma_8\Omega_{\rm m}^{0.25}$	0.6091 ± 0.0084	$D_{\rm M}(0.51)$	1986 ± 12
$\boldsymbol{\ln(10^{10}A_s)}$	$3.052^{+0.014}_{-0.017}$	$\sigma_8/h^{0.5}$	0.990 ± 0.012	$H(0.61)$	95.30 ± 0.24
$\boldsymbol{n_s}$	0.9643 ± 0.0047	$r_{\rm drag}h$	99.0 ± 1.1	$D_{\rm M}(0.61)$	2310 ± 13
$\boldsymbol{{\rm d}n_s/{\rm d}\ln k}$	$-0.0095^{+0.0077}_{-0.0069}$	$\langle d^2\rangle^{1/2}$	2.435 ± 0.030	$H(2.33)$	236.70 ± 0.84
$\boldsymbol{r}$	< 0.0810	$z_{\rm re}$	$7.94^{+0.67}_{-0.83}$	$D_{\rm M}(2.33)$	5762 ± 11
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0025	$10^9A_{\rm s}$	$2.116^{+0.029}_{-0.037}$	$f\sigma_8(0.15)$	0.4608 ± 0.0084
$\boldsymbol{A^{CIB}_{217}}$	48 ± 7	$10^9A_{\rm s}e^{-2\tau}$	1.888 ± 0.012	$\sigma_8(0.15)$	$0.7504^{+0.0059}_{-0.0067}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{40}	1232^{+19}_{-22}	$f\sigma_8(0.38)$	0.4782 ± 0.0068
$\boldsymbol{A^{tSZ}_{143}}$	5.1 ± 2.0	D_{220}	5726 ± 39	$\sigma_8(0.38)$	$0.6647^{+0.0048}_{-0.0057}$
$\boldsymbol{A^{PS}_{100}}$	264 ± 28	D_{810}	2543 ± 13	$f\sigma_8(0.51)$	0.4763 ± 0.0060
$\boldsymbol{A^{PS}_{143}}$	49 ± 8	D_{1420}	816.0 ± 4.9	$\sigma_8(0.51)$	$0.6218^{+0.0044}_{-0.0053}$
$\boldsymbol{A^{PS}_{143\times217}}$	43 ± 9	D_{2000}	229.9 ± 1.8	$f\sigma_8(0.61)$	0.4710 ± 0.0054
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	$n_{\rm s,0.002}$	$0.995^{+0.021}_{-0.024}$	$\sigma_8(0.61)$	$0.5916^{+0.0041}_{-0.0050}$
$\boldsymbol{A^{kSZ}}$	< 5.04	$Y_{\rm P}$	$0.245412^{+0.000061}_{-0.000056}$	$f\sigma_8(2.33)$	$0.2981^{+0.0020}_{-0.0025}$
$\boldsymbol{A^{dust}_{100}}$	8.9 ± 1.8	$Y_{\rm P}^{\rm BBN}$	$0.246738^{+0.000062}_{-0.000056}$	$\sigma_8(2.33)$	$0.3072^{+0.0021}_{-0.0026}$
$\boldsymbol{A^{dust}_{143}}$	10.9 ± 1.8	10^5D/H	2.577 ± 0.028	$r_{0.002}$	< 0.0789
$\boldsymbol{A^{dust}_{143\times217}}$	18.7 ± 3.3	Age/Gyr	13.793 ± 0.025	$r_{0.01}$	< 0.0790
$\boldsymbol{A^{dust}_{217}}$	93.4 ± 7.3	z_*	1089.87 ± 0.28	$\ln(10^{10}A_{\rm t})$	$-0.12^{+1.3}_{-0.54}$
$\boldsymbol{A^{dustTE}_{100}}$	0.116 ± 0.038	r_*	144.36 ± 0.31	r_{10}	< 0.0411
$\boldsymbol{A^{dustTE}_{100\times143}}$	0.136 ± 0.029	$100\theta_*$	1.04109 ± 0.00031	$10^9A_{\rm t}$	< 0.172
$\boldsymbol{A^{dustTE}_{100\times217}}$	0.481 ± 0.084	$D_{\rm M}(z_*)$/Gpc	13.866 ± 0.029	$10^9A_te^{-2\tau}$	< 0.153
$\boldsymbol{A^{dustTE}_{143}}$	0.226 ± 0.054	$z_{\rm drag}$	1060.06 ± 0.31	f^{143}_{2000}	31.2 ± 3.1
$\boldsymbol{A^{dustTE}_{143\times217}}$	0.664 ± 0.080	$r_{\rm drag}$	147.00 ± 0.31	$f^{143\times217}_{2000}$	33.5 ± 2.2
$\boldsymbol{A^{dustTE}_{217}}$	2.08 ± 0.27	$k_{\rm D}$	0.14099 ± 0.00034	f^{217}_{2000}	108.1 ± 2.0
$\boldsymbol{c_{100}}$	0.99967 ± 0.00062	$100\theta_{\rm D}$	0.16069 ± 0.00018	$\chi^2_{\rm simall}$	397.6 ± 2.0
$\boldsymbol{c_{217}}$	0.99823 ± 0.00063	$z_{\rm eq}$	3407 ± 32	$\chi^2_{\rm lowl}$	23.3 ± 1.9
H_0	67.35 ± 0.62	$k_{\rm eq}$	0.010397 ± 0.000096	$\chi^2_{\rm plik}$	2360.9 ± 6.1
Ω_Λ	0.6842 ± 0.0086	$100\theta_{\rm eq}$	0.8127 ± 0.0059	$\chi^2_{\rm prior}$	11.6 ± 4.5
$\Omega_{\rm m}$	0.3158 ± 0.0086	$100\theta_{\rm s,eq}$	0.4490 ± 0.0030	$\chi^2_{\rm CMB}$	2781.8 ± 6.1
$\Omega_{\rm m}h^2$	0.1432 ± 0.0013	$H(0.15)$	72.68 ± 0.53		
$\Omega_{\rm m}h^3$	0.09643 ± 0.00031	$D_{\rm M}(0.15)$	643.5 ± 5.3		

$\bar{\chi}^2_{\rm eff} = 2793.42$; $\Delta\bar{\chi}^2_{\rm eff} = 1.88$; $R - 1 = 0.01323$

15.11 base_nrun_r_plikHM_TTTEEE_lowl_lowE_post_BAO_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02248 ± 0.00014	S_8	0.824 ± 0.013	$H(0.51)$	89.82 ± 0.23
$\boldsymbol{\Omega_c h^2}$	0.1193 ± 0.0010	$\sigma_8 \Omega_m^{0.5}$	0.4513 ± 0.0069	$D_M(0.51)$	1978.2 ± 9.1
$\boldsymbol{100\theta_{MC}}$	1.04102 ± 0.00030	$\sigma_8 \Omega_m^{0.25}$	0.6047 ± 0.0069	$H(0.61)$	95.44 ± 0.19
$\boldsymbol{\tau}$	$0.0581^{+0.0064}_{-0.0086}$	$\sigma_8/h^{0.5}$	0.984 ± 0.010	$D_M(0.61)$	2302.0 ± 9.8
$\boldsymbol{\ln(10^{10} A_s)}$	$3.052^{+0.014}_{-0.018}$	$r_{drag} h$	99.69 ± 0.78	$H(2.33)$	236.19 ± 0.63
$\boldsymbol{n_s}$	0.9665 ± 0.0040	$\langle d^2 \rangle^{1/2}$	2.422 ± 0.026	$D_M(2.33)$	5756.1 ± 9.2
$\boldsymbol{dn_s/d\ln k}$	$-0.0093^{+0.0078}_{-0.0069}$	z_{re}	$8.01^{+0.68}_{-0.83}$	$f\sigma_8(0.15)$	0.4560 ± 0.0065
$\boldsymbol{r}$	< 0.0867	$10^9 A_s$	$2.116^{+0.030}_{-0.038}$	$\sigma_8(0.15)$	$0.7487^{+0.0057}_{-0.0065}$
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.884 ± 0.011	$f\sigma_8(0.38)$	0.4746 ± 0.0056
$\boldsymbol{A_{217}^{CIB}}$	48 ± 7	D_{40}	1230 ± 20	$\sigma_8(0.38)$	$0.6638^{+0.0048}_{-0.0057}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{220}	5729 ± 39	$f\sigma_8(0.51)$	0.4733 ± 0.0051
$\boldsymbol{A_{143}^{tSZ}}$	5.2 ± 2.0	D_{810}	2542 ± 14	$\sigma_8(0.51)$	$0.6213^{+0.0045}_{-0.0053}$
$\boldsymbol{A_{100}^{PS}}$	263 ± 28	D_{1420}	816.6 ± 4.9	$f\sigma_8(0.61)$	0.4684 ± 0.0047
$\boldsymbol{A_{143}^{PS}}$	48 ± 8	D_{2000}	230.2 ± 1.8	$\sigma_8(0.61)$	$0.5912^{+0.0042}_{-0.0050}$
$\boldsymbol{A_{143\times217}^{PS}}$	42 ± 9	$n_{s,0.002}$	$0.997^{+0.021}_{-0.025}$	$f\sigma_8(2.33)$	$0.2981^{+0.0021}_{-0.0025}$
$\boldsymbol{A_{217}^{PS}}$	114 ± 10	Y_P	0.245434 ± 0.000053	$\sigma_8(2.33)$	$0.3074^{+0.0022}_{-0.0026}$
$\boldsymbol{A^{kSZ}}$	< 4.99	Y_P^{BBN}	0.246761 ± 0.000053	$r_{0.002}$	< 0.0849
$\boldsymbol{A_{100}^{dustTT}}$	8.9 ± 1.9	10^5D/H	2.567 ± 0.025	$r_{0.01}$	< 0.0848
$\boldsymbol{A_{143}^{dustTT}}$	11.0 ± 1.8	Age/Gyr	13.781 ± 0.021	$\ln(10^{10} A_t)$	$-0.05^{+1.3}_{-0.54}$
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.6 ± 3.3	z_*	1089.72 ± 0.23	r_{10}	< 0.0442
$\boldsymbol{A_{217}^{dustTT}}$	93.3 ± 7.3	r_*	144.54 ± 0.24	$10^9 A_t$	< 0.184
$\boldsymbol{A_{100}^{dustTE}}$	0.116 ± 0.038	$100\theta_*$	1.04119 ± 0.00029	$10^9 A_t e^{-2\tau}$	< 0.163
$\boldsymbol{A_{100\times143}^{dustTE}}$	0.135 ± 0.029	$D_M(z_*)$/Gpc	13.882 ± 0.023	f_{2000}^{143}	30.9 ± 3.1
$\boldsymbol{A_{100\times217}^{dustTE}}$	0.481 ± 0.083	z_{drag}	1060.13 ± 0.30	$f_{2000}^{143\times217}$	33.2 ± 2.1
$\boldsymbol{A_{143}^{dustTE}}$	0.225 ± 0.054	r_{drag}	147.17 ± 0.26	f_{2000}^{217}	107.9 ± 2.0
$\boldsymbol{A_{143\times217}^{dustTE}}$	0.662 ± 0.079	k_D	0.14086 ± 0.00031	χ^2_{small}	397.7 ± 2.2
$\boldsymbol{A_{217}^{dustTE}}$	2.07 ± 0.27	$100\theta_D$	0.16065 ± 0.00018	χ^2_{lowl}	23.1 ± 1.8
$\boldsymbol{c_{100}}$	0.99968 ± 0.00061	z_{eq}	3387 ± 23	χ^2_{plik}	2361.0 ± 6.1
$\boldsymbol{c_{217}}$	0.99823 ± 0.00062	k_{eq}	0.010337 ± 0.000071	χ^2_{6DF}	0.053 ± 0.064
H_0	67.74 ± 0.45	$100\theta_{eq}$	0.8164 ± 0.0044	χ^2_{MGS}	1.29 ± 0.43
Ω_Λ	0.6896 ± 0.0061	$100\theta_{s,eq}$	0.4509 ± 0.0022	$\chi^2_{DR12BAO}$	4.8 ± 1.4
Ω_m	0.3104 ± 0.0061	$H(0.15)$	73.01 ± 0.39	χ^2_{prior}	11.6 ± 4.5
$\Omega_m h^2$	0.14238 ± 0.00098	$D_M(0.15)$	640.1 ± 3.9	χ^2_{BAO}	6.1 ± 1.1
$\Omega_m h^3$	0.09644 ± 0.00031	$H(0.38)$	83.11 ± 0.29	χ^2_{CMB}	2781.9 ± 6.1
σ_8	$0.8101^{+0.0065}_{-0.0072}$	$D_M(0.38)$	1526.9 ± 7.7		

$\bar{\chi}^2_{eff} = 2799.55$; $\Delta\bar{\chi}^2_{eff} = 1.83$; $R - 1 = 0.01821$

15.12 base_nrun_r_plikHM_TTTEEE_lowl_lowE_post_Riess18_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02255 ± 0.00015	σ_8	0.8081 ± 0.0075	$H(0.38)$	83.34 ± 0.37
$\boldsymbol{\Omega_c h^2}$	0.1185 ± 0.0013	S_8	0.816 ± 0.016	$D_M(0.38)$	1520.8 ± 9.9
$\boldsymbol{100\theta_{MC}}$	1.04112 ± 0.00031	$\sigma_8\Omega_m^{0.5}$	0.4467 ± 0.0086	$H(0.51)$	90.01 ± 0.29
$\boldsymbol{\tau}$	$0.0592^{+0.0066}_{-0.0089}$	$\sigma_8\Omega_m^{0.25}$	0.6008 ± 0.0082	$D_M(0.51)$	1971 ± 12
$\boldsymbol{\ln(10^{10}A_s)}$	$3.053^{+0.015}_{-0.018}$	$\sigma_8/h^{0.5}$	0.979 ± 0.012	$H(0.61)$	95.59 ± 0.24
$\boldsymbol{n_s}$	0.9684 ± 0.0046	$r_{drag}h$	100.3 ± 1.0	$D_M(0.61)$	2294 ± 12
$\boldsymbol{dn_s/d\ln k}$	$-0.0095^{+0.0080}_{-0.0070}$	$\langle d^2\rangle^{1/2}$	2.410 ± 0.030	$H(2.33)$	235.77 ± 0.80
$\boldsymbol{r}$	< 0.0930	z_{re}	$8.09^{+0.69}_{-0.86}$	$D_M(2.33)$	5750 ± 11
$\boldsymbol{y_{cal}}$	1.0008 ± 0.0024	10^9A_s	$2.117^{+0.030}_{-0.039}$	$f\sigma_8(0.15)$	0.4518 ± 0.0081
$\boldsymbol{A_{217}^{CIB}}$	48 ± 7	$10^9A_se^{-2\tau}$	1.881 ± 0.012	$\sigma_8(0.15)$	0.7473 ± 0.0066
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{40}	1227 ± 20	$f\sigma_8(0.38)$	0.4713 ± 0.0067
$\boldsymbol{A_{143}^{tSZ}}$	5.2 ± 2.0	D_{220}	5734 ± 38	$\sigma_8(0.38)$	$0.6631^{+0.0052}_{-0.0059}$
$\boldsymbol{A_{100}^{PS}}$	263 ± 28	D_{810}	2542 ± 13	$f\sigma_8(0.51)$	0.4706 ± 0.0060
$\boldsymbol{A_{143}^{PS}}$	47 ± 8	D_{1420}	817.3 ± 5.0	$\sigma_8(0.51)$	$0.6208^{+0.0047}_{-0.0055}$
$\boldsymbol{A_{143\times217}^{PS}}$	42^{+9}_{-10}	D_{2000}	230.5 ± 1.8	$f\sigma_8(0.61)$	0.4661 ± 0.0055
$\boldsymbol{A_{217}^{PS}}$	114 ± 10	$n_{s,0.002}$	$0.999^{+0.021}_{-0.026}$	$\sigma_8(0.61)$	$0.5909^{+0.0044}_{-0.0052}$
$\boldsymbol{A^{kSZ}}$	< 4.91	Y_P	0.245462 ± 0.000056	$f\sigma_8(2.33)$	$0.2982^{+0.0021}_{-0.0026}$
$\boldsymbol{A_{100}^{dustTT}}$	9.0 ± 1.9	Y_P^{BBN}	0.246788 ± 0.000056	$\sigma_8(2.33)$	$0.3077^{+0.0022}_{-0.0027}$
$\boldsymbol{A_{143}^{dustTT}}$	11.0 ± 1.7	10^5D/H	2.554 ± 0.027	$r_{0.002}$	< 0.0921
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.6 ± 3.3	Age/Gyr	13.767 ± 0.024	$r_{0.01}$	< 0.0915
$\boldsymbol{A_{217}^{dustTT}}$	93.3 ± 7.4	z_*	1089.57 ± 0.26	$\ln(10^{10}A_t)$	$0.02^{+1.3}_{-0.52}$
$\boldsymbol{A_{100}^{dustTE}}$	0.114 ± 0.038	r_*	144.68 ± 0.30	r_{10}	< 0.0479
$\boldsymbol{A_{100\times143}^{dustTE}}$	0.135 ± 0.030	$100\theta_*$	1.04128 ± 0.00031	10^9A_t	< 0.196
$\boldsymbol{A_{100\times217}^{dustTE}}$	0.482 ± 0.082	$D_M(z_*)$/Gpc	13.895 ± 0.028	$10^9A_te^{-2\tau}$	< 0.175
$\boldsymbol{A_{143}^{dustTE}}$	0.225 ± 0.054	z_{drag}	1060.24 ± 0.31	f_{2000}^{143}	30.5 ± 3.1
$\boldsymbol{A_{143\times217}^{dustTE}}$	0.660 ± 0.078	r_{drag}	147.29 ± 0.30	$f_{2000}^{143\times217}$	32.9 ± 2.2
$\boldsymbol{A_{217}^{dustTE}}$	2.06 ± 0.27	k_D	0.14079 ± 0.00034	f_{2000}^{217}	107.7 ± 2.0
$\boldsymbol{c_{100}}$	0.99969 ± 0.00061	$100\theta_D$	0.16059 ± 0.00018	χ^2_{simall}	398.0 ± 2.4
$\boldsymbol{c_{217}}$	0.99822 ± 0.00062	z_{eq}	3371 ± 30	χ^2_{lowl}	22.9 ± 1.7
H_0	68.10 ± 0.59	k_{eq}	0.010287 ± 0.000091	χ^2_{plik}	2362.5 ± 6.5
Ω_Λ	0.6944 ± 0.0078	$100\theta_{eq}$	0.8197 ± 0.0057	$\chi^2_{H073p45}$	10.5 ± 2.3
Ω_m	0.3056 ± 0.0078	$100\theta_{s,eq}$	0.4526 ± 0.0029	χ^2_{prior}	11.5 ± 4.5
$\Omega_m h^2$	0.1417 ± 0.0012	$H(0.15)$	73.32 ± 0.50	χ^2_{CMB}	2783.4 ± 6.5
$\Omega_m h^3$	0.09649 ± 0.00031	$D_M(0.15)$	637.1 ± 4.9		

$\bar{\chi}^2_{eff} = 2805.37$; $\Delta\bar{\chi}^2_{eff} = 1.49$; $R - 1 = 0.03153$

15.13 base_nrun_r_CamSpecHM_TT_lowl_lowE

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02222 ± 0.00024	$\sigma_8\Omega_m^{0.25}$	0.608 ± 0.012	$D_M(0.38)$	1537 ± 16
$\boldsymbol{\Omega_c h^2}$	0.1202 ± 0.0021	$\sigma_8/h^{0.5}$	0.988 ± 0.016	$H(0.51)$	89.49 ± 0.45
$\boldsymbol{100\theta_{MC}}$	1.04089 ± 0.00047	$r_{drag}h$	98.9 ± 1.6	$D_M(0.51)$	1990 ± 19
$\boldsymbol{\tau}$	0.0535 ± 0.0084	$\langle d^2\rangle^{1/2}$	2.432 ± 0.039	$H(0.61)$	95.15 ± 0.37
$\boldsymbol{\ln(10^{10}A_s)}$	3.042 ± 0.018	z_{re}	7.61 ± 0.85	$D_M(0.61)$	2315 ± 20
$\boldsymbol{n_s}$	0.9642 ± 0.0060	$10^9 A_s$	2.095 ± 0.037	$H(2.33)$	236.5 ± 1.3
$\boldsymbol{dn_s/d\ln k}$	-0.0067 ± 0.0084	$10^9 A_s e^{-2\tau}$	1.883 ± 0.014	$D_M(2.33)$	5771 ± 17
$\boldsymbol{r}$	< 0.0695	D_{40}	1232 ± 23	$f\sigma_8(0.15)$	0.460 ± 0.012
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	D_{220}	5701 ± 42	$\sigma_8(0.15)$	0.7478 ± 0.0076
$\boldsymbol{A_{100}^{PS}}$	246 ± 25	D_{810}	2536 ± 14	$f\sigma_8(0.38)$	0.4772 ± 0.0096
$\boldsymbol{A_{143}^{PS}}$	43 ± 9	D_{1420}	813.7 ± 5.3	$\sigma_8(0.38)$	0.6622 ± 0.0061
$\boldsymbol{A_{217}^{PS}}$	100 ± 10	D_{2000}	229.0 ± 2.0	$f\sigma_8(0.51)$	0.4751 ± 0.0083
$\boldsymbol{A_{217}^{CIB}}$	42^{+7}_{-8}	$n_{s,0.002}$	0.986 ± 0.027	$\sigma_8(0.51)$	0.6195 ± 0.0056
$\boldsymbol{A_{143}^{tSZ}}$	$3.6^{+1.7}_{-2.6}$	Y_P	$0.24533^{+0.00011}_{-0.000089}$	$f\sigma_8(0.61)$	0.4697 ± 0.0073
$\boldsymbol{r_{143\times217}^{PS}}$	0.64 ± 0.13	Y_P^{BBN}	$0.24666^{+0.00011}_{-0.000089}$	$\sigma_8(0.61)$	0.5893 ± 0.0052
$\boldsymbol{r_{143\times217}^{CIB}}$	> 0.484	10^5D/H	2.614 ± 0.045	$f\sigma_8(2.33)$	0.2969 ± 0.0026
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Age/Gyr	13.814 ± 0.038	$\sigma_8(2.33)$	0.3059 ± 0.0027
$\boldsymbol{A^{kSZ}}$	$5.2^{+4.0}_{-2.2}$	z_*	1090.12 ± 0.42	$r_{0.002}$	< 0.0660
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.20	r_*	144.50 ± 0.49	$r_{0.01}$	< 0.0671
$\boldsymbol{A_{143}^{dust}}$	0.98 ± 0.18	$100\theta_*$	1.04109 ± 0.00046	$\ln(10^{10}A_t)$	$-0.32^{+1.4}_{-0.61}$
$\boldsymbol{A_{217}^{dust}}$	0.97 ± 0.10	$D_M(z_*)$/Gpc	13.880 ± 0.045	r_{10}	< 0.0343
$\boldsymbol{A_{143\times217}^{dust}}$	1.03 ± 0.16	z_{drag}	1059.61 ± 0.51	$10^9 A_t$	< 0.146
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	r_{drag}	147.21 ± 0.50	$10^9 A_t e^{-2\tau}$	< 0.131
$\boldsymbol{c_{217}}$	1.0013 ± 0.0016	k_D	0.14063 ± 0.00056	f_{2000}^{143}	31.8 ± 3.4
H_0	67.17 ± 0.93	$100\theta_D$	0.16096 ± 0.00029	f_{2000}^{217}	108.2 ± 2.2
Ω_Λ	0.683 ± 0.013	z_{eq}	3403 ± 48	$f_{2000}^{143\times217}$	33.7 ± 2.4
Ω_m	0.317 ± 0.013	k_{eq}	0.01039 ± 0.00015	χ^2_{simall}	397.3 ± 1.7
$\Omega_m h^2$	0.1430 ± 0.0020	$100\theta_{eq}$	0.8128 ± 0.0090	χ^2_{lowl}	23.7 ± 2.3
$\Omega_m h^3$	0.09606 ± 0.00050	$100\theta_{s,eq}$	0.4493 ± 0.0046	$\chi^2_{CamSpec}$	7065.1 ± 5.7
σ_8	0.8098 ± 0.0091	$H(0.15)$	72.51 ± 0.79	χ^2_{prior}	7.7 ± 3.5
S_8	0.833 ± 0.024	$D_M(0.15)$	645.1 ± 8.0	χ^2_{CMB}	7486.1 ± 5.9
$\sigma_8\Omega_m^{0.5}$	0.456 ± 0.013	$H(0.38)$	82.72 ± 0.57		

$\bar{\chi}^2_{eff} = 7493.80$; $\Delta\bar{\chi}^2_{eff} = 2.26$; $R - 1 = 0.00512$

15.14 base_nrun_r_CamSpecHM_TT_lowl_lowE_post_BAO

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02230 ± 0.00022	$\sigma_8/h^{0.5}$	0.979 ± 0.012	$D_M(0.51)$	1979 ± 11
$\boldsymbol{\Omega_c h^2}$	0.1189 ± 0.0012	$r_{drag} h$	99.91 ± 0.95	$H(0.61)$	95.35 ± 0.26
$\boldsymbol{100\theta_{MC}}$	1.04106 ± 0.00041	$\langle d^2 \rangle^{1/2}$	2.412 ± 0.030	$D_M(0.61)$	2303 ± 12
$\boldsymbol{\tau}$	0.0548 ± 0.0083	z_{re}	7.70 ± 0.83	$H(2.33)$	235.75 ± 0.81
$\boldsymbol{\ln(10^{10} A_s)}$	3.042 ± 0.018	$10^9 A_s$	2.094 ± 0.037	$D_M(2.33)$	5762 ± 13
$\boldsymbol{n_s}$	0.9673 ± 0.0045	$10^9 A_s e^{-2\tau}$	1.877 ± 0.012	$f\sigma_8(0.15)$	0.4529 ± 0.0077
$\boldsymbol{dn_s/d\ln k}$	-0.0065 ± 0.0086	D_{40}	1228 ± 22	$\sigma_8(0.15)$	0.7452 ± 0.0069
$\boldsymbol{r}$	< 0.0752	D_{220}	5707 ± 41	$f\sigma_8(0.38)$	0.4717 ± 0.0065
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	D_{810}	2535 ± 14	$\sigma_8(0.38)$	0.6608 ± 0.0059
$\boldsymbol{A_{100}^{PS}}$	245 ± 25	D_{1420}	814.4 ± 5.2	$f\sigma_8(0.51)$	0.4706 ± 0.0059
$\boldsymbol{A_{143}^{PS}}$	42 ± 9	D_{2000}	229.3 ± 1.9	$\sigma_8(0.51)$	0.6185 ± 0.0054
$\boldsymbol{A_{217}^{PS}}$	100 ± 10	$n_{s,0.002}$	0.988 ± 0.027	$f\sigma_8(0.61)$	0.4658 ± 0.0054
$\boldsymbol{A_{217}^{CIB}}$	42 ± 8	Y_P	$0.245362^{+0.000093}_{-0.000080}$	$\sigma_8(0.61)$	0.5886 ± 0.0051
$\boldsymbol{A_{143}^{tSZ}}$	$3.7^{+1.7}_{-2.7}$	Y_P^{BBN}	$0.246689^{+0.000094}_{-0.000080}$	$f\sigma_8(2.33)$	0.2969 ± 0.0026
$\boldsymbol{r_{143\times217}^{PS}}$	0.64 ± 0.13	10^5D/H	2.600 ± 0.041	$\sigma_8(2.33)$	0.3062 ± 0.0027
$\boldsymbol{r_{143\times217}^{CIB}}$	> 0.482	Age/Gyr	13.796 ± 0.029	$r_{0.002}$	< 0.0726
$\boldsymbol{\xi^{tSZ\times CIB}}$	< 0.637	z_*	1089.91 ± 0.31	$r_{0.01}$	< 0.0733
$\boldsymbol{A^{kSZ}}$	$5.2^{+4.0}_{-2.2}$	r_*	144.78 ± 0.34	$\ln(10^{10} A_t)$	$-0.24^{+1.4}_{-0.61}$
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.20	$100\theta_*$	1.04125 ± 0.00040	r_{10}	< 0.0377
$\boldsymbol{A_{143}^{dust}}$	0.98 ± 0.18	$D_M(z_*)$/Gpc	13.905 ± 0.033	$10^9 A_t$	< 0.158
$\boldsymbol{A_{217}^{dust}}$	0.97 ± 0.10	z_{drag}	1059.68 ± 0.50	$10^9 A_t e^{-2\tau}$	< 0.142
$\boldsymbol{A_{143\times217}^{dust}}$	1.03 ± 0.16	r_{drag}	147.48 ± 0.37	f_{2000}^{143}	31.5 ± 3.4
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	k_D	0.14040 ± 0.00050	f_{2000}^{217}	108.0 ± 2.2
$\boldsymbol{c_{217}}$	1.0013 ± 0.0016	$100\theta_D$	0.16092 ± 0.00029	$f_{2000}^{143\times217}$	33.5 ± 2.4
H_0	67.75 ± 0.55	z_{eq}	3373 ± 29	χ^2_{simall}	397.4 ± 1.8
Ω_Λ	0.6909 ± 0.0073	k_{eq}	0.010295 ± 0.000089	χ^2_{lowl}	23.3 ± 2.1
Ω_m	0.3091 ± 0.0073	$100\theta_{eq}$	0.8185 ± 0.0054	$\chi^2_{CamSpec}$	7065.3 ± 5.6
$\Omega_m h^2$	0.1418 ± 0.0012	$100\theta_{s,eq}$	0.4521 ± 0.0028	χ^2_{6DF}	0.052 ± 0.069
$\Omega_m h^3$	0.09606 ± 0.00050	$H(0.15)$	73.00 ± 0.48	χ^2_{MGS}	1.43 ± 0.54
σ_8	0.8061 ± 0.0078	$D_M(0.15)$	640.2 ± 4.7	$\chi^2_{DR12BAO}$	4.6 ± 1.5
S_8	0.818 ± 0.015	$H(0.38)$	83.06 ± 0.36	χ^2_{prior}	7.8 ± 3.5
$\sigma_8 \Omega_m^{0.5}$	0.4482 ± 0.0082	$D_M(0.38)$	1527.3 ± 9.5	χ^2_{BAO}	6.1 ± 1.2
$\sigma_8 \Omega_m^{0.25}$	0.6011 ± 0.0080	$H(0.51)$	89.75 ± 0.30	χ^2_{CMB}	7486.0 ± 5.7

$\bar{\chi}^2_{eff} = 7499.85$; $\Delta\bar{\chi}^2_{eff} = 2.30$; $R - 1 = 0.00974$

15.15 base_nrun_r_CamSpecHM_TT_lowl_lowE_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02223 ± 0.00024	$\sigma_8\Omega_m^{0.25}$	0.608 ± 0.012	$D_M(0.38)$	1537 ± 16
$\boldsymbol{\Omega_c h^2}$	0.1201 ± 0.0021	$\sigma_8/h^{0.5}$	0.989 ± 0.016	$H(0.51)$	89.51 ± 0.45
$\boldsymbol{100\theta_{MC}}$	1.04090 ± 0.00047	$r_{drag}h$	98.9 ± 1.6	$D_M(0.51)$	1990 ± 18
$\boldsymbol{\tau}$	$0.0550^{+0.0051}_{-0.0089}$	$\langle d^2\rangle^{1/2}$	2.433 ± 0.039	$H(0.61)$	$95.17^{+0.34}_{-0.38}$
$\boldsymbol{\ln(10^{10}A_s)}$	$3.045^{+0.013}_{-0.018}$	z_{re}	$7.77^{+0.57}_{-0.86}$	$D_M(0.61)$	2314 ± 20
$\boldsymbol{n_s}$	0.9644 ± 0.0060	$10^9 A_s$	$2.102^{+0.027}_{-0.038}$	$H(2.33)$	236.5 ± 1.3
$\boldsymbol{dn_s/d\ln k}$	-0.0070 ± 0.0084	$10^9 A_s e^{-2\tau}$	1.882 ± 0.014	$D_M(2.33)$	5770 ± 17
$\boldsymbol{r}$	< 0.0704	D_{40}	1231 ± 23	$f\sigma_8(0.15)$	0.460 ± 0.012
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	D_{220}	5702 ± 42	$\sigma_8(0.15)$	0.7487 ± 0.0072
$\boldsymbol{A_{100}^{PS}}$	245 ± 25	D_{810}	2536 ± 14	$f\sigma_8(0.38)$	0.4776 ± 0.0096
$\boldsymbol{A_{143}^{PS}}$	42 ± 9	D_{1420}	813.7 ± 5.3	$\sigma_8(0.38)$	$0.6631^{+0.0052}_{-0.0059}$
$\boldsymbol{A_{217}^{PS}}$	100 ± 10	D_{2000}	229.1 ± 2.0	$f\sigma_8(0.51)$	0.4755 ± 0.0082
$\boldsymbol{A_{217}^{CIB}}$	42^{+7}_{-8}	$n_{s,0.002}$	0.987 ± 0.027	$\sigma_8(0.51)$	$0.6203^{+0.0046}_{-0.0053}$
$\boldsymbol{A_{143}^{tSZ}}$	$3.6^{+1.7}_{-2.6}$	Y_P	$0.24534^{+0.00011}_{-0.000088}$	$f\sigma_8(0.61)$	0.4701 ± 0.0072
$\boldsymbol{r_{143\times217}^{PS}}$	0.64 ± 0.13	Y_P^{BBN}	$0.24666^{+0.00011}_{-0.000088}$	$\sigma_8(0.61)$	$0.5901^{+0.0042}_{-0.0050}$
$\boldsymbol{r_{143\times217}^{CIB}}$	> 0.482	10^5D/H	2.612 ± 0.045	$f\sigma_8(2.33)$	$0.2973^{+0.0020}_{-0.0025}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Age/Gyr	13.812 ± 0.038	$\sigma_8(2.33)$	$0.3063^{+0.0020}_{-0.0027}$
$\boldsymbol{A^{kSZ}}$	$5.2^{+4.0}_{-2.2}$	z_*	1090.11 ± 0.42	$r_{0.002}$	< 0.0671
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.20	r_*	144.51 ± 0.49	$r_{0.01}$	< 0.0681
$\boldsymbol{A_{143}^{dust}}$	0.98 ± 0.18	$100\theta_*$	1.04109 ± 0.00046	$\ln(10^{10}A_t)$	$-0.30^{+1.4}_{-0.61}$
$\boldsymbol{A_{217}^{dust}}$	0.97 ± 0.10	$D_M(z_*)$/Gpc	13.881 ± 0.045	r_{10}	< 0.0348
$\boldsymbol{A_{143\times217}^{dust}}$	1.03 ± 0.16	z_{drag}	1059.62 ± 0.51	$10^9 A_t$	< 0.148
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	r_{drag}	147.22 ± 0.50	$10^9 A_t e^{-2\tau}$	< 0.132
$\boldsymbol{c_{217}}$	1.0013 ± 0.0016	k_D	0.14062 ± 0.00057	f_{2000}^{143}	31.7 ± 3.4
H_0	67.21 ± 0.92	$100\theta_D$	0.16095 ± 0.00029	f_{2000}^{217}	108.1 ± 2.2
Ω_Λ	0.683 ± 0.013	z_{eq}	3401 ± 48	$f_{2000}^{143\times217}$	33.7 ± 2.4
Ω_m	0.317 ± 0.013	k_{eq}	0.01038 ± 0.00015	χ^2_{simall}	397.2 ± 1.7
$\Omega_m h^2$	0.1430 ± 0.0020	$100\theta_{eq}$	0.8132 ± 0.0089	χ^2_{lowl}	23.6 ± 2.2
$\Omega_m h^3$	0.09607 ± 0.00050	$100\theta_{s,eq}$	0.4494 ± 0.0046	$\chi^2_{CamSpec}$	7065.0 ± 5.7
σ_8	0.8108 ± 0.0087	$H(0.15)$	72.54 ± 0.79	χ^2_{prior}	7.7 ± 3.5
S_8	0.833 ± 0.024	$D_M(0.15)$	644.8 ± 7.9	χ^2_{CMB}	7485.8 ± 5.8
$\sigma_8\Omega_m^{0.5}$	0.456 ± 0.013	$H(0.38)$	82.74 ± 0.57		

$\bar{\chi}^2_{eff} = 7493.58$; $\Delta\bar{\chi}^2_{eff} = 2.32$; $R - 1 = 0.00549$

15.16 base_nrun_r_CamSpecHM_TT_lowl_lowE_post_BAO_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02230 ± 0.00022	$\sigma_8/h^{0.5}$	0.980 ± 0.011	$D_M(0.51)$	1979 ± 11
$\boldsymbol{\Omega_c h^2}$	0.1188 ± 0.0012	$r_{drag}h$	99.92 ± 0.95	$H(0.61)$	95.36 ± 0.26
$\boldsymbol{100\theta_{MC}}$	1.04106 ± 0.00041	$\langle d^2\rangle^{1/2}$	2.414 ± 0.029	$D_M(0.61)$	2303 ± 12
$\boldsymbol{\tau}$	$0.0560^{+0.0055}_{-0.0088}$	z_{re}	$7.83^{+0.61}_{-0.85}$	$H(2.33)$	235.74 ± 0.81
$\boldsymbol{\ln(10^{10}A_s)}$	$3.044^{+0.013}_{-0.018}$	$10^9 A_s$	$2.099^{+0.027}_{-0.038}$	$D_M(2.33)$	5762 ± 13
$\boldsymbol{n_s}$	0.9673 ± 0.0045	$10^9 A_s e^{-2\tau}$	1.877 ± 0.012	$f\sigma_8(0.15)$	0.4533 ± 0.0076
$\boldsymbol{dn_s/d\ln k}$	-0.0067 ± 0.0086	D_{40}	1227 ± 22	$\sigma_8(0.15)$	$0.7460^{+0.0059}_{-0.0067}$
$\boldsymbol{r}$	< 0.0760	D_{220}	5706 ± 41	$f\sigma_8(0.38)$	0.4721 ± 0.0064
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	D_{810}	2535 ± 14	$\sigma_8(0.38)$	$0.6615^{+0.0048}_{-0.0058}$
$\boldsymbol{A^{PS}_{100}}$	245 ± 25	D_{1420}	814.4 ± 5.2	$f\sigma_8(0.51)$	0.4710 ± 0.0057
$\boldsymbol{A^{PS}_{143}}$	42 ± 9	D_{2000}	229.3 ± 1.9	$\sigma_8(0.51)$	$0.6192^{+0.0044}_{-0.0054}$
$\boldsymbol{A^{PS}_{217}}$	100 ± 10	$n_{s,0.002}$	0.989 ± 0.027	$f\sigma_8(0.61)$	0.4663 ± 0.0052
$\boldsymbol{A^{CIB}_{217}}$	42 ± 8	Y_P	$0.245364^{+0.000093}_{-0.000079}$	$\sigma_8(0.61)$	$0.5893^{+0.0041}_{-0.0051}$
$\boldsymbol{A^{tSZ}_{143}}$	$3.7^{+1.7}_{-2.7}$	Y_P^{BBN}	$0.246691^{+0.000094}_{-0.000080}$	$f\sigma_8(2.33)$	$0.2972^{+0.0020}_{-0.0025}$
$\boldsymbol{r^{PS}_{143\times217}}$	0.64 ± 0.13	10^5D/H	2.599 ± 0.041	$\sigma_8(2.33)$	$0.3065^{+0.0021}_{-0.0026}$
$\boldsymbol{r^{CIB}_{143\times217}}$	> 0.479	Age/Gyr	13.795 ± 0.029	$r_{0.002}$	< 0.0733
$\boldsymbol{\xi^{tSZ\times CIB}}$	< 0.637	z_*	1089.91 ± 0.31	$r_{0.01}$	< 0.0740
$\boldsymbol{A^{kSZ}}$	$5.2^{+3.9}_{-2.3}$	r_*	144.78 ± 0.34	$\ln(10^{10}A_t)$	$-0.23^{+1.4}_{-0.60}$
$\boldsymbol{A^{dust}_{100}}$	1.01 ± 0.20	$100\theta_*$	1.04125 ± 0.00040	r_{10}	< 0.0380
$\boldsymbol{A^{dust}_{143}}$	0.98 ± 0.18	$D_M(z_*)$/Gpc	13.905 ± 0.033	$10^9 A_t$	< 0.160
$\boldsymbol{A^{dust}_{217}}$	0.97 ± 0.10	z_{drag}	1059.69 ± 0.50	$10^9 A_t e^{-2\tau}$	< 0.143
$\boldsymbol{A^{dust}_{143\times217}}$	1.03 ± 0.16	r_{drag}	147.48 ± 0.38	f^{143}_{2000}	31.5 ± 3.4
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	k_D	0.14041 ± 0.00050	f^{217}_{2000}	107.9 ± 2.2
$\boldsymbol{c_{217}}$	1.0013 ± 0.0016	$100\theta_D$	0.16091 ± 0.00029	$f^{143\times217}_{2000}$	33.5 ± 2.4
H_0	67.76 ± 0.55	z_{eq}	3373 ± 29	χ^2_{simall}	397.3 ± 1.8
Ω_Λ	0.6911 ± 0.0073	k_{eq}	0.010294 ± 0.000089	χ^2_{lowl}	23.3 ± 2.1
Ω_m	0.3089 ± 0.0073	$100\theta_{eq}$	0.8185 ± 0.0054	$\chi^2_{CamSpec}$	7065.3 ± 5.6
$\Omega_m h^2$	0.1418 ± 0.0012	$100\theta_{s,eq}$	0.4522 ± 0.0028	χ^2_{6DF}	0.051 ± 0.068
$\Omega_m h^3$	0.09606 ± 0.00050	$H(0.15)$	73.01 ± 0.48	χ^2_{MGS}	1.44 ± 0.54
σ_8	$0.8070^{+0.0068}_{-0.0076}$	$D_M(0.15)$	640.1 ± 4.7	$\chi^2_{DR12BAO}$	4.6 ± 1.5
S_8	0.819 ± 0.015	$H(0.38)$	83.07 ± 0.36	χ^2_{prior}	7.7 ± 3.5
$\sigma_8\Omega_m^{0.5}$	0.4485 ± 0.0081	$D_M(0.38)$	1527.1 ± 9.5	χ^2_{BAO}	6.1 ± 1.2
$\sigma_8\Omega_m^{0.25}$	0.6016 ± 0.0078	$H(0.51)$	89.76 ± 0.30	χ^2_{CMB}	7485.8 ± 5.7

$\bar{\chi}^2_{eff} = 7499.67$; $\Delta\bar{\chi}^2_{eff} = 2.35$; $R - 1 = 0.00851$

15.17 base_nrun_r_plikHM_TT_lowl_lowE_lensing

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022185	0.02223 ± 0.00023	$\sigma_8/h^{0.5}$	0.9883	0.988 ± 0.011	$H(0.51)$	89.464	89.49 ± 0.37
$\boldsymbol{\Omega_c h^2}$	0.11999	0.1201 ± 0.0016	$r_{\rm drag} h$	98.95	98.9 ± 1.2	$D_{\rm M}(0.51)$	1990.3	1990 ± 15
$\boldsymbol{100\theta_{MC}}$	1.040839	1.04084 ± 0.00044	$\langle d^2 \rangle^{1/2}$	2.4408	2.435 ± 0.028	$H(0.61)$	95.118	95.15 ± 0.31
$\boldsymbol{\tau}$	0.0528	0.0538 ± 0.0081	$z_{\rm re}$	7.56	7.64 ± 0.80	$D_{\rm M}(0.61)$	2315.4	2315 ± 16
$\boldsymbol{\ln(10^{10} A_s)}$	3.0406	3.044 ± 0.016	$10^9 A_{\rm s}$	2.0917	2.099 ± 0.033	$H(2.33)$	236.36	236.47 ± 0.97
$\boldsymbol{n_s}$	0.9646	0.9635 ± 0.0051	$10^9 A_{\rm s} e^{-2\tau}$	1.8821	1.885 ± 0.012	$D_{\rm M}(2.33)$	5772.5	5771 ± 15
$\boldsymbol{\mathrm{d}n_s/\mathrm{d}\ln k}$	-0.0010	-0.0062 ± 0.0080	D_{40}	1226.7	1235^{+20}_{-22}	$f\sigma_8(0.15)$	0.4599	0.4601 ± 0.0082
$\boldsymbol{r}$	0.0000	< 0.0626	D_{220}	5714.7	5716 ± 41	$\sigma_8(0.15)$	0.7480	0.7481 ± 0.0056
$\boldsymbol{y_{cal}}$	1.00026	1.0006 ± 0.0024	D_{810}	2537.2	2539 ± 13	$f\sigma_8(0.38)$	0.4771	0.4773 ± 0.0063
$\boldsymbol{A_{217}^{CIB}}$	49.7	49 ± 7	D_{1420}	815.3	814.4 ± 5.2	$\sigma_8(0.38)$	0.66252	0.6626 ± 0.0048
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.22	—	D_{2000}	229.84	229.2 ± 1.9	$f\sigma_8(0.51)$	0.4751	0.4752 ± 0.0054
$\boldsymbol{A_{143}^{tSZ}}$	6.99	4.9 ± 2.0	$n_{\rm s,0.002}$	0.9678	0.983 ± 0.025	$\sigma_8(0.51)$	0.61979	0.6198 ± 0.0045
$\boldsymbol{A_{100}^{PS}}$	255.9	266 ± 29	$Y_{\rm P}$	0.245320	$0.24533^{+0.00010}_{-0.000088}$	$f\sigma_8(0.61)$	0.46972	0.4698 ± 0.0048
$\boldsymbol{A_{143}^{PS}}$	48.4	50 ± 8	$Y_{\rm P}^{\rm BBN}$	0.246646	$0.24666^{+0.00010}_{-0.000088}$	$\sigma_8(0.61)$	0.58960	0.5896 ± 0.0044
$\boldsymbol{A_{143\times217}^{PS}}$	44.4	43^{+9}_{-10}	10^5D/H	2.6207	2.613 ± 0.044	$f\sigma_8(2.33)$	0.29709	0.2971 ± 0.0023
$\boldsymbol{A_{217}^{PS}}$	117.9	114 ± 10	Age/Gyr	13.8184	13.815 ± 0.034	$\sigma_8(2.33)$	0.30607	0.3061 ± 0.0025
$\boldsymbol{A^{kSZ}}$	0.02	< 5.31	z_*	1090.152	1090.11 ± 0.37	$r_{0.002}$	0.0000	< 0.0592
$\boldsymbol{A_{100}^{dust TT}}$	9.07	9.0 ± 1.8	r_*	144.575	144.52 ± 0.38	$r_{0.01}$	0.0000	< 0.0603
$\boldsymbol{A_{143}^{dust TT}}$	10.88	10.8 ± 1.8	$100\theta_*$	1.041046	1.04104 ± 0.00043	$\ln(10^{10} A_{\rm t})$	-8.76	$-0.41^{+1.4}_{-0.62}$
$\boldsymbol{A_{143\times217}^{dust TT}}$	19.29	18.3 ± 3.3	$D_{\rm M}(z_*)$/Gpc	13.8874	13.882 ± 0.036	r_{10}	0.0000	< 0.0307
$\boldsymbol{A_{217}^{dust TT}}$	94.3	93.2 ± 7.4	$z_{\rm drag}$	1059.51	1059.61 ± 0.51	$10^9 A_{\rm t}$	0.000	< 0.131
$\boldsymbol{c_{100}}$	0.99966	0.99961 ± 0.00061	$r_{\rm drag}$	147.299	147.23 ± 0.40	$10^9 A_t e^{-2\tau}$	0.000	< 0.118
$\boldsymbol{c_{217}}$	0.99830	0.99828 ± 0.00062	$k_{\rm D}$	0.14050	0.14061 ± 0.00050	f_{2000}^{143}	30.59	32.0 ± 3.2
H_0	67.18	67.18 ± 0.72	$100\theta_{\rm D}$	0.161005	0.16095 ± 0.00030	$f_{2000}^{143\times217}$	33.38	34.1 ± 2.2
Ω_Λ	0.6835	0.6831 ± 0.0098	$z_{\rm eq}$	3397.6	3401 ± 36	f_{2000}^{217}	107.82	108.6 ± 2.1
$\Omega_{\rm m}$	0.3165	0.3169 ± 0.0098	$k_{\rm eq}$	0.010370	0.01038 ± 0.00011	$\chi^2_{\rm lensing}$	8.89	9.69 ± 0.95
$\Omega_{\rm m} h^2$	0.14282	0.1430 ± 0.0015	$100\theta_{\rm eq}$	0.8136	0.8131 ± 0.0067	$\chi^2_{\rm simall}$	395.90	397.2 ± 1.7
$\Omega_{\rm m} h^3$	0.095945	0.09604 ± 0.00049	$100\theta_{\rm s,eq}$	0.44965	0.4494 ± 0.0035	$\chi^2_{\rm lowl}$	23.09	23.9 ± 2.3
σ_8	0.8100	0.8101 ± 0.0063	$H(0.15)$	72.51	72.52 ± 0.62	$\chi^2_{\rm plik}$	759.3	772.8 ± 5.5
S_8	0.8320	0.833 ± 0.016	$D_{\rm M}(0.15)$	645.0	645.0 ± 6.2	$\chi^2_{\rm prior}$	1.40	7.3 ± 3.7
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4557	0.4560 ± 0.0089	$H(0.38)$	82.701	82.72 ± 0.46	$\chi^2_{\rm CMB}$	1187.1	1203.5 ± 5.9
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.6076	0.6078 ± 0.0077	$D_{\rm M}(0.38)$	1537.0	1537 ± 12			

Best-fit $\chi^2_{\rm eff} = 1188.53$; $\Delta\chi^2_{\rm eff} = -0.03$; $\bar{\chi}^2_{\rm eff} = 1210.83$; $\Delta\bar{\chi}^2_{\rm eff} = 2.42$; $R - 1 = 0.00920$

$\chi^2_{\rm eff}$: CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.88 (Δ -0.02) simall_100x143_offlike5_EE_Aplanck_B: 395.90 (Δ 0.04) commander_dx12_v3_2_29: 23.09 (Δ -0.15) plik_rd12_HM_v22_TT: 759.26 (Δ -0.06)

15.18 base_nrun_r_plikHM_TT_lowl_lowE_lensing_post_BAO

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022206	0.02230 ± 0.00022	$r_{\rm drag} h$	99.62	99.73 ± 0.84	$H(0.61)$	95.235	95.32 ± 0.25
$\boldsymbol{\Omega_c h^2}$	0.11914	0.1191 ± 0.0011	$\langle d^2 \rangle^{1/2}$	2.4294	2.424 ± 0.024	$D_{\rm M}(0.61)$	2307.9	2305 ± 11
$\boldsymbol{100\theta_{MC}}$	1.040977	1.04099 ± 0.00041	$z_{\rm re}$	7.73	7.88 ± 0.75	$H(2.33)$	235.84	235.88 ± 0.72
$\boldsymbol{\tau}$	0.0545	$0.0564^{+0.0071}_{-0.0080}$	$10^9 A_{\rm s}$	2.0946	2.107 ± 0.033	$D_{\rm M}(2.33)$	5768.0	5764 ± 13
$\boldsymbol{\ln(10^{10} A_s)}$	3.0420	3.048 ± 0.016	$10^9 A_{\rm s} e^{-2\tau}$	1.8782	1.882 ± 0.011	$f\sigma_8(0.15)$	0.4557	0.4552 ± 0.0062
$\boldsymbol{n_s}$	0.96672	0.9660 ± 0.0042	D_{40}	1222.0	1232 ± 21	$\sigma_8(0.15)$	0.7471	0.7475 ± 0.0056
$\boldsymbol{{\rm d}n_s/{\rm d}\ln k}$	−0.00099	-0.0064 ± 0.0082	D_{220}	5713.6	5723 ± 40	$f\sigma_8(0.38)$	0.4740	0.4738 ± 0.0051
$\boldsymbol{r}$	0.0001	< 0.0672	D_{810}	2536.3	2540 ± 13	$\sigma_8(0.38)$	0.66226	0.6627 ± 0.0049
$\boldsymbol{y_{cal}}$	1.00043	1.0008 ± 0.0024	D_{1420}	815.6	815.4 ± 5.0	$f\sigma_8(0.51)$	0.47264	0.4725 ± 0.0046
$\boldsymbol{A_{217}^{CIB}}$	50.1	48 ± 7	D_{2000}	229.95	229.6 ± 1.9	$\sigma_8(0.51)$	0.61977	0.6202 ± 0.0046
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.14	—	$n_{\rm s,0.002}$	0.9699	0.986 ± 0.026	$f\sigma_8(0.61)$	0.46770	0.4676 ± 0.0042
$\boldsymbol{A_{143}^{tSZ}}$	7.13	4.9 ± 2.0	$Y_{\rm P}$	0.245328	$0.245362^{+0.000093}_{-0.000084}$	$\sigma_8(0.61)$	0.58973	0.5902 ± 0.0044
$\boldsymbol{A_{100}^{PS}}$	256.2	265 ± 28	$Y_{\rm P}^{\rm BBN}$	0.246655	$0.246689^{+0.000093}_{-0.000084}$	$f\sigma_8(2.33)$	0.29736	0.2976 ± 0.0022
$\boldsymbol{A_{143}^{PS}}$	47.0	50 ± 8	10^5D/H	2.6168	2.600 ± 0.041	$\sigma_8(2.33)$	0.30657	0.3069 ± 0.0024
$\boldsymbol{A_{143\times217}^{PS}}$	42.2	43 ± 9	Age/Gyr	13.8088	13.799 ± 0.030	$r_{0.002}$	0.0001	< 0.0644
$\boldsymbol{A_{217}^{PS}}$	117.2	115 ± 10	z_*	1090.055	1089.93 ± 0.31	$r_{0.01}$	0.0001	< 0.0652
$\boldsymbol{A^{kSZ}}$	0.00	< 5.21	r_*	144.778	144.73 ± 0.30	$\ln(10^{10} A_{\rm t})$	−6.05	$-0.34^{+1.4}_{-0.61}$
$\boldsymbol{A_{100}^{dust TT}}$	8.96	8.9 ± 1.9	$100\theta_*$	1.041174	1.04118 ± 0.00040	r_{10}	0.0001	< 0.0333
$\boldsymbol{A_{143}^{dust TT}}$	10.87	10.7 ± 1.8	$D_{\rm M}(z_*)$/Gpc	13.9053	13.901 ± 0.030	$10^9 A_{\rm t}$	0.000	< 0.142
$\boldsymbol{A_{143\times217}^{dust TT}}$	19.18	18.3 ± 3.3	$z_{\rm drag}$	1059.475	1059.70 ± 0.50	$10^9 A_t e^{-2\tau}$	0.000	< 0.127
$\boldsymbol{A_{217}^{dust TT}}$	94.1	93.2 ± 7.4	$r_{\rm drag}$	147.503	147.42 ± 0.34	f_{2000}^{143}	30.69	31.6 ± 3.2
$\boldsymbol{c_{100}}$	0.99962	0.99962 ± 0.00061	$k_{\rm D}$	0.140310	0.14046 ± 0.00047	$f_{2000}^{143\times217}$	33.40	33.9 ± 2.2
$\boldsymbol{c_{217}}$	0.99827	0.99828 ± 0.00062	$100\theta_{\rm D}$	0.161021	0.16090 ± 0.00029	f_{2000}^{217}	107.88	108.4 ± 2.1
H_0	67.54	67.65 ± 0.50	$z_{\rm eq}$	3377.8	3378 ± 26	$\chi^2_{\rm lensing}$	8.96	9.49 ± 0.78
Ω_Λ	0.6887	0.6896 ± 0.0066	$k_{\rm eq}$	0.010309	0.010310 ± 0.000078	$\chi^2_{\rm simall}$	396.06	397.5 ± 1.9
$\Omega_{\rm m}$	0.3113	0.3104 ± 0.0066	$100\theta_{\rm eq}$	0.81726	0.8175 ± 0.0047	$\chi^2_{\rm lowl}$	22.68	23.5 ± 2.2
$\Omega_{\rm m} h^2$	0.14200	0.1420 ± 0.0011	$100\theta_{\rm s,eq}$	0.45158	0.4516 ± 0.0024	$\chi^2_{\rm plik}$	759.8	773.1 ± 5.5
$\Omega_{\rm m} h^3$	0.095900	0.09606 ± 0.00050	$H(0.15)$	72.812	72.91 ± 0.44	$\chi^2_{\rm 6DF}$	0.0312	0.054 ± 0.068
σ_8	0.8085	0.8088 ± 0.0062	$D_{\rm M}(0.15)$	641.92	641.0 ± 4.3	$\chi^2_{\rm MGS}$	1.217	1.32 ± 0.47
S_8	0.8236	0.823 ± 0.012	$H(0.38)$	82.912	83.00 ± 0.34	$\chi^2_{\rm DR12BAO}$	4.41	4.7 ± 1.5
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4511	0.4506 ± 0.0066	$D_{\rm M}(0.38)$	1531.0	1528.9 ± 8.8	$\chi^2_{\rm prior}$	1.57	7.3 ± 3.7
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.6039	0.6037 ± 0.0063	$H(0.51)$	89.622	89.71 ± 0.28	$\chi^2_{\rm CMB}$	1187.5	1203.5 ± 5.7
$\sigma_8/h^{0.5}$	0.9838	0.9834 ± 0.0090	$D_{\rm M}(0.51)$	1983.3	1981 ± 10	$\chi^2_{\rm BAO}$	5.66	6.1 ± 1.2

Best-fit $\chi^2_{\rm eff} = 1194.69$; $\Delta\chi^2_{\rm eff} = 0.01$; $\bar{\chi}^2_{\rm eff} = 1216.99$; $\Delta\bar{\chi}^2_{\rm eff} = 2.26$; $R - 1 = 0.01565$

$\chi^2_{\rm eff}$: BAO - 6DF: 0.03 (Δ 0.00) MGS: 1.22 (Δ 0.00) DR12BAO: 4.41 (Δ 0.04) CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.96 (Δ 0.08) simall_100x143_offlike5_EE_Aplanck_l
396.06 (Δ -0.03) commander_dx12_v3_2_29: 22.68 (Δ -0.28) plik_rd12_HM_v22_TT: 759.76 (Δ -0.04)

15.19 base_nrun_r_plikHM_TT_lowl_lowE_lensing_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02224 ± 0.00023	$\sigma_8/h^{0.5}$	0.989 ± 0.011	$H(0.51)$	89.51 ± 0.36
$\boldsymbol{\Omega_c h^2}$	0.1200 ± 0.0015	$r_{\rm drag} h$	99.0 ± 1.2	$D_{\rm M}(0.51)$	1989 ± 14
$\boldsymbol{100\theta_{MC}}$	1.04085 ± 0.00044	$\langle d^2 \rangle^{1/2}$	2.436 ± 0.028	$H(0.61)$	95.17 ± 0.30
$\boldsymbol{\tau}$	$0.0550^{+0.0052}_{-0.0086}$	$z_{\rm re}$	$7.77^{+0.57}_{-0.83}$	$D_{\rm M}(0.61)$	2314 ± 15
$\boldsymbol{\ln(10^{10} A_s)}$	$3.046^{+0.012}_{-0.016}$	$10^9 A_{\rm s}$	$2.104^{+0.025}_{-0.034}$	$H(2.33)$	236.41 ± 0.95
$\boldsymbol{n_s}$	0.9638 ± 0.0050	$10^9 A_{\rm s} e^{-2\tau}$	1.884 ± 0.012	$D_{\rm M}(2.33)$	5770 ± 15
$\boldsymbol{{\rm d}n_s/{\rm d}\ln k}$	-0.0064 ± 0.0080	D_{40}	1234 ± 21	$f\sigma_8(0.15)$	0.4600 ± 0.0082
$\boldsymbol{r}$	< 0.0632	D_{220}	5716 ± 41	$\sigma_8(0.15)$	0.7487 ± 0.0052
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0025	D_{810}	2539 ± 13	$f\sigma_8(0.38)$	0.4773 ± 0.0063
$\boldsymbol{A^{CIB}_{217}}$	49 ± 7	D_{1420}	814.4 ± 5.2	$\sigma_8(0.38)$	$0.6632^{+0.0041}_{-0.0047}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{2000}	229.3 ± 1.9	$f\sigma_8(0.51)$	0.4754 ± 0.0054
$\boldsymbol{A^{tSZ}_{143}}$	4.9 ± 2.0	$n_{\rm s,0.002}$	0.984 ± 0.025	$\sigma_8(0.51)$	$0.6204^{+0.0038}_{-0.0045}$
$\boldsymbol{A^{PS}_{100}}$	266 ± 29	$Y_{\rm P}$	$0.24534^{+0.00010}_{-0.000087}$	$f\sigma_8(0.61)$	0.4700 ± 0.0048
$\boldsymbol{A^{PS}_{143}}$	50 ± 8	$Y^{\rm BBN}_{\rm P}$	$0.24666^{+0.00010}_{-0.000088}$	$\sigma_8(0.61)$	$0.5902^{+0.0035}_{-0.0043}$
$\boldsymbol{A^{PS}_{143\times217}}$	43^{+9}_{-10}	10^5D/H	2.611 ± 0.044	$f\sigma_8(2.33)$	$0.2974^{+0.0018}_{-0.0023}$
$\boldsymbol{A^{PS}_{217}}$	114 ± 10	Age/Gyr	13.813 ± 0.034	$\sigma_8(2.33)$	$0.3064^{+0.0020}_{-0.0025}$
$\boldsymbol{A^{kSZ}}$	< 5.30	z_*	1090.09 ± 0.36	$r_{0.002}$	< 0.0599
$\boldsymbol{A^{dustTT}_{100}}$	9.0 ± 1.8	r_*	144.54 ± 0.37	$r_{0.01}$	< 0.0610
$\boldsymbol{A^{dustTT}_{143}}$	10.8 ± 1.8	$100\theta_*$	1.04105 ± 0.00043	$\ln(10^{10} A_{\rm t})$	$-0.40^{+1.4}_{-0.63}$
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.3 ± 3.3	$D_{\rm M}(z_*)$/Gpc	13.884 ± 0.035	r_{10}	< 0.0311
$\boldsymbol{A^{dustTT}_{217}}$	93.2 ± 7.4	$z_{\rm drag}$	1059.62 ± 0.51	$10^9 A_{\rm t}$	< 0.133
$\boldsymbol{c_{100}}$	0.99961 ± 0.00061	$r_{\rm drag}$	147.25 ± 0.40	$10^9 A_t e^{-2\tau}$	< 0.119
$\boldsymbol{c_{217}}$	0.99828 ± 0.00062	$k_{\rm D}$	0.14060 ± 0.00050	f^{143}_{2000}	32.0 ± 3.2
H_0	67.23 ± 0.70	$100\theta_{\rm D}$	0.16094 ± 0.00030	$f^{143\times217}_{2000}$	34.1 ± 2.2
Ω_Λ	0.6838 ± 0.0095	$z_{\rm eq}$	3399 ± 35	f^{217}_{2000}	108.6 ± 2.0
$\Omega_{\rm m}$	0.3162 ± 0.0095	$k_{\rm eq}$	0.01037 ± 0.00011	$\chi^2_{\rm lensing}$	9.67 ± 0.95
$\Omega_{\rm m} h^2$	0.1429 ± 0.0015	$100\theta_{\rm eq}$	0.8136 ± 0.0066	$\chi^2_{\rm simall}$	397.1 ± 1.7
$\Omega_{\rm m} h^3$	0.09604 ± 0.00049	$100\theta_{\rm s,eq}$	0.4496 ± 0.0034	$\chi^2_{\rm lowl}$	23.8 ± 2.3
σ_8	0.8107 ± 0.0060	$H(0.15)$	72.56 ± 0.60	$\chi^2_{\rm plik}$	772.7 ± 5.5
S_8	0.832 ± 0.016	$D_{\rm M}(0.15)$	644.5 ± 6.0	$\chi^2_{\rm prior}$	7.3 ± 3.7
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4559 ± 0.0089	$H(0.38)$	82.75 ± 0.45	$\chi^2_{\rm CMB}$	1203.3 ± 5.8
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.6079 ± 0.0077	$D_{\rm M}(0.38)$	1536 ± 12		

$\bar{\chi}^2_{\rm eff} = 1210.63$; $\Delta\bar{\chi}^2_{\rm eff} = 2.47$; $R - 1 = 0.00844$

15.20 base_nrun_r_plikHM_TT_lowl_lowE_lensing_post_BAO_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02230 ± 0.00022	$r_{\rm drag} h$	99.75 ± 0.84	$H(0.61)$	95.32 ± 0.25
$\boldsymbol{\Omega_c h^2}$	0.1190 ± 0.0011	$\langle d^2 \rangle^{1/2}$	2.424 ± 0.024	$D_{\rm M}(0.61)$	2305 ± 11
$\boldsymbol{100\theta_{MC}}$	1.04099 ± 0.00041	$z_{\rm re}$	$7.94^{+0.64}_{-0.78}$	$H(2.33)$	235.86 ± 0.71
$\boldsymbol{\tau}$	$0.0570^{+0.0060}_{-0.0082}$	$10^9 A_{\rm s}$	$2.109^{+0.027}_{-0.034}$	$D_{\rm M}(2.33)$	5763 ± 13
$\boldsymbol{\ln(10^{10} A_s)}$	$3.049^{+0.013}_{-0.016}$	$10^9 A_{\rm s} e^{-2\tau}$	1.882 ± 0.011	$f\sigma_8(0.15)$	0.4553 ± 0.0061
$\boldsymbol{n_s}$	0.9660 ± 0.0042	D_{40}	1232 ± 21	$\sigma_8(0.15)$	0.7478 ± 0.0053
$\boldsymbol{{\rm d}n_s/{\rm d}\ln k}$	-0.0065 ± 0.0082	D_{220}	5723 ± 40	$f\sigma_8(0.38)$	0.4739 ± 0.0051
$\boldsymbol{r}$	< 0.0676	D_{810}	2540 ± 13	$\sigma_8(0.38)$	$0.6630^{+0.0043}_{-0.0049}$
$\boldsymbol{y_{cal}}$	1.0008 ± 0.0024	D_{1420}	815.4 ± 5.0	$f\sigma_8(0.51)$	0.4727 ± 0.0045
$\boldsymbol{A^{CIB}_{217}}$	48 ± 7	D_{2000}	229.6 ± 1.9	$\sigma_8(0.51)$	$0.6205^{+0.0040}_{-0.0046}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$n_{\rm s,0.002}$	0.987 ± 0.026	$f\sigma_8(0.61)$	0.4678 ± 0.0041
$\boldsymbol{A^{tSZ}_{143}}$	5.0 ± 2.0	$Y_{\rm P}$	$0.245363^{+0.000093}_{-0.000083}$	$\sigma_8(0.61)$	$0.5905^{+0.0038}_{-0.0044}$
$\boldsymbol{A^{PS}_{100}}$	265 ± 28	$Y_{\rm P}^{\rm BBN}$	$0.246690^{+0.000093}_{-0.000084}$	$f\sigma_8(2.33)$	$0.2978^{+0.0019}_{-0.0023}$
$\boldsymbol{A^{PS}_{143}}$	50 ± 8	10^5D/H	2.600 ± 0.041	$\sigma_8(2.33)$	$0.3071^{+0.0020}_{-0.0025}$
$\boldsymbol{A^{PS}_{143\times217}}$	43 ± 9	Age/Gyr	13.798 ± 0.029	$r_{0.002}$	< 0.0648
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	z_*	1089.93 ± 0.31	$r_{0.01}$	< 0.0657
$\boldsymbol{A^{kSZ}}$	< 5.22	r_*	144.73 ± 0.30	$\ln(10^{10} A_{\rm t})$	$-0.33^{+1.4}_{-0.61}$
$\boldsymbol{A^{dust TT}_{100}}$	8.9 ± 1.9	$100\theta_*$	1.04118 ± 0.00040	r_{10}	< 0.0335
$\boldsymbol{A^{dust TT}_{143}}$	10.7 ± 1.8	$D_{\rm M}(z_*)$/Gpc	13.901 ± 0.030	$10^9 A_{\rm t}$	< 0.143
$\boldsymbol{A^{dust TT}_{143\times217}}$	18.3 ± 3.3	$z_{\rm drag}$	1059.70 ± 0.50	$10^9 A_t e^{-2\tau}$	< 0.127
$\boldsymbol{A^{dust TT}_{217}}$	93.2 ± 7.4	$r_{\rm drag}$	147.43 ± 0.34	f^{143}_{2000}	31.7 ± 3.2
$\boldsymbol{c_{100}}$	0.99962 ± 0.00062	$k_{\rm D}$	0.14046 ± 0.00047	$f^{143\times217}_{2000}$	33.9 ± 2.2
$\boldsymbol{c_{217}}$	0.99828 ± 0.00062	$100\theta_{\rm D}$	0.16090 ± 0.00029	f^{217}_{2000}	108.4 ± 2.1
H_0	67.66 ± 0.50	$z_{\rm eq}$	3378 ± 26	$\chi^2_{\rm lensing}$	9.46 ± 0.74
Ω_Λ	0.6898 ± 0.0065	$k_{\rm eq}$	0.010309 ± 0.000078	$\chi^2_{\rm simall}$	397.4 ± 1.9
$\Omega_{\rm m}$	0.3102 ± 0.0065	$100\theta_{\rm eq}$	0.8176 ± 0.0047	$\chi^2_{\rm lowl}$	23.5 ± 2.1
$\Omega_{\rm m} h^2$	0.1420 ± 0.0011	$100\theta_{\rm s,eq}$	0.4517 ± 0.0024	$\chi^2_{\rm plik}$	773.0 ± 5.5
$\Omega_{\rm m} h^3$	0.09606 ± 0.00050	$H(0.15)$	72.93 ± 0.44	$\chi^2_{\rm 6DF}$	0.052 ± 0.066
σ_8	0.8091 ± 0.0059	$D_{\rm M}(0.15)$	640.9 ± 4.3	$\chi^2_{\rm MGS}$	1.33 ± 0.47
S_8	0.823 ± 0.012	$H(0.38)$	83.01 ± 0.33	$\chi^2_{\rm DR12BAO}$	4.7 ± 1.4
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4507 ± 0.0066	$D_{\rm M}(0.38)$	1528.7 ± 8.7	$\chi^2_{\rm prior}$	7.3 ± 3.7
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.6039 ± 0.0062	$H(0.51)$	89.71 ± 0.28	$\chi^2_{\rm CMB}$	1203.4 ± 5.7
$\sigma_8/h^{0.5}$	0.9837 ± 0.0089	$D_{\rm M}(0.51)$	1981 ± 10	$\chi^2_{\rm BAO}$	6.1 ± 1.1

$\bar{\chi}^2_{\rm eff} = 1216.87$; $\Delta\bar{\chi}^2_{\rm eff} = 2.29$; $R - 1 = 0.01475$

15.21 base_nrun_r_plikHM_TTTEEE_lowl_lowE_lensing

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022398	0.02243 ± 0.00015	σ_8	0.8121	0.8109 ± 0.0060	$H(0.38)$	82.860	82.93 ± 0.34
$\boldsymbol{\Omega_c h^2}$	0.12015	0.1199 ± 0.0012	S_8	0.8333	0.830 ± 0.013	$D_M(0.38)$	1533.9	1531.9 ± 9.3
$\boldsymbol{100\theta_{MC}}$	1.040936	1.04093 ± 0.00030	$\sigma_8\Omega_m^{0.5}$	0.4564	0.4547 ± 0.0069	$H(0.51)$	89.628	89.69 ± 0.27
$\boldsymbol{\tau}$	0.0546	0.0561 ± 0.0077	$\sigma_8\Omega_m^{0.25}$	0.6088	0.6072 ± 0.0064	$D_M(0.51)$	1986.3	1984 ± 11
$\boldsymbol{\ln(10^{10}A_s)}$	3.0464	3.049 ± 0.015	$\sigma_8/h^{0.5}$	0.9897	0.9874 ± 0.0090	$H(0.61)$	95.286	95.33 ± 0.22
$\boldsymbol{n_s}$	0.96542	0.9647 ± 0.0044	$r_{drag}h$	98.99	99.18 ± 0.93	$D_M(0.61)$	2310.7	2308 ± 12
$\boldsymbol{dn_s/d\ln k}$	−0.0025	-0.0085 ± 0.0073	$\langle d^2\rangle^{1/2}$	2.4423	2.431 ± 0.024	$H(2.33)$	236.69	236.55 ± 0.72
$\boldsymbol{r}$	0.0007	< 0.0778	z_{re}	7.71	7.83 ± 0.76	$D_M(2.33)$	5762.6	5761 ± 10
$\boldsymbol{y_{cal}}$	1.00064	1.0007 ± 0.0025	$10^9 A_s$	2.1039	$2.110^{+0.030}_{-0.033}$	$f\sigma_8(0.15)$	0.4606	0.4590 ± 0.0064
$\boldsymbol{A_{217}^{CIB}}$	47.4	48 ± 7	$10^9 A_s e^{-2\tau}$	1.8862	1.886 ± 0.011	$\sigma_8(0.15)$	0.7500	0.7490 ± 0.0054
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.47	—	D_{40}	1224.7	1233^{+19}_{-21}	$f\sigma_8(0.38)$	0.4780	0.4767 ± 0.0052
$\boldsymbol{A_{143}^{tSZ}}$	7.12	5.2 ± 2.0	D_{220}	5732.5	5729 ± 39	$\sigma_8(0.38)$	0.66430	0.6636 ± 0.0048
$\boldsymbol{A_{100}^{PS}}$	251.3	264 ± 28	D_{810}	2542.8	2542 ± 13	$f\sigma_8(0.51)$	0.47611	0.4749 ± 0.0046
$\boldsymbol{A_{143}^{PS}}$	49.3	48 ± 8	D_{1420}	818.14	816.2 ± 5.0	$\sigma_8(0.51)$	0.62148	0.6209 ± 0.0045
$\boldsymbol{A_{143\times217}^{PS}}$	49.2	43 ± 9	D_{2000}	231.06	230.0 ± 1.8	$f\sigma_8(0.61)$	0.47077	0.4697 ± 0.0042
$\boldsymbol{A_{217}^{PS}}$	120.2	115 ± 10	$n_{s,0.002}$	0.9735	0.992 ± 0.023	$\sigma_8(0.61)$	0.59123	0.5907 ± 0.0043
$\boldsymbol{A^{kSZ}}$	0.00	< 5.03	Y_P	0.245407	0.245416 ± 0.000059	$f\sigma_8(2.33)$	0.29793	0.2977 ± 0.0022
$\boldsymbol{A_{100}^{dust TT}}$	8.87	9.0 ± 1.8	Y_P^{BBN}	0.246733	0.246743 ± 0.000059	$\sigma_8(2.33)$	0.30696	0.3068 ± 0.0024
$\boldsymbol{A_{143}^{dust TT}}$	11.05	11.0 ± 1.8	10^5D/H	2.5802	2.575 ± 0.028	$r_{0.002}$	0.0006	< 0.0752
$\boldsymbol{A_{143\times217}^{dust TT}}$	19.92	18.7 ± 3.3	Age/Gyr	13.7949	13.791 ± 0.023	$r_{0.01}$	0.0006	< 0.0756
$\boldsymbol{A_{217}^{dust TT}}$	95.0	93.5 ± 7.4	z_*	1089.898	1089.84 ± 0.26	$\ln(10^{10}A_t)$	−4.27	$-0.17^{+1.3}_{-0.52}$
$\boldsymbol{A_{100}^{dust TE}}$	0.1141	0.115 ± 0.038	r_*	144.371	144.41 ± 0.27	r_{10}	0.0003	< 0.0391
$\boldsymbol{A_{100\times143}^{dust TE}}$	0.1348	0.136 ± 0.029	$100\theta_*$	1.041112	1.04111 ± 0.00030	$10^9 A_t$	0.001	< 0.164
$\boldsymbol{A_{100\times217}^{dust TE}}$	0.481	0.479 ± 0.085	$D_M(z_*)$/Gpc	13.8670	13.871 ± 0.025	$10^9 A_t e^{-2\tau}$	0.001	< 0.147
$\boldsymbol{A_{143}^{dust TE}}$	0.224	0.226 ± 0.054	z_{drag}	1060.009	1060.06 ± 0.32	f_{2000}^{143}	29.32	31.1 ± 3.1
$\boldsymbol{A_{143\times217}^{dust TE}}$	0.666	0.664 ± 0.080	r_{drag}	147.021	147.05 ± 0.27	$f_{2000}^{143\times217}$	32.38	33.4 ± 2.2
$\boldsymbol{A_{217}^{dust TE}}$	2.085	2.08 ± 0.27	k_D	0.140963	0.14095 ± 0.00032	f_{2000}^{217}	106.91	108.0 ± 2.0
$\boldsymbol{c_{100}}$	0.99973	0.99968 ± 0.00061	$100\theta_D$	0.160717	0.16068 ± 0.00019	$\chi^2_{lensing}$	8.96	9.56 ± 0.76
$\boldsymbol{c_{217}}$	0.99820	0.99822 ± 0.00062	z_{eq}	3406.4	3401 ± 27	χ^2_{simall}	396.06	397.4 ± 1.8
H_0	67.33	67.44 ± 0.54	k_{eq}	0.010397	0.010381 ± 0.000082	χ^2_{lowl}	22.66	23.4 ± 1.9
Ω_Λ	0.6841	0.6856 ± 0.0074	$100\theta_{eq}$	0.8126	0.8137 ± 0.0051	χ^2_{plik}	2345.1	2360.6 ± 5.9
Ω_m	0.3159	0.3144 ± 0.0074	$100\theta_{s,eq}$	0.44901	0.4495 ± 0.0026	χ^2_{prior}	1.66	11.6 ± 4.6
$\Omega_m h^2$	0.14319	0.1430 ± 0.0011	$H(0.15)$	72.661	72.76 ± 0.46	χ^2_{CMB}	2772.8	2791.0 ± 6.2
$\Omega_m h^3$	0.096409	0.09642 ± 0.00031	$D_M(0.15)$	643.59	642.6 ± 4.6			

Best-fit $\chi^2_{eff} = 2774.45$; $\Delta\chi^2_{eff} = -0.18$; $\bar{\chi}^2_{eff} = 2802.59$; $\Delta\bar{\chi}^2_{eff} = 1.90$; $R - 1 = 0.00905$

χ^2_{eff}: CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.96 (Δ 0.09) simall_100x143_offlike5_EE_Aplanck_B: 396.06 (Δ 0.01) commander_dx12_v3_2_29: 22.66 (Δ -0.59) plik_rd12_HM_v22b_TTTEEE: 2345.10 (Δ 0.17)

15.22 base_nrun_r_plikHM_TTTEEE_lowl_lowE_lensing_post_BAO

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022442	0.02248 ± 0.00014	S_8	0.8260	0.824 ± 0.011	$H(0.51)$	89.767	89.82 ± 0.22
$\boldsymbol{\Omega_c h^2}$	0.11941	0.11925 ± 0.00094	$\sigma_8 \Omega_m^{0.5}$	0.4524	0.4513 ± 0.0058	$D_M(0.51)$	1980.2	1978.2 ± 8.6
$\boldsymbol{100\theta_{MC}}$	1.040977	1.04101 ± 0.00029	$\sigma_8 \Omega_m^{0.25}$	0.6056	0.6046 ± 0.0057	$H(0.61)$	95.390	95.44 ± 0.19
$\boldsymbol{\tau}$	0.0569	$0.0579^{+0.0067}_{-0.0076}$	$\sigma_8/h^{0.5}$	0.9857	0.9843 ± 0.0083	$D_M(0.61)$	2304.2	2302.1 ± 9.3
$\boldsymbol{\ln(10^{10} A_s)}$	3.0493	$3.052^{+0.014}_{-0.016}$	$r_{drag} h$	99.54	99.69 ± 0.73	$H(2.33)$	236.25	236.18 ± 0.58
$\boldsymbol{n_s}$	0.96642	0.9664 ± 0.0040	$\langle d^2 \rangle^{1/2}$	2.4332	2.424 ± 0.023	$D_M(2.33)$	5758.5	5756.2 ± 9.1
$\boldsymbol{dn_s/d\ln k}$	-0.0037	-0.0084 ± 0.0074	z_{re}	7.92	7.99 ± 0.73	$f\sigma_8(0.15)$	0.4570	0.4560 ± 0.0054
$\boldsymbol{r}$	0.0004	< 0.0813	$10^9 A_s$	2.1101	$2.115^{+0.029}_{-0.034}$	$\sigma_8(0.15)$	0.7491	0.7487 ± 0.0054
$\boldsymbol{y_{cal}}$	1.00069	1.0008 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.8831	1.884 ± 0.011	$f\sigma_8(0.38)$	0.47538	0.4746 ± 0.0046
$\boldsymbol{A_{217}^{CIB}}$	49.0	48 ± 7	D_{40}	1219.6	1231^{+19}_{-22}	$\sigma_8(0.38)$	0.66405	0.6638 ± 0.0048
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.19	—	D_{220}	5736.1	5733 ± 39	$f\sigma_8(0.51)$	0.47399	0.4733 ± 0.0042
$\boldsymbol{A_{143}^{tSZ}}$	7.30	5.2 ± 2.0	D_{810}	2541.5	2542 ± 13	$\sigma_8(0.51)$	0.62144	0.6212 ± 0.0045
$\boldsymbol{A_{100}^{PS}}$	253.3	263 ± 28	D_{1420}	817.64	816.8 ± 4.9	$f\sigma_8(0.61)$	0.46901	0.4684 ± 0.0039
$\boldsymbol{A_{143}^{PS}}$	45.1	48 ± 8	D_{2000}	230.85	230.3 ± 1.8	$\sigma_8(0.61)$	0.59132	0.5912 ± 0.0043
$\boldsymbol{A_{143\times217}^{PS}}$	41.9	42 ± 9	$n_{s,0.002}$	0.9785	0.993 ± 0.023	$f\sigma_8(2.33)$	0.29815	0.2981 ± 0.0022
$\boldsymbol{A_{217}^{PS}}$	117.4	114 ± 10	Y_P	0.245423	0.245434 ± 0.000054	$\sigma_8(2.33)$	0.30738	$0.3074^{+0.0022}_{-0.0024}$
$\boldsymbol{A^{kSZ}}$	0.00	< 4.92	Y_P^{BBN}	0.246750	0.246761 ± 0.000054	$r_{0.002}$	0.0004	< 0.0793
$\boldsymbol{A_{100}^{dust TT}}$	8.93	9.0 ± 1.8	10^5D/H	2.5722	2.567 ± 0.026	$r_{0.01}$	0.0004	< 0.0793
$\boldsymbol{A_{143}^{dust TT}}$	11.01	11.0 ± 1.8	Age/Gyr	13.7860	13.781 ± 0.021	$\ln(10^{10} A_t)$	-4.68	$-0.13^{+1.3}_{-0.51}$
$\boldsymbol{A_{143\times217}^{dust TT}}$	19.41	18.6 ± 3.3	z_*	1089.777	1089.72 ± 0.22	r_{10}	0.0002	< 0.0411
$\boldsymbol{A_{217}^{dust TT}}$	94.4	93.4 ± 7.4	r_*	144.529	144.54 ± 0.22	$10^9 A_t$	0.001	< 0.172
$\boldsymbol{A_{100}^{dust TE}}$	0.1144	0.115 ± 0.039	$100\theta_*$	1.041153	1.04118 ± 0.00028	$10^9 A_t e^{-2\tau}$	0.001	< 0.153
$\boldsymbol{A_{100\times143}^{dust TE}}$	0.1358	0.136 ± 0.030	$D_M(z_*)$/Gpc	13.8817	13.883 ± 0.022	f_{2000}^{143}	29.62	30.8 ± 3.1
$\boldsymbol{A_{100\times217}^{dust TE}}$	0.481	0.478 ± 0.084	z_{drag}	1060.047	1060.12 ± 0.31	$f_{2000}^{143\times217}$	32.52	33.1 ± 2.1
$\boldsymbol{A_{143}^{dust TE}}$	0.225	0.225 ± 0.054	r_{drag}	147.169	147.17 ± 0.24	f_{2000}^{217}	107.22	107.9 ± 2.0
$\boldsymbol{A_{143\times217}^{dust TE}}$	0.663	0.664 ± 0.079	k_D	0.140841	0.14086 ± 0.00030	$\chi^2_{lensing}$	8.840	9.42 ± 0.64
$\boldsymbol{A_{217}^{dust TE}}$	2.072	2.07 ± 0.27	$100\theta_D$	0.160687	0.16065 ± 0.00018	χ^2_{simall}	396.45	397.7 ± 2.0
$\boldsymbol{c_{100}}$	0.99971	0.99968 ± 0.00062	z_{eq}	3389.8	3387 ± 21	χ^2_{lowl}	22.19	23.2 ± 1.9
$\boldsymbol{c_{217}}$	0.99820	0.99822 ± 0.00062	k_{eq}	0.010346	0.010337 ± 0.000065	χ^2_{plik}	2345.4	2360.6 ± 5.9
H_0	67.640	67.73 ± 0.43	$100\theta_{eq}$	0.81577	0.8164 ± 0.0040	χ^2_{6DF}	0.0373	0.049 ± 0.058
Ω_Λ	0.6885	0.6896 ± 0.0057	$100\theta_{s,eq}$	0.45062	0.4509 ± 0.0021	χ^2_{MGS}	1.156	1.29 ± 0.40
Ω_m	0.3115	0.3104 ± 0.0057	$H(0.15)$	72.925	73.01 ± 0.37	$\chi^2_{DR12BAO}$	4.62	4.7 ± 1.3
$\Omega_m h^2$	0.14250	0.14237 ± 0.00090	$D_M(0.15)$	640.94	640.1 ± 3.6	χ^2_{prior}	1.89	11.7 ± 4.6
$\Omega_m h^3$	0.096383	0.09643 ± 0.00031	$H(0.38)$	83.044	83.11 ± 0.27	χ^2_{CMB}	2772.8	2790.9 ± 6.2
σ_8	0.8107	0.8101 ± 0.0059	$D_M(0.38)$	1528.6	1527.0 ± 7.3	χ^2_{BAO}	5.81	6.1 ± 1.0

Best-fit $\chi^2_{eff} = 2780.54$; $\Delta\chi^2_{eff} = -0.16$; $\bar{\chi}^2_{eff} = 2808.64$; $\Delta\bar{\chi}^2_{eff} = 1.79$; $R - 1 = 0.01143$

χ^2_{eff}: BAO - 6DF: 0.04 (Δ 0.01) MGS: 1.16 (Δ -0.06) DR12BAO: 4.62 (Δ 0.20) CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.84 (Δ 0.11) simall_100x143_offlike5_EE_Aplanck_ 396.45 (Δ -0.07) commander_dx12_v3_2_29: 22.19 (Δ -0.71) plik_rd12_HM_v22b_TTTEEE: 2345.36 (Δ 0.04)

15.23 base_nrun_r_plikHM_TTTEEE_lowl_lowE_lensing_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02243 ± 0.00015	σ_8	$0.8113^{+0.0054}_{-0.0060}$	$H(0.38)$	82.95 ± 0.34
$\boldsymbol{\Omega_c h^2}$	0.1199 ± 0.0012	S_8	0.830 ± 0.013	$D_M(0.38)$	1531.6 ± 9.2
$\boldsymbol{100\theta_{MC}}$	1.04094 ± 0.00030	$\sigma_8\Omega_m^{0.5}$	0.4547 ± 0.0070	$H(0.51)$	89.70 ± 0.27
$\boldsymbol{\tau}$	$0.0568^{+0.0058}_{-0.0080}$	$\sigma_8\Omega_m^{0.25}$	0.6073 ± 0.0063	$D_M(0.51)$	1984 ± 11
$\boldsymbol{\ln(10^{10}A_s)}$	$3.051^{+0.012}_{-0.016}$	$\sigma_8/h^{0.5}$	0.9877 ± 0.0089	$H(0.61)$	95.34 ± 0.22
$\boldsymbol{n_s}$	0.9649 ± 0.0044	$r_{drag}h$	99.21 ± 0.92	$D_M(0.61)$	2308 ± 12
$\boldsymbol{dn_s/d\ln k}$	-0.0086 ± 0.0073	$\langle d^2\rangle^{1/2}$	2.431 ± 0.024	$H(2.33)$	236.53 ± 0.71
$\boldsymbol{r}$	< 0.0784	z_{re}	$7.90^{+0.61}_{-0.76}$	$D_M(2.33)$	5760 ± 10
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0025	10^9A_s	$2.113^{+0.025}_{-0.034}$	$f\sigma_8(0.15)$	0.4590 ± 0.0065
$\boldsymbol{A^{CIB}_{217}}$	48 ± 7	$10^9A_se^{-2\tau}$	1.886 ± 0.011	$\sigma_8(0.15)$	$0.7494^{+0.0047}_{-0.0055}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{40}	1233^{+19}_{-21}	$f\sigma_8(0.38)$	0.4768 ± 0.0052
$\boldsymbol{A^{tSZ}_{143}}$	5.2 ± 2.0	D_{220}	5729 ± 39	$\sigma_8(0.38)$	$0.6640^{+0.0040}_{-0.0048}$
$\boldsymbol{A^{PS}_{100}}$	264 ± 28	D_{810}	2542 ± 13	$f\sigma_8(0.51)$	0.4751 ± 0.0045
$\boldsymbol{A^{PS}_{143}}$	48 ± 8	D_{1420}	816.2 ± 5.0	$\sigma_8(0.51)$	$0.6213^{+0.0038}_{-0.0046}$
$\boldsymbol{A^{PS}_{143\times217}}$	43 ± 9	D_{2000}	230.0 ± 1.8	$f\sigma_8(0.61)$	0.4699 ± 0.0041
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	$n_{s,0.002}$	0.992 ± 0.023	$\sigma_8(0.61)$	$0.5911^{+0.0036}_{-0.0044}$
$\boldsymbol{A^{kSZ}}$	< 5.03	Y_P	0.245418 ± 0.000059	$f\sigma_8(2.33)$	$0.2979^{+0.0018}_{-0.0023}$
$\boldsymbol{A^{dustTT}_{100}}$	8.9 ± 1.8	Y_P^{BBN}	0.246744 ± 0.000059	$\sigma_8(2.33)$	$0.3070^{+0.0019}_{-0.0025}$
$\boldsymbol{A^{dustTT}_{143}}$	11.0 ± 1.8	10^5D/H	2.574 ± 0.028	$r_{0.002}$	< 0.0758
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.7 ± 3.3	Age/Gyr	13.790 ± 0.023	$r_{0.01}$	< 0.0763
$\boldsymbol{A^{dustTT}_{217}}$	93.5 ± 7.4	z_*	1089.83 ± 0.26	$\ln(10^{10}A_t)$	$-0.16^{+1.3}_{-0.52}$
$\boldsymbol{A^{dustTE}_{100}}$	0.115 ± 0.038	r_*	144.42 ± 0.27	r_{10}	< 0.0395
$\boldsymbol{A^{dustTE}_{100\times143}}$	0.136 ± 0.029	$100\theta_*$	1.04111 ± 0.00030	10^9A_t	< 0.166
$\boldsymbol{A^{dustTE}_{100\times217}}$	0.479 ± 0.085	$D_M(z_*)$/Gpc	13.872 ± 0.025	$10^9A_te^{-2\tau}$	< 0.148
$\boldsymbol{A^{dustTE}_{143}}$	0.226 ± 0.054	z_{drag}	1060.07 ± 0.32	f^{143}_{2000}	31.1 ± 3.1
$\boldsymbol{A^{dustTE}_{143\times217}}$	0.664 ± 0.080	r_{drag}	147.06 ± 0.27	$f^{143\times217}_{2000}$	33.4 ± 2.2
$\boldsymbol{A^{dustTE}_{217}}$	2.08 ± 0.27	k_D	0.14095 ± 0.00031	f^{217}_{2000}	108.0 ± 2.0
$\boldsymbol{c_{100}}$	0.99968 ± 0.00061	$100\theta_D$	0.16068 ± 0.00019	$\chi^2_{lensing}$	9.55 ± 0.76
$\boldsymbol{c_{217}}$	0.99822 ± 0.00062	z_{eq}	3400 ± 27	χ^2_{simall}	397.4 ± 1.9
H_0	67.46 ± 0.53	k_{eq}	0.010378 ± 0.000081	χ^2_{lowl}	23.3 ± 1.9
Ω_Λ	0.6859 ± 0.0073	$100\theta_{eq}$	0.8139 ± 0.0050	χ^2_{plik}	2360.5 ± 5.9
Ω_m	0.3141 ± 0.0073	$100\theta_{s,eq}$	0.4496 ± 0.0026	χ^2_{prior}	11.6 ± 4.6
$\Omega_m h^2$	0.1429 ± 0.0011	$H(0.15)$	72.78 ± 0.46	χ^2_{CMB}	2790.8 ± 6.2
$\Omega_m h^3$	0.09642 ± 0.00031	$D_M(0.15)$	642.5 ± 4.6		

$\bar{\chi}^2_{eff} = 2802.46$; $\Delta\bar{\chi}^2_{eff} = 1.95$; $R - 1 = 0.01057$

15.24 base_nrun_r_plikHM_TTTEEE_lowl_lowE_lensing_post_BAO_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02248 ± 0.00014	S_8	0.824 ± 0.011	$H(0.51)$	89.83 ± 0.22
$\boldsymbol{\Omega_c h^2}$	0.11924 ± 0.00094	$\sigma_8 \Omega_m^{0.5}$	0.4513 ± 0.0058	$D_M(0.51)$	1978.0 ± 8.6
$\boldsymbol{100\theta_{MC}}$	1.04101 ± 0.00029	$\sigma_8 \Omega_m^{0.25}$	0.6048 ± 0.0056	$H(0.61)$	95.44 ± 0.19
$\boldsymbol{\tau}$	$0.0583^{+0.0060}_{-0.0077}$	$\sigma_8/h^{0.5}$	0.9845 ± 0.0082	$D_M(0.61)$	2301.9 ± 9.3
$\boldsymbol{\ln(10^{10} A_s)}$	$3.052^{+0.013}_{-0.016}$	$r_{drag} h$	99.70 ± 0.72	$H(2.33)$	236.17 ± 0.57
$\boldsymbol{n_s}$	0.9664 ± 0.0040	$\langle d^2 \rangle^{1/2}$	2.424 ± 0.023	$D_M(2.33)$	5756.0 ± 9.0
$\boldsymbol{d n_s / d \ln k}$	-0.0084 ± 0.0074	z_{re}	$8.03^{+0.63}_{-0.74}$	$f\sigma_8(0.15)$	0.4560 ± 0.0054
$\boldsymbol{r}$	< 0.0819	$10^9 A_s$	$2.117^{+0.027}_{-0.034}$	$\sigma_8(0.15)$	$0.7489^{+0.0048}_{-0.0056}$
$\boldsymbol{y_{cal}}$	1.0008 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.884 ± 0.011	$f\sigma_8(0.38)$	0.4746 ± 0.0046
$\boldsymbol{A_{217}^{CIB}}$	48 ± 7	D_{40}	1231^{+19}_{-22}	$\sigma_8(0.38)$	$0.6640^{+0.0042}_{-0.0049}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{220}	5733 ± 39	$f\sigma_8(0.51)$	0.4734 ± 0.0041
$\boldsymbol{A_{143}^{tSZ}}$	5.2 ± 2.0	D_{810}	2542 ± 13	$\sigma_8(0.51)$	$0.6214^{+0.0039}_{-0.0047}$
$\boldsymbol{A_{100}^{PS}}$	263 ± 28	D_{1420}	816.8 ± 4.9	$f\sigma_8(0.61)$	0.4685 ± 0.0038
$\boldsymbol{A_{143}^{PS}}$	48 ± 8	D_{2000}	230.3 ± 1.8	$\sigma_8(0.61)$	$0.5913^{+0.0037}_{-0.0045}$
$\boldsymbol{A_{143\times217}^{PS}}$	42 ± 9	$n_{s,0.002}$	0.994 ± 0.023	$f\sigma_8(2.33)$	$0.2982^{+0.0019}_{-0.0023}$
$\boldsymbol{A_{217}^{PS}}$	114 ± 10	Y_P	0.245435 ± 0.000054	$\sigma_8(2.33)$	$0.3075^{+0.0020}_{-0.0024}$
$\boldsymbol{A^{kSZ}}$	< 4.92	Y_P^{BBN}	0.246761 ± 0.000054	$r_{0.002}$	< 0.0797
$\boldsymbol{A_{100}^{dust TT}}$	9.0 ± 1.8	10^5D/H	2.566 ± 0.026	$r_{0.01}$	< 0.0798
$\boldsymbol{A_{143}^{dust TT}}$	11.0 ± 1.8	Age/Gyr	13.781 ± 0.020	$\ln(10^{10} A_t)$	$-0.12^{+1.3}_{-0.51}$
$\boldsymbol{A_{143\times217}^{dust TT}}$	18.6 ± 3.3	z_*	1089.72 ± 0.22	r_{10}	< 0.0413
$\boldsymbol{A_{217}^{dust TT}}$	93.4 ± 7.4	r_*	144.55 ± 0.22	$10^9 A_t$	< 0.173
$\boldsymbol{A_{100}^{dust TE}}$	0.115 ± 0.039	$100\theta_*$	1.04119 ± 0.00028	$10^9 A_t e^{-2\tau}$	< 0.154
$\boldsymbol{A_{100\times143}^{dust TE}}$	0.136 ± 0.030	$D_M(z_*)$/Gpc	13.883 ± 0.022	f_{2000}^{143}	30.8 ± 3.1
$\boldsymbol{A_{100\times217}^{dust TE}}$	0.478 ± 0.084	z_{drag}	1060.13 ± 0.31	$f_{2000}^{143\times217}$	33.1 ± 2.1
$\boldsymbol{A_{143}^{dust TE}}$	0.225 ± 0.054	r_{drag}	147.17 ± 0.24	f_{2000}^{217}	107.8 ± 2.0
$\boldsymbol{A_{143\times217}^{dust TE}}$	0.664 ± 0.080	k_D	0.14086 ± 0.00030	$\chi^2_{lensing}$	9.40 ± 0.63
$\boldsymbol{A_{217}^{dust TE}}$	2.07 ± 0.27	$100\theta_D$	0.16065 ± 0.00018	χ^2_{simall}	397.7 ± 2.1
$\boldsymbol{c_{100}}$	0.99968 ± 0.00062	z_{eq}	3387 ± 21	χ^2_{lowl}	23.2 ± 1.9
$\boldsymbol{c_{217}}$	0.99822 ± 0.00062	k_{eq}	0.010336 ± 0.000065	χ^2_{plik}	2360.5 ± 5.9
H_0	67.74 ± 0.42	$100\theta_{eq}$	0.8165 ± 0.0040	χ^2_{6DF}	0.048 ± 0.057
Ω_Λ	0.6897 ± 0.0057	$100\theta_{s,eq}$	0.4510 ± 0.0021	χ^2_{MGS}	1.30 ± 0.40
Ω_m	0.3103 ± 0.0057	$H(0.15)$	73.02 ± 0.37	$\chi^2_{DR12BAO}$	4.7 ± 1.3
$\Omega_m h^2$	0.14236 ± 0.00089	$D_M(0.15)$	640.1 ± 3.6	χ^2_{prior}	11.7 ± 4.5
$\Omega_m h^3$	0.09644 ± 0.00031	$H(0.38)$	83.12 ± 0.27	χ^2_{CMB}	2790.8 ± 6.2
σ_8	$0.8103^{+0.0054}_{-0.0061}$	$D_M(0.38)$	1526.8 ± 7.3	χ^2_{BAO}	6.1 ± 1.0

$\bar{\chi}^2_{eff} = 2808.56$; $\Delta\bar{\chi}^2_{eff} = 1.84$; $R - 1 = 0.01181$

15.25 base_nrun_r_CamSpecHM_TTTEEE_lowl_lowE_lensing

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02234 ± 0.00016	$\sigma_8\Omega_m^{0.5}$	0.4525 ± 0.0071	$D_M(0.38)$	1531.6 ± 9.6
$\boldsymbol{\Omega_c h^2}$	0.1195 ± 0.0012	$\sigma_8\Omega_m^{0.25}$	0.6050 ± 0.0065	$H(0.51)$	89.65 ± 0.28
$\boldsymbol{100\theta_{MC}}$	1.04088 ± 0.00031	$\sigma_8/h^{0.5}$	0.9847 ± 0.0092	$D_M(0.51)$	1984 ± 11
$\boldsymbol{\tau}$	0.0549 ± 0.0078	$r_{drag}h$	99.38 ± 0.96	$H(0.61)$	95.28 ± 0.23
$\boldsymbol{\ln(10^{10}A_s)}$	3.044 ± 0.016	$\langle d^2\rangle^{1/2}$	2.425 ± 0.024	$D_M(0.61)$	2308 ± 12
$\boldsymbol{n_s}$	0.9663 ± 0.0046	z_{re}	7.72 ± 0.78	$H(2.33)$	236.21 ± 0.75
$\boldsymbol{dn_s/d\ln k}$	-0.0055 ± 0.0076	$10^9 A_s$	$2.099^{+0.031}_{-0.034}$	$D_M(2.33)$	5764 ± 11
$\boldsymbol{r}$	< 0.0970	$10^9 A_s e^{-2\tau}$	1.881 ± 0.011	$f\sigma_8(0.15)$	0.4569 ± 0.0066
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0025	D_{40}	1239^{+20}_{-22}	$\sigma_8(0.15)$	0.7473 ± 0.0055
$\boldsymbol{A_{100}^{PS}}$	242 ± 25	D_{220}	5714 ± 39	$f\sigma_8(0.38)$	0.4749 ± 0.0053
$\boldsymbol{A_{143}^{PS}}$	41 ± 9	D_{810}	2537 ± 14	$\sigma_8(0.38)$	0.6623 ± 0.0048
$\boldsymbol{A_{217}^{PS}}$	102 ± 10	D_{1420}	815.5 ± 5.1	$f\sigma_8(0.51)$	0.4733 ± 0.0046
$\boldsymbol{A_{217}^{CIB}}$	40 ± 7	D_{2000}	229.9 ± 1.9	$\sigma_8(0.51)$	0.6197 ± 0.0046
$\boldsymbol{A_{143}^{tSZ}}$	$3.8^{+1.8}_{-2.6}$	$n_{s,0.002}$	0.984 ± 0.024	$f\sigma_8(0.61)$	0.4683 ± 0.0042
$\boldsymbol{r_{143\times217}^{PS}}$	0.65 ± 0.13	Y_P	$0.245379^{+0.000069}_{-0.000059}$	$\sigma_8(0.61)$	0.5896 ± 0.0044
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.57^{+0.40}_{-0.15}$	Y_P^{BBN}	$0.246706^{+0.000069}_{-0.000059}$	$f\sigma_8(2.33)$	0.2972 ± 0.0023
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	10^5D/H	2.593 ± 0.030	$\sigma_8(2.33)$	0.3064 ± 0.0025
$\boldsymbol{A^{kSZ}}$	$4.9^{+2.8}_{-3.5}$	Age/Gyr	13.800 ± 0.025	$r_{0.002}$	< 0.0938
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.19	z_*	1089.92 ± 0.27	$r_{0.01}$	< 0.0946
$\boldsymbol{A_{143}^{dust}}$	0.96 ± 0.18	r_*	144.58 ± 0.28	$\ln(10^{10}A_t)$	$0.09^{+1.2}_{-0.43}$
$\boldsymbol{A_{217}^{dust}}$	0.97 ± 0.10	$100\theta_*$	1.04107 ± 0.00031	r_{10}	< 0.0487
$\boldsymbol{A_{143\times217}^{dust}}$	1.02 ± 0.16	$D_M(z_*)$/Gpc	13.888 ± 0.027	$10^9 A_t$	< 0.204
$\boldsymbol{c_{100}}$	0.9975 ± 0.0010	z_{drag}	1059.82 ± 0.35	$10^9 A_t e^{-2\tau}$	< 0.182
$\boldsymbol{c_{217}}$	1.0012 ± 0.0016	r_{drag}	147.26 ± 0.29	f_{2000}^{143}	30.4 ± 3.3
$\boldsymbol{c_{TE}}$	0.9963 ± 0.0049	k_D	0.14066 ± 0.00034	f_{2000}^{217}	107.4 ± 2.2
$\boldsymbol{c_{EE}}$	0.9921 ± 0.0050	$100\theta_D$	0.16082 ± 0.00020	$f_{2000}^{143\times217}$	32.7 ± 2.4
H_0	67.48 ± 0.56	z_{eq}	3390 ± 28	$\chi^2_{lensing}$	9.56 ± 0.78
Ω_Λ	0.6870 ± 0.0076	k_{eq}	0.010346 ± 0.000085	χ^2_{simall}	397.4 ± 1.7
Ω_m	0.3130 ± 0.0076	$100\theta_{eq}$	0.8154 ± 0.0053	χ^2_{lowl}	24.3 ± 2.2
$\Omega_m h^2$	0.1425 ± 0.0012	$100\theta_{s,eq}$	0.4505 ± 0.0027	$\chi^2_{CamSpec}$	11514.1 ± 5.8
$\Omega_m h^3$	0.09616 ± 0.00033	$H(0.15)$	72.78 ± 0.48	χ^2_{prior}	7.8 ± 3.4
σ_8	0.8089 ± 0.0061	$D_M(0.15)$	642.3 ± 4.8	χ^2_{CMB}	11945.3 ± 6.0
S_8	0.826 ± 0.013	$H(0.38)$	82.92 ± 0.35		

$\bar{\chi}^2_{eff} = 11953.15$; $\Delta\bar{\chi}^2_{eff} = 1.71$; $R - 1 = 0.01351$

15.26 base_nrun_r_CamSpecHM_TTTEEE_lowl_lowE_lensing_post_BAO

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02237 ± 0.00015	$\sigma_8\Omega_m^{0.25}$	0.6028 ± 0.0057	$D_M(0.51)$	1978.9 ± 8.7
$\boldsymbol{\Omega_c h^2}$	0.11897 ± 0.00095	$\sigma_8/h^{0.5}$	0.9821 ± 0.0084	$H(0.61)$	95.37 ± 0.19
$\boldsymbol{100\theta_{MC}}$	1.04095 ± 0.00030	$r_{drag}h$	99.81 ± 0.74	$D_M(0.61)$	2302.9 ± 9.4
$\boldsymbol{\tau}$	0.0564 ± 0.0076	$\langle d^2\rangle^{1/2}$	2.419 ± 0.023	$H(2.33)$	235.89 ± 0.59
$\boldsymbol{\ln(10^{10}A_s)}$	3.046 ± 0.016	z_{re}	7.86 ± 0.75	$D_M(2.33)$	5760.6 ± 9.4
$\boldsymbol{n_s}$	0.9676 ± 0.0042	$10^9 A_s$	$2.104^{+0.030}_{-0.034}$	$f\sigma_8(0.15)$	0.4544 ± 0.0054
$\boldsymbol{dn_s/d\ln k}$	$-0.0054^{+0.0080}_{-0.0072}$	$10^9 A_s e^{-2\tau}$	1.879 ± 0.011	$\sigma_8(0.15)$	0.7470 ± 0.0055
$\boldsymbol{r}$	< 0.101	D_{40}	1238^{+20}_{-22}	$f\sigma_8(0.38)$	0.4731 ± 0.0046
$\boldsymbol{y_{cal}}$	1.0008 ± 0.0025	D_{220}	5718 ± 39	$\sigma_8(0.38)$	0.6624 ± 0.0049
$\boldsymbol{A_{100}^{PS}}$	241 ± 25	D_{810}	2538 ± 14	$f\sigma_8(0.51)$	0.4719 ± 0.0042
$\boldsymbol{A_{143}^{PS}}$	40 ± 9	D_{1420}	816.1 ± 5.1	$\sigma_8(0.51)$	0.6200 ± 0.0046
$\boldsymbol{A_{217}^{PS}}$	102 ± 10	D_{2000}	230.1 ± 1.9	$f\sigma_8(0.61)$	0.4671 ± 0.0039
$\boldsymbol{A_{217}^{CIB}}$	40 ± 7	$n_{s,0.002}$	$0.985^{+0.022}_{-0.025}$	$\sigma_8(0.61)$	0.5900 ± 0.0044
$\boldsymbol{A_{143}^{tSZ}}$	$3.8^{+1.8}_{-2.6}$	Y_P	$0.245394^{+0.000063}_{-0.000056}$	$f\sigma_8(2.33)$	0.2976 ± 0.0023
$\boldsymbol{r_{143\times217}^{PS}}$	0.66 ± 0.13	Y_P^{BBN}	$0.246721^{+0.000063}_{-0.000057}$	$\sigma_8(2.33)$	0.3069 ± 0.0024
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.57^{+0.40}_{-0.16}$	10^5D/H	2.586 ± 0.028	$r_{0.002}$	< 0.0979
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Age/Gyr	13.792 ± 0.021	$r_{0.01}$	< 0.0985
$\boldsymbol{A^{kSZ}}$	$4.8^{+2.4}_{-3.8}$	z_*	1089.83 ± 0.23	$\ln(10^{10}A_t)$	$0.14^{+1.2}_{-0.43}$
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.19	r_*	144.70 ± 0.24	r_{10}	< 0.0508
$\boldsymbol{A_{143}^{dust}}$	0.96 ± 0.18	$100\theta_*$	1.04114 ± 0.00030	$10^9 A_t$	< 0.211
$\boldsymbol{A_{217}^{dust}}$	0.97 ± 0.10	$D_M(z_*)$/Gpc	13.898 ± 0.023	$10^9 A_t e^{-2\tau}$	< 0.189
$\boldsymbol{A_{143\times217}^{dust}}$	1.03 ± 0.16	z_{drag}	1059.87 ± 0.34	f_{2000}^{143}	30.2 ± 3.3
$\boldsymbol{c_{100}}$	0.9976 ± 0.0010	r_{drag}	147.36 ± 0.25	f_{2000}^{217}	107.3 ± 2.2
$\boldsymbol{c_{217}}$	1.0012 ± 0.0016	k_D	0.14058 ± 0.00033	$f_{2000}^{143\times217}$	32.5 ± 2.4
$\boldsymbol{c_{TE}}$	0.9964 ± 0.0050	$100\theta_D$	0.16079 ± 0.00020	$\chi^2_{lensing}$	9.56 ± 0.82
$\boldsymbol{c_{EE}}$	0.9923 ± 0.0050	z_{eq}	3378 ± 22	χ^2_{smallA}	397.6 ± 1.9
H_0	67.73 ± 0.43	k_{eq}	0.010309 ± 0.000066	χ^2_{lowl}	24.1 ± 2.2
Ω_Λ	0.6904 ± 0.0057	$100\theta_{eq}$	0.8178 ± 0.0041	$\chi^2_{CamSpec}$	11514.0 ± 5.7
Ω_m	0.3096 ± 0.0057	$100\theta_{s,eq}$	0.4517 ± 0.0021	χ^2_{6DF}	0.042 ± 0.052
$\Omega_m h^2$	0.14199 ± 0.00091	$H(0.15)$	72.99 ± 0.37	χ^2_{MGS}	1.36 ± 0.41
$\Omega_m h^3$	0.09617 ± 0.00033	$D_M(0.15)$	640.2 ± 3.7	$\chi^2_{DR12BAO}$	4.5 ± 1.2
σ_8	0.8082 ± 0.0060	$H(0.38)$	83.07 ± 0.28	χ^2_{prior}	7.9 ± 3.4
S_8	0.821 ± 0.011	$D_M(0.38)$	1527.4 ± 7.4	χ^2_{CMB}	11945.2 ± 5.9
$\sigma_8\Omega_m^{0.5}$	0.4497 ± 0.0058	$H(0.51)$	89.77 ± 0.23	χ^2_{BAO}	5.93 ± 0.90

$\bar{\chi}^2_{eff} = 11958.98$; $\Delta\bar{\chi}^2_{eff} = 1.58$; $R - 1 = 0.01470$

15.27 base_nrun_r_CamSpecHM_TTTEEE_lowl_lowE_lensing_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02234 ± 0.00016	$\sigma_8\Omega_m^{0.5}$	0.4525 ± 0.0071	$D_M(0.38)$	1531.1 ± 9.4
$\boldsymbol{\Omega_c h^2}$	0.1195 ± 0.0012	$\sigma_8\Omega_m^{0.25}$	0.6052 ± 0.0064	$H(0.51)$	89.66 ± 0.28
$\boldsymbol{100\theta_{MC}}$	1.04089 ± 0.00031	$\sigma_8/h^{0.5}$	0.9850 ± 0.0090	$D_M(0.51)$	1983 ± 11
$\boldsymbol{\tau}$	$0.0558^{+0.0056}_{-0.0083}$	$r_{drag}h$	99.42 ± 0.95	$H(0.61)$	95.29 ± 0.23
$\boldsymbol{\ln(10^{10}A_s)}$	$3.046^{+0.012}_{-0.016}$	$\langle d^2\rangle^{1/2}$	2.426 ± 0.024	$D_M(0.61)$	2308 ± 12
$\boldsymbol{n_s}$	0.9664 ± 0.0046	z_{re}	$7.81^{+0.61}_{-0.80}$	$H(2.33)$	236.17 ± 0.74
$\boldsymbol{dn_s/d\ln k}$	-0.0056 ± 0.0076	$10^9 A_s$	$2.103^{+0.025}_{-0.034}$	$D_M(2.33)$	5764 ± 11
$\boldsymbol{r}$	< 0.0979	$10^9 A_s e^{-2\tau}$	1.880 ± 0.011	$f\sigma_8(0.15)$	0.4570 ± 0.0066
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0025	D_{40}	1239^{+20}_{-22}	$\sigma_8(0.15)$	$0.7478^{+0.0048}_{-0.0055}$
$\boldsymbol{A^{PS}_{100}}$	242 ± 25	D_{220}	5714 ± 39	$f\sigma_8(0.38)$	0.4750 ± 0.0053
$\boldsymbol{A^{PS}_{143}}$	41 ± 9	D_{810}	2537 ± 14	$\sigma_8(0.38)$	$0.6627^{+0.0041}_{-0.0049}$
$\boldsymbol{A^{PS}_{217}}$	102 ± 10	D_{1420}	815.5 ± 5.1	$f\sigma_8(0.51)$	0.4735 ± 0.0046
$\boldsymbol{A^{CIB}_{217}}$	40^{+7}_{-8}	D_{2000}	229.9 ± 1.9	$\sigma_8(0.51)$	$0.6201^{+0.0038}_{-0.0046}$
$\boldsymbol{A^{tSZ}_{143}}$	$3.7^{+1.8}_{-2.6}$	$n_{s,0.002}$	0.985 ± 0.024	$f\sigma_8(0.61)$	0.4685 ± 0.0042
$\boldsymbol{r^{PS}_{143\times217}}$	0.65 ± 0.13	Y_P	$0.245382^{+0.000068}_{-0.000059}$	$\sigma_8(0.61)$	$0.5901^{+0.0036}_{-0.0045}$
$\boldsymbol{r^{CIB}_{143\times217}}$	$0.57^{+0.40}_{-0.16}$	Y_P^{BBN}	$0.246708^{+0.000068}_{-0.000059}$	$f\sigma_8(2.33)$	$0.2975^{+0.0018}_{-0.0023}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	10^5D/H	2.592 ± 0.030	$\sigma_8(2.33)$	$0.3066^{+0.0019}_{-0.0025}$
$\boldsymbol{A^{kSZ}}$	$4.9^{+2.8}_{-3.5}$	Age/Gyr	13.799 ± 0.024	$r_{0.002}$	< 0.0947
$\boldsymbol{A^{dust}_{100}}$	1.01 ± 0.19	z_*	1089.91 ± 0.27	$r_{0.01}$	< 0.0954
$\boldsymbol{A^{dust}_{143}}$	0.96 ± 0.18	r_*	144.59 ± 0.28	$\ln(10^{10}A_t)$	$0.10^{+1.2}_{-0.42}$
$\boldsymbol{A^{dust}_{217}}$	0.97 ± 0.10	$100\theta_*$	1.04108 ± 0.00031	r_{10}	< 0.0491
$\boldsymbol{A^{dust}_{143\times217}}$	1.03 ± 0.16	$D_M(z_*)$/Gpc	13.889 ± 0.027	$10^9 A_t$	< 0.205
$\boldsymbol{c_{100}}$	0.9975 ± 0.0010	z_{drag}	1059.83 ± 0.35	$10^9 A_t e^{-2\tau}$	< 0.184
$\boldsymbol{c_{217}}$	1.0012 ± 0.0016	r_{drag}	147.27 ± 0.29	f^{143}_{2000}	30.4 ± 3.3
$\boldsymbol{c_{TE}}$	0.9962 ± 0.0049	k_D	0.14066 ± 0.00035	f^{217}_{2000}	107.4 ± 2.2
$\boldsymbol{c_{EE}}$	0.9920 ± 0.0050	$100\theta_D$	0.16081 ± 0.00020	$f^{143\times217}_{2000}$	32.7 ± 2.4
H_0	67.51 ± 0.55	z_{eq}	3389 ± 28	$\chi^2_{lensing}$	9.53 ± 0.75
Ω_Λ	0.6874 ± 0.0075	k_{eq}	0.010343 ± 0.000084	χ^2_{simall}	397.4 ± 1.8
Ω_m	0.3126 ± 0.0075	$100\theta_{eq}$	0.8157 ± 0.0052	χ^2_{lowl}	24.2 ± 2.2
$\Omega_m h^2$	0.1424 ± 0.0012	$100\theta_{s,eq}$	0.4506 ± 0.0027	$\chi^2_{CamSpec}$	11514.0 ± 5.8
$\Omega_m h^3$	0.09616 ± 0.00033	$H(0.15)$	72.80 ± 0.47	χ^2_{prior}	7.8 ± 3.4
σ_8	0.8093 ± 0.0058	$D_M(0.15)$	642.1 ± 4.7	χ^2_{CMB}	11945.1 ± 6.0
S_8	0.826 ± 0.013	$H(0.38)$	82.94 ± 0.35		

$\bar{\chi}^2_{eff} = 11953.00$; $\Delta\bar{\chi}^2_{eff} = 1.75$; $R - 1 = 0.01489$

15.28 base_nrun_r_CamSpecHM_TTTEEE_lowl_lowE_lensing_post_BAO_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02238 ± 0.00015	$\sigma_8\Omega_m^{0.25}$	0.6030 ± 0.0056	$D_M(0.51)$	1978.7 ± 8.7
$\boldsymbol{\Omega_c h^2}$	0.11895 ± 0.00095	$\sigma_8/h^{0.5}$	0.9824 ± 0.0082	$H(0.61)$	95.38 ± 0.19
$\boldsymbol{100\theta_{MC}}$	1.04096 ± 0.00030	$r_{drag}h$	99.83 ± 0.73	$D_M(0.61)$	2302.7 ± 9.4
$\boldsymbol{\tau}$	$0.0570^{+0.0060}_{-0.0079}$	$\langle d^2\rangle^{1/2}$	2.420 ± 0.023	$H(2.33)$	235.87 ± 0.59
$\boldsymbol{\ln(10^{10}A_s)}$	$3.047^{+0.013}_{-0.016}$	z_{re}	$7.92^{+0.64}_{-0.76}$	$D_M(2.33)$	5760.4 ± 9.4
$\boldsymbol{n_s}$	0.9677 ± 0.0041	$10^9 A_s$	$2.106^{+0.027}_{-0.034}$	$f\sigma_8(0.15)$	0.4545 ± 0.0054
$\boldsymbol{dn_s/d\ln k}$	$-0.0055^{+0.0079}_{-0.0072}$	$10^9 A_s e^{-2\tau}$	1.879 ± 0.011	$\sigma_8(0.15)$	$0.7474^{+0.0048}_{-0.0056}$
$\boldsymbol{r}$	< 0.101	D_{40}	1238^{+20}_{-22}	$f\sigma_8(0.38)$	0.4733 ± 0.0046
$\boldsymbol{y_{cal}}$	1.0008 ± 0.0025	D_{220}	5718 ± 39	$\sigma_8(0.38)$	$0.6627^{+0.0042}_{-0.0050}$
$\boldsymbol{A_{100}^{PS}}$	241 ± 25	D_{810}	2538 ± 14	$f\sigma_8(0.51)$	0.4721 ± 0.0041
$\boldsymbol{A_{143}^{PS}}$	40 ± 9	D_{1420}	816.1 ± 5.0	$\sigma_8(0.51)$	$0.6203^{+0.0039}_{-0.0047}$
$\boldsymbol{A_{217}^{PS}}$	102 ± 10	D_{2000}	230.1 ± 1.9	$f\sigma_8(0.61)$	0.4673 ± 0.0038
$\boldsymbol{A_{217}^{CIB}}$	40 ± 7	$n_{s,0.002}$	$0.985^{+0.022}_{-0.025}$	$\sigma_8(0.61)$	$0.5903^{+0.0037}_{-0.0045}$
$\boldsymbol{A_{143}^{tSZ}}$	$3.8^{+1.8}_{-2.6}$	Y_P	0.245395 ± 0.000060	$f\sigma_8(2.33)$	$0.2977^{+0.0019}_{-0.0023}$
$\boldsymbol{r_{143\times217}^{PS}}$	0.66 ± 0.13	Y_P^{BBN}	0.246722 ± 0.000060	$\sigma_8(2.33)$	$0.3070^{+0.0020}_{-0.0025}$
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.57^{+0.40}_{-0.16}$	10^5D/H	2.585 ± 0.028	$r_{0.002}$	< 0.0984
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Age/Gyr	13.791 ± 0.021	$r_{0.01}$	< 0.0990
$\boldsymbol{A^{kSZ}}$	$4.8^{+2.5}_{-3.8}$	z_*	1089.82 ± 0.23	$\ln(10^{10}A_t)$	$0.14^{+1.2}_{-0.43}$
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.19	r_*	144.70 ± 0.23	r_{10}	< 0.0509
$\boldsymbol{A_{143}^{dust}}$	0.96 ± 0.18	$100\theta_*$	1.04114 ± 0.00030	$10^9 A_t$	< 0.212
$\boldsymbol{A_{217}^{dust}}$	0.97 ± 0.10	$D_M(z_*)$/Gpc	13.898 ± 0.023	$10^9 A_t e^{-2\tau}$	< 0.190
$\boldsymbol{A_{143\times217}^{dust}}$	1.03 ± 0.16	z_{drag}	1059.87 ± 0.34	f_{2000}^{143}	30.2 ± 3.3
$\boldsymbol{c_{100}}$	0.9976 ± 0.0010	r_{drag}	147.37 ± 0.25	f_{2000}^{217}	107.3 ± 2.2
$\boldsymbol{c_{217}}$	1.0012 ± 0.0016	k_D	0.14058 ± 0.00033	$f_{2000}^{143\times217}$	32.5 ± 2.3
$\boldsymbol{c_{TE}}$	0.9964 ± 0.0050	$100\theta_D$	0.16079 ± 0.00020	$\chi^2_{lensing}$	9.52 ± 0.77
$\boldsymbol{c_{EE}}$	0.9923 ± 0.0050	z_{eq}	3377 ± 22	χ^2_{simall}	397.6 ± 1.9
H_0	67.74 ± 0.43	k_{eq}	0.010307 ± 0.000066	χ^2_{lowl}	24.1 ± 2.2
Ω_Λ	0.6906 ± 0.0057	$100\theta_{eq}$	0.8179 ± 0.0041	$\chi^2_{CamSpec}$	11513.9 ± 5.7
Ω_m	0.3094 ± 0.0057	$100\theta_{s,eq}$	0.4518 ± 0.0021	χ^2_{6DF}	0.040 ± 0.051
$\Omega_m h^2$	0.14197 ± 0.00091	$H(0.15)$	73.00 ± 0.37	χ^2_{MGS}	1.37 ± 0.41
$\Omega_m h^3$	0.09617 ± 0.00033	$D_M(0.15)$	640.1 ± 3.6	$\chi^2_{DR12BAO}$	4.5 ± 1.2
σ_8	$0.8086^{+0.0054}_{-0.0061}$	$H(0.38)$	83.08 ± 0.28	χ^2_{prior}	7.9 ± 3.4
S_8	0.821 ± 0.011	$D_M(0.38)$	1527.2 ± 7.4	χ^2_{CMB}	11945.1 ± 5.9
$\sigma_8\Omega_m^{0.5}$	0.4497 ± 0.0058	$H(0.51)$	89.77 ± 0.23	χ^2_{BAO}	5.90 ± 0.88

$\bar{\chi}^2_{eff} = 11958.86$; $\Delta\bar{\chi}^2_{eff} = 1.60$; $R - 1 = 0.01525$

16 omegak

16.1 base_omegak_plikHM_TT_lowl_lowE

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022613	0.02255 ± 0.00026	$\sigma_8\Omega_m^{0.5}$	0.5525	0.552 ± 0.033	$100\theta_{s,eq}$	0.4557	0.4554 ± 0.0051
$\boldsymbol{\Omega_c h^2}$	0.11712	0.1173 ± 0.0023	$\sigma_8\Omega_m^{0.25}$	0.6506	$0.649^{+0.016}_{-0.014}$	$H(0.15)$	58.15	58.4 ± 4.0
$\boldsymbol{100\theta_{MC}}$	1.04130	1.04126 ± 0.00051	$\sigma_8/h^{0.5}$	1.0629	$1.061^{+0.025}_{-0.022}$	$D_M(0.15)$	819	820^{+55}_{-67}
$\boldsymbol{\tau}$	0.0493	$0.0485^{+0.0087}_{-0.0077}$	$r_{drag}h$	76.7	77.1 ± 6.4	$H(0.38)$	69.65	$69.9^{+3.3}_{-3.8}$
$\boldsymbol{\Omega_K}$	−0.0549	$-0.056^{+0.028}_{-0.018}$	$\langle d^2\rangle^{1/2}$	2.678	2.679 ± 0.082	$D_M(0.38)$	1902	1902^{+120}_{-130}
$\boldsymbol{\ln(10^{10}A_s)}$	3.0275	$3.026^{+0.019}_{-0.016}$	z_{re}	6.91	$6.82^{+0.96}_{-0.75}$	$H(0.51)$	77.07	$77.3^{+3.1}_{-3.6}$
$\boldsymbol{n_s}$	0.9744	0.9720 ± 0.0064	$10^9 A_s$	2.0645	$2.061^{+0.038}_{-0.033}$	$D_M(0.51)$	2432	2431^{+140}_{-160}
$\boldsymbol{y_{cal}}$	0.99993	1.0000 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.8706	1.871 ± 0.014	$H(0.61)$	83.18	$83.5^{+3.0}_{-3.4}$
$\boldsymbol{A_{217}^{CIB}}$	42.4	45 ± 7	D_{40}	1197.5	1203 ± 17	$D_M(0.61)$	2805	2803^{+150}_{-170}
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.999	> 0.414	D_{220}	5740.4	5745 ± 42	$H(2.33)$	227.33	227.6 ± 3.0
$\boldsymbol{A_{143}^{tSZ}}$	6.81	$5.6^{+2.1}_{-1.8}$	D_{810}	2531.7	2529 ± 14	$D_M(2.33)$	6471	6463 ± 220
$\boldsymbol{A_{100}^{PS}}$	236.1	250 ± 30	D_{1420}	815.7	813.7 ± 5.1	$f\sigma_8(0.15)$	0.5388	0.537 ± 0.024
$\boldsymbol{A_{143}^{PS}}$	48.6	42 ± 8	D_{2000}	233.29	232.3 ± 2.0	$\sigma_8(0.15)$	0.6909	$0.690^{+0.024}_{-0.020}$
$\boldsymbol{A_{143\times217}^{PS}}$	56.2	40 ± 9	$n_{s,0.002}$	0.9744	0.9720 ± 0.0064	$f\sigma_8(0.38)$	0.5139	$0.512^{+0.011}_{-0.0080}$
$\boldsymbol{A_{217}^{PS}}$	122.6	114 ± 10	Y_P	0.245485	0.24546 ± 0.00011	$\sigma_8(0.38)$	0.5949	$0.594^{+0.026}_{-0.022}$
$\boldsymbol{A^{kSZ}}$	0.00	< 3.46	Y_P^{BBN}	0.246811	0.24679 ± 0.00011	$f\sigma_8(0.51)$	0.4928	$0.4908^{+0.0071}_{-0.0062}$
$\boldsymbol{A_{100}^{dustTT}}$	8.96	9.0 ± 1.8	10^5D/H	2.5421	2.554 ± 0.048	$\sigma_8(0.51)$	0.5497	$0.550^{+0.026}_{-0.023}$
$\boldsymbol{A_{143}^{dustTT}}$	10.62	10.5 ± 1.8	Age/Gyr	15.64	15.62 ± 0.60	$f\sigma_8(0.61)$	0.4753	$0.4735^{+0.0074}_{-0.0061}$
$\boldsymbol{A_{143\times217}^{dustTT}}$	19.81	18.0 ± 3.2	z_*	1089.364	1089.46 ± 0.48	$\sigma_8(0.61)$	0.5188	$0.519^{+0.026}_{-0.023}$
$\boldsymbol{A_{217}^{dustTT}}$	96.1	93.7 ± 7.3	r_*	144.996	145.00 ± 0.50	$f\sigma_8(2.33)$	0.2572	$0.257^{+0.014}_{-0.013}$
$\boldsymbol{c_{100}}$	0.99971	0.99963 ± 0.00062	$100\theta_*$	1.041455	1.04143 ± 0.00049	$\sigma_8(2.33)$	0.2561	0.257 ± 0.016
$\boldsymbol{c_{217}}$	0.99815	0.99818 ± 0.00062	$D_M(z_*)$/Gpc	13.9225	13.923 ± 0.046	f_{2000}^{143}	25.17	27 ± 3
H_0	51.94	52.2 ± 4.3	z_{drag}	1060.276	1060.16 ± 0.52	$f_{2000}^{143\times217}$	29.14	29.9 ± 2.3
Ω_Λ	0.535	$0.531^{+0.069}_{-0.049}$	r_{drag}	147.590	147.61 ± 0.49	f_{2000}^{217}	103.80	104.9 ± 2.2
Ω_m	0.520	$0.526^{+0.067}_{-0.096}$	k_D	0.14052	0.14045 ± 0.00051	χ^2_{simall}	395.52	396.8 ± 1.7
$\Omega_m h^2$	0.14037	0.1405 ± 0.0021	$100\theta_D$	0.160580	0.16066 ± 0.00029	χ^2_{lowl}	20.969	21.39 ± 0.70
$\Omega_m h^3$	0.0729	0.0734 ± 0.0066	z_{eq}	3339	3342 ± 51	χ^2_{plik}	752.3	766.6 ± 5.4
σ_8	0.7660	$0.765^{+0.021}_{-0.017}$	k_{eq}	0.010191	0.01020 ± 0.00016	χ^2_{prior}	1.00	7.1 ± 3.5
S_8	1.009	1.008 ± 0.061	$100\theta_{eq}$	0.8257	0.825 ± 0.010	χ^2_{CMB}	1168.8	1184.8 ± 5.7

Best-fit $\chi^2_{eff} = 1169.83$; $\Delta\chi^2_{eff} = -9.74$; $\bar{\chi}^2_{eff} = 1191.91$; $\Delta\bar{\chi}^2_{eff} = -7.67$; $R - 1 = 0.01634$

χ^2_{eff}: CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.52 (Δ -0.35) commander_dx12_v3_2_29: 20.97 (Δ -2.63) plik_rd12_HM_v22_TT: 752.34 (Δ -6.41)

16.2 base_omegak_plikHM_TT_lowl_lowE_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02255 ± 0.00026	$\sigma_8\Omega_m^{0.5}$	0.549 ± 0.033	$100\theta_{s,eq}$	0.4555 ± 0.0051
$\boldsymbol{\Omega_c h^2}$	0.1173 ± 0.0023	$\sigma_8\Omega_m^{0.25}$	0.650 ± 0.015	$H(0.15)$	59.0 ± 3.9
$\boldsymbol{100\theta_{MC}}$	1.04126 ± 0.00051	$\sigma_8/h^{0.5}$	$1.062^{+0.025}_{-0.022}$	$D_M(0.15)$	811^{+54}_{-63}
$\boldsymbol{\tau}$	$0.0531^{+0.0033}_{-0.0069}$	$r_{drag}h$	77.9 ± 6.2	$H(0.38)$	$70.4^{+3.2}_{-3.7}$
$\boldsymbol{\Omega_K}$	$-0.053^{+0.026}_{-0.017}$	$\langle d^2\rangle^{1/2}$	2.678 ± 0.081	$D_M(0.38)$	1885 ± 120
$\boldsymbol{\ln(10^{10}A_s)}$	$3.0350^{+0.0096}_{-0.014}$	z_{re}	< 7.52	$H(0.51)$	$77.8^{+3.0}_{-3.5}$
$\boldsymbol{n_s}$	0.9722 ± 0.0065	$10^9 A_s$	$2.080^{+0.020}_{-0.029}$	$D_M(0.51)$	2411 ± 140
$\boldsymbol{y_{cal}}$	1.0001 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.871 ± 0.014	$H(0.61)$	$83.9^{+2.9}_{-3.4}$
$\boldsymbol{A_{217}^{CIB}}$	45 ± 7	D_{40}	1204 ± 17	$D_M(0.61)$	2781 ± 160
$\boldsymbol{\xi^{tSZ\times CIB}}$	> 0.423	D_{220}	5744 ± 42	$H(2.33)$	227.8 ± 3.0
$\boldsymbol{A_{143}^{tSZ}}$	5.6 ± 1.9	D_{810}	2529 ± 14	$D_M(2.33)$	6435 ± 210
$\boldsymbol{A_{100}^{PS}}$	250 ± 30	D_{1420}	813.8 ± 5.1	$f\sigma_8(0.15)$	0.536 ± 0.024
$\boldsymbol{A_{143}^{PS}}$	42 ± 8	D_{2000}	232.4 ± 2.0	$\sigma_8(0.15)$	$0.696^{+0.022}_{-0.019}$
$\boldsymbol{A_{143\times217}^{PS}}$	40 ± 9	$n_{s,0.002}$	0.9722 ± 0.0065	$f\sigma_8(0.38)$	$0.513^{+0.011}_{-0.0080}$
$\boldsymbol{A_{217}^{PS}}$	114.1 ± 9.9	Y_P	0.24546 ± 0.00011	$\sigma_8(0.38)$	0.600 ± 0.023
$\boldsymbol{A^{kSZ}}$	< 3.45	Y_P^{BBN}	0.24679 ± 0.00011	$f\sigma_8(0.51)$	0.4926 ± 0.0063
$\boldsymbol{A_{100}^{dustTT}}$	9.0 ± 1.8	10^5D/H	2.554 ± 0.048	$\sigma_8(0.51)$	0.555 ± 0.023
$\boldsymbol{A_{143}^{dustTT}}$	10.5 ± 1.8	Age/Gyr	15.55 ± 0.58	$f\sigma_8(0.61)$	0.4757 ± 0.0061
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.0 ± 3.2	z_*	1089.46 ± 0.47	$\sigma_8(0.61)$	0.524 ± 0.023
$\boldsymbol{A_{217}^{dustTT}}$	93.7 ± 7.3	r_*	145.01 ± 0.50	$f\sigma_8(2.33)$	0.260 ± 0.013
$\boldsymbol{c_{100}}$	0.99963 ± 0.00062	$100\theta_*$	1.04143 ± 0.00050	$\sigma_8(2.33)$	0.260 ± 0.015
$\boldsymbol{c_{217}}$	0.99817 ± 0.00062	$D_M(z_*)$/Gpc	13.924 ± 0.046	f_{2000}^{143}	27 ± 3
H_0	52.8 ± 4.2	z_{drag}	1060.15 ± 0.52	$f_{2000}^{143\times217}$	29.9 ± 2.4
Ω_Λ	$0.540^{+0.064}_{-0.048}$	r_{drag}	147.62 ± 0.48	f_{2000}^{217}	104.9 ± 2.2
Ω_m	$0.513^{+0.065}_{-0.089}$	k_D	0.14044 ± 0.00051	χ^2_{simall}	396.4 ± 1.3
$\Omega_m h^2$	0.1405 ± 0.0021	$100\theta_D$	0.16066 ± 0.00029	χ^2_{lowl}	21.39 ± 0.73
$\Omega_m h^3$	0.0742 ± 0.0064	z_{eq}	3341 ± 51	χ^2_{plik}	766.6 ± 5.5
σ_8	$0.770^{+0.018}_{-0.016}$	k_{eq}	0.01020 ± 0.00016	χ^2_{prior}	7.1 ± 3.5
S_8	1.003 ± 0.060	$100\theta_{eq}$	0.825 ± 0.010	χ^2_{CMB}	1184.4 ± 5.7

$\bar{\chi}^2_{eff} = 1191.43$; $\Delta\bar{\chi}^2_{eff} = -7.88$; $R - 1 = 0.01578$

16.3 base_omegak_plikHM_TTTEEE_lowl_lowE

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022632	0.02260 ± 0.00017	$\Omega_m h^2$	0.14120	0.1413 ± 0.0014	k_{eq}	0.010251	0.01026 ± 0.00010
$\boldsymbol{\Omega_c h^2}$	0.11792	0.1181 ± 0.0015	$\Omega_m h^3$	0.0764	$0.0769^{+0.0048}_{-0.0059}$	$100\theta_{eq}$	0.8221	0.8214 ± 0.0065
$\boldsymbol{100\theta_{MC}}$	1.041187	1.04116 ± 0.00033	σ_8	0.7750	0.774 ± 0.015	$100\theta_{s,eq}$	0.45376	0.4534 ± 0.0033
$\boldsymbol{\tau}$	0.0495	0.0486 ± 0.0082	S_8	0.9830	0.981 ± 0.049	$H(0.15)$	60.17	$60.4^{+3.0}_{-3.7}$
$\boldsymbol{\Omega_K}$	−0.0438	$-0.044^{+0.018}_{-0.015}$	$\sigma_8\Omega_m^{0.5}$	0.5384	0.537 ± 0.027	$D_M(0.15)$	789.0	788 ± 48
$\boldsymbol{\ln(10^{10} A_s)}$	3.0304	3.028 ± 0.017	$\sigma_8\Omega_m^{0.25}$	0.6460	$0.645^{+0.013}_{-0.011}$	$H(0.38)$	71.48	$71.8^{+2.6}_{-3.3}$
$\boldsymbol{n_s}$	0.97235	0.9706 ± 0.0048	$\sigma_8/h^{0.5}$	1.0538	$1.051^{+0.021}_{-0.018}$	$D_M(0.38)$	1841	1838 ± 99
$\boldsymbol{y_{cal}}$	1.00012	0.9999 ± 0.0025	$r_{drag}h$	79.7	$80.1^{+4.8}_{-5.8}$	$H(0.51)$	78.82	$79.1^{+2.5}_{-3.1}$
$\boldsymbol{A_{217}^{CIB}}$	42.1	45 ± 7	$\langle d^2\rangle^{1/2}$	2.646	2.643 ± 0.065	$D_M(0.51)$	2358	2355 ± 120
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.9999	> 0.440	z_{re}	6.96	$6.86^{+0.90}_{-0.75}$	$H(0.61)$	84.88	$85.2^{+2.4}_{-3.0}$
$\boldsymbol{A_{143}^{tSZ}}$	6.82	$5.8^{+2.0}_{-1.8}$	$10^9 A_s$	2.0706	2.066 ± 0.036	$D_M(0.61)$	2723	2719 ± 130
$\boldsymbol{A_{100}^{PS}}$	237.7	248 ± 30	$10^9 A_s e^{-2\tau}$	1.8754	1.875 ± 0.012	$H(2.33)$	228.92	$229.2^{+2.0}_{-2.4}$
$\boldsymbol{A_{143}^{PS}}$	48.5	41 ± 8	D_{40}	1204.9	1208 ± 14	$D_M(2.33)$	6357	6346^{+190}_{-170}
$\boldsymbol{A_{143\times217}^{PS}}$	56.4	41 ± 9	D_{220}	5747.6	5748 ± 39	$f\sigma_8(0.15)$	0.5285	$0.527^{+0.022}_{-0.018}$
$\boldsymbol{A_{217}^{PS}}$	123.6	115.5 ± 9.7	D_{810}	2535.4	2532 ± 14	$\sigma_8(0.15)$	0.7017	0.701 ± 0.018
$\boldsymbol{A^{kSZ}}$	0.00	< 3.05	D_{1420}	816.95	815.2 ± 4.7	$f\sigma_8(0.38)$	0.5110	$0.5092^{+0.0098}_{-0.0068}$
$\boldsymbol{A_{100}^{dustTT}}$	8.77	8.9 ± 1.8	D_{2000}	233.33	232.5 ± 1.7	$\sigma_8(0.38)$	0.6069	0.607 ± 0.020
$\boldsymbol{A_{143}^{dustTT}}$	10.68	10.6 ± 1.8	$n_{s,0.002}$	0.97235	0.9706 ± 0.0048	$f\sigma_8(0.51)$	0.4928	$0.4912^{+0.0057}_{-0.0047}$
$\boldsymbol{A_{143\times217}^{dustTT}}$	19.69	18.1 ± 3.2	Y_P	0.245491	$0.245481^{+0.000059}_{-0.000066}$	$\sigma_8(0.51)$	0.5619	0.562 ± 0.020
$\boldsymbol{A_{217}^{dustTT}}$	95.6	93.6 ± 7.2	Y_P^{BBN}	0.246818	$0.246808^{+0.000059}_{-0.000066}$	$f\sigma_8(0.61)$	0.47707	$0.4757^{+0.0052}_{-0.0047}$
$\boldsymbol{A_{100}^{dustTE}}$	0.1138	0.114 ± 0.038	10^5D/H	2.5387	2.545 ± 0.031	$\sigma_8(0.61)$	0.5309	0.531 ± 0.020
$\boldsymbol{A_{100\times143}^{dustTE}}$	0.1349	0.134 ± 0.030	Age/Gyr	15.331	15.31 ± 0.47	$f\sigma_8(2.33)$	0.2638	0.264 ± 0.011
$\boldsymbol{A_{100\times217}^{dustTE}}$	0.481	0.479 ± 0.085	z_*	1089.411	1089.47 ± 0.31	$\sigma_8(2.33)$	0.2639	0.264 ± 0.013
$\boldsymbol{A_{143}^{dustTE}}$	0.223	0.223 ± 0.053	r_*	144.771	144.75 ± 0.32	f_{2000}^{143}	25.11	26 ± 3
$\boldsymbol{A_{143\times217}^{dustTE}}$	0.661	0.661 ± 0.079	$100\theta_*$	1.041338	1.04132 ± 0.00032	$f_{2000}^{143\times217}$	29.16	29.6 ± 2.1
$\boldsymbol{A_{217}^{dustTE}}$	2.055	2.06 ± 0.27	$D_M(z_*)$/Gpc	13.9024	13.901 ± 0.029	f_{2000}^{217}	103.94	104.7 ± 1.9
$\boldsymbol{c_{100}}$	0.99977	0.99970 ± 0.00061	z_{drag}	1060.390	1060.33 ± 0.33	χ^2_{simall}	395.55	396.7 ± 1.6
$\boldsymbol{c_{217}}$	0.99808	0.99812 ± 0.00062	r_{drag}	147.353	147.35 ± 0.30	χ^2_{lowl}	21.16	21.51 ± 0.63
H_0	54.09	$54.4^{+3.3}_{-4.0}$	k_D	0.140786	0.14077 ± 0.00031	χ^2_{plik}	2336.5	2353.2 ± 5.7
Ω_Λ	0.5611	$0.560^{+0.050}_{-0.043}$	$100\theta_D$	0.160509	0.16055 ± 0.00019	χ^2_{prior}	1.27	11.2 ± 4.4
Ω_m	0.483	$0.485^{+0.058}_{-0.068}$	z_{eq}	3358.8	3362 ± 33	χ^2_{CMB}	2753.2	2771.4 ± 5.9

Best-fit $\chi^2_{eff} = 2754.51$; $\Delta\chi^2_{eff} = -11.26$; $\bar{\chi}^2_{eff} = 2782.60$; $\Delta\bar{\chi}^2_{eff} = -9.17$; $R - 1 = 0.01257$

χ^2_{eff}: CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.55 (Δ -0.50) commander_dx12_v3_2_29: 21.16 (Δ -2.09) plik_rd12_HM_v22b_TTTEEE: 2336.53 (Δ -8.12)

16.4 base_omegak_plikHM_TTTEEE_lowl_lowE_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02260 ± 0.00017	$\Omega_m h^2$	0.1413 ± 0.0014	k_{eq}	0.01026 ± 0.00010
$\boldsymbol{\Omega_c h^2}$	0.1181 ± 0.0015	$\Omega_m h^3$	$0.0778^{+0.0046}_{-0.0060}$	$100\theta_{eq}$	0.8215 ± 0.0065
$\boldsymbol{100\theta_{MC}}$	1.04116 ± 0.00033	σ_8	0.779 ± 0.014	$100\theta_{s,eq}$	0.4535 ± 0.0033
$\boldsymbol{\tau}$	$0.0528^{+0.0029}_{-0.0069}$	S_8	0.974 ± 0.048	$H(0.15)$	$61.1^{+2.9}_{-3.7}$
$\boldsymbol{\Omega_K}$	$-0.041^{+0.017}_{-0.015}$	$\sigma_8\Omega_m^{0.5}$	0.534 ± 0.026	$D_M(0.15)$	779 ± 46
$\boldsymbol{\ln(10^{10} A_s)}$	$3.0365^{+0.0094}_{-0.014}$	$\sigma_8\Omega_m^{0.25}$	$0.645^{+0.013}_{-0.011}$	$H(0.38)$	$72.3^{+2.5}_{-3.3}$
$\boldsymbol{n_s}$	0.9708 ± 0.0048	$\sigma_8/h^{0.5}$	$1.051^{+0.021}_{-0.018}$	$D_M(0.38)$	1819 ± 94
$\boldsymbol{y_{cal}}$	0.99996 ± 0.0025	$r_{drag}h$	$81.1^{+4.6}_{-5.8}$	$H(0.51)$	$79.6^{+2.4}_{-3.2}$
$\boldsymbol{A^{CIB}_{217}}$	45 ± 7	$\langle d^2\rangle^{1/2}$	2.640 ± 0.064	$D_M(0.51)$	2332 ± 110
$\boldsymbol{\xi^{tSZ\times CIB}}$	> 0.441	z_{re}	< 7.52	$H(0.61)$	$85.6^{+2.3}_{-3.0}$
$\boldsymbol{A^{tSZ}_{143}}$	$5.8^{+2.0}_{-1.8}$	$10^9 A_s$	$2.083^{+0.019}_{-0.030}$	$D_M(0.61)$	2694 ± 120
$\boldsymbol{A^{PS}_{100}}$	248 ± 30	$10^9 A_s e^{-2\tau}$	1.874 ± 0.012	$H(2.33)$	$229.5^{+2.0}_{-2.5}$
$\boldsymbol{A^{PS}_{143}}$	41 ± 8	D_{40}	1209 ± 14	$D_M(2.33)$	6314^{+190}_{-160}
$\boldsymbol{A^{PS}_{143\times217}}$	41 ± 9	D_{220}	5748 ± 39	$f\sigma_8(0.15)$	$0.525^{+0.022}_{-0.019}$
$\boldsymbol{A^{PS}_{217}}$	115.5 ± 9.7	D_{810}	2532 ± 14	$\sigma_8(0.15)$	0.707 ± 0.016
$\boldsymbol{A^{kSZ}}$	< 2.99	D_{1420}	815.3 ± 4.8	$f\sigma_8(0.38)$	$0.509^{+0.010}_{-0.0071}$
$\boldsymbol{A^{dustTT}_{100}}$	8.9 ± 1.8	D_{2000}	232.6 ± 1.7	$\sigma_8(0.38)$	0.612 ± 0.018
$\boldsymbol{A^{dustTT}_{143}}$	10.6 ± 1.8	$n_{s,0.002}$	0.9708 ± 0.0048	$f\sigma_8(0.51)$	$0.4924^{+0.0055}_{-0.0044}$
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.1 ± 3.2	Y_P	0.245482 ± 0.000066	$\sigma_8(0.51)$	0.567 ± 0.019
$\boldsymbol{A^{dustTT}_{217}}$	93.5 ± 7.2	Y_P^{BBN}	0.246809 ± 0.000066	$f\sigma_8(0.61)$	0.4774 ± 0.0043
$\boldsymbol{A^{dustTE}_{100}}$	0.113 ± 0.038	10^5D/H	2.544 ± 0.031	$\sigma_8(0.61)$	0.536 ± 0.019
$\boldsymbol{A^{dustTE}_{100\times143}}$	0.134 ± 0.029	Age/Gyr	$15.22^{+0.48}_{-0.43}$	$f\sigma_8(2.33)$	0.267 ± 0.010
$\boldsymbol{A^{dustTE}_{100\times217}}$	0.479 ± 0.085	z_*	1089.46 ± 0.31	$\sigma_8(2.33)$	$0.268^{+0.011}_{-0.013}$
$\boldsymbol{A^{dustTE}_{143}}$	0.223 ± 0.053	r_*	144.76 ± 0.32	f^{143}_{2000}	26 ± 3
$\boldsymbol{A^{dustTE}_{143\times217}}$	0.660 ± 0.079	$100\theta_*$	1.04132 ± 0.00032	$f^{143\times217}_{2000}$	29.6 ± 2.1
$\boldsymbol{A^{dustTE}_{217}}$	2.06 ± 0.27	$D_M(z_*)$/Gpc	13.901 ± 0.029	f^{217}_{2000}	104.7 ± 1.9
$\boldsymbol{c_{100}}$	0.99970 ± 0.00061	z_{drag}	1060.33 ± 0.33	χ^2_{simall}	396.3 ± 1.3
$\boldsymbol{c_{217}}$	0.99812 ± 0.00062	r_{drag}	147.35 ± 0.30	χ^2_{lowl}	21.53 ± 0.67
H_0	$55.1^{+3.1}_{-3.9}$	k_D	0.14077 ± 0.00031	χ^2_{plik}	2353.2 ± 5.7
Ω_Λ	$0.569^{+0.046}_{-0.041}$	$100\theta_D$	0.16055 ± 0.00019	χ^2_{prior}	11.2 ± 4.4
Ω_m	$0.472^{+0.056}_{-0.063}$	z_{eq}	3361 ± 33	χ^2_{CMB}	2771.0 ± 5.8

$\bar{\chi}^2_{eff} = 2782.22$; $\Delta\bar{\chi}^2_{eff} = -9.31$; $R - 1 = 0.01621$

16.5 base_omegak_CamSpecHM_TT_lowl_lowE

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022580	0.02258 ± 0.00028	$\sigma_8\Omega_m^{0.5}$	0.5546	0.554 ± 0.035	$H(0.15)$	58.09	$58.2^{+3.7}_{-4.4}$
$\boldsymbol{\Omega_c h^2}$	0.11749	0.1173 ± 0.0023	$\sigma_8\Omega_m^{0.25}$	0.6521	$0.650^{+0.017}_{-0.014}$	$D_M(0.15)$	820	823^{+59}_{-69}
$\boldsymbol{100\theta_{MC}}$	1.04131	1.04135 ± 0.00052	$\sigma_8/h^{0.5}$	1.0646	$1.062^{+0.027}_{-0.022}$	$H(0.38)$	69.62	$69.8^{+3.3}_{-4.0}$
$\boldsymbol{\tau}$	0.0492	0.0491 ± 0.0082	$r_{drag}h$	76.5	$76.7^{+6.0}_{-6.9}$	$D_M(0.38)$	1904	1909 ± 130
$\boldsymbol{\Omega_K}$	−0.0550	$-0.058^{+0.029}_{-0.019}$	$\langle d^2\rangle^{1/2}$	2.682	2.682 ± 0.084	$H(0.51)$	77.06	$77.2^{+3.1}_{-3.7}$
$\boldsymbol{\ln(10^{10}A_s)}$	3.0265	3.026 ± 0.017	z_{re}	6.91	$6.87^{+0.89}_{-0.76}$	$D_M(0.51)$	2435	2439 ± 150
$\boldsymbol{n_s}$	0.9738	0.9732 ± 0.0066	$10^9 A_s$	2.0625	2.062 ± 0.035	$H(0.61)$	83.19	$83.3^{+3.0}_{-3.6}$
$\boldsymbol{y_{cal}}$	0.99980	1.0000 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.8692	1.869 ± 0.014	$D_M(0.61)$	2807	2811 ± 170
$\boldsymbol{A_{100}^{PS}}$	219.7	229 ± 30	D_{40}	1196.9	1199 ± 17	$H(2.33)$	227.59	227.5 ± 3.0
$\boldsymbol{A_{143}^{PS}}$	39.7	33 ± 9	D_{220}	5727.5	5735 ± 43	$D_M(2.33)$	6470	6473 ± 230
$\boldsymbol{A_{217}^{PS}}$	107.4	104^{+10}_{-10}	D_{810}	2528.2	2527 ± 14	$f\sigma_8(0.15)$	0.5405	$0.539^{+0.027}_{-0.023}$
$\boldsymbol{A_{217}^{CIB}}$	38.2	37^{+7}_{-8}	D_{1420}	814.4	813.7 ± 5.1	$\sigma_8(0.15)$	0.6912	$0.689^{+0.024}_{-0.022}$
$\boldsymbol{A_{143}^{tSZ}}$	6.27	$4.1^{+2.0}_{-2.3}$	D_{2000}	232.89	232.5 ± 2.1	$f\sigma_8(0.38)$	0.5149	$0.512^{+0.012}_{-0.0076}$
$\boldsymbol{r_{143\times217}^{PS}}$	0.742	0.68 ± 0.14	$n_{s,0.002}$	0.9738	0.9732 ± 0.0066	$\sigma_8(0.38)$	0.5950	0.594 ± 0.025
$\boldsymbol{r_{143\times217}^{CIB}}$	0.690	0.49 ± 0.26	Y_P	0.245473	$0.245473^{+0.000099}_{-0.00011}$	$f\sigma_8(0.51)$	0.4935	$0.4911^{+0.0071}_{-0.0059}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.65	—	Y_P^{BBN}	0.246800	$0.246800^{+0.000099}_{-0.00011}$	$\sigma_8(0.51)$	0.5497	0.549 ± 0.026
$\boldsymbol{A^{kSZ}}$	0.01	< 5.28	10^5D/H	2.5480	2.549 ± 0.050	$f\sigma_8(0.61)$	0.4758	$0.4735^{+0.0073}_{-0.0061}$
$\boldsymbol{A_{100}^{dust}}$	0.999	1.01 ± 0.19	Age/Gyr	15.64	15.65 ± 0.62	$\sigma_8(0.61)$	0.5188	0.518 ± 0.025
$\boldsymbol{A_{143}^{dust}}$	0.955	0.95 ± 0.17	z_*	1089.438	1089.43 ± 0.49	$f\sigma_8(2.33)$	0.2571	0.257 ± 0.014
$\boldsymbol{A_{217}^{dust}}$	0.980	0.98 ± 0.10	r_*	144.923	144.98 ± 0.49	$\sigma_8(2.33)$	0.2560	0.256 ± 0.016
$\boldsymbol{A_{143\times217}^{dust}}$	1.019	1.02 ± 0.16	$100\theta_*$	1.04147	1.04151 ± 0.00050	f_{2000}^{143}	25.54	26 ± 3
$\boldsymbol{c_{100}}$	0.99778	0.9976 ± 0.0011	$D_M(z_*)$/Gpc	13.9152	13.920 ± 0.045	f_{2000}^{217}	103.47	104.1 ± 2.3
$\boldsymbol{c_{217}}$	1.00072	1.0008 ± 0.0016	z_{drag}	1060.24	1060.21 ± 0.55	$f_{2000}^{143\times217}$	28.69	29.0 ± 2.5
H_0	51.85	$52.0^{+4.1}_{-4.7}$	r_{drag}	147.526	147.58 ± 0.48	χ^2_{simall}	395.53	396.7 ± 1.5
Ω_Λ	0.532	$0.527^{+0.073}_{-0.053}$	k_D	0.14056	$0.14050^{+0.00053}_{-0.00048}$	χ^2_{lowl}	20.976	21.28 ± 0.63
Ω_m	0.523	$0.531^{+0.072}_{-0.10}$	$100\theta_D$	0.160614	0.16064 ± 0.00030	$\chi^2_{CamSpec}$	7045.3	7059.5 ± 5.3
$\Omega_m h^2$	0.14072	0.1405 ± 0.0021	z_{eq}	3347	3343 ± 50	χ^2_{prior}	1.47	7.1 ± 3.3
$\Omega_m h^3$	0.0730	$0.0731^{+0.0061}_{-0.0071}$	k_{eq}	0.010216	0.01020 ± 0.00015	χ^2_{CMB}	7461.8	7477.5 ± 5.5
σ_8	0.7666	$0.765^{+0.021}_{-0.019}$	$100\theta_{eq}$	0.8241	0.825 ± 0.010			
S_8	1.013	1.012 ± 0.063	$100\theta_{s,eq}$	0.4549	0.4554 ± 0.0051			

Best-fit $\chi^2_{eff} = 7463.28$; $\Delta\chi^2_{eff} = -8.46$; $\bar{\chi}^2_{eff} = 7484.59$; $\Delta\bar{\chi}^2_{eff} = -6.95$; $R - 1 = 0.03021$

χ^2_{eff}: CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.53 (Δ -0.30) commander_dx12_v3_2_29: 20.98 (Δ -2.42) CamSpec like_10.7HM: 7045.30 (Δ -5.04)

16.6 base_omegak_CamSpecHM_TT_lowl_lowE_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02258 ± 0.00027	$\sigma_8\Omega_m^{0.5}$	0.551 ± 0.034	$H(0.15)$	$58.8^{+3.7}_{-4.3}$
$\boldsymbol{\Omega_c h^2}$	0.1173 ± 0.0022	$\sigma_8\Omega_m^{0.25}$	$0.651^{+0.016}_{-0.014}$	$D_M(0.15)$	814^{+57}_{-65}
$\boldsymbol{100\theta_{MC}}$	1.04137 ± 0.00052	$\sigma_8/h^{0.5}$	$1.063^{+0.026}_{-0.022}$	$H(0.38)$	$70.2^{+3.2}_{-3.8}$
$\boldsymbol{\tau}$	$0.0532^{+0.0035}_{-0.0069}$	$r_{drag}h$	$77.6^{+5.8}_{-6.7}$	$D_M(0.38)$	1891 ± 120
$\boldsymbol{\Omega_K}$	$-0.054^{+0.027}_{-0.018}$	$\langle d^2\rangle^{1/2}$	2.679 ± 0.082	$H(0.51)$	$77.6^{+3.1}_{-3.6}$
$\boldsymbol{\ln(10^{10}A_s)}$	$3.034^{+0.010}_{-0.014}$	z_{re}	< 7.54	$D_M(0.51)$	2418 ± 150
$\boldsymbol{n_s}$	0.9734 ± 0.0065	$10^9 A_s$	$2.078^{+0.020}_{-0.029}$	$H(0.61)$	$83.7^{+2.9}_{-3.5}$
$\boldsymbol{y_{cal}}$	1.0000 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.868 ± 0.014	$D_M(0.61)$	2788 ± 160
$\boldsymbol{A_{100}^{PS}}$	229 ± 30	D_{40}	1200 ± 17	$H(2.33)$	$227.7^{+2.8}_{-3.1}$
$\boldsymbol{A_{143}^{PS}}$	33 ± 9	D_{220}	5734 ± 43	$D_M(2.33)$	6444 ± 220
$\boldsymbol{A_{217}^{PS}}$	104 ± 10	D_{810}	2527 ± 14	$f\sigma_8(0.15)$	$0.537^{+0.027}_{-0.023}$
$\boldsymbol{A_{217}^{CIB}}$	37^{+7}_{-8}	D_{1420}	813.8 ± 5.1	$\sigma_8(0.15)$	$0.695^{+0.023}_{-0.020}$
$\boldsymbol{A_{143}^{tSZ}}$	$4.1^{+1.9}_{-2.3}$	D_{2000}	232.5 ± 2.1	$f\sigma_8(0.38)$	$0.513^{+0.012}_{-0.0076}$
$\boldsymbol{r_{143\times217}^{PS}}$	0.68 ± 0.14	$n_{s,0.002}$	0.9734 ± 0.0065	$\sigma_8(0.38)$	0.599 ± 0.024
$\boldsymbol{r_{143\times217}^{CIB}}$	0.49 ± 0.27	Y_P	$0.245475^{+0.000096}_{-0.00011}$	$f\sigma_8(0.51)$	$0.4926^{+0.0065}_{-0.0056}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	$0.246802^{+0.000097}_{-0.00011}$	$\sigma_8(0.51)$	0.554 ± 0.024
$\boldsymbol{A^{kSZ}}$	< 5.32	10^5D/H	2.548 ± 0.049	$f\sigma_8(0.61)$	0.4756 ± 0.0061
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.19	Age/Gyr	15.57 ± 0.59	$\sigma_8(0.61)$	0.523 ± 0.024
$\boldsymbol{A_{143}^{dust}}$	0.95 ± 0.17	z_*	1089.42 ± 0.48	$f\sigma_8(2.33)$	0.259 ± 0.013
$\boldsymbol{A_{217}^{dust}}$	0.98 ± 0.10	r_*	144.99 ± 0.48	$\sigma_8(2.33)$	0.259 ± 0.015
$\boldsymbol{A_{143\times217}^{dust}}$	1.02 ± 0.16	$100\theta_*$	1.04154 ± 0.00050	f_{2000}^{143}	26 ± 3
$\boldsymbol{c_{100}}$	0.9976 ± 0.0011	$D_M(z_*)$/Gpc	13.921 ± 0.044	f_{2000}^{217}	104.1 ± 2.3
$\boldsymbol{c_{217}}$	1.0008 ± 0.0015	z_{drag}	1060.22 ± 0.54	$f_{2000}^{143\times217}$	29.0 ± 2.5
H_0	$52.6^{+4.0}_{-4.6}$	r_{drag}	147.59 ± 0.47	χ^2_{simall}	396.4 ± 1.2
Ω_Λ	$0.537^{+0.066}_{-0.051}$	k_D	0.14049 ± 0.00051	χ^2_{lowl}	21.27 ± 0.65
Ω_m	$0.517^{+0.069}_{-0.093}$	$100\theta_D$	0.16064 ± 0.00029	$\chi^2_{CamSpec}$	7059.4 ± 5.3
$\Omega_m h^2$	0.1405 ± 0.0021	z_{eq}	3342 ± 50	χ^2_{prior}	7.1 ± 3.3
$\Omega_m h^3$	$0.0739^{+0.0060}_{-0.0069}$	k_{eq}	0.01020 ± 0.00015	χ^2_{CMB}	7477.1 ± 5.4
σ_8	0.769 ± 0.018	$100\theta_{eq}$	0.8254 ± 0.0098		
S_8	1.006 ± 0.061	$100\theta_{s,eq}$	0.4555 ± 0.0050		

$\bar{\chi}^2_{eff} = 7484.13$; $\Delta\bar{\chi}^2_{eff} = -7.13$; $R - 1 = 0.03650$

16.7 base_omegak_CamSpecHM_TTTEEE_lowl_lowE

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022535	0.02254 ± 0.00018	σ_8	0.7817	$0.777^{+0.016}_{-0.014}$	$100\theta_{\rm eq}$	0.8226	0.8223 ± 0.0065
$\boldsymbol{\Omega_c h^2}$	0.11783	0.1179 ± 0.0015	S_8	0.943	0.953 ± 0.053	$100\theta_{\rm s,eq}$	0.45409	0.4540 ± 0.0033
$\boldsymbol{100\theta_{MC}}$	1.041095	1.04111 ± 0.00032	$\sigma_8\Omega_{\rm m}^{0.5}$	0.5163	0.522 ± 0.029	$H(0.15)$	62.72	$62.1^{+3.4}_{-4.1}$
$\boldsymbol{\tau}$	0.0509	$0.0481^{+0.0084}_{-0.0069}$	$\sigma_8\Omega_{\rm m}^{0.25}$	0.6353	$0.637^{+0.015}_{-0.013}$	$D_{\rm M}(0.15)$	754	766 ± 51
$\boldsymbol{\Omega_K}$	-0.0320	$-0.037^{+0.019}_{-0.014}$	$\sigma_8/h^{0.5}$	1.0367	$1.039^{+0.024}_{-0.020}$	$H(0.38)$	73.73	$73.2^{+3.0}_{-3.7}$
$\boldsymbol{\ln(10^{10}A_s)}$	3.0304	$3.025^{+0.018}_{-0.015}$	$r_{\rm drag}h$	83.8	$82.8^{+5.4}_{-6.5}$	$D_{\rm M}(0.38)$	1769	1793 ± 110
$\boldsymbol{n_s}$	0.97187	0.9713 ± 0.0048	$\langle d^2\rangle^{1/2}$	2.591	2.602 ± 0.071	$H(0.51)$	80.91	$80.4^{+2.8}_{-3.5}$
$\boldsymbol{y_{cal}}$	0.99975	1.0000 ± 0.0025	$z_{\rm re}$	7.15	$6.83^{+0.94}_{-0.70}$	$D_{\rm M}(0.51)$	2272	2301 ± 130
$\boldsymbol{A^{PS}_{100}}$	225.5	230 ± 25	$10^9 A_{\rm s}$	2.0705	$2.060^{+0.036}_{-0.032}$	$H(0.61)$	86.86	$86.4^{+2.7}_{-3.4}$
$\boldsymbol{A^{PS}_{143}}$	42.6	34 ± 8	$10^9 A_{\rm s}e^{-2\tau}$	1.8700	1.871 ± 0.012	$D_{\rm M}(0.61)$	2629	2660 ± 140
$\boldsymbol{A^{PS}_{217}}$	106.3	104 ± 10	D_{40}	1204.1	1205 ± 14	$H(2.33)$	229.98	$229.8^{+2.2}_{-2.6}$
$\boldsymbol{A^{CIB}_{217}}$	38.8	37^{+7}_{-8}	D_{220}	5726.8	5733 ± 39	$D_{\rm M}(2.33)$	6232	6269 ± 190
$\boldsymbol{A^{tSZ}_{143}}$	5.71	$4.1^{+2.0}_{-2.3}$	D_{810}	2529.7	2529 ± 14	$f\sigma_8(0.15)$	0.5111	$0.515^{+0.024}_{-0.021}$
$\boldsymbol{r^{PS}_{143\times217}}$	0.718	0.68 ± 0.14	D_{1420}	814.87	814.6 ± 4.8	$\sigma_8(0.15)$	0.7114	$0.706^{+0.019}_{-0.017}$
$\boldsymbol{r^{CIB}_{143\times217}}$	0.745	$0.52^{+0.34}_{-0.27}$	D_{2000}	232.05	231.9 ± 1.7	$f\sigma_8(0.38)$	0.5031	$0.503^{+0.012}_{-0.0083}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.73	—	$n_{\rm s,0.002}$	0.97187	0.9713 ± 0.0048	$\sigma_8(0.38)$	0.6188	0.613 ± 0.021
$\boldsymbol{A^{kSZ}}$	0.86	< 5.22	$Y_{\rm P}$	0.245457	0.245457 ± 0.000069	$f\sigma_8(0.51)$	0.4890	$0.4878^{+0.0066}_{-0.0054}$
$\boldsymbol{A^{dust}_{100}}$	1.005	1.02 ± 0.20	$Y_{\rm P}^{\rm BBN}$	0.246784	0.246784 ± 0.000069	$\sigma_8(0.51)$	0.5743	0.569 ± 0.021
$\boldsymbol{A^{dust}_{143}}$	0.959	0.95 ± 0.17	10^5D/H	2.5558	2.556 ± 0.032	$f\sigma_8(0.61)$	0.47572	0.4739 ± 0.0052
$\boldsymbol{A^{dust}_{217}}$	0.981	0.98 ± 0.10	Age/Gyr	15.00	15.10 ± 0.51	$\sigma_8(0.61)$	0.5435	0.538 ± 0.021
$\boldsymbol{A^{dust}_{143\times217}}$	1.002	1.01 ± 0.16	z_*	1089.526	1089.53 ± 0.32	$f\sigma_8(2.33)$	0.2710	0.268 ± 0.012
$\boldsymbol{c_{100}}$	0.99779	0.9976 ± 0.0010	r_*	144.869	144.85 ± 0.33	$\sigma_8(2.33)$	0.2727	0.269 ± 0.014
$\boldsymbol{c_{217}}$	1.00089	1.0008 ± 0.0016	$100\theta_*$	1.041266	1.04127 ± 0.00032	f^{143}_{2000}	26.87	27 ± 3
$\boldsymbol{c_{TE}}$	0.9927	0.9923 ± 0.0051	$D_{\rm M}(z_*)$/Gpc	13.9128	13.911 ± 0.030	f^{217}_{2000}	104.33	104.6 ± 2.1
$\boldsymbol{c_{EE}}$	0.98993	0.9897 ± 0.0049	$z_{\rm drag}$	1060.162	1060.17 ± 0.36	$f^{143\times217}_{2000}$	29.52	29.6 ± 2.2
H_0	56.85	$56.1^{+3.7}_{-4.4}$	$r_{\rm drag}$	147.485	147.47 ± 0.32	$\chi^2_{\rm simall}$	395.63	396.7 ± 1.7
Ω_Λ	0.5958	$0.582^{+0.052}_{-0.042}$	$k_{\rm D}$	0.140575	0.14059 ± 0.00035	$\chi^2_{\rm lowl}$	21.16	21.40 ± 0.64
$\Omega_{\rm m}$	0.436	$0.455^{+0.056}_{-0.071}$	$100\theta_{\rm D}$	0.160629	0.16063 ± 0.00021	$\chi^2_{\rm CamSpec}$	11495.3	11511.3 ± 5.5
$\Omega_{\rm m}h^2$	0.14101	0.1411 ± 0.0014	$z_{\rm eq}$	3354.2	3356 ± 33	$\chi^2_{\rm prior}$	1.90	7.7 ± 3.3
$\Omega_{\rm m}h^3$	0.0802	$0.0792^{+0.0055}_{-0.0065}$	$k_{\rm eq}$	0.010238	0.01024 ± 0.00010	$\chi^2_{\rm CMB}$	11912.1	11929.5 ± 5.8

Best-fit $\chi^2_{\rm eff} = 11914.02$; $\Delta\chi^2_{\rm eff} = -6.75$; $\bar{\chi}^2_{\rm eff} = 11937.16$; $\Delta\bar{\chi}^2_{\rm eff} = -5.30$; $R - 1 = 0.03285$

$\chi^2_{\rm eff}$: CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.63 (Δ -0.27) commander_dx12_v3_2_29: 21.16 (Δ -1.84) CamSpec like_10.7HM_1400_unified: 11495.33 (Δ -4.32)

16.8 base_omegak_CamSpecHM_TTTEEE_lowl_lowE_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02253 ± 0.00018	σ_8	0.782 ± 0.013	$100\theta_{\rm eq}$	0.8225 ± 0.0065
$\boldsymbol{\Omega_c h^2}$	0.1179 ± 0.0015	S_8	0.946 ± 0.051	$100\theta_{\rm s,eq}$	0.4540 ± 0.0033
$\boldsymbol{100\theta_{MC}}$	1.04111 ± 0.00032	$\sigma_8\Omega_{\rm m}^{0.5}$	0.518 ± 0.028	$H(0.15)$	$62.8^{+3.3}_{-4.1}$
$\boldsymbol{\tau}$	$0.0524^{+0.0031}_{-0.0064}$	$\sigma_8\Omega_{\rm m}^{0.25}$	$0.636^{+0.014}_{-0.013}$	$D_{\rm M}(0.15)$	757 ± 48
$\boldsymbol{\Omega_K}$	$-0.034^{+0.018}_{-0.014}$	$\sigma_8/h^{0.5}$	$1.038^{+0.024}_{-0.021}$	$H(0.38)$	$73.8^{+2.9}_{-3.7}$
$\boldsymbol{\ln(10^{10}A_s)}$	$3.0337^{+0.0093}_{-0.014}$	$r_{\rm drag}h$	$83.9^{+5.2}_{-6.3}$	$D_{\rm M}(0.38)$	1773 ± 100
$\boldsymbol{n_s}$	0.9715 ± 0.0047	$\langle d^2\rangle^{1/2}$	2.598 ± 0.070	$H(0.51)$	$81.0^{+2.7}_{-3.5}$
$\boldsymbol{y_{cal}}$	1.0000 ± 0.0025	$z_{\rm re}$	$7.30^{+0.21}_{-0.79}$	$D_{\rm M}(0.51)$	2277 ± 120
$\boldsymbol{A^{PS}_{100}}$	230 ± 25	$10^9 A_{\rm s}$	$2.077^{+0.019}_{-0.028}$	$H(0.61)$	$86.9^{+2.6}_{-3.4}$
$\boldsymbol{A^{PS}_{143}}$	34 ± 8	$10^9 A_{\rm s}e^{-2\tau}$	1.871 ± 0.012	$D_{\rm M}(0.61)$	2634 ± 130
$\boldsymbol{A^{PS}_{217}}$	104 ± 10	D_{40}	1206 ± 14	$H(2.33)$	$230.1^{+2.2}_{-2.6}$
$\boldsymbol{A^{CIB}_{217}}$	37^{+7}_{-8}	D_{220}	5731 ± 39	$D_{\rm M}(2.33)$	6236^{+190}_{-180}
$\boldsymbol{A^{tSZ}_{143}}$	$4.1^{+2.0}_{-2.3}$	D_{810}	2529 ± 14	$f\sigma_8(0.15)$	$0.512^{+0.024}_{-0.021}$
$\boldsymbol{r^{PS}_{143\times217}}$	0.67 ± 0.14	D_{1420}	814.7 ± 4.8	$\sigma_8(0.15)$	0.712 ± 0.016
$\boldsymbol{r^{CIB}_{143\times217}}$	$0.52^{+0.34}_{-0.27}$	D_{2000}	231.9 ± 1.7	$f\sigma_8(0.38)$	$0.503^{+0.012}_{-0.0088}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$n_{\rm s,0.002}$	0.9715 ± 0.0047	$\sigma_8(0.38)$	0.619 ± 0.019
$\boldsymbol{A^{kSZ}}$	< 5.24	$Y_{\rm P}$	0.245456 ± 0.000068	$f\sigma_8(0.51)$	$0.4888^{+0.0069}_{-0.0052}$
$\boldsymbol{A^{dust}_{100}}$	1.02 ± 0.20	$Y_{\rm P}^{\rm BBN}$	0.246783 ± 0.000068	$\sigma_8(0.51)$	0.574 ± 0.019
$\boldsymbol{A^{dust}_{143}}$	0.94 ± 0.17	10^5D/H	2.556 ± 0.032	$f\sigma_8(0.61)$	0.4755 ± 0.0046
$\boldsymbol{A^{dust}_{217}}$	0.98 ± 0.10	Age/Gyr	15.01 ± 0.48	$\sigma_8(0.61)$	0.544 ± 0.019
$\boldsymbol{A^{dust}_{143\times217}}$	1.01 ± 0.16	z_*	1089.53 ± 0.31	$f\sigma_8(2.33)$	0.271 ± 0.011
$\boldsymbol{c_{100}}$	0.9976 ± 0.0010	r_*	144.86 ± 0.33	$\sigma_8(2.33)$	0.273 ± 0.013
$\boldsymbol{c_{217}}$	1.0008 ± 0.0016	$100\theta_*$	1.04128 ± 0.00031	f^{143}_{2000}	27 ± 3
$\boldsymbol{c_{TE}}$	0.9924 ± 0.0051	$D_{\rm M}(z_*)$/Gpc	13.912 ± 0.030	f^{217}_{2000}	104.6 ± 2.1
$\boldsymbol{c_{EE}}$	0.9898 ± 0.0049	$z_{\rm drag}$	1060.16 ± 0.36	$f^{143\times217}_{2000}$	29.6 ± 2.2
H_0	$56.9^{+3.5}_{-4.3}$	$r_{\rm drag}$	147.48 ± 0.32	$\chi^2_{\rm simall}$	396.2 ± 1.1
Ω_Λ	$0.592^{+0.047}_{-0.040}$	$k_{\rm D}$	0.14058 ± 0.00035	$\chi^2_{\rm lowl}$	21.43 ± 0.67
$\Omega_{\rm m}$	$0.442^{+0.054}_{-0.065}$	$100\theta_{\rm D}$	0.16064 ± 0.00020	$\chi^2_{\rm CamSpec}$	11511.3 ± 5.5
$\Omega_{\rm m}h^2$	0.1410 ± 0.0014	$z_{\rm eq}$	3355 ± 33	$\chi^2_{\rm prior}$	7.7 ± 3.3
$\Omega_{\rm m}h^3$	$0.0802^{+0.0052}_{-0.0064}$	$k_{\rm eq}$	0.01024 ± 0.00010	$\chi^2_{\rm CMB}$	11929.0 ± 5.7

$\bar{\chi}^2_{\rm eff} = 11936.68$; $\Delta\bar{\chi}^2_{\rm eff} = -5.50$; $R - 1 = 0.03528$

16.9 base_omegak_plikHM_TT_lowl_lowE_BAO

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022179	0.02216 ± 0.00023	$\sigma_8/h^{0.5}$	0.9841	0.984 ± 0.013	$D_M(0.38)$	1524.4	1525 ± 14
$\boldsymbol{\Omega_c h^2}$	0.11988	0.1198 ± 0.0022	$r_{drag}h$	99.95	99.9 ± 1.0	$H(0.51)$	89.99	89.95 ± 0.70
$\boldsymbol{100\theta_{MC}}$	1.040904	1.04087 ± 0.00048	$\langle d^2\rangle^{1/2}$	2.4310	2.431 ± 0.029	$D_M(0.51)$	1974.9	1976 ± 17
$\boldsymbol{\tau}$	0.0527	0.0529 ± 0.0079	z_{re}	7.56	7.56 ± 0.80	$H(0.61)$	95.61	95.57 ± 0.72
$\boldsymbol{\Omega_K}$	0.00125	0.0012 ± 0.0026	$10^9 A_s$	2.0908	2.091 ± 0.034	$D_M(0.61)$	2298.2	2299 ± 19
$\boldsymbol{\ln(10^{10} A_s)}$	3.0401	3.040 ± 0.016	$10^9 A_s e^{-2\tau}$	1.8815	1.881 ± 0.014	$H(2.33)$	236.58	236.5 ± 1.8
$\boldsymbol{n_s}$	0.9651	0.9647 ± 0.0060	D_{40}	1228.2	1229 ± 16	$D_M(2.33)$	5748.0	5751 ± 38
$\boldsymbol{y_{cal}}$	1.00056	1.0006 ± 0.0025	D_{220}	5714.0	5717 ± 41	$f\sigma_8(0.15)$	0.4559	0.4558 ± 0.0084
$\boldsymbol{A_{217}^{CIB}}$	49.5	48 ± 7	D_{810}	2538.1	2537 ± 14	$\sigma_8(0.15)$	0.7492	0.7488 ± 0.0093
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.19	—	D_{1420}	815.8	815.2 ± 5.1	$f\sigma_8(0.38)$	0.4745	0.4743 ± 0.0074
$\boldsymbol{A_{143}^{tSZ}}$	7.11	5.1 ± 2.0	D_{2000}	230.09	229.7 ± 1.9	$\sigma_8(0.38)$	0.6643	0.6639 ± 0.0082
$\boldsymbol{A_{100}^{PS}}$	256.0	263 ± 28	$n_{s,0.002}$	0.9651	0.9647 ± 0.0060	$f\sigma_8(0.51)$	0.4733	0.4731 ± 0.0068
$\boldsymbol{A_{143}^{PS}}$	48.0	49 ± 8	Y_P	0.245317	$0.24530^{+0.00011}_{-0.000087}$	$\sigma_8(0.51)$	0.6217	0.6214 ± 0.0076
$\boldsymbol{A_{143\times217}^{PS}}$	43.7	44 ± 9	Y_P^{BBN}	0.246644	$0.24663^{+0.00011}_{-0.000087}$	$f\sigma_8(0.61)$	0.4684	0.4682 ± 0.0064
$\boldsymbol{A_{217}^{PS}}$	118.1	115 ± 10	10^5D/H	2.6219	2.626 ± 0.043	$\sigma_8(0.61)$	0.5916	0.5914 ± 0.0073
$\boldsymbol{A^{kSZ}}$	0.00	< 4.80	Age/Gyr	13.757	13.764 ± 0.098	$f\sigma_8(2.33)$	0.29831	0.2982 ± 0.0036
$\boldsymbol{A_{100}^{dustTT}}$	8.90	9.0 ± 1.8	z_*	1090.152	1090.17 ± 0.43	$\sigma_8(2.33)$	0.30779	0.3076 ± 0.0040
$\boldsymbol{A_{143}^{dustTT}}$	10.77	10.7 ± 1.8	r_*	144.608	144.65 ± 0.48	f_{2000}^{143}	30.67	31.1 ± 3.0
$\boldsymbol{A_{143\times217}^{dustTT}}$	19.31	18.3 ± 3.3	$100\theta_*$	1.041105	1.04108 ± 0.00047	$f_{2000}^{143\times217}$	33.38	33.5 ± 2.1
$\boldsymbol{A_{217}^{dustTT}}$	94.5	93.4 ± 7.4	$D_M(z_*)$/Gpc	13.8899	13.894 ± 0.045	f_{2000}^{217}	107.87	108.1 ± 1.9
$\boldsymbol{c_{100}}$	0.99965	0.99961 ± 0.00061	z_{drag}	1059.475	1059.43 ± 0.46	χ^2_{simall}	395.85	397.0 ± 1.7
$\boldsymbol{c_{217}}$	0.99827	0.99825 ± 0.00062	r_{drag}	147.338	147.39 ± 0.48	χ^2_{lowl}	23.34	23.6 ± 1.5
H_0	67.84	67.81 ± 0.69	k_D	0.14046	0.14039 ± 0.00051	χ^2_{plik}	759.6	772.4 ± 5.4
Ω_Λ	0.6887	0.6886 ± 0.0075	$100\theta_D$	0.161024	0.16106 ± 0.00027	χ^2_{6DF}	0.0107	0.056 ± 0.076
Ω_m	0.3101	0.3102 ± 0.0072	z_{eq}	3394.7	3392 ± 49	χ^2_{MGS}	1.41	1.48 ± 0.60
$\Omega_m h^2$	0.14270	0.1426 ± 0.0020	k_{eq}	0.010361	0.01035 ± 0.00015	$\chi^2_{DR12BAO}$	3.66	4.6 ± 1.8
$\Omega_m h^3$	0.09681	0.0967 ± 0.0018	$100\theta_{eq}$	0.8141	0.8146 ± 0.0092	χ^2_{prior}	1.46	7.3 ± 3.7
σ_8	0.8106	0.810 ± 0.010	$100\theta_{s,eq}$	0.44994	0.4502 ± 0.0047	χ^2_{BAO}	5.08	6.1 ± 1.6
S_8	0.8241	0.824 ± 0.016	$H(0.15)$	73.13	73.10 ± 0.67	χ^2_{CMB}	1178.8	1192.9 ± 5.5
$\sigma_8\Omega_m^{0.5}$	0.4514	0.4512 ± 0.0089	$D_M(0.15)$	639.1	639.4 ± 6.2			
$\sigma_8\Omega_m^{0.25}$	0.6049	0.6046 ± 0.0094	$H(0.38)$	83.26	83.22 ± 0.68			

Best-fit $\chi^2_{eff} = 1185.37$; $\Delta\chi^2_{eff} = -0.38$; $\bar{\chi}^2_{eff} = 1206.26$; $\Delta\bar{\chi}^2_{eff} = 0.24$; $R - 1 = 0.01197$

χ^2_{eff}: BAO - 6DF: 0.01 (Δ -0.01) MGS: 1.41 (Δ 0.13) DR12BAO: 3.66 (Δ -0.52) CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.85 (Δ -0.04) commander_dx12_v3_2_29: 23.34 (Δ 0.52) plik_rd12_HM_v22_TT: 759.63 (Δ -0.47)

16.10 base_omegak_plikHM_TT_lowl_lowE_BAO_post_lensing

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022209	0.02217 ± 0.00022	$\sigma_8/h^{0.5}$	0.9849	0.9857 ± 0.0096	$D_M(0.38)$	1525.9	1526 ± 14
$\boldsymbol{\Omega_c h^2}$	0.11978	0.1198 ± 0.0020	$r_{drag}h$	99.84	99.84 ± 0.96	$H(0.51)$	89.92	89.91 ± 0.70
$\boldsymbol{100\theta_{MC}}$	1.040876	1.04086 ± 0.00048	$\langle d^2\rangle^{1/2}$	2.4347	2.436 ± 0.022	$D_M(0.51)$	1976.7	1977 ± 17
$\boldsymbol{\tau}$	0.0539	0.0540 ± 0.0074	z_{re}	7.68	7.68 ± 0.74	$H(0.61)$	95.54	95.54 ± 0.72
$\boldsymbol{\Omega_K}$	0.00100	0.0011 ± 0.0025	$10^9 A_s$	2.0952	2.097 ± 0.030	$D_M(0.61)$	2300.3	2301 ± 19
$\boldsymbol{\ln(10^{10} A_s)}$	3.0422	3.043 ± 0.014	$10^9 A_s e^{-2\tau}$	1.8811	1.882 ± 0.012	$H(2.33)$	236.49	236.5 ± 1.7
$\boldsymbol{n_s}$	0.9649	0.9644 ± 0.0057	D_{40}	1229.1	1231 ± 15	$D_M(2.33)$	5751.5	5752 ± 38
$\boldsymbol{y_{cal}}$	1.00045	1.0007 ± 0.0025	D_{220}	5718.2	5721 ± 41	$f\sigma_8(0.15)$	0.4564	0.4568 ± 0.0065
$\boldsymbol{A_{217}^{CIB}}$	49.4	48 ± 7	D_{810}	2537.5	2538 ± 13	$\sigma_8(0.15)$	0.7493	0.7498 ± 0.0078
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.12	—	D_{1420}	815.6	815.4 ± 5.1	$f\sigma_8(0.38)$	0.4749	0.4753 ± 0.0057
$\boldsymbol{A_{143}^{tSZ}}$	7.12	5.1 ± 2.0	D_{2000}	230.07	229.8 ± 1.9	$\sigma_8(0.38)$	0.6643	0.6647 ± 0.0070
$\boldsymbol{A_{100}^{PS}}$	257.2	263 ± 28	$n_{s,0.002}$	0.9649	0.9644 ± 0.0057	$f\sigma_8(0.51)$	0.4736	0.4739 ± 0.0052
$\boldsymbol{A_{143}^{PS}}$	46.7	49 ± 8	Y_P	0.245329	$0.24531^{+0.00010}_{-0.000085}$	$\sigma_8(0.51)$	0.6217	0.6221 ± 0.0066
$\boldsymbol{A_{143\times217}^{PS}}$	41.4	44 ± 9	Y_P^{BBN}	0.246656	$0.24663^{+0.00010}_{-0.000086}$	$f\sigma_8(0.61)$	0.46866	0.4690 ± 0.0049
$\boldsymbol{A_{217}^{PS}}$	117.7	115 ± 10	10^5D/H	2.6163	2.625 ± 0.042	$\sigma_8(0.61)$	0.5916	0.5920 ± 0.0063
$\boldsymbol{A^{kSZ}}$	0.01	< 4.79	Age/Gyr	13.766	13.768 ± 0.098	$f\sigma_8(2.33)$	0.29829	0.2985 ± 0.0032
$\boldsymbol{A_{100}^{dustTT}}$	8.81	8.9 ± 1.9	z_*	1090.106	1090.17 ± 0.41	$\sigma_8(2.33)$	0.30772	0.3079 ± 0.0036
$\boldsymbol{A_{143}^{dustTT}}$	10.84	10.7 ± 1.8	r_*	144.610	144.63 ± 0.44	f_{2000}^{143}	30.60	31.1 ± 3.0
$\boldsymbol{A_{143\times217}^{dustTT}}$	19.32	18.3 ± 3.3	$100\theta_*$	1.041073	1.04107 ± 0.00047	$f_{2000}^{143\times217}$	33.17	33.5 ± 2.0
$\boldsymbol{A_{217}^{dustTT}}$	94.7	93.4 ± 7.3	$D_M(z_*)$/Gpc	13.8905	13.893 ± 0.040	f_{2000}^{217}	107.81	108.1 ± 1.9
$\boldsymbol{c_{100}}$	0.99966	0.99962 ± 0.00061	z_{drag}	1059.551	1059.45 ± 0.46	$\chi^2_{lensing}$	8.876	9.34 ± 0.74
$\boldsymbol{c_{217}}$	0.99825	0.99825 ± 0.00062	r_{drag}	147.328	147.36 ± 0.44	χ^2_{simall}	396	295 ± 200
H_0	67.77	67.75 ± 0.68	k_D	0.140493	0.14042 ± 0.00048	χ^2_{lowl}	23	125 ± 200
Ω_Λ	0.6884	0.6881 ± 0.0066	$100\theta_D$	0.160982	0.16104 ± 0.00026	χ^2_{plik}	759.40	771.7 ± 5.2
Ω_m	0.3106	0.3109 ± 0.0065	z_{eq}	3393.2	3393 ± 44	χ^2_{6DF}	0.016	0.43 ± 0.68
$\Omega_m h^2$	0.14264	0.1426 ± 0.0018	k_{eq}	0.010356	0.01036 ± 0.00013	χ^2_{MGS}	1.34	1.04 ± 0.77
$\Omega_m h^3$	0.09666	0.0966 ± 0.0018	$100\theta_{eq}$	0.8144	0.8144 ± 0.0084	$\chi^2_{DR12BAO}$	3.85	4.7 ± 1.9
σ_8	0.8108	0.8113 ± 0.0084	$100\theta_{s,eq}$	0.45009	0.4501 ± 0.0043	χ^2_{prior}	1.42	7.3 ± 3.7
S_8	0.8249	0.826 ± 0.013	$H(0.15)$	73.06	73.04 ± 0.67	χ^2_{CMB}	1187.7	1201.7 ± 5.5
$\sigma_8\Omega_m^{0.5}$	0.4518	0.4523 ± 0.0070	$D_M(0.15)$	639.7	640.0 ± 6.1	χ^2_{BAO}	5.21	6.1 ± 1.6
$\sigma_8\Omega_m^{0.25}$	0.6052	0.6058 ± 0.0073	$H(0.38)$	83.19	83.18 ± 0.68			

Best-fit $\chi^2_{eff} = 1194.36$; $\Delta\chi^2_{eff} = -0.33$; $\bar{\chi}^2_{eff} = 1215.14$; $\Delta\bar{\chi}^2_{eff} = 0.41$; $R - 1 = 0.01348$

χ^2_{eff}: BAO - 6DF: 0.02 (Δ -0.01) MGS: 1.34 (Δ 0.13) DR12BAO: 3.85 (Δ -0.52) CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.88 (Δ 0.00) simall_100x143_offlike5_EE_Aplanck 396.03 (Δ -0.07) commander_dx12_v3_2_29: 23.43 (Δ 0.47) plik_rd12_HM_v22_TT: 759.40 (Δ -0.40)

16.11 base_omegak_plikHM_TT_lowl_lowE_BAO_post_lensing_Pantheon

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02218 ± 0.00022	$\sigma_8/h^{0.5}$	0.9848 ± 0.0095	$D_M(0.38)$	1525 ± 13
$\boldsymbol{\Omega_c h^2}$	0.1197 ± 0.0019	$r_{drag}h$	99.96 ± 0.93	$H(0.51)$	89.94 ± 0.70
$\boldsymbol{100\theta_{MC}}$	1.04088 ± 0.00047	$\langle d^2\rangle^{1/2}$	2.434 ± 0.022	$D_M(0.51)$	1976 ± 17
$\boldsymbol{\tau}$	0.0544 ± 0.0074	z_{re}	7.71 ± 0.74	$H(0.61)$	95.56 ± 0.72
$\boldsymbol{\Omega_K}$	0.0011 ± 0.0025	$10^9 A_s$	2.098 ± 0.030	$D_M(0.61)$	2299 ± 19
$\boldsymbol{\ln(10^{10} A_s)}$	3.043 ± 0.014	$10^9 A_s e^{-2\tau}$	1.882 ± 0.012	$H(2.33)$	236.4 ± 1.7
$\boldsymbol{n_s}$	0.9648 ± 0.0056	D_{40}	1230 ± 15	$D_M(2.33)$	5751 ± 38
$\boldsymbol{y_{cal}}$	1.0008 ± 0.0025	D_{220}	5722 ± 41	$f\sigma_8(0.15)$	0.4560 ± 0.0064
$\boldsymbol{A_{217}^{CIB}}$	48 ± 7	D_{810}	2538 ± 13	$\sigma_8(0.15)$	0.7496 ± 0.0078
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{1420}	815.6 ± 5.1	$f\sigma_8(0.38)$	0.4747 ± 0.0056
$\boldsymbol{A_{143}^{tSZ}}$	5.1 ± 2.0	D_{2000}	229.9 ± 1.8	$\sigma_8(0.38)$	0.6647 ± 0.0070
$\boldsymbol{A_{100}^{PS}}$	263 ± 28	$n_{s,0.002}$	0.9648 ± 0.0056	$f\sigma_8(0.51)$	0.4735 ± 0.0052
$\boldsymbol{A_{143}^{PS}}$	49 ± 8	Y_P	$0.24531^{+0.00010}_{-0.000084}$	$\sigma_8(0.51)$	0.6221 ± 0.0066
$\boldsymbol{A_{143\times217}^{PS}}$	44 ± 9	Y_P^{BBN}	$0.24664^{+0.00010}_{-0.000085}$	$f\sigma_8(0.61)$	0.4686 ± 0.0049
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	10^5D/H	2.622 ± 0.042	$\sigma_8(0.61)$	0.5920 ± 0.0063
$\boldsymbol{A^{kSZ}}$	< 4.75	Age/Gyr	13.766 ± 0.098	$f\sigma_8(2.33)$	0.2985 ± 0.0032
$\boldsymbol{A_{100}^{dustTT}}$	8.9 ± 1.9	z_*	1090.13 ± 0.40	$\sigma_8(2.33)$	0.3080 ± 0.0036
$\boldsymbol{A_{143}^{dustTT}}$	10.7 ± 1.8	r_*	144.66 ± 0.43	f_{2000}^{143}	31.0 ± 2.9
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.3 ± 3.3	$100\theta_*$	1.04109 ± 0.00047	$f_{2000}^{143\times217}$	33.4 ± 2.0
$\boldsymbol{A_{217}^{dustTT}}$	93.4 ± 7.3	$D_M(z_*)$/Gpc	13.896 ± 0.040	f_{2000}^{217}	108.1 ± 1.9
$\boldsymbol{c_{100}}$	0.99962 ± 0.00061	z_{drag}	1059.47 ± 0.46	$\chi^2_{lensing}$	9.34 ± 0.75
$\boldsymbol{c_{217}}$	0.99825 ± 0.00062	r_{drag}	147.39 ± 0.43	χ^2_{simall}	293 ± 200
H_0	67.82 ± 0.66	k_D	0.14040 ± 0.00048	χ^2_{lowl}	127 ± 200
Ω_Λ	0.6891 ± 0.0063	$100\theta_D$	0.16103 ± 0.00026	χ^2_{plik}	771.8 ± 5.2
Ω_m	0.3098 ± 0.0062	z_{eq}	3390 ± 44	χ^2_{JLA}	1036.35 ± 0.32
$\Omega_m h^2$	0.1425 ± 0.0018	k_{eq}	0.01035 ± 0.00013	χ^2_{6DF}	0.45 ± 0.71
$\Omega_m h^3$	0.0966 ± 0.0018	$100\theta_{eq}$	0.8151 ± 0.0083	χ^2_{MGS}	1.08 ± 0.80
σ_8	0.8110 ± 0.0084	$100\theta_{s,eq}$	0.4504 ± 0.0042	$\chi^2_{DR12BAO}$	4.5 ± 1.7
S_8	0.824 ± 0.012	$H(0.15)$	73.10 ± 0.66	χ^2_{prior}	7.3 ± 3.7
$\sigma_8\Omega_m^{0.5}$	0.4514 ± 0.0068	$D_M(0.15)$	639.3 ± 6.0	χ^2_{CMB}	1201.7 ± 5.5
$\sigma_8\Omega_m^{0.25}$	0.6051 ± 0.0072	$H(0.38)$	83.22 ± 0.67	χ^2_{BAO}	6.0 ± 1.5

$\bar{\chi}^2_{eff} = 2251.42$; $\Delta\bar{\chi}^2_{eff} = 0.37$; $R - 1 = 0.01367$

16.12 base_omegak_plikHM_TT_lowl_lowE_BAO_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02217 ± 0.00023	$\sigma_8/h^{0.5}$	0.985 ± 0.012	$D_M(0.38)$	1525 ± 14
$\boldsymbol{\Omega_c h^2}$	0.1197 ± 0.0022	$r_{drag}h$	99.9 ± 1.0	$H(0.51)$	89.94 ± 0.70
$\boldsymbol{100\theta_{MC}}$	1.04088 ± 0.00048	$\langle d^2\rangle^{1/2}$	2.434 ± 0.028	$D_M(0.51)$	1976 ± 17
$\boldsymbol{\tau}$	$0.0543^{+0.0050}_{-0.0081}$	z_{re}	$7.71^{+0.55}_{-0.81}$	$H(0.61)$	95.56 ± 0.73
$\boldsymbol{\Omega_K}$	0.0011 ± 0.0026	$10^9 A_s$	$2.097^{+0.025}_{-0.034}$	$D_M(0.61)$	2300 ± 19
$\boldsymbol{\ln(10^{10} A_s)}$	$3.043^{+0.012}_{-0.016}$	$10^9 A_s e^{-2\tau}$	1.881 ± 0.014	$H(2.33)$	236.4 ± 1.8
$\boldsymbol{n_s}$	0.9649 ± 0.0060	D_{40}	1229 ± 16	$D_M(2.33)$	5751 ± 38
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0025	D_{220}	5717 ± 41	$f\sigma_8(0.15)$	0.4562 ± 0.0083
$\boldsymbol{A_{217}^{CIB}}$	48 ± 7	D_{810}	2537 ± 14	$\sigma_8(0.15)$	0.7497 ± 0.0091
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{1420}	815.2 ± 5.1	$f\sigma_8(0.38)$	0.4748 ± 0.0073
$\boldsymbol{A_{143}^{tSZ}}$	5.1 ± 2.0	D_{2000}	229.8 ± 1.9	$\sigma_8(0.38)$	0.6647 ± 0.0079
$\boldsymbol{A_{100}^{PS}}$	263 ± 28	$n_{s,0.002}$	0.9649 ± 0.0060	$f\sigma_8(0.51)$	0.4736 ± 0.0066
$\boldsymbol{A_{143}^{PS}}$	49 ± 8	Y_P	$0.24531^{+0.00011}_{-0.000086}$	$\sigma_8(0.51)$	0.6221 ± 0.0074
$\boldsymbol{A_{143\times217}^{PS}}$	44 ± 9	Y_P^{BBN}	$0.24663^{+0.00011}_{-0.000087}$	$f\sigma_8(0.61)$	0.4687 ± 0.0062
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	10^5D/H	2.625 ± 0.043	$\sigma_8(0.61)$	0.5920 ± 0.0070
$\boldsymbol{A^{kSZ}}$	< 4.79	Age/Gyr	13.766 ± 0.099	$f\sigma_8(2.33)$	0.2985 ± 0.0034
$\boldsymbol{A_{100}^{dustTT}}$	9.0 ± 1.8	z_*	1090.16 ± 0.43	$\sigma_8(2.33)$	0.3080 ± 0.0039
$\boldsymbol{A_{143}^{dustTT}}$	10.7 ± 1.8	r_*	144.66 ± 0.48	f_{2000}^{143}	31.0 ± 3.0
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.3 ± 3.3	$100\theta_*$	1.04109 ± 0.00047	$f_{2000}^{143\times217}$	33.4 ± 2.1
$\boldsymbol{A_{217}^{dustTT}}$	93.4 ± 7.4	$D_M(z_*)$/Gpc	13.895 ± 0.045	f_{2000}^{217}	108.1 ± 1.9
$\boldsymbol{c_{100}}$	0.99961 ± 0.00061	z_{drag}	1059.44 ± 0.46	χ^2_{simall}	396.9 ± 1.7
$\boldsymbol{c_{217}}$	0.99825 ± 0.00062	r_{drag}	147.40 ± 0.48	χ^2_{lowl}	23.6 ± 1.5
H_0	67.81 ± 0.69	k_D	0.14039 ± 0.00051	χ^2_{plik}	772.2 ± 5.4
Ω_Λ	0.6888 ± 0.0075	$100\theta_D$	0.16105 ± 0.00027	χ^2_{6DF}	0.057 ± 0.076
Ω_m	0.3101 ± 0.0072	z_{eq}	3391 ± 49	χ^2_{MGS}	1.48 ± 0.61
$\Omega_m h^2$	0.1425 ± 0.0020	k_{eq}	0.01035 ± 0.00015	$\chi^2_{DR12BAO}$	4.6 ± 1.9
$\Omega_m h^3$	0.0967 ± 0.0018	$100\theta_{eq}$	0.8149 ± 0.0092	χ^2_{prior}	7.3 ± 3.7
σ_8	0.811 ± 0.010	$100\theta_{s,eq}$	0.4504 ± 0.0047	χ^2_{BAO}	6.1 ± 1.6
S_8	0.825 ± 0.016	$H(0.15)$	73.09 ± 0.68	χ^2_{CMB}	1192.6 ± 5.4
$\sigma_8\Omega_m^{0.5}$	0.4517 ± 0.0089	$D_M(0.15)$	639.5 ± 6.2		
$\sigma_8\Omega_m^{0.25}$	0.6052 ± 0.0093	$H(0.38)$	83.21 ± 0.68		

$\bar{\chi}^2_{eff} = 1206.04$; $\Delta\bar{\chi}^2_{eff} = 0.28$; $R - 1 = 0.01397$

16.13 base_omegak_plikHM_TT_lowl_lowE_BAO_post_lensing_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02217 ± 0.00022	$\sigma_8/h^{0.5}$	0.9861 ± 0.0095	$D_M(0.38)$	1526 ± 14
$\boldsymbol{\Omega_c h^2}$	0.1197 ± 0.0019	$r_{drag}h$	99.85 ± 0.96	$H(0.51)$	89.90 ± 0.70
$\boldsymbol{100\theta_{MC}}$	1.04087 ± 0.00048	$\langle d^2\rangle^{1/2}$	2.438 ± 0.022	$D_M(0.51)$	1977 ± 17
$\boldsymbol{\tau}$	$0.0549^{+0.0054}_{-0.0078}$	z_{re}	$7.77^{+0.58}_{-0.76}$	$H(0.61)$	95.52 ± 0.72
$\boldsymbol{\Omega_K}$	0.00099 ± 0.0025	$10^9 A_s$	$2.100^{+0.023}_{-0.031}$	$D_M(0.61)$	2301 ± 19
$\boldsymbol{\ln(10^{10} A_s)}$	$3.045^{+0.011}_{-0.014}$	$10^9 A_s e^{-2\tau}$	1.882 ± 0.012	$H(2.33)$	236.4 ± 1.7
$\boldsymbol{n_s}$	0.9646 ± 0.0056	D_{40}	1230 ± 15	$D_M(2.33)$	5753 ± 38
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0025	D_{220}	5721 ± 41	$f\sigma_8(0.15)$	0.4569 ± 0.0065
$\boldsymbol{A_{217}^{CIB}}$	48 ± 7	D_{810}	2537 ± 13	$\sigma_8(0.15)$	0.7501 ± 0.0077
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{1420}	815.4 ± 5.1	$f\sigma_8(0.38)$	0.4754 ± 0.0056
$\boldsymbol{A_{143}^{tSZ}}$	5.1 ± 2.0	D_{2000}	229.9 ± 1.9	$\sigma_8(0.38)$	0.6650 ± 0.0069
$\boldsymbol{A_{100}^{PS}}$	263 ± 28	$n_{s,0.002}$	0.9646 ± 0.0056	$f\sigma_8(0.51)$	0.4741 ± 0.0052
$\boldsymbol{A_{143}^{PS}}$	49 ± 8	Y_P	$0.24531^{+0.00010}_{-0.000084}$	$\sigma_8(0.51)$	0.6224 ± 0.0065
$\boldsymbol{A_{143\times217}^{PS}}$	44 ± 9	Y_P^{BBN}	$0.24664^{+0.00010}_{-0.000085}$	$f\sigma_8(0.61)$	0.4692 ± 0.0049
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	10^5D/H	2.623 ± 0.042	$\sigma_8(0.61)$	0.5923 ± 0.0062
$\boldsymbol{A^{kSZ}}$	< 4.79	Age/Gyr	13.771 ± 0.097	$f\sigma_8(2.33)$	0.2986 ± 0.0031
$\boldsymbol{A_{100}^{dust TT}}$	8.9 ± 1.9	z_*	1090.15 ± 0.40	$\sigma_8(2.33)$	0.3081 ± 0.0036
$\boldsymbol{A_{143}^{dust TT}}$	10.7 ± 1.8	r_*	144.65 ± 0.43	f_{2000}^{143}	31.0 ± 3.0
$\boldsymbol{A_{143\times217}^{dust TT}}$	18.3 ± 3.3	$100\theta_*$	1.04108 ± 0.00047	$f_{2000}^{143\times217}$	33.4 ± 2.0
$\boldsymbol{A_{217}^{dust TT}}$	93.5 ± 7.3	$D_M(z_*)$/Gpc	13.894 ± 0.040	f_{2000}^{217}	108.1 ± 1.9
$\boldsymbol{c_{100}}$	0.99962 ± 0.00061	z_{drag}	1059.46 ± 0.46	$\chi^2_{lensing}$	9.29 ± 0.69
$\boldsymbol{c_{217}}$	0.99825 ± 0.00062	r_{drag}	147.38 ± 0.43	χ^2_{simall}	296 ± 200
H_0	67.75 ± 0.68	k_D	0.14041 ± 0.00047	χ^2_{lowl}	125 ± 200
Ω_Λ	0.6884 ± 0.0065	$100\theta_D$	0.16104 ± 0.00026	χ^2_{plik}	771.6 ± 5.2
Ω_m	0.3106 ± 0.0064	z_{eq}	3391 ± 43	χ^2_{6DF}	0.43 ± 0.68
$\Omega_m h^2$	0.1426 ± 0.0018	k_{eq}	0.01035 ± 0.00013	χ^2_{MGS}	1.04 ± 0.78
$\Omega_m h^3$	0.0966 ± 0.0018	$100\theta_{eq}$	0.8147 ± 0.0082	$\chi^2_{DR12BAO}$	4.7 ± 1.9
σ_8	0.8117 ± 0.0083	$100\theta_{s,eq}$	0.4503 ± 0.0042	χ^2_{prior}	7.3 ± 3.7
S_8	0.826 ± 0.013	$H(0.15)$	73.04 ± 0.67	χ^2_{CMB}	1201.5 ± 5.4
$\sigma_8\Omega_m^{0.5}$	0.4524 ± 0.0069	$D_M(0.15)$	639.9 ± 6.1	χ^2_{BAO}	6.2 ± 1.6
$\sigma_8\Omega_m^{0.25}$	0.6059 ± 0.0073	$H(0.38)$	83.17 ± 0.68		

$\bar{\chi}^2_{eff} = 1214.95$; $\Delta\bar{\chi}^2_{eff} = 0.38$; $R - 1 = 0.01494$

16.14 base_omegak_plikHM_TT_lowl_lowE_BAO_post_lensing_Pantheon_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02219 ± 0.00022	$\sigma_8/h^{0.5}$	0.9852 ± 0.0094	$D_M(0.38)$	1525 ± 13
$\boldsymbol{\Omega_c h^2}$	0.1196 ± 0.0019	$r_{drag}h$	99.98 ± 0.93	$H(0.51)$	89.93 ± 0.69
$\boldsymbol{100\theta_{MC}}$	1.04089 ± 0.00047	$\langle d^2\rangle^{1/2}$	2.436 ± 0.022	$D_M(0.51)$	1976 ± 17
$\boldsymbol{\tau}$	$0.0552^{+0.0055}_{-0.0078}$	z_{re}	$7.80^{+0.59}_{-0.76}$	$H(0.61)$	95.55 ± 0.72
$\boldsymbol{\Omega_K}$	0.00098 ± 0.0025	$10^9 A_s$	$2.101^{+0.024}_{-0.031}$	$D_M(0.61)$	2299 ± 19
$\boldsymbol{\ln(10^{10} A_s)}$	$3.045^{+0.011}_{-0.015}$	$10^9 A_s e^{-2\tau}$	1.881 ± 0.012	$H(2.33)$	236.3 ± 1.7
$\boldsymbol{n_s}$	0.9650 ± 0.0056	D_{40}	1230 ± 15	$D_M(2.33)$	5752 ± 38
$\boldsymbol{y_{cal}}$	1.0008 ± 0.0025	D_{220}	5722 ± 41	$f\sigma_8(0.15)$	0.4561 ± 0.0064
$\boldsymbol{A^{CIB}_{217}}$	48 ± 7	D_{810}	2537 ± 13	$\sigma_8(0.15)$	0.7499 ± 0.0077
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{1420}	815.6 ± 5.1	$f\sigma_8(0.38)$	0.4748 ± 0.0055
$\boldsymbol{A^{tSZ}_{143}}$	5.1 ± 2.0	D_{2000}	229.9 ± 1.8	$\sigma_8(0.38)$	0.6650 ± 0.0069
$\boldsymbol{A^{PS}_{100}}$	263 ± 28	$n_{s,0.002}$	0.9650 ± 0.0056	$f\sigma_8(0.51)$	0.4736 ± 0.0051
$\boldsymbol{A^{PS}_{143}}$	49 ± 8	Y_P	$0.24532^{+0.00010}_{-0.000084}$	$\sigma_8(0.51)$	0.6224 ± 0.0065
$\boldsymbol{A^{PS}_{143\times217}}$	44 ± 9	Y_P^{BBN}	$0.24664^{+0.00010}_{-0.000084}$	$f\sigma_8(0.61)$	0.4688 ± 0.0049
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	10^5D/H	2.621 ± 0.042	$\sigma_8(0.61)$	0.5923 ± 0.0062
$\boldsymbol{A^{kSZ}}$	< 4.76	Age/Gyr	13.768 ± 0.097	$f\sigma_8(2.33)$	0.2987 ± 0.0031
$\boldsymbol{A^{dustTT}_{100}}$	8.9 ± 1.9	z_*	1090.12 ± 0.40	$\sigma_8(2.33)$	0.3082 ± 0.0036
$\boldsymbol{A^{dustTT}_{143}}$	10.7 ± 1.8	r_*	144.68 ± 0.43	f^{143}_{2000}	31.0 ± 2.9
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.3 ± 3.3	$100\theta_*$	1.04110 ± 0.00047	$f^{143\times217}_{2000}$	33.4 ± 2.0
$\boldsymbol{A^{dustTT}_{217}}$	93.5 ± 7.3	$D_M(z_*)$/Gpc	13.897 ± 0.040	f^{217}_{2000}	108.0 ± 1.9
$\boldsymbol{c_{100}}$	0.99962 ± 0.00061	z_{drag}	1059.48 ± 0.46	$\chi^2_{lensing}$	9.29 ± 0.71
$\boldsymbol{c_{217}}$	0.99825 ± 0.00062	r_{drag}	147.41 ± 0.43	χ^2_{simall}	294 ± 200
H_0	67.82 ± 0.66	k_D	0.14039 ± 0.00047	χ^2_{lowl}	127 ± 200
Ω_Λ	0.6893 ± 0.0062	$100\theta_D$	0.16103 ± 0.00026	χ^2_{plik}	771.7 ± 5.2
Ω_m	0.3097 ± 0.0062	z_{eq}	3388 ± 43	χ^2_{JLA}	1036.34 ± 0.32
$\Omega_m h^2$	0.1424 ± 0.0018	k_{eq}	0.01034 ± 0.00013	χ^2_{6DF}	0.45 ± 0.72
$\Omega_m h^3$	0.0966 ± 0.0018	$100\theta_{eq}$	0.8154 ± 0.0082	χ^2_{MGS}	1.08 ± 0.80
σ_8	0.8114 ± 0.0083	$100\theta_{s,eq}$	0.4506 ± 0.0042	$\chi^2_{DR12BAO}$	4.5 ± 1.7
S_8	0.824 ± 0.012	$H(0.15)$	73.10 ± 0.66	χ^2_{prior}	7.3 ± 3.7
$\sigma_8\Omega_m^{0.5}$	0.4515 ± 0.0068	$D_M(0.15)$	639.3 ± 6.0	χ^2_{CMB}	1201.5 ± 5.4
$\sigma_8\Omega_m^{0.25}$	0.6052 ± 0.0072	$H(0.38)$	83.21 ± 0.67	χ^2_{BAO}	6.0 ± 1.5

$\bar{\chi}^2_{eff} = 2251.25$; $\Delta\bar{\chi}^2_{eff} = 0.34$; $R - 1 = 0.01525$

16.15 base_omegak_plikHM_TTTEEE_lowl_lowE_BAO

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022396	0.02239 ± 0.00015	σ_8	0.8109	0.8109 ± 0.0084	$D_M(0.15)$	638.9	638.8 ± 6.0
$\boldsymbol{\Omega_c h^2}$	0.11972	0.1197 ± 0.0014	S_8	0.8242	0.824 ± 0.013	$H(0.38)$	83.28	83.29 ± 0.62
$\boldsymbol{100\theta_{MC}}$	1.040949	1.04095 ± 0.00031	$\sigma_8\Omega_m^{0.5}$	0.4515	0.4514 ± 0.0070	$D_M(0.38)$	1523.9	1524 ± 13
$\boldsymbol{\tau}$	0.0544	0.0548 ± 0.0078	$\sigma_8\Omega_m^{0.25}$	0.6051	0.6050 ± 0.0073	$H(0.51)$	90.00	90.01 ± 0.61
$\boldsymbol{\Omega_K}$	0.00079	0.0008 ± 0.0019	$\sigma_8/h^{0.5}$	0.9843	0.984 ± 0.010	$D_M(0.51)$	1974.3	1974 ± 16
$\boldsymbol{\ln(10^{10}A_s)}$	3.0441	3.044 ± 0.016	$r_{drag}h$	99.86	99.89 ± 0.99	$H(0.61)$	95.63	95.64 ± 0.61
$\boldsymbol{n_s}$	0.96638	0.9659 ± 0.0045	$\langle d^2\rangle^{1/2}$	2.4336	2.434 ± 0.025	$D_M(0.61)$	2297.5	2297 ± 18
$\boldsymbol{y_{cal}}$	1.00064	1.0006 ± 0.0025	z_{re}	7.69	7.71 ± 0.79	$H(2.33)$	236.59	236.6 ± 1.2
$\boldsymbol{A_{217}^{CIB}}$	47.4	47 ± 7	$10^9 A_s$	2.0991	2.100 ± 0.034	$D_M(2.33)$	5746.4	5746 ± 31
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.43	—	$10^9 A_s e^{-2\tau}$	1.8827	1.882 ± 0.012	$f\sigma_8(0.15)$	0.4561	0.4560 ± 0.0066
$\boldsymbol{A_{143}^{tSZ}}$	7.16	$5.4^{+2.1}_{-1.9}$	D_{40}	1228.1	1229 ± 13	$\sigma_8(0.15)$	0.7495	0.7495 ± 0.0077
$\boldsymbol{A_{100}^{PS}}$	251.1	259 ± 28	D_{220}	5732.8	5734 ± 39	$f\sigma_8(0.38)$	0.4747	0.4747 ± 0.0058
$\boldsymbol{A_{143}^{PS}}$	48.1	46 ± 8	D_{810}	2541.2	2539 ± 14	$\sigma_8(0.38)$	0.6646	0.6646 ± 0.0069
$\boldsymbol{A_{143\times217}^{PS}}$	47.6	42 ± 9	D_{1420}	818.24	817.5 ± 4.8	$f\sigma_8(0.51)$	0.4735	0.4735 ± 0.0053
$\boldsymbol{A_{217}^{PS}}$	119.5	115 ± 10	D_{2000}	231.28	230.9 ± 1.6	$\sigma_8(0.51)$	0.6220	0.6221 ± 0.0065
$\boldsymbol{A^{kSZ}}$	0.00	< 4.39	$n_{s,0.002}$	0.96638	0.9659 ± 0.0045	$f\sigma_8(0.61)$	0.4686	0.4686 ± 0.0051
$\boldsymbol{A_{100}^{dustTT}}$	8.79	8.9 ± 1.8	Y_P	0.245406	$0.245400^{+0.000063}_{-0.000055}$	$\sigma_8(0.61)$	0.5919	0.5920 ± 0.0062
$\boldsymbol{A_{143}^{dustTT}}$	11.01	10.9 ± 1.8	Y_P^{BBN}	0.246732	$0.246726^{+0.000063}_{-0.000055}$	$f\sigma_8(2.33)$	0.29846	0.2985 ± 0.0032
$\boldsymbol{A_{143\times217}^{dustTT}}$	19.80	18.6 ± 3.3	10^5D/H	2.5806	2.583 ± 0.028	$\sigma_8(2.33)$	0.30789	0.3080 ± 0.0035
$\boldsymbol{A_{217}^{dustTT}}$	94.9	93.7 ± 7.3	Age/Gyr	13.755	13.755 ± 0.080	f_{2000}^{143}	29.06	29.5 ± 2.8
$\boldsymbol{A_{100}^{dustTE}}$	0.1141	0.115 ± 0.039	z_*	1089.862	1089.88 ± 0.28	$f_{2000}^{143\times217}$	32.10	32.2 ± 1.9
$\boldsymbol{A_{100\times143}^{dustTE}}$	0.1352	0.135 ± 0.030	r_*	144.483	144.50 ± 0.31	f_{2000}^{217}	106.68	107.0 ± 1.8
$\boldsymbol{A_{100\times217}^{dustTE}}$	0.482	0.482 ± 0.085	$100\theta_*$	1.041130	1.04113 ± 0.00031	χ^2_{simall}	396.06	397.2 ± 1.9
$\boldsymbol{A_{143}^{dustTE}}$	0.225	0.224 ± 0.054	$D_M(z_*)$/Gpc	13.8775	13.879 ± 0.029	χ^2_{lowl}	23.21	23.4 ± 1.1
$\boldsymbol{A_{143\times217}^{dustTE}}$	0.666	0.665 ± 0.080	z_{drag}	1059.971	1059.95 ± 0.31	χ^2_{plik}	2345.1	2360.2 ± 5.8
$\boldsymbol{A_{217}^{dustTE}}$	2.082	2.08 ± 0.27	r_{drag}	147.137	147.15 ± 0.31	χ^2_{6DF}	0.0157	0.057 ± 0.079
$\boldsymbol{c_{100}}$	0.99969	0.99969 ± 0.00062	k_D	0.140840	0.14081 ± 0.00033	χ^2_{MGS}	1.34	1.44 ± 0.59
$\boldsymbol{c_{217}}$	0.99817	0.99822 ± 0.00062	$100\theta_D$	0.160736	0.16075 ± 0.00018	$\chi^2_{DR12BAO}$	3.92	4.7 ± 1.9
H_0	67.87	67.88 ± 0.68	z_{eq}	3396.2	3396 ± 32	χ^2_{prior}	1.75	11.6 ± 4.5
Ω_Λ	0.6893	0.6894 ± 0.0061	k_{eq}	0.010365	0.010364 ± 0.000097	χ^2_{BAO}	5.28	6.2 ± 1.7
Ω_m	0.3099	0.3098 ± 0.0066	$100\theta_{eq}$	0.8145	0.8146 ± 0.0060	χ^2_{CMB}	2764.4	2780.7 ± 5.8
$\Omega_m h^2$	0.14276	0.1427 ± 0.0013	$100\theta_{s,eq}$	0.44998	0.4501 ± 0.0031			
$\Omega_m h^3$	0.09689	0.0969 ± 0.0014	$H(0.15)$	73.15	73.17 ± 0.65			

Best-fit $\chi^2_{eff} = 2771.38$; $\Delta\chi^2_{eff} = -0.53$; $\bar{\chi}^2_{eff} = 2798.58$; $\Delta\bar{\chi}^2_{eff} = 0.67$; $R - 1 = 0.01668$

χ^2_{eff}: BAO - 6DF: 0.02 (Δ -0.01) MGS: 1.34 (Δ 0.13) DR12BAO: 3.92 (Δ -0.50) CMB - simall_100x143_offlike5_EE_Aplanck_B: 396.06 (Δ -0.14) commander_dx12_v3_2_29: 23.21 (Δ 0.34) plik_rd12_HM_v22b_TTTEEE: 2345.09 (Δ -0.42)

16.16 base_omegak_plikHM_TTTEEE_lowl_lowE_BAO_post_lensing

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022412	0.02239 ± 0.00015	σ_8	0.8118	0.8115 ± 0.0072	$D_M(0.15)$	638.8	639.0 ± 5.8
$\boldsymbol{\Omega_c h^2}$	0.11970	0.1197 ± 0.0014	S_8	0.8250	0.825 ± 0.011	$H(0.38)$	83.28	83.27 ± 0.61
$\boldsymbol{100\theta_{MC}}$	1.040988	1.04095 ± 0.00032	$\sigma_8\Omega_m^{0.5}$	0.4519	0.4518 ± 0.0058	$D_M(0.38)$	1523.8	1524 ± 13
$\boldsymbol{\tau}$	0.0556	0.0556 ± 0.0073	$\sigma_8\Omega_m^{0.25}$	0.6057	0.6055 ± 0.0060	$H(0.51)$	90.00	89.99 ± 0.60
$\boldsymbol{\Omega_K}$	0.00073	0.0007 ± 0.0019	$\sigma_8/h^{0.5}$	0.9854	0.9851 ± 0.0085	$D_M(0.51)$	1974.2	1975 ± 16
$\boldsymbol{\ln(10^{10}A_s)}$	3.0462	3.046 ± 0.014	$r_{drag}h$	99.86	99.86 ± 0.95	$H(0.61)$	95.63	95.61 ± 0.60
$\boldsymbol{n_s}$	0.96694	0.9658 ± 0.0044	$\langle d^2\rangle^{1/2}$	2.4351	2.437 ± 0.020	$D_M(0.61)$	2297.4	2298 ± 18
$\boldsymbol{y_{cal}}$	1.00049	1.0007 ± 0.0025	z_{re}	7.80	7.78 ± 0.73	$H(2.33)$	236.58	236.6 ± 1.2
$\boldsymbol{A_{217}^{CIB}}$	46.8	47 ± 7	$10^9 A_s$	2.1036	2.104 ± 0.030	$D_M(2.33)$	5746.3	5747 ± 31
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.47	—	$10^9 A_s e^{-2\tau}$	1.8821	1.882 ± 0.011	$f\sigma_8(0.15)$	0.4565	0.4564 ± 0.0055
$\boldsymbol{A_{143}^{tSZ}}$	7.20	$5.4^{+2.1}_{-1.9}$	D_{40}	1226.9	1230 ± 13	$\sigma_8(0.15)$	0.7503	0.7501 ± 0.0068
$\boldsymbol{A_{100}^{PS}}$	249.1	259 ± 28	D_{220}	5730.0	5737 ± 39	$f\sigma_8(0.38)$	0.47523	0.4751 ± 0.0047
$\boldsymbol{A_{143}^{PS}}$	47.7	46 ± 8	D_{810}	2540.9	2540 ± 13	$\sigma_8(0.38)$	0.6653	0.6651 ± 0.0062
$\boldsymbol{A_{143\times217}^{PS}}$	48.3	42 ± 9	D_{1420}	818.43	817.7 ± 4.7	$f\sigma_8(0.51)$	0.47401	0.4739 ± 0.0044
$\boldsymbol{A_{217}^{PS}}$	120.2	115 ± 10	D_{2000}	231.41	231.0 ± 1.6	$\sigma_8(0.51)$	0.6227	0.6225 ± 0.0059
$\boldsymbol{A^{kSZ}}$	0.00	< 4.24	$n_{s,0.002}$	0.96694	0.9658 ± 0.0044	$f\sigma_8(0.61)$	0.46915	0.4690 ± 0.0041
$\boldsymbol{A_{100}^{dustTT}}$	8.83	8.9 ± 1.8	Y_P	0.245412	$0.245403^{+0.000061}_{-0.000055}$	$\sigma_8(0.61)$	0.5926	0.5923 ± 0.0057
$\boldsymbol{A_{143}^{dustTT}}$	11.00	10.9 ± 1.8	Y_P^{BBN}	0.246738	$0.246729^{+0.000061}_{-0.000055}$	$f\sigma_8(2.33)$	0.29880	0.2987 ± 0.0029
$\boldsymbol{A_{143\times217}^{dustTT}}$	19.80	18.6 ± 3.3	10^5D/H	2.5777	2.582 ± 0.028	$\sigma_8(2.33)$	0.30823	0.3081 ± 0.0033
$\boldsymbol{A_{217}^{dustTT}}$	95.1	93.7 ± 7.4	Age/Gyr	13.755	13.758 ± 0.079	f_{2000}^{143}	28.62	29.5 ± 2.8
$\boldsymbol{A_{100}^{dustTE}}$	0.1142	0.114 ± 0.038	z_*	1089.840	1089.86 ± 0.28	$f_{2000}^{143\times217}$	31.86	32.2 ± 1.9
$\boldsymbol{A_{100\times143}^{dustTE}}$	0.1335	0.135 ± 0.029	r_*	144.478	144.50 ± 0.30	f_{2000}^{217}	106.50	107.0 ± 1.8
$\boldsymbol{A_{100\times217}^{dustTE}}$	0.480	0.483 ± 0.085	$100\theta_*$	1.041163	1.04113 ± 0.00031	$\chi^2_{lensing}$	8.786	9.13 ± 0.58
$\boldsymbol{A_{143}^{dustTE}}$	0.223	0.225 ± 0.055	$D_M(z_*)$/Gpc	13.8766	13.879 ± 0.028	χ^2_{simall}	396	291 ± 200
$\boldsymbol{A_{143\times217}^{dustTE}}$	0.665	0.664 ± 0.080	z_{drag}	1060.009	1059.97 ± 0.30	χ^2_{lowl}	23	129 ± 200
$\boldsymbol{A_{217}^{dustTE}}$	2.091	2.08 ± 0.27	r_{drag}	147.126	147.15 ± 0.29	χ^2_{plik}	2345.0	2359.8 ± 5.8
$\boldsymbol{c_{100}}$	0.99971	0.99969 ± 0.00061	k_D	0.140863	0.14082 ± 0.00031	χ^2_{6DF}	0.016	0.44 ± 0.69
$\boldsymbol{c_{217}}$	0.99818	0.99821 ± 0.00061	$100\theta_D$	0.160720	0.16074 ± 0.00017	χ^2_{MGS}	1.34	1.03 ± 0.77
H_0	67.87	67.86 ± 0.65	z_{eq}	3395.9	3395 ± 31	$\chi^2_{DR12BAO}$	3.93	4.7 ± 1.9
Ω_Λ	0.6894	0.6893 ± 0.0058	k_{eq}	0.010365	0.010362 ± 0.000093	χ^2_{prior}	1.70	11.5 ± 4.4
Ω_m	0.3099	0.3100 ± 0.0063	$100\theta_{eq}$	0.8146	0.8147 ± 0.0058	χ^2_{CMB}	2773.2	2789.5 ± 5.9
$\Omega_m h^2$	0.14275	0.1427 ± 0.0013	$100\theta_{s,eq}$	0.45003	0.4501 ± 0.0030	χ^2_{BAO}	5.29	6.2 ± 1.6
$\Omega_m h^3$	0.09689	0.0969 ± 0.0014	$H(0.15)$	73.16	73.15 ± 0.63			

Best-fit $\chi^2_{eff} = 2780.16$; $\Delta\chi^2_{eff} = -0.54$; $\bar{\chi}^2_{eff} = 2807.21$; $\Delta\bar{\chi}^2_{eff} = 0.36$; $R - 1 = 0.02276$

χ^2_{eff}: BAO - 6DF: 0.02 (Δ -0.01) MGS: 1.34 (Δ 0.13) DR12BAO: 3.93 (Δ -0.49) CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.79 (Δ 0.06) simall_100x143_offlike5_EE_Aplanck 396.28 (Δ -0.24) commander_dx12_v3_2_29: 23.14 (Δ 0.24) plik_rd12_HM_v22b_TTTEEE: 2344.96 (Δ -0.36)

16.17 base_omegak_plikHM_TTTEEE_lowl_lowE_BAO_post_lensing_Pantheon

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02240 ± 0.00015	σ_8	0.8115 ± 0.0072	$D_M(0.15)$	638.3 ± 5.7
$\boldsymbol{\Omega_c h^2}$	0.1196 ± 0.0014	S_8	0.824 ± 0.010	$H(0.38)$	83.32 ± 0.60
$\boldsymbol{100\theta_{MC}}$	1.04096 ± 0.00032	$\sigma_8\Omega_m^{0.5}$	0.4512 ± 0.0057	$D_M(0.38)$	1523 ± 12
$\boldsymbol{\tau}$	0.0559 ± 0.0073	$\sigma_8\Omega_m^{0.25}$	0.6051 ± 0.0059	$H(0.51)$	90.04 ± 0.60
$\boldsymbol{\Omega_K}$	0.0008 ± 0.0019	$\sigma_8/h^{0.5}$	0.9846 ± 0.0084	$D_M(0.51)$	1973 ± 15
$\boldsymbol{\ln(10^{10}A_s)}$	3.047 ± 0.014	$r_{drag}h$	99.98 ± 0.92	$H(0.61)$	95.66 ± 0.60
$\boldsymbol{n_s}$	$0.9661^{+0.0042}_{-0.0047}$	$\langle d^2\rangle^{1/2}$	2.435 ± 0.020	$D_M(0.61)$	2296 ± 17
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0025	z_{re}	7.81 ± 0.72	$H(2.33)$	236.5 ± 1.2
$\boldsymbol{A_{217}^{CIB}}$	47 ± 7	$10^9 A_s$	2.105 ± 0.030	$D_M(2.33)$	5745 ± 31
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$10^9 A_s e^{-2\tau}$	1.882 ± 0.011	$f\sigma_8(0.15)$	0.4559 ± 0.0054
$\boldsymbol{A_{143}^{tSZ}}$	$5.4^{+2.1}_{-1.9}$	D_{40}	1229 ± 13	$\sigma_8(0.15)$	0.7501 ± 0.0068
$\boldsymbol{A_{100}^{PS}}$	259 ± 28	D_{220}	5738 ± 39	$f\sigma_8(0.38)$	0.4747 ± 0.0047
$\boldsymbol{A_{143}^{PS}}$	46 ± 8	D_{810}	2540 ± 13	$\sigma_8(0.38)$	0.6652 ± 0.0062
$\boldsymbol{A_{143\times217}^{PS}}$	42 ± 9	D_{1420}	817.8 ± 4.7	$f\sigma_8(0.51)$	0.4736 ± 0.0043
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	D_{2000}	231.1 ± 1.6	$\sigma_8(0.51)$	0.6227 ± 0.0059
$\boldsymbol{A^{kSZ}}$	< 4.22	$n_{s,0.002}$	$0.9661^{+0.0042}_{-0.0047}$	$f\sigma_8(0.61)$	0.4688 ± 0.0041
$\boldsymbol{A_{100}^{dustTT}}$	8.9 ± 1.8	Y_P	$0.245406^{+0.000061}_{-0.000054}$	$\sigma_8(0.61)$	0.5926 ± 0.0057
$\boldsymbol{A_{143}^{dustTT}}$	10.9 ± 1.8	Y_P^{BBN}	$0.246732^{+0.000061}_{-0.000055}$	$f\sigma_8(2.33)$	0.2988 ± 0.0029
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.6 ± 3.3	10^5D/H	2.580 ± 0.028	$\sigma_8(2.33)$	0.3083 ± 0.0033
$\boldsymbol{A_{217}^{dustTT}}$	93.7 ± 7.4	Age/Gyr	13.753 ± 0.079	f_{2000}^{143}	29.5 ± 2.8
$\boldsymbol{A_{100}^{dustTE}}$	0.114 ± 0.038	z_*	1089.85 ± 0.28	$f_{2000}^{143\times217}$	32.1 ± 1.9
$\boldsymbol{A_{100\times143}^{dustTE}}$	0.135 ± 0.029	r_*	144.51 ± 0.30	f_{2000}^{217}	107.0 ± 1.8
$\boldsymbol{A_{100\times217}^{dustTE}}$	0.483 ± 0.085	$100\theta_*$	1.04114 ± 0.00031	$\chi^2_{lensing}$	9.13 ± 0.59
$\boldsymbol{A_{143}^{dustTE}}$	0.224 ± 0.055	$D_M(z_*)$/Gpc	13.880 ± 0.028	χ^2_{simall}	291 ± 200
$\boldsymbol{A_{143\times217}^{dustTE}}$	0.664 ± 0.080	z_{drag}	1059.98 ± 0.30	χ^2_{lowl}	129 ± 200
$\boldsymbol{A_{217}^{dustTE}}$	2.08 ± 0.27	r_{drag}	147.16 ± 0.29	χ^2_{plik}	2359.9 ± 5.8
$\boldsymbol{c_{100}}$	0.99969 ± 0.00061	k_D	0.14081 ± 0.00031	χ^2_{JLA}	1036.31 ± 0.28
$\boldsymbol{c_{217}}$	0.99821 ± 0.00061	$100\theta_D$	0.16074 ± 0.00017	χ^2_{6DF}	0.46 ± 0.72
H_0	67.94 ± 0.64	z_{eq}	3393 ± 30	χ^2_{MGS}	1.07 ± 0.79
Ω_Λ	0.6901 ± 0.0056	k_{eq}	0.010357 ± 0.000093	$\chi^2_{DR12BAO}$	4.5 ± 1.7
Ω_m	0.3091 ± 0.0060	$100\theta_{eq}$	0.8151 ± 0.0058	χ^2_{prior}	11.5 ± 4.5
$\Omega_m h^2$	0.1426 ± 0.0013	$100\theta_{s,eq}$	0.4503 ± 0.0030	χ^2_{CMB}	2789.6 ± 5.9
$\Omega_m h^3$	0.0969 ± 0.0014	$H(0.15)$	73.21 ± 0.62	χ^2_{BAO}	6.1 ± 1.4

$\bar{\chi}^2_{eff} = 3843.47$; $\Delta\bar{\chi}^2_{eff} = 0.34$; $R - 1 = 0.02222$

16.18 base_omegak_plikHM_TTTEEE_lowl_lowE_BAO_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02239 ± 0.00015	σ_8	$0.8117^{+0.0073}_{-0.0084}$	$D_M(0.15)$	638.7 ± 6.0
$\boldsymbol{\Omega_c h^2}$	0.1197 ± 0.0014	S_8	0.825 ± 0.013	$H(0.38)$	83.29 ± 0.62
$\boldsymbol{100\theta_{MC}}$	1.04095 ± 0.00031	$\sigma_8\Omega_m^{0.5}$	0.4517 ± 0.0069	$D_M(0.38)$	1524 ± 13
$\boldsymbol{\tau}$	$0.0558^{+0.0057}_{-0.0081}$	$\sigma_8\Omega_m^{0.25}$	0.6055 ± 0.0071	$H(0.51)$	90.02 ± 0.61
$\boldsymbol{\Omega_K}$	0.0008 ± 0.0019	$\sigma_8/h^{0.5}$	$0.9851^{+0.0094}_{-0.010}$	$D_M(0.51)$	1974 ± 16
$\boldsymbol{\ln(10^{10}A_s)}$	$3.046^{+0.013}_{-0.016}$	$r_{drag}h$	99.91 ± 0.99	$H(0.61)$	95.64 ± 0.61
$\boldsymbol{n_s}$	0.9660 ± 0.0044	$\langle d^2\rangle^{1/2}$	$2.436^{+0.022}_{-0.025}$	$D_M(0.61)$	2297 ± 18
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0025	z_{re}	$7.81^{+0.62}_{-0.80}$	$H(2.33)$	236.6 ± 1.2
$\boldsymbol{A^{CIB}_{217}}$	47 ± 7	$10^9 A_s$	$2.104^{+0.026}_{-0.035}$	$D_M(2.33)$	5746 ± 31
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$10^9 A_s e^{-2\tau}$	1.882 ± 0.012	$f\sigma_8(0.15)$	0.4563 ± 0.0065
$\boldsymbol{A^{tSZ}_{143}}$	$5.4^{+2.2}_{-1.9}$	D_{40}	1229 ± 13	$\sigma_8(0.15)$	$0.7502^{+0.0067}_{-0.0077}$
$\boldsymbol{A^{PS}_{100}}$	259 ± 28	D_{220}	5734 ± 39	$f\sigma_8(0.38)$	0.4751 ± 0.0056
$\boldsymbol{A^{PS}_{143}}$	46 ± 8	D_{810}	2539 ± 14	$\sigma_8(0.38)$	$0.6652^{+0.0060}_{-0.0069}$
$\boldsymbol{A^{PS}_{143\times217}}$	42 ± 9	D_{1420}	817.5 ± 4.8	$f\sigma_8(0.51)$	0.4739 ± 0.0052
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	D_{2000}	230.9 ± 1.6	$\sigma_8(0.51)$	$0.6227^{+0.0057}_{-0.0065}$
$\boldsymbol{A^{kSZ}}$	< 4.38	$n_{s,0.002}$	0.9660 ± 0.0044	$f\sigma_8(0.61)$	0.4690 ± 0.0048
$\boldsymbol{A^{dustTT}_{100}}$	8.9 ± 1.8	Y_P	$0.245400^{+0.000063}_{-0.000055}$	$\sigma_8(0.61)$	$0.5925^{+0.0054}_{-0.0062}$
$\boldsymbol{A^{dustTT}_{143}}$	10.9 ± 1.8	Y_P^{BBN}	$0.246727^{+0.000063}_{-0.000055}$	$f\sigma_8(2.33)$	$0.2988^{+0.0027}_{-0.0031}$
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.6 ± 3.3	10^5D/H	2.583 ± 0.028	$\sigma_8(2.33)$	$0.3083^{+0.0031}_{-0.0035}$
$\boldsymbol{A^{dustTT}_{217}}$	93.7 ± 7.3	Age/Gyr	13.755 ± 0.080	f^{143}_{2000}	29.5 ± 2.8
$\boldsymbol{A^{dustTE}_{100}}$	0.115 ± 0.039	z_*	1089.87 ± 0.28	$f^{143\times217}_{2000}$	32.2 ± 1.9
$\boldsymbol{A^{dustTE}_{100\times143}}$	0.135 ± 0.029	r_*	144.50 ± 0.31	f^{217}_{2000}	107.0 ± 1.8
$\boldsymbol{A^{dustTE}_{100\times217}}$	0.482 ± 0.085	$100\theta_*$	1.04113 ± 0.00031	χ^2_{simall}	397.1 ± 1.9
$\boldsymbol{A^{dustTE}_{143}}$	0.224 ± 0.054	$D_M(z_*)$/Gpc	13.879 ± 0.029	χ^2_{lowl}	23.4 ± 1.1
$\boldsymbol{A^{dustTE}_{143\times217}}$	0.665 ± 0.080	z_{drag}	1059.95 ± 0.31	χ^2_{plik}	2360.0 ± 5.8
$\boldsymbol{A^{dustTE}_{217}}$	2.08 ± 0.27	r_{drag}	147.16 ± 0.31	χ^2_{6DF}	0.057 ± 0.078
$\boldsymbol{c_{100}}$	0.99968 ± 0.00062	k_D	0.14081 ± 0.00033	χ^2_{MGS}	1.45 ± 0.59
$\boldsymbol{c_{217}}$	0.99822 ± 0.00062	$100\theta_D$	0.16075 ± 0.00018	$\chi^2_{DR12BAO}$	4.7 ± 1.9
H_0	67.89 ± 0.67	z_{eq}	3395 ± 32	χ^2_{prior}	11.6 ± 4.5
Ω_Λ	0.6895 ± 0.0061	k_{eq}	0.010362 ± 0.000097	χ^2_{BAO}	6.2 ± 1.7
Ω_m	0.3097 ± 0.0066	$100\theta_{eq}$	0.8147 ± 0.0060	χ^2_{CMB}	2780.5 ± 5.7
$\Omega_m h^2$	0.1427 ± 0.0013	$100\theta_{s,eq}$	0.4501 ± 0.0031		
$\Omega_m h^3$	0.0969 ± 0.0014	$H(0.15)$	73.18 ± 0.65		

$\bar{\chi}^2_{eff} = 2798.34$; $\Delta\bar{\chi}^2_{eff} = 0.62$; $R - 1 = 0.01378$

16.19 base_omegak_plikHM_TTTEEE_lowl_lowE_BAO_post_lensing_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02240 ± 0.00015	σ_8	0.8119 ± 0.0070	$D_M(0.15)$	638.9 ± 5.8
$\boldsymbol{\Omega_c h^2}$	0.1197 ± 0.0014	S_8	0.825 ± 0.011	$H(0.38)$	83.27 ± 0.61
$\boldsymbol{100\theta_{MC}}$	1.04096 ± 0.00032	$\sigma_8\Omega_m^{0.5}$	0.4519 ± 0.0058	$D_M(0.38)$	1524 ± 13
$\boldsymbol{\tau}$	$0.0562^{+0.0060}_{-0.0076}$	$\sigma_8\Omega_m^{0.25}$	0.6057 ± 0.0059	$H(0.51)$	90.00 ± 0.60
$\boldsymbol{\Omega_K}$	0.0007 ± 0.0019	$\sigma_8/h^{0.5}$	0.9855 ± 0.0083	$D_M(0.51)$	1974 ± 16
$\boldsymbol{\ln(10^{10}A_s)}$	$3.047^{+0.012}_{-0.015}$	$r_{drag}h$	99.88 ± 0.95	$H(0.61)$	95.62 ± 0.60
$\boldsymbol{n_s}$	$0.9659^{+0.0042}_{-0.0047}$	$\langle d^2\rangle^{1/2}$	2.438 ± 0.020	$D_M(0.61)$	2298 ± 18
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0025	z_{re}	$7.85^{+0.64}_{-0.74}$	$H(2.33)$	236.5 ± 1.2
$\boldsymbol{A_{217}^{CIB}}$	47 ± 7	$10^9 A_s$	$2.106^{+0.026}_{-0.031}$	$D_M(2.33)$	5747 ± 31
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$10^9 A_s e^{-2\tau}$	1.882 ± 0.011	$f\sigma_8(0.15)$	0.4565 ± 0.0055
$\boldsymbol{A_{143}^{tSZ}}$	$5.4^{+2.1}_{-1.9}$	D_{40}	1229 ± 13	$\sigma_8(0.15)$	$0.7504^{+0.0062}_{-0.0069}$
$\boldsymbol{A_{100}^{PS}}$	259 ± 28	D_{220}	5737 ± 39	$f\sigma_8(0.38)$	0.4752 ± 0.0047
$\boldsymbol{A_{143}^{PS}}$	46 ± 8	D_{810}	2540 ± 13	$\sigma_8(0.38)$	$0.6654^{+0.0056}_{-0.0063}$
$\boldsymbol{A_{143\times217}^{PS}}$	42 ± 9	D_{1420}	817.7 ± 4.7	$f\sigma_8(0.51)$	0.4740 ± 0.0043
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	D_{2000}	231.0 ± 1.6	$\sigma_8(0.51)$	$0.6228^{+0.0053}_{-0.0060}$
$\boldsymbol{A^{kSZ}}$	< 4.22	$n_{s,0.002}$	$0.9659^{+0.0042}_{-0.0047}$	$f\sigma_8(0.61)$	0.4692 ± 0.0041
$\boldsymbol{A_{100}^{dustTT}}$	8.9 ± 1.8	Y_P	$0.245403^{+0.000061}_{-0.000055}$	$\sigma_8(0.61)$	$0.5927^{+0.0051}_{-0.0058}$
$\boldsymbol{A_{143}^{dustTT}}$	10.9 ± 1.8	Y_P^{BBN}	$0.246730^{+0.000062}_{-0.000055}$	$f\sigma_8(2.33)$	$0.2989^{+0.0026}_{-0.0030}$
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.5 ± 3.3	10^5D/H	2.581 ± 0.028	$\sigma_8(2.33)$	$0.3083^{+0.0030}_{-0.0034}$
$\boldsymbol{A_{217}^{dustTT}}$	93.7 ± 7.4	Age/Gyr	13.757 ± 0.079	f_{2000}^{143}	29.5 ± 2.8
$\boldsymbol{A_{100}^{dustTE}}$	0.114 ± 0.038	z_*	1089.86 ± 0.28	$f_{2000}^{143\times217}$	32.1 ± 1.9
$\boldsymbol{A_{100\times143}^{dustTE}}$	0.135 ± 0.029	r_*	144.50 ± 0.30	f_{2000}^{217}	107.0 ± 1.8
$\boldsymbol{A_{100\times217}^{dustTE}}$	0.483 ± 0.085	$100\theta_*$	1.04114 ± 0.00031	$\chi^2_{lensing}$	9.11 ± 0.55
$\boldsymbol{A_{143}^{dustTE}}$	0.224 ± 0.055	$D_M(z_*)$/Gpc	13.879 ± 0.028	χ^2_{simall}	291 ± 200
$\boldsymbol{A_{143\times217}^{dustTE}}$	0.664 ± 0.080	z_{drag}	1059.97 ± 0.30	χ^2_{lowl}	130 ± 200
$\boldsymbol{A_{217}^{dustTE}}$	2.08 ± 0.26	r_{drag}	147.16 ± 0.29	χ^2_{plik}	2359.7 ± 5.8
$\boldsymbol{c_{100}}$	0.99969 ± 0.00061	k_D	0.14082 ± 0.00031	χ^2_{6DF}	0.45 ± 0.70
$\boldsymbol{c_{217}}$	0.99821 ± 0.00061	$100\theta_D$	0.16074 ± 0.00018	χ^2_{MGS}	1.03 ± 0.78
H_0	67.87 ± 0.65	z_{eq}	3395 ± 30	$\chi^2_{DR12BAO}$	4.7 ± 1.9
Ω_Λ	0.6894 ± 0.0057	k_{eq}	0.010360 ± 0.000093	χ^2_{prior}	11.5 ± 4.4
Ω_m	0.3098 ± 0.0062	$100\theta_{eq}$	0.8148 ± 0.0058	χ^2_{CMB}	2789.4 ± 5.9
$\Omega_m h^2$	0.1427 ± 0.0013	$100\theta_{s,eq}$	0.4502 ± 0.0030	χ^2_{BAO}	6.2 ± 1.6
$\Omega_m h^3$	0.0969 ± 0.0014	$H(0.15)$	73.16 ± 0.63		

$\bar{\chi}^2_{eff} = 2807.05$; $\Delta\bar{\chi}^2_{eff} = 0.33$; $R - 1 = 0.02354$

16.20 base_omegak_plikHM_TTTEEE_lowl_lowE_BAO_post_lensing_Pantheon_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02240 ± 0.00015	σ_8	0.8119 ± 0.0070	$D_M(0.15)$	638.2 ± 5.7
$\boldsymbol{\Omega_c h^2}$	0.1196 ± 0.0014	S_8	0.824 ± 0.010	$H(0.38)$	83.33 ± 0.60
$\boldsymbol{100\theta_{MC}}$	1.04096 ± 0.00032	$\sigma_8\Omega_m^{0.5}$	0.4513 ± 0.0057	$D_M(0.38)$	1523 ± 12
$\boldsymbol{\tau}$	$0.0564^{+0.0060}_{-0.0076}$	$\sigma_8\Omega_m^{0.25}$	0.6053 ± 0.0058	$H(0.51)$	90.04 ± 0.60
$\boldsymbol{\Omega_K}$	0.0008 ± 0.0019	$\sigma_8/h^{0.5}$	0.9849 ± 0.0082	$D_M(0.51)$	1973 ± 15
$\boldsymbol{\ln(10^{10}A_s)}$	$3.048^{+0.012}_{-0.015}$	$r_{drag}h$	99.996 ± 0.92	$H(0.61)$	95.66 ± 0.60
$\boldsymbol{n_s}$	$0.9661^{+0.0042}_{-0.0047}$	$\langle d^2\rangle^{1/2}$	2.436 ± 0.020	$D_M(0.61)$	2296 ± 17
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0025	z_{re}	$7.87^{+0.64}_{-0.74}$	$H(2.33)$	236.5 ± 1.2
$\boldsymbol{A^{CIB}_{217}}$	47 ± 7	$10^9 A_s$	$2.107^{+0.026}_{-0.031}$	$D_M(2.33)$	5745 ± 31
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$10^9 A_s e^{-2\tau}$	1.882 ± 0.011	$f\sigma_8(0.15)$	0.4560 ± 0.0053
$\boldsymbol{A^{tSZ}_{143}}$	$5.4^{+2.1}_{-1.9}$	D_{40}	1229 ± 13	$\sigma_8(0.15)$	$0.7505^{+0.0062}_{-0.0069}$
$\boldsymbol{A^{PS}_{100}}$	259 ± 28	D_{220}	5738 ± 39	$f\sigma_8(0.38)$	0.4749 ± 0.0046
$\boldsymbol{A^{PS}_{143}}$	46 ± 8	D_{810}	2540 ± 13	$\sigma_8(0.38)$	$0.6655^{+0.0056}_{-0.0064}$
$\boldsymbol{A^{PS}_{143\times217}}$	42 ± 9	D_{1420}	817.8 ± 4.7	$f\sigma_8(0.51)$	0.4737 ± 0.0043
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	D_{2000}	231.1 ± 1.6	$\sigma_8(0.51)$	$0.6230^{+0.0053}_{-0.0061}$
$\boldsymbol{A^{kSZ}}$	< 4.20	$n_{s,0.002}$	$0.9661^{+0.0042}_{-0.0047}$	$f\sigma_8(0.61)$	0.4690 ± 0.0041
$\boldsymbol{A^{dustTT}_{100}}$	8.9 ± 1.8	Y_P	$0.245406^{+0.000061}_{-0.000054}$	$\sigma_8(0.61)$	$0.5928^{+0.0051}_{-0.0058}$
$\boldsymbol{A^{dustTT}_{143}}$	10.9 ± 1.8	Y_P^{BBN}	$0.246733^{+0.000061}_{-0.000055}$	$f\sigma_8(2.33)$	$0.2990^{+0.0026}_{-0.0030}$
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.5 ± 3.4	10^5D/H	2.580 ± 0.028	$\sigma_8(2.33)$	$0.3085^{+0.0030}_{-0.0034}$
$\boldsymbol{A^{dustTT}_{217}}$	93.7 ± 7.4	Age/Gyr	13.752 ± 0.079	f^{143}_{2000}	29.4 ± 2.8
$\boldsymbol{A^{dustTE}_{100}}$	0.114 ± 0.038	z_*	1089.84 ± 0.28	$f^{143\times217}_{2000}$	32.1 ± 1.9
$\boldsymbol{A^{dustTE}_{100\times143}}$	0.135 ± 0.029	r_*	144.52 ± 0.30	f^{217}_{2000}	106.9 ± 1.8
$\boldsymbol{A^{dustTE}_{100\times217}}$	0.483 ± 0.085	$100\theta_*$	1.04114 ± 0.00031	$\chi^2_{lensing}$	9.10 ± 0.55
$\boldsymbol{A^{dustTE}_{143}}$	0.224 ± 0.055	$D_M(z_*)$/Gpc	13.881 ± 0.028	χ^2_{simall}	291 ± 200
$\boldsymbol{A^{dustTE}_{143\times217}}$	0.664 ± 0.080	z_{drag}	1059.98 ± 0.30	χ^2_{lowl}	130 ± 200
$\boldsymbol{A^{dustTE}_{217}}$	2.08 ± 0.26	r_{drag}	147.17 ± 0.29	χ^2_{plik}	2359.8 ± 5.8
$\boldsymbol{c_{100}}$	0.99969 ± 0.00061	k_D	0.14081 ± 0.00031	χ^2_{JLA}	1036.30 ± 0.28
$\boldsymbol{c_{217}}$	0.99821 ± 0.00061	$100\theta_D$	0.16073 ± 0.00018	χ^2_{6DF}	0.46 ± 0.73
H_0	67.95 ± 0.64	z_{eq}	3393 ± 30	χ^2_{MGS}	1.08 ± 0.80
Ω_Λ	0.6902 ± 0.0055	k_{eq}	0.010355 ± 0.000093	$\chi^2_{DR12BAO}$	4.5 ± 1.7
Ω_m	0.3090 ± 0.0060	$100\theta_{eq}$	0.8152 ± 0.0058	χ^2_{prior}	11.5 ± 4.4
$\Omega_m h^2$	0.1426 ± 0.0013	$100\theta_{s,eq}$	0.4503 ± 0.0030	χ^2_{CMB}	2789.5 ± 5.9
$\Omega_m h^3$	0.0969 ± 0.0014	$H(0.15)$	73.22 ± 0.62	χ^2_{BAO}	6.0 ± 1.4

$\bar{\chi}^2_{eff} = 3843.33$; $\Delta\bar{\chi}^2_{eff} = 0.31$; $R - 1 = 0.02286$

16.21 base_omegak_CamSpecHM_TT_lowl_lowE_BAO

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022178	0.02217 ± 0.00023	$\sigma_8 \Omega_m^{0.25}$	0.6036	0.6036 ± 0.0097	$H(0.38)$	83.23	83.26 ± 0.66
$\boldsymbol{\Omega_c h^2}$	0.11972	0.1197 ± 0.0022	$\sigma_8/h^{0.5}$	0.9824	0.982 ± 0.013	$D_M(0.38)$	1524.9	1524 ± 13
$\boldsymbol{100\theta_{MC}}$	1.040934	1.04094 ± 0.00049	$r_{drag} h$	99.96	100.0 ± 1.0	$H(0.51)$	89.95	89.98 ± 0.69
$\boldsymbol{\tau}$	0.0528	0.0527 ± 0.0082	$\langle d^2 \rangle^{1/2}$	2.4276	2.425 ± 0.030	$D_M(0.51)$	1975.5	1975 ± 17
$\boldsymbol{\Omega_K}$	0.00108	0.0011 ± 0.0025	z_{re}	7.57	7.53 ± 0.84	$H(0.61)$	95.57	95.60 ± 0.71
$\boldsymbol{\ln(10^{10} A_s)}$	3.0378	3.038 ± 0.017	$10^9 A_s$	2.0859	2.086 ± 0.035	$D_M(0.61)$	2299.0	2298 ± 19
$\boldsymbol{n_s}$	0.9652	0.9657 ± 0.0060	$10^9 A_s e^{-2\tau}$	1.8769	1.877 ± 0.014	$H(2.33)$	236.44	236.4 ± 1.8
$\boldsymbol{y_{cal}}$	1.00027	1.0004 ± 0.0025	D_{40}	1225.3	1224 ± 16	$D_M(2.33)$	5750.3	5749 ± 38
$\boldsymbol{A_{100}^{PS}}$	242.6	242 ± 25	D_{220}	5702.9	5703 ± 41	$f\sigma_8(0.15)$	0.4550	0.4548 ± 0.0086
$\boldsymbol{A_{143}^{PS}}$	37.7	41 ± 8	D_{810}	2532.5	2533 ± 14	$\sigma_8(0.15)$	0.7478	0.7480 ± 0.0095
$\boldsymbol{A_{217}^{PS}}$	100.4	101 ± 10	D_{1420}	814.0	814.5 ± 5.1	$f\sigma_8(0.38)$	0.4736	0.4735 ± 0.0075
$\boldsymbol{A_{217}^{CIB}}$	43.3	41 ± 7	D_{2000}	229.53	229.6 ± 1.9	$\sigma_8(0.38)$	0.6631	0.6633 ± 0.0083
$\boldsymbol{A_{143}^{tSZ}}$	4.78	$3.7^{+1.8}_{-2.6}$	$n_{s,0.002}$	0.9652	0.9657 ± 0.0060	$f\sigma_8(0.51)$	0.4724	0.4723 ± 0.0069
$\boldsymbol{r_{143\times217}^{PS}}$	0.594	0.65 ± 0.13	Y_P	0.245317	$0.24531^{+0.00011}_{-0.000087}$	$\sigma_8(0.51)$	0.6206	0.6208 ± 0.0078
$\boldsymbol{r_{143\times217}^{CIB}}$	0.599	> 0.460	Y_P^{BBN}	0.246643	$0.24664^{+0.00011}_{-0.000088}$	$f\sigma_8(0.61)$	0.4675	0.4675 ± 0.0065
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.01	—	10^5D/H	2.6222	2.623 ± 0.043	$\sigma_8(0.61)$	0.5906	0.5908 ± 0.0074
$\boldsymbol{A^{kSZ}}$	3.1	—	Age/Gyr	13.764	13.762 ± 0.097	$f\sigma_8(2.33)$	0.29779	0.2979 ± 0.0036
$\boldsymbol{A_{100}^{dust}}$	1.006	1.01 ± 0.19	z_*	1090.141	1090.14 ± 0.43	$\sigma_8(2.33)$	0.30725	0.3074 ± 0.0040
$\boldsymbol{A_{143}^{dust}}$	0.971	0.98 ± 0.17	r_*	144.649	144.66 ± 0.50	f_{2000}^{143}	30.95	30.7 ± 3.1
$\boldsymbol{A_{217}^{dust}}$	0.961	0.97 ± 0.10	$100\theta_*$	1.041141	1.04114 ± 0.00048	f_{2000}^{217}	107.63	107.5 ± 2.0
$\boldsymbol{A_{143\times217}^{dust}}$	1.040	1.03 ± 0.16	$D_M(z_*)$/Gpc	13.8933	13.894 ± 0.045	$f_{2000}^{143\times217}$	33.15	32.9 ± 2.2
$\boldsymbol{c_{100}}$	0.99748	0.9975 ± 0.0011	z_{drag}	1059.475	1059.46 ± 0.46	χ^2_{simall}	395.87	397.0 ± 1.8
$\boldsymbol{c_{217}}$	1.00125	1.0012 ± 0.0016	r_{drag}	147.379	147.39 ± 0.49	χ^2_{lowl}	23.19	23.2 ± 1.4
H_0	67.82	67.86 ± 0.68	k_D	0.14042	0.14040 ± 0.00051	$\chi^2_{CamSpec}$	7051.1	7064.3 ± 5.4
Ω_Λ	0.6890	0.6893 ± 0.0078	$100\theta_D$	0.161037	0.16105 ± 0.00026	χ^2_{6DF}	0.0105	0.053 ± 0.073
Ω_m	0.3099	0.3095 ± 0.0073	z_{eq}	3391	3390 ± 50	χ^2_{MGS}	1.41	1.52 ± 0.60
$\Omega_m h^2$	0.14255	0.1425 ± 0.0021	k_{eq}	0.010350	0.01035 ± 0.00015	$\chi^2_{DR12BAO}$	3.68	4.5 ± 1.8
$\Omega_m h^3$	0.09668	$0.0967^{+0.0017}_{-0.0019}$	$100\theta_{eq}$	0.8148	0.8150 ± 0.0095	χ^2_{prior}	2.25	7.5 ± 3.3
σ_8	0.8091	0.809 ± 0.011	$100\theta_{s,eq}$	0.45030	0.4504 ± 0.0049	χ^2_{BAO}	5.10	6.1 ± 1.5
S_8	0.8223	0.822 ± 0.017	$H(0.15)$	73.11	73.14 ± 0.66	χ^2_{CMB}	7470.1	7484.5 ± 5.5
$\sigma_8 \Omega_m^{0.5}$	0.4504	0.4502 ± 0.0091	$D_M(0.15)$	639.3	639.0 ± 6.1			

Best-fit $\chi^2_{eff} = 7477.49$; $\bar{\chi}^2_{eff} = 7498.13$; $\Delta\bar{\chi}^2_{eff} = 0.57$; $R - 1 = 0.00836$

χ^2_{eff}: BAO - 6DF: 0.01 MGS: 1.41 DR12BAO: 3.69 CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.87 commander_dx12_v3_2_29: 23.19 CamSpec like_10.7HM: 7051.07

16.22 base_omegak_CamSpecHM_TT_lowl_lowE_BAO_post_lensing

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02218 ± 0.00022	$\sigma_8\Omega_m^{0.25}$	0.6057 ± 0.0074	$H(0.38)$	83.22 ± 0.67
$\boldsymbol{\Omega_c h^2}$	0.1199 ± 0.0020	$\sigma_8/h^{0.5}$	0.9855 ± 0.0097	$D_M(0.38)$	1525 ± 13
$\boldsymbol{100\theta_{MC}}$	1.04091 ± 0.00048	$r_{drag}h$	99.88 ± 0.96	$H(0.51)$	89.95 ± 0.69
$\boldsymbol{\tau}$	0.0543 ± 0.0079	$\langle d^2\rangle^{1/2}$	2.434 ± 0.022	$D_M(0.51)$	1976 ± 17
$\boldsymbol{\Omega_K}$	0.0011 ± 0.0025	z_{re}	7.71 ± 0.78	$H(0.61)$	95.57 ± 0.71
$\boldsymbol{\ln(10^{10}A_s)}$	3.042 ± 0.015	$10^9 A_s$	2.095 ± 0.031	$D_M(0.61)$	2300 ± 19
$\boldsymbol{n_s}$	0.9651 ± 0.0056	$10^9 A_s e^{-2\tau}$	1.879 ± 0.012	$H(2.33)$	236.6 ± 1.7
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0025	D_{40}	1227 ± 15	$D_M(2.33)$	5750 ± 37
$\boldsymbol{A_{100}^{PS}}$	242 ± 25	D_{220}	5708 ± 41	$f\sigma_8(0.15)$	0.4567 ± 0.0066
$\boldsymbol{A_{143}^{PS}}$	41 ± 8	D_{810}	2534 ± 13	$\sigma_8(0.15)$	0.7499 ± 0.0078
$\boldsymbol{A_{217}^{PS}}$	101 ± 10	D_{1420}	814.7 ± 5.1	$f\sigma_8(0.38)$	0.4752 ± 0.0057
$\boldsymbol{A_{217}^{CIB}}$	41 ± 7	D_{2000}	229.7 ± 1.8	$\sigma_8(0.38)$	0.6648 ± 0.0070
$\boldsymbol{A_{143}^{tSZ}}$	$3.7^{+1.7}_{-2.7}$	$n_{s,0.002}$	0.9651 ± 0.0056	$f\sigma_8(0.51)$	0.4739 ± 0.0053
$\boldsymbol{r_{143\times217}^{PS}}$	0.65 ± 0.13	Y_P	$0.24531^{+0.00010}_{-0.000087}$	$\sigma_8(0.51)$	0.6222 ± 0.0066
$\boldsymbol{r_{143\times217}^{CIB}}$	> 0.459	Y_P^{BBN}	$0.24664^{+0.00010}_{-0.000088}$	$f\sigma_8(0.61)$	0.4690 ± 0.0050
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	10^5D/H	2.623 ± 0.042	$\sigma_8(0.61)$	0.5921 ± 0.0063
$\boldsymbol{A^{kSZ}}$	—	Age/Gyr	13.763 ± 0.096	$f\sigma_8(2.33)$	0.2985 ± 0.0032
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.20	z_*	1090.16 ± 0.41	$\sigma_8(2.33)$	0.3080 ± 0.0036
$\boldsymbol{A_{143}^{dust}}$	0.97 ± 0.17	r_*	144.61 ± 0.44	f_{2000}^{143}	30.6 ± 3.1
$\boldsymbol{A_{217}^{dust}}$	0.97 ± 0.10	$100\theta_*$	1.04111 ± 0.00047	f_{2000}^{217}	107.5 ± 2.0
$\boldsymbol{A_{143\times217}^{dust}}$	1.03 ± 0.16	$D_M(z_*)$/Gpc	13.890 ± 0.041	$f_{2000}^{143\times217}$	32.9 ± 2.2
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	z_{drag}	1059.47 ± 0.46	$\chi^2_{lensing}$	9.49 ± 0.83
$\boldsymbol{c_{217}}$	1.0012 ± 0.0016	r_{drag}	147.34 ± 0.44	χ^2_{simall}	397.1 ± 1.9
H_0	67.79 ± 0.67	k_D	0.14045 ± 0.00048	χ^2_{lowl}	23.4 ± 1.3
Ω_Λ	0.6883 ± 0.0068	$100\theta_D$	0.16104 ± 0.00026	$\chi^2_{CamSpec}$	7063.5 ± 5.2
Ω_m	0.3106 ± 0.0066	z_{eq}	3395 ± 45	χ^2_{6DF}	0.055 ± 0.074
$\Omega_m h^2$	0.1427 ± 0.0019	k_{eq}	0.01036 ± 0.00014	χ^2_{MGS}	1.44 ± 0.57
$\Omega_m h^3$	0.0967 ± 0.0017	$100\theta_{eq}$	0.8142 ± 0.0085	$\chi^2_{DR12BAO}$	4.6 ± 1.8
σ_8	0.8114 ± 0.0085	$100\theta_{s,eq}$	0.4500 ± 0.0044	χ^2_{prior}	7.6 ± 3.3
S_8	0.826 ± 0.013	$H(0.15)$	73.08 ± 0.66	χ^2_{CMB}	7493.5 ± 5.5
$\sigma_8\Omega_m^{0.5}$	0.4522 ± 0.0071	$D_M(0.15)$	639.6 ± 6.0	χ^2_{BAO}	6.1 ± 1.6

$\bar{\chi}^2_{eff} = 7507.17$; $\Delta\bar{\chi}^2_{eff} = 0.69$; $R - 1 = 0.01378$

16.23 base_omegak_CamSpecHM_TT_lowl_lowE_BAO_post_lensing_Pantheon

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02219 ± 0.00022	$\sigma_8/h^{0.5}$	0.9846 ± 0.0096	$H(0.51)$	89.98 ± 0.68
$\boldsymbol{\Omega_c h^2}$	0.1197 ± 0.0020	$r_{\rm drag} h$	100.01 ± 0.93	$D_{\rm M}(0.51)$	1975 ± 17
$\boldsymbol{100\theta_{MC}}$	1.04094 ± 0.00048	$\langle d^2 \rangle^{1/2}$	2.432 ± 0.022	$H(0.61)$	95.60 ± 0.71
$\boldsymbol{\tau}$	0.0548 ± 0.0079	$z_{\rm re}$	7.75 ± 0.78	$D_{\rm M}(0.61)$	2298 ± 19
$\boldsymbol{\Omega_K}$	0.0011 ± 0.0025	$10^9 A_{\rm s}$	$2.097^{+0.029}_{-0.033}$	$H(2.33)$	236.4 ± 1.7
$\boldsymbol{\ln(10^{10} A_s)}$	3.043 ± 0.015	$10^9 A_{\rm s} e^{-2\tau}$	1.879 ± 0.012	$D_{\rm M}(2.33)$	5749 ± 37
$\boldsymbol{n_s}$	0.9656 ± 0.0056	D_{40}	1226 ± 14	$f\sigma_8(0.15)$	0.4559 ± 0.0064
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0025	D_{220}	5710 ± 41	$\sigma_8(0.15)$	0.7497 ± 0.0078
$\boldsymbol{A^{PS}_{100}}$	242 ± 25	D_{810}	2534 ± 13	$f\sigma_8(0.38)$	0.4746 ± 0.0056
$\boldsymbol{A^{PS}_{143}}$	41 ± 8	D_{1420}	814.9 ± 5.1	$\sigma_8(0.38)$	0.6648 ± 0.0070
$\boldsymbol{A^{PS}_{217}}$	101 ± 10	D_{2000}	229.8 ± 1.8	$f\sigma_8(0.51)$	0.4734 ± 0.0052
$\boldsymbol{A^{CIB}_{217}}$	41 ± 7	$n_{\rm s,0.002}$	0.9656 ± 0.0056	$\sigma_8(0.51)$	0.6222 ± 0.0066
$\boldsymbol{A^{tSZ}_{143}}$	$3.7^{+1.7}_{-2.7}$	$Y_{\rm P}$	$0.24532^{+0.00010}_{-0.000087}$	$f\sigma_8(0.61)$	0.4686 ± 0.0049
$\boldsymbol{r^{PS}_{143\times217}}$	0.65 ± 0.13	$Y_{\rm P}^{\rm BBN}$	$0.24664^{+0.00010}_{-0.000087}$	$\sigma_8(0.61)$	0.5921 ± 0.0063
$\boldsymbol{r^{CIB}_{143\times217}}$	$0.58^{+0.42}_{-0.13}$	10^5D/H	2.620 ± 0.042	$f\sigma_8(2.33)$	0.2986 ± 0.0032
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Age/Gyr	13.761 ± 0.096	$\sigma_8(2.33)$	0.3081 ± 0.0036
$\boldsymbol{A^{kSZ}}$	—	z_*	1090.12 ± 0.41	f^{143}_{2000}	30.6 ± 3.1
$\boldsymbol{A^{dust}_{100}}$	1.01 ± 0.20	r_*	144.65 ± 0.44	f^{217}_{2000}	107.5 ± 2.0
$\boldsymbol{A^{dust}_{143}}$	0.97 ± 0.17	$100\theta_*$	1.04114 ± 0.00047	$f^{143\times217}_{2000}$	32.8 ± 2.2
$\boldsymbol{A^{dust}_{217}}$	0.97 ± 0.10	$D_{\rm M}(z_*)$/Gpc	13.893 ± 0.040	$\chi^2_{\rm lensing}$	9.50 ± 0.86
$\boldsymbol{A^{dust}_{143\times217}}$	1.03 ± 0.16	$z_{\rm drag}$	1059.50 ± 0.46	$\chi^2_{\rm simall}$	397.2 ± 2.0
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	$r_{\rm drag}$	147.38 ± 0.44	$\chi^2_{\rm lowl}$	23.3 ± 1.3
$\boldsymbol{c_{217}}$	1.0012 ± 0.0016	$k_{\rm D}$	0.14043 ± 0.00048	$\chi^2_{\rm CamSpec}$	7063.6 ± 5.2
H_0	67.86 ± 0.66	$100\theta_{\rm D}$	0.16103 ± 0.00026	$\chi^2_{\rm JLA}$	1036.35 ± 0.33
Ω_Λ	0.6894 ± 0.0066	$z_{\rm eq}$	3391 ± 44	$\chi^2_{\rm 6DF}$	0.047 ± 0.064
$\Omega_{\rm m}$	0.3095 ± 0.0064	$k_{\rm eq}$	0.01035 ± 0.00014	$\chi^2_{\rm MGS}$	1.51 ± 0.56
$\Omega_{\rm m} h^2$	0.1425 ± 0.0019	$100\theta_{\rm eq}$	0.8150 ± 0.0084	$\chi^2_{\rm DR12BAO}$	4.4 ± 1.6
$\Omega_{\rm m} h^3$	$0.0967^{+0.0017}_{-0.0018}$	$100\theta_{\rm s,eq}$	0.4504 ± 0.0043	$\chi^2_{\rm prior}$	7.6 ± 3.3
σ_8	0.8111 ± 0.0085	$H(0.15)$	73.15 ± 0.65	$\chi^2_{\rm CMB}$	7493.6 ± 5.4
S_8	0.824 ± 0.013	$D_{\rm M}(0.15)$	639.0 ± 5.9	$\chi^2_{\rm BAO}$	6.0 ± 1.4
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4512 ± 0.0069	$H(0.38)$	83.26 ± 0.66		
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.6050 ± 0.0072	$D_{\rm M}(0.38)$	1524 ± 13		

$\bar{\chi}^2_{\rm eff} = 8543.49$; $\Delta\bar{\chi}^2_{\rm eff} = 0.71$; $R - 1 = 0.01394$

16.24 base_omegak_CamSpecHM_TT_lowl_lowE_BAO_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02218 ± 0.00023	$\sigma_8\Omega_m^{0.25}$	0.6043 ± 0.0095	$H(0.38)$	83.26 ± 0.66
$\boldsymbol{\Omega_c h^2}$	0.1196 ± 0.0022	$\sigma_8/h^{0.5}$	0.984 ± 0.013	$D_M(0.38)$	1524 ± 13
$\boldsymbol{100\theta_{MC}}$	1.04094 ± 0.00049	$r_{drag}h$	100.0 ± 1.0	$H(0.51)$	89.97 ± 0.69
$\boldsymbol{\tau}$	$0.0543^{+0.0049}_{-0.0083}$	$\langle d^2\rangle^{1/2}$	2.429 ± 0.029	$D_M(0.51)$	1975 ± 17
$\boldsymbol{\Omega_K}$	0.0011 ± 0.0025	z_{re}	$7.71^{+0.53}_{-0.84}$	$H(0.61)$	95.59 ± 0.71
$\boldsymbol{\ln(10^{10}A_s)}$	$3.041^{+0.012}_{-0.017}$	$10^9 A_s$	$2.093^{+0.025}_{-0.035}$	$D_M(0.61)$	2298 ± 19
$\boldsymbol{n_s}$	0.9659 ± 0.0061	$10^9 A_s e^{-2\tau}$	1.877 ± 0.014	$H(2.33)$	236.4 ± 1.9
$\boldsymbol{y_{cal}}$	1.0003 ± 0.0025	D_{40}	1224 ± 16	$D_M(2.33)$	5750 ± 38
$\boldsymbol{A^{PS}_{100}}$	242 ± 25	D_{220}	5703 ± 41	$f\sigma_8(0.15)$	0.4554 ± 0.0086
$\boldsymbol{A^{PS}_{143}}$	41 ± 8	D_{810}	2533 ± 14	$\sigma_8(0.15)$	0.7490 ± 0.0092
$\boldsymbol{A^{PS}_{217}}$	101 ± 10	D_{1420}	814.4 ± 5.2	$f\sigma_8(0.38)$	0.4741 ± 0.0074
$\boldsymbol{A^{CIB}_{217}}$	41 ± 7	D_{2000}	229.6 ± 1.9	$\sigma_8(0.38)$	0.6642 ± 0.0080
$\boldsymbol{A^{tSZ}_{143}}$	$3.7^{+1.8}_{-2.6}$	$n_{s,0.002}$	0.9659 ± 0.0061	$f\sigma_8(0.51)$	0.4729 ± 0.0068
$\boldsymbol{r^{PS}_{143\times217}}$	0.65 ± 0.13	Y_P	$0.24531^{+0.00011}_{-0.000087}$	$\sigma_8(0.51)$	0.6217 ± 0.0074
$\boldsymbol{r^{CIB}_{143\times217}}$	> 0.457	Y_P^{BBN}	$0.24664^{+0.00011}_{-0.000087}$	$f\sigma_8(0.61)$	0.4681 ± 0.0064
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	10^5D/H	2.622 ± 0.043	$\sigma_8(0.61)$	0.5916 ± 0.0071
$\boldsymbol{A^{kSZ}}$	—	Age/Gyr	13.763 ± 0.097	$f\sigma_8(2.33)$	$0.2983^{+0.0032}_{-0.0036}$
$\boldsymbol{A^{dust}_{100}}$	1.01 ± 0.19	z_*	1090.13 ± 0.43	$\sigma_8(2.33)$	$0.3078^{+0.0036}_{-0.0040}$
$\boldsymbol{A^{dust}_{143}}$	0.98 ± 0.17	r_*	144.67 ± 0.50	f^{143}_{2000}	30.6 ± 3.1
$\boldsymbol{A^{dust}_{217}}$	0.97 ± 0.10	$100\theta_*$	1.04114 ± 0.00048	f^{217}_{2000}	107.5 ± 2.0
$\boldsymbol{A^{dust}_{143\times217}}$	1.03 ± 0.16	$D_M(z_*)$/Gpc	13.895 ± 0.046	$f^{143\times217}_{2000}$	32.8 ± 2.2
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	z_{drag}	1059.47 ± 0.46	χ^2_{simall}	396.9 ± 1.8
$\boldsymbol{c_{217}}$	1.0012 ± 0.0016	r_{drag}	147.40 ± 0.49	χ^2_{lowl}	23.2 ± 1.4
H_0	67.87 ± 0.68	k_D	0.14040 ± 0.00052	$\chi^2_{CamSpec}$	7064.1 ± 5.4
Ω_Λ	0.6895 ± 0.0078	$100\theta_D$	0.16104 ± 0.00026	χ^2_{6DF}	0.052 ± 0.073
Ω_m	0.3094 ± 0.0073	z_{eq}	3389 ± 50	χ^2_{MGS}	1.53 ± 0.60
$\Omega_m h^2$	0.1425 ± 0.0021	k_{eq}	0.01034 ± 0.00015	$\chi^2_{DR12BAO}$	4.5 ± 1.7
$\Omega_m h^3$	$0.0967^{+0.0017}_{-0.0019}$	$100\theta_{eq}$	0.8152 ± 0.0095	χ^2_{prior}	7.5 ± 3.3
σ_8	0.810 ± 0.010	$100\theta_{s,eq}$	0.4505 ± 0.0049	χ^2_{BAO}	6.1 ± 1.5
S_8	0.823 ± 0.017	$H(0.15)$	73.15 ± 0.66	χ^2_{CMB}	7484.3 ± 5.4
$\sigma_8\Omega_m^{0.5}$	0.4507 ± 0.0091	$D_M(0.15)$	639.0 ± 6.1		

$\bar{\chi}^2_{eff} = 7497.90$; $\Delta\bar{\chi}^2_{eff} = 0.58$; $R - 1 = 0.01053$

16.25 base_omegak_CamSpecHM_TT_lowl_lowE_BAO_post_lensing_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02218 ± 0.00022	$\sigma_8\Omega_m^{0.25}$	0.6059 ± 0.0073	$H(0.38)$	83.21 ± 0.67
$\boldsymbol{\Omega_c h^2}$	0.1198 ± 0.0020	$\sigma_8/h^{0.5}$	0.9859 ± 0.0096	$D_M(0.38)$	1525 ± 13
$\boldsymbol{100\theta_{MC}}$	1.04092 ± 0.00048	$r_{drag}h$	99.90 ± 0.96	$H(0.51)$	89.94 ± 0.69
$\boldsymbol{\tau}$	$0.0553^{+0.0057}_{-0.0080}$	$\langle d^2\rangle^{1/2}$	2.435 ± 0.022	$D_M(0.51)$	1976 ± 17
$\boldsymbol{\Omega_K}$	0.0011 ± 0.0025	z_{re}	$7.81^{+0.59}_{-0.79}$	$H(0.61)$	95.56 ± 0.71
$\boldsymbol{\ln(10^{10}A_s)}$	$3.044^{+0.012}_{-0.015}$	$10^9 A_s$	$2.099^{+0.024}_{-0.032}$	$D_M(0.61)$	2300 ± 19
$\boldsymbol{n_s}$	0.9653 ± 0.0056	$10^9 A_s e^{-2\tau}$	1.879 ± 0.012	$H(2.33)$	236.5 ± 1.7
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	D_{40}	1227 ± 15	$D_M(2.33)$	5751 ± 37
$\boldsymbol{A_{100}^{PS}}$	242 ± 25	D_{220}	5708 ± 41	$f\sigma_8(0.15)$	0.4568 ± 0.0066
$\boldsymbol{A_{143}^{PS}}$	41 ± 8	D_{810}	2534 ± 13	$\sigma_8(0.15)$	0.7503 ± 0.0077
$\boldsymbol{A_{217}^{PS}}$	101 ± 10	D_{1420}	814.7 ± 5.1	$f\sigma_8(0.38)$	0.4754 ± 0.0057
$\boldsymbol{A_{217}^{CIB}}$	41 ± 7	D_{2000}	229.7 ± 1.9	$\sigma_8(0.38)$	0.6652 ± 0.0069
$\boldsymbol{A_{143}^{tSZ}}$	$3.7^{+1.7}_{-2.7}$	$n_{s,0.002}$	0.9653 ± 0.0056	$f\sigma_8(0.51)$	0.4741 ± 0.0052
$\boldsymbol{r_{143\times217}^{PS}}$	0.65 ± 0.13	Y_P	$0.24531^{+0.00010}_{-0.000087}$	$\sigma_8(0.51)$	0.6226 ± 0.0065
$\boldsymbol{r_{143\times217}^{CIB}}$	> 0.460	Y_P^{BBN}	$0.24664^{+0.00010}_{-0.000088}$	$f\sigma_8(0.61)$	0.4692 ± 0.0049
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	10^5D/H	2.622 ± 0.042	$\sigma_8(0.61)$	0.5925 ± 0.0062
$\boldsymbol{A^{kSZ}}$	—	Age/Gyr	13.765 ± 0.096	$f\sigma_8(2.33)$	0.2987 ± 0.0031
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.20	z_*	1090.14 ± 0.41	$\sigma_8(2.33)$	0.3082 ± 0.0036
$\boldsymbol{A_{143}^{dust}}$	0.97 ± 0.17	r_*	144.63 ± 0.44	f_{2000}^{143}	30.6 ± 3.1
$\boldsymbol{A_{217}^{dust}}$	0.97 ± 0.10	$100\theta_*$	1.04112 ± 0.00047	f_{2000}^{217}	107.5 ± 2.0
$\boldsymbol{A_{143\times217}^{dust}}$	1.03 ± 0.16	$D_M(z_*)$/Gpc	13.892 ± 0.040	$f_{2000}^{143\times217}$	32.8 ± 2.2
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	z_{drag}	1059.48 ± 0.46	$\chi^2_{lensing}$	9.43 ± 0.77
$\boldsymbol{c_{217}}$	1.0012 ± 0.0016	r_{drag}	147.36 ± 0.44	χ^2_{simall}	397.1 ± 1.9
H_0	67.79 ± 0.67	k_D	0.14044 ± 0.00048	χ^2_{lowl}	23.4 ± 1.3
Ω_Λ	0.6886 ± 0.0068	$100\theta_D$	0.16103 ± 0.00026	$\chi^2_{CamSpec}$	7063.4 ± 5.1
Ω_m	0.3104 ± 0.0066	z_{eq}	3393 ± 44	χ^2_{6DF}	0.054 ± 0.072
$\Omega_m h^2$	0.1426 ± 0.0019	k_{eq}	0.01035 ± 0.00014	χ^2_{MGS}	1.45 ± 0.57
$\Omega_m h^3$	$0.0967^{+0.0016}_{-0.0018}$	$100\theta_{eq}$	0.8146 ± 0.0084	$\chi^2_{DR12BAO}$	4.6 ± 1.8
σ_8	0.8118 ± 0.0083	$100\theta_{s,eq}$	0.4502 ± 0.0043	χ^2_{prior}	7.6 ± 3.3
S_8	0.826 ± 0.013	$H(0.15)$	73.08 ± 0.66	χ^2_{CMB}	7493.3 ± 5.4
$\sigma_8\Omega_m^{0.5}$	0.4522 ± 0.0071	$D_M(0.15)$	639.6 ± 6.1	χ^2_{BAO}	6.1 ± 1.6

$\bar{\chi}^2_{eff} = 7506.97$; $\Delta\bar{\chi}^2_{eff} = 0.65$; $R - 1 = 0.01641$

16.26 base_omegak_CamSpecHM_TT_lowl_lowE_BAO_post_lensing_Pantheon_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02220 ± 0.00022	$\sigma_8/h^{0.5}$	0.9850 ± 0.0095	$H(0.51)$	89.97 ± 0.68
$\boldsymbol{\Omega_c h^2}$	0.1196 ± 0.0019	$r_{\rm drag} h$	100.03 ± 0.93	$D_{\rm M}(0.51)$	1975 ± 17
$\boldsymbol{100\theta_{MC}}$	1.04094 ± 0.00048	$\langle d^2 \rangle^{1/2}$	2.433 ± 0.022	$H(0.61)$	95.59 ± 0.71
$\boldsymbol{\tau}$	$0.0557^{+0.0057}_{-0.0080}$	$z_{\rm re}$	$7.84^{+0.60}_{-0.79}$	$D_{\rm M}(0.61)$	2298 ± 19
$\boldsymbol{\Omega_K}$	0.0010 ± 0.0025	$10^9 A_{\rm s}$	$2.100^{+0.024}_{-0.032}$	$H(2.33)$	236.4 ± 1.7
$\boldsymbol{\ln(10^{10} A_s)}$	$3.044^{+0.012}_{-0.015}$	$10^9 A_{\rm s} e^{-2\tau}$	1.878 ± 0.012	$D_{\rm M}(2.33)$	5750 ± 37
$\boldsymbol{n_s}$	0.9658 ± 0.0056	D_{40}	1226 ± 14	$f\sigma_8(0.15)$	0.4560 ± 0.0064
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0025	D_{220}	5710 ± 41	$\sigma_8(0.15)$	0.7501 ± 0.0077
$\boldsymbol{A^{PS}_{100}}$	242 ± 25	D_{810}	2534 ± 13	$f\sigma_8(0.38)$	0.4747 ± 0.0056
$\boldsymbol{A^{PS}_{143}}$	40 ± 8	D_{1420}	814.9 ± 5.1	$\sigma_8(0.38)$	0.6651 ± 0.0069
$\boldsymbol{A^{PS}_{217}}$	101 ± 10	D_{2000}	229.8 ± 1.9	$f\sigma_8(0.51)$	0.4736 ± 0.0052
$\boldsymbol{A^{CIB}_{217}}$	40 ± 7	$n_{\rm s,0.002}$	0.9658 ± 0.0056	$\sigma_8(0.51)$	0.6226 ± 0.0065
$\boldsymbol{A^{tSZ}_{143}}$	$3.8^{+1.7}_{-2.7}$	$Y_{\rm P}$	$0.24532^{+0.00010}_{-0.000087}$	$f\sigma_8(0.61)$	0.4688 ± 0.0049
$\boldsymbol{r^{PS}_{143\times217}}$	0.65 ± 0.13	$Y_{\rm P}^{\rm BBN}$	$0.24665^{+0.00010}_{-0.000087}$	$\sigma_8(0.61)$	0.5925 ± 0.0062
$\boldsymbol{r^{CIB}_{143\times217}}$	> 0.456	10^5D/H	2.619 ± 0.042	$f\sigma_8(2.33)$	0.2988 ± 0.0031
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Age/Gyr	13.763 ± 0.096	$\sigma_8(2.33)$	0.3083 ± 0.0036
$\boldsymbol{A^{kSZ}}$	—	z_*	1090.11 ± 0.40	f^{143}_{2000}	30.5 ± 3.1
$\boldsymbol{A^{dust}_{100}}$	1.01 ± 0.20	r_*	144.67 ± 0.44	f^{217}_{2000}	107.4 ± 2.0
$\boldsymbol{A^{dust}_{143}}$	0.97 ± 0.17	$100\theta_*$	1.04115 ± 0.00047	$f^{143\times217}_{2000}$	32.8 ± 2.2
$\boldsymbol{A^{dust}_{217}}$	0.97 ± 0.10	$D_{\rm M}(z_*)$/Gpc	13.895 ± 0.040	$\chi^2_{\rm lensing}$	9.44 ± 0.80
$\boldsymbol{A^{dust}_{143\times217}}$	1.03 ± 0.16	$z_{\rm drag}$	1059.50 ± 0.46	$\chi^2_{\rm simall}$	397.2 ± 2.0
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	$r_{\rm drag}$	147.39 ± 0.43	$\chi^2_{\rm lowl}$	23.3 ± 1.3
$\boldsymbol{c_{217}}$	1.0012 ± 0.0016	$k_{\rm D}$	0.14042 ± 0.00048	$\chi^2_{\rm CamSpec}$	7063.5 ± 5.2
H_0	67.87 ± 0.66	$100\theta_{\rm D}$	0.16102 ± 0.00026	$\chi^2_{\rm JLA}$	1036.33 ± 0.32
Ω_Λ	0.6896 ± 0.0065	$z_{\rm eq}$	3389 ± 44	$\chi^2_{\rm 6DF}$	0.046 ± 0.063
$\Omega_{\rm m}$	0.3094 ± 0.0063	$k_{\rm eq}$	0.01034 ± 0.00013	$\chi^2_{\rm MGS}$	1.52 ± 0.56
$\Omega_{\rm m} h^2$	0.1425 ± 0.0018	$100\theta_{\rm eq}$	0.8153 ± 0.0084	$\chi^2_{\rm DR12BAO}$	4.4 ± 1.6
$\Omega_{\rm m} h^3$	$0.0967^{+0.0016}_{-0.0019}$	$100\theta_{\rm s,eq}$	0.4506 ± 0.0043	$\chi^2_{\rm prior}$	7.6 ± 3.3
σ_8	0.8115 ± 0.0083	$H(0.15)$	73.14 ± 0.65	$\chi^2_{\rm CMB}$	7493.4 ± 5.4
S_8	0.824 ± 0.013	$D_{\rm M}(0.15)$	639.0 ± 5.9	$\chi^2_{\rm BAO}$	6.0 ± 1.4
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4513 ± 0.0069	$H(0.38)$	83.25 ± 0.66		
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.6052 ± 0.0072	$D_{\rm M}(0.38)$	1524 ± 13		

$\bar{\chi}^2_{\rm eff} = 8543.30$; $\Delta\bar{\chi}^2_{\rm eff} = 0.67$; $R - 1 = 0.01709$

16.27 base_omegak_CamSpecHM_TTTEEE_lowl_lowE_BAO

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022328	0.02232 ± 0.00016	$\sigma_8\Omega_m^{0.5}$	0.4488	0.4485 ± 0.0071	$H(0.38)$	83.29	83.22 ± 0.61
$\boldsymbol{\Omega_c h^2}$	0.11934	0.1192 ± 0.0015	$\sigma_8\Omega_m^{0.25}$	0.6022	0.6017 ± 0.0074	$D_M(0.38)$	1523.0	1525 ± 13
$\boldsymbol{100\theta_{MC}}$	1.040927	1.04092 ± 0.00032	$\sigma_8/h^{0.5}$	0.9805	0.980 ± 0.011	$H(0.51)$	89.99	89.92 ± 0.61
$\boldsymbol{\tau}$	0.0531	0.0532 ± 0.0079	$r_{drag}h$	100.08	100.01 ± 0.99	$D_M(0.51)$	1973.4	1975 ± 16
$\boldsymbol{\Omega_K}$	0.00079	0.0005 ± 0.0020	$\langle d^2\rangle^{1/2}$	2.4229	2.423 ± 0.025	$H(0.61)$	95.60	95.53 ± 0.61
$\boldsymbol{\ln(10^{10}A_s)}$	3.0392	3.038 ± 0.016	z_{re}	7.56	7.55 ± 0.81	$D_M(0.61)$	2296.7	2299 ± 18
$\boldsymbol{n_s}$	0.96722	0.9668 ± 0.0046	$10^9 A_s$	2.0889	2.088 ± 0.034	$H(2.33)$	236.27	236.1 ± 1.2
$\boldsymbol{y_{cal}}$	1.00054	1.0004 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.8784	1.877 ± 0.012	$D_M(2.33)$	5748.8	5753 ± 32
$\boldsymbol{A_{100}^{PS}}$	234.6	240 ± 24	D_{40}	1223.3	1223 ± 13	$f\sigma_8(0.15)$	0.4535	0.4533 ± 0.0067
$\boldsymbol{A_{143}^{PS}}$	49.2	39 ± 8	D_{220}	5718.7	5720 ± 39	$\sigma_8(0.15)$	0.7471	0.7462 ± 0.0077
$\boldsymbol{A_{217}^{PS}}$	105.6	102 ± 10	D_{810}	2537.3	2534 ± 13	$f\sigma_8(0.38)$	0.4725	0.4721 ± 0.0059
$\boldsymbol{A_{217}^{CIB}}$	39.9	40 ± 7	D_{1420}	816.89	815.8 ± 4.8	$\sigma_8(0.38)$	0.6626	0.6618 ± 0.0069
$\boldsymbol{A_{143}^{tSZ}}$	4.97	$3.8^{+1.8}_{-2.6}$	D_{2000}	230.71	230.3 ± 1.6	$f\sigma_8(0.51)$	0.4714	0.4710 ± 0.0054
$\boldsymbol{r_{143\times217}^{PS}}$	0.758	0.66 ± 0.13	$n_{s,0.002}$	0.96722	0.9668 ± 0.0046	$\sigma_8(0.51)$	0.6203	0.6195 ± 0.0065
$\boldsymbol{r_{143\times217}^{CIB}}$	0.711	$0.56^{+0.39}_{-0.18}$	Y_P	0.245378	$0.245375^{+0.000070}_{-0.000060}$	$f\sigma_8(0.61)$	0.4667	0.4663 ± 0.0051
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.95	—	Y_P^{BBN}	0.246705	$0.246701^{+0.000070}_{-0.000060}$	$\sigma_8(0.61)$	0.5903	0.5895 ± 0.0062
$\boldsymbol{A^{kSZ}}$	2.55	$4.8^{+2.3}_{-4.0}$	10^5D/H	2.5935	2.595 ± 0.031	$f\sigma_8(2.33)$	0.29772	0.2973 ± 0.0031
$\boldsymbol{A_{100}^{dust}}$	1.008	1.01 ± 0.20	Age/Gyr	13.761	13.772 ± 0.081	$\sigma_8(2.33)$	0.30720	0.3067 ± 0.0035
$\boldsymbol{A_{143}^{dust}}$	0.952	0.97 ± 0.18	z_*	1089.916	1089.91 ± 0.30	f_{2000}^{143}	29.71	29.8 ± 2.9
$\boldsymbol{A_{217}^{dust}}$	0.966	0.97 ± 0.10	r_*	144.635	144.67 ± 0.32	f_{2000}^{217}	106.35	106.8 ± 1.9
$\boldsymbol{A_{143\times217}^{dust}}$	1.019	1.03 ± 0.16	$100\theta_*$	1.041111	1.04111 ± 0.00031	$f_{2000}^{143\times217}$	32.07	32.1 ± 2.0
$\boldsymbol{c_{100}}$	0.99785	0.9975 ± 0.0011	$D_M(z_*)$/Gpc	13.8923	13.896 ± 0.030	χ^2_{simall}	395.85	396.9 ± 1.7
$\boldsymbol{c_{217}}$	1.00095	1.0011 ± 0.0016	z_{drag}	1059.780	1059.77 ± 0.33	χ^2_{lowl}	22.88	23.0 ± 1.0
$\boldsymbol{c_{TE}}$	0.99693	0.9966 ± 0.0049	r_{drag}	147.315	147.35 ± 0.32	$\chi^2_{CamSpec}$	11500.8	11514.9 ± 5.6
$\boldsymbol{c_{EE}}$	0.99225	0.9921 ± 0.0049	k_D	0.140600	0.14056 ± 0.00034	χ^2_{6DF}	0.0063	0.052 ± 0.071
H_0	67.94	67.87 ± 0.67	$100\theta_D$	0.160838	0.16085 ± 0.00019	χ^2_{MGS}	1.47	1.50 ± 0.59
Ω_Λ	0.6909	0.6907 ± 0.0061	z_{eq}	3385.4	3382 ± 33	$\chi^2_{DR12BAO}$	3.65	4.6 ± 1.8
Ω_m	0.3083	0.3087 ± 0.0066	k_{eq}	0.010333	0.01032 ± 0.00010	χ^2_{prior}	1.81	7.8 ± 3.4
$\Omega_m h^2$	0.14231	0.1422 ± 0.0014	$100\theta_{eq}$	0.8162	0.8168 ± 0.0063	χ^2_{BAO}	5.13	6.2 ± 1.5
$\Omega_m h^3$	0.09668	0.0965 ± 0.0014	$100\theta_{s,eq}$	0.45093	0.4512 ± 0.0032	χ^2_{CMB}	11919.5	11934.9 ± 5.8
σ_8	0.8082	0.8072 ± 0.0084	$H(0.15)$	73.20	73.13 ± 0.64			
S_8	0.8193	0.819 ± 0.013	$D_M(0.15)$	638.3	639.0 ± 5.9			

Best-fit $\chi^2_{eff} = 11926.45$; $\bar{\chi}^2_{eff} = 11948.83$; $\Delta\bar{\chi}^2_{eff} = 0.54$; $R - 1 = 0.01869$

χ^2_{eff}: BAO - 6DF: 0.01 MGS: 1.47 DR12BAO: 3.65 CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.85 commander_dx12_v3_2_29: 22.88 CamSpec like_10.7HM_1400_unified: 11500.78

16.28 base_omegak_CamSpecHM_TTTEEE_lowl_lowE_BAO_post_lensing

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02233 ± 0.00016	$\sigma_8\Omega_m^{0.5}$	0.4504 ± 0.0059	$H(0.38)$	83.16 ± 0.61
$\boldsymbol{\Omega_c h^2}$	0.1193 ± 0.0014	$\sigma_8\Omega_m^{0.25}$	0.6037 ± 0.0061	$D_M(0.38)$	1526 ± 13
$\boldsymbol{100\theta_{MC}}$	1.04091 ± 0.00031	$\sigma_8/h^{0.5}$	0.9830 ± 0.0086	$H(0.51)$	89.87 ± 0.61
$\boldsymbol{\tau}$	0.0551 ± 0.0074	$r_{drag}h$	99.87 ± 0.95	$D_M(0.51)$	1977 ± 16
$\boldsymbol{\Omega_K}$	0.0005 ± 0.0020	$\langle d^2\rangle^{1/2}$	2.431 ± 0.020	$H(0.61)$	95.48 ± 0.61
$\boldsymbol{\ln(10^{10}A_s)}$	3.043 ± 0.014	z_{re}	7.74 ± 0.74	$D_M(0.61)$	2301 ± 18
$\boldsymbol{n_s}$	0.9665 ± 0.0045	$10^9 A_s$	2.097 ± 0.030	$H(2.33)$	236.2 ± 1.2
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0024	$10^9 A_s e^{-2\tau}$	1.878 ± 0.011	$D_M(2.33)$	5755 ± 32
$\boldsymbol{A_{100}^{PS}}$	240 ± 25	D_{40}	1225 ± 13	$f\sigma_8(0.15)$	0.4551 ± 0.0056
$\boldsymbol{A_{143}^{PS}}$	39 ± 8	D_{220}	5724 ± 38	$\sigma_8(0.15)$	0.7480 ± 0.0068
$\boldsymbol{A_{217}^{PS}}$	102 ± 10	D_{810}	2536 ± 13	$f\sigma_8(0.38)$	0.4737 ± 0.0048
$\boldsymbol{A_{217}^{CIB}}$	40 ± 7	D_{1420}	816.1 ± 4.7	$\sigma_8(0.38)$	0.6633 ± 0.0062
$\boldsymbol{A_{143}^{tSZ}}$	$3.9^{+1.8}_{-2.6}$	D_{2000}	230.4 ± 1.6	$f\sigma_8(0.51)$	0.4725 ± 0.0044
$\boldsymbol{r_{143\times217}^{PS}}$	0.66 ± 0.13	$n_{s,0.002}$	0.9665 ± 0.0045	$\sigma_8(0.51)$	0.6208 ± 0.0059
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.56^{+0.38}_{-0.19}$	Y_P	$0.245376^{+0.000068}_{-0.000060}$	$f\sigma_8(0.61)$	0.4677 ± 0.0042
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	$0.246702^{+0.000069}_{-0.000060}$	$\sigma_8(0.61)$	0.5908 ± 0.0057
$\boldsymbol{A^{kSZ}}$	$4.7^{+1.7}_{-4.5}$	10^5D/H	2.594 ± 0.030	$f\sigma_8(2.33)$	0.2979 ± 0.0029
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.20	Age/Gyr	13.777 ± 0.081	$\sigma_8(2.33)$	0.3073 ± 0.0033
$\boldsymbol{A_{143}^{dust}}$	0.96 ± 0.17	z_*	1089.92 ± 0.29	f_{2000}^{143}	29.6 ± 2.8
$\boldsymbol{A_{217}^{dust}}$	0.97 ± 0.10	r_*	144.64 ± 0.31	f_{2000}^{217}	106.8 ± 2.0
$\boldsymbol{A_{143\times217}^{dust}}$	1.03 ± 0.16	$100\theta_*$	1.04110 ± 0.00031	$f_{2000}^{143\times217}$	32.0 ± 2.0
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	$D_M(z_*)$/Gpc	13.893 ± 0.029	$\chi^2_{lensing}$	9.31 ± 0.77
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	z_{drag}	1059.79 ± 0.33	χ^2_{simall}	397.1 ± 1.8
$\boldsymbol{c_{TE}}$	0.9965 ± 0.0049	r_{drag}	147.32 ± 0.31	χ^2_{lowl}	23.1 ± 1.0
$\boldsymbol{c_{EE}}$	0.9921 ± 0.0048	k_D	0.14059 ± 0.00034	$\chi^2_{CamSpec}$	11514.4 ± 5.6
H_0	67.79 ± 0.65	$100\theta_D$	0.16084 ± 0.00019	χ^2_{6DF}	0.056 ± 0.074
Ω_Λ	0.6898 ± 0.0058	z_{eq}	3385 ± 31	χ^2_{MGS}	1.42 ± 0.56
Ω_m	0.3097 ± 0.0063	k_{eq}	0.010332 ± 0.000096	$\chi^2_{DR12BAO}$	4.8 ± 1.9
$\Omega_m h^2$	0.1423 ± 0.0013	$100\theta_{eq}$	0.8163 ± 0.0060	χ^2_{prior}	7.8 ± 3.5
$\Omega_m h^3$	0.0965 ± 0.0014	$100\theta_{s,eq}$	0.4510 ± 0.0031	χ^2_{CMB}	11943.9 ± 5.9
σ_8	0.8093 ± 0.0073	$H(0.15)$	73.06 ± 0.63	χ^2_{BAO}	6.2 ± 1.6
S_8	0.822 ± 0.011	$D_M(0.15)$	639.7 ± 5.8		

$\bar{\chi}^2_{eff} = 11957.96$; $\Delta\bar{\chi}^2_{eff} = 0.56$; $R - 1 = 0.03026$

16.29 base_omegak_CamSpecHM_TTTEEE_lowl_lowE_BAO_post_lensing_Pantheon

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02233 ± 0.00016	$\sigma_8\Omega_m^{0.5}$	0.4498 ± 0.0058	$H(0.38)$	83.21 ± 0.60
$\boldsymbol{\Omega_c h^2}$	0.1192 ± 0.0014	$\sigma_8\Omega_m^{0.25}$	0.6033 ± 0.0060	$D_M(0.38)$	1525 ± 13
$\boldsymbol{100\theta_{MC}}$	1.04092 ± 0.00031	$\sigma_8/h^{0.5}$	0.9824 ± 0.0085	$H(0.51)$	89.92 ± 0.60
$\boldsymbol{\tau}$	0.0554 ± 0.0074	$r_{drag}h$	99.98 ± 0.92	$D_M(0.51)$	1975 ± 16
$\boldsymbol{\Omega_K}$	0.0005 ± 0.0020	$\langle d^2\rangle^{1/2}$	2.429 ± 0.020	$H(0.61)$	95.52 ± 0.61
$\boldsymbol{\ln(10^{10}A_s)}$	3.043 ± 0.014	z_{re}	7.77 ± 0.74	$D_M(0.61)$	2299 ± 18
$\boldsymbol{n_s}$	0.9667 ± 0.0045	$10^9 A_s$	2.098 ± 0.030	$H(2.33)$	236.2 ± 1.2
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0024	$10^9 A_s e^{-2\tau}$	1.878 ± 0.011	$D_M(2.33)$	5753 ± 31
$\boldsymbol{A_{100}^{PS}}$	240 ± 25	D_{40}	1225 ± 13	$f\sigma_8(0.15)$	0.4545 ± 0.0054
$\boldsymbol{A_{143}^{PS}}$	39 ± 8	D_{220}	5725 ± 38	$\sigma_8(0.15)$	0.7481 ± 0.0068
$\boldsymbol{A_{217}^{PS}}$	102 ± 10	D_{810}	2536 ± 13	$f\sigma_8(0.38)$	0.4734 ± 0.0047
$\boldsymbol{A_{217}^{CIB}}$	40 ± 7	D_{1420}	816.2 ± 4.7	$\sigma_8(0.38)$	0.6634 ± 0.0062
$\boldsymbol{A_{143}^{tSZ}}$	$3.9^{+1.8}_{-2.6}$	D_{2000}	230.4 ± 1.6	$f\sigma_8(0.51)$	0.4723 ± 0.0044
$\boldsymbol{r_{143\times217}^{PS}}$	0.66 ± 0.13	$n_{s,0.002}$	0.9667 ± 0.0045	$\sigma_8(0.51)$	0.6210 ± 0.0059
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.55^{+0.38}_{-0.19}$	Y_P	$0.245379^{+0.000067}_{-0.000060}$	$f\sigma_8(0.61)$	0.4675 ± 0.0042
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	$0.246705^{+0.000067}_{-0.000060}$	$\sigma_8(0.61)$	0.5910 ± 0.0057
$\boldsymbol{A^{kSZ}}$	$4.7^{+1.6}_{-4.6}$	10^5D/H	2.593 ± 0.030	$f\sigma_8(2.33)$	0.2981 ± 0.0029
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.20	Age/Gyr	13.772 ± 0.080	$\sigma_8(2.33)$	0.3075 ± 0.0033
$\boldsymbol{A_{143}^{dust}}$	0.96 ± 0.17	z_*	1089.90 ± 0.29	f_{2000}^{143}	29.6 ± 2.8
$\boldsymbol{A_{217}^{dust}}$	0.97 ± 0.10	r_*	144.66 ± 0.31	f_{2000}^{217}	106.8 ± 2.0
$\boldsymbol{A_{143\times217}^{dust}}$	1.03 ± 0.16	$100\theta_*$	1.04111 ± 0.00031	$f_{2000}^{143\times217}$	32.0 ± 2.0
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	$D_M(z_*)$/Gpc	13.895 ± 0.028	$\chi^2_{lensing}$	9.33 ± 0.80
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	z_{drag}	1059.80 ± 0.33	χ^2_{simall}	397.1 ± 1.8
$\boldsymbol{c_{TE}}$	0.9965 ± 0.0049	r_{drag}	147.33 ± 0.31	χ^2_{lowl}	23.1 ± 1.0
$\boldsymbol{c_{EE}}$	0.9921 ± 0.0048	k_D	0.14058 ± 0.00033	$\chi^2_{CamSpec}$	11514.4 ± 5.6
H_0	67.86 ± 0.64	$100\theta_D$	0.16083 ± 0.00019	χ^2_{JLA}	1036.29 ± 0.28
Ω_Λ	0.6906 ± 0.0056	z_{eq}	3383 ± 31	χ^2_{6DF}	0.048 ± 0.065
Ω_m	0.3089 ± 0.0060	k_{eq}	0.010326 ± 0.000095	χ^2_{MGS}	1.48 ± 0.55
$\Omega_m h^2$	0.1422 ± 0.0013	$100\theta_{eq}$	0.8167 ± 0.0059	$\chi^2_{DR12BAO}$	4.6 ± 1.7
$\Omega_m h^3$	0.0965 ± 0.0014	$100\theta_{s,eq}$	0.4512 ± 0.0030	χ^2_{prior}	7.8 ± 3.5
σ_8	0.8093 ± 0.0073	$H(0.15)$	73.13 ± 0.62	χ^2_{CMB}	11944.0 ± 5.8
S_8	0.821 ± 0.011	$D_M(0.15)$	639.1 ± 5.7	χ^2_{BAO}	6.1 ± 1.5

$\bar{\chi}^2_{eff} = 12994.18$; $\Delta\bar{\chi}^2_{eff} = 0.51$; $R - 1 = 0.03010$

16.30 base_omegak_CamSpecHM_TTTEEE_lowl_lowE_BAO_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02233 ± 0.00016	$\sigma_8\Omega_m^{0.5}$	0.4490 ± 0.0069	$H(0.38)$	83.22 ± 0.62
$\boldsymbol{\Omega_c h^2}$	0.1192 ± 0.0015	$\sigma_8\Omega_m^{0.25}$	0.6024 ± 0.0071	$D_M(0.38)$	1524 ± 13
$\boldsymbol{100\theta_{MC}}$	1.04092 ± 0.00032	$\sigma_8/h^{0.5}$	0.981 ± 0.010	$H(0.51)$	89.92 ± 0.61
$\boldsymbol{\tau}$	$0.0547^{+0.0052}_{-0.0081}$	$r_{drag}h$	100.02 ± 0.99	$D_M(0.51)$	1975 ± 16
$\boldsymbol{\Omega_K}$	0.0005 ± 0.0020	$\langle d^2\rangle^{1/2}$	2.426 ± 0.023	$H(0.61)$	95.53 ± 0.62
$\boldsymbol{\ln(10^{10}A_s)}$	$3.041^{+0.012}_{-0.016}$	z_{re}	$7.70^{+0.56}_{-0.81}$	$D_M(0.61)$	2299 ± 18
$\boldsymbol{n_s}$	0.9669 ± 0.0046	10^9A_s	$2.093^{+0.025}_{-0.034}$	$H(2.33)$	236.1 ± 1.2
$\boldsymbol{y_{cal}}$	1.0004 ± 0.0025	$10^9A_se^{-2\tau}$	$1.876^{+0.011}_{-0.012}$	$D_M(2.33)$	5753 ± 32
$\boldsymbol{A_{100}^{PS}}$	240 ± 24	D_{40}	1223 ± 13	$f\sigma_8(0.15)$	0.4538 ± 0.0065
$\boldsymbol{A_{143}^{PS}}$	39 ± 8	D_{220}	5719 ± 39	$\sigma_8(0.15)$	0.7472 ± 0.0072
$\boldsymbol{A_{217}^{PS}}$	102 ± 10	D_{810}	2534 ± 13	$f\sigma_8(0.38)$	0.4727 ± 0.0056
$\boldsymbol{A_{217}^{CIB}}$	40 ± 7	D_{1420}	815.8 ± 4.8	$\sigma_8(0.38)$	$0.6627^{+0.0060}_{-0.0067}$
$\boldsymbol{A_{143}^{tSZ}}$	$3.8^{+1.8}_{-2.6}$	D_{2000}	230.3 ± 1.6	$f\sigma_8(0.51)$	0.4716 ± 0.0052
$\boldsymbol{r_{143\times217}^{PS}}$	0.66 ± 0.13	$n_{s,0.002}$	0.9669 ± 0.0046	$\sigma_8(0.51)$	0.6203 ± 0.0061
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.56^{+0.39}_{-0.18}$	Y_P	$0.245377^{+0.000069}_{-0.000060}$	$f\sigma_8(0.61)$	0.4669 ± 0.0048
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	$0.246703^{+0.000069}_{-0.000060}$	$\sigma_8(0.61)$	0.5903 ± 0.0058
$\boldsymbol{A^{kSZ}}$	$4.7^{+2.2}_{-4.1}$	10^5D/H	2.594 ± 0.030	$f\sigma_8(2.33)$	0.2977 ± 0.0029
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.20	Age/Gyr	13.772 ± 0.081	$\sigma_8(2.33)$	0.3072 ± 0.0033
$\boldsymbol{A_{143}^{dust}}$	0.97 ± 0.18	z_*	1089.90 ± 0.30	f_{2000}^{143}	29.7 ± 2.8
$\boldsymbol{A_{217}^{dust}}$	0.97 ± 0.10	r_*	144.68 ± 0.32	f_{2000}^{217}	106.8 ± 1.9
$\boldsymbol{A_{143\times217}^{dust}}$	1.03 ± 0.16	$100\theta_*$	1.04111 ± 0.00031	$f_{2000}^{143\times217}$	32.1 ± 2.0
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	$D_M(z_*)$/Gpc	13.896 ± 0.030	χ^2_{simall}	396.9 ± 1.7
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	z_{drag}	1059.78 ± 0.33	χ^2_{lowl}	23.0 ± 1.0
$\boldsymbol{c_{TE}}$	0.9965 ± 0.0049	r_{drag}	147.36 ± 0.32	$\chi^2_{CamSpec}$	11514.7 ± 5.6
$\boldsymbol{c_{EE}}$	0.9921 ± 0.0048	k_D	0.14056 ± 0.00034	χ^2_{6DF}	0.052 ± 0.071
H_0	67.88 ± 0.67	$100\theta_D$	0.16084 ± 0.00019	χ^2_{MGS}	1.51 ± 0.59
Ω_Λ	0.6908 ± 0.0061	z_{eq}	3382 ± 33	$\chi^2_{DR12BAO}$	4.6 ± 1.8
Ω_m	0.3086 ± 0.0066	k_{eq}	0.01032 ± 0.00010	χ^2_{prior}	7.8 ± 3.4
$\Omega_m h^2$	0.1422 ± 0.0014	$100\theta_{eq}$	0.8169 ± 0.0062	χ^2_{BAO}	6.2 ± 1.6
$\Omega_m h^3$	0.0965 ± 0.0014	$100\theta_{s,eq}$	0.4513 ± 0.0032	χ^2_{CMB}	11934.6 ± 5.7
σ_8	0.8083 ± 0.0079	$H(0.15)$	73.14 ± 0.64		
S_8	0.820 ± 0.013	$D_M(0.15)$	638.9 ± 6.0		

$\bar{\chi}^2_{eff} = 11948.57$; $\Delta\bar{\chi}^2_{eff} = 0.58$; $R - 1 = 0.01907$

16.31 base_omegak_CamSpecHM_TTTEEE_lowl_lowE_BAO_post_lensing_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02233 ± 0.00016	$\sigma_8\Omega_m^{0.5}$	0.4505 ± 0.0059	$H(0.38)$	83.16 ± 0.61
$\boldsymbol{\Omega_c h^2}$	0.1193 ± 0.0014	$\sigma_8\Omega_m^{0.25}$	0.6040 ± 0.0060	$D_M(0.38)$	1526 ± 13
$\boldsymbol{100\theta_{MC}}$	1.04091 ± 0.00031	$\sigma_8/h^{0.5}$	0.9835 ± 0.0083	$H(0.51)$	89.87 ± 0.61
$\boldsymbol{\tau}$	$0.0558^{+0.0058}_{-0.0077}$	$r_{drag}h$	99.88 ± 0.95	$D_M(0.51)$	1977 ± 16
$\boldsymbol{\Omega_K}$	0.0005 ± 0.0020	$\langle d^2\rangle^{1/2}$	2.432 ± 0.020	$H(0.61)$	95.48 ± 0.61
$\boldsymbol{\ln(10^{10}A_s)}$	$3.044^{+0.012}_{-0.015}$	z_{re}	$7.82^{+0.62}_{-0.75}$	$D_M(0.61)$	2301 ± 18
$\boldsymbol{n_s}$	0.9666 ± 0.0045	10^9A_s	$2.100^{+0.025}_{-0.031}$	$H(2.33)$	236.2 ± 1.2
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0024	$10^9A_se^{-2\tau}$	$1.878^{+0.010}_{-0.012}$	$D_M(2.33)$	5755 ± 32
$\boldsymbol{A_{100}^{PS}}$	240 ± 25	D_{40}	1225 ± 13	$f\sigma_8(0.15)$	0.4552 ± 0.0055
$\boldsymbol{A_{143}^{PS}}$	39 ± 8	D_{220}	5724 ± 38	$\sigma_8(0.15)$	0.7485 ± 0.0066
$\boldsymbol{A_{217}^{PS}}$	102 ± 10	D_{810}	2535 ± 13	$f\sigma_8(0.38)$	0.4739 ± 0.0047
$\boldsymbol{A_{217}^{CIB}}$	40 ± 7	D_{1420}	816.1 ± 4.7	$\sigma_8(0.38)$	0.6637 ± 0.0060
$\boldsymbol{A_{143}^{tSZ}}$	$3.9^{+1.8}_{-2.6}$	D_{2000}	230.4 ± 1.6	$f\sigma_8(0.51)$	0.4728 ± 0.0043
$\boldsymbol{r_{143\times217}^{PS}}$	0.66 ± 0.13	$n_{s,0.002}$	0.9666 ± 0.0045	$\sigma_8(0.51)$	0.6212 ± 0.0057
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.56^{+0.38}_{-0.18}$	Y_P	$0.245377^{+0.000068}_{-0.000060}$	$f\sigma_8(0.61)$	0.4679 ± 0.0041
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	$0.246704^{+0.000068}_{-0.000060}$	$\sigma_8(0.61)$	0.5911 ± 0.0055
$\boldsymbol{A^{kSZ}}$	$4.7^{+1.6}_{-4.6}$	10^5D/H	2.594 ± 0.030	$f\sigma_8(2.33)$	0.2981 ± 0.0028
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.20	Age/Gyr	13.777 ± 0.081	$\sigma_8(2.33)$	0.3075 ± 0.0032
$\boldsymbol{A_{143}^{dust}}$	0.96 ± 0.18	z_*	1089.91 ± 0.29	f_{2000}^{143}	29.6 ± 2.8
$\boldsymbol{A_{217}^{dust}}$	0.97 ± 0.10	r_*	144.65 ± 0.31	f_{2000}^{217}	106.8 ± 2.0
$\boldsymbol{A_{143\times217}^{dust}}$	1.03 ± 0.16	$100\theta_*$	1.04110 ± 0.00031	$f_{2000}^{143\times217}$	32.0 ± 2.0
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	$D_M(z_*)$/Gpc	13.894 ± 0.029	$\chi^2_{lensing}$	9.26 ± 0.70
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	z_{drag}	1059.79 ± 0.33	χ^2_{simall}	397.1 ± 1.8
$\boldsymbol{c_{TE}}$	0.9964 ± 0.0049	r_{drag}	147.32 ± 0.31	χ^2_{lowl}	23.1 ± 1.0
$\boldsymbol{c_{EE}}$	0.9920 ± 0.0048	k_D	0.14059 ± 0.00034	$\chi^2_{CamSpec}$	11514.3 ± 5.6
H_0	67.80 ± 0.65	$100\theta_D$	0.16084 ± 0.00019	χ^2_{6DF}	0.055 ± 0.073
Ω_Λ	0.6900 ± 0.0057	z_{eq}	3384 ± 31	χ^2_{MGS}	1.43 ± 0.56
Ω_m	0.3096 ± 0.0062	k_{eq}	0.010329 ± 0.000095	$\chi^2_{DR12BAO}$	4.8 ± 1.9
$\Omega_m h^2$	0.1423 ± 0.0013	$100\theta_{eq}$	0.8164 ± 0.0059	χ^2_{prior}	7.8 ± 3.5
$\Omega_m h^3$	0.0965 ± 0.0014	$100\theta_{s,eq}$	0.4510 ± 0.0030	χ^2_{CMB}	11943.7 ± 5.8
σ_8	0.8098 ± 0.0071	$H(0.15)$	73.07 ± 0.63	χ^2_{BAO}	6.2 ± 1.6
S_8	0.823 ± 0.011	$D_M(0.15)$	639.6 ± 5.8		

$\bar{\chi}^2_{eff} = 11957.78$; $\Delta\bar{\chi}^2_{eff} = 0.52$; $R - 1 = 0.03337$

16.32 base_omegak_CamSpecHM_TTTEEE_lowl_lowE_BAO_post_lensing_Pantheon_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02234 ± 0.00016	$\sigma_8\Omega_m^{0.5}$	0.4499 ± 0.0057	$H(0.38)$	83.22 ± 0.60
$\boldsymbol{\Omega_c h^2}$	0.1192 ± 0.0014	$\sigma_8\Omega_m^{0.25}$	0.6036 ± 0.0059	$D_M(0.38)$	1525 ± 13
$\boldsymbol{100\theta_{MC}}$	1.04092 ± 0.00031	$\sigma_8/h^{0.5}$	0.9829 ± 0.0083	$H(0.51)$	89.92 ± 0.60
$\boldsymbol{\tau}$	$0.0561^{+0.0059}_{-0.0077}$	$r_{drag}h$	99.999 ± 0.92	$D_M(0.51)$	1975 ± 16
$\boldsymbol{\Omega_K}$	0.0005 ± 0.0020	$\langle d^2\rangle^{1/2}$	2.431 ± 0.019	$H(0.61)$	95.52 ± 0.61
$\boldsymbol{\ln(10^{10}A_s)}$	$3.045^{+0.012}_{-0.015}$	z_{re}	$7.84^{+0.62}_{-0.75}$	$D_M(0.61)$	2299 ± 18
$\boldsymbol{n_s}$	0.9668 ± 0.0045	10^9A_s	$2.101^{+0.025}_{-0.031}$	$H(2.33)$	236.1 ± 1.2
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0024	$10^9A_se^{-2\tau}$	1.878 ± 0.011	$D_M(2.33)$	5753 ± 31
$\boldsymbol{A_{100}^{PS}}$	240 ± 25	D_{40}	1225 ± 13	$f\sigma_8(0.15)$	0.4547 ± 0.0054
$\boldsymbol{A_{143}^{PS}}$	39 ± 8	D_{220}	5724 ± 38	$\sigma_8(0.15)$	0.7485 ± 0.0066
$\boldsymbol{A_{217}^{PS}}$	102 ± 10	D_{810}	2535 ± 13	$f\sigma_8(0.38)$	0.4736 ± 0.0047
$\boldsymbol{A_{217}^{CIB}}$	40 ± 7	D_{1420}	816.2 ± 4.7	$\sigma_8(0.38)$	0.6638 ± 0.0060
$\boldsymbol{A_{143}^{tSZ}}$	$3.9^{+1.8}_{-2.6}$	D_{2000}	230.4 ± 1.6	$f\sigma_8(0.51)$	0.4725 ± 0.0043
$\boldsymbol{r_{143\times217}^{PS}}$	0.66 ± 0.13	$n_{s,0.002}$	0.9668 ± 0.0045	$\sigma_8(0.51)$	0.6213 ± 0.0057
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.56^{+0.38}_{-0.18}$	Y_P	$0.245380^{+0.000066}_{-0.000060}$	$f\sigma_8(0.61)$	0.4677 ± 0.0041
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	$0.246706^{+0.000067}_{-0.000060}$	$\sigma_8(0.61)$	0.5913 ± 0.0055
$\boldsymbol{A^{kSZ}}$	< 6.21	10^5D/H	2.592 ± 0.030	$f\sigma_8(2.33)$	0.2982 ± 0.0028
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.20	Age/Gyr	13.772 ± 0.080	$\sigma_8(2.33)$	0.3077 ± 0.0032
$\boldsymbol{A_{143}^{dust}}$	0.96 ± 0.17	z_*	1089.89 ± 0.29	f_{2000}^{143}	29.6 ± 2.8
$\boldsymbol{A_{217}^{dust}}$	0.97 ± 0.10	r_*	144.66 ± 0.31	f_{2000}^{217}	106.7 ± 2.0
$\boldsymbol{A_{143\times217}^{dust}}$	1.03 ± 0.16	$100\theta_*$	1.04111 ± 0.00031	$f_{2000}^{143\times217}$	32.0 ± 2.0
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	$D_M(z_*)$/Gpc	13.895 ± 0.028	$\chi^2_{lensing}$	9.28 ± 0.72
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	z_{drag}	1059.80 ± 0.33	χ^2_{simall}	397.1 ± 1.8
$\boldsymbol{c_{TE}}$	0.9964 ± 0.0049	r_{drag}	147.34 ± 0.30	χ^2_{lowl}	23.1 ± 1.0
$\boldsymbol{c_{EE}}$	0.9921 ± 0.0048	k_D	0.14058 ± 0.00034	$\chi^2_{CamSpec}$	11514.3 ± 5.6
H_0	67.87 ± 0.64	$100\theta_D$	0.16083 ± 0.00019	χ^2_{JLA}	1036.28 ± 0.27
Ω_Λ	0.6907 ± 0.0055	z_{eq}	3383 ± 31	χ^2_{6DF}	0.047 ± 0.065
Ω_m	0.3088 ± 0.0060	k_{eq}	0.010324 ± 0.000094	χ^2_{MGS}	1.49 ± 0.55
$\Omega_m h^2$	0.1422 ± 0.0013	$100\theta_{eq}$	0.8168 ± 0.0059	$\chi^2_{DR12BAO}$	4.6 ± 1.7
$\Omega_m h^3$	0.0965 ± 0.0014	$100\theta_{s,eq}$	0.4512 ± 0.0030	χ^2_{prior}	7.8 ± 3.5
σ_8	0.8097 ± 0.0071	$H(0.15)$	73.13 ± 0.62	χ^2_{CMB}	11943.8 ± 5.8
S_8	0.821 ± 0.010	$D_M(0.15)$	639.0 ± 5.7	χ^2_{BAO}	6.1 ± 1.5

$\bar{\chi}^2_{eff} = 12994.00$; $\Delta\bar{\chi}^2_{eff} = 0.47$; $R - 1 = 0.03304$

16.33 base_omegak_plikHM_TT_lowl_lowE_BAO_Riess18_JLA

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022173	0.02217 ± 0.00023	$\sigma_8\Omega_m^{0.25}$	0.6030	0.6023 ± 0.0095	$D_M(0.38)$	1508.4	1508 ± 13
$\boldsymbol{\Omega_c h^2}$	0.12004	0.1201 ± 0.0022	$\sigma_8/h^{0.5}$	0.9808	0.980 ± 0.013	$H(0.51)$	90.70	90.75 ± 0.68
$\boldsymbol{100\theta_{MC}}$	1.040866	1.04086 ± 0.00047	$r_{drag}h$	101.16	101.22 ± 0.95	$D_M(0.51)$	1955.2	1954 ± 16
$\boldsymbol{\tau}$	0.0540	0.0527 ± 0.0081	$\langle d^2\rangle^{1/2}$	2.4220	2.420 ± 0.029	$H(0.61)$	96.31	96.36 ± 0.72
$\boldsymbol{\Omega_K}$	0.00305	0.0032 ± 0.0025	z_{re}	7.70	$7.56^{+0.83}_{-0.75}$	$D_M(0.61)$	2276.2	2275 ± 18
$\boldsymbol{\ln(10^{10}A_s)}$	3.0422	3.040 ± 0.017	$10^9 A_s$	2.0952	2.092 ± 0.035	$H(2.33)$	237.12	237.2 ± 1.9
$\boldsymbol{n_s}$	0.9645	0.9639 ± 0.0060	$10^9 A_s e^{-2\tau}$	1.8809	1.882 ± 0.014	$D_M(2.33)$	5713.7	5712 ± 37
$\boldsymbol{\alpha_{JLA}}$	0.1412	0.1412 ± 0.0065	D_{40}	1229.6	1231 ± 16	$f\sigma_8(0.15)$	0.4523	0.4517 ± 0.0083
$\boldsymbol{\beta_{JLA}}$	3.101	3.103 ± 0.081	D_{220}	5710.1	5717 ± 43	$\sigma_8(0.15)$	0.7519	0.7513 ± 0.0095
$\boldsymbol{y_{cal}}$	1.00022	1.0004 ± 0.0026	D_{810}	2536.4	2537 ± 14	$f\sigma_8(0.38)$	0.4724	0.4719 ± 0.0074
$\boldsymbol{A_{217}^{CIB}}$	50.0	48 ± 7	D_{1420}	815.2	815.2 ± 5.2	$\sigma_8(0.38)$	0.6676	0.6670 ± 0.0083
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.11	—	D_{2000}	229.80	229.7 ± 1.9	$f\sigma_8(0.51)$	0.4720	0.4714 ± 0.0069
$\boldsymbol{A_{143}^{tSZ}}$	7.14	5.1 ± 2.0	$n_{s,0.002}$	0.9645	0.9639 ± 0.0060	$\sigma_8(0.51)$	0.6252	0.6247 ± 0.0078
$\boldsymbol{A_{100}^{PS}}$	256.0	264 ± 28	Y_P	0.245315	$0.24531^{+0.00011}_{-0.000084}$	$f\sigma_8(0.61)$	0.4677	0.4672 ± 0.0065
$\boldsymbol{A_{143}^{PS}}$	46.9	49 ± 8	Y_P^{BBN}	0.246641	$0.24664^{+0.00011}_{-0.000085}$	$\sigma_8(0.61)$	0.5952	0.5947 ± 0.0074
$\boldsymbol{A_{143\times217}^{PS}}$	41.7	43 ± 9	10^5D/H	2.6231	2.624 ± 0.044	$f\sigma_8(2.33)$	0.30029	0.3001 ± 0.0036
$\boldsymbol{A_{217}^{PS}}$	117.2	115 ± 10	Age/Gyr	13.672	13.666 ± 0.097	$\sigma_8(2.33)$	0.31045	0.3103 ± 0.0040
$\boldsymbol{A^{kSZ}}$	0.02	< 4.96	z_*	1090.173	1090.18 ± 0.44	f_{2000}^{143}	30.79	31.2 ± 2.9
$\boldsymbol{A_{100}^{dustTT}}$	8.98	8.9 ± 1.8	r_*	144.57	144.56 ± 0.50	$f_{2000}^{143\times217}$	33.49	33.6 ± 2.0
$\boldsymbol{A_{143}^{dustTT}}$	10.69	10.7 ± 1.8	$100\theta_*$	1.041070	1.04107 ± 0.00046	f_{2000}^{217}	107.97	108.1 ± 1.9
$\boldsymbol{A_{143\times217}^{dustTT}}$	19.10	18.3 ± 3.3	$D_M(z_*)$/Gpc	13.8869	13.886 ± 0.046	χ^2_{simall}	396.06	397.0 ± 1.7
$\boldsymbol{A_{217}^{dustTT}}$	94.3	93.4 ± 7.3	z_{drag}	1059.475	1059.48 ± 0.47	χ^2_{lowl}	23.66	23.9 ± 1.5
$\boldsymbol{c_{100}}$	0.99961	0.99961 ± 0.00061	r_{drag}	147.30	147.29 ± 0.50	χ^2_{plik}	760.0	773.0 ± 5.4
$\boldsymbol{c_{217}}$	0.99827	0.99826 ± 0.00062	k_D	0.14049	0.14050 ± 0.00053	$\chi^2_{H073p45}$	8.28	8.3 ± 2.2
H_0	68.67	68.72 ± 0.65	$100\theta_D$	0.161024	0.16103 ± 0.00027	χ^2_{JLA}	695.12	697.2 ± 2.0
Ω_Λ	0.6940	0.6942 ± 0.0073	z_{eq}	3398	3400 ± 51	χ^2_{6DF}	0.0229	0.067 ± 0.086
Ω_m	0.3029	0.3026 ± 0.0067	k_{eq}	0.010372	0.01038 ± 0.00015	χ^2_{MGS}	2.19	2.30 ± 0.65
$\Omega_m h^2$	0.14285	0.1429 ± 0.0021	$100\theta_{eq}$	0.8134	0.8133 ± 0.0095	$\chi^2_{DR12BAO}$	3.30	4.1 ± 1.3
$\Omega_m h^3$	0.09810	0.0982 ± 0.0019	$100\theta_{s,eq}$	0.44958	0.4495 ± 0.0049	χ^2_{prior}	1.57	7.4 ± 3.7
σ_8	0.8128	0.812 ± 0.011	$H(0.15)$	73.93	73.98 ± 0.64	χ^2_{BAO}	5.52	6.5 ± 1.9
S_8	0.8167	0.816 ± 0.016	$D_M(0.15)$	631.8	631.4 ± 5.7	χ^2_{CMB}	1179.7	1194.0 ± 5.6
$\sigma_8\Omega_m^{0.5}$	0.4473	0.4467 ± 0.0088	$H(0.38)$	84.00	84.05 ± 0.65			

Best-fit $\chi^2_{eff} = 1890.21$; $\bar{\chi}^2_{eff} = 1913.25$; $R - 1 = 0.01616$

χ^2_{eff}: BAO - 6DF: 0.02 MGS: 2.19 DR12BAO: 3.30 CMB - simall_100x143_offlike5_EE_Aplanck_B: 396.06 commander_dx12_v3_2_29: 23.66 plik_rd12_HM_v22_TT: 760.01 Hubble - H073p45: 8.28 SN - JLA December_2013: 695.12

16.34 base_omegak_plikHM_TT_lowl_lowE_BAO_Riess18_JLA_post_lensing

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022181	0.02217 ± 0.00023	$\sigma_8\Omega_m^{0.25}$	0.6052	0.6050 ± 0.0075	$D_M(0.38)$	1507.3	1508 ± 13
$\boldsymbol{\Omega_c h^2}$	0.12037	0.1204 ± 0.0020	$\sigma_8/h^{0.5}$	0.9839	0.9835 ± 0.0098	$H(0.51)$	90.79	90.74 ± 0.68
$\boldsymbol{100\theta_{MC}}$	1.040810	1.04084 ± 0.00046	$r_{drag}h$	101.15	101.08 ± 0.91	$D_M(0.51)$	1953.7	1955 ± 16
$\boldsymbol{\tau}$	0.0551	0.0547 ± 0.0077	$\langle d^2\rangle^{1/2}$	2.4287	2.430 ± 0.022	$H(0.61)$	96.40	96.36 ± 0.71
$\boldsymbol{\Omega_K}$	0.00339	0.0033 ± 0.0025	z_{re}	7.82	7.76 ± 0.76	$D_M(0.61)$	2274.4	2276 ± 18
$\boldsymbol{\ln(10^{10}A_s)}$	3.0464	3.046 ± 0.015	$10^9 A_s$	2.1040	2.102 ± 0.031	$H(2.33)$	237.43	237.4 ± 1.7
$\boldsymbol{n_s}$	0.9640	0.9631 ± 0.0056	$10^9 A_s e^{-2\tau}$	1.8846	1.884 ± 0.013	$D_M(2.33)$	5708.4	5711 ± 37
$\boldsymbol{y_{cal}}$	1.00056	1.0006 ± 0.0026	D_{40}	1232.8	1235 ± 15	$f\sigma_8(0.15)$	0.4541	0.4540 ± 0.0066
$\boldsymbol{\alpha_{JLA}}$	0.1413	0.1411 ± 0.0065	D_{220}	5716.5	5722 ± 43	$\sigma_8(0.15)$	0.7545	0.7538 ± 0.0079
$\boldsymbol{\beta_{JLA}}$	3.099	3.104 ± 0.080	D_{810}	2539.8	2538 ± 14	$f\sigma_8(0.38)$	0.4742	0.4740 ± 0.0058
$\boldsymbol{A_{217}^{CIB}}$	48.9	48 ± 7	D_{1420}	816.3	815.5 ± 5.2	$\sigma_8(0.38)$	0.6698	0.6691 ± 0.0070
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.31	—	D_{2000}	230.17	229.8 ± 1.9	$f\sigma_8(0.51)$	0.4737	0.4734 ± 0.0054
$\boldsymbol{A_{143}^{tSZ}}$	6.96	5.1 ± 2.0	$n_{s,0.002}$	0.9640	0.9631 ± 0.0056	$\sigma_8(0.51)$	0.6272	0.6266 ± 0.0066
$\boldsymbol{A_{100}^{PS}}$	255.0	263 ± 28	Y_P	0.245318	$0.24531^{+0.00011}_{-0.000085}$	$f\sigma_8(0.61)$	0.4693	0.4690 ± 0.0051
$\boldsymbol{A_{143}^{PS}}$	49.5	49 ± 8	Y_P^{BBN}	0.246644	$0.24664^{+0.00011}_{-0.000085}$	$\sigma_8(0.61)$	0.5971	0.5965 ± 0.0063
$\boldsymbol{A_{143\times217}^{PS}}$	46.8	44 ± 9	10^5D/H	2.6216	2.623 ± 0.043	$f\sigma_8(2.33)$	0.30125	0.3009 ± 0.0032
$\boldsymbol{A_{217}^{PS}}$	119.2	115 ± 10	Age/Gyr	13.658	13.664 ± 0.095	$\sigma_8(2.33)$	0.31146	0.3111 ± 0.0036
$\boldsymbol{A^{kSZ}}$	0.02	< 4.83	z_*	1090.191	1090.21 ± 0.42	f_{2000}^{143}	30.35	31.1 ± 2.9
$\boldsymbol{A_{100}^{dustTT}}$	8.85	8.8 ± 1.8	r_*	144.480	144.49 ± 0.45	$f_{2000}^{143\times217}$	33.25	33.5 ± 2.0
$\boldsymbol{A_{143}^{dustTT}}$	10.82	10.7 ± 1.8	$100\theta_*$	1.041019	1.04104 ± 0.00045	f_{2000}^{217}	107.71	108.1 ± 1.9
$\boldsymbol{A_{143\times217}^{dustTT}}$	19.35	18.3 ± 3.3	$D_M(z_*)$/Gpc	13.8787	13.879 ± 0.042	$\chi^2_{lensing}$	9.04	9.53 ± 0.88
$\boldsymbol{A_{217}^{dustTT}}$	94.4	93.5 ± 7.3	z_{drag}	1059.513	1059.50 ± 0.47	χ^2_{simall}	396.29	397.2 ± 1.9
$\boldsymbol{c_{100}}$	0.99967	0.99961 ± 0.00063	r_{drag}	147.206	147.22 ± 0.45	χ^2_{lowl}	23.89	24.2 ± 1.4
$\boldsymbol{c_{217}}$	0.99825	$0.99827^{+0.00065}_{-0.00059}$	k_D	0.140601	0.14058 ± 0.00049	χ^2_{plik}	760.03	772.1 ± 5.2
H_0	68.71	68.66 ± 0.64	$100\theta_D$	0.160995	0.16101 ± 0.00027	$\chi^2_{H073p45}$	8.14	8.5 ± 2.2
Ω_Λ	0.6933	0.6929 ± 0.0065	z_{eq}	3406.5	3406 ± 46	χ^2_{JLA}	695.13	697.2 ± 2.0
Ω_m	0.3033	0.3038 ± 0.0061	k_{eq}	0.010397	0.01040 ± 0.00014	χ^2_{6DF}	0.0226	0.055 ± 0.073
$\Omega_m h^2$	0.14319	0.1432 ± 0.0019	$100\theta_{eq}$	0.8119	0.8121 ± 0.0086	χ^2_{MGS}	2.19	2.21 ± 0.62
$\Omega_m h^3$	0.09839	0.0983 ± 0.0018	$100\theta_{s,eq}$	0.44881	0.4489 ± 0.0044	$\chi^2_{DR12BAO}$	3.29	4.0 ± 1.2
σ_8	0.8156	0.8149 ± 0.0086	$H(0.15)$	73.98	73.93 ± 0.63	χ^2_{prior}	1.31	7.4 ± 3.8
S_8	0.8200	0.820 ± 0.013	$D_M(0.15)$	631.4	631.9 ± 5.6	χ^2_{CMB}	1189.2	1203.0 ± 5.5
$\sigma_8\Omega_m^{0.5}$	0.4491	0.4491 ± 0.0070	$H(0.38)$	84.07	84.03 ± 0.65	χ^2_{BAO}	5.51	6.2 ± 1.7

Best-fit $\chi^2_{eff} = 1899.34$; $\Delta\chi^2_{eff} = -13.47$; $\bar{\chi}^2_{eff} = 1922.24$; $\Delta\bar{\chi}^2_{eff} = -10.80$; $R - 1 = 0.02517$

χ^2_{eff}: BAO - 6DF: 0.02 (Δ 0.02) MGS: 2.19 (Δ 0.52) DR12BAO: 3.29 (Δ -0.21) CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 9.04 (Δ 0.09) simall_100x143_offlike5_EE_Aplanck_ 396.29 (Δ -0.54) commander_dx12_v3_2_29: 23.89 (Δ 1.30) plik_rd12_HM_v22_TT: 760.03 (Δ -0.80) Hubble - H073p45: 8.14 (Δ -2.45) SN - JLA December_2013: 695.13 (Δ -11.46)

16.35 base_omegak_plikHM_TT_lowl_lowE_BAO_Riess18_JLA_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02218 ± 0.00023	$\sigma_8\Omega_m^{0.25}$	0.6029 ± 0.0093	$D_M(0.38)$	1508 ± 13
$\boldsymbol{\Omega_c h^2}$	0.1200 ± 0.0022	$\sigma_8/h^{0.5}$	0.981 ± 0.012	$H(0.51)$	90.74 ± 0.68
$\boldsymbol{100\theta_{MC}}$	1.04087 ± 0.00047	$r_{drag}h$	101.23 ± 0.95	$D_M(0.51)$	1954 ± 16
$\boldsymbol{\tau}$	$0.0543^{+0.0053}_{-0.0079}$	$\langle d^2\rangle^{1/2}$	2.423 ± 0.028	$H(0.61)$	96.34 ± 0.71
$\boldsymbol{\Omega_K}$	0.0031 ± 0.0025	z_{re}	$7.72^{+0.57}_{-0.80}$	$D_M(0.61)$	2275 ± 18
$\boldsymbol{\ln(10^{10}A_s)}$	$3.043^{+0.012}_{-0.016}$	$10^9 A_s$	$2.098^{+0.026}_{-0.033}$	$H(2.33)$	237.1 ± 1.9
$\boldsymbol{n_s}$	0.9642 ± 0.0059	$10^9 A_s e^{-2\tau}$	1.882 ± 0.014	$D_M(2.33)$	5712 ± 37
$\boldsymbol{\alpha_{JLA}}$	0.1412 ± 0.0065	D_{40}	1231 ± 16	$f\sigma_8(0.15)$	0.4522 ± 0.0082
$\boldsymbol{\beta_{JLA}}$	3.103 ± 0.081	D_{220}	5717 ± 43	$\sigma_8(0.15)$	0.7522 ± 0.0092
$\boldsymbol{y_{cal}}$	1.0004 ± 0.0026	D_{810}	2536 ± 14	$f\sigma_8(0.38)$	0.4724 ± 0.0072
$\boldsymbol{A_{217}^{CIB}}$	48 ± 7	D_{1420}	815.2 ± 5.2	$\sigma_8(0.38)$	0.6678 ± 0.0080
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{2000}	229.7 ± 1.9	$f\sigma_8(0.51)$	0.4720 ± 0.0067
$\boldsymbol{A_{143}^{tSZ}}$	5.1 ± 2.0	$n_{s,0.002}$	0.9642 ± 0.0059	$\sigma_8(0.51)$	0.6255 ± 0.0074
$\boldsymbol{A_{100}^{PS}}$	264 ± 28	Y_P	$0.24531^{+0.00011}_{-0.000083}$	$f\sigma_8(0.61)$	0.4677 ± 0.0063
$\boldsymbol{A_{143}^{PS}}$	49 ± 8	Y_P^{BBN}	$0.24664^{+0.00011}_{-0.000083}$	$\sigma_8(0.61)$	0.5954 ± 0.0071
$\boldsymbol{A_{143\times217}^{PS}}$	43 ± 9	10^5D/H	2.622 ± 0.043	$f\sigma_8(2.33)$	0.3005 ± 0.0035
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	Age/Gyr	13.668 ± 0.096	$\sigma_8(2.33)$	0.3107 ± 0.0039
$\boldsymbol{A^{kSZ}}$	< 4.90	z_*	1090.17 ± 0.43	f_{2000}^{143}	31.1 ± 2.9
$\boldsymbol{A_{100}^{dustTT}}$	8.9 ± 1.8	r_*	144.58 ± 0.50	$f_{2000}^{143\times217}$	33.5 ± 2.0
$\boldsymbol{A_{143}^{dustTT}}$	10.7 ± 1.8	$100\theta_*$	1.04108 ± 0.00046	f_{2000}^{217}	108.1 ± 1.9
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.3 ± 3.3	$D_M(z_*)$/Gpc	13.887 ± 0.046	χ^2_{simall}	396.9 ± 1.7
$\boldsymbol{A_{217}^{dustTT}}$	93.4 ± 7.3	z_{drag}	1059.49 ± 0.46	χ^2_{lowl}	23.9 ± 1.5
$\boldsymbol{c_{100}}$	0.99961 ± 0.00061	r_{drag}	147.30 ± 0.49	χ^2_{plik}	772.8 ± 5.4
$\boldsymbol{c_{217}}$	0.99826 ± 0.00062	k_D	0.14049 ± 0.00053	$\chi^2_{H073p45}$	8.3 ± 2.2
H_0	68.73 ± 0.65	$100\theta_D$	0.16102 ± 0.00027	χ^2_{JLA}	697.1 ± 2.0
Ω_Λ	0.6944 ± 0.0072	z_{eq}	3398 ± 50	χ^2_{6DF}	0.068 ± 0.087
Ω_m	0.3025 ± 0.0066	k_{eq}	0.01037 ± 0.00015	χ^2_{MGS}	2.31 ± 0.65
$\Omega_m h^2$	0.1428 ± 0.0021	$100\theta_{eq}$	0.8136 ± 0.0094	$\chi^2_{DR12BAO}$	4.1 ± 1.3
$\Omega_m h^3$	0.0982 ± 0.0018	$100\theta_{s,eq}$	0.4497 ± 0.0048	χ^2_{prior}	7.4 ± 3.7
σ_8	0.813 ± 0.010	$H(0.15)$	73.98 ± 0.64	χ^2_{BAO}	6.5 ± 1.9
S_8	0.816 ± 0.016	$D_M(0.15)$	631.4 ± 5.7	χ^2_{CMB}	1193.6 ± 5.4
$\sigma_8\Omega_m^{0.5}$	0.4471 ± 0.0087	$H(0.38)$	84.04 ± 0.65		

$\bar{\chi}^2_{eff} = 1912.92$; $R - 1 = 0.02011$

16.36 base_omegak_plikHM_TT_lowl_lowE_BAO_Riess18_JLA_post_lensing_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02218 ± 0.00023	$\sigma_8\Omega_m^{0.25}$	0.6051 ± 0.0075	$D_M(0.38)$	1508 ± 13
$\boldsymbol{\Omega_c h^2}$	0.1203 ± 0.0020	$\sigma_8/h^{0.5}$	0.9838 ± 0.0097	$H(0.51)$	90.73 ± 0.68
$\boldsymbol{100\theta_{MC}}$	1.04084 ± 0.00046	$r_{drag}h$	101.09 ± 0.90	$D_M(0.51)$	1955 ± 16
$\boldsymbol{\tau}$	$0.0555^{+0.0059}_{-0.0077}$	$\langle d^2\rangle^{1/2}$	2.431 ± 0.022	$H(0.61)$	96.35 ± 0.70
$\boldsymbol{\Omega_K}$	0.0032 ± 0.0024	z_{re}	$7.85^{+0.63}_{-0.76}$	$D_M(0.61)$	2276 ± 18
$\boldsymbol{\ln(10^{10}A_s)}$	$3.047^{+0.012}_{-0.015}$	$10^9 A_s$	$2.105^{+0.025}_{-0.031}$	$H(2.33)$	237.3 ± 1.7
$\boldsymbol{n_s}$	0.9634 ± 0.0055	$10^9 A_s e^{-2\tau}$	1.884 ± 0.013	$D_M(2.33)$	5712 ± 37
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0026	D_{40}	1234 ± 14	$f\sigma_8(0.15)$	0.4541 ± 0.0066
$\boldsymbol{\alpha_{JLA}}$	0.1411 ± 0.0065	D_{220}	5721 ± 42	$\sigma_8(0.15)$	0.7541 ± 0.0078
$\boldsymbol{\beta_{JLA}}$	3.104 ± 0.080	D_{810}	2538 ± 14	$f\sigma_8(0.38)$	0.4741 ± 0.0058
$\boldsymbol{A_{217}^{CIB}}$	48 ± 7	D_{1420}	815.5 ± 5.2	$\sigma_8(0.38)$	0.6694 ± 0.0069
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{2000}	229.8 ± 1.9	$f\sigma_8(0.51)$	0.4736 ± 0.0053
$\boldsymbol{A_{143}^{tSZ}}$	5.2 ± 2.0	$n_{s,0.002}$	0.9634 ± 0.0055	$\sigma_8(0.51)$	0.6269 ± 0.0065
$\boldsymbol{A_{100}^{PS}}$	263 ± 28	Y_P	$0.24531^{+0.00011}_{-0.000084}$	$f\sigma_8(0.61)$	0.4692 ± 0.0050
$\boldsymbol{A_{143}^{PS}}$	49 ± 8	Y_P^{BBN}	$0.24664^{+0.00011}_{-0.000084}$	$\sigma_8(0.61)$	0.5968 ± 0.0063
$\boldsymbol{A_{143\times217}^{PS}}$	44 ± 9	10^5D/H	2.622 ± 0.043	$f\sigma_8(2.33)$	0.3011 ± 0.0031
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	Age/Gyr	13.666 ± 0.094	$\sigma_8(2.33)$	0.3113 ± 0.0035
$\boldsymbol{A^{kSZ}}$	< 4.81	z_*	1090.19 ± 0.41	f_{2000}^{143}	31.0 ± 2.9
$\boldsymbol{A_{100}^{dustTT}}$	8.8 ± 1.8	r_*	144.50 ± 0.45	$f_{2000}^{143\times217}$	33.5 ± 2.0
$\boldsymbol{A_{143}^{dustTT}}$	10.7 ± 1.8	$100\theta_*$	1.04105 ± 0.00045	f_{2000}^{217}	108.1 ± 1.9
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.3 ± 3.3	$D_M(z_*)$/Gpc	13.881 ± 0.041	$\chi^2_{lensing}$	9.48 ± 0.83
$\boldsymbol{A_{217}^{dustTT}}$	93.5 ± 7.3	z_{drag}	1059.51 ± 0.46	χ^2_{simall}	397.2 ± 1.9
$\boldsymbol{c_{100}}$	0.99961 ± 0.00063	r_{drag}	147.23 ± 0.44	χ^2_{lowl}	24.1 ± 1.4
$\boldsymbol{c_{217}}$	$0.99827^{+0.00065}_{-0.00059}$	k_D	0.14057 ± 0.00049	χ^2_{plik}	772.0 ± 5.1
H_0	68.66 ± 0.64	$100\theta_D$	0.16101 ± 0.00027	$\chi^2_{H073p45}$	8.5 ± 2.2
Ω_Λ	0.6932 ± 0.0064	z_{eq}	3405 ± 45	χ^2_{JLA}	697.1 ± 2.0
Ω_m	0.3036 ± 0.0060	k_{eq}	0.01039 ± 0.00014	χ^2_{6DF}	0.055 ± 0.073
$\Omega_m h^2$	0.1431 ± 0.0019	$100\theta_{eq}$	0.8124 ± 0.0085	χ^2_{MGS}	2.21 ± 0.62
$\Omega_m h^3$	0.0983 ± 0.0018	$100\theta_{s,eq}$	0.4490 ± 0.0044	$\chi^2_{DR12BAO}$	4.0 ± 1.2
σ_8	0.8152 ± 0.0085	$H(0.15)$	73.93 ± 0.63	χ^2_{prior}	7.4 ± 3.8
S_8	0.820 ± 0.013	$D_M(0.15)$	631.9 ± 5.6	χ^2_{CMB}	1202.8 ± 5.4
$\sigma_8\Omega_m^{0.5}$	0.4492 ± 0.0070	$H(0.38)$	84.02 ± 0.65	χ^2_{BAO}	6.2 ± 1.7

$\bar{\chi}^2_{eff} = 1922.05$; $\Delta\bar{\chi}^2_{eff} = -10.90$; $R - 1 = 0.02915$

16.37 base_omegak_plikHM_TTTEEE_lowl_lowE_BAO_Riess18_JLA

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02240 ± 0.00015	$\Omega_m h^3$	$0.0982^{+0.0013}_{-0.0015}$	$D_M(0.15)$	631.3 ± 5.6
$\boldsymbol{\Omega_c h^2}$	0.1198 ± 0.0014	σ_8	0.8129 ± 0.0083	$H(0.38)$	84.04 ± 0.60
$\boldsymbol{100\theta_{MC}}$	1.04095 ± 0.00032	S_8	0.816 ± 0.012	$D_M(0.38)$	1508 ± 12
$\boldsymbol{\tau}$	$0.0556^{+0.0071}_{-0.0081}$	$\sigma_8 \Omega_m^{0.5}$	0.4470 ± 0.0067	$H(0.51)$	90.73 ± 0.60
$\boldsymbol{\Omega_K}$	$0.0025^{+0.0018}_{-0.0020}$	$\sigma_8 \Omega_m^{0.25}$	0.6028 ± 0.0071	$D_M(0.51)$	1954 ± 15
$\boldsymbol{\ln(10^{10} A_s)}$	3.046 ± 0.016	$\sigma_8/h^{0.5}$	0.981 ± 0.010	$H(0.61)$	96.33 ± 0.61
$\boldsymbol{n_s}$	0.9660 ± 0.0045	$r_{drag} h$	101.12 ± 0.95	$D_M(0.61)$	2275 ± 17
$\boldsymbol{\alpha_{JLA}}$	0.1412 ± 0.0066	$\langle d^2 \rangle^{1/2}$	2.423 ± 0.024	$H(2.33)$	237.1 ± 1.2
$\boldsymbol{\beta_{JLA}}$	3.104 ± 0.080	z_{re}	7.79 ± 0.78	$D_M(2.33)$	5712 ± 31
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0025	$10^9 A_s$	$2.104^{+0.031}_{-0.035}$	$f\sigma_8(0.15)$	0.4521 ± 0.0063
$\boldsymbol{A^{CIB}_{217}}$	47 ± 7	$10^9 A_s e^{-2\tau}$	1.883 ± 0.012	$\sigma_8(0.15)$	0.7521 ± 0.0077
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{40}	1230 ± 13	$f\sigma_8(0.38)$	0.4723 ± 0.0056
$\boldsymbol{A^{tSZ}_{143}}$	$5.5^{+2.1}_{-1.9}$	D_{220}	5734 ± 39	$\sigma_8(0.38)$	0.6678 ± 0.0069
$\boldsymbol{A^{PS}_{100}}$	258 ± 27	D_{810}	2540 ± 14	$f\sigma_8(0.51)$	0.4720 ± 0.0052
$\boldsymbol{A^{PS}_{143}}$	46 ± 8	D_{1420}	818.1 ± 4.8	$\sigma_8(0.51)$	0.6254 ± 0.0065
$\boldsymbol{A^{PS}_{143\times217}}$	42 ± 9	D_{2000}	231.1 ± 1.6	$f\sigma_8(0.61)$	0.4677 ± 0.0050
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	$n_{s,0.002}$	0.9660 ± 0.0045	$\sigma_8(0.61)$	0.5954 ± 0.0062
$\boldsymbol{A^{kSZ}}$	< 4.08	Y_P	$0.245405^{+0.000063}_{-0.000055}$	$f\sigma_8(2.33)$	0.3005 ± 0.0031
$\boldsymbol{A^{dustTT}_{100}}$	8.9 ± 1.8	Y_P^{BBN}	$0.246731^{+0.000064}_{-0.000055}$	$\sigma_8(2.33)$	0.3106 ± 0.0035
$\boldsymbol{A^{dustTT}_{143}}$	10.9 ± 1.8	10^5D/H	2.581 ± 0.028	f^{143}_{2000}	29.4 ± 2.8
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.6 ± 3.3	Age/Gyr	13.670 ± 0.078	$f^{143\times217}_{2000}$	32.1 ± 1.9
$\boldsymbol{A^{dustTT}_{217}}$	93.9 ± 7.3	z_*	1089.86 ± 0.29	f^{217}_{2000}	107.0 ± 1.8
$\boldsymbol{A^{dustTE}_{100}}$	0.114 ± 0.039	r_*	144.47 ± 0.31	χ^2_{simall}	397.3 ± 2.1
$\boldsymbol{A^{dustTE}_{100\times143}}$	0.135 ± 0.030	$100\theta_*$	1.04113 ± 0.00031	χ^2_{lowl}	23.5 ± 1.1
$\boldsymbol{A^{dustTE}_{100\times217}}$	0.482 ± 0.085	$D_M(z_*)$/Gpc	13.876 ± 0.029	χ^2_{plik}	2361.1 ± 5.8
$\boldsymbol{A^{dustTE}_{143}}$	0.224 ± 0.053	z_{drag}	1059.99 ± 0.30	$\chi^2_{H073p45}$	8.2 ± 2.2
$\boldsymbol{A^{dustTE}_{143\times217}}$	0.666 ± 0.081	r_{drag}	147.12 ± 0.30	χ^2_{JLA}	697.1 ± 2.0
$\boldsymbol{A^{dustTE}_{217}}$	2.08 ± 0.27	k_D	0.14086 ± 0.00032	χ^2_{6DF}	0.059 ± 0.079
$\boldsymbol{c_{100}}$	0.99967 ± 0.00061	$100\theta_D$	0.16073 ± 0.00018	χ^2_{MGS}	2.22 ± 0.65
$\boldsymbol{c_{217}}$	0.99821 ± 0.00062	z_{eq}	3398 ± 32	$\chi^2_{DR12BAO}$	4.1 ± 1.2
H_0	68.74 ± 0.65	k_{eq}	0.010370 ± 0.000098	χ^2_{prior}	11.6 ± 4.5
Ω_Λ	0.6951 ± 0.0057	$100\theta_{eq}$	0.8143 ± 0.0061	χ^2_{BAO}	6.3 ± 1.7
Ω_m	0.3024 ± 0.0060	$100\theta_{s,eq}$	0.4499 ± 0.0031	χ^2_{CMB}	2781.9 ± 5.8
$\Omega_m h^2$	0.1428 ± 0.0013	$H(0.15)$	73.98 ± 0.62		

$\bar{\chi}^2_{eff} = 3505.21$; $R - 1 = 0.02028$

16.38 base_omegak_plikHM_TTTEEE_lowl_lowE_BAO_Riess18_JLA_post_lensing

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022418	0.02240 ± 0.00015	$\Omega_m h^3$	0.09813	0.0981 ± 0.0014	$D_M(0.15)$	631.5	631.9 ± 5.5
$\boldsymbol{\Omega_c h^2}$	0.11977	0.1198 ± 0.0014	σ_8	0.8146	0.8145 ± 0.0072	$H(0.38)$	84.01	83.99 ± 0.59
$\boldsymbol{100\theta_{MC}}$	1.040971	1.04095 ± 0.00032	S_8	0.8181	0.819 ± 0.010	$D_M(0.38)$	1508.0	1509 ± 12
$\boldsymbol{\tau}$	0.0574	$0.0571^{+0.0068}_{-0.0076}$	$\sigma_8 \Omega_m^{0.5}$	0.4481	0.4484 ± 0.0057	$H(0.51)$	90.70	90.68 ± 0.59
$\boldsymbol{\Omega_K}$	0.00244	0.0024 ± 0.0019	$\sigma_8 \Omega_m^{0.25}$	0.6042	0.6043 ± 0.0059	$D_M(0.51)$	1954.7	1956 ± 15
$\boldsymbol{\ln(10^{10} A_s)}$	3.0505	3.050 ± 0.014	$\sigma_8/h^{0.5}$	0.9828	0.9829 ± 0.0083	$H(0.61)$	96.30	96.29 ± 0.60
$\boldsymbol{n_s}$	0.96656	0.9657 ± 0.0045	$r_{drag} h$	101.06	101.01 ± 0.92	$D_M(0.61)$	2275.7	2277 ± 17
$\boldsymbol{y_{cal}}$	1.00063	1.0009 ± 0.0025	$\langle d^2 \rangle^{1/2}$	2.4282	2.430 ± 0.020	$H(2.33)$	237.06	237.1 ± 1.2
$\boldsymbol{\alpha_{JLA}}$	0.1412	0.1412 ± 0.0066	z_{re}	7.99	7.95 ± 0.72	$D_M(2.33)$	5713.1	5714 ± 31
$\boldsymbol{\beta_{JLA}}$	3.101	3.102 ± 0.080	$10^9 A_s$	2.1126	$2.112^{+0.029}_{-0.032}$	$f\sigma_8(0.15)$	0.4532	0.4535 ± 0.0053
$\boldsymbol{A_{217}^{CIB}}$	46.9	47 ± 7	$10^9 A_s e^{-2\tau}$	1.8834	1.884 ± 0.011	$\sigma_8(0.15)$	0.7536	0.7535 ± 0.0068
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.48	—	D_{40}	1229.7	1231 ± 13	$f\sigma_8(0.38)$	0.47345	0.4736 ± 0.0047
$\boldsymbol{A_{143}^{tSZ}}$	7.19	5.4 ± 1.9	D_{220}	5734.5	5738 ± 39	$\sigma_8(0.38)$	0.6691	0.6689 ± 0.0062
$\boldsymbol{A_{100}^{PS}}$	248.5	258 ± 27	D_{810}	2542.2	2541 ± 13	$f\sigma_8(0.51)$	0.47305	0.4731 ± 0.0043
$\boldsymbol{A_{143}^{PS}}$	48.0	46 ± 8	D_{1420}	818.85	818.3 ± 4.8	$\sigma_8(0.51)$	0.6266	0.6264 ± 0.0059
$\boldsymbol{A_{143\times217}^{PS}}$	48.7	42 ± 9	D_{2000}	231.47	231.2 ± 1.6	$f\sigma_8(0.61)$	0.46877	0.4688 ± 0.0041
$\boldsymbol{A_{217}^{PS}}$	120.1	115 ± 10	$n_{s,0.002}$	0.96656	0.9657 ± 0.0045	$\sigma_8(0.61)$	0.5965	0.5964 ± 0.0057
$\boldsymbol{A^{kSZ}}$	0.01	< 4.10	Y_P	0.245414	$0.245405^{+0.000063}_{-0.000056}$	$f\sigma_8(2.33)$	0.30102	0.3009 ± 0.0029
$\boldsymbol{A_{100}^{dustTT}}$	8.78	8.9 ± 1.8	Y_P^{BBN}	0.246741	$0.246732^{+0.000063}_{-0.000056}$	$\sigma_8(2.33)$	0.31112	0.3110 ± 0.0033
$\boldsymbol{A_{143}^{dustTT}}$	10.89	10.9 ± 1.7	10^5D/H	2.5766	2.580 ± 0.028	f_{2000}^{143}	28.63	29.3 ± 2.8
$\boldsymbol{A_{143\times217}^{dustTT}}$	19.80	18.6 ± 3.4	Age/Gyr	13.672	13.674 ± 0.078	$f_{2000}^{143\times217}$	31.87	32.1 ± 1.9
$\boldsymbol{A_{217}^{dustTT}}$	95.1	93.9 ± 7.4	z_*	1089.838	1089.87 ± 0.28	f_{2000}^{217}	106.49	107.0 ± 1.8
$\boldsymbol{A_{100}^{dustTE}}$	0.1149	0.114 ± 0.039	r_*	144.454	144.45 ± 0.30	$\chi^2_{lensing}$	8.866	9.25 ± 0.69
$\boldsymbol{A_{100\times143}^{dustTE}}$	0.1355	0.135 ± 0.030	$100\theta_*$	1.041155	1.04113 ± 0.00031	χ^2_{simall}	397	295 ± 200
$\boldsymbol{A_{100\times217}^{dustTE}}$	0.482	0.483 ± 0.086	$D_M(z_*)$/Gpc	13.8744	13.874 ± 0.028	χ^2_{lowl}	23.44	23.7 ± 1.1
$\boldsymbol{A_{143}^{dustTE}}$	0.225	0.224 ± 0.054	z_{drag}	1060.047	1060.00 ± 0.30	χ^2_{plik}	2345.5	2360.5 ± 5.7
$\boldsymbol{A_{143\times217}^{dustTE}}$	0.665	0.666 ± 0.081	r_{drag}	147.097	147.10 ± 0.29	$\chi^2_{H073p45}$	8	110 ± 200
$\boldsymbol{A_{217}^{dustTE}}$	2.080	2.09 ± 0.27	k_D	0.140896	0.14088 ± 0.00031	χ^2_{JLA}	695.12	697.2 ± 2.0
$\boldsymbol{c_{100}}$	0.99973	0.99968 ± 0.00061	$100\theta_D$	0.160709	0.16073 ± 0.00018	χ^2_{6DF}	0.0165	0.051 ± 0.069
$\boldsymbol{c_{217}}$	0.99820	0.99821 ± 0.00062	z_{eq}	3397.8	3399 ± 31	χ^2_{MGS}	2.12	2.14 ± 0.62
H_0	68.71	68.67 ± 0.63	k_{eq}	0.010371	0.010375 ± 0.000095	$\chi^2_{DR12BAO}$	3.256	4.0 ± 1.1
Ω_Λ	0.6950	0.6944 ± 0.0054	$100\theta_{eq}$	0.8143	0.8140 ± 0.0059	χ^2_{prior}	1.69	11.6 ± 4.7
Ω_m	0.3026	0.3031 ± 0.0058	$100\theta_{s,eq}$	0.44985	0.4497 ± 0.0030	χ^2_{CMB}	2775	2689 ± 170
$\Omega_m h^2$	0.14283	0.1429 ± 0.0013	$H(0.15)$	73.95	73.92 ± 0.61	χ^2_{BAO}	5.39	6.1 ± 1.5

Best-fit $\chi^2_{eff} = 3484.92$; $\Delta\chi^2_{eff} = -13.68$; $\bar{\chi}^2_{eff} = 3514.30$; $\Delta\bar{\chi}^2_{eff} = -10.57$; $R - 1 = 0.02289$

χ^2_{eff}: BAO - 6DF: 0.02 (Δ 0.01) MGS: 2.12 (Δ 0.51) DR12BAO: 3.26 (Δ -0.35) CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.87 (Δ 0.11) simall_100x143_offlike5_EE_Aplanck_ 396.72 (Δ -0.22) commander_dx12_v3_2_29: 23.44 (Δ 0.81) plik_rd12_HM_v22b_TTTEEE: 2345.53 (Δ -0.84) Hubble - H073p45: 8.17 (Δ -2.23) SN - JLA December_2013: 695.12 (Δ -11.48)

16.39 base_omegak_plikHM_TTTEEE_lowl_lowE_BAO_Riess18_JLA_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02240 ± 0.00015	$\Omega_m h^3$	$0.0982^{+0.0013}_{-0.0015}$	$D_M(0.15)$	631.3 ± 5.6
$\boldsymbol{\Omega_c h^2}$	0.1198 ± 0.0014	σ_8	0.8135 ± 0.0080	$H(0.38)$	84.04 ± 0.60
$\boldsymbol{100\theta_{MC}}$	1.04095 ± 0.00032	S_8	0.817 ± 0.012	$D_M(0.38)$	1507 ± 12
$\boldsymbol{\tau}$	$0.0564^{+0.0056}_{-0.0083}$	$\sigma_8 \Omega_m^{0.5}$	0.4473 ± 0.0065	$H(0.51)$	90.73 ± 0.60
$\boldsymbol{\Omega_K}$	0.0025 ± 0.0019	$\sigma_8 \Omega_m^{0.25}$	0.6032 ± 0.0069	$D_M(0.51)$	1954 ± 15
$\boldsymbol{\ln(10^{10} A_s)}$	$3.048^{+0.013}_{-0.017}$	$\sigma_8/h^{0.5}$	0.9812 ± 0.0097	$H(0.61)$	96.33 ± 0.60
$\boldsymbol{n_s}$	0.9661 ± 0.0045	$r_{drag} h$	101.13 ± 0.94	$D_M(0.61)$	2275 ± 17
$\boldsymbol{\alpha_{JLA}}$	0.1412 ± 0.0066	$\langle d^2 \rangle^{1/2}$	2.425 ± 0.023	$H(2.33)$	237.1 ± 1.2
$\boldsymbol{\beta_{JLA}}$	3.104 ± 0.080	z_{re}	$7.87^{+0.61}_{-0.81}$	$D_M(2.33)$	5712 ± 31
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0025	$10^9 A_s$	$2.107^{+0.026}_{-0.035}$	$f\sigma_8(0.15)$	0.4524 ± 0.0062
$\boldsymbol{A^{CIB}_{217}}$	47 ± 7	$10^9 A_s e^{-2\tau}$	1.882 ± 0.012	$\sigma_8(0.15)$	0.7527 ± 0.0073
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{40}	1230 ± 13	$f\sigma_8(0.38)$	0.4727 ± 0.0055
$\boldsymbol{A^{tSZ}_{143}}$	$5.5^{+2.1}_{-1.9}$	D_{220}	5734 ± 39	$\sigma_8(0.38)$	0.6683 ± 0.0066
$\boldsymbol{A^{PS}_{100}}$	258 ± 27	D_{810}	2540 ± 14	$f\sigma_8(0.51)$	0.4723 ± 0.0051
$\boldsymbol{A^{PS}_{143}}$	46 ± 8	D_{1420}	818.1 ± 4.8	$\sigma_8(0.51)$	0.6259 ± 0.0062
$\boldsymbol{A^{PS}_{143\times217}}$	42 ± 9	D_{2000}	231.1 ± 1.6	$f\sigma_8(0.61)$	0.4680 ± 0.0048
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	$n_{s,0.002}$	0.9661 ± 0.0045	$\sigma_8(0.61)$	0.5958 ± 0.0059
$\boldsymbol{A^{kSZ}}$	< 4.06	Y_P	$0.245405^{+0.000063}_{-0.000055}$	$f\sigma_8(2.33)$	0.3007 ± 0.0030
$\boldsymbol{A^{dustTT}_{100}}$	8.9 ± 1.8	Y_P^{BBN}	$0.246732^{+0.000063}_{-0.000056}$	$\sigma_8(2.33)$	0.3108 ± 0.0034
$\boldsymbol{A^{dustTT}_{143}}$	10.9 ± 1.8	10^5D/H	2.580 ± 0.028	f^{143}_{2000}	29.3 ± 2.8
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.6 ± 3.3	Age/Gyr	13.670 ± 0.078	$f^{143\times217}_{2000}$	32.1 ± 1.9
$\boldsymbol{A^{dustTT}_{217}}$	93.9 ± 7.3	z_*	1089.86 ± 0.29	f^{217}_{2000}	107.0 ± 1.8
$\boldsymbol{A^{dustTE}_{100}}$	0.114 ± 0.038	r_*	144.47 ± 0.31	χ^2_{simall}	397.3 ± 2.1
$\boldsymbol{A^{dustTE}_{100\times143}}$	0.135 ± 0.030	$100\theta_*$	1.04113 ± 0.00031	χ^2_{lowl}	23.5 ± 1.1
$\boldsymbol{A^{dustTE}_{100\times217}}$	0.483 ± 0.085	$D_M(z_*)$/Gpc	13.876 ± 0.029	χ^2_{plik}	2360.9 ± 5.8
$\boldsymbol{A^{dustTE}_{143}}$	0.224 ± 0.053	z_{drag}	1059.99 ± 0.30	$\chi^2_{H073p45}$	8.2 ± 2.2
$\boldsymbol{A^{dustTE}_{143\times217}}$	0.666 ± 0.081	r_{drag}	147.12 ± 0.30	χ^2_{JLA}	697.1 ± 2.0
$\boldsymbol{A^{dustTE}_{217}}$	2.08 ± 0.27	k_D	0.14086 ± 0.00032	χ^2_{6DF}	0.059 ± 0.079
$\boldsymbol{c_{100}}$	0.99967 ± 0.00061	$100\theta_D$	0.16073 ± 0.00018	χ^2_{MGS}	2.22 ± 0.64
$\boldsymbol{c_{217}}$	0.99821 ± 0.00063	z_{eq}	3397 ± 32	$\chi^2_{DR12BAO}$	4.0 ± 1.2
H_0	68.74 ± 0.64	k_{eq}	0.010369 ± 0.000098	χ^2_{prior}	11.6 ± 4.5
Ω_Λ	0.6952 ± 0.0057	$100\theta_{eq}$	0.8143 ± 0.0061	χ^2_{BAO}	6.3 ± 1.7
Ω_m	0.3023 ± 0.0060	$100\theta_{s,eq}$	0.4499 ± 0.0031	χ^2_{CMB}	2781.7 ± 5.7
$\Omega_m h^2$	0.1428 ± 0.0013	$H(0.15)$	73.98 ± 0.62		

$\bar{\chi}^2_{eff} = 3505.05$; $R - 1 = 0.01737$

16.40 base_omegak_plikHM_TTTEEE_lowl_lowE_BAO_Riess18_JLA_post_lensing_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02240 ± 0.00015	$\Omega_m h^3$	0.0981 ± 0.0014	$D_M(0.15)$	631.8 ± 5.5
$\boldsymbol{\Omega_c h^2}$	0.1198 ± 0.0014	σ_8	0.8147 ± 0.0071	$H(0.38)$	83.99 ± 0.59
$\boldsymbol{100\theta_{MC}}$	1.04095 ± 0.00032	S_8	0.819 ± 0.010	$D_M(0.38)$	1509 ± 12
$\boldsymbol{\tau}$	$0.0575^{+0.0060}_{-0.0077}$	$\sigma_8\Omega_m^{0.5}$	0.4485 ± 0.0056	$H(0.51)$	90.68 ± 0.59
$\boldsymbol{\Omega_K}$	0.0024 ± 0.0019	$\sigma_8\Omega_m^{0.25}$	0.6045 ± 0.0058	$D_M(0.51)$	1956 ± 15
$\boldsymbol{\ln(10^{10}A_s)}$	$3.051^{+0.013}_{-0.015}$	$\sigma_8/h^{0.5}$	0.9832 ± 0.0082	$H(0.61)$	96.28 ± 0.60
$\boldsymbol{n_s}$	0.9658 ± 0.0045	$r_{drag}h$	101.02 ± 0.91	$D_M(0.61)$	2277 ± 17
$\boldsymbol{y_{cal}}$	1.0008 ± 0.0025	$\langle d^2\rangle^{1/2}$	2.430 ± 0.020	$H(2.33)$	237.1 ± 1.2
$\boldsymbol{\alpha_{JLA}}$	0.1411 ± 0.0066	z_{re}	$7.99^{+0.64}_{-0.73}$	$D_M(2.33)$	5714 ± 30
$\boldsymbol{\beta_{JLA}}$	3.102 ± 0.080	$10^9 A_s$	$2.113^{+0.026}_{-0.032}$	$f\sigma_8(0.15)$	0.4535 ± 0.0053
$\boldsymbol{A_{217}^{CIB}}$	47 ± 7	$10^9 A_s e^{-2\tau}$	1.884 ± 0.011	$\sigma_8(0.15)$	0.7537 ± 0.0066
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{40}	1231 ± 13	$f\sigma_8(0.38)$	0.4737 ± 0.0046
$\boldsymbol{A_{143}^{tSZ}}$	5.4 ± 1.9	D_{220}	5738 ± 39	$\sigma_8(0.38)$	0.6691 ± 0.0060
$\boldsymbol{A_{100}^{PS}}$	258 ± 27	D_{810}	2541 ± 13	$f\sigma_8(0.51)$	0.4733 ± 0.0043
$\boldsymbol{A_{143}^{PS}}$	46 ± 8	D_{1420}	818.3 ± 4.8	$\sigma_8(0.51)$	0.6266 ± 0.0057
$\boldsymbol{A_{143\times217}^{PS}}$	42 ± 9	D_{2000}	231.2 ± 1.6	$f\sigma_8(0.61)$	0.4689 ± 0.0041
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	$n_{s,0.002}$	0.9658 ± 0.0045	$\sigma_8(0.61)$	0.5965 ± 0.0055
$\boldsymbol{A^{kSZ}}$	< 4.09	Y_P	$0.245406^{+0.000063}_{-0.000056}$	$f\sigma_8(2.33)$	0.3010 ± 0.0028
$\boldsymbol{A_{100}^{dustTT}}$	8.9 ± 1.8	Y_P^{BBN}	$0.246732^{+0.000063}_{-0.000056}$	$\sigma_8(2.33)$	0.3111 ± 0.0032
$\boldsymbol{A_{143}^{dustTT}}$	10.9 ± 1.7	10^5D/H	2.580 ± 0.028	f_{2000}^{143}	29.3 ± 2.8
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.6 ± 3.4	Age/Gyr	13.674 ± 0.078	$f_{2000}^{143\times217}$	32.1 ± 1.9
$\boldsymbol{A_{217}^{dustTT}}$	93.9 ± 7.4	z_*	1089.87 ± 0.28	f_{2000}^{217}	106.9 ± 1.8
$\boldsymbol{A_{100}^{dustTE}}$	0.114 ± 0.039	r_*	144.45 ± 0.30	$\chi^2_{lensing}$	9.23 ± 0.65
$\boldsymbol{A_{100\times143}^{dustTE}}$	0.135 ± 0.030	$100\theta_*$	1.04113 ± 0.00031	χ^2_{simall}	296 ± 200
$\boldsymbol{A_{100\times217}^{dustTE}}$	0.483 ± 0.086	$D_M(z_*)$/Gpc	13.874 ± 0.028	χ^2_{lowl}	23.7 ± 1.1
$\boldsymbol{A_{143}^{dustTE}}$	0.224 ± 0.054	z_{drag}	1060.00 ± 0.30	χ^2_{plik}	2360.4 ± 5.7
$\boldsymbol{A_{143\times217}^{dustTE}}$	0.667 ± 0.081	r_{drag}	147.10 ± 0.29	$\chi^2_{H073p45}$	109 ± 200
$\boldsymbol{A_{217}^{dustTE}}$	2.09 ± 0.27	k_D	0.14088 ± 0.00031	χ^2_{JLA}	697.2 ± 2.0
$\boldsymbol{c_{100}}$	0.99967 ± 0.00061	$100\theta_D$	0.16073 ± 0.00018	χ^2_{6DF}	0.051 ± 0.069
$\boldsymbol{c_{217}}$	0.99821 ± 0.00062	z_{eq}	3399 ± 31	χ^2_{MGS}	2.15 ± 0.62
H_0	68.67 ± 0.63	k_{eq}	0.010374 ± 0.000095	$\chi^2_{DR12BAO}$	4.0 ± 1.1
Ω_Λ	0.6945 ± 0.0054	$100\theta_{eq}$	0.8140 ± 0.0059	χ^2_{prior}	11.6 ± 4.7
Ω_m	0.3030 ± 0.0058	$100\theta_{s,eq}$	0.4497 ± 0.0030	χ^2_{CMB}	2690 ± 170
$\Omega_m h^2$	0.1429 ± 0.0013	$H(0.15)$	73.92 ± 0.61	χ^2_{BAO}	6.2 ± 1.5

$\bar{\chi}^2_{eff} = 3514.21$; $\Delta\bar{\chi}^2_{eff} = -10.57$; $R - 1 = 0.02147$

16.41 base_omegak_plikHM_TT_lowl_lowE_lensing

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022317	0.02232 ± 0.00024	$\sigma_8\Omega_m^{0.25}$	0.6101	0.6099 ± 0.0074	$D_M(0.15)$	675.7	682 ± 24
$\boldsymbol{\Omega_c h^2}$	0.11806	0.1178 ± 0.0021	$\sigma_8/h^{0.5}$	0.9955	0.996 ± 0.011	$H(0.38)$	79.71	79.2 ± 2.2
$\boldsymbol{100\theta_{MC}}$	1.041071	1.04111 ± 0.00049	$r_{drag}h$	94.45	93.6 ± 3.4	$D_M(0.38)$	1604	1618 ± 53
$\boldsymbol{\tau}$	0.0510	0.0494 ± 0.0081	$\langle d^2\rangle^{1/2}$	2.4687	2.473 ± 0.029	$H(0.51)$	86.54	$86.0^{+2.0}_{-2.2}$
$\boldsymbol{\Omega_K}$	−0.0092	-0.0114 ± 0.0075	z_{re}	7.29	$7.08^{+0.88}_{-0.74}$	$D_M(0.51)$	2073	2091 ± 65
$\boldsymbol{\ln(10^{10}A_s)}$	3.0316	3.027 ± 0.017	$10^9 A_s$	2.0731	2.065 ± 0.035	$H(0.61)$	92.24	$91.8^{+2.0}_{-2.2}$
$\boldsymbol{n_s}$	0.9696	0.9693 ± 0.0062	$10^9 A_s e^{-2\tau}$	1.8719	1.870 ± 0.014	$D_M(0.61)$	2409	2428 ± 72
$\boldsymbol{y_{cal}}$	1.00010	0.99998 ± 0.0025	D_{40}	1213.4	1213 ± 17	$H(2.33)$	233.28	$232.8^{+2.3}_{-2.6}$
$\boldsymbol{A_{217}^{CIB}}$	48.0	47 ± 7	D_{220}	5718.2	5723 ± 41	$D_M(2.33)$	5924	5953 ± 110
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.40	—	D_{810}	2533.1	2531 ± 14	$f\sigma_8(0.15)$	0.4700	0.471 ± 0.010
$\boldsymbol{A_{143}^{tSZ}}$	7.01	5.2 ± 2.0	D_{1420}	815.3	814.3 ± 5.1	$\sigma_8(0.15)$	0.7325	0.729 ± 0.014
$\boldsymbol{A_{100}^{PS}}$	252.1	261 ± 28	D_{2000}	230.62	230.3 ± 1.9	$f\sigma_8(0.38)$	0.4812	0.4812 ± 0.0062
$\boldsymbol{A_{143}^{PS}}$	48.5	47 ± 8	$n_{s,0.002}$	0.9696	0.9693 ± 0.0062	$\sigma_8(0.38)$	0.6457	0.642 ± 0.014
$\boldsymbol{A_{143\times217}^{PS}}$	47.1	42 ± 9	Y_P	0.245374	$0.245373^{+0.000099}_{-0.000086}$	$f\sigma_8(0.51)$	0.47615	0.4756 ± 0.0050
$\boldsymbol{A_{217}^{PS}}$	118.8	114 ± 10	Y_P^{BBN}	0.246701	$0.24670^{+0.00010}_{-0.000087}$	$\sigma_8(0.51)$	0.6028	0.599 ± 0.014
$\boldsymbol{A^{kSZ}}$	0.22	< 4.66	10^5D/H	2.5954	2.595 ± 0.044	$f\sigma_8(0.61)$	0.46877	0.4678 ± 0.0047
$\boldsymbol{A_{100}^{dustTT}}$	8.97	9.0 ± 1.8	Age/Gyr	14.203	14.28 ± 0.29	$\sigma_8(0.61)$	0.5726	0.569 ± 0.014
$\boldsymbol{A_{143}^{dustTT}}$	10.93	10.7 ± 1.8	z_*	1089.816	1089.79 ± 0.44	$f\sigma_8(2.33)$	0.2878	0.2856 ± 0.0075
$\boldsymbol{A_{143\times217}^{dustTT}}$	19.50	18.3 ± 3.3	r_*	144.975	145.03 ± 0.47	$\sigma_8(2.33)$	0.2942	0.2917 ± 0.0093
$\boldsymbol{A_{217}^{dustTT}}$	94.6	93.5 ± 7.4	$100\theta_*$	1.041264	1.04130 ± 0.00047	f_{2000}^{143}	29.55	30.1 ± 3.0
$\boldsymbol{c_{100}}$	0.99963	0.99961 ± 0.00061	$D_M(z_*)$/Gpc	13.9229	13.928 ± 0.043	$f_{2000}^{143\times217}$	32.50	32.6 ± 2.1
$\boldsymbol{c_{217}}$	0.99822	0.99825 ± 0.00062	z_{drag}	1059.666	1059.67 ± 0.47	f_{2000}^{217}	106.95	107.2 ± 2.0
H_0	63.96	63.4 ± 2.4	r_{drag}	147.666	147.72 ± 0.46	$\chi^2_{lensing}$	9.44	10.4 ± 2.2
Ω_Λ	0.6645	$0.660^{+0.019}_{-0.017}$	k_D	0.140222	0.14016 ± 0.00048	χ^2_{simall}	395.67	396.7 ± 1.5
Ω_m	0.3447	$0.352^{+0.023}_{-0.026}$	$100\theta_D$	0.160917	0.16093 ± 0.00027	χ^2_{lowl}	21.81	22.0 ± 1.2
$\Omega_m h^2$	0.14103	0.1408 ± 0.0020	z_{eq}	3354.7	3349 ± 48	χ^2_{plik}	757.9	770.7 ± 5.5
$\Omega_m h^3$	0.09020	$0.0893^{+0.0039}_{-0.0043}$	k_{eq}	0.010239	0.01022 ± 0.00015	χ^2_{prior}	1.44	7.3 ± 3.7
σ_8	0.7962	0.792 ± 0.013	$100\theta_{eq}$	0.8219	0.8230 ± 0.0094	χ^2_{CMB}	1184.8	1199.8 ± 5.6
S_8	0.8534	0.857 ± 0.022	$100\theta_{s,eq}$	0.45389	0.4545 ± 0.0048			
$\sigma_8\Omega_m^{0.5}$	0.4675	0.470 ± 0.012	$H(0.15)$	69.39	68.8 ± 2.3			

Best-fit $\chi^2_{eff} = 1186.22$; $\Delta\chi^2_{eff} = -2.35$; $\bar{\chi}^2_{eff} = 1207.14$; $\Delta\bar{\chi}^2_{eff} = -1.28$; $R - 1 = 0.01227$

χ^2_{eff}: CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 9.44 (Δ 0.54) simall_100x143_offlike5_EE_Aplanck_B: 395.67 (Δ -0.19) commander_dx12_v3_2_29: 21.81 (Δ -1.43) plik_rd12_HM_v22_TT: 757.86 (Δ -1.46)

16.42 base_omegak_plikHM_TT_lowl_lowE_lensing_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02233 ± 0.00024	$\sigma_8\Omega_m^{0.25}$	0.6101 ± 0.0074	$D_M(0.15)$	679 ± 23
$\boldsymbol{\Omega_c h^2}$	$0.1177^{+0.0020}_{-0.0022}$	$\sigma_8/h^{0.5}$	0.996 ± 0.011	$H(0.38)$	$79.5^{+2.0}_{-2.2}$
$\boldsymbol{100\theta_{MC}}$	1.04113 ± 0.00049	$r_{drag}h$	$94.2^{+3.1}_{-3.4}$	$D_M(0.38)$	1610 ± 50
$\boldsymbol{\tau}$	$0.0525^{+0.0036}_{-0.0074}$	$\langle d^2\rangle^{1/2}$	2.473 ± 0.029	$H(0.51)$	$86.3^{+1.9}_{-2.2}$
$\boldsymbol{\Omega_K}$	$-0.0104^{+0.0076}_{-0.0068}$	z_{re}	$7.42^{+0.30}_{-0.84}$	$D_M(0.51)$	2081 ± 62
$\boldsymbol{\ln(10^{10}A_s)}$	$3.033^{+0.010}_{-0.015}$	$10^9 A_s$	$2.077^{+0.021}_{-0.031}$	$H(0.61)$	$92.0^{+1.9}_{-2.1}$
$\boldsymbol{n_s}$	0.9696 ± 0.0062	$10^9 A_s e^{-2\tau}$	1.870 ± 0.013	$D_M(0.61)$	2417 ± 69
$\boldsymbol{y_{cal}}$	0.99997 ± 0.0025	D_{40}	1213 ± 17	$H(2.33)$	$232.9^{+2.3}_{-2.6}$
$\boldsymbol{A_{217}^{CIB}}$	47 ± 7	D_{220}	5723 ± 41	$D_M(2.33)$	5938 ± 110
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{810}	2530 ± 14	$f\sigma_8(0.15)$	0.470 ± 0.010
$\boldsymbol{A_{143}^{tSZ}}$	5.2 ± 2.0	D_{1420}	814.3 ± 5.1	$\sigma_8(0.15)$	0.731 ± 0.012
$\boldsymbol{A_{100}^{PS}}$	260 ± 28	D_{2000}	230.3 ± 1.9	$f\sigma_8(0.38)$	0.4812 ± 0.0062
$\boldsymbol{A_{143}^{PS}}$	47 ± 8	$n_{s,0.002}$	0.9696 ± 0.0062	$\sigma_8(0.38)$	0.645 ± 0.013
$\boldsymbol{A_{143\times217}^{PS}}$	42 ± 9	Y_P	$0.245376^{+0.000098}_{-0.000088}$	$f\sigma_8(0.51)$	0.4760 ± 0.0049
$\boldsymbol{A_{217}^{PS}}$	114 ± 10	Y_P^{BBN}	$0.246703^{+0.000099}_{-0.000089}$	$\sigma_8(0.51)$	0.602 ± 0.013
$\boldsymbol{A^{kSZ}}$	< 4.62	10^5D/H	2.594 ± 0.044	$f\sigma_8(0.61)$	0.4685 ± 0.0045
$\boldsymbol{A_{100}^{dustTT}}$	9.0 ± 1.8	Age/Gyr	14.24 ± 0.28	$\sigma_8(0.61)$	0.571 ± 0.013
$\boldsymbol{A_{143}^{dustTT}}$	10.7 ± 1.8	z_*	1089.77 ± 0.44	$f\sigma_8(2.33)$	0.2872 ± 0.0070
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.3 ± 3.3	r_*	145.05 ± 0.47	$\sigma_8(2.33)$	0.2935 ± 0.0087
$\boldsymbol{A_{217}^{dustTT}}$	93.4 ± 7.4	$100\theta_*$	1.04132 ± 0.00048	f_{2000}^{143}	30.0 ± 3.0
$\boldsymbol{c_{100}}$	0.99961 ± 0.00061	$D_M(z_*)$/Gpc	13.930 ± 0.043	$f_{2000}^{143\times217}$	32.5 ± 2.1
$\boldsymbol{c_{217}}$	0.99825 ± 0.00063	z_{drag}	1059.68 ± 0.47	f_{2000}^{217}	107.1 ± 2.0
H_0	$63.8^{+2.2}_{-2.4}$	r_{drag}	147.74 ± 0.46	$\chi^2_{lensing}$	10.4 ± 2.1
Ω_Λ	0.663 ± 0.017	k_D	0.14015 ± 0.00048	χ^2_{simall}	396.4 ± 1.1
Ω_m	0.347 ± 0.023	$100\theta_D$	0.16092 ± 0.00027	χ^2_{lowl}	22.1 ± 1.2
$\Omega_m h^2$	$0.1407^{+0.0019}_{-0.0021}$	z_{eq}	3347^{+44}_{-50}	χ^2_{plik}	770.6 ± 5.5
$\Omega_m h^3$	$0.0897^{+0.0038}_{-0.0043}$	k_{eq}	$0.01022^{+0.00014}_{-0.00015}$	χ^2_{prior}	7.3 ± 3.7
σ_8	0.795 ± 0.012	$100\theta_{eq}$	0.8234 ± 0.0094	χ^2_{CMB}	1199.4 ± 5.6
S_8	0.855 ± 0.021	$100\theta_{s,eq}$	0.4547 ± 0.0048		
$\sigma_8\Omega_m^{0.5}$	0.468 ± 0.012	$H(0.15)$	$69.2^{+2.1}_{-2.3}$		

$\bar{\chi}^2_{eff} = 1206.71$; $\Delta\bar{\chi}^2_{eff} = -1.45$; $R - 1 = 0.01427$

16.43 base_omegak_plikHM_TTTEEE_lowl_lowE_lensing

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022509	0.02249 ± 0.00016	$\Omega_m h^3$	0.09063	$0.0900^{+0.0033}_{-0.0038}$	$100\theta_{s,eq}$	0.45283	0.4527 ± 0.0033
$\boldsymbol{\Omega_c h^2}$	0.11839	0.1185 ± 0.0015	σ_8	0.7974	0.795 ± 0.011	$H(0.15)$	69.47	$69.0^{+2.0}_{-2.2}$
$\boldsymbol{100\theta_{MC}}$	1.041060	1.04107 ± 0.00032	S_8	0.8554	0.860 ± 0.021	$D_M(0.15)$	675.0	680 ± 22
$\boldsymbol{\tau}$	0.0515	$0.0497^{+0.0082}_{-0.0071}$	$\sigma_8\Omega_m^{0.5}$	0.4685	0.471 ± 0.011	$H(0.38)$	79.82	$79.4^{+1.8}_{-2.1}$
$\boldsymbol{\Omega_K}$	−0.0092	-0.0106 ± 0.0065	$\sigma_8\Omega_m^{0.25}$	0.6112	0.6121 ± 0.0066	$D_M(0.38)$	1602.4	1614 ± 48
$\boldsymbol{\ln(10^{10} A_s)}$	3.0336	$3.030^{+0.017}_{-0.015}$	$\sigma_8/h^{0.5}$	0.9965	0.998 ± 0.010	$H(0.51)$	86.67	$86.3^{+1.8}_{-2.0}$
$\boldsymbol{n_s}$	0.96989	0.9688 ± 0.0047	$r_{drag}h$	94.36	$93.7^{+3.0}_{-3.4}$	$D_M(0.51)$	2071	2084 ± 59
$\boldsymbol{y_{cal}}$	1.00002	0.99998 ± 0.0025	$\langle d^2\rangle^{1/2}$	2.4720	2.478 ± 0.028	$H(0.61)$	92.38	$92.0^{+1.7}_{-2.0}$
$\boldsymbol{A_{217}^{CIB}}$	46.8	46 ± 7	z_{re}	7.30	$7.09^{+0.90}_{-0.70}$	$D_M(0.61)$	2406	2420 ± 65
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.52	—	$10^9 A_s$	2.0772	$2.070^{+0.035}_{-0.032}$	$H(2.33)$	233.70	233.6 ± 1.9
$\boldsymbol{A_{143}^{tSZ}}$	7.25	$5.5^{+2.1}_{-1.9}$	$10^9 A_s e^{-2\tau}$	1.8741	1.874 ± 0.012	$D_M(2.33)$	5915	5935 ± 100
$\boldsymbol{A_{100}^{PS}}$	247.2	257 ± 28	D_{40}	1214.6	1216 ± 14	$f\sigma_8(0.15)$	0.4710	0.4731 ± 0.0098
$\boldsymbol{A_{143}^{PS}}$	47.2	44 ± 8	D_{220}	5731.3	5735 ± 38	$\sigma_8(0.15)$	0.7335	0.731 ± 0.012
$\boldsymbol{A_{143\times217}^{PS}}$	48.3	41 ± 9	D_{810}	2535.3	2534 ± 13	$f\sigma_8(0.38)$	0.4821	0.4829 ± 0.0057
$\boldsymbol{A_{217}^{PS}}$	119.1	114 ± 10	D_{1420}	817.16	816.2 ± 4.7	$\sigma_8(0.38)$	0.6466	0.644 ± 0.013
$\boldsymbol{A^{kSZ}}$	0.01	< 4.17	D_{2000}	231.60	231.2 ± 1.6	$f\sigma_8(0.51)$	0.47699	0.4771 ± 0.0044
$\boldsymbol{A_{100}^{dust TT}}$	8.94	9.0 ± 1.8	$n_{s,0.002}$	0.96989	0.9688 ± 0.0047	$\sigma_8(0.51)$	0.6035	0.601 ± 0.013
$\boldsymbol{A_{143}^{dust TT}}$	11.10	10.9 ± 1.8	Y_P	0.245448	0.245438 ± 0.000060	$f\sigma_8(0.61)$	0.46955	0.4693 ± 0.0040
$\boldsymbol{A_{143\times217}^{dust TT}}$	20.03	18.6 ± 3.3	Y_P^{BBN}	0.246774	0.246765 ± 0.000061	$\sigma_8(0.61)$	0.5733	0.571 ± 0.013
$\boldsymbol{A_{217}^{dust TT}}$	95.1	93.6 ± 7.3	10^5D/H	2.5603	2.565 ± 0.029	$f\sigma_8(2.33)$	0.2881	0.2866 ± 0.0069
$\boldsymbol{A_{100}^{dust TE}}$	0.1140	0.113 ± 0.038	Age/Gyr	14.182	14.23 ± 0.26	$\sigma_8(2.33)$	0.2946	0.2928 ± 0.0085
$\boldsymbol{A_{100\times143}^{dust TE}}$	0.1346	0.134 ± 0.030	z_*	1089.606	1089.64 ± 0.30	f_{2000}^{143}	28.11	28.8 ± 2.8
$\boldsymbol{A_{100\times217}^{dust TE}}$	0.480	0.481 ± 0.085	r_*	144.741	144.73 ± 0.32	$f_{2000}^{143\times217}$	31.35	31.5 ± 1.9
$\boldsymbol{A_{143}^{dust TE}}$	0.224	0.223 ± 0.053	$100\theta_*$	1.041231	1.04124 ± 0.00031	f_{2000}^{217}	105.88	106.3 ± 1.8
$\boldsymbol{A_{143\times217}^{dust TE}}$	0.660	0.663 ± 0.081	$D_M(z_*)$/Gpc	13.9010	13.900 ± 0.030	$\chi^2_{lensing}$	9.78	10.9 ± 2.4
$\boldsymbol{A_{217}^{dust TE}}$	2.072	2.07 ± 0.27	z_{drag}	1060.123	1060.10 ± 0.31	χ^2_{simall}	395.65	396.7 ± 1.5
$\boldsymbol{c_{100}}$	0.99970	0.99968 ± 0.00060	r_{drag}	147.364	147.36 ± 0.31	χ^2_{lowl}	21.84	22.15 ± 0.98
$\boldsymbol{c_{217}}$	0.99817	0.99818 ± 0.00062	k_D	0.140685	0.14067 ± 0.00032	χ^2_{plik}	2342.4	2357.5 ± 5.9
H_0	64.03	$63.6^{+2.1}_{-2.3}$	$100\theta_D$	0.160641	0.16067 ± 0.00018	χ^2_{prior}	1.76	11.5 ± 4.5
Ω_Λ	0.6639	0.659 ± 0.017	z_{eq}	3367.1	3369 ± 33	χ^2_{CMB}	2769.7	2787.2 ± 5.9
Ω_m	0.3453	0.352 ± 0.023	k_{eq}	0.010277	0.01028 ± 0.00010			
$\Omega_m h^2$	0.14155	0.1416 ± 0.0014	$100\theta_{eq}$	0.8201	0.8198 ± 0.0064			

Best-fit $\chi^2_{eff} = 2771.41$; $\Delta\chi^2_{eff} = -3.23$; $\bar{\chi}^2_{eff} = 2798.70$; $\Delta\bar{\chi}^2_{eff} = -1.99$; $R - 1 = 0.02587$

χ^2_{eff}: CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 9.79 (Δ 0.92) simall_100x143_offlike5_EE_Aplanck_B: 395.65 (Δ -0.40) commander_dx12_v3_2_29: 21.84 (Δ -1.41) plik_rd12_HM_v22b_TTTEEE: 2342.38 (Δ -2.55)

16.44 base_omegak_plikHM_TTTEEE_lowl_lowE_lensing_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02249 ± 0.00016	$\Omega_m h^3$	$0.0906^{+0.0032}_{-0.0038}$	$100\theta_{s,eq}$	0.4527 ± 0.0033
$\boldsymbol{\Omega_c h^2}$	0.1185 ± 0.0015	σ_8	$0.7982^{+0.0093}_{-0.010}$	$H(0.15)$	$69.4^{+1.9}_{-2.2}$
$\boldsymbol{100\theta_{MC}}$	1.04107 ± 0.00032	S_8	0.858 ± 0.020	$D_M(0.15)$	676 ± 21
$\boldsymbol{\tau}$	$0.0528^{+0.0036}_{-0.0073}$	$\sigma_8\Omega_m^{0.5}$	0.470 ± 0.011	$H(0.38)$	$79.8^{+1.8}_{-2.1}$
$\boldsymbol{\Omega_K}$	-0.0096 ± 0.0061	$\sigma_8\Omega_m^{0.25}$	0.6124 ± 0.0065	$D_M(0.38)$	1605 ± 45
$\boldsymbol{\ln(10^{10}A_s)}$	$3.0361^{+0.0099}_{-0.014}$	$\sigma_8/h^{0.5}$	0.998 ± 0.010	$H(0.51)$	$86.6^{+1.7}_{-2.0}$
$\boldsymbol{n_s}$	0.9689 ± 0.0047	$r_{drag}h$	$94.2^{+2.8}_{-3.3}$	$D_M(0.51)$	2074 ± 55
$\boldsymbol{y_{cal}}$	0.99997 ± 0.0025	$\langle d^2\rangle^{1/2}$	2.478 ± 0.028	$H(0.61)$	$92.3^{+1.7}_{-1.9}$
$\boldsymbol{A^{CIB}_{217}}$	46 ± 7	z_{re}	$7.42^{+0.32}_{-0.82}$	$D_M(0.61)$	2409 ± 62
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	10^9A_s	$2.083^{+0.020}_{-0.030}$	$H(2.33)$	$233.7^{+1.8}_{-2.0}$
$\boldsymbol{A^{tSZ}_{143}}$	$5.5^{+2.1}_{-1.9}$	$10^9A_se^{-2\tau}$	1.874 ± 0.012	$D_M(2.33)$	5919 ± 96
$\boldsymbol{A^{PS}_{100}}$	257 ± 28	D_{40}	1217 ± 14	$f\sigma_8(0.15)$	0.4722 ± 0.0097
$\boldsymbol{A^{PS}_{143}}$	44 ± 8	D_{220}	5734 ± 38	$\sigma_8(0.15)$	$0.734^{+0.010}_{-0.011}$
$\boldsymbol{A^{PS}_{143\times217}}$	41 ± 9	D_{810}	2533 ± 13	$f\sigma_8(0.38)$	0.4829 ± 0.0058
$\boldsymbol{A^{PS}_{217}}$	114 ± 10	D_{1420}	816.2 ± 4.7	$\sigma_8(0.38)$	$0.647^{+0.011}_{-0.012}$
$\boldsymbol{A^{kSZ}}$	< 4.10	D_{2000}	231.2 ± 1.6	$f\sigma_8(0.51)$	0.4777 ± 0.0043
$\boldsymbol{A^{dustTT}_{100}}$	9.0 ± 1.8	$n_{s,0.002}$	0.9689 ± 0.0047	$\sigma_8(0.51)$	$0.604^{+0.011}_{-0.012}$
$\boldsymbol{A^{dustTT}_{143}}$	10.9 ± 1.8	Y_P	0.245440 ± 0.000060	$f\sigma_8(0.61)$	0.4701 ± 0.0037
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.6 ± 3.3	Y_P^{BBN}	0.246766 ± 0.000061	$\sigma_8(0.61)$	$0.574^{+0.011}_{-0.012}$
$\boldsymbol{A^{dustTT}_{217}}$	93.6 ± 7.3	10^5D/H	2.564 ± 0.029	$f\sigma_8(2.33)$	$0.2883^{+0.0058}_{-0.0067}$
$\boldsymbol{A^{dustTE}_{100}}$	0.113 ± 0.038	Age/Gyr	14.19 ± 0.24	$\sigma_8(2.33)$	$0.2947^{+0.0072}_{-0.0084}$
$\boldsymbol{A^{dustTE}_{100\times143}}$	0.134 ± 0.029	z_*	1089.64 ± 0.30	f^{143}_{2000}	28.7 ± 2.8
$\boldsymbol{A^{dustTE}_{100\times217}}$	0.480 ± 0.085	r_*	144.74 ± 0.32	$f^{143\times217}_{2000}$	31.4 ± 1.9
$\boldsymbol{A^{dustTE}_{143}}$	0.222 ± 0.054	$100\theta_*$	1.04124 ± 0.00031	f^{217}_{2000}	106.3 ± 1.8
$\boldsymbol{A^{dustTE}_{143\times217}}$	0.663 ± 0.081	$D_M(z_*)$/Gpc	13.901 ± 0.030	$\chi^2_{lensing}$	10.8 ± 2.4
$\boldsymbol{A^{dustTE}_{217}}$	2.07 ± 0.27	z_{drag}	1060.10 ± 0.31	χ^2_{simall}	396.4 ± 1.2
$\boldsymbol{c_{100}}$	0.99968 ± 0.00060	r_{drag}	147.37 ± 0.31	χ^2_{lowl}	22.2 ± 1.0
$\boldsymbol{c_{217}}$	0.99818 ± 0.00062	k_D	0.14067 ± 0.00032	χ^2_{plik}	2357.4 ± 5.9
H_0	$64.0^{+2.0}_{-2.3}$	$100\theta_D$	0.16067 ± 0.00018	χ^2_{prior}	11.5 ± 4.4
Ω_Λ	0.662 ± 0.016	z_{eq}	3368 ± 33	χ^2_{CMB}	2786.8 ± 5.8
Ω_m	0.347 ± 0.022	k_{eq}	0.01028 ± 0.00010		
$\Omega_m h^2$	0.1416 ± 0.0014	$100\theta_{eq}$	0.8199 ± 0.0064		

$\bar{\chi}^2_{eff} = 2798.28$; $\Delta\bar{\chi}^2_{eff} = -2.23$; $R - 1 = 0.02761$

16.45 base_omegak_CamSpecHM_TT_lowl_lowE_lensing

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022289	0.02235 ± 0.00025	$\sigma_8\Omega_m^{0.5}$	0.4678	0.470 ± 0.012	$H(0.15)$	69.30	68.7 ± 2.3
$\boldsymbol{\Omega_c h^2}$	0.11825	0.1177 ± 0.0022	$\sigma_8\Omega_m^{0.25}$	0.6099	0.6099 ± 0.0075	$D_M(0.15)$	676.6	684 ± 25
$\boldsymbol{100\theta_{MC}}$	1.041032	1.04119 ± 0.00050	$\sigma_8/h^{0.5}$	0.9950	0.996 ± 0.011	$H(0.38)$	79.65	79.0 ± 2.2
$\boldsymbol{\tau}$	0.0498	0.0494 ± 0.0084	$r_{drag}h$	94.29	93.4 ± 3.5	$D_M(0.38)$	1606	1623 ± 53
$\boldsymbol{\Omega_K}$	−0.0093	$-0.0121^{+0.0084}_{-0.0069}$	$\langle d^2\rangle^{1/2}$	2.4689	2.472 ± 0.030	$H(0.51)$	86.49	85.9 ± 2.1
$\boldsymbol{\ln(10^{10}A_s)}$	3.0282	3.026 ± 0.017	z_{re}	7.17	$7.07^{+0.90}_{-0.74}$	$D_M(0.51)$	2076	2096 ± 66
$\boldsymbol{n_s}$	0.9685	0.9705 ± 0.0064	$10^9 A_s$	2.0661	2.062 ± 0.035	$H(0.61)$	92.20	91.6 ± 2.1
$\boldsymbol{y_{cal}}$	1.00026	1.0001 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.8701	1.868 ± 0.014	$D_M(0.61)$	2411	2434 ± 73
$\boldsymbol{A_{100}^{PS}}$	241.9	240 ± 25	D_{40}	1213.8	1209 ± 17	$H(2.33)$	233.37	232.6 ± 2.6
$\boldsymbol{A_{143}^{PS}}$	36.4	38 ± 9	D_{220}	5711.4	5715 ± 41	$D_M(2.33)$	5926	5962 ± 120
$\boldsymbol{A_{217}^{PS}}$	98.4	101 ± 10	D_{810}	2529.2	2529 ± 14	$f\sigma_8(0.15)$	0.4702	0.472 ± 0.010
$\boldsymbol{A_{217}^{CIB}}$	42.9	40 ± 7	D_{1420}	813.6	814.2 ± 5.0	$\sigma_8(0.15)$	0.7315	0.727 ± 0.014
$\boldsymbol{A_{143}^{tSZ}}$	4.37	$3.8^{+1.8}_{-2.6}$	D_{2000}	230.02	230.3 ± 1.8	$f\sigma_8(0.38)$	0.4811	0.4813 ± 0.0062
$\boldsymbol{r_{143\times217}^{PS}}$	0.565	0.65 ± 0.13	$n_{s,0.002}$	0.9685	0.9705 ± 0.0064	$\sigma_8(0.38)$	0.6446	0.640 ± 0.014
$\boldsymbol{r_{143\times217}^{CIB}}$	0.648	$0.56^{+0.39}_{-0.17}$	Y_P	0.245363	$0.24538^{+0.00010}_{-0.000090}$	$f\sigma_8(0.51)$	0.4759	0.4755 ± 0.0050
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.07	—	Y_P^{BBN}	0.246689	$0.24671^{+0.00010}_{-0.000090}$	$\sigma_8(0.51)$	0.6017	0.598 ± 0.014
$\boldsymbol{A^{kSZ}}$	3.8	—	10^5D/H	2.6009	2.591 ± 0.045	$f\sigma_8(0.61)$	0.46843	0.4675 ± 0.0048
$\boldsymbol{A_{100}^{dust}}$	1.010	1.01 ± 0.19	Age/Gyr	14.208	14.30 ± 0.30	$\sigma_8(0.61)$	0.5715	0.567 ± 0.014
$\boldsymbol{A_{143}^{dust}}$	0.989	0.98 ± 0.18	z_*	1089.870	1089.75 ± 0.46	$f\sigma_8(2.33)$	0.2872	0.2850 ± 0.0076
$\boldsymbol{A_{217}^{dust}}$	0.960	0.97 ± 0.10	r_*	144.95	145.06 ± 0.49	$\sigma_8(2.33)$	0.2936	0.2909 ± 0.0094
$\boldsymbol{A_{143\times217}^{dust}}$	1.004	1.02 ± 0.16	$100\theta_*$	1.041227	1.04138 ± 0.00048	f_{2000}^{143}	30.33	29.5 ± 3.1
$\boldsymbol{c_{100}}$	0.99735	0.9975 ± 0.0011	$D_M(z_*)$/Gpc	13.9209	13.929 ± 0.045	f_{2000}^{217}	107.02	106.5 ± 2.2
$\boldsymbol{c_{217}}$	1.00124	1.0011 ± 0.0016	z_{drag}	1059.628	1059.71 ± 0.48	$f_{2000}^{143\times217}$	32.32	31.9 ± 2.3
H_0	63.86	63.2 ± 2.4	r_{drag}	147.648	147.74 ± 0.48	$\chi^2_{lensing}$	9.19	10.3 ± 2.1
Ω_Λ	0.6631	0.659 ± 0.018	k_D	0.140219	0.14016 ± 0.00050	χ^2_{simall}	395.64	396.8 ± 1.6
Ω_m	0.3461	$0.353^{+0.023}_{-0.026}$	$100\theta_D$	0.160944	0.16091 ± 0.00027	χ^2_{lowl}	21.85	21.8 ± 1.1
$\Omega_m h^2$	0.14118	0.1407 ± 0.0021	z_{eq}	3358	3346 ± 50	$\chi^2_{CamSpec}$	7049.2	7062.9 ± 5.5
$\Omega_m h^3$	0.09016	0.0889 ± 0.0042	k_{eq}	0.010250	0.01021 ± 0.00015	χ^2_{prior}	2.37	7.5 ± 3.4
σ_8	0.7952	0.791 ± 0.013	$100\theta_{eq}$	0.8211	0.8238 ± 0.0098	χ^2_{CMB}	7475.9	7491.7 ± 5.6
S_8	0.8542	0.858 ± 0.022	$100\theta_{s,eq}$	0.4535	0.4549 ± 0.0050			

Best-fit $\chi^2_{eff} = 7478.30$; $\Delta\chi^2_{eff} = -2.38$; $\bar{\chi}^2_{eff} = 7499.29$; $\Delta\bar{\chi}^2_{eff} = -0.96$; $R - 1 = 0.01550$

χ^2_{eff}: CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 9.19 (Δ 0.27) simall_100x143_offlike5_EE_Aplanck_B: 395.64 (Δ -0.23) commander_dx12_v3_2_29: 21.85 (Δ -1.57) CamSpec like_10.7HM: 7049.24 (Δ -0.94)

16.46 base_omegak_CamSpecHM_TT_lowl_lowE_lensing_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02236 ± 0.00025	$\sigma_8\Omega_m^{0.5}$	0.469 ± 0.012	$H(0.15)$	69.0 ± 2.3
$\boldsymbol{\Omega_c h^2}$	0.1176 ± 0.0022	$\sigma_8\Omega_m^{0.25}$	0.6100 ± 0.0076	$D_M(0.15)$	680 ± 24
$\boldsymbol{100\theta_{MC}}$	1.04121 ± 0.00050	$\sigma_8/h^{0.5}$	0.996 ± 0.011	$H(0.38)$	79.4 ± 2.2
$\boldsymbol{\tau}$	$0.0528^{+0.0036}_{-0.0074}$	$r_{drag}h$	94.0 ± 3.4	$D_M(0.38)$	1614 ± 52
$\boldsymbol{\Omega_K}$	$-0.0111^{+0.0083}_{-0.0066}$	$\langle d^2\rangle^{1/2}$	2.472 ± 0.030	$H(0.51)$	86.2 ± 2.1
$\boldsymbol{\ln(10^{10}A_s)}$	$3.033^{+0.010}_{-0.015}$	z_{re}	$7.43^{+0.31}_{-0.83}$	$D_M(0.51)$	2085 ± 64
$\boldsymbol{n_s}$	0.9708 ± 0.0063	10^9A_s	$2.075^{+0.021}_{-0.031}$	$H(0.61)$	91.9 ± 2.1
$\boldsymbol{y_{cal}}$	1.0000 ± 0.0025	$10^9A_se^{-2\tau}$	1.867 ± 0.014	$D_M(0.61)$	2422 ± 71
$\boldsymbol{A_{100}^{PS}}$	240 ± 25	D_{40}	1209 ± 17	$H(2.33)$	232.7 ± 2.6
$\boldsymbol{A_{143}^{PS}}$	38 ± 9	D_{220}	5714 ± 42	$D_M(2.33)$	5946 ± 110
$\boldsymbol{A_{217}^{PS}}$	101 ± 10	D_{810}	2528 ± 14	$f\sigma_8(0.15)$	0.471 ± 0.010
$\boldsymbol{A_{217}^{CIB}}$	40 ± 7	D_{1420}	814.2 ± 5.0	$\sigma_8(0.15)$	0.730 ± 0.013
$\boldsymbol{A_{143}^{tSZ}}$	$3.8^{+1.8}_{-2.6}$	D_{2000}	230.4 ± 1.8	$f\sigma_8(0.38)$	0.4812 ± 0.0064
$\boldsymbol{r_{143\times217}^{PS}}$	0.65 ± 0.13	$n_{s,0.002}$	0.9708 ± 0.0063	$\sigma_8(0.38)$	0.644 ± 0.013
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.56^{+0.39}_{-0.17}$	Y_P	$0.24539^{+0.00010}_{-0.000091}$	$f\sigma_8(0.51)$	0.4759 ± 0.0050
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	$0.24671^{+0.00010}_{-0.000091}$	$\sigma_8(0.51)$	0.601 ± 0.013
$\boldsymbol{A^{kSZ}}$	—	10^5D/H	2.589 ± 0.046	$f\sigma_8(0.61)$	0.4683 ± 0.0046
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.19	Age/Gyr	14.26 ± 0.29	$\sigma_8(0.61)$	0.570 ± 0.013
$\boldsymbol{A_{143}^{dust}}$	0.98 ± 0.18	z_*	1089.73 ± 0.46	$f\sigma_8(2.33)$	0.2867 ± 0.0071
$\boldsymbol{A_{217}^{dust}}$	0.97 ± 0.10	r_*	145.08 ± 0.49	$\sigma_8(2.33)$	0.2929 ± 0.0088
$\boldsymbol{A_{143\times217}^{dust}}$	1.02 ± 0.16	$100\theta_*$	1.04140 ± 0.00049	f_{2000}^{143}	29.5 ± 3.1
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	$D_M(z_*)$/Gpc	13.931 ± 0.045	f_{2000}^{217}	106.5 ± 2.1
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	z_{drag}	1059.72 ± 0.49	$f_{2000}^{143\times217}$	31.8 ± 2.3
H_0	63.6 ± 2.4	r_{drag}	147.76 ± 0.48	$\chi^2_{lensing}$	10.3 ± 2.2
Ω_Λ	0.662 ± 0.017	k_D	0.14015 ± 0.00050	χ^2_{simall}	396.4 ± 1.3
Ω_m	$0.349^{+0.022}_{-0.024}$	$100\theta_D$	0.16091 ± 0.00028	χ^2_{lowl}	21.8 ± 1.1
$\Omega_m h^2$	0.1406 ± 0.0021	z_{eq}	3344 ± 50	$\chi^2_{CamSpec}$	7063.0 ± 5.5
$\Omega_m h^3$	0.0894 ± 0.0042	k_{eq}	0.01021 ± 0.00015	χ^2_{prior}	7.5 ± 3.4
σ_8	0.794 ± 0.012	$100\theta_{eq}$	0.8242 ± 0.0098	χ^2_{CMB}	7491.5 ± 5.6
S_8	0.856 ± 0.022	$100\theta_{s,eq}$	0.4551 ± 0.0050		

$\bar{\chi}^2_{eff} = 7498.95$; $\Delta\bar{\chi}^2_{eff} = -1.06$; $R - 1 = 0.01796$

16.47 base_omegak_CamSpecHM_TTTEEE_lowl_lowE_lensing

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022422	0.02242 ± 0.00017	S_8	0.8541	0.857 ± 0.021	$H(0.15)$	69.39	69.0 ± 2.1
$\boldsymbol{\Omega_c h^2}$	0.11833	0.1182 ± 0.0015	$\sigma_8 \Omega_m^{0.5}$	0.4678	0.469 ± 0.012	$D_M(0.15)$	675.7	680 ± 23
$\boldsymbol{100\theta_{MC}}$	1.041001	1.04101 ± 0.00033	$\sigma_8 \Omega_m^{0.25}$	0.6101	0.6101 ± 0.0065	$H(0.38)$	79.74	79.4 ± 2.0
$\boldsymbol{\tau}$	0.0500	0.0488 ± 0.0082	$\sigma_8/h^{0.5}$	0.9949	0.995 ± 0.010	$D_M(0.38)$	1604.1	1614 ± 48
$\boldsymbol{\Omega_K}$	−0.0092	$-0.0106^{+0.0072}_{-0.0059}$	$r_{drag} h$	94.31	93.8 ± 3.2	$H(0.51)$	86.59	86.3 ± 1.9
$\boldsymbol{\ln(10^{10} A_s)}$	3.0294	3.027 ± 0.017	$\langle d^2 \rangle^{1/2}$	2.4684	2.470 ± 0.028	$D_M(0.51)$	2073	2085 ± 59
$\boldsymbol{n_s}$	0.96930	0.9694 ± 0.0048	z_{re}	7.16	$7.01^{+0.90}_{-0.75}$	$H(0.61)$	92.30	92.0 ± 1.9
$\boldsymbol{y_{cal}}$	0.99993	1.0001 ± 0.0024	$10^9 A_s$	2.0685	2.063 ± 0.035	$D_M(0.61)$	2408	2421 ± 66
$\boldsymbol{A_{100}^{PS}}$	233.1	238 ± 25	$10^9 A_s e^{-2\tau}$	1.8717	1.871 ± 0.012	$H(2.33)$	233.57	233.3 ± 1.9
$\boldsymbol{A_{143}^{PS}}$	46.5	37 ± 8	D_{40}	1213.6	1212 ± 14	$D_M(2.33)$	5920	5939 ± 100
$\boldsymbol{A_{217}^{PS}}$	104.8	102 ± 10	D_{220}	5721.4	5722 ± 38	$f\sigma_8(0.15)$	0.4702	0.4713 ± 0.0099
$\boldsymbol{A_{217}^{CIB}}$	39.1	39^{+7}_{-8}	D_{810}	2531.9	2530 ± 13	$\sigma_8(0.15)$	0.7319	0.729 ± 0.012
$\boldsymbol{A_{143}^{tSZ}}$	4.82	$4.0^{+2.0}_{-2.5}$	D_{1420}	815.41	814.9 ± 4.8	$f\sigma_8(0.38)$	0.4812	$0.4813^{+0.0061}_{-0.0053}$
$\boldsymbol{r_{143\times217}^{PS}}$	0.753	0.66 ± 0.13	D_{2000}	230.86	230.6 ± 1.6	$\sigma_8(0.38)$	0.6451	0.642 ± 0.013
$\boldsymbol{r_{143\times217}^{CIB}}$	0.684	$0.55^{+0.40}_{-0.19}$	$n_{s,0.002}$	0.96930	0.9694 ± 0.0048	$f\sigma_8(0.51)$	0.47606	0.4757 ± 0.0043
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.94	—	Y_P	0.245416	$0.245411^{+0.000068}_{-0.000060}$	$\sigma_8(0.51)$	0.6021	0.599 ± 0.013
$\boldsymbol{A^{kSZ}}$	3.00	< 6.19	Y_P^{BBN}	0.246743	$0.246737^{+0.000068}_{-0.000061}$	$f\sigma_8(0.61)$	0.46860	0.4680 ± 0.0039
$\boldsymbol{A_{100}^{dust}}$	1.009	1.01 ± 0.19	10^5D/H	2.5758	2.578 ± 0.031	$\sigma_8(0.61)$	0.5719	0.569 ± 0.013
$\boldsymbol{A_{143}^{dust}}$	0.950	0.97 ± 0.18	Age/Gyr	14.193	14.24 ± 0.26	$f\sigma_8(2.33)$	0.2874	0.2860 ± 0.0069
$\boldsymbol{A_{217}^{dust}}$	0.981	0.97 ± 0.10	z_*	1089.707	1089.71 ± 0.30	$\sigma_8(2.33)$	0.2938	0.2922 ± 0.0085
$\boldsymbol{A_{143\times217}^{dust}}$	1.033	1.02 ± 0.16	r_*	144.825	144.87 ± 0.33	f_{2000}^{143}	28.93	28.8 ± 2.9
$\boldsymbol{c_{100}}$	0.99785	0.9975 ± 0.0011	$100\theta_*$	1.041186	1.04119 ± 0.00032	f_{2000}^{217}	105.89	106.1 ± 2.0
$\boldsymbol{c_{217}}$	1.00113	1.0010 ± 0.0016	$D_M(z_*)$/Gpc	13.9096	13.914 ± 0.030	$f_{2000}^{143\times217}$	31.50	31.4 ± 2.1
$\boldsymbol{c_{TE}}$	0.99567	0.9955 ± 0.0049	z_{drag}	1059.933	1059.91 ± 0.34	$\chi^2_{lensing}$	9.39	10.2 ± 1.9
$\boldsymbol{c_{EE}}$	0.99173	0.9914 ± 0.0049	r_{drag}	147.477	147.52 ± 0.32	χ^2_{simall}	395.63	396.8 ± 1.5
H_0	63.95	63.6 ± 2.2	k_D	0.140499	0.14045 ± 0.00035	χ^2_{lowl}	21.83	21.93 ± 0.94
Ω_Λ	0.6635	0.660 ± 0.018	$100\theta_D$	0.160754	0.16077 ± 0.00019	$\chi^2_{CamSpec}$	11498.3	11513.1 ± 5.7
Ω_m	0.3457	$0.351^{+0.022}_{-0.025}$	z_{eq}	3363.5	3360 ± 33	χ^2_{prior}	1.96	7.7 ± 3.3
$\Omega_m h^2$	0.14140	0.1413 ± 0.0014	k_{eq}	0.010266	0.01026 ± 0.00010	χ^2_{CMB}	11925.1	11942.0 ± 5.9
$\Omega_m h^3$	0.09043	0.0898 ± 0.0036	$100\theta_{eq}$	0.8205	0.8212 ± 0.0064			
σ_8	0.7956	0.793 ± 0.011	$100\theta_{s,eq}$	0.45309	0.4535 ± 0.0033			

Best-fit $\chi^2_{eff} = 11927.06$; $\Delta\chi^2_{eff} = -2.59$; $\bar{\chi}^2_{eff} = 11949.70$; $\Delta\bar{\chi}^2_{eff} = -1.75$; $R - 1 = 0.01965$

χ^2_{eff}: CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 9.39 (Δ 0.56) simall_100x143_offlike5_EE_Aplanck_B: 395.63 (Δ -0.24) commander_dx12_v3_2_29: 21.83 (Δ -1.39) CamSpec like_10.7HM_1400_unified: 11498.26 (Δ -1.40)

16.48 base_omegak_CamSpecHM_TTTEEE_lowl_lowE_lensing_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02242 ± 0.00017	S_8	0.854 ± 0.020	$H(0.15)$	69.5 ± 2.0
$\boldsymbol{\Omega_c h^2}$	0.1181 ± 0.0015	$\sigma_8 \Omega_m^{0.5}$	0.468 ± 0.011	$D_M(0.15)$	675 ± 21
$\boldsymbol{100\theta_{MC}}$	1.04102 ± 0.00033	$\sigma_8 \Omega_m^{0.25}$	0.6103 ± 0.0065	$H(0.38)$	79.8 ± 1.9
$\boldsymbol{\tau}$	$0.0523^{+0.0033}_{-0.0074}$	$\sigma_8/h^{0.5}$	0.996 ± 0.010	$D_M(0.38)$	1603 ± 45
$\boldsymbol{\Omega_K}$	$-0.0094^{+0.0067}_{-0.0056}$	$r_{drag} h$	94.5 ± 3.0	$H(0.51)$	86.7 ± 1.8
$\boldsymbol{\ln(10^{10} A_s)}$	$3.033^{+0.010}_{-0.015}$	$\langle d^2 \rangle^{1/2}$	2.470 ± 0.028	$D_M(0.51)$	2072 ± 55
$\boldsymbol{n_s}$	0.9696 ± 0.0048	z_{re}	< 7.62	$H(0.61)$	92.4 ± 1.8
$\boldsymbol{y_{cal}}$	1.0001 ± 0.0024	$10^9 A_s$	$2.077^{+0.020}_{-0.031}$	$D_M(0.61)$	2407 ± 62
$\boldsymbol{A^{PS}_{100}}$	238 ± 25	$10^9 A_s e^{-2\tau}$	1.870 ± 0.012	$H(2.33)$	233.5 ± 1.9
$\boldsymbol{A^{PS}_{143}}$	37 ± 8	D_{40}	1213 ± 14	$D_M(2.33)$	5919 ± 96
$\boldsymbol{A^{PS}_{217}}$	102 ± 10	D_{220}	5721 ± 38	$f\sigma_8(0.15)$	0.4701 ± 0.0096
$\boldsymbol{A^{CIB}_{217}}$	39^{+7}_{-8}	D_{810}	2530 ± 13	$\sigma_8(0.15)$	0.733 ± 0.010
$\boldsymbol{A^{tSZ}_{143}}$	$4.0^{+2.0}_{-2.5}$	D_{1420}	815.0 ± 4.8	$f\sigma_8(0.38)$	$0.4812^{+0.0062}_{-0.0054}$
$\boldsymbol{r^{PS}_{143\times217}}$	0.66 ± 0.13	D_{2000}	230.7 ± 1.6	$\sigma_8(0.38)$	0.646 ± 0.011
$\boldsymbol{r^{CIB}_{143\times217}}$	$0.54^{+0.39}_{-0.20}$	$n_{s,0.002}$	0.9696 ± 0.0048	$f\sigma_8(0.51)$	0.4762 ± 0.0043
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P	$0.245411^{+0.000068}_{-0.000061}$	$\sigma_8(0.51)$	0.603 ± 0.011
$\boldsymbol{A^{kSZ}}$	< 6.16	Y_P^{BBN}	$0.246738^{+0.000068}_{-0.000062}$	$f\sigma_8(0.61)$	0.4688 ± 0.0037
$\boldsymbol{A^{dust}_{100}}$	1.01 ± 0.19	10^5D/H	2.577 ± 0.031	$\sigma_8(0.61)$	0.573 ± 0.011
$\boldsymbol{A^{dust}_{143}}$	0.97 ± 0.18	Age/Gyr	14.19 ± 0.24	$f\sigma_8(2.33)$	0.2880 ± 0.0061
$\boldsymbol{A^{dust}_{217}}$	0.98 ± 0.10	z_*	1089.70 ± 0.31	$\sigma_8(2.33)$	0.2946 ± 0.0076
$\boldsymbol{A^{dust}_{143\times217}}$	1.03 ± 0.16	r_*	144.88 ± 0.33	f^{143}_{2000}	28.8 ± 2.9
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	$100\theta_*$	1.04120 ± 0.00032	f^{217}_{2000}	106.1 ± 2.0
$\boldsymbol{c_{217}}$	1.0010 ± 0.0016	$D_M(z_*)$/Gpc	13.914 ± 0.030	$f^{143\times217}_{2000}$	31.4 ± 2.0
$\boldsymbol{c_{TE}}$	0.9955 ± 0.0049	z_{drag}	1059.91 ± 0.34	$\chi^2_{lensing}$	10.1 ± 1.8
$\boldsymbol{c_{EE}}$	0.9915 ± 0.0050	r_{drag}	147.53 ± 0.32	χ^2_{simall}	396.3 ± 1.1
H_0	64.1 ± 2.1	k_D	0.14044 ± 0.00035	χ^2_{lowl}	21.99 ± 0.96
Ω_Λ	0.664 ± 0.016	$100\theta_D$	0.16077 ± 0.00019	$\chi^2_{CamSpec}$	11513.1 ± 5.7
Ω_m	0.345 ± 0.021	z_{eq}	3359 ± 33	χ^2_{prior}	7.7 ± 3.4
$\Omega_m h^2$	0.1412 ± 0.0014	k_{eq}	0.01025 ± 0.00010	χ^2_{CMB}	11941.6 ± 5.8
$\Omega_m h^3$	0.0905 ± 0.0035	$100\theta_{eq}$	0.8214 ± 0.0064		
σ_8	$0.7967^{+0.0090}_{-0.010}$	$100\theta_{s,eq}$	0.4535 ± 0.0033		

$\bar{\chi}^2_{eff} = 11949.31$; $\Delta\bar{\chi}^2_{eff} = -1.94$; $R - 1 = 0.03090$

16.49 base_omegak_CleanedCamSpecHM_TT_lowl_lowE

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02253 ± 0.00027	$\sigma_8/h^{0.5}$	$1.059^{+0.026}_{-0.022}$	$D_M(0.15)$	820^{+58}_{-68}
$\boldsymbol{\Omega_c h^2}$	0.1172 ± 0.0023	$r_{drag}h$	$77.1^{+6.0}_{-6.9}$	$H(0.38)$	$69.9^{+3.3}_{-3.9}$
$\boldsymbol{100\theta_{MC}}$	1.04128 ± 0.00050	$\langle d^2\rangle^{1/2}$	2.677 ± 0.084	$D_M(0.38)$	1903^{+120}_{-140}
$\boldsymbol{\tau}$	$0.0484^{+0.0088}_{-0.0076}$	z_{re}	$6.81^{+0.96}_{-0.75}$	$H(0.51)$	$77.3^{+3.1}_{-3.7}$
$\boldsymbol{\Omega_K}$	$-0.057^{+0.028}_{-0.018}$	$10^9 A_s$	$2.057^{+0.038}_{-0.033}$	$D_M(0.51)$	2433 ± 160
$\boldsymbol{\ln(10^{10} A_s)}$	$3.023^{+0.019}_{-0.016}$	$10^9 A_s e^{-2\tau}$	1.867 ± 0.014	$H(0.61)$	$83.4^{+3.0}_{-3.6}$
$\boldsymbol{n_s}$	0.9716 ± 0.0066	D_{40}	1201 ± 17	$D_M(0.61)$	2804 ± 170
$\boldsymbol{y_{cal}}$	0.9998 ± 0.0026	D_{220}	5734 ± 43	$H(2.33)$	227.5 ± 3.0
$\boldsymbol{A_{100}^{PS}}$	240 ± 30	D_{810}	2523 ± 14	$D_M(2.33)$	6465 ± 230
$\boldsymbol{A_{143}^{tSZ}}$	4.5 ± 2.1	D_{1420}	811.7 ± 5.3	$f\sigma_8(0.15)$	$0.536^{+0.027}_{-0.024}$
$\boldsymbol{A^{kSZ}}$	< 5.11	D_{2000}	231.6 ± 2.1	$\sigma_8(0.15)$	$0.689^{+0.024}_{-0.021}$
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.19	$n_{s,0.002}$	0.9716 ± 0.0066	$f\sigma_8(0.38)$	$0.511^{+0.012}_{-0.0081}$
$\boldsymbol{A_{143}^{power}}$	$8.0^{+2.1}_{-2.3}$	Y_P	0.24545 ± 0.00011	$\sigma_8(0.38)$	$0.594^{+0.026}_{-0.023}$
$\boldsymbol{A_{217}^{power}}$	$6.5^{+1.2}_{-2.2}$	Y_P^{BBN}	0.24678 ± 0.00011	$f\sigma_8(0.51)$	$0.4900^{+0.0073}_{-0.0062}$
$\boldsymbol{A_{143\times217}^{power}}$	$2.60^{+0.67}_{-2.6}$	10^5D/H	2.558 ± 0.050	$\sigma_8(0.51)$	0.549 ± 0.026
$\boldsymbol{\gamma_{143}^{power}}$	$1.32^{+0.49}_{-0.61}$	Age/Gyr	15.63 ± 0.61	$f\sigma_8(0.61)$	$0.4727^{+0.0074}_{-0.0060}$
$\boldsymbol{\gamma_{217}^{power}}$	> 1.27	z_*	1089.48 ± 0.49	$\sigma_8(0.61)$	0.518 ± 0.026
$\boldsymbol{\gamma_{143\times217}^{power}}$	$1.39^{+0.80}_{-0.57}$	r_*	145.03 ± 0.49	$f\sigma_8(2.33)$	0.257 ± 0.014
$\boldsymbol{c_{100}}$	0.9979 ± 0.0010	$100\theta_*$	1.04145 ± 0.00049	$\sigma_8(2.33)$	0.256 ± 0.016
$\boldsymbol{c_{217}}$	$0.9992^{+0.0011}_{-0.0015}$	$D_M(z_*)$/Gpc	13.926 ± 0.046	f_{2000}^{143}	19.3 ± 3.3
H_0	$52.2^{+4.1}_{-4.7}$	z_{drag}	1060.10 ± 0.54	f_{2000}^{217}	13.6 ± 2.3
Ω_Λ	$0.530^{+0.071}_{-0.051}$	r_{drag}	147.66 ± 0.48	$f_{2000}^{143\times217}$	7.5 ± 2.4
Ω_m	$0.527^{+0.069}_{-0.099}$	k_D	0.14039 ± 0.00052	χ^2_{simall}	396.8 ± 1.7
$\Omega_m h^2$	0.1404 ± 0.0021	$100\theta_D$	0.16069 ± 0.00030	χ^2_{lowl}	21.39 ± 0.71
$\Omega_m h^3$	$0.0733^{+0.0061}_{-0.0070}$	z_{eq}	3340 ± 51	$\chi^2_{CamSpec}$	6712.6 ± 5.3
σ_8	$0.764^{+0.021}_{-0.017}$	k_{eq}	0.01019 ± 0.00015	χ^2_{prior}	5.1 ± 2.8
S_8	1.007 ± 0.063	$100\theta_{eq}$	0.825 ± 0.010	χ^2_{CMB}	7130.8 ± 5.6
$\sigma_8\Omega_m^{0.5}$	0.551 ± 0.035	$100\theta_{s,eq}$	0.4556 ± 0.0051		
$\sigma_8\Omega_m^{0.25}$	$0.648^{+0.016}_{-0.014}$	$H(0.15)$	$58.4^{+3.7}_{-4.4}$		

$\bar{\chi}^2_{eff} = 7135.85$; $\Delta\bar{\chi}^2_{eff} = -6.36$; $R - 1 = 0.01609$

17 r

17.1 base_r_plikHM_TT_lowl_lowE

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022127	0.02213 ± 0.00022	$\sigma_8/h^{0.5}$	0.9947	0.990 ± 0.016	$D_M(0.38)$	1542.1	1540 ± 16
$\boldsymbol{\Omega_c h^2}$	0.12064	0.1203 ± 0.0021	$r_{drag} h$	98.45	98.7 ± 1.6	$H(0.51)$	89.323	89.38 ± 0.44
$\boldsymbol{100\theta_{MC}}$	1.040778	1.04082 ± 0.00047	$\langle d^2 \rangle^{1/2}$	2.4556	2.446 ± 0.038	$D_M(0.51)$	1996.3	1994 ± 18
$\boldsymbol{\tau}$	0.0535	0.0518 ± 0.0080	z_{re}	7.66	7.46 ± 0.83	$H(0.61)$	95.008	95.05 ± 0.35
$\boldsymbol{\ln(10^{10} A_s)}$	3.0436	3.039 ± 0.017	$10^9 A_s$	2.0980	2.089 ± 0.034	$D_M(0.61)$	2321.8	2319 ± 20
$\boldsymbol{n_s}$	0.9637	0.9639 ± 0.0057	$10^9 A_s e^{-2\tau}$	1.8853	1.883 ± 0.014	$H(2.33)$	236.73	236.5 ± 1.3
$\boldsymbol{r}$	0.0001	< 0.0468	D_{40}	1231.7	1244^{+16}_{-19}	$D_M(2.33)$	5777.4	5776 ± 16
$\boldsymbol{y_{cal}}$	1.00047	1.0005 ± 0.0025	D_{220}	5710.6	5711 ± 41	$f\sigma_8(0.15)$	0.4644	0.462 ± 0.012
$\boldsymbol{A_{217}^{CIB}}$	49.0	48 ± 7	D_{810}	2538.4	2537 ± 14	$\sigma_8(0.15)$	0.7508	0.7483 ± 0.0077
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.28	—	D_{1420}	815.6	815.0 ± 5.1	$f\sigma_8(0.38)$	0.4808	0.4783 ± 0.0097
$\boldsymbol{A_{143}^{tSZ}}$	7.00	5.1 ± 2.0	D_{2000}	230.00	229.7 ± 1.8	$\sigma_8(0.38)$	0.6645	0.6625 ± 0.0061
$\boldsymbol{A_{100}^{PS}}$	254.7	263 ± 28	$n_{s,0.002}$	0.9637	0.9639 ± 0.0057	$f\sigma_8(0.51)$	0.4783	0.4760 ± 0.0083
$\boldsymbol{A_{143}^{PS}}$	49.3	49 ± 8	Y_P	0.245295	$0.24529^{+0.00010}_{-0.000087}$	$\sigma_8(0.51)$	0.6215	0.6197 ± 0.0056
$\boldsymbol{A_{143\times217}^{PS}}$	46.2	44 ± 9	Y_P^{BBN}	0.246621	$0.24662^{+0.00010}_{-0.000087}$	$f\sigma_8(0.61)$	0.4726	0.4705 ± 0.0074
$\boldsymbol{A_{217}^{PS}}$	119.2	115 ± 10	10^5D/H	2.6320	2.632 ± 0.042	$\sigma_8(0.61)$	0.5911	0.5895 ± 0.0052
$\boldsymbol{A^{kSZ}}$	0.01	< 4.75	Age/Gyr	13.8290	13.826 ± 0.036	$f\sigma_8(2.33)$	0.29769	0.2969 ± 0.0026
$\boldsymbol{A_{100}^{dustTT}}$	8.91	8.9 ± 1.8	z_*	1090.287	1090.26 ± 0.41	$\sigma_8(2.33)$	0.30652	0.3058 ± 0.0027
$\boldsymbol{A_{143}^{dustTT}}$	10.76	10.7 ± 1.8	r_*	144.452	144.54 ± 0.48	$r_{0.002}$	0.0001	< 0.0424
$\boldsymbol{A_{143\times217}^{dustTT}}$	19.30	18.3 ± 3.3	$100\theta_*$	1.040982	1.04102 ± 0.00046	$r_{0.01}$	0.0001	< 0.0446
$\boldsymbol{A_{217}^{dustTT}}$	94.4	93.5 ± 7.3	$D_M(z_*)$/Gpc	13.8765	13.884 ± 0.044	$\ln(10^{10} A_t)$	−6.27	$-0.72^{+1.4}_{-0.61}$
$\boldsymbol{c_{100}}$	0.99965	0.99959 ± 0.00061	z_{drag}	1059.399	1059.39 ± 0.45	r_{10}	0.0000	< 0.0218
$\boldsymbol{c_{217}}$	0.99828	0.99826 ± 0.00062	r_{drag}	147.196	147.28 ± 0.48	$10^9 A_t$	0.0002	< 0.0977
H_0	66.88	67.01 ± 0.92	k_D	0.14057	0.14048 ± 0.00051	$10^9 A_t e^{-2\tau}$	0.0002	< 0.0880
Ω_Λ	0.6794	0.681 ± 0.013	$100\theta_D$	0.161055	0.16108 ± 0.00026	f_{2000}^{143}	30.47	31.0 ± 2.9
Ω_m	0.3206	0.319 ± 0.013	z_{eq}	3411.6	3404 ± 47	$f_{2000}^{143\times217}$	33.32	33.5 ± 2.0
$\Omega_m h^2$	0.14341	0.1431 ± 0.0020	k_{eq}	0.010413	0.01039 ± 0.00014	f_{2000}^{217}	107.81	108.0 ± 1.9
$\Omega_m h^3$	0.095916	0.09588 ± 0.00045	$100\theta_{eq}$	0.8108	0.8123 ± 0.0089	χ^2_{simall}	396.03	397.1 ± 1.7
σ_8	0.8135	0.8106 ± 0.0091	$100\theta_{s,eq}$	0.44827	0.4490 ± 0.0046	χ^2_{lowl}	23.61	25.0 ± 1.8
S_8	0.8409	0.836 ± 0.024	$H(0.15)$	72.26	72.37 ± 0.78	χ^2_{plik}	758.6	771.7 ± 5.4
$\sigma_8 \Omega_m^{0.5}$	0.4606	0.458 ± 0.013	$D_M(0.15)$	647.5	646.5 ± 7.9	χ^2_{prior}	1.38	7.3 ± 3.7
$\sigma_8 \Omega_m^{0.25}$	0.6121	0.609 ± 0.012	$H(0.38)$	82.52	82.60 ± 0.57	χ^2_{CMB}	1178.2	1193.7 ± 5.7

Best-fit $\chi^2_{eff} = 1179.62$; $\Delta\chi^2_{eff} = 0.04$; $\bar{\chi}^2_{eff} = 1201.03$; $\Delta\bar{\chi}^2_{eff} = 1.45$; $R - 1 = 0.00654$

χ^2_{eff}: CMB - simall_100x143_offlike5_EE_Aplanck_B: 396.03 (Δ 0.15) commander_dx12_v3_2_29: 23.61 (Δ 0.01) plik_rd12_HM_v22_TT: 758.60 (Δ -0.15)

17.2 base_r_plikHM_TT_lowl_lowE_post_BAO

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022246	0.02222 ± 0.00020	$\langle d^2 \rangle^{1/2}$	2.4237	2.423 ± 0.028	$D_M(0.61)$	2305.8	2305 ± 12
$\boldsymbol{\Omega_c h^2}$	0.11896	0.1188 ± 0.0012	z_{re}	7.58	7.56 ± 0.81	$H(2.33)$	235.76	235.65 ± 0.79
$\boldsymbol{100\theta_{MC}}$	1.040956	1.04101 ± 0.00041	$10^9 A_s$	2.0870	2.088 ± 0.034	$D_M(2.33)$	5766.0	5766 ± 12
$\boldsymbol{\tau}$	0.0532	0.0532 ± 0.0079	$10^9 A_s e^{-2\tau}$	1.8761	1.877 ± 0.012	$f\sigma_8(0.15)$	0.4539	0.4533 ± 0.0078
$\boldsymbol{\ln(10^{10} A_s)}$	3.0383	3.038 ± 0.016	D_{40}	1222.0	1238^{+14}_{-18}	$\sigma_8(0.15)$	0.7455	0.7453 ± 0.0069
$\boldsymbol{n_s}$	0.96753	0.9673 ± 0.0042	D_{220}	5713.6	5717 ± 41	$f\sigma_8(0.38)$	0.4725	0.4720 ± 0.0066
$\boldsymbol{r}$	0.0001	< 0.0502	D_{810}	2535.0	2536 ± 14	$\sigma_8(0.38)$	0.6610	0.6609 ± 0.0059
$\boldsymbol{y_{cal}}$	1.00014	1.0006 ± 0.0025	D_{1420}	815.9	815.8 ± 5.0	$f\sigma_8(0.51)$	0.4712	0.4708 ± 0.0059
$\boldsymbol{A_{217}^{CIB}}$	48.9	48 ± 7	D_{2000}	230.18	230.1 ± 1.8	$\sigma_8(0.51)$	0.6186	0.6186 ± 0.0054
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.28	—	$n_{s,0.002}$	0.96753	0.9673 ± 0.0042	$f\sigma_8(0.61)$	0.4664	0.4661 ± 0.0054
$\boldsymbol{A_{143}^{tSZ}}$	7.11	5.2 ± 2.0	Y_P	0.245345	$0.245329^{+0.000088}_{-0.000075}$	$\sigma_8(0.61)$	0.5887	0.5886 ± 0.0051
$\boldsymbol{A_{100}^{PS}}$	253.9	262 ± 28	Y_P^{BBN}	0.246671	$0.246655^{+0.000089}_{-0.000075}$	$f\sigma_8(2.33)$	0.29687	0.2969 ± 0.0026
$\boldsymbol{A_{143}^{PS}}$	48.1	48 ± 8	10^5D/H	2.6091	2.615 ± 0.037	$\sigma_8(2.33)$	0.30612	0.3062 ± 0.0026
$\boldsymbol{A_{143\times217}^{PS}}$	45.5	43^{+9}_{-10}	Age/Gyr	13.8045	13.806 ± 0.028	$r_{0.002}$	0.0001	< 0.0462
$\boldsymbol{A_{217}^{PS}}$	118.4	115 ± 10	z_*	1089.986	1090.02 ± 0.30	$r_{0.01}$	0.0001	< 0.0481
$\boldsymbol{A^{kSZ}}$	0.01	< 4.67	r_*	144.795	144.85 ± 0.32	$\ln(10^{10} A_t)$	−5.91	$-0.64^{+1.4}_{-0.61}$
$\boldsymbol{A_{100}^{dustTT}}$	8.92	8.9 ± 1.9	$100\theta_*$	1.041157	1.04121 ± 0.00040	r_{10}	0.0001	< 0.0237
$\boldsymbol{A_{143}^{dustTT}}$	10.83	10.7 ± 1.8	$D_M(z_*)$/Gpc	13.9071	13.912 ± 0.031	$10^9 A_t$	0.000	< 0.105
$\boldsymbol{A_{143\times217}^{dustTT}}$	19.37	18.3 ± 3.3	z_{drag}	1059.589	1059.49 ± 0.44	$10^9 A_t e^{-2\tau}$	0.0002	< 0.0941
$\boldsymbol{A_{217}^{dustTT}}$	94.5	93.5 ± 7.4	r_{drag}	147.503	147.57 ± 0.35	f_{2000}^{143}	30.07	30.7 ± 2.9
$\boldsymbol{c_{100}}$	0.99964	0.99960 ± 0.00061	k_D	0.140336	0.14024 ± 0.00045	$f_{2000}^{143\times217}$	33.00	33.2 ± 2.0
$\boldsymbol{c_{217}}$	0.99827	0.99826 ± 0.00063	$100\theta_D$	0.160969	0.16103 ± 0.00026	f_{2000}^{217}	107.41	107.8 ± 1.9
H_0	67.63	67.67 ± 0.54	z_{eq}	3374.4	3371 ± 29	χ^2_{simall}	395.88	397.2 ± 1.8
Ω_Λ	0.6899	0.6905 ± 0.0073	k_{eq}	0.010299	0.010288 ± 0.000088	χ^2_{lowl}	22.78	24.3 ± 1.6
Ω_m	0.3101	0.3095 ± 0.0073	$100\theta_{eq}$	0.8180	0.8187 ± 0.0053	χ^2_{plik}	760.2	772.4 ± 5.5
$\Omega_m h^2$	0.14185	0.1417 ± 0.0012	$100\theta_{s,eq}$	0.45192	0.4523 ± 0.0028	χ^2_{6DF}	0.0222	0.053 ± 0.072
$\Omega_m h^3$	0.095935	0.09588 ± 0.00046	$H(0.15)$	72.892	72.92 ± 0.47	χ^2_{MGS}	1.28	1.41 ± 0.53
σ_8	0.8066	0.8064 ± 0.0078	$D_M(0.15)$	641.13	640.8 ± 4.6	$\chi^2_{DR12BAO}$	4.21	4.6 ± 1.5
S_8	0.8202	0.819 ± 0.015	$H(0.38)$	82.973	82.99 ± 0.35	χ^2_{prior}	1.44	7.4 ± 3.7
$\sigma_8 \Omega_m^{0.5}$	0.4492	0.4486 ± 0.0082	$D_M(0.38)$	1529.4	1528.8 ± 9.4	χ^2_{BAO}	5.51	6.1 ± 1.2
$\sigma_8 \Omega_m^{0.25}$	0.6020	0.6015 ± 0.0081	$H(0.51)$	89.672	89.68 ± 0.29	χ^2_{CMB}	1178.8	1193.8 ± 5.7
$\sigma_8 / h^{0.5}$	0.9809	0.980 ± 0.012	$D_M(0.51)$	1981.4	1981 ± 11			
$r_{drag} h$	99.76	99.86 ± 0.94	$H(0.61)$	95.276	95.28 ± 0.25			

Best-fit $\chi^2_{eff} = 1185.79$; $\Delta\chi^2_{eff} = 0.05$; $\bar{\chi}^2_{eff} = 1207.29$; $\Delta\bar{\chi}^2_{eff} = 1.27$; $R - 1 = 0.01115$

χ^2_{eff}: BAO - 6DF: 0.02 (Δ 0.00) MGS: 1.28 (Δ 0.00) DR12BAO: 4.21 (Δ 0.03) CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.88 (Δ -0.01) commander_dx12_v3_2_29: 22.79 (Δ -0.04) plik_rd12_HM_v22_TT: 760.17 (Δ 0.07)

17.3 base_r_plikHM_TT_lowl_lowE_post_Riess18

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022389	0.02237 ± 0.00021	$r_{\rm drag} h$	101.15	101.3 ± 1.4	$D_{\rm M}(0.51)$	1965.2	1964 ± 15
$\boldsymbol{\Omega_c h^2}$	0.11728	0.1171 ± 0.0017	$\langle d^2 \rangle^{1/2}$	2.4002	2.396 ± 0.034	$H(0.61)$	95.599	95.61 ± 0.33
$\boldsymbol{100\theta_{\rm MC}}$	1.041240	1.04126 ± 0.00044	$z_{\rm re}$	7.83	7.68 ± 0.84	$D_{\rm M}(0.61)$	2288.3	2287 ± 17
$\boldsymbol{\tau}$	0.0562	$0.0550^{+0.0074}_{-0.0087}$	$10^9 A_{\rm s}$	2.0934	$2.087^{+0.033}_{-0.038}$	$H(2.33)$	234.82	234.7 ± 1.0
$\boldsymbol{\ln(10^{10} A_{\rm s})}$	3.0414	$3.038^{+0.016}_{-0.018}$	$10^9 A_{\rm s} e^{-2\tau}$	1.8706	1.870 ± 0.013	$D_{\rm M}(2.33)$	5752.1	5752 ± 15
$\boldsymbol{n_{\rm s}}$	0.9720	0.9715 ± 0.0051	D_{40}	1214.1	1231^{+16}_{-19}	$f\sigma_8(0.15)$	0.4450	0.444 ± 0.010
$\boldsymbol{r}$	0.0000	< 0.0557	D_{220}	5726.1	5729 ± 41	$\sigma_8(0.15)$	0.7433	0.7417 ± 0.0077
$\boldsymbol{y_{\rm cal}}$	1.00044	1.0007 ± 0.0025	D_{810}	2536.6	2536 ± 14	$f\sigma_8(0.38)$	0.4659	0.4645 ± 0.0085
$\boldsymbol{A^{\rm CIB}_{217}}$	47.5	47 ± 6	D_{1420}	818.0	817.3 ± 5.1	$\sigma_8(0.38)$	0.6602	0.6588 ± 0.0064
$\boldsymbol{\xi^{\rm tSZ\times CIB}}$	0.48	—	D_{2000}	231.05	230.7 ± 1.8	$f\sigma_8(0.51)$	0.4659	0.4646 ± 0.0075
$\boldsymbol{A^{\rm tSZ}_{143}}$	7.05	5.3 ± 2.0	$n_{\rm s,0.002}$	0.9720	0.9715 ± 0.0051	$\sigma_8(0.51)$	0.6184	0.6172 ± 0.0058
$\boldsymbol{A^{\rm PS}_{100}}$	250.7	260 ± 28	$Y_{\rm P}$	0.245403	0.245391 ± 0.000083	$f\sigma_8(0.61)$	0.4619	0.4607 ± 0.0068
$\boldsymbol{A^{\rm PS}_{143}}$	49.3	47 ± 8	$Y_{\rm P}^{\rm BBN}$	0.246730	0.246717 ± 0.000084	$\sigma_8(0.61)$	0.5888	0.5876 ± 0.0055
$\boldsymbol{A^{\rm PS}_{143\times217}}$	49.5	42 ± 9	10^5D/H	2.5819	2.587 ± 0.039	$f\sigma_8(2.33)$	0.29734	$0.2968^{+0.0025}_{-0.0028}$
$\boldsymbol{A^{\rm PS}_{217}}$	120.0	114 ± 10	Age/Gyr	13.7744	13.775 ± 0.033	$\sigma_8(2.33)$	0.30708	$0.3066^{+0.0025}_{-0.0029}$
$\boldsymbol{A^{\rm kSZ}}$	0.00	< 4.61	z_*	1089.656	1089.68 ± 0.35	$r_{0.002}$	0.0000	< 0.0516
$\boldsymbol{A^{{\rm dust}TT}_{100}}$	8.90	8.9 ± 1.8	r_*	145.123	$145.18^{+0.45}_{-0.41}$	$r_{0.01}$	0.0000	< 0.0536
$\boldsymbol{A^{{\rm dust}TT}_{143}}$	10.84	10.7 ± 1.7	$100\theta_*$	1.041420	1.04145 ± 0.00043	$\ln(10^{10} A_{\rm t})$	−7.17	$-0.53^{+1.3}_{-0.65}$
$\boldsymbol{A^{{\rm dust}TT}_{143\times217}}$	19.60	18.4 ± 3.4	$D_{\rm M}(z_*)$/Gpc	13.9352	$13.940^{+0.042}_{-0.038}$	r_{10}	0.0000	< 0.0263
$\boldsymbol{A^{{\rm dust}TT}_{217}}$	94.9	93.7 ± 7.3	$z_{\rm drag}$	1059.780	1059.72 ± 0.45	$10^9 A_{\rm t}$	0.000	< 0.116
$\boldsymbol{c_{100}}$	0.99968	0.99959 ± 0.00059	$r_{\rm drag}$	147.794	$147.86^{+0.45}_{-0.40}$	$10^9 A_t e^{-2\tau}$	0.000	< 0.104
$\boldsymbol{c_{217}}$	0.99826	0.99828 ± 0.00064	$k_{\rm D}$	0.140142	0.14005 ± 0.00048	f^{143}_{2000}	29.19	30.2 ± 2.8
H_0	68.44	68.49 ± 0.77	$100\theta_{\rm D}$	0.160868	0.16091 ± 0.00025	$f^{143\times217}_{2000}$	32.40	32.7 ± 1.9
Ω_Λ	0.7004	$0.701^{+0.011}_{-0.0092}$	$z_{\rm eq}$	3337.7	3334 ± 39	f^{217}_{2000}	106.87	107.4 ± 1.9
$\Omega_{\rm m}$	0.2996	$0.2989^{+0.0092}_{-0.011}$	$k_{\rm eq}$	0.010187	0.01017 ± 0.00012	$\chi^2_{\rm simall}$	396.24	397.4 ± 2.1
$\Omega_{\rm m} h^2$	0.14032	0.1401 ± 0.0016	$100\theta_{\rm eq}$	0.8253	0.8261 ± 0.0075	$\chi^2_{\rm lowl}$	22.08	23.6 ± 1.6
$\Omega_{\rm m} h^3$	0.096032	0.09597 ± 0.00046	$100\theta_{\rm s,eq}$	0.45564	0.4561 ± 0.0039	$\chi^2_{\rm plik}$	762.9	775.1 ± 6.2
σ_8	0.8031	0.8013 ± 0.0089	$H(0.15)$	73.59	73.63 ± 0.67	$\chi^2_{\rm H073p45}$	9.11	9.1 ± 2.8
S_8	0.8025	0.800 ± 0.020	$D_{\rm M}(0.15)$	634.3	633.9 ± 6.5	$\chi^2_{\rm prior}$	1.31	7.4 ± 3.7
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4396	0.438 ± 0.011	$H(0.38)$	83.485	83.51 ± 0.49	$\chi^2_{\rm CMB}$	1181.2	1196.1 ± 6.2
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.5942	0.592 ± 0.010	$D_{\rm M}(0.38)$	1515.6	1515 ± 13			
$\sigma_8 / h^{0.5}$	0.9708	0.968 ± 0.015	$H(0.51)$	90.076	90.09 ± 0.40			

Best-fit $\chi^2_{\rm eff} = 1191.61$; $\Delta\chi^2_{\rm eff} = 0.03$; $\bar{\chi}^2_{\rm eff} = 1212.59$; $\Delta\bar{\chi}^2_{\rm eff} = 0.51$; $R - 1 = 0.05992$

$\chi^2_{\rm eff}$: CMB - simall_100x143_offlike5_EE_Aplanck_B: 396.24 (Δ 0.17) commander_dx12_v3_2_29: 22.08 (Δ -0.00) plik_rd12_HM_v22_TT: 762.86 (Δ -0.16) Hubble - H073p45: 9.11 (Δ 0.12)

17.4 base_r_plikHM_TT_lowl_lowE_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02213 ± 0.00022	$\sigma_8/h^{0.5}$	0.991 ± 0.016	$D_M(0.38)$	1539 ± 16
$\boldsymbol{\Omega_c h^2}$	0.1202 ± 0.0021	$r_{drag}h$	98.8 ± 1.6	$H(0.51)$	89.40 ± 0.44
$\boldsymbol{100\theta_{MC}}$	1.04083 ± 0.00046	$\langle d^2\rangle^{1/2}$	2.449 ± 0.037	$D_M(0.51)$	1993 ± 18
$\boldsymbol{\tau}$	$0.0536^{+0.0045}_{-0.0083}$	z_{re}	$7.65^{+0.50}_{-0.84}$	$H(0.61)$	95.07 ± 0.35
$\boldsymbol{\ln(10^{10}A_s)}$	$3.042^{+0.012}_{-0.016}$	$10^9 A_s$	$2.096^{+0.024}_{-0.034}$	$D_M(0.61)$	2318 ± 20
$\boldsymbol{n_s}$	0.9642 ± 0.0056	$10^9 A_s e^{-2\tau}$	1.883 ± 0.014	$H(2.33)$	236.5 ± 1.3
$\boldsymbol{r}$	< 0.0469	D_{40}	1244^{+16}_{-19}	$D_M(2.33)$	5775 ± 16
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	D_{220}	5711 ± 41	$f\sigma_8(0.15)$	0.462 ± 0.012
$\boldsymbol{A^{CIB}_{217}}$	48 ± 7	D_{810}	2536 ± 14	$\sigma_8(0.15)$	0.7494 ± 0.0071
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{1420}	815.0 ± 5.1	$f\sigma_8(0.38)$	0.4788 ± 0.0096
$\boldsymbol{A^{tSZ}_{143}}$	5.1 ± 2.0	D_{2000}	229.8 ± 1.8	$\sigma_8(0.38)$	$0.6636^{+0.0052}_{-0.0059}$
$\boldsymbol{A^{PS}_{100}}$	262 ± 28	$n_{s,0.002}$	0.9642 ± 0.0056	$f\sigma_8(0.51)$	0.4766 ± 0.0082
$\boldsymbol{A^{PS}_{143}}$	49 ± 8	Y_P	$0.24529^{+0.00010}_{-0.000085}$	$\sigma_8(0.51)$	$0.6207^{+0.0045}_{-0.0053}$
$\boldsymbol{A^{PS}_{143\times217}}$	44 ± 9	Y_P^{BBN}	$0.24662^{+0.00010}_{-0.000086}$	$f\sigma_8(0.61)$	0.4710 ± 0.0072
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	10^5D/H	2.631 ± 0.041	$\sigma_8(0.61)$	$0.5904^{+0.0041}_{-0.0050}$
$\boldsymbol{A^{kSZ}}$	< 4.70	Age/Gyr	13.825 ± 0.036	$f\sigma_8(2.33)$	$0.2974^{+0.0019}_{-0.0025}$
$\boldsymbol{A^{dustTT}_{100}}$	8.9 ± 1.8	z_*	1090.24 ± 0.40	$\sigma_8(2.33)$	$0.3064^{+0.0019}_{-0.0026}$
$\boldsymbol{A^{dustTT}_{143}}$	10.7 ± 1.8	r_*	144.55 ± 0.47	$r_{0.002}$	< 0.0425
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.3 ± 3.3	$100\theta_*$	1.04104 ± 0.00046	$r_{0.01}$	< 0.0447
$\boldsymbol{A^{dustTT}_{217}}$	93.5 ± 7.3	$D_M(z_*)$/Gpc	13.885 ± 0.044	$\ln(10^{10}A_t)$	$-0.72^{+1.4}_{-0.61}$
$\boldsymbol{c_{100}}$	0.99959 ± 0.00061	z_{drag}	1059.40 ± 0.45	r_{10}	< 0.0218
$\boldsymbol{c_{217}}$	0.99826 ± 0.00062	r_{drag}	147.29 ± 0.47	$10^9 A_t$	< 0.0981
H_0	67.05 ± 0.91	k_D	0.14047 ± 0.00051	$10^9 A_t e^{-2\tau}$	< 0.0881
Ω_Λ	0.682 ± 0.013	$100\theta_D$	0.16107 ± 0.00026	f^{143}_{2000}	30.9 ± 2.9
Ω_m	0.318 ± 0.013	z_{eq}	3402 ± 47	$f^{143\times217}_{2000}$	33.4 ± 2.0
$\Omega_m h^2$	0.1430 ± 0.0020	k_{eq}	0.01038 ± 0.00014	f^{217}_{2000}	108.0 ± 1.9
$\Omega_m h^3$	0.09588 ± 0.00045	$100\theta_{eq}$	0.8127 ± 0.0088	χ^2_{simall}	397.0 ± 1.7
σ_8	0.8117 ± 0.0086	$100\theta_{s,eq}$	0.4492 ± 0.0045	χ^2_{lowl}	25.0 ± 1.8
S_8	0.836 ± 0.024	$H(0.15)$	72.40 ± 0.78	χ^2_{plik}	771.5 ± 5.4
$\sigma_8\Omega_m^{0.5}$	0.458 ± 0.013	$D_M(0.15)$	646.2 ± 7.9	χ^2_{prior}	7.3 ± 3.7
$\sigma_8\Omega_m^{0.25}$	0.610 ± 0.012	$H(0.38)$	82.62 ± 0.56	χ^2_{CMB}	1193.4 ± 5.6

$\bar{\chi}^2_{eff} = 1200.73$; $\Delta\bar{\chi}^2_{eff} = 1.41$; $R - 1 = 0.00675$

17.5 base_r_plikHM_TT_lowl_lowE_post_BAO_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02222 ± 0.00020	$\langle d^2 \rangle^{1/2}$	2.426 ± 0.027	$D_M(0.61)$	2305 ± 12
$\boldsymbol{\Omega_c h^2}$	0.1188 ± 0.0012	z_{re}	$7.72^{+0.53}_{-0.82}$	$H(2.33)$	235.63 ± 0.79
$\boldsymbol{100\theta_{MC}}$	1.04101 ± 0.00041	$10^9 A_s$	$2.093^{+0.024}_{-0.035}$	$D_M(2.33)$	5766 ± 12
$\boldsymbol{\tau}$	$0.0546^{+0.0047}_{-0.0082}$	$10^9 A_s e^{-2\tau}$	1.877 ± 0.012	$f\sigma_8(0.15)$	0.4538 ± 0.0077
$\boldsymbol{\ln(10^{10} A_s)}$	$3.041^{+0.012}_{-0.017}$	D_{40}	1238^{+14}_{-18}	$\sigma_8(0.15)$	$0.7463^{+0.0057}_{-0.0068}$
$\boldsymbol{n_s}$	0.9674 ± 0.0042	D_{220}	5717 ± 41	$f\sigma_8(0.38)$	0.4726 ± 0.0064
$\boldsymbol{r}$	< 0.0502	D_{810}	2536 ± 14	$\sigma_8(0.38)$	$0.6618^{+0.0047}_{-0.0058}$
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0025	D_{1420}	815.8 ± 5.0	$f\sigma_8(0.51)$	0.4714 ± 0.0057
$\boldsymbol{A_{217}^{CIB}}$	48 ± 7	D_{2000}	230.1 ± 1.8	$\sigma_8(0.51)$	$0.6194^{+0.0042}_{-0.0054}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$n_{s,0.002}$	0.9674 ± 0.0042	$f\sigma_8(0.61)$	0.4666 ± 0.0052
$\boldsymbol{A_{143}^{tSZ}}$	5.2 ± 2.0	Y_P	$0.245330^{+0.000088}_{-0.000075}$	$\sigma_8(0.61)$	$0.5895^{+0.0040}_{-0.0051}$
$\boldsymbol{A_{100}^{PS}}$	261 ± 28	Y_P^{BBN}	$0.246656^{+0.000089}_{-0.000075}$	$f\sigma_8(2.33)$	$0.2973^{+0.0019}_{-0.0026}$
$\boldsymbol{A_{143}^{PS}}$	48 ± 8	10^5D/H	2.615 ± 0.037	$\sigma_8(2.33)$	$0.3066^{+0.0019}_{-0.0027}$
$\boldsymbol{A_{143\times217}^{PS}}$	43^{+9}_{-10}	Age/Gyr	13.805 ± 0.028	$r_{0.002}$	< 0.0463
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	z_*	1090.01 ± 0.30	$r_{0.01}$	< 0.0481
$\boldsymbol{A^{kSZ}}$	< 4.64	r_*	144.86 ± 0.32	$\ln(10^{10} A_t)$	$-0.64^{+1.4}_{-0.61}$
$\boldsymbol{A_{100}^{dustTT}}$	8.9 ± 1.8	$100\theta_*$	1.04121 ± 0.00040	r_{10}	< 0.0236
$\boldsymbol{A_{143}^{dustTT}}$	10.7 ± 1.8	$D_M(z_*)$/Gpc	13.912 ± 0.031	$10^9 A_t$	< 0.105
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.3 ± 3.3	z_{drag}	1059.50 ± 0.44	$10^9 A_t e^{-2\tau}$	< 0.0941
$\boldsymbol{A_{217}^{dustTT}}$	93.5 ± 7.3	r_{drag}	147.58 ± 0.35	f_{2000}^{143}	30.6 ± 2.9
$\boldsymbol{c_{100}}$	0.99960 ± 0.00061	k_D	0.14024 ± 0.00045	$f_{2000}^{143\times217}$	33.2 ± 2.0
$\boldsymbol{c_{217}}$	0.99826 ± 0.00063	$100\theta_D$	0.16102 ± 0.00026	f_{2000}^{217}	107.8 ± 1.9
H_0	67.68 ± 0.55	z_{eq}	3370 ± 29	χ^2_{simall}	397.1 ± 1.8
Ω_Λ	0.6906 ± 0.0073	k_{eq}	0.010286 ± 0.000088	χ^2_{lowl}	24.3 ± 1.6
Ω_m	0.3094 ± 0.0073	$100\theta_{eq}$	0.8188 ± 0.0053	χ^2_{plik}	772.2 ± 5.4
$\Omega_m h^2$	0.1417 ± 0.0012	$100\theta_{s,eq}$	0.4523 ± 0.0028	χ^2_{6DF}	0.053 ± 0.071
$\Omega_m h^3$	0.09588 ± 0.00046	$H(0.15)$	72.93 ± 0.47	χ^2_{MGS}	1.42 ± 0.53
σ_8	$0.8074^{+0.0067}_{-0.0076}$	$D_M(0.15)$	640.7 ± 4.6	$\chi^2_{DR12BAO}$	4.6 ± 1.5
S_8	0.820 ± 0.015	$H(0.38)$	83.00 ± 0.35	χ^2_{prior}	7.4 ± 3.7
$\sigma_8 \Omega_m^{0.5}$	0.4491 ± 0.0082	$D_M(0.38)$	1528.6 ± 9.4	χ^2_{BAO}	6.1 ± 1.2
$\sigma_8 \Omega_m^{0.25}$	0.6022 ± 0.0078	$H(0.51)$	89.69 ± 0.29	χ^2_{CMB}	1193.6 ± 5.6
$\sigma_8/h^{0.5}$	0.982 ± 0.011	$D_M(0.51)$	1981 ± 11		
$r_{drag} h$	99.88 ± 0.94	$H(0.61)$	95.28 ± 0.25		

$\bar{\chi}^2_{eff} = 1207.00$; $\Delta\bar{\chi}^2_{eff} = 1.24$; $R - 1 = 0.01158$

17.6 base_r_plikHM_TT_lowl_lowE_post_Riess18_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02237 ± 0.00021	$r_{\rm drag} h$	101.3 ± 1.3	$D_{\rm M}(0.51)$	1964 ± 15
$\boldsymbol{\Omega_c h^2}$	0.1171 ± 0.0017	$\langle d^2 \rangle^{1/2}$	2.399 ± 0.033	$H(0.61)$	95.62 ± 0.33
$\boldsymbol{100\theta_{\rm MC}}$	1.04127 ± 0.00044	$z_{\rm re}$	$7.81^{+0.55}_{-0.91}$	$D_{\rm M}(0.61)$	2287 ± 17
$\boldsymbol{\tau}$	$0.0562^{+0.0054}_{-0.0087}$	$10^9 A_{\rm s}$	$2.092^{+0.026}_{-0.037}$	$H(2.33)$	234.7 ± 1.0
$\boldsymbol{\ln(10^{10} A_{\rm s})}$	$3.041^{+0.013}_{-0.018}$	$10^9 A_{\rm s} e^{-2\tau}$	1.870 ± 0.013	$D_{\rm M}(2.33)$	5752 ± 15
$\boldsymbol{n_{\rm s}}$	0.9716 ± 0.0051	D_{40}	1231^{+16}_{-19}	$f\sigma_8(0.15)$	0.444 ± 0.010
$\boldsymbol{r}$	< 0.0556	D_{220}	5729 ± 41	$\sigma_8(0.15)$	0.7425 ± 0.0072
$\boldsymbol{y_{\rm cal}}$	1.0007 ± 0.0025	D_{810}	2535 ± 14	$f\sigma_8(0.38)$	0.4649 ± 0.0084
$\boldsymbol{A^{\rm CIB}_{217}}$	47 ± 6	D_{1420}	817.3 ± 5.1	$\sigma_8(0.38)$	$0.6596^{+0.0055}_{-0.0062}$
$\boldsymbol{\xi^{\rm tSZ\times CIB}}$	—	D_{2000}	230.7 ± 1.8	$f\sigma_8(0.51)$	0.4650 ± 0.0074
$\boldsymbol{A^{\rm tSZ}_{143}}$	5.3 ± 2.0	$n_{\rm s,0.002}$	0.9716 ± 0.0051	$\sigma_8(0.51)$	$0.6178^{+0.0049}_{-0.0057}$
$\boldsymbol{A^{\rm PS}_{100}}$	260 ± 28	$Y_{\rm P}$	0.245392 ± 0.000084	$f\sigma_8(0.61)$	0.4611 ± 0.0066
$\boldsymbol{A^{\rm PS}_{143}}$	47 ± 8	$Y_{\rm P}^{\rm BBN}$	0.246718 ± 0.000084	$\sigma_8(0.61)$	$0.5882^{+0.0045}_{-0.0054}$
$\boldsymbol{A^{\rm PS}_{143\times217}}$	42 ± 9	10^5D/H	2.586 ± 0.039	$f\sigma_8(2.33)$	$0.2971^{+0.0021}_{-0.0027}$
$\boldsymbol{A^{\rm PS}_{217}}$	114 ± 10	Age/Gyr	13.774 ± 0.033	$\sigma_8(2.33)$	$0.3069^{+0.0020}_{-0.0028}$
$\boldsymbol{A^{\rm kSZ}}$	< 4.61	z_*	1089.67 ± 0.35	$r_{0.002}$	< 0.0516
$\boldsymbol{A^{{\rm dust}TT}_{100}}$	8.9 ± 1.8	r_*	145.19 ± 0.40	$r_{0.01}$	< 0.0537
$\boldsymbol{A^{{\rm dust}TT}_{143}}$	10.7 ± 1.8	$100\theta_*$	1.04145 ± 0.00043	$\ln(10^{10} A_{\rm t})$	$-0.53^{+1.3}_{-0.65}$
$\boldsymbol{A^{{\rm dust}TT}_{143\times217}}$	18.3 ± 3.4	$D_{\rm M}(z_*)$/Gpc	$13.941^{+0.042}_{-0.038}$	r_{10}	< 0.0263
$\boldsymbol{A^{{\rm dust}TT}_{217}}$	93.7 ± 7.2	$z_{\rm drag}$	1059.73 ± 0.45	$10^9 A_{\rm t}$	< 0.116
$\boldsymbol{c_{100}}$	0.99959 ± 0.00059	$r_{\rm drag}$	147.87 ± 0.42	$10^9 A_t e^{-2\tau}$	< 0.104
$\boldsymbol{c_{217}}$	0.99829 ± 0.00064	$k_{\rm D}$	0.14005 ± 0.00048	f^{143}_{2000}	30.1 ± 2.8
H_0	68.51 ± 0.77	$100\theta_{\rm D}$	0.16091 ± 0.00025	$f^{143\times217}_{2000}$	$32.6^{+1.8}_{-2.0}$
Ω_Λ	$0.701^{+0.010}_{-0.0091}$	$z_{\rm eq}$	3333 ± 39	f^{217}_{2000}	107.4 ± 1.9
$\Omega_{\rm m}$	$0.2988^{+0.0091}_{-0.010}$	$k_{\rm eq}$	0.01017 ± 0.00012	$\chi^2_{\rm simall}$	397.3 ± 2.1
$\Omega_{\rm m} h^2$	0.1401 ± 0.0016	$100\theta_{\rm eq}$	0.8262 ± 0.0075	$\chi^2_{\rm lowl}$	23.6 ± 1.6
$\Omega_{\rm m} h^3$	0.09598 ± 0.00046	$100\theta_{\rm s,eq}$	0.4561 ± 0.0038	$\chi^2_{\rm plik}$	774.9 ± 6.1
σ_8	0.8021 ± 0.0085	$H(0.15)$	73.65 ± 0.66	$\chi^2_{\rm H073p45}$	9.1 ± 2.8
S_8	0.800 ± 0.020	$D_{\rm M}(0.15)$	633.8 ± 6.4	$\chi^2_{\rm prior}$	7.4 ± 3.6
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.438 ± 0.011	$H(0.38)$	83.52 ± 0.49	$\chi^2_{\rm CMB}$	1195.9 ± 6.2
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.593 ± 0.010	$D_{\rm M}(0.38)$	1515 ± 13		
$\sigma_8 / h^{0.5}$	0.969 ± 0.014	$H(0.51)$	90.10 ± 0.40		

$\bar{\chi}^2_{\rm eff} = 1212.36$; $\Delta\bar{\chi}^2_{\rm eff} = 0.55$; $R - 1 = 0.06373$

17.7 base_r_plikHM_TTTEEE_lowl_lowE

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022376	0.02236 ± 0.00015	σ_8	0.8119	0.8112 ± 0.0074	$D_M(0.15)$	643.6	643.6 ± 5.2
$\boldsymbol{\Omega_c h^2}$	0.12007	0.1200 ± 0.0014	S_8	0.8328	0.832 ± 0.016	$H(0.38)$	82.852	82.85 ± 0.37
$\boldsymbol{100\theta_{MC}}$	1.040902	1.04091 ± 0.00031	$\sigma_8\Omega_m^{0.5}$	0.4562	0.4557 ± 0.0088	$D_M(0.38)$	1533.9	1534 ± 10
$\boldsymbol{\tau}$	0.0543	$0.0539^{+0.0069}_{-0.0078}$	$\sigma_8\Omega_m^{0.25}$	0.6086	0.6080 ± 0.0083	$H(0.51)$	89.616	89.61 ± 0.29
$\boldsymbol{\ln(10^{10}A_s)}$	3.0449	3.043 ± 0.016	$\sigma_8/h^{0.5}$	0.9895	0.989 ± 0.012	$D_M(0.51)$	1986.4	1986 ± 12
$\boldsymbol{n_s}$	0.96606	0.9657 ± 0.0044	$r_{drag}h$	99.02	99.0 ± 1.1	$H(0.61)$	95.271	95.27 ± 0.24
$\boldsymbol{r}$	0.0001	< 0.0522	$\langle d^2\rangle^{1/2}$	2.4447	2.443 ± 0.028	$D_M(0.61)$	2310.9	2311 ± 13
$\boldsymbol{y_{cal}}$	1.00059	1.0007 ± 0.0024	z_{re}	7.68	7.62 ± 0.77	$H(2.33)$	236.61	236.57 ± 0.82
$\boldsymbol{A_{217}^{CIB}}$	46.5	47 ± 7	$10^9 A_s$	2.1008	2.098 ± 0.033	$D_M(2.33)$	5763.7	5764 ± 11
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.55	—	$10^9 A_s e^{-2\tau}$	1.8845	1.883 ± 0.012	$f\sigma_8(0.15)$	0.4604	0.4599 ± 0.0082
$\boldsymbol{A_{143}^{tSZ}}$	7.14	$5.5^{+2.2}_{-1.9}$	D_{40}	1229.2	1244^{+14}_{-18}	$\sigma_8(0.15)$	0.7499	0.7492 ± 0.0065
$\boldsymbol{A_{100}^{PS}}$	248.2	258 ± 28	D_{220}	5731.2	5730 ± 38	$f\sigma_8(0.38)$	0.4779	0.4773 ± 0.0067
$\boldsymbol{A_{143}^{PS}}$	49.3	46 ± 8	D_{810}	2541.7	2540 ± 13	$\sigma_8(0.38)$	0.6643	0.6636 ± 0.0055
$\boldsymbol{A_{143\times217}^{PS}}$	50.7	42 ± 9	D_{1420}	818.53	817.8 ± 4.7	$f\sigma_8(0.51)$	0.4760	0.4755 ± 0.0059
$\boldsymbol{A_{217}^{PS}}$	121.1	115 ± 10	D_{2000}	231.34	231.1 ± 1.5	$\sigma_8(0.51)$	0.62145	0.6209 ± 0.0051
$\boldsymbol{A^{kSZ}}$	0.00	< 4.16	$n_{s,0.002}$	0.96606	0.9657 ± 0.0044	$f\sigma_8(0.61)$	0.4707	0.4701 ± 0.0054
$\boldsymbol{A_{100}^{dustTT}}$	8.86	8.9 ± 1.8	Y_P	0.245398	$0.245390^{+0.000062}_{-0.000053}$	$\sigma_8(0.61)$	0.59121	0.5907 ± 0.0048
$\boldsymbol{A_{143}^{dustTT}}$	10.99	10.9 ± 1.8	Y_P^{BBN}	0.246725	$0.246716^{+0.000062}_{-0.000053}$	$f\sigma_8(2.33)$	0.29793	0.2977 ± 0.0024
$\boldsymbol{A_{143\times217}^{dustTT}}$	20.00	18.6 ± 3.3	10^5D/H	2.5843	2.588 ± 0.027	$\sigma_8(2.33)$	0.30697	0.3067 ± 0.0025
$\boldsymbol{A_{217}^{dustTT}}$	95.3	93.7 ± 7.4	Age/Gyr	13.7975	13.799 ± 0.024	$r_{0.002}$	0.0001	< 0.0477
$\boldsymbol{A_{100}^{dustTE}}$	0.1152	0.115 ± 0.038	z_*	1089.918	1089.93 ± 0.27	$r_{0.01}$	0.0001	< 0.0499
$\boldsymbol{A_{100\times143}^{dustTE}}$	0.1352	0.135 ± 0.030	r_*	144.409	144.43 ± 0.30	$\ln(10^{10}A_t)$	−6.12	$-0.58^{+1.3}_{-0.58}$
$\boldsymbol{A_{100\times217}^{dustTE}}$	0.484	0.482 ± 0.084	$100\theta_*$	1.041090	1.04109 ± 0.00030	r_{10}	0.0000	< 0.0245
$\boldsymbol{A_{143}^{dustTE}}$	0.225	0.226 ± 0.054	$D_M(z_*)$/Gpc	13.8710	13.873 ± 0.028	$10^9 A_t$	0.000	< 0.110
$\boldsymbol{A_{143\times217}^{dustTE}}$	0.667	0.666 ± 0.079	z_{drag}	1059.971	1059.92 ± 0.30	$10^9 A_t e^{-2\tau}$	0.0002	< 0.0981
$\boldsymbol{A_{217}^{dustTE}}$	2.089	2.08 ± 0.27	r_{drag}	147.065	147.10 ± 0.30	f_{2000}^{143}	28.71	29.3 ± 2.7
$\boldsymbol{c_{100}}$	0.99974	0.99965 ± 0.00061	k_D	0.140898	0.14086 ± 0.00032	$f_{2000}^{143\times217}$	31.98	32.1 ± 1.8
$\boldsymbol{c_{217}}$	0.99817	0.99820 ± 0.00062	$100\theta_D$	0.160745	0.16077 ± 0.00017	f_{2000}^{217}	106.60	106.9 ± 1.8
H_0	67.33	67.34 ± 0.61	z_{eq}	3404.0	3403 ± 31	χ^2_{simall}	396.05	397.2 ± 1.8
Ω_Λ	0.6844	0.6844 ± 0.0084	k_{eq}	0.010389	0.010385 ± 0.000094	χ^2_{lowl}	23.24	24.8 ± 1.6
Ω_m	0.3156	0.3156 ± 0.0084	$100\theta_{eq}$	0.8130	0.8132 ± 0.0058	χ^2_{plik}	2344.9	2359.6 ± 5.8
$\Omega_m h^2$	0.14309	0.1430 ± 0.0013	$100\theta_{s,eq}$	0.44922	0.4494 ± 0.0030	χ^2_{prior}	1.62	11.6 ± 4.5
$\Omega_m h^3$	0.096344	0.09631 ± 0.00029	$H(0.15)$	72.66	72.66 ± 0.52	χ^2_{CMB}	2764.1	2781.6 ± 6.0

Best-fit $\chi^2_{eff} = 2765.76$; $\Delta\chi^2_{eff} = -0.01$; $\bar{\chi}^2_{eff} = 2793.18$; $\Delta\bar{\chi}^2_{eff} = 1.41$; $R - 1 = 0.00988$

χ^2_{eff}: CMB - simall_100x143_offlike5_EE_Aplanck_B: 396.05 (Δ 0.00) commander_dx12_v3_2_29: 23.24 (Δ -0.01) plik_rd12_HM_v22b_TTTEEE: 2344.85 (Δ 0.20)

17.8 base_r_plikHM_TTTEEE_lowl_lowE_post_BAO

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022440	0.02241 ± 0.00013	$\sigma_8\Omega_m^{0.5}$	0.4518	0.4509 ± 0.0068	$D_M(0.51)$	1979.1	1979.3 ± 8.9
$\boldsymbol{\Omega_c h^2}$	0.11926	0.1192 ± 0.0010	$\sigma_8\Omega_m^{0.25}$	0.6051	0.6040 ± 0.0069	$H(0.61)$	95.406	95.39 ± 0.19
$\boldsymbol{100\theta_{MC}}$	1.040993	1.04100 ± 0.00029	$\sigma_8/h^{0.5}$	0.9852	0.983 ± 0.010	$D_M(0.61)$	2303.0	2303.3 ± 9.6
$\boldsymbol{\tau}$	0.0565	$0.0550^{+0.0070}_{-0.0078}$	$r_{drag}h$	99.66	99.68 ± 0.77	$H(2.33)$	236.15	236.10 ± 0.61
$\boldsymbol{\ln(10^{10}A_s)}$	3.0472	3.044 ± 0.016	$\langle d^2\rangle^{1/2}$	2.4350	2.431 ± 0.024	$D_M(2.33)$	5757.9	5758.8 ± 8.8
$\boldsymbol{n_s}$	0.96802	0.9677 ± 0.0038	z_{re}	7.88	7.72 ± 0.77	$f\sigma_8(0.15)$	0.4564	0.4555 ± 0.0064
$\boldsymbol{r}$	0.0001	< 0.0561	$10^9 A_s$	2.1057	$2.099^{+0.031}_{-0.034}$	$\sigma_8(0.15)$	0.7491	0.7478 ± 0.0063
$\boldsymbol{y_{cal}}$	1.00048	1.0008 ± 0.0024	$10^9 A_s e^{-2\tau}$	1.8806	1.880 ± 0.011	$f\sigma_8(0.38)$	0.4750	0.4741 ± 0.0055
$\boldsymbol{A^{CIB}_{217}}$	46.1	47 ± 7	D_{40}	1225.2	1241^{+13}_{-17}	$\sigma_8(0.38)$	0.6642	0.6630 ± 0.0055
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.63	—	D_{220}	5733.7	5733 ± 37	$f\sigma_8(0.51)$	0.4737	0.4728 ± 0.0051
$\boldsymbol{A^{tSZ}_{143}}$	7.12	$5.5^{+2.2}_{-1.9}$	D_{810}	2540.4	2540 ± 13	$\sigma_8(0.51)$	0.6216	0.6205 ± 0.0051
$\boldsymbol{A^{PS}_{100}}$	248.7	258 ± 28	D_{1420}	818.81	818.3 ± 4.5	$f\sigma_8(0.61)$	0.46878	0.4679 ± 0.0047
$\boldsymbol{A^{PS}_{143}}$	49.9	45 ± 8	D_{2000}	231.53	231.3 ± 1.5	$\sigma_8(0.61)$	0.59147	0.5904 ± 0.0048
$\boldsymbol{A^{PS}_{143\times217}}$	52.3	42 ± 9	$n_{s,0.002}$	0.96802	0.9677 ± 0.0038	$f\sigma_8(2.33)$	0.29826	0.2977 ± 0.0024
$\boldsymbol{A^{PS}_{217}}$	121.3	115 ± 10	Y_P	0.245422	$0.245411^{+0.000053}_{-0.000047}$	$\sigma_8(2.33)$	0.30753	0.3070 ± 0.0025
$\boldsymbol{A^{kSZ}}$	0.01	< 4.11	Y_P^{BBN}	0.246749	$0.246738^{+0.000053}_{-0.000048}$	$r_{0.002}$	0.0001	< 0.0515
$\boldsymbol{A^{dustTT}_{100}}$	8.83	8.9 ± 1.9	10^5D/H	2.5726	2.578 ± 0.024	$r_{0.01}$	0.0001	< 0.0537
$\boldsymbol{A^{dustTT}_{143}}$	11.02	10.9 ± 1.8	Age/Gyr	13.7850	13.787 ± 0.020	$\ln(10^{10}A_t)$	−6.22	$-0.52^{+1.3}_{-0.57}$
$\boldsymbol{A^{dustTT}_{143\times217}}$	20.11	18.6 ± 3.4	z_*	1089.767	1089.80 ± 0.22	r_{10}	0.0000	< 0.0264
$\boldsymbol{A^{dustTT}_{217}}$	95.4	93.8 ± 7.4	r_*	144.570	144.60 ± 0.24	$10^9 A_t$	0.000	< 0.117
$\boldsymbol{A^{dustTE}_{100}}$	0.1147	0.115 ± 0.038	$100\theta_*$	1.041176	1.04118 ± 0.00029	$10^9 A_t e^{-2\tau}$	0.000	< 0.105
$\boldsymbol{A^{dustTE}_{100\times143}}$	0.1346	0.136 ± 0.030	$D_M(z_*)$/Gpc	13.8852	13.888 ± 0.023	f^{143}_{2000}	28.46	29.1 ± 2.7
$\boldsymbol{A^{dustTE}_{100\times217}}$	0.480	0.482 ± 0.084	z_{drag}	1060.047	1059.98 ± 0.29	$f^{143\times217}_{2000}$	31.78	31.9 ± 1.8
$\boldsymbol{A^{dustTE}_{143}}$	0.224	0.226 ± 0.054	r_{drag}	147.209	147.25 ± 0.24	f^{217}_{2000}	106.28	106.8 ± 1.8
$\boldsymbol{A^{dustTE}_{143\times217}}$	0.662	0.665 ± 0.079	k_D	0.140795	0.14073 ± 0.00029	χ^2_{simall}	396	1323 ± 1000
$\boldsymbol{A^{dustTE}_{217}}$	2.076	2.08 ± 0.26	$100\theta_D$	0.160698	0.16074 ± 0.00017	χ^2_{lowl}	22.92	24.5 ± 1.5
$\boldsymbol{c_{100}}$	0.99973	0.99966 ± 0.00061	z_{eq}	3386.2	3385 ± 23	χ^2_{plik}	2345	1435 ± 1000
$\boldsymbol{c_{217}}$	0.99818	0.99820 ± 0.00062	k_{eq}	0.010335	0.010330 ± 0.000070	χ^2_{6DF}	0.0289	0.052 ± 0.062
H_0	67.698	67.70 ± 0.44	$100\theta_{eq}$	0.81643	0.8167 ± 0.0043	χ^2_{MGS}	1.217	1.29 ± 0.42
Ω_Λ	0.6894	0.6895 ± 0.0060	$100\theta_{s,eq}$	0.45097	0.4511 ± 0.0022	$\chi^2_{DR12BAO}$	4.42	4.8 ± 1.4
Ω_m	0.3106	0.3105 ± 0.0060	$H(0.15)$	72.973	72.97 ± 0.38	χ^2_{prior}	1.58	11.5 ± 4.5
$\Omega_m h^2$	0.14234	0.14228 ± 0.00095	$D_M(0.15)$	640.45	640.5 ± 3.8	χ^2_{BAO}	5.67	6.1 ± 1.1
$\Omega_m h^3$	0.096364	0.09631 ± 0.00029	$H(0.38)$	83.077	83.07 ± 0.28	χ^2_{CMB}	2764.7	2781.6 ± 5.9
σ_8	0.8106	0.8091 ± 0.0071	$D_M(0.38)$	1527.7	1527.8 ± 7.6			
S_8	0.8248	0.823 ± 0.012	$H(0.51)$	89.790	89.78 ± 0.22			

Best-fit $\chi^2_{eff} = 2771.96$; $\Delta\chi^2_{eff} = 0.05$; $\bar{\chi}^2_{eff} = 2799.17$; $\Delta\bar{\chi}^2_{eff} = 1.27$; $R - 1 = 0.01744$

χ^2_{eff}: BAO - 6DF: 0.03 (Δ 0.00) MGS: 1.22 (Δ 0.00) DR12BAO: 4.42 (Δ 0.00) CMB - simall_100x143_offlike5_EE_Aplanck_B: 396.48 (Δ 0.28) commander_dx12_v3_2_29: 22.92 (Δ 0.05) plik_rd12_HM_v22b_TTTEEE: 2345.31 (Δ -0.19)

17.9 base_r_plikHM_TTTEEE_lowl_lowE_post_Riess18

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02248 ± 0.00014	S_8	0.815 ± 0.015	$D_M(0.38)$	1521.8 ± 9.7
$\boldsymbol{\Omega_c h^2}$	0.1185 ± 0.0013	$\sigma_8\Omega_m^{0.5}$	0.4464 ± 0.0085	$H(0.51)$	89.96 ± 0.28
$\boldsymbol{100\theta_{MC}}$	1.04110 ± 0.00030	$\sigma_8\Omega_m^{0.25}$	0.6003 ± 0.0082	$D_M(0.51)$	1972 ± 11
$\boldsymbol{\tau}$	$0.0562^{+0.0071}_{-0.0081}$	$\sigma_8/h^{0.5}$	0.979 ± 0.012	$H(0.61)$	$95.53^{+0.21}_{-0.24}$
$\boldsymbol{\ln(10^{10}A_s)}$	3.045 ± 0.016	$r_{drag}h$	100.3 ± 1.0	$D_M(0.61)$	2296 ± 12
$\boldsymbol{n_s}$	0.9695 ± 0.0042	$\langle d^2\rangle^{1/2}$	2.420 ± 0.028	$H(2.33)$	235.68 ± 0.78
$\boldsymbol{r}$	< 0.0578	z_{re}	7.80 ± 0.77	$D_M(2.33)$	5753 ± 10
$\boldsymbol{y_{cal}}$	1.0008 ± 0.0024	10^9A_s	2.100 ± 0.034	$f\sigma_8(0.15)$	0.4514 ± 0.0080
$\boldsymbol{A_{217}^{CIB}}$	46 ± 7	$10^9A_se^{-2\tau}$	1.877 ± 0.011	$\sigma_8(0.15)$	0.7464 ± 0.0067
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{40}	1238^{+14}_{-18}	$f\sigma_8(0.38)$	0.4709 ± 0.0067
$\boldsymbol{A_{143}^{tSZ}}$	$5.6^{+2.2}_{-1.9}$	D_{220}	5738 ± 38	$\sigma_8(0.38)$	0.6623 ± 0.0057
$\boldsymbol{A_{100}^{PS}}$	257 ± 27	D_{810}	2539 ± 13	$f\sigma_8(0.51)$	0.4702 ± 0.0060
$\boldsymbol{A_{143}^{PS}}$	45 ± 8	D_{1420}	818.9 ± 4.6	$\sigma_8(0.51)$	0.6200 ± 0.0052
$\boldsymbol{A_{143\times217}^{PS}}$	42 ± 9	D_{2000}	231.6 ± 1.5	$f\sigma_8(0.61)$	0.4657 ± 0.0055
$\boldsymbol{A_{217}^{PS}}$	115.1 ± 9.9	$n_{s,0.002}$	0.9695 ± 0.0042	$\sigma_8(0.61)$	0.5901 ± 0.0049
$\boldsymbol{A^{kSZ}}$	< 4.00	Y_P	0.245437 ± 0.000054	$f\sigma_8(2.33)$	0.2978 ± 0.0025
$\boldsymbol{A_{100}^{dustTT}}$	8.8 ± 1.9	Y_P^{BBN}	0.246764 ± 0.000054	$\sigma_8(2.33)$	0.3073 ± 0.0026
$\boldsymbol{A_{143}^{dustTT}}$	10.9 ± 1.8	10^5D/H	2.565 ± 0.026	$r_{0.002}$	< 0.0539
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.6 ± 3.3	Age/Gyr	13.774 ± 0.023	$r_{0.01}$	< 0.0557
$\boldsymbol{A_{217}^{dustTT}}$	93.8 ± 7.3	z_*	1089.64 ± 0.26	$\ln(10^{10}A_t)$	$-0.48^{+1.3}_{-0.55}$
$\boldsymbol{A_{100}^{dustTE}}$	0.115 ± 0.038	r_*	144.74 ± 0.29	r_{10}	< 0.0275
$\boldsymbol{A_{100\times143}^{dustTE}}$	0.135 ± 0.030	$100\theta_*$	1.04127 ± 0.00030	10^9A_t	< 0.122
$\boldsymbol{A_{100\times217}^{dustTE}}$	0.481 ± 0.085	$D_M(z_*)$/Gpc	13.900 ± 0.028	$10^9A_te^{-2\tau}$	< 0.109
$\boldsymbol{A_{143}^{dustTE}}$	0.224 ± 0.054	z_{drag}	1060.09 ± 0.29	f_{2000}^{143}	28.8 ± 2.7
$\boldsymbol{A_{143\times217}^{dustTE}}$	0.662 ± 0.079	r_{drag}	147.37 ± 0.29	$f_{2000}^{143\times217}$	31.6 ± 1.8
$\boldsymbol{A_{217}^{dustTE}}$	2.06 ± 0.27	k_D	0.14066 ± 0.00032	f_{2000}^{217}	106.6 ± 1.7
$\boldsymbol{c_{100}}$	0.99966 ± 0.00061	$100\theta_D$	0.16068 ± 0.00017	χ^2_{simall}	1327 ± 1000
$\boldsymbol{c_{217}}$	0.99818 ± 0.00061	z_{eq}	3368 ± 29	χ^2_{lowl}	24.2 ± 1.6
H_0	68.05 ± 0.58	k_{eq}	0.010281 ± 0.000090	χ^2_{plik}	1431 ± 1000
Ω_Λ	0.6941 ± 0.0077	$100\theta_{eq}$	0.8199 ± 0.0056	$\chi^2_{H073p45}$	10.7 ± 2.3
Ω_m	0.3059 ± 0.0077	$100\theta_{s,eq}$	0.4527 ± 0.0029	χ^2_{prior}	11.5 ± 4.5
$\Omega_m h^2$	0.1416 ± 0.0012	$H(0.15)$	73.27 ± 0.49	χ^2_{CMB}	2782.9 ± 6.3
$\Omega_m h^3$	0.09635 ± 0.00029	$D_M(0.15)$	637.5 ± 4.8		
σ_8	0.8072 ± 0.0076	$H(0.38)$	83.29 ± 0.36		

$\bar{\chi}^2_{eff} = 2805.11$; $\Delta\bar{\chi}^2_{eff} = 0.94$; $R - 1 = 0.02628$

17.10 base_r_plikHM_TTTEEE_lowl_lowE_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02236 ± 0.00015	σ_8	0.8119 ± 0.0070	$D_M(0.15)$	643.4 ± 5.2
$\boldsymbol{\Omega_c h^2}$	0.1200 ± 0.0014	S_8	0.832 ± 0.016	$H(0.38)$	82.86 ± 0.37
$\boldsymbol{100\theta_{MC}}$	1.04091 ± 0.00031	$\sigma_8\Omega_m^{0.5}$	0.4559 ± 0.0088	$D_M(0.38)$	1534 ± 10
$\boldsymbol{\tau}$	$0.0550^{+0.0049}_{-0.0082}$	$\sigma_8\Omega_m^{0.25}$	0.6084 ± 0.0081	$H(0.51)$	89.62 ± 0.29
$\boldsymbol{\ln(10^{10}A_s)}$	$3.046^{+0.012}_{-0.016}$	$\sigma_8/h^{0.5}$	0.989 ± 0.011	$D_M(0.51)$	1986 ± 12
$\boldsymbol{n_s}$	0.9659 ± 0.0044	$r_{drag}h$	99.1 ± 1.1	$H(0.61)$	95.27 ± 0.24
$\boldsymbol{r}$	< 0.0520	$\langle d^2\rangle^{1/2}$	2.445 ± 0.027	$D_M(0.61)$	2311 ± 13
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0024	z_{re}	$7.73^{+0.54}_{-0.80}$	$H(2.33)$	236.55 ± 0.82
$\boldsymbol{A_{217}^{CIB}}$	47 ± 7	10^9A_s	$2.102^{+0.024}_{-0.034}$	$D_M(2.33)$	5764 ± 11
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$10^9A_se^{-2\tau}$	1.883 ± 0.012	$f\sigma_8(0.15)$	0.4602 ± 0.0082
$\boldsymbol{A_{143}^{tSZ}}$	$5.5^{+2.2}_{-1.9}$	D_{40}	1244^{+14}_{-18}	$\sigma_8(0.15)$	$0.7499^{+0.0056}_{-0.0064}$
$\boldsymbol{A_{100}^{PS}}$	258 ± 28	D_{220}	5730 ± 38	$f\sigma_8(0.38)$	0.4777 ± 0.0066
$\boldsymbol{A_{143}^{PS}}$	46 ± 8	D_{810}	2540 ± 13	$\sigma_8(0.38)$	$0.6643^{+0.0045}_{-0.0054}$
$\boldsymbol{A_{143\times217}^{PS}}$	42 ± 9	D_{1420}	817.8 ± 4.6	$f\sigma_8(0.51)$	0.4758 ± 0.0058
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	D_{2000}	231.1 ± 1.5	$\sigma_8(0.51)$	$0.6215^{+0.0040}_{-0.0051}$
$\boldsymbol{A^{kSZ}}$	< 4.15	$n_{s,0.002}$	0.9659 ± 0.0044	$f\sigma_8(0.61)$	0.4705 ± 0.0052
$\boldsymbol{A_{100}^{dustTT}}$	8.9 ± 1.8	Y_P	$0.245391^{+0.000062}_{-0.000053}$	$\sigma_8(0.61)$	$0.5913^{+0.0037}_{-0.0048}$
$\boldsymbol{A_{143}^{dustTT}}$	10.9 ± 1.8	Y_P^{BBN}	$0.246718^{+0.000062}_{-0.000053}$	$f\sigma_8(2.33)$	$0.2980^{+0.0018}_{-0.0024}$
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.6 ± 3.3	10^5D/H	2.587 ± 0.027	$\sigma_8(2.33)$	$0.3070^{+0.0018}_{-0.0026}$
$\boldsymbol{A_{217}^{dustTT}}$	93.7 ± 7.4	Age/Gyr	13.798 ± 0.024	$r_{0.002}$	< 0.0475
$\boldsymbol{A_{100}^{dustTE}}$	0.115 ± 0.038	z_*	1089.93 ± 0.27	$r_{0.01}$	< 0.0497
$\boldsymbol{A_{100\times143}^{dustTE}}$	0.135 ± 0.030	r_*	144.44 ± 0.30	$\ln(10^{10}A_t)$	$-0.58^{+1.4}_{-0.58}$
$\boldsymbol{A_{100\times217}^{dustTE}}$	0.483 ± 0.084	$100\theta_*$	1.04110 ± 0.00030	r_{10}	< 0.0244
$\boldsymbol{A_{143}^{dustTE}}$	0.226 ± 0.054	$D_M(z_*)$/Gpc	13.874 ± 0.028	10^9A_t	< 0.109
$\boldsymbol{A_{143\times217}^{dustTE}}$	0.665 ± 0.079	z_{drag}	1059.92 ± 0.30	$10^9A_te^{-2\tau}$	< 0.0979
$\boldsymbol{A_{217}^{dustTE}}$	2.08 ± 0.27	r_{drag}	147.10 ± 0.30	f_{2000}^{143}	29.3 ± 2.7
$\boldsymbol{c_{100}}$	0.99965 ± 0.00061	k_D	0.14085 ± 0.00032	$f_{2000}^{143\times217}$	32.0 ± 1.8
$\boldsymbol{c_{217}}$	0.99819 ± 0.00062	$100\theta_D$	0.16077 ± 0.00017	f_{2000}^{217}	106.9 ± 1.8
H_0	67.35 ± 0.60	z_{eq}	3402 ± 31	χ^2_{simall}	397.2 ± 1.9
Ω_Λ	0.6846 ± 0.0084	k_{eq}	0.010383 ± 0.000094	χ^2_{lowl}	24.8 ± 1.6
Ω_m	0.3154 ± 0.0084	$100\theta_{eq}$	0.8134 ± 0.0058	χ^2_{plik}	2359.4 ± 5.8
$\Omega_m h^2$	0.1430 ± 0.0013	$100\theta_{s,eq}$	0.4494 ± 0.0030	χ^2_{prior}	11.5 ± 4.5
$\Omega_m h^3$	0.09631 ± 0.00029	$H(0.15)$	72.68 ± 0.52	χ^2_{CMB}	2781.4 ± 5.9

$\bar{\chi}^2_{eff} = 2792.94$; $\Delta\bar{\chi}^2_{eff} = 1.40$; $R - 1 = 0.01114$

17.11 base_r_plikHM_TTTEEE_lowl_lowE_post_BAO_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02242 ± 0.00013	$\sigma_8\Omega_m^{0.5}$	0.4512 ± 0.0067	$D_M(0.51)$	1979.1 ± 8.8
$\boldsymbol{\Omega_c h^2}$	0.1192 ± 0.0010	$\sigma_8\Omega_m^{0.25}$	0.6044 ± 0.0067	$H(0.61)$	95.40 ± 0.19
$\boldsymbol{100\theta_{MC}}$	1.04101 ± 0.00029	$\sigma_8/h^{0.5}$	0.9842 ± 0.0097	$D_M(0.61)$	2303.1 ± 9.5
$\boldsymbol{\tau}$	$0.0559^{+0.0054}_{-0.0080}$	$r_{drag}h$	99.70 ± 0.77	$H(2.33)$	236.09 ± 0.61
$\boldsymbol{\ln(10^{10}A_s)}$	$3.046^{+0.012}_{-0.016}$	$\langle d^2\rangle^{1/2}$	$2.433^{+0.022}_{-0.025}$	$D_M(2.33)$	5758.6 ± 8.8
$\boldsymbol{n_s}$	0.9678 ± 0.0037	z_{re}	$7.81^{+0.59}_{-0.79}$	$f\sigma_8(0.15)$	0.4558 ± 0.0064
$\boldsymbol{r}$	< 0.0557	10^9A_s	$2.103^{+0.025}_{-0.034}$	$\sigma_8(0.15)$	$0.7484^{+0.0053}_{-0.0064}$
$\boldsymbol{y_{cal}}$	1.0008 ± 0.0024	$10^9A_se^{-2\tau}$	1.880 ± 0.011	$f\sigma_8(0.38)$	0.4744 ± 0.0054
$\boldsymbol{A^{CIB}_{217}}$	47 ± 7	D_{40}	1241^{+13}_{-17}	$\sigma_8(0.38)$	$0.6635^{+0.0044}_{-0.0056}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{220}	5733 ± 37	$f\sigma_8(0.51)$	0.4731 ± 0.0049
$\boldsymbol{A^{tSZ}_{143}}$	$5.5^{+2.2}_{-1.9}$	D_{810}	2540 ± 13	$\sigma_8(0.51)$	$0.6210^{+0.0041}_{-0.0052}$
$\boldsymbol{A^{PS}_{100}}$	258 ± 28	D_{1420}	818.3 ± 4.5	$f\sigma_8(0.61)$	0.4682 ± 0.0045
$\boldsymbol{A^{PS}_{143}}$	45 ± 8	D_{2000}	231.3 ± 1.5	$\sigma_8(0.61)$	$0.5909^{+0.0038}_{-0.0049}$
$\boldsymbol{A^{PS}_{143\times217}}$	42 ± 9	$n_{s,0.002}$	0.9678 ± 0.0037	$f\sigma_8(2.33)$	$0.2980^{+0.0019}_{-0.0025}$
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	Y_P	$0.245412^{+0.000053}_{-0.000047}$	$\sigma_8(2.33)$	$0.3073^{+0.0019}_{-0.0026}$
$\boldsymbol{A^{kSZ}}$	< 4.10	Y_P^{BBN}	$0.246738^{+0.000053}_{-0.000047}$	$r_{0.002}$	< 0.0513
$\boldsymbol{A^{dustTT}_{100}}$	8.9 ± 1.9	10^5D/H	2.577 ± 0.024	$r_{0.01}$	< 0.0535
$\boldsymbol{A^{dustTT}_{143}}$	10.9 ± 1.8	Age/Gyr	13.787 ± 0.020	$\ln(10^{10}A_t)$	$-0.53^{+1.3}_{-0.57}$
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.6 ± 3.4	z_*	1089.79 ± 0.22	r_{10}	< 0.0263
$\boldsymbol{A^{dustTT}_{217}}$	93.8 ± 7.4	r_*	144.60 ± 0.24	10^9A_t	< 0.117
$\boldsymbol{A^{dustTE}_{100}}$	0.116 ± 0.037	$100\theta_*$	1.04119 ± 0.00029	$10^9A_te^{-2\tau}$	< 0.105
$\boldsymbol{A^{dustTE}_{100\times143}}$	0.136 ± 0.030	$D_M(z_*)$/Gpc	13.888 ± 0.023	f^{143}_{2000}	29.0 ± 2.7
$\boldsymbol{A^{dustTE}_{100\times217}}$	0.482 ± 0.084	z_{drag}	1059.99 ± 0.28	$f^{143\times217}_{2000}$	31.8 ± 1.8
$\boldsymbol{A^{dustTE}_{143}}$	0.226 ± 0.054	r_{drag}	147.25 ± 0.25	f^{217}_{2000}	106.8 ± 1.7
$\boldsymbol{A^{dustTE}_{143\times217}}$	0.665 ± 0.079	k_D	0.14073 ± 0.00029	χ^2_{simall}	1323 ± 1000
$\boldsymbol{A^{dustTE}_{217}}$	2.08 ± 0.26	$100\theta_D$	0.16073 ± 0.00017	χ^2_{lowl}	24.5 ± 1.5
$\boldsymbol{c_{100}}$	0.99966 ± 0.00061	z_{eq}	3384 ± 23	χ^2_{plik}	1434 ± 1000
$\boldsymbol{c_{217}}$	0.99819 ± 0.00062	k_{eq}	0.010329 ± 0.000070	χ^2_{6DF}	0.051 ± 0.062
H_0	67.70 ± 0.44	$100\theta_{eq}$	0.8168 ± 0.0043	χ^2_{MGS}	1.30 ± 0.42
Ω_Λ	0.6896 ± 0.0060	$100\theta_{s,eq}$	0.4512 ± 0.0022	$\chi^2_{DR12BAO}$	4.7 ± 1.4
Ω_m	0.3104 ± 0.0060	$H(0.15)$	72.98 ± 0.38	χ^2_{prior}	11.5 ± 4.5
$\Omega_m h^2$	0.14226 ± 0.00095	$D_M(0.15)$	640.4 ± 3.8	χ^2_{BAO}	6.1 ± 1.1
$\Omega_m h^3$	0.09631 ± 0.00029	$H(0.38)$	83.07 ± 0.28	χ^2_{CMB}	2781.4 ± 5.9
σ_8	$0.8098^{+0.0060}_{-0.0071}$	$D_M(0.38)$	1527.6 ± 7.5		
S_8	0.824 ± 0.012	$H(0.51)$	89.78 ± 0.22		

$\bar{\chi}^2_{eff} = 2798.95$; $\Delta\bar{\chi}^2_{eff} = 1.23$; $R - 1 = 0.02065$

17.12 base_r_plikHM_TTTEEE_lowl_lowE_post_Riess18_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02249 ± 0.00014	S_8	0.815 ± 0.015	$D_M(0.38)$	1521.6 ± 9.7
$\boldsymbol{\Omega_c h^2}$	0.1185 ± 0.0013	$\sigma_8\Omega_m^{0.5}$	0.4466 ± 0.0084	$H(0.51)$	89.96 ± 0.28
$\boldsymbol{100\theta_{MC}}$	1.04110 ± 0.00030	$\sigma_8\Omega_m^{0.25}$	0.6006 ± 0.0081	$D_M(0.51)$	1972 ± 11
$\boldsymbol{\tau}$	$0.0569^{+0.0058}_{-0.0082}$	$\sigma_8/h^{0.5}$	0.979 ± 0.011	$H(0.61)$	$95.54^{+0.21}_{-0.24}$
$\boldsymbol{\ln(10^{10}A_s)}$	$3.046^{+0.013}_{-0.016}$	$r_{drag}h$	100.3 ± 1.0	$D_M(0.61)$	2295 ± 12
$\boldsymbol{n_s}$	0.9696 ± 0.0042	$\langle d^2\rangle^{1/2}$	2.422 ± 0.027	$H(2.33)$	235.67 ± 0.78
$\boldsymbol{r}$	< 0.0577	z_{re}	$7.87^{+0.61}_{-0.82}$	$D_M(2.33)$	5753 ± 10
$\boldsymbol{y_{cal}}$	1.0008 ± 0.0024	10^9A_s	$2.103^{+0.028}_{-0.035}$	$f\sigma_8(0.15)$	0.4516 ± 0.0079
$\boldsymbol{A_{217}^{CIB}}$	46 ± 6	$10^9A_se^{-2\tau}$	1.877 ± 0.011	$\sigma_8(0.15)$	0.7469 ± 0.0064
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{40}	1238^{+14}_{-18}	$f\sigma_8(0.38)$	0.4712 ± 0.0066
$\boldsymbol{A_{143}^{tSZ}}$	$5.6^{+2.2}_{-1.9}$	D_{220}	5738 ± 38	$\sigma_8(0.38)$	$0.6627^{+0.0050}_{-0.0056}$
$\boldsymbol{A_{100}^{PS}}$	257 ± 27	D_{810}	2539 ± 13	$f\sigma_8(0.51)$	0.4705 ± 0.0059
$\boldsymbol{A_{143}^{PS}}$	45 ± 8	D_{1420}	818.9 ± 4.6	$\sigma_8(0.51)$	$0.6205^{+0.0045}_{-0.0052}$
$\boldsymbol{A_{143\times217}^{PS}}$	42 ± 9	D_{2000}	231.6 ± 1.5	$f\sigma_8(0.61)$	0.4660 ± 0.0053
$\boldsymbol{A_{217}^{PS}}$	115.1 ± 9.9	$n_{s,0.002}$	0.9696 ± 0.0042	$\sigma_8(0.61)$	$0.5905^{+0.0042}_{-0.0050}$
$\boldsymbol{A^{kSZ}}$	< 3.99	Y_P	0.245438 ± 0.000053	$f\sigma_8(2.33)$	$0.2980^{+0.0020}_{-0.0026}$
$\boldsymbol{A_{100}^{dustTT}}$	8.8 ± 1.9	Y_P^{BBN}	0.246765 ± 0.000054	$\sigma_8(2.33)$	$0.3075^{+0.0021}_{-0.0027}$
$\boldsymbol{A_{143}^{dustTT}}$	10.9 ± 1.7	10^5D/H	2.565 ± 0.026	$r_{0.002}$	< 0.0538
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.6 ± 3.3	Age/Gyr	13.774 ± 0.023	$r_{0.01}$	< 0.0557
$\boldsymbol{A_{217}^{dustTT}}$	93.8 ± 7.3	z_*	1089.64 ± 0.25	$\ln(10^{10}A_t)$	$-0.48^{+1.4}_{-0.56}$
$\boldsymbol{A_{100}^{dustTE}}$	0.115 ± 0.037	r_*	144.75 ± 0.29	r_{10}	< 0.0275
$\boldsymbol{A_{100\times143}^{dustTE}}$	0.135 ± 0.030	$100\theta_*$	1.04127 ± 0.00030	10^9A_t	< 0.122
$\boldsymbol{A_{100\times217}^{dustTE}}$	0.482 ± 0.084	$D_M(z_*)$/Gpc	13.901 ± 0.028	$10^9A_te^{-2\tau}$	< 0.109
$\boldsymbol{A_{143}^{dustTE}}$	0.224 ± 0.053	z_{drag}	1060.09 ± 0.29	f_{2000}^{143}	28.7 ± 2.6
$\boldsymbol{A_{143\times217}^{dustTE}}$	0.662 ± 0.079	r_{drag}	147.37 ± 0.29	$f_{2000}^{143\times217}$	31.6 ± 1.8
$\boldsymbol{A_{217}^{dustTE}}$	2.06 ± 0.27	k_D	0.14065 ± 0.00032	f_{2000}^{217}	106.5 ± 1.7
$\boldsymbol{c_{100}}$	0.99967 ± 0.00061	$100\theta_D$	0.16068 ± 0.00017	χ^2_{simall}	1329 ± 1000
$\boldsymbol{c_{217}}$	0.99818 ± 0.00061	z_{eq}	3368 ± 29	χ^2_{lowl}	24.2 ± 1.6
H_0	68.06 ± 0.57	k_{eq}	0.010279 ± 0.000089	χ^2_{plik}	1430 ± 1000
Ω_Λ	0.6942 ± 0.0077	$100\theta_{eq}$	0.8200 ± 0.0056	$\chi^2_{H073p45}$	10.7 ± 2.2
Ω_m	0.3058 ± 0.0077	$100\theta_{s,eq}$	0.4528 ± 0.0029	χ^2_{prior}	11.5 ± 4.5
$\Omega_m h^2$	0.1416 ± 0.0012	$H(0.15)$	73.28 ± 0.49	χ^2_{CMB}	2782.7 ± 6.2
$\Omega_m h^3$	0.09635 ± 0.00029	$D_M(0.15)$	637.4 ± 4.8		
σ_8	0.8077 ± 0.0073	$H(0.38)$	83.30 ± 0.36		

$\bar{\chi}^2_{eff} = 2804.92$; $\Delta\bar{\chi}^2_{eff} = 1.03$; $R - 1 = 0.02655$

17.13 base_r_CamSpecHM_TT_lowl_lowE

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02214 ± 0.00022	$\sigma_8/h^{0.5}$	0.989 ± 0.016	$H(0.51)$	89.43 ± 0.46
$\boldsymbol{\Omega_c h^2}$	0.1201 ± 0.0021	$r_{\rm drag} h$	98.9 ± 1.7	$D_{\rm M}(0.51)$	1992 ± 19
$\boldsymbol{100\theta_{MC}}$	1.04087 ± 0.00048	$\langle d^2 \rangle^{1/2}$	2.440 ± 0.039	$H(0.61)$	95.09 ± 0.37
$\boldsymbol{\tau}$	0.0520 ± 0.0080	$z_{\rm re}$	7.47 ± 0.82	$D_{\rm M}(0.61)$	2317 ± 20
$\boldsymbol{\ln(10^{10} A_s)}$	3.038 ± 0.016	$10^9 A_{\rm s}$	2.086 ± 0.034	$H(2.33)$	236.4 ± 1.3
$\boldsymbol{n_s}$	0.9652 ± 0.0059	$10^9 A_{\rm s} e^{-2\tau}$	1.880 ± 0.014	$D_{\rm M}(2.33)$	5774 ± 17
$\boldsymbol{r}$	< 0.0497	D_{40}	1240^{+17}_{-19}	$f\sigma_8(0.15)$	0.460 ± 0.012
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	D_{220}	5700 ± 42	$\sigma_8(0.15)$	0.7476 ± 0.0076
$\boldsymbol{A^{PS}_{100}}$	242 ± 25	D_{810}	2534 ± 14	$f\sigma_8(0.38)$	0.4773 ± 0.0098
$\boldsymbol{A^{PS}_{143}}$	41 ± 8	D_{1420}	814.5 ± 5.2	$\sigma_8(0.38)$	0.6621 ± 0.0060
$\boldsymbol{A^{PS}_{217}}$	102 ± 10	D_{2000}	229.7 ± 1.8	$f\sigma_8(0.51)$	0.4751 ± 0.0084
$\boldsymbol{A^{CIB}_{217}}$	41 ± 7	$n_{\rm s,0.002}$	0.9652 ± 0.0059	$\sigma_8(0.51)$	0.6193 ± 0.0055
$\boldsymbol{A^{tSZ}_{143}}$	$3.8^{+1.8}_{-2.6}$	$Y_{\rm P}$	$0.24530^{+0.00010}_{-0.000088}$	$f\sigma_8(0.61)$	0.4697 ± 0.0074
$\boldsymbol{r^{PS}_{143\times217}}$	0.65 ± 0.13	$Y_{\rm P}^{\rm BBN}$	$0.24662^{+0.00010}_{-0.000088}$	$\sigma_8(0.61)$	0.5891 ± 0.0051
$\boldsymbol{r^{CIB}_{143\times217}}$	$0.58^{+0.41}_{-0.14}$	10^5D/H	2.629 ± 0.042	$f\sigma_8(2.33)$	0.2968 ± 0.0025
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Age/Gyr	13.822 ± 0.037	$\sigma_8(2.33)$	0.3058 ± 0.0026
$\boldsymbol{A^{kSZ}}$	—	z_*	1090.22 ± 0.42	$r_{0.002}$	< 0.0453
$\boldsymbol{A^{dust}_{100}}$	1.01 ± 0.20	r_*	144.57 ± 0.49	$r_{0.01}$	< 0.0475
$\boldsymbol{A^{dust}_{143}}$	0.98 ± 0.18	$100\theta_*$	1.04108 ± 0.00047	$\ln(10^{10} A_{\rm t})$	$-0.67^{+1.4}_{-0.60}$
$\boldsymbol{A^{dust}_{217}}$	0.97 ± 0.10	$D_{\rm M}(z_*)$/Gpc	13.887 ± 0.045	r_{10}	< 0.0233
$\boldsymbol{A^{dust}_{143\times217}}$	1.03 ± 0.16	$z_{\rm drag}$	1059.41 ± 0.46	$10^9 A_{\rm t}$	< 0.104
$\boldsymbol{c_{100}}$	0.9974 ± 0.0011	$r_{\rm drag}$	147.31 ± 0.49	$10^9 A_t e^{-2\tau}$	< 0.0934
$\boldsymbol{c_{217}}$	1.0012 ± 0.0016	$k_{\rm D}$	0.14045 ± 0.00053	f^{143}_{2000}	30.6 ± 3.1
H_0	67.11 ± 0.95	$100\theta_{\rm D}$	0.16107 ± 0.00027	f^{217}_{2000}	107.5 ± 2.0
Ω_Λ	$0.682^{+0.014}_{-0.013}$	$z_{\rm eq}$	3400 ± 49	$f^{143\times217}_{2000}$	32.8 ± 2.2
$\Omega_{\rm m}$	0.318 ± 0.013	$k_{\rm eq}$	0.01038 ± 0.00015	$\chi^2_{\rm simall}$	397.1 ± 1.6
$\Omega_{\rm m} h^2$	0.1429 ± 0.0020	$100\theta_{\rm eq}$	0.8132 ± 0.0092	$\chi^2_{\rm lowl}$	24.7 ± 1.8
$\Omega_{\rm m} h^3$	0.09590 ± 0.00046	$100\theta_{\rm s,eq}$	0.4495 ± 0.0047	$\chi^2_{\rm CamSpec}$	7063.7 ± 5.5
σ_8	0.8097 ± 0.0090	$H(0.15)$	72.45 ± 0.81	$\chi^2_{\rm prior}$	7.6 ± 3.5
S_8	0.833 ± 0.025	$D_{\rm M}(0.15)$	645.6 ± 8.2	$\chi^2_{\rm CMB}$	7485.5 ± 5.7
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.456 ± 0.013	$H(0.38)$	82.66 ± 0.58		
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.608 ± 0.012	$D_{\rm M}(0.38)$	1538 ± 16		

$\bar{\chi}^2_{\rm eff} = 7493.09$; $\Delta\bar{\chi}^2_{\rm eff} = 1.55$; $R - 1 = 0.00732$

17.14 base_r_CamSpecHM_TT_lowl_lowE_post_BAO

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02222 ± 0.00020	$r_{\rm drag} h$	99.92 ± 0.94	$H(0.61)$	95.30 ± 0.25
$\boldsymbol{\Omega_c h^2}$	0.1188 ± 0.0012	$\langle d^2 \rangle^{1/2}$	2.419 ± 0.028	$D_{\rm M}(0.61)$	2304 ± 12
$\boldsymbol{100\theta_{MC}}$	1.04105 ± 0.00042	$z_{\rm re}$	7.57 ± 0.81	$H(2.33)$	235.63 ± 0.79
$\boldsymbol{\tau}$	0.0533 ± 0.0079	$10^9 A_{\rm s}$	2.085 ± 0.034	$D_{\rm M}(2.33)$	5766 ± 12
$\boldsymbol{\ln(10^{10} A_s)}$	3.037 ± 0.016	$10^9 A_{\rm s} e^{-2\tau}$	1.874 ± 0.012	$f\sigma_8(0.15)$	0.4529 ± 0.0077
$\boldsymbol{n_s}$	0.9682 ± 0.0044	D_{40}	1235^{+15}_{-19}	$\sigma_8(0.15)$	0.7450 ± 0.0068
$\boldsymbol{r}$	< 0.0532	D_{220}	5704 ± 41	$f\sigma_8(0.38)$	0.4716 ± 0.0065
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	D_{810}	2533 ± 14	$\sigma_8(0.38)$	0.6606 ± 0.0058
$\boldsymbol{A_{100}^{PS}}$	241 ± 25	D_{1420}	815.2 ± 5.2	$f\sigma_8(0.51)$	0.4705 ± 0.0058
$\boldsymbol{A_{143}^{PS}}$	40 ± 8	D_{2000}	229.9 ± 1.8	$\sigma_8(0.51)$	0.6184 ± 0.0054
$\boldsymbol{A_{217}^{PS}}$	101 ± 10	$n_{\rm s,0.002}$	0.9682 ± 0.0044	$f\sigma_8(0.61)$	0.4657 ± 0.0054
$\boldsymbol{A_{217}^{CIB}}$	41 ± 7	$Y_{\rm P}$	0.245331 ± 0.000083	$\sigma_8(0.61)$	0.5884 ± 0.0051
$\boldsymbol{A_{143}^{tSZ}}$	$3.8^{+1.8}_{-2.5}$	$Y_{\rm P}^{\rm BBN}$	0.246657 ± 0.000084	$f\sigma_8(2.33)$	0.2968 ± 0.0026
$\boldsymbol{r_{143\times217}^{PS}}$	0.65 ± 0.13	10^5D/H	2.615 ± 0.037	$\sigma_8(2.33)$	0.3061 ± 0.0026
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.58^{+0.39}_{-0.15}$	Age/Gyr	13.804 ± 0.028	$r_{0.002}$	< 0.0491
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	z_*	1090.01 ± 0.30	$r_{0.01}$	< 0.0512
$\boldsymbol{A^{kSZ}}$	4.9 ± 2.7	r_*	144.86 ± 0.32	$\ln(10^{10} A_{\rm t})$	$-0.60^{+1.4}_{-0.59}$
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.20	$100\theta_*$	1.04125 ± 0.00042	r_{10}	< 0.0251
$\boldsymbol{A_{143}^{dust}}$	0.98 ± 0.18	$D_{\rm M}(z_*)$/Gpc	13.912 ± 0.031	$10^9 A_{\rm t}$	< 0.111
$\boldsymbol{A_{217}^{dust}}$	0.97 ± 0.10	$z_{\rm drag}$	1059.50 ± 0.45	$10^9 A_t e^{-2\tau}$	< 0.0996
$\boldsymbol{A_{143\times217}^{dust}}$	1.03 ± 0.16	$r_{\rm drag}$	147.58 ± 0.35	f_{2000}^{143}	30.4 ± 3.0
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	$k_{\rm D}$	0.14023 ± 0.00045	f_{2000}^{217}	107.3 ± 2.0
$\boldsymbol{c_{217}}$	1.0012 ± 0.0016	$100\theta_{\rm D}$	0.16103 ± 0.00026	$f_{2000}^{143\times217}$	32.6 ± 2.2
H_0	67.70 ± 0.55	$z_{\rm eq}$	3370 ± 29	$\chi^2_{\rm simall}$	397.2 ± 1.7
Ω_Λ	0.6908 ± 0.0073	$k_{\rm eq}$	0.010285 ± 0.000087	$\chi^2_{\rm lowl}$	24.1 ± 1.6
$\Omega_{\rm m}$	0.3092 ± 0.0073	$100\theta_{\rm eq}$	0.8189 ± 0.0053	$\chi^2_{\rm CamSpec}$	7064.2 ± 5.4
$\Omega_{\rm m} h^2$	0.1417 ± 0.0012	$100\theta_{\rm s,eq}$	0.4524 ± 0.0027	$\chi^2_{\rm 6DF}$	0.051 ± 0.069
$\Omega_{\rm m} h^3$	0.09590 ± 0.00046	$H(0.15)$	72.95 ± 0.47	$\chi^2_{\rm MGS}$	1.44 ± 0.54
σ_8	0.8060 ± 0.0077	$D_{\rm M}(0.15)$	640.6 ± 4.7	$\chi^2_{\rm DR12BAO}$	4.6 ± 1.5
S_8	0.818 ± 0.015	$H(0.38)$	83.01 ± 0.35	$\chi^2_{\rm prior}$	7.6 ± 3.5
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4481 ± 0.0081	$D_{\rm M}(0.38)$	1528.3 ± 9.4	$\chi^2_{\rm BAO}$	6.1 ± 1.2
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.6010 ± 0.0080	$H(0.51)$	89.70 ± 0.29	$\chi^2_{\rm CMB}$	7485.4 ± 5.6
$\sigma_8 / h^{0.5}$	0.980 ± 0.011	$D_{\rm M}(0.51)$	1980 ± 11		

$\bar{\chi}^2_{\rm eff} = 7499.09$; $\Delta\bar{\chi}^2_{\rm eff} = 1.54$; $R - 1 = 0.01122$

17.15 base_r_CamSpecHM_TT_lowl_lowE_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02215 ± 0.00022	$\sigma_8/h^{0.5}$	0.989 ± 0.016	$H(0.51)$	89.45 ± 0.46
$\boldsymbol{\Omega_c h^2}$	0.1200 ± 0.0021	$r_{\rm drag} h$	98.9 ± 1.7	$D_{\rm M}(0.51)$	1991 ± 19
$\boldsymbol{100\theta_{MC}}$	1.04088 ± 0.00048	$\langle d^2 \rangle^{1/2}$	2.442 ± 0.038	$H(0.61)$	$95.11^{+0.34}_{-0.38}$
$\boldsymbol{\tau}$	$0.0537^{+0.0045}_{-0.0083}$	$z_{\rm re}$	$7.65^{+0.52}_{-0.82}$	$D_{\rm M}(0.61)$	2316 ± 20
$\boldsymbol{\ln(10^{10} A_s)}$	$3.041^{+0.012}_{-0.016}$	$10^9 A_{\rm s}$	$2.092^{+0.024}_{-0.033}$	$H(2.33)$	236.4 ± 1.3
$\boldsymbol{n_s}$	0.9654 ± 0.0059	$10^9 A_{\rm s} e^{-2\tau}$	1.879 ± 0.014	$D_{\rm M}(2.33)$	5773 ± 17
$\boldsymbol{r}$	< 0.0495	D_{40}	1240^{+17}_{-19}	$f\sigma_8(0.15)$	0.461 ± 0.012
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	D_{220}	5700 ± 42	$\sigma_8(0.15)$	0.7486 ± 0.0071
$\boldsymbol{A^{PS}_{100}}$	242 ± 25	D_{810}	2533 ± 14	$f\sigma_8(0.38)$	0.4776 ± 0.0097
$\boldsymbol{A^{PS}_{143}}$	41 ± 8	D_{1420}	814.6 ± 5.2	$\sigma_8(0.38)$	$0.6630^{+0.0051}_{-0.0057}$
$\boldsymbol{A^{PS}_{217}}$	102 ± 10	D_{2000}	229.7 ± 1.8	$f\sigma_8(0.51)$	0.4756 ± 0.0083
$\boldsymbol{A^{CIB}_{217}}$	41 ± 7	$n_{\rm s,0.002}$	0.9654 ± 0.0059	$\sigma_8(0.51)$	$0.6202^{+0.0045}_{-0.0052}$
$\boldsymbol{A^{tSZ}_{143}}$	$3.8^{+1.8}_{-2.6}$	$Y_{\rm P}$	$0.24530^{+0.00010}_{-0.000088}$	$f\sigma_8(0.61)$	0.4702 ± 0.0073
$\boldsymbol{r^{PS}_{143\times217}}$	0.65 ± 0.13	$Y_{\rm P}^{\rm BBN}$	$0.24663^{+0.00010}_{-0.000088}$	$\sigma_8(0.61)$	$0.5900^{+0.0041}_{-0.0049}$
$\boldsymbol{r^{CIB}_{143\times217}}$	$0.58^{+0.40}_{-0.14}$	10^5D/H	2.628 ± 0.042	$f\sigma_8(2.33)$	$0.2973^{+0.0019}_{-0.0024}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Age/Gyr	13.821 ± 0.037	$\sigma_8(2.33)$	$0.3063^{+0.0019}_{-0.0026}$
$\boldsymbol{A^{kSZ}}$	$4.9^{+2.8}_{-3.5}$	z_*	1090.21 ± 0.41	$r_{0.002}$	< 0.0451
$\boldsymbol{A^{dust}_{100}}$	1.00 ± 0.19	r_*	144.59 ± 0.49	$r_{0.01}$	< 0.0473
$\boldsymbol{A^{dust}_{143}}$	0.98 ± 0.17	$100\theta_*$	1.04109 ± 0.00047	$\ln(10^{10} A_{\rm t})$	$-0.67^{+1.4}_{-0.61}$
$\boldsymbol{A^{dust}_{217}}$	0.97 ± 0.10	$D_{\rm M}(z_*)$/Gpc	13.888 ± 0.045	r_{10}	< 0.0232
$\boldsymbol{A^{dust}_{143\times217}}$	1.03 ± 0.16	$z_{\rm drag}$	1059.43 ± 0.46	$10^9 A_{\rm t}$	< 0.104
$\boldsymbol{c_{100}}$	0.9974 ± 0.0011	$r_{\rm drag}$	147.33 ± 0.49	$10^9 A_t e^{-2\tau}$	< 0.0930
$\boldsymbol{c_{217}}$	1.0012 ± 0.0016	$k_{\rm D}$	0.14045 ± 0.00053	f^{143}_{2000}	30.5 ± 3.0
H_0	67.15 ± 0.94	$100\theta_{\rm D}$	0.16106 ± 0.00026	f^{217}_{2000}	107.4 ± 2.0
Ω_Λ	0.683 ± 0.013	$z_{\rm eq}$	3398 ± 49	$f^{143\times217}_{2000}$	32.8 ± 2.2
$\Omega_{\rm m}$	0.317 ± 0.013	$k_{\rm eq}$	0.01037 ± 0.00015	$\chi^2_{\rm simall}$	397.0 ± 1.6
$\Omega_{\rm m} h^2$	0.1428 ± 0.0020	$100\theta_{\rm eq}$	0.8135 ± 0.0091	$\chi^2_{\rm lowl}$	24.6 ± 1.8
$\Omega_{\rm m} h^3$	0.09590 ± 0.00046	$100\theta_{\rm s,eq}$	0.4497 ± 0.0047	$\chi^2_{\rm CamSpec}$	7063.6 ± 5.5
σ_8	0.8108 ± 0.0086	$H(0.15)$	72.49 ± 0.80	$\chi^2_{\rm prior}$	7.6 ± 3.4
S_8	0.833 ± 0.025	$D_{\rm M}(0.15)$	645.3 ± 8.1	$\chi^2_{\rm CMB}$	7485.2 ± 5.6
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.456 ± 0.013	$H(0.38)$	82.69 ± 0.58		
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.608 ± 0.012	$D_{\rm M}(0.38)$	1538 ± 16		

$\bar{\chi}^2_{\rm eff} = 7492.76$; $\Delta\bar{\chi}^2_{\rm eff} = 1.50$; $R - 1 = 0.00713$

17.16 base_r_CamSpecHM_TT_lowl_lowE_post_BAO_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02222 ± 0.00020	$r_{\rm drag} h$	99.93 ± 0.94	$H(0.61)$	95.30 ± 0.25
$\boldsymbol{\Omega_c h^2}$	0.1188 ± 0.0012	$\langle d^2 \rangle^{1/2}$	2.422 ± 0.026	$D_{\rm M}(0.61)$	2304 ± 12
$\boldsymbol{100\theta_{MC}}$	1.04105 ± 0.00042	$z_{\rm re}$	$7.72^{+0.56}_{-0.82}$	$H(2.33)$	235.61 ± 0.79
$\boldsymbol{\tau}$	$0.0547^{+0.0050}_{-0.0082}$	$10^9 A_{\rm s}$	$2.090^{+0.025}_{-0.034}$	$D_{\rm M}(2.33)$	5765 ± 12
$\boldsymbol{\ln(10^{10} A_s)}$	$3.040^{+0.012}_{-0.016}$	$10^9 A_{\rm s} e^{-2\tau}$	1.873 ± 0.012	$f\sigma_8(0.15)$	0.4533 ± 0.0075
$\boldsymbol{n_s}$	0.9683 ± 0.0043	D_{40}	1234^{+15}_{-19}	$\sigma_8(0.15)$	$0.7459^{+0.0057}_{-0.0066}$
$\boldsymbol{r}$	< 0.0529	D_{220}	5704 ± 41	$f\sigma_8(0.38)$	0.4722 ± 0.0063
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	D_{810}	2533 ± 14	$\sigma_8(0.38)$	$0.6615^{+0.0047}_{-0.0057}$
$\boldsymbol{A^{PS}_{100}}$	241 ± 25	D_{1420}	815.2 ± 5.2	$f\sigma_8(0.51)$	0.4710 ± 0.0056
$\boldsymbol{A^{PS}_{143}}$	40 ± 8	D_{2000}	230.0 ± 1.8	$\sigma_8(0.51)$	$0.6192^{+0.0042}_{-0.0053}$
$\boldsymbol{A^{PS}_{217}}$	101 ± 10	$n_{\rm s,0.002}$	0.9683 ± 0.0043	$f\sigma_8(0.61)$	0.4663 ± 0.0051
$\boldsymbol{A^{CIB}_{217}}$	41 ± 7	$Y_{\rm P}$	0.245332 ± 0.000083	$\sigma_8(0.61)$	$0.5892^{+0.0040}_{-0.0050}$
$\boldsymbol{A^{tSZ}_{143}}$	$3.8^{+1.8}_{-2.5}$	$Y^{\rm BBN}_{\rm P}$	0.246658 ± 0.000083	$f\sigma_8(2.33)$	$0.2972^{+0.0019}_{-0.0025}$
$\boldsymbol{r^{PS}_{143\times217}}$	0.65 ± 0.13	10^5D/H	2.614 ± 0.037	$\sigma_8(2.33)$	$0.3065^{+0.0020}_{-0.0026}$
$\boldsymbol{r^{CIB}_{143\times217}}$	$0.57^{+0.39}_{-0.16}$	Age/Gyr	13.803 ± 0.028	$r_{0.002}$	< 0.0488
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	z_*	1090.00 ± 0.30	$r_{0.01}$	< 0.0508
$\boldsymbol{A^{kSZ}}$	4.9 ± 2.7	r_*	144.86 ± 0.32	$\ln(10^{10} A_{\rm t})$	$-0.61^{+1.4}_{-0.59}$
$\boldsymbol{A^{dust}_{100}}$	1.01 ± 0.20	$100\theta_*$	1.04125 ± 0.00042	r_{10}	< 0.0249
$\boldsymbol{A^{dust}_{143}}$	0.98 ± 0.18	$D_{\rm M}(z_*)$/Gpc	13.912 ± 0.031	$10^9 A_{\rm t}$	< 0.111
$\boldsymbol{A^{dust}_{217}}$	0.97 ± 0.10	$z_{\rm drag}$	1059.50 ± 0.45	$10^9 A_t e^{-2\tau}$	< 0.0992
$\boldsymbol{A^{dust}_{143\times217}}$	1.03 ± 0.16	$r_{\rm drag}$	147.58 ± 0.35	f^{143}_{2000}	30.3 ± 3.0
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	$k_{\rm D}$	0.14023 ± 0.00045	f^{217}_{2000}	107.2 ± 2.0
$\boldsymbol{c_{217}}$	1.0012 ± 0.0016	$100\theta_{\rm D}$	0.16103 ± 0.00026	$f^{143\times217}_{2000}$	32.6 ± 2.2
H_0	67.71 ± 0.54	$z_{\rm eq}$	3369 ± 29	$\chi^2_{\rm simall}$	397.1 ± 1.7
Ω_Λ	0.6910 ± 0.0073	$k_{\rm eq}$	0.010283 ± 0.000087	$\chi^2_{\rm lowl}$	24.1 ± 1.6
$\Omega_{\rm m}$	0.3090 ± 0.0073	$100\theta_{\rm eq}$	0.8190 ± 0.0053	$\chi^2_{\rm CamSpec}$	7064.0 ± 5.4
$\Omega_{\rm m} h^2$	0.1416 ± 0.0012	$100\theta_{\rm s,eq}$	0.4524 ± 0.0027	$\chi^2_{\rm 6DF}$	0.050 ± 0.067
$\Omega_{\rm m} h^3$	0.09590 ± 0.00046	$H(0.15)$	72.96 ± 0.47	$\chi^2_{\rm MGS}$	1.44 ± 0.54
σ_8	$0.8070^{+0.0066}_{-0.0075}$	$D_{\rm M}(0.15)$	640.5 ± 4.6	$\chi^2_{\rm DR12BAO}$	4.5 ± 1.5
S_8	0.819 ± 0.015	$H(0.38)$	83.02 ± 0.35	$\chi^2_{\rm prior}$	7.6 ± 3.4
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4486 ± 0.0080	$D_{\rm M}(0.38)$	1528.1 ± 9.4	$\chi^2_{\rm BAO}$	6.0 ± 1.2
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.6017 ± 0.0077	$H(0.51)$	89.71 ± 0.29	$\chi^2_{\rm CMB}$	7485.2 ± 5.6
$\sigma_8/h^{0.5}$	0.981 ± 0.011	$D_{\rm M}(0.51)$	1980 ± 11		

$\bar{\chi}^2_{\rm eff} = 7498.81$; $\Delta\bar{\chi}^2_{\rm eff} = 1.50$; $R - 1 = 0.01239$

17.17 base_r_CamSpecHM_TTTEEE_lowl_lowE

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02230 ± 0.00016	$\sigma_8\Omega_m^{0.5}$	0.4509 ± 0.0092	$H(0.38)$	82.93 ± 0.40
$\boldsymbol{\Omega_c h^2}$	0.1193 ± 0.0014	$\sigma_8\Omega_m^{0.25}$	0.6032 ± 0.0086	$D_M(0.38)$	1531 ± 11
$\boldsymbol{100\theta_{MC}}$	1.04090 ± 0.00032	$\sigma_8/h^{0.5}$	0.982 ± 0.012	$H(0.51)$	89.65 ± 0.31
$\boldsymbol{\tau}$	0.0524 ± 0.0078	$r_{drag}h$	99.5 ± 1.1	$D_M(0.51)$	1983 ± 13
$\boldsymbol{\ln(10^{10}A_s)}$	3.037 ± 0.016	$\langle d^2\rangle^{1/2}$	2.426 ± 0.029	$H(0.61)$	95.28 ± 0.25
$\boldsymbol{n_s}$	0.9673 ± 0.0047	z_{re}	7.47 ± 0.80	$D_M(0.61)$	2308 ± 14
$\boldsymbol{r}$	< 0.0751	$10^9 A_s$	2.084 ± 0.033	$H(2.33)$	236.06 ± 0.85
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.877 ± 0.012	$D_M(2.33)$	5765 ± 11
$\boldsymbol{A_{100}^{PS}}$	239 ± 25	D_{40}	1243^{+16}_{-20}	$f\sigma_8(0.15)$	0.4554 ± 0.0086
$\boldsymbol{A_{143}^{PS}}$	39 ± 8	D_{220}	5713 ± 39	$\sigma_8(0.15)$	0.7456 ± 0.0067
$\boldsymbol{A_{217}^{PS}}$	103 ± 10	D_{810}	2535 ± 14	$f\sigma_8(0.38)$	0.4735 ± 0.0070
$\boldsymbol{A_{217}^{CIB}}$	39 ± 7	D_{1420}	816.1 ± 4.9	$\sigma_8(0.38)$	0.6609 ± 0.0056
$\boldsymbol{A_{143}^{tSZ}}$	$3.9^{+1.9}_{-2.5}$	D_{2000}	230.4 ± 1.7	$f\sigma_8(0.51)$	0.4720 ± 0.0062
$\boldsymbol{r_{143\times217}^{PS}}$	0.66 ± 0.13	$n_{s,0.002}$	0.9673 ± 0.0047	$\sigma_8(0.51)$	0.6184 ± 0.0052
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.55^{+0.39}_{-0.19}$	Y_P	0.245365 ± 0.000066	$f\sigma_8(0.61)$	0.4670 ± 0.0056
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	0.246691 ± 0.000066	$\sigma_8(0.61)$	0.5884 ± 0.0049
$\boldsymbol{A^{kSZ}}$	$4.6^{+1.6}_{-4.5}$	10^5D/H	2.599 ± 0.031	$f\sigma_8(2.33)$	0.2967 ± 0.0024
$\boldsymbol{A_{100}^{dust}}$	1.00 ± 0.19	Age/Gyr	13.802 ± 0.026	$\sigma_8(2.33)$	0.3058 ± 0.0026
$\boldsymbol{A_{143}^{dust}}$	0.96 ± 0.18	z_*	1089.95 ± 0.29	$r_{0.002}$	< 0.0696
$\boldsymbol{A_{217}^{dust}}$	0.97 ± 0.10	r_*	144.66 ± 0.32	$r_{0.01}$	< 0.0723
$\boldsymbol{A_{143\times217}^{dust}}$	1.03 ± 0.16	$100\theta_*$	1.04109 ± 0.00032	$\ln(10^{10}A_t)$	$-0.18^{+1.2}_{-0.46}$
$\boldsymbol{c_{100}}$	0.9975 ± 0.0010	$D_M(z_*)$/Gpc	13.895 ± 0.030	r_{10}	< 0.0358
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	z_{drag}	1059.72 ± 0.34	$10^9 A_t$	< 0.156
$\boldsymbol{c_{TE}}$	0.9968 ± 0.0049	r_{drag}	147.34 ± 0.32	$10^9 A_t e^{-2\tau}$	< 0.141
$\boldsymbol{c_{EE}}$	0.9923 ± 0.0049	k_D	0.14055 ± 0.00035	f_{2000}^{143}	29.5 ± 2.9
H_0	67.52 ± 0.63	$100\theta_D$	0.16088 ± 0.00020	f_{2000}^{217}	106.7 ± 1.9
Ω_Λ	0.6878 ± 0.0087	z_{eq}	3385 ± 32	$f_{2000}^{143\times217}$	32.0 ± 2.0
Ω_m	0.3122 ± 0.0087	k_{eq}	0.010331 ± 0.000098	χ^2_{simall}	397.1 ± 1.6
$\Omega_m h^2$	0.1423 ± 0.0013	$100\theta_{eq}$	0.8162 ± 0.0061	χ^2_{lowl}	24.9 ± 1.9
$\Omega_m h^3$	0.09607 ± 0.00032	$100\theta_{s,eq}$	0.4510 ± 0.0031	$\chi^2_{CamSpec}$	11513.6 ± 5.8
σ_8	0.8070 ± 0.0076	$H(0.15)$	72.81 ± 0.54	χ^2_{prior}	7.8 ± 3.4
S_8	0.823 ± 0.017	$D_M(0.15)$	642.0 ± 5.4	χ^2_{CMB}	11935.7 ± 5.9

$\bar{\chi}^2_{eff} = 11943.49$; $\Delta\bar{\chi}^2_{eff} = 1.03$; $R - 1 = 0.01020$

17.18 base_r_CamSpecHM_TTTEEE_lowl_lowE_post_BAO

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02234 ± 0.00015	$\sigma_8/h^{0.5}$	0.978 ± 0.010	$H(0.61)$	95.37 ± 0.20
$\boldsymbol{\Omega_c h^2}$	0.1188 ± 0.0010	$r_{\rm drag} h$	99.94 ± 0.81	$D_{\rm M}(0.61)$	2302 ± 10
$\boldsymbol{100\theta_{MC}}$	1.04097 ± 0.00030	$\langle d^2 \rangle^{1/2}$	2.418 ± 0.025	$H(2.33)$	235.72 ± 0.64
$\boldsymbol{\tau}$	0.0530 ± 0.0078	$z_{\rm re}$	7.52 ± 0.79	$D_{\rm M}(2.33)$	5761.4 ± 9.4
$\boldsymbol{\ln(10^{10} A_s)}$	3.037 ± 0.016	$10^9 A_{\rm s}$	2.085 ± 0.033	$f\sigma_8(0.15)$	0.4522 ± 0.0067
$\boldsymbol{n_s}$	0.9686 ± 0.0041	$10^9 A_{\rm s} e^{-2\tau}$	1.875 ± 0.011	$\sigma_8(0.15)$	0.7446 ± 0.0065
$\boldsymbol{r}$	< 0.0786	D_{40}	1241^{+15}_{-20}	$f\sigma_8(0.38)$	0.4711 ± 0.0058
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	D_{220}	5716 ± 39	$\sigma_8(0.38)$	0.6603 ± 0.0056
$\boldsymbol{A^{PS}_{100}}$	238 ± 25	D_{810}	2534 ± 14	$f\sigma_8(0.51)$	0.4700 ± 0.0053
$\boldsymbol{A^{PS}_{143}}$	39 ± 8	D_{1420}	816.5 ± 4.8	$\sigma_8(0.51)$	0.6181 ± 0.0052
$\boldsymbol{A^{PS}_{217}}$	103 ± 10	D_{2000}	230.5 ± 1.6	$f\sigma_8(0.61)$	0.4653 ± 0.0049
$\boldsymbol{A^{CIB}_{217}}$	39 ± 7	$n_{\rm s,0.002}$	0.9686 ± 0.0041	$\sigma_8(0.61)$	0.5882 ± 0.0049
$\boldsymbol{A^{tSZ}_{143}}$	$4.0^{+1.9}_{-2.4}$	$Y_{\rm P}$	0.245380 ± 0.000059	$f\sigma_8(2.33)$	0.2967 ± 0.0025
$\boldsymbol{r^{PS}_{143\times217}}$	0.66 ± 0.13	$Y_{\rm P}^{\rm BBN}$	0.246707 ± 0.000060	$\sigma_8(2.33)$	0.3060 ± 0.0025
$\boldsymbol{r^{CIB}_{143\times217}}$	$0.55^{+0.40}_{-0.18}$	10^5D/H	2.592 ± 0.028	$r_{0.002}$	< 0.0735
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Age/Gyr	13.794 ± 0.021	$r_{0.01}$	< 0.0760
$\boldsymbol{A^{kSZ}}$	< 6.05	z_*	1089.86 ± 0.24	$\ln(10^{10} A_{\rm t})$	$-0.12^{+1.2}_{-0.45}$
$\boldsymbol{A^{dust}_{100}}$	1.01 ± 0.20	r_*	144.77 ± 0.25	r_{10}	< 0.0377
$\boldsymbol{A^{dust}_{143}}$	0.96 ± 0.17	$100\theta_*$	1.04116 ± 0.00030	$10^9 A_{\rm t}$	< 0.163
$\boldsymbol{A^{dust}_{217}}$	0.98 ± 0.10	$D_{\rm M}(z_*)$/Gpc	13.905 ± 0.024	$10^9 A_t e^{-2\tau}$	< 0.147
$\boldsymbol{A^{dust}_{143\times217}}$	1.03 ± 0.16	$z_{\rm drag}$	1059.77 ± 0.32	f^{143}_{2000}	29.3 ± 2.9
$\boldsymbol{c_{100}}$	0.9975 ± 0.0010	$r_{\rm drag}$	147.45 ± 0.26	f^{217}_{2000}	106.6 ± 1.9
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	$k_{\rm D}$	0.14046 ± 0.00032	$f^{143\times217}_{2000}$	31.8 ± 2.0
$\boldsymbol{c_{TE}}$	0.9968 ± 0.0049	$100\theta_{\rm D}$	0.16085 ± 0.00019	$\chi^2_{\rm simall}$	397.2 ± 1.6
$\boldsymbol{c_{EE}}$	0.9925 ± 0.0049	$z_{\rm eq}$	3372 ± 24	$\chi^2_{\rm lowl}$	24.7 ± 1.8
H_0	67.78 ± 0.47	$k_{\rm eq}$	0.010292 ± 0.000073	$\chi^2_{\rm CamSpec}$	11513.5 ± 5.7
Ω_Λ	0.6913 ± 0.0063	$100\theta_{\rm eq}$	0.8187 ± 0.0045	$\chi^2_{\rm 6DF}$	0.040 ± 0.052
$\Omega_{\rm m}$	0.3087 ± 0.0063	$100\theta_{\rm s,eq}$	0.4522 ± 0.0023	$\chi^2_{\rm MGS}$	1.44 ± 0.46
$\Omega_{\rm m} h^2$	0.1418 ± 0.0010	$H(0.15)$	73.03 ± 0.40	$\chi^2_{\rm DR12BAO}$	4.4 ± 1.2
$\Omega_{\rm m} h^3$	0.09608 ± 0.00031	$D_{\rm M}(0.15)$	639.9 ± 4.0	$\chi^2_{\rm prior}$	7.8 ± 3.4
σ_8	0.8054 ± 0.0072	$H(0.38)$	83.09 ± 0.30	$\chi^2_{\rm BAO}$	5.89 ± 0.90
S_8	0.817 ± 0.013	$D_{\rm M}(0.38)$	1526.7 ± 8.0	$\chi^2_{\rm CMB}$	11935.4 ± 5.8
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4475 ± 0.0071	$H(0.51)$	89.77 ± 0.24		
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.6003 ± 0.0071	$D_{\rm M}(0.51)$	1978.2 ± 9.4		

$\bar{\chi}^2_{\rm eff} = 11949.07$; $\Delta\bar{\chi}^2_{\rm eff} = 0.79$; $R - 1 = 0.01061$

17.19 base_r_CamSpecHM_TTTEEE_lowl_lowE_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02230 ± 0.00016	$\sigma_8\Omega_m^{0.5}$	0.4513 ± 0.0091	$H(0.38)$	82.94 ± 0.40
$\boldsymbol{\Omega_c h^2}$	0.1193 ± 0.0014	$\sigma_8\Omega_m^{0.25}$	0.6039 ± 0.0084	$D_M(0.38)$	1531 ± 11
$\boldsymbol{100\theta_{MC}}$	1.04091 ± 0.00032	$\sigma_8/h^{0.5}$	0.983 ± 0.012	$H(0.51)$	89.66 ± 0.31
$\boldsymbol{\tau}$	$0.0540^{+0.0047}_{-0.0080}$	$r_{drag}h$	99.5 ± 1.1	$D_M(0.51)$	1983 ± 13
$\boldsymbol{\ln(10^{10}A_s)}$	$3.040^{+0.011}_{-0.016}$	$\langle d^2\rangle^{1/2}$	2.429 ± 0.028	$H(0.61)$	95.28 ± 0.25
$\boldsymbol{n_s}$	0.9675 ± 0.0047	z_{re}	$7.64^{+0.52}_{-0.80}$	$D_M(0.61)$	2307 ± 14
$\boldsymbol{r}$	< 0.0751	$10^9 A_s$	$2.091^{+0.023}_{-0.033}$	$H(2.33)$	236.03 ± 0.85
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.877 ± 0.012	$D_M(2.33)$	5765 ± 11
$\boldsymbol{A^{PS}_{100}}$	238 ± 25	D_{40}	1243^{+16}_{-20}	$f\sigma_8(0.15)$	0.4558 ± 0.0085
$\boldsymbol{A^{PS}_{143}}$	39 ± 8	D_{220}	5713 ± 39	$\sigma_8(0.15)$	$0.7467^{+0.0056}_{-0.0064}$
$\boldsymbol{A^{PS}_{217}}$	103 ± 10	D_{810}	2534 ± 14	$f\sigma_8(0.38)$	0.4740 ± 0.0069
$\boldsymbol{A^{CIB}_{217}}$	39 ± 7	D_{1420}	816.1 ± 4.9	$\sigma_8(0.38)$	$0.6619^{+0.0044}_{-0.0054}$
$\boldsymbol{A^{tSZ}_{143}}$	$3.9^{+1.9}_{-2.5}$	D_{2000}	230.4 ± 1.7	$f\sigma_8(0.51)$	0.4726 ± 0.0060
$\boldsymbol{r^{PS}_{143\times217}}$	0.66 ± 0.13	$n_{s,0.002}$	0.9675 ± 0.0047	$\sigma_8(0.51)$	$0.6194^{+0.0040}_{-0.0050}$
$\boldsymbol{r^{CIB}_{143\times217}}$	$0.55^{+0.39}_{-0.19}$	Y_P	0.245367 ± 0.000066	$f\sigma_8(0.61)$	0.4676 ± 0.0054
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	0.246693 ± 0.000066	$\sigma_8(0.61)$	$0.5894^{+0.0037}_{-0.0048}$
$\boldsymbol{A^{kSZ}}$	$4.6^{+1.7}_{-4.4}$	10^5D/H	2.598 ± 0.030	$f\sigma_8(2.33)$	$0.2971^{+0.0018}_{-0.0024}$
$\boldsymbol{A^{dust}_{100}}$	1.01 ± 0.19	Age/Gyr	13.801 ± 0.026	$\sigma_8(2.33)$	$0.3063^{+0.0018}_{-0.0025}$
$\boldsymbol{A^{dust}_{143}}$	0.96 ± 0.18	z_*	1089.94 ± 0.29	$r_{0.002}$	< 0.0697
$\boldsymbol{A^{dust}_{217}}$	0.98 ± 0.10	r_*	144.66 ± 0.32	$r_{0.01}$	< 0.0723
$\boldsymbol{A^{dust}_{143\times217}}$	1.03 ± 0.16	$100\theta_*$	1.04110 ± 0.00032	$\ln(10^{10}A_t)$	$-0.17^{+1.2}_{-0.46}$
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	$D_M(z_*)$/Gpc	13.895 ± 0.030	r_{10}	< 0.0358
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	z_{drag}	1059.73 ± 0.33	$10^9 A_t$	< 0.157
$\boldsymbol{c_{TE}}$	0.9966 ± 0.0049	r_{drag}	147.35 ± 0.32	$10^9 A_t e^{-2\tau}$	< 0.141
$\boldsymbol{c_{EE}}$	0.9922 ± 0.0049	k_D	0.14054 ± 0.00035	f^{143}_{2000}	29.4 ± 2.9
H_0	67.55 ± 0.63	$100\theta_D$	0.16087 ± 0.00020	f^{217}_{2000}	106.7 ± 1.9
Ω_Λ	0.6881 ± 0.0087	z_{eq}	3384 ± 32	$f^{143\times217}_{2000}$	31.9 ± 2.0
Ω_m	0.3119 ± 0.0087	k_{eq}	0.010328 ± 0.000098	χ^2_{simall}	397.0 ± 1.6
$\Omega_m h^2$	0.1422 ± 0.0013	$100\theta_{eq}$	0.8165 ± 0.0061	χ^2_{lowl}	24.9 ± 1.9
$\Omega_m h^3$	0.09607 ± 0.00032	$100\theta_{s,eq}$	0.4511 ± 0.0031	$\chi^2_{CamSpec}$	11513.5 ± 5.8
σ_8	0.8081 ± 0.0070	$H(0.15)$	72.83 ± 0.54	χ^2_{prior}	7.8 ± 3.4
S_8	0.824 ± 0.017	$D_M(0.15)$	641.9 ± 5.4	χ^2_{CMB}	11935.4 ± 5.9

$\bar{\chi}^2_{eff} = 11943.24$; $\Delta\bar{\chi}^2_{eff} = 1.05$; $R - 1 = 0.00947$

17.20 base_r_CamSpecHM_TTTEEE_lowl_lowE_post_BAO_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02234 ± 0.00015	$\sigma_8/h^{0.5}$	0.9796 ± 0.0099	$H(0.61)$	95.37 ± 0.20
$\boldsymbol{\Omega_c h^2}$	0.1187 ± 0.0010	$r_{\rm drag}h$	99.96 ± 0.81	$D_{\rm M}(0.61)$	2302 ± 10
$\boldsymbol{100\theta_{MC}}$	1.04098 ± 0.00030	$\langle d^2\rangle^{1/2}$	2.420 ± 0.024	$H(2.33)$	235.71 ± 0.65
$\boldsymbol{\tau}$	$0.0545^{+0.0049}_{-0.0079}$	$z_{\rm re}$	$7.68^{+0.53}_{-0.80}$	$D_{\rm M}(2.33)$	5761.2 ± 9.5
$\boldsymbol{\ln(10^{10}A_s)}$	$3.040^{+0.012}_{-0.016}$	$10^9 A_{\rm s}$	$2.091^{+0.025}_{-0.033}$	$f\sigma_8(0.15)$	0.4528 ± 0.0066
$\boldsymbol{n_s}$	0.9688 ± 0.0041	$10^9 A_{\rm s}e^{-2\tau}$	1.874 ± 0.011	$\sigma_8(0.15)$	$0.7456^{+0.0052}_{-0.0063}$
$\boldsymbol{r}$	< 0.0783	D_{40}	1241^{+15}_{-20}	$f\sigma_8(0.38)$	0.4717 ± 0.0056
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	D_{220}	5715 ± 39	$\sigma_8(0.38)$	$0.6612^{+0.0043}_{-0.0054}$
$\boldsymbol{A^{PS}_{100}}$	238 ± 25	D_{810}	2534 ± 14	$f\sigma_8(0.51)$	0.4706 ± 0.0050
$\boldsymbol{A^{PS}_{143}}$	39 ± 8	D_{1420}	816.5 ± 4.9	$\sigma_8(0.51)$	$0.6190^{+0.0040}_{-0.0050}$
$\boldsymbol{A^{PS}_{217}}$	103 ± 10	D_{2000}	230.6 ± 1.6	$f\sigma_8(0.61)$	0.4659 ± 0.0046
$\boldsymbol{A^{CIB}_{217}}$	39 ± 7	$n_{\rm s,0.002}$	0.9688 ± 0.0041	$\sigma_8(0.61)$	$0.5890^{+0.0037}_{-0.0048}$
$\boldsymbol{A^{tSZ}_{143}}$	$4.0^{+1.9}_{-2.5}$	$Y_{\rm P}$	0.245381 ± 0.000059	$f\sigma_8(2.33)$	$0.2971^{+0.0019}_{-0.0024}$
$\boldsymbol{r^{PS}_{143\times217}}$	0.66 ± 0.13	$Y_{\rm P}^{\rm BBN}$	0.246708 ± 0.000060	$\sigma_8(2.33)$	$0.3065^{+0.0019}_{-0.0025}$
$\boldsymbol{r^{CIB}_{143\times217}}$	$0.55^{+0.39}_{-0.18}$	10^5D/H	2.592 ± 0.028	$r_{0.002}$	< 0.0733
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Age/Gyr	13.794 ± 0.021	$r_{0.01}$	< 0.0758
$\boldsymbol{A^{kSZ}}$	< 6.05	z_*	1089.85 ± 0.24	$\ln(10^{10}A_{\rm t})$	$-0.11^{+1.2}_{-0.46}$
$\boldsymbol{A^{dust}_{100}}$	1.01 ± 0.20	r_*	144.78 ± 0.25	r_{10}	< 0.0375
$\boldsymbol{A^{dust}_{143}}$	0.96 ± 0.17	$100\theta_*$	1.04116 ± 0.00030	$10^9 A_{\rm t}$	< 0.163
$\boldsymbol{A^{dust}_{217}}$	0.98 ± 0.10	$D_{\rm M}(z_*)$/Gpc	13.905 ± 0.024	$10^9 A_t e^{-2\tau}$	< 0.147
$\boldsymbol{A^{dust}_{143\times217}}$	1.03 ± 0.16	$z_{\rm drag}$	1059.78 ± 0.33	f^{143}_{2000}	29.2 ± 2.9
$\boldsymbol{c_{100}}$	0.9975 ± 0.0010	$r_{\rm drag}$	147.46 ± 0.26	f^{217}_{2000}	106.6 ± 1.9
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	$k_{\rm D}$	0.14046 ± 0.00032	$f^{143\times217}_{2000}$	31.8 ± 2.0
$\boldsymbol{c_{TE}}$	0.9966 ± 0.0049	$100\theta_{\rm D}$	0.16085 ± 0.00019	$\chi^2_{\rm simall}$	397.1 ± 1.6
$\boldsymbol{c_{EE}}$	0.9925 ± 0.0049	$z_{\rm eq}$	3372 ± 24	$\chi^2_{\rm lowl}$	24.7 ± 1.8
H_0	67.79 ± 0.47	$k_{\rm eq}$	0.010290 ± 0.000073	$\chi^2_{\rm CamSpec}$	11513.4 ± 5.7
Ω_Λ	0.6915 ± 0.0063	$100\theta_{\rm eq}$	0.8188 ± 0.0045	$\chi^2_{\rm 6DF}$	0.039 ± 0.051
$\Omega_{\rm m}$	0.3085 ± 0.0063	$100\theta_{\rm s,eq}$	0.4523 ± 0.0023	$\chi^2_{\rm MGS}$	1.45 ± 0.47
$\Omega_{\rm m}h^2$	0.1417 ± 0.0010	$H(0.15)$	73.04 ± 0.40	$\chi^2_{\rm DR12BAO}$	4.4 ± 1.2
$\Omega_{\rm m}h^3$	0.09608 ± 0.00031	$D_{\rm M}(0.15)$	639.8 ± 4.0	$\chi^2_{\rm prior}$	7.8 ± 3.4
σ_8	$0.8066^{+0.0060}_{-0.0070}$	$H(0.38)$	83.09 ± 0.30	$\chi^2_{\rm BAO}$	5.88 ± 0.89
S_8	0.818 ± 0.013	$D_{\rm M}(0.38)$	1526.5 ± 8.0	$\chi^2_{\rm CMB}$	11935.2 ± 5.8
$\sigma_8\Omega_{\rm m}^{0.5}$	0.4480 ± 0.0070	$H(0.51)$	89.78 ± 0.24		
$\sigma_8\Omega_{\rm m}^{0.25}$	0.6011 ± 0.0069	$D_{\rm M}(0.51)$	1977.9 ± 9.4		

$\bar{\chi}^2_{\rm eff} = 11948.86$; $\Delta\bar{\chi}^2_{\rm eff} = 0.87$; $R - 1 = 0.01058$

17.21 base_r_plikHM_TE_lowE

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022491	0.02248 ± 0.00025	z_{re}	7.13	$7.07^{+0.94}_{-0.72}$	$D_M(0.38)$	1516.0	1515 ± 15
$\boldsymbol{\Omega_c h^2}$	0.11778	0.1177 ± 0.0020	$10^9 A_s$	2.0459	2.043 ± 0.041	$H(0.51)$	90.121	$90.14^{+0.43}_{-0.48}$
$\boldsymbol{100\theta_{MC}}$	1.04137	1.04140 ± 0.00051	$10^9 A_s e^{-2\tau}$	1.8530	1.851 ± 0.018	$D_M(0.51)$	1965.4	1965 ± 18
$\boldsymbol{\tau}$	0.0495	$0.0492^{+0.0087}_{-0.0075}$	D_{40}	1214.8	1253^{+33}_{-46}	$H(0.61)$	95.664	$95.68^{+0.35}_{-0.40}$
$\boldsymbol{\ln(10^{10} A_s)}$	3.0184	$3.017^{+0.021}_{-0.018}$	D_{220}	5699	5686 ± 57	$D_M(0.61)$	2288.4	2288 ± 19
$\boldsymbol{n_s}$	0.9663	0.968 ± 0.011	D_{810}	2508.0	2507 ± 25	$H(2.33)$	235.26	235.2 ± 1.2
$\boldsymbol{r}$	0.000	< 0.149	D_{1420}	807.3	808 ± 12	$D_M(2.33)$	5747.3	5747 ± 17
$\boldsymbol{A_{100}^{dustTE}}$	0.1131	0.116 ± 0.038	D_{2000}	227.67	227.8 ± 4.2	$f\sigma_8(0.15)$	0.4409	0.440 ± 0.012
$\boldsymbol{A_{100\times143}^{dustTE}}$	0.1359	0.138 ± 0.030	$n_{s,0.002}$	0.9663	0.968 ± 0.011	$\sigma_8(0.15)$	0.7344	0.7339 ± 0.0097
$\boldsymbol{A_{100\times217}^{dustTE}}$	0.478	0.477 ± 0.085	Y_P	0.245441	0.24543 ± 0.00010	$f\sigma_8(0.38)$	0.4611	0.461 ± 0.010
$\boldsymbol{A_{143}^{dustTE}}$	0.221	0.225 ± 0.054	Y_P^{BBN}	0.246768	0.24676 ± 0.00010	$\sigma_8(0.38)$	0.6521	$0.6517^{+0.0083}_{-0.0076}$
$\boldsymbol{A_{143\times217}^{dustTE}}$	0.659	0.657 ± 0.080	10^5D/H	2.5635	2.567 ± 0.046	$f\sigma_8(0.51)$	0.4609	0.4604 ± 0.0090
$\boldsymbol{A_{217}^{dustTE}}$	2.040	2.03 ± 0.27	Age/Gyr	13.7622	13.762 ± 0.038	$\sigma_8(0.51)$	0.6107	$0.6104^{+0.0076}_{-0.0069}$
$\boldsymbol{c_{100}}$	1.00017	1.00017 ± 0.00070	z_*	1089.574	1089.59 ± 0.42	$f\sigma_8(0.61)$	0.4569	0.4564 ± 0.0082
$\boldsymbol{c_{217}}$	0.99799	0.99800 ± 0.00066	r_*	144.913	144.95 ± 0.48	$\sigma_8(0.61)$	0.5814	0.5811 ± 0.0070
$\boldsymbol{y_{cal}}$	1.00008	1.0000 ± 0.0025	$100\theta_*$	1.041550	1.04157 ± 0.00050	$f\sigma_8(2.33)$	0.29354	0.2934 ± 0.0035
H_0	68.39	68.43 ± 0.91	$D_M(z_*)$/Gpc	13.9132	13.917 ± 0.045	$\sigma_8(2.33)$	0.30308	0.3030 ± 0.0036
Ω_Λ	0.6987	0.699 ± 0.012	z_{drag}	1060.05	1060.01 ± 0.54	$r_{0.002}$	0.000	< 0.142
Ω_m	0.3013	0.301 ± 0.012	r_{drag}	147.546	147.59 ± 0.49	$r_{0.01}$	0.000	< 0.146
$\Omega_m h^2$	0.14092	0.1408 ± 0.0019	k_D	0.14048	0.14042 ± 0.00057	$\ln(10^{10} A_t)$	-11.51	$0.47^{+1.3}_{-0.51}$
$\Omega_m h^3$	0.09638	0.09634 ± 0.00052	$100\theta_D$	0.160734	0.16076 ± 0.00031	r_{10}	0.0000	< 0.0735
σ_8	0.7937	0.793 ± 0.011	z_{eq}	3352.1	3349 ± 46	$10^9 A_t$	0.000	< 0.304
S_8	0.7954	0.794 ± 0.024	k_{eq}	0.010231	0.01022 ± 0.00014	$10^9 A_t e^{-2\tau}$	0.000	< 0.275
$\sigma_8 \Omega_m^{0.5}$	0.4356	0.435 ± 0.013	$100\theta_{eq}$	0.8230	0.8236 ± 0.0088	χ^2_{simall}	395.70	397.4 ± 1.7
$\sigma_8 \Omega_m^{0.25}$	0.5880	0.587 ± 0.012	$100\theta_{s,eq}$	0.45439	0.4547 ± 0.0045	χ^2_{plikTE}	852.87	860.3 ± 3.8
$\sigma_8/h^{0.5}$	0.9597	0.959 ± 0.017	$H(0.15)$	73.57	73.60 ± 0.78	χ^2_{prior}	0.43	7.4 ± 3.7
$r_{drag} h$	100.91	101.0 ± 1.6	$D_M(0.15)$	634.6	634.4 ± 7.6	χ^2_{CMB}	1248.57	1257.8 ± 4.2
$\langle d^2 \rangle^{1/2}$	2.3877	2.382 ± 0.042	$H(0.38)$	83.50	83.53 ± 0.58			

Best-fit $\chi^2_{eff} = 1249.01$; $\Delta\chi^2_{eff} = 0.02$; $\bar{\chi}^2_{eff} = 1265.18$; $\Delta\bar{\chi}^2_{eff} = 1.17$; $R - 1 = 0.00716$
χ^2_{eff}: CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.70 (Δ 0.01) plik_rd12_HM_v22_TE: 852.88 (Δ 0.02)

17.22 base_r_plikHM_TE_lowE_post_BAO

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022448	0.02244 ± 0.00023	$10^9 A_s$	2.0457	2.043 ± 0.041	$D_M(0.51)$	1969.5	1969 ± 11
$\boldsymbol{\Omega_c h^2}$	0.11823	0.1181 ± 0.0012	$10^9 A_s e^{-2\tau}$	1.8552	1.853 ± 0.017	$H(0.61)$	95.584	95.59 ± 0.26
$\boldsymbol{100\theta_{MC}}$	1.041342	1.04135 ± 0.00047	D_{40}	1217.9	1255^{+31}_{-44}	$D_M(0.61)$	2292.7	2292 ± 12
$\boldsymbol{\tau}$	0.0489	$0.0489^{+0.0084}_{-0.0075}$	D_{220}	5698	5685 ± 56	$H(2.33)$	235.51	235.45 ± 0.79
$\boldsymbol{\ln(10^{10} A_s)}$	3.0183	3.017 ± 0.020	D_{810}	2508.4	2507 ± 25	$D_M(2.33)$	5750.7	5750 ± 13
$\boldsymbol{n_s}$	0.9651	0.967 ± 0.010	D_{1420}	806.9	807 ± 12	$f\sigma_8(0.15)$	0.4433	0.4429 ± 0.0082
$\boldsymbol{r}$	0.001	< 0.147	D_{2000}	227.49	227.6 ± 4.2	$\sigma_8(0.15)$	0.7353	0.7351 ± 0.0090
$\boldsymbol{y_{cal}}$	1.00010	0.99998 ± 0.0025	$n_{s,0.002}$	0.9651	0.967 ± 0.010	$f\sigma_8(0.38)$	0.4630	0.4626 ± 0.0073
$\boldsymbol{A_{100}^{dustTE}}$	0.1135	0.116 ± 0.038	Y_P	0.245425	0.245421 ± 0.000091	$\sigma_8(0.38)$	0.6526	0.6524 ± 0.0078
$\boldsymbol{A_{100\times143}^{dustTE}}$	0.1345	0.138 ± 0.029	Y_P^{BBN}	0.246752	0.246747 ± 0.000092	$f\sigma_8(0.51)$	0.4625	0.4622 ± 0.0068
$\boldsymbol{A_{100\times217}^{dustTE}}$	0.476	0.476 ± 0.084	10^5D/H	2.5712	2.573 ± 0.042	$\sigma_8(0.51)$	0.6110	0.6109 ± 0.0072
$\boldsymbol{A_{143}^{dustTE}}$	0.220	0.225 ± 0.055	Age/Gyr	13.7694	13.769 ± 0.030	$f\sigma_8(0.61)$	0.4582	0.4579 ± 0.0064
$\boldsymbol{A_{143\times217}^{dustTE}}$	0.658	0.658 ± 0.080	z_*	1089.667	1089.67 ± 0.33	$\sigma_8(0.61)$	0.5816	0.5815 ± 0.0069
$\boldsymbol{A_{217}^{dustTE}}$	2.057	2.04 ± 0.27	r_*	144.831	144.86 ± 0.33	$f\sigma_8(2.33)$	0.29356	0.2935 ± 0.0034
$\boldsymbol{c_{100}}$	1.00016	1.00017 ± 0.00070	$100\theta_*$	1.041522	1.04152 ± 0.00046	$\sigma_8(2.33)$	0.30298	0.3030 ± 0.0036
$\boldsymbol{c_{217}}$	0.99801	0.99799 ± 0.00065	$D_M(z_*)$/Gpc	13.9057	13.908 ± 0.033	$r_{0.002}$	0.001	< 0.140
H_0	68.19	68.22 ± 0.54	z_{drag}	1059.97	1059.97 ± 0.53	$r_{0.01}$	0.001	< 0.144
Ω_Λ	0.6960	0.6964 ± 0.0070	r_{drag}	147.477	147.50 ± 0.37	$\ln(10^{10} A_t)$	-3.90	$0.47^{+1.3}_{-0.49}$
Ω_m	0.3040	0.3036 ± 0.0070	k_D	0.14052	0.14049 ± 0.00051	r_{10}	0.0005	< 0.0724
$\Omega_m h^2$	0.14132	0.1412 ± 0.0012	$100\theta_D$	0.160774	0.16079 ± 0.00031	$10^9 A_t$	0.002	< 0.300
$\Omega_m h^3$	0.09636	0.09634 ± 0.00052	z_{eq}	3361.7	3360 ± 29	$10^9 A_t e^{-2\tau}$	0.002	< 0.273
σ_8	0.7949	0.7946 ± 0.0099	k_{eq}	0.010260	0.010254 ± 0.000087	χ^2_{simall}	395.69	397.4 ± 1.7
S_8	0.8001	0.799 ± 0.016	$100\theta_{eq}$	0.8212	0.8216 ± 0.0053	χ^2_{plikTE}	852.95	859.7 ± 3.6
$\sigma_8 \Omega_m^{0.5}$	0.4382	0.4378 ± 0.0086	$100\theta_{s,eq}$	0.45343	0.4537 ± 0.0027	χ^2_{6DF}	0.0002	0.037 ± 0.053
$\sigma_8 \Omega_m^{0.25}$	0.5902	0.5898 ± 0.0091	$H(0.15)$	73.390	73.42 ± 0.47	χ^2_{MGS}	1.75	1.85 ± 0.58
$\sigma_8/h^{0.5}$	0.9626	0.962 ± 0.013	$D_M(0.15)$	636.34	636.1 ± 4.6	$\chi^2_{DR12BAO}$	3.435	3.97 ± 0.88
$r_{drag} h$	100.56	100.62 ± 0.92	$H(0.38)$	83.375	83.39 ± 0.36	χ^2_{prior}	0.41	7.4 ± 3.6
$\langle d^2 \rangle^{1/2}$	2.3948	2.389 ± 0.032	$D_M(0.38)$	1519.4	1519.0 ± 9.3	χ^2_{BAO}	5.183	5.86 ± 0.95
z_{re}	7.08	$7.05^{+0.92}_{-0.73}$	$H(0.51)$	90.020	90.03 ± 0.30	χ^2_{CMB}	1248.64	1257.2 ± 4.0

Best-fit $\chi^2_{eff} = 1254.24$; $\Delta\chi^2_{eff} = 0.00$; $\bar{\chi}^2_{eff} = 1270.41$; $\Delta\bar{\chi}^2_{eff} = 0.99$; $R - 1 = 0.01140$

χ^2_{eff}: BAO - 6DF: 0.00 (Δ 0.00) MGS: 1.75 (Δ 0.00) DR12BAO: 3.44 (Δ -0.00) CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.69 (Δ 0.03) plik_rd12_HM_v22_TE: 852.95 (Δ 0.02)

17.23 base_r_plikHM_TE_lowE_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02249 ± 0.00025	$z_{\rm re}$	$7.43^{+0.33}_{-0.84}$	$D_{\rm M}(0.38)$	1515 ± 15
$\boldsymbol{\Omega_c h^2}$	0.1176 ± 0.0020	$10^9 A_{\rm s}$	$2.057^{+0.027}_{-0.035}$	$H(0.51)$	90.16 ± 0.46
$\boldsymbol{100\theta_{\rm MC}}$	1.04141 ± 0.00051	$10^9 A_{\rm s} e^{-2\tau}$	1.851 ± 0.018	$D_{\rm M}(0.51)$	1964 ± 18
$\boldsymbol{\tau}$	$0.0526^{+0.0035}_{-0.0078}$	D_{40}	1252^{+33}_{-46}	$H(0.61)$	$95.70^{+0.35}_{-0.40}$
$\boldsymbol{\ln(10^{10} A_{\rm s})}$	$3.024^{+0.014}_{-0.017}$	D_{220}	5686 ± 57	$D_{\rm M}(0.61)$	2287 ± 19
$\boldsymbol{n_{\rm s}}$	0.969 ± 0.011	D_{810}	2508 ± 25	$H(2.33)$	235.2 ± 1.2
$\boldsymbol{r}$	< 0.149	D_{1420}	808 ± 12	$D_{\rm M}(2.33)$	5746 ± 17
$\boldsymbol{A^{{\rm dust}TE}_{100}}$	0.116 ± 0.038	D_{2000}	228.2 ± 4.2	$f\sigma_8(0.15)$	0.442 ± 0.012
$\boldsymbol{A^{{\rm dust}TE}_{100\times143}}$	0.138 ± 0.030	$n_{\rm s,0.002}$	0.969 ± 0.011	$\sigma_8(0.15)$	0.7365 ± 0.0085
$\boldsymbol{A^{{\rm dust}TE}_{100\times217}}$	0.477 ± 0.084	$Y_{\rm P}$	0.24544 ± 0.00010	$f\sigma_8(0.38)$	0.4620 ± 0.0098
$\boldsymbol{A^{{\rm dust}TE}_{143}}$	0.225 ± 0.054	$Y_{\rm P}^{\rm BBN}$	0.24677 ± 0.00010	$\sigma_8(0.38)$	0.6541 ± 0.0069
$\boldsymbol{A^{{\rm dust}TE}_{143\times217}}$	0.657 ± 0.080	10^5D/H	2.564 ± 0.046	$f\sigma_8(0.51)$	0.4619 ± 0.0086
$\boldsymbol{A^{{\rm dust}TE}_{217}}$	2.03 ± 0.27	Age/Gyr	13.760 ± 0.038	$\sigma_8(0.51)$	0.6126 ± 0.0062
$\boldsymbol{c_{100}}$	1.00017 ± 0.00070	z_*	1089.56 ± 0.42	$f\sigma_8(0.61)$	0.4579 ± 0.0078
$\boldsymbol{c_{217}}$	0.99800 ± 0.00065	r_*	144.96 ± 0.48	$\sigma_8(0.61)$	0.5833 ± 0.0058
$\boldsymbol{y_{\rm cal}}$	1.0000 ± 0.0025	$100\theta_*$	1.04159 ± 0.00050	$f\sigma_8(2.33)$	$0.2945^{+0.0026}_{-0.0030}$
H_0	68.47 ± 0.91	$D_{\rm M}(z_*)$/Gpc	13.917 ± 0.045	$\sigma_8(2.33)$	$0.3042^{+0.0026}_{-0.0031}$
Ω_Λ	0.700 ± 0.012	$z_{\rm drag}$	1060.04 ± 0.54	$r_{0.002}$	< 0.143
$\Omega_{\rm m}$	0.300 ± 0.012	$r_{\rm drag}$	147.59 ± 0.49	$r_{0.01}$	< 0.146
$\Omega_{\rm m} h^2$	0.1408 ± 0.0019	$k_{\rm D}$	0.14043 ± 0.00057	$\ln(10^{10} A_{\rm t})$	$0.47^{+1.3}_{-0.50}$
$\Omega_{\rm m} h^3$	0.09636 ± 0.00052	$100\theta_{\rm D}$	0.16075 ± 0.00031	r_{10}	< 0.0737
σ_8	0.7959 ± 0.0099	$z_{\rm eq}$	3348 ± 46	$10^9 A_{\rm t}$	< 0.306
S_8	0.796 ± 0.023	$k_{\rm eq}$	0.01022 ± 0.00014	$10^9 A_t e^{-2\tau}$	< 0.276
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.436 ± 0.013	$100\theta_{\rm eq}$	0.8239 ± 0.0088	$\chi^2_{\rm simall}$	397.0 ± 1.3
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.589 ± 0.012	$100\theta_{\rm s,eq}$	0.4548 ± 0.0045	$\chi^2_{\rm plikTE}$	860.4 ± 3.8
$\sigma_8/h^{0.5}$	0.962 ± 0.017	$H(0.15)$	73.64 ± 0.78	$\chi^2_{\rm prior}$	7.4 ± 3.7
$r_{\rm drag} h$	101.1 ± 1.6	$D_{\rm M}(0.15)$	634.0 ± 7.6	$\chi^2_{\rm CMB}$	1257.4 ± 4.1
$\langle d^2 \rangle^{1/2}$	2.388 ± 0.041	$H(0.38)$	83.56 ± 0.58		

$\bar{\chi}^2_{\rm eff} = 1264.77$; $\Delta\bar{\chi}^2_{\rm eff} = 1.13$; $R - 1 = 0.00680$

17.24 base_r_plikHM_TE_lowE_post_BAO_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02246 ± 0.00023	$10^9 A_s$	$2.058^{+0.027}_{-0.035}$	$D_M(0.51)$	1968 ± 11
$\boldsymbol{\Omega_c h^2}$	0.1181 ± 0.0012	$10^9 A_s e^{-2\tau}$	1.853 ± 0.017	$H(0.61)$	95.61 ± 0.26
$\boldsymbol{100\theta_{MC}}$	1.04136 ± 0.00046	D_{40}	1255^{+31}_{-44}	$D_M(0.61)$	2292 ± 12
$\boldsymbol{\tau}$	$0.0524^{+0.0035}_{-0.0076}$	D_{220}	5684 ± 56	$H(2.33)$	235.45 ± 0.79
$\boldsymbol{\ln(10^{10} A_s)}$	$3.024^{+0.013}_{-0.017}$	D_{810}	2508 ± 25	$D_M(2.33)$	5750 ± 13
$\boldsymbol{n_s}$	0.967 ± 0.010	D_{1420}	808 ± 11	$f\sigma_8(0.15)$	0.4445 ± 0.0077
$\boldsymbol{r}$	< 0.150	D_{2000}	228.0 ± 4.2	$\sigma_8(0.15)$	$0.7379^{+0.0070}_{-0.0078}$
$\boldsymbol{y_{cal}}$	0.99998 ± 0.0025	$n_{s,0.002}$	0.967 ± 0.010	$f\sigma_8(0.38)$	0.4643 ± 0.0067
$\boldsymbol{A^{dustTE}_{100}}$	0.116 ± 0.038	Y_P	0.245425 ± 0.000090	$\sigma_8(0.38)$	$0.6549^{+0.0059}_{-0.0068}$
$\boldsymbol{A^{dustTE}_{100\times143}}$	0.138 ± 0.029	Y_P^{BBN}	0.246752 ± 0.000091	$f\sigma_8(0.51)$	0.4639 ± 0.0061
$\boldsymbol{A^{dustTE}_{100\times217}}$	0.476 ± 0.083	10^5D/H	2.571 ± 0.042	$\sigma_8(0.51)$	$0.6133^{+0.0054}_{-0.0063}$
$\boldsymbol{A^{dustTE}_{143}}$	0.224 ± 0.055	Age/Gyr	13.768 ± 0.030	$f\sigma_8(0.61)$	0.4596 ± 0.0057
$\boldsymbol{A^{dustTE}_{143\times217}}$	0.658 ± 0.080	z_*	1089.65 ± 0.32	$\sigma_8(0.61)$	$0.5838^{+0.0051}_{-0.0060}$
$\boldsymbol{A^{dustTE}_{217}}$	2.04 ± 0.27	r_*	144.85 ± 0.33	$f\sigma_8(2.33)$	$0.2947^{+0.0025}_{-0.0030}$
$\boldsymbol{c_{100}}$	1.00017 ± 0.00070	$100\theta_*$	1.04154 ± 0.00046	$\sigma_8(2.33)$	$0.3042^{+0.0026}_{-0.0031}$
$\boldsymbol{c_{217}}$	0.99799 ± 0.00065	$D_M(z_*)$/Gpc	13.908 ± 0.033	$r_{0.002}$	< 0.143
H_0	68.24 ± 0.54	z_{drag}	1060.00 ± 0.52	$r_{0.01}$	< 0.146
Ω_Λ	0.6966 ± 0.0070	r_{drag}	147.50 ± 0.37	$\ln(10^{10} A_t)$	$0.49^{+1.3}_{-0.49}$
Ω_m	0.3034 ± 0.0070	k_D	0.14050 ± 0.00050	r_{10}	< 0.0737
$\Omega_m h^2$	0.1412 ± 0.0012	$100\theta_D$	0.16077 ± 0.00031	$10^9 A_t$	< 0.308
$\Omega_m h^3$	0.09636 ± 0.00052	z_{eq}	3359 ± 28	$10^9 A_t e^{-2\tau}$	< 0.278
σ_8	0.7976 ± 0.0084	k_{eq}	0.010253 ± 0.000087	χ^2_{simall}	397.0 ± 1.3
S_8	0.802 ± 0.015	$100\theta_{eq}$	0.8217 ± 0.0052	χ^2_{plikTE}	859.8 ± 3.5
$\sigma_8 \Omega_m^{0.5}$	0.4393 ± 0.0081	$100\theta_{s,eq}$	0.4537 ± 0.0027	χ^2_{6DF}	0.037 ± 0.054
$\sigma_8 \Omega_m^{0.25}$	0.5920 ± 0.0082	$H(0.15)$	73.44 ± 0.47	χ^2_{MGS}	1.87 ± 0.58
$\sigma_8/h^{0.5}$	0.966 ± 0.012	$D_M(0.15)$	635.9 ± 4.5	$\chi^2_{DR12BAO}$	3.96 ± 0.87
$r_{drag} h$	100.65 ± 0.92	$H(0.38)$	83.41 ± 0.36	χ^2_{prior}	7.3 ± 3.6
$\langle d^2 \rangle^{1/2}$	2.396 ± 0.029	$D_M(0.38)$	1518.6 ± 9.2	χ^2_{BAO}	5.87 ± 0.96
z_{re}	$7.42^{+0.31}_{-0.84}$	$H(0.51)$	90.05 ± 0.30	χ^2_{CMB}	1256.8 ± 3.9

$\bar{\chi}^2_{eff} = 1269.96$; $\Delta\bar{\chi}^2_{eff} = 0.97$; $R - 1 = 0.01240$

17.25 base_r_plikHM_EE_lowE

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02387	0.0239 ± 0.0012	D_{810}	2585.9	2583 ± 39	$D_{\rm M}(0.51)$	1924	1920 ± 57
$\boldsymbol{\Omega_c h^2}$	0.11440	0.1138 ± 0.0048	D_{1420}	845.3	846 ± 19	$H(0.61)$	96.75	$96.9^{+1.3}_{-1.6}$
$\boldsymbol{100\theta_{MC}}$	1.04018	1.04020 ± 0.00088	D_{2000}	241.8	242.1 ± 7.3	$D_{\rm M}(0.61)$	2243	2238 ± 62
$\boldsymbol{\tau}$	0.0537	0.0528 ± 0.0090	$n_{\rm s,0.002}$	0.9879	$0.993^{+0.016}_{-0.018}$	$H(2.33)$	234.31	233.9 ± 2.2
$\boldsymbol{\ln(10^{10} A_s)}$	3.0476	3.043 ± 0.023	$Y_{\rm P}$	0.246003	$0.24599^{+0.00043}_{-0.00056}$	$D_{\rm M}(2.33)$	5695	5691^{+73}_{-66}
$\boldsymbol{n_s}$	0.9879	$0.993^{+0.016}_{-0.018}$	$Y_{\rm P}^{\rm BBN}$	0.247331	$0.24732^{+0.00043}_{-0.00056}$	$f\sigma_8(0.15)$	0.4266	0.423 ± 0.030
$\boldsymbol{r}$	0.187	$0.267^{+0.076}_{-0.26}$	10^5D/H	2.329	$2.34^{+0.18}_{-0.21}$	$\sigma_8(0.15)$	0.7355	$0.732^{+0.017}_{-0.014}$
$\boldsymbol{y_{cal}}$	1.00017	1.0001 ± 0.0025	Age/Gyr	13.644	13.64 ± 0.15	$f\sigma_8(0.38)$	0.4512	0.448 ± 0.024
H_0	70.36	70.7 ± 2.8	z_*	1087.68	$1087.7^{+1.6}_{-1.8}$	$\sigma_8(0.38)$	0.6554	$0.653^{+0.012}_{-0.010}$
Ω_Λ	0.7194	$0.721^{+0.032}_{-0.026}$	r_*	144.74	144.90 ± 0.76	$f\sigma_8(0.51)$	0.4535	0.450 ± 0.021
$\Omega_{\rm m}$	0.2806	$0.279^{+0.026}_{-0.032}$	$100\theta_*$	1.04020	1.04023 ± 0.00085	$\sigma_8(0.51)$	0.6148	$0.613^{+0.010}_{-0.0086}$
$\Omega_{\rm m} h^2$	0.13891	0.1383 ± 0.0039	$D_{\rm M}(z_*)$/Gpc	13.915	13.930 ± 0.071	$f\sigma_8(0.61)$	0.4512	$0.448^{+0.020}_{-0.017}$
$\Omega_{\rm m} h^3$	0.09774	$0.0977^{+0.0017}_{-0.0019}$	$z_{\rm drag}$	1062.91	1062.9 ± 2.5	$\sigma_8(0.61)$	0.5860	$0.5839^{+0.0089}_{-0.0078}$
σ_8	0.7926	$0.789^{+0.021}_{-0.018}$	$r_{\rm drag}$	146.93	147.10 ± 0.84	$f\sigma_8(2.33)$	0.29673	0.2958 ± 0.0037
S_8	0.767	0.760 ± 0.058	$k_{\rm D}$	0.14207	0.1418 ± 0.0014	$\sigma_8(2.33)$	0.30741	0.3068 ± 0.0037
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4198	0.416 ± 0.032	$100\theta_{\rm D}$	0.15892	$0.1590^{+0.0012}_{-0.0014}$	$r_{0.002}$	0.194	< 0.385
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.5769	0.573 ± 0.028	$z_{\rm eq}$	3304	3289 ± 93	$r_{0.01}$	0.191	< 0.361
$\sigma_8/h^{0.5}$	0.9449	0.939 ± 0.040	$k_{\rm eq}$	0.010084	0.01004 ± 0.00028	$\ln(10^{10} A_{\rm t})$	1.37	$1.41^{+1.1}_{-0.35}$
$r_{\rm drag} h$	103.39	104.0 ± 4.2	$100\theta_{\rm eq}$	0.8349	0.838 ± 0.021	r_{10}	0.100	< 0.201
$\langle d^2 \rangle^{1/2}$	2.341	2.320 ± 0.084	$100\theta_{\rm s,eq}$	0.4595	0.461 ± 0.010	$10^9 A_{\rm t}$	0.395	$0.56^{+0.17}_{-0.54}$
$z_{\rm re}$	7.22	$7.10^{+0.88}_{-0.73}$	$H(0.15)$	75.33	75.6 ± 2.5	$10^9 A_t e^{-2\tau}$	0.355	$0.50^{+0.15}_{-0.48}$
$10^9 A_{\rm s}$	2.1065	2.097 ± 0.049	$D_{\rm M}(0.15)$	618.3	616 ± 23	$\chi^2_{\rm simall}$	396.53	398.4 ± 2.1
$10^9 A_{\rm s} e^{-2\tau}$	1.8920	1.886 ± 0.027	$H(0.38)$	84.93	$85.2^{+1.9}_{-2.2}$	$\chi^2_{\rm plikEE}$	737.59	742.5 ± 3.2
D_{40}	1275	1297^{+44}_{-65}	$D_{\rm M}(0.38)$	1481.8	1478 ± 47	$\chi^2_{\rm prior}$	0.004	0.99 ± 1.4
D_{220}	5905	5880 ± 200	$H(0.51)$	91.36	$91.6^{+1.6}_{-1.9}$	$\chi^2_{\rm CMB}$	1134.12	1140.9 ± 3.7

Best-fit $\chi^2_{\rm eff} = 1134.13$; $\Delta\chi^2_{\rm eff} = -0.43$; $\bar{\chi}^2_{\rm eff} = 1141.89$; $\Delta\bar{\chi}^2_{\rm eff} = 0.28$; $R - 1 = 0.00830$

$\chi^2_{\rm eff}$: CMB - simall_100x143_offlike5_EE_Aplanck_B: 396.53 (Δ 0.94) plik_rd12_HM_v22_EE: 737.59 (Δ -1.37)

17.26 base_r_plikHM_EE_lowE_post_BAO

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02330	0.02305 ± 0.00071	D_{2000}	238.3	238.0 ± 5.5	$D_{\rm M}(2.33)$	5731.5	5741 ± 31
$\boldsymbol{\Omega_c h^2}$	0.11753	0.1174 ± 0.0015	$n_{\rm s,0.002}$	0.9767	0.983 ± 0.011	$f\sigma_8(0.15)$	0.4457	0.4452 ± 0.0098
$\boldsymbol{100\theta_{MC}}$	1.03986	1.03993 ± 0.00077	$Y_{\rm P}$	0.245788	0.24567 ± 0.00029	$\sigma_8(0.15)$	0.7436	0.7425 ± 0.0091
$\boldsymbol{\tau}$	0.0532	0.0512 ± 0.0085	$Y_{\rm P}^{\rm BBN}$	0.247116	0.24699 ± 0.00029	$f\sigma_8(0.38)$	0.4663	0.4658 ± 0.0084
$\boldsymbol{\ln(10^{10} A_s)}$	3.0493	3.040 ± 0.022	10^5D/H	2.422	$2.47^{+0.11}_{-0.13}$	$\sigma_8(0.38)$	0.6603	0.6594 ± 0.0078
$\boldsymbol{n_s}$	0.9767	0.983 ± 0.011	Age/Gyr	13.725	13.747 ± 0.073	$f\sigma_8(0.51)$	0.4663	0.4657 ± 0.0076
$\boldsymbol{r}$	0.065	< 0.314	z_*	1088.59	1088.89 ± 0.88	$\sigma_8(0.51)$	0.6185	0.6176 ± 0.0072
$\boldsymbol{y_{cal}}$	1.00017	1.0001 ± 0.0025	r_*	144.36	144.60 ± 0.59	$f\sigma_8(0.61)$	0.4623	0.4617 ± 0.0071
H_0	68.65	68.53 ± 0.86	$100\theta_*$	1.03995	1.04005 ± 0.00078	$\sigma_8(0.61)$	0.5888	0.5880 ± 0.0068
Ω_Λ	0.6998	0.6995 ± 0.0091	$D_{\rm M}(z_*)$/Gpc	13.881	13.903 ± 0.057	$f\sigma_8(2.33)$	0.29734	0.2969 ± 0.0034
$\Omega_{\rm m}$	0.3002	0.3005 ± 0.0091	$z_{\rm drag}$	1061.88	1061.3 ± 1.6	$\sigma_8(2.33)$	0.30705	0.3066 ± 0.0035
$\Omega_{\rm m} h^2$	0.14147	0.1411 ± 0.0015	$r_{\rm drag}$	146.72	147.05 ± 0.79	$r_{0.002}$	0.062	< 0.342
$\Omega_{\rm m} h^3$	0.09711	0.0967 ± 0.0013	$k_{\rm D}$	0.14194	0.1414 ± 0.0013	$r_{0.01}$	0.064	< 0.327
σ_8	0.8034	0.802 ± 0.010	$100\theta_{\rm D}$	0.15945	$0.15982^{+0.00086}_{-0.00097}$	$\ln(10^{10} A_{\rm t})$	0.32	$1.32^{+1.1}_{-0.39}$
S_8	0.8038	0.803 ± 0.019	$z_{\rm eq}$	3365.4	3355 ± 36	r_{10}	0.032	< 0.180
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4402	0.440 ± 0.010	$k_{\rm eq}$	0.010271	0.01024 ± 0.00011	$10^9 A_{\rm t}$	0.138	< 0.656
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.5947	0.594 ± 0.010	$100\theta_{\rm eq}$	0.8217	0.8230 ± 0.0062	$10^9 A_t e^{-2\tau}$	0.124	< 0.590
$\sigma_8 / h^{0.5}$	0.9697	0.969 ± 0.015	$100\theta_{\rm s,eq}$	0.45304	0.4539 ± 0.0033	$\chi^2_{\rm simall}$	395.97	398.3 ± 2.1
$r_{\rm drag} h$	100.71	100.8 ± 1.1	$H(0.15)$	73.82	73.70 ± 0.78	$\chi^2_{\rm plikEE}$	738.57	742.1 ± 2.9
$\langle d^2 \rangle^{1/2}$	2.4004	2.377 ± 0.040	$D_{\rm M}(0.15)$	632.3	633.5 ± 7.3	$\chi^2_{\rm 6DF}$	0.0017	0.057 ± 0.082
$z_{\rm re}$	7.33	$7.16^{+0.87}_{-0.73}$	$H(0.38)$	83.77	83.63 ± 0.67	$\chi^2_{\rm MGS}$	1.82	1.94 ± 0.71
$10^9 A_{\rm s}$	2.1101	2.091 ± 0.047	$D_{\rm M}(0.38)$	1510.8	1513 ± 15	$\chi^2_{\rm DR12BAO}$	3.61	4.4 ± 1.2
$10^9 A_{\rm s} e^{-2\tau}$	1.8972	1.888 ± 0.027	$H(0.51)$	90.39	90.25 ± 0.61	$\chi^2_{\rm prior}$	0.00	0.98 ± 1.4
D_{40}	1247	1295^{+44}_{-61}	$D_{\rm M}(0.51)$	1958.9	1962 ± 19	$\chi^2_{\rm BAO}$	5.43	6.4 ± 1.4
D_{220}	5855	5773 ± 160	$H(0.61)$	95.94	95.79 ± 0.58	$\chi^2_{\rm CMB}$	1134.54	1140.4 ± 3.5
D_{810}	2575.0	2567 ± 35	$D_{\rm M}(0.61)$	2280.9	2285 ± 21			
D_{1420}	836.4	836 ± 15	$H(2.33)$	235.76	235.4 ± 1.1			

Best-fit $\chi^2_{\rm eff} = 1139.97$; $\Delta\chi^2_{\rm eff} = -0.19$; $\bar{\chi}^2_{\rm eff} = 1147.71$; $\Delta\bar{\chi}^2_{\rm eff} = 0.35$; $R - 1 = 0.01154$

$\chi^2_{\rm eff}$: BAO - 6DF: 0.00 (Δ -0.00) MGS: 1.82 (Δ -0.07) DR12BAO: 3.61 (Δ 0.01) CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.97 (Δ 0.36) plik_rd12_HM_v22_EE: 738.57 (Δ -0.47)

17.27 base_r_plikHM_EE_lowE_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.0239 ± 0.0012	D_{810}	2582 ± 39	$D_{\rm M}(0.51)$	1921 ± 56
$\boldsymbol{\Omega_c h^2}$	0.1138 ± 0.0048	D_{1420}	846 ± 19	$H(0.61)$	$96.9^{+1.3}_{-1.6}$
$\boldsymbol{100\theta_{MC}}$	1.04019 ± 0.00087	D_{2000}	242.1 ± 7.3	$D_{\rm M}(0.61)$	2239 ± 61
$\boldsymbol{\tau}$	$0.0561^{+0.0048}_{-0.0082}$	$n_{\rm s,0.002}$	$0.993^{+0.016}_{-0.018}$	$H(2.33)$	233.9 ± 2.2
$\boldsymbol{\ln(10^{10} A_s)}$	$3.049^{+0.019}_{-0.021}$	$Y_{\rm P}$	$0.24598^{+0.00042}_{-0.00055}$	$D_{\rm M}(2.33)$	5692 ± 69
$\boldsymbol{n_s}$	$0.993^{+0.016}_{-0.018}$	$Y_{\rm P}^{\rm BBN}$	$0.24731^{+0.00042}_{-0.00055}$	$f\sigma_8(0.15)$	0.425 ± 0.029
$\boldsymbol{r}$	$0.268^{+0.079}_{-0.26}$	10^5D/H	$2.34^{+0.18}_{-0.21}$	$\sigma_8(0.15)$	$0.735^{+0.016}_{-0.014}$
$\boldsymbol{y_{cal}}$	1.0001 ± 0.0025	Age/Gyr	13.64 ± 0.15	$f\sigma_8(0.38)$	0.449 ± 0.024
H_0	70.6 ± 2.8	z_*	$1087.7^{+1.6}_{-1.8}$	$\sigma_8(0.38)$	$0.655^{+0.011}_{-0.0094}$
Ω_Λ	$0.721^{+0.032}_{-0.026}$	r_*	144.91 ± 0.76	$f\sigma_8(0.51)$	0.452 ± 0.020
$\Omega_{\rm m}$	$0.279^{+0.026}_{-0.032}$	$100\theta_*$	1.04022 ± 0.00084	$\sigma_8(0.51)$	$0.6148^{+0.0091}_{-0.0079}$
$\Omega_{\rm m}h^2$	0.1383 ± 0.0039	$D_{\rm M}(z_*)$/Gpc	13.931 ± 0.071	$f\sigma_8(0.61)$	$0.450^{+0.019}_{-0.017}$
$\Omega_{\rm m}h^3$	0.0976 ± 0.0018	$z_{\rm drag}$	1062.8 ± 2.5	$\sigma_8(0.61)$	$0.5860^{+0.0079}_{-0.0072}$
σ_8	$0.792^{+0.020}_{-0.018}$	$r_{\rm drag}$	147.12 ± 0.84	$f\sigma_8(2.33)$	0.2969 ± 0.0032
S_8	0.763 ± 0.057	$k_{\rm D}$	0.1418 ± 0.0014	$\sigma_8(2.33)$	$0.3078^{+0.0029}_{-0.0034}$
$\sigma_8\Omega_{\rm m}^{0.5}$	0.418 ± 0.031	$100\theta_{\rm D}$	$0.1590^{+0.0012}_{-0.0014}$	$r_{0.002}$	< 0.384
$\sigma_8\Omega_{\rm m}^{0.25}$	0.575 ± 0.028	$z_{\rm eq}$	3290 ± 93	$r_{0.01}$	< 0.361
$\sigma_8/h^{0.5}$	0.943 ± 0.040	$k_{\rm eq}$	0.01004 ± 0.00028	$\ln(10^{10}A_{\rm t})$	$1.42^{+1.1}_{-0.35}$
$r_{\rm drag}h$	103.9 ± 4.2	$100\theta_{\rm eq}$	0.838 ± 0.021	r_{10}	< 0.201
$\langle d^2\rangle^{1/2}$	2.327 ± 0.082	$100\theta_{\rm s,eq}$	0.4611 ± 0.0099	$10^9 A_{\rm t}$	$0.56^{+0.18}_{-0.53}$
$z_{\rm re}$	$7.43^{+0.33}_{-0.83}$	$H(0.15)$	75.6 ± 2.5	$10^9 A_t e^{-2\tau}$	$0.50^{+0.16}_{-0.48}$
$10^9 A_{\rm s}$	$2.110^{+0.039}_{-0.046}$	$D_{\rm M}(0.15)$	617 ± 23	$\chi^2_{\rm simall}$	398.1 ± 2.0
$10^9 A_{\rm s}e^{-2\tau}$	1.886 ± 0.027	$H(0.38)$	$85.1^{+1.9}_{-2.1}$	$\chi^2_{\rm plikEE}$	742.4 ± 3.2
D_{40}	1296^{+44}_{-64}	$D_{\rm M}(0.38)$	1479 ± 47	$\chi^2_{\rm prior}$	0.99 ± 1.4
D_{220}	5872 ± 200	$H(0.51)$	$91.5^{+1.6}_{-1.8}$	$\chi^2_{\rm CMB}$	1140.5 ± 3.5

$\bar{\chi}^2_{\rm eff} = 1141.46$; $\Delta\bar{\chi}^2_{\rm eff} = 0.16$; $R - 1 = 0.01059$

17.28 base_r_plikHM_EE_lowE_post_BAO_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02302 ± 0.00070	D_{2000}	238.0 ± 5.6	$D_{\rm M}(2.33)$	5742 ± 31
$\boldsymbol{\Omega_c h^2}$	0.1174 ± 0.0015	$n_{\rm s,0.002}$	0.984 ± 0.011	$f\sigma_8(0.15)$	0.4467 ± 0.0095
$\boldsymbol{100\theta_{MC}}$	1.03993 ± 0.00077	$Y_{\rm P}$	$0.24566^{+0.00030}_{-0.00027}$	$\sigma_8(0.15)$	0.7448 ± 0.0081
$\boldsymbol{\tau}$	$0.0542^{+0.0042}_{-0.0075}$	$Y_{\rm P}^{\rm BBN}$	$0.24698^{+0.00030}_{-0.00027}$	$f\sigma_8(0.38)$	0.4673 ± 0.0080
$\boldsymbol{\ln(10^{10} A_s)}$	3.046 ± 0.020	10^5D/H	2.47 ± 0.12	$\sigma_8(0.38)$	0.6614 ± 0.0069
$\boldsymbol{n_s}$	0.984 ± 0.011	Age/Gyr	13.750 ± 0.072	$f\sigma_8(0.51)$	0.4672 ± 0.0071
$\boldsymbol{r}$	< 0.317	z_*	1088.92 ± 0.86	$\sigma_8(0.51)$	$0.6194^{+0.0061}_{-0.0068}$
$\boldsymbol{y_{cal}}$	1.0001 ± 0.0024	r_*	144.62 ± 0.59	$f\sigma_8(0.61)$	0.4631 ± 0.0066
H_0	68.51 ± 0.85	$100\theta_*$	1.04005 ± 0.00078	$\sigma_8(0.61)$	$0.5897^{+0.0057}_{-0.0064}$
Ω_Λ	0.6993 ± 0.0090	$D_{\rm M}(z_*)$/Gpc	13.905 ± 0.057	$f\sigma_8(2.33)$	$0.2978^{+0.0028}_{-0.0032}$
$\Omega_{\rm m}$	0.3007 ± 0.0090	$z_{\rm drag}$	1061.2 ± 1.6	$\sigma_8(2.33)$	$0.3075^{+0.0029}_{-0.0034}$
$\Omega_{\rm m} h^2$	0.1410 ± 0.0015	$r_{\rm drag}$	147.08 ± 0.78	$r_{0.002}$	< 0.347
$\Omega_{\rm m} h^3$	0.0966 ± 0.0013	$k_{\rm D}$	0.1414 ± 0.0013	$r_{0.01}$	< 0.331
σ_8	0.8048 ± 0.0092	$100\theta_{\rm D}$	0.15985 ± 0.00091	$\ln(10^{10} A_{\rm t})$	$1.34^{+1.1}_{-0.39}$
S_8	0.806 ± 0.018	$z_{\rm eq}$	3355 ± 36	r_{10}	< 0.182
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.441 ± 0.010	$k_{\rm eq}$	0.01024 ± 0.00011	$10^9 A_{\rm t}$	< 0.664
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.5959 ± 0.0097	$100\theta_{\rm eq}$	0.8230 ± 0.0063	$10^9 A_t e^{-2\tau}$	< 0.595
$\sigma_8 / h^{0.5}$	0.972 ± 0.014	$100\theta_{\rm s,eq}$	0.4539 ± 0.0033	$\chi^2_{\rm simall}$	398.0 ± 1.9
$r_{\rm drag} h$	100.8 ± 1.1	$H(0.15)$	73.68 ± 0.77	$\chi^2_{\rm plikEE}$	741.9 ± 2.8
$\langle d^2 \rangle^{1/2}$	2.382 ± 0.038	$D_{\rm M}(0.15)$	633.7 ± 7.3	$\chi^2_{\rm 6DF}$	0.057 ± 0.081
$z_{\rm re}$	$7.47^{+0.36}_{-0.81}$	$H(0.38)$	83.61 ± 0.66	$\chi^2_{\rm MGS}$	1.93 ± 0.71
$10^9 A_{\rm s}$	2.103 ± 0.041	$D_{\rm M}(0.38)$	1514 ± 15	$\chi^2_{\rm DR12BAO}$	4.4 ± 1.2
$10^9 A_{\rm s} e^{-2\tau}$	1.887 ± 0.027	$H(0.51)$	90.22 ± 0.61	$\chi^2_{\rm prior}$	0.95 ± 1.4
D_{40}	1295^{+43}_{-62}	$D_{\rm M}(0.51)$	1963 ± 19	$\chi^2_{\rm BAO}$	6.3 ± 1.4
D_{220}	5766 ± 150	$H(0.61)$	95.77 ± 0.57	$\chi^2_{\rm CMB}$	1140.0 ± 3.3
D_{810}	2566 ± 35	$D_{\rm M}(0.61)$	2285 ± 21		
D_{1420}	835 ± 15	$H(2.33)$	235.4 ± 1.1		

$\bar{\chi}^2_{\rm eff} = 1147.29$; $\Delta\bar{\chi}^2_{\rm eff} = 0.22$; $R - 1 = 0.01573$

17.29 base_r_plikHM_TT_lowl_lowE_lensing

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022177	0.02214 ± 0.00021	$r_{\rm drag} h$	98.82	98.9 ± 1.2	$D_{\rm M}(0.51)$	1991.6	1992 ± 14
$\boldsymbol{\Omega_c h^2}$	0.12018	0.1200 ± 0.0015	$\langle d^2 \rangle^{1/2}$	2.4451	2.444 ± 0.025	$H(0.61)$	95.099	95.08 ± 0.30
$\boldsymbol{100\theta_{MC}}$	1.040852	1.04082 ± 0.00045	$z_{\rm re}$	7.55	$7.53^{+0.80}_{-0.71}$	$D_{\rm M}(0.61)$	2316.8	2317 ± 15
$\boldsymbol{\tau}$	0.0526	0.0525 ± 0.0077	$10^9 A_{\rm s}$	2.0922	2.091 ± 0.031	$H(2.33)$	236.48	236.35 ± 0.94
$\boldsymbol{\ln(10^{10} A_s)}$	3.0408	3.040 ± 0.015	$10^9 A_{\rm s} e^{-2\tau}$	1.8834	1.882 ± 0.011	$D_{\rm M}(2.33)$	5773.2	5775 ± 14
$\boldsymbol{n_s}$	0.96474	0.9643 ± 0.0048	D_{40}	1229.4	1244^{+14}_{-17}	$f\sigma_8(0.15)$	0.4611	0.4603 ± 0.0081
$\boldsymbol{r}$	0.0002	< 0.0468	D_{220}	5714.8	5714 ± 42	$\sigma_8(0.15)$	0.7488	0.7481 ± 0.0056
$\boldsymbol{y_{cal}}$	1.00047	1.0006 ± 0.0025	D_{810}	2538.4	2537 ± 14	$f\sigma_8(0.38)$	0.4781	0.4774 ± 0.0063
$\boldsymbol{A^{CIB}_{217}}$	48.7	48 ± 7	D_{1420}	816.1	815.0 ± 5.2	$\sigma_8(0.38)$	0.66315	0.6625 ± 0.0048
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.34	—	D_{2000}	230.18	229.8 ± 1.8	$f\sigma_8(0.51)$	0.4760	0.4753 ± 0.0054
$\boldsymbol{A^{tSZ}_{143}}$	7.01	5.1 ± 2.0	$n_{\rm s,0.002}$	0.96474	0.9643 ± 0.0048	$\sigma_8(0.51)$	0.62032	0.6198 ± 0.0046
$\boldsymbol{A^{PS}_{100}}$	254.4	263 ± 28	$Y_{\rm P}$	0.245316	$0.245297^{+0.000096}_{-0.000083}$	$f\sigma_8(0.61)$	0.47054	0.4699 ± 0.0048
$\boldsymbol{A^{PS}_{143}}$	49.5	49 ± 8	$Y_{\rm P}^{\rm BBN}$	0.246643	$0.246623^{+0.000097}_{-0.000083}$	$\sigma_8(0.61)$	0.59009	0.5896 ± 0.0044
$\boldsymbol{A^{PS}_{143\times217}}$	47.3	44 ± 9	10^5D/H	2.6223	2.629 ± 0.040	$f\sigma_8(2.33)$	0.29729	0.2970 ± 0.0023
$\boldsymbol{A^{PS}_{217}}$	119.3	115 ± 10	Age/Gyr	13.8198	13.824 ± 0.032	$\sigma_8(2.33)$	0.30623	0.3060 ± 0.0025
$\boldsymbol{A^{kSZ}}$	0.02	< 4.76	z_*	1090.179	1090.22 ± 0.35	$r_{0.002}$	0.0001	< 0.0425
$\boldsymbol{A^{dustTT}_{100}}$	8.88	8.9 ± 1.8	r_*	144.532	144.60 ± 0.36	$r_{0.01}$	0.0001	< 0.0446
$\boldsymbol{A^{dustTT}_{143}}$	10.79	10.7 ± 1.8	$100\theta_*$	1.041055	1.04103 ± 0.00044	$\ln(10^{10} A_{\rm t})$	−5.72	$-0.70^{+1.4}_{-0.62}$
$\boldsymbol{A^{dustTT}_{143\times217}}$	19.46	18.3 ± 3.3	$D_{\rm M}(z_*)$/Gpc	13.8833	13.890 ± 0.034	r_{10}	0.0001	< 0.0218
$\boldsymbol{A^{dustTT}_{217}}$	94.7	93.5 ± 7.3	$z_{\rm drag}$	1059.513	1059.41 ± 0.45	$10^9 A_{\rm t}$	0.0003	< 0.0977
$\boldsymbol{c_{100}}$	0.99965	0.99960 ± 0.00061	$r_{\rm drag}$	147.258	147.34 ± 0.38	$10^9 A_t e^{-2\tau}$	0.0003	< 0.0879
$\boldsymbol{c_{217}}$	0.99827	0.99827 ± 0.00063	$k_{\rm D}$	0.140540	0.14043 ± 0.00045	f^{143}_{2000}	30.23	31.0 ± 2.9
H_0	67.11	67.12 ± 0.70	$100\theta_{\rm D}$	0.161012	0.16106 ± 0.00026	$f^{143\times217}_{2000}$	33.17	33.5 ± 2.0
Ω_Λ	0.6825	0.6828 ± 0.0097	$z_{\rm eq}$	3401.9	3398 ± 35	f^{217}_{2000}	107.60	108.1 ± 1.9
$\Omega_{\rm m}$	0.3175	0.3172 ± 0.0097	$k_{\rm eq}$	0.010383	0.01037 ± 0.00011	$\chi^2_{\rm lensing}$	8.901	9.46 ± 0.85
$\Omega_{\rm m} h^2$	0.14300	0.1428 ± 0.0015	$100\theta_{\rm eq}$	0.8128	0.8135 ± 0.0066	$\chi^2_{\rm simall}$	395.87	397.1 ± 1.6
$\Omega_{\rm m} h^3$	0.095967	0.09586 ± 0.00045	$100\theta_{\rm s,eq}$	0.44925	0.4496 ± 0.0034	$\chi^2_{\rm lowl}$	23.37	24.9 ± 1.6
σ_8	0.8110	0.8102 ± 0.0063	$H(0.15)$	72.45	72.46 ± 0.60	$\chi^2_{\rm plik}$	759.04	771.2 ± 5.2
S_8	0.8344	0.833 ± 0.016	$D_{\rm M}(0.15)$	645.6	645.5 ± 6.1	$\chi^2_{\rm prior}$	1.36	7.3 ± 3.7
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4570	0.4562 ± 0.0088	$H(0.38)$	82.662	82.66 ± 0.45	$\chi^2_{\rm CMB}$	1187.2	1202.6 ± 5.7
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.6088	0.6079 ± 0.0077	$D_{\rm M}(0.38)$	1538.2	1538 ± 12			
$\sigma_8 / h^{0.5}$	0.9900	0.989 ± 0.010	$H(0.51)$	89.437	89.43 ± 0.36			

Best-fit $\chi^2_{\rm eff} = 1188.55$; $\Delta\chi^2_{\rm eff} = -0.02$; $\bar{\chi}^2_{\rm eff} = 1209.87$; $\Delta\bar{\chi}^2_{\rm eff} = 1.46$; $R - 1 = 0.00994$

$\chi^2_{\rm eff}$: CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.90 (Δ -0.00) simall_100x143_offlike5_EE_Aplanck_B: 395.87 (Δ 0.01) commander_dx12_v3_2_29: 23.37 (Δ 0.14) plik_rd12_HM_v22_TT: 759.04 (Δ -0.28)

17.30 base_r_plikHM_TT_lowl_lowE_lensing_post_BAO

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022253	0.02221 ± 0.00020	$\langle d^2 \rangle^{1/2}$	2.4337	2.433 ± 0.022	$D_M(0.61)$	2306.8	2307 ± 11
$\boldsymbol{\Omega_c h^2}$	0.11914	0.1190 ± 0.0011	z_{re}	7.75	7.75 ± 0.73	$H(2.33)$	235.88	235.78 ± 0.69
$\boldsymbol{100\theta_{MC}}$	1.040958	1.04098 ± 0.00042	$10^9 A_s$	2.0990	2.097 ± 0.030	$D_M(2.33)$	5766.1	5768 ± 12
$\boldsymbol{\tau}$	0.0549	0.0549 ± 0.0072	$10^9 A_s e^{-2\tau}$	1.8808	1.879 ± 0.011	$f\sigma_8(0.15)$	0.4560	0.4555 ± 0.0061
$\boldsymbol{\ln(10^{10} A_s)}$	3.0440	3.043 ± 0.014	D_{40}	1226.7	1241^{+13}_{-17}	$\sigma_8(0.15)$	0.7479	0.7474 ± 0.0056
$\boldsymbol{n_s}$	0.96686	0.9666 ± 0.0041	D_{220}	5727.7	5722 ± 41	$f\sigma_8(0.38)$	0.4744	0.4740 ± 0.0051
$\boldsymbol{r}$	0.0000	< 0.0490	D_{810}	2540.0	2537 ± 14	$\sigma_8(0.38)$	0.66299	0.6626 ± 0.0049
$\boldsymbol{y_{cal}}$	1.00090	1.0008 ± 0.0025	D_{1420}	817.3	816.1 ± 5.0	$f\sigma_8(0.51)$	0.47305	0.4726 ± 0.0045
$\boldsymbol{A_{217}^{CIB}}$	48.1	48 ± 7	D_{2000}	230.62	230.2 ± 1.8	$\sigma_8(0.51)$	0.62047	0.6201 ± 0.0046
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.42	—	$n_{s,0.002}$	0.96686	0.9666 ± 0.0041	$f\sigma_8(0.61)$	0.46812	0.4677 ± 0.0042
$\boldsymbol{A_{143}^{tSZ}}$	6.96	$5.2^{+2.2}_{-1.9}$	Y_P	0.245348	$0.245326^{+0.000087}_{-0.000076}$	$\sigma_8(0.61)$	0.59040	0.5901 ± 0.0044
$\boldsymbol{A_{100}^{PS}}$	253.6	262 ± 28	Y_P^{BBN}	0.246674	$0.246652^{+0.000087}_{-0.000076}$	$f\sigma_8(2.33)$	0.29770	0.2976 ± 0.0022
$\boldsymbol{A_{143}^{PS}}$	50.6	48 ± 8	10^5D/H	2.6077	2.617 ± 0.037	$\sigma_8(2.33)$	0.30694	0.3068 ± 0.0024
$\boldsymbol{A_{143\times217}^{PS}}$	49.2	43 ± 9	Age/Gyr	13.8045	13.808 ± 0.028	$r_{0.002}$	0.0000	< 0.0448
$\boldsymbol{A_{217}^{PS}}$	120.3	115 ± 10	z_*	1089.993	1090.04 ± 0.29	$r_{0.01}$	0.0000	< 0.0469
$\boldsymbol{A^{kSZ}}$	0.01	< 4.59	r_*	144.744	144.80 ± 0.28	$\ln(10^{10} A_t)$	-6.92	$-0.65^{+1.4}_{-0.61}$
$\boldsymbol{A_{100}^{dustTT}}$	8.89	8.9 ± 1.8	$100\theta_*$	1.041155	1.04118 ± 0.00042	r_{10}	0.0000	< 0.0229
$\boldsymbol{A_{143}^{dustTT}}$	10.83	10.7 ± 1.8	$D_M(z_*)$/Gpc	13.9023	13.908 ± 0.028	$10^9 A_t$	0.000	< 0.103
$\boldsymbol{A_{143\times217}^{dustTT}}$	19.58	18.3 ± 3.2	z_{drag}	1059.589	1059.49 ± 0.45	$10^9 A_t e^{-2\tau}$	0.0001	< 0.0920
$\boldsymbol{A_{217}^{dustTT}}$	94.9	93.6 ± 7.2	r_{drag}	147.452	147.53 ± 0.32	f_{2000}^{143}	30.07	30.7 ± 2.9
$\boldsymbol{c_{100}}$	0.99967	0.99960 ± 0.00061	k_D	0.140399	0.14028 ± 0.00043	$f_{2000}^{143\times217}$	33.02	33.2 ± 2.0
$\boldsymbol{c_{217}}$	0.99823	0.99827 ± 0.00063	$100\theta_D$	0.160954	0.16103 ± 0.00026	f_{2000}^{217}	107.50	107.9 ± 1.9
H_0	67.574	67.58 ± 0.49	z_{eq}	3378.7	3376 ± 25	$\chi^2_{lensing}$	8.808	9.32 ± 0.77
Ω_Λ	0.6889	0.6892 ± 0.0065	k_{eq}	0.010312	0.010303 ± 0.000076	χ^2_{simall}	396.18	397.3 ± 1.7
Ω_m	0.3111	0.3108 ± 0.0065	$100\theta_{eq}$	0.81721	0.8177 ± 0.0046	χ^2_{lowl}	23.01	24.5 ± 1.5
$\Omega_m h^2$	0.14203	0.1419 ± 0.0010	$100\theta_{s,eq}$	0.45151	0.4518 ± 0.0024	χ^2_{plik}	759.74	771.5 ± 5.2
$\Omega_m h^3$	0.095978	0.09589 ± 0.00045	$H(0.15)$	72.847	72.85 ± 0.43	χ^2_{6DF}	0.0299	0.055 ± 0.068
σ_8	0.8093	0.8088 ± 0.0062	$D_M(0.15)$	641.59	641.6 ± 4.2	χ^2_{MGS}	1.217	1.30 ± 0.46
S_8	0.8241	0.823 ± 0.012	$H(0.38)$	82.945	82.94 ± 0.33	$\chi^2_{DR12BAO}$	4.40	4.8 ± 1.5
$\sigma_8 \Omega_m^{0.5}$	0.4514	0.4509 ± 0.0065	$D_M(0.38)$	1530.3	1530.4 ± 8.6	χ^2_{prior}	1.35	7.3 ± 3.6
$\sigma_8 \Omega_m^{0.25}$	0.6044	0.6039 ± 0.0062	$H(0.51)$	89.654	89.64 ± 0.27	χ^2_{CMB}	1187.7	1202.6 ± 5.6
$\sigma_8 / h^{0.5}$	0.9845	0.9839 ± 0.0089	$D_M(0.51)$	1982.4	1983 ± 10	χ^2_{BAO}	5.64	6.1 ± 1.2
$r_{drag} h$	99.64	99.69 ± 0.83	$H(0.61)$	95.267	95.25 ± 0.24			

Best-fit $\chi^2_{eff} = 1194.73$; $\Delta\chi^2_{eff} = 0.04$; $\bar{\chi}^2_{eff} = 1215.99$; $\Delta\bar{\chi}^2_{eff} = 1.26$; $R - 1 = 0.01776$

χ^2_{eff}: BAO - 6DF: 0.03 (Δ 0.00) MGS: 1.22 (Δ 0.00) DR12BAO: 4.40 (Δ 0.02) CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.81 (Δ -0.07) simall_100x143_offlike5_EE_Aplanck_
396.18 (Δ 0.08) commander_dx12_v3_2_29: 23.01 (Δ 0.05) plik_rd12_HM_v22_TT: 759.74 (Δ -0.06)

17.31 base_r_plikHM_TT_lowl_lowE_lensing_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02215 ± 0.00021	$r_{\rm drag} h$	99.0 ± 1.2	$D_{\rm M}(0.51)$	1991 ± 14
$\boldsymbol{\Omega_c h^2}$	0.1199 ± 0.0015	$\langle d^2 \rangle^{1/2}$	2.445 ± 0.025	$H(0.61)$	95.10 ± 0.29
$\boldsymbol{100\theta_{\rm MC}}$	1.04083 ± 0.00045	$z_{\rm re}$	$7.68^{+0.55}_{-0.77}$	$D_{\rm M}(0.61)$	2316 ± 15
$\boldsymbol{\tau}$	$0.0540^{+0.0050}_{-0.0079}$	$10^9 A_{\rm s}$	$2.096^{+0.023}_{-0.030}$	$H(2.33)$	236.28 ± 0.92
$\boldsymbol{\ln(10^{10} A_{\rm s})}$	$3.043^{+0.011}_{-0.014}$	$10^9 A_{\rm s} e^{-2\tau}$	1.881 ± 0.011	$D_{\rm M}(2.33)$	5774 ± 14
$\boldsymbol{n_{\rm s}}$	0.9646 ± 0.0047	D_{40}	1243^{+14}_{-17}	$f\sigma_8(0.15)$	0.4602 ± 0.0081
$\boldsymbol{r}$	< 0.0471	D_{220}	5714 ± 42	$\sigma_8(0.15)$	0.7488 ± 0.0051
$\boldsymbol{y_{\rm cal}}$	1.0006 ± 0.0025	D_{810}	2536 ± 14	$f\sigma_8(0.38)$	0.4775 ± 0.0063
$\boldsymbol{A^{\rm CIB}_{217}}$	48 ± 7	D_{1420}	815.1 ± 5.2	$\sigma_8(0.38)$	$0.6632^{+0.0040}_{-0.0047}$
$\boldsymbol{\xi^{\rm tSZ\times CIB}}$	—	D_{2000}	229.8 ± 1.8	$f\sigma_8(0.51)$	0.4755 ± 0.0053
$\boldsymbol{A^{\rm tSZ}_{143}}$	5.1 ± 2.0	$n_{\rm s,0.002}$	0.9646 ± 0.0047	$\sigma_8(0.51)$	$0.6205^{+0.0037}_{-0.0044}$
$\boldsymbol{A^{\rm PS}_{100}}$	263 ± 28	$Y_{\rm P}$	$0.245301^{+0.000096}_{-0.000082}$	$f\sigma_8(0.61)$	0.4701 ± 0.0047
$\boldsymbol{A^{\rm PS}_{143}}$	49 ± 8	$Y_{\rm P}^{\rm BBN}$	$0.246627^{+0.000096}_{-0.000082}$	$\sigma_8(0.61)$	$0.5903^{+0.0035}_{-0.0042}$
$\boldsymbol{A^{\rm PS}_{143\times217}}$	44 ± 9	10^5D/H	2.628 ± 0.040	$f\sigma_8(2.33)$	$0.2974^{+0.0017}_{-0.0023}$
$\boldsymbol{A^{\rm PS}_{217}}$	115 ± 10	Age/Gyr	13.822 ± 0.032	$\sigma_8(2.33)$	$0.3064^{+0.0019}_{-0.0025}$
$\boldsymbol{A^{\rm kSZ}}$	< 4.71	z_*	1090.19 ± 0.34	$r_{0.002}$	< 0.0428
$\boldsymbol{A^{{\rm dust}TT}_{100}}$	8.9 ± 1.8	r_*	144.62 ± 0.35	$r_{0.01}$	< 0.0449
$\boldsymbol{A^{{\rm dust}TT}_{143}}$	10.7 ± 1.8	$100\theta_*$	1.04104 ± 0.00044	$\ln(10^{10} A_{\rm t})$	$-0.69^{+1.4}_{-0.62}$
$\boldsymbol{A^{{\rm dust}TT}_{143\times217}}$	18.3 ± 3.3	$D_{\rm M}(z_*)$/Gpc	13.892 ± 0.033	r_{10}	< 0.0220
$\boldsymbol{A^{{\rm dust}TT}_{217}}$	93.5 ± 7.3	$z_{\rm drag}$	1059.42 ± 0.45	$10^9 A_{\rm t}$	< 0.0987
$\boldsymbol{c_{100}}$	0.99960 ± 0.00061	$r_{\rm drag}$	147.36 ± 0.37	$10^9 A_t e^{-2\tau}$	< 0.0885
$\boldsymbol{c_{217}}$	0.99827 ± 0.00063	$k_{\rm D}$	0.14041 ± 0.00045	f^{143}_{2000}	31.0 ± 2.9
H_0	67.18 ± 0.69	$100\theta_{\rm D}$	0.16106 ± 0.00026	$f^{143\times217}_{2000}$	33.4 ± 2.0
Ω_Λ	0.6836 ± 0.0094	$z_{\rm eq}$	3395 ± 34	f^{217}_{2000}	108.0 ± 1.9
$\Omega_{\rm m}$	0.3164 ± 0.0094	$k_{\rm eq}$	0.01036 ± 0.00010	$\chi^2_{\rm lensing}$	9.43 ± 0.84
$\Omega_{\rm m} h^2$	0.1427 ± 0.0014	$100\theta_{\rm eq}$	0.8140 ± 0.0064	$\chi^2_{\rm simall}$	397.0 ± 1.6
$\Omega_{\rm m} h^3$	0.09586 ± 0.00045	$100\theta_{\rm s,eq}$	0.4499 ± 0.0033	$\chi^2_{\rm lowl}$	24.9 ± 1.6
σ_8	0.8109 ± 0.0060	$H(0.15)$	72.51 ± 0.59	$\chi^2_{\rm plik}$	771.1 ± 5.2
S_8	0.833 ± 0.016	$D_{\rm M}(0.15)$	645.0 ± 5.9	$\chi^2_{\rm prior}$	7.3 ± 3.7
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4561 ± 0.0088	$H(0.38)$	82.69 ± 0.44	$\chi^2_{\rm CMB}$	1202.4 ± 5.6
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.6081 ± 0.0076	$D_{\rm M}(0.38)$	1537 ± 12		
$\sigma_8 / h^{0.5}$	0.989 ± 0.010	$H(0.51)$	89.45 ± 0.35		

$\bar{\chi}^2_{\rm eff} = 1209.64$; $\Delta\bar{\chi}^2_{\rm eff} = 1.48$; $R - 1 = 0.01135$

17.32 base_r_plikHM_TT_lowl_lowE_lensing_post_BAO_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02221 ± 0.00020	$\langle d^2 \rangle^{1/2}$	2.434 ± 0.021	$D_M(0.61)$	2307 ± 11
$\boldsymbol{\Omega_c h^2}$	0.1190 ± 0.0011	z_{re}	$7.83^{+0.61}_{-0.72}$	$H(2.33)$	235.76 ± 0.68
$\boldsymbol{100\theta_{MC}}$	1.04098 ± 0.00042	$10^9 A_s$	$2.100^{+0.025}_{-0.031}$	$D_M(2.33)$	5767 ± 12
$\boldsymbol{\tau}$	$0.0557^{+0.0056}_{-0.0074}$	$10^9 A_s e^{-2\tau}$	1.879 ± 0.011	$f\sigma_8(0.15)$	0.4556 ± 0.0061
$\boldsymbol{\ln(10^{10} A_s)}$	$3.045^{+0.012}_{-0.014}$	D_{40}	1241^{+13}_{-17}	$\sigma_8(0.15)$	$0.7479^{+0.0049}_{-0.0056}$
$\boldsymbol{n_s}$	0.9667 ± 0.0041	D_{220}	5722 ± 41	$f\sigma_8(0.38)$	0.4741 ± 0.0050
$\boldsymbol{r}$	< 0.0492	D_{810}	2537 ± 14	$\sigma_8(0.38)$	$0.6630^{+0.0042}_{-0.0049}$
$\boldsymbol{y_{cal}}$	1.0008 ± 0.0025	D_{1420}	816.1 ± 5.0	$f\sigma_8(0.51)$	0.4728 ± 0.0044
$\boldsymbol{A^{CIB}_{217}}$	48 ± 7	D_{2000}	230.2 ± 1.8	$\sigma_8(0.51)$	$0.6205^{+0.0039}_{-0.0046}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$n_{s,0.002}$	0.9667 ± 0.0041	$f\sigma_8(0.61)$	0.4679 ± 0.0041
$\boldsymbol{A^{tSZ}_{143}}$	$5.2^{+2.2}_{-1.9}$	Y_P	$0.245328^{+0.000087}_{-0.000076}$	$\sigma_8(0.61)$	$0.5905^{+0.0037}_{-0.0044}$
$\boldsymbol{A^{PS}_{100}}$	262 ± 28	Y_P^{BBN}	$0.246654^{+0.000087}_{-0.000076}$	$f\sigma_8(2.33)$	$0.2978^{+0.0019}_{-0.0023}$
$\boldsymbol{A^{PS}_{143}}$	48 ± 8	10^5D/H	2.616 ± 0.037	$\sigma_8(2.33)$	$0.3070^{+0.0020}_{-0.0024}$
$\boldsymbol{A^{PS}_{143\times217}}$	43 ± 9	Age/Gyr	13.807 ± 0.028	$r_{0.002}$	< 0.0453
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	z_*	1090.04 ± 0.29	$r_{0.01}$	< 0.0472
$\boldsymbol{A^{kSZ}}$	< 4.58	r_*	144.81 ± 0.28	$\ln(10^{10} A_t)$	$-0.64^{+1.4}_{-0.61}$
$\boldsymbol{A^{dustTT}_{100}}$	8.9 ± 1.8	$100\theta_*$	1.04118 ± 0.00042	r_{10}	< 0.0231
$\boldsymbol{A^{dustTT}_{143}}$	10.7 ± 1.8	$D_M(z_*)$/Gpc	13.908 ± 0.028	$10^9 A_t$	< 0.104
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.3 ± 3.3	z_{drag}	1059.50 ± 0.45	$10^9 A_t e^{-2\tau}$	< 0.0926
$\boldsymbol{A^{dustTT}_{217}}$	93.6 ± 7.2	r_{drag}	147.53 ± 0.32	f^{143}_{2000}	30.7 ± 2.9
$\boldsymbol{c_{100}}$	0.99960 ± 0.00061	k_D	0.14028 ± 0.00043	$f^{143\times217}_{2000}$	33.2 ± 2.0
$\boldsymbol{c_{217}}$	0.99827 ± 0.00063	$100\theta_D$	0.16102 ± 0.00026	f^{217}_{2000}	107.9 ± 1.9
H_0	67.59 ± 0.49	z_{eq}	3375 ± 25	$\chi^2_{lensing}$	9.28 ± 0.72
Ω_Λ	0.6894 ± 0.0064	k_{eq}	0.010300 ± 0.000075	χ^2_{simall}	397.2 ± 1.7
Ω_m	0.3106 ± 0.0064	$100\theta_{eq}$	0.8179 ± 0.0046	χ^2_{lowl}	24.5 ± 1.5
$\Omega_m h^2$	0.1419 ± 0.0010	$100\theta_{s,eq}$	0.4519 ± 0.0024	χ^2_{plik}	771.4 ± 5.2
$\Omega_m h^3$	0.09589 ± 0.00045	$H(0.15)$	72.86 ± 0.43	χ^2_{6DF}	0.053 ± 0.066
σ_8	$0.8092^{+0.0055}_{-0.0062}$	$D_M(0.15)$	641.5 ± 4.2	χ^2_{MGS}	1.32 ± 0.46
S_8	0.823 ± 0.012	$H(0.38)$	82.95 ± 0.33	$\chi^2_{DR12BAO}$	4.7 ± 1.4
$\sigma_8 \Omega_m^{0.5}$	0.4510 ± 0.0065	$D_M(0.38)$	1530.1 ± 8.5	χ^2_{prior}	7.3 ± 3.6
$\sigma_8 \Omega_m^{0.25}$	0.6041 ± 0.0061	$H(0.51)$	89.65 ± 0.27	χ^2_{CMB}	1202.5 ± 5.6
$\sigma_8 / h^{0.5}$	0.9843 ± 0.0088	$D_M(0.51)$	1982 ± 10	χ^2_{BAO}	6.1 ± 1.1
$r_{drag} h$	99.72 ± 0.83	$H(0.61)$	95.25 ± 0.24		

$\bar{\chi}^2_{eff} = 1215.85$; $\Delta\bar{\chi}^2_{eff} = 1.27$; $R - 1 = 0.01875$

17.33 base_r_plikHM_TTTEEE_lowl_lowE_lensing

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022391	0.02237 ± 0.00014	S_8	0.8320	0.830 ± 0.013	$D_M(0.38)$	1533.2	1532.9 ± 9.3
$\boldsymbol{\Omega_c h^2}$	0.12002	0.1199 ± 0.0012	$\sigma_8 \Omega_m^{0.5}$	0.4557	0.4549 ± 0.0070	$H(0.51)$	89.639	89.64 ± 0.27
$\boldsymbol{100\theta_{MC}}$	1.040933	1.04092 ± 0.00031	$\sigma_8 \Omega_m^{0.25}$	0.6082	0.6073 ± 0.0064	$D_M(0.51)$	1985.6	1985 ± 11
$\boldsymbol{\tau}$	0.0543	0.0543 ± 0.0075	$\sigma_8/h^{0.5}$	0.9889	0.9878 ± 0.0090	$H(0.61)$	95.291	95.29 ± 0.22
$\boldsymbol{\ln(10^{10} A_s)}$	3.0445	3.044 ± 0.014	$r_{drag} h$	99.08	99.16 ± 0.93	$D_M(0.61)$	2310.0	2310 ± 12
$\boldsymbol{n_s}$	0.96634	0.9659 ± 0.0041	$\langle d^2 \rangle^{1/2}$	2.4430	2.442 ± 0.022	$H(2.33)$	236.59	236.49 ± 0.72
$\boldsymbol{r}$	0.0005	< 0.0494	z_{re}	7.68	7.66 ± 0.75	$D_M(2.33)$	5762.7	5763 ± 10
$\boldsymbol{y_{cal}}$	1.00038	1.0006 ± 0.0025	$10^9 A_s$	2.0999	2.099 ± 0.030	$f\sigma_8(0.15)$	0.4600	0.4592 ± 0.0065
$\boldsymbol{A_{217}^{CIB}}$	45.8	47 ± 7	$10^9 A_s e^{-2\tau}$	1.8836	1.883 ± 0.011	$\sigma_8(0.15)$	0.7496	0.7490 ± 0.0053
$\boldsymbol{\xi^{tSZ \times CIB}}$	0.65	—	D_{40}	1228.3	1243^{+13}_{-17}	$f\sigma_8(0.38)$	0.4775	0.4768 ± 0.0052
$\boldsymbol{A_{143}^{tSZ}}$	7.08	$5.5^{+2.1}_{-1.9}$	D_{220}	5729.4	5730 ± 39	$\sigma_8(0.38)$	0.66410	0.6636 ± 0.0047
$\boldsymbol{A_{100}^{PS}}$	248.4	258 ± 28	D_{810}	2540.9	2539 ± 13	$f\sigma_8(0.51)$	0.47567	0.4750 ± 0.0046
$\boldsymbol{A_{143}^{PS}}$	50.6	46 ± 8	D_{1420}	818.43	817.6 ± 4.8	$\sigma_8(0.51)$	0.62132	0.6209 ± 0.0044
$\boldsymbol{A_{143\times217}^{PS}}$	53.1	43 ± 9	D_{2000}	231.35	231.0 ± 1.6	$f\sigma_8(0.61)$	0.47039	0.4698 ± 0.0041
$\boldsymbol{A_{217}^{PS}}$	122.1	115 ± 10	$n_{s,0.002}$	0.96634	0.9659 ± 0.0041	$\sigma_8(0.61)$	0.59110	0.5907 ± 0.0042
$\boldsymbol{A^{kSZ}}$	0.00	< 4.07	Y_P	0.245404	$0.245394^{+0.000060}_{-0.000052}$	$f\sigma_8(2.33)$	0.29789	0.2977 ± 0.0022
$\boldsymbol{A_{100}^{dust TT}}$	8.81	8.9 ± 1.8	Y_P^{BBN}	0.246730	$0.246720^{+0.000060}_{-0.000052}$	$\sigma_8(2.33)$	0.30695	0.3068 ± 0.0024
$\boldsymbol{A_{143}^{dust TT}}$	11.02	10.8 ± 1.8	10^5D/H	2.5815	2.586 ± 0.027	$r_{0.002}$	0.0004	< 0.0452
$\boldsymbol{A_{143\times217}^{dust TT}}$	20.21	18.6 ± 3.3	Age/Gyr	13.7951	13.797 ± 0.023	$r_{0.01}$	0.0004	< 0.0473
$\boldsymbol{A_{217}^{dust TT}}$	95.6	93.8 ± 7.3	z_*	1089.894	1089.91 ± 0.25	$\ln(10^{10} A_t)$	-4.62	$-0.65^{+1.4}_{-0.57}$
$\boldsymbol{A_{100}^{dust TE}}$	0.1151	0.115 ± 0.038	r_*	144.411	144.46 ± 0.27	r_{10}	0.0002	< 0.0231
$\boldsymbol{A_{100\times143}^{dust TE}}$	0.1353	0.135 ± 0.030	$100\theta_*$	1.041110	1.04110 ± 0.00030	$10^9 A_t$	0.001	< 0.104
$\boldsymbol{A_{100\times217}^{dust TE}}$	0.482	0.481 ± 0.084	$D_M(z_*)$/Gpc	13.8709	13.876 ± 0.025	$10^9 A_t e^{-2\tau}$	0.0009	< 0.0930
$\boldsymbol{A_{143}^{dust TE}}$	0.226	0.226 ± 0.054	z_{drag}	1059.971	1059.93 ± 0.29	f_{2000}^{143}	28.57	29.3 ± 2.7
$\boldsymbol{A_{143\times217}^{dust TE}}$	0.667	0.667 ± 0.081	r_{drag}	147.065	147.12 ± 0.27	$f_{2000}^{143\times217}$	31.92	32.1 ± 1.8
$\boldsymbol{A_{217}^{dust TE}}$	2.088	2.09 ± 0.27	k_D	0.140912	0.14084 ± 0.00030	f_{2000}^{217}	106.44	106.9 ± 1.8
$\boldsymbol{c_{100}}$	0.99973	0.99966 ± 0.00061	$100\theta_D$	0.160730	0.16076 ± 0.00017	$\chi^2_{lensing}$	8.839	9.25 ± 0.67
$\boldsymbol{c_{217}}$	0.99818	0.99819 ± 0.00062	z_{eq}	3403.1	3400 ± 27	χ^2_{simall}	396.05	397.2 ± 1.8
H_0	67.37	67.40 ± 0.54	k_{eq}	0.010387	0.010376 ± 0.000082	χ^2_{lowl}	23.21	24.7 ± 1.5
Ω_Λ	0.6848	0.6853 ± 0.0074	$100\theta_{eq}$	0.8132	0.8138 ± 0.0051	χ^2_{plik}	2345.0	2359.2 ± 5.7
Ω_m	0.3152	0.3147 ± 0.0074	$100\theta_{s,eq}$	0.44932	0.4496 ± 0.0026	χ^2_{prior}	1.55	11.6 ± 4.5
$\Omega_m h^2$	0.14305	0.1429 ± 0.0011	$H(0.15)$	72.693	72.71 ± 0.46	χ^2_{CMB}	2773.1	2790.4 ± 6.0
$\Omega_m h^3$	0.096372	0.09631 ± 0.00029	$D_M(0.15)$	643.25	643.1 ± 4.6			
σ_8	0.8117	0.8109 ± 0.0059	$H(0.38)$	82.879	82.89 ± 0.34			

Best-fit $\chi^2_{eff} = 2774.63$; $\Delta\chi^2_{eff} = 0.00$; $\bar{\chi}^2_{eff} = 2801.95$; $\Delta\bar{\chi}^2_{eff} = 1.26$; $R - 1 = 0.00682$

χ^2_{eff}: CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.84 (Δ -0.03) simall_100x143_offlike5_EE_Aplanck_B: 396.05 (Δ 0.00) commander_dx12_v3_2_29: 23.20 (Δ -0.05) plik_rd12_HM_v22b_TTTEEE: 2344.99 (Δ 0.06)

17.34 base_r_plikHM_TTTEEE_lowl_lowE_lensing_post_BAO

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022447	0.02242 ± 0.00013	$\sigma_8\Omega_m^{0.5}$	0.4521	0.4515 ± 0.0058	$D_M(0.51)$	1979.0	1979.3 ± 8.6
$\boldsymbol{\Omega_c h^2}$	0.11929	0.11924 ± 0.00094	$\sigma_8\Omega_m^{0.25}$	0.6056	0.6047 ± 0.0056	$H(0.61)$	95.413	95.40 ± 0.18
$\boldsymbol{100\theta_{MC}}$	1.041014	1.04101 ± 0.00029	$\sigma_8/h^{0.5}$	0.9859	0.9846 ± 0.0083	$D_M(0.61)$	2303.0	2303.3 ± 9.3
$\boldsymbol{\tau}$	0.0566	$0.0561^{+0.0068}_{-0.0076}$	$r_{drag}h$	99.65	99.67 ± 0.73	$H(2.33)$	236.18	236.11 ± 0.57
$\boldsymbol{\ln(10^{10}A_s)}$	3.0484	3.046 ± 0.014	$\langle d^2\rangle^{1/2}$	2.4367	2.435 ± 0.020	$D_M(2.33)$	5757.5	5758.7 ± 8.8
$\boldsymbol{n_s}$	0.96801	0.9675 ± 0.0038	z_{re}	7.89	7.82 ± 0.73	$f\sigma_8(0.15)$	0.4568	0.4561 ± 0.0054
$\boldsymbol{r}$	0.0000	< 0.0513	$10^9 A_s$	2.1082	$2.104^{+0.028}_{-0.031}$	$\sigma_8(0.15)$	0.7496	0.7486 ± 0.0053
$\boldsymbol{y_{cal}}$	1.00082	1.0008 ± 0.0024	$10^9 A_s e^{-2\tau}$	1.8825	1.880 ± 0.011	$f\sigma_8(0.38)$	0.47533	0.4746 ± 0.0046
$\boldsymbol{A^{CIB}_{217}}$	45.7	46 ± 7	D_{40}	1226.5	1241^{+12}_{-18}	$\sigma_8(0.38)$	0.66460	0.6637 ± 0.0047
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.666	> 0.367	D_{220}	5739.5	5735 ± 38	$f\sigma_8(0.51)$	0.47403	0.4733 ± 0.0041
$\boldsymbol{A^{tSZ}_{143}}$	7.06	5.5 ± 1.9	D_{810}	2542.8	2540 ± 13	$\sigma_8(0.51)$	0.62199	0.6212 ± 0.0044
$\boldsymbol{A^{PS}_{100}}$	248.2	258 ± 28	D_{1420}	819.61	818.3 ± 4.7	$f\sigma_8(0.61)$	0.46911	0.4684 ± 0.0038
$\boldsymbol{A^{PS}_{143}}$	50.2	45 ± 8	D_{2000}	231.78	231.3 ± 1.5	$\sigma_8(0.61)$	0.59186	0.5911 ± 0.0042
$\boldsymbol{A^{PS}_{143\times217}}$	52.9	42 ± 9	$n_{s,0.002}$	0.96801	0.9675 ± 0.0038	$f\sigma_8(2.33)$	0.29845	0.2981 ± 0.0022
$\boldsymbol{A^{PS}_{217}}$	122.0	115 ± 10	Y_P	0.245425	$0.245412^{+0.000055}_{-0.000047}$	$\sigma_8(2.33)$	0.30773	0.3073 ± 0.0023
$\boldsymbol{A^{kSZ}}$	0.01	< 3.99	Y_P^{BBN}	0.246752	$0.246739^{+0.000055}_{-0.000047}$	$r_{0.002}$	0.0000	< 0.0471
$\boldsymbol{A^{dustTT}_{100}}$	8.82	8.9 ± 1.8	10^5D/H	2.5713	2.577 ± 0.025	$r_{0.01}$	0.0000	< 0.0491
$\boldsymbol{A^{dustTT}_{143}}$	11.04	10.8 ± 1.8	Age/Gyr	13.7840	13.787 ± 0.020	$\ln(10^{10}A_t)$	-7.83	$-0.60^{+1.4}_{-0.57}$
$\boldsymbol{A^{dustTT}_{143\times217}}$	20.21	18.6 ± 3.3	z_*	1089.760	1089.79 ± 0.22	r_{10}	0.0000	< 0.0241
$\boldsymbol{A^{dustTT}_{217}}$	95.8	93.9 ± 7.4	r_*	144.557	144.59 ± 0.22	$10^9 A_t$	0.000	< 0.108
$\boldsymbol{A^{dustTE}_{100}}$	0.1138	0.114 ± 0.038	$100\theta_*$	1.041188	1.04119 ± 0.00029	$10^9 A_t e^{-2\tau}$	0.0000	< 0.0964
$\boldsymbol{A^{dustTE}_{100\times143}}$	0.1343	0.135 ± 0.030	$D_M(z_*)$/Gpc	13.8838	13.887 ± 0.021	f^{143}_{2000}	28.29	29.1 ± 2.7
$\boldsymbol{A^{dustTE}_{100\times217}}$	0.478	0.482 ± 0.085	z_{drag}	1060.047	1059.99 ± 0.29	$f^{143\times217}_{2000}$	31.68	31.9 ± 1.8
$\boldsymbol{A^{dustTE}_{143}}$	0.223	0.226 ± 0.054	r_{drag}	147.196	147.24 ± 0.23	f^{217}_{2000}	106.33	106.8 ± 1.7
$\boldsymbol{A^{dustTE}_{143\times217}}$	0.665	0.665 ± 0.080	k_D	0.140817	0.14075 ± 0.00028	$\chi^2_{lensing}$	8.720	9.14 ± 0.60
$\boldsymbol{A^{dustTE}_{217}}$	2.082	2.08 ± 0.27	$100\theta_D$	0.160689	0.16073 ± 0.00017	χ^2_{simall}	396	1296 ± 1000
$\boldsymbol{c_{100}}$	0.99975	0.99966 ± 0.00062	z_{eq}	3387.0	3385 ± 21	χ^2_{lowl}	22.95	24.5 ± 1.5
$\boldsymbol{c_{217}}$	0.99818	0.99819 ± 0.00062	k_{eq}	0.010337	0.010332 ± 0.000065	χ^2_{plik}	2345	1461 ± 1000
H_0	67.698	67.69 ± 0.43	$100\theta_{eq}$	0.81631	0.8166 ± 0.0040	χ^2_{6DF}	0.0294	0.050 ± 0.058
Ω_Λ	0.6893	0.6894 ± 0.0057	$100\theta_{s,eq}$	0.45090	0.4511 ± 0.0021	χ^2_{MGS}	1.217	1.28 ± 0.40
Ω_m	0.3107	0.3106 ± 0.0057	$H(0.15)$	72.975	72.97 ± 0.37	$\chi^2_{DR12BAO}$	4.43	4.8 ± 1.3
$\Omega_m h^2$	0.14238	0.14230 ± 0.00089	$D_M(0.15)$	640.44	640.5 ± 3.6	χ^2_{prior}	1.58	11.6 ± 4.6
$\Omega_m h^3$	0.096388	0.09632 ± 0.00029	$H(0.38)$	83.081	83.07 ± 0.27	χ^2_{CMB}	2773.4	2790.4 ± 5.9
σ_8	0.8112	0.8101 ± 0.0059	$D_M(0.38)$	1527.6	1527.8 ± 7.3	χ^2_{BAO}	5.68	6.1 ± 1.0
S_8	0.8255	0.824 ± 0.011	$H(0.51)$	89.795	89.78 ± 0.22			

Best-fit $\chi^2_{eff} = 2780.69$; $\Delta\chi^2_{eff} = -0.00$; $\bar{\chi}^2_{eff} = 2808.06$; $\Delta\bar{\chi}^2_{eff} = 1.22$; $R - 1 = 0.01525$

χ^2_{eff}: BAO - 6DF: 0.03 (Δ 0.00) MGS: 1.22 (Δ 0.00) DR12BAO: 4.43 (Δ 0.01) CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.72 (Δ -0.01) simall_100x143_offlike5_EE_Aplanck_ 396.49 (Δ -0.03) commander_dx12_v3_2_29: 22.95 (Δ 0.05) plik_rd12_HM_v22b_TTTEEE: 2345.28 (Δ -0.03)

17.35 base_r_plikHM_TTTEEE_lowl_lowE_lensing_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02238 ± 0.00014	S_8	0.831 ± 0.013	$D_M(0.38)$	1532.4 ± 9.1
$\boldsymbol{\Omega_c h^2}$	0.1198 ± 0.0012	$\sigma_8 \Omega_m^{0.5}$	0.4549 ± 0.0070	$H(0.51)$	89.65 ± 0.27
$\boldsymbol{100\theta_{MC}}$	1.04093 ± 0.00030	$\sigma_8 \Omega_m^{0.25}$	0.6075 ± 0.0063	$D_M(0.51)$	1985 ± 11
$\boldsymbol{\tau}$	$0.0552^{+0.0053}_{-0.0079}$	$\sigma_8/h^{0.5}$	0.9882 ± 0.0089	$H(0.61)$	95.30 ± 0.22
$\boldsymbol{\ln(10^{10} A_s)}$	$3.045^{+0.011}_{-0.014}$	$r_{drag} h$	99.20 ± 0.92	$D_M(0.61)$	2309 ± 12
$\boldsymbol{n_s}$	0.9661 ± 0.0041	$\langle d^2 \rangle^{1/2}$	2.443 ± 0.021	$H(2.33)$	236.45 ± 0.70
$\boldsymbol{r}$	< 0.0493	z_{re}	$7.76^{+0.58}_{-0.76}$	$D_M(2.33)$	5763 ± 10
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0024	$10^9 A_s$	$2.102^{+0.023}_{-0.031}$	$f\sigma_8(0.15)$	0.4592 ± 0.0065
$\boldsymbol{A_{217}^{CIB}}$	47 ± 7	$10^9 A_s e^{-2\tau}$	1.882 ± 0.011	$\sigma_8(0.15)$	$0.7495^{+0.0047}_{-0.0052}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{40}	1243^{+13}_{-17}	$f\sigma_8(0.38)$	0.4770 ± 0.0052
$\boldsymbol{A_{143}^{tSZ}}$	$5.5^{+2.1}_{-1.9}$	D_{220}	5730 ± 38	$\sigma_8(0.38)$	$0.6641^{+0.0039}_{-0.0047}$
$\boldsymbol{A_{100}^{PS}}$	258 ± 28	D_{810}	2539 ± 13	$f\sigma_8(0.51)$	0.4752 ± 0.0045
$\boldsymbol{A_{143}^{PS}}$	46 ± 8	D_{1420}	817.6 ± 4.7	$\sigma_8(0.51)$	$0.6213^{+0.0036}_{-0.0044}$
$\boldsymbol{A_{143\times217}^{PS}}$	43 ± 9	D_{2000}	231.0 ± 1.6	$f\sigma_8(0.61)$	0.4700 ± 0.0041
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	$n_{s,0.002}$	0.9661 ± 0.0041	$\sigma_8(0.61)$	$0.5911^{+0.0034}_{-0.0043}$
$\boldsymbol{A^{kSZ}}$	< 4.07	Y_P	$0.245396^{+0.000059}_{-0.000052}$	$f\sigma_8(2.33)$	$0.2979^{+0.0017}_{-0.0022}$
$\boldsymbol{A_{100}^{dust TT}}$	8.9 ± 1.8	Y_P^{BBN}	$0.246722^{+0.000060}_{-0.000052}$	$\sigma_8(2.33)$	$0.3071^{+0.0019}_{-0.0024}$
$\boldsymbol{A_{143}^{dust TT}}$	10.8 ± 1.8	10^5D/H	2.585 ± 0.026	$r_{0.002}$	< 0.0451
$\boldsymbol{A_{143\times217}^{dust TT}}$	18.6 ± 3.3	Age/Gyr	13.796 ± 0.023	$r_{0.01}$	< 0.0472
$\boldsymbol{A_{217}^{dust TT}}$	93.8 ± 7.3	z_*	1089.90 ± 0.25	$\ln(10^{10} A_t)$	$-0.65^{+1.4}_{-0.57}$
$\boldsymbol{A_{100}^{dust TE}}$	0.115 ± 0.038	r_*	144.47 ± 0.26	r_{10}	< 0.0231
$\boldsymbol{A_{100\times143}^{dust TE}}$	0.135 ± 0.030	$100\theta_*$	1.04111 ± 0.00030	$10^9 A_t$	< 0.104
$\boldsymbol{A_{100\times217}^{dust TE}}$	0.482 ± 0.084	$D_M(z_*)$/Gpc	13.877 ± 0.025	$10^9 A_t e^{-2\tau}$	< 0.0927
$\boldsymbol{A_{143}^{dust TE}}$	0.226 ± 0.054	z_{drag}	1059.94 ± 0.29	f_{2000}^{143}	29.3 ± 2.7
$\boldsymbol{A_{143\times217}^{dust TE}}$	0.667 ± 0.081	r_{drag}	147.13 ± 0.26	$f_{2000}^{143\times217}$	32.1 ± 1.8
$\boldsymbol{A_{217}^{dust TE}}$	2.09 ± 0.27	k_D	0.14083 ± 0.00030	f_{2000}^{217}	106.9 ± 1.8
$\boldsymbol{c_{100}}$	0.99966 ± 0.00061	$100\theta_D$	0.16076 ± 0.00017	$\chi^2_{lensing}$	9.22 ± 0.65
$\boldsymbol{c_{217}}$	0.99819 ± 0.00063	z_{eq}	3398 ± 26	χ^2_{simall}	397.2 ± 1.8
H_0	67.42 ± 0.53	k_{eq}	0.010372 ± 0.000081	χ^2_{lowl}	24.7 ± 1.5
Ω_Λ	0.6857 ± 0.0073	$100\theta_{eq}$	0.8141 ± 0.0050	χ^2_{plik}	2359.1 ± 5.6
Ω_m	0.3143 ± 0.0073	$100\theta_{s,eq}$	0.4498 ± 0.0026	χ^2_{prior}	11.5 ± 4.5
$\Omega_m h^2$	0.1428 ± 0.0011	$H(0.15)$	72.74 ± 0.46	χ^2_{CMB}	2790.2 ± 5.9
$\Omega_m h^3$	0.09631 ± 0.00029	$D_M(0.15)$	642.8 ± 4.6		
σ_8	0.8114 ± 0.0056	$H(0.38)$	82.90 ± 0.33		

$\bar{\chi}^2_{eff} = 2801.72$; $\Delta\bar{\chi}^2_{eff} = 1.22$; $R - 1 = 0.00705$

17.36 base_r_plikHM_TTTEEE_lowl_lowE_lensing_post_BAO_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02242 ± 0.00013	$\sigma_8\Omega_m^{0.5}$	0.4516 ± 0.0057	$D_M(0.51)$	1979.1 ± 8.6
$\boldsymbol{\Omega_c h^2}$	0.11922 ± 0.00093	$\sigma_8\Omega_m^{0.25}$	0.6049 ± 0.0055	$H(0.61)$	95.40 ± 0.18
$\boldsymbol{100\theta_{MC}}$	1.04101 ± 0.00029	$\sigma_8/h^{0.5}$	0.9850 ± 0.0081	$D_M(0.61)$	2303.1 ± 9.3
$\boldsymbol{\tau}$	$0.0566^{+0.0058}_{-0.0078}$	$r_{drag}h$	99.69 ± 0.73	$H(2.33)$	236.10 ± 0.57
$\boldsymbol{\ln(10^{10}A_s)}$	$3.047^{+0.012}_{-0.015}$	$\langle d^2\rangle^{1/2}$	2.436 ± 0.020	$D_M(2.33)$	5758.5 ± 8.8
$\boldsymbol{n_s}$	0.9676 ± 0.0038	z_{re}	$7.88^{+0.62}_{-0.76}$	$f\sigma_8(0.15)$	0.4562 ± 0.0054
$\boldsymbol{r}$	< 0.0511	$10^9 A_s$	$2.106^{+0.024}_{-0.031}$	$\sigma_8(0.15)$	$0.7490^{+0.0048}_{-0.0054}$
$\boldsymbol{y_{cal}}$	1.0008 ± 0.0024	$10^9 A_s e^{-2\tau}$	1.880 ± 0.010	$f\sigma_8(0.38)$	0.4748 ± 0.0045
$\boldsymbol{A^{CIB}_{217}}$	46 ± 7	D_{40}	1241^{+12}_{-18}	$\sigma_8(0.38)$	$0.6640^{+0.0041}_{-0.0048}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	> 0.367	D_{220}	5734 ± 38	$f\sigma_8(0.51)$	0.4735 ± 0.0040
$\boldsymbol{A^{tSZ}_{143}}$	5.5 ± 1.9	D_{810}	2540 ± 13	$\sigma_8(0.51)$	$0.6215^{+0.0038}_{-0.0045}$
$\boldsymbol{A^{PS}_{100}}$	258 ± 28	D_{1420}	818.2 ± 4.7	$f\sigma_8(0.61)$	0.4686 ± 0.0038
$\boldsymbol{A^{PS}_{143}}$	45 ± 8	D_{2000}	231.3 ± 1.5	$\sigma_8(0.61)$	$0.5914^{+0.0036}_{-0.0044}$
$\boldsymbol{A^{PS}_{143\times217}}$	42 ± 9	$n_{s,0.002}$	0.9676 ± 0.0038	$f\sigma_8(2.33)$	$0.2982^{+0.0018}_{-0.0023}$
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	Y_P	$0.245413^{+0.000055}_{-0.000047}$	$\sigma_8(2.33)$	$0.3075^{+0.0019}_{-0.0024}$
$\boldsymbol{A^{kSZ}}$	< 3.99	Y_P^{BBN}	$0.246739^{+0.000055}_{-0.000047}$	$r_{0.002}$	< 0.0470
$\boldsymbol{A^{dustTT}_{100}}$	8.9 ± 1.8	10^5D/H	2.577 ± 0.025	$r_{0.01}$	< 0.0490
$\boldsymbol{A^{dustTT}_{143}}$	10.8 ± 1.8	Age/Gyr	13.787 ± 0.020	$\ln(10^{10}A_t)$	$-0.60^{+1.4}_{-0.57}$
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.6 ± 3.3	z_*	1089.79 ± 0.22	r_{10}	< 0.0240
$\boldsymbol{A^{dustTT}_{217}}$	93.9 ± 7.4	r_*	144.60 ± 0.22	$10^9 A_t$	< 0.108
$\boldsymbol{A^{dustTE}_{100}}$	0.114 ± 0.038	$100\theta_*$	1.04119 ± 0.00029	$10^9 A_t e^{-2\tau}$	< 0.0961
$\boldsymbol{A^{dustTE}_{100\times143}}$	0.135 ± 0.030	$D_M(z_*)$/Gpc	13.888 ± 0.021	f^{143}_{2000}	29.1 ± 2.7
$\boldsymbol{A^{dustTE}_{100\times217}}$	0.482 ± 0.085	z_{drag}	1059.99 ± 0.29	$f^{143\times217}_{2000}$	31.9 ± 1.8
$\boldsymbol{A^{dustTE}_{143}}$	0.226 ± 0.054	r_{drag}	147.25 ± 0.23	f^{217}_{2000}	106.8 ± 1.7
$\boldsymbol{A^{dustTE}_{143\times217}}$	0.665 ± 0.080	k_D	0.14074 ± 0.00028	$\chi^2_{lensing}$	9.12 ± 0.55
$\boldsymbol{A^{dustTE}_{217}}$	2.08 ± 0.27	$100\theta_D$	0.16073 ± 0.00017	χ^2_{simall}	1291 ± 1000
$\boldsymbol{c_{100}}$	0.99966 ± 0.00062	z_{eq}	3385 ± 21	χ^2_{lowl}	24.5 ± 1.5
$\boldsymbol{c_{217}}$	0.99819 ± 0.00063	k_{eq}	0.010330 ± 0.000064	χ^2_{plik}	1466 ± 1000
H_0	67.70 ± 0.42	$100\theta_{eq}$	0.8167 ± 0.0040	χ^2_{6DF}	0.049 ± 0.057
Ω_Λ	0.6895 ± 0.0057	$100\theta_{s,eq}$	0.4511 ± 0.0020	χ^2_{MGS}	1.29 ± 0.40
Ω_m	0.3105 ± 0.0057	$H(0.15)$	72.97 ± 0.37	$\chi^2_{DR12BAO}$	4.7 ± 1.3
$\Omega_m h^2$	0.14228 ± 0.00088	$D_M(0.15)$	640.5 ± 3.6	χ^2_{prior}	11.6 ± 4.6
$\Omega_m h^3$	0.09632 ± 0.00029	$H(0.38)$	83.07 ± 0.27	χ^2_{CMB}	2790.2 ± 5.9
σ_8	0.8104 ± 0.0056	$D_M(0.38)$	1527.7 ± 7.3	χ^2_{BAO}	6.05 ± 0.99
S_8	0.824 ± 0.010	$H(0.51)$	89.78 ± 0.22		

$\bar{\chi}^2_{eff} = 2807.89$; $\Delta\bar{\chi}^2_{eff} = 1.17$; $R - 1 = 0.01530$

17.37 base_r_CamSpecHM_TTTEEE_lowl_lowE_lensing

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02230 ± 0.00015	$\sigma_8\Omega_m^{0.25}$	0.6051 ± 0.0065	$H(0.51)$	89.62 ± 0.27
$\boldsymbol{\Omega_c h^2}$	0.1195 ± 0.0012	$\sigma_8/h^{0.5}$	0.9849 ± 0.0091	$D_M(0.51)$	1985 ± 11
$\boldsymbol{100\theta_{MC}}$	1.04088 ± 0.00031	$r_{drag}h$	99.36 ± 0.93	$H(0.61)$	95.25 ± 0.22
$\boldsymbol{\tau}$	0.0538 ± 0.0073	$\langle d^2\rangle^{1/2}$	2.433 ± 0.022	$D_M(0.61)$	2309 ± 12
$\boldsymbol{\ln(10^{10}A_s)}$	3.041 ± 0.014	z_{re}	7.62 ± 0.74	$H(2.33)$	236.17 ± 0.73
$\boldsymbol{n_s}$	0.9669 ± 0.0043	$10^9 A_s$	2.092 ± 0.030	$D_M(2.33)$	5766 ± 10
$\boldsymbol{r}$	< 0.0725	$10^9 A_s e^{-2\tau}$	1.878 ± 0.011	$f\sigma_8(0.15)$	0.4571 ± 0.0065
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0025	D_{40}	1244^{+15}_{-20}	$\sigma_8(0.15)$	0.7473 ± 0.0054
$\boldsymbol{A_{100}^{PS}}$	238 ± 25	D_{220}	5715 ± 39	$f\sigma_8(0.38)$	0.4750 ± 0.0053
$\boldsymbol{A_{143}^{PS}}$	39 ± 8	D_{810}	2535 ± 13	$\sigma_8(0.38)$	0.6622 ± 0.0047
$\boldsymbol{A_{217}^{PS}}$	103 ± 10	D_{1420}	816.3 ± 4.8	$f\sigma_8(0.51)$	0.4734 ± 0.0046
$\boldsymbol{A_{217}^{CIB}}$	39 ± 7	D_{2000}	230.5 ± 1.6	$\sigma_8(0.51)$	0.6197 ± 0.0044
$\boldsymbol{A_{143}^{tSZ}}$	$3.9^{+1.9}_{-2.5}$	$n_{s,0.002}$	0.9669 ± 0.0043	$f\sigma_8(0.61)$	0.4683 ± 0.0042
$\boldsymbol{r_{143\times217}^{PS}}$	0.66 ± 0.13	Y_P	$0.245365^{+0.000065}_{-0.000058}$	$\sigma_8(0.61)$	0.5896 ± 0.0042
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.55^{+0.38}_{-0.20}$	Y_P^{BBN}	$0.246691^{+0.000065}_{-0.000058}$	$f\sigma_8(2.33)$	0.2972 ± 0.0022
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	10^5D/H	2.599 ± 0.029	$\sigma_8(2.33)$	0.3063 ± 0.0024
$\boldsymbol{A^{kSZ}}$	< 6.08	Age/Gyr	13.804 ± 0.023	$r_{0.002}$	< 0.0671
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.19	z_*	1089.97 ± 0.26	$r_{0.01}$	< 0.0698
$\boldsymbol{A_{143}^{dust}}$	0.96 ± 0.18	r_*	144.61 ± 0.28	$\ln(10^{10}A_t)$	$-0.22^{+1.3}_{-0.47}$
$\boldsymbol{A_{217}^{dust}}$	0.98 ± 0.10	$100\theta_*$	1.04107 ± 0.00030	r_{10}	< 0.0344
$\boldsymbol{A_{143\times217}^{dust}}$	1.03 ± 0.16	$D_M(z_*)$/Gpc	13.891 ± 0.026	$10^9 A_t$	< 0.152
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	z_{drag}	1059.74 ± 0.33	$10^9 A_t e^{-2\tau}$	< 0.136
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	r_{drag}	147.30 ± 0.28	f_{2000}^{143}	29.4 ± 2.8
$\boldsymbol{c_{TE}}$	0.9965 ± 0.0049	k_D	0.14059 ± 0.00033	f_{2000}^{217}	106.7 ± 1.9
$\boldsymbol{c_{EE}}$	0.9921 ± 0.0050	$100\theta_D$	0.16087 ± 0.00019	$f_{2000}^{143\times217}$	31.9 ± 2.0
H_0	67.45 ± 0.54	z_{eq}	3389 ± 27	$\chi^2_{lensing}$	9.38 ± 0.76
Ω_Λ	0.6868 ± 0.0074	k_{eq}	0.010343 ± 0.000083	χ^2_{simall}	397.2 ± 1.6
Ω_m	0.3132 ± 0.0074	$100\theta_{eq}$	0.8155 ± 0.0051	χ^2_{lowl}	25.0 ± 1.9
$\Omega_m h^2$	0.1425 ± 0.0011	$100\theta_{s,eq}$	0.4506 ± 0.0026	$\chi^2_{CamSpec}$	11512.9 ± 5.5
$\Omega_m h^3$	0.09609 ± 0.00032	$H(0.15)$	72.75 ± 0.46	χ^2_{prior}	7.8 ± 3.4
σ_8	0.8089 ± 0.0060	$D_M(0.15)$	642.6 ± 4.6	χ^2_{CMB}	11944.5 ± 5.9
S_8	0.826 ± 0.013	$H(0.38)$	82.89 ± 0.34		
$\sigma_8\Omega_m^{0.5}$	0.4527 ± 0.0070	$D_M(0.38)$	1532.2 ± 9.2		

$\bar{\chi}^2_{eff} = 11952.27$; $\Delta\bar{\chi}^2_{eff} = 0.82$; $R - 1 = 0.00977$

17.38 base_r_CamSpecHM_TTTEEE_lowl_lowE_lensing_post_BAO

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02234 ± 0.00014	$\sigma_8/h^{0.5}$	0.9823 ± 0.0084	$H(0.61)$	95.34 ± 0.19
$\boldsymbol{\Omega_c h^2}$	0.11898 ± 0.00096	$r_{\rm drag} h$	99.78 ± 0.73	$D_{\rm M}(0.61)$	2304.0 ± 9.3
$\boldsymbol{100\theta_{MC}}$	1.04094 ± 0.00029	$\langle d^2 \rangle^{1/2}$	2.427 ± 0.021	$H(2.33)$	235.86 ± 0.59
$\boldsymbol{\tau}$	0.0552 ± 0.0072	$z_{\rm re}$	7.75 ± 0.72	$D_{\rm M}(2.33)$	5762.4 ± 9.1
$\boldsymbol{\ln(10^{10} A_s)}$	3.042 ± 0.014	$10^9 A_{\rm s}$	2.096 ± 0.030	$f\sigma_8(0.15)$	0.4546 ± 0.0055
$\boldsymbol{n_s}$	0.9682 ± 0.0039	$10^9 A_{\rm s} e^{-2\tau}$	1.877 ± 0.010	$\sigma_8(0.15)$	0.7470 ± 0.0054
$\boldsymbol{r}$	< 0.0744	D_{40}	1243^{+15}_{-20}	$f\sigma_8(0.38)$	0.4732 ± 0.0047
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0024	D_{220}	5719 ± 38	$\sigma_8(0.38)$	0.6623 ± 0.0047
$\boldsymbol{A^{PS}_{100}}$	238 ± 25	D_{810}	2536 ± 13	$f\sigma_8(0.51)$	0.4720 ± 0.0042
$\boldsymbol{A^{PS}_{143}}$	39 ± 8	D_{1420}	816.9 ± 4.8	$\sigma_8(0.51)$	0.6199 ± 0.0044
$\boldsymbol{A^{PS}_{217}}$	103 ± 10	D_{2000}	230.7 ± 1.6	$f\sigma_8(0.61)$	0.4672 ± 0.0039
$\boldsymbol{A^{CIB}_{217}}$	39 ± 7	$n_{\rm s,0.002}$	0.9682 ± 0.0039	$\sigma_8(0.61)$	0.5899 ± 0.0042
$\boldsymbol{A^{tSZ}_{143}}$	$3.9^{+1.9}_{-2.5}$	$Y_{\rm P}$	0.245380 ± 0.000058	$f\sigma_8(2.33)$	0.2975 ± 0.0022
$\boldsymbol{r^{PS}_{143\times217}}$	0.67 ± 0.13	$Y_{\rm P}^{\rm BBN}$	0.246706 ± 0.000058	$\sigma_8(2.33)$	0.3068 ± 0.0023
$\boldsymbol{r^{CIB}_{143\times217}}$	$0.54^{+0.37}_{-0.21}$	10^5D/H	2.592 ± 0.027	$r_{0.002}$	< 0.0693
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Age/Gyr	13.796 ± 0.021	$r_{0.01}$	< 0.0718
$\boldsymbol{A^{kSZ}}$	< 5.95	z_*	1089.88 ± 0.23	$\ln(10^{10} A_{\rm t})$	$-0.19^{+1.2}_{-0.47}$
$\boldsymbol{A^{dust}_{100}}$	1.01 ± 0.19	r_*	144.72 ± 0.23	r_{10}	< 0.0355
$\boldsymbol{A^{dust}_{143}}$	0.96 ± 0.18	$100\theta_*$	1.04113 ± 0.00029	$10^9 A_{\rm t}$	< 0.156
$\boldsymbol{A^{dust}_{217}}$	0.98 ± 0.10	$D_{\rm M}(z_*)$/Gpc	13.900 ± 0.023	$10^9 A_t e^{-2\tau}$	< 0.140
$\boldsymbol{A^{dust}_{143\times217}}$	1.03 ± 0.16	$z_{\rm drag}$	1059.78 ± 0.32	f^{143}_{2000}	29.2 ± 2.8
$\boldsymbol{c_{100}}$	0.9975 ± 0.0010	$r_{\rm drag}$	147.40 ± 0.25	f^{217}_{2000}	106.6 ± 1.9
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	$k_{\rm D}$	0.14052 ± 0.00031	$f^{143\times217}_{2000}$	31.7 ± 2.0
$\boldsymbol{c_{TE}}$	0.9966 ± 0.0049	$100\theta_{\rm D}$	0.16084 ± 0.00019	$\chi^2_{\rm lensing}$	9.40 ± 0.83
$\boldsymbol{c_{EE}}$	0.9923 ± 0.0049	$z_{\rm eq}$	3377 ± 22	$\chi^2_{\rm simall}$	397.3 ± 1.7
H_0	67.69 ± 0.43	$k_{\rm eq}$	0.010307 ± 0.000067	$\chi^2_{\rm lowl}$	24.8 ± 1.9
Ω_Λ	0.6901 ± 0.0057	$100\theta_{\rm eq}$	0.8178 ± 0.0041	$\chi^2_{\rm CamSpec}$	11512.9 ± 5.5
$\Omega_{\rm m}$	0.3099 ± 0.0057	$100\theta_{\rm s,eq}$	0.4517 ± 0.0021	$\chi^2_{\rm 6DF}$	0.043 ± 0.053
$\Omega_{\rm m} h^2$	0.14197 ± 0.00091	$H(0.15)$	72.95 ± 0.37	$\chi^2_{\rm MGS}$	1.34 ± 0.41
$\Omega_{\rm m} h^3$	0.09610 ± 0.00031	$D_{\rm M}(0.15)$	640.6 ± 3.6	$\chi^2_{\rm DR12BAO}$	4.6 ± 1.2
σ_8	0.8082 ± 0.0059	$H(0.38)$	83.04 ± 0.27	$\chi^2_{\rm prior}$	7.7 ± 3.4
S_8	0.821 ± 0.011	$D_{\rm M}(0.38)$	1528.1 ± 7.3	$\chi^2_{\rm CMB}$	11944.4 ± 5.8
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4499 ± 0.0059	$H(0.51)$	89.74 ± 0.22	$\chi^2_{\rm BAO}$	5.95 ± 0.91
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.6030 ± 0.0057	$D_{\rm M}(0.51)$	1979.8 ± 8.6		

$\bar{\chi}^2_{\rm eff} = 11958.11$; $\Delta\bar{\chi}^2_{\rm eff} = 0.70$; $R - 1 = 0.01271$

17.39 base_r_CamSpecHM_TTTEEE_lowl_lowE_lensing_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02230 ± 0.00015	$\sigma_8\Omega_m^{0.25}$	0.6054 ± 0.0064	$H(0.51)$	89.64 ± 0.27
$\boldsymbol{\Omega_c h^2}$	0.1195 ± 0.0012	$\sigma_8/h^{0.5}$	0.9855 ± 0.0090	$D_M(0.51)$	1984 ± 11
$\boldsymbol{100\theta_{MC}}$	1.04088 ± 0.00031	$r_{drag}h$	99.40 ± 0.92	$H(0.61)$	95.26 ± 0.22
$\boldsymbol{\tau}$	$0.0549^{+0.0053}_{-0.0077}$	$\langle d^2\rangle^{1/2}$	2.434 ± 0.022	$D_M(0.61)$	2309 ± 12
$\boldsymbol{\ln(10^{10}A_s)}$	$3.042^{+0.011}_{-0.014}$	z_{re}	$7.73^{+0.58}_{-0.74}$	$H(2.33)$	236.13 ± 0.72
$\boldsymbol{n_s}$	0.9671 ± 0.0042	$10^9 A_s$	$2.096^{+0.023}_{-0.030}$	$D_M(2.33)$	5766 ± 10
$\boldsymbol{r}$	< 0.0727	$10^9 A_s e^{-2\tau}$	1.878 ± 0.011	$f\sigma_8(0.15)$	0.4572 ± 0.0065
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0025	D_{40}	1244^{+15}_{-20}	$\sigma_8(0.15)$	$0.7479^{+0.0047}_{-0.0053}$
$\boldsymbol{A_{100}^{PS}}$	238 ± 25	D_{220}	5715 ± 39	$f\sigma_8(0.38)$	0.4752 ± 0.0052
$\boldsymbol{A_{143}^{PS}}$	39 ± 8	D_{810}	2535 ± 13	$\sigma_8(0.38)$	$0.6628^{+0.0039}_{-0.0047}$
$\boldsymbol{A_{217}^{PS}}$	103 ± 10	D_{1420}	816.3 ± 4.8	$f\sigma_8(0.51)$	0.4737 ± 0.0046
$\boldsymbol{A_{217}^{CIB}}$	39 ± 7	D_{2000}	230.5 ± 1.6	$\sigma_8(0.51)$	$0.6202^{+0.0036}_{-0.0044}$
$\boldsymbol{A_{143}^{tSZ}}$	$3.9^{+1.9}_{-2.5}$	$n_{s,0.002}$	0.9671 ± 0.0042	$f\sigma_8(0.61)$	0.4686 ± 0.0041
$\boldsymbol{r_{143\times217}^{PS}}$	0.66 ± 0.13	Y_P	$0.245367^{+0.000064}_{-0.000057}$	$\sigma_8(0.61)$	$0.5901^{+0.0034}_{-0.0043}$
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.55^{+0.38}_{-0.20}$	Y_P^{BBN}	$0.246693^{+0.000065}_{-0.000058}$	$f\sigma_8(2.33)$	$0.2975^{+0.0017}_{-0.0022}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	10^5D/H	2.599 ± 0.029	$\sigma_8(2.33)$	$0.3066^{+0.0019}_{-0.0024}$
$\boldsymbol{A^{kSZ}}$	< 6.05	Age/Gyr	13.803 ± 0.023	$r_{0.002}$	< 0.0673
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.19	z_*	1089.96 ± 0.26	$r_{0.01}$	< 0.0700
$\boldsymbol{A_{143}^{dust}}$	0.96 ± 0.18	r_*	144.62 ± 0.27	$\ln(10^{10}A_t)$	$-0.22^{+1.3}_{-0.47}$
$\boldsymbol{A_{217}^{dust}}$	0.98 ± 0.10	$100\theta_*$	1.04107 ± 0.00030	r_{10}	< 0.0345
$\boldsymbol{A_{143\times217}^{dust}}$	1.03 ± 0.16	$D_M(z_*)$/Gpc	13.892 ± 0.026	$10^9 A_t$	< 0.152
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	z_{drag}	1059.74 ± 0.33	$10^9 A_t e^{-2\tau}$	< 0.136
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	r_{drag}	147.31 ± 0.28	f_{2000}^{143}	29.3 ± 2.8
$\boldsymbol{c_{TE}}$	0.9965 ± 0.0049	k_D	0.14058 ± 0.00033	f_{2000}^{217}	106.7 ± 1.9
$\boldsymbol{c_{EE}}$	0.9921 ± 0.0050	$100\theta_D$	0.16086 ± 0.00019	$f_{2000}^{143\times217}$	31.9 ± 2.0
H_0	67.48 ± 0.53	z_{eq}	3388 ± 27	$\chi^2_{lensing}$	9.32 ± 0.71
Ω_Λ	0.6872 ± 0.0073	k_{eq}	0.010340 ± 0.000082	χ^2_{simall}	397.1 ± 1.6
Ω_m	0.3128 ± 0.0073	$100\theta_{eq}$	0.8157 ± 0.0051	χ^2_{lowl}	25.0 ± 1.9
$\Omega_m h^2$	0.1424 ± 0.0011	$100\theta_{s,eq}$	0.4507 ± 0.0026	$\chi^2_{CamSpec}$	11512.8 ± 5.5
$\Omega_m h^3$	0.09609 ± 0.00032	$H(0.15)$	72.77 ± 0.46	χ^2_{prior}	7.7 ± 3.4
σ_8	0.8095 ± 0.0056	$D_M(0.15)$	642.4 ± 4.5	χ^2_{CMB}	11944.3 ± 5.8
S_8	0.827 ± 0.013	$H(0.38)$	82.91 ± 0.33		
$\sigma_8\Omega_m^{0.5}$	0.4528 ± 0.0070	$D_M(0.38)$	1531.8 ± 9.1		

$\bar{\chi}^2_{eff} = 11952.03$; $\Delta\bar{\chi}^2_{eff} = 0.78$; $R - 1 = 0.00998$

17.40 base_r_CamSpecHM_TTTEEE_lowl_lowE_lensing_post_BAO_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02234 ± 0.00014	$\sigma_8/h^{0.5}$	0.9828 ± 0.0082	$H(0.61)$	95.34 ± 0.19
$\boldsymbol{\Omega_c h^2}$	0.11896 ± 0.00095	$r_{\rm drag} h$	99.80 ± 0.73	$D_{\rm M}(0.61)$	2303.7 ± 9.3
$\boldsymbol{100\theta_{MC}}$	1.04095 ± 0.00029	$\langle d^2 \rangle^{1/2}$	2.428 ± 0.020	$H(2.33)$	235.84 ± 0.59
$\boldsymbol{\tau}$	$0.0559^{+0.0058}_{-0.0073}$	$z_{\rm re}$	$7.82^{+0.62}_{-0.70}$	$D_{\rm M}(2.33)$	5762.2 ± 9.0
$\boldsymbol{\ln(10^{10} A_s)}$	$3.044^{+0.012}_{-0.014}$	$10^9 A_{\rm s}$	$2.099^{+0.025}_{-0.030}$	$f\sigma_8(0.15)$	0.4547 ± 0.0055
$\boldsymbol{n_s}$	0.9683 ± 0.0039	$10^9 A_{\rm s} e^{-2\tau}$	1.876 ± 0.010	$\sigma_8(0.15)$	$0.7474^{+0.0047}_{-0.0054}$
$\boldsymbol{r}$	< 0.0745	D_{40}	1243^{+15}_{-20}	$f\sigma_8(0.38)$	0.4734 ± 0.0046
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0024	D_{220}	5719 ± 38	$\sigma_8(0.38)$	$0.6627^{+0.0041}_{-0.0048}$
$\boldsymbol{A^{PS}_{100}}$	238 ± 25	D_{810}	2536 ± 13	$f\sigma_8(0.51)$	0.4722 ± 0.0041
$\boldsymbol{A^{PS}_{143}}$	39 ± 8	D_{1420}	816.8 ± 4.8	$\sigma_8(0.51)$	$0.6203^{+0.0038}_{-0.0045}$
$\boldsymbol{A^{PS}_{217}}$	103 ± 10	D_{2000}	230.7 ± 1.6	$f\sigma_8(0.61)$	0.4674 ± 0.0038
$\boldsymbol{A^{CIB}_{217}}$	39 ± 7	$n_{\rm s,0.002}$	0.9683 ± 0.0039	$\sigma_8(0.61)$	$0.5903^{+0.0036}_{-0.0043}$
$\boldsymbol{A^{tSZ}_{143}}$	$3.9^{+1.9}_{-2.5}$	$Y_{\rm P}$	0.245381 ± 0.000057	$f\sigma_8(2.33)$	$0.2977^{+0.0018}_{-0.0022}$
$\boldsymbol{r^{PS}_{143\times217}}$	0.67 ± 0.13	$Y_{\rm P}^{\rm BBN}$	0.246707 ± 0.000058	$\sigma_8(2.33)$	$0.3070^{+0.0019}_{-0.0023}$
$\boldsymbol{r^{CIB}_{143\times217}}$	$0.54^{+0.37}_{-0.22}$	10^5D/H	2.592 ± 0.027	$r_{0.002}$	< 0.0693
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Age/Gyr	13.795 ± 0.021	$r_{0.01}$	< 0.0719
$\boldsymbol{A^{kSZ}}$	< 5.95	z_*	1089.87 ± 0.23	$\ln(10^{10} A_{\rm t})$	$-0.19^{+1.3}_{-0.47}$
$\boldsymbol{A^{dust}_{100}}$	1.01 ± 0.19	r_*	144.73 ± 0.23	r_{10}	< 0.0356
$\boldsymbol{A^{dust}_{143}}$	0.96 ± 0.18	$100\theta_*$	1.04114 ± 0.00029	$10^9 A_{\rm t}$	< 0.156
$\boldsymbol{A^{dust}_{217}}$	0.98 ± 0.10	$D_{\rm M}(z_*)$/Gpc	13.901 ± 0.022	$10^9 A_t e^{-2\tau}$	< 0.140
$\boldsymbol{A^{dust}_{143\times217}}$	1.03 ± 0.16	$z_{\rm drag}$	1059.79 ± 0.32	f^{143}_{2000}	29.1 ± 2.8
$\boldsymbol{c_{100}}$	0.9975 ± 0.0010	$r_{\rm drag}$	147.40 ± 0.25	f^{217}_{2000}	106.5 ± 1.9
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	$k_{\rm D}$	0.14051 ± 0.00031	$f^{143\times217}_{2000}$	31.7 ± 2.0
$\boldsymbol{c_{TE}}$	0.9966 ± 0.0049	$100\theta_{\rm D}$	0.16084 ± 0.00019	$\chi^2_{\rm lensing}$	9.34 ± 0.75
$\boldsymbol{c_{EE}}$	0.9923 ± 0.0049	$z_{\rm eq}$	3377 ± 22	$\chi^2_{\rm simall}$	397.3 ± 1.8
H_0	67.70 ± 0.42	$k_{\rm eq}$	0.010306 ± 0.000066	$\chi^2_{\rm lowl}$	24.8 ± 1.9
Ω_Λ	0.6903 ± 0.0057	$100\theta_{\rm eq}$	0.8179 ± 0.0041	$\chi^2_{\rm CamSpec}$	11512.8 ± 5.5
$\Omega_{\rm m}$	0.3097 ± 0.0057	$100\theta_{\rm s,eq}$	0.4518 ± 0.0021	$\chi^2_{\rm 6DF}$	0.042 ± 0.051
$\Omega_{\rm m} h^2$	0.14194 ± 0.00091	$H(0.15)$	72.97 ± 0.37	$\chi^2_{\rm MGS}$	1.35 ± 0.41
$\Omega_{\rm m} h^3$	0.09610 ± 0.00031	$D_{\rm M}(0.15)$	640.5 ± 3.6	$\chi^2_{\rm DR12BAO}$	4.5 ± 1.2
σ_8	$0.8086^{+0.0053}_{-0.0060}$	$H(0.38)$	83.04 ± 0.27	$\chi^2_{\rm prior}$	7.7 ± 3.4
S_8	0.822 ± 0.011	$D_{\rm M}(0.38)$	1527.9 ± 7.3	$\chi^2_{\rm CMB}$	11944.3 ± 5.7
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4500 ± 0.0059	$H(0.51)$	89.74 ± 0.22	$\chi^2_{\rm BAO}$	5.92 ± 0.88
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.6032 ± 0.0056	$D_{\rm M}(0.51)$	1979.6 ± 8.6		

$\bar{\chi}^2_{\rm eff} = 11957.91$; $\Delta\bar{\chi}^2_{\rm eff} = 0.65$; $R - 1 = 0.01331$

17.41 base_r_CleanedCamSpecHM_TT_lowl_lowE

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02212 ± 0.00022	$\langle d^2 \rangle^{1/2}$	2.441 ± 0.039	$D_M(0.51)$	1992 ± 19
$\boldsymbol{\Omega_c h^2}$	0.1201 ± 0.0021	z_{re}	7.45 ± 0.81	$H(0.61)$	95.07 ± 0.36
$\boldsymbol{100\theta_{MC}}$	1.04082 ± 0.00048	$10^9 A_s$	2.083 ± 0.034	$D_M(0.61)$	2317 ± 20
$\boldsymbol{\tau}$	0.0517 ± 0.0079	$10^9 A_s e^{-2\tau}$	1.878 ± 0.014	$H(2.33)$	236.3 ± 1.3
$\boldsymbol{\ln(10^{10} A_s)}$	3.036 ± 0.016	D_{40}	1243^{+17}_{-19}	$D_M(2.33)$	5776 ± 16
$\boldsymbol{n_s}$	0.9637 ± 0.0059	D_{220}	5704 ± 42	$f\sigma_8(0.15)$	0.460 ± 0.012
$\boldsymbol{r}$	< 0.0499	D_{810}	2531 ± 14	$\sigma_8(0.15)$	0.7466 ± 0.0076
$\boldsymbol{y_{cal}}$	1.0004 ± 0.0025	D_{1420}	813.0 ± 5.3	$f\sigma_8(0.38)$	0.4766 ± 0.0097
$\boldsymbol{A_{100}^{PS}}$	255 ± 27	D_{2000}	229.0 ± 1.9	$\sigma_8(0.38)$	0.6612 ± 0.0061
$\boldsymbol{A_{143}^{tSZ}}$	$3.8^{+1.7}_{-2.7}$	$n_{s,0.002}$	0.9637 ± 0.0059	$f\sigma_8(0.51)$	0.4745 ± 0.0083
$\boldsymbol{A^{kSZ}}$	$5.3^{+4.1}_{-2.2}$	Y_P	$0.24529^{+0.00010}_{-0.000084}$	$\sigma_8(0.51)$	0.6185 ± 0.0055
$\boldsymbol{A_{100}^{dust}}$	1.00 ± 0.20	Y_P^{BBN}	$0.24661^{+0.00011}_{-0.000084}$	$f\sigma_8(0.61)$	0.4690 ± 0.0074
$\boldsymbol{A_{143}^{power}}$	$10.3^{+2.1}_{-2.5}$	10^5D/H	2.634 ± 0.042	$\sigma_8(0.61)$	0.5884 ± 0.0052
$\boldsymbol{A_{217}^{power}}$	$8.1^{+1.7}_{-2.9}$	Age/Gyr	13.826 ± 0.037	$f\sigma_8(2.33)$	0.2964 ± 0.0025
$\boldsymbol{A_{143\times217}^{power}}$	$4.3^{+1.7}_{-2.8}$	z_*	1090.25 ± 0.41	$\sigma_8(2.33)$	0.3054 ± 0.0027
$\boldsymbol{\gamma_{143}^{power}}$	$1.34^{+0.41}_{-0.54}$	r_*	144.61 ± 0.48	$r_{0.002}$	< 0.0453
$\boldsymbol{\gamma_{217}^{power}}$	$1.38^{+0.76}_{-0.58}$	$100\theta_*$	1.04103 ± 0.00047	$r_{0.01}$	< 0.0475
$\boldsymbol{\gamma_{143\times217}^{power}}$	1.34 ± 0.59	$D_M(z_*)$/Gpc	13.891 ± 0.045	$\ln(10^{10} A_t)$	$-0.66^{+1.4}_{-0.60}$
$\boldsymbol{c_{100}}$	0.9978 ± 0.0011	z_{drag}	1059.35 ± 0.45	r_{10}	< 0.0232
$\boldsymbol{c_{217}}$	$0.9994^{+0.0012}_{-0.0017}$	r_{drag}	147.36 ± 0.48	$10^9 A_t$	< 0.104
H_0	67.10 ± 0.93	k_D	0.14038 ± 0.00052	$10^9 A_t e^{-2\tau}$	< 0.0936
Ω_Λ	0.683 ± 0.013	$100\theta_D$	0.16110 ± 0.00026	f_{2000}^{143}	23^{+3}_{-3}
Ω_m	0.317 ± 0.013	z_{eq}	3397 ± 48	f_{2000}^{217}	16.8 ± 2.0
$\Omega_m h^2$	0.1428 ± 0.0020	k_{eq}	0.01037 ± 0.00015	$f_{2000}^{143\times217}$	11.0 ± 2.2
$\Omega_m h^3$	0.09581 ± 0.00045	$100\theta_{eq}$	0.8135 ± 0.0090	χ^2_{simall}	397.0 ± 1.6
σ_8	0.8086 ± 0.0091	$100\theta_{s,eq}$	0.4497 ± 0.0046	χ^2_{lowl}	25.0 ± 1.8
S_8	0.832 ± 0.024	$H(0.15)$	72.44 ± 0.79	$\chi^2_{CamSpec}$	6716.7 ± 5.3
$\sigma_8 \Omega_m^{0.5}$	0.456 ± 0.013	$D_M(0.15)$	645.8 ± 8.0	χ^2_{prior}	5.3 ± 3.0
$\sigma_8 \Omega_m^{0.25}$	0.607 ± 0.012	$H(0.38)$	82.64 ± 0.57	χ^2_{CMB}	7138.7 ± 5.5
$\sigma_8/h^{0.5}$	0.987 ± 0.016	$D_M(0.38)$	1539 ± 16		
$r_{drag} h$	98.9 ± 1.6	$H(0.51)$	89.41 ± 0.45		

$\bar{\chi}^2_{eff} = 7144.04$; $\Delta\bar{\chi}^2_{eff} = 1.83$; $R - 1 = 0.00760$

18 w

18.1 base_w_plikHM_TT_lowl_lowE

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022222	0.02215 ± 0.00022	$\sigma_8\Omega_m^{0.5}$	0.4077	$0.431^{+0.016}_{-0.023}$	$100\theta_{s,eq}$	0.44903	0.4487 ± 0.0046
$\boldsymbol{\Omega_c h^2}$	0.12025	0.1205 ± 0.0021	$\sigma_8\Omega_m^{0.25}$	0.6626	$0.643^{+0.023}_{-0.018}$	$H(0.15)$	88.71	$81.8^{+6.6}_{-2.8}$
$\boldsymbol{100\theta_{MC}}$	1.040876	1.04080 ± 0.00047	$\sigma_8/h^{0.5}$	1.0772	$1.045^{+0.037}_{-0.026}$	$D_M(0.15)$	480.8	547^{+20}_{-65}
$\boldsymbol{\tau}$	0.0523	0.0516 ± 0.0079	$r_{drag}h$	147.1	125^{+20}_{-8}	$H(0.38)$	84.31	$84.0^{+1.1}_{-0.89}$
$\boldsymbol{w_0}$	−1.971	$-1.56^{+0.19}_{-0.39}$	$\langle d^2\rangle^{1/2}$	2.5278	$2.504^{+0.048}_{-0.042}$	$D_M(0.38)$	1288	1386^{+34}_{-98}
$\boldsymbol{\ln(10^{10}A_s)}$	3.0403	3.039 ± 0.016	z_{re}	7.44	$7.38^{+0.83}_{-0.72}$	$H(0.51)$	86.62	$88.1^{+1.4}_{-0.86}$
$\boldsymbol{n_s}$	0.9647	0.9630 ± 0.0057	$10^9 A_s$	2.0912	2.088 ± 0.034	$D_M(0.51)$	1745	1840^{+35}_{-97}
$\boldsymbol{y_{cal}}$	1.00031	1.0004 ± 0.0024	$10^9 A_s e^{-2\tau}$	1.8835	1.884 ± 0.013	$H(0.61)$	90.06	$92.4^{+1.6}_{-1.9}$
$\boldsymbol{A_{217}^{CIB}}$	48.3	48 ± 7	D_{40}	1225.0	1230 ± 15	$D_M(0.61)$	2085	2172^{+34}_{-92}
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.38	—	D_{220}	5717.3	5716 ± 41	$H(2.33)$	230.54	$232.3^{+1.4}_{-2.7}$
$\boldsymbol{A_{143}^{tSZ}}$	6.98	5.1 ± 2.0	D_{810}	2537.0	2535 ± 13	$D_M(2.33)$	5737.5	5750^{+18}_{-23}
$\boldsymbol{A_{100}^{PS}}$	253.0	263 ± 28	D_{1420}	815.4	814.0 ± 5.0	$f\sigma_8(0.15)$	0.5108	0.491 ± 0.021
$\boldsymbol{A_{143}^{PS}}$	49.1	49 ± 8	D_{2000}	230.40	229.7 ± 1.8	$\sigma_8(0.15)$	1.015	$0.901^{+0.11}_{-0.052}$
$\boldsymbol{A_{143\times217}^{PS}}$	47.5	43 ± 9	$n_{s,0.002}$	0.9647	0.9630 ± 0.0057	$f\sigma_8(0.38)$	0.648	$0.574^{+0.066}_{-0.045}$
$\boldsymbol{A_{217}^{PS}}$	119.3	115 ± 10	Y_P	0.245335	$0.24530^{+0.00010}_{-0.000082}$	$\sigma_8(0.38)$	0.908	$0.803^{+0.099}_{-0.046}$
$\boldsymbol{A^{kSZ}}$	0.00	< 4.73	Y_P^{BBN}	0.246661	$0.24663^{+0.00010}_{-0.000082}$	$f\sigma_8(0.51)$	0.680	$0.590^{+0.080}_{-0.049}$
$\boldsymbol{A_{100}^{dust TT}}$	8.88	8.9 ± 1.8	10^5D/H	2.6136	2.627 ± 0.042	$\sigma_8(0.51)$	0.849	$0.751^{+0.092}_{-0.042}$
$\boldsymbol{A_{143}^{dust TT}}$	10.76	10.7 ± 1.8	Age/Gyr	13.451	$13.592^{+0.055}_{-0.15}$	$f\sigma_8(0.61)$	0.685	$0.591^{+0.086}_{-0.048}$
$\boldsymbol{A_{143\times217}^{dust TT}}$	19.35	18.2 ± 3.3	z_*	1090.128	1090.24 ± 0.40	$\sigma_8(0.61)$	0.805	$0.713^{+0.087}_{-0.039}$
$\boldsymbol{A_{217}^{dust TT}}$	94.5	93.3 ± 7.3	r_*	144.479	144.48 ± 0.48	$f\sigma_8(2.33)$	0.4006	$0.357^{+0.041}_{-0.017}$
$\boldsymbol{c_{100}}$	0.99965	0.99961 ± 0.00062	$100\theta_*$	1.041078	1.04101 ± 0.00046	$\sigma_8(2.33)$	0.4011	$0.360^{+0.039}_{-0.017}$
$\boldsymbol{c_{217}}$	0.99823	0.99825 ± 0.00063	$D_M(z_*)$/Gpc	13.8778	13.879 ± 0.044	f_{2000}^{143}	29.71	30.9 ± 2.9
H_0	99.9	> 80.4	z_{drag}	1059.628	1059.46 ± 0.45	$f_{2000}^{143\times217}$	32.74	33.4 ± 2.0
Ω_Λ	0.8566	$0.792^{+0.065}_{-0.017}$	r_{drag}	147.188	147.22 ± 0.48	f_{2000}^{217}	107.21	107.9 ± 1.9
Ω_m	0.1434	$0.208^{+0.017}_{-0.065}$	k_D	0.14065	0.14056 ± 0.00053	χ^2_{simall}	395.73	396.8 ± 1.6
$\Omega_m h^2$	0.14312	0.1433 ± 0.0020	$100\theta_D$	0.160950	0.16104 ± 0.00026	χ^2_{lowl}	22.64	23.2 ± 1.2
$\Omega_m h^3$	0.1430	$0.122^{+0.019}_{-0.0092}$	z_{eq}	3404.7	3408 ± 47	χ^2_{plik}	756.6	770.0 ± 5.4
σ_8	1.077	$0.963^{+0.11}_{-0.053}$	k_{eq}	0.010392	0.01040 ± 0.00014	χ^2_{prior}	1.29	7.2 ± 3.6
S_8	0.7444	$0.787^{+0.030}_{-0.042}$	$100\theta_{eq}$	0.8124	0.8117 ± 0.0089	χ^2_{CMB}	1175.0	1190.0 ± 5.7

Best-fit $\chi^2_{eff} = 1176.30$; $\Delta\chi^2_{eff} = -3.28$; $\bar{\chi}^2_{eff} = 1197.21$; $\Delta\bar{\chi}^2_{eff} = -2.37$; $R - 1 = 0.00888$

χ^2_{eff}: CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.73 (Δ -0.14) commander_dx12_v3_2_29: 22.64 (Δ -0.96) plik_rd12_HM_v22_TT: 756.63 (Δ -2.12)

18.2 base_w_plikHM_TT_lowl_lowE_post_lensing

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022274	0.02221 ± 0.00021	$\sigma_8\Omega_m^{0.25}$	0.6517	$0.635^{+0.018}_{-0.013}$	$D_M(0.15)$	479.2	543^{+20}_{-63}
$\boldsymbol{\Omega_c h^2}$	0.11880	0.1193 ± 0.0016	$\sigma_8/h^{0.5}$	1.0622	$1.034^{+0.029}_{-0.019}$	$H(0.38)$	84.97	$84.4^{+1.0}_{-0.69}$
$\boldsymbol{100\theta_{MC}}$	1.040976	1.04092 ± 0.00045	$r_{drag}h$	147.4	126^{+20}_{-8}	$D_M(0.38)$	1280	1378^{+33}_{-97}
$\boldsymbol{\tau}$	0.0519	0.0508 ± 0.0078	$\langle d^2\rangle^{1/2}$	2.5004	$2.482^{+0.031}_{-0.028}$	$H(0.51)$	87.18	$88.5^{+1.1}_{-0.73}$
$\boldsymbol{w_0}$	-1.928	$-1.54^{+0.17}_{-0.37}$	z_{re}	7.37	$7.27^{+0.84}_{-0.70}$	$D_M(0.51)$	1734	1829^{+34}_{-96}
$\boldsymbol{\ln(10^{10}A_s)}$	3.0353	$3.034^{+0.015}_{-0.014}$	$10^9 A_s$	2.0807	2.079 ± 0.031	$H(0.61)$	90.51	$92.7^{+1.4}_{-1.7}$
$\boldsymbol{n_s}$	0.96759	0.9654 ± 0.0049	$10^9 A_s e^{-2\tau}$	1.8757	1.878 ± 0.011	$D_M(0.61)$	2072	2161^{+33}_{-91}
$\boldsymbol{y_{cal}}$	1.00002	1.0002 ± 0.0024	D_{40}	1217.1	1223 ± 13	$H(2.33)$	229.51	$231.5^{+1.1}_{-2.6}$
$\boldsymbol{A_{217}^{CIB}}$	48.5	48 ± 7	D_{220}	5717.8	5718 ± 40	$D_M(2.33)$	5729.4	5743^{+15}_{-22}
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.32	—	D_{810}	2533.5	2533 ± 13	$f\sigma_8(0.15)$	0.4978	0.482 ± 0.015
$\boldsymbol{A_{143}^{tSZ}}$	7.03	5.1 ± 2.0	D_{1420}	815.05	814.1 ± 5.0	$\sigma_8(0.15)$	1.001	$0.893^{+0.10}_{-0.046}$
$\boldsymbol{A_{100}^{PS}}$	253.3	263 ± 28	D_{2000}	230.24	229.7 ± 1.8	$f\sigma_8(0.38)$	0.6319	$0.564^{+0.059}_{-0.037}$
$\boldsymbol{A_{143}^{PS}}$	48.2	48 ± 8	$n_{s,0.002}$	0.96759	0.9654 ± 0.0049	$\sigma_8(0.38)$	0.898	$0.798^{+0.093}_{-0.042}$
$\boldsymbol{A_{143\times217}^{PS}}$	46.0	43 ± 9	Y_P	0.245357	$0.245326^{+0.000094}_{-0.000079}$	$f\sigma_8(0.51)$	0.664	$0.581^{+0.073}_{-0.042}$
$\boldsymbol{A_{217}^{PS}}$	118.6	115 ± 10	Y_P^{BBN}	0.246683	$0.246652^{+0.000095}_{-0.000079}$	$\sigma_8(0.51)$	0.839	$0.746^{+0.087}_{-0.038}$
$\boldsymbol{A^{kSZ}}$	0.01	< 4.85	10^5D/H	2.6037	2.617 ± 0.040	$f\sigma_8(0.61)$	0.671	$0.583^{+0.079}_{-0.042}$
$\boldsymbol{A_{100}^{dustTT}}$	8.97	9.0 ± 1.8	Age/Gyr	13.437	$13.576^{+0.056}_{-0.14}$	$\sigma_8(0.61)$	0.797	$0.709^{+0.082}_{-0.036}$
$\boldsymbol{A_{143}^{dustTT}}$	10.84	10.7 ± 1.8	z_*	1089.935	1090.07 ± 0.35	$f\sigma_8(2.33)$	0.3973	$0.356^{+0.039}_{-0.016}$
$\boldsymbol{A_{143\times217}^{dustTT}}$	19.40	18.3 ± 3.3	r_*	144.816	144.73 ± 0.38	$\sigma_8(2.33)$	0.3980	$0.359^{+0.036}_{-0.016}$
$\boldsymbol{A_{217}^{dustTT}}$	94.5	93.2 ± 7.3	$100\theta_*$	1.041175	1.04112 ± 0.00044	f_{2000}^{143}	29.77	30.9 ± 2.9
$\boldsymbol{c_{100}}$	0.99967	0.99962 ± 0.00062	$D_M(z_*)$/Gpc	13.9089	13.901 ± 0.035	$f_{2000}^{143\times217}$	32.73	33.3 ± 2.0
$\boldsymbol{c_{217}}$	0.99825	0.99825 ± 0.00064	z_{drag}	1059.628	1059.51 ± 0.45	f_{2000}^{217}	107.17	107.8 ± 1.9
H_0	99.9	> 81.1	r_{drag}	147.518	147.45 ± 0.39	$\chi^2_{lensing}$	8.41	9.0 ± 1.2
Ω_Λ	0.8581	$0.796^{+0.062}_{-0.016}$	k_D	0.140344	0.14036 ± 0.00046	χ^2_{simall}	395.65	396.6 ± 1.3
Ω_m	0.1419	$0.204^{+0.016}_{-0.062}$	$100\theta_D$	0.160939	0.16101 ± 0.00026	χ^2_{lowl}	22.16	22.74 ± 0.94
$\Omega_m h^2$	0.14172	0.1422 ± 0.0015	z_{eq}	3371.1	3382 ± 36	χ^2_{plik}	757.7	770.3 ± 5.3
$\Omega_m h^3$	0.1416	$0.121^{+0.019}_{-0.0087}$	k_{eq}	0.010289	0.01032 ± 0.00011	χ^2_{prior}	1.32	7.3 ± 3.7
σ_8	1.062	$0.955^{+0.098}_{-0.047}$	$100\theta_{eq}$	0.8187	0.8165 ± 0.0069	χ^2_{CMB}	1183.9	1198.7 ± 5.6
S_8	0.7303	$0.774^{+0.025}_{-0.042}$	$100\theta_{s,eq}$	0.45226	0.4512 ± 0.0035			
$\sigma_8\Omega_m^{0.5}$	0.4000	$0.424^{+0.014}_{-0.023}$	$H(0.15)$	89.23	$82.3^{+6.6}_{-2.8}$			

Best-fit $\chi^2_{eff} = 1185.20$; $\Delta\chi^2_{eff} = -3.37$; $\bar{\chi}^2_{eff} = 1205.98$; $\Delta\bar{\chi}^2_{eff} = -2.44$; $R - 1 = 0.01136$

χ^2_{eff}: CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.41 (Δ -0.49) simall_100x143_offlike5_EE_Aplanck_B: 395.65 (Δ -0.21) commander_dx12_v3_2_29: 22.16 (Δ -1.07) plik_rd12_HM_v22_TT: 757.66 (Δ -1.66)

18.3 base_w_plikHM_TT_lowl_lowE_post_Riess18

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022155	0.02212 ± 0.00021	$\sigma_8\Omega_m^{0.25}$	0.6270	0.626 ± 0.014	$D_M(0.15)$	601.1	602 ± 10
$\boldsymbol{\Omega_c h^2}$	0.12060	0.1206 ± 0.0020	$\sigma_8/h^{0.5}$	1.0189	1.017 ± 0.020	$H(0.38)$	83.57	83.51 ± 0.55
$\boldsymbol{100\theta_{MC}}$	1.040794	1.04076 ± 0.00046	$r_{drag}h$	108.44	108.4 ± 2.5	$D_M(0.38)$	1467.9	1469 ± 17
$\boldsymbol{\tau}$	0.0524	0.0512 ± 0.0079	$\langle d^2\rangle^{1/2}$	2.4817	2.481 ± 0.042	$H(0.51)$	89.24	89.18 ± 0.55
$\boldsymbol{w_0}$	-1.225	-1.227 ± 0.067	z_{re}	7.51	$7.37^{+0.79}_{-0.71}$	$D_M(0.51)$	1919.5	1921 ± 19
$\boldsymbol{\ln(10^{10}A_s)}$	3.0411	3.038 ± 0.016	$10^9 A_s$	2.0927	2.087 ± 0.034	$H(0.61)$	94.25	94.20 ± 0.58
$\boldsymbol{n_s}$	0.9638	0.9626 ± 0.0058	$10^9 A_s e^{-2\tau}$	1.8846	1.884 ± 0.013	$D_M(0.61)$	2246.5	2248 ± 19
$\boldsymbol{y_{cal}}$	1.00029	1.0003 ± 0.0024	D_{40}	1229.2	1231 ± 15	$H(2.33)$	234.03	234.0 ± 1.1
$\boldsymbol{A_{217}^{CIB}}$	48.5	48 ± 7	D_{220}	5711.3	5712 ± 38	$D_M(2.33)$	5758.2	5760 ± 15
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.35	—	D_{810}	2537.2	2535 ± 13	$f\sigma_8(0.15)$	0.4756	0.475 ± 0.015
$\boldsymbol{A_{143}^{tSZ}}$	6.98	5.1 ± 2.0	D_{1420}	815.2	813.9 ± 5.0	$\sigma_8(0.15)$	0.8120	0.811 ± 0.021
$\boldsymbol{A_{100}^{PS}}$	254.4	262 ± 28	D_{2000}	230.06	$229.5^{+1.7}_{-1.9}$	$f\sigma_8(0.38)$	0.5164	0.516 ± 0.018
$\boldsymbol{A_{143}^{PS}}$	49.6	49^{+8}_{-8}	$n_{s,0.002}$	0.9638	0.9626 ± 0.0058	$\sigma_8(0.38)$	0.7213	0.720 ± 0.018
$\boldsymbol{A_{143\times217}^{PS}}$	47.6	44 ± 9	Y_P	0.245307	0.245286 ± 0.000094	$f\sigma_8(0.51)$	0.5212	0.521 ± 0.019
$\boldsymbol{A_{217}^{PS}}$	119.6	115 ± 10	Y_P^{BBN}	0.246633	0.246613 ± 0.000094	$\sigma_8(0.51)$	0.6747	0.673 ± 0.017
$\boldsymbol{A^{kSZ}}$	0.02	< 4.77	10^5D/H	2.6266	2.634 ± 0.041	$f\sigma_8(0.61)$	0.5185	0.518 ± 0.018
$\boldsymbol{A_{100}^{dustTT}}$	8.90	8.9 ± 1.8	Age/Gyr	13.7052	13.711 ± 0.035	$\sigma_8(0.61)$	0.6415	0.640 ± 0.016
$\boldsymbol{A_{143}^{dustTT}}$	10.82	10.8 ± 1.8	z_*	1090.247	1090.30 ± 0.39	$f\sigma_8(2.33)$	0.3232	0.3225 ± 0.0074
$\boldsymbol{A_{143\times217}^{dustTT}}$	19.30	$18.3^{+3.4}_{-3.0}$	r_*	144.440	144.47 ± 0.47	$\sigma_8(2.33)$	0.3286	0.3280 ± 0.0065
$\boldsymbol{A_{217}^{dustTT}}$	94.4	93.3 ± 7.1	$100\theta_*$	1.041004	1.04097 ± 0.00045	f_{2000}^{143}	30.16	31.1 ± 2.9
$\boldsymbol{c_{100}}$	0.99967	0.99963 ± 0.00063	$D_M(z_*)$/Gpc	13.8750	13.878 ± 0.044	$f_{2000}^{143\times217}$	33.14	33.6 ± 2.0
$\boldsymbol{c_{217}}$	0.99824	0.99828 ± 0.00063	z_{drag}	1059.475	1059.39 ± 0.45	f_{2000}^{217}	107.55	108.1 ± 2.0
H_0	73.68	73.7 ± 1.7	r_{drag}	147.172	147.21 ± 0.48	χ^2_{simall}	395.82	396.8 ± 1.7
Ω_Λ	0.7358	0.735 ± 0.012	k_D	0.14062	0.14054 ± 0.00052	χ^2_{lowl}	23.23	23.5 ± 1.2
Ω_m	0.2642	0.265 ± 0.012	$100\theta_D$	0.161022	0.16107 ± 0.00026	χ^2_{plik}	757.77	770.5 ± 5.4
$\Omega_m h^2$	0.14340	0.1434 ± 0.0020	z_{eq}	3411.5	3411 ± 47	$\chi^2_{H073p45}$	0.019	1.0 ± 1.4
$\Omega_m h^3$	0.10566	0.1056 ± 0.0028	k_{eq}	0.010412	0.01041 ± 0.00014	χ^2_{prior}	1.28	7.2 ± 3.6
σ_8	0.8746	0.873 ± 0.022	$100\theta_{eq}$	0.8110	0.8111 ± 0.0087	χ^2_{CMB}	1176.8	1190.8 ± 5.6
S_8	0.8207	0.820 ± 0.021	$100\theta_{s,eq}$	0.44832	0.4484 ± 0.0045			
$\sigma_8\Omega_m^{0.5}$	0.4495	0.449 ± 0.012	$H(0.15)$	76.27	76.21 ± 0.97			

Best-fit $\chi^2_{eff} = 1178.12$; $\Delta\chi^2_{eff} = -13.46$; $\bar{\chi}^2_{eff} = 1198.92$; $\Delta\bar{\chi}^2_{eff} = -13.16$; $R - 1 = 0.05017$

χ^2_{eff}: CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.82 (Δ -0.25) commander_dx12_v3_2_29: 23.23 (Δ 1.14) plik_rd12_HM_v22_TT: 757.77 (Δ -5.25) Hubble - H073p45: 0.02 (Δ -8.97)

18.4 base_w_plikHM_TT_lowl_lowE_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02216 ± 0.00022	$\sigma_8\Omega_m^{0.5}$	$0.431^{+0.016}_{-0.023}$	$100\theta_{s,eq}$	0.4489 ± 0.0045
$\boldsymbol{\Omega_c h^2}$	0.1204 ± 0.0021	$\sigma_8\Omega_m^{0.25}$	$0.644^{+0.023}_{-0.018}$	$H(0.15)$	$81.8^{+6.6}_{-2.8}$
$\boldsymbol{100\theta_{MC}}$	1.04082 ± 0.00047	$\sigma_8/h^{0.5}$	$1.046^{+0.037}_{-0.025}$	$D_M(0.15)$	546^{+20}_{-65}
$\boldsymbol{\tau}$	$0.0535^{+0.0044}_{-0.0079}$	$r_{drag}h$	125^{+20}_{-8}	$H(0.38)$	$84.0^{+1.1}_{-0.88}$
$\boldsymbol{w_0}$	$-1.56^{+0.19}_{-0.39}$	$\langle d^2\rangle^{1/2}$	$2.507^{+0.046}_{-0.041}$	$D_M(0.38)$	1385^{+34}_{-98}
$\boldsymbol{\ln(10^{10}A_s)}$	$3.043^{+0.011}_{-0.015}$	z_{re}	$7.59^{+0.48}_{-0.79}$	$H(0.51)$	$88.1^{+1.4}_{-0.86}$
$\boldsymbol{n_s}$	0.9633 ± 0.0056	$10^9 A_s$	$2.096^{+0.023}_{-0.032}$	$D_M(0.51)$	1839^{+35}_{-96}
$\boldsymbol{y_{cal}}$	1.0004 ± 0.0024	$10^9 A_s e^{-2\tau}$	1.883 ± 0.013	$H(0.61)$	$92.4^{+1.6}_{-1.9}$
$\boldsymbol{A^{CIB}_{217}}$	48 ± 7	D_{40}	1230 ± 15	$D_M(0.61)$	2171^{+34}_{-91}
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{220}	5716 ± 41	$H(2.33)$	$232.3^{+1.4}_{-2.7}$
$\boldsymbol{A^{tSZ}_{143}}$	5.1 ± 2.0	D_{810}	2535 ± 13	$D_M(2.33)$	5750^{+17}_{-23}
$\boldsymbol{A^{PS}_{100}}$	262 ± 28	D_{1420}	814.1 ± 5.0	$f\sigma_8(0.15)$	0.492 ± 0.021
$\boldsymbol{A^{PS}_{143}}$	49 ± 8	D_{2000}	229.8 ± 1.8	$\sigma_8(0.15)$	$0.902^{+0.11}_{-0.052}$
$\boldsymbol{A^{PS}_{143\times217}}$	43 ± 9	$n_{s,0.002}$	0.9633 ± 0.0056	$f\sigma_8(0.38)$	$0.574^{+0.066}_{-0.045}$
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	Y_P	$0.24530^{+0.00010}_{-0.000082}$	$\sigma_8(0.38)$	$0.805^{+0.099}_{-0.046}$
$\boldsymbol{A^{kSZ}}$	< 4.69	Y_P^{BBN}	$0.24663^{+0.00010}_{-0.000082}$	$f\sigma_8(0.51)$	$0.591^{+0.080}_{-0.049}$
$\boldsymbol{A^{dustTT}_{100}}$	8.9 ± 1.8	10^5D/H	2.626 ± 0.041	$\sigma_8(0.51)$	$0.752^{+0.092}_{-0.042}$
$\boldsymbol{A^{dustTT}_{143}}$	10.7 ± 1.8	Age/Gyr	$13.590^{+0.055}_{-0.15}$	$f\sigma_8(0.61)$	$0.592^{+0.086}_{-0.049}$
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.2 ± 3.3	z_*	1090.22 ± 0.40	$\sigma_8(0.61)$	$0.714^{+0.087}_{-0.038}$
$\boldsymbol{A^{dustTT}_{217}}$	93.3 ± 7.3	r_*	144.50 ± 0.48	$f\sigma_8(2.33)$	$0.358^{+0.041}_{-0.017}$
$\boldsymbol{c_{100}}$	0.99961 ± 0.00062	$100\theta_*$	1.04102 ± 0.00046	$\sigma_8(2.33)$	$0.361^{+0.038}_{-0.017}$
$\boldsymbol{c_{217}}$	0.99825 ± 0.00063	$D_M(z_*)$/Gpc	13.880 ± 0.044	f^{143}_{2000}	30.8 ± 2.9
H_0	> 80.5	z_{drag}	1059.47 ± 0.45	$f^{143\times217}_{2000}$	33.3 ± 2.0
Ω_Λ	$0.792^{+0.065}_{-0.017}$	r_{drag}	147.23 ± 0.48	f^{217}_{2000}	107.9 ± 1.9
Ω_m	$0.208^{+0.017}_{-0.065}$	k_D	0.14056 ± 0.00052	χ^2_{simall}	396.6 ± 1.5
$\Omega_m h^2$	0.1432 ± 0.0020	$100\theta_D$	0.16103 ± 0.00026	χ^2_{lowl}	23.2 ± 1.2
$\Omega_m h^3$	$0.122^{+0.019}_{-0.0092}$	z_{eq}	3406 ± 47	χ^2_{plik}	769.8 ± 5.4
σ_8	$0.964^{+0.11}_{-0.053}$	k_{eq}	0.01040 ± 0.00014	χ^2_{prior}	7.2 ± 3.6
S_8	$0.787^{+0.029}_{-0.042}$	$100\theta_{eq}$	0.8120 ± 0.0088	χ^2_{CMB}	1189.7 ± 5.6

$\bar{\chi}^2_{eff} = 1196.88$; $\Delta\bar{\chi}^2_{eff} = -2.44$; $R - 1 = 0.00979$

18.5 base_w_plikHM_TT_lowl_lowE_post_lensing_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02222 ± 0.00021	$\sigma_8\Omega_m^{0.25}$	$0.635^{+0.018}_{-0.013}$	$D_M(0.15)$	544^{+20}_{-64}
$\boldsymbol{\Omega_c h^2}$	0.1191 ± 0.0015	$\sigma_8/h^{0.5}$	$1.034^{+0.029}_{-0.019}$	$H(0.38)$	$84.5^{+1.1}_{-0.67}$
$\boldsymbol{100\theta_{MC}}$	1.04094 ± 0.00045	$r_{drag}h$	126^{+20}_{-8}	$D_M(0.38)$	1378^{+34}_{-99}
$\boldsymbol{\tau}$	$0.0530^{+0.0042}_{-0.0075}$	$\langle d^2\rangle^{1/2}$	$2.483^{+0.031}_{-0.027}$	$H(0.51)$	$88.6^{+1.1}_{-0.70}$
$\boldsymbol{w_0}$	$-1.53^{+0.17}_{-0.37}$	z_{re}	$7.51^{+0.43}_{-0.78}$	$D_M(0.51)$	1830^{+35}_{-98}
$\boldsymbol{\ln(10^{10}A_s)}$	$3.038^{+0.010}_{-0.013}$	$10^9 A_s$	$2.087^{+0.021}_{-0.028}$	$H(0.61)$	$92.8^{+1.5}_{-1.7}$
$\boldsymbol{n_s}$	0.9659 ± 0.0049	$10^9 A_s e^{-2\tau}$	1.877 ± 0.011	$D_M(0.61)$	2161^{+33}_{-93}
$\boldsymbol{y_{cal}}$	1.0002 ± 0.0024	D_{40}	1223 ± 13	$H(2.33)$	$231.4^{+1.0}_{-2.6}$
$\boldsymbol{A^{CIB}_{217}}$	48 ± 7	D_{220}	5718 ± 40	$D_M(2.33)$	5742^{+15}_{-23}
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{810}	2533 ± 13	$f\sigma_8(0.15)$	0.481 ± 0.015
$\boldsymbol{A^{tSZ}_{143}}$	5.1 ± 2.0	D_{1420}	814.2 ± 5.0	$\sigma_8(0.15)$	$0.893^{+0.10}_{-0.047}$
$\boldsymbol{A^{PS}_{100}}$	262 ± 28	D_{2000}	229.8 ± 1.8	$f\sigma_8(0.38)$	$0.563^{+0.059}_{-0.038}$
$\boldsymbol{A^{PS}_{143}}$	48 ± 8	$n_{s,0.002}$	0.9659 ± 0.0049	$\sigma_8(0.38)$	$0.797^{+0.095}_{-0.042}$
$\boldsymbol{A^{PS}_{143\times217}}$	43 ± 9	Y_P	$0.245330^{+0.000092}_{-0.000079}$	$f\sigma_8(0.51)$	$0.580^{+0.074}_{-0.042}$
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	Y_P^{BBN}	$0.246657^{+0.000093}_{-0.000080}$	$\sigma_8(0.51)$	$0.746^{+0.089}_{-0.038}$
$\boldsymbol{A^{kSZ}}$	< 4.81	10^5D/H	2.615 ± 0.039	$f\sigma_8(0.61)$	$0.582^{+0.080}_{-0.043}$
$\boldsymbol{A^{dustTT}_{100}}$	8.9 ± 1.8	Age/Gyr	$13.576^{+0.057}_{-0.15}$	$\sigma_8(0.61)$	$0.709^{+0.084}_{-0.036}$
$\boldsymbol{A^{dustTT}_{143}}$	10.7 ± 1.8	z_*	1090.04 ± 0.34	$f\sigma_8(2.33)$	$0.356^{+0.040}_{-0.016}$
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.3 ± 3.3	r_*	144.77 ± 0.37	$\sigma_8(2.33)$	$0.359^{+0.037}_{-0.016}$
$\boldsymbol{A^{dustTT}_{217}}$	93.3 ± 7.3	$100\theta_*$	1.04114 ± 0.00044	f^{143}_{2000}	30.8 ± 3.0
$\boldsymbol{c_{100}}$	0.99961 ± 0.00063	$D_M(z_*)$/Gpc	13.905 ± 0.034	$f^{143\times217}_{2000}$	33.2 ± 2.0
$\boldsymbol{c_{217}}$	0.99825 ± 0.00064	z_{drag}	1059.52 ± 0.45	f^{217}_{2000}	107.8 ± 1.9
H_0	> 80.8	r_{drag}	147.49 ± 0.38	$\chi^2_{lensing}$	9.1 ± 1.2
Ω_Λ	$0.795^{+0.063}_{-0.016}$	k_D	0.14033 ± 0.00045	χ^2_{simall}	396.4 ± 1.2
Ω_m	$0.205^{+0.016}_{-0.063}$	$100\theta_D$	0.16100 ± 0.00026	χ^2_{lowl}	22.70 ± 0.95
$\Omega_m h^2$	0.1420 ± 0.0015	z_{eq}	3378 ± 35	χ^2_{plik}	770.2 ± 5.3
$\Omega_m h^3$	$0.121^{+0.019}_{-0.0087}$	k_{eq}	0.01031 ± 0.00011	χ^2_{prior}	7.3 ± 3.7
σ_8	$0.954^{+0.10}_{-0.047}$	$100\theta_{eq}$	0.8173 ± 0.0067	χ^2_{CMB}	1198.3 ± 5.5
S_8	$0.774^{+0.025}_{-0.042}$	$100\theta_{s,eq}$	0.4516 ± 0.0034		
$\sigma_8\Omega_m^{0.5}$	$0.424^{+0.014}_{-0.023}$	$H(0.15)$	$82.2^{+6.8}_{-2.8}$		

$\bar{\chi}^2_{eff} = 1205.67$; $\Delta\bar{\chi}^2_{eff} = -2.49$; $R - 1 = 0.01511$

18.6 base_w_plikHM_TT_lowl_lowE_post_Riess18_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	$0.02212^{+0.00020}_{-0.00022}$	$\sigma_8\Omega_m^{0.25}$	0.627 ± 0.014	$D_M(0.15)$	602 ± 10
$\boldsymbol{\Omega_c h^2}$	0.1205 ± 0.0020	$\sigma_8/h^{0.5}$	1.019 ± 0.020	$H(0.38)$	83.53 ± 0.54
$\boldsymbol{100\theta_{MC}}$	1.04076 ± 0.00046	$r_{drag}h$	108.4 ± 2.5	$D_M(0.38)$	1469 ± 17
$\boldsymbol{\tau}$	$0.0531^{+0.0045}_{-0.0071}$	$\langle d^2\rangle^{1/2}$	2.484 ± 0.041	$H(0.51)$	89.20 ± 0.54
$\boldsymbol{w_0}$	-1.225 ± 0.066	z_{re}	$7.58^{+0.45}_{-0.76}$	$D_M(0.51)$	1921 ± 18
$\boldsymbol{\ln(10^{10}A_s)}$	$3.042^{+0.010}_{-0.015}$	$10^9 A_s$	$2.095^{+0.021}_{-0.032}$	$H(0.61)$	94.22 ± 0.57
$\boldsymbol{n_s}$	0.9630 ± 0.0056	$10^9 A_s e^{-2\tau}$	1.883 ± 0.013	$D_M(0.61)$	2248 ± 19
$\boldsymbol{y_{cal}}$	1.0003 ± 0.0024	D_{40}	1231 ± 15	$H(2.33)$	234.0 ± 1.1
$\boldsymbol{A_{217}^{CIB}}$	48 ± 7	D_{220}	5712 ± 38	$D_M(2.33)$	5760 ± 15
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{810}	2535 ± 13	$f\sigma_8(0.15)$	0.476 ± 0.015
$\boldsymbol{A_{143}^{tSZ}}$	5.1 ± 2.0	D_{1420}	813.9 ± 5.0	$\sigma_8(0.15)$	0.812 ± 0.021
$\boldsymbol{A_{100}^{PS}}$	262 ± 28	D_{2000}	$229.6^{+1.6}_{-1.9}$	$f\sigma_8(0.38)$	0.516 ± 0.018
$\boldsymbol{A_{143}^{PS}}$	49^{+8}_{-8}	$n_{s,0.002}$	0.9630 ± 0.0056	$\sigma_8(0.38)$	0.721 ± 0.018
$\boldsymbol{A_{143\times217}^{PS}}$	44 ± 9	Y_P	0.245289 ± 0.000092	$f\sigma_8(0.51)$	0.521 ± 0.018
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	Y_P^{BBN}	0.246616 ± 0.000092	$\sigma_8(0.51)$	0.674 ± 0.017
$\boldsymbol{A^{kSZ}}$	< 4.74	10^5D/H	2.633 ± 0.040	$f\sigma_8(0.61)$	0.518 ± 0.018
$\boldsymbol{A_{100}^{dustTT}}$	8.9 ± 1.8	Age/Gyr	13.710 ± 0.035	$\sigma_8(0.61)$	0.641 ± 0.015
$\boldsymbol{A_{143}^{dustTT}}$	10.7 ± 1.8	z_*	1090.28 ± 0.38	$f\sigma_8(2.33)$	0.3230 ± 0.0073
$\boldsymbol{A_{143\times217}^{dustTT}}$	$18.3^{+3.4}_{-3.0}$	r_*	144.49 ± 0.47	$\sigma_8(2.33)$	0.3285 ± 0.0064
$\boldsymbol{A_{217}^{dustTT}}$	93.3 ± 7.1	$100\theta_*$	1.04097 ± 0.00045	f_{2000}^{143}	31.1 ± 2.9
$\boldsymbol{c_{100}}$	0.99963 ± 0.00063	$D_M(z_*)$/Gpc	13.880 ± 0.043	$f_{2000}^{143\times217}$	33.5 ± 2.0
$\boldsymbol{c_{217}}$	0.99828 ± 0.00063	z_{drag}	1059.40 ± 0.44	f_{2000}^{217}	108.0 ± 1.9
H_0	73.7 ± 1.7	r_{drag}	147.23 ± 0.47	χ^2_{simall}	396.6 ± 1.6
Ω_Λ	0.735 ± 0.012	k_D	0.14053 ± 0.00052	χ^2_{lowl}	23.5 ± 1.2
Ω_m	0.265 ± 0.012	$100\theta_D$	0.16107 ± 0.00025	χ^2_{plik}	770.2 ± 5.3
$\Omega_m h^2$	0.1433 ± 0.0019	z_{eq}	3409 ± 46	$\chi^2_{H073p45}$	1.0 ± 1.4
$\Omega_m h^3$	0.1055 ± 0.0028	k_{eq}	0.01040 ± 0.00014	χ^2_{prior}	7.1 ± 3.6
σ_8	0.874 ± 0.022	$100\theta_{eq}$	0.8114 ± 0.0086	χ^2_{CMB}	1190.3 ± 5.5
S_8	0.820 ± 0.021	$100\theta_{s,eq}$	0.4486 ± 0.0044		
$\sigma_8\Omega_m^{0.5}$	0.449 ± 0.011	$H(0.15)$	76.23 ± 0.97		

$\bar{\chi}^2_{eff} = 1198.47$; $\Delta\bar{\chi}^2_{eff} = -13.34$; $R - 1 = 0.05306$

18.7 base_w_plikHM_TTTEEE_lowl_lowE

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022434	0.02239 ± 0.00015	$\Omega_m h^2$	0.14291	0.1430 ± 0.0013	k_{eq}	0.010376	0.010380 ± 0.000093
$\boldsymbol{\Omega_c h^2}$	0.11983	0.1199 ± 0.0014	$\Omega_m h^3$	0.1427	$0.124^{+0.018}_{-0.0077}$	$100\theta_{eq}$	0.8140	0.8136 ± 0.0058
$\boldsymbol{100\theta_{MC}}$	1.040967	1.04094 ± 0.00032	σ_8	1.072	$0.972^{+0.094}_{-0.044}$	$100\theta_{s,eq}$	0.44969	0.4495 ± 0.0030
$\boldsymbol{\tau}$	0.0540	0.0539 ± 0.0079	S_8	0.7409	$0.777^{+0.022}_{-0.036}$	$H(0.15)$	88.98	$82.9^{+5.9}_{-2.3}$
$\boldsymbol{w_0}$	-1.947	$-1.58^{+0.16}_{-0.35}$	$\sigma_8\Omega_m^{0.5}$	0.4058	$0.426^{+0.012}_{-0.020}$	$D_M(0.15)$	480.1	537^{+17}_{-56}
$\boldsymbol{\ln(10^{10}A_s)}$	3.0435	3.043 ± 0.016	$\sigma_8\Omega_m^{0.25}$	0.6596	$0.643^{+0.019}_{-0.013}$	$H(0.38)$	84.72	$84.49^{+0.81}_{-0.58}$
$\boldsymbol{n_s}$	0.96668	0.9654 ± 0.0043	$\sigma_8/h^{0.5}$	1.0728	$1.045^{+0.030}_{-0.019}$	$D_M(0.38)$	1284	1368^{+28}_{-84}
$\boldsymbol{y_{cal}}$	1.00030	1.0005 ± 0.0025	$r_{drag}h$	146.9	127^{+20}_{-7}	$H(0.51)$	87.01	$88.4^{+1.2}_{-0.82}$
$\boldsymbol{A^{CIB}_{217}}$	45.5	46 ± 7	$\langle d^2\rangle^{1/2}$	2.5215	$2.501^{+0.037}_{-0.031}$	$D_M(0.51)$	1739	1820^{+28}_{-82}
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.67	—	z_{re}	7.57	7.57 ± 0.80	$H(0.61)$	90.41	$92.5^{+1.2}_{-1.9}$
$\boldsymbol{A^{tSZ}_{143}}$	7.02	$5.5^{+2.1}_{-1.9}$	$10^9 A_s$	2.0978	2.098 ± 0.034	$D_M(0.61)$	2077	2151^{+27}_{-77}
$\boldsymbol{A^{PS}_{100}}$	247.5	257 ± 28	$10^9 A_s e^{-2\tau}$	1.8831	1.883 ± 0.012	$H(2.33)$	230.42	$231.86^{+0.89}_{-2.1}$
$\boldsymbol{A^{PS}_{143}}$	49.8	46 ± 8	D_{40}	1223.0	1227 ± 13	$D_M(2.33)$	5726.0	5735^{+12}_{-16}
$\boldsymbol{A^{PS}_{143\times217}}$	52.9	43 ± 9	D_{220}	5733.8	5735 ± 39	$f\sigma_8(0.15)$	0.5064	$0.489^{+0.017}_{-0.015}$
$\boldsymbol{A^{PS}_{217}}$	122.0	116 ± 10	D_{810}	2539.6	2539 ± 13	$\sigma_8(0.15)$	1.011	$0.911^{+0.095}_{-0.043}$
$\boldsymbol{A^{kSZ}}$	0.01	< 4.00	D_{1420}	817.83	816.9 ± 4.8	$f\sigma_8(0.38)$	0.6421	$0.576^{+0.059}_{-0.035}$
$\boldsymbol{A^{dustTT}_{100}}$	8.80	8.9 ± 1.8	D_{2000}	231.54	231.1 ± 1.6	$\sigma_8(0.38)$	0.905	$0.813^{+0.088}_{-0.039}$
$\boldsymbol{A^{dustTT}_{143}}$	10.97	10.9 ± 1.8	$n_{s,0.002}$	0.96668	0.9654 ± 0.0043	$f\sigma_8(0.51)$	0.674	$0.595^{+0.072}_{-0.039}$
$\boldsymbol{A^{dustTT}_{143\times217}}$	19.99	18.5 ± 3.3	Y_P	0.245420	0.245402 ± 0.000057	$\sigma_8(0.51)$	0.846	$0.760^{+0.082}_{-0.035}$
$\boldsymbol{A^{dustTT}_{217}}$	95.4	93.7 ± 7.3	Y_P^{BBN}	0.246747	0.246729 ± 0.000058	$f\sigma_8(0.61)$	0.680	$0.597^{+0.077}_{-0.039}$
$\boldsymbol{A^{dustTE}_{100}}$	0.1150	0.114 ± 0.038	10^5D/H	2.5737	2.582 ± 0.027	$\sigma_8(0.61)$	0.803	$0.722^{+0.077}_{-0.033}$
$\boldsymbol{A^{dustTE}_{100\times143}}$	0.1341	0.135 ± 0.029	Age/Gyr	13.427	$13.544^{+0.043}_{-0.12}$	$f\sigma_8(2.33)$	0.3998	$0.362^{+0.036}_{-0.015}$
$\boldsymbol{A^{dustTE}_{100\times217}}$	0.480	0.482 ± 0.085	z_*	1089.824	1089.89 ± 0.27	$\sigma_8(2.33)$	0.4004	$0.365^{+0.034}_{-0.015}$
$\boldsymbol{A^{dustTE}_{143}}$	0.225	0.225 ± 0.054	r_*	144.427	144.43 ± 0.30	f^{143}_{2000}	28.05	29.1 ± 2.7
$\boldsymbol{A^{dustTE}_{143\times217}}$	0.665	0.665 ± 0.080	$100\theta_*$	1.041140	1.04112 ± 0.00031	$f^{143\times217}_{2000}$	31.50	31.9 ± 1.9
$\boldsymbol{A^{dustTE}_{217}}$	2.084	2.08 ± 0.27	$D_M(z_*)$/Gpc	13.8720	13.873 ± 0.028	f^{217}_{2000}	106.10	106.8 ± 1.8
$\boldsymbol{c_{100}}$	0.99973	0.99967 ± 0.00061	z_{drag}	1060.085	1059.98 ± 0.30	χ^2_{simall}	395.85	397.0 ± 1.8
$\boldsymbol{c_{217}}$	0.99819	0.99818 ± 0.00063	r_{drag}	147.065	147.09 ± 0.30	χ^2_{lowl}	22.44	22.87 ± 0.85
H_0	99.9	> 82.6	k_D	0.140942	0.14089 ± 0.00032	χ^2_{plik}	2341.6	2357.3 ± 5.8
Ω_Λ	0.8567	$0.802^{+0.055}_{-0.014}$	$100\theta_D$	0.160683	0.16073 ± 0.00017	χ^2_{prior}	1.51	11.5 ± 4.5
Ω_m	0.1433	$0.198^{+0.014}_{-0.055}$	z_{eq}	3399.6	3401 ± 31	χ^2_{CMB}	2759.9	2777.1 ± 5.9

Best-fit $\chi^2_{eff} = 2761.37$; $\Delta\chi^2_{eff} = -4.40$; $\bar{\chi}^2_{eff} = 2788.65$; $\Delta\bar{\chi}^2_{eff} = -3.11$; $R - 1 = 0.00965$

χ^2_{eff}: CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.85 (Δ -0.20) commander_dx12_v3_2_29: 22.45 (Δ -0.81) plik_rd12_HM_v22b_TTTEEE: 2341.57 (Δ -3.07)

18.8 base_w_plikHM_TTTEEE_lowl_lowE_post_lensing

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022465	0.02243 ± 0.00015	$\Omega_m h^3$	0.1420	$0.123^{+0.017}_{-0.0081}$	$100\theta_{s,eq}$	0.45136	0.4508 ± 0.0026
$\boldsymbol{\Omega_c h^2}$	0.11907	0.1193 ± 0.0012	σ_8	1.062	$0.964^{+0.090}_{-0.044}$	$H(0.15)$	89.25	$83.0^{+5.9}_{-2.5}$
$\boldsymbol{100\theta_{MC}}$	1.040998	1.04099 ± 0.00031	S_8	0.7324	$0.771^{+0.021}_{-0.036}$	$D_M(0.15)$	479.3	537^{+18}_{-56}
$\boldsymbol{\tau}$	0.0523	0.0523 ± 0.0074	$\sigma_8\Omega_m^{0.5}$	0.4011	$0.422^{+0.012}_{-0.020}$	$H(0.38)$	85.07	$84.72^{+0.81}_{-0.53}$
$\boldsymbol{w_0}$	-1.925	$-1.57^{+0.16}_{-0.33}$	$\sigma_8\Omega_m^{0.25}$	0.6528	$0.637^{+0.016}_{-0.011}$	$D_M(0.38)$	1280	1366^{+30}_{-84}
$\boldsymbol{\ln(10^{10}A_s)}$	3.0373	3.038 ± 0.014	$\sigma_8/h^{0.5}$	1.0631	$1.037^{+0.027}_{-0.016}$	$H(0.51)$	87.31	$88.6^{+1.1}_{-0.70}$
$\boldsymbol{n_s}$	0.96834	0.9666 ± 0.0041	$r_{drag}h$	147.0	127^{+20}_{-8}	$D_M(0.51)$	1733	1816^{+31}_{-82}
$\boldsymbol{y_{cal}}$	1.00007	1.0003 ± 0.0025	$\langle d^2\rangle^{1/2}$	2.5024	$2.485^{+0.028}_{-0.024}$	$H(0.61)$	90.65	$92.7^{+1.3}_{-1.7}$
$\boldsymbol{A_{217}^{CIB}}$	46.3	47 ± 7	z_{re}	7.37	7.39 ± 0.76	$D_M(0.61)$	2071	2147^{+29}_{-77}
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.57	—	$10^9 A_s$	2.0849	2.087 ± 0.030	$H(2.33)$	229.89	$231.49^{+0.81}_{-2.1}$
$\boldsymbol{A_{143}^{tSZ}}$	7.18	5.5 ± 2.0	$10^9 A_s e^{-2\tau}$	1.8779	1.879 ± 0.011	$D_M(2.33)$	5721.7	5731^{+12}_{-16}
$\boldsymbol{A_{100}^{PS}}$	248.4	257 ± 28	D_{40}	1217.3	1223 ± 12	$f\sigma_8(0.15)$	0.4987	$0.483^{+0.014}_{-0.013}$
$\boldsymbol{A_{143}^{PS}}$	48.5	45 ± 8	D_{220}	5730.0	5734 ± 39	$\sigma_8(0.15)$	1.002	$0.903^{+0.091}_{-0.043}$
$\boldsymbol{A_{143\times217}^{PS}}$	50.3	42 ± 9	D_{810}	2536.5	2536 ± 13	$f\sigma_8(0.38)$	0.6323	$0.569^{+0.055}_{-0.034}$
$\boldsymbol{A_{217}^{PS}}$	120.5	115 ± 10	D_{1420}	817.35	816.6 ± 4.7	$\sigma_8(0.38)$	0.898	$0.806^{+0.084}_{-0.039}$
$\boldsymbol{A^{kSZ}}$	0.00	< 4.17	D_{2000}	231.36	230.9 ± 1.6	$f\sigma_8(0.51)$	0.664	$0.587^{+0.068}_{-0.039}$
$\boldsymbol{A_{100}^{dustTT}}$	8.81	9.0 ± 1.8	$n_{s,0.002}$	0.96834	0.9666 ± 0.0041	$\sigma_8(0.51)$	0.840	$0.755^{+0.079}_{-0.036}$
$\boldsymbol{A_{143}^{dustTT}}$	11.06	10.9 ± 1.8	Y_P	0.245432	0.245415 ± 0.000056	$f\sigma_8(0.61)$	0.671	$0.590^{+0.072}_{-0.039}$
$\boldsymbol{A_{143\times217}^{dustTT}}$	20.06	18.6 ± 3.3	Y_P^{BBN}	0.246758	0.246742 ± 0.000057	$\sigma_8(0.61)$	0.797	$0.717^{+0.074}_{-0.034}$
$\boldsymbol{A_{217}^{dustTT}}$	95.3	93.7 ± 7.4	10^5D/H	2.5681	2.576 ± 0.027	$f\sigma_8(2.33)$	0.3974	$0.360^{+0.035}_{-0.015}$
$\boldsymbol{A_{100}^{dustTE}}$	0.1142	0.114 ± 0.038	Age/Gyr	13.420	$13.539^{+0.047}_{-0.12}$	$\sigma_8(2.33)$	0.3981	$0.362^{+0.033}_{-0.015}$
$\boldsymbol{A_{100\times143}^{dustTE}}$	0.1348	0.135 ± 0.029	z_*	1089.720	1089.79 ± 0.26	f_{2000}^{143}	28.30	29.2 ± 2.8
$\boldsymbol{A_{100\times217}^{dustTE}}$	0.484	0.483 ± 0.085	r_*	144.599	144.56 ± 0.27	$f_{2000}^{143\times217}$	31.58	31.9 ± 1.9
$\boldsymbol{A_{143}^{dustTE}}$	0.223	0.225 ± 0.054	$100\theta_*$	1.041180	1.04117 ± 0.00030	f_{2000}^{217}	106.15	106.8 ± 1.8
$\boldsymbol{A_{143\times217}^{dustTE}}$	0.665	0.664 ± 0.081	$D_M(z_*)$/Gpc	13.8880	13.885 ± 0.025	$\chi^2_{lensing}$	8.68	9.0 ± 1.1
$\boldsymbol{A_{217}^{dustTE}}$	2.076	2.07 ± 0.27	z_{drag}	1060.085	1060.02 ± 0.30	χ^2_{simall}	396	1325 ± 1000
$\boldsymbol{c_{100}}$	0.99972	0.99966 ± 0.00061	r_{drag}	147.232	147.21 ± 0.26	χ^2_{lowl}	22.13	22.59 ± 0.76
$\boldsymbol{c_{217}}$	0.99818	0.99819 ± 0.00063	k_D	0.140791	0.14079 ± 0.00029	χ^2_{plik}	2342	1430 ± 1000
H_0	99.9	> 82.4	$100\theta_D$	0.160670	0.16072 ± 0.00017	χ^2_{prior}	1.61	11.6 ± 4.5
Ω_Λ	0.8574	$0.803^{+0.055}_{-0.015}$	z_{eq}	3382.2	3388 ± 27	χ^2_{CMB}	2768.9	2786.1 ± 6.0
Ω_m	0.1426	$0.197^{+0.015}_{-0.055}$	k_{eq}	0.010323	0.010339 ± 0.000082			
$\Omega_m h^2$	0.14218	0.1424 ± 0.0011	$100\theta_{eq}$	0.8172	0.8162 ± 0.0051			

Best-fit $\chi^2_{eff} = 2770.54$; $\Delta\chi^2_{eff} = -4.10$; $\bar{\chi}^2_{eff} = 2797.72$; $\Delta\bar{\chi}^2_{eff} = -2.97$; $R - 1 = 0.01426$

χ^2_{eff}: CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.68 (Δ -0.19) simall_100x143_offlike5_EE_Aplanck_B: 395.65 (Δ -0.40) commander_dx12_v3_2_29: 22.13 (Δ -1.12) plik_rd12_HM_v22b_TTTEEE: 2342.46 (Δ -2.47)

18.9 base_w_plikHM_TTTEEE_lowl_lowE_post_Riess18

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02236 ± 0.00014	$\Omega_m h^3$	0.1055 ± 0.0025	$100\theta_{s,eq}$	0.4489 ± 0.0030
$\boldsymbol{\Omega_c h^2}$	0.1202 ± 0.0014	σ_8	0.870 ± 0.018	$H(0.15)$	76.39 ± 0.94
$\boldsymbol{100\theta_{MC}}$	1.04092 ± 0.00032	S_8	0.816 ± 0.016	$D_M(0.15)$	601 ± 10
$\boldsymbol{\tau}$	0.0538 ± 0.0082	$\sigma_8\Omega_m^{0.5}$	0.4472 ± 0.0085	$H(0.38)$	83.80 ± 0.41
$\boldsymbol{w_0}$	-1.211 ± 0.056	$\sigma_8\Omega_m^{0.25}$	0.624 ± 0.010	$D_M(0.38)$	1466^{+15}_{-17}
$\boldsymbol{\ln(10^{10}A_s)}$	3.044 ± 0.017	$\sigma_8/h^{0.5}$	1.014 ± 0.015	$H(0.51)$	89.50 ± 0.37
$\boldsymbol{n_s}$	0.9647 ± 0.0044	$r_{drag}h$	108.3 ± 2.4	$D_M(0.51)$	1916^{+16}_{-18}
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0025	$\langle d^2\rangle^{1/2}$	2.476 ± 0.032	$H(0.61)$	94.53 ± 0.40
$\boldsymbol{A^{CIB}_{217}}$	46 ± 7	z_{re}	7.58 ± 0.83	$D_M(0.61)$	2242^{+16}_{-18}
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	10^9A_s	$2.099^{+0.033}_{-0.036}$	$H(2.33)$	234.14 ± 0.85
$\boldsymbol{A^{tSZ}_{143}}$	5.5 ± 1.9	$10^9A_se^{-2\tau}$	1.885 ± 0.012	$D_M(2.33)$	5748 ± 10
$\boldsymbol{A^{PS}_{100}}$	258 ± 27	D_{40}	1231 ± 13	$f\sigma_8(0.15)$	0.472 ± 0.010
$\boldsymbol{A^{PS}_{143}}$	46 ± 8	D_{220}	5734^{+36}_{-41}	$\sigma_8(0.15)$	0.808 ± 0.018
$\boldsymbol{A^{PS}_{143\times217}}$	43 ± 10	D_{810}	2540^{+13}_{-14}	$f\sigma_8(0.38)$	0.512 ± 0.013
$\boldsymbol{A^{PS}_{217}}$	116 ± 10	D_{1420}	817.1 ± 4.7	$\sigma_8(0.38)$	0.718 ± 0.016
$\boldsymbol{A^{kSZ}}$	< 4.09	D_{2000}	231.0 ± 1.5	$f\sigma_8(0.51)$	0.517 ± 0.014
$\boldsymbol{A^{dustTT}_{100}}$	9.0 ± 1.8	$n_{s,0.002}$	0.9647 ± 0.0044	$\sigma_8(0.51)$	0.672 ± 0.015
$\boldsymbol{A^{dustTT}_{143}}$	11.0 ± 1.9	Y_P	$0.245391^{+0.000059}_{-0.000051}$	$f\sigma_8(0.61)$	0.515 ± 0.015
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.7 ± 3.3	Y_P^{BBN}	$0.246718^{+0.000059}_{-0.000052}$	$\sigma_8(0.61)$	0.639 ± 0.014
$\boldsymbol{A^{dustTT}_{217}}$	94.1 ± 7.2	10^5D/H	2.587 ± 0.026	$f\sigma_8(2.33)$	0.3222 ± 0.0067
$\boldsymbol{A^{dustTE}_{100}}$	$0.114^{+0.035}_{-0.040}$	Age/Gyr	13.685 ± 0.030	$\sigma_8(2.33)$	0.3279 ± 0.0060
$\boldsymbol{A^{dustTE}_{100\times143}}$	0.135 ± 0.029	z_*	1089.95 ± 0.26	f^{143}_{2000}	29.4 ± 2.7
$\boldsymbol{A^{dustTE}_{100\times217}}$	0.484 ± 0.086	r_*	144.38 ± 0.31	$f^{143\times217}_{2000}$	32.1 ± 1.8
$\boldsymbol{A^{dustTE}_{143}}$	0.225 ± 0.055	$100\theta_*$	1.04110 ± 0.00032	f^{217}_{2000}	107.0 ± 1.8
$\boldsymbol{A^{dustTE}_{143\times217}}$	0.665 ± 0.078	$D_M(z_*)$/Gpc	13.868 ± 0.029	χ^2_{simall}	1288 ± 1000
$\boldsymbol{A^{dustTE}_{217}}$	2.08 ± 0.27	z_{drag}	1059.94 ± 0.29	χ^2_{lowl}	23.25 ± 0.92
$\boldsymbol{c_{100}}$	0.99967 ± 0.00063	r_{drag}	147.04 ± 0.31	χ^2_{plik}	1468 ± 1000
$\boldsymbol{c_{217}}$	$0.99820^{+0.00057}_{-0.00064}$	k_D	0.14092 ± 0.00033	$\chi^2_{H073p45}$	0.97 ± 1.4
H_0	73.7 ± 1.6	$100\theta_D$	0.16076 ± 0.00017	χ^2_{prior}	11.6 ± 4.6
Ω_Λ	$0.736^{+0.013}_{-0.011}$	z_{eq}	3408 ± 31	χ^2_{CMB}	2778.8 ± 6.0
Ω_m	$0.264^{+0.011}_{-0.013}$	k_{eq}	0.010400 ± 0.000095		
$\Omega_m h^2$	0.1432 ± 0.0013	$100\theta_{eq}$	0.8124 ± 0.0058		

$\bar{\chi}^2_{eff} = 2791.33$; $\Delta\bar{\chi}^2_{eff} = -12.83$; $R - 1 = 0.07272$

18.10 base_w_plikHM_TTTEEE_lowl_lowE_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02240 ± 0.00015	$\Omega_m h^2$	0.1429 ± 0.0013	k_{eq}	0.010377 ± 0.000093
$\boldsymbol{\Omega_c h^2}$	0.1199 ± 0.0013	$\Omega_m h^3$	$0.124^{+0.018}_{-0.0078}$	$100\theta_{eq}$	0.8138 ± 0.0057
$\boldsymbol{100\theta_{MC}}$	1.04094 ± 0.00032	σ_8	$0.973^{+0.094}_{-0.044}$	$100\theta_{s,eq}$	0.4496 ± 0.0029
$\boldsymbol{\tau}$	$0.0553^{+0.0049}_{-0.0083}$	S_8	$0.778^{+0.022}_{-0.037}$	$H(0.15)$	$82.9^{+5.9}_{-2.3}$
$\boldsymbol{w_0}$	$-1.58^{+0.16}_{-0.34}$	$\sigma_8\Omega_m^{0.5}$	$0.426^{+0.012}_{-0.020}$	$D_M(0.15)$	537^{+18}_{-56}
$\boldsymbol{\ln(10^{10} A_s)}$	$3.046^{+0.012}_{-0.016}$	$\sigma_8\Omega_m^{0.25}$	$0.643^{+0.019}_{-0.013}$	$H(0.38)$	$84.51^{+0.81}_{-0.57}$
$\boldsymbol{n_s}$	0.9656 ± 0.0043	$\sigma_8/h^{0.5}$	$1.046^{+0.030}_{-0.019}$	$D_M(0.38)$	1368^{+28}_{-84}
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	$r_{drag}h$	127^{+20}_{-7}	$H(0.51)$	$88.4^{+1.2}_{-0.81}$
$\boldsymbol{A^{CIB}_{217}}$	46 ± 7	$\langle d^2\rangle^{1/2}$	$2.504^{+0.036}_{-0.030}$	$D_M(0.51)$	1819^{+28}_{-82}
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	z_{re}	$7.72^{+0.55}_{-0.82}$	$H(0.61)$	$92.5^{+1.2}_{-1.9}$
$\boldsymbol{A^{tSZ}_{143}}$	$5.5^{+2.1}_{-1.9}$	$10^9 A_s$	$2.103^{+0.024}_{-0.035}$	$D_M(0.61)$	2151^{+27}_{-77}
$\boldsymbol{A^{PS}_{100}}$	257 ± 28	$10^9 A_s e^{-2\tau}$	1.883 ± 0.012	$H(2.33)$	$231.84^{+0.88}_{-2.1}$
$\boldsymbol{A^{PS}_{143}}$	45 ± 8	D_{40}	1227 ± 13	$D_M(2.33)$	5735^{+12}_{-16}
$\boldsymbol{A^{PS}_{143\times217}}$	43 ± 9	D_{220}	5735 ± 38	$f\sigma_8(0.15)$	$0.489^{+0.017}_{-0.015}$
$\boldsymbol{A^{PS}_{217}}$	116 ± 10	D_{810}	2538 ± 13	$\sigma_8(0.15)$	$0.911^{+0.095}_{-0.043}$
$\boldsymbol{A^{kSZ}}$	< 3.96	D_{1420}	816.9 ± 4.7	$f\sigma_8(0.38)$	$0.577^{+0.059}_{-0.035}$
$\boldsymbol{A^{dustTT}_{100}}$	8.9 ± 1.8	D_{2000}	231.1 ± 1.6	$\sigma_8(0.38)$	$0.814^{+0.088}_{-0.039}$
$\boldsymbol{A^{dustTT}_{143}}$	10.8 ± 1.8	$n_{s,0.002}$	0.9656 ± 0.0043	$f\sigma_8(0.51)$	$0.595^{+0.072}_{-0.039}$
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.5 ± 3.3	Y_P	0.245404 ± 0.000057	$\sigma_8(0.51)$	$0.761^{+0.082}_{-0.036}$
$\boldsymbol{A^{dustTT}_{217}}$	93.7 ± 7.3	Y_P^{BBN}	0.246731 ± 0.000057	$f\sigma_8(0.61)$	$0.597^{+0.077}_{-0.039}$
$\boldsymbol{A^{dustTE}_{100}}$	0.114 ± 0.038	10^5D/H	2.581 ± 0.027	$\sigma_8(0.61)$	$0.723^{+0.077}_{-0.033}$
$\boldsymbol{A^{dustTE}_{100\times143}}$	0.135 ± 0.029	Age/Gyr	$13.544^{+0.044}_{-0.12}$	$f\sigma_8(2.33)$	$0.362^{+0.036}_{-0.015}$
$\boldsymbol{A^{dustTE}_{100\times217}}$	0.482 ± 0.085	z_*	1089.88 ± 0.27	$\sigma_8(2.33)$	$0.365^{+0.034}_{-0.015}$
$\boldsymbol{A^{dustTE}_{143}}$	0.225 ± 0.054	r_*	144.44 ± 0.30	f^{143}_{2000}	29.0 ± 2.7
$\boldsymbol{A^{dustTE}_{143\times217}}$	0.665 ± 0.081	$100\theta_*$	1.04113 ± 0.00031	$f^{143\times217}_{2000}$	31.8 ± 1.8
$\boldsymbol{A^{dustTE}_{217}}$	2.08 ± 0.27	$D_M(z_*)$/Gpc	13.874 ± 0.028	f^{217}_{2000}	106.7 ± 1.8
$\boldsymbol{c_{100}}$	0.99967 ± 0.00062	z_{drag}	1059.99 ± 0.30	χ^2_{simall}	396.9 ± 1.8
$\boldsymbol{c_{217}}$	0.99818 ± 0.00063	r_{drag}	147.09 ± 0.29	χ^2_{lowl}	22.87 ± 0.85
H_0	> 82.6	k_D	0.14088 ± 0.00032	χ^2_{plik}	2357.1 ± 5.7
Ω_Λ	$0.802^{+0.055}_{-0.014}$	$100\theta_D$	0.16073 ± 0.00017	χ^2_{prior}	11.5 ± 4.5
Ω_m	$0.198^{+0.014}_{-0.055}$	z_{eq}	3400 ± 30	χ^2_{CMB}	2776.9 ± 5.9

$\bar{\chi}^2_{eff} = 2788.38$; $\Delta\bar{\chi}^2_{eff} = -3.15$; $R - 1 = 0.01060$

18.11 base_w_plikHM_TTTEEE_lowl_lowE_post_lensing_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02243 ± 0.00015	$\Omega_m h^3$	$0.123^{+0.017}_{-0.0083}$	$100\theta_{s,eq}$	0.4510 ± 0.0026
$\boldsymbol{\Omega_c h^2}$	0.1192 ± 0.0012	σ_8	$0.963^{+0.090}_{-0.045}$	$H(0.15)$	$82.9^{+6.0}_{-2.6}$
$\boldsymbol{100\theta_{MC}}$	1.04100 ± 0.00031	S_8	$0.771^{+0.022}_{-0.036}$	$D_M(0.15)$	537^{+19}_{-57}
$\boldsymbol{\tau}$	$0.0540^{+0.0044}_{-0.0076}$	$\sigma_8\Omega_m^{0.5}$	$0.422^{+0.012}_{-0.020}$	$H(0.38)$	$84.75^{+0.82}_{-0.51}$
$\boldsymbol{w_0}$	$-1.56^{+0.16}_{-0.33}$	$\sigma_8\Omega_m^{0.25}$	$0.637^{+0.016}_{-0.011}$	$D_M(0.38)$	1367^{+31}_{-86}
$\boldsymbol{\ln(10^{10}A_s)}$	$3.041^{+0.010}_{-0.014}$	$\sigma_8/h^{0.5}$	$1.037^{+0.027}_{-0.016}$	$H(0.51)$	$88.7^{+1.1}_{-0.67}$
$\boldsymbol{n_s}$	0.9669 ± 0.0040	$r_{drag}h$	127^{+20}_{-8}	$D_M(0.51)$	1817^{+31}_{-83}
$\boldsymbol{y_{cal}}$	1.0002 ± 0.0024	$\langle d^2\rangle^{1/2}$	$2.487^{+0.028}_{-0.024}$	$H(0.61)$	$92.8^{+1.3}_{-1.7}$
$\boldsymbol{A^{CIB}_{217}}$	46 ± 7	z_{re}	$7.56^{+0.47}_{-0.77}$	$D_M(0.61)$	2148^{+29}_{-78}
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	10^9A_s	$2.093^{+0.021}_{-0.030}$	$H(2.33)$	$231.47^{+0.78}_{-2.1}$
$\boldsymbol{A^{tSZ}_{143}}$	5.5 ± 2.0	$10^9A_se^{-2\tau}$	1.879 ± 0.010	$D_M(2.33)$	5731^{+11}_{-16}
$\boldsymbol{A^{PS}_{100}}$	257 ± 28	D_{40}	1223 ± 12	$f\sigma_8(0.15)$	0.483 ± 0.013
$\boldsymbol{A^{PS}_{143}}$	45 ± 8	D_{220}	5733 ± 38	$\sigma_8(0.15)$	$0.902^{+0.091}_{-0.045}$
$\boldsymbol{A^{PS}_{143\times217}}$	42 ± 9	D_{810}	2536 ± 13	$f\sigma_8(0.38)$	$0.568^{+0.055}_{-0.035}$
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	D_{1420}	816.5 ± 4.7	$\sigma_8(0.38)$	$0.806^{+0.085}_{-0.040}$
$\boldsymbol{A^{kSZ}}$	< 4.12	D_{2000}	231.0 ± 1.6	$f\sigma_8(0.51)$	$0.586^{+0.068}_{-0.040}$
$\boldsymbol{A^{dustTT}_{100}}$	9.0 ± 1.8	$n_{s,0.002}$	0.9669 ± 0.0040	$\sigma_8(0.51)$	$0.754^{+0.079}_{-0.037}$
$\boldsymbol{A^{dustTT}_{143}}$	10.9 ± 1.8	Y_P	0.245418 ± 0.000056	$f\sigma_8(0.61)$	$0.589^{+0.072}_{-0.040}$
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.6 ± 3.3	Y_P^{BBN}	0.246745 ± 0.000056	$\sigma_8(0.61)$	$0.716^{+0.074}_{-0.035}$
$\boldsymbol{A^{dustTT}_{217}}$	93.7 ± 7.4	10^5D/H	2.574 ± 0.027	$f\sigma_8(2.33)$	$0.359^{+0.036}_{-0.016}$
$\boldsymbol{A^{dustTE}_{100}}$	0.114 ± 0.038	Age/Gyr	$13.540^{+0.048}_{-0.12}$	$\sigma_8(2.33)$	$0.362^{+0.033}_{-0.015}$
$\boldsymbol{A^{dustTE}_{100\times143}}$	0.135 ± 0.029	z_*	1089.78 ± 0.25	f^{143}_{2000}	29.1 ± 2.8
$\boldsymbol{A^{dustTE}_{100\times217}}$	0.483 ± 0.085	r_*	144.58 ± 0.26	$f^{143\times217}_{2000}$	31.9 ± 1.8
$\boldsymbol{A^{dustTE}_{143}}$	0.225 ± 0.054	$100\theta_*$	1.04118 ± 0.00030	f^{217}_{2000}	106.7 ± 1.8
$\boldsymbol{A^{dustTE}_{143\times217}}$	0.664 ± 0.081	$D_M(z_*)$/Gpc	13.886 ± 0.024	$\chi^2_{lensing}$	9.0 ± 1.1
$\boldsymbol{A^{dustTE}_{217}}$	2.07 ± 0.27	z_{drag}	1060.03 ± 0.30	χ^2_{simall}	1339 ± 1000
$\boldsymbol{c_{100}}$	0.99966 ± 0.00061	r_{drag}	147.22 ± 0.26	χ^2_{lowl}	22.58 ± 0.76
$\boldsymbol{c_{217}}$	0.99819 ± 0.00064	k_D	0.14077 ± 0.00029	χ^2_{plik}	1416 ± 1000
H_0	> 82.2	$100\theta_D$	0.16071 ± 0.00017	χ^2_{prior}	11.6 ± 4.5
Ω_Λ	$0.802^{+0.056}_{-0.015}$	z_{eq}	3385 ± 26	χ^2_{CMB}	2785.8 ± 5.9
Ω_m	$0.198^{+0.015}_{-0.056}$	k_{eq}	0.010333 ± 0.000080		
$\Omega_m h^2$	0.1423 ± 0.0011	$100\theta_{eq}$	0.8166 ± 0.0050		

$\bar{\chi}^2_{eff} = 2797.43$; $\Delta\bar{\chi}^2_{eff} = -3.08$; $R - 1 = 0.01516$

18.12 base_w_plikHM_TTTEEE_lowl_lowE_post_Riess18_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02236 ± 0.00014	$\Omega_m h^3$	0.1055 ± 0.0025	$100\theta_{s,eq}$	0.4490 ± 0.0030
$\boldsymbol{\Omega_c h^2}$	0.1202 ± 0.0014	σ_8	0.872 ± 0.018	$H(0.15)$	76.39 ± 0.94
$\boldsymbol{100\theta_{MC}}$	1.04092 ± 0.00032	S_8	0.817 ± 0.015	$D_M(0.15)$	$600.7^{+9.4}_{-11}$
$\boldsymbol{\tau}$	$0.0552^{+0.0060}_{-0.0082}$	$\sigma_8\Omega_m^{0.5}$	0.4477 ± 0.0084	$H(0.38)$	83.80 ± 0.40
$\boldsymbol{w_0}$	-1.211 ± 0.057	$\sigma_8\Omega_m^{0.25}$	0.625 ± 0.010	$D_M(0.38)$	1466^{+15}_{-17}
$\boldsymbol{\ln(10^{10}A_s)}$	$3.047^{+0.012}_{-0.017}$	$\sigma_8/h^{0.5}$	1.015 ± 0.015	$H(0.51)$	89.50 ± 0.37
$\boldsymbol{n_s}$	0.9648 ± 0.0044	$r_{drag}h$	108.4 ± 2.4	$D_M(0.51)$	1916^{+16}_{-18}
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0024	$\langle d^2\rangle^{1/2}$	2.479 ± 0.030	$H(0.61)$	94.53 ± 0.41
$\boldsymbol{A^{CIB}_{217}}$	47 ± 7	z_{re}	$7.74^{+0.57}_{-0.91}$	$D_M(0.61)$	2242^{+16}_{-18}
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	10^9A_s	$2.105^{+0.025}_{-0.035}$	$H(2.33)$	234.13 ± 0.85
$\boldsymbol{A^{tSZ}_{143}}$	5.5 ± 1.9	$10^9A_se^{-2\tau}$	1.884 ± 0.012	$D_M(2.33)$	5748 ± 10
$\boldsymbol{A^{PS}_{100}}$	257 ± 27	D_{40}	1231 ± 13	$f\sigma_8(0.15)$	0.473 ± 0.010
$\boldsymbol{A^{PS}_{143}}$	46 ± 8	D_{220}	5733 ± 38	$\sigma_8(0.15)$	0.809 ± 0.018
$\boldsymbol{A^{PS}_{143\times217}}$	43 ± 10	D_{810}	2539^{+12}_{-14}	$f\sigma_8(0.38)$	0.513 ± 0.013
$\boldsymbol{A^{PS}_{217}}$	116 ± 10	D_{1420}	817.0 ± 4.7	$\sigma_8(0.38)$	0.719 ± 0.016
$\boldsymbol{A^{kSZ}}$	< 4.04	D_{2000}	231.0 ± 1.5	$f\sigma_8(0.51)$	0.518 ± 0.014
$\boldsymbol{A^{dustTT}_{100}}$	9.0 ± 1.8	$n_{s,0.002}$	0.9648 ± 0.0044	$\sigma_8(0.51)$	0.673 ± 0.015
$\boldsymbol{A^{dustTT}_{143}}$	10.9 ± 1.8	Y_P	$0.245391^{+0.000058}_{-0.000051}$	$f\sigma_8(0.61)$	0.515 ± 0.015
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.7 ± 3.2	Y_P^{BBN}	$0.246718^{+0.000058}_{-0.000052}$	$\sigma_8(0.61)$	0.640 ± 0.014
$\boldsymbol{A^{dustTT}_{217}}$	93.9 ± 7.2	10^5D/H	2.587 ± 0.026	$f\sigma_8(2.33)$	0.3226 ± 0.0066
$\boldsymbol{A^{dustTE}_{100}}$	$0.114^{+0.035}_{-0.040}$	Age/Gyr	13.685 ± 0.030	$\sigma_8(2.33)$	0.3284 ± 0.0059
$\boldsymbol{A^{dustTE}_{100\times143}}$	0.134 ± 0.029	z_*	1089.95 ± 0.26	f^{143}_{2000}	29.4 ± 2.8
$\boldsymbol{A^{dustTE}_{100\times217}}$	0.485 ± 0.085	r_*	144.38 ± 0.31	$f^{143\times217}_{2000}$	32.1 ± 1.8
$\boldsymbol{A^{dustTE}_{143}}$	0.225 ± 0.056	$100\theta_*$	1.04110 ± 0.00032	f^{217}_{2000}	106.9 ± 1.8
$\boldsymbol{A^{dustTE}_{143\times217}}$	0.664 ± 0.079	$D_M(z_*)$/Gpc	13.868 ± 0.029	χ^2_{simall}	1305 ± 1000
$\boldsymbol{A^{dustTE}_{217}}$	2.08 ± 0.27	z_{drag}	1059.94 ± 0.29	χ^2_{lowl}	23.28 ± 0.93
$\boldsymbol{c_{100}}$	$0.99966^{+0.00060}_{-0.00068}$	r_{drag}	147.05 ± 0.31	χ^2_{plik}	1450 ± 1000
$\boldsymbol{c_{217}}$	$0.99820^{+0.00056}_{-0.00064}$	k_D	0.14091 ± 0.00033	$\chi^2_{H073p45}$	0.97 ± 1.4
H_0	73.7 ± 1.6	$100\theta_D$	0.16076 ± 0.00017	χ^2_{prior}	11.6 ± 4.5
Ω_Λ	$0.736^{+0.013}_{-0.011}$	z_{eq}	3407 ± 31	χ^2_{CMB}	2778.4 ± 6.0
Ω_m	$0.264^{+0.011}_{-0.013}$	k_{eq}	0.010399 ± 0.000095		
$\Omega_m h^2$	0.1432 ± 0.0013	$100\theta_{eq}$	0.8125 ± 0.0058		

$\bar{\chi}^2_{eff} = 2791.00$; $\Delta\bar{\chi}^2_{eff} = -12.89$; $R - 1 = 0.07585$

18.13 base_w_CamSpecHM_TT_lowl_lowE

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02217 ± 0.00022	$\sigma_8\Omega_m^{0.5}$	$0.430^{+0.016}_{-0.023}$	$H(0.15)$	$81.6^{+6.7}_{-2.9}$
$\boldsymbol{\Omega_c h^2}$	0.1202 ± 0.0020	$\sigma_8\Omega_m^{0.25}$	$0.641^{+0.023}_{-0.018}$	$D_M(0.15)$	548^{+21}_{-66}
$\boldsymbol{100\theta_{MC}}$	1.04088 ± 0.00047	$\sigma_8/h^{0.5}$	$1.042^{+0.037}_{-0.026}$	$H(0.38)$	$84.1^{+1.1}_{-0.87}$
$\boldsymbol{\tau}$	0.0523 ± 0.0082	$r_{drag}h$	125^{+20}_{-9}	$D_M(0.38)$	1388^{+36}_{-100}
$\boldsymbol{w_0}$	$-1.54^{+0.20}_{-0.39}$	$\langle d^2\rangle^{1/2}$	$2.498^{+0.047}_{-0.041}$	$H(0.51)$	$88.2^{+1.3}_{-0.85}$
$\boldsymbol{\ln(10^{10}A_s)}$	3.039 ± 0.017	z_{re}	7.45 ± 0.85	$D_M(0.51)$	1841^{+36}_{-99}
$\boldsymbol{n_s}$	0.9643 ± 0.0056	$10^9 A_s$	2.088 ± 0.035	$H(0.61)$	92.5 ± 1.6
$\boldsymbol{y_{cal}}$	1.0004 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.881 ± 0.013	$D_M(0.61)$	2173^{+35}_{-93}
$\boldsymbol{A^{PS}_{100}}$	241 ± 25	D_{40}	1226 ± 15	$H(2.33)$	$232.3^{+1.4}_{-2.7}$
$\boldsymbol{A^{PS}_{143}}$	40 ± 8	D_{220}	5707 ± 41	$D_M(2.33)$	5748^{+18}_{-23}
$\boldsymbol{A^{PS}_{217}}$	102 ± 10	D_{810}	2533 ± 14	$f\sigma_8(0.15)$	0.489 ± 0.021
$\boldsymbol{A^{CIB}_{217}}$	40 ± 7	D_{1420}	813.8 ± 5.1	$\sigma_8(0.15)$	$0.896^{+0.11}_{-0.053}$
$\boldsymbol{A^{tSZ}_{143}}$	$3.8^{+1.8}_{-2.6}$	D_{2000}	229.7 ± 1.8	$f\sigma_8(0.38)$	$0.570^{+0.065}_{-0.046}$
$\boldsymbol{r^{PS}_{143\times217}}$	0.65 ± 0.13	$n_{s,0.002}$	0.9643 ± 0.0056	$\sigma_8(0.38)$	$0.799^{+0.10}_{-0.047}$
$\boldsymbol{r^{CIB}_{143\times217}}$	$0.57^{+0.41}_{-0.14}$	Y_P	$0.24531^{+0.00010}_{-0.000081}$	$f\sigma_8(0.51)$	$0.586^{+0.080}_{-0.051}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	$0.24664^{+0.00010}_{-0.000082}$	$\sigma_8(0.51)$	$0.747^{+0.093}_{-0.043}$
$\boldsymbol{A^{kSZ}}$	—	10^5D/H	2.624 ± 0.042	$f\sigma_8(0.61)$	$0.587^{+0.086}_{-0.050}$
$\boldsymbol{A^{dust}_{100}}$	1.01 ± 0.20	Age/Gyr	$13.592^{+0.057}_{-0.15}$	$\sigma_8(0.61)$	$0.710^{+0.088}_{-0.040}$
$\boldsymbol{A^{dust}_{143}}$	0.97 ± 0.18	z_*	1090.20 ± 0.40	$f\sigma_8(2.33)$	$0.356^{+0.042}_{-0.018}$
$\boldsymbol{A^{dust}_{217}}$	0.97 ± 0.10	r_*	144.52 ± 0.47	$\sigma_8(2.33)$	$0.359^{+0.039}_{-0.017}$
$\boldsymbol{A^{dust}_{143\times217}}$	1.03 ± 0.16	$100\theta_*$	1.04108 ± 0.00047	f^{143}_{2000}	30.5 ± 3.0
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	$D_M(z_*)$/Gpc	13.882 ± 0.043	f^{217}_{2000}	107.3 ± 2.0
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	z_{drag}	1059.49 ± 0.45	$f^{143\times217}_{2000}$	32.7 ± 2.2
H_0	> 79.9	r_{drag}	147.25 ± 0.47	χ^2_{simall}	396.9 ± 1.7
Ω_Λ	$0.790^{+0.067}_{-0.017}$	k_D	0.14054 ± 0.00051	χ^2_{lowl}	23.0 ± 1.1
Ω_m	$0.210^{+0.017}_{-0.067}$	$100\theta_D$	0.16103 ± 0.00026	$\chi^2_{CamSpec}$	7062.0 ± 5.3
$\Omega_m h^2$	0.1431 ± 0.0019	z_{eq}	3403 ± 46	χ^2_{prior}	7.6 ± 3.4
$\Omega_m h^3$	$0.121^{+0.020}_{-0.0095}$	k_{eq}	0.01039 ± 0.00014	χ^2_{CMB}	7481.8 ± 5.5
σ_8	$0.958^{+0.11}_{-0.055}$	$100\theta_{eq}$	0.8126 ± 0.0087		
S_8	$0.786^{+0.030}_{-0.042}$	$100\theta_{s,eq}$	0.4492 ± 0.0045		

$\bar{\chi}^2_{eff} = 7489.40$; $\Delta\bar{\chi}^2_{eff} = -2.14$; $R - 1 = 0.00889$

18.14 base_w_CamSpecHM_TT_lowl_lowE_post_lensing

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02222 ± 0.00021	$\sigma_8\Omega_m^{0.5}$	$0.424^{+0.014}_{-0.023}$	$H(0.15)$	$82.2^{+6.5}_{-2.8}$
$\boldsymbol{\Omega_c h^2}$	0.1193 ± 0.0016	$\sigma_8\Omega_m^{0.25}$	$0.635^{+0.017}_{-0.013}$	$D_M(0.15)$	544^{+21}_{-62}
$\boldsymbol{100\theta_{MC}}$	1.04097 ± 0.00046	$\sigma_8/h^{0.5}$	$1.034^{+0.028}_{-0.019}$	$H(0.38)$	$84.5^{+1.0}_{-0.73}$
$\boldsymbol{\tau}$	0.0517 ± 0.0081	$r_{drag}h$	126^{+20}_{-9}	$D_M(0.38)$	1378^{+35}_{-95}
$\boldsymbol{w_0}$	$-1.53^{+0.19}_{-0.35}$	$\langle d^2\rangle^{1/2}$	$2.481^{+0.030}_{-0.027}$	$H(0.51)$	$88.5^{+1.1}_{-0.70}$
$\boldsymbol{\ln(10^{10}A_s)}$	3.035 ± 0.015	z_{re}	7.37 ± 0.83	$D_M(0.51)$	1829^{+35}_{-94}
$\boldsymbol{n_s}$	0.9661 ± 0.0050	$10^9 A_s$	2.081 ± 0.032	$H(0.61)$	92.7 ± 1.4
$\boldsymbol{y_{cal}}$	1.0003 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.876 ± 0.011	$D_M(0.61)$	2161^{+34}_{-89}
$\boldsymbol{A^{PS}_{100}}$	242 ± 25	D_{40}	1221 ± 13	$H(2.33)$	$231.5^{+1.1}_{-2.6}$
$\boldsymbol{A^{PS}_{143}}$	40 ± 8	D_{220}	5709 ± 41	$D_M(2.33)$	5742^{+16}_{-22}
$\boldsymbol{A^{PS}_{217}}$	101 ± 10	D_{810}	2531 ± 13	$f\sigma_8(0.15)$	0.482 ± 0.015
$\boldsymbol{A^{CIB}_{217}}$	41 ± 7	D_{1420}	813.8 ± 5.2	$\sigma_8(0.15)$	$0.893^{+0.097}_{-0.049}$
$\boldsymbol{A^{tSZ}_{143}}$	$3.8^{+1.8}_{-2.6}$	D_{2000}	229.7 ± 1.8	$f\sigma_8(0.38)$	$0.563^{+0.057}_{-0.039}$
$\boldsymbol{r^{PS}_{143\times217}}$	0.65 ± 0.13	$n_{s,0.002}$	0.9661 ± 0.0050	$\sigma_8(0.38)$	$0.797^{+0.091}_{-0.044}$
$\boldsymbol{r^{CIB}_{143\times217}}$	> 0.451	Y_P	$0.245330^{+0.000096}_{-0.000079}$	$f\sigma_8(0.51)$	$0.580^{+0.071}_{-0.045}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	$0.246656^{+0.000097}_{-0.000080}$	$\sigma_8(0.51)$	$0.746^{+0.085}_{-0.041}$
$\boldsymbol{A^{kSZ}}$	—	10^5D/H	2.615 ± 0.040	$f\sigma_8(0.61)$	$0.583^{+0.076}_{-0.045}$
$\boldsymbol{A^{dust}_{100}}$	1.02 ± 0.20	Age/Gyr	$13.574^{+0.057}_{-0.14}$	$\sigma_8(0.61)$	$0.709^{+0.080}_{-0.038}$
$\boldsymbol{A^{dust}_{143}}$	0.98 ± 0.18	z_*	1090.05 ± 0.36	$f\sigma_8(2.33)$	$0.356^{+0.038}_{-0.017}$
$\boldsymbol{A^{dust}_{217}}$	0.97 ± 0.10	r_*	144.73 ± 0.37	$\sigma_8(2.33)$	$0.359^{+0.036}_{-0.017}$
$\boldsymbol{A^{dust}_{143\times217}}$	1.03 ± 0.16	$100\theta_*$	1.04117 ± 0.00045	f^{143}_{2000}	30.5 ± 3.0
$\boldsymbol{c_{100}}$	0.9975 ± 0.0010	$D_M(z_*)$/Gpc	13.900 ± 0.035	f^{217}_{2000}	107.3 ± 2.0
$\boldsymbol{c_{217}}$	1.0012 ± 0.0016	z_{drag}	1059.53 ± 0.45	$f^{143\times217}_{2000}$	32.7 ± 2.2
H_0	> 80.6	r_{drag}	147.45 ± 0.38	$\chi^2_{lensing}$	9.0 ± 1.1
Ω_Λ	$0.796^{+0.062}_{-0.018}$	k_D	0.14038 ± 0.00045	χ^2_{simall}	396.8 ± 1.5
Ω_m	$0.204^{+0.018}_{-0.062}$	$100\theta_D$	0.16100 ± 0.00026	χ^2_{lowl}	22.56 ± 0.89
$\Omega_m h^2$	0.1422 ± 0.0015	z_{eq}	3382 ± 36	$\chi^2_{CamSpec}$	7062.1 ± 5.1
$\Omega_m h^3$	$0.121^{+0.018}_{-0.0094}$	k_{eq}	0.01032 ± 0.00011	χ^2_{prior}	7.6 ± 3.4
σ_8	$0.954^{+0.096}_{-0.050}$	$100\theta_{eq}$	0.8166 ± 0.0069	χ^2_{CMB}	7490.4 ± 5.5
S_8	$0.774^{+0.025}_{-0.041}$	$100\theta_{s,eq}$	0.4512 ± 0.0035		

$\bar{\chi}^2_{eff} = 7497.94$; $\Delta\bar{\chi}^2_{eff} = -2.30$; $R - 1 = 0.01572$

18.15 base_w_CamSpecHM_TT_lowl_lowE_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02218 ± 0.00022	$\sigma_8\Omega_m^{0.5}$	$0.431^{+0.016}_{-0.023}$	$H(0.15)$	$81.6^{+6.7}_{-2.9}$
$\boldsymbol{\Omega_c h^2}$	0.1201 ± 0.0020	$\sigma_8\Omega_m^{0.25}$	$0.641^{+0.023}_{-0.018}$	$D_M(0.15)$	548^{+22}_{-67}
$\boldsymbol{100\theta_{MC}}$	1.04089 ± 0.00047	$\sigma_8/h^{0.5}$	$1.043^{+0.037}_{-0.026}$	$H(0.38)$	$84.1^{+1.1}_{-0.87}$
$\boldsymbol{\tau}$	$0.0542^{+0.0045}_{-0.0086}$	$r_{drag}h$	124^{+20}_{-9}	$D_M(0.38)$	1388^{+36}_{-100}
$\boldsymbol{w_0}$	$-1.53^{+0.20}_{-0.39}$	$\langle d^2\rangle^{1/2}$	$2.500^{+0.047}_{-0.041}$	$H(0.51)$	$88.3^{+1.3}_{-0.84}$
$\boldsymbol{\ln(10^{10}A_s)}$	$3.042^{+0.012}_{-0.016}$	z_{re}	$7.66^{+0.52}_{-0.84}$	$D_M(0.51)$	1841^{+37}_{-99}
$\boldsymbol{n_s}$	0.9646 ± 0.0056	$10^9 A_s$	$2.095^{+0.024}_{-0.034}$	$H(0.61)$	92.6 ± 1.6
$\boldsymbol{y_{cal}}$	1.0004 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.880 ± 0.013	$D_M(0.61)$	2173^{+35}_{-94}
$\boldsymbol{A^{PS}_{100}}$	241 ± 25	D_{40}	1225 ± 15	$H(2.33)$	$232.2^{+1.4}_{-2.7}$
$\boldsymbol{A^{PS}_{143}}$	40 ± 8	D_{220}	5707 ± 41	$D_M(2.33)$	5748^{+18}_{-23}
$\boldsymbol{A^{PS}_{217}}$	102 ± 10	D_{810}	2533 ± 14	$f\sigma_8(0.15)$	0.489 ± 0.021
$\boldsymbol{A^{CIB}_{217}}$	40 ± 7	D_{1420}	813.8 ± 5.1	$\sigma_8(0.15)$	$0.896^{+0.11}_{-0.054}$
$\boldsymbol{A^{tSZ}_{143}}$	$3.8^{+1.8}_{-2.6}$	D_{2000}	229.8 ± 1.8	$f\sigma_8(0.38)$	$0.569^{+0.065}_{-0.046}$
$\boldsymbol{r^{PS}_{143\times217}}$	0.65 ± 0.13	$n_{s,0.002}$	0.9646 ± 0.0056	$\sigma_8(0.38)$	$0.799^{+0.10}_{-0.048}$
$\boldsymbol{r^{CIB}_{143\times217}}$	$0.57^{+0.41}_{-0.15}$	Y_P	$0.24531^{+0.00010}_{-0.000081}$	$f\sigma_8(0.51)$	$0.585^{+0.079}_{-0.051}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	$0.24664^{+0.00010}_{-0.000081}$	$\sigma_8(0.51)$	$0.748^{+0.093}_{-0.043}$
$\boldsymbol{A^{kSZ}}$	—	10^5D/H	2.622 ± 0.041	$f\sigma_8(0.61)$	$0.587^{+0.085}_{-0.051}$
$\boldsymbol{A^{dust}_{100}}$	1.01 ± 0.20	Age/Gyr	$13.591^{+0.057}_{-0.15}$	$\sigma_8(0.61)$	$0.710^{+0.088}_{-0.040}$
$\boldsymbol{A^{dust}_{143}}$	0.97 ± 0.18	z_*	1090.18 ± 0.40	$f\sigma_8(2.33)$	$0.356^{+0.042}_{-0.018}$
$\boldsymbol{A^{dust}_{217}}$	0.97 ± 0.10	r_*	144.54 ± 0.46	$\sigma_8(2.33)$	$0.359^{+0.039}_{-0.017}$
$\boldsymbol{A^{dust}_{143\times217}}$	1.02 ± 0.16	$100\theta_*$	1.04109 ± 0.00047	f^{143}_{2000}	30.4 ± 3.0
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	$D_M(z_*)$/Gpc	13.884 ± 0.043	f^{217}_{2000}	107.3 ± 2.0
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	z_{drag}	1059.50 ± 0.45	$f^{143\times217}_{2000}$	32.6 ± 2.2
H_0	> 79.8	r_{drag}	147.27 ± 0.47	χ^2_{simall}	396.8 ± 1.6
Ω_Λ	$0.790^{+0.067}_{-0.018}$	k_D	0.14053 ± 0.00051	χ^2_{lowl}	22.9 ± 1.1
Ω_m	$0.210^{+0.018}_{-0.067}$	$100\theta_D$	0.16102 ± 0.00026	$\chi^2_{CamSpec}$	7061.9 ± 5.3
$\Omega_m h^2$	0.1430 ± 0.0019	z_{eq}	3401 ± 46	χ^2_{prior}	7.6 ± 3.4
$\Omega_m h^3$	$0.121^{+0.019}_{-0.0097}$	k_{eq}	0.01038 ± 0.00014	χ^2_{CMB}	7481.6 ± 5.4
σ_8	$0.959^{+0.11}_{-0.055}$	$100\theta_{eq}$	0.8131 ± 0.0086		
S_8	$0.787^{+0.030}_{-0.042}$	$100\theta_{s,eq}$	0.4494 ± 0.0045		

$\bar{\chi}^2_{eff} = 7489.13$; $\Delta\bar{\chi}^2_{eff} = -2.13$; $R - 1 = 0.01149$

18.16 base_w_CamSpecHM_TT_lowl_lowE_post_lensing_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02223 ± 0.00021	$\sigma_8\Omega_m^{0.5}$	$0.424^{+0.014}_{-0.023}$	$H(0.15)$	$82.2^{+6.6}_{-2.9}$
$\boldsymbol{\Omega_c h^2}$	0.1191 ± 0.0016	$\sigma_8\Omega_m^{0.25}$	$0.635^{+0.017}_{-0.013}$	$D_M(0.15)$	544^{+22}_{-63}
$\boldsymbol{100\theta_{MC}}$	1.04099 ± 0.00046	$\sigma_8/h^{0.5}$	$1.034^{+0.028}_{-0.020}$	$H(0.38)$	$84.5^{+1.1}_{-0.70}$
$\boldsymbol{\tau}$	$0.0538^{+0.0043}_{-0.0084}$	$r_{drag}h$	125^{+20}_{-9}	$D_M(0.38)$	1379^{+36}_{-97}
$\boldsymbol{w_0}$	$-1.52^{+0.19}_{-0.35}$	$\langle d^2\rangle^{1/2}$	$2.482^{+0.030}_{-0.027}$	$H(0.51)$	$88.6^{+1.1}_{-0.67}$
$\boldsymbol{\ln(10^{10}A_s)}$	$3.039^{+0.011}_{-0.015}$	z_{re}	$7.59^{+0.45}_{-0.87}$	$D_M(0.51)$	1830^{+36}_{-96}
$\boldsymbol{n_s}$	0.9666 ± 0.0048	$10^9 A_s$	$2.088^{+0.022}_{-0.031}$	$H(0.61)$	92.8 ± 1.4
$\boldsymbol{y_{cal}}$	1.0003 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.875 ± 0.011	$D_M(0.61)$	2161^{+34}_{-91}
$\boldsymbol{A^{PS}_{100}}$	242 ± 25	D_{40}	1220 ± 13	$H(2.33)$	$231.5^{+1.1}_{-2.6}$
$\boldsymbol{A^{PS}_{143}}$	40 ± 8	D_{220}	5709 ± 41	$D_M(2.33)$	5740^{+16}_{-22}
$\boldsymbol{A^{PS}_{217}}$	101 ± 10	D_{810}	2531 ± 13	$f\sigma_8(0.15)$	0.481 ± 0.015
$\boldsymbol{A^{CIB}_{217}}$	41 ± 7	D_{1420}	813.9 ± 5.1	$\sigma_8(0.15)$	$0.892^{+0.098}_{-0.051}$
$\boldsymbol{A^{tSZ}_{143}}$	$3.8^{+1.8}_{-2.6}$	D_{2000}	229.8 ± 1.8	$f\sigma_8(0.38)$	$0.562^{+0.056}_{-0.040}$
$\boldsymbol{r^{PS}_{143\times217}}$	0.65 ± 0.13	$n_{s,0.002}$	0.9666 ± 0.0048	$\sigma_8(0.38)$	$0.796^{+0.091}_{-0.045}$
$\boldsymbol{r^{CIB}_{143\times217}}$	> 0.450	Y_P	$0.245336^{+0.000094}_{-0.000079}$	$f\sigma_8(0.51)$	$0.579^{+0.070}_{-0.046}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	$0.246662^{+0.000094}_{-0.000080}$	$\sigma_8(0.51)$	$0.745^{+0.085}_{-0.042}$
$\boldsymbol{A^{kSZ}}$	—	10^5D/H	2.612 ± 0.040	$f\sigma_8(0.61)$	$0.581^{+0.076}_{-0.046}$
$\boldsymbol{A^{dust}_{100}}$	1.01 ± 0.20	Age/Gyr	$13.574^{+0.057}_{-0.14}$	$\sigma_8(0.61)$	$0.708^{+0.081}_{-0.039}$
$\boldsymbol{A^{dust}_{143}}$	0.98 ± 0.18	z_*	1090.02 ± 0.35	$f\sigma_8(2.33)$	$0.355^{+0.039}_{-0.017}$
$\boldsymbol{A^{dust}_{217}}$	0.97 ± 0.10	r_*	144.76 ± 0.36	$\sigma_8(2.33)$	$0.359^{+0.036}_{-0.017}$
$\boldsymbol{A^{dust}_{143\times217}}$	1.03 ± 0.16	$100\theta_*$	1.04119 ± 0.00045	f^{143}_{2000}	30.4 ± 3.0
$\boldsymbol{c_{100}}$	0.9975 ± 0.0010	$D_M(z_*)$/Gpc	13.904 ± 0.034	f^{217}_{2000}	107.2 ± 2.1
$\boldsymbol{c_{217}}$	1.0012 ± 0.0016	z_{drag}	1059.55 ± 0.45	$f^{143\times217}_{2000}$	32.6 ± 2.2
H_0	> 80.4	r_{drag}	147.48 ± 0.37	$\chi^2_{lensing}$	9.0 ± 1.1
Ω_Λ	$0.795^{+0.063}_{-0.018}$	k_D	0.14035 ± 0.00045	χ^2_{simall}	396.6 ± 1.4
Ω_m	$0.205^{+0.018}_{-0.063}$	$100\theta_D$	0.16099 ± 0.00026	χ^2_{lowl}	22.52 ± 0.88
$\Omega_m h^2$	0.1420 ± 0.0015	z_{eq}	3378 ± 35	$\chi^2_{CamSpec}$	7062.0 ± 5.2
$\Omega_m h^3$	$0.121^{+0.018}_{-0.0096}$	k_{eq}	0.01031 ± 0.00011	χ^2_{prior}	7.6 ± 3.4
σ_8	$0.953^{+0.096}_{-0.052}$	$100\theta_{eq}$	0.8174 ± 0.0067	χ^2_{CMB}	7490.1 ± 5.4
S_8	$0.775^{+0.025}_{-0.042}$	$100\theta_{s,eq}$	0.4516 ± 0.0034		

$\bar{\chi}^2_{eff} = 7497.68$; $\Delta\bar{\chi}^2_{eff} = -2.33$; $R - 1 = 0.02078$

18.17 base_w_CamSpecHM_TTTEEE_lowl_lowE

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022361	0.02233 ± 0.00016	σ_8	1.060	$0.952^{+0.11}_{-0.051}$	$100\theta_{\rm eq}$	0.8166	0.8160 ± 0.0058
$\boldsymbol{\Omega_c h^2}$	0.11924	0.1194 ± 0.0014	S_8	0.7367	$0.776^{+0.025}_{-0.039}$	$100\theta_{\rm s,eq}$	0.45110	0.4508 ± 0.0030
$\boldsymbol{100\theta_{MC}}$	1.040932	1.04091 ± 0.00032	$\sigma_8\Omega_{\rm m}^{0.5}$	0.4035	$0.425^{+0.014}_{-0.021}$	$H(0.15)$	88.79	$82.1^{+6.7}_{-2.8}$
$\boldsymbol{\tau}$	0.0528	0.0523 ± 0.0077	$\sigma_8\Omega_{\rm m}^{0.25}$	0.6540	$0.635^{+0.021}_{-0.014}$	$D_{\rm M}(0.15)$	482.4	546^{+21}_{-65}
$\boldsymbol{w_0}$	-1.916	$-1.52^{+0.18}_{-0.39}$	$\sigma_8/h^{0.5}$	1.0650	$1.034^{+0.034}_{-0.021}$	$H(0.38)$	84.89	$84.46^{+0.97}_{-0.54}$
$\boldsymbol{\ln(10^{10}A_s)}$	3.0380	3.037 ± 0.016	$r_{\rm drag}h$	146.0	125^{+20}_{-9}	$D_{\rm M}(0.38)$	1286	1381^{+34}_{-98}
$\boldsymbol{n_s}$	0.96761	0.9665 ± 0.0044	$\langle d^2\rangle^{1/2}$	2.5066	$2.481^{+0.041}_{-0.032}$	$H(0.51)$	87.21	$88.6^{+1.2}_{-0.74}$
$\boldsymbol{y_{cal}}$	1.00017	1.0003 ± 0.0025	$z_{\rm re}$	7.45	$7.41^{+0.80}_{-0.70}$	$D_{\rm M}(0.51)$	1740	1832^{+33}_{-97}
$\boldsymbol{A_{100}^{PS}}$	230.4	238 ± 25	$10^9 A_{\rm s}$	2.0863	2.085 ± 0.033	$H(0.61)$	90.60	$92.8^{+1.8}_{-2.0}$
$\boldsymbol{A_{143}^{PS}}$	43.8	39 ± 8	$10^9 A_{\rm s}e^{-2\tau}$	1.8772	1.877 ± 0.012	$D_{\rm M}(0.61)$	2078	2163^{+31}_{-91}
$\boldsymbol{A_{217}^{PS}}$	105.9	103 ± 10	D_{40}	1217.6	1221 ± 13	$H(2.33)$	229.95	$231.83^{+0.87}_{-2.5}$
$\boldsymbol{A_{217}^{CIB}}$	40.9	39 ± 7	D_{220}	5718.9	5719 ± 38	$D_{\rm M}(2.33)$	5727.8	5739^{+11}_{-19}
$\boldsymbol{A_{143}^{tSZ}}$	6.01	$3.9^{+1.9}_{-2.5}$	D_{810}	2534.2	2534 ± 14	$f\sigma_8(0.15)$	0.5003	$0.482^{+0.018}_{-0.016}$
$\boldsymbol{r_{143\times217}^{PS}}$	0.718	0.66 ± 0.13	D_{1420}	815.93	815.3 ± 4.8	$\sigma_8(0.15)$	0.999	$0.891^{+0.11}_{-0.050}$
$\boldsymbol{r_{143\times217}^{CIB}}$	0.692	$0.55^{+0.38}_{-0.20}$	D_{2000}	230.76	230.4 ± 1.6	$f\sigma_8(0.38)$	0.632	$0.562^{+0.065}_{-0.040}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.53	—	$n_{\rm s,0.002}$	0.96761	0.9665 ± 0.0044	$\sigma_8(0.38)$	0.895	$0.795^{+0.098}_{-0.045}$
$\boldsymbol{A^{kSZ}}$	0.84	$4.6^{+1.7}_{-4.4}$	$Y_{\rm P}$	0.245392	$0.245378^{+0.000065}_{-0.000058}$	$f\sigma_8(0.51)$	0.663	$0.579^{+0.079}_{-0.045}$
$\boldsymbol{A_{100}^{dust}}$	1.001	1.01 ± 0.20	$Y_{\rm P}^{\rm BBN}$	0.246719	$0.246705^{+0.000065}_{-0.000059}$	$\sigma_8(0.51)$	0.837	$0.744^{+0.092}_{-0.041}$
$\boldsymbol{A_{143}^{dust}}$	0.943	0.96 ± 0.18	10^5D/H	2.5871	2.593 ± 0.029	$f\sigma_8(0.61)$	0.670	$0.581^{+0.085}_{-0.045}$
$\boldsymbol{A_{217}^{dust}}$	0.977	0.98 ± 0.10	Age/Gyr	13.437	$13.571^{+0.049}_{-0.14}$	$\sigma_8(0.61)$	0.794	$0.707^{+0.086}_{-0.039}$
$\boldsymbol{A_{143\times217}^{dust}}$	1.037	1.03 ± 0.16	z_*	1089.863	1089.92 ± 0.27	$f\sigma_8(2.33)$	0.3961	$0.355^{+0.041}_{-0.018}$
$\boldsymbol{c_{100}}$	0.99782	0.9975 ± 0.0011	r_*	144.635	144.62 ± 0.31	$\sigma_8(2.33)$	0.3968	$0.358^{+0.038}_{-0.017}$
$\boldsymbol{c_{217}}$	1.00110	1.0011 ± 0.0016	$100\theta_*$	1.041112	1.04110 ± 0.00031	f_{2000}^{143}	28.86	29.3 ± 2.8
$\boldsymbol{c_{TE}}$	0.99588	0.9958 ± 0.0049	$D_{\rm M}(z_*)$/Gpc	13.8924	13.891 ± 0.029	f_{2000}^{217}	105.98	106.6 ± 1.9
$\boldsymbol{c_{EE}}$	0.99188	0.9917 ± 0.0050	$z_{\rm drag}$	1059.856	1059.81 ± 0.32	$f_{2000}^{143\times217}$	31.53	31.8 ± 2.0
H_0	99.1	> 80.2	$r_{\rm drag}$	147.303	147.29 ± 0.31	$\chi^2_{\rm simall}$	395.73	396.7 ± 1.5
Ω_Λ	0.8551	$0.793^{+0.064}_{-0.017}$	$k_{\rm D}$	0.140636	0.14062 ± 0.00035	$\chi^2_{\rm lowl}$	22.18	22.57 ± 0.82
$\Omega_{\rm m}$	0.1449	$0.207^{+0.017}_{-0.064}$	$100\theta_{\rm D}$	0.160796	0.16083 ± 0.00019	$\chi^2_{\rm CamSpec}$	11498.2	11513.3 ± 5.6
$\Omega_{\rm m}h^2$	0.14224	0.1424 ± 0.0013	$z_{\rm eq}$	3383.8	3387 ± 31	$\chi^2_{\rm prior}$	1.93	7.8 ± 3.4
$\Omega_{\rm m}h^3$	0.1409	$0.121^{+0.019}_{-0.0090}$	$k_{\rm eq}$	0.010328	0.010337 ± 0.000094	$\chi^2_{\rm CMB}$	11916.1	11932.6 ± 5.8

Best-fit $\chi^2_{\rm eff} = 11918.08$; $\Delta\chi^2_{\rm eff} = -2.68$; $\bar{\chi}^2_{\rm eff} = 11940.42$; $\Delta\bar{\chi}^2_{\rm eff} = -2.04$; $R - 1 = 0.01476$

$\chi^2_{\rm eff}$: CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.73 (Δ -0.16) commander_dx12_v3_2_29: 22.18 (Δ -0.83) CamSpec like_10.7HM_1400_unified: 11498.24 (Δ -1.41)

18.18 base_w_CamSpecHM_TTTEEE_lowl_lowE_post_lensing

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02235 ± 0.00015	S_8	$0.770^{+0.022}_{-0.039}$	$H(0.15)$	$82.6^{+6.3}_{-2.8}$
$\boldsymbol{\Omega_c h^2}$	0.1191 ± 0.0012	$\sigma_8\Omega_m^{0.5}$	$0.422^{+0.012}_{-0.021}$	$D_M(0.15)$	541^{+22}_{-60}
$\boldsymbol{100\theta_{MC}}$	1.04093 ± 0.00031	$\sigma_8\Omega_m^{0.25}$	$0.634^{+0.017}_{-0.012}$	$H(0.38)$	$84.65^{+0.88}_{-0.51}$
$\boldsymbol{\tau}$	0.0516 ± 0.0073	$\sigma_8/h^{0.5}$	$1.032^{+0.028}_{-0.018}$	$D_M(0.38)$	1372^{+34}_{-90}
$\boldsymbol{w_0}$	$-1.54^{+0.17}_{-0.35}$	$r_{drag}h$	126^{+20}_{-10}	$H(0.51)$	$88.7^{+1.1}_{-0.71}$
$\boldsymbol{\ln(10^{10}A_s)}$	3.035 ± 0.014	$\langle d^2\rangle^{1/2}$	$2.476^{+0.030}_{-0.025}$	$D_M(0.51)$	1823^{+34}_{-89}
$\boldsymbol{n_s}$	0.9671 ± 0.0041	z_{re}	$7.33^{+0.77}_{-0.67}$	$H(0.61)$	$92.8^{+1.4}_{-1.8}$
$\boldsymbol{y_{cal}}$	1.0002 ± 0.0025	$10^9 A_s$	2.080 ± 0.030	$D_M(0.61)$	2154^{+32}_{-84}
$\boldsymbol{A_{100}^{PS}}$	239 ± 25	$10^9 A_s e^{-2\tau}$	1.875 ± 0.011	$H(2.33)$	$231.41^{+0.85}_{-2.3}$
$\boldsymbol{A_{143}^{PS}}$	39 ± 8	D_{40}	1219 ± 12	$D_M(2.33)$	5735^{+11}_{-17}
$\boldsymbol{A_{217}^{PS}}$	103 ± 10	D_{220}	5719 ± 38	$f\sigma_8(0.15)$	$0.480^{+0.015}_{-0.013}$
$\boldsymbol{A_{217}^{CIB}}$	39 ± 7	D_{810}	2532 ± 13	$\sigma_8(0.15)$	$0.894^{+0.096}_{-0.048}$
$\boldsymbol{A_{143}^{tSZ}}$	$3.9^{+1.9}_{-2.5}$	D_{1420}	815.1 ± 4.8	$f\sigma_8(0.38)$	$0.563^{+0.058}_{-0.036}$
$\boldsymbol{r_{143\times217}^{PS}}$	0.66 ± 0.13	D_{2000}	230.3 ± 1.6	$\sigma_8(0.38)$	$0.799^{+0.089}_{-0.043}$
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.55^{+0.38}_{-0.19}$	$n_{s,0.002}$	0.9671 ± 0.0041	$f\sigma_8(0.51)$	$0.580^{+0.072}_{-0.041}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P	$0.245385^{+0.000063}_{-0.000057}$	$\sigma_8(0.51)$	$0.747^{+0.083}_{-0.040}$
$\boldsymbol{A^{kSZ}}$	$4.7^{+2.3}_{-3.9}$	Y_P^{BBN}	$0.246711^{+0.000063}_{-0.000057}$	$f\sigma_8(0.61)$	$0.583^{+0.077}_{-0.042}$
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.20	10^5D/H	2.590 ± 0.029	$\sigma_8(0.61)$	$0.710^{+0.078}_{-0.037}$
$\boldsymbol{A_{143}^{dust}}$	0.96 ± 0.18	Age/Gyr	$13.557^{+0.050}_{-0.13}$	$f\sigma_8(2.33)$	$0.356^{+0.037}_{-0.017}$
$\boldsymbol{A_{217}^{dust}}$	0.98 ± 0.10	z_*	1089.87 ± 0.26	$\sigma_8(2.33)$	$0.359^{+0.035}_{-0.017}$
$\boldsymbol{A_{143\times217}^{dust}}$	1.03 ± 0.16	r_*	144.68 ± 0.28	f_{2000}^{143}	29.4 ± 2.8
$\boldsymbol{c_{100}}$	0.9975 ± 0.0010	$100\theta_*$	1.04112 ± 0.00031	f_{2000}^{217}	106.6 ± 1.9
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	$D_M(z_*)$/Gpc	13.897 ± 0.026	$f_{2000}^{143\times217}$	31.9 ± 2.0
$\boldsymbol{c_{TE}}$	0.9960 ± 0.0049	z_{drag}	1059.82 ± 0.33	$\chi^2_{lensing}$	8.75 ± 0.84
$\boldsymbol{c_{EE}}$	0.9918 ± 0.0049	r_{drag}	147.36 ± 0.28	χ^2_{simall}	396.6 ± 1.3
H_0	> 81.0	k_D	0.14057 ± 0.00033	χ^2_{lowl}	22.42 ± 0.74
Ω_Λ	$0.799^{+0.059}_{-0.021}$	$100\theta_D$	0.16082 ± 0.00019	$\chi^2_{CamSpec}$	11513.1 ± 5.4
Ω_m	$0.201^{+0.021}_{-0.059}$	z_{eq}	3380 ± 27	χ^2_{prior}	7.8 ± 3.4
$\Omega_m h^2$	0.1421 ± 0.0011	k_{eq}	0.010316 ± 0.000083	χ^2_{CMB}	11940.9 ± 5.8
$\Omega_m h^3$	$0.122^{+0.018}_{-0.0087}$	$100\theta_{eq}$	0.8173 ± 0.0052		
σ_8	$0.955^{+0.095}_{-0.048}$	$100\theta_{s,eq}$	0.4515 ± 0.0026		

$\bar{\chi}^2_{eff} = 11948.65$; $\Delta\bar{\chi}^2_{eff} = -2.80$; $R - 1 = 0.02333$

18.19 base_w_CamSpecHM_TTTEEE_lowl_lowE_post_Riess18

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02232 ± 0.00014	S_8	0.809 ± 0.015	$H(0.15)$	76.36 ± 0.98
$\boldsymbol{\Omega_c h^2}$	0.1196 ± 0.0014	$\sigma_8\Omega_m^{0.5}$	0.4434 ± 0.0085	$D_M(0.15)$	601 ± 11
$\boldsymbol{100\theta_{MC}}$	1.04089 ± 0.00032	$\sigma_8\Omega_m^{0.25}$	0.619 ± 0.010	$H(0.38)$	83.85 ± 0.41
$\boldsymbol{\tau}$	0.0522 ± 0.0073	$\sigma_8/h^{0.5}$	1.007 ± 0.015	$D_M(0.38)$	1466 ± 17
$\boldsymbol{w_0}$	$-1.199^{+0.063}_{-0.055}$	$r_{drag}h$	108.3 ± 2.5	$H(0.51)$	89.56 ± 0.36
$\boldsymbol{\ln(10^{10}A_s)}$	$3.038^{+0.016}_{-0.015}$	$\langle d^2\rangle^{1/2}$	2.460 ± 0.031	$D_M(0.51)$	1916 ± 18
$\boldsymbol{n_s}$	0.9659 ± 0.0043	z_{re}	$7.42^{+0.79}_{-0.69}$	$H(0.61)$	$94.59^{+0.43}_{-0.38}$
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0024	$10^9 A_s$	$2.086^{+0.034}_{-0.031}$	$D_M(0.61)$	2242 ± 18
$\boldsymbol{A_{100}^{PS}}$	239 ± 24	$10^9 A_s e^{-2\tau}$	1.879 ± 0.012	$H(2.33)$	233.79 ± 0.89
$\boldsymbol{A_{143}^{PS}}$	39^{+8}_{-9}	D_{40}	1225 ± 13	$D_M(2.33)$	5749 ± 10
$\boldsymbol{A_{217}^{PS}}$	103 ± 10	D_{220}	5721 ± 38	$f\sigma_8(0.15)$	0.467 ± 0.010
$\boldsymbol{A_{217}^{CIB}}$	39 ± 7	D_{810}	2535 ± 13	$\sigma_8(0.15)$	0.802 ± 0.018
$\boldsymbol{A_{143}^{tSZ}}$	$3.9^{+1.8}_{-2.5}$	D_{1420}	$815.8^{+4.5}_{-5.0}$	$f\sigma_8(0.38)$	0.507 ± 0.014
$\boldsymbol{r_{143\times217}^{PS}}$	0.66 ± 0.12	D_{2000}	$230.4^{+1.5}_{-1.7}$	$\sigma_8(0.38)$	0.713 ± 0.016
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.55^{+0.39}_{-0.19}$	$n_{s,0.002}$	0.9659 ± 0.0043	$f\sigma_8(0.51)$	0.512 ± 0.014
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P	0.245372 ± 0.000058	$\sigma_8(0.51)$	0.667 ± 0.015
$\boldsymbol{A^{kSZ}}$	$4.8^{+2.3}_{-4.0}$	Y_P^{BBN}	0.246699 ± 0.000058	$f\sigma_8(0.61)$	0.509 ± 0.015
$\boldsymbol{A_{100}^{dust}}$	$1.00^{+0.21}_{-0.18}$	10^5D/H	2.596 ± 0.027	$\sigma_8(0.61)$	0.634 ± 0.014
$\boldsymbol{A_{143}^{dust}}$	0.96 ± 0.17	Age/Gyr	13.693 ± 0.031	$f\sigma_8(2.33)$	0.3200 ± 0.0068
$\boldsymbol{A_{217}^{dust}}$	0.98 ± 0.10	z_*	1089.96 ± 0.26	$\sigma_8(2.33)$	0.3260 ± 0.0060
$\boldsymbol{A_{143\times217}^{dust}}$	1.03 ± 0.16	r_*	144.57 ± 0.32	f_{2000}^{143}	29.6 ± 2.8
$\boldsymbol{c_{100}}$	0.9975 ± 0.0010	$100\theta_*$	1.04108 ± 0.00032	f_{2000}^{217}	106.8 ± 2.0
$\boldsymbol{c_{217}}$	1.0011 ± 0.0015	$D_M(z_*)$/Gpc	13.887 ± 0.030	$f_{2000}^{143\times217}$	32.0 ± 2.0
$\boldsymbol{c_{TE}}$	0.9961 ± 0.0049	z_{drag}	1059.78 ± 0.30	χ^2_{simall}	396.7 ± 1.3
$\boldsymbol{c_{EE}}$	0.9918 ± 0.0049	r_{drag}	147.25 ± 0.33	χ^2_{lowl}	22.85 ± 0.85
H_0	73.5 ± 1.7	k_D	0.14066 ± 0.00036	$\chi^2_{CamSpec}$	11513.7 ± 5.3
Ω_Λ	0.736 ± 0.012	$100\theta_D$	0.16084 ± 0.00018	$\chi^2_{H073p45}$	1.0 ± 1.4
Ω_m	0.264 ± 0.012	z_{eq}	3392 ± 32	χ^2_{prior}	7.7 ± 3.4
$\Omega_m h^2$	0.1426 ± 0.0013	k_{eq}	0.010352 ± 0.000097	χ^2_{CMB}	11933.2 ± 5.5
$\Omega_m h^3$	0.1049 ± 0.0026	$100\theta_{eq}$	0.8150 ± 0.0060		
σ_8	0.863 ± 0.019	$100\theta_{s,eq}$	0.4503 ± 0.0031		

$\bar{\chi}^2_{eff} = 11941.94$; $\Delta\bar{\chi}^2_{eff} = -12.32$; $R - 1 = 0.08175$

18.20 base_w_CamSpecHM_TTTEEE_lowl_lowE_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02234 ± 0.00015	σ_8	$0.953^{+0.11}_{-0.052}$	$100\theta_{\rm eq}$	0.8161 ± 0.0058
$\boldsymbol{\Omega_c h^2}$	0.1194 ± 0.0013	S_8	$0.777^{+0.025}_{-0.039}$	$100\theta_{\rm s,eq}$	0.4509 ± 0.0030
$\boldsymbol{100\theta_{MC}}$	1.04092 ± 0.00031	$\sigma_8\Omega_{\rm m}^{0.5}$	$0.426^{+0.014}_{-0.021}$	$H(0.15)$	$82.0^{+6.8}_{-2.8}$
$\boldsymbol{\tau}$	$0.0540^{+0.0045}_{-0.0076}$	$\sigma_8\Omega_{\rm m}^{0.25}$	$0.636^{+0.021}_{-0.014}$	$D_{\rm M}(0.15)$	546^{+22}_{-65}
$\boldsymbol{w_0}$	$-1.52^{+0.18}_{-0.39}$	$\sigma_8/h^{0.5}$	$1.035^{+0.035}_{-0.021}$	$H(0.38)$	$84.47^{+0.98}_{-0.54}$
$\boldsymbol{\ln(10^{10}A_s)}$	$3.040^{+0.011}_{-0.015}$	$r_{\rm drag}h$	125^{+20}_{-9}	$D_{\rm M}(0.38)$	1381^{+34}_{-99}
$\boldsymbol{n_s}$	0.9667 ± 0.0044	$\langle d^2\rangle^{1/2}$	$2.484^{+0.040}_{-0.031}$	$H(0.51)$	$88.6^{+1.2}_{-0.74}$
$\boldsymbol{y_{cal}}$	1.0003 ± 0.0025	$z_{\rm re}$	$7.60^{+0.51}_{-0.76}$	$D_{\rm M}(0.51)$	1833^{+33}_{-97}
$\boldsymbol{A_{100}^{PS}}$	238 ± 25	$10^9 A_{\rm s}$	$2.092^{+0.023}_{-0.032}$	$H(0.61)$	92.8 ± 1.5
$\boldsymbol{A_{143}^{PS}}$	39 ± 8	$10^9 A_{\rm s}e^{-2\tau}$	1.877 ± 0.012	$D_{\rm M}(0.61)$	2164^{+31}_{-92}
$\boldsymbol{A_{217}^{PS}}$	103 ± 10	D_{40}	1221 ± 13	$H(2.33)$	$231.84^{+0.86}_{-2.6}$
$\boldsymbol{A_{217}^{CIB}}$	39 ± 7	D_{220}	5719 ± 38	$D_{\rm M}(2.33)$	5738^{+11}_{-19}
$\boldsymbol{A_{143}^{tSZ}}$	$3.9^{+1.9}_{-2.5}$	D_{810}	2533 ± 14	$f\sigma_8(0.15)$	$0.482^{+0.019}_{-0.016}$
$\boldsymbol{r_{143\times217}^{PS}}$	0.66 ± 0.13	D_{1420}	815.3 ± 4.8	$\sigma_8(0.15)$	$0.891^{+0.11}_{-0.051}$
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.55^{+0.38}_{-0.20}$	D_{2000}	230.4 ± 1.6	$f\sigma_8(0.38)$	$0.563^{+0.065}_{-0.040}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$n_{\rm s,0.002}$	0.9667 ± 0.0044	$\sigma_8(0.38)$	$0.796^{+0.099}_{-0.046}$
$\boldsymbol{A^{kSZ}}$	$4.6^{+1.7}_{-4.4}$	$Y_{\rm P}$	0.245381 ± 0.000061	$f\sigma_8(0.51)$	$0.579^{+0.080}_{-0.045}$
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.20	$Y_{\rm P}^{\rm BBN}$	0.246707 ± 0.000062	$\sigma_8(0.51)$	$0.744^{+0.092}_{-0.042}$
$\boldsymbol{A_{143}^{dust}}$	0.96 ± 0.18	10^5D/H	2.592 ± 0.029	$f\sigma_8(0.61)$	$0.581^{+0.085}_{-0.046}$
$\boldsymbol{A_{217}^{dust}}$	0.98 ± 0.10	Age/Gyr	$13.571^{+0.049}_{-0.15}$	$\sigma_8(0.61)$	$0.707^{+0.087}_{-0.039}$
$\boldsymbol{A_{143\times217}^{dust}}$	1.03 ± 0.16	z_*	1089.91 ± 0.27	$f\sigma_8(2.33)$	$0.355^{+0.041}_{-0.018}$
$\boldsymbol{c_{100}}$	0.9975 ± 0.0010	r_*	144.62 ± 0.31	$\sigma_8(2.33)$	$0.358^{+0.038}_{-0.017}$
$\boldsymbol{c_{217}}$	1.0010 ± 0.0016	$100\theta_*$	1.04111 ± 0.00031	f_{2000}^{143}	29.2 ± 2.8
$\boldsymbol{c_{TE}}$	0.9957 ± 0.0049	$D_{\rm M}(z_*)$/Gpc	13.891 ± 0.029	f_{2000}^{217}	106.5 ± 1.9
$\boldsymbol{c_{EE}}$	0.9916 ± 0.0050	$z_{\rm drag}$	1059.82 ± 0.32	$f_{2000}^{143\times217}$	31.8 ± 2.0
H_0	> 80.1	$r_{\rm drag}$	147.30 ± 0.31	$\chi^2_{\rm simall}$	396.6 ± 1.4
Ω_Λ	$0.793^{+0.065}_{-0.018}$	$k_{\rm D}$	0.14063 ± 0.00035	$\chi^2_{\rm lowl}$	22.57 ± 0.83
$\Omega_{\rm m}$	$0.207^{+0.018}_{-0.065}$	$100\theta_{\rm D}$	0.16082 ± 0.00019	$\chi^2_{\rm CamSpec}$	11513.1 ± 5.6
$\Omega_{\rm m}h^2$	0.1423 ± 0.0013	$z_{\rm eq}$	3386 ± 31	$\chi^2_{\rm prior}$	7.8 ± 3.4
$\Omega_{\rm m}h^3$	$0.121^{+0.019}_{-0.0092}$	$k_{\rm eq}$	0.010335 ± 0.000093	$\chi^2_{\rm CMB}$	11932.3 ± 5.7

$\bar{\chi}^2_{\rm eff} = 11940.09$; $\Delta\bar{\chi}^2_{\rm eff} = -2.09$; $R - 1 = 0.01385$

18.21 base_w_CamSpecHM_TTTEEE_lowl_lowE_post_lensing_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02236 ± 0.00015	S_8	$0.771^{+0.023}_{-0.039}$	$H(0.15)$	$82.5^{+6.4}_{-2.9}$
$\boldsymbol{\Omega_c h^2}$	0.1190 ± 0.0012	$\sigma_8 \Omega_m^{0.5}$	$0.422^{+0.012}_{-0.021}$	$D_M(0.15)$	542^{+23}_{-61}
$\boldsymbol{100\theta_{MC}}$	1.04095 ± 0.00030	$\sigma_8 \Omega_m^{0.25}$	$0.634^{+0.018}_{-0.012}$	$H(0.38)$	$84.67^{+0.90}_{-0.50}$
$\boldsymbol{\tau}$	$0.0534^{+0.0042}_{-0.0073}$	$\sigma_8/h^{0.5}$	$1.032^{+0.029}_{-0.018}$	$D_M(0.38)$	1374^{+36}_{-92}
$\boldsymbol{w_0}$	$-1.53^{+0.17}_{-0.36}$	$r_{drag} h$	126^{+20}_{-10}	$H(0.51)$	$88.7^{+1.1}_{-0.70}$
$\boldsymbol{\ln(10^{10} A_s)}$	$3.038^{+0.010}_{-0.014}$	$\langle d^2 \rangle^{1/2}$	$2.478^{+0.029}_{-0.024}$	$D_M(0.51)$	1824^{+35}_{-91}
$\boldsymbol{n_s}$	0.9674 ± 0.0041	z_{re}	$7.52^{+0.45}_{-0.74}$	$H(0.61)$	$92.9^{+1.5}_{-1.8}$
$\boldsymbol{y_{cal}}$	1.0002 ± 0.0025	$10^9 A_s$	$2.086^{+0.021}_{-0.029}$	$D_M(0.61)$	2155^{+32}_{-86}
$\boldsymbol{A_{100}^{PS}}$	238 ± 25	$10^9 A_s e^{-2\tau}$	1.875 ± 0.011	$H(2.33)$	$231.41^{+0.85}_{-2.4}$
$\boldsymbol{A_{143}^{PS}}$	39 ± 8	D_{40}	1219 ± 12	$D_M(2.33)$	5735^{+11}_{-18}
$\boldsymbol{A_{217}^{PS}}$	102 ± 10	D_{220}	5719 ± 37	$f\sigma_8(0.15)$	$0.480^{+0.015}_{-0.013}$
$\boldsymbol{A_{217}^{CIB}}$	39 ± 7	D_{810}	2532 ± 13	$\sigma_8(0.15)$	$0.893^{+0.097}_{-0.049}$
$\boldsymbol{A_{143}^{tSZ}}$	$3.9^{+1.9}_{-2.5}$	D_{1420}	815.0 ± 4.8	$f\sigma_8(0.38)$	$0.562^{+0.059}_{-0.037}$
$\boldsymbol{r_{143\times217}^{PS}}$	0.66 ± 0.13	D_{2000}	230.3 ± 1.6	$\sigma_8(0.38)$	$0.798^{+0.090}_{-0.044}$
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.55^{+0.38}_{-0.19}$	$n_{s,0.002}$	0.9674 ± 0.0041	$f\sigma_8(0.51)$	$0.579^{+0.072}_{-0.042}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P	$0.245388^{+0.000063}_{-0.000057}$	$\sigma_8(0.51)$	$0.746^{+0.084}_{-0.041}$
$\boldsymbol{A^{kSZ}}$	$4.7^{+2.3}_{-3.9}$	Y_P^{BBN}	$0.246715^{+0.000063}_{-0.000057}$	$f\sigma_8(0.61)$	$0.582^{+0.077}_{-0.043}$
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.20	10^5D/H	2.588 ± 0.028	$\sigma_8(0.61)$	$0.709^{+0.079}_{-0.038}$
$\boldsymbol{A_{143}^{dust}}$	0.96 ± 0.18	Age/Gyr	$13.559^{+0.051}_{-0.13}$	$f\sigma_8(2.33)$	$0.356^{+0.038}_{-0.017}$
$\boldsymbol{A_{217}^{dust}}$	0.98 ± 0.10	z_*	1089.85 ± 0.26	$\sigma_8(2.33)$	$0.359^{+0.035}_{-0.017}$
$\boldsymbol{A_{143\times217}^{dust}}$	1.03 ± 0.16	r_*	144.70 ± 0.27	f_{2000}^{143}	29.3 ± 2.8
$\boldsymbol{c_{100}}$	0.9975 ± 0.0010	$100\theta_*$	1.04113 ± 0.00030	f_{2000}^{217}	106.5 ± 1.9
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	$D_M(z_*)$/Gpc	13.898 ± 0.026	$f_{2000}^{143\times217}$	31.8 ± 2.0
$\boldsymbol{c_{TE}}$	0.9958 ± 0.0049	z_{drag}	1059.83 ± 0.32	$\chi^2_{lensing}$	8.76 ± 0.85
$\boldsymbol{c_{EE}}$	0.9917 ± 0.0049	r_{drag}	147.37 ± 0.28	χ^2_{simall}	396.4 ± 1.2
H_0	> 80.7	k_D	0.14056 ± 0.00033	χ^2_{lowl}	22.41 ± 0.75
Ω_Λ	$0.797^{+0.060}_{-0.019}$	$100\theta_D$	0.16081 ± 0.00019	$\chi^2_{CamSpec}$	11513.0 ± 5.4
Ω_m	$0.203^{+0.019}_{-0.060}$	z_{eq}	3378 ± 27	χ^2_{prior}	7.8 ± 3.4
$\Omega_m h^2$	0.1420 ± 0.0011	k_{eq}	0.010310 ± 0.000082	χ^2_{CMB}	11940.6 ± 5.7
$\Omega_m h^3$	$0.121^{+0.018}_{-0.0090}$	$100\theta_{eq}$	0.8177 ± 0.0051		
σ_8	$0.954^{+0.096}_{-0.049}$	$100\theta_{s,eq}$	0.4517 ± 0.0026		

$\bar{\chi}^2_{eff} = 11948.34$; $\Delta\bar{\chi}^2_{eff} = -2.91$; $R - 1 = 0.02464$

18.22 base_w_CamSpecHM_TTTEEE_lowl_lowE_post_Riess18_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02232 ± 0.00014	S_8	0.810 ± 0.015	$H(0.15)$	76.35 ± 0.98
$\boldsymbol{\Omega_c h^2}$	0.1196 ± 0.0014	$\sigma_8\Omega_m^{0.5}$	0.4438 ± 0.0082	$D_M(0.15)$	602 ± 11
$\boldsymbol{100\theta_{MC}}$	1.04090 ± 0.00032	$\sigma_8\Omega_m^{0.25}$	0.6192 ± 0.0099	$H(0.38)$	83.86 ± 0.40
$\boldsymbol{\tau}$	$0.0537^{+0.0052}_{-0.0068}$	$\sigma_8/h^{0.5}$	1.008 ± 0.014	$D_M(0.38)$	1466 ± 17
$\boldsymbol{w_0}$	$-1.198^{+0.062}_{-0.053}$	$r_{drag}h$	108.3 ± 2.5	$H(0.51)$	89.58 ± 0.35
$\boldsymbol{\ln(10^{10}A_s)}$	$3.041^{+0.012}_{-0.014}$	$\langle d^2\rangle^{1/2}$	2.462 ± 0.029	$D_M(0.51)$	1916 ± 18
$\boldsymbol{n_s}$	0.9661 ± 0.0041	z_{re}	$7.59^{+0.52}_{-0.75}$	$H(0.61)$	94.60 ± 0.40
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0024	$10^9 A_s$	$2.092^{+0.025}_{-0.030}$	$D_M(0.61)$	2242 ± 18
$\boldsymbol{A_{100}^{PS}}$	238 ± 24	$10^9 A_s e^{-2\tau}$	1.879 ± 0.011	$H(2.33)$	233.77 ± 0.88
$\boldsymbol{A_{143}^{PS}}$	39^{+8}_{-9}	D_{40}	1225 ± 12	$D_M(2.33)$	5749 ± 10
$\boldsymbol{A_{217}^{PS}}$	103 ± 10	D_{220}	5722^{+40}_{-36}	$f\sigma_8(0.15)$	0.4676 ± 0.0098
$\boldsymbol{A_{217}^{CIB}}$	39 ± 7	D_{810}	2535 ± 13	$\sigma_8(0.15)$	0.802 ± 0.018
$\boldsymbol{A_{143}^{tSZ}}$	$3.9^{+1.8}_{-2.5}$	D_{1420}	$815.8^{+4.5}_{-5.0}$	$f\sigma_8(0.38)$	0.507 ± 0.013
$\boldsymbol{r_{143\times217}^{PS}}$	0.66 ± 0.12	D_{2000}	$230.4^{+1.4}_{-1.7}$	$\sigma_8(0.38)$	0.713 ± 0.016
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.55^{+0.40}_{-0.18}$	$n_{s,0.002}$	0.9661 ± 0.0041	$f\sigma_8(0.51)$	0.512 ± 0.014
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P	0.245374 ± 0.000056	$\sigma_8(0.51)$	0.668 ± 0.015
$\boldsymbol{A^{kSZ}}$	$4.8^{+2.2}_{-4.1}$	Y_P^{BBN}	0.246700 ± 0.000056	$f\sigma_8(0.61)$	0.509 ± 0.014
$\boldsymbol{A_{100}^{dust}}$	$0.995^{+0.20}_{-0.18}$	10^5D/H	2.595 ± 0.026	$\sigma_8(0.61)$	0.635 ± 0.014
$\boldsymbol{A_{143}^{dust}}$	0.96 ± 0.18	Age/Gyr	13.693 ± 0.031	$f\sigma_8(2.33)$	0.3203 ± 0.0067
$\boldsymbol{A_{217}^{dust}}$	$0.981^{+0.094}_{-0.11}$	z_*	1089.95 ± 0.25	$\sigma_8(2.33)$	0.3263 ± 0.0059
$\boldsymbol{A_{143\times217}^{dust}}$	1.03 ± 0.15	r_*	144.58 ± 0.32	f_{2000}^{143}	29.5 ± 2.8
$\boldsymbol{c_{100}}$	0.9975 ± 0.0010	$100\theta_*$	1.04109 ± 0.00032	f_{2000}^{217}	106.8 ± 1.9
$\boldsymbol{c_{217}}$	1.0011 ± 0.0015	$D_M(z_*)$/Gpc	13.887 ± 0.029	$f_{2000}^{143\times217}$	32.0 ± 2.0
$\boldsymbol{c_{TE}}$	0.9959 ± 0.0049	z_{drag}	1059.79 ± 0.29	χ^2_{simall}	396.6 ± 1.3
$\boldsymbol{c_{EE}}$	0.9918 ± 0.0049	r_{drag}	147.26 ± 0.32	χ^2_{lowl}	22.86 ± 0.82
H_0	73.5 ± 1.7	k_D	0.14065 ± 0.00035	$\chi^2_{CamSpec}$	11513.4 ± 5.3
Ω_Λ	0.736 ± 0.012	$100\theta_D$	0.16084 ± 0.00017	$\chi^2_{H073p45}$	1.0 ± 1.4
Ω_m	0.264 ± 0.012	z_{eq}	3391 ± 31	χ^2_{prior}	7.7 ± 3.5
$\Omega_m h^2$	0.1425 ± 0.0013	k_{eq}	0.010349 ± 0.000095	χ^2_{CMB}	11932.9 ± 5.4
$\Omega_m h^3$	0.1048 ± 0.0025	$100\theta_{eq}$	0.8152 ± 0.0058		
σ_8	0.864 ± 0.018	$100\theta_{s,eq}$	0.4504 ± 0.0030		

$\bar{\chi}^2_{eff} = 11941.58$; $\Delta\bar{\chi}^2_{eff} = -12.43$; $R - 1 = 0.09840$

18.23 base_w_plikHM_TT_lowl_lowE_BAO

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022173	0.02217 ± 0.00020	$\sigma_8/h^{0.5}$	0.9895	0.992 ± 0.020	$D_M(0.38)$	1524.8	1522 ± 17
$\boldsymbol{\Omega_c h^2}$	0.11961	0.1197 ± 0.0018	$r_{drag}h$	100.45	$100.9^{+1.9}_{-2.3}$	$H(0.51)$	89.543	$89.50^{+0.39}_{-0.34}$
$\boldsymbol{100\theta_{MC}}$	1.040921	1.04090 ± 0.00044	$\langle d^2\rangle^{1/2}$	2.4411	2.445 ± 0.040	$D_M(0.51)$	1977.2	1974 ± 17
$\boldsymbol{\tau}$	0.0528	0.0531 ± 0.0080	z_{re}	7.56	7.57 ± 0.82	$H(0.61)$	95.092	$95.02^{+0.49}_{-0.40}$
$\boldsymbol{w_0}$	−1.027	$-1.041^{+0.074}_{-0.060}$	$10^9 A_s$	2.0905	2.091 ± 0.034	$D_M(0.61)$	2302.2	2299 ± 17
$\boldsymbol{\ln(10^{10} A_s)}$	3.0400	3.040 ± 0.016	$10^9 A_s e^{-2\tau}$	1.8811	1.880 ± 0.013	$H(2.33)$	235.70	235.65 ± 0.80
$\boldsymbol{n_s}$	0.9655	0.9649 ± 0.0051	D_{40}	1227.4	1228 ± 14	$D_M(2.33)$	5768.2	5768 ± 12
$\boldsymbol{y_{cal}}$	1.00058	1.0005 ± 0.0025	D_{220}	5717.3	5716 ± 40	$f\sigma_8(0.15)$	0.4594	0.461 ± 0.013
$\boldsymbol{A^{CIB}_{217}}$	49.6	48 ± 7	D_{810}	2537.6	2536 ± 14	$\sigma_8(0.15)$	0.7551	0.759 ± 0.022
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.21	—	D_{1420}	815.8	815.0 ± 5.1	$f\sigma_8(0.38)$	0.4799	$0.483^{+0.016}_{-0.018}$
$\boldsymbol{A^{tSZ}_{143}}$	6.99	5.1 ± 2.0	D_{2000}	230.04	229.8 ± 1.8	$\sigma_8(0.38)$	0.6694	0.673 ± 0.020
$\boldsymbol{A^{PS}_{100}}$	256.8	263 ± 28	$n_{s,0.002}$	0.9655	0.9649 ± 0.0051	$f\sigma_8(0.51)$	0.4791	$0.482^{+0.017}_{-0.019}$
$\boldsymbol{A^{PS}_{143}}$	48.2	49 ± 8	Y_P	0.245315	$0.245310^{+0.000091}_{-0.000077}$	$\sigma_8(0.51)$	0.6263	0.629 ± 0.018
$\boldsymbol{A^{PS}_{143\times217}}$	43.9	43 ± 9	Y_P^{BBN}	0.246641	$0.246636^{+0.000092}_{-0.000078}$	$f\sigma_8(0.61)$	0.4743	$0.477^{+0.017}_{-0.019}$
$\boldsymbol{A^{PS}_{217}}$	117.7	115 ± 10	10^5D/H	2.6231	2.624 ± 0.038	$\sigma_8(0.61)$	0.5959	0.599 ± 0.017
$\boldsymbol{A^{kSZ}}$	0.12	< 4.72	Age/Gyr	13.7989	13.794 ± 0.035	$f\sigma_8(2.33)$	0.3004	0.3018 ± 0.0084
$\boldsymbol{A^{dustTT}_{100}}$	8.86	9.0 ± 1.8	z_*	1090.135	1090.15 ± 0.35	$\sigma_8(2.33)$	0.3090	0.3102 ± 0.0071
$\boldsymbol{A^{dustTT}_{143}}$	10.82	10.7 ± 1.8	r_*	144.683	144.66 ± 0.42	f^{143}_{2000}	30.67	31.0 ± 2.9
$\boldsymbol{A^{dustTT}_{143\times217}}$	19.34	18.3 ± 3.3	$100\theta_*$	1.041129	1.04110 ± 0.00044	$f^{143\times217}_{2000}$	33.38	33.4 ± 2.0
$\boldsymbol{A^{dustTT}_{217}}$	94.5	93.3 ± 7.3	$D_M(z_*)$/Gpc	13.8967	13.895 ± 0.039	f^{217}_{2000}	107.87	108.0 ± 1.9
$\boldsymbol{c_{100}}$	0.99965	0.99960 ± 0.00062	z_{drag}	1059.437	1059.45 ± 0.43	χ^2_{simall}	395.86	397.0 ± 1.8
$\boldsymbol{c_{217}}$	0.99829	0.99826 ± 0.00062	r_{drag}	147.416	147.40 ± 0.43	χ^2_{lowl}	23.15	23.3 ± 1.0
H_0	68.14	$68.5^{+1.4}_{-1.7}$	k_D	0.140374	0.14039 ± 0.00049	χ^2_{plik}	759.1	771.5 ± 5.6
Ω_Λ	0.6933	0.696 ± 0.012	$100\theta_D$	0.161047	0.16105 ± 0.00025	χ^2_{6DF}	0.002	0.13 ± 0.19
Ω_m	0.3067	0.304 ± 0.012	z_{eq}	3388.2	3390 ± 41	χ^2_{MGS}	1.54	1.9 ± 1.0
$\Omega_m h^2$	0.14243	0.1425 ± 0.0017	k_{eq}	0.010341	0.01035 ± 0.00012	$\chi^2_{DR12BAO}$	4.36	5.2 ± 1.5
$\Omega_m h^3$	0.09705	$0.0976^{+0.0027}_{-0.0031}$	$100\theta_{eq}$	0.8153	0.8149 ± 0.0076	χ^2_{prior}	1.47	7.3 ± 3.7
σ_8	0.8168	0.821 ± 0.024	$100\theta_{s,eq}$	0.45056	0.4504 ± 0.0039	χ^2_{BAO}	5.90	7.2 ± 1.9
S_8	0.8260	0.826 ± 0.017	$H(0.15)$	73.14	73.31 ± 0.87	χ^2_{CMB}	1178.1	1191.8 ± 5.6
$\sigma_8\Omega_m^{0.5}$	0.4524	0.4524 ± 0.0094	$D_M(0.15)$	637.7	636 ± 11			
$\sigma_8\Omega_m^{0.25}$	0.6079	0.609 ± 0.014	$H(0.38)$	82.945	82.96 ± 0.35			

Best-fit $\chi^2_{eff} = 1185.52$; $\Delta\chi^2_{eff} = -0.23$; $\bar{\chi}^2_{eff} = 1206.32$; $\Delta\bar{\chi}^2_{eff} = 0.29$; $R - 1 = 0.00799$

χ^2_{eff}: BAO - 6DF: 0.00 (Δ -0.02) MGS: 1.54 (Δ 0.26) DR12BAO: 4.36 (Δ 0.18) CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.86 (Δ -0.03) commander_dx12_v3_2_29: 23.15 (Δ 0.32) plik_rd12_HM_v22_TT: 759.14 (Δ -0.96)

18.24 base_w_plikHM_TT_lowl_lowE_BAO_post_lensing

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022205	0.02217 ± 0.00020	$\sigma_8/h^{0.5}$	0.9908	0.992 ± 0.014	$D_M(0.38)$	1523.4	1521 ± 16
$\boldsymbol{\Omega_c h^2}$	0.11959	0.1197 ± 0.0014	$r_{drag}h$	100.60	$101.0^{+1.9}_{-2.2}$	$H(0.51)$	89.554	89.52 ± 0.31
$\boldsymbol{100\theta_{MC}}$	1.040857	1.04090 ± 0.00042	$\langle d^2\rangle^{1/2}$	2.4444	2.445 ± 0.027	$D_M(0.51)$	1975.7	1973 ± 17
$\boldsymbol{\tau}$	0.0542	0.0533 ± 0.0078	z_{re}	7.70	7.59 ± 0.79	$H(0.61)$	95.092	$95.03^{+0.40}_{-0.34}$
$\boldsymbol{w_0}$	−1.031	$-1.042^{+0.062}_{-0.052}$	$10^9 A_s$	2.0957	2.092 ± 0.031	$D_M(0.61)$	2300.6	2298 ± 17
$\boldsymbol{\ln(10^{10} A_s)}$	3.0425	3.041 ± 0.015	$10^9 A_s e^{-2\tau}$	1.8805	1.880 ± 0.011	$H(2.33)$	235.66	235.59 ± 0.79
$\boldsymbol{n_s}$	0.96550	0.9649 ± 0.0045	D_{40}	1227.6	1229 ± 12	$D_M(2.33)$	5767.3	5768 ± 12
$\boldsymbol{y_{cal}}$	1.00028	1.0005 ± 0.0024	D_{220}	5718.5	5718 ± 40	$f\sigma_8(0.15)$	0.4600	0.4605 ± 0.0091
$\boldsymbol{A^{CIB}_{217}}$	48.6	48 ± 7	D_{810}	2536.8	2536 ± 13	$\sigma_8(0.15)$	0.7568	0.759 ± 0.017
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.32	—	D_{1420}	815.6	815.0 ± 5.0	$f\sigma_8(0.38)$	0.4809	$0.483^{+0.012}_{-0.013}$
$\boldsymbol{A^{tSZ}_{143}}$	7.02	$5.1^{+2.2}_{-2.0}$	D_{2000}	230.08	229.8 ± 1.7	$\sigma_8(0.38)$	0.6709	0.673 ± 0.015
$\boldsymbol{A^{PS}_{100}}$	254.1	263 ± 28	$n_{s,0.002}$	0.96550	0.9649 ± 0.0045	$f\sigma_8(0.51)$	0.4802	$0.482^{+0.013}_{-0.014}$
$\boldsymbol{A^{PS}_{143}}$	49.2	49 ± 8	Y_P	0.245328	$0.245312^{+0.000090}_{-0.000074}$	$\sigma_8(0.51)$	0.6278	0.630 ± 0.014
$\boldsymbol{A^{PS}_{143\times217}}$	46.9	43 ± 9	Y_P^{BBN}	0.246654	$0.246638^{+0.000091}_{-0.000074}$	$f\sigma_8(0.61)$	0.4754	$0.477^{+0.013}_{-0.015}$
$\boldsymbol{A^{PS}_{217}}$	119.5	115 ± 10	10^5D/H	2.6170	2.623 ± 0.037	$\sigma_8(0.61)$	0.5973	0.599 ± 0.013
$\boldsymbol{A^{kSZ}}$	0.01	< 4.72	Age/Gyr	13.7956	13.793 ± 0.034	$f\sigma_8(2.33)$	0.3012	0.3020 ± 0.0066
$\boldsymbol{A^{dustTT}_{100}}$	8.88	8.9 ± 1.9	z_*	1090.093	1090.14 ± 0.31	$\sigma_8(2.33)$	0.3097	0.3104 ± 0.0056
$\boldsymbol{A^{dustTT}_{143}}$	10.80	10.7 ± 1.8	r_*	144.663	144.67 ± 0.33	f^{143}_{2000}	30.19	31.0 ± 2.9
$\boldsymbol{A^{dustTT}_{143\times217}}$	19.36	18.3 ± 3.2	$100\theta_*$	1.041056	1.04110 ± 0.00042	$f^{143\times217}_{2000}$	33.12	33.4 ± 2.0
$\boldsymbol{A^{dustTT}_{217}}$	94.5	93.2 ± 7.2	$D_M(z_*)$/Gpc	13.8958	13.896 ± 0.032	f^{217}_{2000}	107.58	108.0 ± 1.9
$\boldsymbol{c_{100}}$	0.99966	0.99960 ± 0.00061	z_{drag}	1059.513	1059.46 ± 0.44	$\chi^2_{lensing}$	8.734	9.35 ± 0.86
$\boldsymbol{c_{217}}$	0.99823	0.99826 ± 0.00062	r_{drag}	147.385	147.40 ± 0.35	χ^2_{simall}	396.05	397.0 ± 1.7
H_0	68.25	$68.5^{+1.3}_{-1.5}$	k_D	0.140431	0.14039 ± 0.00044	χ^2_{lowl}	23.21	23.32 ± 0.89
Ω_Λ	0.6943	0.696 ± 0.012	$100\theta_D$	0.160992	0.16104 ± 0.00025	χ^2_{plik}	759.0	770.9 ± 5.3
Ω_m	0.3057	0.304 ± 0.012	z_{eq}	3388.5	3389 ± 31	χ^2_{6DF}	0.000	0.13 ± 0.18
$\Omega_m h^2$	0.14244	0.1425 ± 0.0013	k_{eq}	0.010342	0.010345 ± 0.000095	χ^2_{MGS}	1.61	1.92 ± 0.99
$\Omega_m h^3$	0.09722	$0.0977^{+0.0023}_{-0.0026}$	$100\theta_{eq}$	0.8152	0.8151 ± 0.0058	$\chi^2_{DR12BAO}$	4.33	5.1 ± 1.4
σ_8	0.8186	0.821 ± 0.018	$100\theta_{s,eq}$	0.45052	0.4505 ± 0.0030	χ^2_{prior}	1.31	7.2 ± 3.6
S_8	0.8264	0.825 ± 0.012	$H(0.15)$	73.21	73.36 ± 0.85	χ^2_{CMB}	1187.0	1200.6 ± 5.6
$\sigma_8\Omega_m^{0.5}$	0.4526	0.4521 ± 0.0067	$D_M(0.15)$	636.9	635 ± 10	χ^2_{BAO}	5.94	7.2 ± 1.8
$\sigma_8\Omega_m^{0.25}$	0.6087	0.6092 ± 0.0095	$H(0.38)$	82.973	82.98 ± 0.34			

Best-fit $\chi^2_{eff} = 1194.29$; $\Delta\chi^2_{eff} = -0.39$; $\bar{\chi}^2_{eff} = 1214.98$; $\Delta\bar{\chi}^2_{eff} = 0.25$; $R - 1 = 0.01126$

χ^2_{eff}: BAO - 6DF: 0.00 (Δ -0.03) MGS: 1.61 (Δ 0.39) DR12BAO: 4.33 (Δ -0.04) CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.73 (Δ -0.14) simall_100x143_offlike5_EE_Aplanc
396.05 (Δ -0.05) commander_dx12_v3_2_29: 23.21 (Δ 0.25) plik_rd12_HM_v22_TT: 759.05 (Δ -0.75)

18.25 base_w_plikHM_TT_lowl_lowE_BAO_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02217 ± 0.00020	$\sigma_8/h^{0.5}$	0.992 ± 0.020	$D_M(0.38)$	1522 ± 17
$\boldsymbol{\Omega_c h^2}$	0.1197 ± 0.0018	$r_{drag}h$	$100.9^{+1.9}_{-2.3}$	$H(0.51)$	$89.51^{+0.39}_{-0.34}$
$\boldsymbol{100\theta_{MC}}$	1.04091 ± 0.00044	$\langle d^2\rangle^{1/2}$	2.447 ± 0.040	$D_M(0.51)$	1974 ± 17
$\boldsymbol{\tau}$	$0.0545^{+0.0050}_{-0.0082}$	z_{re}	$7.72^{+0.56}_{-0.82}$	$H(0.61)$	$95.03^{+0.49}_{-0.39}$
$\boldsymbol{w_0}$	$-1.040^{+0.074}_{-0.060}$	$10^9 A_s$	$2.097^{+0.025}_{-0.034}$	$D_M(0.61)$	2299 ± 17
$\boldsymbol{\ln(10^{10} A_s)}$	$3.043^{+0.012}_{-0.016}$	$10^9 A_s e^{-2\tau}$	1.880 ± 0.013	$H(2.33)$	235.64 ± 0.81
$\boldsymbol{n_s}$	0.9651 ± 0.0051	D_{40}	1229 ± 14	$D_M(2.33)$	5768 ± 12
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	D_{220}	5716 ± 40	$f\sigma_8(0.15)$	0.461 ± 0.013
$\boldsymbol{A^{CIB}_{217}}$	48 ± 7	D_{810}	2536 ± 14	$\sigma_8(0.15)$	0.759 ± 0.022
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{1420}	815.0 ± 5.1	$f\sigma_8(0.38)$	$0.483^{+0.016}_{-0.018}$
$\boldsymbol{A^{tSZ}_{143}}$	5.1 ± 2.0	D_{2000}	229.8 ± 1.8	$\sigma_8(0.38)$	0.673 ± 0.020
$\boldsymbol{A^{PS}_{100}}$	263 ± 28	$n_{s,0.002}$	0.9651 ± 0.0051	$f\sigma_8(0.51)$	$0.482^{+0.017}_{-0.019}$
$\boldsymbol{A^{PS}_{143}}$	49 ± 8	Y_P	$0.245312^{+0.000090}_{-0.000077}$	$\sigma_8(0.51)$	0.630 ± 0.018
$\boldsymbol{A^{PS}_{143\times217}}$	43 ± 9	Y_P^{BBN}	$0.246638^{+0.000090}_{-0.000077}$	$f\sigma_8(0.61)$	$0.478^{+0.017}_{-0.020}$
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	10^5D/H	2.623 ± 0.038	$\sigma_8(0.61)$	0.599 ± 0.017
$\boldsymbol{A^{kSZ}}$	< 4.68	Age/Gyr	13.794 ± 0.035	$f\sigma_8(2.33)$	0.3021 ± 0.0084
$\boldsymbol{A^{dustTT}_{100}}$	8.9 ± 1.8	z_*	1090.14 ± 0.35	$\sigma_8(2.33)$	0.3106 ± 0.0070
$\boldsymbol{A^{dustTT}_{143}}$	10.7 ± 1.8	r_*	144.67 ± 0.42	f^{143}_{2000}	30.9 ± 2.9
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.3 ± 3.3	$100\theta_*$	1.04111 ± 0.00044	$f^{143\times217}_{2000}$	33.3 ± 2.0
$\boldsymbol{A^{dustTT}_{217}}$	93.3 ± 7.3	$D_M(z_*)$/Gpc	13.896 ± 0.040	f^{217}_{2000}	107.9 ± 1.9
$\boldsymbol{c_{100}}$	0.99960 ± 0.00062	z_{drag}	1059.46 ± 0.43	χ^2_{simall}	396.9 ± 1.8
$\boldsymbol{c_{217}}$	0.99825 ± 0.00062	r_{drag}	147.40 ± 0.43	χ^2_{lowl}	23.3 ± 1.0
H_0	$68.5^{+1.4}_{-1.6}$	k_D	0.14039 ± 0.00049	χ^2_{plik}	771.3 ± 5.6
Ω_Λ	0.696 ± 0.012	$100\theta_D$	0.16104 ± 0.00025	χ^2_{6DF}	0.13 ± 0.19
Ω_m	0.304 ± 0.012	z_{eq}	3389 ± 41	χ^2_{MGS}	1.88 ± 0.99
$\Omega_m h^2$	0.1425 ± 0.0017	k_{eq}	0.01034 ± 0.00012	$\chi^2_{DR12BAO}$	5.2 ± 1.5
$\Omega_m h^3$	$0.0976^{+0.0027}_{-0.0031}$	$100\theta_{eq}$	0.8151 ± 0.0076	χ^2_{prior}	7.3 ± 3.7
σ_8	0.821 ± 0.024	$100\theta_{s,eq}$	0.4505 ± 0.0039	χ^2_{BAO}	7.2 ± 1.9
S_8	0.827 ± 0.017	$H(0.15)$	73.31 ± 0.87	χ^2_{CMB}	1191.6 ± 5.5
$\sigma_8\Omega_m^{0.5}$	0.4527 ± 0.0094	$D_M(0.15)$	636 ± 11		
$\sigma_8\Omega_m^{0.25}$	0.610 ± 0.014	$H(0.38)$	82.96 ± 0.35		

$\bar{\chi}^2_{eff} = 1206.07$; $\Delta\bar{\chi}^2_{eff} = 0.31$; $R - 1 = 0.00764$

18.26 base_w_plikHM_TT_lowl_lowE_BAO_post_lensing_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02218 ± 0.00020	$\sigma_8/h^{0.5}$	0.992 ± 0.014	$D_M(0.38)$	1521 ± 16
$\boldsymbol{\Omega_c h^2}$	0.1196 ± 0.0013	$r_{drag}h$	$101.0^{+1.9}_{-2.2}$	$H(0.51)$	89.54 ± 0.31
$\boldsymbol{100\theta_{MC}}$	1.04091 ± 0.00042	$\langle d^2\rangle^{1/2}$	2.446 ± 0.027	$D_M(0.51)$	1973 ± 17
$\boldsymbol{\tau}$	$0.0546^{+0.0052}_{-0.0079}$	z_{re}	$7.73^{+0.56}_{-0.79}$	$H(0.61)$	$95.05^{+0.39}_{-0.33}$
$\boldsymbol{w_0}$	$-1.039^{+0.060}_{-0.052}$	$10^9 A_s$	$2.097^{+0.023}_{-0.031}$	$D_M(0.61)$	2298 ± 17
$\boldsymbol{\ln(10^{10} A_s)}$	$3.043^{+0.011}_{-0.015}$	$10^9 A_s e^{-2\tau}$	1.880 ± 0.011	$H(2.33)$	235.57 ± 0.79
$\boldsymbol{n_s}$	0.9651 ± 0.0044	D_{40}	1229 ± 12	$D_M(2.33)$	5767 ± 12
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0024	D_{220}	5718 ± 40	$f\sigma_8(0.15)$	0.4604 ± 0.0091
$\boldsymbol{A_{217}^{CIB}}$	48 ± 7	D_{810}	2536 ± 13	$\sigma_8(0.15)$	$0.759^{+0.016}_{-0.018}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{1420}	815.1 ± 5.0	$f\sigma_8(0.38)$	$0.482^{+0.012}_{-0.013}$
$\boldsymbol{A_{143}^{tSZ}}$	$5.1^{+2.2}_{-1.9}$	D_{2000}	229.9 ± 1.7	$\sigma_8(0.38)$	0.673 ± 0.015
$\boldsymbol{A_{100}^{PS}}$	262 ± 28	$n_{s,0.002}$	0.9651 ± 0.0044	$f\sigma_8(0.51)$	$0.482^{+0.013}_{-0.014}$
$\boldsymbol{A_{143}^{PS}}$	49 ± 8	Y_P	$0.245315^{+0.000089}_{-0.000073}$	$\sigma_8(0.51)$	0.630 ± 0.014
$\boldsymbol{A_{143\times217}^{PS}}$	43 ± 9	Y_P^{BBN}	$0.246641^{+0.000089}_{-0.000074}$	$f\sigma_8(0.61)$	$0.477^{+0.013}_{-0.015}$
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	10^5D/H	2.622 ± 0.037	$\sigma_8(0.61)$	0.599 ± 0.013
$\boldsymbol{A^{kSZ}}$	< 4.65	Age/Gyr	13.793 ± 0.034	$f\sigma_8(2.33)$	0.3021 ± 0.0066
$\boldsymbol{A_{100}^{dustTT}}$	8.9 ± 1.9	z_*	1090.12 ± 0.31	$\sigma_8(2.33)$	0.3105 ± 0.0055
$\boldsymbol{A_{143}^{dustTT}}$	10.7 ± 1.8	r_*	144.69 ± 0.33	f_{2000}^{143}	30.9 ± 2.9
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.3 ± 3.2	$100\theta_*$	1.04111 ± 0.00042	$f_{2000}^{143\times217}$	33.3 ± 2.0
$\boldsymbol{A_{217}^{dustTT}}$	93.3 ± 7.2	$D_M(z_*)$/Gpc	13.898 ± 0.032	f_{2000}^{217}	107.9 ± 1.9
$\boldsymbol{c_{100}}$	0.99960 ± 0.00061	z_{drag}	1059.47 ± 0.43	$\chi^2_{lensing}$	9.33 ± 0.85
$\boldsymbol{c_{217}}$	0.99826 ± 0.00062	r_{drag}	147.42 ± 0.35	χ^2_{simall}	396.9 ± 1.8
H_0	$68.5^{+1.3}_{-1.5}$	k_D	0.14038 ± 0.00044	χ^2_{lowl}	23.31 ± 0.89
Ω_Λ	0.696 ± 0.012	$100\theta_D$	0.16104 ± 0.00025	χ^2_{plik}	770.9 ± 5.3
Ω_m	0.304 ± 0.012	z_{eq}	3387 ± 31	χ^2_{6DF}	0.13 ± 0.18
$\Omega_m h^2$	0.1424 ± 0.0013	k_{eq}	0.010338 ± 0.000094	χ^2_{MGS}	1.91 ± 0.98
$\Omega_m h^3$	$0.0975^{+0.0023}_{-0.0026}$	$100\theta_{eq}$	0.8155 ± 0.0057	$\chi^2_{DR12BAO}$	5.1 ± 1.4
σ_8	0.821 ± 0.018	$100\theta_{s,eq}$	0.4507 ± 0.0029	χ^2_{prior}	7.2 ± 3.6
S_8	0.826 ± 0.012	$H(0.15)$	73.35 ± 0.85	χ^2_{CMB}	1200.4 ± 5.6
$\sigma_8\Omega_m^{0.5}$	0.4522 ± 0.0067	$D_M(0.15)$	635 ± 10	χ^2_{BAO}	7.1 ± 1.7
$\sigma_8\Omega_m^{0.25}$	0.6092 ± 0.0095	$H(0.38)$	83.00 ± 0.34		

$\bar{\chi}^2_{eff} = 1214.74$; $\Delta\bar{\chi}^2_{eff} = 0.16$; $R - 1 = 0.01087$

18.27 base_w_plikHM_TTTEEE_lowl_lowE_BAO

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022384	0.02238 ± 0.00015	σ_8	0.8230	0.822 ± 0.019	$D_M(0.15)$	634.2	634 ± 10
$\boldsymbol{\Omega_c h^2}$	0.11994	0.1199 ± 0.0013	S_8	0.8281	0.827 ± 0.013	$H(0.38)$	83.119	83.11 ± 0.31
$\boldsymbol{100\theta_{MC}}$	1.040916	1.04095 ± 0.00031	$\sigma_8\Omega_m^{0.5}$	0.4536	0.4530 ± 0.0071	$D_M(0.38)$	1518.4	1519 ± 16
$\boldsymbol{\tau}$	0.0544	0.0546 ± 0.0078	$\sigma_8\Omega_m^{0.25}$	0.6110	0.610 ± 0.011	$H(0.51)$	89.664	$89.66^{+0.29}_{-0.25}$
$\boldsymbol{w_0}$	-1.041	$-1.041^{+0.060}_{-0.053}$	$\sigma_8/h^{0.5}$	0.9936	0.993 ± 0.015	$D_M(0.51)$	1970.1	1970 ± 17
$\boldsymbol{\ln(10^{10}A_s)}$	3.0443	3.044 ± 0.016	$r_{drag}h$	100.92	$101.0^{+1.9}_{-2.2}$	$H(0.61)$	95.183	$95.18^{+0.37}_{-0.31}$
$\boldsymbol{n_s}$	0.96630	0.9654 ± 0.0042	$\langle d^2\rangle^{1/2}$	2.4486	2.449 ± 0.031	$D_M(0.61)$	2294.7	2295 ± 17
$\boldsymbol{y_{cal}}$	1.00033	1.0006 ± 0.0025	z_{re}	7.68	7.68 ± 0.79	$H(2.33)$	235.93	235.95 ± 0.71
$\boldsymbol{A_{217}^{CIB}}$	46.4	47 ± 7	$10^9 A_s$	2.0995	2.100 ± 0.034	$D_M(2.33)$	5758.7	5758.7 ± 9.1
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.56	—	$10^9 A_s e^{-2\tau}$	1.8829	1.883 ± 0.012	$f\sigma_8(0.15)$	0.4618	0.4613 ± 0.0097
$\boldsymbol{A_{143}^{tSZ}}$	7.10	$5.5^{+2.2}_{-1.9}$	D_{40}	1227.5	1230 ± 12	$\sigma_8(0.15)$	0.7610	0.760 ± 0.018
$\boldsymbol{A_{100}^{PS}}$	249.3	259 ± 28	D_{220}	5728.7	5734 ± 39	$f\sigma_8(0.38)$	0.4838	$0.483^{+0.013}_{-0.014}$
$\boldsymbol{A_{143}^{PS}}$	49.5	46 ± 8	D_{810}	2540.0	2539 ± 14	$\sigma_8(0.38)$	0.6747	0.674 ± 0.016
$\boldsymbol{A_{143\times217}^{PS}}$	50.8	42 ± 9	D_{1420}	818.02	817.3 ± 4.8	$f\sigma_8(0.51)$	0.4833	$0.483^{+0.013}_{-0.015}$
$\boldsymbol{A_{217}^{PS}}$	121.1	115 ± 10	D_{2000}	231.23	231.0 ± 1.6	$\sigma_8(0.51)$	0.6313	0.631 ± 0.015
$\boldsymbol{A^{kSZ}}$	0.00	< 4.23	$n_{s,0.002}$	0.96630	0.9654 ± 0.0042	$f\sigma_8(0.61)$	0.4786	$0.478^{+0.014}_{-0.015}$
$\boldsymbol{A_{100}^{dustTT}}$	8.81	8.9 ± 1.8	Y_P	0.245401	$0.245399^{+0.000060}_{-0.000053}$	$\sigma_8(0.61)$	0.6006	0.600 ± 0.014
$\boldsymbol{A_{143}^{dustTT}}$	11.04	10.9 ± 1.7	Y_P^{BBN}	0.246728	$0.246725^{+0.000060}_{-0.000053}$	$f\sigma_8(2.33)$	0.3028	0.3025 ± 0.0072
$\boldsymbol{A_{143\times217}^{dustTT}}$	20.03	18.6 ± 3.3	10^5D/H	2.5828	2.584 ± 0.027	$\sigma_8(2.33)$	0.3112	0.3110 ± 0.0061
$\boldsymbol{A_{217}^{dustTT}}$	95.4	93.7 ± 7.3	Age/Gyr	13.7710	13.772 ± 0.031	f_{2000}^{143}	28.75	29.4 ± 2.7
$\boldsymbol{A_{100}^{dustTE}}$	0.1143	0.115 ± 0.038	z_*	1089.897	1089.89 ± 0.26	$f_{2000}^{143\times217}$	31.98	32.1 ± 1.8
$\boldsymbol{A_{100\times143}^{dustTE}}$	0.1359	0.135 ± 0.029	r_*	144.435	144.46 ± 0.28	f_{2000}^{217}	106.51	107.0 ± 1.8
$\boldsymbol{A_{100\times217}^{dustTE}}$	0.480	0.481 ± 0.086	$100\theta_*$	1.041097	1.04113 ± 0.00031	χ^2_{simall}	396.06	397.1 ± 1.9
$\boldsymbol{A_{143}^{dustTE}}$	0.227	0.224 ± 0.054	$D_M(z_*)$/Gpc	13.8734	13.875 ± 0.026	χ^2_{lowl}	23.12	23.35 ± 0.89
$\boldsymbol{A_{143\times217}^{dustTE}}$	0.666	0.665 ± 0.080	z_{drag}	1059.971	1059.96 ± 0.30	χ^2_{plik}	2344.5	2359.4 ± 5.9
$\boldsymbol{A_{217}^{dustTE}}$	2.093	2.08 ± 0.27	r_{drag}	147.090	147.11 ± 0.28	χ^2_{6DF}	0.001	0.13 ± 0.19
$\boldsymbol{c_{100}}$	0.99970	0.99967 ± 0.00062	k_D	0.140879	0.14086 ± 0.00031	χ^2_{MGS}	1.75	1.89 ± 0.99
$\boldsymbol{c_{217}}$	0.99819	0.99819 ± 0.00062	$100\theta_D$	0.160740	0.16075 ± 0.00017	$\chi^2_{DR12BAO}$	4.40	5.2 ± 1.4
H_0	68.61	$68.6^{+1.3}_{-1.5}$	z_{eq}	3401.2	3399 ± 28	χ^2_{prior}	1.66	11.5 ± 4.5
Ω_Λ	0.6963	0.696 ± 0.012	k_{eq}	0.010381	0.010376 ± 0.000086	χ^2_{BAO}	6.15	7.2 ± 1.7
Ω_m	0.3037	0.304 ± 0.012	$100\theta_{eq}$	0.8135	0.8139 ± 0.0053	χ^2_{CMB}	2763.7	2779.9 ± 5.9
$\Omega_m h^2$	0.14297	0.1429 ± 0.0012	$100\theta_{s,eq}$	0.44949	0.4497 ± 0.0027			
$\Omega_m h^3$	0.09809	$0.0981^{+0.0023}_{-0.0026}$	$H(0.15)$	73.46	73.46 ± 0.85			

Best-fit $\chi^2_{eff} = 2771.48$; $\Delta\chi^2_{eff} = -0.44$; $\bar{\chi}^2_{eff} = 2798.61$; $\Delta\bar{\chi}^2_{eff} = 0.70$; $R - 1 = 0.00736$

χ^2_{eff}: BAO - 6DF: 0.00 (Δ -0.03) MGS: 1.75 (Δ 0.53) DR12BAO: 4.40 (Δ -0.01) CMB - simall_100x143_offlike5_EE_Aplanck_B: 396.06 (Δ -0.14) commander_dx12_v3_2_29: 23.12 (Δ 0.25) plik_rd12_HM_v22b_TTTEEE: 2344.49 (Δ -1.02)

18.28 base_w_plikHM_TTTEEE_lowl_lowE_BAO_post_lensing

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022391	0.02239 ± 0.00014	σ_8	0.8220	0.821 ± 0.016	$D_M(0.15)$	634.3	634.3 ± 9.8
$\boldsymbol{\Omega_c h^2}$	0.11983	0.1198 ± 0.0011	S_8	0.8271	0.826 ± 0.010	$H(0.38)$	83.137	83.14 ± 0.31
$\boldsymbol{100\theta_{MC}}$	1.040936	1.04095 ± 0.00030	$\sigma_8\Omega_m^{0.5}$	0.4530	0.4522 ± 0.0057	$D_M(0.38)$	1518.5	1518 ± 16
$\boldsymbol{\tau}$	0.0545	0.0545 ± 0.0075	$\sigma_8\Omega_m^{0.25}$	0.6102	0.6093 ± 0.0081	$H(0.51)$	89.688	$89.69^{+0.26}_{-0.23}$
$\boldsymbol{w_0}$	-1.038	$-1.038^{+0.055}_{-0.048}$	$\sigma_8/h^{0.5}$	0.9926	0.991 ± 0.012	$D_M(0.51)$	1970.0	1970 ± 16
$\boldsymbol{\ln(10^{10}A_s)}$	3.0448	3.044 ± 0.015	$r_{drag}h$	100.89	$101.0^{+1.9}_{-2.1}$	$H(0.61)$	95.211	$95.21^{+0.33}_{-0.27}$
$\boldsymbol{n_s}$	0.96622	0.9656 ± 0.0039	$\langle d^2\rangle^{1/2}$	2.4477	2.447 ± 0.024	$D_M(0.61)$	2294.5	2294 ± 16
$\boldsymbol{y_{cal}}$	1.00062	1.0006 ± 0.0025	z_{re}	7.68	7.67 ± 0.75	$H(2.33)$	235.90	235.91 ± 0.71
$\boldsymbol{A_{217}^{CIB}}$	46.4	47 ± 7	$10^9 A_s$	2.1005	2.099 ± 0.031	$D_M(2.33)$	5758.1	5758.0 ± 9.0
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.58	—	$10^9 A_s e^{-2\tau}$	1.8837	1.882 ± 0.011	$f\sigma_8(0.15)$	0.4611	0.4603 ± 0.0075
$\boldsymbol{A_{143}^{tSZ}}$	7.12	$5.4^{+2.1}_{-1.9}$	D_{40}	1228.7	1230 ± 11	$\sigma_8(0.15)$	0.7601	0.759 ± 0.016
$\boldsymbol{A_{100}^{PS}}$	249.0	259 ± 28	D_{220}	5734.9	5736 ± 39	$f\sigma_8(0.38)$	0.4829	$0.482^{+0.010}_{-0.012}$
$\boldsymbol{A_{143}^{PS}}$	50.1	46 ± 8	D_{810}	2541.3	2539 ± 13	$\sigma_8(0.38)$	0.6739	0.673 ± 0.014
$\boldsymbol{A_{143\times217}^{PS}}$	51.5	42 ± 9	D_{1420}	818.39	817.4 ± 4.8	$f\sigma_8(0.51)$	0.4824	$0.482^{+0.011}_{-0.013}$
$\boldsymbol{A_{217}^{PS}}$	121.4	115 ± 10	D_{2000}	231.32	231.0 ± 1.6	$\sigma_8(0.51)$	0.6306	0.630 ± 0.013
$\boldsymbol{A^{kSZ}}$	0.01	< 4.24	$n_{s,0.002}$	0.96622	0.9656 ± 0.0039	$f\sigma_8(0.61)$	0.4777	$0.477^{+0.011}_{-0.013}$
$\boldsymbol{A_{100}^{dust}TT}$	8.80	8.9 ± 1.8	Y_P	0.245404	$0.245403^{+0.000059}_{-0.000050}$	$\sigma_8(0.61)$	0.5999	0.599 ± 0.012
$\boldsymbol{A_{143}^{dust}TT}$	11.00	10.9 ± 1.7	Y_P^{BBN}	0.246730	$0.246730^{+0.000059}_{-0.000051}$	$f\sigma_8(2.33)$	0.3025	0.3022 ± 0.0062
$\boldsymbol{A_{143\times217}^{dust}TT}$	20.14	18.6 ± 3.2	10^5D/H	2.5815	2.582 ± 0.026	$\sigma_8(2.33)$	0.3109	0.3107 ± 0.0053
$\boldsymbol{A_{217}^{dust}TT}$	95.6	93.6 ± 7.3	Age/Gyr	13.7708	13.771 ± 0.030	f_{2000}^{143}	28.88	29.5 ± 2.7
$\boldsymbol{A_{100}^{dust}TE}$	0.1141	0.114 ± 0.038	z_*	1089.878	1089.87 ± 0.24	$f_{2000}^{143\times217}$	32.09	32.1 ± 1.8
$\boldsymbol{A_{100\times143}^{dust}TE}$	0.1350	0.135 ± 0.029	r_*	144.459	144.48 ± 0.24	f_{2000}^{217}	106.64	107.0 ± 1.7
$\boldsymbol{A_{100\times217}^{dust}TE}$	0.482	0.481 ± 0.085	$100\theta_*$	1.041116	1.04113 ± 0.00030	$\chi^2_{lensing}$	8.752	9.16 ± 0.68
$\boldsymbol{A_{143}^{dust}TE}$	0.226	0.225 ± 0.054	$D_M(z_*)$/Gpc	13.8754	13.877 ± 0.023	χ^2_{smallI}	396	226 ± 200
$\boldsymbol{A_{143\times217}^{dust}TE}$	0.663	0.664 ± 0.079	z_{drag}	1059.971	1059.97 ± 0.30	χ^2_{lowl}	23	194 ± 200
$\boldsymbol{A_{217}^{dust}TE}$	2.078	2.08 ± 0.27	r_{drag}	147.114	147.13 ± 0.25	χ^2_{plik}	2344.6	2359.2 ± 5.8
$\boldsymbol{c_{100}}$	0.99973	0.99968 ± 0.00061	k_D	0.140860	0.14084 ± 0.00029	χ^2_{6DF}	0.00	0.9 ± 1.1
$\boldsymbol{c_{217}}$	0.99818	0.99819 ± 0.00062	$100\theta_D$	0.160737	0.16074 ± 0.00017	χ^2_{MGS}	1.75	1.1 ± 1.1
H_0	68.58	$68.6^{+1.3}_{-1.4}$	z_{eq}	3398.6	3397 ± 24	$\chi^2_{DR12BAO}$	4.32	5.1 ± 1.3
Ω_Λ	0.6962	0.696 ± 0.012	k_{eq}	0.010373	0.010368 ± 0.000074	χ^2_{prior}	1.64	11.5 ± 4.4
Ω_m	0.3038	0.304 ± 0.012	$100\theta_{eq}$	0.81401	0.8144 ± 0.0046	χ^2_{CMB}	2772.5	2788.7 ± 5.9
$\Omega_m h^2$	0.14286	0.1428 ± 0.0010	$100\theta_{s,eq}$	0.44974	0.4499 ± 0.0023	χ^2_{BAO}	6.07	7.1 ± 1.6
$\Omega_m h^3$	0.09798	$0.0980^{+0.0021}_{-0.0024}$	$H(0.15)$	73.46	73.47 ± 0.83			

Best-fit $\chi^2_{eff} = 2780.22$; $\Delta\chi^2_{eff} = -0.48$; $\bar{\chi}^2_{eff} = 2807.23$; $\Delta\bar{\chi}^2_{eff} = 0.39$; $R - 1 = 0.01456$

χ^2_{eff}: BAO - 6DF: 0.00 (Δ -0.03) MGS: 1.75 (Δ 0.53) DR12BAO: 4.32 (Δ -0.10) CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.75 (Δ 0.02) simall_100x143_offlike5_EE_Aplanck 396.04 (Δ -0.48) commander_dx12_v3_2_29: 23.15 (Δ 0.25) plik_rd12_HM_v22b_TTTEEE: 2344.57 (Δ -0.75)

18.29 base_w_plikHM_TTTEEE_lowl_lowE_BAO_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02239 ± 0.00015	σ_8	0.823 ± 0.019	$D_M(0.15)$	634 ± 10
$\boldsymbol{\Omega_c h^2}$	0.1198 ± 0.0013	S_8	0.828 ± 0.013	$H(0.38)$	83.12 ± 0.31
$\boldsymbol{100\theta_{MC}}$	1.04095 ± 0.00031	$\sigma_8\Omega_m^{0.5}$	0.4533 ± 0.0070	$D_M(0.38)$	1519 ± 16
$\boldsymbol{\tau}$	$0.0556^{+0.0053}_{-0.0081}$	$\sigma_8\Omega_m^{0.25}$	0.611 ± 0.010	$H(0.51)$	$89.67^{+0.29}_{-0.25}$
$\boldsymbol{w_0}$	$-1.040^{+0.060}_{-0.053}$	$\sigma_8/h^{0.5}$	0.993 ± 0.015	$D_M(0.51)$	1970 ± 17
$\boldsymbol{\ln(10^{10}A_s)}$	$3.046^{+0.013}_{-0.016}$	$r_{drag}h$	$100.9^{+1.9}_{-2.2}$	$H(0.61)$	$95.19^{+0.37}_{-0.31}$
$\boldsymbol{n_s}$	0.9656 ± 0.0042	$\langle d^2\rangle^{1/2}$	2.451 ± 0.031	$D_M(0.61)$	2295 ± 17
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0025	z_{re}	$7.79^{+0.59}_{-0.79}$	$H(2.33)$	235.95 ± 0.71
$\boldsymbol{A^{CIB}_{217}}$	47 ± 7	$10^9 A_s$	$2.104^{+0.026}_{-0.034}$	$D_M(2.33)$	5758.5 ± 9.1
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$10^9 A_s e^{-2\tau}$	1.883 ± 0.012	$f\sigma_8(0.15)$	0.4615 ± 0.0097
$\boldsymbol{A^{tSZ}_{143}}$	$5.5^{+2.2}_{-1.9}$	D_{40}	1230 ± 12	$\sigma_8(0.15)$	0.761 ± 0.018
$\boldsymbol{A^{PS}_{100}}$	258 ± 28	D_{220}	5734 ± 39	$f\sigma_8(0.38)$	0.483 ± 0.013
$\boldsymbol{A^{PS}_{143}}$	46 ± 8	D_{810}	2539 ± 14	$\sigma_8(0.38)$	0.675 ± 0.016
$\boldsymbol{A^{PS}_{143\times217}}$	42 ± 9	D_{1420}	817.4 ± 4.8	$f\sigma_8(0.51)$	$0.483^{+0.014}_{-0.015}$
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	D_{2000}	231.0 ± 1.6	$\sigma_8(0.51)$	0.631 ± 0.015
$\boldsymbol{A^{kSZ}}$	< 4.21	$n_{s,0.002}$	0.9656 ± 0.0042	$f\sigma_8(0.61)$	$0.478^{+0.014}_{-0.015}$
$\boldsymbol{A^{dustTT}_{100}}$	8.9 ± 1.8	Y_P	$0.245400^{+0.000059}_{-0.000053}$	$\sigma_8(0.61)$	0.600 ± 0.014
$\boldsymbol{A^{dustTT}_{143}}$	10.9 ± 1.8	Y_P^{BBN}	$0.246726^{+0.000060}_{-0.000053}$	$f\sigma_8(2.33)$	0.3027 ± 0.0072
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.6 ± 3.3	10^5D/H	2.583 ± 0.027	$\sigma_8(2.33)$	0.3112 ± 0.0061
$\boldsymbol{A^{dustTT}_{217}}$	93.7 ± 7.3	Age/Gyr	13.772 ± 0.031	f^{143}_{2000}	29.4 ± 2.7
$\boldsymbol{A^{dustTE}_{100}}$	0.115 ± 0.038	z_*	1089.89 ± 0.26	$f^{143\times217}_{2000}$	32.1 ± 1.8
$\boldsymbol{A^{dustTE}_{100\times143}}$	0.135 ± 0.029	r_*	144.46 ± 0.28	f^{217}_{2000}	106.9 ± 1.7
$\boldsymbol{A^{dustTE}_{100\times217}}$	0.481 ± 0.086	$100\theta_*$	1.04114 ± 0.00031	χ^2_{simall}	397.1 ± 1.9
$\boldsymbol{A^{dustTE}_{143}}$	0.224 ± 0.054	$D_M(z_*)$/Gpc	13.875 ± 0.026	χ^2_{lowl}	23.36 ± 0.89
$\boldsymbol{A^{dustTE}_{143\times217}}$	0.664 ± 0.080	z_{drag}	1059.96 ± 0.30	χ^2_{plik}	2359.2 ± 5.9
$\boldsymbol{A^{dustTE}_{217}}$	2.08 ± 0.27	r_{drag}	147.12 ± 0.28	χ^2_{6DF}	0.13 ± 0.19
$\boldsymbol{c_{100}}$	0.99967 ± 0.00062	k_D	0.14085 ± 0.00031	χ^2_{MGS}	1.88 ± 0.98
$\boldsymbol{c_{217}}$	0.99819 ± 0.00062	$100\theta_D$	0.16075 ± 0.00017	$\chi^2_{DR12BAO}$	5.1 ± 1.4
H_0	$68.6^{+1.3}_{-1.5}$	z_{eq}	3399 ± 28	χ^2_{prior}	11.5 ± 4.5
Ω_Λ	0.696 ± 0.012	k_{eq}	0.010374 ± 0.000086	χ^2_{BAO}	7.2 ± 1.7
Ω_m	0.304 ± 0.012	$100\theta_{eq}$	0.8140 ± 0.0053	χ^2_{CMB}	2779.7 ± 5.9
$\Omega_m h^2$	0.1429 ± 0.0012	$100\theta_{s,eq}$	0.4497 ± 0.0027		
$\Omega_m h^3$	$0.0980^{+0.0023}_{-0.0026}$	$H(0.15)$	73.46 ± 0.85		

$\bar{\chi}^2_{eff} = 2798.36$; $\Delta\bar{\chi}^2_{eff} = 0.65$; $R - 1 = 0.00833$

18.30 base_w_plikHM_TTTEEE_lowl_lowE_BAO_post_lensing_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02240 ± 0.00014	σ_8	0.821 ± 0.016	$D_M(0.15)$	634.4 ± 9.7
$\boldsymbol{\Omega_c h^2}$	0.1197 ± 0.0011	S_8	0.826 ± 0.010	$H(0.38)$	83.14 ± 0.31
$\boldsymbol{100\theta_{MC}}$	1.04096 ± 0.00030	$\sigma_8\Omega_m^{0.5}$	0.4524 ± 0.0057	$D_M(0.38)$	1519 ± 16
$\boldsymbol{\tau}$	$0.0554^{+0.0054}_{-0.0077}$	$\sigma_8\Omega_m^{0.25}$	0.6094 ± 0.0081	$H(0.51)$	89.70 ± 0.24
$\boldsymbol{w_0}$	$-1.036^{+0.055}_{-0.048}$	$\sigma_8/h^{0.5}$	0.991 ± 0.012	$D_M(0.51)$	1970 ± 16
$\boldsymbol{\ln(10^{10} A_s)}$	$3.046^{+0.012}_{-0.015}$	$r_{drag}h$	$100.9^{+1.9}_{-2.1}$	$H(0.61)$	$95.22^{+0.32}_{-0.27}$
$\boldsymbol{n_s}$	0.9657 ± 0.0039	$\langle d^2\rangle^{1/2}$	2.448 ± 0.023	$D_M(0.61)$	2295 ± 16
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0025	z_{re}	$7.76^{+0.58}_{-0.76}$	$H(2.33)$	235.90 ± 0.70
$\boldsymbol{A^{CIB}_{217}}$	47 ± 7	$10^9 A_s$	$2.103^{+0.024}_{-0.032}$	$D_M(2.33)$	5757.8 ± 9.0
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$10^9 A_s e^{-2\tau}$	1.882 ± 0.011	$f\sigma_8(0.15)$	0.4603 ± 0.0075
$\boldsymbol{A^{tSZ}_{143}}$	$5.4^{+2.1}_{-1.9}$	D_{40}	1230 ± 11	$\sigma_8(0.15)$	0.759 ± 0.015
$\boldsymbol{A^{PS}_{100}}$	259 ± 28	D_{220}	5736 ± 39	$f\sigma_8(0.38)$	$0.482^{+0.010}_{-0.012}$
$\boldsymbol{A^{PS}_{143}}$	46 ± 8	D_{810}	2539 ± 13	$\sigma_8(0.38)$	0.673 ± 0.014
$\boldsymbol{A^{PS}_{143\times217}}$	42 ± 9	D_{1420}	817.4 ± 4.8	$f\sigma_8(0.51)$	$0.482^{+0.011}_{-0.013}$
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	D_{2000}	231.0 ± 1.6	$\sigma_8(0.51)$	0.630 ± 0.013
$\boldsymbol{A^{kSZ}}$	< 4.23	$n_{s,0.002}$	0.9657 ± 0.0039	$f\sigma_8(0.61)$	$0.477^{+0.011}_{-0.013}$
$\boldsymbol{A^{dustTT}_{100}}$	8.9 ± 1.8	Y_P	$0.245404^{+0.000058}_{-0.000050}$	$\sigma_8(0.61)$	0.599 ± 0.012
$\boldsymbol{A^{dustTT}_{143}}$	10.9 ± 1.7	Y_P^{BBN}	$0.246731^{+0.000058}_{-0.000051}$	$f\sigma_8(2.33)$	0.3022 ± 0.0062
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.6 ± 3.3	10^5D/H	2.581 ± 0.026	$\sigma_8(2.33)$	0.3108 ± 0.0052
$\boldsymbol{A^{dustTT}_{217}}$	93.6 ± 7.3	Age/Gyr	13.771 ± 0.030	f^{143}_{2000}	29.4 ± 2.7
$\boldsymbol{A^{dustTE}_{100}}$	0.114 ± 0.038	z_*	1089.86 ± 0.24	$f^{143\times217}_{2000}$	32.1 ± 1.8
$\boldsymbol{A^{dustTE}_{100\times143}}$	0.135 ± 0.029	r_*	144.49 ± 0.24	f^{217}_{2000}	106.9 ± 1.7
$\boldsymbol{A^{dustTE}_{100\times217}}$	0.481 ± 0.085	$100\theta_*$	1.04114 ± 0.00030	$\chi^2_{lensing}$	9.15 ± 0.68
$\boldsymbol{A^{dustTE}_{143}}$	0.225 ± 0.054	$D_M(z_*)$/Gpc	13.878 ± 0.023	χ^2_{simall}	227 ± 200
$\boldsymbol{A^{dustTE}_{143\times217}}$	0.663 ± 0.079	z_{drag}	1059.98 ± 0.30	χ^2_{lowl}	193 ± 200
$\boldsymbol{A^{dustTE}_{217}}$	2.08 ± 0.27	r_{drag}	147.14 ± 0.25	χ^2_{plik}	2359.1 ± 5.8
$\boldsymbol{c_{100}}$	0.99968 ± 0.00062	k_D	0.14084 ± 0.00029	χ^2_{6DF}	0.9 ± 1.1
$\boldsymbol{c_{217}}$	0.99819 ± 0.00062	$100\theta_D$	0.16074 ± 0.00017	χ^2_{MGS}	1.1 ± 1.1
H_0	$68.6^{+1.3}_{-1.4}$	z_{eq}	3396 ± 24	$\chi^2_{DR12BAO}$	5.0 ± 1.3
Ω_Λ	0.696 ± 0.012	k_{eq}	0.010364 ± 0.000073	χ^2_{prior}	11.5 ± 4.4
Ω_m	0.304 ± 0.012	$100\theta_{eq}$	0.8146 ± 0.0045	χ^2_{CMB}	2788.5 ± 5.9
$\Omega_m h^2$	0.1427 ± 0.0010	$100\theta_{s,eq}$	0.4500 ± 0.0023	χ^2_{BAO}	7.0 ± 1.6
$\Omega_m h^3$	$0.0979^{+0.0021}_{-0.0023}$	$H(0.15)$	73.46 ± 0.83		

$\bar{\chi}^2_{eff} = 2807.01$; $\Delta\bar{\chi}^2_{eff} = 0.29$; $R - 1 = 0.01536$

18.31 base_w_CamSpecHM_TTTEEE_lowl_lowE_BAO

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022331	0.02232 ± 0.00015	$\sigma_8\Omega_m^{0.5}$	0.4490	0.4493 ± 0.0073	$H(0.38)$	83.108	83.08 ± 0.32
$\boldsymbol{\Omega_c h^2}$	0.11915	0.1193 ± 0.0013	$\sigma_8\Omega_m^{0.25}$	0.6039	0.605 ± 0.011	$D_M(0.38)$	1522.4	1522 ± 17
$\boldsymbol{100\theta_{MC}}$	1.040919	1.04092 ± 0.00031	$\sigma_8/h^{0.5}$	0.9835	0.984 ± 0.016	$H(0.51)$	89.718	89.68 ± 0.26
$\boldsymbol{\tau}$	0.0534	0.0529 ± 0.0079	$r_{drag}h$	100.49	$100.6^{+1.9}_{-2.2}$	$D_M(0.51)$	1973.9	1974 ± 17
$\boldsymbol{w_0}$	-1.019	$-1.024^{+0.059}_{-0.051}$	$\langle d^2\rangle^{1/2}$	2.4295	2.431 ± 0.032	$H(0.61)$	95.270	$95.22^{+0.35}_{-0.29}$
$\boldsymbol{\ln(10^{10}A_s)}$	3.0385	3.038 ± 0.016	z_{re}	7.58	7.51 ± 0.81	$D_M(0.61)$	2298.3	2298 ± 17
$\boldsymbol{n_s}$	0.96691	0.9668 ± 0.0042	$10^9 A_s$	2.0873	2.087 ± 0.034	$H(2.33)$	235.67	235.71 ± 0.75
$\boldsymbol{y_{cal}}$	1.00030	1.0005 ± 0.0026	$10^9 A_s e^{-2\tau}$	1.8758	1.877 ± 0.012	$D_M(2.33)$	5761.2	5762.0 ± 9.3
$\boldsymbol{A_{100}^{PS}}$	241.5	240 ± 24	D_{40}	1223.2	1224 ± 13	$f\sigma_8(0.15)$	0.4555	0.4562 ± 0.0097
$\boldsymbol{A_{143}^{PS}}$	42.1	39 ± 8	D_{220}	5718.5	5719 ± 40	$\sigma_8(0.15)$	0.7510	0.752 ± 0.018
$\boldsymbol{A_{217}^{PS}}$	102.2	102 ± 10	D_{810}	2533.6	2535 ± 14	$f\sigma_8(0.38)$	0.4759	0.477 ± 0.013
$\boldsymbol{A_{217}^{CIB}}$	39.1	40 ± 7	D_{1420}	815.6	815.9 ± 5.0	$\sigma_8(0.38)$	0.6660	0.667 ± 0.016
$\boldsymbol{A_{143}^{tSZ}}$	3.40	$3.9^{+1.9}_{-2.5}$	D_{2000}	230.26	230.3 ± 1.7	$f\sigma_8(0.51)$	0.4752	0.476 ± 0.014
$\boldsymbol{r_{143\times217}^{PS}}$	0.669	0.66 ± 0.13	$n_{s,0.002}$	0.96691	0.9668 ± 0.0042	$\sigma_8(0.51)$	0.6233	0.624 ± 0.015
$\boldsymbol{r_{143\times217}^{CIB}}$	0.605	$0.56^{+0.39}_{-0.18}$	Y_P	0.245380	0.245373 ± 0.000061	$f\sigma_8(0.61)$	0.4705	0.472 ± 0.015
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.69	—	Y_P^{BBN}	0.246706	0.246700 ± 0.000061	$\sigma_8(0.61)$	0.5931	0.594 ± 0.014
$\boldsymbol{A^{kSZ}}$	5.16	$4.7^{+2.1}_{-4.1}$	10^5D/H	2.5929	2.596 ± 0.028	$f\sigma_8(2.33)$	0.2992	0.2995 ± 0.0072
$\boldsymbol{A_{100}^{dust}}$	1.018	1.01 ± 0.20	Age/Gyr	13.7859	13.786 ± 0.032	$\sigma_8(2.33)$	0.3080	0.3084 ± 0.0062
$\boldsymbol{A_{143}^{dust}}$	0.972	0.96 ± 0.18	z_*	1089.895	1089.92 ± 0.26	f_{2000}^{143}	29.88	29.7 ± 2.8
$\boldsymbol{A_{217}^{dust}}$	0.983	0.97 ± 0.10	r_*	144.681	144.66 ± 0.30	f_{2000}^{217}	106.82	106.8 ± 1.9
$\boldsymbol{A_{143\times217}^{dust}}$	1.024	1.03 ± 0.16	$100\theta_*$	1.041113	1.04111 ± 0.00030	$f_{2000}^{143\times217}$	32.13	32.1 ± 2.0
$\boldsymbol{c_{100}}$	0.99750	0.9975 ± 0.0011	$D_M(z_*)$/Gpc	13.8967	13.895 ± 0.028	χ^2_{simall}	395.90	396.9 ± 1.7
$\boldsymbol{c_{217}}$	1.00129	1.0011 ± 0.0016	z_{drag}	1059.780	1059.76 ± 0.32	χ^2_{lowl}	22.84	22.91 ± 0.85
$\boldsymbol{c_{TE}}$	0.99648	0.9967 ± 0.0049	r_{drag}	147.360	147.35 ± 0.30	$\chi^2_{CamSpec}$	11499.9	11514.7 ± 5.7
$\boldsymbol{c_{EE}}$	0.99203	0.9921 ± 0.0049	k_D	0.140553	0.14056 ± 0.00035	χ^2_{6DF}	0.001	0.13 ± 0.20
H_0	68.20	$68.3^{+1.3}_{-1.5}$	$100\theta_D$	0.160841	0.16085 ± 0.00019	χ^2_{MGS}	1.61	1.78 ± 0.99
Ω_Λ	0.6944	0.695 ± 0.012	z_{eq}	3381.0	3383 ± 29	$\chi^2_{DR12BAO}$	4.04	4.9 ± 1.4
Ω_m	0.3056	0.305 ± 0.012	k_{eq}	0.010319	0.010326 ± 0.000088	χ^2_{prior}	2.37	7.9 ± 3.4
$\Omega_m h^2$	0.14213	0.1422 ± 0.0012	$100\theta_{eq}$	0.8170	0.8166 ± 0.0054	χ^2_{BAO}	5.65	6.9 ± 1.8
$\Omega_m h^3$	0.09693	$0.0971^{+0.0023}_{-0.0025}$	$100\theta_{s,eq}$	0.45134	0.4512 ± 0.0028	χ^2_{CMB}	11918.6	11934.5 ± 5.8
σ_8	0.8122	0.814 ± 0.019	$H(0.15)$	73.25	73.28 ± 0.87			
S_8	0.8198	0.820 ± 0.013	$D_M(0.15)$	636.9	637 ± 10			

Best-fit $\chi^2_{\rm eff} = 11926.60$; $\bar{\chi}^2_{\rm eff} = 11949.21$; $\Delta\bar{\chi}^2_{\rm eff} = 0.93$; $R - 1 = 0.01464$

$\chi^2_{\rm eff}$: BAO - 6DF: 0.00 MGS: 1.61 DR12BAO: 4.04 CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.90 commander_dx12_v3_2_29: 22.84 CamSpec like_10.7HM_1400_unified: 11499.85

18.32 base_w_CamSpecHM_TTTEEE_lowl_lowE_BAO_post_lensing

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02232 ± 0.00015	$\sigma_8\Omega_m^{0.5}$	0.4505 ± 0.0059	$H(0.38)$	83.09 ± 0.31
$\boldsymbol{\Omega_c h^2}$	0.1194 ± 0.0011	$\sigma_8\Omega_m^{0.25}$	0.6067 ± 0.0081	$D_M(0.38)$	1520 ± 16
$\boldsymbol{100\theta_{MC}}$	1.04091 ± 0.00031	$\sigma_8/h^{0.5}$	0.988 ± 0.012	$H(0.51)$	89.66 ± 0.24
$\boldsymbol{\tau}$	$0.0538^{+0.0070}_{-0.0078}$	$r_{drag}h$	$100.8^{+1.9}_{-2.1}$	$D_M(0.51)$	1972 ± 17
$\boldsymbol{w_0}$	$-1.032^{+0.055}_{-0.049}$	$\langle d^2\rangle^{1/2}$	2.438 ± 0.024	$H(0.61)$	$95.18^{+0.32}_{-0.27}$
$\boldsymbol{\ln(10^{10}A_s)}$	3.041 ± 0.015	z_{re}	7.61 ± 0.76	$D_M(0.61)$	2297 ± 17
$\boldsymbol{n_s}$	0.9662 ± 0.0040	$10^9 A_s$	2.092 ± 0.031	$H(2.33)$	235.70 ± 0.75
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0026	$10^9 A_s e^{-2\tau}$	1.878 ± 0.011	$D_M(2.33)$	5761.9 ± 9.2
$\boldsymbol{A^{PS}_{100}}$	240 ± 25	D_{40}	1226 ± 12	$f\sigma_8(0.15)$	0.4581 ± 0.0075
$\boldsymbol{A^{PS}_{143}}$	40 ± 8	D_{220}	5722 ± 39	$\sigma_8(0.15)$	0.756 ± 0.016
$\boldsymbol{A^{PS}_{217}}$	103 ± 10	D_{810}	2536 ± 14	$f\sigma_8(0.38)$	0.480 ± 0.011
$\boldsymbol{A^{CIB}_{217}}$	40 ± 7	D_{1420}	816.0 ± 5.0	$\sigma_8(0.38)$	0.670 ± 0.014
$\boldsymbol{A^{tSZ}_{143}}$	$3.9^{+1.9}_{-2.5}$	D_{2000}	230.4 ± 1.7	$f\sigma_8(0.51)$	0.479 ± 0.012
$\boldsymbol{r^{PS}_{143\times217}}$	0.66 ± 0.13	$n_{s,0.002}$	0.9662 ± 0.0040	$\sigma_8(0.51)$	0.627 ± 0.013
$\boldsymbol{r^{CIB}_{143\times217}}$	$0.56^{+0.39}_{-0.18}$	Y_P	0.245372 ± 0.000060	$f\sigma_8(0.61)$	0.474 ± 0.012
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	0.246698 ± 0.000060	$\sigma_8(0.61)$	0.597 ± 0.012
$\boldsymbol{A^{kSZ}}$	$4.6^{+1.8}_{-4.3}$	10^5D/H	2.596 ± 0.028	$f\sigma_8(2.33)$	0.3009 ± 0.0063
$\boldsymbol{A^{dust}_{100}}$	1.00 ± 0.20	Age/Gyr	13.783 ± 0.031	$\sigma_8(2.33)$	0.3095 ± 0.0053
$\boldsymbol{A^{dust}_{143}}$	0.96 ± 0.18	z_*	1089.94 ± 0.24	f^{143}_{2000}	29.7 ± 2.8
$\boldsymbol{A^{dust}_{217}}$	0.98 ± 0.10	r_*	144.62 ± 0.26	f^{217}_{2000}	106.8 ± 1.9
$\boldsymbol{A^{dust}_{143\times217}}$	1.03 ± 0.16	$100\theta_*$	1.04110 ± 0.00030	$f^{143\times217}_{2000}$	32.1 ± 2.0
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	$D_M(z_*)$/Gpc	13.892 ± 0.024	$\chi^2_{lensing}$	9.26 ± 0.77
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	z_{drag}	1059.77 ± 0.32	χ^2_{simall}	396.9 ± 1.7
$\boldsymbol{c_{TE}}$	0.9966 ± 0.0049	r_{drag}	147.31 ± 0.27	χ^2_{lowl}	23.05 ± 0.80
$\boldsymbol{c_{EE}}$	0.9922 ± 0.0050	k_D	0.14060 ± 0.00032	$\chi^2_{CamSpec}$	11514.0 ± 5.5
H_0	$68.5^{+1.3}_{-1.5}$	$100\theta_D$	0.16085 ± 0.00019	χ^2_{6DF}	0.13 ± 0.20
Ω_Λ	0.696 ± 0.012	z_{eq}	3387 ± 25	χ^2_{MGS}	1.87 ± 0.99
Ω_m	0.304 ± 0.012	k_{eq}	0.010338 ± 0.000076	$\chi^2_{DR12BAO}$	5.0 ± 1.3
$\Omega_m h^2$	0.1424 ± 0.0010	$100\theta_{eq}$	0.8159 ± 0.0047	χ^2_{prior}	7.9 ± 3.5
$\Omega_m h^3$	0.0975 ± 0.0023	$100\theta_{s,eq}$	0.4508 ± 0.0024	χ^2_{CMB}	11943.2 ± 5.8
σ_8	0.817 ± 0.016	$H(0.15)$	73.37 ± 0.85	χ^2_{BAO}	7.0 ± 1.7
S_8	0.822 ± 0.011	$D_M(0.15)$	635 ± 10		

$\bar{\chi}^2_{eff} = 11958.08$; $\Delta\bar{\chi}^2_{eff} = 0.68$; $R - 1 = 0.01812$

18.33 base_w_CamSpecHM_TTTEEE_lowl_lowE_BAO_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02232 ± 0.00015	$\sigma_8\Omega_m^{0.5}$	0.4498 ± 0.0071	$H(0.38)$	83.09 ± 0.32
$\boldsymbol{\Omega_c h^2}$	0.1192 ± 0.0013	$\sigma_8\Omega_m^{0.25}$	0.605 ± 0.010	$D_M(0.38)$	1522 ± 17
$\boldsymbol{100\theta_{MC}}$	1.04093 ± 0.00031	$\sigma_8/h^{0.5}$	0.986 ± 0.015	$H(0.51)$	89.68 ± 0.26
$\boldsymbol{\tau}$	$0.0544^{+0.0047}_{-0.0084}$	$r_{drag}h$	$100.6^{+1.9}_{-2.2}$	$D_M(0.51)$	1974 ± 17
$\boldsymbol{w_0}$	$-1.024^{+0.059}_{-0.051}$	$\langle d^2\rangle^{1/2}$	2.433 ± 0.031	$H(0.61)$	$95.23^{+0.35}_{-0.29}$
$\boldsymbol{\ln(10^{10}A_s)}$	$3.041^{+0.011}_{-0.016}$	z_{re}	$7.67^{+0.53}_{-0.84}$	$D_M(0.61)$	2298 ± 17
$\boldsymbol{n_s}$	0.9669 ± 0.0042	$10^9 A_s$	$2.093^{+0.024}_{-0.034}$	$H(2.33)$	235.71 ± 0.75
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0026	$10^9 A_s e^{-2\tau}$	1.877 ± 0.012	$D_M(2.33)$	5761.8 ± 9.3
$\boldsymbol{A^{PS}_{100}}$	240 ± 24	D_{40}	1224 ± 12	$f\sigma_8(0.15)$	0.4567 ± 0.0096
$\boldsymbol{A^{PS}_{143}}$	39 ± 8	D_{220}	5719 ± 40	$\sigma_8(0.15)$	0.753 ± 0.018
$\boldsymbol{A^{PS}_{217}}$	102 ± 10	D_{810}	2535 ± 14	$f\sigma_8(0.38)$	0.478 ± 0.013
$\boldsymbol{A^{CIB}_{217}}$	40 ± 7	D_{1420}	815.9 ± 5.0	$\sigma_8(0.38)$	0.668 ± 0.016
$\boldsymbol{A^{tSZ}_{143}}$	$3.9^{+1.9}_{-2.5}$	D_{2000}	230.4 ± 1.7	$f\sigma_8(0.51)$	0.477 ± 0.014
$\boldsymbol{r^{PS}_{143\times217}}$	0.66 ± 0.13	$n_{s,0.002}$	0.9669 ± 0.0042	$\sigma_8(0.51)$	0.625 ± 0.015
$\boldsymbol{r^{CIB}_{143\times217}}$	$0.56^{+0.39}_{-0.18}$	Y_P	0.245375 ± 0.000060	$f\sigma_8(0.61)$	0.472 ± 0.015
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	0.246701 ± 0.000060	$\sigma_8(0.61)$	0.595 ± 0.014
$\boldsymbol{A^{kSZ}}$	$4.7^{+2.0}_{-4.1}$	10^5D/H	2.595 ± 0.028	$f\sigma_8(2.33)$	0.2999 ± 0.0072
$\boldsymbol{A^{dust}_{100}}$	1.01 ± 0.20	Age/Gyr	13.786 ± 0.032	$\sigma_8(2.33)$	0.3088 ± 0.0061
$\boldsymbol{A^{dust}_{143}}$	0.96 ± 0.18	z_*	1089.91 ± 0.26	f^{143}_{2000}	29.6 ± 2.8
$\boldsymbol{A^{dust}_{217}}$	0.98 ± 0.10	r_*	144.67 ± 0.30	f^{217}_{2000}	106.8 ± 1.9
$\boldsymbol{A^{dust}_{143\times217}}$	1.03 ± 0.16	$100\theta_*$	1.04112 ± 0.00031	$f^{143\times217}_{2000}$	32.0 ± 2.0
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	$D_M(z_*)$/Gpc	13.896 ± 0.028	χ^2_{simall}	396.8 ± 1.7
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	z_{drag}	1059.77 ± 0.32	χ^2_{lowl}	22.93 ± 0.85
$\boldsymbol{c_{TE}}$	0.9966 ± 0.0049	r_{drag}	147.35 ± 0.30	$\chi^2_{CamSpec}$	11514.5 ± 5.7
$\boldsymbol{c_{EE}}$	0.9921 ± 0.0049	k_D	0.14056 ± 0.00035	χ^2_{6DF}	0.13 ± 0.20
H_0	$68.3^{+1.3}_{-1.5}$	$100\theta_D$	0.16085 ± 0.00019	χ^2_{MGS}	1.78 ± 0.99
Ω_Λ	0.695 ± 0.012	z_{eq}	3382 ± 29	$\chi^2_{DR12BAO}$	4.9 ± 1.4
Ω_m	0.305 ± 0.012	k_{eq}	0.010324 ± 0.000088	χ^2_{prior}	7.9 ± 3.4
$\Omega_m h^2$	0.1422 ± 0.0012	$100\theta_{eq}$	0.8167 ± 0.0054	χ^2_{BAO}	6.8 ± 1.8
$\Omega_m h^3$	$0.0971^{+0.0023}_{-0.0025}$	$100\theta_{s,eq}$	0.4512 ± 0.0028	χ^2_{CMB}	11934.2 ± 5.7
σ_8	0.815 ± 0.019	$H(0.15)$	73.28 ± 0.87		
S_8	0.821 ± 0.013	$D_M(0.15)$	637 ± 10		

$\bar{\chi}^2_{eff} = 11948.94$; $\Delta\bar{\chi}^2_{eff} = 0.95$; $R - 1 = 0.01259$

18.34 base_w_CamSpecHM_TTTEEE_lowl_lowE_BAO_post_lensing_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02232 ± 0.00015	$\sigma_8\Omega_m^{0.5}$	0.4507 ± 0.0058	$H(0.38)$	83.10 ± 0.31
$\boldsymbol{\Omega_c h^2}$	0.1194 ± 0.0011	$\sigma_8\Omega_m^{0.25}$	0.6069 ± 0.0081	$D_M(0.38)$	1521 ± 16
$\boldsymbol{100\theta_{MC}}$	1.04091 ± 0.00031	$\sigma_8/h^{0.5}$	0.988 ± 0.012	$H(0.51)$	89.67 ± 0.24
$\boldsymbol{\tau}$	$0.0548^{+0.0050}_{-0.0080}$	$r_{drag}h$	$100.8^{+1.9}_{-2.1}$	$D_M(0.51)$	1972 ± 17
$\boldsymbol{w_0}$	$-1.030^{+0.054}_{-0.049}$	$\langle d^2\rangle^{1/2}$	2.439 ± 0.023	$H(0.61)$	$95.20^{+0.31}_{-0.27}$
$\boldsymbol{\ln(10^{10}A_s)}$	$3.043^{+0.011}_{-0.015}$	z_{re}	$7.72^{+0.56}_{-0.80}$	$D_M(0.61)$	2297 ± 17
$\boldsymbol{n_s}$	0.9664 ± 0.0040	$10^9 A_s$	$2.096^{+0.024}_{-0.032}$	$H(2.33)$	235.69 ± 0.74
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0026	$10^9 A_s e^{-2\tau}$	1.878 ± 0.011	$D_M(2.33)$	5761.7 ± 9.1
$\boldsymbol{A^{PS}_{100}}$	240 ± 25	D_{40}	1226 ± 11	$f\sigma_8(0.15)$	0.4581 ± 0.0075
$\boldsymbol{A^{PS}_{143}}$	39 ± 8	D_{220}	5722 ± 39	$\sigma_8(0.15)$	0.756 ± 0.016
$\boldsymbol{A^{PS}_{217}}$	103 ± 10	D_{810}	2535 ± 14	$f\sigma_8(0.38)$	0.479 ± 0.011
$\boldsymbol{A^{CIB}_{217}}$	40 ± 7	D_{1420}	816.0 ± 5.0	$\sigma_8(0.38)$	0.670 ± 0.014
$\boldsymbol{A^{tSZ}_{143}}$	$3.9^{+1.9}_{-2.5}$	D_{2000}	230.4 ± 1.7	$f\sigma_8(0.51)$	$0.479^{+0.011}_{-0.012}$
$\boldsymbol{r^{PS}_{143\times217}}$	0.66 ± 0.13	$n_{s,0.002}$	0.9664 ± 0.0040	$\sigma_8(0.51)$	0.627 ± 0.013
$\boldsymbol{r^{CIB}_{143\times217}}$	$0.56^{+0.39}_{-0.18}$	Y_P	0.245373 ± 0.000059	$f\sigma_8(0.61)$	0.474 ± 0.012
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	0.246700 ± 0.000059	$\sigma_8(0.61)$	0.597 ± 0.012
$\boldsymbol{A^{kSZ}}$	$4.6^{+1.7}_{-4.3}$	10^5D/H	2.596 ± 0.028	$f\sigma_8(2.33)$	0.3010 ± 0.0063
$\boldsymbol{A^{dust}_{100}}$	1.00 ± 0.20	Age/Gyr	13.783 ± 0.031	$\sigma_8(2.33)$	0.3096 ± 0.0053
$\boldsymbol{A^{dust}_{143}}$	0.96 ± 0.18	z_*	1089.93 ± 0.24	f^{143}_{2000}	29.7 ± 2.8
$\boldsymbol{A^{dust}_{217}}$	0.98 ± 0.10	r_*	144.63 ± 0.26	f^{217}_{2000}	106.8 ± 1.9
$\boldsymbol{A^{dust}_{143\times217}}$	1.03 ± 0.16	$100\theta_*$	1.04110 ± 0.00030	$f^{143\times217}_{2000}$	32.0 ± 2.0
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	$D_M(z_*)$/Gpc	13.892 ± 0.024	$\chi^2_{lensing}$	9.22 ± 0.72
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	z_{drag}	1059.77 ± 0.32	χ^2_{simall}	396.9 ± 1.7
$\boldsymbol{c_{TE}}$	0.9965 ± 0.0049	r_{drag}	147.32 ± 0.27	χ^2_{lowl}	23.04 ± 0.79
$\boldsymbol{c_{EE}}$	0.9921 ± 0.0050	k_D	0.14059 ± 0.00032	$\chi^2_{CamSpec}$	11513.9 ± 5.6
H_0	$68.4^{+1.3}_{-1.5}$	$100\theta_D$	0.16085 ± 0.00019	χ^2_{6DF}	0.13 ± 0.20
Ω_Λ	0.696 ± 0.012	z_{eq}	3386 ± 24	χ^2_{MGS}	1.86 ± 0.99
Ω_m	0.304 ± 0.012	k_{eq}	0.010334 ± 0.000075	$\chi^2_{DR12BAO}$	4.9 ± 1.3
$\Omega_m h^2$	0.1423 ± 0.0010	$100\theta_{eq}$	0.8161 ± 0.0046	χ^2_{prior}	7.9 ± 3.5
$\Omega_m h^3$	0.0974 ± 0.0023	$100\theta_{s,eq}$	0.4509 ± 0.0024	χ^2_{CMB}	11943.0 ± 5.8
σ_8	0.817 ± 0.016	$H(0.15)$	73.36 ± 0.85	χ^2_{BAO}	6.9 ± 1.7
S_8	0.823 ± 0.011	$D_M(0.15)$	636 ± 10		

$\bar{\chi}^2_{eff} = 11957.86$; $\Delta\bar{\chi}^2_{eff} = 0.60$; $R - 1 = 0.01772$

18.35 base_w_plikHM_TT_lowl_lowE_BAO_Riess18_JLA

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022194	0.02218 ± 0.00020	$\sigma_8\Omega_m^{0.25}$	0.6142	0.613 ± 0.011	$D_M(0.38)$	1507.0	1507 ± 11
$\boldsymbol{\Omega_c h^2}$	0.12001	0.1199 ± 0.0016	$\sigma_8/h^{0.5}$	0.9991	0.998 ± 0.016	$H(0.51)$	89.513	89.51 ± 0.36
$\boldsymbol{100\theta_{MC}}$	1.040912	1.04090 ± 0.00044	$r_{drag}h$	102.71	102.7 ± 1.3	$D_M(0.51)$	1958.9	1959 ± 11
$\boldsymbol{\tau}$	0.0527	0.0525 ± 0.0080	$\langle d^2\rangle^{1/2}$	2.4545	2.454 ± 0.035	$H(0.61)$	94.902	94.90 ± 0.39
$\boldsymbol{w_0}$	−1.0848	-1.084 ± 0.043	z_{re}	7.55	7.51 ± 0.82	$D_M(0.61)$	2284.3	2285 ± 12
$\boldsymbol{\ln(10^{10}A_s)}$	3.0406	3.040 ± 0.017	$10^9 A_s$	2.0917	2.090 ± 0.035	$H(2.33)$	235.20	235.18 ± 0.77
$\boldsymbol{n_s}$	0.96520	0.9645 ± 0.0048	$10^9 A_s e^{-2\tau}$	1.8824	1.881 ± 0.012	$D_M(2.33)$	5763.0	5764 ± 12
$\boldsymbol{\alpha_{JLA}}$	0.1420	0.1420 ± 0.0066	D_{40}	1227.4	1229 ± 14	$f\sigma_8(0.15)$	0.4646	0.464 ± 0.011
$\boldsymbol{\beta_{JLA}}$	3.116	3.118 ± 0.081	D_{220}	5714.9	5717 ± 41	$\sigma_8(0.15)$	0.7723	0.771 ± 0.015
$\boldsymbol{y_{cal}}$	1.00044	1.0004 ± 0.0025	D_{810}	2537.8	2536 ± 14	$f\sigma_8(0.38)$	0.4908	0.490 ± 0.013
$\boldsymbol{A_{217}^{CIB}}$	49.1	48 ± 7	D_{1420}	816.0	815.0 ± 5.1	$\sigma_8(0.38)$	0.6850	0.684 ± 0.013
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.25	—	D_{2000}	230.24	229.9 ± 1.8	$f\sigma_8(0.51)$	0.4916	0.491 ± 0.013
$\boldsymbol{A_{143}^{tSZ}}$	7.01	5.1 ± 2.0	$n_{s,0.002}$	0.96520	0.9645 ± 0.0048	$\sigma_8(0.51)$	0.6409	0.640 ± 0.012
$\boldsymbol{A_{100}^{PS}}$	254.9	263 ± 28	Y_P	0.245323	$0.245316^{+0.000092}_{-0.000076}$	$f\sigma_8(0.61)$	0.4874	0.487 ± 0.013
$\boldsymbol{A_{143}^{PS}}$	48.1	49 ± 8	Y_P^{BBN}	0.246649	$0.246642^{+0.000092}_{-0.000077}$	$\sigma_8(0.61)$	0.6097	0.609 ± 0.011
$\boldsymbol{A_{143\times217}^{PS}}$	44.8	43 ± 9	10^5D/H	2.6191	2.621 ± 0.038	$f\sigma_8(2.33)$	0.3074	0.3069 ± 0.0055
$\boldsymbol{A_{217}^{PS}}$	118.4	115 ± 10	Age/Gyr	13.7656	13.768 ± 0.028	$\sigma_8(2.33)$	0.31497	0.3145 ± 0.0047
$\boldsymbol{A^{kSZ}}$	0.00	< 4.76	z_*	1090.143	1090.15 ± 0.33	f_{2000}^{143}	30.22	30.9 ± 2.9
$\boldsymbol{A_{100}^{dustTT}}$	8.92	8.9 ± 1.8	r_*	144.565	144.60 ± 0.38	$f_{2000}^{143\times217}$	33.03	33.3 ± 2.0
$\boldsymbol{A_{143}^{dustTT}}$	10.76	10.7 ± 1.8	$100\theta_*$	1.041115	1.04111 ± 0.00044	f_{2000}^{217}	107.53	107.9 ± 1.9
$\boldsymbol{A_{143\times217}^{dustTT}}$	19.15	18.3 ± 3.3	$D_M(z_*)$/Gpc	13.8855	13.889 ± 0.036	χ^2_{simall}	395.87	396.9 ± 1.7
$\boldsymbol{A_{217}^{dustTT}}$	94.2	93.5 ± 7.4	z_{drag}	1059.513	1059.50 ± 0.44	χ^2_{lowl}	23.12	23.3 ± 1.0
$\boldsymbol{c_{100}}$	0.99963	0.99960 ± 0.00062	r_{drag}	147.288	147.32 ± 0.40	χ^2_{plik}	758.6	771.0 ± 5.4
$\boldsymbol{c_{217}}$	0.99825	0.99825 ± 0.00062	k_D	0.140524	0.14048 ± 0.00047	$\chi^2_{H073p45}$	5.01	5.4 ± 2.5
H_0	69.73	69.71 ± 0.93	$100\theta_D$	0.161004	0.16102 ± 0.00026	χ^2_{JLA}	696.56	699.0 ± 2.6
Ω_Λ	0.7063	0.7062 ± 0.0078	z_{eq}	3398.1	3396 ± 36	χ^2_{6DF}	0.118	0.17 ± 0.18
Ω_m	0.2937	0.2938 ± 0.0078	k_{eq}	0.010371	0.01036 ± 0.00011	χ^2_{MGS}	2.67	2.73 ± 0.74
$\Omega_m h^2$	0.14284	0.1427 ± 0.0015	$100\theta_{eq}$	0.8135	0.8140 ± 0.0067	$\chi^2_{DR12BAO}$	4.52	5.1 ± 1.0
$\Omega_m h^3$	0.09961	0.0995 ± 0.0018	$100\theta_{s,eq}$	0.44964	0.4499 ± 0.0035	χ^2_{prior}	1.41	7.3 ± 3.7
σ_8	0.8343	0.833 ± 0.016	$H(0.15)$	74.08	74.06 ± 0.56	χ^2_{BAO}	7.31	8.0 ± 1.6
S_8	0.8256	0.824 ± 0.016	$D_M(0.15)$	626.5	626.8 ± 6.4	χ^2_{CMB}	1177.6	1191.3 ± 5.4
$\sigma_8\Omega_m^{0.5}$	0.4522	0.4515 ± 0.0089	$H(0.38)$	83.185	83.17 ± 0.35			

Best-fit $\chi^2_{eff} = 1887.89$; $\bar{\chi}^2_{eff} = 1910.92$; $R - 1 = 0.00727$

χ^2_{eff}: BAO - 6DF: 0.12 MGS: 2.67 DR12BAO: 4.52 CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.87 commander_dx12_v3_2_29: 23.12 plik_rd12_HM_v22_TT: 758.61 Hubble - H073p45: 5.01 SN - JLA December_2013: 696.56

18.36 base_w_plikHM_TT_lowl_lowE_BAO_Riess18_JLA_post_lensing

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022209	0.02220 ± 0.00020	$\sigma_8\Omega_m^{0.25}$	0.6129	0.6119 ± 0.0083	$D_M(0.38)$	1506.3	1507 ± 11
$\boldsymbol{\Omega_c h^2}$	0.11977	0.1197 ± 0.0013	$\sigma_8/h^{0.5}$	0.9973	0.996 ± 0.012	$H(0.51)$	89.545	89.54 ± 0.32
$\boldsymbol{100\theta_{MC}}$	1.040854	1.04090 ± 0.00044	$r_{drag}h$	102.79	102.7 ± 1.3	$D_M(0.51)$	1958.0	1959 ± 11
$\boldsymbol{\tau}$	0.0529	0.0525 ± 0.0077	$\langle d^2\rangle^{1/2}$	2.4511	2.450 ± 0.025	$H(0.61)$	94.928	94.93 ± 0.34
$\boldsymbol{w_0}$	−1.0830	-1.081 ± 0.038	z_{re}	7.55	7.49 ± 0.79	$D_M(0.61)$	2283.2	2284 ± 12
$\boldsymbol{\ln(10^{10}A_s)}$	3.0404	3.039 ± 0.015	$10^9 A_s$	2.0914	2.089 ± 0.031	$H(2.33)$	235.07	235.10 ± 0.69
$\boldsymbol{n_s}$	0.96558	0.9647 ± 0.0043	$10^9 A_s e^{-2\tau}$	1.8815	1.880 ± 0.011	$D_M(2.33)$	5762.6	5763 ± 12
$\boldsymbol{y_{cal}}$	1.00047	1.0004 ± 0.0025	D_{40}	1226.7	1229 ± 12	$f\sigma_8(0.15)$	0.4632	0.4625 ± 0.0082
$\boldsymbol{\alpha_{JLA}}$	0.1421	0.1420 ± 0.0066	D_{220}	5717.4	5719 ± 41	$\sigma_8(0.15)$	0.7711	0.770 ± 0.012
$\boldsymbol{\beta_{JLA}}$	3.113	3.117 ± 0.082	D_{810}	2537.7	2536 ± 14	$f\sigma_8(0.38)$	0.4895	0.4886 ± 0.0099
$\boldsymbol{A_{217}^{CIB}}$	48.3	48 ± 7	D_{1420}	816.1	814.9 ± 5.1	$\sigma_8(0.38)$	0.6842	0.683 ± 0.011
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.37	—	D_{2000}	230.26	229.8 ± 1.8	$f\sigma_8(0.51)$	0.4904	0.489 ± 0.010
$\boldsymbol{A_{143}^{tSZ}}$	7.07	5.1 ± 2.0	$n_{s,0.002}$	0.96558	0.9647 ± 0.0043	$\sigma_8(0.51)$	0.6402	0.6390 ± 0.0097
$\boldsymbol{A_{100}^{PS}}$	253.2	263 ± 28	Y_P	0.245330	$0.245321^{+0.000089}_{-0.000075}$	$f\sigma_8(0.61)$	0.4863	0.485 ± 0.010
$\boldsymbol{A_{143}^{PS}}$	49.7	49 ± 8	Y_P^{BBN}	0.246656	$0.246647^{+0.000089}_{-0.000075}$	$\sigma_8(0.61)$	0.6090	0.6078 ± 0.0091
$\boldsymbol{A_{143\times217}^{PS}}$	48.0	43 ± 9	10^5D/H	2.6162	2.619 ± 0.037	$f\sigma_8(2.33)$	0.30713	0.3065 ± 0.0045
$\boldsymbol{A_{217}^{PS}}$	119.7	115 ± 10	Age/Gyr	13.7654	13.767 ± 0.028	$\sigma_8(2.33)$	0.31475	0.3142 ± 0.0039
$\boldsymbol{A^{kSZ}}$	0.01	< 4.83	z_*	1090.103	1090.12 ± 0.31	f_{2000}^{143}	30.08	30.9 ± 2.9
$\boldsymbol{A_{100}^{dustTT}}$	8.84	8.9 ± 1.8	r_*	144.615	144.63 ± 0.32	$f_{2000}^{143\times217}$	33.04	33.3 ± 2.0
$\boldsymbol{A_{143}^{dustTT}}$	10.75	10.7 ± 1.8	$100\theta_*$	1.041063	1.04110 ± 0.00043	f_{2000}^{217}	107.47	107.9 ± 1.9
$\boldsymbol{A_{143\times217}^{dustTT}}$	19.49	18.3 ± 3.3	$D_M(z_*)$/Gpc	13.8910	13.892 ± 0.031	$\chi^2_{lensing}$	8.717	9.22 ± 0.78
$\boldsymbol{A_{217}^{dustTT}}$	94.7	93.4 ± 7.3	z_{drag}	1059.551	1059.51 ± 0.44	χ^2_{simall}	395.86	396.8 ± 1.6
$\boldsymbol{c_{100}}$	0.99966	0.99961 ± 0.00061	r_{drag}	147.332	147.36 ± 0.34	χ^2_{lowl}	23.06	23.27 ± 0.87
$\boldsymbol{c_{217}}$	0.99823	0.99825 ± 0.00062	k_D	0.140488	0.14045 ± 0.00044	χ^2_{plik}	758.81	770.9 ± 5.2
H_0	69.77	69.72 ± 0.91	$100\theta_D$	0.160982	0.16101 ± 0.00026	$\chi^2_{H073p45}$	4.92	5.4 ± 2.5
Ω_Λ	0.7070	0.7065 ± 0.0078	z_{eq}	3392.8	3392 ± 30	χ^2_{JLA}	696.55	698.9 ± 2.6
Ω_m	0.2930	0.2935 ± 0.0078	k_{eq}	0.010355	0.010352 ± 0.000091	χ^2_{6DF}	0.131	0.18 ± 0.18
$\Omega_m h^2$	0.14262	0.1426 ± 0.0012	$100\theta_{eq}$	0.8145	0.8147 ± 0.0055	χ^2_{MGS}	2.76	2.77 ± 0.75
$\Omega_m h^3$	0.09951	0.0994 ± 0.0017	$100\theta_{s,eq}$	0.45013	0.4502 ± 0.0029	$\chi^2_{DR12BAO}$	4.50	4.96 ± 0.90
σ_8	0.8330	0.832 ± 0.013	$H(0.15)$	74.12	74.08 ± 0.56	χ^2_{prior}	1.34	7.2 ± 3.6
S_8	0.8232	0.822 ± 0.012	$D_M(0.15)$	626.2	626.6 ± 6.3	χ^2_{CMB}	1186.4	1200.3 ± 5.4
$\sigma_8\Omega_m^{0.5}$	0.4509	0.4504 ± 0.0066	$H(0.38)$	83.222	83.21 ± 0.32	χ^2_{BAO}	7.38	7.9 ± 1.6

Best-fit $\chi^2_{eff} = 1896.64$; $\Delta\chi^2_{eff} = -16.17$; $\bar{\chi}^2_{eff} = 1919.63$; $\Delta\bar{\chi}^2_{eff} = -13.41$; $R - 1 = 0.00916$

χ^2_{eff}: BAO - 6DF: 0.13 (Δ 0.13) MGS: 2.76 (Δ 1.08) DR12BAO: 4.50 (Δ 1.00) CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.72 (Δ -0.23) simall_100x143_offlike5_EE_Aplanck_ 395.86 (Δ -0.97) commander_dx12_v3_2_29: 23.05 (Δ 0.47) plik_rd12_HM_v22_TT: 758.81 (Δ -2.01) Hubble - H073p45: 4.92 (Δ -5.68) SN - JLA December_2013: 696.55 (Δ -10.04)

18.37 base_w_plikHM_TT_lowl_lowE_BAO_Riess18_JLA_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02219 ± 0.00020	$\sigma_8\Omega_m^{0.25}$	0.614 ± 0.011	$D_M(0.38)$	1507 ± 11
$\boldsymbol{\Omega_c h^2}$	0.1199 ± 0.0016	$\sigma_8/h^{0.5}$	0.999 ± 0.016	$H(0.51)$	89.52 ± 0.36
$\boldsymbol{100\theta_{MC}}$	1.04091 ± 0.00044	$r_{drag}h$	102.7 ± 1.3	$D_M(0.51)$	1959 ± 11
$\boldsymbol{\tau}$	$0.0542^{+0.0047}_{-0.0082}$	$\langle d^2\rangle^{1/2}$	2.456 ± 0.034	$H(0.61)$	94.91 ± 0.39
$\boldsymbol{w_0}$	-1.083 ± 0.043	z_{re}	$7.68^{+0.52}_{-0.82}$	$D_M(0.61)$	2285 ± 12
$\boldsymbol{\ln(10^{10}A_s)}$	$3.043^{+0.012}_{-0.016}$	$10^9 A_s$	$2.096^{+0.024}_{-0.035}$	$H(2.33)$	235.16 ± 0.77
$\boldsymbol{n_s}$	0.9647 ± 0.0048	$10^9 A_s e^{-2\tau}$	1.881 ± 0.012	$D_M(2.33)$	5763 ± 12
$\boldsymbol{\alpha_{JLA}}$	0.1420 ± 0.0066	D_{40}	1229 ± 14	$f\sigma_8(0.15)$	0.464 ± 0.011
$\boldsymbol{\beta_{JLA}}$	3.118 ± 0.081	D_{220}	5717 ± 41	$\sigma_8(0.15)$	0.772 ± 0.015
$\boldsymbol{y_{cal}}$	1.0004 ± 0.0026	D_{810}	2536 ± 14	$f\sigma_8(0.38)$	0.490 ± 0.013
$\boldsymbol{A_{217}^{CIB}}$	47 ± 7	D_{1420}	815.0 ± 5.1	$\sigma_8(0.38)$	0.685 ± 0.013
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{2000}	229.9 ± 1.8	$f\sigma_8(0.51)$	0.491 ± 0.013
$\boldsymbol{A_{143}^{tSZ}}$	5.1 ± 2.0	$n_{s,0.002}$	0.9647 ± 0.0048	$\sigma_8(0.51)$	0.641 ± 0.012
$\boldsymbol{A_{100}^{PS}}$	262 ± 28	Y_P	$0.245318^{+0.000091}_{-0.000076}$	$f\sigma_8(0.61)$	0.487 ± 0.013
$\boldsymbol{A_{143}^{PS}}$	48 ± 8	Y_P^{BBN}	$0.246644^{+0.000091}_{-0.000076}$	$\sigma_8(0.61)$	0.609 ± 0.011
$\boldsymbol{A_{143\times217}^{PS}}$	43 ± 9	10^5D/H	2.620 ± 0.038	$f\sigma_8(2.33)$	0.3073 ± 0.0055
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	Age/Gyr	13.767 ± 0.028	$\sigma_8(2.33)$	0.3149 ± 0.0046
$\boldsymbol{A^{kSZ}}$	< 4.72	z_*	1090.14 ± 0.33	f_{2000}^{143}	30.8 ± 2.9
$\boldsymbol{A_{100}^{dustTT}}$	8.9 ± 1.8	r_*	144.61 ± 0.38	$f_{2000}^{143\times217}$	33.2 ± 2.0
$\boldsymbol{A_{143}^{dustTT}}$	10.7 ± 1.8	$100\theta_*$	1.04112 ± 0.00043	f_{2000}^{217}	107.9 ± 1.9
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.3 ± 3.3	$D_M(z_*)$/Gpc	13.890 ± 0.036	χ^2_{simall}	396.8 ± 1.8
$\boldsymbol{A_{217}^{dustTT}}$	93.5 ± 7.3	z_{drag}	1059.51 ± 0.44	χ^2_{lowl}	23.3 ± 1.0
$\boldsymbol{c_{100}}$	0.99960 ± 0.00061	r_{drag}	147.33 ± 0.40	χ^2_{plik}	770.9 ± 5.3
$\boldsymbol{c_{217}}$	0.99825 ± 0.00062	k_D	0.14047 ± 0.00047	$\chi^2_{H073p45}$	5.4 ± 2.5
H_0	69.71 ± 0.93	$100\theta_D$	0.16102 ± 0.00026	χ^2_{JLA}	698.9 ± 2.6
Ω_Λ	0.7062 ± 0.0078	z_{eq}	3395 ± 36	χ^2_{6DF}	0.17 ± 0.18
Ω_m	0.2938 ± 0.0078	k_{eq}	0.01036 ± 0.00011	χ^2_{MGS}	2.74 ± 0.74
$\Omega_m h^2$	0.1427 ± 0.0015	$100\theta_{eq}$	0.8142 ± 0.0067	$\chi^2_{DR12BAO}$	5.1 ± 1.0
$\Omega_m h^3$	0.0995 ± 0.0018	$100\theta_{s,eq}$	0.4500 ± 0.0035	χ^2_{prior}	7.3 ± 3.7
σ_8	0.834 ± 0.016	$H(0.15)$	74.06 ± 0.56	χ^2_{BAO}	8.0 ± 1.6
S_8	0.825 ± 0.016	$D_M(0.15)$	626.8 ± 6.4	χ^2_{CMB}	1191.0 ± 5.3
$\sigma_8\Omega_m^{0.5}$	0.4519 ± 0.0089	$H(0.38)$	83.19 ± 0.35		

$\bar{\chi}^2_{eff} = 1910.63$; $R - 1 = 0.00797$

18.38 base_w_plikHM_TT_lowl_lowE_BAO_Riess18_JLA_post_lensing_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02220 ± 0.00020	$\sigma_8\Omega_m^{0.25}$	0.6121 ± 0.0083	$D_M(0.38)$	1507 ± 11
$\boldsymbol{\Omega_c h^2}$	0.1196 ± 0.0013	$\sigma_8/h^{0.5}$	0.996 ± 0.012	$H(0.51)$	89.56 ± 0.31
$\boldsymbol{100\theta_{MC}}$	1.04091 ± 0.00043	$r_{drag}h$	102.7 ± 1.3	$D_M(0.51)$	1959 ± 11
$\boldsymbol{\tau}$	$0.0540^{+0.0046}_{-0.0079}$	$\langle d^2\rangle^{1/2}$	2.452 ± 0.025	$H(0.61)$	94.95 ± 0.34
$\boldsymbol{w_0}$	-1.079 ± 0.038	z_{re}	$7.65^{+0.51}_{-0.79}$	$D_M(0.61)$	2284 ± 12
$\boldsymbol{\ln(10^{10}A_s)}$	$3.042^{+0.011}_{-0.015}$	$10^9 A_s$	$2.094^{+0.022}_{-0.031}$	$H(2.33)$	235.06 ± 0.69
$\boldsymbol{n_s}$	0.9650 ± 0.0043	$10^9 A_s e^{-2\tau}$	1.880 ± 0.011	$D_M(2.33)$	5762 ± 12
$\boldsymbol{y_{cal}}$	1.0004 ± 0.0025	D_{40}	1228 ± 12	$f\sigma_8(0.15)$	0.4625 ± 0.0082
$\boldsymbol{\alpha_{JLA}}$	0.1419 ± 0.0066	D_{220}	5719 ± 41	$\sigma_8(0.15)$	0.770 ± 0.012
$\boldsymbol{\beta_{JLA}}$	3.116 ± 0.082	D_{810}	2535 ± 14	$f\sigma_8(0.38)$	0.4885 ± 0.0099
$\boldsymbol{A_{217}^{CIB}}$	48 ± 7	D_{1420}	814.9 ± 5.1	$\sigma_8(0.38)$	0.683 ± 0.011
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{2000}	229.9 ± 1.8	$f\sigma_8(0.51)$	0.489 ± 0.010
$\boldsymbol{A_{143}^{tSZ}}$	5.1 ± 2.0	$n_{s,0.002}$	0.9650 ± 0.0043	$\sigma_8(0.51)$	0.6393 ± 0.0097
$\boldsymbol{A_{100}^{PS}}$	263 ± 28	Y_P	$0.245323^{+0.000088}_{-0.000075}$	$f\sigma_8(0.61)$	0.485 ± 0.010
$\boldsymbol{A_{143}^{PS}}$	48 ± 8	Y_P^{BBN}	$0.246650^{+0.000088}_{-0.000075}$	$\sigma_8(0.61)$	0.6081 ± 0.0091
$\boldsymbol{A_{143\times217}^{PS}}$	43 ± 9	10^5D/H	2.618 ± 0.037	$f\sigma_8(2.33)$	0.3067 ± 0.0045
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	Age/Gyr	13.767 ± 0.028	$\sigma_8(2.33)$	0.3145 ± 0.0038
$\boldsymbol{A^{kSZ}}$	< 4.81	z_*	1090.10 ± 0.30	f_{2000}^{143}	30.8 ± 2.9
$\boldsymbol{A_{100}^{dustTT}}$	8.9 ± 1.8	r_*	144.65 ± 0.32	$f_{2000}^{143\times217}$	33.3 ± 2.0
$\boldsymbol{A_{143}^{dustTT}}$	10.7 ± 1.8	$100\theta_*$	1.04111 ± 0.00043	f_{2000}^{217}	107.9 ± 1.9
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.3 ± 3.3	$D_M(z_*)$/Gpc	13.894 ± 0.030	$\chi^2_{lensing}$	9.20 ± 0.78
$\boldsymbol{A_{217}^{dustTT}}$	93.4 ± 7.3	z_{drag}	1059.52 ± 0.44	χ^2_{smallI}	396.7 ± 1.6
$\boldsymbol{c_{100}}$	0.99961 ± 0.00061	r_{drag}	147.38 ± 0.34	χ^2_{lowl}	23.26 ± 0.87
$\boldsymbol{c_{217}}$	0.99825 ± 0.00062	k_D	0.14044 ± 0.00043	χ^2_{plik}	770.8 ± 5.2
H_0	69.70 ± 0.91	$100\theta_D$	0.16101 ± 0.00026	$\chi^2_{H073p45}$	5.4 ± 2.5
Ω_Λ	0.7066 ± 0.0078	z_{eq}	3389 ± 29	χ^2_{JLA}	698.8 ± 2.6
Ω_m	0.2934 ± 0.0078	k_{eq}	0.010345 ± 0.000089	χ^2_{6DF}	0.18 ± 0.18
$\Omega_m h^2$	0.1425 ± 0.0012	$100\theta_{eq}$	0.8151 ± 0.0054	χ^2_{MGS}	2.78 ± 0.75
$\Omega_m h^3$	0.0993 ± 0.0016	$100\theta_{s,eq}$	0.4505 ± 0.0028	$\chi^2_{DR12BAO}$	4.92 ± 0.89
σ_8	0.832 ± 0.013	$H(0.15)$	74.09 ± 0.56	χ^2_{prior}	7.2 ± 3.6
S_8	0.822 ± 0.012	$D_M(0.15)$	626.7 ± 6.4	χ^2_{CMB}	1200.0 ± 5.4
$\sigma_8\Omega_m^{0.5}$	0.4505 ± 0.0067	$H(0.38)$	83.23 ± 0.32	χ^2_{BAO}	7.9 ± 1.6

$\bar{\chi}^2_{eff} = 1919.34$; $\Delta\bar{\chi}^2_{eff} = -13.61$; $R - 1 = 0.00910$

18.39 base_w_plikHM_TTTEEE_lowl_lowE_BAO_Riess18_JLA

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022407	0.02239 ± 0.00014	$\Omega_m h^3$	0.10004	0.0999 ± 0.0017	$D_M(0.15)$	624.9	625.5 ± 6.5
$\boldsymbol{\Omega_c h^2}$	0.12001	0.1199 ± 0.0012	σ_8	0.8358	0.834 ± 0.014	$H(0.38)$	83.366	83.34 ± 0.29
$\boldsymbol{100\theta_{MC}}$	1.040974	1.04095 ± 0.00030	S_8	0.8254	0.824 ± 0.013	$D_M(0.38)$	1503.3	1504 ± 11
$\boldsymbol{\tau}$	0.0545	0.0544 ± 0.0080	$\sigma_8 \Omega_m^{0.5}$	0.4521	0.4515 ± 0.0072	$H(0.51)$	89.690	89.67 ± 0.28
$\boldsymbol{w_0}$	−1.0843	-1.082 ± 0.038	$\sigma_8 \Omega_m^{0.25}$	0.6147	0.6137 ± 0.0093	$D_M(0.51)$	1954.2	1955 ± 11
$\boldsymbol{\ln(10^{10} A_s)}$	3.0450	3.045 ± 0.016	$\sigma_8/h^{0.5}$	0.9995	0.998 ± 0.014	$H(0.61)$	95.077	95.07 ± 0.30
$\boldsymbol{n_s}$	0.96665	0.9654 ± 0.0041	$r_{drag} h$	102.83	102.8 ± 1.4	$D_M(0.61)$	2279.0	2280 ± 12
$\boldsymbol{\alpha_{JLA}}$	0.1420	0.1420 ± 0.0066	$\langle d^2 \rangle^{1/2}$	2.4555	2.456 ± 0.029	$H(2.33)$	235.42	235.41 ± 0.62
$\boldsymbol{\beta_{JLA}}$	3.117	3.119 ± 0.081	z_{re}	7.68	7.65 ± 0.81	$D_M(2.33)$	5753.2	5754.4 ± 9.0
$\boldsymbol{y_{cal}}$	1.00045	1.0007 ± 0.0025	$10^9 A_s$	2.1011	2.100 ± 0.034	$f\sigma_8(0.15)$	0.4646	0.4638 ± 0.0088
$\boldsymbol{A_{217}^{CIB}}$	45.4	47 ± 7	$10^9 A_s e^{-2\tau}$	1.8842	1.884 ± 0.012	$\sigma_8(0.15)$	0.7737	0.772 ± 0.013
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.72	—	D_{40}	1227.0	1230 ± 12	$f\sigma_8(0.38)$	0.4911	0.490 ± 0.011
$\boldsymbol{A_{143}^{tSZ}}$	7.07	$5.5^{+2.1}_{-1.9}$	D_{220}	5730.6	5737 ± 39	$\sigma_8(0.38)$	0.6865	0.685 ± 0.012
$\boldsymbol{A_{100}^{PS}}$	247.7	258 ± 28	D_{810}	2541.6	2540 ± 14	$f\sigma_8(0.51)$	0.4920	0.491 ± 0.011
$\boldsymbol{A_{143}^{PS}}$	51.2	46 ± 8	D_{1420}	818.77	817.6 ± 4.7	$\sigma_8(0.51)$	0.6423	0.641 ± 0.011
$\boldsymbol{A_{143\times217}^{PS}}$	54.7	43 ± 9	D_{2000}	231.56	231.1 ± 1.5	$f\sigma_8(0.61)$	0.4879	0.487 ± 0.011
$\boldsymbol{A_{217}^{PS}}$	122.7	115 ± 10	$n_{s,0.002}$	0.96665	0.9654 ± 0.0041	$\sigma_8(0.61)$	0.6110	0.610 ± 0.010
$\boldsymbol{A^{kSZ}}$	0.01	< 4.15	Y_P	0.245410	0.245401 ± 0.000055	$f\sigma_8(2.33)$	0.3082	0.3075 ± 0.0050
$\boldsymbol{A_{100}^{dust TT}}$	8.80	8.9 ± 1.8	Y_P^{BBN}	0.246736	0.246728 ± 0.000055	$\sigma_8(2.33)$	0.31579	0.3152 ± 0.0044
$\boldsymbol{A_{143}^{dust TT}}$	11.08	10.9 ± 1.8	10^5D/H	2.5787	2.582 ± 0.026	f_{2000}^{143}	28.37	29.3 ± 2.7
$\boldsymbol{A_{143\times217}^{dust TT}}$	20.27	18.6 ± 3.3	Age/Gyr	13.7426	13.747 ± 0.023	$f_{2000}^{143\times217}$	31.79	32.1 ± 1.8
$\boldsymbol{A_{217}^{dust TT}}$	95.7	93.7 ± 7.3	z_*	1089.874	1089.89 ± 0.25	f_{2000}^{217}	106.31	106.9 ± 1.8
$\boldsymbol{A_{100}^{dust TE}}$	0.1140	0.115 ± 0.038	r_*	144.400	144.43 ± 0.27	χ^2_{small}	396.06	397.1 ± 2.0
$\boldsymbol{A_{100\times143}^{dust TE}}$	0.1348	0.135 ± 0.029	$100\theta_*$	1.041149	1.04113 ± 0.00030	χ^2_{lowl}	23.01	23.29 ± 0.87
$\boldsymbol{A_{100\times217}^{dust TE}}$	0.480	0.481 ± 0.086	$D_M(z_*)$/Gpc	13.8693	13.873 ± 0.025	χ^2_{plik}	2344.3	2358.9 ± 5.9
$\boldsymbol{A_{143}^{dust TE}}$	0.226	0.225 ± 0.053	z_{drag}	1060.009	1059.97 ± 0.29	$\chi^2_{H073p45}$	4.50	5.0 ± 2.5
$\boldsymbol{A_{143\times217}^{dust TE}}$	0.665	0.666 ± 0.080	r_{drag}	147.049	147.09 ± 0.27	χ^2_{JLA}	696.62	698.9 ± 2.6
$\boldsymbol{A_{217}^{dust TE}}$	2.085	2.08 ± 0.27	k_D	0.140941	0.14088 ± 0.00031	χ^2_{6DF}	0.135	0.18 ± 0.19
$\boldsymbol{c_{100}}$	0.99973	0.99967 ± 0.00061	$100\theta_D$	0.160715	0.16074 ± 0.00017	χ^2_{MGS}	2.76	2.77 ± 0.76
$\boldsymbol{c_{217}}$	0.99817	0.99819 ± 0.00062	z_{eq}	3403.4	3401 ± 27	$\chi^2_{DR12BAO}$	4.54	4.98 ± 0.87
H_0	69.93	69.86 ± 0.94	k_{eq}	0.010387	0.010380 ± 0.000082	χ^2_{prior}	1.56	11.6 ± 4.5
Ω_Λ	0.7074	0.7069 ± 0.0079	$100\theta_{eq}$	0.8132	0.8136 ± 0.0051	χ^2_{BAO}	7.44	7.9 ± 1.6
Ω_m	0.2926	0.2931 ± 0.0079	$100\theta_{s,eq}$	0.44932	0.4495 ± 0.0026	χ^2_{CMB}	2763.3	2779.3 ± 5.9
$\Omega_m h^2$	0.14306	0.1430 ± 0.0011	$H(0.15)$	74.27	74.22 ± 0.57			

Best-fit $\chi^2_{eff} = 3473.47$; $\bar{\chi}^2_{eff} = 3502.78$; $R - 1 = 0.01464$

χ^2_{eff}: BAO - 6DF: 0.14 MGS: 2.76 DR12BAO: 4.54 CMB - simall_100x143_offlike5_EE_Aplanck_B: 396.06 commander_dx12_v3_2_29: 23.01 plik_rd12_HM_v22b_TTTEEE: 2344.29 Hubble - H073p45: 4.50 SN - JLA December_2013: 696.62

18.40 base_w_plikHM_TTTEEE_lowl_lowE_BAO_Riess18_JLA_post_lensing

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022427	0.02240 ± 0.00014	$\Omega_m h^3$	0.09975	0.0998 ± 0.0015	$D_M(0.15)$	625.2	625.3 ± 6.4
$\boldsymbol{\Omega_c h^2}$	0.11970	0.1197 ± 0.0010	σ_8	0.8329	0.832 ± 0.012	$H(0.38)$	83.408	83.38 ± 0.28
$\boldsymbol{100\theta_{MC}}$	1.040957	1.04096 ± 0.00030	S_8	0.8225	0.822 ± 0.010	$D_M(0.38)$	1503.4	1504 ± 11
$\boldsymbol{\tau}$	0.0545	0.0540 ± 0.0076	$\sigma_8\Omega_m^{0.5}$	0.4505	0.4502 ± 0.0057	$H(0.51)$	89.747	89.71 ± 0.25
$\boldsymbol{w_0}$	-1.0777	-1.079 ± 0.036	$\sigma_8\Omega_m^{0.25}$	0.6126	0.6121 ± 0.0072	$D_M(0.51)$	1954.1	1955 ± 11
$\boldsymbol{\ln(10^{10} A_s)}$	3.0454	3.043 ± 0.015	$\sigma_8/h^{0.5}$	0.9965	0.996 ± 0.011	$H(0.61)$	95.138	95.10 ± 0.28
$\boldsymbol{n_s}$	0.96658	0.9657 ± 0.0038	$r_{drag}h$	102.77	102.8 ± 1.4	$D_M(0.61)$	2278.6	2279 ± 12
$\boldsymbol{y_{cal}}$	1.00089	1.0006 ± 0.0025	$\langle d^2\rangle^{1/2}$	2.4520	2.452 ± 0.023	$H(2.33)$	235.32	235.33 ± 0.58
$\boldsymbol{\alpha_{JLA}}$	0.1420	0.1419 ± 0.0066	z_{re}	7.68	7.61 ± 0.77	$D_M(2.33)$	5752.3	5753.6 ± 8.8
$\boldsymbol{\beta_{JLA}}$	3.115	3.119 ± 0.080	$10^9 A_s$	2.1018	$2.097^{+0.028}_{-0.032}$	$f\sigma_8(0.15)$	0.4625	0.4623 ± 0.0069
$\boldsymbol{A_{217}^{CIB}}$	46.3	47 ± 7	$10^9 A_s e^{-2\tau}$	1.8846	1.883 ± 0.011	$\sigma_8(0.15)$	0.7711	0.771 ± 0.011
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.58	—	D_{40}	1228.6	1229 ± 11	$f\sigma_8(0.38)$	0.4887	0.4885 ± 0.0087
$\boldsymbol{A_{143}^{tSZ}}$	7.13	5.5 ± 1.9	D_{220}	5741.6	5737 ± 39	$\sigma_8(0.38)$	0.6843	0.684 ± 0.010
$\boldsymbol{A_{100}^{PS}}$	249.2	257 ± 28	D_{810}	2543.1	2539 ± 14	$f\sigma_8(0.51)$	0.4896	0.4894 ± 0.0091
$\boldsymbol{A_{143}^{PS}}$	49.4	46 ± 8	D_{1420}	819.15	817.5 ± 4.7	$\sigma_8(0.51)$	0.6404	0.6398 ± 0.0094
$\boldsymbol{A_{143\times217}^{PS}}$	51.2	42 ± 9	D_{2000}	231.63	231.0 ± 1.5	$f\sigma_8(0.61)$	0.4856	0.4854 ± 0.0092
$\boldsymbol{A_{217}^{PS}}$	121.3	115 ± 10	$n_{s,0.002}$	0.96658	0.9657 ± 0.0038	$\sigma_8(0.61)$	0.6092	0.6087 ± 0.0088
$\boldsymbol{A^{kSZ}}$	0.01	< 4.27	Y_P	0.245418	0.245405 ± 0.000054	$f\sigma_8(2.33)$	0.30734	0.3070 ± 0.0044
$\boldsymbol{A_{100}^{dustTT}}$	8.80	8.9 ± 1.8	Y_P^{BBN}	0.246744	0.246732 ± 0.000054	$\sigma_8(2.33)$	0.31513	0.3148 ± 0.0039
$\boldsymbol{A_{143}^{dustTT}}$	11.03	10.9 ± 1.8	10^5D/H	2.5749	2.580 ± 0.026	f_{2000}^{143}	28.56	29.4 ± 2.7
$\boldsymbol{A_{143\times217}^{dustTT}}$	20.09	18.6 ± 3.3	Age/Gyr	13.7430	13.746 ± 0.023	$f_{2000}^{143\times217}$	31.86	32.1 ± 1.9
$\boldsymbol{A_{217}^{dustTT}}$	95.6	93.6 ± 7.2	z_*	1089.821	1089.86 ± 0.23	f_{2000}^{217}	106.52	106.9 ± 1.8
$\boldsymbol{A_{100}^{dustTE}}$	0.1134	0.114 ± 0.038	r_*	144.465	144.47 ± 0.24	$\chi^2_{lensing}$	8.709	9.10 ± 0.68
$\boldsymbol{A_{100\times143}^{dustTE}}$	0.1347	0.135 ± 0.029	$100\theta_*$	1.041138	1.04114 ± 0.00030	χ^2_{simall}	396.06	397.0 ± 1.8
$\boldsymbol{A_{100\times217}^{dustTE}}$	0.483	0.481 ± 0.086	$D_M(z_*)$/Gpc	13.8757	13.876 ± 0.022	χ^2_{lowl}	23.04	23.21 ± 0.78
$\boldsymbol{A_{143}^{dustTE}}$	0.224	0.224 ± 0.052	z_{drag}	1060.047	1059.99 ± 0.29	χ^2_{plik}	2344.2	2358.8 ± 5.8
$\boldsymbol{A_{143\times217}^{dustTE}}$	0.664	0.667 ± 0.080	r_{drag}	147.107	147.13 ± 0.24	$\chi^2_{H073p45}$	4.67	5.0 ± 2.5
$\boldsymbol{A_{217}^{dustTE}}$	2.081	2.09 ± 0.27	k_D	0.140894	0.14085 ± 0.00029	χ^2_{JLA}	696.43	698.8 ± 2.5
$\boldsymbol{c_{100}}$	0.99973	0.99967 ± 0.00061	$100\theta_D$	0.160696	0.16073 ± 0.00017	χ^2_{6DF}	0.133	0.19 ± 0.19
$\boldsymbol{c_{217}}$	0.99820	0.99819 ± 0.00062	z_{eq}	3396.5	3397 ± 23	χ^2_{MGS}	2.76	2.81 ± 0.76
H_0	69.86	69.86 ± 0.93	k_{eq}	0.010366	0.010368 ± 0.000072	$\chi^2_{DR12BAO}$	4.45	4.91 ± 0.84
Ω_Λ	0.7075	0.7072 ± 0.0079	$100\theta_{eq}$	0.81451	0.8144 ± 0.0044	χ^2_{prior}	1.74	11.6 ± 4.5
Ω_m	0.2925	0.2928 ± 0.0079	$100\theta_{s,eq}$	0.44998	0.4499 ± 0.0023	χ^2_{CMB}	2772.0	2788.1 ± 6.0
$\Omega_m h^2$	0.14277	0.14279 ± 0.00098	$H(0.15)$	74.26	74.24 ± 0.57	χ^2_{BAO}	7.34	7.9 ± 1.6

Best-fit $\chi^2_{eff} = 3482.22$; $\Delta\chi^2_{eff} = -16.38$; $\bar{\chi}^2_{eff} = 3511.42$; $\Delta\bar{\chi}^2_{eff} = -13.45$; $R - 1 = 0.02202$

χ^2_{eff}: BAO - 6DF: 0.13 (Δ 0.13) MGS: 2.76 (Δ 1.15) DR12BAO: 4.45 (Δ 0.85) CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.71 (Δ -0.04) simall_100x143_offlike5_EE_Aplanck_ 396.06 (Δ -0.87) commander_dx12_v3_2_29: 23.04 (Δ 0.40) plik_rd12_HM_v22b_TTTEEE: 2344.24 (Δ -2.12) Hubble - H073p45: 4.67 (Δ -5.73) SN - JLA December_2013: 696.43 (Δ -10.17)

18.41 base_w_plikHM_TTTEEE_lowl_lowE_BAO_Riess18_JLA_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02239 ± 0.00014	$\Omega_m h^3$	0.0999 ± 0.0017	$D_M(0.15)$	625.5 ± 6.5
$\boldsymbol{\Omega_c h^2}$	0.1199 ± 0.0012	σ_8	0.835 ± 0.014	$H(0.38)$	83.34 ± 0.29
$\boldsymbol{100\theta_{MC}}$	1.04095 ± 0.00030	S_8	0.825 ± 0.013	$D_M(0.38)$	1504 ± 11
$\boldsymbol{\tau}$	$0.0556^{+0.0053}_{-0.0083}$	$\sigma_8\Omega_m^{0.5}$	0.4519 ± 0.0071	$H(0.51)$	89.68 ± 0.28
$\boldsymbol{w_0}$	-1.081 ± 0.038	$\sigma_8\Omega_m^{0.25}$	0.6142 ± 0.0091	$D_M(0.51)$	1955 ± 11
$\boldsymbol{\ln(10^{10}A_s)}$	$3.047^{+0.012}_{-0.016}$	$\sigma_8/h^{0.5}$	0.999 ± 0.013	$H(0.61)$	95.07 ± 0.30
$\boldsymbol{n_s}$	0.9655 ± 0.0040	$r_{drag}h$	102.8 ± 1.4	$D_M(0.61)$	2280 ± 12
$\boldsymbol{\alpha_{JLA}}$	0.1420 ± 0.0066	$\langle d^2\rangle^{1/2}$	2.459 ± 0.028	$H(2.33)$	235.40 ± 0.61
$\boldsymbol{\beta_{JLA}}$	3.119 ± 0.081	z_{re}	$7.78^{+0.58}_{-0.82}$	$D_M(2.33)$	5754.2 ± 9.0
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0025	10^9A_s	$2.105^{+0.025}_{-0.035}$	$f\sigma_8(0.15)$	0.4642 ± 0.0087
$\boldsymbol{A_{217}^{CIB}}$	47 ± 7	$10^9A_se^{-2\tau}$	1.883 ± 0.012	$\sigma_8(0.15)$	0.773 ± 0.013
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{40}	1230 ± 12	$f\sigma_8(0.38)$	0.490 ± 0.011
$\boldsymbol{A_{143}^{tSZ}}$	5.5 ± 1.9	D_{220}	5736 ± 39	$\sigma_8(0.38)$	0.686 ± 0.012
$\boldsymbol{A_{100}^{PS}}$	257 ± 28	D_{810}	2540 ± 14	$f\sigma_8(0.51)$	0.491 ± 0.011
$\boldsymbol{A_{143}^{PS}}$	46 ± 8	D_{1420}	817.5 ± 4.7	$\sigma_8(0.51)$	0.642 ± 0.011
$\boldsymbol{A_{143\times217}^{PS}}$	42 ± 9	D_{2000}	231.1 ± 1.5	$f\sigma_8(0.61)$	0.487 ± 0.011
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	$n_{s,0.002}$	0.9655 ± 0.0040	$\sigma_8(0.61)$	0.610 ± 0.010
$\boldsymbol{A^{kSZ}}$	< 4.13	Y_P	$0.245402^{+0.000057}_{-0.000052}$	$f\sigma_8(2.33)$	0.3078 ± 0.0050
$\boldsymbol{A_{100}^{dustTT}}$	8.9 ± 1.8	Y_P^{BBN}	$0.246729^{+0.000058}_{-0.000052}$	$\sigma_8(2.33)$	0.3156 ± 0.0043
$\boldsymbol{A_{143}^{dustTT}}$	10.9 ± 1.8	10^5D/H	2.582 ± 0.026	f_{2000}^{143}	29.3 ± 2.7
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.6 ± 3.3	Age/Gyr	13.746 ± 0.023	$f_{2000}^{143\times217}$	32.0 ± 1.8
$\boldsymbol{A_{217}^{dustTT}}$	93.7 ± 7.3	z_*	1089.89 ± 0.25	f_{2000}^{217}	106.9 ± 1.8
$\boldsymbol{A_{100}^{dustTE}}$	0.115 ± 0.038	r_*	144.44 ± 0.27	χ^2_{simall}	397.1 ± 2.0
$\boldsymbol{A_{100\times143}^{dustTE}}$	0.135 ± 0.029	$100\theta_*$	1.04113 ± 0.00030	χ^2_{lowl}	23.31 ± 0.87
$\boldsymbol{A_{100\times217}^{dustTE}}$	0.481 ± 0.086	$D_M(z_*)$/Gpc	13.873 ± 0.025	χ^2_{plik}	2358.7 ± 5.9
$\boldsymbol{A_{143}^{dustTE}}$	0.225 ± 0.053	z_{drag}	1059.98 ± 0.29	$\chi^2_{H073p45}$	5.0 ± 2.5
$\boldsymbol{A_{143\times217}^{dustTE}}$	0.666 ± 0.080	r_{drag}	147.09 ± 0.27	χ^2_{JLA}	698.9 ± 2.6
$\boldsymbol{A_{217}^{dustTE}}$	2.08 ± 0.27	k_D	0.14088 ± 0.00031	χ^2_{6DF}	0.18 ± 0.19
$\boldsymbol{c_{100}}$	0.99967 ± 0.00061	$100\theta_D$	0.16074 ± 0.00017	χ^2_{MGS}	2.78 ± 0.76
$\boldsymbol{c_{217}}$	0.99819 ± 0.00062	z_{eq}	3401 ± 27	$\chi^2_{DR12BAO}$	4.97 ± 0.87
H_0	69.86 ± 0.94	k_{eq}	0.010379 ± 0.000082	χ^2_{prior}	11.6 ± 4.5
Ω_Λ	0.7069 ± 0.0079	$100\theta_{eq}$	0.8137 ± 0.0050	χ^2_{BAO}	7.9 ± 1.6
Ω_m	0.2931 ± 0.0079	$100\theta_{s,eq}$	0.4496 ± 0.0026	χ^2_{CMB}	2779.1 ± 5.8
$\Omega_m h^2$	0.1429 ± 0.0011	$H(0.15)$	74.22 ± 0.57		

$\bar{\chi}^2_{eff} = 3502.55$; $R - 1 = 0.01555$

18.42 base_w_plikHM_TTTEEE_lowl_lowE_BAO_Riess18_JLA_post_lensing_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02240 ± 0.00014	$\Omega_m h^3$	0.0997 ± 0.0015	$D_M(0.15)$	625.4 ± 6.4
$\boldsymbol{\Omega_c h^2}$	0.1197 ± 0.0010	σ_8	0.833 ± 0.012	$H(0.38)$	83.39 ± 0.28
$\boldsymbol{100\theta_{MC}}$	1.04097 ± 0.00030	S_8	0.822 ± 0.010	$D_M(0.38)$	1504 ± 11
$\boldsymbol{\tau}$	$0.0551^{+0.0051}_{-0.0079}$	$\sigma_8\Omega_m^{0.5}$	0.4504 ± 0.0057	$H(0.51)$	89.72 ± 0.25
$\boldsymbol{w_0}$	-1.078 ± 0.036	$\sigma_8\Omega_m^{0.25}$	0.6124 ± 0.0072	$D_M(0.51)$	1955 ± 11
$\boldsymbol{\ln(10^{10} A_s)}$	$3.045^{+0.011}_{-0.015}$	$\sigma_8/h^{0.5}$	0.996 ± 0.010	$H(0.61)$	95.12 ± 0.27
$\boldsymbol{n_s}$	0.9658 ± 0.0038	$r_{drag}h$	102.8 ± 1.4	$D_M(0.61)$	2279 ± 12
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0025	$\langle d^2\rangle^{1/2}$	2.453 ± 0.022	$H(2.33)$	235.31 ± 0.58
$\boldsymbol{\alpha_{JLA}}$	0.1419 ± 0.0066	z_{re}	$7.72^{+0.56}_{-0.79}$	$D_M(2.33)$	5753.3 ± 8.7
$\boldsymbol{\beta_{JLA}}$	3.118 ± 0.080	$10^9 A_s$	$2.101^{+0.023}_{-0.032}$	$f\sigma_8(0.15)$	0.4624 ± 0.0069
$\boldsymbol{A^{CIB}_{217}}$	47 ± 7	$10^9 A_s e^{-2\tau}$	1.882 ± 0.011	$\sigma_8(0.15)$	0.771 ± 0.011
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{40}	1229 ± 11	$f\sigma_8(0.38)$	0.4886 ± 0.0087
$\boldsymbol{A^{tSZ}_{143}}$	5.6 ± 1.9	D_{220}	5736 ± 39	$\sigma_8(0.38)$	0.684 ± 0.010
$\boldsymbol{A^{PS}_{100}}$	257 ± 28	D_{810}	2539 ± 13	$f\sigma_8(0.51)$	0.4895 ± 0.0091
$\boldsymbol{A^{PS}_{143}}$	45 ± 8	D_{1420}	817.4 ± 4.7	$\sigma_8(0.51)$	0.6401 ± 0.0093
$\boldsymbol{A^{PS}_{143\times217}}$	42 ± 9	D_{2000}	231.0 ± 1.5	$f\sigma_8(0.61)$	0.4855 ± 0.0092
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	$n_{s,0.002}$	0.9658 ± 0.0038	$\sigma_8(0.61)$	0.6090 ± 0.0087
$\boldsymbol{A^{kSZ}}$	< 4.27	Y_P	0.245407 ± 0.000054	$f\sigma_8(2.33)$	0.3072 ± 0.0044
$\boldsymbol{A^{dustTT}_{100}}$	8.9 ± 1.8	Y_P^{BBN}	0.246733 ± 0.000054	$\sigma_8(2.33)$	0.3150 ± 0.0038
$\boldsymbol{A^{dustTT}_{143}}$	10.9 ± 1.8	10^5D/H	2.580 ± 0.026	f^{143}_{2000}	29.4 ± 2.7
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.6 ± 3.3	Age/Gyr	13.746 ± 0.023	$f^{143\times217}_{2000}$	32.1 ± 1.8
$\boldsymbol{A^{dustTT}_{217}}$	93.6 ± 7.2	z_*	1089.85 ± 0.23	f^{217}_{2000}	106.9 ± 1.8
$\boldsymbol{A^{dustTE}_{100}}$	0.114 ± 0.038	r_*	144.48 ± 0.24	$\chi^2_{lensing}$	9.09 ± 0.68
$\boldsymbol{A^{dustTE}_{100\times143}}$	0.135 ± 0.029	$100\theta_*$	1.04115 ± 0.00029	χ^2_{simall}	396.9 ± 1.8
$\boldsymbol{A^{dustTE}_{100\times217}}$	0.481 ± 0.086	$D_M(z_*)$/Gpc	13.877 ± 0.022	χ^2_{lowl}	23.21 ± 0.78
$\boldsymbol{A^{dustTE}_{143}}$	0.224 ± 0.052	z_{drag}	1059.99 ± 0.30	χ^2_{plik}	2358.7 ± 5.8
$\boldsymbol{A^{dustTE}_{143\times217}}$	0.667 ± 0.080	r_{drag}	147.13 ± 0.24	$\chi^2_{H073p45}$	5.0 ± 2.5
$\boldsymbol{A^{dustTE}_{217}}$	2.09 ± 0.27	k_D	0.14085 ± 0.00029	χ^2_{JLA}	698.8 ± 2.5
$\boldsymbol{c_{100}}$	0.99967 ± 0.00061	$100\theta_D$	0.16073 ± 0.00017	χ^2_{6DF}	0.19 ± 0.19
$\boldsymbol{c_{217}}$	0.99818 ± 0.00062	z_{eq}	3396 ± 23	χ^2_{MGS}	2.81 ± 0.76
H_0	69.85 ± 0.93	k_{eq}	0.010365 ± 0.000071	$\chi^2_{DR12BAO}$	4.89 ± 0.84
Ω_Λ	0.7073 ± 0.0079	$100\theta_{eq}$	0.8146 ± 0.0044	χ^2_{prior}	11.6 ± 4.5
Ω_m	0.2927 ± 0.0079	$100\theta_{s,eq}$	0.4500 ± 0.0022	χ^2_{CMB}	2787.9 ± 5.9
$\Omega_m h^2$	0.14275 ± 0.00097	$H(0.15)$	74.24 ± 0.57	χ^2_{BAO}	7.9 ± 1.6

$\bar{\chi}^2_{eff} = 3511.18$; $\Delta\bar{\chi}^2_{eff} = -13.60$; $R - 1 = 0.02300$

18.43 base_w_plikHM_TT_lowl_lowE_BAO_Pantheon

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022212	0.02216 ± 0.00020	$\sigma_8/h^{0.5}$	0.9882	0.989 ± 0.016	$D_M(0.38)$	1523.4	1525 ± 11
$\boldsymbol{\Omega_c h^2}$	0.11943	0.1196 ± 0.0016	$r_{drag}h$	100.56	100.5 ± 1.2	$H(0.51)$	89.595	89.53 ± 0.34
$\boldsymbol{100\theta_{MC}}$	1.040924	1.04091 ± 0.00043	$\langle d^2\rangle^{1/2}$	2.4354	2.441 ± 0.035	$D_M(0.51)$	1975.6	1977 ± 12
$\boldsymbol{\tau}$	0.0529	0.0529 ± 0.0081	z_{re}	7.56	7.55 ± 0.83	$H(0.61)$	95.138	95.08 ± 0.35
$\boldsymbol{w_0}$	−1.0263	-1.028 ± 0.037	$10^9 A_s$	2.0895	2.090 ± 0.035	$D_M(0.61)$	2300.4	2302 ± 12
$\boldsymbol{\ln(10^{10}A_s)}$	3.0395	3.040 ± 0.017	$10^9 A_s e^{-2\tau}$	1.8796	1.880 ± 0.012	$H(2.33)$	235.63	235.68 ± 0.78
$\boldsymbol{n_s}$	0.96698	0.9650 ± 0.0048	D_{40}	1223.4	1228 ± 14	$D_M(2.33)$	5766.2	5769 ± 12
$\boldsymbol{y_{cal}}$	1.00039	1.0005 ± 0.0025	D_{220}	5712.4	5716 ± 41	$f\sigma_8(0.15)$	0.4583	0.459 ± 0.011
$\boldsymbol{A_{217}^{CIB}}$	47.9	48 ± 7	D_{810}	2537.5	2536 ± 14	$\sigma_8(0.15)$	0.7545	0.755 ± 0.014
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.41	—	D_{1420}	816.5	814.8 ± 5.0	$f\sigma_8(0.38)$	0.4790	0.480 ± 0.012
$\boldsymbol{A_{143}^{tSZ}}$	7.03	5.1 ± 2.0	D_{2000}	230.38	229.7 ± 1.7	$\sigma_8(0.38)$	0.6690	0.669 ± 0.012
$\boldsymbol{A_{100}^{PS}}$	252.1	263 ± 28	$n_{s,0.002}$	0.96698	0.9650 ± 0.0048	$f\sigma_8(0.51)$	0.4783	0.479 ± 0.012
$\boldsymbol{A_{143}^{PS}}$	49.9	49 ± 8	Y_P	0.245331	$0.245306^{+0.000094}_{-0.000073}$	$\sigma_8(0.51)$	0.6260	0.626 ± 0.011
$\boldsymbol{A_{143\times217}^{PS}}$	48.8	44 ± 9	Y_P^{BBN}	0.246657	$0.246632^{+0.000095}_{-0.000073}$	$f\sigma_8(0.61)$	0.4736	0.474 ± 0.012
$\boldsymbol{A_{217}^{PS}}$	120.1	115 ± 10	10^5D/H	2.6157	2.625 ± 0.038	$\sigma_8(0.61)$	0.5956	0.596 ± 0.010
$\boldsymbol{A^{kSZ}}$	0.00	< 4.84	Age/Gyr	13.7948	13.800 ± 0.028	$f\sigma_8(2.33)$	0.3004	0.3003 ± 0.0052
$\boldsymbol{A_{100}^{dustTT}}$	8.84	8.9 ± 1.8	z_*	1090.071	1090.15 ± 0.33	$\sigma_8(2.33)$	0.30901	0.3089 ± 0.0044
$\boldsymbol{A_{143}^{dustTT}}$	10.84	10.7 ± 1.8	r_*	144.699	144.70 ± 0.39	f_{2000}^{143}	29.85	31.1 ± 2.9
$\boldsymbol{A_{143\times217}^{dustTT}}$	19.59	18.3 ± 3.3	$100\theta_*$	1.041123	1.04111 ± 0.00043	$f_{2000}^{143\times217}$	32.89	33.5 ± 2.0
$\boldsymbol{A_{217}^{dustTT}}$	95.0	93.4 ± 7.3	$D_M(z_*)$/Gpc	13.8984	13.899 ± 0.037	f_{2000}^{217}	107.32	108.1 ± 1.9
$\boldsymbol{c_{100}}$	0.99966	0.99961 ± 0.00061	z_{drag}	1059.513	1059.42 ± 0.44	χ^2_{simall}	395.88	397.0 ± 1.8
$\boldsymbol{c_{217}}$	0.99824	0.99825 ± 0.00062	r_{drag}	147.420	147.44 ± 0.40	χ^2_{lowl}	22.85	23.3 ± 1.0
H_0	68.21	68.16 ± 0.84	k_D	0.140401	0.14034 ± 0.00048	χ^2_{plik}	759.7	771.5 ± 5.5
Ω_Λ	0.6942	0.6934 ± 0.0079	$100\theta_D$	0.160996	0.16106 ± 0.00025	χ^2_{JLA}	1035.933	1036.7 ± 1.0
Ω_m	0.3058	0.3066 ± 0.0079	z_{eq}	3384.8	3387 ± 36	χ^2_{6DF}	0.0004	0.050 ± 0.069
$\Omega_m h^2$	0.14229	0.1424 ± 0.0015	k_{eq}	0.010331	0.01034 ± 0.00011	χ^2_{MGS}	1.61	1.63 ± 0.62
$\Omega_m h^3$	0.09706	0.0970 ± 0.0017	$100\theta_{eq}$	0.8160	$0.8155^{+0.0063}_{-0.0071}$	$\chi^2_{DR12BAO}$	4.20	5.0 ± 1.5
σ_8	0.8161	0.817 ± 0.015	$100\theta_{s,eq}$	0.45090	$0.4507^{+0.0032}_{-0.0036}$	χ^2_{prior}	1.32	7.3 ± 3.6
S_8	0.8240	0.825 ± 0.017	$H(0.15)$	73.21	73.14 ± 0.54	χ^2_{BAO}	5.81	6.6 ± 1.3
$\sigma_8\Omega_m^{0.5}$	0.4513	0.4520 ± 0.0093	$D_M(0.15)$	637.1	637.7 ± 6.1	χ^2_{CMB}	1178.4	1191.8 ± 5.5
$\sigma_8\Omega_m^{0.25}$	0.6069	0.608 ± 0.011	$H(0.38)$	83.003	82.93 ± 0.35			

Best-fit $\chi^2_{eff} = 2221.48$; $\bar{\chi}^2_{eff} = 2242.31$; $R - 1 = 0.00968$

χ^2_{eff}: BAO - 6DF: 0.00 MGS: 1.61 DR12BAO: 4.20 CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.88 commander_dx12_v3_2_29: 22.85 plik_rd12_HM_v22_TT: 759.69 SN - JLA Pantheon: 1035.93

18.44 base_w_plikHM_TT_lowl_lowE_BAO_Pantheon_post_lensing

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022203	0.02217 ± 0.00020	$\sigma_8/h^{0.5}$	0.9896	0.990 ± 0.011	$D_M(0.38)$	1524.5	1524 ± 11
$\boldsymbol{\Omega_c h^2}$	0.11962	0.1196 ± 0.0013	$r_{drag}h$	100.46	100.6 ± 1.2	$H(0.51)$	89.553	89.53 ± 0.30
$\boldsymbol{100\theta_{MC}}$	1.040876	1.04090 ± 0.00043	$\langle d^2\rangle^{1/2}$	2.4416	2.444 ± 0.024	$D_M(0.51)$	1976.8	1977 ± 12
$\boldsymbol{\tau}$	0.0529	0.0534 ± 0.0077	z_{re}	7.57	7.61 ± 0.78	$H(0.61)$	95.101	95.07 ± 0.31
$\boldsymbol{w_0}$	−1.0278	-1.030 ± 0.034	$10^9 A_s$	2.0914	2.093 ± 0.031	$D_M(0.61)$	2301.7	2302 ± 12
$\boldsymbol{\ln(10^{10} A_s)}$	3.0404	3.041 ± 0.015	$10^9 A_s e^{-2\tau}$	1.8813	1.880 ± 0.011	$H(2.33)$	235.73	235.67 ± 0.70
$\boldsymbol{n_s}$	0.96551	0.9647 ± 0.0043	D_{40}	1227.7	1229 ± 12	$D_M(2.33)$	5767.5	5769 ± 12
$\boldsymbol{y_{cal}}$	1.00041	1.0005 ± 0.0025	D_{220}	5720.1	5719 ± 41	$f\sigma_8(0.15)$	0.4595	0.4597 ± 0.0078
$\boldsymbol{A_{217}^{CIB}}$	48.3	48 ± 7	D_{810}	2537.9	2536 ± 13	$\sigma_8(0.15)$	0.7553	0.756 ± 0.011
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.44	—	D_{1420}	816.04	814.8 ± 5.0	$f\sigma_8(0.38)$	0.4801	0.4805 ± 0.0090
$\boldsymbol{A_{143}^{tSZ}}$	6.95	5.1 ± 2.0	D_{2000}	230.18	229.7 ± 1.7	$\sigma_8(0.38)$	0.6696	0.6701 ± 0.0096
$\boldsymbol{A_{100}^{PS}}$	254.3	263 ± 28	$n_{s,0.002}$	0.96551	0.9647 ± 0.0043	$f\sigma_8(0.51)$	0.4793	0.4797 ± 0.0092
$\boldsymbol{A_{143}^{PS}}$	51.2	49 ± 8	Y_P	0.245327	$0.245308^{+0.000093}_{-0.000073}$	$\sigma_8(0.51)$	0.6265	0.6270 ± 0.0089
$\boldsymbol{A_{143\times217}^{PS}}$	50.0	43 ± 9	Y_P^{BBN}	0.246653	$0.246634^{+0.000093}_{-0.000073}$	$f\sigma_8(0.61)$	0.4745	0.4749 ± 0.0091
$\boldsymbol{A_{217}^{PS}}$	120.2	115 ± 10	10^5D/H	2.6173	2.625 ± 0.038	$\sigma_8(0.61)$	0.5960	0.5965 ± 0.0083
$\boldsymbol{A^{kSZ}}$	0.01	< 4.86	Age/Gyr	13.7969	13.799 ± 0.029	$f\sigma_8(2.33)$	0.30053	0.3007 ± 0.0041
$\boldsymbol{A_{100}^{dustTT}}$	8.84	9.0 ± 1.8	z_*	1090.098	1090.15 ± 0.31	$\sigma_8(2.33)$	0.30910	0.3093 ± 0.0036
$\boldsymbol{A_{143}^{dustTT}}$	10.81	10.7 ± 1.8	r_*	144.656	144.69 ± 0.32	f_{2000}^{143}	30.24	31.1 ± 2.9
$\boldsymbol{A_{143\times217}^{dustTT}}$	19.52	18.3 ± 3.3	$100\theta_*$	1.041081	1.04110 ± 0.00042	$f_{2000}^{143\times217}$	33.21	33.5 ± 2.0
$\boldsymbol{A_{217}^{dustTT}}$	94.6	93.4 ± 7.2	$D_M(z_*)$/Gpc	13.8948	13.898 ± 0.031	f_{2000}^{217}	107.52	108.1 ± 1.9
$\boldsymbol{c_{100}}$	0.99966	0.99961 ± 0.00061	z_{drag}	1059.513	1059.43 ± 0.44	$\chi^2_{lensing}$	8.754	9.28 ± 0.77
$\boldsymbol{c_{217}}$	0.99824	0.99825 ± 0.00062	r_{drag}	147.378	147.43 ± 0.34	χ^2_{simall}	395.89	396.9 ± 1.7
H_0	68.16	68.21 ± 0.83	k_D	0.140436	0.14036 ± 0.00044	χ^2_{lowl}	23.18	23.37 ± 0.89
Ω_Λ	0.6934	0.6937 ± 0.0078	$100\theta_D$	0.160997	0.16106 ± 0.00026	χ^2_{plik}	759.31	771.0 ± 5.2
Ω_m	0.3066	0.3063 ± 0.0078	z_{eq}	3389.2	3388 ± 29	χ^2_{JLA}	1035.930	1036.61 ± 0.96
$\Omega_m h^2$	0.14247	0.1424 ± 0.0012	k_{eq}	0.010344	0.010340 ± 0.000090	χ^2_{6DF}	0.0017	0.049 ± 0.068
$\Omega_m h^3$	0.09711	0.0971 ± 0.0015	$100\theta_{eq}$	0.8151	0.8153 ± 0.0055	χ^2_{MGS}	1.54	1.66 ± 0.61
σ_8	0.8171	0.818 ± 0.012	$100\theta_{s,eq}$	0.45046	0.4506 ± 0.0028	$\chi^2_{DR12BAO}$	4.39	4.9 ± 1.3
S_8	0.8261	0.826 ± 0.012	$H(0.15)$	73.16	73.17 ± 0.54	χ^2_{prior}	1.27	7.3 ± 3.6
$\sigma_8\Omega_m^{0.5}$	0.4524	0.4524 ± 0.0068	$D_M(0.15)$	637.5	637.4 ± 6.1	χ^2_{CMB}	1187.1	1200.6 ± 5.5
$\sigma_8\Omega_m^{0.25}$	0.6080	0.6082 ± 0.0080	$H(0.38)$	82.956	82.94 ± 0.32	χ^2_{BAO}	5.93	6.6 ± 1.1

Best-fit $\chi^2_{eff} = 2230.26$; $\Delta\chi^2_{eff} = -0.73$; $\bar{\chi}^2_{eff} = 2251.01$; $\Delta\bar{\chi}^2_{eff} = -0.04$; $R - 1 = 0.01016$

χ^2_{eff}: BAO - 6DF: 0.00 (Δ -0.01) MGS: 1.54 (Δ 0.20) DR12BAO: 4.39 (Δ 0.36) CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.75 (Δ -0.11) simall_100x143_offlike5_EE_Aplanck 395.89 (Δ -0.56) commander_dx12_v3_2_29: 23.18 (Δ 0.33) plik_rd12_HM_v22_TT: 759.31 (Δ -0.54) SN - JLA Pantheon: 1035.93 (Δ -0.30)

18.45 base_w_plikHM_TT_lowl_lowE_BAO_Pantheon_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02217 ± 0.00020	$\sigma_8/h^{0.5}$	0.990 ± 0.016	$D_M(0.38)$	1525 ± 11
$\boldsymbol{\Omega_c h^2}$	0.1195 ± 0.0016	$r_{drag} h$	100.5 ± 1.2	$H(0.51)$	89.54 ± 0.34
$\boldsymbol{100\theta_{MC}}$	1.04091 ± 0.00043	$\langle d^2 \rangle^{1/2}$	2.444 ± 0.034	$D_M(0.51)$	1977 ± 12
$\boldsymbol{\tau}$	$0.0544^{+0.0049}_{-0.0082}$	z_{re}	$7.71^{+0.54}_{-0.82}$	$H(0.61)$	95.08 ± 0.35
$\boldsymbol{w_0}$	-1.028 ± 0.037	$10^9 A_s$	$2.096^{+0.024}_{-0.035}$	$D_M(0.61)$	2302 ± 12
$\boldsymbol{\ln(10^{10} A_s)}$	$3.042^{+0.012}_{-0.016}$	$10^9 A_s e^{-2\tau}$	1.880 ± 0.012	$H(2.33)$	235.67 ± 0.78
$\boldsymbol{n_s}$	0.9651 ± 0.0048	D_{40}	1228 ± 14	$D_M(2.33)$	5769 ± 12
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	D_{220}	5716 ± 41	$f\sigma_8(0.15)$	0.460 ± 0.011
$\boldsymbol{A^{CIB}_{217}}$	48 ± 7	D_{810}	2535 ± 14	$\sigma_8(0.15)$	0.756 ± 0.014
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{1420}	814.8 ± 5.0	$f\sigma_8(0.38)$	0.480 ± 0.012
$\boldsymbol{A^{tSZ}_{143}}$	5.1 ± 2.0	D_{2000}	229.7 ± 1.7	$\sigma_8(0.38)$	0.670 ± 0.012
$\boldsymbol{A^{PS}_{100}}$	263 ± 28	$n_{s,0.002}$	0.9651 ± 0.0048	$f\sigma_8(0.51)$	0.479 ± 0.012
$\boldsymbol{A^{PS}_{143}}$	49 ± 8	Y_P	$0.245308^{+0.000095}_{-0.000073}$	$\sigma_8(0.51)$	0.627 ± 0.011
$\boldsymbol{A^{PS}_{143\times217}}$	43 ± 9	Y_P^{BBN}	$0.246634^{+0.000095}_{-0.000073}$	$f\sigma_8(0.61)$	0.475 ± 0.012
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	10^5D/H	2.625 ± 0.038	$\sigma_8(0.61)$	0.596 ± 0.010
$\boldsymbol{A^{kSZ}}$	< 4.81	Age/Gyr	13.800 ± 0.028	$f\sigma_8(2.33)$	0.3007 ± 0.0051
$\boldsymbol{A^{dustTT}_{100}}$	8.9 ± 1.8	z_*	1090.14 ± 0.33	$\sigma_8(2.33)$	0.3093 ± 0.0043
$\boldsymbol{A^{dustTT}_{143}}$	10.7 ± 1.8	r_*	144.71 ± 0.38	f^{143}_{2000}	31.1 ± 2.9
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.3 ± 3.3	$100\theta_*$	1.04111 ± 0.00043	$f^{143\times217}_{2000}$	33.5 ± 2.0
$\boldsymbol{A^{dustTT}_{217}}$	93.4 ± 7.3	$D_M(z_*)$/Gpc	13.900 ± 0.036	f^{217}_{2000}	108.1 ± 1.9
$\boldsymbol{c_{100}}$	0.99961 ± 0.00061	z_{drag}	1059.42 ± 0.44	χ^2_{simall}	396.9 ± 1.8
$\boldsymbol{c_{217}}$	0.99825 ± 0.00062	r_{drag}	147.45 ± 0.40	χ^2_{lowl}	23.3 ± 1.0
H_0	68.15 ± 0.84	k_D	0.14033 ± 0.00047	χ^2_{plik}	771.3 ± 5.5
Ω_Λ	0.6934 ± 0.0079	$100\theta_D$	0.16106 ± 0.00025	χ^2_{JLA}	1036.7 ± 1.0
Ω_m	0.3066 ± 0.0079	z_{eq}	3386 ± 36	χ^2_{6DF}	0.051 ± 0.070
$\Omega_m h^2$	0.1423 ± 0.0015	k_{eq}	0.01033 ± 0.00011	χ^2_{MGS}	1.64 ± 0.62
$\Omega_m h^3$	0.0970 ± 0.0016	$100\theta_{eq}$	$0.8157^{+0.0062}_{-0.0071}$	$\chi^2_{DR12BAO}$	4.9 ± 1.5
σ_8	0.817 ± 0.015	$100\theta_{s,eq}$	$0.4508^{+0.0032}_{-0.0036}$	χ^2_{prior}	7.3 ± 3.6
S_8	0.826 ± 0.017	$H(0.15)$	73.14 ± 0.54	χ^2_{BAO}	6.6 ± 1.3
$\sigma_8 \Omega_m^{0.5}$	0.4525 ± 0.0092	$D_M(0.15)$	637.7 ± 6.1	χ^2_{CMB}	1191.5 ± 5.5
$\sigma_8 \Omega_m^{0.25}$	0.608 ± 0.011	$H(0.38)$	82.94 ± 0.35		

$\bar{\chi}^2_{eff} = 2242.05$; $R - 1 = 0.01123$

18.46 base_w_plikHM_TT_lowl_lowE_BAO_Pantheon_post_lensing_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02217 ± 0.00020	$\sigma_8/h^{0.5}$	0.990 ± 0.011	$D_M(0.38)$	1524 ± 11
$\boldsymbol{\Omega_c h^2}$	0.1195 ± 0.0013	$r_{drag}h$	100.5 ± 1.2	$H(0.51)$	89.54 ± 0.30
$\boldsymbol{100\theta_{MC}}$	1.04090 ± 0.00043	$\langle d^2\rangle^{1/2}$	2.445 ± 0.024	$D_M(0.51)$	1977 ± 12
$\boldsymbol{\tau}$	$0.0546^{+0.0051}_{-0.0078}$	z_{re}	$7.73^{+0.56}_{-0.78}$	$H(0.61)$	95.08 ± 0.31
$\boldsymbol{w_0}$	-1.029 ± 0.033	$10^9 A_s$	$2.097^{+0.023}_{-0.032}$	$D_M(0.61)$	2302 ± 12
$\boldsymbol{\ln(10^{10} A_s)}$	$3.043^{+0.011}_{-0.015}$	$10^9 A_s e^{-2\tau}$	1.880 ± 0.011	$H(2.33)$	235.65 ± 0.69
$\boldsymbol{n_s}$	0.9649 ± 0.0043	D_{40}	1229 ± 12	$D_M(2.33)$	5768 ± 12
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	D_{220}	5718 ± 41	$f\sigma_8(0.15)$	0.4597 ± 0.0078
$\boldsymbol{A_{217}^{CIB}}$	48 ± 7	D_{810}	2536 ± 13	$\sigma_8(0.15)$	0.756 ± 0.011
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{1420}	814.8 ± 5.0	$f\sigma_8(0.38)$	0.4804 ± 0.0090
$\boldsymbol{A_{143}^{tSZ}}$	5.1 ± 2.0	D_{2000}	229.7 ± 1.7	$\sigma_8(0.38)$	0.6703 ± 0.0096
$\boldsymbol{A_{100}^{PS}}$	263 ± 28	$n_{s,0.002}$	0.9649 ± 0.0043	$f\sigma_8(0.51)$	0.4797 ± 0.0092
$\boldsymbol{A_{143}^{PS}}$	49 ± 8	Y_P	$0.245310^{+0.000093}_{-0.000073}$	$\sigma_8(0.51)$	0.6272 ± 0.0088
$\boldsymbol{A_{143\times217}^{PS}}$	43 ± 9	Y_P^{BBN}	$0.246636^{+0.000093}_{-0.000073}$	$f\sigma_8(0.61)$	0.4749 ± 0.0091
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	10^5D/H	2.624 ± 0.038	$\sigma_8(0.61)$	0.5967 ± 0.0083
$\boldsymbol{A^{kSZ}}$	< 4.84	Age/Gyr	13.799 ± 0.029	$f\sigma_8(2.33)$	0.3009 ± 0.0041
$\boldsymbol{A_{100}^{dustTT}}$	8.9 ± 1.8	z_*	1090.13 ± 0.31	$\sigma_8(2.33)$	0.3095 ± 0.0036
$\boldsymbol{A_{143}^{dustTT}}$	10.7 ± 1.8	r_*	144.71 ± 0.31	f_{2000}^{143}	31.1 ± 2.9
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.3 ± 3.3	$100\theta_*$	1.04111 ± 0.00042	$f_{2000}^{143\times217}$	33.5 ± 2.0
$\boldsymbol{A_{217}^{dustTT}}$	93.4 ± 7.2	$D_M(z_*)$/Gpc	13.899 ± 0.030	f_{2000}^{217}	108.1 ± 1.9
$\boldsymbol{c_{100}}$	0.99961 ± 0.00061	z_{drag}	1059.44 ± 0.44	$\chi^2_{lensing}$	9.26 ± 0.75
$\boldsymbol{c_{217}}$	0.99824 ± 0.00063	r_{drag}	147.44 ± 0.34	χ^2_{simall}	396.9 ± 1.8
H_0	68.20 ± 0.83	k_D	0.14034 ± 0.00043	χ^2_{lowl}	23.36 ± 0.89
Ω_Λ	0.6938 ± 0.0078	$100\theta_D$	0.16105 ± 0.00026	χ^2_{plik}	770.9 ± 5.2
Ω_m	0.3062 ± 0.0078	z_{eq}	3386 ± 29	χ^2_{JLA}	1036.60 ± 0.94
$\Omega_m h^2$	0.1423 ± 0.0012	k_{eq}	0.010335 ± 0.000088	χ^2_{6DF}	0.049 ± 0.068
$\Omega_m h^3$	0.0971 ± 0.0015	$100\theta_{eq}$	0.8157 ± 0.0054	χ^2_{MGS}	1.66 ± 0.61
σ_8	0.818 ± 0.012	$100\theta_{s,eq}$	0.4508 ± 0.0028	$\chi^2_{DR12BAO}$	4.8 ± 1.2
S_8	0.826 ± 0.012	$H(0.15)$	73.17 ± 0.54	χ^2_{prior}	7.3 ± 3.6
$\sigma_8\Omega_m^{0.5}$	0.4525 ± 0.0068	$D_M(0.15)$	637.4 ± 6.1	χ^2_{CMB}	1200.4 ± 5.4
$\sigma_8\Omega_m^{0.25}$	0.6083 ± 0.0080	$H(0.38)$	82.95 ± 0.32	χ^2_{BAO}	6.5 ± 1.1

$\bar{\chi}^2_{eff} = 2250.77$; $\Delta\bar{\chi}^2_{eff} = -0.14$; $R - 1 = 0.01070$

18.47 base_w_plikHM_TTTEEE_lowl_lowE_BAO_Pantheon

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022391	0.02239 ± 0.00014	σ_8	0.8202	0.819 ± 0.013	$D_M(0.15)$	635.8	636.1 ± 6.0
$\boldsymbol{\Omega_c h^2}$	0.11980	0.1198 ± 0.0012	S_8	0.8277	0.827 ± 0.013	$H(0.38)$	83.106	83.10 ± 0.28
$\boldsymbol{100\theta_{MC}}$	1.040957	1.04097 ± 0.00030	$\sigma_8\Omega_m^{0.5}$	0.4533	0.4531 ± 0.0073	$D_M(0.38)$	1520.8	1521 ± 10
$\boldsymbol{\tau}$	0.0551	0.0550 ± 0.0079	$\sigma_8\Omega_m^{0.25}$	0.6098	0.6093 ± 0.0090	$H(0.51)$	89.694	89.69 ± 0.25
$\boldsymbol{w_0}$	-1.0309	-1.030 ± 0.033	$\sigma_8/h^{0.5}$	0.9919	0.991 ± 0.013	$D_M(0.51)$	1972.4	1973 ± 11
$\boldsymbol{\ln(10^{10}A_s)}$	3.0455	3.045 ± 0.016	$r_{drag}h$	100.60	100.6 ± 1.2	$H(0.61)$	95.237	95.24 ± 0.26
$\boldsymbol{n_s}$	0.96651	0.9658 ± 0.0040	$\langle d^2\rangle^{1/2}$	2.4465	2.447 ± 0.029	$D_M(0.61)$	2296.8	2297 ± 11
$\boldsymbol{y_{cal}}$	1.00050	1.0007 ± 0.0024	z_{re}	7.75	7.72 ± 0.80	$H(2.33)$	235.99	236.01 ± 0.60
$\boldsymbol{A_{217}^{CIB}}$	46.8	47 ± 7	$10^9 A_s$	2.1020	2.102 ± 0.034	$D_M(2.33)$	5758.6	5758.8 ± 8.8
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.47	—	$10^9 A_s e^{-2\tau}$	1.8827	1.883 ± 0.011	$f\sigma_8(0.15)$	0.4607	0.4603 ± 0.0084
$\boldsymbol{A_{143}^{tSZ}}$	7.14	5.4 ± 2.0	D_{40}	1227.6	1230 ± 12	$\sigma_8(0.15)$	0.7583	0.758 ± 0.012
$\boldsymbol{A_{100}^{PS}}$	250.6	259 ± 28	D_{220}	5730.9	5735 ± 38	$f\sigma_8(0.38)$	0.4818	0.4813 ± 0.0097
$\boldsymbol{A_{143}^{PS}}$	48.3	46 ± 8	D_{810}	2540.3	2540 ± 13	$\sigma_8(0.38)$	0.6723	0.672 ± 0.011
$\boldsymbol{A_{143\times217}^{PS}}$	48.8	42 ± 9	D_{1420}	818.16	817.7 ± 4.7	$f\sigma_8(0.51)$	0.4811	0.4805 ± 0.0099
$\boldsymbol{A_{217}^{PS}}$	120.4	115 ± 10	D_{2000}	231.27	231.1 ± 1.5	$\sigma_8(0.51)$	0.6291	0.628 ± 0.010
$\boldsymbol{A^{kSZ}}$	0.00	< 4.29	$n_{s,0.002}$	0.96651	0.9658 ± 0.0040	$f\sigma_8(0.61)$	0.4763	0.4758 ± 0.0099
$\boldsymbol{A_{100}^{dustTT}}$	8.81	8.9 ± 1.8	Y_P	0.245404	$0.245400^{+0.000058}_{-0.000050}$	$\sigma_8(0.61)$	0.5985	0.5979 ± 0.0094
$\boldsymbol{A_{143}^{dustTT}}$	11.02	10.9 ± 1.8	Y_P^{BBN}	0.246730	$0.246727^{+0.000059}_{-0.000050}$	$f\sigma_8(2.33)$	0.30178	0.3014 ± 0.0047
$\boldsymbol{A_{143\times217}^{dustTT}}$	19.84	18.6 ± 3.3	10^5D/H	2.5816	$2.583^{+0.024}_{-0.027}$	$\sigma_8(2.33)$	0.31034	0.3101 ± 0.0041
$\boldsymbol{A_{217}^{dustTT}}$	95.2	93.8 ± 7.4	Age/Gyr	13.7746	13.776 ± 0.023	f_{2000}^{143}	28.84	29.4 ± 2.7
$\boldsymbol{A_{100}^{dustTE}}$	0.1138	0.115 ± 0.038	z_*	1089.876	1089.88 ± 0.24	$f_{2000}^{143\times217}$	32.03	32.1 ± 1.9
$\boldsymbol{A_{100\times143}^{dustTE}}$	0.1343	0.135 ± 0.029	r_*	144.467	144.48 ± 0.26	f_{2000}^{217}	106.62	106.9 ± 1.8
$\boldsymbol{A_{100\times217}^{dustTE}}$	0.481	0.480 ± 0.085	$100\theta_*$	1.041138	1.04115 ± 0.00030	χ^2_{small}	396.18	397.2 ± 2.0
$\boldsymbol{A_{143}^{dustTE}}$	0.224	0.224 ± 0.054	$D_M(z_*)$/Gpc	13.8759	13.877 ± 0.025	χ^2_{lowl}	23.10	23.31 ± 0.88
$\boldsymbol{A_{143\times217}^{dustTE}}$	0.668	0.666 ± 0.080	z_{drag}	1059.971	1059.96 ± 0.29	χ^2_{plik}	2344.6	2359.4 ± 5.8
$\boldsymbol{A_{217}^{dustTE}}$	2.088	2.08 ± 0.27	r_{drag}	147.121	147.13 ± 0.27	χ^2_{JLA}	1035.949	1036.60 ± 0.91
$\boldsymbol{c_{100}}$	0.99972	0.99966 ± 0.00061	k_D	0.140851	0.14083 ± 0.00030	χ^2_{6DF}	0.0003	0.046 ± 0.064
$\boldsymbol{c_{217}}$	0.99817	0.99820 ± 0.00062	$100\theta_D$	0.160742	0.16075 ± 0.00017	χ^2_{MGS}	1.61	1.66 ± 0.59
H_0	68.38	68.34 ± 0.82	z_{eq}	3397.9	3397 ± 26	$\chi^2_{DR12BAO}$	4.38	4.8 ± 1.1
Ω_Λ	0.6945	0.6941 ± 0.0075	k_{eq}	0.010371	0.010368 ± 0.000080	χ^2_{prior}	1.64	11.5 ± 4.5
Ω_m	0.3055	0.3059 ± 0.0075	$100\theta_{eq}$	0.81415	0.8143 ± 0.0049	χ^2_{BAO}	5.99	6.53 ± 0.98
$\Omega_m h^2$	0.14284	0.1428 ± 0.0011	$100\theta_{s,eq}$	0.44981	0.4499 ± 0.0025	χ^2_{CMB}	2763.9	2779.9 ± 5.8
$\Omega_m h^3$	0.09767	0.0976 ± 0.0014	$H(0.15)$	73.34	73.31 ± 0.52			

Best-fit $\chi^2_{eff} = 3807.45$; $\bar{\chi}^2_{eff} = 3834.52$; $R - 1 = 0.01040$

χ^2_{eff}: BAO - 6DF: 0.00 MGS: 1.61 DR12BAO: 4.38 CMB - simall_100x143_offlike5_EE_Aplanck_B: 396.19 commander_dx12_v3_2_29: 23.10 plik_rd12_HM_v22b_TTTEEE: 2344.58 SN - JLA Pantheon: 1035.95

18.48 base_w_plikHM_TTTEEE_lowl_lowE_BAO_Pantheon_post_lensing

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022429	0.02239 ± 0.00014	σ_8	0.8179	0.819 ± 0.011	$D_M(0.15)$	635.9	636.0 ± 6.0
$\boldsymbol{\Omega_c h^2}$	0.11956	0.1197 ± 0.0010	S_8	0.8253	0.826 ± 0.011	$H(0.38)$	83.159	83.11 ± 0.27
$\boldsymbol{100\theta_{MC}}$	1.040987	1.04098 ± 0.00030	$\sigma_8\Omega_m^{0.5}$	0.4520	0.4525 ± 0.0058	$D_M(0.38)$	1520.5	1521 ± 10
$\boldsymbol{\tau}$	0.0551	0.0549 ± 0.0074	$\sigma_8\Omega_m^{0.25}$	0.6080	0.6086 ± 0.0071	$H(0.51)$	89.759	89.71 ± 0.23
$\boldsymbol{w_0}$	−1.0253	-1.028 ± 0.032	$\sigma_8/h^{0.5}$	0.9894	0.990 ± 0.010	$D_M(0.51)$	1971.8	1973 ± 11
$\boldsymbol{\ln(10^{10}A_s)}$	3.0452	3.045 ± 0.014	$r_{drag}h$	100.56	100.6 ± 1.2	$H(0.61)$	95.308	95.26 ± 0.24
$\boldsymbol{n_s}$	0.96751	0.9658 ± 0.0039	$\langle d^2\rangle^{1/2}$	2.4407	2.445 ± 0.022	$D_M(0.61)$	2296.0	2297 ± 11
$\boldsymbol{y_{cal}}$	1.00053	1.0007 ± 0.0024	z_{re}	7.73	7.71 ± 0.74	$H(2.33)$	235.95	235.98 ± 0.57
$\boldsymbol{A_{217}^{CIB}}$	45.8	47 ± 7	$10^9 A_s$	2.1015	2.101 ± 0.030	$D_M(2.33)$	5756.5	5758.3 ± 8.6
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.66	—	$10^9 A_s e^{-2\tau}$	1.8823	1.882 ± 0.010	$f\sigma_8(0.15)$	0.4590	0.4597 ± 0.0067
$\boldsymbol{A_{143}^{tSZ}}$	7.06	5.4 ± 2.0	D_{40}	1225.9	1230 ± 11	$\sigma_8(0.15)$	0.7563	0.757 ± 0.010
$\boldsymbol{A_{100}^{PS}}$	248.4	259 ± 28	D_{220}	5733.4	5737 ± 38	$f\sigma_8(0.38)$	0.4798	0.4806 ± 0.0080
$\boldsymbol{A_{143}^{PS}}$	50.4	46 ± 8	D_{810}	2541.4	2540 ± 13	$\sigma_8(0.38)$	0.6706	0.6710 ± 0.0093
$\boldsymbol{A_{143\times217}^{PS}}$	53.1	42 ± 9	D_{1420}	819.00	817.6 ± 4.7	$f\sigma_8(0.51)$	0.4791	0.4799 ± 0.0084
$\boldsymbol{A_{217}^{PS}}$	121.9	115 ± 10	D_{2000}	231.59	231.0 ± 1.5	$\sigma_8(0.51)$	0.6275	0.6279 ± 0.0086
$\boldsymbol{A^{kSZ}}$	0.00	< 4.38	$n_{s,0.002}$	0.96751	0.9658 ± 0.0039	$f\sigma_8(0.61)$	0.4744	0.4752 ± 0.0084
$\boldsymbol{A_{100}^{dustTT}}$	8.86	8.9 ± 1.8	Y_P	0.245418	$0.245403^{+0.000057}_{-0.000048}$	$\sigma_8(0.61)$	0.5971	0.5974 ± 0.0081
$\boldsymbol{A_{143}^{dustTT}}$	11.03	10.9 ± 1.8	Y_P^{BBN}	0.246745	$0.246729^{+0.000057}_{-0.000048}$	$f\sigma_8(2.33)$	0.30111	0.3012 ± 0.0041
$\boldsymbol{A_{143\times217}^{dustTT}}$	20.11	18.6 ± 3.3	10^5D/H	2.5746	$2.582^{+0.024}_{-0.027}$	$\sigma_8(2.33)$	0.30984	0.3099 ± 0.0036
$\boldsymbol{A_{217}^{dustTT}}$	95.5	93.8 ± 7.4	Age/Gyr	13.7721	13.775 ± 0.023	f_{2000}^{143}	28.39	29.5 ± 2.7
$\boldsymbol{A_{100}^{dustTE}}$	0.1146	0.115 ± 0.039	z_*	1089.806	1089.86 ± 0.23	$f_{2000}^{143\times217}$	31.79	32.1 ± 1.9
$\boldsymbol{A_{100\times143}^{dustTE}}$	0.1346	0.135 ± 0.030	r_*	144.500	144.50 ± 0.24	f_{2000}^{217}	106.32	107.0 ± 1.8
$\boldsymbol{A_{100\times217}^{dustTE}}$	0.480	0.480 ± 0.085	$100\theta_*$	1.041164	1.04116 ± 0.00029	$\chi^2_{lensing}$	8.721	9.15 ± 0.64
$\boldsymbol{A_{143}^{dustTE}}$	0.224	0.225 ± 0.054	$D_M(z_*)$/Gpc	13.8787	13.878 ± 0.022	χ^2_{simall}	396.18	397.1 ± 1.8
$\boldsymbol{A_{143\times217}^{dustTE}}$	0.668	0.666 ± 0.079	z_{drag}	1060.047	1059.97 ± 0.29	χ^2_{lowl}	22.94	23.29 ± 0.82
$\boldsymbol{A_{217}^{dustTE}}$	2.082	2.08 ± 0.26	r_{drag}	147.142	147.15 ± 0.24	χ^2_{plik}	2345.1	2359.3 ± 5.7
$\boldsymbol{c_{100}}$	0.99974	0.99965 ± 0.00061	k_D	0.140857	0.14082 ± 0.00029	χ^2_{JLA}	1035.935	1036.59 ± 0.92
$\boldsymbol{c_{217}}$	0.99819	0.99819 ± 0.00062	$100\theta_D$	0.160702	0.16075 ± 0.00017	χ^2_{6DF}	0.0003	0.046 ± 0.065
H_0	68.34	68.35 ± 0.82	z_{eq}	3393.1	3395 ± 23	χ^2_{MGS}	1.61	1.67 ± 0.60
Ω_Λ	0.6946	0.6944 ± 0.0075	k_{eq}	0.010356	0.010363 ± 0.000071	$\chi^2_{DR12BAO}$	4.22	4.7 ± 1.0
Ω_m	0.3054	0.3056 ± 0.0075	$100\theta_{eq}$	0.81514	0.8147 ± 0.0044	χ^2_{prior}	1.52	11.5 ± 4.5
$\Omega_m h^2$	0.14263	0.14272 ± 0.00098	$100\theta_{s,eq}$	0.45030	0.4501 ± 0.0022	χ^2_{CMB}	2772.9	2788.8 ± 5.9
$\Omega_m h^3$	0.09748	0.0976 ± 0.0014	$H(0.15)$	73.35	73.33 ± 0.52	χ^2_{BAO}	5.83	6.45 ± 0.91

Best-fit $\chi^2_{eff} = 3816.20$; $\Delta\chi^2_{eff} = -0.75$; $\bar{\chi}^2_{eff} = 3843.29$; $\Delta\bar{\chi}^2_{eff} = 0.15$; $R - 1 = 0.01568$

χ^2_{eff}: BAO - 6DF: 0.00 (Δ -0.02) MGS: 1.61 (Δ 0.33) DR12BAO: 4.22 (Δ -0.05) CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.72 (Δ -0.01) simall_100x143_offlike5_EE_Aplanc
396.18 (Δ -0.28) commander_dx12_v3_2_29: 22.94 (Δ 0.06) plik_rd12_HM_v22b_TTTEEE: 2345.08 (Δ -0.33) SN - JLA Pantheon: 1035.93 (Δ -0.33)

18.49 base_w_plikHM_TTTEEE_lowl_lowE_BAO_Pantheon_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02239 ± 0.00014	σ_8	0.820 ± 0.013	$D_M(0.15)$	636.0 ± 6.0
$\boldsymbol{\Omega_c h^2}$	0.1198 ± 0.0012	S_8	0.828 ± 0.013	$H(0.38)$	83.10 ± 0.28
$\boldsymbol{100\theta_{MC}}$	1.04097 ± 0.00030	$\sigma_8\Omega_m^{0.5}$	0.4534 ± 0.0071	$D_M(0.38)$	1521 ± 10
$\boldsymbol{\tau}$	$0.0560^{+0.0056}_{-0.0082}$	$\sigma_8\Omega_m^{0.25}$	0.6098 ± 0.0088	$H(0.51)$	89.70 ± 0.25
$\boldsymbol{w_0}$	-1.029 ± 0.033	$\sigma_8/h^{0.5}$	0.992 ± 0.013	$D_M(0.51)$	1973 ± 11
$\boldsymbol{\ln(10^{10} A_s)}$	$3.047^{+0.012}_{-0.017}$	$r_{drag}h$	100.6 ± 1.2	$H(0.61)$	95.24 ± 0.26
$\boldsymbol{n_s}$	0.9659 ± 0.0040	$\langle d^2\rangle^{1/2}$	2.449 ± 0.028	$D_M(0.61)$	2297 ± 11
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0024	z_{re}	$7.83^{+0.60}_{-0.82}$	$H(2.33)$	236.01 ± 0.60
$\boldsymbol{A_{217}^{CIB}}$	47 ± 7	$10^9 A_s$	$2.106^{+0.026}_{-0.035}$	$D_M(2.33)$	5758.6 ± 8.8
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$10^9 A_s e^{-2\tau}$	1.883 ± 0.011	$f\sigma_8(0.15)$	0.4607 ± 0.0083
$\boldsymbol{A_{143}^{tSZ}}$	5.4 ± 2.0	D_{40}	1230 ± 12	$\sigma_8(0.15)$	0.758 ± 0.012
$\boldsymbol{A_{100}^{PS}}$	259 ± 28	D_{220}	5735 ± 38	$f\sigma_8(0.38)$	0.4817 ± 0.0096
$\boldsymbol{A_{143}^{PS}}$	46 ± 8	D_{810}	2540 ± 13	$\sigma_8(0.38)$	0.672 ± 0.011
$\boldsymbol{A_{143\times217}^{PS}}$	42 ± 9	D_{1420}	817.6 ± 4.7	$f\sigma_8(0.51)$	0.4809 ± 0.0098
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	D_{2000}	231.1 ± 1.5	$\sigma_8(0.51)$	0.6290 ± 0.0098
$\boldsymbol{A^{kSZ}}$	< 4.26	$n_{s,0.002}$	0.9659 ± 0.0040	$f\sigma_8(0.61)$	0.4762 ± 0.0098
$\boldsymbol{A_{100}^{dust TT}}$	8.9 ± 1.8	Y_P	$0.245401^{+0.000058}_{-0.000049}$	$\sigma_8(0.61)$	0.5984 ± 0.0092
$\boldsymbol{A_{143}^{dust TT}}$	10.9 ± 1.8	Y_P^{BBN}	$0.246728^{+0.000059}_{-0.000049}$	$f\sigma_8(2.33)$	0.3017 ± 0.0046
$\boldsymbol{A_{143\times217}^{dust TT}}$	18.6 ± 3.3	10^5D/H	$2.582^{+0.024}_{-0.027}$	$\sigma_8(2.33)$	0.3104 ± 0.0040
$\boldsymbol{A_{217}^{dust TT}}$	93.8 ± 7.4	Age/Gyr	13.775 ± 0.023	f_{2000}^{143}	29.3 ± 2.7
$\boldsymbol{A_{100}^{dust TE}}$	0.115 ± 0.038	z_*	1089.88 ± 0.24	$f_{2000}^{143\times217}$	32.0 ± 1.8
$\boldsymbol{A_{100\times143}^{dust TE}}$	0.135 ± 0.030	r_*	144.48 ± 0.26	f_{2000}^{217}	106.9 ± 1.8
$\boldsymbol{A_{100\times217}^{dust TE}}$	0.480 ± 0.085	$100\theta_*$	1.04115 ± 0.00030	χ^2_{simall}	397.2 ± 2.1
$\boldsymbol{A_{143}^{dust TE}}$	0.224 ± 0.054	$D_M(z_*)$/Gpc	13.877 ± 0.025	χ^2_{lowl}	23.33 ± 0.88
$\boldsymbol{A_{143\times217}^{dust TE}}$	0.666 ± 0.080	z_{drag}	1059.96 ± 0.29	χ^2_{plik}	2359.2 ± 5.8
$\boldsymbol{A_{217}^{dust TE}}$	2.08 ± 0.27	r_{drag}	147.14 ± 0.27	χ^2_{JLA}	1036.60 ± 0.92
$\boldsymbol{c_{100}}$	0.99966 ± 0.00061	k_D	0.14083 ± 0.00030	χ^2_{6DF}	0.047 ± 0.064
$\boldsymbol{c_{217}}$	0.99819 ± 0.00062	$100\theta_D$	0.16075 ± 0.00017	χ^2_{MGS}	1.66 ± 0.60
H_0	68.35 ± 0.82	z_{eq}	3397 ± 26	$\chi^2_{DR12BAO}$	4.8 ± 1.1
Ω_Λ	0.6942 ± 0.0076	k_{eq}	0.010367 ± 0.000080	χ^2_{prior}	11.5 ± 4.5
Ω_m	0.3058 ± 0.0076	$100\theta_{eq}$	0.8144 ± 0.0049	χ^2_{BAO}	6.52 ± 0.98
$\Omega_m h^2$	0.1428 ± 0.0011	$100\theta_{s,eq}$	0.4499 ± 0.0025	χ^2_{CMB}	2779.7 ± 5.7
$\Omega_m h^3$	0.0976 ± 0.0014	$H(0.15)$	73.32 ± 0.52		

$\bar{\chi}^2_{eff} = 3834.31$; $R - 1 = 0.01077$

18.50 base_w_plikHM_TTTEEE_lowl_lowE_BAO_Pantheon_post_lensing_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02240 ± 0.00014	σ_8	0.819 ± 0.011	$D_M(0.15)$	636.0 ± 6.0
$\boldsymbol{\Omega_c h^2}$	0.1196 ± 0.0010	S_8	0.826 ± 0.010	$H(0.38)$	83.12 ± 0.26
$\boldsymbol{100\theta_{MC}}$	1.04098 ± 0.00030	$\sigma_8\Omega_m^{0.5}$	0.4526 ± 0.0057	$D_M(0.38)$	1521 ± 10
$\boldsymbol{\tau}$	$0.0557^{+0.0056}_{-0.0077}$	$\sigma_8\Omega_m^{0.25}$	0.6088 ± 0.0070	$H(0.51)$	89.72 ± 0.23
$\boldsymbol{w_0}$	-1.028 ± 0.032	$\sigma_8/h^{0.5}$	0.990 ± 0.010	$D_M(0.51)$	1972 ± 11
$\boldsymbol{\ln(10^{10}A_s)}$	$3.046^{+0.012}_{-0.015}$	$r_{drag}h$	100.6 ± 1.2	$H(0.61)$	95.26 ± 0.24
$\boldsymbol{n_s}$	0.9659 ± 0.0039	$\langle d^2\rangle^{1/2}$	2.446 ± 0.022	$D_M(0.61)$	2297 ± 11
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0024	z_{re}	$7.79^{+0.60}_{-0.76}$	$H(2.33)$	235.96 ± 0.56
$\boldsymbol{A^{CIB}_{217}}$	47 ± 7	$10^9 A_s$	$2.104^{+0.024}_{-0.031}$	$D_M(2.33)$	5758.1 ± 8.5
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$10^9 A_s e^{-2\tau}$	1.882 ± 0.010	$f\sigma_8(0.15)$	0.4597 ± 0.0067
$\boldsymbol{A^{tSZ}_{143}}$	5.4 ± 2.0	D_{40}	1230 ± 11	$\sigma_8(0.15)$	0.757 ± 0.010
$\boldsymbol{A^{PS}_{100}}$	259 ± 28	D_{220}	5736 ± 38	$f\sigma_8(0.38)$	0.4807 ± 0.0080
$\boldsymbol{A^{PS}_{143}}$	46 ± 8	D_{810}	2539 ± 13	$\sigma_8(0.38)$	0.6713 ± 0.0093
$\boldsymbol{A^{PS}_{143\times217}}$	42 ± 9	D_{1420}	817.6 ± 4.7	$f\sigma_8(0.51)$	0.4800 ± 0.0084
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	D_{2000}	231.0 ± 1.5	$\sigma_8(0.51)$	0.6282 ± 0.0086
$\boldsymbol{A^{kSZ}}$	< 4.35	$n_{s,0.002}$	0.9659 ± 0.0039	$f\sigma_8(0.61)$	0.4753 ± 0.0084
$\boldsymbol{A^{dustTT}_{100}}$	8.9 ± 1.8	Y_P	$0.245404^{+0.000057}_{-0.000048}$	$\sigma_8(0.61)$	0.5977 ± 0.0081
$\boldsymbol{A^{dustTT}_{143}}$	10.9 ± 1.8	Y_P^{BBN}	$0.246730^{+0.000057}_{-0.000048}$	$f\sigma_8(2.33)$	0.3014 ± 0.0041
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.6 ± 3.3	10^5D/H	$2.581^{+0.023}_{-0.027}$	$\sigma_8(2.33)$	0.3100 ± 0.0035
$\boldsymbol{A^{dustTT}_{217}}$	93.8 ± 7.4	Age/Gyr	13.775 ± 0.023	f^{143}_{2000}	29.4 ± 2.7
$\boldsymbol{A^{dustTE}_{100}}$	0.114 ± 0.038	z_*	1089.86 ± 0.23	$f^{143\times217}_{2000}$	32.1 ± 1.8
$\boldsymbol{A^{dustTE}_{100\times143}}$	0.134 ± 0.030	r_*	144.50 ± 0.23	f^{217}_{2000}	106.9 ± 1.8
$\boldsymbol{A^{dustTE}_{100\times217}}$	0.480 ± 0.085	$100\theta_*$	1.04116 ± 0.00029	$\chi^2_{lensing}$	9.13 ± 0.63
$\boldsymbol{A^{dustTE}_{143}}$	0.225 ± 0.054	$D_M(z_*)$/Gpc	13.879 ± 0.022	χ^2_{simall}	397.0 ± 1.8
$\boldsymbol{A^{dustTE}_{143\times217}}$	0.666 ± 0.079	z_{drag}	1059.97 ± 0.29	χ^2_{lowl}	23.29 ± 0.82
$\boldsymbol{A^{dustTE}_{217}}$	2.08 ± 0.26	r_{drag}	147.16 ± 0.24	χ^2_{plik}	2359.2 ± 5.7
$\boldsymbol{c_{100}}$	0.99965 ± 0.00061	k_D	0.14082 ± 0.00029	χ^2_{JLA}	1036.59 ± 0.92
$\boldsymbol{c_{217}}$	0.99819 ± 0.00062	$100\theta_D$	0.16074 ± 0.00017	χ^2_{6DF}	0.046 ± 0.065
H_0	68.35 ± 0.82	z_{eq}	3394 ± 23	χ^2_{MGS}	1.68 ± 0.60
Ω_Λ	0.6945 ± 0.0075	k_{eq}	0.010360 ± 0.000070	$\chi^2_{DR12BAO}$	4.7 ± 1.0
Ω_m	0.3055 ± 0.0075	$100\theta_{eq}$	0.8148 ± 0.0043	χ^2_{prior}	11.4 ± 4.4
$\Omega_m h^2$	0.14269 ± 0.00096	$100\theta_{s,eq}$	0.4502 ± 0.0022	χ^2_{CMB}	2788.7 ± 5.8
$\Omega_m h^3$	0.0975 ± 0.0014	$H(0.15)$	73.33 ± 0.52	χ^2_{BAO}	6.42 ± 0.89

$\bar{\chi}^2_{eff} = 3843.11$; $\Delta\bar{\chi}^2_{eff} = 0.09$; $R - 1 = 0.01732$

18.51 base_w_CamSpecHM_TTTEEE_lowl_lowE_BAO_Pantheon

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022335	0.02232 ± 0.00015	$\sigma_8\Omega_m^{0.5}$	0.4495	0.4493 ± 0.0074	$H(0.38)$	83.107	83.09 ± 0.29
$\boldsymbol{\Omega_c h^2}$	0.11922	0.1192 ± 0.0012	$\sigma_8\Omega_m^{0.25}$	0.6046	0.6043 ± 0.0092	$D_M(0.38)$	1522.2	1522 ± 10
$\boldsymbol{100\theta_{MC}}$	1.040926	1.04093 ± 0.00031	$\sigma_8/h^{0.5}$	0.9845	0.984 ± 0.013	$H(0.51)$	89.715	89.70 ± 0.26
$\boldsymbol{\tau}$	0.0533	0.0533 ± 0.0078	$r_{drag}h$	100.51	100.5 ± 1.2	$D_M(0.51)$	1973.8	1974 ± 11
$\boldsymbol{w_0}$	−1.0204	-1.021 ± 0.033	$\langle d^2\rangle^{1/2}$	2.4307	2.430 ± 0.029	$H(0.61)$	95.266	95.25 ± 0.27
$\boldsymbol{\ln(10^{10}A_s)}$	3.0392	3.039 ± 0.016	z_{re}	7.57	7.55 ± 0.79	$D_M(0.61)$	2298.1	2299 ± 11
$\boldsymbol{n_s}$	0.96718	0.9669 ± 0.0042	$10^9 A_s$	2.0888	2.088 ± 0.034	$H(2.33)$	235.70	235.69 ± 0.63
$\boldsymbol{y_{cal}}$	1.00049	1.0005 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.8776	1.877 ± 0.011	$D_M(2.33)$	5761.0	5761.6 ± 9.4
$\boldsymbol{A_{100}^{PS}}$	234.7	239 ± 25	D_{40}	1223.4	1224 ± 12	$f\sigma_8(0.15)$	0.4561	0.4559 ± 0.0086
$\boldsymbol{A_{143}^{PS}}$	43.2	39 ± 8	D_{220}	5720.9	5720 ± 39	$\sigma_8(0.15)$	0.7519	0.752 ± 0.012
$\boldsymbol{A_{217}^{PS}}$	104.4	102 ± 10	D_{810}	2535.9	2535 ± 14	$f\sigma_8(0.38)$	0.4765	0.4764 ± 0.0099
$\boldsymbol{A_{217}^{CIB}}$	41.8	40 ± 7	D_{1420}	816.52	815.9 ± 4.9	$\sigma_8(0.38)$	0.6667	0.666 ± 0.011
$\boldsymbol{A_{143}^{tSZ}}$	5.62	$3.8^{+1.9}_{-2.5}$	D_{2000}	230.56	230.3 ± 1.7	$f\sigma_8(0.51)$	0.4758	0.476 ± 0.010
$\boldsymbol{r_{143\times217}^{PS}}$	0.687	0.66 ± 0.13	$n_{s,0.002}$	0.96718	0.9669 ± 0.0042	$\sigma_8(0.51)$	0.6240	0.624 ± 0.010
$\boldsymbol{r_{143\times217}^{CIB}}$	0.691	$0.55^{+0.39}_{-0.19}$	Y_P	0.245381	$0.245374^{+0.000065}_{-0.000056}$	$f\sigma_8(0.61)$	0.4712	0.471 ± 0.010
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.43	—	Y_P^{BBN}	0.246708	$0.246701^{+0.000065}_{-0.000056}$	$\sigma_8(0.61)$	0.5937	0.5935 ± 0.0094
$\boldsymbol{A^{kSZ}}$	1.40	$4.7^{+2.3}_{-4.0}$	10^5D/H	2.5921	2.595 ± 0.029	$f\sigma_8(2.33)$	0.29946	0.2993 ± 0.0047
$\boldsymbol{A_{100}^{dust}}$	1.010	1.01 ± 0.19	Age/Gyr	13.7848	13.787 ± 0.024	$\sigma_8(2.33)$	0.30830	0.3082 ± 0.0041
$\boldsymbol{A_{143}^{dust}}$	0.972	0.96 ± 0.18	z_*	1089.896	1089.91 ± 0.26	f_{2000}^{143}	29.68	29.7 ± 2.8
$\boldsymbol{A_{217}^{dust}}$	0.963	0.98 ± 0.10	r_*	144.660	144.68 ± 0.29	f_{2000}^{217}	106.49	106.8 ± 1.9
$\boldsymbol{A_{143\times217}^{dust}}$	1.021	1.03 ± 0.16	$100\theta_*$	1.041120	1.04112 ± 0.00031	$f_{2000}^{143\times217}$	32.09	32.1 ± 2.0
$\boldsymbol{c_{100}}$	0.99764	0.9975 ± 0.0011	$D_M(z_*)$/Gpc	13.8946	13.896 ± 0.027	χ^2_{simall}	395.88	396.9 ± 1.7
$\boldsymbol{c_{217}}$	1.00095	1.0011 ± 0.0016	z_{drag}	1059.780	1059.77 ± 0.33	χ^2_{lowl}	22.81	22.91 ± 0.85
$\boldsymbol{c_{TE}}$	0.99648	0.9967 ± 0.0049	r_{drag}	147.339	147.36 ± 0.29	$\chi^2_{CamSpec}$	11500.1	11514.6 ± 5.6
$\boldsymbol{c_{EE}}$	0.99219	0.9922 ± 0.0049	k_D	0.140581	0.14055 ± 0.00034	χ^2_{JLA}	1035.935	1036.61 ± 0.96
H_0	68.22	68.21 ± 0.83	$100\theta_D$	0.160834	0.16085 ± 0.00019	χ^2_{6DF}	0.0005	0.048 ± 0.069
Ω_Λ	0.6944	0.6944 ± 0.0077	z_{eq}	3382.8	3382 ± 28	χ^2_{MGS}	1.61	1.68 ± 0.61
Ω_m	0.3056	0.3056 ± 0.0077	k_{eq}	0.010325	0.010322 ± 0.000085	$\chi^2_{DR12BAO}$	4.07	4.5 ± 1.1
$\Omega_m h^2$	0.14220	0.1422 ± 0.0012	$100\theta_{eq}$	0.8167	0.8169 ± 0.0052	χ^2_{prior}	1.99	7.8 ± 3.4
$\Omega_m h^3$	0.09700	0.0970 ± 0.0015	$100\theta_{s,eq}$	0.45118	0.4513 ± 0.0027	χ^2_{BAO}	5.68	6.3 ± 1.0
σ_8	0.8131	0.813 ± 0.013	$H(0.15)$	73.26	73.25 ± 0.53	χ^2_{CMB}	11918.8	11934.4 ± 5.6
S_8	0.8207	0.820 ± 0.014	$D_M(0.15)$	636.8	636.9 ± 6.1			

Best-fit $\chi^2_{eff} = 12962.39$; $\bar{\chi}^2_{eff} = 12985.12$; $R - 1 = 0.01359$

χ^2_{eff}: BAO - 6DF: 0.00 MGS: 1.61 DR12BAO: 4.07 CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.88 commander_dx12_v3_2_29: 22.81 CamSpec like_10.7HM_1400_unified: 11500.10 SN - JLA Pantheon: 1035.93

18.52 base_w_CamSpecHM_TTTEEE_lowl_lowE_BAO_Pantheon_post_lensing

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02232 ± 0.00015	$\sigma_8\Omega_m^{0.5}$	0.4506 ± 0.0059	$H(0.38)$	83.08 ± 0.28
$\boldsymbol{\Omega_c h^2}$	0.1193 ± 0.0011	$\sigma_8\Omega_m^{0.25}$	0.6061 ± 0.0071	$D_M(0.38)$	1522 ± 10
$\boldsymbol{100\theta_{MC}}$	1.04091 ± 0.00030	$\sigma_8/h^{0.5}$	0.987 ± 0.010	$H(0.51)$	89.68 ± 0.25
$\boldsymbol{\tau}$	0.0544 ± 0.0073	$r_{drag}h$	100.6 ± 1.2	$D_M(0.51)$	1974 ± 11
$\boldsymbol{w_0}$	-1.024 ± 0.032	$\langle d^2\rangle^{1/2}$	2.437 ± 0.022	$H(0.61)$	95.23 ± 0.26
$\boldsymbol{\ln(10^{10}A_s)}$	3.042 ± 0.014	z_{re}	7.67 ± 0.73	$D_M(0.61)$	2298 ± 11
$\boldsymbol{n_s}$	0.9664 ± 0.0041	$10^9 A_s$	2.094 ± 0.030	$H(2.33)$	235.73 ± 0.60
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.878 ± 0.010	$D_M(2.33)$	5762.0 ± 9.3
$\boldsymbol{A_{100}^{PS}}$	239 ± 25	D_{40}	1226 ± 11	$f\sigma_8(0.15)$	0.4574 ± 0.0068
$\boldsymbol{A_{143}^{PS}}$	39 ± 8	D_{220}	5723 ± 38	$\sigma_8(0.15)$	0.754 ± 0.010
$\boldsymbol{A_{217}^{PS}}$	103 ± 10	D_{810}	2535 ± 13	$f\sigma_8(0.38)$	0.4781 ± 0.0081
$\boldsymbol{A_{217}^{CIB}}$	39 ± 7	D_{1420}	816.0 ± 4.9	$\sigma_8(0.38)$	0.6684 ± 0.0091
$\boldsymbol{A_{143}^{tSZ}}$	$3.9^{+1.9}_{-2.5}$	D_{2000}	230.4 ± 1.6	$f\sigma_8(0.51)$	0.4774 ± 0.0084
$\boldsymbol{r_{143\times217}^{PS}}$	0.66 ± 0.13	$n_{s,0.002}$	0.9664 ± 0.0041	$\sigma_8(0.51)$	0.6255 ± 0.0085
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.55^{+0.38}_{-0.20}$	Y_P	$0.245373^{+0.000065}_{-0.000056}$	$f\sigma_8(0.61)$	0.4728 ± 0.0084
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	$0.246699^{+0.000065}_{-0.000057}$	$\sigma_8(0.61)$	0.5952 ± 0.0080
$\boldsymbol{A^{kSZ}}$	$4.7^{+1.9}_{-4.3}$	10^5D/H	2.596 ± 0.028	$f\sigma_8(2.33)$	0.3001 ± 0.0040
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.20	Age/Gyr	13.786 ± 0.024	$\sigma_8(2.33)$	0.3089 ± 0.0035
$\boldsymbol{A_{143}^{dust}}$	0.96 ± 0.18	z_*	1089.93 ± 0.25	f_{2000}^{143}	29.6 ± 2.8
$\boldsymbol{A_{217}^{dust}}$	0.98 ± 0.10	r_*	144.64 ± 0.26	f_{2000}^{217}	106.8 ± 1.9
$\boldsymbol{A_{143\times217}^{dust}}$	1.03 ± 0.16	$100\theta_*$	1.04110 ± 0.00030	$f_{2000}^{143\times217}$	32.1 ± 2.0
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	$D_M(z_*)$/Gpc	13.893 ± 0.024	$\chi^2_{lensing}$	9.23 ± 0.72
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	z_{drag}	1059.77 ± 0.33	χ^2_{simall}	396.9 ± 1.6
$\boldsymbol{c_{TE}}$	0.9966 ± 0.0049	r_{drag}	147.32 ± 0.27	χ^2_{lowl}	23.04 ± 0.81
$\boldsymbol{c_{EE}}$	0.9923 ± 0.0050	k_D	0.14058 ± 0.00032	$\chi^2_{CamSpec}$	11514.1 ± 5.4
H_0	68.26 ± 0.82	$100\theta_D$	0.16085 ± 0.00019	χ^2_{JLA}	1036.58 ± 0.90
Ω_Λ	0.6944 ± 0.0076	z_{eq}	3385 ± 25	χ^2_{6DF}	0.047 ± 0.066
Ω_m	0.3056 ± 0.0076	k_{eq}	0.010332 ± 0.000075	χ^2_{MGS}	1.69 ± 0.60
$\Omega_m h^2$	0.1423 ± 0.0010	$100\theta_{eq}$	0.8162 ± 0.0046	$\chi^2_{DR12BAO}$	4.6 ± 1.0
$\Omega_m h^3$	0.0971 ± 0.0014	$100\theta_{s,eq}$	0.4509 ± 0.0024	χ^2_{prior}	7.8 ± 3.4
σ_8	0.815 ± 0.011	$H(0.15)$	73.27 ± 0.53	χ^2_{CMB}	11943.3 ± 5.6
S_8	0.823 ± 0.011	$D_M(0.15)$	636.7 ± 6.0	χ^2_{BAO}	6.32 ± 0.92

$\bar{\chi}^2_{eff} = 12993.94$; $\Delta\bar{\chi}^2_{eff} = 0.27$; $R - 1 = 0.01467$

18.53 base_w_CamSpecHM_TTTEEE_lowl_lowE_BAO_Pantheon_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02233 ± 0.00015	$\sigma_8\Omega_m^{0.5}$	0.4497 ± 0.0073	$H(0.38)$	83.10 ± 0.29
$\boldsymbol{\Omega_c h^2}$	0.1192 ± 0.0012	$\sigma_8\Omega_m^{0.25}$	0.6049 ± 0.0090	$D_M(0.38)$	1522 ± 10
$\boldsymbol{100\theta_{MC}}$	1.04093 ± 0.00031	$\sigma_8/h^{0.5}$	0.985 ± 0.013	$H(0.51)$	89.71 ± 0.26
$\boldsymbol{\tau}$	$0.0546^{+0.0050}_{-0.0082}$	$r_{drag}h$	100.5 ± 1.2	$D_M(0.51)$	1974 ± 11
$\boldsymbol{w_0}$	-1.020 ± 0.033	$\langle d^2\rangle^{1/2}$	2.433 ± 0.028	$H(0.61)$	95.26 ± 0.27
$\boldsymbol{\ln(10^{10}A_s)}$	$3.041^{+0.012}_{-0.016}$	z_{re}	$7.70^{+0.56}_{-0.82}$	$D_M(0.61)$	2298 ± 11
$\boldsymbol{n_s}$	0.9670 ± 0.0042	$10^9 A_s$	$2.093^{+0.024}_{-0.035}$	$H(2.33)$	235.69 ± 0.63
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.877 ± 0.011	$D_M(2.33)$	5761.5 ± 9.4
$\boldsymbol{A_{100}^{PS}}$	239 ± 25	D_{40}	1224 ± 12	$f\sigma_8(0.15)$	0.4563 ± 0.0085
$\boldsymbol{A_{143}^{PS}}$	39 ± 8	D_{220}	5719 ± 39	$\sigma_8(0.15)$	0.752 ± 0.012
$\boldsymbol{A_{217}^{PS}}$	103 ± 10	D_{810}	2534 ± 14	$f\sigma_8(0.38)$	0.4768 ± 0.0098
$\boldsymbol{A_{217}^{CIB}}$	39 ± 7	D_{1420}	815.9 ± 4.9	$\sigma_8(0.38)$	0.667 ± 0.011
$\boldsymbol{A_{143}^{tSZ}}$	$3.9^{+1.9}_{-2.5}$	D_{2000}	230.4 ± 1.7	$f\sigma_8(0.51)$	0.476 ± 0.010
$\boldsymbol{r_{143\times217}^{PS}}$	0.66 ± 0.13	$n_{s,0.002}$	0.9670 ± 0.0042	$\sigma_8(0.51)$	0.6244 ± 0.0098
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.55^{+0.39}_{-0.19}$	Y_P	$0.245376^{+0.000065}_{-0.000056}$	$f\sigma_8(0.61)$	0.4714 ± 0.0099
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	$0.246702^{+0.000065}_{-0.000056}$	$\sigma_8(0.61)$	0.5941 ± 0.0092
$\boldsymbol{A^{kSZ}}$	$4.7^{+2.1}_{-4.1}$	10^5D/H	2.594 ± 0.028	$f\sigma_8(2.33)$	0.2996 ± 0.0046
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.19	Age/Gyr	13.786 ± 0.024	$\sigma_8(2.33)$	0.3085 ± 0.0040
$\boldsymbol{A_{143}^{dust}}$	0.96 ± 0.18	z_*	1089.90 ± 0.25	f_{2000}^{143}	29.6 ± 2.8
$\boldsymbol{A_{217}^{dust}}$	0.98 ± 0.10	r_*	144.68 ± 0.28	f_{2000}^{217}	106.8 ± 1.9
$\boldsymbol{A_{143\times217}^{dust}}$	1.03 ± 0.16	$100\theta_*$	1.04112 ± 0.00031	$f_{2000}^{143\times217}$	32.0 ± 2.0
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	$D_M(z_*)$/Gpc	13.897 ± 0.027	χ^2_{simall}	396.8 ± 1.7
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	z_{drag}	1059.77 ± 0.33	χ^2_{lowl}	22.92 ± 0.85
$\boldsymbol{c_{TE}}$	0.9966 ± 0.0049	r_{drag}	147.36 ± 0.29	$\chi^2_{CamSpec}$	11514.4 ± 5.6
$\boldsymbol{c_{EE}}$	0.9921 ± 0.0049	k_D	0.14055 ± 0.00034	χ^2_{JLA}	1036.61 ± 0.95
H_0	68.21 ± 0.83	$100\theta_D$	0.16085 ± 0.00019	χ^2_{6DF}	0.048 ± 0.068
Ω_Λ	0.6944 ± 0.0077	z_{eq}	3381 ± 28	χ^2_{MGS}	1.68 ± 0.61
Ω_m	0.3056 ± 0.0077	k_{eq}	0.010320 ± 0.000084	$\chi^2_{DR12BAO}$	4.5 ± 1.1
$\Omega_m h^2$	0.1421 ± 0.0012	$100\theta_{eq}$	0.8170 ± 0.0052	χ^2_{prior}	7.8 ± 3.4
$\Omega_m h^3$	0.0969 ± 0.0015	$100\theta_{s,eq}$	0.4513 ± 0.0027	χ^2_{BAO}	6.25 ± 0.99
σ_8	0.814 ± 0.013	$H(0.15)$	73.25 ± 0.53	χ^2_{CMB}	11934.2 ± 5.6
S_8	0.821 ± 0.013	$D_M(0.15)$	636.9 ± 6.1		

$\bar{\chi}^2_{eff} = 12984.87$; $R - 1 = 0.01292$

18.54 base_w_CamSpecHM_TTTEEE_lowl_lowE_BAO_Pantheon_post_lensing_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02232 ± 0.00015	$\sigma_8\Omega_m^{0.5}$	0.4507 ± 0.0059	$H(0.38)$	83.09 ± 0.28
$\boldsymbol{\Omega_c h^2}$	0.1193 ± 0.0011	$\sigma_8\Omega_m^{0.25}$	0.6062 ± 0.0071	$D_M(0.38)$	1522 ± 10
$\boldsymbol{100\theta_{MC}}$	1.04092 ± 0.00030	$\sigma_8/h^{0.5}$	0.987 ± 0.010	$H(0.51)$	89.69 ± 0.24
$\boldsymbol{\tau}$	$0.0552^{+0.0055}_{-0.0077}$	$r_{drag}h$	100.6 ± 1.2	$D_M(0.51)$	1974 ± 11
$\boldsymbol{w_0}$	-1.023 ± 0.031	$\langle d^2\rangle^{1/2}$	2.438 ± 0.022	$H(0.61)$	95.24 ± 0.25
$\boldsymbol{\ln(10^{10}A_s)}$	$3.043^{+0.011}_{-0.015}$	z_{re}	$7.75^{+0.59}_{-0.76}$	$D_M(0.61)$	2298 ± 11
$\boldsymbol{n_s}$	0.9666 ± 0.0040	$10^9 A_s$	$2.097^{+0.024}_{-0.031}$	$H(2.33)$	235.72 ± 0.59
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.878 ± 0.010	$D_M(2.33)$	5761.7 ± 9.2
$\boldsymbol{A_{100}^{PS}}$	239 ± 25	D_{40}	1226 ± 11	$f\sigma_8(0.15)$	0.4575 ± 0.0068
$\boldsymbol{A_{143}^{PS}}$	39 ± 8	D_{220}	5722 ± 38	$\sigma_8(0.15)$	0.754 ± 0.010
$\boldsymbol{A_{217}^{PS}}$	103 ± 10	D_{810}	2535 ± 13	$f\sigma_8(0.38)$	0.4782 ± 0.0081
$\boldsymbol{A_{217}^{CIB}}$	39 ± 7	D_{1420}	816.0 ± 4.9	$\sigma_8(0.38)$	0.6686 ± 0.0091
$\boldsymbol{A_{143}^{tSZ}}$	$3.9^{+1.9}_{-2.5}$	D_{2000}	230.4 ± 1.6	$f\sigma_8(0.51)$	0.4775 ± 0.0083
$\boldsymbol{r_{143\times217}^{PS}}$	0.66 ± 0.13	$n_{s,0.002}$	0.9666 ± 0.0040	$\sigma_8(0.51)$	0.6257 ± 0.0084
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.55^{+0.38}_{-0.20}$	Y_P	$0.245374^{+0.000064}_{-0.000056}$	$f\sigma_8(0.61)$	0.4728 ± 0.0083
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	$0.246701^{+0.000065}_{-0.000056}$	$\sigma_8(0.61)$	0.5954 ± 0.0079
$\boldsymbol{A^{kSZ}}$	$4.7^{+1.8}_{-4.4}$	10^5D/H	2.595 ± 0.028	$f\sigma_8(2.33)$	0.3003 ± 0.0040
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.20	Age/Gyr	13.786 ± 0.024	$\sigma_8(2.33)$	0.3091 ± 0.0034
$\boldsymbol{A_{143}^{dust}}$	0.96 ± 0.18	z_*	1089.92 ± 0.24	f_{2000}^{143}	29.6 ± 2.8
$\boldsymbol{A_{217}^{dust}}$	0.98 ± 0.10	r_*	144.65 ± 0.25	f_{2000}^{217}	106.8 ± 1.9
$\boldsymbol{A_{143\times217}^{dust}}$	1.03 ± 0.16	$100\theta_*$	1.04111 ± 0.00030	$f_{2000}^{143\times217}$	32.1 ± 2.0
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	$D_M(z_*)$/Gpc	13.894 ± 0.024	$\chi^2_{lensing}$	9.20 ± 0.67
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	z_{drag}	1059.77 ± 0.33	χ^2_{simall}	396.9 ± 1.6
$\boldsymbol{c_{TE}}$	0.9965 ± 0.0049	r_{drag}	147.33 ± 0.26	χ^2_{lowl}	23.04 ± 0.81
$\boldsymbol{c_{EE}}$	0.9923 ± 0.0050	k_D	0.14058 ± 0.00032	$\chi^2_{CamSpec}$	11514.0 ± 5.4
H_0	68.25 ± 0.82	$100\theta_D$	0.16085 ± 0.00019	χ^2_{JLA}	1036.57 ± 0.88
Ω_Λ	0.6945 ± 0.0076	z_{eq}	3384 ± 24	χ^2_{6DF}	0.047 ± 0.066
Ω_m	0.3055 ± 0.0076	k_{eq}	0.010329 ± 0.000074	χ^2_{MGS}	1.69 ± 0.60
$\Omega_m h^2$	0.1423 ± 0.0010	$100\theta_{eq}$	0.8164 ± 0.0046	$\chi^2_{DR12BAO}$	4.55 ± 0.97
$\Omega_m h^3$	0.0971 ± 0.0014	$100\theta_{s,eq}$	0.4510 ± 0.0023	χ^2_{prior}	7.8 ± 3.4
σ_8	0.815 ± 0.011	$H(0.15)$	73.27 ± 0.53	χ^2_{CMB}	11943.1 ± 5.6
S_8	0.823 ± 0.011	$D_M(0.15)$	636.7 ± 6.0	χ^2_{BAO}	6.29 ± 0.90

$\bar{\chi}^2_{eff} = 12993.74$; $\Delta\bar{\chi}^2_{eff} = 0.21$; $R - 1 = 0.01620$

18.55 base_w_plikHM_TT_lowl_lowE_BAO_Riess18_Pantheon

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022221	0.02221 ± 0.00021	$\sigma_8\Omega_m^{0.25}$	0.6107	0.610 ± 0.011	$D_M(0.15)$	629.7	629.6 ± 5.5
$\boldsymbol{\Omega_c h^2}$	0.11966	0.1196 ± 0.0016	$\sigma_8/h^{0.5}$	0.9940	0.993 ± 0.016	$H(0.38)$	83.176	83.17 ± 0.35
$\boldsymbol{100\theta_{MC}}$	1.040956	1.04094 ± 0.00044	$r_{drag}h$	102.04	102.1 ± 1.1	$D_M(0.38)$	1511.6	1511.6 ± 9.6
$\boldsymbol{\tau}$	0.0529	0.0530 ± 0.0080	$\langle d^2\rangle^{1/2}$	2.4468	2.447 ± 0.034	$H(0.51)$	89.592	89.58 ± 0.35
$\boldsymbol{w_0}$	−1.0630	-1.064 ± 0.036	z_{re}	7.55	7.54 ± 0.82	$D_M(0.51)$	1963.3	1963 ± 11
$\boldsymbol{\ln(10^{10}A_s)}$	3.0404	3.040 ± 0.016	$10^9 A_s$	2.0914	2.091 ± 0.034	$H(0.61)$	95.030	95.01 ± 0.36
$\boldsymbol{n_s}$	0.96559	0.9651 ± 0.0048	$10^9 A_s e^{-2\tau}$	1.8814	1.880 ± 0.012	$D_M(0.61)$	2288.3	2288 ± 11
$\boldsymbol{y_{cal}}$	1.00053	1.0005 ± 0.0025	D_{40}	1227.4	1228 ± 13	$H(2.33)$	235.28	235.25 ± 0.78
$\boldsymbol{A_{217}^{CIB}}$	49.3	48 ± 7	D_{220}	5720.9	5720 ± 41	$D_M(2.33)$	5762.4	5763 ± 12
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.22	—	D_{810}	2538.1	2536 ± 14	$f\sigma_8(0.15)$	0.4614	0.461 ± 0.011
$\boldsymbol{A_{143}^{tSZ}}$	7.01	5.1 ± 2.0	D_{1420}	816.20	815.3 ± 5.0	$\sigma_8(0.15)$	0.7654	0.765 ± 0.014
$\boldsymbol{A_{100}^{PS}}$	256.3	262 ± 28	D_{2000}	230.29	230.0 ± 1.8	$f\sigma_8(0.38)$	0.4858	0.486 ± 0.012
$\boldsymbol{A_{143}^{PS}}$	47.7	48 ± 8	$n_{s,0.002}$	0.96559	0.9651 ± 0.0048	$\sigma_8(0.38)$	0.6789	0.679 ± 0.012
$\boldsymbol{A_{143\times217}^{PS}}$	44.0	43 ± 9	Y_P	0.245335	$0.245325^{+0.000094}_{-0.000077}$	$f\sigma_8(0.51)$	0.4861	0.486 ± 0.012
$\boldsymbol{A_{217}^{PS}}$	118.1	115 ± 10	Y_P^{BBN}	0.246661	$0.246651^{+0.000095}_{-0.000077}$	$\sigma_8(0.51)$	0.6353	0.635 ± 0.011
$\boldsymbol{A^{kSZ}}$	0.02	< 4.76	10^5D/H	2.6139	2.617 ± 0.039	$f\sigma_8(0.61)$	0.4818	0.482 ± 0.012
$\boldsymbol{A_{100}^{dustTT}}$	8.90	8.9 ± 1.8	Age/Gyr	13.7723	13.774 ± 0.027	$\sigma_8(0.61)$	0.6044	0.604 ± 0.010
$\boldsymbol{A_{143}^{dustTT}}$	10.84	10.7 ± 1.8	z_*	1090.079	1090.10 ± 0.33	$f\sigma_8(2.33)$	0.30483	0.3047 ± 0.0049
$\boldsymbol{A_{143\times217}^{dustTT}}$	19.18	18.3 ± 3.3	r_*	144.633	144.66 ± 0.38	$\sigma_8(2.33)$	0.31280	0.3127 ± 0.0043
$\boldsymbol{A_{217}^{dustTT}}$	94.3	93.5 ± 7.2	$100\theta_*$	1.041151	1.04114 ± 0.00043	χ^2_{simall}	395.86	397.0 ± 1.8
$\boldsymbol{c_{100}}$	0.99964	0.99960 ± 0.00062	$D_M(z_*)$/Gpc	13.8916	13.894 ± 0.036	χ^2_{lowl}	23.10	23.25 ± 0.99
$\boldsymbol{c_{217}}$	0.99825	0.99825 ± 0.00062	z_{drag}	1059.551	1059.53 ± 0.45	χ^2_{plik}	758.9	771.3 ± 5.4
H_0	69.25	69.27 ± 0.78	r_{drag}	147.349	147.38 ± 0.40	$\chi^2_{H073p45}$	6.40	6.6 ± 2.4
Ω_Λ	0.7028	0.7030 ± 0.0071	k_D	0.140483	0.14044 ± 0.00049	χ^2_{JLA}	1037.07	1037.8 ± 2.0
Ω_m	0.2972	0.2970 ± 0.0071	$100\theta_D$	0.160981	0.16100 ± 0.00026	χ^2_{6DF}	0.056	0.10 ± 0.12
$\Omega_m h^2$	0.14253	0.1425 ± 0.0015	z_{eq}	3390.5	3389 ± 36	χ^2_{MGS}	2.35	2.44 ± 0.66
$\Omega_m h^3$	0.09870	0.0987 ± 0.0016	k_{eq}	0.010348	0.01034 ± 0.00011	$\chi^2_{DR12BAO}$	4.22	4.79 ± 0.98
σ_8	0.8271	0.827 ± 0.015	$100\theta_{eq}$	0.8150	0.8153 ± 0.0067	χ^2_{prior}	1.42	7.3 ± 3.6
S_8	0.8233	0.823 ± 0.017	$100\theta_{s,eq}$	0.45038	0.4505 ± 0.0035	χ^2_{BAO}	6.62	7.3 ± 1.3
$\sigma_8\Omega_m^{0.5}$	0.4509	0.4506 ± 0.0091	$H(0.15)$	73.83	73.83 ± 0.50	χ^2_{CMB}	1177.9	1191.5 ± 5.4

Best-fit $\chi^2_{eff} = 2229.39$; $\bar{\chi}^2_{eff} = 2250.46$; $R - 1 = 0.01167$

χ^2_{eff}: BAO - 6DF: 0.06 MGS: 2.35 DR12BAO: 4.22 CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.86 commander_dx12_v3_2_29: 23.10 plik_rd12_HM_v22_TT: 758.93 Hubble - H073p45: 6.40 SN - JLA Pantheon: 1037.07

18.56 base_w_plikHM_TT_lowl_lowE_BAO_Riess18_Pantheon_post_lensing

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022244	0.02221 ± 0.00020	$r_{\rm drag} h$	102.17	102.1 ± 1.1	$D_{\rm M}(0.51)$	1962.0	1963 ± 10
$\boldsymbol{\Omega_c h^2}$	0.11953	0.1196 ± 0.0013	$\langle d^2 \rangle^{1/2}$	2.4442	2.447 ± 0.024	$H(0.61)$	95.043	95.02 ± 0.32
$\boldsymbol{100\theta_{MC}}$	1.040900	1.04092 ± 0.00042	$z_{\rm re}$	7.55	7.56 ± 0.78	$D_{\rm M}(0.61)$	2286.9	2288 ± 11
$\boldsymbol{\tau}$	0.0530	0.0532 ± 0.0077	$10^9 A_{\rm s}$	2.0907	2.092 ± 0.031	$H(2.33)$	235.20	235.21 ± 0.70
$\boldsymbol{w_0}$	-1.0641	-1.064 ± 0.032	$10^9 A_{\rm s} e^{-2\tau}$	1.8806	1.880 ± 0.011	$D_{\rm M}(2.33)$	5761.7	5763 ± 12
$\boldsymbol{\ln(10^{10} A_s)}$	3.0401	3.040 ± 0.015	D_{40}	1225.9	1229 ± 12	$f\sigma_8(0.15)$	0.4607	0.4609 ± 0.0078
$\boldsymbol{n_s}$	0.96612	0.9651 ± 0.0044	D_{220}	5720.4	5722 ± 40	$\sigma_8(0.15)$	0.7653	0.765 ± 0.011
$\boldsymbol{y_{cal}}$	1.00036	1.0005 ± 0.0025	D_{810}	2537.7	2536 ± 13	$f\sigma_8(0.38)$	0.4853	0.4854 ± 0.0090
$\boldsymbol{A_{217}^{CIB}}$	48.3	48 ± 7	D_{1420}	816.35	815.3 ± 5.0	$\sigma_8(0.38)$	0.6789	0.6788 ± 0.0094
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.36	—	D_{2000}	230.39	230.0 ± 1.7	$f\sigma_8(0.51)$	0.4857	0.4858 ± 0.0091
$\boldsymbol{A_{143}^{tSZ}}$	6.98	5.1 ± 2.0	$n_{\rm s,0.002}$	0.96612	0.9651 ± 0.0044	$\sigma_8(0.51)$	0.6353	0.6352 ± 0.0086
$\boldsymbol{A_{100}^{PS}}$	253.2	263 ± 28	$Y_{\rm P}$	0.245344	$0.245328^{+0.000093}_{-0.000076}$	$f\sigma_8(0.61)$	0.4815	0.4816 ± 0.0090
$\boldsymbol{A_{143}^{PS}}$	49.1	48 ± 8	$Y_{\rm P}^{\rm BBN}$	0.246670	$0.246654^{+0.000093}_{-0.000076}$	$\sigma_8(0.61)$	0.6044	0.6043 ± 0.0081
$\boldsymbol{A_{143\times217}^{PS}}$	47.4	43 ± 9	10^5D/H	2.6094	2.616 ± 0.038	$f\sigma_8(2.33)$	0.30487	0.3048 ± 0.0040
$\boldsymbol{A_{217}^{PS}}$	119.5	115 ± 10	Age/Gyr	13.7702	13.773 ± 0.027	$\sigma_8(2.33)$	0.31286	0.3128 ± 0.0035
$\boldsymbol{A^{kSZ}}$	0.00	< 4.80	z_*	1090.039	1090.08 ± 0.31	f_{2000}^{143}	29.83	30.8 ± 2.9
$\boldsymbol{A_{100}^{dustTT}}$	8.83	9.0 ± 1.9	r_*	144.649	144.67 ± 0.32	$f_{2000}^{143\times217}$	32.82	33.3 ± 2.0
$\boldsymbol{A_{143}^{dustTT}}$	10.77	10.7 ± 1.8	$100\theta_*$	1.041097	1.04112 ± 0.00042	f_{2000}^{217}	107.31	107.9 ± 1.9
$\boldsymbol{A_{143\times217}^{dustTT}}$	19.38	18.3 ± 3.3	$D_{\rm M}(z_*)$/Gpc	13.8939	13.895 ± 0.031	$\chi^2_{\rm lensing}$	8.683	9.20 ± 0.75
$\boldsymbol{A_{217}^{dustTT}}$	94.5	93.4 ± 7.3	$z_{\rm drag}$	1059.628	1059.54 ± 0.46	$\chi^2_{\rm simall}$	395.88	396.9 ± 1.6
$\boldsymbol{c_{100}}$	0.99966	0.99961 ± 0.00061	$r_{\rm drag}$	147.355	147.39 ± 0.35	$\chi^2_{\rm lowl}$	23.00	23.25 ± 0.87
$\boldsymbol{c_{217}}$	0.99825	0.99825 ± 0.00062	$k_{\rm D}$	0.140492	0.14043 ± 0.00045	$\chi^2_{\rm plik}$	759.22	770.9 ± 5.2
H_0	69.34	69.30 ± 0.77	$100\theta_{\rm D}$	0.160944	0.16100 ± 0.00027	$\chi^2_{\rm H073p45}$	6.14	6.5 ± 2.3
Ω_Λ	0.7037	0.7034 ± 0.0070	$z_{\rm eq}$	3388.0	3388 ± 29	$\chi^2_{\rm JLA}$	1037.21	1037.8 ± 1.9
$\Omega_{\rm m}$	0.2963	0.2966 ± 0.0070	$k_{\rm eq}$	0.010340	0.010340 ± 0.000089	$\chi^2_{\rm 6DF}$	0.068	0.11 ± 0.12
$\Omega_{\rm m} h^2$	0.14242	0.1424 ± 0.0012	$100\theta_{\rm eq}$	0.8155	0.8155 ± 0.0054	$\chi^2_{\rm MGS}$	2.43	2.47 ± 0.65
$\Omega_{\rm m} h^3$	0.09875	0.0987 ± 0.0014	$100\theta_{\rm s,eq}$	0.45062	0.4506 ± 0.0028	$\chi^2_{\rm DR12BAO}$	4.22	4.67 ± 0.78
σ_8	0.8269	0.827 ± 0.011	$H(0.15)$	73.893	73.86 ± 0.49	$\chi^2_{\rm prior}$	1.29	7.3 ± 3.6
S_8	0.8217	0.822 ± 0.012	$D_{\rm M}(0.15)$	629.1	629.4 ± 5.5	$\chi^2_{\rm CMB}$	1186.8	1200.3 ± 5.4
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4501	0.4503 ± 0.0066	$H(0.38)$	83.212	83.18 ± 0.31	$\chi^2_{\rm BAO}$	6.71	7.2 ± 1.2
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.6101	0.6102 ± 0.0079	$D_{\rm M}(0.38)$	1510.4	1511.2 ± 9.4			
$\sigma_8 / h^{0.5}$	0.9931	0.993 ± 0.011	$H(0.51)$	89.615	89.59 ± 0.31			

Best-fit $\chi^2_{\rm eff} = 2238.14$; $\Delta\chi^2_{\rm eff} = -4.13$; $\bar{\chi}^2_{\rm eff} = 2259.05$; $\Delta\bar{\chi}^2_{\rm eff} = -3.47$; $R - 1 = 0.01321$

$\chi^2_{\rm eff}$: BAO - 6DF: 0.07 (Δ 0.07) MGS: 2.43 (Δ 0.75) DR12BAO: 4.22 (Δ 0.73) CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.68 (Δ -0.37) simall_100x143_offlike5_EE_Aplanck_ 395.88 (Δ -0.69) commander_dx12_v3_2_29: 23.00 (Δ 0.35) plik_rd12_HM_v22_TT: 759.23 (Δ -1.68) Hubble - H073p45: 6.14 (Δ -4.42) SN - JLA Pantheon: 1037.21 (Δ 1.14)

18.57 base_w_plikHM_TT_lowl_lowE_BAO_Riess18_Pantheon_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02221 ± 0.00021	$\sigma_8/h^{0.5}$	0.995 ± 0.016	$D_M(0.38)$	1511.5 ± 9.6
$\boldsymbol{\Omega_c h^2}$	0.1196 ± 0.0016	$r_{drag}h$	102.1 ± 1.1	$H(0.51)$	89.59 ± 0.35
$\boldsymbol{100\theta_{MC}}$	1.04094 ± 0.00044	$\langle d^2\rangle^{1/2}$	2.450 ± 0.034	$D_M(0.51)$	1963 ± 11
$\boldsymbol{\tau}$	$0.0545^{+0.0048}_{-0.0083}$	z_{re}	$7.70^{+0.54}_{-0.83}$	$H(0.61)$	95.02 ± 0.37
$\boldsymbol{w_0}$	-1.064 ± 0.036	$10^9 A_s$	$2.097^{+0.024}_{-0.034}$	$D_M(0.61)$	2288 ± 11
$\boldsymbol{\ln(10^{10} A_s)}$	$3.043^{+0.012}_{-0.016}$	$10^9 A_s e^{-2\tau}$	1.880 ± 0.012	$H(2.33)$	235.24 ± 0.78
$\boldsymbol{n_s}$	0.9653 ± 0.0048	D_{40}	1228 ± 13	$D_M(2.33)$	5763 ± 12
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	D_{220}	5720 ± 41	$f\sigma_8(0.15)$	0.462 ± 0.011
$\boldsymbol{A^{CIB}_{217}}$	48 ± 7	D_{810}	2536 ± 14	$\sigma_8(0.15)$	0.766 ± 0.014
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{1420}	815.3 ± 5.1	$f\sigma_8(0.38)$	0.486 ± 0.012
$\boldsymbol{A^{tSZ}_{143}}$	5.1 ± 2.0	D_{2000}	230.0 ± 1.8	$\sigma_8(0.38)$	0.679 ± 0.012
$\boldsymbol{A^{PS}_{100}}$	262 ± 28	$n_{s,0.002}$	0.9653 ± 0.0048	$f\sigma_8(0.51)$	0.486 ± 0.012
$\boldsymbol{A^{PS}_{143}}$	48 ± 8	Y_P	$0.245327^{+0.000094}_{-0.000077}$	$\sigma_8(0.51)$	0.636 ± 0.011
$\boldsymbol{A^{PS}_{143\times217}}$	43 ± 9	Y_P^{BBN}	$0.246654^{+0.000094}_{-0.000077}$	$f\sigma_8(0.61)$	0.482 ± 0.012
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	10^5D/H	2.616 ± 0.039	$\sigma_8(0.61)$	0.605 ± 0.010
$\boldsymbol{A^{kSZ}}$	< 4.72	Age/Gyr	13.774 ± 0.027	$f\sigma_8(2.33)$	0.3051 ± 0.0049
$\boldsymbol{A^{dustTT}_{100}}$	9.0 ± 1.8	z_*	1090.09 ± 0.33	$\sigma_8(2.33)$	0.3131 ± 0.0042
$\boldsymbol{A^{dustTT}_{143}}$	10.7 ± 1.8	r_*	144.66 ± 0.38	f^{143}_{2000}	30.7 ± 2.9
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.3 ± 3.3	$100\theta_*$	1.04114 ± 0.00043	$f^{143\times217}_{2000}$	33.2 ± 2.0
$\boldsymbol{A^{dustTT}_{217}}$	93.5 ± 7.2	$D_M(z_*)$/Gpc	13.895 ± 0.036	f^{217}_{2000}	107.8 ± 1.9
$\boldsymbol{c_{100}}$	0.99960 ± 0.00061	z_{drag}	1059.54 ± 0.45	χ^2_{simall}	396.9 ± 1.8
$\boldsymbol{c_{217}}$	0.99825 ± 0.00062	r_{drag}	147.38 ± 0.40	χ^2_{lowl}	23.26 ± 0.99
H_0	69.27 ± 0.78	k_D	0.14044 ± 0.00049	χ^2_{plik}	771.1 ± 5.4
Ω_Λ	0.7031 ± 0.0071	$100\theta_D$	0.16100 ± 0.00026	$\chi^2_{H073p45}$	6.5 ± 2.4
Ω_m	0.2969 ± 0.0071	z_{eq}	3388 ± 36	χ^2_{JLA}	1037.8 ± 2.0
$\Omega_m h^2$	0.1424 ± 0.0015	k_{eq}	0.01034 ± 0.00011	χ^2_{6DF}	0.10 ± 0.12
$\Omega_m h^3$	0.0987 ± 0.0016	$100\theta_{eq}$	0.8155 ± 0.0067	χ^2_{MGS}	2.44 ± 0.66
σ_8	0.828 ± 0.015	$100\theta_{s,eq}$	0.4506 ± 0.0035	$\chi^2_{DR12BAO}$	4.77 ± 0.98
S_8	0.823 ± 0.017	$H(0.15)$	73.84 ± 0.50	χ^2_{prior}	7.3 ± 3.6
$\sigma_8\Omega_m^{0.5}$	0.4510 ± 0.0091	$D_M(0.15)$	629.6 ± 5.5	χ^2_{BAO}	7.3 ± 1.3
$\sigma_8\Omega_m^{0.25}$	0.611 ± 0.011	$H(0.38)$	83.18 ± 0.35	χ^2_{CMB}	1191.3 ± 5.4

$\bar{\chi}^2_{eff} = 2250.21$; $R - 1 = 0.01268$

18.58 base_w_plikHM_TT_lowl_lowE_BAO_Riess18_Pantheon_post_lensing_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02222 ± 0.00020	$r_{\rm drag} h$	102.2 ± 1.1	$D_{\rm M}(0.51)$	1963 ± 10
$\boldsymbol{\Omega_c h^2}$	0.1195 ± 0.0012	$\langle d^2 \rangle^{1/2}$	2.448 ± 0.024	$H(0.61)$	95.04 ± 0.32
$\boldsymbol{100\theta_{\rm MC}}$	1.04093 ± 0.00042	$z_{\rm re}$	$7.70^{+0.56}_{-0.79}$	$D_{\rm M}(0.61)$	2288 ± 11
$\boldsymbol{\tau}$	$0.0545^{+0.0050}_{-0.0079}$	$10^9 A_{\rm s}$	$2.096^{+0.023}_{-0.031}$	$H(2.33)$	235.18 ± 0.69
$\boldsymbol{w_0}$	-1.063 ± 0.032	$10^9 A_{\rm s} e^{-2\tau}$	1.880 ± 0.011	$D_{\rm M}(2.33)$	5762 ± 12
$\boldsymbol{\ln(10^{10} A_{\rm s})}$	$3.043^{+0.011}_{-0.015}$	D_{40}	1228 ± 12	$f\sigma_8(0.15)$	0.4609 ± 0.0078
$\boldsymbol{n_{\rm s}}$	0.9653 ± 0.0043	D_{220}	5722 ± 40	$\sigma_8(0.15)$	0.766 ± 0.011
$\boldsymbol{y_{\rm cal}}$	1.0005 ± 0.0025	D_{810}	2536 ± 13	$f\sigma_8(0.38)$	0.4854 ± 0.0090
$\boldsymbol{A^{\rm CIB}_{217}}$	48 ± 7	D_{1420}	815.3 ± 5.0	$\sigma_8(0.38)$	0.6792 ± 0.0093
$\boldsymbol{\xi^{\rm tSZ\times CIB}}$	—	D_{2000}	230.0 ± 1.8	$f\sigma_8(0.51)$	0.4859 ± 0.0092
$\boldsymbol{A^{\rm tSZ}_{143}}$	5.1 ± 2.0	$n_{\rm s,0.002}$	0.9653 ± 0.0043	$\sigma_8(0.51)$	0.6356 ± 0.0086
$\boldsymbol{A^{\rm PS}_{100}}$	262 ± 28	$Y_{\rm P}$	$0.245330^{+0.000093}_{-0.000076}$	$f\sigma_8(0.61)$	0.4816 ± 0.0091
$\boldsymbol{A^{\rm PS}_{143}}$	48 ± 8	$Y_{\rm P}^{\rm BBN}$	$0.246656^{+0.000093}_{-0.000076}$	$\sigma_8(0.61)$	0.6046 ± 0.0080
$\boldsymbol{A^{\rm PS}_{143\times217}}$	43 ± 9	10^5D/H	2.615 ± 0.038	$f\sigma_8(2.33)$	0.3050 ± 0.0040
$\boldsymbol{A^{\rm PS}_{217}}$	115 ± 10	Age/Gyr	13.773 ± 0.027	$\sigma_8(2.33)$	0.3130 ± 0.0034
$\boldsymbol{A^{\rm kSZ}}$	< 4.77	z_*	1090.07 ± 0.31	f^{143}_{2000}	30.7 ± 2.9
$\boldsymbol{A^{{\rm dust}TT}_{100}}$	9.0 ± 1.9	r_*	144.68 ± 0.32	$f^{143\times217}_{2000}$	33.2 ± 2.0
$\boldsymbol{A^{{\rm dust}TT}_{143}}$	10.7 ± 1.8	$100\theta_*$	1.04113 ± 0.00042	f^{217}_{2000}	107.8 ± 1.9
$\boldsymbol{A^{{\rm dust}TT}_{143\times217}}$	18.3 ± 3.3	$D_{\rm M}(z_*)$/Gpc	13.897 ± 0.031	$\chi^2_{\rm lensing}$	9.18 ± 0.74
$\boldsymbol{A^{{\rm dust}TT}_{217}}$	93.4 ± 7.3	$z_{\rm drag}$	1059.55 ± 0.46	$\chi^2_{\rm simall}$	396.8 ± 1.7
$\boldsymbol{c_{100}}$	0.99961 ± 0.00061	$r_{\rm drag}$	147.40 ± 0.34	$\chi^2_{\rm lowl}$	23.23 ± 0.87
$\boldsymbol{c_{217}}$	0.99825 ± 0.00062	$k_{\rm D}$	0.14042 ± 0.00045	$\chi^2_{\rm plik}$	770.8 ± 5.2
H_0	69.30 ± 0.77	$100\theta_{\rm D}$	0.16099 ± 0.00027	$\chi^2_{\rm H073p45}$	6.5 ± 2.3
Ω_Λ	0.7035 ± 0.0070	$z_{\rm eq}$	3386 ± 29	$\chi^2_{\rm JLA}$	1037.7 ± 1.9
$\Omega_{\rm m}$	0.2965 ± 0.0070	$k_{\rm eq}$	0.010335 ± 0.000088	$\chi^2_{\rm 6DF}$	0.11 ± 0.12
$\Omega_{\rm m} h^2$	0.1423 ± 0.0012	$100\theta_{\rm eq}$	0.8158 ± 0.0053	$\chi^2_{\rm MGS}$	2.48 ± 0.65
$\Omega_{\rm m} h^3$	0.0986 ± 0.0014	$100\theta_{\rm s,eq}$	0.4508 ± 0.0027	$\chi^2_{\rm DR12BAO}$	4.63 ± 0.76
σ_8	0.827 ± 0.011	$H(0.15)$	73.87 ± 0.49	$\chi^2_{\rm prior}$	7.3 ± 3.6
S_8	0.822 ± 0.012	$D_{\rm M}(0.15)$	629.4 ± 5.5	$\chi^2_{\rm CMB}$	1200.1 ± 5.4
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4504 ± 0.0066	$H(0.38)$	83.20 ± 0.31	$\chi^2_{\rm BAO}$	7.2 ± 1.2
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.6104 ± 0.0079	$D_{\rm M}(0.38)$	1511.0 ± 9.4		
$\sigma_8 / h^{0.5}$	0.994 ± 0.011	$H(0.51)$	89.61 ± 0.30		

$\bar{\chi}^2_{\rm eff} = 2258.82$; $\Delta\bar{\chi}^2_{\rm eff} = -3.60$; $R - 1 = 0.01425$

18.59 base_w_plikHM_TTTEEE_lowl_lowE_BAO_Riess18_Pantheon

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022423	0.02241 ± 0.00014	σ_8	0.8299	0.829 ± 0.013	$D_M(0.15)$	627.9	628.4 ± 5.3
$\boldsymbol{\Omega_c h^2}$	0.11981	0.1198 ± 0.0012	S_8	0.8243	0.824 ± 0.013	$H(0.38)$	83.325	83.31 ± 0.29
$\boldsymbol{100\theta_{MC}}$	1.040956	1.04098 ± 0.00030	$\sigma_8\Omega_m^{0.5}$	0.4515	0.4514 ± 0.0072	$D_M(0.38)$	1507.9	1508.7 ± 9.1
$\boldsymbol{\tau}$	0.0545	0.0551 ± 0.0079	$\sigma_8\Omega_m^{0.25}$	0.6121	0.6117 ± 0.0089	$H(0.51)$	89.729	89.72 ± 0.27
$\boldsymbol{w_0}$	-1.0664	-1.064 ± 0.031	$\sigma_8/h^{0.5}$	0.9956	0.995 ± 0.013	$D_M(0.51)$	1958.9	1960 ± 10
$\boldsymbol{\ln(10^{10}A_s)}$	3.0450	3.045 ± 0.016	$r_{drag}h$	102.19	102.1 ± 1.1	$H(0.61)$	95.161	95.16 ± 0.28
$\boldsymbol{n_s}$	0.96634	0.9658 ± 0.0040	$\langle d^2\rangle^{1/2}$	2.4514	2.452 ± 0.028	$D_M(0.61)$	2283.4	2284 ± 10
$\boldsymbol{y_{cal}}$	1.00063	1.0006 ± 0.0025	z_{re}	7.68	7.72 ± 0.79	$H(2.33)$	235.53	235.53 ± 0.59
$\boldsymbol{A_{217}^{CIB}}$	46.6	47 ± 7	$10^9 A_s$	2.1011	2.102 ± 0.034	$D_M(2.33)$	5753.7	5754.3 ± 9.0
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.57	—	$10^9 A_s e^{-2\tau}$	1.8840	1.883 ± 0.011	$f\sigma_8(0.15)$	0.4623	0.4620 ± 0.0084
$\boldsymbol{A_{143}^{tSZ}}$	7.06	$5.5^{+2.1}_{-1.9}$	D_{40}	1228.6	1230 ± 12	$\sigma_8(0.15)$	0.7680	0.767 ± 0.012
$\boldsymbol{A_{100}^{PS}}$	249.8	258 ± 28	D_{220}	5738.1	5737 ± 39	$f\sigma_8(0.38)$	0.4872	0.4867 ± 0.0095
$\boldsymbol{A_{143}^{PS}}$	49.6	46 ± 8	D_{810}	2541.7	2540 ± 13	$\sigma_8(0.38)$	0.6813	0.681 ± 0.010
$\boldsymbol{A_{143\times217}^{PS}}$	50.9	42 ± 9	D_{1420}	818.67	817.6 ± 4.8	$f\sigma_8(0.51)$	0.4877	0.4871 ± 0.0097
$\boldsymbol{A_{217}^{PS}}$	120.9	115 ± 10	D_{2000}	231.48	231.1 ± 1.6	$\sigma_8(0.51)$	0.6376	0.6370 ± 0.0094
$\boldsymbol{A^{kSZ}}$	0.01	< 4.13	$n_{s,0.002}$	0.96634	0.9658 ± 0.0040	$f\sigma_8(0.61)$	0.4834	0.4829 ± 0.0095
$\boldsymbol{A_{100}^{dustTT}}$	8.81	9.0 ± 1.8	Y_P	0.245416	$0.245408^{+0.000058}_{-0.000049}$	$\sigma_8(0.61)$	0.6066	0.6060 ± 0.0088
$\boldsymbol{A_{143}^{dustTT}}$	11.01	10.9 ± 1.8	Y_P^{BBN}	0.246743	$0.246735^{+0.000058}_{-0.000049}$	$f\sigma_8(2.33)$	0.30594	0.3056 ± 0.0044
$\boldsymbol{A_{143\times217}^{dustTT}}$	19.99	18.6 ± 3.3	10^5D/H	2.5757	$2.579^{+0.024}_{-0.027}$	$\sigma_8(2.33)$	0.31389	0.3137 ± 0.0039
$\boldsymbol{A_{217}^{dustTT}}$	95.2	93.6 ± 7.2	Age/Gyr	13.7504	13.753 ± 0.021	f_{2000}^{143}	28.67	29.3 ± 2.7
$\boldsymbol{A_{100}^{dustTE}}$	0.1154	0.114 ± 0.038	z_*	1089.835	1089.85 ± 0.25	$f_{2000}^{143\times217}$	31.92	32.0 ± 1.8
$\boldsymbol{A_{100\times143}^{dustTE}}$	0.1347	0.135 ± 0.029	r_*	144.441	144.47 ± 0.26	f_{2000}^{217}	106.49	106.9 ± 1.8
$\boldsymbol{A_{100\times217}^{dustTE}}$	0.481	0.481 ± 0.084	$100\theta_*$	1.041138	1.04116 ± 0.00030	χ^2_{simall}	396.05	397.2 ± 2.0
$\boldsymbol{A_{143}^{dustTE}}$	0.223	0.225 ± 0.055	$D_M(z_*)$/Gpc	13.8734	13.876 ± 0.025	χ^2_{lowl}	23.10	23.26 ± 0.87
$\boldsymbol{A_{143\times217}^{dustTE}}$	0.665	0.662 ± 0.080	z_{drag}	1060.047	1060.01 ± 0.29	χ^2_{plik}	2344.4	2359.0 ± 5.9
$\boldsymbol{A_{217}^{dustTE}}$	2.079	2.08 ± 0.27	r_{drag}	147.084	147.12 ± 0.26	$\chi^2_{H073p45}$	5.73	6.1 ± 2.2
$\boldsymbol{c_{100}}$	0.99973	0.99968 ± 0.00061	k_D	0.140915	0.14087 ± 0.00030	χ^2_{JLA}	1037.32	1037.8 ± 1.9
$\boldsymbol{c_{217}}$	0.99818	0.99818 ± 0.00062	$100\theta_D$	0.160698	0.16072 ± 0.00017	χ^2_{6DF}	0.068	0.10 ± 0.11
H_0	69.48	69.42 ± 0.75	z_{eq}	3398.8	3397 ± 26	χ^2_{MGS}	2.43	2.45 ± 0.63
Ω_Λ	0.7040	0.7035 ± 0.0068	k_{eq}	0.010374	0.010369 ± 0.000080	$\chi^2_{DR12BAO}$	4.29	4.67 ± 0.73
Ω_m	0.2960	0.2965 ± 0.0068	$100\theta_{eq}$	0.8141	0.8144 ± 0.0049	χ^2_{prior}	1.54	11.6 ± 4.5
$\Omega_m h^2$	0.14287	0.1428 ± 0.0011	$100\theta_{s,eq}$	0.44975	0.4499 ± 0.0025	χ^2_{BAO}	6.78	7.2 ± 1.1
$\Omega_m h^3$	0.09926	0.0991 ± 0.0013	$H(0.15)$	74.016	73.98 ± 0.48	χ^2_{CMB}	2763.6	2779.5 ± 5.8

Best-fit $\chi^2_{eff} = 3814.97$; $\bar{\chi}^2_{eff} = 3842.12$; $R - 1 = 0.01598$

χ^2_{eff}: BAO - 6DF: 0.07 MGS: 2.43 DR12BAO: 4.29 CMB - simall_100x143_offlike5_EE_Aplanck_B: 396.05 commander_dx12_v3_2_29: 23.10 plik_rd12_HM_v22b_TTTEEE: 2344.44 Hubble - H073p45: 5.73 SN - JLA Pantheon: 1037.32

18.60 base_w_plikHM_TTTEEE_lowl_lowE_BAO_Riess18_Pantheon_post_lensing

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022431	0.02242 ± 0.00014	S_8	0.8229	0.822 ± 0.010	$D_M(0.38)$	1509.0	1508.3 ± 9.1
$\boldsymbol{\Omega_c h^2}$	0.11967	0.1196 ± 0.0010	$\sigma_8 \Omega_m^{0.5}$	0.4507	0.4504 ± 0.0057	$H(0.51)$	89.763	89.76 ± 0.25
$\boldsymbol{100\theta_{MC}}$	1.040999	1.04099 ± 0.00030	$\sigma_8 \Omega_m^{0.25}$	0.6106	0.6105 ± 0.0068	$D_M(0.51)$	1959.9	1959.1 ± 9.9
$\boldsymbol{\tau}$	0.0546	0.0548 ± 0.0074	$\sigma_8/h^{0.5}$	0.9934	0.9934 ± 0.0099	$H(0.61)$	95.208	95.19 ± 0.25
$\boldsymbol{w_0}$	−1.0597	-1.062 ± 0.029	$r_{drag} h$	102.02	102.2 ± 1.1	$D_M(0.61)$	2284.2	2284 ± 10
$\boldsymbol{\ln(10^{10} A_s)}$	3.0442	3.045 ± 0.014	$\langle d^2 \rangle^{1/2}$	2.4474	2.449 ± 0.022	$H(2.33)$	235.54	235.47 ± 0.56
$\boldsymbol{n_s}$	0.96658	0.9660 ± 0.0039	z_{re}	7.68	7.69 ± 0.74	$D_M(2.33)$	5753.2	5753.5 ± 8.7
$\boldsymbol{y_{cal}}$	1.00050	1.0006 ± 0.0025	$10^9 A_s$	2.0993	2.100 ± 0.030	$f\sigma_8(0.15)$	0.4610	0.4609 ± 0.0066
$\boldsymbol{A_{217}^{CIB}}$	47.8	47 ± 7	$10^9 A_s e^{-2\tau}$	1.8821	1.882 ± 0.011	$\sigma_8(0.15)$	0.7656	0.7661 ± 0.0096
$\boldsymbol{\xi^{tSZ \times CIB}}$	0.39	—	D_{40}	1227.4	1229 ± 11	$f\sigma_8(0.38)$	0.4853	0.4855 ± 0.0077
$\boldsymbol{A_{143}^{tSZ}}$	7.28	5.5 ± 1.9	D_{220}	5735.6	5738 ± 38	$\sigma_8(0.38)$	0.6792	0.6797 ± 0.0085
$\boldsymbol{A_{100}^{PS}}$	250.7	258 ± 28	D_{810}	2540.1	2540 ± 13	$f\sigma_8(0.51)$	0.4857	0.4860 ± 0.0079
$\boldsymbol{A_{143}^{PS}}$	46.8	46 ± 8	D_{1420}	818.22	817.7 ± 4.7	$\sigma_8(0.51)$	0.6356	0.6361 ± 0.0079
$\boldsymbol{A_{143\times217}^{PS}}$	46.4	42 ± 9	D_{2000}	231.34	231.1 ± 1.6	$f\sigma_8(0.61)$	0.4814	0.4818 ± 0.0078
$\boldsymbol{A_{217}^{PS}}$	118.6	115 ± 10	$n_{s,0.002}$	0.96658	0.9660 ± 0.0039	$\sigma_8(0.61)$	0.6047	0.6051 ± 0.0074
$\boldsymbol{A^{kSZ}}$	0.00	< 4.12	Y_P	0.245419	$0.245412^{+0.000055}_{-0.000049}$	$f\sigma_8(2.33)$	0.30504	0.3053 ± 0.0037
$\boldsymbol{A_{100}^{dustTT}}$	8.91	9.0 ± 1.8	Y_P^{BBN}	0.246746	$0.246739^{+0.000055}_{-0.000049}$	$\sigma_8(2.33)$	0.31314	0.3133 ± 0.0033
$\boldsymbol{A_{143}^{dustTT}}$	11.06	11.0 ± 1.8	10^5D/H	2.5743	2.577 ± 0.025	f_{2000}^{143}	28.83	29.3 ± 2.7
$\boldsymbol{A_{143\times217}^{dustTT}}$	19.74	18.6 ± 3.2	Age/Gyr	13.7516	13.752 ± 0.021	$f_{2000}^{143\times217}$	31.96	32.0 ± 1.8
$\boldsymbol{A_{217}^{dustTT}}$	94.7	93.7 ± 7.1	z_*	1089.813	1089.83 ± 0.23	f_{2000}^{217}	106.55	106.9 ± 1.8
$\boldsymbol{A_{100}^{dustTE}}$	0.1138	0.113 ± 0.038	r_*	144.471	144.50 ± 0.24	$\chi^2_{lensing}$	8.671	9.06 ± 0.64
$\boldsymbol{A_{100\times143}^{dustTE}}$	0.1345	0.135 ± 0.029	$100\theta_*$	1.041176	1.04117 ± 0.00030	χ^2_{simall}	396.06	397.0 ± 1.7
$\boldsymbol{A_{100\times217}^{dustTE}}$	0.482	0.483 ± 0.084	$D_M(z_*)$/Gpc	13.8758	13.878 ± 0.022	χ^2_{lowl}	23.04	23.20 ± 0.79
$\boldsymbol{A_{143}^{dustTE}}$	0.224	0.225 ± 0.054	z_{drag}	1060.047	1060.02 ± 0.29	χ^2_{plik}	2344.4	2358.9 ± 5.7
$\boldsymbol{A_{143\times217}^{dustTE}}$	0.666	0.662 ± 0.079	r_{drag}	147.113	147.14 ± 0.24	$\chi^2_{H073p45}$	6.11	6.1 ± 2.2
$\boldsymbol{A_{217}^{dustTE}}$	2.092	2.08 ± 0.27	k_D	0.140890	0.14085 ± 0.00028	χ^2_{JLA}	1036.99	1037.7 ± 1.8
$\boldsymbol{c_{100}}$	0.99972	0.99969 ± 0.00062	$100\theta_D$	0.160698	0.16072 ± 0.00017	χ^2_{6DF}	0.055	0.11 ± 0.12
$\boldsymbol{c_{217}}$	0.99818	0.99819 ± 0.00061	z_{eq}	3395.7	3394 ± 23	χ^2_{MGS}	2.35	2.48 ± 0.63
H_0	69.35	69.43 ± 0.75	k_{eq}	0.010364	0.010359 ± 0.000071	$\chi^2_{DR12BAO}$	4.19	4.59 ± 0.65
Ω_Λ	0.7032	0.7039 ± 0.0068	$100\theta_{eq}$	0.81470	0.8150 ± 0.0044	χ^2_{prior}	1.78	11.6 ± 4.5
Ω_m	0.2968	0.2961 ± 0.0068	$100\theta_{s,eq}$	0.45007	0.4502 ± 0.0023	χ^2_{CMB}	2772.2	2788.2 ± 5.8
$\Omega_m h^2$	0.14274	0.14267 ± 0.00098	$H(0.15)$	73.956	74.00 ± 0.48	χ^2_{BAO}	6.59	7.2 ± 1.1
$\Omega_m h^3$	0.09899	0.0991 ± 0.0013	$D_M(0.15)$	628.7	628.2 ± 5.3			
σ_8	0.8273	0.828 ± 0.010	$H(0.38)$	83.335	83.34 ± 0.27			

Best-fit $\chi^2_{eff} = 3823.69$; $\bar{\chi}^2_{eff} = 3850.71$; $\Delta\bar{\chi}^2_{eff} = -3.65$; $R - 1 = 0.01889$

χ^2_{eff}: BAO - 6DF: 0.06 MGS: 2.35 DR12BAO: 4.19 CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.67 simall_100x143_offlike5_EE_Aplanck_B: 396.06 commander_dx12_v3_2_29: 23.04 plik_rd12_HM_v22b_TTTEEE: 2344.44 Hubble - H073p45: 6.11 SN - JLA Pantheon: 1036.99

18.61 base_w_plikHM_TTTEEE_lowl_lowE_BAO_Riess18_Pantheon_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02241 ± 0.00014	σ_8	0.830 ± 0.012	$D_M(0.15)$	628.4 ± 5.4
$\boldsymbol{\Omega_c h^2}$	0.1197 ± 0.0012	S_8	0.825 ± 0.013	$H(0.38)$	83.31 ± 0.29
$\boldsymbol{100\theta_{MC}}$	1.04098 ± 0.00030	$\sigma_8\Omega_m^{0.5}$	0.4517 ± 0.0071	$D_M(0.38)$	1508.7 ± 9.2
$\boldsymbol{\tau}$	$0.0561^{+0.0055}_{-0.0083}$	$\sigma_8\Omega_m^{0.25}$	0.6122 ± 0.0087	$H(0.51)$	89.73 ± 0.27
$\boldsymbol{w_0}$	-1.064 ± 0.031	$\sigma_8/h^{0.5}$	0.996 ± 0.013	$D_M(0.51)$	1960 ± 10
$\boldsymbol{\ln(10^{10} A_s)}$	$3.047^{+0.012}_{-0.017}$	$r_{drag}h$	102.1 ± 1.1	$H(0.61)$	95.17 ± 0.28
$\boldsymbol{n_s}$	0.9659 ± 0.0040	$\langle d^2\rangle^{1/2}$	2.454 ± 0.028	$D_M(0.61)$	2284 ± 10
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0025	z_{re}	$7.83^{+0.60}_{-0.82}$	$H(2.33)$	235.53 ± 0.59
$\boldsymbol{A^{CIB}_{217}}$	47 ± 7	$10^9 A_s$	$2.106^{+0.025}_{-0.035}$	$D_M(2.33)$	5754.2 ± 9.0
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$10^9 A_s e^{-2\tau}$	1.883 ± 0.011	$f\sigma_8(0.15)$	0.4623 ± 0.0083
$\boldsymbol{A^{tSZ}_{143}}$	$5.5^{+2.1}_{-1.9}$	D_{40}	1230 ± 12	$\sigma_8(0.15)$	0.768 ± 0.012
$\boldsymbol{A^{PS}_{100}}$	258 ± 28	D_{220}	5737 ± 39	$f\sigma_8(0.38)$	0.4870 ± 0.0095
$\boldsymbol{A^{PS}_{143}}$	45 ± 8	D_{810}	2540 ± 13	$\sigma_8(0.38)$	0.681 ± 0.010
$\boldsymbol{A^{PS}_{143\times217}}$	42 ± 9	D_{1420}	817.7 ± 4.8	$f\sigma_8(0.51)$	0.4874 ± 0.0096
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	D_{2000}	231.1 ± 1.6	$\sigma_8(0.51)$	0.6374 ± 0.0093
$\boldsymbol{A^{kSZ}}$	< 4.11	$n_{s,0.002}$	0.9659 ± 0.0040	$f\sigma_8(0.61)$	0.4832 ± 0.0095
$\boldsymbol{A^{dustTT}_{100}}$	9.0 ± 1.8	Y_P	$0.245409^{+0.000057}_{-0.000049}$	$\sigma_8(0.61)$	0.6064 ± 0.0087
$\boldsymbol{A^{dustTT}_{143}}$	10.9 ± 1.8	Y_P^{BBN}	$0.246736^{+0.000058}_{-0.000049}$	$f\sigma_8(2.33)$	0.3059 ± 0.0043
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.5 ± 3.3	10^5D/H	2.579 ± 0.026	$\sigma_8(2.33)$	0.3139 ± 0.0038
$\boldsymbol{A^{dustTT}_{217}}$	93.6 ± 7.2	Age/Gyr	13.753 ± 0.021	f^{143}_{2000}	29.2 ± 2.7
$\boldsymbol{A^{dustTE}_{100}}$	0.114 ± 0.038	z_*	1089.85 ± 0.25	$f^{143\times217}_{2000}$	32.0 ± 1.8
$\boldsymbol{A^{dustTE}_{100\times143}}$	0.135 ± 0.029	r_*	144.47 ± 0.26	f^{217}_{2000}	106.8 ± 1.8
$\boldsymbol{A^{dustTE}_{100\times217}}$	0.481 ± 0.084	$100\theta_*$	1.04116 ± 0.00030	χ^2_{simall}	397.2 ± 2.0
$\boldsymbol{A^{dustTE}_{143}}$	0.224 ± 0.055	$D_M(z_*)$/Gpc	13.876 ± 0.025	χ^2_{lowl}	23.27 ± 0.87
$\boldsymbol{A^{dustTE}_{143\times217}}$	0.662 ± 0.080	z_{drag}	1060.01 ± 0.29	χ^2_{plik}	2358.8 ± 5.8
$\boldsymbol{A^{dustTE}_{217}}$	2.08 ± 0.27	r_{drag}	147.12 ± 0.26	$\chi^2_{H073p45}$	6.1 ± 2.2
$\boldsymbol{c_{100}}$	0.99968 ± 0.00061	k_D	0.14087 ± 0.00030	χ^2_{JLA}	1037.7 ± 1.9
$\boldsymbol{c_{217}}$	0.99818 ± 0.00062	$100\theta_D$	0.16072 ± 0.00017	χ^2_{6DF}	0.10 ± 0.11
H_0	69.41 ± 0.76	z_{eq}	3397 ± 26	χ^2_{MGS}	2.45 ± 0.63
Ω_Λ	0.7035 ± 0.0068	k_{eq}	0.010368 ± 0.000080	$\chi^2_{DR12BAO}$	4.66 ± 0.73
Ω_m	0.2965 ± 0.0068	$100\theta_{eq}$	0.8144 ± 0.0049	χ^2_{prior}	11.6 ± 4.5
$\Omega_m h^2$	0.1428 ± 0.0011	$100\theta_{s,eq}$	0.4500 ± 0.0025	χ^2_{BAO}	7.2 ± 1.1
$\Omega_m h^3$	0.0991 ± 0.0013	$H(0.15)$	73.98 ± 0.48	χ^2_{CMB}	2779.3 ± 5.7

$\bar{\chi}^2_{eff} = 3841.92$; $R - 1 = 0.01872$

18.62 base_w_plikHM_TTTEEE_lowl_lowE_BAO_Riess18_Pantheon_post_lensing_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02242 ± 0.00014	S_8	0.822 ± 0.010	$D_M(0.38)$	1508.3 ± 9.1
$\boldsymbol{\Omega_c h^2}$	0.1196 ± 0.0010	$\sigma_8\Omega_m^{0.5}$	0.4505 ± 0.0057	$H(0.51)$	89.76 ± 0.24
$\boldsymbol{100\theta_{MC}}$	1.04100 ± 0.00030	$\sigma_8\Omega_m^{0.25}$	0.6107 ± 0.0068	$D_M(0.51)$	1959 ± 10
$\boldsymbol{\tau}$	$0.0556^{+0.0055}_{-0.0077}$	$\sigma_8/h^{0.5}$	0.9938 ± 0.0098	$H(0.61)$	95.20 ± 0.25
$\boldsymbol{w_0}$	-1.061 ± 0.029	$r_{drag}h$	102.1 ± 1.1	$D_M(0.61)$	2283 ± 10
$\boldsymbol{\ln(10^{10}A_s)}$	$3.046^{+0.011}_{-0.015}$	$\langle d^2\rangle^{1/2}$	2.450 ± 0.021	$H(2.33)$	235.46 ± 0.56
$\boldsymbol{n_s}$	0.9662 ± 0.0039	z_{re}	$7.77^{+0.59}_{-0.77}$	$D_M(2.33)$	5753.3 ± 8.6
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0025	$10^9 A_s$	$2.103^{+0.023}_{-0.031}$	$f\sigma_8(0.15)$	0.4609 ± 0.0065
$\boldsymbol{A_{217}^{CIB}}$	47 ± 7	$10^9 A_s e^{-2\tau}$	1.882 ± 0.010	$\sigma_8(0.15)$	0.7663 ± 0.0096
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{40}	1229 ± 11	$f\sigma_8(0.38)$	0.4855 ± 0.0077
$\boldsymbol{A_{143}^{tSZ}}$	5.5 ± 1.9	D_{220}	5738 ± 38	$\sigma_8(0.38)$	0.6799 ± 0.0085
$\boldsymbol{A_{100}^{PS}}$	258 ± 28	D_{810}	2539 ± 13	$f\sigma_8(0.51)$	0.4860 ± 0.0079
$\boldsymbol{A_{143}^{PS}}$	46 ± 8	D_{1420}	817.7 ± 4.7	$\sigma_8(0.51)$	0.6363 ± 0.0078
$\boldsymbol{A_{143\times217}^{PS}}$	42 ± 9	D_{2000}	231.1 ± 1.6	$f\sigma_8(0.61)$	0.4818 ± 0.0078
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	$n_{s,0.002}$	0.9662 ± 0.0039	$\sigma_8(0.61)$	0.6054 ± 0.0074
$\boldsymbol{A^{kSZ}}$	< 4.11	Y_P	$0.245413^{+0.000055}_{-0.000049}$	$f\sigma_8(2.33)$	0.3054 ± 0.0037
$\boldsymbol{A_{100}^{dustTT}}$	9.0 ± 1.8	Y_P^{BBN}	$0.246740^{+0.000055}_{-0.000049}$	$\sigma_8(2.33)$	0.3135 ± 0.0033
$\boldsymbol{A_{143}^{dustTT}}$	11.0 ± 1.8	10^5D/H	2.577 ± 0.025	f_{2000}^{143}	29.3 ± 2.8
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.6 ± 3.2	Age/Gyr	13.752 ± 0.021	$f_{2000}^{143\times217}$	32.0 ± 1.8
$\boldsymbol{A_{217}^{dustTT}}$	93.7 ± 7.1	z_*	1089.82 ± 0.23	f_{2000}^{217}	106.8 ± 1.8
$\boldsymbol{A_{100}^{dustTE}}$	0.113 ± 0.038	r_*	144.50 ± 0.23	$\chi^2_{lensing}$	9.05 ± 0.63
$\boldsymbol{A_{100\times143}^{dustTE}}$	0.135 ± 0.029	$100\theta_*$	1.04118 ± 0.00029	χ^2_{smallA}	397.0 ± 1.8
$\boldsymbol{A_{100\times217}^{dustTE}}$	0.483 ± 0.084	$D_M(z_*)$/Gpc	13.879 ± 0.022	χ^2_{lowl}	23.20 ± 0.79
$\boldsymbol{A_{143}^{dustTE}}$	0.225 ± 0.054	z_{drag}	1060.02 ± 0.29	χ^2_{plik}	2358.8 ± 5.7
$\boldsymbol{A_{143\times217}^{dustTE}}$	0.662 ± 0.079	r_{drag}	147.15 ± 0.24	$\chi^2_{H073p45}$	6.1 ± 2.2
$\boldsymbol{A_{217}^{dustTE}}$	2.08 ± 0.27	k_D	0.14084 ± 0.00028	χ^2_{JLA}	1037.7 ± 1.8
$\boldsymbol{c_{100}}$	0.99969 ± 0.00062	$100\theta_D$	0.16072 ± 0.00017	χ^2_{6DF}	0.11 ± 0.12
$\boldsymbol{c_{217}}$	0.99818 ± 0.00062	z_{eq}	3393 ± 23	χ^2_{MGS}	2.49 ± 0.63
H_0	69.42 ± 0.75	k_{eq}	0.010356 ± 0.000071	$\chi^2_{DR12BAO}$	4.57 ± 0.64
Ω_Λ	0.7039 ± 0.0068	$100\theta_{eq}$	0.8151 ± 0.0044	χ^2_{prior}	11.6 ± 4.5
Ω_m	0.2961 ± 0.0068	$100\theta_{s,eq}$	0.4503 ± 0.0022	χ^2_{CMB}	2788.1 ± 5.7
$\Omega_m h^2$	0.14264 ± 0.00097	$H(0.15)$	74.00 ± 0.48	χ^2_{BAO}	7.2 ± 1.1
$\Omega_m h^3$	0.0990 ± 0.0012	$D_M(0.15)$	628.3 ± 5.3		
σ_8	0.828 ± 0.010	$H(0.38)$	83.35 ± 0.27		

$\bar{\chi}^2_{eff} = 3850.54$; $\Delta\bar{\chi}^2_{eff} = -3.73$; $R - 1 = 0.02167$

18.63 base_w_CamSpecHM_TTTEEE_lowl_lowE_BAO_Riess18_Pantheon

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02233 ± 0.00015	$\sigma_8\Omega_m^{0.5}$	0.4481 ± 0.0070	$H(0.38)$	83.30 ± 0.28
$\boldsymbol{\Omega_c h^2}$	0.1193 ± 0.0012	$\sigma_8\Omega_m^{0.25}$	0.6075 ± 0.0086	$D_M(0.38)$	1509.7 ± 9.1
$\boldsymbol{100\theta_{MC}}$	1.04093 ± 0.00030	$\sigma_8/h^{0.5}$	0.989 ± 0.013	$H(0.51)$	89.71 ± 0.26
$\boldsymbol{\tau}$	0.0531 ± 0.0076	$r_{drag}h$	102.1 ± 1.1	$D_M(0.51)$	1960.8 ± 9.9
$\boldsymbol{w_0}$	-1.058 ± 0.031	$\langle d^2\rangle^{1/2}$	2.437 ± 0.027	$H(0.61)$	95.15 ± 0.27
$\boldsymbol{\ln(10^{10}A_s)}$	3.039 ± 0.016	z_{re}	7.53 ± 0.78	$D_M(0.61)$	2285 ± 10
$\boldsymbol{n_s}$	0.9667 ± 0.0041	$10^9 A_s$	2.088 ± 0.033	$H(2.33)$	235.23 ± 0.60
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0024	$10^9 A_s e^{-2\tau}$	1.877 ± 0.011	$D_M(2.33)$	5757.7 ± 9.0
$\boldsymbol{A_{100}^{PS}}$	239 ± 25	D_{40}	1224 ± 12	$f\sigma_8(0.15)$	0.4583 ± 0.0081
$\boldsymbol{A_{143}^{PS}}$	39 ± 8	D_{220}	5721 ± 39	$\sigma_8(0.15)$	0.762 ± 0.012
$\boldsymbol{A_{217}^{PS}}$	102 ± 10	D_{810}	2535 ± 13	$f\sigma_8(0.38)$	0.4826 ± 0.0094
$\boldsymbol{A_{217}^{CIB}}$	40 ± 7	D_{1420}	815.9 ± 4.7	$\sigma_8(0.38)$	0.676 ± 0.010
$\boldsymbol{A_{143}^{tSZ}}$	$3.9^{+1.9}_{-2.5}$	D_{2000}	230.4 ± 1.6	$f\sigma_8(0.51)$	0.4830 ± 0.0095
$\boldsymbol{r_{143\times217}^{PS}}$	0.66 ± 0.13	$n_{s,0.002}$	0.9667 ± 0.0041	$\sigma_8(0.51)$	0.6329 ± 0.0093
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.56^{+0.39}_{-0.18}$	Y_P	$0.245377^{+0.000064}_{-0.000056}$	$f\sigma_8(0.61)$	0.4789 ± 0.0094
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	$0.246704^{+0.000064}_{-0.000056}$	$\sigma_8(0.61)$	0.6022 ± 0.0087
$\boldsymbol{A^{kSZ}}$	$4.7^{+2.2}_{-4.0}$	10^5D/H	2.594 ± 0.028	$f\sigma_8(2.33)$	0.3038 ± 0.0043
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.19	Age/Gyr	13.764 ± 0.022	$\sigma_8(2.33)$	0.3120 ± 0.0038
$\boldsymbol{A_{143}^{dust}}$	0.96 ± 0.18	z_*	1089.91 ± 0.25	f_{2000}^{143}	29.6 ± 2.8
$\boldsymbol{A_{217}^{dust}}$	0.97 ± 0.10	r_*	144.65 ± 0.27	f_{2000}^{217}	106.8 ± 1.9
$\boldsymbol{A_{143\times217}^{dust}}$	1.03 ± 0.16	$100\theta_*$	1.04112 ± 0.00030	$f_{2000}^{143\times217}$	32.0 ± 2.0
$\boldsymbol{c_{100}}$	0.9975 ± 0.0010	$D_M(z_*)$/Gpc	13.894 ± 0.026	χ^2_{simall}	396.9 ± 1.6
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	z_{drag}	1059.79 ± 0.32	χ^2_{lowl}	22.89 ± 0.83
$\boldsymbol{c_{TE}}$	0.9965 ± 0.0049	r_{drag}	147.33 ± 0.28	$\chi^2_{CamSpec}$	11514.3 ± 5.6
$\boldsymbol{c_{EE}}$	0.9919 ± 0.0050	k_D	0.14059 ± 0.00033	$\chi^2_{H073p45}$	6.4 ± 2.3
H_0	69.31 ± 0.75	$100\theta_D$	0.16084 ± 0.00019	χ^2_{JLA}	1037.6 ± 1.7
Ω_Λ	0.7038 ± 0.0067	z_{eq}	3384 ± 26	χ^2_{6DF}	0.11 ± 0.12
Ω_m	0.2962 ± 0.0067	k_{eq}	0.010329 ± 0.000080	χ^2_{MGS}	2.49 ± 0.63
$\Omega_m h^2$	0.1423 ± 0.0011	$100\theta_{eq}$	0.8165 ± 0.0050	$\chi^2_{DR12BAO}$	4.52 ± 0.70
$\Omega_m h^3$	0.0986 ± 0.0013	$100\theta_{s,eq}$	0.4511 ± 0.0025	χ^2_{prior}	7.7 ± 3.4
σ_8	0.824 ± 0.012	$H(0.15)$	73.92 ± 0.48	χ^2_{BAO}	7.1 ± 1.2
S_8	0.818 ± 0.013	$D_M(0.15)$	629.0 ± 5.3	χ^2_{CMB}	11934.0 ± 5.6

$\bar{\chi}^2_{eff} = 12992.81$; $R - 1 = 0.01226$

18.64 base_w_CamSpecHM_TTTEEE_lowl_lowE_BAO_Riess18_Pantheon_post_lensing

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02233 ± 0.00015	$\sigma_8\Omega_m^{0.25}$	0.6085 ± 0.0069	$H(0.51)$	89.70 ± 0.25
$\boldsymbol{\Omega_c h^2}$	0.1194 ± 0.0010	$\sigma_8/h^{0.5}$	0.9907 ± 0.0099	$D_M(0.51)$	1960.7 ± 9.8
$\boldsymbol{100\theta_{MC}}$	1.04092 ± 0.00030	$r_{drag}h$	102.1 ± 1.1	$H(0.61)$	95.14 ± 0.26
$\boldsymbol{\tau}$	0.0538 ± 0.0072	$\langle d^2\rangle^{1/2}$	2.441 ± 0.022	$D_M(0.61)$	2285 ± 10
$\boldsymbol{w_0}$	-1.060 ± 0.029	z_{re}	7.60 ± 0.73	$H(2.33)$	235.25 ± 0.57
$\boldsymbol{\ln(10^{10}A_s)}$	3.041 ± 0.014	$10^9 A_s$	2.092 ± 0.029	$D_M(2.33)$	5757.9 ± 8.8
$\boldsymbol{n_s}$	0.9664 ± 0.0040	$10^9 A_s e^{-2\tau}$	1.878 ± 0.010	$f\sigma_8(0.15)$	0.4592 ± 0.0066
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0024	D_{40}	1225 ± 12	$\sigma_8(0.15)$	0.7635 ± 0.0097
$\boldsymbol{A_{100}^{PS}}$	239 ± 25	D_{220}	5724 ± 39	$f\sigma_8(0.38)$	0.4836 ± 0.0078
$\boldsymbol{A_{143}^{PS}}$	39 ± 8	D_{810}	2535 ± 13	$\sigma_8(0.38)$	0.6775 ± 0.0086
$\boldsymbol{A_{217}^{PS}}$	102 ± 10	D_{1420}	816.0 ± 4.7	$f\sigma_8(0.51)$	0.4841 ± 0.0080
$\boldsymbol{A_{217}^{CIB}}$	40 ± 7	D_{2000}	230.4 ± 1.6	$\sigma_8(0.51)$	0.6340 ± 0.0079
$\boldsymbol{A_{143}^{tSZ}}$	$3.9^{+1.8}_{-2.6}$	$n_{s,0.002}$	0.9664 ± 0.0040	$f\sigma_8(0.61)$	0.4799 ± 0.0079
$\boldsymbol{r_{143\times217}^{PS}}$	0.66 ± 0.13	Y_P	0.245378 ± 0.000059	$\sigma_8(0.61)$	0.6032 ± 0.0074
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.56^{+0.38}_{-0.18}$	Y_P^{BBN}	0.246704 ± 0.000059	$f\sigma_8(2.33)$	0.3043 ± 0.0037
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	10^5D/H	2.593 ± 0.028	$\sigma_8(2.33)$	0.3124 ± 0.0033
$\boldsymbol{A^{kSZ}}$	$4.7^{+1.9}_{-4.3}$	Age/Gyr	13.763 ± 0.022	f_{2000}^{143}	29.6 ± 2.8
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.20	z_*	1089.92 ± 0.24	f_{2000}^{217}	106.8 ± 1.9
$\boldsymbol{A_{143}^{dust}}$	0.95 ± 0.18	r_*	144.63 ± 0.25	$f_{2000}^{143\times217}$	32.0 ± 2.0
$\boldsymbol{A_{217}^{dust}}$	0.97 ± 0.10	$100\theta_*$	1.04110 ± 0.00030	$\chi^2_{lensing}$	9.11 ± 0.65
$\boldsymbol{A_{143\times217}^{dust}}$	1.02 ± 0.16	$D_M(z_*)$/Gpc	13.892 ± 0.024	χ^2_{simall}	396.8 ± 1.5
$\boldsymbol{c_{100}}$	0.9975 ± 0.0010	z_{drag}	1059.80 ± 0.32	χ^2_{lowl}	22.98 ± 0.79
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	r_{drag}	147.30 ± 0.26	$\chi^2_{CamSpec}$	11513.9 ± 5.5
$\boldsymbol{c_{TE}}$	0.9964 ± 0.0048	k_D	0.14061 ± 0.00032	$\chi^2_{H073p45}$	6.3 ± 2.2
$\boldsymbol{c_{EE}}$	0.9919 ± 0.0051	$100\theta_D$	0.16083 ± 0.00019	χ^2_{JLA}	1037.6 ± 1.8
H_0	69.34 ± 0.75	z_{eq}	3386 ± 24	χ^2_{6DF}	0.11 ± 0.12
Ω_Λ	0.7039 ± 0.0067	k_{eq}	0.010335 ± 0.000072	χ^2_{MGS}	2.49 ± 0.62
Ω_m	0.2961 ± 0.0067	$100\theta_{eq}$	0.8161 ± 0.0044	$\chi^2_{DR12BAO}$	4.52 ± 0.65
$\Omega_m h^2$	0.14234 ± 0.00099	$100\theta_{s,eq}$	0.4509 ± 0.0023	χ^2_{prior}	7.7 ± 3.4
$\Omega_m h^3$	0.0987 ± 0.0013	$H(0.15)$	73.93 ± 0.48	χ^2_{CMB}	11942.8 ± 5.7
σ_8	0.825 ± 0.010	$D_M(0.15)$	628.9 ± 5.3	χ^2_{BAO}	7.1 ± 1.2
S_8	0.820 ± 0.010	$H(0.38)$	83.29 ± 0.27		
$\sigma_8\Omega_m^{0.5}$	0.4489 ± 0.0057	$D_M(0.38)$	1509.6 ± 9.0		

$\bar{\chi}^2_{eff} = 13001.61$; $\Delta\bar{\chi}^2_{eff} = -3.29$; $R - 1 = 0.01485$

18.65 base_w_CamSpecHM_TTTEEE_lowl_lowE_BAO_Riess18_Pantheon_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02233 ± 0.00015	$\sigma_8\Omega_m^{0.5}$	0.4485 ± 0.0069	$H(0.38)$	83.30 ± 0.28
$\boldsymbol{\Omega_c h^2}$	0.1193 ± 0.0012	$\sigma_8\Omega_m^{0.25}$	0.6081 ± 0.0085	$D_M(0.38)$	1509.6 ± 9.1
$\boldsymbol{100\theta_{MC}}$	1.04093 ± 0.00030	$\sigma_8/h^{0.5}$	0.990 ± 0.012	$H(0.51)$	89.72 ± 0.26
$\boldsymbol{\tau}$	$0.0545^{+0.0048}_{-0.0080}$	$r_{drag}h$	102.1 ± 1.1	$D_M(0.51)$	1961 ± 10
$\boldsymbol{w_0}$	-1.057 ± 0.031	$\langle d^2\rangle^{1/2}$	2.440 ± 0.026	$H(0.61)$	95.16 ± 0.27
$\boldsymbol{\ln(10^{10}A_s)}$	$3.041^{+0.012}_{-0.015}$	z_{re}	$7.67^{+0.53}_{-0.80}$	$D_M(0.61)$	2285 ± 10
$\boldsymbol{n_s}$	0.9669 ± 0.0041	$10^9 A_s$	$2.093^{+0.024}_{-0.033}$	$H(2.33)$	235.21 ± 0.60
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0024	$10^9 A_s e^{-2\tau}$	1.877 ± 0.011	$D_M(2.33)$	5757.5 ± 9.1
$\boldsymbol{A^{PS}_{100}}$	239 ± 25	D_{40}	1224 ± 12	$f\sigma_8(0.15)$	0.4586 ± 0.0081
$\boldsymbol{A^{PS}_{143}}$	39 ± 8	D_{220}	5720 ± 39	$\sigma_8(0.15)$	0.763 ± 0.011
$\boldsymbol{A^{PS}_{217}}$	102 ± 10	D_{810}	2535 ± 13	$f\sigma_8(0.38)$	0.4830 ± 0.0093
$\boldsymbol{A^{CIB}_{217}}$	40 ± 7	D_{1420}	815.9 ± 4.7	$\sigma_8(0.38)$	0.6770 ± 0.0099
$\boldsymbol{A^{tSZ}_{143}}$	$3.9^{+1.9}_{-2.5}$	D_{2000}	230.4 ± 1.6	$f\sigma_8(0.51)$	0.4834 ± 0.0094
$\boldsymbol{r^{PS}_{143\times217}}$	0.66 ± 0.13	$n_{s,0.002}$	0.9669 ± 0.0041	$\sigma_8(0.51)$	0.6336 ± 0.0091
$\boldsymbol{r^{CIB}_{143\times217}}$	$0.56^{+0.39}_{-0.18}$	Y_P	$0.245379^{+0.000063}_{-0.000056}$	$f\sigma_8(0.61)$	0.4793 ± 0.0093
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	$0.246705^{+0.000063}_{-0.000056}$	$\sigma_8(0.61)$	0.6029 ± 0.0085
$\boldsymbol{A^{kSZ}}$	$4.7^{+2.1}_{-4.1}$	10^5D/H	2.593 ± 0.028	$f\sigma_8(2.33)$	0.3041 ± 0.0042
$\boldsymbol{A^{dust}_{100}}$	1.01 ± 0.19	Age/Gyr	13.763 ± 0.022	$\sigma_8(2.33)$	0.3124 ± 0.0037
$\boldsymbol{A^{dust}_{143}}$	0.96 ± 0.18	z_*	1089.90 ± 0.25	f^{143}_{2000}	29.5 ± 2.8
$\boldsymbol{A^{dust}_{217}}$	0.97 ± 0.10	r_*	144.65 ± 0.27	f^{217}_{2000}	106.7 ± 1.9
$\boldsymbol{A^{dust}_{143\times217}}$	1.02 ± 0.16	$100\theta_*$	1.04112 ± 0.00030	$f^{143\times217}_{2000}$	32.0 ± 2.0
$\boldsymbol{c_{100}}$	0.9975 ± 0.0010	$D_M(z_*)$/Gpc	13.894 ± 0.026	χ^2_{simall}	396.8 ± 1.6
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	z_{drag}	1059.80 ± 0.32	χ^2_{lowl}	22.90 ± 0.83
$\boldsymbol{c_{TE}}$	0.9964 ± 0.0049	r_{drag}	147.33 ± 0.28	$\chi^2_{CamSpec}$	11514.2 ± 5.6
$\boldsymbol{c_{EE}}$	0.9919 ± 0.0050	k_D	0.14058 ± 0.00033	$\chi^2_{H073p45}$	6.4 ± 2.3
H_0	69.32 ± 0.75	$100\theta_D$	0.16084 ± 0.00019	χ^2_{JLA}	1037.5 ± 1.7
Ω_Λ	0.7039 ± 0.0068	z_{eq}	3383 ± 26	χ^2_{6DF}	0.11 ± 0.12
Ω_m	0.2961 ± 0.0068	k_{eq}	0.010327 ± 0.000080	χ^2_{MGS}	2.50 ± 0.63
$\Omega_m h^2$	0.1422 ± 0.0011	$100\theta_{eq}$	0.8166 ± 0.0049	$\chi^2_{DR12BAO}$	4.52 ± 0.70
$\Omega_m h^3$	0.0986 ± 0.0013	$100\theta_{s,eq}$	0.4511 ± 0.0025	χ^2_{prior}	7.8 ± 3.4
σ_8	0.824 ± 0.012	$H(0.15)$	73.93 ± 0.48	χ^2_{BAO}	7.1 ± 1.2
S_8	0.819 ± 0.013	$D_M(0.15)$	629.0 ± 5.4	χ^2_{CMB}	11933.8 ± 5.6

$\bar{\chi}^2_{eff} = 12992.64$; $R - 1 = 0.01237$

18.66 base_w_CamSpecHM_TTTEEE_lowl_lowE_BAO_Riess18_Pantheon_post_lensing_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02233 ± 0.00015	$\sigma_8\Omega_m^{0.25}$	0.6088 ± 0.0068	$H(0.51)$	89.71 ± 0.24
$\boldsymbol{\Omega_c h^2}$	0.1193 ± 0.0010	$\sigma_8/h^{0.5}$	0.9911 ± 0.0098	$D_M(0.51)$	1960.6 ± 9.8
$\boldsymbol{100\theta_{MC}}$	1.04092 ± 0.00030	$r_{drag}h$	102.1 ± 1.1	$H(0.61)$	95.15 ± 0.25
$\boldsymbol{\tau}$	$0.0548^{+0.0051}_{-0.0075}$	$\langle d^2\rangle^{1/2}$	2.442 ± 0.021	$D_M(0.61)$	2285 ± 10
$\boldsymbol{w_0}$	-1.059 ± 0.029	z_{re}	$7.71^{+0.55}_{-0.74}$	$H(2.33)$	235.23 ± 0.57
$\boldsymbol{\ln(10^{10}A_s)}$	$3.042^{+0.011}_{-0.014}$	$10^9 A_s$	$2.095^{+0.023}_{-0.030}$	$D_M(2.33)$	5757.6 ± 8.8
$\boldsymbol{n_s}$	0.9666 ± 0.0039	$10^9 A_s e^{-2\tau}$	1.878 ± 0.010	$f\sigma_8(0.15)$	0.4592 ± 0.0066
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0024	D_{40}	1225 ± 12	$\sigma_8(0.15)$	0.7639 ± 0.0096
$\boldsymbol{A^{PS}_{100}}$	239 ± 25	D_{220}	5723 ± 39	$f\sigma_8(0.38)$	0.4837 ± 0.0077
$\boldsymbol{A^{PS}_{143}}$	39 ± 8	D_{810}	2535 ± 13	$\sigma_8(0.38)$	0.6778 ± 0.0085
$\boldsymbol{A^{PS}_{217}}$	102 ± 10	D_{1420}	816.0 ± 4.7	$f\sigma_8(0.51)$	0.4842 ± 0.0080
$\boldsymbol{A^{CIB}_{217}}$	40 ± 7	D_{2000}	230.4 ± 1.6	$\sigma_8(0.51)$	0.6343 ± 0.0078
$\boldsymbol{A^{tSZ}_{143}}$	$3.9^{+1.8}_{-2.6}$	$n_{s,0.002}$	0.9666 ± 0.0039	$f\sigma_8(0.61)$	0.4800 ± 0.0079
$\boldsymbol{r^{PS}_{143\times217}}$	0.66 ± 0.13	Y_P	0.245379 ± 0.000059	$\sigma_8(0.61)$	0.6035 ± 0.0074
$\boldsymbol{r^{CIB}_{143\times217}}$	$0.56^{+0.38}_{-0.19}$	Y_P^{BBN}	0.246706 ± 0.000059	$f\sigma_8(2.33)$	0.3045 ± 0.0037
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	10^5D/H	2.593 ± 0.028	$\sigma_8(2.33)$	0.3126 ± 0.0032
$\boldsymbol{A^{kSZ}}$	$4.7^{+1.9}_{-4.4}$	Age/Gyr	13.763 ± 0.022	f^{143}_{2000}	29.5 ± 2.8
$\boldsymbol{A^{dust}_{100}}$	1.01 ± 0.20	z_*	1089.91 ± 0.24	f^{217}_{2000}	106.7 ± 1.9
$\boldsymbol{A^{dust}_{143}}$	0.96 ± 0.18	r_*	144.64 ± 0.24	$f^{143\times217}_{2000}$	32.0 ± 2.0
$\boldsymbol{A^{dust}_{217}}$	0.97 ± 0.10	$100\theta_*$	1.04111 ± 0.00030	$\chi^2_{lensing}$	9.07 ± 0.61
$\boldsymbol{A^{dust}_{143\times217}}$	1.02 ± 0.16	$D_M(z_*)$/Gpc	13.893 ± 0.023	χ^2_{simall}	396.8 ± 1.5
$\boldsymbol{c_{100}}$	0.9975 ± 0.0010	z_{drag}	1059.80 ± 0.32	χ^2_{lowl}	22.97 ± 0.79
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	r_{drag}	147.31 ± 0.26	$\chi^2_{CamSpec}$	11513.8 ± 5.5
$\boldsymbol{c_{TE}}$	0.9963 ± 0.0048	k_D	0.14060 ± 0.00032	$\chi^2_{H073p45}$	6.3 ± 2.2
$\boldsymbol{c_{EE}}$	0.9919 ± 0.0051	$100\theta_D$	0.16083 ± 0.00019	χ^2_{JLA}	1037.6 ± 1.7
H_0	69.34 ± 0.75	z_{eq}	3385 ± 23	χ^2_{6DF}	0.11 ± 0.12
Ω_Λ	0.7039 ± 0.0067	k_{eq}	0.010331 ± 0.000071	χ^2_{MGS}	2.50 ± 0.63
Ω_m	0.2961 ± 0.0067	$100\theta_{eq}$	0.8163 ± 0.0044	$\chi^2_{DR12BAO}$	4.51 ± 0.65
$\Omega_m h^2$	0.14229 ± 0.00098	$100\theta_{s,eq}$	0.4510 ± 0.0023	χ^2_{prior}	7.8 ± 3.4
$\Omega_m h^3$	0.0987 ± 0.0013	$H(0.15)$	73.94 ± 0.48	χ^2_{CMB}	11942.6 ± 5.6
σ_8	0.825 ± 0.010	$D_M(0.15)$	628.9 ± 5.3	χ^2_{BAO}	7.1 ± 1.2
S_8	0.820 ± 0.010	$H(0.38)$	83.30 ± 0.27		
$\sigma_8\Omega_m^{0.5}$	0.4490 ± 0.0057	$D_M(0.38)$	1509.5 ± 9.0		

$\bar{\chi}^2_{eff} = 13001.43$; $\Delta\bar{\chi}^2_{eff} = -3.37$; $R - 1 = 0.01501$

18.67 base_w_CleanedCamSpecHM_TT_lowl_lowE

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02215 ± 0.00022	$\sigma_8/h^{0.5}$	$1.041^{+0.036}_{-0.026}$	$D_M(0.15)$	547^{+21}_{-66}
$\boldsymbol{\Omega_c h^2}$	0.1201 ± 0.0021	$r_{drag}h$	125^{+20}_{-8}	$H(0.38)$	$84.1^{+1.1}_{-0.90}$
$\boldsymbol{100\theta_{MC}}$	1.04084 ± 0.00046	$\langle d^2\rangle^{1/2}$	$2.498^{+0.047}_{-0.041}$	$D_M(0.38)$	1386^{+36}_{-99}
$\boldsymbol{\tau}$	0.0518 ± 0.0081	z_{re}	7.41 ± 0.83	$H(0.51)$	$88.2^{+1.3}_{-0.86}$
$\boldsymbol{w_0}$	$-1.55^{+0.20}_{-0.39}$	$10^9 A_s$	2.085 ± 0.034	$D_M(0.51)$	1839^{+37}_{-98}
$\boldsymbol{\ln(10^{10} A_s)}$	3.037 ± 0.016	$10^9 A_s e^{-2\tau}$	1.879 ± 0.014	$H(0.61)$	$92.5^{+1.7}_{-1.9}$
$\boldsymbol{n_s}$	0.9631 ± 0.0056	D_{40}	1228 ± 15	$D_M(0.61)$	2171^{+36}_{-92}
$\boldsymbol{y_{cal}}$	1.0004 ± 0.0025	D_{220}	5710 ± 42	$H(2.33)$	$232.1^{+1.4}_{-2.7}$
$\boldsymbol{A^{PS}_{100}}$	254 ± 26	D_{810}	2531 ± 14	$D_M(2.33)$	5749^{+18}_{-23}
$\boldsymbol{A^{tSZ}_{143}}$	$3.8^{+1.8}_{-2.6}$	D_{1420}	812.5 ± 5.1	$f\sigma_8(0.15)$	0.488 ± 0.021
$\boldsymbol{A^{kSZ}}$	—	D_{2000}	229.2 ± 1.8	$\sigma_8(0.15)$	$0.897^{+0.11}_{-0.054}$
$\boldsymbol{A^{dust}_{100}}$	1.01 ± 0.19	$n_{s,0.002}$	0.9631 ± 0.0056	$f\sigma_8(0.38)$	$0.570^{+0.064}_{-0.046}$
$\boldsymbol{A^{power}_{143}}$	$10.2^{+2.1}_{-2.4}$	Y_P	$0.24530^{+0.00010}_{-0.000082}$	$\sigma_8(0.38)$	$0.800^{+0.098}_{-0.048}$
$\boldsymbol{A^{power}_{217}}$	$8.0^{+1.7}_{-2.9}$	Y_P^{BBN}	$0.24663^{+0.00010}_{-0.000082}$	$f\sigma_8(0.51)$	$0.586^{+0.079}_{-0.050}$
$\boldsymbol{A^{power}_{143\times217}}$	$4.1^{+1.7}_{-2.8}$	10^5D/H	2.628 ± 0.042	$\sigma_8(0.51)$	$0.748^{+0.092}_{-0.043}$
$\boldsymbol{\gamma^{power}_{143}}$	$1.34^{+0.41}_{-0.54}$	Age/Gyr	$13.591^{+0.058}_{-0.15}$	$f\sigma_8(0.61)$	$0.587^{+0.085}_{-0.050}$
$\boldsymbol{\gamma^{power}_{217}}$	$1.39^{+0.76}_{-0.57}$	z_*	1090.21 ± 0.40	$\sigma_8(0.61)$	$0.710^{+0.086}_{-0.040}$
$\boldsymbol{\gamma^{power}_{143\times217}}$	1.34 ± 0.59	r_*	144.56 ± 0.48	$f\sigma_8(2.33)$	$0.356^{+0.041}_{-0.018}$
$\boldsymbol{c_{100}}$	0.9978 ± 0.0011	$100\theta_*$	1.04105 ± 0.00046	$\sigma_8(2.33)$	$0.359^{+0.038}_{-0.018}$
$\boldsymbol{c_{217}}$	$0.9994^{+0.0013}_{-0.0017}$	$D_M(z_*)$/Gpc	13.886 ± 0.044	f^{143}_{2000}	23 ± 3
H_0	> 80.2	z_{drag}	1059.44 ± 0.45	f^{217}_{2000}	16.6 ± 2.0
Ω_Λ	$0.792^{+0.066}_{-0.017}$	r_{drag}	147.30 ± 0.48	$f^{143\times217}_{2000}$	10.8 ± 2.1
Ω_m	$0.208^{+0.017}_{-0.066}$	k_D	0.14047 ± 0.00052	χ^2_{simall}	396.8 ± 1.6
$\Omega_m h^2$	0.1429 ± 0.0020	$100\theta_D$	0.16105 ± 0.00026	χ^2_{lowl}	23.1 ± 1.1
$\Omega_m h^3$	$0.121^{+0.019}_{-0.0095}$	z_{eq}	3400 ± 47	$\chi^2_{CamSpec}$	6715.0 ± 5.1
σ_8	$0.959^{+0.11}_{-0.055}$	k_{eq}	0.01038 ± 0.00014	χ^2_{prior}	5.2 ± 2.9
S_8	$0.783^{+0.030}_{-0.042}$	$100\theta_{eq}$	0.8131 ± 0.0089	χ^2_{CMB}	7135.0 ± 5.3
$\sigma_8\Omega_m^{0.5}$	$0.429^{+0.016}_{-0.023}$	$100\theta_{s,eq}$	0.4494 ± 0.0046		
$\sigma_8\Omega_m^{0.25}$	$0.640^{+0.023}_{-0.018}$	$H(0.15)$	$81.8^{+6.7}_{-2.9}$		

$\bar{\chi}^2_{eff} = 7140.23$; $\Delta\bar{\chi}^2_{eff} = -1.98$; $R - 1 = 0.00669$

19 w+wa

19.1 base_w_wa_plikHM_TT_lowl_lowE_BAO

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022172	0.02213 ± 0.00021	$\sigma_8\Omega_m^{0.25}$	0.6089	0.609 ± 0.014	$H(0.38)$	84.71	$84.8^{+1.2}_{-1.1}$
$\boldsymbol{\Omega_c h^2}$	0.12035	0.1206 ± 0.0019	$\sigma_8/h^{0.5}$	0.9899	0.990 ± 0.020	$D_M(0.38)$	1527.0	1527 ± 17
$\boldsymbol{100\theta_{MC}}$	1.040791	1.04078 ± 0.00046	$r_{drag}h$	95.60	$95.5^{+3.1}_{-4.1}$	$H(0.51)$	91.42	91.4 ± 1.2
$\boldsymbol{\tau}$	0.0530	0.0516 ± 0.0081	$\langle d^2\rangle^{1/2}$	2.4660	2.469 ± 0.042	$D_M(0.51)$	1969.8	1969 ± 18
$\boldsymbol{w_0}$	−0.617	$-0.59^{+0.29}_{-0.26}$	z_{re}	7.57	$7.42^{+0.84}_{-0.75}$	$H(0.61)$	96.82	96.8 ± 1.2
$\boldsymbol{w_a}$	−1.20	-1.33 ± 0.79	$10^9 A_s$	2.0932	2.089 ± 0.035	$D_M(0.61)$	2288.5	2288 ± 18
$\boldsymbol{\ln(10^{10}A_s)}$	3.0413	3.039 ± 0.017	$10^9 A_s e^{-2\tau}$	1.8827	1.884 ± 0.013	$H(2.33)$	233.96	$234.0^{+1.1}_{-1.3}$
$\boldsymbol{n_s}$	0.9644	0.9630 ± 0.0053	D_{40}	1228.6	1232 ± 14	$D_M(2.33)$	5754.1	5757 ± 14
$\boldsymbol{y_{cal}}$	1.00010	1.0004 ± 0.0025	D_{220}	5710.0	5714 ± 41	$f\sigma_8(0.15)$	0.4487	0.449 ± 0.014
$\boldsymbol{A_{217}^{CIB}}$	48.3	48 ± 7	D_{810}	2536.0	2536 ± 14	$\sigma_8(0.15)$	0.7361	$0.736^{+0.023}_{-0.026}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.37	—	D_{1420}	815.1	814.4 ± 5.0	$f\sigma_8(0.38)$	0.4595	$0.460^{+0.020}_{-0.022}$
$\boldsymbol{A_{143}^{tSZ}}$	6.99	5.1 ± 2.0	D_{2000}	230.03	229.7 ± 1.8	$\sigma_8(0.38)$	0.6535	$0.653^{+0.020}_{-0.023}$
$\boldsymbol{A_{100}^{PS}}$	253.4	262 ± 28	$n_{s,0.002}$	0.9644	0.9630 ± 0.0053	$f\sigma_8(0.51)$	0.4597	$0.460^{+0.020}_{-0.023}$
$\boldsymbol{A_{143}^{PS}}$	49.9	49 ± 8	Y_P	0.245314	$0.24529^{+0.00010}_{-0.000079}$	$\sigma_8(0.51)$	0.6122	$0.612^{+0.019}_{-0.021}$
$\boldsymbol{A_{143\times217}^{PS}}$	48.0	44 ± 9	Y_P^{BBN}	0.246641	$0.24662^{+0.00010}_{-0.000080}$	$f\sigma_8(0.61)$	0.4569	$0.458^{+0.020}_{-0.022}$
$\boldsymbol{A_{217}^{PS}}$	119.8	115 ± 10	10^5D/H	2.6233	2.631 ± 0.040	$\sigma_8(0.61)$	0.5830	$0.583^{+0.017}_{-0.019}$
$\boldsymbol{A^{kSZ}}$	0.01	< 4.70	Age/Gyr	13.7748	13.777 ± 0.035	$f\sigma_8(2.33)$	0.2963	$0.2960^{+0.0078}_{-0.0088}$
$\boldsymbol{A_{100}^{dustTT}}$	8.90	8.9 ± 1.8	z_*	1090.201	1090.28 ± 0.37	$\sigma_8(2.33)$	0.3014	$0.3010^{+0.0078}_{-0.0090}$
$\boldsymbol{A_{143}^{dustTT}}$	10.75	10.7 ± 1.8	r_*	144.493	144.47 ± 0.43	f_{2000}^{143}	30.14	31.0 ± 2.9
$\boldsymbol{A_{143\times217}^{dustTT}}$	19.42	18.3 ± 3.3	$100\theta_*$	1.041002	1.04099 ± 0.00045	$f_{2000}^{143\times217}$	33.07	33.4 ± 2.0
$\boldsymbol{A_{217}^{dustTT}}$	94.6	93.5 ± 7.4	$D_M(z_*)$/Gpc	13.8802	13.878 ± 0.041	f_{2000}^{217}	107.46	108.0 ± 1.9
$\boldsymbol{c_{100}}$	0.99965	0.99960 ± 0.00061	z_{drag}	1059.513	1059.42 ± 0.44	χ^2_{simall}	395.89	396.9 ± 1.7
$\boldsymbol{c_{217}}$	0.99825	0.99825 ± 0.00062	r_{drag}	147.220	147.21 ± 0.44	χ^2_{lowl}	23.46	23.8 ± 1.2
H_0	64.94	$64.9^{+2.1}_{-2.8}$	k_D	0.14058	0.14055 ± 0.00050	χ^2_{plik}	758.0	770.5 ± 5.3
Ω_Λ	0.6605	0.658 ± 0.026	$100\theta_D$	0.161005	0.16106 ± 0.00026	χ^2_{6DF}	0.316	0.56 ± 0.60
Ω_m	0.3395	0.342 ± 0.026	z_{eq}	3405.7	3410 ± 42	χ^2_{MGS}	0.63	0.89 ± 0.88
$\Omega_m h^2$	0.14316	0.1433 ± 0.0018	k_{eq}	0.010395	0.01041 ± 0.00013	$\chi^2_{DR12BAO}$	3.49	5.0 ± 1.5
$\Omega_m h^3$	0.09297	$0.0930^{+0.0033}_{-0.0041}$	$100\theta_{eq}$	0.8120	0.8113 ± 0.0079	χ^2_{prior}	1.32	7.2 ± 3.6
σ_8	0.7977	$0.798^{+0.024}_{-0.027}$	$100\theta_{s,eq}$	0.44886	0.4485 ± 0.0041	χ^2_{BAO}	4.43	6.4 ± 1.9
S_8	0.8486	0.850 ± 0.022	$H(0.15)$	73.09	73.14 ± 0.92	χ^2_{CMB}	1177.3	1191.2 ± 5.5
$\sigma_8\Omega_m^{0.5}$	0.4648	0.466 ± 0.012	$D_M(0.15)$	651.6	652 ± 14			

Best-fit $\chi^2_{eff} = 1183.08$; $\Delta\chi^2_{eff} = -2.67$; $\bar{\chi}^2_{eff} = 1204.85$; $\Delta\bar{\chi}^2_{eff} = -1.18$; $R - 1 = 0.00724$

χ^2_{eff}: BAO - 6DF: 0.32 (Δ 0.29) MGS: 0.62 (Δ -0.65) DR12BAO: 3.49 (Δ -0.70) CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.89 (Δ 0.00) commander_dx12_v3_2_29: 23.46 (Δ 0.64) plik_rd12_HM_v22_TT: 757.98 (Δ -2.12)

19.2 base_w_wa_plikHM_TT_lowl_lowE_BAO_post_lensing

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022196	0.02216 ± 0.00020	$\sigma_8\Omega_m^{0.25}$	0.6047	0.6046 ± 0.0098	$H(0.38)$	84.55	84.7 ± 1.1
$\boldsymbol{\Omega_c h^2}$	0.11973	0.1199 ± 0.0014	$\sigma_8/h^{0.5}$	0.9841	0.984 ± 0.014	$D_M(0.38)$	1527.2	1528 ± 17
$\boldsymbol{100\theta_{MC}}$	1.040926	1.04083 ± 0.00044	$r_{drag}h$	96.12	$95.7^{+3.3}_{-4.1}$	$H(0.51)$	91.30	91.5 ± 1.2
$\boldsymbol{\tau}$	0.0525	0.0512 ± 0.0080	$\langle d^2\rangle^{1/2}$	2.4508	2.455 ± 0.027	$D_M(0.51)$	1970.8	1970 ± 17
$\boldsymbol{w_0}$	−0.662	-0.61 ± 0.27	z_{re}	7.51	7.36 ± 0.82	$H(0.61)$	96.75	96.9 ± 1.2
$\boldsymbol{w_a}$	−1.01	-1.21 ± 0.76	$10^9 A_s$	2.0882	2.084 ± 0.032	$D_M(0.61)$	2289.8	2289 ± 18
$\boldsymbol{\ln(10^{10}A_s)}$	3.0389	3.037 ± 0.015	$10^9 A_s e^{-2\tau}$	1.8801	1.881 ± 0.011	$H(2.33)$	234.01	$233.9^{+1.1}_{-1.4}$
$\boldsymbol{n_s}$	0.96570	0.9641 ± 0.0045	D_{40}	1225.7	1229 ± 12	$D_M(2.33)$	5752.4	5755 ± 14
$\boldsymbol{y_{cal}}$	1.00014	1.0003 ± 0.0024	D_{220}	5712.1	5715 ± 41	$f\sigma_8(0.15)$	0.4463	0.445 ± 0.012
$\boldsymbol{A_{217}^{CIB}}$	48.8	48 ± 7	D_{810}	2535.8	2535 ± 13	$\sigma_8(0.15)$	0.7336	$0.732^{+0.022}_{-0.024}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.30	—	D_{1420}	815.40	814.4 ± 5.0	$f\sigma_8(0.38)$	0.4577	$0.456^{+0.019}_{-0.021}$
$\boldsymbol{A_{143}^{tSZ}}$	7.06	5.1 ± 2.0	D_{2000}	230.09	229.6 ± 1.8	$\sigma_8(0.38)$	0.6513	$0.650^{+0.019}_{-0.021}$
$\boldsymbol{A_{100}^{PS}}$	254.4	263 ± 28	$n_{s,0.002}$	0.96570	0.9641 ± 0.0045	$f\sigma_8(0.51)$	0.4577	$0.456^{+0.019}_{-0.021}$
$\boldsymbol{A_{143}^{PS}}$	48.8	49 ± 8	Y_P	0.245324	$0.245306^{+0.000095}_{-0.000075}$	$\sigma_8(0.51)$	0.6103	$0.609^{+0.017}_{-0.019}$
$\boldsymbol{A_{143\times217}^{PS}}$	46.1	43 ± 9	Y_P^{BBN}	0.246650	$0.246632^{+0.000096}_{-0.000075}$	$f\sigma_8(0.61)$	0.4547	0.453 ± 0.019
$\boldsymbol{A_{217}^{PS}}$	118.8	$115^{+11}_{-9.8}$	10^5D/H	2.6187	2.626 ± 0.038	$\sigma_8(0.61)$	0.5811	$0.580^{+0.016}_{-0.018}$
$\boldsymbol{A^{kSZ}}$	0.01	< 4.75	Age/Gyr	13.7765	13.779 ± 0.034	$f\sigma_8(2.33)$	0.2953	$0.2945^{+0.0071}_{-0.0080}$
$\boldsymbol{A_{100}^{dustTT}}$	8.88	8.9 ± 1.9	z_*	1090.116	1090.18 ± 0.32	$\sigma_8(2.33)$	0.3011	$0.2999^{+0.0076}_{-0.0086}$
$\boldsymbol{A_{143}^{dustTT}}$	10.84	10.7 ± 1.8	r_*	144.633	144.61 ± 0.33	f_{2000}^{143}	30.19	31.1 ± 2.9
$\boldsymbol{A_{143\times217}^{dustTT}}$	19.47	18.3 ± 3.3	$100\theta_*$	1.041123	1.04104 ± 0.00044	$f_{2000}^{143\times217}$	33.06	33.5 ± 2.0
$\boldsymbol{A_{217}^{dustTT}}$	94.6	93.4 ± 7.2	$D_M(z_*)$/Gpc	13.8921	13.891 ± 0.032	f_{2000}^{217}	107.48	108.0 ± 1.9
$\boldsymbol{c_{100}}$	0.99965	0.99960 ± 0.00061	z_{drag}	1059.513	1059.44 ± 0.44	$\chi^2_{lensing}$	8.80	9.4 ± 1.0
$\boldsymbol{c_{217}}$	0.99825	0.99824 ± 0.00063	r_{drag}	147.356	147.35 ± 0.35	χ^2_{simall}	395.81	396.8 ± 1.5
H_0	65.23	$64.9^{+2.2}_{-2.8}$	k_D	0.140453	0.14043 ± 0.00044	χ^2_{lowl}	23.18	23.52 ± 0.93
Ω_Λ	0.6649	0.660 ± 0.026	$100\theta_D$	0.161010	0.16104 ± 0.00026	χ^2_{plik}	758.58	770.6 ± 5.2
Ω_m	0.3351	0.340 ± 0.026	z_{eq}	3391.6	3395 ± 32	χ^2_{6DF}	0.254	0.55 ± 0.59
$\Omega_m h^2$	0.14257	0.1427 ± 0.0013	k_{eq}	0.010352	0.010363 ± 0.000097	χ^2_{MGS}	0.72	0.91 ± 0.89
$\Omega_m h^3$	0.09300	$0.0927^{+0.0033}_{-0.0040}$	$100\theta_{eq}$	0.8147	0.8139 ± 0.0059	$\chi^2_{DR12BAO}$	3.34	4.9 ± 1.5
σ_8	0.7948	0.793 ± 0.024	$100\theta_{s,eq}$	0.45025	0.4499 ± 0.0030	χ^2_{prior}	1.36	7.2 ± 3.6
S_8	0.8400	0.842 ± 0.016	$H(0.15)$	73.05	73.07 ± 0.89	χ^2_{CMB}	1186.4	1200.3 ± 5.4
$\sigma_8\Omega_m^{0.5}$	0.4601	0.4613 ± 0.0088	$D_M(0.15)$	650.6	652 ± 15	χ^2_{BAO}	4.31	6.3 ± 1.9

Best-fit $\chi^2_{eff} = 1192.04$; $\Delta\chi^2_{eff} = -2.65$; $\bar{\chi}^2_{eff} = 1213.89$; $\Delta\bar{\chi}^2_{eff} = -0.84$; $R - 1 = 0.01045$

χ^2_{eff}: BAO - 6DF: 0.25 (Δ 0.23) MGS: 0.72 (Δ -0.50) DR12BAO: 3.34 (Δ -1.03) CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.80 (Δ -0.08) simall_100x143_offlike5_EE_Aplanc
395.81 (Δ -0.28) commander_dx12_v3_2_29: 23.18 (Δ 0.22) plik_rd12_HM_v22_TT: 758.58 (Δ -1.23)

19.3 base_w_wa_plikHM_TT_lowl_lowE_BAO_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02214 ± 0.00021	$\sigma_8\Omega_m^{0.25}$	0.610 ± 0.014	$H(0.38)$	$84.8^{+1.2}_{-1.1}$
$\boldsymbol{\Omega_c h^2}$	0.1205 ± 0.0019	$\sigma_8/h^{0.5}$	0.992 ± 0.020	$D_M(0.38)$	1527 ± 17
$\boldsymbol{100\theta_{MC}}$	1.04079 ± 0.00046	$r_{drag}h$	$95.6^{+3.1}_{-4.1}$	$H(0.51)$	91.4 ± 1.2
$\boldsymbol{\tau}$	$0.0535^{+0.0044}_{-0.0082}$	$\langle d^2\rangle^{1/2}$	2.472 ± 0.042	$D_M(0.51)$	1969 ± 18
$\boldsymbol{w_0}$	$-0.59^{+0.29}_{-0.26}$	z_{re}	$7.62^{+0.50}_{-0.83}$	$H(0.61)$	96.8 ± 1.2
$\boldsymbol{w_a}$	-1.31 ± 0.79	$10^9 A_s$	$2.097^{+0.024}_{-0.033}$	$D_M(0.61)$	2288 ± 18
$\boldsymbol{\ln(10^{10}A_s)}$	$3.043^{+0.012}_{-0.016}$	$10^9 A_s e^{-2\tau}$	1.884 ± 0.013	$H(2.33)$	$234.0^{+1.1}_{-1.3}$
$\boldsymbol{n_s}$	0.9632 ± 0.0053	D_{40}	1232 ± 14	$D_M(2.33)$	5757 ± 14
$\boldsymbol{y_{cal}}$	1.0004 ± 0.0025	D_{220}	5714 ± 41	$f\sigma_8(0.15)$	0.449 ± 0.014
$\boldsymbol{A_{217}^{CIB}}$	48 ± 7	D_{810}	2536 ± 14	$\sigma_8(0.15)$	$0.737^{+0.023}_{-0.026}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{1420}	814.4 ± 5.1	$f\sigma_8(0.38)$	$0.460^{+0.020}_{-0.022}$
$\boldsymbol{A_{143}^{tSZ}}$	5.1 ± 2.0	D_{2000}	229.7 ± 1.8	$\sigma_8(0.38)$	$0.654^{+0.020}_{-0.023}$
$\boldsymbol{A_{100}^{PS}}$	262 ± 28	$n_{s,0.002}$	0.9632 ± 0.0053	$f\sigma_8(0.51)$	$0.461^{+0.020}_{-0.023}$
$\boldsymbol{A_{143}^{PS}}$	49 ± 8	Y_P	$0.24530^{+0.00010}_{-0.000080}$	$\sigma_8(0.51)$	$0.613^{+0.019}_{-0.021}$
$\boldsymbol{A_{143\times217}^{PS}}$	44 ± 9	Y_P^{BBN}	$0.24662^{+0.00010}_{-0.000080}$	$f\sigma_8(0.61)$	$0.458^{+0.020}_{-0.022}$
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	10^5D/H	2.630 ± 0.040	$\sigma_8(0.61)$	$0.584^{+0.017}_{-0.019}$
$\boldsymbol{A^{kSZ}}$	< 4.66	Age/Gyr	13.777 ± 0.035	$f\sigma_8(2.33)$	$0.2964^{+0.0078}_{-0.0088}$
$\boldsymbol{A_{100}^{dustTT}}$	8.9 ± 1.8	z_*	1090.26 ± 0.37	$\sigma_8(2.33)$	$0.3015^{+0.0077}_{-0.0089}$
$\boldsymbol{A_{143}^{dustTT}}$	10.7 ± 1.8	r_*	144.48 ± 0.43	f_{2000}^{143}	30.9 ± 2.9
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.3 ± 3.3	$100\theta_*$	1.04100 ± 0.00045	$f_{2000}^{143\times217}$	33.4 ± 2.0
$\boldsymbol{A_{217}^{dustTT}}$	93.4 ± 7.4	$D_M(z_*)$/Gpc	13.879 ± 0.041	f_{2000}^{217}	108.0 ± 1.9
$\boldsymbol{c_{100}}$	0.99960 ± 0.00061	z_{drag}	1059.43 ± 0.44	χ^2_{simall}	396.7 ± 1.6
$\boldsymbol{c_{217}}$	0.99824 ± 0.00062	r_{drag}	147.22 ± 0.44	χ^2_{lowl}	23.8 ± 1.2
H_0	$64.9^{+2.1}_{-2.8}$	k_D	0.14055 ± 0.00050	χ^2_{plik}	770.3 ± 5.3
Ω_Λ	0.659 ± 0.026	$100\theta_D$	0.16105 ± 0.00026	χ^2_{6DF}	0.56 ± 0.60
Ω_m	0.341 ± 0.026	z_{eq}	3408 ± 42	χ^2_{MGS}	0.89 ± 0.88
$\Omega_m h^2$	0.1433 ± 0.0018	k_{eq}	0.01040 ± 0.00013	$\chi^2_{DR12BAO}$	5.0 ± 1.5
$\Omega_m h^3$	$0.0930^{+0.0033}_{-0.0041}$	$100\theta_{eq}$	0.8116 ± 0.0079	χ^2_{prior}	7.2 ± 3.6
σ_8	$0.799^{+0.024}_{-0.027}$	$100\theta_{s,eq}$	0.4486 ± 0.0041	χ^2_{BAO}	6.4 ± 1.9
S_8	0.851 ± 0.022	$H(0.15)$	73.13 ± 0.92	χ^2_{CMB}	1190.9 ± 5.4
$\sigma_8\Omega_m^{0.5}$	0.466 ± 0.012	$D_M(0.15)$	652 ± 14		

$\bar{\chi}^2_{eff} = 1204.53$; $\Delta\bar{\chi}^2_{eff} = -1.22$; $R - 1 = 0.00721$

19.4 base_w_wa_plikHM_TT_lowl_lowE_BAO_post_lensing_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02217 ± 0.00020	$\sigma_8\Omega_m^{0.25}$	0.6048 ± 0.0098	$H(0.38)$	84.7 ± 1.1
$\boldsymbol{\Omega_c h^2}$	0.1198 ± 0.0013	$\sigma_8/h^{0.5}$	0.984 ± 0.014	$D_M(0.38)$	1528 ± 17
$\boldsymbol{100\theta_{MC}}$	1.04085 ± 0.00044	$r_{drag}h$	$95.7^{+3.3}_{-4.1}$	$H(0.51)$	91.5 ± 1.3
$\boldsymbol{\tau}$	$0.0532^{+0.0043}_{-0.0080}$	$\langle d^2\rangle^{1/2}$	2.456 ± 0.027	$D_M(0.51)$	1971 ± 17
$\boldsymbol{w_0}$	-0.61 ± 0.27	z_{re}	$7.58^{+0.47}_{-0.82}$	$H(0.61)$	96.9 ± 1.2
$\boldsymbol{w_a}$	$-1.18^{+0.82}_{-0.74}$	$10^9 A_s$	$2.091^{+0.021}_{-0.030}$	$D_M(0.61)$	2289 ± 18
$\boldsymbol{\ln(10^{10}A_s)}$	$3.040^{+0.010}_{-0.014}$	$10^9 A_s e^{-2\tau}$	1.880 ± 0.011	$H(2.33)$	$233.9^{+1.2}_{-1.4}$
$\boldsymbol{n_s}$	0.9645 ± 0.0045	D_{40}	1229 ± 12	$D_M(2.33)$	5755 ± 14
$\boldsymbol{y_{cal}}$	1.0003 ± 0.0024	D_{220}	5715 ± 41	$f\sigma_8(0.15)$	0.445 ± 0.013
$\boldsymbol{A_{217}^{CIB}}$	48 ± 7	D_{810}	2535 ± 13	$\sigma_8(0.15)$	0.732 ± 0.023
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{1420}	814.4 ± 5.0	$f\sigma_8(0.38)$	$0.456^{+0.019}_{-0.021}$
$\boldsymbol{A_{143}^{tSZ}}$	5.1 ± 2.0	D_{2000}	229.7 ± 1.8	$\sigma_8(0.38)$	0.650 ± 0.020
$\boldsymbol{A_{100}^{PS}}$	263 ± 28	$n_{s,0.002}$	0.9645 ± 0.0045	$f\sigma_8(0.51)$	0.456 ± 0.020
$\boldsymbol{A_{143}^{PS}}$	49 ± 8	Y_P	$0.245310^{+0.000094}_{-0.000075}$	$\sigma_8(0.51)$	0.609 ± 0.018
$\boldsymbol{A_{143\times217}^{PS}}$	43^{+9}_{-10}	Y_P^{BBN}	$0.246636^{+0.000094}_{-0.000076}$	$f\sigma_8(0.61)$	0.454 ± 0.020
$\boldsymbol{A_{217}^{PS}}$	$115^{+11}_{-9.8}$	10^5D/H	2.624 ± 0.038	$\sigma_8(0.61)$	0.580 ± 0.017
$\boldsymbol{A^{kSZ}}$	< 4.72	Age/Gyr	13.780 ± 0.035	$f\sigma_8(2.33)$	$0.2947^{+0.0072}_{-0.0080}$
$\boldsymbol{A_{100}^{dustTT}}$	8.9 ± 1.9	z_*	1090.15 ± 0.32	$\sigma_8(2.33)$	$0.3004^{+0.0076}_{-0.0086}$
$\boldsymbol{A_{143}^{dustTT}}$	10.8 ± 1.8	r_*	144.64 ± 0.33	f_{2000}^{143}	31.0 ± 2.9
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.3 ± 3.2	$100\theta_*$	1.04105 ± 0.00044	$f_{2000}^{143\times217}$	33.4 ± 2.0
$\boldsymbol{A_{217}^{dustTT}}$	93.4 ± 7.2	$D_M(z_*)$/Gpc	13.894 ± 0.031	f_{2000}^{217}	108.0 ± 1.9
$\boldsymbol{c_{100}}$	0.99960 ± 0.00061	z_{drag}	1059.46 ± 0.44	$\chi^2_{lensing}$	9.4 ± 1.0
$\boldsymbol{c_{217}}$	0.99824 ± 0.00062	r_{drag}	147.38 ± 0.35	χ^2_{simall}	396.6 ± 1.4
H_0	$65.0^{+2.2}_{-2.8}$	k_D	0.14041 ± 0.00044	χ^2_{lowl}	23.50 ± 0.93
Ω_Λ	0.661 ± 0.026	$100\theta_D$	0.16104 ± 0.00026	χ^2_{plik}	770.5 ± 5.2
Ω_m	0.339 ± 0.026	z_{eq}	3392 ± 31	χ^2_{6DF}	0.54 ± 0.60
$\Omega_m h^2$	0.1426 ± 0.0013	k_{eq}	0.010352 ± 0.000093	χ^2_{MGS}	0.91 ± 0.89
$\Omega_m h^3$	$0.0926^{+0.0034}_{-0.0040}$	$100\theta_{eq}$	0.8146 ± 0.0057	$\chi^2_{DR12BAO}$	4.9 ± 1.5
σ_8	0.793 ± 0.024	$100\theta_{s,eq}$	0.4502 ± 0.0029	χ^2_{prior}	7.3 ± 3.6
S_8	0.842 ± 0.016	$H(0.15)$	73.05 ± 0.89	χ^2_{CMB}	1200.0 ± 5.3
$\sigma_8\Omega_m^{0.5}$	0.4612 ± 0.0088	$D_M(0.15)$	652 ± 15	χ^2_{BAO}	6.3 ± 1.9

$\bar{\chi}^2_{eff} = 1213.56$; $\Delta\bar{\chi}^2_{eff} = -1.01$; $R - 1 = 0.01398$

19.5 base_w_wa_plikHM_TTTEEE_lowl_lowE_BAO

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022395	0.02236 ± 0.00014	$\Omega_m h^3$	0.09287	$0.0930^{+0.0032}_{-0.0039}$	$H(0.15)$	73.19	73.24 ± 0.88
$\boldsymbol{\Omega_c h^2}$	0.12001	0.1203 ± 0.0013	σ_8	0.7948	$0.795^{+0.022}_{-0.025}$	$D_M(0.15)$	651.2	652 ± 14
$\boldsymbol{100\theta_{MC}}$	1.040930	1.04089 ± 0.00031	S_8	0.8454	0.848 ± 0.017	$H(0.38)$	84.95	85.0 ± 1.1
$\boldsymbol{\tau}$	0.0546	0.0538 ± 0.0078	$\sigma_8 \Omega_m^{0.5}$	0.4631	0.4642 ± 0.0094	$D_M(0.38)$	1524.6	1524 ± 17
$\boldsymbol{w_0}$	−0.603	-0.58 ± 0.27	$\sigma_8 \Omega_m^{0.25}$	0.6067	0.608 ± 0.010	$H(0.51)$	91.71	91.7 ± 1.2
$\boldsymbol{w_a}$	−1.20	-1.32 ± 0.76	$\sigma_8/h^{0.5}$	0.9865	0.988 ± 0.015	$D_M(0.51)$	1966.1	1965 ± 17
$\boldsymbol{\ln(10^{10} A_s)}$	3.0454	3.044 ± 0.016	$r_{drag} h$	95.47	$95.4^{+3.2}_{-3.9}$	$H(0.61)$	97.14	97.1 ± 1.2
$\boldsymbol{n_s}$	0.96636	0.9645 ± 0.0042	$\langle d^2 \rangle^{1/2}$	2.4606	2.466 ± 0.032	$D_M(0.61)$	2283.8	2283 ± 18
$\boldsymbol{y_{cal}}$	1.00057	1.0005 ± 0.0025	z_{re}	7.68	7.60 ± 0.79	$H(2.33)$	234.06	$234.1^{+1.0}_{-1.3}$
$\boldsymbol{A_{217}^{CIB}}$	45.5	47 ± 7	$10^9 A_s$	2.1018	2.099 ± 0.033	$D_M(2.33)$	5742.5	5746 ± 11
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.69	—	$10^9 A_s e^{-2\tau}$	1.8846	1.884 ± 0.011	$f\sigma_8(0.15)$	0.4460	$0.446^{+0.011}_{-0.013}$
$\boldsymbol{A_{143}^{tSZ}}$	7.02	$5.5^{+2.1}_{-1.9}$	D_{40}	1228.1	1232 ± 12	$\sigma_8(0.15)$	0.7335	$0.734^{+0.021}_{-0.024}$
$\boldsymbol{A_{100}^{PS}}$	248.1	258 ± 28	D_{220}	5732.4	5731 ± 38	$f\sigma_8(0.38)$	0.4563	$0.457^{+0.017}_{-0.021}$
$\boldsymbol{A_{143}^{PS}}$	51.1	46 ± 8	D_{810}	2541.5	2539 ± 13	$\sigma_8(0.38)$	0.6514	$0.652^{+0.019}_{-0.021}$
$\boldsymbol{A_{143\times217}^{PS}}$	54.0	42 ± 9	D_{1420}	818.52	816.8 ± 4.8	$f\sigma_8(0.51)$	0.4565	$0.457^{+0.018}_{-0.021}$
$\boldsymbol{A_{217}^{PS}}$	122.4	115 ± 10	D_{2000}	231.50	230.9 ± 1.6	$\sigma_8(0.51)$	0.6105	$0.611^{+0.017}_{-0.019}$
$\boldsymbol{A^{kSZ}}$	0.01	< 4.20	$n_{s,0.002}$	0.96636	0.9645 ± 0.0042	$f\sigma_8(0.61)$	0.4538	$0.455^{+0.018}_{-0.020}$
$\boldsymbol{A_{100}^{dust TT}}$	8.79	8.9 ± 1.8	Y_P	0.245405	$0.245388^{+0.000059}_{-0.000053}$	$\sigma_8(0.61)$	0.5814	$0.582^{+0.016}_{-0.018}$
$\boldsymbol{A_{143}^{dust TT}}$	11.00	10.9 ± 1.8	Y_P^{BBN}	0.246732	$0.246714^{+0.000059}_{-0.000053}$	$f\sigma_8(2.33)$	0.2958	$0.2957^{+0.0072}_{-0.0081}$
$\boldsymbol{A_{143\times217}^{dust TT}}$	20.17	18.6 ± 3.3	10^5D/H	2.5808	2.589 ± 0.027	$\sigma_8(2.33)$	0.3011	$0.3008^{+0.0075}_{-0.0086}$
$\boldsymbol{A_{217}^{dust TT}}$	95.7	93.7 ± 7.4	Age/Gyr	13.7528	13.755 ± 0.030	f_{2000}^{143}	28.50	29.4 ± 2.7
$\boldsymbol{A_{100}^{dust TE}}$	0.1149	0.115 ± 0.038	z_*	1089.889	1089.96 ± 0.26	$f_{2000}^{143\times217}$	31.83	32.1 ± 1.8
$\boldsymbol{A_{100\times143}^{dust TE}}$	0.1349	0.134 ± 0.029	r_*	144.409	144.37 ± 0.29	f_{2000}^{217}	106.35	106.9 ± 1.8
$\boldsymbol{A_{100\times217}^{dust TE}}$	0.483	0.482 ± 0.085	$100\theta_*$	1.041107	1.04108 ± 0.00031	χ^2_{simall}	396.05	397.0 ± 1.8
$\boldsymbol{A_{143}^{dust TE}}$	0.226	0.225 ± 0.054	$D_M(z_*)$/Gpc	13.8707	13.867 ± 0.027	χ^2_{lowl}	23.24	23.63 ± 0.94
$\boldsymbol{A_{143\times217}^{dust TE}}$	0.665	0.667 ± 0.080	z_{drag}	1060.009	1059.92 ± 0.30	χ^2_{plik}	2343.6	2358.5 ± 5.8
$\boldsymbol{A_{217}^{dust TE}}$	2.086	2.09 ± 0.27	r_{drag}	147.059	147.03 ± 0.29	χ^2_{6DF}	0.329	0.57 ± 0.61
$\boldsymbol{c_{100}}$	0.99973	0.99967 ± 0.00061	k_D	0.140919	0.14092 ± 0.00032	χ^2_{MGS}	0.63	0.87 ± 0.86
$\boldsymbol{c_{217}}$	0.99818	0.99819 ± 0.00062	$100\theta_D$	0.160724	0.16077 ± 0.00017	$\chi^2_{DR12BAO}$	3.45	4.9 ± 1.5
H_0	64.92	$64.9^{+2.1}_{-2.7}$	z_{eq}	3403.1	3409 ± 29	χ^2_{prior}	1.56	11.5 ± 4.5
Ω_Λ	0.6606	0.658 ± 0.025	k_{eq}	0.010387	0.010403 ± 0.000088	χ^2_{BAO}	4.40	6.3 ± 1.8
Ω_m	0.3394	0.342 ± 0.025	$100\theta_{eq}$	0.8132	0.8121 ± 0.0054	χ^2_{CMB}	2762.9	2779.1 ± 5.8
$\Omega_m h^2$	0.14305	0.1433 ± 0.0012	$100\theta_{s,eq}$	0.44932	0.4488 ± 0.0028			

Best-fit $\chi^2_{eff} = 2768.85$; $\Delta\chi^2_{eff} = -3.07$; $\bar{\chi}^2_{eff} = 2796.92$; $\Delta\bar{\chi}^2_{eff} = -0.99$; $R - 1 = 0.01402$

χ^2_{eff}: BAO - 6DF: 0.33 (Δ 0.30) MGS: 0.62 (Δ -0.59) DR12BAO: 3.45 (Δ -0.96) CMB - simall_100x143_offlike5_EE_Aplanck_B: 396.05 (Δ -0.15) commander_dx12_v3_2_29: 23.24 (Δ 0.37) plik_rd12_HM_v22b_TTTEEE: 2343.59 (Δ -1.91)

19.6 base_w_wa_plikHM_TTTEEE_lowl_lowE_BAO_post_lensing

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022408	0.02238 ± 0.00014	$\Omega_m h^3$	0.09286	$0.0928^{+0.0032}_{-0.0039}$	$H(0.15)$	73.10	73.20 ± 0.87
$\boldsymbol{\Omega_c h^2}$	0.11969	0.1199 ± 0.0011	σ_8	0.7917	$0.792^{+0.021}_{-0.024}$	$D_M(0.15)$	651.2	651 ± 14
$\boldsymbol{100\theta_{MC}}$	1.040950	1.04092 ± 0.00031	S_8	0.8396	0.842 ± 0.014	$H(0.38)$	84.79	85.0 ± 1.1
$\boldsymbol{\tau}$	0.0530	0.0529 ± 0.0075	$\sigma_8 \Omega_m^{0.5}$	0.4599	0.4612 ± 0.0078	$D_M(0.38)$	1526.2	1525 ± 17
$\boldsymbol{w_0}$	-0.635	-0.59 ± 0.27	$\sigma_8 \Omega_m^{0.25}$	0.6034	0.6043 ± 0.0084	$H(0.51)$	91.58	91.7 ± 1.2
$\boldsymbol{w_a}$	-1.07	-1.24 ± 0.74	$\sigma_8/h^{0.5}$	0.9817	0.983 ± 0.013	$D_M(0.51)$	1968.5	1966 ± 17
$\boldsymbol{\ln(10^{10} A_s)}$	3.0408	3.041 ± 0.015	$r_{drag} h$	95.71	$95.6^{+3.2}_{-4.0}$	$H(0.61)$	97.05	97.1 ± 1.2
$\boldsymbol{n_s}$	0.96706	0.9652 ± 0.0039	$\langle d^2 \rangle^{1/2}$	2.4480	2.455 ± 0.024	$D_M(0.61)$	2286.5	2284 ± 17
$\boldsymbol{y_{cal}}$	1.00045	1.0004 ± 0.0025	z_{re}	7.51	7.50 ± 0.76	$H(2.33)$	234.19	$234.1^{+1.1}_{-1.3}$
$\boldsymbol{A_{217}^{CIB}}$	46.6	47 ± 7	$10^9 A_s$	2.0922	2.092 ± 0.031	$D_M(2.33)$	5742.7	5744 ± 11
$\boldsymbol{\xi^{tSZ \times CIB}}$	0.52	—	$10^9 A_s e^{-2\tau}$	1.8818	1.882 ± 0.010	$f\sigma_8(0.15)$	0.4444	$0.444^{+0.011}_{-0.013}$
$\boldsymbol{A_{143}^{tSZ}}$	7.16	$5.5^{+2.1}_{-1.9}$	D_{40}	1225.3	1229 ± 11	$\sigma_8(0.15)$	0.7307	$0.731^{+0.021}_{-0.024}$
$\boldsymbol{A_{100}^{PS}}$	249.2	258 ± 28	D_{220}	5729.1	5732 ± 38	$f\sigma_8(0.38)$	0.4549	$0.455^{+0.017}_{-0.020}$
$\boldsymbol{A_{143}^{PS}}$	48.6	46 ± 8	D_{810}	2539.7	2538 ± 13	$\sigma_8(0.38)$	0.6489	$0.649^{+0.018}_{-0.020}$
$\boldsymbol{A_{143\times217}^{PS}}$	49.7	42 ± 9	D_{1420}	818.18	816.7 ± 4.8	$f\sigma_8(0.51)$	0.4548	$0.455^{+0.018}_{-0.021}$
$\boldsymbol{A_{217}^{PS}}$	120.6	115 ± 10	D_{2000}	231.36	230.8 ± 1.6	$\sigma_8(0.51)$	0.6081	$0.608^{+0.016}_{-0.019}$
$\boldsymbol{A^{kSZ}}$	0.00	< 4.32	$n_{s,0.002}$	0.96706	0.9652 ± 0.0039	$f\sigma_8(0.61)$	0.4519	$0.452^{+0.017}_{-0.020}$
$\boldsymbol{A_{100}^{dust TT}}$	8.85	8.9 ± 1.8	Y_P	0.245411	$0.245397^{+0.000057}_{-0.000052}$	$\sigma_8(0.61)$	0.5791	$0.579^{+0.015}_{-0.017}$
$\boldsymbol{A_{143}^{dust TT}}$	11.02	10.9 ± 1.8	Y_P^{BBN}	0.246737	$0.246723^{+0.000057}_{-0.000052}$	$f\sigma_8(2.33)$	0.2945	$0.2946^{+0.0069}_{-0.0077}$
$\boldsymbol{A_{143\times217}^{dust TT}}$	19.87	18.6 ± 3.2	10^5D/H	2.5784	2.584 ± 0.026	$\sigma_8(2.33)$	0.3004	$0.3001^{+0.0074}_{-0.0084}$
$\boldsymbol{A_{217}^{dust TT}}$	95.2	93.7 ± 7.2	Age/Gyr	13.7575	13.756 ± 0.030	f_{2000}^{143}	28.64	29.5 ± 2.7
$\boldsymbol{A_{100}^{dust TE}}$	0.1139	0.115 ± 0.038	z_*	1089.844	1089.90 ± 0.24	$f_{2000}^{143\times217}$	31.89	32.1 ± 1.8
$\boldsymbol{A_{100\times143}^{dust TE}}$	0.1346	0.134 ± 0.029	r_*	144.481	144.45 ± 0.25	f_{2000}^{217}	106.47	106.9 ± 1.8
$\boldsymbol{A_{100\times217}^{dust TE}}$	0.481	0.479 ± 0.084	$100\theta_*$	1.041125	1.04111 ± 0.00031	$\chi^2_{lensing}$	8.766	9.28 ± 0.87
$\boldsymbol{A_{143}^{dust TE}}$	0.225	0.224 ± 0.053	$D_M(z_*)$/Gpc	13.8774	13.875 ± 0.023	χ^2_{simall}	395.82	396.8 ± 1.5
$\boldsymbol{A_{143\times217}^{dust TE}}$	0.666	0.666 ± 0.081	z_{drag}	1060.009	1059.95 ± 0.30	χ^2_{lowl}	23.02	23.44 ± 0.82
$\boldsymbol{A_{217}^{dust TE}}$	2.082	2.08 ± 0.27	r_{drag}	147.129	147.11 ± 0.25	χ^2_{plik}	2344.2	2358.6 ± 5.7
$\boldsymbol{c_{100}}$	0.99971	0.99966 ± 0.00061	k_D	0.140855	0.14085 ± 0.00030	χ^2_{6DF}	0.313	0.56 ± 0.61
$\boldsymbol{c_{217}}$	0.99819	0.99819 ± 0.00063	$100\theta_D$	0.160720	0.16075 ± 0.00017	χ^2_{MGS}	0.63	0.89 ± 0.87
H_0	65.05	$65.0^{+2.2}_{-2.7}$	z_{eq}	3395.8	3400 ± 25	$\chi^2_{DR12BAO}$	3.35	4.8 ± 1.5
Ω_Λ	0.6627	0.660 ± 0.025	k_{eq}	0.010364	0.010377 ± 0.000075	χ^2_{prior}	1.68	11.5 ± 4.5
Ω_m	0.3373	0.340 ± 0.025	$100\theta_{eq}$	0.81457	0.8137 ± 0.0046	χ^2_{CMB}	2771.8	2788.1 ± 5.9
$\Omega_m h^2$	0.14275	0.1429 ± 0.0010	$100\theta_{s,eq}$	0.45002	0.4496 ± 0.0024	χ^2_{BAO}	4.28	6.3 ± 1.9

Best-fit $\chi^2_{eff} = 2777.81$; $\Delta\chi^2_{eff} = -2.88$; $\bar{\chi}^2_{eff} = 2805.90$; $\Delta\bar{\chi}^2_{eff} = -0.95$; $R - 1 = 0.01750$

χ^2_{eff}: BAO - 6DF: 0.31 (Δ 0.28) MGS: 0.62 (Δ -0.59) DR12BAO: 3.35 (Δ -1.07) CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.77 (Δ 0.04) simall_100x143_offlike5_EE_Aplanck 395.82 (Δ -0.70) commander_dx12_v3_2_29: 23.02 (Δ 0.12) plik_rd12_HM_v22b_TTTEEE: 2344.24 (Δ -1.08)

19.7 base_w_wa_plikHM_TTTEEE_lowl_lowE_BAO_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02236 ± 0.00014	$\Omega_m h^3$	$0.0929^{+0.0032}_{-0.0039}$	$H(0.15)$	73.23 ± 0.88
$\boldsymbol{\Omega_c h^2}$	0.1202 ± 0.0013	σ_8	$0.796^{+0.022}_{-0.025}$	$D_M(0.15)$	652 ± 14
$\boldsymbol{100\theta_{MC}}$	1.04090 ± 0.00031	S_8	0.848 ± 0.017	$H(0.38)$	85.0 ± 1.1
$\boldsymbol{\tau}$	$0.0551^{+0.0049}_{-0.0083}$	$\sigma_8 \Omega_m^{0.5}$	0.4646 ± 0.0094	$D_M(0.38)$	1524 ± 17
$\boldsymbol{w_0}$	-0.58 ± 0.27	$\sigma_8 \Omega_m^{0.25}$	0.608 ± 0.010	$H(0.51)$	91.7 ± 1.2
$\boldsymbol{w_a}$	-1.31 ± 0.76	$\sigma_8/h^{0.5}$	0.988 ± 0.015	$D_M(0.51)$	1966 ± 17
$\boldsymbol{\ln(10^{10} A_s)}$	$3.046^{+0.012}_{-0.016}$	$r_{drag} h$	$95.4^{+3.1}_{-4.0}$	$H(0.61)$	97.1 ± 1.2
$\boldsymbol{n_s}$	0.9647 ± 0.0042	$\langle d^2 \rangle^{1/2}$	2.468 ± 0.031	$D_M(0.61)$	2283 ± 18
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	z_{re}	$7.73^{+0.55}_{-0.81}$	$H(2.33)$	$234.1^{+1.0}_{-1.3}$
$\boldsymbol{A_{217}^{CIB}}$	47 ± 7	$10^9 A_s$	$2.104^{+0.025}_{-0.034}$	$D_M(2.33)$	5745 ± 11
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$10^9 A_s e^{-2\tau}$	1.884 ± 0.011	$f\sigma_8(0.15)$	$0.447^{+0.011}_{-0.013}$
$\boldsymbol{A_{143}^{tSZ}}$	$5.5^{+2.1}_{-1.9}$	D_{40}	1232 ± 12	$\sigma_8(0.15)$	$0.735^{+0.021}_{-0.024}$
$\boldsymbol{A_{100}^{PS}}$	258 ± 28	D_{220}	5731 ± 38	$f\sigma_8(0.38)$	$0.457^{+0.018}_{-0.021}$
$\boldsymbol{A_{143}^{PS}}$	46 ± 8	D_{810}	2539 ± 13	$\sigma_8(0.38)$	$0.652^{+0.019}_{-0.021}$
$\boldsymbol{A_{143\times217}^{PS}}$	42 ± 9	D_{1420}	816.8 ± 4.8	$f\sigma_8(0.51)$	$0.458^{+0.018}_{-0.021}$
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	D_{2000}	230.9 ± 1.6	$\sigma_8(0.51)$	$0.611^{+0.017}_{-0.019}$
$\boldsymbol{A^{kSZ}}$	< 4.18	$n_{s,0.002}$	0.9647 ± 0.0042	$f\sigma_8(0.61)$	$0.455^{+0.018}_{-0.020}$
$\boldsymbol{A_{100}^{dust TT}}$	8.9 ± 1.8	Y_P	$0.245389^{+0.000059}_{-0.000053}$	$\sigma_8(0.61)$	$0.582^{+0.016}_{-0.018}$
$\boldsymbol{A_{143}^{dust TT}}$	10.9 ± 1.8	Y_P^{BBN}	$0.246716^{+0.000059}_{-0.000053}$	$f\sigma_8(2.33)$	0.2959 ± 0.0076
$\boldsymbol{A_{143\times217}^{dust TT}}$	18.5 ± 3.3	10^5D/H	2.588 ± 0.027	$\sigma_8(2.33)$	$0.3011^{+0.0075}_{-0.0086}$
$\boldsymbol{A_{217}^{dust TT}}$	93.7 ± 7.4	Age/Gyr	$13.755^{+0.028}_{-0.031}$	f_{2000}^{143}	29.4 ± 2.7
$\boldsymbol{A_{100}^{dust TE}}$	0.115 ± 0.038	z_*	1089.96 ± 0.26	$f_{2000}^{143\times217}$	32.1 ± 1.8
$\boldsymbol{A_{100\times143}^{dust TE}}$	0.134 ± 0.029	r_*	144.38 ± 0.29	f_{2000}^{217}	106.9 ± 1.7
$\boldsymbol{A_{100\times217}^{dust TE}}$	0.482 ± 0.085	$100\theta_*$	1.04108 ± 0.00031	χ^2_{simall}	397.0 ± 1.9
$\boldsymbol{A_{143}^{dust TE}}$	0.225 ± 0.054	$D_M(z_*)$/Gpc	13.868 ± 0.027	χ^2_{lowl}	23.64 ± 0.94
$\boldsymbol{A_{143\times217}^{dust TE}}$	0.667 ± 0.080	z_{drag}	1059.93 ± 0.30	χ^2_{plik}	2358.3 ± 5.7
$\boldsymbol{A_{217}^{dust TE}}$	2.09 ± 0.27	r_{drag}	147.04 ± 0.29	χ^2_{6DF}	0.57 ± 0.61
$\boldsymbol{c_{100}}$	0.99967 ± 0.00061	k_D	0.14091 ± 0.00032	χ^2_{MGS}	0.87 ± 0.86
$\boldsymbol{c_{217}}$	0.99819 ± 0.00062	$100\theta_D$	0.16076 ± 0.00017	$\chi^2_{DR12BAO}$	4.9 ± 1.5
H_0	$64.9^{+2.1}_{-2.7}$	z_{eq}	3408 ± 29	χ^2_{prior}	11.5 ± 4.5
Ω_Λ	0.658 ± 0.025	k_{eq}	0.010401 ± 0.000088	χ^2_{BAO}	6.3 ± 1.8
Ω_m	0.342 ± 0.025	$100\theta_{eq}$	0.8123 ± 0.0054	χ^2_{CMB}	2778.9 ± 5.8
$\Omega_m h^2$	0.1432 ± 0.0012	$100\theta_{s,eq}$	0.4489 ± 0.0028		

$\bar{\chi}^2_{eff} = 2796.70$; $\Delta\bar{\chi}^2_{eff} = -1.01$; $R - 1 = 0.01451$

19.8 base_w_wa_plikHM_TTTEEE_lowl_lowE_BAO_post_lensing_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02238 ± 0.00014	$\Omega_m h^3$	$0.0928^{+0.0032}_{-0.0039}$	$H(0.15)$	73.18 ± 0.87
$\boldsymbol{\Omega_c h^2}$	0.1198 ± 0.0011	σ_8	$0.792^{+0.021}_{-0.024}$	$D_M(0.15)$	652 ± 14
$\boldsymbol{100\theta_{MC}}$	1.04093 ± 0.00031	S_8	0.842 ± 0.014	$H(0.38)$	85.0 ± 1.1
$\boldsymbol{\tau}$	$0.0543^{+0.0047}_{-0.0078}$	$\sigma_8 \Omega_m^{0.5}$	0.4613 ± 0.0078	$D_M(0.38)$	1525 ± 17
$\boldsymbol{w_0}$	-0.60 ± 0.27	$\sigma_8 \Omega_m^{0.25}$	0.6045 ± 0.0084	$H(0.51)$	91.7 ± 1.2
$\boldsymbol{w_a}$	-1.22 ± 0.74	$\sigma_8/h^{0.5}$	0.983 ± 0.013	$D_M(0.51)$	1967 ± 17
$\boldsymbol{\ln(10^{10} A_s)}$	$3.043^{+0.010}_{-0.015}$	$r_{drag} h$	$95.6^{+3.2}_{-4.0}$	$H(0.61)$	97.1 ± 1.2
$\boldsymbol{n_s}$	0.9655 ± 0.0039	$\langle d^2 \rangle^{1/2}$	2.457 ± 0.023	$D_M(0.61)$	2284 ± 17
$\boldsymbol{y_{cal}}$	1.0003 ± 0.0025	z_{re}	$7.64^{+0.51}_{-0.78}$	$H(2.33)$	$234.1^{+1.1}_{-1.3}$
$\boldsymbol{A_{217}^{CIB}}$	47 ± 7	$10^9 A_s$	$2.097^{+0.022}_{-0.031}$	$D_M(2.33)$	5744 ± 11
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$10^9 A_s e^{-2\tau}$	1.881 ± 0.010	$f\sigma_8(0.15)$	$0.444^{+0.011}_{-0.012}$
$\boldsymbol{A_{143}^{tSZ}}$	$5.5^{+2.1}_{-1.9}$	D_{40}	1229 ± 11	$\sigma_8(0.15)$	$0.731^{+0.021}_{-0.023}$
$\boldsymbol{A_{100}^{PS}}$	258 ± 28	D_{220}	5731 ± 38	$f\sigma_8(0.38)$	$0.455^{+0.017}_{-0.020}$
$\boldsymbol{A_{143}^{PS}}$	46 ± 8	D_{810}	2537 ± 13	$\sigma_8(0.38)$	$0.650^{+0.018}_{-0.020}$
$\boldsymbol{A_{143\times217}^{PS}}$	42 ± 9	D_{1420}	816.7 ± 4.8	$f\sigma_8(0.51)$	$0.455^{+0.018}_{-0.021}$
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	D_{2000}	230.8 ± 1.6	$\sigma_8(0.51)$	$0.609^{+0.017}_{-0.019}$
$\boldsymbol{A^{kSZ}}$	< 4.31	$n_{s,0.002}$	0.9655 ± 0.0039	$f\sigma_8(0.61)$	$0.452^{+0.017}_{-0.020}$
$\boldsymbol{A_{100}^{dust TT}}$	8.9 ± 1.8	Y_P	$0.245399^{+0.000057}_{-0.000051}$	$\sigma_8(0.61)$	$0.580^{+0.015}_{-0.017}$
$\boldsymbol{A_{143}^{dust TT}}$	10.9 ± 1.8	Y_P^{BBN}	$0.246725^{+0.000057}_{-0.000051}$	$f\sigma_8(2.33)$	0.2948 ± 0.0073
$\boldsymbol{A_{143\times217}^{dust TT}}$	18.6 ± 3.2	10^5D/H	2.583 ± 0.026	$\sigma_8(2.33)$	$0.3003^{+0.0075}_{-0.0084}$
$\boldsymbol{A_{217}^{dust TT}}$	93.7 ± 7.3	Age/Gyr	13.757 ± 0.030	f_{2000}^{143}	29.4 ± 2.7
$\boldsymbol{A_{100}^{dust TE}}$	0.115 ± 0.038	z_*	1089.89 ± 0.23	$f_{2000}^{143\times217}$	32.1 ± 1.8
$\boldsymbol{A_{100\times143}^{dust TE}}$	0.135 ± 0.029	r_*	144.47 ± 0.24	f_{2000}^{217}	106.9 ± 1.8
$\boldsymbol{A_{100\times217}^{dust TE}}$	0.479 ± 0.084	$100\theta_*$	1.04112 ± 0.00031	$\chi^2_{lensing}$	9.29 ± 0.89
$\boldsymbol{A_{143}^{dust TE}}$	0.224 ± 0.053	$D_M(z_*)$/Gpc	13.876 ± 0.023	χ^2_{simall}	396.7 ± 1.6
$\boldsymbol{A_{143\times217}^{dust TE}}$	0.667 ± 0.080	z_{drag}	1059.95 ± 0.30	χ^2_{lowl}	23.43 ± 0.83
$\boldsymbol{A_{217}^{dust TE}}$	2.08 ± 0.27	r_{drag}	147.12 ± 0.25	χ^2_{plik}	2358.5 ± 5.7
$\boldsymbol{c_{100}}$	0.99966 ± 0.00061	k_D	0.14084 ± 0.00029	χ^2_{6DF}	0.56 ± 0.61
$\boldsymbol{c_{217}}$	0.99819 ± 0.00063	$100\theta_D$	0.16075 ± 0.00017	χ^2_{MGS}	0.89 ± 0.87
H_0	$65.0^{+2.2}_{-2.7}$	z_{eq}	3398 ± 24	$\chi^2_{DR12BAO}$	4.8 ± 1.5
Ω_Λ	0.660 ± 0.026	k_{eq}	0.010372 ± 0.000073	χ^2_{prior}	11.5 ± 4.5
Ω_m	0.340 ± 0.026	$100\theta_{eq}$	0.8141 ± 0.0045	χ^2_{CMB}	2787.9 ± 5.8
$\Omega_m h^2$	0.1429 ± 0.0010	$100\theta_{s,eq}$	0.4498 ± 0.0023	χ^2_{BAO}	6.3 ± 1.9

$\bar{\chi}^2_{eff} = 2805.65$; $\Delta\bar{\chi}^2_{eff} = -1.07$; $R - 1 = 0.01782$

19.9 base_w_wa_plikHM_TT_lowl_lowE_BAO_Riess18_JLA

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022183	0.02214 ± 0.00021	$\sigma_8\Omega_m^{0.5}$	0.4571	0.458 ± 0.011	$H(0.38)$	83.67	83.70 ± 0.69
$\boldsymbol{\Omega_c h^2}$	0.12068	0.1209 ± 0.0018	$\sigma_8\Omega_m^{0.25}$	0.6194	0.620 ± 0.013	$D_M(0.38)$	1500.3	1499 ± 14
$\boldsymbol{100\theta_{MC}}$	1.040847	1.04080 ± 0.00045	$\sigma_8/h^{0.5}$	1.0064	1.008 ± 0.019	$H(0.51)$	89.89	89.85 ± 0.57
$\boldsymbol{\tau}$	0.0523	0.0519 ± 0.0079	$r_{drag}h$	102.36	102.4 ± 1.4	$D_M(0.51)$	1949.9	1949 ± 16
$\boldsymbol{w_0}$	−1.010	-0.998 ± 0.10	$\langle d^2\rangle^{1/2}$	2.4726	2.478 ± 0.041	$H(0.61)$	95.160	95.07 ± 0.50
$\boldsymbol{w_a}$	−0.314	$-0.40^{+0.48}_{-0.38}$	z_{re}	7.51	$7.46^{+0.82}_{-0.74}$	$D_M(0.61)$	2274.1	2273 ± 17
$\boldsymbol{\ln(10^{10}A_s)}$	3.0415	3.041 ± 0.016	$10^9 A_s$	2.0937	2.092 ± 0.033	$H(2.33)$	234.70	234.67 ± 0.98
$\boldsymbol{n_s}$	0.9641	0.9625 ± 0.0051	$10^9 A_s e^{-2\tau}$	1.8857	1.886 ± 0.013	$D_M(2.33)$	5758.8	5762 ± 13
$\boldsymbol{\alpha_{JLA}}$	0.1417	0.1417 ± 0.0066	D_{40}	1229.7	1233 ± 14	$f\sigma_8(0.15)$	0.4661	0.467 ± 0.011
$\boldsymbol{\beta_{JLA}}$	3.111	3.113 ± 0.080	D_{220}	5713.3	5714 ± 41	$\sigma_8(0.15)$	0.7770	0.778 ± 0.016
$\boldsymbol{y_{cal}}$	1.00040	1.0004 ± 0.0025	D_{810}	2538.9	2537 ± 14	$f\sigma_8(0.38)$	0.4925	0.494 ± 0.013
$\boldsymbol{A_{217}^{CIB}}$	48.0	48 ± 7	D_{1420}	816.1	814.5 ± 5.0	$\sigma_8(0.38)$	0.6895	0.691 ± 0.014
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.47	—	D_{2000}	230.38	229.8 ± 1.8	$f\sigma_8(0.51)$	0.4942	0.496 ± 0.014
$\boldsymbol{A_{143}^{tSZ}}$	6.99	5.1 ± 2.0	$n_{s,0.002}$	0.9641	0.9625 ± 0.0051	$\sigma_8(0.51)$	0.6452	0.646 ± 0.013
$\boldsymbol{A_{100}^{PS}}$	251.6	263 ± 28	Y_P	0.245319	$0.245296^{+0.000096}_{-0.000080}$	$f\sigma_8(0.61)$	0.4908	0.492 ± 0.014
$\boldsymbol{A_{143}^{PS}}$	51.0	49 ± 8	Y_P^{BBN}	0.246645	$0.246622^{+0.000096}_{-0.000080}$	$\sigma_8(0.61)$	0.6138	0.615 ± 0.012
$\boldsymbol{A_{143\times217}^{PS}}$	50.5	44 ± 9	10^5D/H	2.6212	2.630 ± 0.040	$f\sigma_8(2.33)$	0.3100	$0.3103^{+0.0066}_{-0.0057}$
$\boldsymbol{A_{217}^{PS}}$	120.5	115 ± 10	Age/Gyr	13.7465	13.749 ± 0.035	$\sigma_8(2.33)$	0.31606	0.3161 ± 0.0048
$\boldsymbol{A^{kSZ}}$	0.05	< 4.71	z_*	1090.217	1090.29 ± 0.36	f_{2000}^{143}	29.93	30.9 ± 2.9
$\boldsymbol{A_{100}^{dustTT}}$	8.91	8.9 ± 1.8	r_*	144.399	144.39 ± 0.42	$f_{2000}^{143\times217}$	33.00	33.4 ± 2.0
$\boldsymbol{A_{143}^{dustTT}}$	10.70	10.7 ± 1.8	$100\theta_*$	1.041047	1.04100 ± 0.00045	f_{2000}^{217}	107.38	107.9 ± 1.9
$\boldsymbol{A_{143\times217}^{dustTT}}$	19.53	18.2 ± 3.3	$D_M(z_*)$/Gpc	13.8706	13.870 ± 0.039	χ^2_{simall}	395.83	396.9 ± 1.6
$\boldsymbol{A_{217}^{dustTT}}$	94.6	93.3 ± 7.3	z_{drag}	1059.551	1059.46 ± 0.45	χ^2_{lowl}	23.33	23.7 ± 1.1
$\boldsymbol{c_{100}}$	0.99967	0.99960 ± 0.00062	r_{drag}	147.121	147.13 ± 0.43	χ^2_{plik}	758.1	770.5 ± 5.4
$\boldsymbol{c_{217}}$	0.99824	0.99825 ± 0.00063	k_D	0.140691	0.14065 ± 0.00049	$\chi^2_{H073p45}$	5.46	5.7 ± 2.7
H_0	69.57	69.61 ± 0.95	$100\theta_D$	0.160987	0.16104 ± 0.00026	χ^2_{JLA}	695.50	698.3 ± 2.6
Ω_Λ	0.7035	0.7034 ± 0.0086	z_{eq}	3414.0	3417 ± 41	χ^2_{6DF}	0.133	0.21 ± 0.21
Ω_m	0.2965	0.2966 ± 0.0086	k_{eq}	0.010420	0.01043 ± 0.00012	χ^2_{MGS}	2.84	2.99 ± 0.81
$\Omega_m h^2$	0.14351	0.1436 ± 0.0017	$100\theta_{eq}$	0.8106	$0.8100^{+0.0071}_{-0.0079}$	$\chi^2_{DR12BAO}$	4.81	5.9 ± 1.7
$\Omega_m h^3$	0.09984	0.09999 ± 0.0019	$100\theta_{s,eq}$	0.44813	0.4478 ± 0.0039	χ^2_{prior}	1.29	7.2 ± 3.6
σ_8	0.8395	0.841 ± 0.018	$H(0.15)$	74.46	74.56 ± 0.78	χ^2_{BAO}	7.78	9.1 ± 2.5
S_8	0.8345	0.836 ± 0.020	$D_M(0.15)$	625.2	624.6 ± 6.8	χ^2_{CMB}	1177.3	1191.1 ± 5.4

Best-fit $\chi^2_{eff} = 1887.34$; $\bar{\chi}^2_{eff} = 1911.34$; $R - 1 = 0.00894$

χ^2_{eff}: BAO - 6DF: 0.13 MGS: 2.84 DR12BAO: 4.81 CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.83 commander_dx12_v3_2_29: 23.34 plik_rd12_HM_v22_TT: 758.14 Hubble - H073p45: 5.46 SN - JLA December_2013: 695.50

19.10 base_w_wa_plikHM_TT_lowl_lowE_BAO_Riess18_JLA_post_lensing

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022220	0.02217 ± 0.00020	$\sigma_8 \Omega_m^{0.25}$	0.6136	0.6147 ± 0.0086	$H(0.51)$	89.90	89.88 ± 0.58
$\boldsymbol{\Omega_c h^2}$	0.11990	0.1201 ± 0.0013	$\sigma_8/h^{0.5}$	0.9982	0.9997 ± 0.012	$D_M(0.51)$	1950.4	1950 ± 16
$\boldsymbol{100\theta_{MC}}$	1.040879	1.04085 ± 0.00044	$r_{drag} h$	102.59	102.5 ± 1.4	$H(0.61)$	95.201	95.15 ± 0.49
$\boldsymbol{\tau}$	0.0519	0.0514 ± 0.0078	$\langle d^2 \rangle^{1/2}$	2.4552	2.461 ± 0.027	$D_M(0.61)$	2274.5	2274 ± 17
$\boldsymbol{w_0}$	−1.025	-1.01 ± 0.10	z_{re}	7.44	7.39 ± 0.80	$H(2.33)$	234.57	234.6 ± 1.0
$\boldsymbol{w_a}$	−0.214	$-0.29^{+0.41}_{-0.34}$	$10^9 A_s$	2.0876	2.086 ± 0.031	$D_M(2.33)$	5757.3	5760 ± 13
$\boldsymbol{\ln(10^{10} A_s)}$	3.0386	3.038 ± 0.015	$10^9 A_s e^{-2\tau}$	1.8820	1.882 ± 0.011	$f\sigma_8(0.15)$	0.4615	0.4621 ± 0.0080
$\boldsymbol{n_s}$	0.96544	0.9638 ± 0.0045	D_{40}	1226.5	1230 ± 12	$\sigma_8(0.15)$	0.7713	0.772 ± 0.012
$\boldsymbol{y_{cal}}$	1.00035	1.0003 ± 0.0025	D_{220}	5717.0	5716 ± 41	$f\sigma_8(0.38)$	0.4877	0.4885 ± 0.0099
$\boldsymbol{\alpha_{JLA}}$	0.1415	0.1418 ± 0.0066	D_{810}	2537.6	2535 ± 13	$\sigma_8(0.38)$	0.6847	0.685 ± 0.011
$\boldsymbol{\beta_{JLA}}$	3.111	3.112 ± 0.080	D_{1420}	816.1	814.5 ± 5.1	$f\sigma_8(0.51)$	0.4893	0.490 ± 0.010
$\boldsymbol{A_{217}^{CIB}}$	48.1	48 ± 7	D_{2000}	230.32	229.7 ± 1.8	$\sigma_8(0.51)$	0.6408	0.641 ± 0.010
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.44	—	$n_{s,0.002}$	0.96544	0.9638 ± 0.0045	$f\sigma_8(0.61)$	0.4858	0.487 ± 0.010
$\boldsymbol{A_{143}^{tSZ}}$	6.97	5.1 ± 2.0	Y_P	0.245334	$0.245311^{+0.000091}_{-0.000078}$	$\sigma_8(0.61)$	0.6097	0.6102 ± 0.0093
$\boldsymbol{A_{100}^{PS}}$	253.4	263 ± 29	Y_P^{BBN}	0.246661	$0.246637^{+0.000092}_{-0.000078}$	$f\sigma_8(2.33)$	0.30799	0.3081 ± 0.0047
$\boldsymbol{A_{143}^{PS}}$	50.7	49 ± 8	10^5D/H	2.6140	2.624 ± 0.038	$\sigma_8(2.33)$	0.31469	0.3146 ± 0.0039
$\boldsymbol{A_{143\times217}^{PS}}$	49.8	43 ± 9	Age/Gyr	13.7493	13.752 ± 0.034	f_{2000}^{143}	30.03	31.0 ± 2.9
$\boldsymbol{A_{217}^{PS}}$	120.2	115 ± 10	z_*	1090.100	1090.19 ± 0.32	$f_{2000}^{143\times217}$	33.06	33.4 ± 2.0
$\boldsymbol{A^{kSZ}}$	0.00	< 4.77	r_*	144.572	144.55 ± 0.32	f_{2000}^{217}	107.41	107.9 ± 1.9
$\boldsymbol{A_{100}^{dustTT}}$	8.91	8.9 ± 1.8	$100\theta_*$	1.041083	1.04105 ± 0.00044	$\chi^2_{lensing}$	8.75	9.4 ± 1.1
$\boldsymbol{A_{143}^{dustTT}}$	10.82	10.7 ± 1.8	$D_M(z_*)$/Gpc	13.8867	13.885 ± 0.031	χ^2_{simall}	395.76	396.8 ± 1.5
$\boldsymbol{A_{143\times217}^{dustTT}}$	19.51	18.2 ± 3.4	z_{drag}	1059.589	1059.48 ± 0.45	χ^2_{lowl}	23.05	23.40 ± 0.89
$\boldsymbol{A_{217}^{dustTT}}$	94.6	93.2 ± 7.4	r_{drag}	147.285	147.28 ± 0.35	χ^2_{plik}	758.7	770.7 ± 5.3
$\boldsymbol{c_{100}}$	0.99967	0.99960 ± 0.00063	k_D	0.140546	0.14052 ± 0.00044	$\chi^2_{H073p45}$	5.23	5.7 ± 2.7
$\boldsymbol{c_{217}}$	0.99826	0.99824 ± 0.00063	$100\theta_D$	0.160965	0.16102 ± 0.00026	χ^2_{JLA}	695.66	698.2 ± 2.6
H_0	69.65	69.60 ± 0.95	z_{eq}	3396.2	3401 ± 30	χ^2_{6DF}	0.155	0.21 ± 0.21
Ω_Λ	0.7057	0.7047 ± 0.0083	k_{eq}	0.010365	0.010379 ± 0.000093	χ^2_{MGS}	2.92	2.99 ± 0.81
Ω_m	0.2943	0.2953 ± 0.0083	$100\theta_{eq}$	0.8139	0.8130 ± 0.0056	$\chi^2_{DR12BAO}$	4.72	5.7 ± 1.7
$\Omega_m h^2$	0.14276	0.1430 ± 0.0013	$100\theta_{s,eq}$	0.44982	0.4494 ± 0.0029	χ^2_{prior}	1.28	7.3 ± 3.7
$\Omega_m h^3$	0.09944	0.0995 ± 0.0017	$H(0.15)$	74.43	74.46 ± 0.75	χ^2_{CMB}	1186.3	1200.2 ± 5.5
σ_8	0.8331	0.834 ± 0.013	$D_M(0.15)$	625.1	625.2 ± 6.7	χ^2_{BAO}	7.79	8.9 ± 2.5
S_8	0.8251	0.827 ± 0.013	$H(0.38)$	83.64	83.67 ± 0.69			
$\sigma_8 \Omega_m^{0.5}$	0.4519	0.4531 ± 0.0072	$D_M(0.38)$	1500.7	1500 ± 14			

Best-fit $\chi^2_{eff} = 1896.26$; $\Delta\chi^2_{eff} = -16.55$; $\bar{\chi}^2_{eff} = 1920.42$; $\Delta\bar{\chi}^2_{eff} = -12.63$; $R - 1 = 0.01184$

χ^2_{eff}: BAO - 6DF: 0.15 (Δ 0.15) MGS: 2.92 (Δ 1.25) DR12BAO: 4.72 (Δ 1.22) CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.75 (Δ -0.19) simall_100x143_offlike5_EE_Aplanck_ 395.76 (Δ -1.06) commander_dx12_v3_2_29: 23.05 (Δ 0.46) plik_rd12_HM_v22_TT: 758.73 (Δ -2.10) Hubble - H073p45: 5.23 (Δ -5.36) SN - JLA December_2013: 695.66 (Δ -10.93)

19.11 base_w_wa_plikHM_TT_lowl_lowE_BAO_Riess18_JLA_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02215 ± 0.00021	$\sigma_8\Omega_m^{0.5}$	0.458 ± 0.011	$H(0.38)$	83.69 ± 0.69
$\boldsymbol{\Omega_c h^2}$	0.1208 ± 0.0018	$\sigma_8\Omega_m^{0.25}$	0.621 ± 0.013	$D_M(0.38)$	1499 ± 14
$\boldsymbol{100\theta_{MC}}$	1.04081 ± 0.00045	$\sigma_8/h^{0.5}$	1.009 ± 0.018	$H(0.51)$	89.85 ± 0.57
$\boldsymbol{\tau}$	$0.0536^{+0.0047}_{-0.0079}$	$r_{drag}h$	102.4 ± 1.4	$D_M(0.51)$	1949 ± 16
$\boldsymbol{w_0}$	-0.999 ± 0.10	$\langle d^2\rangle^{1/2}$	2.481 ± 0.040	$H(0.61)$	95.08 ± 0.50
$\boldsymbol{w_a}$	$-0.39^{+0.47}_{-0.38}$	z_{re}	$7.64^{+0.52}_{-0.80}$	$D_M(0.61)$	2273 ± 17
$\boldsymbol{\ln(10^{10}A_s)}$	$3.044^{+0.012}_{-0.015}$	$10^9 A_s$	$2.099^{+0.024}_{-0.032}$	$H(2.33)$	234.68 ± 0.98
$\boldsymbol{n_s}$	0.9627 ± 0.0051	$10^9 A_s e^{-2\tau}$	1.885 ± 0.013	$D_M(2.33)$	5762 ± 13
$\boldsymbol{\alpha_{JLA}}$	0.1417 ± 0.0066	D_{40}	1233 ± 14	$f\sigma_8(0.15)$	0.467 ± 0.011
$\boldsymbol{\beta_{JLA}}$	3.112 ± 0.080	D_{220}	5714 ± 41	$\sigma_8(0.15)$	0.779 ± 0.016
$\boldsymbol{y_{cal}}$	1.0004 ± 0.0025	D_{810}	2536 ± 14	$f\sigma_8(0.38)$	0.494 ± 0.013
$\boldsymbol{A_{217}^{CIB}}$	48 ± 7	D_{1420}	814.5 ± 5.1	$\sigma_8(0.38)$	0.691 ± 0.014
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{2000}	229.8 ± 1.8	$f\sigma_8(0.51)$	0.496 ± 0.014
$\boldsymbol{A_{143}^{tSZ}}$	5.1 ± 2.0	$n_{s,0.002}$	0.9627 ± 0.0051	$\sigma_8(0.51)$	0.647 ± 0.013
$\boldsymbol{A_{100}^{PS}}$	263 ± 28	Y_P	$0.245299^{+0.000094}_{-0.000080}$	$f\sigma_8(0.61)$	0.493 ± 0.014
$\boldsymbol{A_{143}^{PS}}$	49 ± 8	Y_P^{BBN}	$0.246625^{+0.000095}_{-0.000080}$	$\sigma_8(0.61)$	0.615 ± 0.012
$\boldsymbol{A_{143\times217}^{PS}}$	44 ± 9	10^5D/H	2.629 ± 0.039	$f\sigma_8(2.33)$	$0.3106^{+0.0065}_{-0.0057}$
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	Age/Gyr	13.749 ± 0.035	$\sigma_8(2.33)$	0.3165 ± 0.0047
$\boldsymbol{A^{kSZ}}$	< 4.67	z_*	1090.28 ± 0.36	f_{2000}^{143}	30.8 ± 2.9
$\boldsymbol{A_{100}^{dustTT}}$	8.9 ± 1.8	r_*	144.40 ± 0.42	$f_{2000}^{143\times217}$	33.3 ± 2.0
$\boldsymbol{A_{143}^{dustTT}}$	10.7 ± 1.8	$100\theta_*$	1.04101 ± 0.00045	f_{2000}^{217}	107.9 ± 1.9
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.2 ± 3.3	$D_M(z_*)$/Gpc	13.871 ± 0.039	χ^2_{simall}	396.8 ± 1.6
$\boldsymbol{A_{217}^{dustTT}}$	93.3 ± 7.3	z_{drag}	1059.47 ± 0.45	χ^2_{lowl}	23.7 ± 1.1
$\boldsymbol{c_{100}}$	0.99959 ± 0.00062	r_{drag}	147.13 ± 0.43	χ^2_{plik}	770.3 ± 5.3
$\boldsymbol{c_{217}}$	0.99825 ± 0.00063	k_D	0.14065 ± 0.00049	$\chi^2_{H073p45}$	5.7 ± 2.7
H_0	69.60 ± 0.95	$100\theta_D$	0.16103 ± 0.00026	χ^2_{JLA}	698.3 ± 2.6
Ω_Λ	0.7035 ± 0.0086	z_{eq}	3416 ± 41	χ^2_{6DF}	0.21 ± 0.21
Ω_m	0.2965 ± 0.0086	k_{eq}	0.01043 ± 0.00012	χ^2_{MGS}	2.98 ± 0.81
$\Omega_m h^2$	0.1436 ± 0.0017	$100\theta_{eq}$	0.8102 ± 0.0075	$\chi^2_{DR12BAO}$	5.9 ± 1.7
$\Omega_m h^3$	0.0999 ± 0.0019	$100\theta_{s,eq}$	0.4479 ± 0.0039	χ^2_{prior}	7.2 ± 3.6
σ_8	0.842 ± 0.018	$H(0.15)$	74.54 ± 0.77	χ^2_{BAO}	9.1 ± 2.5
S_8	0.837 ± 0.020	$D_M(0.15)$	624.7 ± 6.8	χ^2_{CMB}	1190.8 ± 5.3

$\bar{\chi}^2_{eff} = 1911.05$; $R - 1 = 0.01013$

19.12 base_w_wa_plikHM_TT_lowl_lowE_BAO_Riess18_JLA_post_lensing_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02218 ± 0.00020	$\sigma_8\Omega_m^{0.25}$	0.6148 ± 0.0086	$H(0.51)$	89.89 ± 0.58
$\boldsymbol{\Omega_c h^2}$	0.1200 ± 0.0013	$\sigma_8/h^{0.5}$	1.000 ± 0.012	$D_M(0.51)$	1950 ± 16
$\boldsymbol{100\theta_{MC}}$	1.04087 ± 0.00044	$r_{drag}h$	102.5 ± 1.4	$H(0.61)$	95.17 ± 0.49
$\boldsymbol{\tau}$	$0.0533^{+0.0044}_{-0.0078}$	$\langle d^2\rangle^{1/2}$	2.462 ± 0.026	$D_M(0.61)$	2275 ± 17
$\boldsymbol{w_0}$	-1.01 ± 0.10	z_{re}	$7.58^{+0.48}_{-0.80}$	$H(2.33)$	234.6 ± 1.0
$\boldsymbol{w_a}$	$-0.27^{+0.40}_{-0.33}$	$10^9 A_s$	$2.093^{+0.022}_{-0.029}$	$D_M(2.33)$	5760 ± 13
$\boldsymbol{\ln(10^{10}A_s)}$	$3.041^{+0.011}_{-0.014}$	$10^9 A_s e^{-2\tau}$	1.881 ± 0.011	$f\sigma_8(0.15)$	0.4622 ± 0.0081
$\boldsymbol{n_s}$	0.9642 ± 0.0044	D_{40}	1229 ± 12	$\sigma_8(0.15)$	0.772 ± 0.012
$\boldsymbol{y_{cal}}$	1.0003 ± 0.0025	D_{220}	5716 ± 41	$f\sigma_8(0.38)$	0.4884 ± 0.0099
$\boldsymbol{\alpha_{JLA}}$	0.1418 ± 0.0066	D_{810}	2535 ± 13	$\sigma_8(0.38)$	0.686 ± 0.011
$\boldsymbol{\beta_{JLA}}$	3.112 ± 0.079	D_{1420}	814.5 ± 5.1	$f\sigma_8(0.51)$	0.490 ± 0.010
$\boldsymbol{A_{217}^{CIB}}$	48 ± 7	D_{2000}	229.8 ± 1.8	$\sigma_8(0.51)$	0.6416 ± 0.0099
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$n_{s,0.002}$	0.9642 ± 0.0044	$f\sigma_8(0.61)$	0.487 ± 0.010
$\boldsymbol{A_{143}^{tSZ}}$	5.1 ± 2.0	Y_P	$0.245316^{+0.000089}_{-0.000077}$	$\sigma_8(0.61)$	0.6104 ± 0.0093
$\boldsymbol{A_{100}^{PS}}$	263 ± 29	Y_P^{BBN}	$0.246642^{+0.000090}_{-0.000077}$	$f\sigma_8(2.33)$	0.3083 ± 0.0047
$\boldsymbol{A_{143}^{PS}}$	49 ± 8	10^5D/H	2.621 ± 0.038	$\sigma_8(2.33)$	0.3149 ± 0.0038
$\boldsymbol{A_{143\times217}^{PS}}$	43 ± 9	Age/Gyr	13.752 ± 0.034	f_{2000}^{143}	30.9 ± 2.9
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	z_*	1090.16 ± 0.31	$f_{2000}^{143\times217}$	33.3 ± 2.0
$\boldsymbol{A^{kSZ}}$	< 4.75	r_*	144.57 ± 0.32	f_{2000}^{217}	107.9 ± 1.9
$\boldsymbol{A_{100}^{dustTT}}$	8.9 ± 1.9	$100\theta_*$	1.04107 ± 0.00044	$\chi^2_{lensing}$	9.4 ± 1.1
$\boldsymbol{A_{143}^{dustTT}}$	10.7 ± 1.8	$D_M(z_*)$/Gpc	13.887 ± 0.031	χ^2_{simall}	396.6 ± 1.4
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.2 ± 3.3	z_{drag}	1059.50 ± 0.44	χ^2_{lowl}	23.38 ± 0.89
$\boldsymbol{A_{217}^{dustTT}}$	93.3 ± 7.3	r_{drag}	147.30 ± 0.34	χ^2_{plik}	770.6 ± 5.3
$\boldsymbol{c_{100}}$	0.99959 ± 0.00062	k_D	0.14050 ± 0.00044	$\chi^2_{H073p45}$	5.7 ± 2.7
$\boldsymbol{c_{217}}$	0.99824 ± 0.00062	$100\theta_D$	0.16101 ± 0.00026	χ^2_{JLA}	698.2 ± 2.6
H_0	69.59 ± 0.95	z_{eq}	3398 ± 30	χ^2_{6DF}	0.21 ± 0.21
Ω_Λ	0.7049 ± 0.0083	k_{eq}	0.010370 ± 0.000091	χ^2_{MGS}	2.98 ± 0.81
Ω_m	0.2951 ± 0.0083	$100\theta_{eq}$	0.8136 ± 0.0055	$\chi^2_{DR12BAO}$	5.7 ± 1.7
$\Omega_m h^2$	0.1428 ± 0.0012	$100\theta_{s,eq}$	0.4497 ± 0.0028	χ^2_{prior}	7.3 ± 3.7
$\Omega_m h^3$	0.0994 ± 0.0016	$H(0.15)$	74.44 ± 0.74	χ^2_{CMB}	1199.9 ± 5.5
σ_8	0.834 ± 0.013	$D_M(0.15)$	625.3 ± 6.7	χ^2_{BAO}	8.8 ± 2.5
S_8	0.827 ± 0.013	$H(0.38)$	83.66 ± 0.69		
$\sigma_8\Omega_m^{0.5}$	0.4531 ± 0.0072	$D_M(0.38)$	1501 ± 13		

$\bar{\chi}^2_{eff} = 1920.07$; $\Delta\bar{\chi}^2_{eff} = -12.87$; $R - 1 = 0.01435$

19.13 base_w_wa_plikHM_TTTEEE_lowl_lowE_BAO_Riess18_JLA

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022383	0.02237 ± 0.00014	$\Omega_m h^2$	0.14321	0.1434 ± 0.0012	$H(0.15)$	74.51	74.65 ± 0.74
$\boldsymbol{\Omega_c h^2}$	0.12018	0.1204 ± 0.0012	$\Omega_m h^3$	0.09971	0.09996 ± 0.0016	$D_M(0.15)$	624.8	623.8 ± 6.7
$\boldsymbol{100\theta_{MC}}$	1.040920	1.04090 ± 0.00030	σ_8	0.8356	0.837 ± 0.014	$H(0.38)$	83.79	83.87 ± 0.66
$\boldsymbol{\tau}$	0.0544	0.0536 ± 0.0077	S_8	0.8292	0.831 ± 0.014	$D_M(0.38)$	1499.0	1497 ± 13
$\boldsymbol{w_0}$	−1.013	-1.001 ± 0.097	$\sigma_8 \Omega_m^{0.5}$	0.4542	0.4549 ± 0.0079	$H(0.51)$	90.06	90.08 ± 0.54
$\boldsymbol{w_a}$	−0.253	$-0.33^{+0.39}_{-0.33}$	$\sigma_8 \Omega_m^{0.25}$	0.6160	0.6171 ± 0.0096	$D_M(0.51)$	1947.9	1945 ± 16
$\boldsymbol{\ln(10^{10} A_s)}$	3.0447	3.044 ± 0.016	$\sigma_8/h^{0.5}$	1.0014	1.003 ± 0.014	$H(0.61)$	95.362	95.33 ± 0.45
$\boldsymbol{n_s}$	0.96606	0.9645 ± 0.0041	$r_{drag} h$	102.37	102.5 ± 1.4	$D_M(0.61)$	2271.5	2269 ± 17
$\boldsymbol{\alpha_{JLA}}$	0.1417	0.1417 ± 0.0067	$\langle d^2 \rangle^{1/2}$	2.4635	2.469 ± 0.031	$H(2.33)$	234.84	234.78 ± 0.94
$\boldsymbol{\beta_{JLA}}$	3.108	3.114 ± 0.081	z_{re}	7.67	7.58 ± 0.79	$D_M(2.33)$	5749.9	5751 ± 10
$\boldsymbol{y_{cal}}$	1.00035	1.0006 ± 0.0025	$10^9 A_s$	2.1004	2.099 ± 0.033	$f\sigma_8(0.15)$	0.4630	0.4635 ± 0.0085
$\boldsymbol{A^{CIB}_{217}}$	46.8	46 ± 7	$10^9 A_s e^{-2\tau}$	1.8840	1.885 ± 0.011	$\sigma_8(0.15)$	0.7736	0.775 ± 0.013
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.478	> 0.382	D_{40}	1227.4	1232 ± 12	$f\sigma_8(0.38)$	0.4890	0.490 ± 0.010
$\boldsymbol{A^{tSZ}_{143}}$	7.20	$5.5^{+2.1}_{-1.9}$	D_{220}	5727.1	5734 ± 38	$\sigma_8(0.38)$	0.6867	0.688 ± 0.012
$\boldsymbol{A^{PS}_{100}}$	248.2	258 ± 28	D_{810}	2540.1	2540 ± 13	$f\sigma_8(0.51)$	0.4906	0.492 ± 0.011
$\boldsymbol{A^{PS}_{143}}$	47.6	46 ± 8	D_{1420}	817.98	817.3 ± 4.8	$\sigma_8(0.51)$	0.6427	0.644 ± 0.011
$\boldsymbol{A^{PS}_{143\times217}}$	48.4	43 ± 9	D_{2000}	231.32	231.0 ± 1.6	$f\sigma_8(0.61)$	0.4872	0.489 ± 0.011
$\boldsymbol{A^{PS}_{217}}$	120.1	116 ± 10	$n_{s,0.002}$	0.96606	0.9645 ± 0.0041	$\sigma_8(0.61)$	0.6115	0.613 ± 0.010
$\boldsymbol{A^{kSZ}}$	0.00	< 4.05	Y_P	0.245401	$0.245392^{+0.000059}_{-0.000053}$	$f\sigma_8(2.33)$	0.3090	0.3095 ± 0.0052
$\boldsymbol{A^{dustTT}_{100}}$	8.94	8.9 ± 1.8	Y_P^{BBN}	0.246727	$0.246718^{+0.000059}_{-0.000053}$	$\sigma_8(2.33)$	0.31555	0.3158 ± 0.0043
$\boldsymbol{A^{dustTT}_{143}}$	10.97	10.8 ± 1.8	10^5D/H	2.5830	2.587 ± 0.027	f^{143}_{2000}	28.50	29.3 ± 2.7
$\boldsymbol{A^{dustTT}_{143\times217}}$	19.77	18.5 ± 3.3	Age/Gyr	13.7315	$13.729^{+0.028}_{-0.031}$	$f^{143\times217}_{2000}$	31.77	32.0 ± 1.8
$\boldsymbol{A^{dustTT}_{217}}$	95.0	93.8 ± 7.3	z_*	1089.919	1089.96 ± 0.26	f^{217}_{2000}	106.41	106.9 ± 1.7
$\boldsymbol{A^{dustTE}_{100}}$	0.1145	0.114 ± 0.038	r_*	144.375	144.34 ± 0.28	χ^2_{simall}	396.04	397.0 ± 1.8
$\boldsymbol{A^{dustTE}_{100\times143}}$	0.1337	0.134 ± 0.030	$100\theta_*$	1.041101	1.04108 ± 0.00030	χ^2_{lowl}	23.09	23.43 ± 0.88
$\boldsymbol{A^{dustTE}_{100\times217}}$	0.481	0.480 ± 0.085	$D_M(z_*)$/Gpc	13.8675	13.864 ± 0.026	χ^2_{plik}	2343.7	2358.5 ± 5.7
$\boldsymbol{A^{dustTE}_{143}}$	0.223	0.225 ± 0.054	z_{drag}	1059.971	1059.95 ± 0.30	$\chi^2_{H073p45}$	5.31	5.4 ± 2.6
$\boldsymbol{A^{dustTE}_{143\times217}}$	0.669	0.666 ± 0.080	r_{drag}	147.030	147.00 ± 0.28	χ^2_{JLA}	695.47	698.2 ± 2.6
$\boldsymbol{A^{dustTE}_{217}}$	2.083	2.08 ± 0.27	k_D	0.140943	0.14096 ± 0.00031	χ^2_{6DF}	0.133	0.22 ± 0.21
$\boldsymbol{c_{100}}$	0.99971	0.99967 ± 0.00061	$100\theta_D$	0.160734	0.16075 ± 0.00017	χ^2_{MGS}	2.84	3.02 ± 0.82
$\boldsymbol{c_{217}}$	0.99819	0.99819 ± 0.00062	z_{eq}	3406.8	3411 ± 28	$\chi^2_{DR12BAO}$	4.68	5.8 ± 1.7
H_0	69.63	69.71 ± 0.95	k_{eq}	0.010398	0.010412 ± 0.000085	χ^2_{prior}	1.67	11.5 ± 4.5
Ω_Λ	0.7046	0.7047 ± 0.0084	$100\theta_{eq}$	0.8125	0.8117 ± 0.0052	χ^2_{BAO}	7.65	9.0 ± 2.6
Ω_m	0.2954	0.2953 ± 0.0084	$100\theta_{s,eq}$	0.44897	0.4485 ± 0.0027	χ^2_{CMB}	2762.8	2778.9 ± 5.8

Best-fit $\chi^2_{eff} = 3472.92$; $\bar{\chi}^2_{eff} = 3502.96$; $R - 1 = 0.01220$

χ^2_{eff}: BAO - 6DF: 0.13 MGS: 2.84 DR12BAO: 4.67 CMB - simall_100x143_offlike5_EE_Aplanck_B: 396.04 commander_dx12_v3_2_29: 23.09 plik_rd12_HM_v22b_TTTEEE: 2343.70 Hubble - H073p45: 5.30 SN - JLA December_2013: 695.47

19.14 base_w_wa_plikHM_TTTEEE_lowl_lowE_BAO_Riess18_JLA_post_lensing

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022394	0.02239 ± 0.00014	$\Omega_m h^3$	0.09957	0.0997 ± 0.0015	$H(0.38)$	83.84	83.85 ± 0.65
$\boldsymbol{\Omega_c h^2}$	0.11988	0.1200 ± 0.0011	σ_8	0.8326	0.833 ± 0.012	$D_M(0.38)$	1498.2	1498 ± 13
$\boldsymbol{100\theta_{MC}}$	1.040956	1.04093 ± 0.00030	S_8	0.8249	0.826 ± 0.011	$H(0.51)$	90.10	90.09 ± 0.54
$\boldsymbol{\tau}$	0.0531	0.0526 ± 0.0074	$\sigma_8\Omega_m^{0.5}$	0.4518	0.4522 ± 0.0061	$D_M(0.51)$	1946.8	1946 ± 15
$\boldsymbol{w_0}$	-1.012	-1.008 ± 0.094	$\sigma_8\Omega_m^{0.25}$	0.6133	0.6138 ± 0.0073	$H(0.61)$	95.408	95.37 ± 0.45
$\boldsymbol{w_a}$	-0.244	$-0.28^{+0.36}_{-0.31}$	$\sigma_8/h^{0.5}$	0.9975	0.998 ± 0.011	$D_M(0.61)$	2270.2	2270 ± 17
$\boldsymbol{\ln(10^{10}A_s)}$	3.0418	3.041 ± 0.014	$r_{drag}h$	102.48	102.5 ± 1.4	$H(2.33)$	234.72	234.75 ± 0.95
$\boldsymbol{n_s}$	0.96629	0.9651 ± 0.0039	$\langle d^2\rangle^{1/2}$	2.4558	2.459 ± 0.023	$D_M(2.33)$	5748.7	5750 ± 10
$\boldsymbol{y_{cal}}$	1.00044	1.0005 ± 0.0025	z_{re}	7.53	7.47 ± 0.75	$f\sigma_8(0.15)$	0.4606	0.4610 ± 0.0071
$\boldsymbol{\alpha_{JLA}}$	0.1417	0.1416 ± 0.0068	$10^9 A_s$	2.0943	2.092 ± 0.030	$\sigma_8(0.15)$	0.7709	0.772 ± 0.011
$\boldsymbol{\beta_{JLA}}$	3.106	3.115 ± 0.080	$10^9 A_s e^{-2\tau}$	1.8834	1.883 ± 0.010	$f\sigma_8(0.38)$	0.4865	0.4872 ± 0.0089
$\boldsymbol{A_{217}^{CIB}}$	46.0	47 ± 7	D_{40}	1227.1	1230 ± 11	$\sigma_8(0.38)$	0.6845	0.685 ± 0.010
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.63	—	D_{220}	5732.1	5734 ± 38	$f\sigma_8(0.51)$	0.4882	0.4891 ± 0.0092
$\boldsymbol{A_{143}^{tSZ}}$	7.09	$5.5^{+2.1}_{-1.9}$	D_{810}	2540.5	2539 ± 13	$\sigma_8(0.51)$	0.6407	0.6412 ± 0.0094
$\boldsymbol{A_{100}^{PS}}$	249.2	259 ± 28	D_{1420}	818.15	817.1 ± 4.8	$f\sigma_8(0.61)$	0.4849	0.4858 ± 0.0092
$\boldsymbol{A_{143}^{PS}}$	50.7	46 ± 8	D_{2000}	231.31	230.9 ± 1.6	$\sigma_8(0.61)$	0.6096	0.6100 ± 0.0088
$\boldsymbol{A_{143\times217}^{PS}}$	52.9	42 ± 9	$n_{s,0.002}$	0.96629	0.9651 ± 0.0039	$f\sigma_8(2.33)$	0.30809	0.3082 ± 0.0045
$\boldsymbol{A_{217}^{PS}}$	122.0	115 ± 10	Y_P	0.245405	$0.245400^{+0.000057}_{-0.000051}$	$\sigma_8(2.33)$	0.31481	0.3148 ± 0.0038
$\boldsymbol{A^{kSZ}}$	0.01	< 4.21	Y_P^{BBN}	0.246731	$0.246726^{+0.000057}_{-0.000051}$	f_{2000}^{143}	28.75	29.4 ± 2.7
$\boldsymbol{A_{100}^{dustTT}}$	8.79	8.9 ± 1.8	10^5D/H	2.5810	2.583 ± 0.026	$f_{2000}^{143\times217}$	32.04	32.1 ± 1.8
$\boldsymbol{A_{143}^{dustTT}}$	11.02	10.8 ± 1.8	Age/Gyr	13.7302	13.730 ± 0.029	f_{2000}^{217}	106.55	106.9 ± 1.8
$\boldsymbol{A_{143\times217}^{dustTT}}$	20.16	18.5 ± 3.3	z_*	1089.879	1089.90 ± 0.24	$\chi^2_{lensing}$	8.770	9.23 ± 0.85
$\boldsymbol{A_{217}^{dustTT}}$	95.6	93.7 ± 7.4	r_*	144.443	144.41 ± 0.24	χ^2_{simall}	396	216 ± 200
$\boldsymbol{A_{100}^{dustTE}}$	0.1136	0.114 ± 0.038	$100\theta_*$	1.041133	1.04111 ± 0.00029	χ^2_{lowl}	23.02	23.27 ± 0.78
$\boldsymbol{A_{100\times143}^{dustTE}}$	0.1351	0.134 ± 0.029	$D_M(z_*)$/Gpc	13.8736	13.871 ± 0.023	χ^2_{plik}	2344.1	2358.6 ± 5.5
$\boldsymbol{A_{100\times217}^{dustTE}}$	0.485	0.481 ± 0.084	z_{drag}	1059.971	1059.97 ± 0.30	$\chi^2_{H073p45}$	5	186 ± 200
$\boldsymbol{A_{143}^{dustTE}}$	0.226	0.226 ± 0.054	r_{drag}	147.097	147.06 ± 0.25	χ^2_{JLA}	695.46	698.2 ± 2.6
$\boldsymbol{A_{143\times217}^{dustTE}}$	0.665	0.665 ± 0.079	k_D	0.140880	0.14091 ± 0.00029	χ^2_{6DF}	0.150	0.22 ± 0.22
$\boldsymbol{A_{217}^{dustTE}}$	2.088	2.08 ± 0.27	$100\theta_D$	0.160734	0.16074 ± 0.00017	χ^2_{MGS}	2.92	3.02 ± 0.82
$\boldsymbol{c_{100}}$	0.99974	0.99968 ± 0.00061	z_{eq}	3400.0	3404 ± 24	$\chi^2_{DR12BAO}$	4.74	5.7 ± 1.7
$\boldsymbol{c_{217}}$	0.99820	0.99819 ± 0.00063	k_{eq}	0.010377	0.010388 ± 0.000074	χ^2_{prior}	1.62	11.5 ± 4.5
H_0	69.67	69.71 ± 0.95	$100\theta_{eq}$	0.81378	0.8131 ± 0.0045	χ^2_{CMB}	2772	2607 ± 200
Ω_Λ	0.7055	0.7054 ± 0.0083	$100\theta_{s,eq}$	0.44962	0.4493 ± 0.0023	χ^2_{BAO}	7.81	8.9 ± 2.6
Ω_m	0.2945	0.2946 ± 0.0083	$H(0.15)$	74.56	74.61 ± 0.73			
$\Omega_m h^2$	0.14292	0.1431 ± 0.0010	$D_M(0.15)$	624.4	624.1 ± 6.6			

Best-fit $\chi^2_{eff} = 3481.83$; $\Delta\chi^2_{eff} = -16.77$; $\bar{\chi}^2_{eff} = 3511.91$; $\Delta\bar{\chi}^2_{eff} = -12.96$; $R - 1 = 0.02088$

χ^2_{eff}: BAO - 6DF: 0.15 (Δ 0.15) MGS: 2.92 (Δ 1.32) DR12BAO: 4.74 (Δ 1.14) CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.77 (Δ 0.02) simall_100x143_offlike5_EE_Aplanck_B 395.84 (Δ -1.09) commander_dx12_v3_2_29: 23.02 (Δ 0.38) plik_rd12_HM_v22b_TTTEEE: 2344.12 (Δ -2.24) Hubble - H073p45: 5.19 (Δ -5.20) SN - JLA December_2013: 695.46 (Δ -11.14)

19.15 base_w_wa_plikHM_TTTEEE_lowl_lowE_BAO_Riess18_JLA_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02237 ± 0.00014	$\Omega_m h^2$	0.1434 ± 0.0012	$H(0.15)$	74.65 ± 0.74
$\boldsymbol{\Omega_c h^2}$	0.1203 ± 0.0012	$\Omega_m h^3$	0.0999 ± 0.0016	$D_M(0.15)$	623.9 ± 6.7
$\boldsymbol{100\theta_{MC}}$	1.04091 ± 0.00030	σ_8	0.838 ± 0.014	$H(0.38)$	83.87 ± 0.66
$\boldsymbol{\tau}$	$0.0549^{+0.0050}_{-0.0079}$	S_8	0.831 ± 0.014	$D_M(0.38)$	1497 ± 13
$\boldsymbol{w_0}$	-1.002 ± 0.097	$\sigma_8 \Omega_m^{0.5}$	0.4552 ± 0.0078	$H(0.51)$	90.08 ± 0.54
$\boldsymbol{w_a}$	$-0.33^{+0.39}_{-0.33}$	$\sigma_8 \Omega_m^{0.25}$	0.6177 ± 0.0095	$D_M(0.51)$	1946 ± 16
$\boldsymbol{\ln(10^{10} A_s)}$	$3.046^{+0.012}_{-0.015}$	$\sigma_8/h^{0.5}$	1.004 ± 0.014	$H(0.61)$	95.34 ± 0.45
$\boldsymbol{n_s}$	0.9646 ± 0.0041	$r_{drag} h$	102.5 ± 1.4	$D_M(0.61)$	2269 ± 17
$\boldsymbol{\alpha_{JLA}}$	0.1417 ± 0.0067	$\langle d^2 \rangle^{1/2}$	2.471 ± 0.030	$H(2.33)$	234.78 ± 0.94
$\boldsymbol{\beta_{JLA}}$	3.114 ± 0.081	z_{re}	$7.71^{+0.56}_{-0.78}$	$D_M(2.33)$	5751 ± 10
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0025	$10^9 A_s$	$2.104^{+0.025}_{-0.033}$	$f\sigma_8(0.15)$	0.4639 ± 0.0084
$\boldsymbol{A_{217}^{CIB}}$	46 ± 7	$10^9 A_s e^{-2\tau}$	1.885 ± 0.011	$\sigma_8(0.15)$	0.776 ± 0.013
$\boldsymbol{\xi^{tSZ\times CIB}}$	> 0.382	D_{40}	1232 ± 12	$f\sigma_8(0.38)$	0.490 ± 0.010
$\boldsymbol{A_{143}^{tSZ}}$	$5.5^{+2.1}_{-1.9}$	D_{220}	5733 ± 38	$\sigma_8(0.38)$	0.689 ± 0.012
$\boldsymbol{A_{100}^{PS}}$	258 ± 28	D_{810}	2540 ± 13	$f\sigma_8(0.51)$	0.492 ± 0.011
$\boldsymbol{A_{143}^{PS}}$	46 ± 8	D_{1420}	817.3 ± 4.7	$\sigma_8(0.51)$	0.645 ± 0.011
$\boldsymbol{A_{143\times217}^{PS}}$	43 ± 9	D_{2000}	231.1 ± 1.6	$f\sigma_8(0.61)$	0.489 ± 0.011
$\boldsymbol{A_{217}^{PS}}$	116 ± 10	$n_{s,0.002}$	0.9646 ± 0.0041	$\sigma_8(0.61)$	0.613 ± 0.010
$\boldsymbol{A^{kSZ}}$	< 4.03	Y_P	$0.245393^{+0.000058}_{-0.000052}$	$f\sigma_8(2.33)$	0.3098 ± 0.0052
$\boldsymbol{A_{100}^{dustTT}}$	8.9 ± 1.8	Y_P^{BBN}	$0.246719^{+0.000059}_{-0.000053}$	$\sigma_8(2.33)$	0.3161 ± 0.0042
$\boldsymbol{A_{143}^{dustTT}}$	10.8 ± 1.8	10^5D/H	2.586 ± 0.027	f_{2000}^{143}	29.3 ± 2.7
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.5 ± 3.3	Age/Gyr	$13.729^{+0.028}_{-0.031}$	$f_{2000}^{143\times217}$	32.0 ± 1.8
$\boldsymbol{A_{217}^{dustTT}}$	93.8 ± 7.3	z_*	1089.95 ± 0.25	f_{2000}^{217}	106.9 ± 1.7
$\boldsymbol{A_{100}^{dustTE}}$	0.114 ± 0.038	r_*	144.34 ± 0.28	χ^2_{simall}	396.9 ± 1.8
$\boldsymbol{A_{100\times143}^{dustTE}}$	0.134 ± 0.030	$100\theta_*$	1.04109 ± 0.00030	χ^2_{lowl}	23.44 ± 0.88
$\boldsymbol{A_{100\times217}^{dustTE}}$	0.480 ± 0.085	$D_M(z_*)$/Gpc	13.865 ± 0.026	χ^2_{plik}	2358.3 ± 5.7
$\boldsymbol{A_{143}^{dustTE}}$	0.225 ± 0.054	z_{drag}	1059.96 ± 0.29	$\chi^2_{H073p45}$	5.4 ± 2.6
$\boldsymbol{A_{143\times217}^{dustTE}}$	0.666 ± 0.080	r_{drag}	147.00 ± 0.28	χ^2_{JLA}	698.2 ± 2.6
$\boldsymbol{A_{217}^{dustTE}}$	2.08 ± 0.27	k_D	0.14096 ± 0.00031	χ^2_{6DF}	0.22 ± 0.22
$\boldsymbol{c_{100}}$	0.99968 ± 0.00061	$100\theta_D$	0.16075 ± 0.00017	χ^2_{MGS}	3.02 ± 0.83
$\boldsymbol{c_{217}}$	0.99819 ± 0.00062	z_{eq}	3411 ± 28	$\chi^2_{DR12BAO}$	5.8 ± 1.7
H_0	69.71 ± 0.95	k_{eq}	0.010409 ± 0.000085	χ^2_{prior}	11.5 ± 4.5
Ω_Λ	0.7048 ± 0.0084	$100\theta_{eq}$	0.8118 ± 0.0052	χ^2_{BAO}	9.0 ± 2.6
Ω_m	0.2952 ± 0.0084	$100\theta_{s,eq}$	0.4486 ± 0.0027	χ^2_{CMB}	2778.6 ± 5.7

$\bar{\chi}^2_{eff} = 3502.71$; $R - 1 = 0.01370$

19.16 base_w_wa_plikHM_TTTEEE_lowl_lowE_BAO_Riess18_JLA_post_lensing_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02239 ± 0.00014	$\Omega_m h^3$	0.0997 ± 0.0015	$H(0.38)$	83.85 ± 0.65
$\boldsymbol{\Omega_c h^2}$	0.1200 ± 0.0010	σ_8	0.834 ± 0.012	$D_M(0.38)$	1498 ± 13
$\boldsymbol{100\theta_{MC}}$	1.04094 ± 0.00030	S_8	0.826 ± 0.011	$H(0.51)$	90.09 ± 0.54
$\boldsymbol{\tau}$	$0.0540^{+0.0048}_{-0.0075}$	$\sigma_8 \Omega_m^{0.5}$	0.4523 ± 0.0061	$D_M(0.51)$	1946 ± 16
$\boldsymbol{w_0}$	-1.009 ± 0.094	$\sigma_8 \Omega_m^{0.25}$	0.6141 ± 0.0073	$H(0.61)$	95.37 ± 0.45
$\boldsymbol{w_a}$	$-0.27^{+0.36}_{-0.31}$	$\sigma_8/h^{0.5}$	0.999 ± 0.011	$D_M(0.61)$	2270 ± 17
$\boldsymbol{\ln(10^{10} A_s)}$	$3.043^{+0.011}_{-0.014}$	$r_{drag} h$	102.5 ± 1.4	$H(2.33)$	234.74 ± 0.96
$\boldsymbol{n_s}$	0.9653 ± 0.0038	$\langle d^2 \rangle^{1/2}$	2.460 ± 0.023	$D_M(2.33)$	5750 ± 10
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	z_{re}	$7.61^{+0.53}_{-0.74}$	$f\sigma_8(0.15)$	0.4611 ± 0.0070
$\boldsymbol{\alpha_{JLA}}$	0.1416 ± 0.0068	$10^9 A_s$	$2.098^{+0.022}_{-0.030}$	$\sigma_8(0.15)$	0.772 ± 0.011
$\boldsymbol{\beta_{JLA}}$	3.116 ± 0.080	$10^9 A_s e^{-2\tau}$	1.883 ± 0.010	$f\sigma_8(0.38)$	0.4873 ± 0.0089
$\boldsymbol{A_{217}^{CIB}}$	47 ± 7	D_{40}	1229 ± 11	$\sigma_8(0.38)$	0.685 ± 0.010
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{220}	5733 ± 38	$f\sigma_8(0.51)$	0.4892 ± 0.0092
$\boldsymbol{A_{143}^{tSZ}}$	$5.5^{+2.1}_{-1.9}$	D_{810}	2539 ± 13	$\sigma_8(0.51)$	0.6416 ± 0.0094
$\boldsymbol{A_{100}^{PS}}$	259 ± 28	D_{1420}	817.1 ± 4.8	$f\sigma_8(0.61)$	0.4859 ± 0.0092
$\boldsymbol{A_{143}^{PS}}$	46 ± 8	D_{2000}	231.0 ± 1.6	$\sigma_8(0.61)$	0.6104 ± 0.0088
$\boldsymbol{A_{143\times217}^{PS}}$	42 ± 9	$n_{s,0.002}$	0.9653 ± 0.0038	$f\sigma_8(2.33)$	0.3084 ± 0.0045
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	Y_P	0.245402 ± 0.000054	$\sigma_8(2.33)$	0.3150 ± 0.0037
$\boldsymbol{A^{kSZ}}$	< 4.19	Y_P^{BBN}	0.246728 ± 0.000054	f_{2000}^{143}	29.4 ± 2.7
$\boldsymbol{A_{100}^{dust TT}}$	8.9 ± 1.8	10^5D/H	2.582 ± 0.026	$f_{2000}^{143\times217}$	32.0 ± 1.8
$\boldsymbol{A_{143}^{dust TT}}$	10.8 ± 1.8	Age/Gyr	13.730 ± 0.029	f_{2000}^{217}	106.8 ± 1.7
$\boldsymbol{A_{143\times217}^{dust TT}}$	18.5 ± 3.3	z_*	1089.89 ± 0.23	$\chi^2_{lensing}$	9.24 ± 0.87
$\boldsymbol{A_{217}^{dust TT}}$	93.7 ± 7.4	r_*	144.43 ± 0.24	χ^2_{simall}	218 ± 200
$\boldsymbol{A_{100}^{dust TE}}$	0.114 ± 0.038	$100\theta_*$	1.04112 ± 0.00029	χ^2_{lowl}	23.26 ± 0.78
$\boldsymbol{A_{100\times143}^{dust TE}}$	0.134 ± 0.029	$D_M(z_*)$/Gpc	13.872 ± 0.022	χ^2_{plik}	2358.4 ± 5.5
$\boldsymbol{A_{100\times217}^{dust TE}}$	0.481 ± 0.084	z_{drag}	1059.98 ± 0.29	$\chi^2_{H073p45}$	184 ± 200
$\boldsymbol{A_{143}^{dust TE}}$	0.225 ± 0.054	r_{drag}	147.08 ± 0.24	χ^2_{JLA}	698.2 ± 2.6
$\boldsymbol{A_{143\times217}^{dust TE}}$	0.665 ± 0.079	k_D	0.14089 ± 0.00029	χ^2_{6DF}	0.22 ± 0.22
$\boldsymbol{A_{217}^{dust TE}}$	2.08 ± 0.27	$100\theta_D$	0.16074 ± 0.00017	χ^2_{MGS}	3.02 ± 0.83
$\boldsymbol{c_{100}}$	0.99968 ± 0.00061	z_{eq}	3402 ± 24	$\chi^2_{DR12BAO}$	5.7 ± 1.8
$\boldsymbol{c_{217}}$	0.99819 ± 0.00063	k_{eq}	0.010383 ± 0.000072	χ^2_{prior}	11.5 ± 4.4
H_0	69.70 ± 0.95	$100\theta_{eq}$	0.8135 ± 0.0044	χ^2_{CMB}	2609 ± 200
Ω_Λ	0.7055 ± 0.0083	$100\theta_{s,eq}$	0.4495 ± 0.0023	χ^2_{BAO}	8.9 ± 2.6
Ω_m	0.2945 ± 0.0083	$H(0.15)$	$74.59^{+0.69}_{-0.76}$		
$\Omega_m h^2$	0.14300 ± 0.00099	$D_M(0.15)$	624.2 ± 6.7		

$\bar{\chi}^2_{eff} = 3511.63$; $\Delta\bar{\chi}^2_{eff} = -13.15$; $R - 1 = 0.02239$

19.17 base_w_wa_plikHM_TT_lowl_lowE_BAO_Pantheon

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022146	0.02213 ± 0.00020	$\sigma_8 \Omega_m^{0.25}$	0.6133	0.614 ± 0.013	$H(0.38)$	83.33	83.45 ± 0.63
$\boldsymbol{\Omega_c h^2}$	0.12030	0.1205 ± 0.0018	$\sigma_8/h^{0.5}$	0.9971	0.998 ± 0.019	$D_M(0.38)$	1518.9	1516 ± 14
$\boldsymbol{100\theta_{MC}}$	1.040778	1.04078 ± 0.00045	$r_{drag} h$	100.26	100.4 ± 1.2	$H(0.51)$	89.829	89.88 ± 0.51
$\boldsymbol{\tau}$	0.0522	0.0518 ± 0.0078	$\langle d^2 \rangle^{1/2}$	2.4587	2.464 ± 0.041	$D_M(0.51)$	1969.5	1966 ± 16
$\boldsymbol{w_0}$	−0.972	-0.956 ± 0.084	z_{re}	7.51	$7.45^{+0.82}_{-0.74}$	$H(0.61)$	95.282	95.27 ± 0.43
$\boldsymbol{w_a}$	−0.246	$-0.35^{+0.40}_{-0.31}$	$10^9 A_s$	2.0907	2.090 ± 0.034	$D_M(0.61)$	2293.7	2290 ± 17
$\boldsymbol{\ln(10^{10} A_s)}$	3.0401	3.040 ± 0.016	$10^9 A_s e^{-2\tau}$	1.8834	1.884 ± 0.013	$H(2.33)$	235.22	235.10 ± 0.98
$\boldsymbol{n_s}$	0.9643	0.9631 ± 0.0051	D_{40}	1229.0	1232 ± 14	$D_M(2.33)$	5765.4	5766 ± 13
$\boldsymbol{y_{cal}}$	1.00038	1.0006 ± 0.0025	D_{220}	5711.6	5716 ± 40	$f\sigma_8(0.15)$	0.4618	0.462 ± 0.011
$\boldsymbol{A_{217}^{CIB}}$	48.7	48 ± 7	D_{810}	2537.4	2537 ± 14	$\sigma_8(0.15)$	0.7606	0.762 ± 0.016
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.34	—	D_{1420}	815.4	814.6 ± 5.0	$f\sigma_8(0.38)$	0.4827	0.483 ± 0.013
$\boldsymbol{A_{143}^{tSZ}}$	7.03	5.1 ± 2.0	D_{2000}	229.99	229.7 ± 1.7	$\sigma_8(0.38)$	0.6744	0.676 ± 0.014
$\boldsymbol{A_{100}^{PS}}$	253.4	264 ± 28	$n_{s,0.002}$	0.9643	0.9631 ± 0.0051	$f\sigma_8(0.51)$	0.4826	0.484 ± 0.013
$\boldsymbol{A_{143}^{PS}}$	49.8	49 ± 8	Y_P	0.245303	$0.245292^{+0.000098}_{-0.000075}$	$\sigma_8(0.51)$	0.6311	0.633 ± 0.013
$\boldsymbol{A_{143\times217}^{PS}}$	47.6	44 ± 9	Y_P^{BBN}	0.246630	$0.246618^{+0.000098}_{-0.000075}$	$f\sigma_8(0.61)$	0.4784	0.480 ± 0.013
$\boldsymbol{A_{217}^{PS}}$	119.5	115 ± 10	10^5D/H	2.6283	2.632 ± 0.038	$\sigma_8(0.61)$	0.6004	0.602 ± 0.012
$\boldsymbol{A^{kSZ}}$	0.00	< 4.80	Age/Gyr	13.7836	$13.779^{+0.032}_{-0.037}$	$f\sigma_8(2.33)$	0.3032	$0.3039^{+0.0067}_{-0.0058}$
$\boldsymbol{A_{100}^{dustTT}}$	8.87	9.0 ± 1.8	z_*	1090.231	1090.27 ± 0.35	$\sigma_8(2.33)$	0.31038	0.3107 ± 0.0048
$\boldsymbol{A_{143}^{dustTT}}$	10.79	10.7 ± 1.8	r_*	144.526	144.50 ± 0.42	f_{2000}^{143}	30.35	31.1 ± 2.9
$\boldsymbol{A_{143\times217}^{dustTT}}$	19.44	18.3 ± 3.3	$100\theta_*$	1.040987	1.04099 ± 0.00044	$f_{2000}^{143\times217}$	33.26	33.5 ± 2.0
$\boldsymbol{A_{217}^{dustTT}}$	94.6	93.6 ± 7.4	$D_M(z_*)$/Gpc	13.8835	13.881 ± 0.040	f_{2000}^{217}	107.67	108.1 ± 1.9
$\boldsymbol{c_{100}}$	0.99963	0.99961 ± 0.00061	z_{drag}	1059.437	1059.41 ± 0.43	χ^2_{simall}	395.84	396.9 ± 1.6
$\boldsymbol{c_{217}}$	0.99827	0.99825 ± 0.00062	r_{drag}	147.263	147.24 ± 0.44	χ^2_{lowl}	23.33	23.7 ± 1.1
H_0	68.08	68.18 ± 0.84	k_D	0.140512	0.14052 ± 0.00050	χ^2_{plik}	758.4	770.8 ± 5.4
Ω_Λ	0.6913	0.6917 ± 0.0081	$100\theta_D$	0.161041	0.16106 ± 0.00025	χ^2_{JLA}	1036.11	1037.2 ± 1.6
Ω_m	0.3087	0.3083 ± 0.0081	z_{eq}	3403.9	3407 ± 41	χ^2_{6DF}	0.0002	0.055 ± 0.077
$\Omega_m h^2$	0.14309	0.1432 ± 0.0017	k_{eq}	0.010389	0.01040 ± 0.00013	χ^2_{MGS}	1.68	1.90 ± 0.70
$\Omega_m h^3$	0.09742	0.0977 ± 0.0018	$100\theta_{eq}$	0.8123	0.8117 ± 0.0076	$\chi^2_{DR12BAO}$	4.11	5.0 ± 1.3
σ_8	0.8228	0.824 ± 0.017	$100\theta_{s,eq}$	0.44900	0.4487 ± 0.0039	χ^2_{prior}	1.42	7.3 ± 3.7
S_8	0.8346	0.836 ± 0.020	$H(0.15)$	73.47	73.64 ± 0.76	χ^2_{BAO}	5.78	6.9 ± 1.5
$\sigma_8 \Omega_m^{0.5}$	0.4571	0.458 ± 0.011	$D_M(0.15)$	636.2	635.0 ± 6.7	χ^2_{CMB}	1177.5	1191.3 ± 5.4

Best-fit $\chi^2_{eff} = 2220.85$; $\bar{\chi}^2_{eff} = 2242.69$; $R - 1 = 0.01641$

χ^2_{eff}: BAO - 6DF: 0.00 MGS: 1.68 DR12BAO: 4.11 CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.84 commander_dx12_v3_2_29: 23.33 plik_rd12_HM_v22_TT: 758.37 SN - JLA Pantheon: 1036.11

19.18 base_w_wa_plikHM_TT_lowl_lowE_BAO_Pantheon_post_lensing

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022178	0.02215 ± 0.00020	$\sigma_8/h^{0.5}$	0.9927	0.994 ± 0.012	$H(0.51)$	89.85	89.92 ± 0.51
$\boldsymbol{\Omega_c h^2}$	0.11994	0.1200 ± 0.0013	$r_{\rm drag} h$	100.43	100.4 ± 1.2	$D_{\rm M}(0.51)$	1968.8	1966 ± 16
$\boldsymbol{100\theta_{MC}}$	1.040850	1.04082 ± 0.00043	$\langle d^2 \rangle^{1/2}$	2.4482	2.454 ± 0.027	$H(0.61)$	95.315	95.33 ± 0.43
$\boldsymbol{\tau}$	0.0515	0.0516 ± 0.0076	$z_{\rm re}$	7.43	7.41 ± 0.78	$D_{\rm M}(0.61)$	2292.9	2290 ± 17
$\boldsymbol{w_0}$	−0.979	-0.961 ± 0.081	$10^9 A_{\rm s}$	2.0852	2.087 ± 0.031	$H(2.33)$	235.18	235.00 ± 0.99
$\boldsymbol{w_a}$	−0.204	$-0.29^{+0.34}_{-0.28}$	$10^9 A_{\rm s} e^{-2\tau}$	1.8809	1.882 ± 0.011	$D_{\rm M}(2.33)$	5763.5	5764 ± 13
$\boldsymbol{\ln(10^{10} A_s)}$	3.0375	3.038 ± 0.015	D_{40}	1226.2	1231 ± 12	$f\sigma_8(0.15)$	0.4593	0.4591 ± 0.0077
$\boldsymbol{n_s}$	0.96526	0.9638 ± 0.0044	D_{220}	5710.5	5718 ± 40	$\sigma_8(0.15)$	0.7578	0.759 ± 0.012
$\boldsymbol{y_{cal}}$	1.00016	1.0005 ± 0.0025	D_{810}	2536.2	2536 ± 13	$f\sigma_8(0.38)$	0.4802	0.4803 ± 0.0091
$\boldsymbol{A_{217}^{CIB}}$	48.7	48 ± 7	D_{1420}	815.4	814.6 ± 5.0	$\sigma_8(0.38)$	0.6721	0.673 ± 0.010
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.31	—	D_{2000}	230.01	229.7 ± 1.7	$f\sigma_8(0.51)$	0.4801	0.4806 ± 0.0094
$\boldsymbol{A_{143}^{tSZ}}$	7.03	5.0 ± 2.0	$n_{\rm s,0.002}$	0.96526	0.9638 ± 0.0044	$\sigma_8(0.51)$	0.6290	0.6298 ± 0.0095
$\boldsymbol{A_{100}^{PS}}$	253.9	264 ± 28	$Y_{\rm P}$	0.245317	$0.245303^{+0.000094}_{-0.000073}$	$f\sigma_8(0.61)$	0.4759	0.4767 ± 0.0096
$\boldsymbol{A_{143}^{PS}}$	49.1	49 ± 8	$Y_{\rm P}^{\rm BBN}$	0.246643	$0.246629^{+0.000094}_{-0.000073}$	$\sigma_8(0.61)$	0.5984	0.5992 ± 0.0090
$\boldsymbol{A_{143\times217}^{PS}}$	46.6	43 ± 9	10^5D/H	2.6222	2.627 ± 0.037	$f\sigma_8(2.33)$	0.30222	0.3027 ± 0.0047
$\boldsymbol{A_{217}^{PS}}$	119.1	115 ± 10	Age/Gyr	13.7817	$13.780^{+0.031}_{-0.036}$	$\sigma_8(2.33)$	0.30969	0.3098 ± 0.0037
$\boldsymbol{A^{kSZ}}$	0.00	< 5.01	z_*	1090.157	1090.20 ± 0.31	f_{2000}^{143}	30.25	31.2 ± 2.9
$\boldsymbol{A_{100}^{dustTT}}$	8.90	9.0 ± 1.8	r_*	144.594	144.60 ± 0.32	$f_{2000}^{143\times217}$	33.15	33.5 ± 2.0
$\boldsymbol{A_{143}^{dustTT}}$	10.84	10.7 ± 1.8	$100\theta_*$	1.041059	1.04102 ± 0.00043	f_{2000}^{217}	107.58	108.1 ± 1.9
$\boldsymbol{A_{143\times217}^{dustTT}}$	19.44	18.3 ± 3.4	$D_{\rm M}(z_*)$/Gpc	13.8891	13.890 ± 0.031	$\chi^2_{\rm lensing}$	8.78	9.37 ± 0.95
$\boldsymbol{A_{217}^{dustTT}}$	94.6	93.4 ± 7.5	$z_{\rm drag}$	1059.475	1059.43 ± 0.43	$\chi^2_{\rm simall}$	395.75	396.7 ± 1.4
$\boldsymbol{c_{100}}$	0.99964	0.99963 ± 0.00062	$r_{\rm drag}$	147.323	147.33 ± 0.35	$\chi^2_{\rm lowl}$	23.12	23.48 ± 0.90
$\boldsymbol{c_{217}}$	0.99826	0.99825 ± 0.00062	$k_{\rm D}$	0.140475	0.14044 ± 0.00043	$\chi^2_{\rm plik}$	758.9	770.8 ± 5.3
H_0	68.17	68.18 ± 0.83	$100\theta_{\rm D}$	0.161019	0.16105 ± 0.00025	$\chi^2_{\rm JLA}$	1036.05	1037.2 ± 1.6
Ω_Λ	0.6928	$0.6926^{+0.0082}_{-0.0075}$	$z_{\rm eq}$	3396.1	3397 ± 30	$\chi^2_{\rm 6DF}$	0.0001	0.055 ± 0.076
$\Omega_{\rm m}$	0.3072	0.3074 ± 0.0079	$k_{\rm eq}$	0.010365	0.010368 ± 0.000093	$\chi^2_{\rm MGS}$	1.75	1.92 ± 0.70
$\Omega_{\rm m} h^2$	0.14276	0.1428 ± 0.0013	$100\theta_{\rm eq}$	0.8138	0.8136 ± 0.0057	$\chi^2_{\rm DR12BAO}$	3.97	4.8 ± 1.3
$\Omega_{\rm m} h^3$	0.09732	0.0974 ± 0.0015	$100\theta_{\rm s,eq}$	0.44978	0.4497 ± 0.0029	$\chi^2_{\rm prior}$	1.37	7.3 ± 3.6
σ_8	0.8196	0.820 ± 0.012	$H(0.15)$	73.49	73.61 ± 0.72	$\chi^2_{\rm CMB}$	1186.5	1200.4 ± 5.5
S_8	0.8294	0.830 ± 0.013	$D_{\rm M}(0.15)$	635.8	635.2 ± 6.6	$\chi^2_{\rm BAO}$	5.71	6.8 ± 1.5
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4543	0.4548 ± 0.0072	$H(0.38)$	83.34	83.45 ± 0.63			
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.6102	0.6108 ± 0.0085	$D_{\rm M}(0.38)$	1518.3	1516 ± 13			

Best-fit $\chi^2_{\rm eff} = 2229.66$; $\Delta\chi^2_{\rm eff} = -1.34$; $\bar{\chi}^2_{\rm eff} = 2251.59$; $\Delta\bar{\chi}^2_{\rm eff} = 0.54$; $R - 1 = 0.01508$

$\chi^2_{\rm eff}$: BAO - 6DF: 0.00 (Δ -0.01) MGS: 1.75 (Δ 0.41) DR12BAO: 3.96 (Δ -0.07) CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.78 (Δ -0.08) simall_100x143_offlike5_EE_Aplanc
395.75 (Δ -0.70) commander_dx12_v3_2_29: 23.12 (Δ 0.28) plik_rd12_HM_v22_TT: 758.88 (Δ -0.97) SN - JLA Pantheon: 1036.05 (Δ -0.18)

19.19 base_w_wa_plikHM_TT_lowl_lowE_BAO_Pantheon_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02214 ± 0.00020	$\sigma_8\Omega_m^{0.25}$	0.615 ± 0.013	$H(0.38)$	83.45 ± 0.63
$\boldsymbol{\Omega_c h^2}$	0.1204 ± 0.0018	$\sigma_8/h^{0.5}$	0.999 ± 0.018	$D_M(0.38)$	1516 ± 14
$\boldsymbol{100\theta_{MC}}$	1.04080 ± 0.00045	$r_{drag}h$	100.4 ± 1.2	$H(0.51)$	89.88 ± 0.51
$\boldsymbol{\tau}$	$0.0536^{+0.0046}_{-0.0079}$	$\langle d^2\rangle^{1/2}$	2.467 ± 0.041	$D_M(0.51)$	1966 ± 16
$\boldsymbol{w_0}$	-0.956 ± 0.084	z_{re}	$7.63^{+0.51}_{-0.80}$	$H(0.61)$	95.29 ± 0.43
$\boldsymbol{w_a}$	$-0.34^{+0.40}_{-0.31}$	$10^9 A_s$	$2.097^{+0.024}_{-0.033}$	$D_M(0.61)$	2290 ± 17
$\boldsymbol{\ln(10^{10}A_s)}$	$3.043^{+0.012}_{-0.016}$	$10^9 A_s e^{-2\tau}$	1.884 ± 0.013	$H(2.33)$	235.10 ± 0.98
$\boldsymbol{n_s}$	0.9633 ± 0.0050	D_{40}	1232 ± 14	$D_M(2.33)$	5766 ± 13
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0025	D_{220}	5716 ± 40	$f\sigma_8(0.15)$	0.462 ± 0.011
$\boldsymbol{A_{217}^{CIB}}$	47 ± 7	D_{810}	2537 ± 14	$\sigma_8(0.15)$	0.763 ± 0.016
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{1420}	814.7 ± 5.0	$f\sigma_8(0.38)$	0.484 ± 0.012
$\boldsymbol{A_{143}^{tSZ}}$	5.1 ± 2.0	D_{2000}	229.7 ± 1.7	$\sigma_8(0.38)$	0.677 ± 0.014
$\boldsymbol{A_{100}^{PS}}$	263 ± 28	$n_{s,0.002}$	0.9633 ± 0.0050	$f\sigma_8(0.51)$	0.484 ± 0.013
$\boldsymbol{A_{143}^{PS}}$	49 ± 8	Y_P	$0.245295^{+0.000098}_{-0.000075}$	$\sigma_8(0.51)$	0.633 ± 0.013
$\boldsymbol{A_{143\times217}^{PS}}$	44 ± 9	Y_P^{BBN}	$0.246621^{+0.000098}_{-0.000075}$	$f\sigma_8(0.61)$	0.480 ± 0.013
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	10^5D/H	2.630 ± 0.038	$\sigma_8(0.61)$	0.602 ± 0.012
$\boldsymbol{A^{kSZ}}$	< 4.76	Age/Gyr	$13.779^{+0.032}_{-0.037}$	$f\sigma_8(2.33)$	$0.3042^{+0.0066}_{-0.0058}$
$\boldsymbol{A_{100}^{dust TT}}$	9.0 ± 1.9	z_*	1090.25 ± 0.35	$\sigma_8(2.33)$	0.3111 ± 0.0046
$\boldsymbol{A_{143}^{dust TT}}$	10.7 ± 1.8	r_*	144.51 ± 0.42	f_{2000}^{143}	31.0 ± 2.9
$\boldsymbol{A_{143\times217}^{dust TT}}$	18.3 ± 3.3	$100\theta_*$	1.04100 ± 0.00044	$f_{2000}^{143\times217}$	33.4 ± 2.0
$\boldsymbol{A_{217}^{dust TT}}$	93.6 ± 7.4	$D_M(z_*)$/Gpc	13.882 ± 0.040	f_{2000}^{217}	108.0 ± 1.9
$\boldsymbol{c_{100}}$	0.99961 ± 0.00061	z_{drag}	1059.42 ± 0.43	χ^2_{simall}	396.7 ± 1.5
$\boldsymbol{c_{217}}$	0.99825 ± 0.00062	r_{drag}	147.25 ± 0.43	χ^2_{lowl}	23.7 ± 1.1
H_0	68.17 ± 0.84	k_D	0.14052 ± 0.00050	χ^2_{plik}	770.6 ± 5.4
Ω_Λ	0.6918 ± 0.0081	$100\theta_D$	0.16106 ± 0.00025	χ^2_{JLA}	1037.2 ± 1.6
Ω_m	0.3082 ± 0.0081	z_{eq}	3406 ± 41	χ^2_{6DF}	0.054 ± 0.076
$\Omega_m h^2$	0.1432 ± 0.0017	k_{eq}	0.01039 ± 0.00013	χ^2_{MGS}	1.90 ± 0.70
$\Omega_m h^3$	0.0976 ± 0.0017	$100\theta_{eq}$	0.8120 ± 0.0076	$\chi^2_{DR12BAO}$	5.0 ± 1.3
σ_8	0.825 ± 0.017	$100\theta_{s,eq}$	0.4489 ± 0.0039	χ^2_{prior}	7.3 ± 3.7
S_8	0.836 ± 0.020	$H(0.15)$	73.64 ± 0.75	χ^2_{BAO}	6.9 ± 1.5
$\sigma_8\Omega_m^{0.5}$	0.458 ± 0.011	$D_M(0.15)$	635.0 ± 6.7	χ^2_{CMB}	1191.0 ± 5.4

$\bar{\chi}^2_{eff} = 2242.36$; $R - 1 = 0.01465$

19.20 base_w_wa_plikHM_TT_lowl_lowE_BAO_Pantheon_post_lensing_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02216 ± 0.00019	$\sigma_8/h^{0.5}$	0.994 ± 0.012	$H(0.51)$	89.92 ± 0.52
$\boldsymbol{\Omega_c h^2}$	0.1199 ± 0.0013	$r_{\rm drag} h$	100.4 ± 1.2	$D_{\rm M}(0.51)$	1967 ± 16
$\boldsymbol{100\theta_{MC}}$	1.04083 ± 0.00043	$\langle d^2 \rangle^{1/2}$	2.455 ± 0.027	$H(0.61)$	95.35 ± 0.44
$\boldsymbol{\tau}$	$0.0533^{+0.0045}_{-0.0077}$	$z_{\rm re}$	$7.59^{+0.48}_{-0.79}$	$D_{\rm M}(0.61)$	2291 ± 17
$\boldsymbol{w_0}$	-0.963 ± 0.081	$10^9 A_{\rm s}$	$2.093^{+0.022}_{-0.031}$	$H(2.33)$	235.0 ± 1.0
$\boldsymbol{w_a}$	$-0.28^{+0.33}_{-0.27}$	$10^9 A_{\rm s} e^{-2\tau}$	1.881 ± 0.011	$D_{\rm M}(2.33)$	5764 ± 13
$\boldsymbol{\ln(10^{10} A_s)}$	$3.041^{+0.010}_{-0.015}$	D_{40}	1230 ± 12	$f\sigma_8(0.15)$	0.4591 ± 0.0078
$\boldsymbol{n_s}$	0.9641 ± 0.0044	D_{220}	5718 ± 40	$\sigma_8(0.15)$	0.759 ± 0.012
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	D_{810}	2536 ± 13	$f\sigma_8(0.38)$	0.4803 ± 0.0091
$\boldsymbol{A^{CIB}_{217}}$	48 ± 7	D_{1420}	814.6 ± 5.0	$\sigma_8(0.38)$	0.673 ± 0.010
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{2000}	229.7 ± 1.7	$f\sigma_8(0.51)$	0.4805 ± 0.0094
$\boldsymbol{A^{tSZ}_{143}}$	5.0 ± 2.0	$n_{\rm s,0.002}$	0.9641 ± 0.0044	$\sigma_8(0.51)$	0.6300 ± 0.0095
$\boldsymbol{A^{PS}_{100}}$	264 ± 28	$Y_{\rm P}$	$0.245307^{+0.000093}_{-0.000071}$	$f\sigma_8(0.61)$	0.4765 ± 0.0096
$\boldsymbol{A^{PS}_{143}}$	49 ± 8	$Y_{\rm P}^{\rm BBN}$	$0.246633^{+0.000093}_{-0.000072}$	$\sigma_8(0.61)$	0.5994 ± 0.0090
$\boldsymbol{A^{PS}_{143\times217}}$	43 ± 9	10^5D/H	2.625 ± 0.037	$f\sigma_8(2.33)$	0.3028 ± 0.0047
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	Age/Gyr	$13.780^{+0.032}_{-0.036}$	$\sigma_8(2.33)$	0.3101 ± 0.0036
$\boldsymbol{A^{kSZ}}$	< 5.01	z_*	1090.17 ± 0.30	f^{143}_{2000}	31.1 ± 2.9
$\boldsymbol{A^{dustTT}_{100}}$	9.0 ± 1.8	r_*	144.62 ± 0.32	$f^{143\times217}_{2000}$	33.5 ± 2.0
$\boldsymbol{A^{dustTT}_{143}}$	10.7 ± 1.8	$100\theta_*$	1.04104 ± 0.00043	f^{217}_{2000}	108.1 ± 1.9
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.3 ± 3.4	$D_{\rm M}(z_*)$/Gpc	13.892 ± 0.031	$\chi^2_{\rm lensing}$	9.37 ± 0.96
$\boldsymbol{A^{dustTT}_{217}}$	93.5 ± 7.5	$z_{\rm drag}$	1059.45 ± 0.43	$\chi^2_{\rm simall}$	396.6 ± 1.4
$\boldsymbol{c_{100}}$	0.99962 ± 0.00062	$r_{\rm drag}$	147.36 ± 0.34	$\chi^2_{\rm lowl}$	23.45 ± 0.90
$\boldsymbol{c_{217}}$	0.99825 ± 0.00062	$k_{\rm D}$	0.14043 ± 0.00043	$\chi^2_{\rm plik}$	770.7 ± 5.3
H_0	68.16 ± 0.83	$100\theta_{\rm D}$	0.16104 ± 0.00025	$\chi^2_{\rm JLA}$	1037.2 ± 1.6
Ω_Λ	0.6928 ± 0.0078	$z_{\rm eq}$	3394 ± 30	$\chi^2_{\rm 6DF}$	0.054 ± 0.075
$\Omega_{\rm m}$	0.3072 ± 0.0078	$k_{\rm eq}$	0.010360 ± 0.000091	$\chi^2_{\rm MGS}$	1.91 ± 0.70
$\Omega_{\rm m} h^2$	0.1427 ± 0.0012	$100\theta_{\rm eq}$	0.8141 ± 0.0055	$\chi^2_{\rm DR12BAO}$	4.8 ± 1.3
$\Omega_{\rm m} h^3$	0.0973 ± 0.0015	$100\theta_{\rm s,eq}$	0.4500 ± 0.0029	$\chi^2_{\rm prior}$	7.3 ± 3.6
σ_8	0.821 ± 0.012	$H(0.15)$	73.59 ± 0.72	$\chi^2_{\rm CMB}$	1200.1 ± 5.5
S_8	0.830 ± 0.013	$D_{\rm M}(0.15)$	635.3 ± 6.5	$\chi^2_{\rm BAO}$	6.7 ± 1.5
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4548 ± 0.0072	$H(0.38)$	83.45 ± 0.63		
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.6109 ± 0.0086	$D_{\rm M}(0.38)$	1517 ± 13		

$\bar{\chi}^2_{\rm eff} = 2251.28$; $\Delta\bar{\chi}^2_{\rm eff} = 0.37$; $R - 1 = 0.01495$

19.21 base_w_wa_plikHM_TTTEEE_lowl_lowE_BAO_Pantheon

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022385	0.02236 ± 0.00014	$\Omega_m h^3$	0.09795	0.0979 ± 0.0015	$H(0.15)$	73.80	73.81 ± 0.73
$\boldsymbol{\Omega_c h^2}$	0.12017	0.1203 ± 0.0013	σ_8	0.8252	0.824 ± 0.014	$D_M(0.15)$	633.3	633.5 ± 6.6
$\boldsymbol{100\theta_{MC}}$	1.040898	1.04090 ± 0.00031	S_8	0.8335	0.833 ± 0.015	$H(0.38)$	83.63	83.64 ± 0.61
$\boldsymbol{\tau}$	0.0551	0.0541 ± 0.0078	$\sigma_8 \Omega_m^{0.5}$	0.4565	0.4564 ± 0.0080	$D_M(0.38)$	1512.3	1512 ± 14
$\boldsymbol{w_0}$	-0.966	-0.958 ± 0.079	$\sigma_8 \Omega_m^{0.25}$	0.6138	0.6133 ± 0.0098	$H(0.51)$	90.106	90.09 ± 0.49
$\boldsymbol{w_a}$	-0.272	$-0.31^{+0.34}_{-0.28}$	$\sigma_8/h^{0.5}$	0.9978	0.997 ± 0.014	$D_M(0.51)$	1961.4	1962 ± 16
$\boldsymbol{\ln(10^{10} A_s)}$	3.0466	3.045 ± 0.016	$r_{drag} h$	100.56	100.5 ± 1.2	$H(0.61)$	95.534	95.50 ± 0.40
$\boldsymbol{n_s}$	0.96626	0.9646 ± 0.0042	$\langle d^2 \rangle^{1/2}$	2.4604	2.462 ± 0.032	$D_M(0.61)$	2284.6	2285 ± 17
$\boldsymbol{y_{cal}}$	1.00045	1.0007 ± 0.0025	z_{re}	7.74	7.63 ± 0.80	$H(2.33)$	235.28	235.29 ± 0.94
$\boldsymbol{A_{217}^{CIB}}$	44.9	47 ± 7	$10^9 A_s$	2.1044	2.100 ± 0.034	$D_M(2.33)$	5752.7	5755 ± 10
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.80	—	$10^9 A_s e^{-2\tau}$	1.8850	1.885 ± 0.012	$f\sigma_8(0.15)$	0.4612	0.4607 ± 0.0083
$\boldsymbol{A_{143}^{tSZ}}$	6.95	5.5 ± 1.9	D_{40}	1228.1	1232 ± 12	$\sigma_8(0.15)$	0.7631	0.762 ± 0.013
$\boldsymbol{A_{100}^{PS}}$	247.4	258 ± 28	D_{220}	5729.3	5733 ± 39	$f\sigma_8(0.38)$	0.4828	0.4823 ± 0.0098
$\boldsymbol{A_{143}^{PS}}$	52.4	46 ± 8	D_{810}	2541.6	2540 ± 14	$\sigma_8(0.38)$	0.6770	0.676 ± 0.012
$\boldsymbol{A_{143\times217}^{PS}}$	56.5	42 ± 9	D_{1420}	818.58	817.2 ± 4.8	$f\sigma_8(0.51)$	0.4831	0.483 ± 0.010
$\boldsymbol{A_{217}^{PS}}$	123.5	115 ± 10	D_{2000}	231.50	230.9 ± 1.6	$\sigma_8(0.51)$	0.6336	0.633 ± 0.011
$\boldsymbol{A^{kSZ}}$	0.01	< 4.21	$n_{s,0.002}$	0.96626	0.9646 ± 0.0042	$f\sigma_8(0.61)$	0.4792	0.479 ± 0.011
$\boldsymbol{A_{100}^{dust TT}}$	8.77	8.9 ± 1.8	Y_P	0.245401	$0.245388^{+0.000059}_{-0.000052}$	$\sigma_8(0.61)$	0.6029	0.602 ± 0.010
$\boldsymbol{A_{143}^{dust TT}}$	11.02	10.9 ± 1.8	Y_P^{BBN}	0.246728	$0.246715^{+0.000059}_{-0.000052}$	$f\sigma_8(2.33)$	0.3047	0.3042 ± 0.0053
$\boldsymbol{A_{143\times217}^{dust TT}}$	20.32	18.6 ± 3.3	10^5D/H	2.5828	2.589 ± 0.026	$\sigma_8(2.33)$	0.31179	0.3112 ± 0.0042
$\boldsymbol{A_{217}^{dust TT}}$	95.9	93.8 ± 7.4	Age/Gyr	13.7528	13.755 ± 0.030	f_{2000}^{143}	28.35	29.5 ± 2.7
$\boldsymbol{A_{100}^{dust TE}}$	0.1139	0.115 ± 0.038	z_*	1089.918	1089.96 ± 0.25	$f_{2000}^{143\times217}$	31.81	32.2 ± 1.8
$\boldsymbol{A_{100\times143}^{dust TE}}$	0.1359	0.135 ± 0.030	r_*	144.375	144.38 ± 0.28	f_{2000}^{217}	106.27	107.0 ± 1.7
$\boldsymbol{A_{100\times217}^{dust TE}}$	0.481	0.481 ± 0.084	$100\theta_*$	1.041079	1.04108 ± 0.00030	χ^2_{small}	396.19	397.1 ± 1.9
$\boldsymbol{A_{143}^{dust TE}}$	0.227	0.226 ± 0.053	$D_M(z_*)$/Gpc	13.8679	13.868 ± 0.027	χ^2_{lowl}	23.15	23.49 ± 0.90
$\boldsymbol{A_{143\times217}^{dust TE}}$	0.667	0.667 ± 0.080	z_{drag}	1059.971	1059.92 ± 0.29	χ^2_{plik}	2344.0	2358.7 ± 5.7
$\boldsymbol{A_{217}^{dust TE}}$	2.087	2.09 ± 0.27	r_{drag}	147.031	147.04 ± 0.28	χ^2_{JLA}	1036.09	1037.2 ± 1.5
$\boldsymbol{c_{100}}$	0.99975	0.99966 ± 0.00061	k_D	0.140944	0.14091 ± 0.00031	χ^2_{6DF}	0.0030	0.057 ± 0.084
$\boldsymbol{c_{217}}$	0.99818	0.99821 ± 0.00062	$100\theta_D$	0.160729	0.16077 ± 0.00017	χ^2_{MGS}	1.89	1.96 ± 0.71
H_0	68.40	68.35 ± 0.84	z_{eq}	3406.7	3408 ± 29	$\chi^2_{DR12BAO}$	3.95	4.8 ± 1.3
Ω_Λ	0.6939	$0.6932^{+0.0081}_{-0.0073}$	k_{eq}	0.010398	0.010402 ± 0.000088	χ^2_{prior}	1.46	11.6 ± 4.5
Ω_m	0.3061	$0.3068^{+0.0073}_{-0.0081}$	$100\theta_{eq}$	0.8125	0.8123 ± 0.0054	χ^2_{BAO}	5.84	6.8 ± 1.6
$\Omega_m h^2$	0.14320	0.1433 ± 0.0012	$100\theta_{s,eq}$	0.44896	0.4488 ± 0.0027	χ^2_{CMB}	2763.4	2779.3 ± 5.7

Best-fit $\chi^2_{eff} = 3806.78$; $\bar{\chi}^2_{eff} = 3834.84$; $R - 1 = 0.01278$

χ^2_{eff}: BAO - 6DF: 0.00 MGS: 1.89 DR12BAO: 3.95 CMB - simall_100x143_offlike5_EE_Aplanck_B: 396.19 commander_dx12_v3_2_29: 23.15 plik_rd12_HM_v22b_TTTEEE: 2344.04 SN - JLA Pantheon: 1036.09

19.22 base_w_wa_plikHM_TTTEEE_lowl_lowE_BAO_Pantheon_post_lensing

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022402	0.02238 ± 0.00014	σ_8	0.8200	0.821 ± 0.011	$H(0.38)$	83.63	83.64 ± 0.60
$\boldsymbol{\Omega_c h^2}$	0.11981	0.1199 ± 0.0011	S_8	0.8277	0.829 ± 0.011	$D_M(0.38)$	1512.9	1513 ± 13
$\boldsymbol{100\theta_{MC}}$	1.040933	1.04092 ± 0.00030	$\sigma_8\Omega_m^{0.5}$	0.4534	0.4542 ± 0.0062	$H(0.51)$	90.125	90.11 ± 0.48
$\boldsymbol{\tau}$	0.0531	$0.0536^{+0.0069}_{-0.0077}$	$\sigma_8\Omega_m^{0.25}$	0.6097	0.6106 ± 0.0074	$D_M(0.51)$	1962.0	1962 ± 15
$\boldsymbol{w_0}$	-0.968	-0.961 ± 0.077	$\sigma_8/h^{0.5}$	0.9918	0.993 ± 0.011	$H(0.61)$	95.571	95.54 ± 0.40
$\boldsymbol{w_a}$	-0.239	$-0.28^{+0.31}_{-0.27}$	$r_{drag}h$	100.57	100.5 ± 1.2	$D_M(0.61)$	2285.1	2285 ± 16
$\boldsymbol{\ln(10^{10}A_s)}$	3.0420	3.043 ± 0.015	$\langle d^2\rangle^{1/2}$	2.4494	2.454 ± 0.024	$H(2.33)$	235.24	235.24 ± 0.93
$\boldsymbol{n_s}$	0.96619	0.9652 ± 0.0039	z_{re}	7.53	7.58 ± 0.76	$D_M(2.33)$	5751.8	5754 ± 10
$\boldsymbol{y_{cal}}$	1.00074	1.0006 ± 0.0025	$10^9 A_s$	2.0948	2.096 ± 0.031	$f\sigma_8(0.15)$	0.4579	0.4585 ± 0.0067
$\boldsymbol{A_{217}^{CIB}}$	47.1	47 ± 7	$10^9 A_s e^{-2\tau}$	1.8839	1.883 ± 0.011	$\sigma_8(0.15)$	0.7584	0.759 ± 0.011
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.48	—	D_{40}	1228.4	1230 ± 11	$f\sigma_8(0.38)$	0.4792	0.4798 ± 0.0080
$\boldsymbol{A_{143}^{tSZ}}$	7.27	$5.5^{+2.2}_{-1.9}$	D_{220}	5736.9	5734 ± 38	$\sigma_8(0.38)$	0.6729	0.6736 ± 0.0096
$\boldsymbol{A_{100}^{PS}}$	249.3	259 ± 28	D_{810}	2541.6	2539 ± 13	$f\sigma_8(0.51)$	0.4795	0.4802 ± 0.0084
$\boldsymbol{A_{143}^{PS}}$	48.2	46 ± 8	D_{1420}	818.47	817.1 ± 4.8	$\sigma_8(0.51)$	0.6299	0.6305 ± 0.0089
$\boldsymbol{A_{143\times217}^{PS}}$	49.0	42 ± 9	D_{2000}	231.36	230.9 ± 1.6	$f\sigma_8(0.61)$	0.4755	0.4763 ± 0.0085
$\boldsymbol{A_{217}^{PS}}$	120.0	115 ± 10	$n_{s,0.002}$	0.96619	0.9652 ± 0.0039	$\sigma_8(0.61)$	0.5994	0.5999 ± 0.0084
$\boldsymbol{A^{kSZ}}$	0.00	< 4.29	Y_P	0.245408	0.245396 ± 0.000053	$f\sigma_8(2.33)$	0.30290	0.3031 ± 0.0044
$\boldsymbol{A_{100}^{dust TT}}$	8.85	8.9 ± 1.8	Y_P^{BBN}	0.246735	0.246723 ± 0.000053	$\sigma_8(2.33)$	0.31035	0.3104 ± 0.0036
$\boldsymbol{A_{143}^{dust TT}}$	11.01	10.9 ± 1.8	10^5D/H	2.5795	2.585 ± 0.025	f_{2000}^{143}	28.82	29.5 ± 2.7
$\boldsymbol{A_{143\times217}^{dust TT}}$	19.98	18.7 ± 3.3	Age/Gyr	13.7544	13.756 ± 0.030	$f_{2000}^{143\times217}$	32.05	32.2 ± 1.8
$\boldsymbol{A_{217}^{dust TT}}$	95.2	93.9 ± 7.4	z_*	1089.862	1089.91 ± 0.23	f_{2000}^{217}	106.65	107.0 ± 1.7
$\boldsymbol{A_{100}^{dust TE}}$	0.1142	0.115 ± 0.038	r_*	144.457	144.44 ± 0.25	$\chi^2_{lensing}$	8.719	9.24 ± 0.81
$\boldsymbol{A_{100\times143}^{dust TE}}$	0.1344	0.135 ± 0.029	$100\theta_*$	1.041115	1.04110 ± 0.00030	χ^2_{simall}	395.84	396.9 ± 1.7
$\boldsymbol{A_{100\times217}^{dust TE}}$	0.482	0.481 ± 0.084	$D_M(z_*)$/Gpc	13.8752	13.874 ± 0.023	χ^2_{lowl}	23.10	23.34 ± 0.80
$\boldsymbol{A_{143}^{dust TE}}$	0.225	0.225 ± 0.053	z_{drag}	1060.009	1059.95 ± 0.28	χ^2_{plik}	2344.3	2358.7 ± 5.6
$\boldsymbol{A_{143\times217}^{dust TE}}$	0.665	0.666 ± 0.081	r_{drag}	147.106	147.10 ± 0.25	χ^2_{JLA}	1036.10	1037.1 ± 1.5
$\boldsymbol{A_{217}^{dust TE}}$	2.089	2.08 ± 0.27	k_D	0.140875	0.14086 ± 0.00029	χ^2_{6DF}	0.0030	0.056 ± 0.086
$\boldsymbol{c_{100}}$	0.99971	0.99966 ± 0.00061	$100\theta_D$	0.160723	0.16075 ± 0.00017	χ^2_{MGS}	1.89	1.97 ± 0.71
$\boldsymbol{c_{217}}$	0.99819	0.99820 ± 0.00063	z_{eq}	3398.4	3401 ± 25	$\chi^2_{DR12BAO}$	3.83	4.7 ± 1.2
H_0	68.36	68.34 ± 0.83	k_{eq}	0.010372	0.010380 ± 0.000075	χ^2_{prior}	1.82	11.5 ± 4.5
Ω_Λ	0.6943	0.6937 ± 0.0078	$100\theta_{eq}$	0.81408	0.8136 ± 0.0046	χ^2_{CMB}	2771.9	2788.2 ± 5.8
Ω_m	0.3057	0.3063 ± 0.0078	$100\theta_{s,eq}$	0.44977	0.4495 ± 0.0024	χ^2_{BAO}	5.73	6.7 ± 1.6
$\Omega_m h^2$	0.14286	0.1430 ± 0.0010	$H(0.15)$	73.76	73.78 ± 0.71			
$\Omega_m h^3$	0.09766	0.0977 ± 0.0014	$D_M(0.15)$	633.6	633.7 ± 6.5			

Best-fit $\chi^2_{eff} = 3815.59$; $\Delta\chi^2_{eff} = -1.37$; $\bar{\chi}^2_{eff} = 3843.58$; $\Delta\bar{\chi}^2_{eff} = 0.45$; $R - 1 = 0.01824$

χ^2_{eff}: BAO - 6DF: 0.00 (Δ -0.02) MGS: 1.89 (Δ 0.61) DR12BAO: 3.83 (Δ -0.43) CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.72 (Δ -0.02) simall_100x143_offlike5_EE_Aplanc
395.84 (Δ -0.62) commander_dx12_v3_2_29: 23.10 (Δ 0.22) plik_rd12_HM_v22b_TTTEEE: 2344.29 (Δ -1.13) SN - JLA Pantheon: 1036.10 (Δ -0.16)

19.23 base_w_wa_plikHM_TTTEEE_lowl_lowE_BAO_Pantheon_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02236 ± 0.00014	$\Omega_m h^3$	0.0979 ± 0.0015	$H(0.15)$	73.80 ± 0.73
$\boldsymbol{\Omega_c h^2}$	0.1202 ± 0.0013	σ_8	0.825 ± 0.014	$D_M(0.15)$	633.6 ± 6.6
$\boldsymbol{100\theta_{MC}}$	1.04090 ± 0.00031	S_8	0.834 ± 0.014	$H(0.38)$	83.63 ± 0.61
$\boldsymbol{\tau}$	$0.0552^{+0.0052}_{-0.0081}$	$\sigma_8\Omega_m^{0.5}$	0.4568 ± 0.0079	$D_M(0.38)$	1513 ± 13
$\boldsymbol{w_0}$	-0.958 ± 0.080	$\sigma_8\Omega_m^{0.25}$	0.6138 ± 0.0097	$H(0.51)$	90.09 ± 0.49
$\boldsymbol{w_a}$	$-0.31^{+0.34}_{-0.28}$	$\sigma_8/h^{0.5}$	0.998 ± 0.014	$D_M(0.51)$	1962 ± 16
$\boldsymbol{\ln(10^{10}A_s)}$	$3.047^{+0.012}_{-0.016}$	$r_{drag}h$	100.5 ± 1.2	$H(0.61)$	95.50 ± 0.40
$\boldsymbol{n_s}$	0.9647 ± 0.0042	$\langle d^2\rangle^{1/2}$	2.464 ± 0.032	$D_M(0.61)$	2285 ± 17
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0025	z_{re}	$7.75^{+0.58}_{-0.80}$	$H(2.33)$	235.29 ± 0.93
$\boldsymbol{A^{CIB}_{217}}$	47 ± 7	$10^9 A_s$	$2.105^{+0.025}_{-0.034}$	$D_M(2.33)$	5755 ± 10
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$10^9 A_s e^{-2\tau}$	1.885 ± 0.011	$f\sigma_8(0.15)$	0.4611 ± 0.0082
$\boldsymbol{A^{tSZ}_{143}}$	5.5 ± 1.9	D_{40}	1232 ± 12	$\sigma_8(0.15)$	0.763 ± 0.013
$\boldsymbol{A^{PS}_{100}}$	258 ± 28	D_{220}	5733 ± 39	$f\sigma_8(0.38)$	0.4826 ± 0.0097
$\boldsymbol{A^{PS}_{143}}$	46 ± 8	D_{810}	2540 ± 14	$\sigma_8(0.38)$	0.677 ± 0.012
$\boldsymbol{A^{PS}_{143\times217}}$	42 ± 9	D_{1420}	817.2 ± 4.8	$f\sigma_8(0.51)$	0.483 ± 0.010
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	D_{2000}	231.0 ± 1.6	$\sigma_8(0.51)$	0.633 ± 0.011
$\boldsymbol{A^{kSZ}}$	< 4.18	$n_{s,0.002}$	0.9647 ± 0.0042	$f\sigma_8(0.61)$	0.479 ± 0.010
$\boldsymbol{A^{dust TT}_{100}}$	8.9 ± 1.8	Y_P	$0.245389^{+0.000058}_{-0.000052}$	$\sigma_8(0.61)$	0.603 ± 0.010
$\boldsymbol{A^{dust TT}_{143}}$	10.9 ± 1.8	Y_P^{BBN}	$0.246716^{+0.000059}_{-0.000052}$	$f\sigma_8(2.33)$	0.3044 ± 0.0053
$\boldsymbol{A^{dust TT}_{143\times217}}$	18.6 ± 3.3	10^5D/H	2.588 ± 0.026	$\sigma_8(2.33)$	0.3115 ± 0.0041
$\boldsymbol{A^{dust TT}_{217}}$	93.9 ± 7.4	Age/Gyr	13.756 ± 0.030	f^{143}_{2000}	29.4 ± 2.7
$\boldsymbol{A^{dust TE}_{100}}$	0.115 ± 0.038	z_*	1089.95 ± 0.25	$f^{143\times217}_{2000}$	32.1 ± 1.8
$\boldsymbol{A^{dust TE}_{100\times143}}$	0.135 ± 0.029	r_*	144.38 ± 0.28	f^{217}_{2000}	107.0 ± 1.7
$\boldsymbol{A^{dust TE}_{100\times217}}$	0.481 ± 0.084	$100\theta_*$	1.04109 ± 0.00030	χ^2_{simall}	397.0 ± 1.9
$\boldsymbol{A^{dust TE}_{143}}$	0.225 ± 0.053	$D_M(z_*)$/Gpc	13.868 ± 0.027	χ^2_{lowl}	23.50 ± 0.91
$\boldsymbol{A^{dust TE}_{143\times217}}$	0.667 ± 0.080	z_{drag}	1059.93 ± 0.29	χ^2_{plik}	2358.6 ± 5.6
$\boldsymbol{A^{dust TE}_{217}}$	2.09 ± 0.27	r_{drag}	147.04 ± 0.28	χ^2_{JLA}	1037.2 ± 1.5
$\boldsymbol{c_{100}}$	0.99966 ± 0.00061	k_D	0.14091 ± 0.00031	χ^2_{6DF}	0.056 ± 0.081
$\boldsymbol{c_{217}}$	0.99821 ± 0.00062	$100\theta_D$	0.16077 ± 0.00017	χ^2_{MGS}	1.96 ± 0.71
H_0	68.34 ± 0.83	z_{eq}	3407 ± 29	$\chi^2_{DR12BAO}$	4.8 ± 1.2
Ω_Λ	$0.6932^{+0.0081}_{-0.0072}$	k_{eq}	0.010400 ± 0.000087	χ^2_{prior}	11.6 ± 4.5
Ω_m	$0.3068^{+0.0072}_{-0.0081}$	$100\theta_{eq}$	0.8124 ± 0.0053	χ^2_{BAO}	6.8 ± 1.5
$\Omega_m h^2$	0.1432 ± 0.0012	$100\theta_{s,eq}$	0.4489 ± 0.0027	χ^2_{CMB}	2779.1 ± 5.6

$\bar{\chi}^2_{eff} = 3834.60$; $R - 1 = 0.01200$

19.24 base_w_wa_plikHM_TTTEEE_lowl_lowE_BAO_Pantheon_post_lensing_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02238 ± 0.00013	σ_8	0.821 ± 0.011	$H(0.38)$	83.62 ± 0.60
$\boldsymbol{\Omega_c h^2}$	0.1199 ± 0.0011	S_8	0.830 ± 0.011	$D_{\rm M}(0.38)$	1513 ± 13
$\boldsymbol{100\theta_{MC}}$	1.04092 ± 0.00030	$\sigma_8\Omega_{\rm m}^{0.5}$	0.4543 ± 0.0061	$H(0.51)$	90.11 ± 0.49
$\boldsymbol{\tau}$	$0.0547^{+0.0049}_{-0.0080}$	$\sigma_8\Omega_{\rm m}^{0.25}$	0.6108 ± 0.0073	$D_{\rm M}(0.51)$	1962 ± 15
$\boldsymbol{w_0}$	-0.962 ± 0.077	$\sigma_8/h^{0.5}$	0.993 ± 0.011	$H(0.61)$	95.54 ± 0.40
$\boldsymbol{w_a}$	$-0.27^{+0.30}_{-0.27}$	$r_{\rm drag}h$	100.5 ± 1.2	$D_{\rm M}(0.61)$	2286 ± 16
$\boldsymbol{\ln(10^{10}A_s)}$	$3.045^{+0.011}_{-0.015}$	$\langle d^2\rangle^{1/2}$	2.455 ± 0.024	$H(2.33)$	235.25 ± 0.93
$\boldsymbol{n_s}$	0.9654 ± 0.0039	$z_{\rm re}$	$7.69^{+0.53}_{-0.80}$	$D_{\rm M}(2.33)$	5754 ± 10
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0025	$10^9 A_{\rm s}$	$2.100^{+0.023}_{-0.031}$	$f\sigma_8(0.15)$	0.4587 ± 0.0067
$\boldsymbol{A^{CIB}_{217}}$	47 ± 7	$10^9 A_{\rm s}e^{-2\tau}$	1.883 ± 0.010	$\sigma_8(0.15)$	0.759 ± 0.011
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{40}	1230 ± 11	$f\sigma_8(0.38)$	0.4800 ± 0.0080
$\boldsymbol{A^{tSZ}_{143}}$	$5.5^{+2.2}_{-1.9}$	D_{220}	5734 ± 38	$\sigma_8(0.38)$	0.6738 ± 0.0096
$\boldsymbol{A^{PS}_{100}}$	258 ± 28	D_{810}	2539 ± 13	$f\sigma_8(0.51)$	0.4803 ± 0.0084
$\boldsymbol{A^{PS}_{143}}$	46 ± 8	D_{1420}	817.1 ± 4.8	$\sigma_8(0.51)$	0.6307 ± 0.0089
$\boldsymbol{A^{PS}_{143\times217}}$	42 ± 9	D_{2000}	230.9 ± 1.6	$f\sigma_8(0.61)$	0.4764 ± 0.0085
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	$n_{\rm s,0.002}$	0.9654 ± 0.0039	$\sigma_8(0.61)$	0.6001 ± 0.0084
$\boldsymbol{A^{kSZ}}$	< 4.28	$Y_{\rm P}$	0.245398 ± 0.000053	$f\sigma_8(2.33)$	0.3032 ± 0.0044
$\boldsymbol{A^{dust}_{100}}^{TT}$	8.9 ± 1.8	$Y_{\rm P}^{\rm BBN}$	0.246724 ± 0.000053	$\sigma_8(2.33)$	0.3106 ± 0.0035
$\boldsymbol{A^{dust}_{143}}^{TT}$	10.9 ± 1.8	10^5D/H	2.584 ± 0.025	f^{143}_{2000}	29.5 ± 2.7
$\boldsymbol{A^{dust}_{143\times217}}^{TT}$	18.7 ± 3.3	Age/Gyr	13.757 ± 0.030	$f^{143\times217}_{2000}$	32.1 ± 1.8
$\boldsymbol{A^{dust}_{217}}^{TT}$	93.9 ± 7.4	z_*	1089.90 ± 0.23	f^{217}_{2000}	107.0 ± 1.7
$\boldsymbol{A^{dust}_{100}}^{TE}$	0.116 ± 0.038	r_*	144.46 ± 0.24	$\chi^2_{\rm lensing}$	9.25 ± 0.82
$\boldsymbol{A^{dust}_{100\times143}}^{TE}$	0.135 ± 0.029	$100\theta_*$	1.04111 ± 0.00029	$\chi^2_{\rm simall}$	396.8 ± 1.7
$\boldsymbol{A^{dust}_{100\times217}}^{TE}$	0.482 ± 0.084	$D_{\rm M}(z_*)$/Gpc	13.875 ± 0.023	$\chi^2_{\rm lowl}$	23.34 ± 0.80
$\boldsymbol{A^{dust}_{143}}^{TE}$	0.225 ± 0.053	$z_{\rm drag}$	1059.95 ± 0.28	$\chi^2_{\rm plik}$	2358.6 ± 5.6
$\boldsymbol{A^{dust}_{143\times217}}^{TE}$	0.666 ± 0.082	$r_{\rm drag}$	147.11 ± 0.25	$\chi^2_{\rm JLA}$	1037.1 ± 1.5
$\boldsymbol{A^{dust}_{217}}^{TE}$	2.08 ± 0.27	$k_{\rm D}$	0.14085 ± 0.00029	$\chi^2_{\rm 6DF}$	0.055 ± 0.081
$\boldsymbol{c_{100}}$	0.99966 ± 0.00061	$100\theta_{\rm D}$	0.16075 ± 0.00017	$\chi^2_{\rm MGS}$	1.96 ± 0.70
$\boldsymbol{c_{217}}$	0.99821 ± 0.00063	$z_{\rm eq}$	3400 ± 24	$\chi^2_{\rm DR12BAO}$	4.7 ± 1.2
H_0	68.33 ± 0.82	$k_{\rm eq}$	0.010376 ± 0.000074	$\chi^2_{\rm prior}$	11.6 ± 4.5
Ω_Λ	0.6938 ± 0.0077	$100\theta_{\rm eq}$	0.8138 ± 0.0045	$\chi^2_{\rm CMB}$	2788.0 ± 5.7
$\Omega_{\rm m}$	0.3062 ± 0.0077	$100\theta_{\rm s,eq}$	0.4497 ± 0.0023	$\chi^2_{\rm BAO}$	6.7 ± 1.5
$\Omega_{\rm m}h^2$	0.1429 ± 0.0010	$H(0.15)$	73.76 ± 0.70		
$\Omega_{\rm m}h^3$	0.0976 ± 0.0014	$D_{\rm M}(0.15)$	633.9 ± 6.4		

$\bar{\chi}^2_{\rm eff} = 3843.35$; $\Delta\bar{\chi}^2_{\rm eff} = 0.34$; $R - 1 = 0.01860$

19.25 base_w_wa_CamSpecHM_TTTEEE_lowl_lowE_BAO_Pantheon

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022306	0.02230 ± 0.00016	S_8	0.8230	0.825 ± 0.015	$D_M(0.15)$	635.2	635.0 ± 6.6
$\boldsymbol{\Omega_c h^2}$	0.11940	0.1196 ± 0.0013	$\sigma_8 \Omega_m^{0.5}$	0.4508	0.4518 ± 0.0080	$H(0.38)$	83.49	83.47 ± 0.63
$\boldsymbol{100\theta_{MC}}$	1.040906	1.04089 ± 0.00030	$\sigma_8 \Omega_m^{0.25}$	0.6061	0.6074 ± 0.0099	$D_M(0.38)$	1516.3	1516 ± 14
$\boldsymbol{\tau}$	0.0521	0.0527 ± 0.0078	$\sigma_8/h^{0.5}$	0.9867	0.989 ± 0.014	$H(0.51)$	90.02	89.98 ± 0.51
$\boldsymbol{w_0}$	−0.972	-0.972 ± 0.080	$r_{drag} h$	100.47	100.5 ± 1.2	$D_M(0.51)$	1966.1	1966 ± 16
$\boldsymbol{w_a}$	−0.194	$-0.22^{+0.33}_{-0.27}$	$\langle d^2 \rangle^{1/2}$	2.4358	2.441 ± 0.032	$H(0.61)$	95.493	95.43 ± 0.42
$\boldsymbol{\ln(10^{10} A_s)}$	3.0368	3.038 ± 0.016	z_{re}	7.45	7.49 ± 0.81	$D_M(0.61)$	2289.5	2290 ± 17
$\boldsymbol{n_s}$	0.96709	0.9662 ± 0.0043	$10^9 A_s$	2.0838	2.087 ± 0.034	$H(2.33)$	235.11	235.19 ± 0.97
$\boldsymbol{y_{cal}}$	1.00034	1.0005 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.8777	1.879 ± 0.011	$D_M(2.33)$	5757.1	5759 ± 11
$\boldsymbol{A_{100}^{PS}}$	233.0	239 ± 25	D_{40}	1222.3	1225 ± 12	$f\sigma_8(0.15)$	0.4552	0.4565 ± 0.0084
$\boldsymbol{A_{143}^{PS}}$	44.2	40 ± 8	D_{220}	5714.9	5718 ± 38	$\sigma_8(0.15)$	0.7536	0.755 ± 0.013
$\boldsymbol{A_{217}^{PS}}$	104.1	103 ± 10	D_{810}	2535.2	2535 ± 13	$f\sigma_8(0.38)$	0.4760	0.4775 ± 0.0099
$\boldsymbol{A_{217}^{CIB}}$	42.2	40^{+7}_{-7}	D_{1420}	816.23	815.8 ± 4.8	$\sigma_8(0.38)$	0.6686	0.670 ± 0.012
$\boldsymbol{A_{143}^{tSZ}}$	5.99	$3.9^{+1.9}_{-2.5}$	D_{2000}	230.48	230.3 ± 1.6	$f\sigma_8(0.51)$	0.4760	0.478 ± 0.010
$\boldsymbol{r_{143\times217}^{PS}}$	0.677	0.66 ± 0.13	$n_{s,0.002}$	0.96709	0.9662 ± 0.0043	$\sigma_8(0.51)$	0.6259	0.627 ± 0.011
$\boldsymbol{r_{143\times217}^{CIB}}$	0.751	$0.56^{+0.39}_{-0.18}$	Y_P	0.245370	$0.245365^{+0.000067}_{-0.000058}$	$f\sigma_8(0.61)$	0.4719	0.474 ± 0.011
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.44	—	Y_P^{BBN}	0.246696	$0.246692^{+0.000067}_{-0.000059}$	$\sigma_8(0.61)$	0.5956	0.597 ± 0.010
$\boldsymbol{A^{kSZ}}$	0.86	$4.6^{+1.9}_{-4.2}$	10^5D/H	2.5975	2.599 ± 0.029	$f\sigma_8(2.33)$	0.3009	0.3014 ± 0.0054
$\boldsymbol{A_{100}^{dust}}$	1.008	1.01 ± 0.19	Age/Gyr	13.7710	13.772 ± 0.032	$\sigma_8(2.33)$	0.30876	0.3091 ± 0.0043
$\boldsymbol{A_{143}^{dust}}$	0.966	0.96 ± 0.17	z_*	1089.948	1089.97 ± 0.27	f_{2000}^{143}	29.79	29.6 ± 2.8
$\boldsymbol{A_{217}^{dust}}$	0.979	0.97 ± 0.10	r_*	144.635	144.60 ± 0.30	f_{2000}^{217}	106.58	106.8 ± 1.9
$\boldsymbol{A_{143\times217}^{dust}}$	1.026	1.03 ± 0.16	$100\theta_*$	1.041091	1.04108 ± 0.00030	$f_{2000}^{143\times217}$	32.05	32.0 ± 2.0
$\boldsymbol{c_{100}}$	0.99772	0.9975 ± 0.0011	$D_M(z_*)$/Gpc	13.8927	13.889 ± 0.028	χ^2_{simall}	395.75	396.9 ± 1.6
$\boldsymbol{c_{217}}$	1.00126	1.0011 ± 0.0016	z_{drag}	1059.742	1059.74 ± 0.33	χ^2_{lowl}	22.76	23.02 ± 0.86
$\boldsymbol{c_{TE}}$	0.99663	0.9964 ± 0.0049	r_{drag}	147.322	147.28 ± 0.30	$\chi^2_{CamSpec}$	11499.8	11514.2 ± 5.6
$\boldsymbol{c_{EE}}$	0.99243	0.9920 ± 0.0049	k_D	0.140576	0.14061 ± 0.00034	χ^2_{JLA}	1036.12	1037.1 ± 1.5
H_0	68.20	68.24 ± 0.84	$100\theta_D$	0.160862	0.16087 ± 0.00019	χ^2_{6DF}	0.00097	0.056 ± 0.083
Ω_Λ	0.6940	0.6938 ± 0.0078	z_{eq}	3386.3	3390 ± 29	χ^2_{MGS}	1.82	1.91 ± 0.71
Ω_m	0.3060	0.3062 ± 0.0078	k_{eq}	0.010335	0.010348 ± 0.000089	$\chi^2_{DR12BAO}$	3.74	4.7 ± 1.3
$\Omega_m h^2$	0.14235	0.1425 ± 0.0012	$100\theta_{eq}$	0.8160	0.8153 ± 0.0055	χ^2_{prior}	2.05	7.7 ± 3.4
$\Omega_m h^3$	0.09708	0.0973 ± 0.0015	$100\theta_{s,eq}$	0.45082	0.4505 ± 0.0028	χ^2_{BAO}	5.56	6.6 ± 1.5
σ_8	0.8149	0.817 ± 0.014	$H(0.15)$	73.58	$73.61^{+0.68}_{-0.76}$	χ^2_{CMB}	11918.3	11934.1 ± 5.7

Best-fit $\chi^2_{eff} = 12962.05$; $\bar{\chi}^2_{eff} = 12985.60$; $R - 1 = 0.01177$

χ^2_{eff}: BAO - 6DF: 0.00 MGS: 1.82 DR12BAO: 3.73 CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.75 commander_dx12_v3_2_29: 22.76 CamSpec like_10.7HM_1400_unified: 11499.81 SN - JLA Pantheon: 1036.12

19.26 base_w_wa_CamSpecHM_TTTEEE_lowl_lowE_BAO_Pantheon_post_lensing

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02230 ± 0.00015	$\sigma_8\Omega_m^{0.5}$	0.4522 ± 0.0061	$D_M(0.38)$	1515 ± 13
$\boldsymbol{\Omega_c h^2}$	0.1196 ± 0.0011	$\sigma_8\Omega_m^{0.25}$	0.6080 ± 0.0074	$H(0.51)$	90.01 ± 0.51
$\boldsymbol{100\theta_{MC}}$	1.04088 ± 0.00030	$\sigma_8/h^{0.5}$	0.990 ± 0.011	$D_M(0.51)$	1965^{+16}_{-15}
$\boldsymbol{\tau}$	0.0530 ± 0.0076	$r_{drag}h$	100.5 ± 1.2	$H(0.61)$	95.46 ± 0.42
$\boldsymbol{w_0}$	-0.969 ± 0.079	$\langle d^2\rangle^{1/2}$	2.444 ± 0.024	$D_M(0.61)$	2288 ± 17
$\boldsymbol{w_a}$	$-0.23^{+0.31}_{-0.27}$	z_{re}	7.53 ± 0.77	$H(2.33)$	235.13 ± 0.97
$\boldsymbol{\ln(10^{10}A_s)}$	3.039 ± 0.015	$10^9 A_s$	2.089 ± 0.031	$D_M(2.33)$	5758 ± 11
$\boldsymbol{n_s}$	0.9659 ± 0.0040	$10^9 A_s e^{-2\tau}$	1.879 ± 0.010	$f\sigma_8(0.15)$	0.4567 ± 0.0068
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0024	D_{40}	1226 ± 11	$\sigma_8(0.15)$	0.756 ± 0.011
$\boldsymbol{A^{PS}_{100}}$	240 ± 25	D_{220}	5720 ± 38	$f\sigma_8(0.38)$	0.4778 ± 0.0082
$\boldsymbol{A^{PS}_{143}}$	40 ± 8	D_{810}	2535 ± 13	$\sigma_8(0.38)$	0.6708 ± 0.0097
$\boldsymbol{A^{PS}_{217}}$	102 ± 10	D_{1420}	815.8 ± 4.8	$f\sigma_8(0.51)$	0.4780 ± 0.0085
$\boldsymbol{A^{CIB}_{217}}$	40 ± 7	D_{2000}	230.3 ± 1.6	$\sigma_8(0.51)$	0.6279 ± 0.0090
$\boldsymbol{A^{tSZ}_{143}}$	$3.9^{+1.9}_{-2.5}$	$n_{s,0.002}$	0.9659 ± 0.0040	$f\sigma_8(0.61)$	0.4741 ± 0.0087
$\boldsymbol{r^{PS}_{143\times217}}$	0.66 ± 0.13	Y_P	$0.245366^{+0.000065}_{-0.000058}$	$\sigma_8(0.61)$	0.5975 ± 0.0085
$\boldsymbol{r^{CIB}_{143\times217}}$	$0.56^{+0.41}_{-0.15}$	Y_P^{BBN}	$0.246693^{+0.000065}_{-0.000059}$	$f\sigma_8(2.33)$	0.3018 ± 0.0045
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	10^5D/H	2.599 ± 0.029	$\sigma_8(2.33)$	0.3094 ± 0.0036
$\boldsymbol{A^{kSZ}}$	$4.6^{+2.0}_{-4.1}$	Age/Gyr	13.769 ± 0.031	f^{143}_{2000}	29.7 ± 2.8
$\boldsymbol{A^{dust}_{100}}$	1.01 ± 0.20	z_*	1089.97 ± 0.25	f^{217}_{2000}	106.8 ± 1.9
$\boldsymbol{A^{dust}_{143}}$	0.96 ± 0.18	r_*	144.59 ± 0.25	$f^{143\times217}_{2000}$	32.1 ± 2.0
$\boldsymbol{A^{dust}_{217}}$	0.97 ± 0.10	$100\theta_*$	1.04107 ± 0.00030	$\chi^2_{lensing}$	9.19 ± 0.72
$\boldsymbol{A^{dust}_{143\times217}}$	1.02 ± 0.17	$D_M(z_*)$/Gpc	13.888 ± 0.024	χ^2_{simall}	396.8 ± 1.5
$\boldsymbol{c_{100}}$	0.9975 ± 0.0010	z_{drag}	1059.75 ± 0.33	χ^2_{lowl}	23.07 ± 0.80
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	r_{drag}	147.27 ± 0.26	$\chi^2_{CamSpec}$	11513.7 ± 5.5
$\boldsymbol{c_{TE}}$	0.9963 ± 0.0048	k_D	0.14062 ± 0.00032	χ^2_{JLA}	1037.1 ± 1.5
$\boldsymbol{c_{EE}}$	0.9920 ± 0.0049	$100\theta_D$	0.16086 ± 0.00019	χ^2_{6DF}	0.056 ± 0.083
H_0	68.26 ± 0.84	z_{eq}	3391 ± 25	χ^2_{MGS}	1.94 ± 0.71
Ω_Λ	0.6939 ± 0.0078	k_{eq}	0.010350 ± 0.000076	$\chi^2_{DR12BAO}$	4.7 ± 1.2
Ω_m	0.3061 ± 0.0078	$100\theta_{eq}$	0.8151 ± 0.0047	χ^2_{prior}	7.8 ± 3.5
$\Omega_m h^2$	0.1426 ± 0.0010	$100\theta_{s,eq}$	0.4504 ± 0.0024	χ^2_{CMB}	11942.8 ± 5.8
$\Omega_m h^3$	0.0973 ± 0.0014	$H(0.15)$	$73.65^{+0.66}_{-0.75}$	χ^2_{BAO}	6.6 ± 1.6
σ_8	0.818 ± 0.011	$D_M(0.15)$	634.7 ± 6.5		
S_8	0.826 ± 0.011	$H(0.38)$	83.52 ± 0.62		

$\bar{\chi}^2_{eff} = 12994.34$; $\Delta\bar{\chi}^2_{eff} = 0.67$; $R - 1 = 0.01411$

19.27 base_w_wa_CamSpecHM_TTTEEE_lowl_lowE_BAO_Pantheon_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02231 ± 0.00015	S_8	0.826 ± 0.015	$D_{\rm M}(0.15)$	635.1 ± 6.6
$\boldsymbol{\Omega_c h^2}$	0.1195 ± 0.0013	$\sigma_8\Omega_{\rm m}^{0.5}$	0.4522 ± 0.0080	$H(0.38)$	83.46 ± 0.63
$\boldsymbol{100\theta_{MC}}$	1.04090 ± 0.00030	$\sigma_8\Omega_{\rm m}^{0.25}$	0.6080 ± 0.0098	$D_{\rm M}(0.38)$	1516 ± 14
$\boldsymbol{\tau}$	$0.0543^{+0.0046}_{-0.0080}$	$\sigma_8/h^{0.5}$	0.990 ± 0.014	$H(0.51)$	89.98 ± 0.51
$\boldsymbol{w_0}$	-0.973 ± 0.080	$r_{\rm drag}h$	100.5 ± 1.2	$D_{\rm M}(0.51)$	1966 ± 16
$\boldsymbol{w_a}$	$-0.21^{+0.33}_{-0.27}$	$\langle d^2\rangle^{1/2}$	2.444 ± 0.032	$H(0.61)$	95.44 ± 0.42
$\boldsymbol{\ln(10^{10}A_s)}$	$3.041^{+0.011}_{-0.016}$	$z_{\rm re}$	$7.66^{+0.52}_{-0.80}$	$D_{\rm M}(0.61)$	2290 ± 17
$\boldsymbol{n_s}$	0.9663 ± 0.0042	$10^9 A_{\rm s}$	$2.094^{+0.023}_{-0.033}$	$H(2.33)$	235.21 ± 0.98
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	$10^9 A_{\rm s}e^{-2\tau}$	1.878 ± 0.011	$D_{\rm M}(2.33)$	5759 ± 11
$\boldsymbol{A^{PS}_{100}}$	239 ± 25	D_{40}	1225 ± 12	$f\sigma_8(0.15)$	0.4569 ± 0.0083
$\boldsymbol{A^{PS}_{143}}$	39 ± 8	D_{220}	5718 ± 38	$\sigma_8(0.15)$	0.756 ± 0.013
$\boldsymbol{A^{PS}_{217}}$	103 ± 10	D_{810}	2535 ± 13	$f\sigma_8(0.38)$	0.4779 ± 0.0098
$\boldsymbol{A^{CIB}_{217}}$	40^{+7}_{-7}	D_{1420}	815.8 ± 4.8	$\sigma_8(0.38)$	0.671 ± 0.012
$\boldsymbol{A^{tSZ}_{143}}$	$3.9^{+1.9}_{-2.5}$	D_{2000}	230.3 ± 1.6	$f\sigma_8(0.51)$	0.478 ± 0.010
$\boldsymbol{r^{PS}_{143\times217}}$	0.66 ± 0.13	$n_{\rm s,0.002}$	0.9663 ± 0.0042	$\sigma_8(0.51)$	0.628 ± 0.011
$\boldsymbol{r^{CIB}_{143\times217}}$	$0.56^{+0.39}_{-0.18}$	$Y_{\rm P}$	$0.245368^{+0.000066}_{-0.000058}$	$f\sigma_8(0.61)$	0.474 ± 0.010
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$Y_{\rm P}^{\rm BBN}$	$0.246694^{+0.000066}_{-0.000058}$	$\sigma_8(0.61)$	0.597 ± 0.010
$\boldsymbol{A^{kSZ}}$	$4.6^{+1.8}_{-4.3}$	10^5D/H	2.598 ± 0.029	$f\sigma_8(2.33)$	0.3017 ± 0.0054
$\boldsymbol{A^{dust}_{100}}$	1.01 ± 0.19	Age/Gyr	13.772 ± 0.032	$\sigma_8(2.33)$	0.3095 ± 0.0042
$\boldsymbol{A^{dust}_{143}}$	0.96 ± 0.17	z_*	1089.96 ± 0.27	f^{143}_{2000}	29.6 ± 2.8
$\boldsymbol{A^{dust}_{217}}$	0.98 ± 0.10	r_*	144.61 ± 0.30	f^{217}_{2000}	106.8 ± 1.9
$\boldsymbol{A^{dust}_{143\times217}}$	1.03 ± 0.16	$100\theta_*$	1.04109 ± 0.00030	$f^{143\times217}_{2000}$	32.0 ± 2.0
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	$D_{\rm M}(z_*)$/Gpc	13.890 ± 0.028	$\chi^2_{\rm simall}$	396.8 ± 1.6
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	$z_{\rm drag}$	1059.75 ± 0.33	$\chi^2_{\rm lowl}$	23.03 ± 0.87
$\boldsymbol{c_{TE}}$	0.9963 ± 0.0049	$r_{\rm drag}$	147.29 ± 0.30	$\chi^2_{\rm CamSpec}$	11514.0 ± 5.6
$\boldsymbol{c_{EE}}$	0.9920 ± 0.0049	$k_{\rm D}$	0.14060 ± 0.00034	$\chi^2_{\rm JLA}$	1037.1 ± 1.5
H_0	68.23 ± 0.84	$100\theta_{\rm D}$	0.16086 ± 0.00019	$\chi^2_{\rm 6DF}$	0.056 ± 0.083
Ω_Λ	0.6938 ± 0.0078	$z_{\rm eq}$	3389 ± 29	$\chi^2_{\rm MGS}$	1.90 ± 0.71
$\Omega_{\rm m}$	0.3062 ± 0.0078	$k_{\rm eq}$	0.010344 ± 0.000089	$\chi^2_{\rm DR12BAO}$	4.7 ± 1.3
$\Omega_{\rm m}h^2$	0.1425 ± 0.0012	$100\theta_{\rm eq}$	0.8155 ± 0.0055	$\chi^2_{\rm prior}$	7.7 ± 3.4
$\Omega_{\rm m}h^3$	0.0972 ± 0.0015	$100\theta_{\rm s,eq}$	0.4506 ± 0.0028	$\chi^2_{\rm BAO}$	6.6 ± 1.5
σ_8	0.817 ± 0.014	$H(0.15)$	$73.59^{+0.67}_{-0.76}$	$\chi^2_{\rm CMB}$	11933.8 ± 5.6

$\bar{\chi}^2_{\rm eff} = 12985.32$; $R - 1 = 0.01294$

19.28 base_w_wa_CamSpecHM_TTTEEE_lowl_lowE_BAO_Pantheon_post_lensing_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02231 ± 0.00015	$\sigma_8\Omega_m^{0.5}$	0.4523 ± 0.0061	$D_M(0.38)$	1516 ± 13
$\boldsymbol{\Omega_c h^2}$	0.1195 ± 0.0011	$\sigma_8\Omega_m^{0.25}$	0.6082 ± 0.0073	$H(0.51)$	90.01 ± 0.51
$\boldsymbol{100\theta_{MC}}$	1.04089 ± 0.00030	$\sigma_8/h^{0.5}$	0.990 ± 0.011	$D_M(0.51)$	1965^{+16}_{-15}
$\boldsymbol{\tau}$	$0.0544^{+0.0048}_{-0.0078}$	$r_{drag}h$	100.5 ± 1.2	$H(0.61)$	95.46 ± 0.42
$\boldsymbol{w_0}$	-0.970 ± 0.078	$\langle d^2\rangle^{1/2}$	2.445 ± 0.023	$D_M(0.61)$	2289^{+17}_{-16}
$\boldsymbol{w_a}$	$-0.22^{+0.31}_{-0.26}$	z_{re}	$7.67^{+0.53}_{-0.78}$	$H(2.33)$	235.15 ± 0.97
$\boldsymbol{\ln(10^{10}A_s)}$	$3.042^{+0.011}_{-0.015}$	$10^9 A_s$	$2.094^{+0.022}_{-0.031}$	$D_M(2.33)$	5758 ± 11
$\boldsymbol{n_s}$	0.9661 ± 0.0040	$10^9 A_s e^{-2\tau}$	1.878 ± 0.010	$f\sigma_8(0.15)$	0.4569 ± 0.0068
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0024	D_{40}	1226 ± 11	$\sigma_8(0.15)$	0.756 ± 0.011
$\boldsymbol{A^{PS}_{100}}$	240 ± 24	D_{220}	5720 ± 38	$f\sigma_8(0.38)$	0.4779 ± 0.0081
$\boldsymbol{A^{PS}_{143}}$	40 ± 8	D_{810}	2535 ± 13	$\sigma_8(0.38)$	0.6710 ± 0.0096
$\boldsymbol{A^{PS}_{217}}$	102 ± 10	D_{1420}	815.7 ± 4.8	$f\sigma_8(0.51)$	0.4781 ± 0.0085
$\boldsymbol{A^{CIB}_{217}}$	40 ± 7	D_{2000}	230.3 ± 1.6	$\sigma_8(0.51)$	0.6281 ± 0.0090
$\boldsymbol{A^{tSZ}_{143}}$	$3.8^{+1.9}_{-2.5}$	$n_{s,0.002}$	0.9661 ± 0.0040	$f\sigma_8(0.61)$	0.4741 ± 0.0086
$\boldsymbol{r^{PS}_{143\times217}}$	0.66 ± 0.13	Y_P	$0.245369^{+0.000064}_{-0.000058}$	$\sigma_8(0.61)$	0.5977 ± 0.0085
$\boldsymbol{r^{CIB}_{143\times217}}$	$0.56^{+0.41}_{-0.15}$	Y_P^{BBN}	$0.246695^{+0.000064}_{-0.000058}$	$f\sigma_8(2.33)$	0.3019 ± 0.0045
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	10^5D/H	2.598 ± 0.029	$\sigma_8(2.33)$	0.3097 ± 0.0036
$\boldsymbol{A^{kSZ}}$	$4.6^{+2.0}_{-4.1}$	Age/Gyr	13.770 ± 0.031	f^{143}_{2000}	29.6 ± 2.8
$\boldsymbol{A^{dust}_{100}}$	1.01 ± 0.20	z_*	1089.96 ± 0.25	f^{217}_{2000}	106.8 ± 1.9
$\boldsymbol{A^{dust}_{143}}$	0.96 ± 0.18	r_*	144.60 ± 0.25	$f^{143\times217}_{2000}$	32.0 ± 2.0
$\boldsymbol{A^{dust}_{217}}$	0.97 ± 0.10	$100\theta_*$	1.04108 ± 0.00030	$\chi^2_{lensing}$	9.16 ± 0.69
$\boldsymbol{A^{dust}_{143\times217}}$	1.02 ± 0.17	$D_M(z_*)$/Gpc	13.890 ± 0.024	χ^2_{simall}	396.8 ± 1.6
$\boldsymbol{c_{100}}$	0.9975 ± 0.0010	z_{drag}	1059.76 ± 0.33	χ^2_{lowl}	23.07 ± 0.80
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	r_{drag}	147.29 ± 0.26	$\chi^2_{CamSpec}$	11513.6 ± 5.5
$\boldsymbol{c_{TE}}$	0.9962 ± 0.0048	k_D	0.14061 ± 0.00032	χ^2_{JLA}	1037.1 ± 1.5
$\boldsymbol{c_{EE}}$	0.9919 ± 0.0049	$100\theta_D$	0.16086 ± 0.00019	χ^2_{6DF}	0.056 ± 0.083
H_0	68.25 ± 0.84	z_{eq}	3389 ± 24	χ^2_{MGS}	1.93 ± 0.71
Ω_Λ	0.6940 ± 0.0078	k_{eq}	0.010345 ± 0.000074	$\chi^2_{DR12BAO}$	4.6 ± 1.2
Ω_m	0.3060 ± 0.0078	$100\theta_{eq}$	0.8154 ± 0.0046	χ^2_{prior}	7.8 ± 3.5
$\Omega_m h^2$	0.1425 ± 0.0010	$100\theta_{s,eq}$	0.4505 ± 0.0023	χ^2_{CMB}	11942.6 ± 5.7
$\Omega_m h^3$	0.0972 ± 0.0014	$H(0.15)$	$73.63^{+0.66}_{-0.75}$	χ^2_{BAO}	6.6 ± 1.6
σ_8	0.818 ± 0.011	$D_M(0.15)$	634.8 ± 6.5		
S_8	0.826 ± 0.011	$H(0.38)$	83.50 ± 0.62		

$\bar{\chi}^2_{eff} = 12994.08$; $\Delta\bar{\chi}^2_{eff} = 0.55$; $R - 1 = 0.01635$

19.29 base_w_wa_plikHM_TT_lowl_lowE_BAO_Riess18_Pantheon

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022189	0.02215 ± 0.00021	$\sigma_8/h^{0.5}$	1.0026	1.004 ± 0.018	$H(0.51)$	89.89	89.87 ± 0.51
$\boldsymbol{\Omega_c h^2}$	0.12040	0.1206 ± 0.0018	$r_{\rm drag} h$	101.96	102.0 ± 1.1	$D_{\rm M}(0.51)$	1954.2	1953 ± 16
$\boldsymbol{100\theta_{MC}}$	1.040877	1.04083 ± 0.00045	$\langle d^2 \rangle^{1/2}$	2.4659	2.472 ± 0.040	$H(0.61)$	95.208	95.14 ± 0.44
$\boldsymbol{\tau}$	0.0526	0.0520 ± 0.0078	$z_{\rm re}$	7.54	7.46 ± 0.81	$D_{\rm M}(0.61)$	2278.3	2277 ± 17
$\boldsymbol{w_0}$	-1.007	-0.993 ± 0.082	$10^9 A_{\rm s}$	2.0931	2.092 ± 0.034	$H(2.33)$	234.80	234.78 ± 0.96
$\boldsymbol{w_a}$	-0.268	$-0.36^{+0.41}_{-0.32}$	$10^9 A_{\rm s} e^{-2\tau}$	1.8840	1.885 ± 0.013	$D_{\rm M}(2.33)$	5759.2	5762 ± 13
$\boldsymbol{\ln(10^{10} A_{\rm s})}$	3.0412	3.041 ± 0.016	D_{40}	1228.7	1233 ± 14	$f\sigma_8(0.15)$	0.4642	0.465 ± 0.011
$\boldsymbol{n_{\rm s}}$	0.9645	0.9629 ± 0.0052	D_{220}	5713.3	5716 ± 41	$\sigma_8(0.15)$	0.7722	0.774 ± 0.016
$\boldsymbol{y_{\rm cal}}$	1.00030	1.0005 ± 0.0025	D_{810}	2537.9	2537 ± 14	$f\sigma_8(0.38)$	0.4893	0.491 ± 0.013
$\boldsymbol{A_{217}^{\rm CIB}}$	47.9	48 ± 7	D_{1420}	815.9	814.8 ± 5.1	$\sigma_8(0.38)$	0.6852	0.687 ± 0.014
$\boldsymbol{\xi^{\rm tSZ\times CIB}}$	0.44	—	D_{2000}	230.28	229.9 ± 1.8	$f\sigma_8(0.51)$	0.4906	0.492 ± 0.013
$\boldsymbol{A_{143}^{\rm tSZ}}$	7.01	5.1 ± 2.0	$n_{\rm s,0.002}$	0.9645	0.9629 ± 0.0052	$\sigma_8(0.51)$	0.6413	0.642 ± 0.013
$\boldsymbol{A_{100}^{\rm PS}}$	253.1	263 ± 28	$Y_{\rm P}$	0.245321	$0.245302^{+0.000099}_{-0.000081}$	$f\sigma_8(0.61)$	0.4870	0.489 ± 0.013
$\boldsymbol{A_{143}^{\rm PS}}$	50.7	49 ± 8	$Y_{\rm P}^{\rm BBN}$	0.246648	$0.24663^{+0.00010}_{-0.000081}$	$\sigma_8(0.61)$	0.6100	0.611 ± 0.012
$\boldsymbol{A_{143\times217}^{\rm PS}}$	49.8	44 ± 9	10^5D/H	2.6199	2.627 ± 0.040	$f\sigma_8(2.33)$	0.3081	0.3085 ± 0.0059
$\boldsymbol{A_{217}^{\rm PS}}$	120.4	115 ± 10	Age/Gyr	13.7540	13.755 ± 0.034	$\sigma_8(2.33)$	0.31461	0.3147 ± 0.0045
$\boldsymbol{A^{\rm kSZ}}$	0.03	< 4.66	z_*	1090.183	1090.25 ± 0.36	f_{2000}^{143}	30.03	30.9 ± 3.0
$\boldsymbol{A_{100}^{{\rm dust}TT}}$	8.86	8.9 ± 1.8	r_*	144.465	144.43 ± 0.42	$f_{2000}^{143\times217}$	33.05	33.3 ± 2.0
$\boldsymbol{A_{143}^{{\rm dust}TT}}$	10.80	10.7 ± 1.8	$100\theta_*$	1.041079	1.04103 ± 0.00044	f_{2000}^{217}	107.41	107.9 ± 1.9
$\boldsymbol{A_{143\times217}^{{\rm dust}TT}}$	19.58	18.3 ± 3.3	$D_{\rm M}(z_*)$/Gpc	13.8765	13.874 ± 0.040	$\chi^2_{\rm simall}$	395.86	396.9 ± 1.6
$\boldsymbol{A_{217}^{{\rm dust}TT}}$	94.8	93.4 ± 7.4	$z_{\rm drag}$	1059.551	1059.48 ± 0.45	$\chi^2_{\rm lowl}$	23.27	23.7 ± 1.1
$\boldsymbol{c_{100}}$	0.99969	0.99961 ± 0.00062	$r_{\rm drag}$	147.185	147.17 ± 0.44	$\chi^2_{\rm plik}$	758.3	770.6 ± 5.4
$\boldsymbol{c_{217}}$	0.99825	0.99826 ± 0.00062	$k_{\rm D}$	0.14063	0.14062 ± 0.00050	$\chi^2_{\rm H073p45}$	6.33	6.5 ± 2.3
H_0	69.27	69.29 ± 0.76	$100\theta_{\rm D}$	0.160991	0.16103 ± 0.00026	$\chi^2_{\rm JLA}$	1036.59	1037.5 ± 1.7
Ω_Λ	0.7015	0.7011 ± 0.0072	$z_{\rm eq}$	3407.5	3412 ± 41	$\chi^2_{\rm 6DF}$	0.084	0.14 ± 0.15
$\Omega_{\rm m}$	0.2985	0.2989 ± 0.0072	$k_{\rm eq}$	0.010400	0.01042 ± 0.00013	$\chi^2_{\rm MGS}$	2.59	2.72 ± 0.74
$\Omega_{\rm m} h^2$	0.14324	0.1434 ± 0.0017	$100\theta_{\rm eq}$	0.8118	0.8109 ± 0.0076	$\chi^2_{\rm DR12BAO}$	4.47	5.5 ± 1.4
$\Omega_{\rm m} h^3$	0.09923	0.0994 ± 0.0017	$100\theta_{\rm s,eq}$	0.44874	0.4483 ± 0.0039	$\chi^2_{\rm prior}$	1.24	7.3 ± 3.7
σ_8	0.8345	0.836 ± 0.017	$H(0.15)$	74.24	74.33 ± 0.73	$\chi^2_{\rm BAO}$	7.15	8.3 ± 2.1
S_8	0.8324	0.834 ± 0.019	$D_{\rm M}(0.15)$	627.5	627.0 ± 6.1	$\chi^2_{\rm CMB}$	1177.5	1191.1 ± 5.5
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4559	0.457 ± 0.011	$H(0.38)$	83.59	83.63 ± 0.63			
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.6168	0.618 ± 0.013	$D_{\rm M}(0.38)$	1504.4	1503 ± 13			

Best-fit $\chi^2_{\rm eff} = 2228.76$; $\bar{\chi}^2_{\rm eff} = 2250.81$; $R - 1 = 0.00876$

$\chi^2_{\rm eff}$: BAO - 6DF: 0.08 MGS: 2.59 DR12BAO: 4.47 CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.86 commander_dx12_v3_2_29: 23.27 plik_rd12_HM_v22_TT: 758.33 Hubble - H073p45: 6.33 SN - JLA Pantheon: 1036.59

19.30 base_w_wa_plikHM_TT_lowl_lowE_BAO_Riess18_Pantheon_post_lensing

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022225	0.02218 ± 0.00020	$\sigma_8/h^{0.5}$	0.9971	0.998 ± 0.012	$H(0.51)$	89.91	89.91 ± 0.51
$\boldsymbol{\Omega_c h^2}$	0.11986	0.1200 ± 0.0014	$r_{\rm drag} h$	101.98	102.0 ± 1.1	$D_{\rm M}(0.51)$	1955.0	1954 ± 15
$\boldsymbol{100\theta_{MC}}$	1.040887	1.04087 ± 0.00044	$\langle d^2 \rangle^{1/2}$	2.4548	2.458 ± 0.026	$H(0.61)$	95.261	95.23 ± 0.43
$\boldsymbol{\tau}$	0.0528	0.0517 ± 0.0077	$z_{\rm re}$	7.54	7.42 ± 0.79	$D_{\rm M}(0.61)$	2279.0	2278 ± 16
$\boldsymbol{w_0}$	-1.011	-0.9999 ± 0.079	$10^9 A_{\rm s}$	2.0910	2.087 ± 0.031	$H(2.33)$	234.73	234.64 ± 0.96
$\boldsymbol{w_a}$	-0.213	$-0.28^{+0.35}_{-0.28}$	$10^9 A_{\rm s} e^{-2\tau}$	1.8815	1.882 ± 0.011	$D_{\rm M}(2.33)$	5758.0	5760 ± 13
$\boldsymbol{\ln(10^{10} A_{\rm s})}$	3.0402	3.038 ± 0.015	D_{40}	1226.7	1230 ± 12	$f\sigma_8(0.15)$	0.4609	$0.4609^{+0.0074}_{-0.0082}$
$\boldsymbol{n_{\rm s}}$	0.96549	0.9641 ± 0.0045	D_{220}	5716.9	5718 ± 40	$\sigma_8(0.15)$	0.7679	0.768 ± 0.011
$\boldsymbol{y_{\rm cal}}$	1.00031	1.0004 ± 0.0025	D_{810}	2537.3	2536 ± 13	$f\sigma_8(0.38)$	0.4856	0.4860 ± 0.0091
$\boldsymbol{A^{\rm CIB}_{217}}$	48.4	48 ± 7	D_{1420}	816.0	814.8 ± 5.1	$\sigma_8(0.38)$	0.6815	0.682 ± 0.010
$\boldsymbol{\xi^{\rm tSZ\times CIB}}$	0.34	—	D_{2000}	230.31	229.8 ± 1.8	$f\sigma_8(0.51)$	0.4868	0.4874 ± 0.0095
$\boldsymbol{A^{\rm tSZ}_{143}}$	7.07	5.1 ± 2.0	$n_{\rm s,0.002}$	0.96549	0.9641 ± 0.0045	$\sigma_8(0.51)$	0.6379	0.6383 ± 0.0092
$\boldsymbol{A^{\rm PS}_{100}}$	252.9	263 ± 29	$Y_{\rm P}$	0.245336	$0.245315^{+0.000094}_{-0.000078}$	$f\sigma_8(0.61)$	0.4831	$0.4839^{+0.0090}_{-0.010}$
$\boldsymbol{A^{\rm PS}_{143}}$	48.8	49 ± 8	$Y_{\rm P}^{\rm BBN}$	0.246663	$0.246641^{+0.000095}_{-0.000078}$	$\sigma_8(0.61)$	0.6069	0.6073 ± 0.0087
$\boldsymbol{A^{\rm PS}_{143\times217}}$	46.8	43 ± 9	10^5D/H	2.6131	2.622 ± 0.039	$f\sigma_8(2.33)$	0.30658	0.3067 ± 0.0045
$\boldsymbol{A^{\rm PS}_{217}}$	119.2	115 ± 10	Age/Gyr	13.7563	13.757 ± 0.034	$\sigma_8(2.33)$	0.31352	0.3134 ± 0.0035
$\boldsymbol{A^{\rm kSZ}}$	0.00	< 4.74	z_*	1090.091	1090.16 ± 0.32	f^{143}_{2000}	29.92	30.9 ± 3.0
$\boldsymbol{A^{{\rm dust}TT}_{100}}$	8.91	8.9 ± 1.8	r_*	144.577	144.57 ± 0.33	$f^{143\times217}_{2000}$	32.91	33.3 ± 2.0
$\boldsymbol{A^{{\rm dust}TT}_{143}}$	10.76	10.7 ± 1.8	$100\theta_*$	1.041084	1.04107 ± 0.00043	f^{217}_{2000}	107.39	107.9 ± 1.9
$\boldsymbol{A^{{\rm dust}TT}_{143\times217}}$	19.43	18.3 ± 3.3	$D_{\rm M}(z_*)$/Gpc	13.8872	13.887 ± 0.032	$\chi^2_{\rm lensing}$	8.76	9.35 ± 0.99
$\boldsymbol{A^{{\rm dust}TT}_{217}}$	94.7	93.3 ± 7.5	$z_{\rm drag}$	1059.589	1059.50 ± 0.45	$\chi^2_{\rm simall}$	395.85	396.8 ± 1.5
$\boldsymbol{c_{100}}$	0.99966	0.99963 ± 0.00062	$r_{\rm drag}$	147.289	147.30 ± 0.36	$\chi^2_{\rm lowl}$	23.09	23.38 ± 0.91
$\boldsymbol{c_{217}}$	0.99827	0.99826 ± 0.00062	$k_{\rm D}$	0.140547	0.14050 ± 0.00045	$\chi^2_{\rm plik}$	758.57	770.7 ± 5.2
H_0	69.24	69.26 ± 0.77	$100\theta_{\rm D}$	0.160959	0.16102 ± 0.00026	$\chi^2_{\rm H073p45}$	6.43	6.6 ± 2.3
Ω_Λ	0.7023	0.7022 ± 0.0070	$z_{\rm eq}$	3395.5	3398 ± 31	$\chi^2_{\rm JLA}$	1036.52	1037.4 ± 1.7
$\Omega_{\rm m}$	0.2977	0.2978 ± 0.0070	$k_{\rm eq}$	0.010363	0.010371 ± 0.000095	$\chi^2_{\rm 6DF}$	0.084	0.14 ± 0.15
$\Omega_{\rm m} h^2$	0.14273	0.1428 ± 0.0013	$100\theta_{\rm eq}$	0.8141	0.8136 ± 0.0058	$\chi^2_{\rm MGS}$	2.59	2.73 ± 0.74
$\Omega_{\rm m} h^3$	0.09883	0.0989 ± 0.0015	$100\theta_{\rm s,eq}$	0.44989	0.4497 ± 0.0030	$\chi^2_{\rm DR12BAO}$	4.34	5.3 ± 1.4
σ_8	0.8297	0.830 ± 0.012	$H(0.15)$	74.18	74.27 ± 0.71	$\chi^2_{\rm prior}$	1.38	7.3 ± 3.6
S_8	0.8265	0.827 ± 0.013	$D_{\rm M}(0.15)$	628.0	627.5 ± 6.0	$\chi^2_{\rm CMB}$	1186.3	1200.2 ± 5.4
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4527	0.4530 ± 0.0071	$H(0.38)$	83.58	83.63 ± 0.63	$\chi^2_{\rm BAO}$	7.01	8.2 ± 2.1
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.6129	0.6133 ± 0.0085	$D_{\rm M}(0.38)$	1505.2	1504 ± 13			

Best-fit $\chi^2_{\rm eff} = 2237.60$; $\Delta\chi^2_{\rm eff} = -4.66$; $\bar{\chi}^2_{\rm eff} = 2259.69$; $\Delta\bar{\chi}^2_{\rm eff} = -2.83$; $R - 1 = 0.01010$

$\chi^2_{\rm eff}$: BAO - 6DF: 0.08 (Δ 0.08) MGS: 2.59 (Δ 0.91) DR12BAO: 4.33 (Δ 0.84) CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.76 (Δ -0.29) simall_100x143_offlike5_EE_Aplanck_
395.85 (Δ -0.73) commander_dx12_v3_2_29: 23.09 (Δ 0.44) plik_rd12_HM_v22_TT: 758.57 (Δ -2.33) Hubble - H073p45: 6.43 (Δ -4.14) SN - JLA Pantheon: 1036.52 (Δ 0.45)

19.31 base_w_wa_plikHM_TT_lowl_lowE_BAO_Riess18_Pantheon_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02216 ± 0.00021	$\sigma_8/h^{0.5}$	1.005 ± 0.018	$H(0.51)$	89.87 ± 0.51
$\boldsymbol{\Omega_c h^2}$	0.1206 ± 0.0018	$r_{\rm drag} h$	102.0 ± 1.1	$D_{\rm M}(0.51)$	1953 ± 16
$\boldsymbol{100\theta_{MC}}$	1.04084 ± 0.00044	$\langle d^2 \rangle^{1/2}$	2.474 ± 0.040	$H(0.61)$	95.15 ± 0.44
$\boldsymbol{\tau}$	$0.0537^{+0.0046}_{-0.0079}$	$z_{\rm re}$	$7.64^{+0.52}_{-0.80}$	$D_{\rm M}(0.61)$	2277 ± 17
$\boldsymbol{w_0}$	-0.995 ± 0.082	$10^9 A_{\rm s}$	$2.098^{+0.023}_{-0.033}$	$H(2.33)$	234.78 ± 0.96
$\boldsymbol{w_a}$	$-0.34^{+0.41}_{-0.32}$	$10^9 A_{\rm s} e^{-2\tau}$	1.885 ± 0.013	$D_{\rm M}(2.33)$	5761 ± 13
$\boldsymbol{\ln(10^{10} A_s)}$	$3.044^{+0.011}_{-0.015}$	D_{40}	1232 ± 14	$f\sigma_8(0.15)$	0.465 ± 0.011
$\boldsymbol{n_s}$	0.9632 ± 0.0052	D_{220}	5716 ± 41	$\sigma_8(0.15)$	0.774 ± 0.016
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	D_{810}	2537 ± 14	$f\sigma_8(0.38)$	0.491 ± 0.013
$\boldsymbol{A_{217}^{CIB}}$	48 ± 7	D_{1420}	814.9 ± 5.1	$\sigma_8(0.38)$	0.687 ± 0.014
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{2000}	229.9 ± 1.8	$f\sigma_8(0.51)$	0.492 ± 0.013
$\boldsymbol{A_{143}^{tSZ}}$	5.2 ± 2.0	$n_{\rm s,0.002}$	0.9632 ± 0.0052	$\sigma_8(0.51)$	0.643 ± 0.013
$\boldsymbol{A_{100}^{PS}}$	262 ± 28	$Y_{\rm P}$	$0.245305^{+0.000099}_{-0.000080}$	$f\sigma_8(0.61)$	0.489 ± 0.013
$\boldsymbol{A_{143}^{PS}}$	49 ± 8	$Y_{\rm P}^{\rm BBN}$	$0.246631^{+0.000099}_{-0.000080}$	$\sigma_8(0.61)$	0.612 ± 0.012
$\boldsymbol{A_{143\times217}^{PS}}$	44 ± 9	10^5D/H	2.626 ± 0.040	$f\sigma_8(2.33)$	0.3088 ± 0.0059
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	Age/Gyr	13.755 ± 0.034	$\sigma_8(2.33)$	0.3151 ± 0.0044
$\boldsymbol{A^{kSZ}}$	< 4.64	z_*	1090.24 ± 0.36	f_{2000}^{143}	30.8 ± 3.0
$\boldsymbol{A_{100}^{dust TT}}$	8.9 ± 1.8	r_*	144.45 ± 0.42	$f_{2000}^{143\times217}$	33.3 ± 2.0
$\boldsymbol{A_{143}^{dust TT}}$	10.7 ± 1.8	$100\theta_*$	1.04105 ± 0.00044	f_{2000}^{217}	107.9 ± 1.9
$\boldsymbol{A_{143\times217}^{dust TT}}$	18.3 ± 3.4	$D_{\rm M}(z_*)$/Gpc	13.875 ± 0.040	$\chi^2_{\rm simall}$	396.8 ± 1.6
$\boldsymbol{A_{217}^{dust TT}}$	93.4 ± 7.4	$z_{\rm drag}$	1059.49 ± 0.45	$\chi^2_{\rm lowl}$	23.6 ± 1.1
$\boldsymbol{c_{100}}$	0.99961 ± 0.00062	$r_{\rm drag}$	147.18 ± 0.43	$\chi^2_{\rm plik}$	770.5 ± 5.4
$\boldsymbol{c_{217}}$	0.99826 ± 0.00062	$k_{\rm D}$	0.14061 ± 0.00050	$\chi^2_{\rm H073p45}$	6.5 ± 2.3
H_0	69.28 ± 0.76	$100\theta_{\rm D}$	0.16103 ± 0.00026	$\chi^2_{\rm JLA}$	1037.5 ± 1.7
Ω_Λ	0.7012 ± 0.0072	$z_{\rm eq}$	3411 ± 41	$\chi^2_{\rm 6DF}$	0.14 ± 0.15
$\Omega_{\rm m}$	0.2988 ± 0.0072	$k_{\rm eq}$	0.01041 ± 0.00013	$\chi^2_{\rm MGS}$	2.72 ± 0.74
$\Omega_{\rm m} h^2$	0.1434 ± 0.0017	$100\theta_{\rm eq}$	0.8112 ± 0.0076	$\chi^2_{\rm DR12BAO}$	5.5 ± 1.4
$\Omega_{\rm m} h^3$	0.0993 ± 0.0017	$100\theta_{\rm s,eq}$	0.4485 ± 0.0039	$\chi^2_{\rm prior}$	7.3 ± 3.7
σ_8	0.837 ± 0.017	$H(0.15)$	74.32 ± 0.73	$\chi^2_{\rm BAO}$	8.3 ± 2.1
S_8	0.835 ± 0.019	$D_{\rm M}(0.15)$	627.1 ± 6.1	$\chi^2_{\rm CMB}$	1190.9 ± 5.4
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.457 ± 0.011	$H(0.38)$	83.63 ± 0.63		
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.619 ± 0.013	$D_{\rm M}(0.38)$	1503 ± 13		

$\bar{\chi}^2_{\rm eff} = 2250.55$; $R - 1 = 0.00726$

19.32 base_w_wa_plikHM_TT_lowl_lowE_BAO_Riess18_Pantheon_post_lensing_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02219 ± 0.00020	$\sigma_8/h^{0.5}$	0.998 ± 0.012	$H(0.51)$	89.92 ± 0.51
$\boldsymbol{\Omega_c h^2}$	0.1199 ± 0.0013	$r_{\rm drag} h$	102.0 ± 1.1	$D_{\rm M}(0.51)$	1954 ± 15
$\boldsymbol{100\theta_{MC}}$	1.04089 ± 0.00043	$\langle d^2 \rangle^{1/2}$	2.459 ± 0.026	$H(0.61)$	95.24 ± 0.43
$\boldsymbol{\tau}$	$0.0535^{+0.0046}_{-0.0078}$	$z_{\rm re}$	$7.61^{+0.50}_{-0.81}$	$D_{\rm M}(0.61)$	2278 ± 17
$\boldsymbol{w_0}$	-1.003 ± 0.079	$10^9 A_{\rm s}$	$2.094^{+0.022}_{-0.031}$	$H(2.33)$	234.64 ± 0.97
$\boldsymbol{w_a}$	$-0.26^{+0.34}_{-0.28}$	$10^9 A_{\rm s} e^{-2\tau}$	1.881 ± 0.011	$D_{\rm M}(2.33)$	5760 ± 13
$\boldsymbol{\ln(10^{10} A_s)}$	$3.041^{+0.011}_{-0.015}$	D_{40}	1229 ± 12	$f\sigma_8(0.15)$	$0.4609^{+0.0074}_{-0.0082}$
$\boldsymbol{n_s}$	0.9644 ± 0.0044	D_{220}	5719 ± 40	$\sigma_8(0.15)$	0.769 ± 0.011
$\boldsymbol{y_{cal}}$	1.0004 ± 0.0025	D_{810}	2536 ± 13	$f\sigma_8(0.38)$	0.4859 ± 0.0091
$\boldsymbol{A^{CIB}_{217}}$	48 ± 7	D_{1420}	814.8 ± 5.1	$\sigma_8(0.38)$	0.6822 ± 0.0099
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{2000}	229.9 ± 1.8	$f\sigma_8(0.51)$	0.4873 ± 0.0094
$\boldsymbol{A^{tSZ}_{143}}$	5.2 ± 2.0	$n_{\rm s,0.002}$	0.9644 ± 0.0044	$\sigma_8(0.51)$	0.6385 ± 0.0092
$\boldsymbol{A^{PS}_{100}}$	263 ± 29	$Y_{\rm P}$	$0.245319^{+0.000093}_{-0.000077}$	$f\sigma_8(0.61)$	$0.4838^{+0.0090}_{-0.010}$
$\boldsymbol{A^{PS}_{143}}$	48 ± 8	$Y_{\rm P}^{\rm BBN}$	$0.246645^{+0.000093}_{-0.000077}$	$\sigma_8(0.61)$	0.6075 ± 0.0086
$\boldsymbol{A^{PS}_{143\times217}}$	43 ± 9	10^5D/H	2.620 ± 0.038	$f\sigma_8(2.33)$	0.3068 ± 0.0045
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	Age/Gyr	13.758 ± 0.034	$\sigma_8(2.33)$	0.3137 ± 0.0034
$\boldsymbol{A^{kSZ}}$	< 4.72	z_*	1090.14 ± 0.31	f^{143}_{2000}	30.9 ± 3.0
$\boldsymbol{A^{dustTT}_{100}}$	8.9 ± 1.9	r_*	144.60 ± 0.33	$f^{143\times217}_{2000}$	33.3 ± 2.0
$\boldsymbol{A^{dustTT}_{143}}$	10.7 ± 1.8	$100\theta_*$	1.04109 ± 0.00043	f^{217}_{2000}	107.9 ± 1.9
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.3 ± 3.3	$D_{\rm M}(z_*)$/Gpc	13.889 ± 0.031	$\chi^2_{\rm lensing}$	9.3 ± 1.0
$\boldsymbol{A^{dustTT}_{217}}$	93.3 ± 7.5	$z_{\rm drag}$	1059.51 ± 0.45	$\chi^2_{\rm simall}$	396.6 ± 1.5
$\boldsymbol{c_{100}}$	0.99963 ± 0.00063	$r_{\rm drag}$	147.33 ± 0.35	$\chi^2_{\rm lowl}$	23.36 ± 0.90
$\boldsymbol{c_{217}}$	0.99827 ± 0.00062	$k_{\rm D}$	0.14048 ± 0.00045	$\chi^2_{\rm plik}$	770.6 ± 5.2
H_0	69.26 ± 0.77	$100\theta_{\rm D}$	0.16101 ± 0.00026	$\chi^2_{\rm H073p45}$	6.6 ± 2.3
Ω_Λ	0.7024 ± 0.0070	$z_{\rm eq}$	3395 ± 30	$\chi^2_{\rm JLA}$	1037.4 ± 1.7
$\Omega_{\rm m}$	0.2976 ± 0.0070	$k_{\rm eq}$	0.010361 ± 0.000092	$\chi^2_{\rm 6DF}$	0.14 ± 0.16
$\Omega_{\rm m} h^2$	0.1427 ± 0.0013	$100\theta_{\rm eq}$	0.8141 ± 0.0056	$\chi^2_{\rm MGS}$	2.73 ± 0.74
$\Omega_{\rm m} h^3$	0.0988 ± 0.0014	$100\theta_{\rm s,eq}$	0.4500 ± 0.0029	$\chi^2_{\rm DR12BAO}$	5.2 ± 1.4
σ_8	0.830 ± 0.012	$H(0.15)$	$74.25^{+0.66}_{-0.74}$	$\chi^2_{\rm prior}$	7.3 ± 3.7
S_8	0.827 ± 0.013	$D_{\rm M}(0.15)$	627.6 ± 6.0	$\chi^2_{\rm CMB}$	1199.9 ± 5.4
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4530 ± 0.0071	$H(0.38)$	83.62 ± 0.63	$\chi^2_{\rm BAO}$	8.1 ± 2.1
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.6133 ± 0.0085	$D_{\rm M}(0.38)$	1504 ± 13		

$\bar{\chi}^2_{\rm eff} = 2259.41$; $\Delta\bar{\chi}^2_{\rm eff} = -3.02$; $R - 1 = 0.01165$

19.33 base_w_wa_plikHM_TTTEEE_lowl_lowE_BAO_Riess18_Pantheon

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022405	0.02237 ± 0.00014	σ_8	0.8326	0.833 ± 0.013	$H(0.38)$	83.72	83.77 ± 0.61
$\boldsymbol{\Omega_c h^2}$	0.12004	0.1203 ± 0.0012	S_8	0.8291	0.830 ± 0.014	$D_M(0.38)$	1502.8	1501 ± 13
$\boldsymbol{100\theta_{MC}}$	1.040962	1.04092 ± 0.00031	$\sigma_8\Omega_m^{0.5}$	0.4541	0.4547 ± 0.0078	$H(0.51)$	90.049	90.05 ± 0.48
$\boldsymbol{\tau}$	0.0551	0.0540 ± 0.0079	$\sigma_8\Omega_m^{0.25}$	0.6149	0.6156 ± 0.0096	$D_M(0.51)$	1951.9	1950 ± 15
$\boldsymbol{w_0}$	-1.010	-0.999 ± 0.079	$\sigma_8/h^{0.5}$	0.9998	1.001 ± 0.014	$H(0.61)$	95.402	95.36 ± 0.39
$\boldsymbol{w_a}$	-0.215	$-0.29^{+0.35}_{-0.28}$	$r_{drag}h$	101.98	102.0 ± 1.1	$D_M(0.61)$	2275.4	2274 ± 16
$\boldsymbol{\ln(10^{10}A_s)}$	3.0469	3.044 ± 0.016	$\langle d^2\rangle^{1/2}$	2.4613	2.466 ± 0.031	$H(2.33)$	235.02	234.96 ± 0.90
$\boldsymbol{n_s}$	0.96641	0.9646 ± 0.0041	z_{re}	7.74	7.61 ± 0.80	$D_M(2.33)$	5749.8	5752 ± 10
$\boldsymbol{y_{cal}}$	1.00069	1.0006 ± 0.0025	$10^9 A_s$	2.1050	2.100 ± 0.034	$f\sigma_8(0.15)$	0.4623	0.4626 ± 0.0082
$\boldsymbol{A_{217}^{CIB}}$	45.5	46 ± 7	$10^9 A_s e^{-2\tau}$	1.8852	1.885 ± 0.011	$\sigma_8(0.15)$	0.7706	0.771 ± 0.013
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.73	—	D_{40}	1228.4	1231 ± 12	$f\sigma_8(0.38)$	0.4872	0.4879 ± 0.0095
$\boldsymbol{A_{143}^{tSZ}}$	7.05	$5.5^{+2.1}_{-1.9}$	D_{220}	5734.5	5734 ± 39	$\sigma_8(0.38)$	0.6840	0.685 ± 0.011
$\boldsymbol{A_{100}^{PS}}$	247.5	258 ± 28	D_{810}	2542.6	2540 ± 14	$f\sigma_8(0.51)$	0.4884	0.489 ± 0.010
$\boldsymbol{A_{143}^{PS}}$	51.3	46 ± 8	D_{1420}	818.96	817.2 ± 4.8	$\sigma_8(0.51)$	0.6402	0.641 ± 0.010
$\boldsymbol{A_{143\times217}^{PS}}$	54.9	43 ± 9	D_{2000}	231.63	231.0 ± 1.6	$f\sigma_8(0.61)$	0.4847	0.486 ± 0.010
$\boldsymbol{A_{217}^{PS}}$	122.8	115 ± 10	$n_{s,0.002}$	0.96641	0.9646 ± 0.0041	$\sigma_8(0.61)$	0.6091	0.6096 ± 0.0098
$\boldsymbol{A^{kSZ}}$	0.00	< 4.21	Y_P	0.245409	$0.245394^{+0.000059}_{-0.000053}$	$f\sigma_8(2.33)$	0.3077	0.3079 ± 0.0051
$\boldsymbol{A_{100}^{dust TT}}$	8.73	8.9 ± 1.8	Y_P^{BBN}	0.246736	$0.246720^{+0.000060}_{-0.000053}$	$\sigma_8(2.33)$	0.31468	0.3146 ± 0.0040
$\boldsymbol{A_{143}^{dust TT}}$	11.00	10.9 ± 1.8	10^5D/H	2.5790	2.586 ± 0.027	f_{2000}^{143}	28.35	29.4 ± 2.7
$\boldsymbol{A_{143\times217}^{dust TT}}$	20.10	18.6 ± 3.3	Age/Gyr	13.7367	$13.737^{+0.027}_{-0.031}$	$f_{2000}^{143\times217}$	31.81	32.1 ± 1.8
$\boldsymbol{A_{217}^{dust TT}}$	95.4	93.8 ± 7.3	z_*	1089.879	1089.94 ± 0.26	f_{2000}^{217}	106.35	106.9 ± 1.8
$\boldsymbol{A_{100}^{dust TE}}$	0.1141	0.115 ± 0.038	r_*	144.396	144.36 ± 0.28	χ^2_{simall}	396.17	397.1 ± 1.9
$\boldsymbol{A_{100\times143}^{dust TE}}$	0.1352	0.135 ± 0.029	$100\theta_*$	1.041135	1.04110 ± 0.00030	χ^2_{lowl}	23.09	23.44 ± 0.88
$\boldsymbol{A_{100\times217}^{dust TE}}$	0.479	0.481 ± 0.085	$D_M(z_*)$/Gpc	13.8691	13.866 ± 0.026	χ^2_{plik}	2343.8	2358.6 ± 5.8
$\boldsymbol{A_{143}^{dust TE}}$	0.227	0.225 ± 0.054	z_{drag}	1060.009	1059.96 ± 0.30	$\chi^2_{H073p45}$	6.09	6.2 ± 2.2
$\boldsymbol{A_{143\times217}^{dust TE}}$	0.667	0.665 ± 0.080	r_{drag}	147.045	147.02 ± 0.28	χ^2_{JLA}	1036.53	1037.5 ± 1.7
$\boldsymbol{A_{217}^{dust TE}}$	2.077	2.08 ± 0.27	k_D	0.140944	0.14094 ± 0.00031	χ^2_{6DF}	0.083	0.14 ± 0.15
$\boldsymbol{c_{100}}$	0.99972	0.99967 ± 0.00061	$100\theta_D$	0.160715	0.16075 ± 0.00017	χ^2_{MGS}	2.59	2.72 ± 0.73
$\boldsymbol{c_{217}}$	0.99816	0.99819 ± 0.00062	z_{eq}	3403.9	3409 ± 28	$\chi^2_{DR12BAO}$	4.35	5.3 ± 1.3
H_0	69.35	69.39 ± 0.76	k_{eq}	0.010389	0.010403 ± 0.000086	χ^2_{prior}	1.58	11.6 ± 4.5
Ω_Λ	0.7025	0.7023 ± 0.0069	$100\theta_{eq}$	0.8131	0.8122 ± 0.0053	χ^2_{BAO}	7.03	8.1 ± 2.0
Ω_m	0.2975	0.2977 ± 0.0069	$100\theta_{s,eq}$	0.44927	0.4488 ± 0.0027	χ^2_{CMB}	2763.1	2779.1 ± 5.9
$\Omega_m h^2$	0.14308	0.1433 ± 0.0012	$H(0.15)$	74.30	74.40 ± 0.70			
$\Omega_m h^3$	0.09923	0.0994 ± 0.0014	$D_M(0.15)$	626.9	626.4 ± 5.9			

Best-fit $\chi^2_{eff} = 3814.32$; $\bar{\chi}^2_{eff} = 3842.43$; $R - 1 = 0.00687$

χ^2_{eff}: BAO - 6DF: 0.08 MGS: 2.59 DR12BAO: 4.35 CMB - simall_100x143_offlike5_EE_Aplanck_B: 396.17 commander_dx12_v3_2_29: 23.09 plik_rd12_HM_v22b_TTTEEE: 2343.84 Hubble - H073p45: 6.09 SN - JLA Pantheon: 1036.53

19.34 base_w_wa_plikHM_TTTEEE_lowl_lowE_BAO_Riess18_Pantheon_post_lensing

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022420	0.02239 ± 0.00014	σ_8	0.8298	0.830 ± 0.010	$H(0.38)$	83.77	83.75 ± 0.61
$\boldsymbol{\Omega_c h^2}$	0.11987	0.1200 ± 0.0011	S_8	0.8252	0.826 ± 0.011	$D_M(0.38)$	1501.5	1502 ± 12
$\boldsymbol{100\theta_{MC}}$	1.040950	1.04094 ± 0.00030	$\sigma_8\Omega_m^{0.5}$	0.4520	0.4524 ± 0.0060	$H(0.51)$	90.092	90.05 ± 0.49
$\boldsymbol{\tau}$	0.0534	$0.0532^{+0.0069}_{-0.0079}$	$\sigma_8\Omega_m^{0.25}$	0.6124	0.6128 ± 0.0071	$D_M(0.51)$	1950.4	1951 ± 15
$\boldsymbol{w_0}$	-1.009	-1.005 ± 0.077	$\sigma_8/h^{0.5}$	0.9960	0.996 ± 0.010	$H(0.61)$	95.435	95.38 ± 0.39
$\boldsymbol{w_a}$	-0.219	$-0.25^{+0.32}_{-0.27}$	$r_{drag}h$	102.09	102.0 ± 1.1	$D_M(0.61)$	2273.8	2275 ± 16
$\boldsymbol{\ln(10^{10}A_s)}$	3.0421	3.042 ± 0.015	$\langle d^2\rangle^{1/2}$	2.4542	2.457 ± 0.023	$H(2.33)$	234.91	234.93 ± 0.91
$\boldsymbol{n_s}$	0.96619	0.9651 ± 0.0039	z_{re}	7.56	7.53 ± 0.76	$D_M(2.33)$	5748.7	5751 ± 10
$\boldsymbol{y_{cal}}$	1.00026	1.0004 ± 0.0025	$10^9 A_s$	2.0950	2.094 ± 0.031	$f\sigma_8(0.15)$	0.4601	0.4604 ± 0.0066
$\boldsymbol{A_{217}^{CIB}}$	46.7	47 ± 7	$10^9 A_s e^{-2\tau}$	1.8827	1.883 ± 0.010	$\sigma_8(0.15)$	0.7682	0.7682 ± 0.0099
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.57	—	D_{40}	1227.4	1230 ± 11	$f\sigma_8(0.38)$	0.4851	0.4854 ± 0.0077
$\boldsymbol{A_{143}^{tSZ}}$	7.09	$5.5^{+2.2}_{-1.8}$	D_{220}	5733.5	5733 ± 39	$\sigma_8(0.38)$	0.6819	0.6819 ± 0.0089
$\boldsymbol{A_{100}^{PS}}$	249.3	258 ± 28	D_{810}	2539.8	2538 ± 13	$f\sigma_8(0.51)$	0.4864	0.4868 ± 0.0079
$\boldsymbol{A_{143}^{PS}}$	49.4	46 ± 8	D_{1420}	817.98	816.9 ± 4.9	$\sigma_8(0.51)$	0.6383	0.6383 ± 0.0083
$\boldsymbol{A_{143\times217}^{PS}}$	50.6	43 ± 9	D_{2000}	231.29	230.9 ± 1.6	$f\sigma_8(0.61)$	0.4829	0.4833 ± 0.0080
$\boldsymbol{A_{217}^{PS}}$	120.4	115.3 ± 9.9	$n_{s,0.002}$	0.96619	0.9651 ± 0.0039	$\sigma_8(0.61)$	0.6073	0.6073 ± 0.0078
$\boldsymbol{A^{kSZ}}$	0.00	< 4.27	Y_P	0.245415	0.245400 ± 0.000056	$f\sigma_8(2.33)$	0.30688	0.3068 ± 0.0041
$\boldsymbol{A_{100}^{dust TT}}$	8.86	8.9 ± 1.9	Y_P^{BBN}	0.246742	0.246726 ± 0.000056	$\sigma_8(2.33)$	0.31385	0.3137 ± 0.0033
$\boldsymbol{A_{143}^{dust TT}}$	11.04	10.9 ± 1.8	10^5D/H	2.5762	2.583 ± 0.027	f_{2000}^{143}	28.65	29.4 ± 2.8
$\boldsymbol{A_{143\times217}^{dust TT}}$	20.06	18.7 ± 3.3	Age/Gyr	13.7344	13.738 ± 0.029	$f_{2000}^{143\times217}$	31.83	32.2 ± 1.8
$\boldsymbol{A_{217}^{dust TT}}$	95.1	93.8 ± 7.3	z_*	1089.844	1089.90 ± 0.24	f_{2000}^{217}	106.36	107.0 ± 1.8
$\boldsymbol{A_{100}^{dust TE}}$	0.1145	0.115 ± 0.039	r_*	144.428	144.43 ± 0.24	$\chi^2_{lensing}$	8.743	9.18 ± 0.81
$\boldsymbol{A_{100\times143}^{dust TE}}$	0.1346	0.135 ± 0.030	$100\theta_*$	1.041128	1.04112 ± 0.00029	χ^2_{simall}	395.89	396.8 ± 1.6
$\boldsymbol{A_{100\times217}^{dust TE}}$	0.479	0.481 ± 0.086	$D_M(z_*)$/Gpc	13.8722	13.872 ± 0.023	χ^2_{lowl}	23.08	23.30 ± 0.79
$\boldsymbol{A_{143}^{dust TE}}$	0.224	0.224 ± 0.054	z_{drag}	1060.047	1059.97 ± 0.30	χ^2_{plik}	2344.3	2358.6 ± 5.8
$\boldsymbol{A_{143\times217}^{dust TE}}$	0.665	0.663 ± 0.078	r_{drag}	147.071	147.08 ± 0.25	$\chi^2_{H073p45}$	5.91	6.2 ± 2.3
$\boldsymbol{A_{217}^{dust TE}}$	2.071	2.08 ± 0.27	k_D	0.140926	0.14089 ± 0.00029	χ^2_{JLA}	1036.57	1037.4 ± 1.7
$\boldsymbol{c_{100}}$	0.99974	0.99965 ± 0.00061	$100\theta_D$	0.160699	0.16074 ± 0.00018	χ^2_{6DF}	0.098	0.14 ± 0.14
$\boldsymbol{c_{217}}$	0.99818	0.99817 ± 0.00063	z_{eq}	3400.2	3402 ± 24	χ^2_{MGS}	2.67	2.72 ± 0.73
H_0	69.42	69.38 ± 0.76	k_{eq}	0.010378	0.010383 ± 0.000074	$\chi^2_{DR12BAO}$	4.41	5.2 ± 1.3
Ω_Λ	0.7034	0.7028 ± 0.0069	$100\theta_{eq}$	0.81382	0.8135 ± 0.0046	χ^2_{prior}	1.51	11.7 ± 4.6
Ω_m	0.2966	0.2972 ± 0.0069	$100\theta_{s,eq}$	0.44962	0.4495 ± 0.0023	χ^2_{CMB}	2772.0	2787.9 ± 6.1
$\Omega_m h^2$	0.14293	0.1430 ± 0.0010	$H(0.15)$	74.37	74.36 ± 0.68	χ^2_{BAO}	7.18	8.1 ± 2.0
$\Omega_m h^3$	0.09922	0.0992 ± 0.0013	$D_M(0.15)$	626.4	$626.6^{+5.4}_{-6.1}$			

Best-fit $\chi^2_{eff} = 3823.16$; $\bar{\chi}^2_{eff} = 3851.33$; $\Delta\bar{\chi}^2_{eff} = -3.03$; $R - 1 = 0.06715$

χ^2_{eff}: BAO - 6DF: 0.10 MGS: 2.67 DR12BAO: 4.41 CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.74 simall_100x143_offlike5_EE_Aplanck_B: 395.89 commander_dx12_v3_2_29: 23.08 plik_rd12_HM_v22b_TTTEEE: 2344.28 Hubble - H073p45: 5.91 SN - JLA Pantheon: 1036.57

19.35 base_w_wa_plikHM_TTTEEE_lowl_lowE_BAO_Riess18_Pantheon_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02237 ± 0.00014	σ_8	0.834 ± 0.013	$H(0.38)$	83.76 ± 0.61
$\boldsymbol{\Omega_c h^2}$	0.1202 ± 0.0012	S_8	0.831 ± 0.014	$D_{\rm M}(0.38)$	1501 ± 13
$\boldsymbol{100\theta_{MC}}$	1.04092 ± 0.00031	$\sigma_8\Omega_{\rm m}^{0.5}$	0.4550 ± 0.0077	$H(0.51)$	90.05 ± 0.48
$\boldsymbol{\tau}$	$0.0552^{+0.0050}_{-0.0084}$	$\sigma_8\Omega_{\rm m}^{0.25}$	0.6161 ± 0.0095	$D_{\rm M}(0.51)$	1950 ± 15
$\boldsymbol{w_0}$	-1.000 ± 0.079	$\sigma_8/h^{0.5}$	1.001 ± 0.014	$H(0.61)$	95.36 ± 0.39
$\boldsymbol{w_a}$	$-0.28^{+0.35}_{-0.29}$	$r_{\rm drag}h$	102.0 ± 1.1	$D_{\rm M}(0.61)$	2274 ± 16
$\boldsymbol{\ln(10^{10}A_s)}$	$3.047^{+0.012}_{-0.016}$	$\langle d^2\rangle^{1/2}$	2.468 ± 0.031	$H(2.33)$	234.96 ± 0.90
$\boldsymbol{n_s}$	0.9648 ± 0.0041	$z_{\rm re}$	$7.74^{+0.56}_{-0.82}$	$D_{\rm M}(2.33)$	5752 ± 10
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0025	$10^9 A_{\rm s}$	$2.105^{+0.024}_{-0.035}$	$f\sigma_8(0.15)$	0.4630 ± 0.0081
$\boldsymbol{A^{CIB}_{217}}$	46 ± 7	$10^9 A_{\rm s}e^{-2\tau}$	1.885 ± 0.011	$\sigma_8(0.15)$	0.772 ± 0.012
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{40}	1232 ± 12	$f\sigma_8(0.38)$	0.4882 ± 0.0094
$\boldsymbol{A^{tSZ}_{143}}$	$5.5^{+2.1}_{-1.9}$	D_{220}	5734 ± 39	$\sigma_8(0.38)$	0.685 ± 0.011
$\boldsymbol{A^{PS}_{100}}$	258 ± 28	D_{810}	2540 ± 14	$f\sigma_8(0.51)$	0.4897 ± 0.0099
$\boldsymbol{A^{PS}_{143}}$	46 ± 8	D_{1420}	817.2 ± 4.8	$\sigma_8(0.51)$	0.641 ± 0.010
$\boldsymbol{A^{PS}_{143\times217}}$	43 ± 9	D_{2000}	231.0 ± 1.6	$f\sigma_8(0.61)$	0.486 ± 0.010
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	$n_{\rm s,0.002}$	0.9648 ± 0.0041	$\sigma_8(0.61)$	0.6102 ± 0.0096
$\boldsymbol{A^{kSZ}}$	< 4.18	$Y_{\rm P}$	$0.245395^{+0.000059}_{-0.000053}$	$f\sigma_8(2.33)$	0.3082 ± 0.0050
$\boldsymbol{A^{dustTT}_{100}}$	8.9 ± 1.8	$Y_{\rm P}^{\rm BBN}$	$0.246722^{+0.000059}_{-0.000053}$	$\sigma_8(2.33)$	0.3149 ± 0.0039
$\boldsymbol{A^{dustTT}_{143}}$	10.9 ± 1.8	10^5D/H	2.585 ± 0.027	f^{143}_{2000}	29.3 ± 2.7
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.6 ± 3.3	Age/Gyr	$13.737^{+0.027}_{-0.031}$	$f^{143\times217}_{2000}$	32.0 ± 1.8
$\boldsymbol{A^{dustTT}_{217}}$	93.8 ± 7.3	z_*	1089.94 ± 0.25	f^{217}_{2000}	106.9 ± 1.8
$\boldsymbol{A^{dustTE}_{100}}$	0.115 ± 0.038	r_*	144.37 ± 0.28	$\chi^2_{\rm simall}$	397.0 ± 1.9
$\boldsymbol{A^{dustTE}_{100\times143}}$	0.135 ± 0.029	$100\theta_*$	1.04110 ± 0.00030	$\chi^2_{\rm lowl}$	23.44 ± 0.88
$\boldsymbol{A^{dustTE}_{100\times217}}$	0.481 ± 0.085	$D_{\rm M}(z_*)$/Gpc	13.867 ± 0.026	$\chi^2_{\rm plik}$	2358.4 ± 5.7
$\boldsymbol{A^{dustTE}_{143}}$	0.225 ± 0.054	$z_{\rm drag}$	1059.96 ± 0.30	$\chi^2_{\rm H073p45}$	6.2 ± 2.2
$\boldsymbol{A^{dustTE}_{143\times217}}$	0.665 ± 0.080	$r_{\rm drag}$	147.03 ± 0.28	$\chi^2_{\rm JLA}$	1037.5 ± 1.7
$\boldsymbol{A^{dustTE}_{217}}$	2.08 ± 0.27	$k_{\rm D}$	0.14094 ± 0.00031	$\chi^2_{\rm 6DF}$	0.14 ± 0.15
$\boldsymbol{c_{100}}$	0.99967 ± 0.00061	$100\theta_{\rm D}$	0.16075 ± 0.00017	$\chi^2_{\rm MGS}$	2.72 ± 0.73
$\boldsymbol{c_{217}}$	0.99818 ± 0.00062	$z_{\rm eq}$	3408 ± 28	$\chi^2_{\rm DR12BAO}$	5.3 ± 1.3
H_0	69.39 ± 0.75	$k_{\rm eq}$	0.010401 ± 0.000085	$\chi^2_{\rm prior}$	11.6 ± 4.5
Ω_Λ	0.7024 ± 0.0069	$100\theta_{\rm eq}$	0.8124 ± 0.0052	$\chi^2_{\rm BAO}$	8.1 ± 2.0
$\Omega_{\rm m}$	0.2976 ± 0.0069	$100\theta_{\rm s,eq}$	0.4489 ± 0.0027	$\chi^2_{\rm CMB}$	2778.8 ± 5.8
$\Omega_{\rm m}h^2$	0.1432 ± 0.0012	$H(0.15)$	74.40 ± 0.70		
$\Omega_{\rm m}h^3$	0.0994 ± 0.0014	$D_{\rm M}(0.15)$	626.4 ± 5.9		

$\bar{\chi}^2_{\rm eff} = 3842.17$; $R - 1 = 0.00769$

19.36 base_w_wa_plikHM_TTTEEE_lowl_lowE_BAO_Riess18_Pantheon_post_lensing_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02239 ± 0.00014	σ_8	0.830 ± 0.010	$H(0.38)$	83.75 ± 0.60
$\boldsymbol{\Omega_c h^2}$	0.1199 ± 0.0011	S_8	0.826 ± 0.011	$D_M(0.38)$	1502 ± 12
$\boldsymbol{100\theta_{MC}}$	1.04094 ± 0.00030	$\sigma_8\Omega_m^{0.5}$	0.4525 ± 0.0060	$H(0.51)$	90.06 ± 0.48
$\boldsymbol{\tau}$	$0.0544^{+0.0049}_{-0.0079}$	$\sigma_8\Omega_m^{0.25}$	0.6130 ± 0.0070	$D_M(0.51)$	1951 ± 15
$\boldsymbol{w_0}$	-1.005 ± 0.076	$\sigma_8/h^{0.5}$	0.997 ± 0.010	$H(0.61)$	95.39 ± 0.39
$\boldsymbol{w_a}$	$-0.24^{+0.32}_{-0.27}$	$r_{drag}h$	102.0 ± 1.1	$D_M(0.61)$	2275 ± 16
$\boldsymbol{\ln(10^{10}A_s)}$	$3.044^{+0.011}_{-0.015}$	$\langle d^2\rangle^{1/2}$	2.458 ± 0.023	$H(2.33)$	234.92 ± 0.91
$\boldsymbol{n_s}$	0.9654 ± 0.0038	z_{re}	$7.65^{+0.50}_{-0.83}$	$D_M(2.33)$	5751 ± 10
$\boldsymbol{y_{cal}}$	1.0004 ± 0.0025	$10^9 A_s$	$2.098^{+0.022}_{-0.031}$	$f\sigma_8(0.15)$	0.4605 ± 0.0066
$\boldsymbol{A_{217}^{CIB}}$	47 ± 7	$10^9 A_s e^{-2\tau}$	1.882 ± 0.010	$\sigma_8(0.15)$	0.7685 ± 0.0099
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{40}	1229 ± 11	$f\sigma_8(0.38)$	0.4855 ± 0.0077
$\boldsymbol{A_{143}^{tSZ}}$	$5.6^{+2.2}_{-1.8}$	D_{220}	5733 ± 39	$\sigma_8(0.38)$	0.6822 ± 0.0089
$\boldsymbol{A_{100}^{PS}}$	257 ± 28	D_{810}	2538 ± 13	$f\sigma_8(0.51)$	0.4868 ± 0.0079
$\boldsymbol{A_{143}^{PS}}$	46 ± 8	D_{1420}	816.9 ± 4.9	$\sigma_8(0.51)$	0.6386 ± 0.0083
$\boldsymbol{A_{143\times217}^{PS}}$	43 ± 9	D_{2000}	230.9 ± 1.6	$f\sigma_8(0.61)$	0.4833 ± 0.0081
$\boldsymbol{A_{217}^{PS}}$	115.4 ± 9.9	$n_{s,0.002}$	0.9654 ± 0.0038	$\sigma_8(0.61)$	0.6076 ± 0.0078
$\boldsymbol{A^{kSZ}}$	< 4.22	Y_P	0.245401 ± 0.000056	$f\sigma_8(2.33)$	0.3069 ± 0.0041
$\boldsymbol{A_{100}^{dustTT}}$	8.9 ± 1.9	Y_P^{BBN}	0.246728 ± 0.000056	$\sigma_8(2.33)$	0.3139 ± 0.0033
$\boldsymbol{A_{143}^{dustTT}}$	10.9 ± 1.8	10^5D/H	2.582 ± 0.026	f_{2000}^{143}	29.3 ± 2.8
$\boldsymbol{A_{143\times217}^{dustTT}}$	$18.6^{+3.4}_{-3.0}$	Age/Gyr	$13.738^{+0.027}_{-0.030}$	$f_{2000}^{143\times217}$	32.1 ± 1.8
$\boldsymbol{A_{217}^{dustTT}}$	93.8 ± 7.2	z_*	1089.89 ± 0.24	f_{2000}^{217}	107.0 ± 1.8
$\boldsymbol{A_{100}^{dustTE}}$	0.115 ± 0.039	r_*	144.44 ± 0.24	$\chi^2_{lensing}$	9.19 ± 0.83
$\boldsymbol{A_{100\times143}^{dustTE}}$	0.135 ± 0.030	$100\theta_*$	1.04112 ± 0.00029	χ^2_{simall}	396.8 ± 1.6
$\boldsymbol{A_{100\times217}^{dustTE}}$	0.482 ± 0.086	$D_M(z_*)$/Gpc	13.874 ± 0.022	χ^2_{lowl}	23.28 ± 0.78
$\boldsymbol{A_{143}^{dustTE}}$	0.224 ± 0.054	z_{drag}	1059.97 ± 0.30	χ^2_{plik}	2358.4 ± 5.8
$\boldsymbol{A_{143\times217}^{dustTE}}$	0.662 ± 0.078	r_{drag}	147.10 ± 0.24	$\chi^2_{H073p45}$	6.2 ± 2.3
$\boldsymbol{A_{217}^{dustTE}}$	2.07 ± 0.27	k_D	0.14088 ± 0.00029	χ^2_{JLA}	1037.4 ± 1.6
$\boldsymbol{c_{100}}$	0.99965 ± 0.00061	$100\theta_D$	0.16074 ± 0.00018	χ^2_{6DF}	0.14 ± 0.14
$\boldsymbol{c_{217}}$	0.99817 ± 0.00064	z_{eq}	3400 ± 24	χ^2_{MGS}	2.72 ± 0.73
H_0	69.37 ± 0.76	k_{eq}	0.010378 ± 0.000072	$\chi^2_{DR12BAO}$	5.2 ± 1.3
Ω_Λ	0.7029 ± 0.0070	$100\theta_{eq}$	0.8138 ± 0.0045	χ^2_{prior}	11.7 ± 4.6
Ω_m	0.2971 ± 0.0070	$100\theta_{s,eq}$	0.4496 ± 0.0023	χ^2_{CMB}	2787.7 ± 6.0
$\Omega_m h^2$	0.14293 ± 0.00099	$H(0.15)$	74.35 ± 0.68	χ^2_{BAO}	8.0 ± 2.0
$\Omega_m h^3$	0.0992 ± 0.0013	$D_M(0.15)$	$626.7^{+5.4}_{-6.2}$		

$\bar{\chi}^2_{eff} = 3851.10$; $\Delta\bar{\chi}^2_{eff} = -3.17$; $R - 1 = 0.07242$

19.37 base_w_wa_CamSpecHM_TTTEEE_lowl_lowE_BAO_Riess18_Pantheon

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02231 ± 0.00015	$\sigma_8\Omega_m^{0.5}$	0.4509 ± 0.0079	$D_M(0.38)$	1503 ± 13
$\boldsymbol{\Omega_c h^2}$	0.1197 ± 0.0013	$\sigma_8\Omega_m^{0.25}$	0.6107 ± 0.0097	$H(0.51)$	90.01 ± 0.51
$\boldsymbol{100\theta_{MC}}$	1.04090 ± 0.00031	$\sigma_8/h^{0.5}$	0.994 ± 0.014	$D_M(0.51)$	1953 ± 16
$\boldsymbol{\tau}$	0.0526 ± 0.0080	$r_{drag}h$	102.0 ± 1.1	$H(0.61)$	95.34 ± 0.41
$\boldsymbol{w_0}$	-1.002 ± 0.080	$\langle d^2\rangle^{1/2}$	2.449 ± 0.032	$D_M(0.61)$	2276 ± 17
$\boldsymbol{w_a}$	$-0.24^{+0.35}_{-0.29}$	z_{re}	7.48 ± 0.82	$H(2.33)$	234.74 ± 0.95
$\boldsymbol{\ln(10^{10}A_s)}$	3.038 ± 0.016	$10^9 A_s$	2.087 ± 0.034	$D_M(2.33)$	5755 ± 11
$\boldsymbol{n_s}$	0.9659 ± 0.0044	$10^9 A_s e^{-2\tau}$	1.879 ± 0.011	$f\sigma_8(0.15)$	0.4586 ± 0.0082
$\boldsymbol{y_{cal}}$	1.0004 ± 0.0025	D_{40}	1225 ± 13	$\sigma_8(0.15)$	0.766 ± 0.013
$\boldsymbol{A^{PS}_{100}}$	239 ± 25	D_{220}	5718 ± 39	$f\sigma_8(0.38)$	0.4834 ± 0.0095
$\boldsymbol{A^{PS}_{143}}$	39 ± 8	D_{810}	2535 ± 13	$\sigma_8(0.38)$	0.680 ± 0.011
$\boldsymbol{A^{PS}_{217}}$	103 ± 10	D_{1420}	815.6 ± 4.8	$f\sigma_8(0.51)$	0.4848 ± 0.0099
$\boldsymbol{A^{CIB}_{217}}$	39 ± 7	D_{2000}	230.3 ± 1.6	$\sigma_8(0.51)$	0.636 ± 0.010
$\boldsymbol{A^{tSZ}_{143}}$	$3.8^{+1.8}_{-2.5}$	$n_{s,0.002}$	0.9659 ± 0.0044	$f\sigma_8(0.61)$	0.481 ± 0.010
$\boldsymbol{r^{PS}_{143\times217}}$	0.66 ± 0.13	Y_P	0.245369 ± 0.000062	$\sigma_8(0.61)$	0.6053 ± 0.0098
$\boldsymbol{r^{CIB}_{143\times217}}$	$0.55^{+0.39}_{-0.19}$	Y_P^{BBN}	0.246696 ± 0.000062	$f\sigma_8(2.33)$	0.3058 ± 0.0051
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	10^5D/H	2.597 ± 0.029	$\sigma_8(2.33)$	0.3128 ± 0.0040
$\boldsymbol{A^{kSZ}}$	$4.7^{+2.1}_{-4.1}$	Age/Gyr	$13.749^{+0.029}_{-0.033}$	f^{143}_{2000}	29.6 ± 2.9
$\boldsymbol{A^{dust}_{100}}$	1.01 ± 0.19	z_*	1089.97 ± 0.26	f^{217}_{2000}	106.7 ± 1.9
$\boldsymbol{A^{dust}_{143}}$	0.96 ± 0.17	r_*	144.56 ± 0.29	$f^{143\times217}_{2000}$	32.0 ± 2.0
$\boldsymbol{A^{dust}_{217}}$	0.97 ± 0.10	$100\theta_*$	1.04109 ± 0.00030	χ^2_{simall}	396.9 ± 1.7
$\boldsymbol{A^{dust}_{143\times217}}$	1.03 ± 0.16	$D_M(z_*)$/Gpc	13.885 ± 0.027	χ^2_{lowl}	23.01 ± 0.88
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	z_{drag}	1059.77 ± 0.33	$\chi^2_{CamSpec}$	11514.1 ± 5.6
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	r_{drag}	147.24 ± 0.30	$\chi^2_{H073p45}$	6.5 ± 2.3
$\boldsymbol{c_{TE}}$	0.9962 ± 0.0049	k_D	0.14066 ± 0.00035	χ^2_{JLA}	1037.4 ± 1.6
$\boldsymbol{c_{EE}}$	0.9916 ± 0.0050	$100\theta_D$	0.16085 ± 0.00019	χ^2_{6DF}	0.14 ± 0.15
H_0	69.29 ± 0.76	z_{eq}	3393 ± 29	χ^2_{MGS}	2.72 ± 0.75
Ω_Λ	0.7028 ± 0.0069	k_{eq}	0.010357 ± 0.000088	$\chi^2_{DR12BAO}$	5.2 ± 1.4
Ω_m	0.2972 ± 0.0069	$100\theta_{eq}$	0.8148 ± 0.0054	χ^2_{prior}	7.7 ± 3.4
$\Omega_m h^2$	0.1426 ± 0.0012	$100\theta_{s,eq}$	0.4502 ± 0.0028	χ^2_{BAO}	8.1 ± 2.1
$\Omega_m h^3$	0.0988 ± 0.0014	$H(0.15)$	74.29 ± 0.72	χ^2_{CMB}	11934.0 ± 5.7
σ_8	0.827 ± 0.013	$D_M(0.15)$	627.3 ± 6.1		
S_8	0.823 ± 0.014	$H(0.38)$	83.70 ± 0.64		

$\bar{\chi}^2_{eff} = 12993.71$; $R - 1 = 0.01687$

19.38 base_w_wa_CamSpecHM_TTTEEE_lowl_lowE_BAO_Riess18_Pantheon_post_lensing

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02232 ± 0.00015	$\sigma_8\Omega_m^{0.5}$	0.4506 ± 0.0060	$D_M(0.38)$	1503 ± 13
$\boldsymbol{\Omega_c h^2}$	0.1196 ± 0.0011	$\sigma_8\Omega_m^{0.25}$	0.6105 ± 0.0072	$H(0.51)$	90.04 ± 0.51
$\boldsymbol{100\theta_{MC}}$	1.04090 ± 0.00030	$\sigma_8/h^{0.5}$	0.993 ± 0.010	$D_M(0.51)$	1952 ± 15
$\boldsymbol{\tau}$	0.0528 ± 0.0076	$r_{drag}h$	102.0 ± 1.1	$H(0.61)$	95.37 ± 0.41
$\boldsymbol{w_0}$	-1.000 ± 0.078	$\langle d^2\rangle^{1/2}$	2.449 ± 0.024	$D_M(0.61)$	2276 ± 17
$\boldsymbol{w_a}$	$-0.25^{+0.32}_{-0.28}$	z_{re}	7.50 ± 0.77	$H(2.33)$	234.69 ± 0.95
$\boldsymbol{\ln(10^{10}A_s)}$	3.039 ± 0.015	$10^9 A_s$	2.088 ± 0.031	$D_M(2.33)$	5754 ± 11
$\boldsymbol{n_s}$	0.9659 ± 0.0041	$10^9 A_s e^{-2\tau}$	1.879 ± 0.010	$f\sigma_8(0.15)$	0.4583 ± 0.0067
$\boldsymbol{y_{cal}}$	1.0004 ± 0.0025	D_{40}	1225 ± 12	$\sigma_8(0.15)$	0.766 ± 0.010
$\boldsymbol{A_{100}^{PS}}$	239 ± 25	D_{220}	5720 ± 39	$f\sigma_8(0.38)$	0.4831 ± 0.0078
$\boldsymbol{A_{143}^{PS}}$	39 ± 8	D_{810}	2535 ± 13	$\sigma_8(0.38)$	0.6796 ± 0.0091
$\boldsymbol{A_{217}^{PS}}$	103 ± 10	D_{1420}	815.7 ± 4.8	$f\sigma_8(0.51)$	0.4845 ± 0.0081
$\boldsymbol{A_{217}^{CIB}}$	39 ± 7	D_{2000}	230.3 ± 1.6	$\sigma_8(0.51)$	0.6362 ± 0.0085
$\boldsymbol{A_{143}^{tSZ}}$	$3.8^{+1.8}_{-2.5}$	$n_{s,0.002}$	0.9659 ± 0.0041	$f\sigma_8(0.61)$	0.4811 ± 0.0082
$\boldsymbol{r_{143\times217}^{PS}}$	0.66 ± 0.13	Y_P	0.245372 ± 0.000061	$\sigma_8(0.61)$	0.6054 ± 0.0080
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.55^{+0.39}_{-0.20}$	Y_P^{BBN}	0.246698 ± 0.000061	$f\sigma_8(2.33)$	0.3058 ± 0.0042
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	10^5D/H	2.596 ± 0.028	$\sigma_8(2.33)$	0.3129 ± 0.0034
$\boldsymbol{A^{kSZ}}$	$4.8^{+2.3}_{-4.0}$	Age/Gyr	$13.747^{+0.028}_{-0.033}$	f_{2000}^{143}	29.6 ± 2.9
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.19	z_*	1089.96 ± 0.25	f_{2000}^{217}	106.8 ± 1.9
$\boldsymbol{A_{143}^{dust}}$	0.97 ± 0.17	r_*	144.57 ± 0.26	$f_{2000}^{143\times217}$	32.0 ± 2.0
$\boldsymbol{A_{217}^{dust}}$	0.97 ± 0.10	$100\theta_*$	1.04109 ± 0.00030	$\chi^2_{lensing}$	9.12 ± 0.69
$\boldsymbol{A_{143\times217}^{dust}}$	1.03 ± 0.16	$D_M(z_*)$/Gpc	13.886 ± 0.024	χ^2_{simall}	396.8 ± 1.5
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	z_{drag}	1059.78 ± 0.33	χ^2_{lowl}	23.01 ± 0.80
$\boldsymbol{c_{217}}$	1.0010 ± 0.0016	r_{drag}	147.25 ± 0.27	$\chi^2_{CamSpec}$	11513.8 ± 5.5
$\boldsymbol{c_{TE}}$	0.9962 ± 0.0048	k_D	0.14066 ± 0.00033	$\chi^2_{H073p45}$	6.4 ± 2.3
$\boldsymbol{c_{EE}}$	0.9917 ± 0.0049	$100\theta_D$	0.16084 ± 0.00019	χ^2_{JLA}	1037.3 ± 1.6
H_0	69.30 ± 0.75	z_{eq}	3392 ± 25	χ^2_{6DF}	0.15 ± 0.15
Ω_Λ	0.7030 ± 0.0068	k_{eq}	0.010353 ± 0.000075	χ^2_{MGS}	2.75 ± 0.74
Ω_m	0.2970 ± 0.0068	$100\theta_{eq}$	0.8150 ± 0.0046	$\chi^2_{DR12BAO}$	5.2 ± 1.4
$\Omega_m h^2$	0.1426 ± 0.0010	$100\theta_{s,eq}$	0.4503 ± 0.0024	χ^2_{prior}	7.7 ± 3.3
$\Omega_m h^3$	0.0988 ± 0.0013	$H(0.15)$	74.31 ± 0.70	χ^2_{CMB}	11942.7 ± 5.8
σ_8	0.827 ± 0.011	$D_M(0.15)$	627.1 ± 5.9	χ^2_{BAO}	8.1 ± 2.1
S_8	0.823 ± 0.011	$H(0.38)$	83.73 ± 0.63		

$\bar{\chi}^2_{eff} = 13002.37$; $\Delta\bar{\chi}^2_{eff} = -2.53$; $R - 1 = 0.01963$

19.39 base_w_wa_CamSpecHM_TTTEEE_lowl_lowE_BAO_Riess18_Pantheon_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02232 ± 0.00015	$\sigma_8\Omega_m^{0.5}$	0.4513 ± 0.0078	$D_M(0.38)$	1503 ± 13
$\boldsymbol{\Omega_c h^2}$	0.1196 ± 0.0013	$\sigma_8\Omega_m^{0.25}$	0.6113 ± 0.0096	$H(0.51)$	90.01 ± 0.51
$\boldsymbol{100\theta_{MC}}$	1.04090 ± 0.00031	$\sigma_8/h^{0.5}$	0.995 ± 0.014	$D_M(0.51)$	1953 ± 16
$\boldsymbol{\tau}$	$0.0543^{+0.0046}_{-0.0081}$	$r_{drag}h$	102.0 ± 1.1	$H(0.61)$	95.35 ± 0.41
$\boldsymbol{w_0}$	-1.003 ± 0.080	$\langle d^2\rangle^{1/2}$	2.451 ± 0.031	$D_M(0.61)$	2276 ± 17
$\boldsymbol{w_a}$	$-0.24^{+0.35}_{-0.29}$	z_{re}	$7.65^{+0.52}_{-0.81}$	$H(2.33)$	234.74 ± 0.95
$\boldsymbol{\ln(10^{10}A_s)}$	$3.041^{+0.012}_{-0.016}$	$10^9 A_s$	$2.094^{+0.024}_{-0.033}$	$D_M(2.33)$	5755 ± 11
$\boldsymbol{n_s}$	0.9661 ± 0.0044	$10^9 A_s e^{-2\tau}$	1.878 ± 0.011	$f\sigma_8(0.15)$	0.4591 ± 0.0082
$\boldsymbol{y_{cal}}$	1.0004 ± 0.0025	D_{40}	1225 ± 13	$\sigma_8(0.15)$	0.766 ± 0.012
$\boldsymbol{A^{PS}_{100}}$	239 ± 25	D_{220}	5718 ± 39	$f\sigma_8(0.38)$	0.4838 ± 0.0095
$\boldsymbol{A^{PS}_{143}}$	39 ± 8	D_{810}	2534 ± 13	$\sigma_8(0.38)$	0.680 ± 0.011
$\boldsymbol{A^{PS}_{217}}$	103 ± 10	D_{1420}	815.6 ± 4.8	$f\sigma_8(0.51)$	0.4852 ± 0.0099
$\boldsymbol{A^{CIB}_{217}}$	39 ± 7	D_{2000}	230.4 ± 1.6	$\sigma_8(0.51)$	0.637 ± 0.010
$\boldsymbol{A^{tSZ}_{143}}$	$3.8^{+1.9}_{-2.5}$	$n_{s,0.002}$	0.9661 ± 0.0044	$f\sigma_8(0.61)$	0.482 ± 0.010
$\boldsymbol{r^{PS}_{143\times217}}$	0.66 ± 0.13	Y_P	0.245371 ± 0.000062	$\sigma_8(0.61)$	0.6060 ± 0.0097
$\boldsymbol{r^{CIB}_{143\times217}}$	$0.55^{+0.39}_{-0.20}$	Y_P^{BBN}	0.246698 ± 0.000062	$f\sigma_8(2.33)$	0.3061 ± 0.0051
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	10^5D/H	2.596 ± 0.029	$\sigma_8(2.33)$	0.3132 ± 0.0039
$\boldsymbol{A^{kSZ}}$	$4.7^{+1.9}_{-4.3}$	Age/Gyr	$13.749^{+0.030}_{-0.033}$	f^{143}_{2000}	29.5 ± 2.9
$\boldsymbol{A^{dust}_{100}}$	1.01 ± 0.19	z_*	1089.96 ± 0.26	f^{217}_{2000}	106.7 ± 1.9
$\boldsymbol{A^{dust}_{143}}$	0.96 ± 0.17	r_*	144.57 ± 0.29	$f^{143\times217}_{2000}$	32.0 ± 2.0
$\boldsymbol{A^{dust}_{217}}$	0.97 ± 0.10	$100\theta_*$	1.04109 ± 0.00030	χ^2_{simall}	396.8 ± 1.6
$\boldsymbol{A^{dust}_{143\times217}}$	1.03 ± 0.16	$D_M(z_*)$/Gpc	13.886 ± 0.027	χ^2_{lowl}	23.02 ± 0.89
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	z_{drag}	1059.78 ± 0.33	$\chi^2_{CamSpec}$	11514.0 ± 5.6
$\boldsymbol{c_{217}}$	1.0010 ± 0.0016	r_{drag}	147.25 ± 0.30	$\chi^2_{H073p45}$	6.5 ± 2.3
$\boldsymbol{c_{TE}}$	0.9961 ± 0.0049	k_D	0.14066 ± 0.00035	χ^2_{JLA}	1037.4 ± 1.6
$\boldsymbol{c_{EE}}$	0.9916 ± 0.0050	$100\theta_D$	0.16085 ± 0.00019	χ^2_{6DF}	0.14 ± 0.15
H_0	69.28 ± 0.76	z_{eq}	3392 ± 29	χ^2_{MGS}	2.72 ± 0.75
Ω_Λ	0.7028 ± 0.0069	k_{eq}	0.010353 ± 0.000087	$\chi^2_{DR12BAO}$	5.2 ± 1.5
Ω_m	0.2972 ± 0.0069	$100\theta_{eq}$	0.8150 ± 0.0054	χ^2_{prior}	7.7 ± 3.4
$\Omega_m h^2$	0.1426 ± 0.0012	$100\theta_{s,eq}$	0.4503 ± 0.0028	χ^2_{BAO}	8.1 ± 2.1
$\Omega_m h^3$	0.0988 ± 0.0014	$H(0.15)$	74.28 ± 0.72	χ^2_{CMB}	11933.8 ± 5.7
σ_8	0.828 ± 0.013	$D_M(0.15)$	627.4 ± 6.1		
S_8	0.824 ± 0.014	$H(0.38)$	83.70 ± 0.64		

$\bar{\chi}^2_{eff} = 12993.45$; $R - 1 = 0.01675$

19.40 base_w_wa_CamSpecHM_TTTEEE_lowl_lowE_BAO_Riess18_Pantheon_post_lensing_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02232 ± 0.00015	$\sigma_8\Omega_m^{0.5}$	0.4508 ± 0.0060	$D_M(0.38)$	1503 ± 13
$\boldsymbol{\Omega_c h^2}$	0.1195 ± 0.0011	$\sigma_8\Omega_m^{0.25}$	0.6107 ± 0.0072	$H(0.51)$	90.04 ± 0.51
$\boldsymbol{100\theta_{MC}}$	1.04091 ± 0.00030	$\sigma_8/h^{0.5}$	0.994 ± 0.010	$D_M(0.51)$	1952 ± 15
$\boldsymbol{\tau}$	$0.0542^{+0.0049}_{-0.0075}$	$r_{drag}h$	102.1 ± 1.1	$H(0.61)$	95.37 ± 0.41
$\boldsymbol{w_0}$	-1.002 ± 0.078	$\langle d^2\rangle^{1/2}$	2.450 ± 0.023	$D_M(0.61)$	2276 ± 17
$\boldsymbol{w_a}$	$-0.23^{+0.32}_{-0.28}$	z_{re}	$7.65^{+0.53}_{-0.76}$	$H(2.33)$	$234.69^{+0.91}_{-1.0}$
$\boldsymbol{\ln(10^{10}A_s)}$	$3.041^{+0.011}_{-0.014}$	$10^9 A_s$	$2.093^{+0.023}_{-0.030}$	$D_M(2.33)$	5754 ± 11
$\boldsymbol{n_s}$	0.9662 ± 0.0040	$10^9 A_s e^{-2\tau}$	1.878 ± 0.010	$f\sigma_8(0.15)$	0.4585 ± 0.0067
$\boldsymbol{y_{cal}}$	1.0004 ± 0.0024	D_{40}	1225 ± 12	$\sigma_8(0.15)$	0.766 ± 0.010
$\boldsymbol{A^{PS}_{100}}$	239 ± 25	D_{220}	5719 ± 39	$f\sigma_8(0.38)$	0.4832 ± 0.0079
$\boldsymbol{A^{PS}_{143}}$	39 ± 8	D_{810}	2534 ± 13	$\sigma_8(0.38)$	0.6800 ± 0.0091
$\boldsymbol{A^{PS}_{217}}$	103 ± 10	D_{1420}	815.6 ± 4.8	$f\sigma_8(0.51)$	0.4846 ± 0.0081
$\boldsymbol{A^{CIB}_{217}}$	39 ± 7	D_{2000}	230.4 ± 1.6	$\sigma_8(0.51)$	0.6365 ± 0.0085
$\boldsymbol{A^{tSZ}_{143}}$	$3.8^{+1.8}_{-2.6}$	$n_{s,0.002}$	0.9662 ± 0.0040	$f\sigma_8(0.61)$	0.4811 ± 0.0082
$\boldsymbol{r^{PS}_{143\times217}}$	0.66 ± 0.13	Y_P	0.245374 ± 0.000060	$\sigma_8(0.61)$	0.6057 ± 0.0080
$\boldsymbol{r^{CIB}_{143\times217}}$	$0.54^{+0.38}_{-0.21}$	Y_P^{BBN}	0.246701 ± 0.000061	$f\sigma_8(2.33)$	0.3060 ± 0.0042
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	10^5D/H	2.595 ± 0.028	$\sigma_8(2.33)$	0.3131 ± 0.0033
$\boldsymbol{A^{kSZ}}$	$4.8^{+2.3}_{-4.0}$	Age/Gyr	$13.748^{+0.029}_{-0.033}$	f^{143}_{2000}	29.5 ± 2.9
$\boldsymbol{A^{dust}_{100}}$	1.01 ± 0.19	z_*	1089.94 ± 0.24	f^{217}_{2000}	106.7 ± 1.9
$\boldsymbol{A^{dust}_{143}}$	0.97 ± 0.17	r_*	144.59 ± 0.25	$f^{143\times217}_{2000}$	32.0 ± 2.0
$\boldsymbol{A^{dust}_{217}}$	0.97 ± 0.10	$100\theta_*$	1.04110 ± 0.00030	$\chi^2_{lensing}$	9.10 ± 0.68
$\boldsymbol{A^{dust}_{143\times217}}$	1.03 ± 0.16	$D_M(z_*)$/Gpc	13.888 ± 0.024	χ^2_{simall}	396.7 ± 1.5
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	z_{drag}	1059.79 ± 0.33	χ^2_{lowl}	23.00 ± 0.80
$\boldsymbol{c_{217}}$	1.0010 ± 0.0016	r_{drag}	147.27 ± 0.26	$\chi^2_{CamSpec}$	11513.7 ± 5.5
$\boldsymbol{c_{TE}}$	0.9961 ± 0.0048	k_D	0.14065 ± 0.00032	$\chi^2_{H073p45}$	6.5 ± 2.3
$\boldsymbol{c_{EE}}$	0.9916 ± 0.0049	$100\theta_D$	0.16084 ± 0.00019	χ^2_{JLA}	1037.3 ± 1.6
H_0	69.30 ± 0.75	z_{eq}	3390 ± 24	χ^2_{6DF}	0.15 ± 0.15
Ω_Λ	0.7031 ± 0.0068	k_{eq}	0.010347 ± 0.000073	χ^2_{MGS}	2.75 ± 0.75
Ω_m	0.2969 ± 0.0068	$100\theta_{eq}$	0.8153 ± 0.0045	$\chi^2_{DR12BAO}$	5.2 ± 1.4
$\Omega_m h^2$	0.1425 ± 0.0010	$100\theta_{s,eq}$	0.4505 ± 0.0023	χ^2_{prior}	7.7 ± 3.3
$\Omega_m h^3$	0.0988 ± 0.0013	$H(0.15)$	74.30 ± 0.71	χ^2_{CMB}	11942.5 ± 5.7
σ_8	0.827 ± 0.011	$D_M(0.15)$	627.2 ± 6.0	χ^2_{BAO}	8.1 ± 2.1
S_8	0.823 ± 0.011	$H(0.38)$	83.72 ± 0.63		

$\bar{\chi}^2_{eff} = 13002.10$; $\Delta\bar{\chi}^2_{eff} = -2.70$; $R - 1 = 0.02217$

20 yhe

20.1 base_yhe_plikHM_TT_lowl_lowE

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022104	0.02212 ± 0.00030	$\sigma_8\Omega_m^{0.5}$	0.4596	0.460 ± 0.013	$H(0.15)$	72.21	72.28 ± 0.96
$\boldsymbol{\Omega_c h^2}$	0.12062	0.1206 ± 0.0022	$\sigma_8\Omega_m^{0.25}$	0.6106	0.611 ± 0.012	$D_M(0.15)$	648.0	647.5 ± 9.6
$\boldsymbol{100\theta_{MC}}$	1.04067	1.04080 ± 0.00089	$\sigma_8/h^{0.5}$	0.9924	0.992 ± 0.016	$H(0.38)$	82.48	82.54 ± 0.73
$\boldsymbol{\tau}$	0.0518	0.0518 ± 0.0081	$r_{drag}h$	98.40	98.5 ± 1.8	$D_M(0.38)$	1543.1	1542 ± 19
$\boldsymbol{Y_P}$	0.2421	0.246 ± 0.021	$\langle d^2\rangle^{1/2}$	2.4524	2.453 ± 0.043	$H(0.51)$	89.28	89.34 ± 0.60
$\boldsymbol{\ln(10^{10}A_s)}$	3.0391	3.040 ± 0.018	z_{re}	7.48	7.47 ± 0.84	$D_M(0.51)$	1997.5	1996 ± 23
$\boldsymbol{n_s}$	0.9627	0.963 ± 0.011	$10^9 A_s$	2.0887	2.091 ± 0.037	$H(0.61)$	94.97	95.02 ± 0.51
$\boldsymbol{y_{cal}}$	1.00043	1.0004 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.8831	1.885 ± 0.015	$D_M(0.61)$	2323.1	2322 ± 25
$\boldsymbol{A_{217}^{CIB}}$	48.2	48 ± 7	D_{40}	1232.3	1233 ± 22	$H(2.33)$	236.68	236.7 ± 1.3
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.38	—	D_{220}	5708.6	5713 ± 41	$D_M(2.33)$	5779.7	5777 ± 25
$\boldsymbol{A_{143}^{tSZ}}$	6.95	5.0 ± 2.0	D_{810}	2537.4	2536 ± 14	$f\sigma_8(0.15)$	0.4634	0.463 ± 0.012
$\boldsymbol{A_{100}^{PS}}$	253.8	264 ± 29	D_{1420}	815.9	814.3 ± 5.4	$\sigma_8(0.15)$	0.7487	0.7491 ± 0.0084
$\boldsymbol{A_{143}^{PS}}$	49.8	49 ± 9	D_{2000}	230.27	229.4 ± 2.4	$f\sigma_8(0.38)$	0.4797	0.4796 ± 0.0095
$\boldsymbol{A_{143\times217}^{PS}}$	48.3	43 ± 9	$n_{s,0.002}$	0.9627	0.963 ± 0.011	$\sigma_8(0.38)$	0.6627	0.6631 ± 0.0073
$\boldsymbol{A_{217}^{PS}}$	119.9	115 ± 10	Y_P	0.2421	0.246 ± 0.021	$f\sigma_8(0.51)$	0.4771	0.4771 ± 0.0081
$\boldsymbol{A^{kSZ}}$	0.05	< 5.01	Y_P^{BBN}	0.2434	0.247 ± 0.021	$\sigma_8(0.51)$	0.6197	0.6201 ± 0.0069
$\boldsymbol{A_{100}^{dustTT}}$	8.89	9.0 ± 1.8	Age/Gyr	13.835	13.829 ± 0.058	$f\sigma_8(0.61)$	0.4714	0.4714 ± 0.0072
$\boldsymbol{A_{143}^{dustTT}}$	10.88	10.7 ± 1.8	z_*	1090.18	1090.33 ± 0.65	$\sigma_8(0.61)$	0.5894	0.5898 ± 0.0066
$\boldsymbol{A_{143\times217}^{dustTT}}$	19.45	18.3 ± 3.3	r_*	144.486	144.46 ± 0.48	$f\sigma_8(2.33)$	0.29683	0.2970 ± 0.0034
$\boldsymbol{A_{217}^{dustTT}}$	94.7	93.2 ± 7.3	$100\theta_*$	1.04096	1.04099 ± 0.00050	$\sigma_8(2.33)$	0.30562	0.3059 ± 0.0038
$\boldsymbol{c_{100}}$	0.99965	0.99961 ± 0.00062	$D_M(z_*)$/Gpc	13.8801	13.877 ± 0.045	f_{2000}^{143}	30.03	31 ± 4
$\boldsymbol{c_{217}}$	0.99823	0.99827 ± 0.00062	z_{drag}	1059.25	1059.4 ± 1.2	$f_{2000}^{143\times217}$	33.05	33.7 ± 2.9
H_0	66.83	66.9 ± 1.1	r_{drag}	147.236	147.21 ± 0.49	f_{2000}^{217}	107.48	108.3 ± 2.6
Ω_Λ	0.6790	0.679 ± 0.015	k_D	0.14064	0.14051 ± 0.00075	χ^2_{simall}	395.83	396.9 ± 1.7
Ω_m	0.3210	0.321 ± 0.015	$100\theta_D$	0.16093	0.16111 ± 0.00077	χ^2_{lowl}	23.69	24.0 ± 2.1
$\Omega_m h^2$	0.14337	0.1434 ± 0.0020	z_{eq}	3410.6	3411 ± 48	χ^2_{plik}	758.7	772.2 ± 5.8
$\Omega_m h^3$	0.09582	0.09591 ± 0.00078	k_{eq}	0.010410	0.01041 ± 0.00015	χ^2_{prior}	1.32	7.3 ± 3.7
σ_8	0.8113	0.8117 ± 0.0095	$100\theta_{eq}$	0.8109	0.8111 ± 0.0092	χ^2_{CMB}	1178.2	1193.1 ± 5.7
S_8	0.8392	0.839 ± 0.024	$100\theta_{s,eq}$	0.44831	0.4484 ± 0.0047			

Best-fit $\chi^2_{eff} = 1179.56$; $\Delta\chi^2_{eff} = -0.01$; $\bar{\chi}^2_{eff} = 1200.43$; $\Delta\bar{\chi}^2_{eff} = 0.85$; $R - 1 = 0.00562$

χ^2_{eff}: CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.83 (Δ -0.04) commander_dx12_v3_2_29: 23.69 (Δ 0.09) plik_rd12_HM_v22_TT: 758.72 (Δ -0.02)

20.2 base_yhe_plikHM_TT_lowl_lowE_post_BAO

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022249	0.02227 ± 0.00025	$\sigma_8\Omega_m^{0.25}$	0.6030	0.6033 ± 0.0084	$H(0.38)$	83.023	83.07 ± 0.44
$\boldsymbol{\Omega_c h^2}$	0.11890	0.1190 ± 0.0012	$\sigma_8/h^{0.5}$	0.9827	0.983 ± 0.012	$D_M(0.38)$	1528.1	1527 ± 11
$\boldsymbol{100\theta_{MC}}$	1.04108	1.04125 ± 0.00074	$r_{drag}h$	99.86	99.87 ± 0.98	$H(0.51)$	89.715	89.76 ± 0.39
$\boldsymbol{\tau}$	0.0545	0.0536 ± 0.0078	$\langle d^2\rangle^{1/2}$	2.4251	2.424 ± 0.029	$D_M(0.51)$	1979.9	1979 ± 13
$\boldsymbol{Y_P}$	0.2484	0.253 ± 0.018	z_{re}	7.73	7.63 ± 0.81	$H(0.61)$	95.315	95.37 ± 0.35
$\boldsymbol{\ln(10^{10}A_s)}$	3.0423	3.042 ± 0.017	$10^9 A_s$	2.0952	2.095 ± 0.036	$D_M(0.61)$	2304.2	2303 ± 14
$\boldsymbol{n_s}$	0.9688	0.9693 ± 0.0082	$10^9 A_s e^{-2\tau}$	1.8788	1.881 ± 0.015	$H(2.33)$	235.73	235.84 ± 0.83
$\boldsymbol{y_{cal}}$	1.00048	1.0005 ± 0.0025	D_{40}	1221.0	1221 ± 17	$D_M(2.33)$	5764.1	5761 ± 19
$\boldsymbol{A_{217}^{CIB}}$	49.2	49 ± 7	D_{220}	5716.2	5720 ± 40	$f\sigma_8(0.15)$	0.4545	0.4547 ± 0.0078
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.24	—	D_{810}	2537.3	2537 ± 14	$\sigma_8(0.15)$	0.7473	0.7477 ± 0.0082
$\boldsymbol{A_{143}^{tSZ}}$	7.03	4.9 ± 2.0	D_{1420}	816.0	814.5 ± 5.3	$f\sigma_8(0.38)$	0.4732	0.4735 ± 0.0068
$\boldsymbol{A_{100}^{PS}}$	255.8	267 ± 28	D_{2000}	230.00	229.1 ± 2.4	$\sigma_8(0.38)$	0.6627	0.6630 ± 0.0072
$\boldsymbol{A_{143}^{PS}}$	49.1	50 ± 9	$n_{s,0.002}$	0.9688	0.9693 ± 0.0082	$f\sigma_8(0.51)$	0.4721	0.4723 ± 0.0062
$\boldsymbol{A_{143\times217}^{PS}}$	45.0	44 ± 9	Y_P	0.2484	0.253 ± 0.018	$\sigma_8(0.51)$	0.6202	0.6206 ± 0.0068
$\boldsymbol{A_{217}^{PS}}$	118.6	115 ± 10	Y_P^{BBN}	0.2498	0.255 ± 0.019	$f\sigma_8(0.61)$	0.4673	0.4675 ± 0.0058
$\boldsymbol{A^{kSZ}}$	0.02	< 5.26	Age/Gyr	13.8000	13.793 ± 0.043	$\sigma_8(0.61)$	0.5902	0.5906 ± 0.0065
$\boldsymbol{A_{100}^{dustTT}}$	8.93	9.0 ± 1.8	z_*	1090.10	1090.29 ± 0.65	$f\sigma_8(2.33)$	0.29769	0.2978 ± 0.0033
$\boldsymbol{A_{143}^{dustTT}}$	10.77	10.8 ± 1.8	r_*	144.798	144.73 ± 0.38	$\sigma_8(2.33)$	0.30699	0.3072 ± 0.0035
$\boldsymbol{A_{143\times217}^{dustTT}}$	19.46	18.3 ± 3.3	$100\theta_*$	1.041207	1.04123 ± 0.00043	f_{2000}^{143}	30.74	32 ± 4
$\boldsymbol{A_{217}^{dustTT}}$	94.8	93.1 ± 7.3	$D_M(z_*)$/Gpc	13.9067	13.900 ± 0.038	$f_{2000}^{143\times217}$	33.40	34.2 ± 2.8
$\boldsymbol{c_{100}}$	0.99961	0.99961 ± 0.00062	z_{drag}	1059.67	1059.9 ± 1.1	f_{2000}^{217}	107.88	108.7 ± 2.6
$\boldsymbol{c_{217}}$	0.99828	0.99827 ± 0.00062	r_{drag}	147.510	147.44 ± 0.43	χ^2_{simall}	396.06	397.0 ± 1.8
H_0	67.70	67.74 ± 0.62	k_D	0.14021	0.14009 ± 0.00058	χ^2_{lowl}	22.64	22.8 ± 1.3
Ω_Λ	0.6906	0.6906 ± 0.0076	$100\theta_D$	0.16112	0.16133 ± 0.00073	χ^2_{plik}	760.1	773.3 ± 5.7
Ω_m	0.3094	0.3094 ± 0.0076	z_{eq}	3373.0	3376 ± 29	χ^2_{6DF}	0.0162	0.056 ± 0.075
$\Omega_m h^2$	0.14179	0.1419 ± 0.0012	k_{eq}	0.010295	0.010304 ± 0.000089	χ^2_{MGS}	1.34	1.41 ± 0.55
$\Omega_m h^3$	0.09599	0.09613 ± 0.00074	$100\theta_{eq}$	0.8183	0.8180 ± 0.0053	$\chi^2_{DR12BAO}$	4.05	4.7 ± 1.6
σ_8	0.8085	0.8089 ± 0.0090	$100\theta_{s,eq}$	0.45211	0.4519 ± 0.0028	χ^2_{prior}	1.51	7.3 ± 3.7
S_8	0.8211	0.822 ± 0.015	$H(0.15)$	72.95	73.00 ± 0.55	χ^2_{BAO}	5.41	6.2 ± 1.3
$\sigma_8\Omega_m^{0.5}$	0.4497	0.4500 ± 0.0083	$D_M(0.15)$	640.5	640.2 ± 5.3	χ^2_{CMB}	1178.8	1193.1 ± 5.6

Best-fit $\chi^2_{eff} = 1185.74$; $\Delta\chi^2_{eff} = -0.00$; $\bar{\chi}^2_{eff} = 1206.53$; $\Delta\bar{\chi}^2_{eff} = 0.51$; $R - 1 = 0.01126$

χ^2_{eff}: BAO - 6DF: 0.02 (Δ -0.01) MGS: 1.34 (Δ 0.06) DR12BAO: 4.05 (Δ -0.13) CMB - simall_100x143_offlike5_EE_Aplanck_B: 396.06 (Δ 0.17) commander_dx12_v3_2_29: 22.64 (Δ -0.18) plik_rd12_HM_v22_TT: 760.12 (Δ 0.02)

20.3 base_yhe_plikHM_TT_lowl_lowE_post_lensing

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022126	0.02213 ± 0.00028	$\sigma_8\Omega_m^{0.5}$	0.4568	0.4572 ± 0.0090	$H(0.15)$	72.36	72.37 ± 0.77
$\boldsymbol{\Omega_c h^2}$	0.12014	0.1203 ± 0.0016	$\sigma_8\Omega_m^{0.25}$	0.6081	0.6085 ± 0.0077	$D_M(0.15)$	646.5	646.4 ± 7.7
$\boldsymbol{100\theta_{MC}}$	1.04064	1.04078 ± 0.00085	$\sigma_8/h^{0.5}$	0.9890	0.990 ± 0.011	$H(0.38)$	82.57	82.60 ± 0.61
$\boldsymbol{\tau}$	0.0525	0.0519 ± 0.0079	$r_{drag}h$	98.74	98.7 ± 1.4	$D_M(0.38)$	1540.2	1540 ± 16
$\boldsymbol{Y_P}$	0.2394	0.244 ± 0.020	$\langle d^2\rangle^{1/2}$	2.4478	2.448 ± 0.029	$H(0.51)$	89.35	89.38 ± 0.52
$\boldsymbol{\ln(10^{10}A_s)}$	3.0392	3.039 ± 0.017	z_{re}	7.53	7.47 ± 0.82	$D_M(0.51)$	1994.1	1994 ± 19
$\boldsymbol{n_s}$	0.9626	0.9629 ± 0.0099	$10^9 A_s$	2.0889	2.089 ± 0.035	$H(0.61)$	95.015	95.05 ± 0.45
$\boldsymbol{y_{cal}}$	1.00055	1.0004 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.8806	1.882 ± 0.014	$D_M(0.61)$	2319.5	2319 ± 20
$\boldsymbol{A_{217}^{CIB}}$	47.8	48 ± 7	D_{40}	1232.7	1233 ± 19	$H(2.33)$	236.39	236.48 ± 0.95
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.46	—	D_{220}	5715.4	5716 ± 41	$D_M(2.33)$	5778.0	5776 ± 23
$\boldsymbol{A_{143}^{tSZ}}$	6.93	5.0 ± 2.0	D_{810}	2537.6	2536 ± 14	$f\sigma_8(0.15)$	0.4608	0.4612 ± 0.0082
$\boldsymbol{A_{100}^{PS}}$	252.4	264 ± 29	D_{1420}	816.7	814.4 ± 5.3	$\sigma_8(0.15)$	0.7475	0.7479 ± 0.0072
$\boldsymbol{A_{143}^{PS}}$	50.2	49 ± 9	D_{2000}	230.72	229.6 ± 2.4	$f\sigma_8(0.38)$	0.4776	0.4779 ± 0.0063
$\boldsymbol{A_{143\times217}^{PS}}$	49.5	43 ± 9	$n_{s,0.002}$	0.9626	0.9629 ± 0.0099	$\sigma_8(0.38)$	0.6618	0.6622 ± 0.0067
$\boldsymbol{A_{217}^{PS}}$	119.9	115 ± 10	Y_P	0.2394	0.244 ± 0.020	$f\sigma_8(0.51)$	0.4754	0.4756 ± 0.0055
$\boldsymbol{A^{kSZ}}$	0.00	< 5.00	Y_P^{BBN}	0.2407	0.246 ± 0.020	$\sigma_8(0.51)$	0.6191	0.6194 ± 0.0064
$\boldsymbol{A_{100}^{dustTT}}$	8.86	8.9 ± 1.9	Age/Gyr	13.831	13.827 ± 0.053	$f\sigma_8(0.61)$	0.46988	0.4701 ± 0.0050
$\boldsymbol{A_{143}^{dustTT}}$	10.77	10.7 ± 1.8	z_*	1090.00	1090.23 ± 0.64	$\sigma_8(0.61)$	0.5889	0.5892 ± 0.0063
$\boldsymbol{A_{143\times217}^{dustTT}}$	19.49	18.3 ± 3.3	r_*	144.601	144.55 ± 0.39	$f\sigma_8(2.33)$	0.29665	0.2968 ± 0.0034
$\boldsymbol{A_{217}^{dustTT}}$	94.8	93.2 ± 7.2	$100\theta_*$	1.041002	1.04101 ± 0.00048	$\sigma_8(2.33)$	0.30555	0.3057 ± 0.0037
$\boldsymbol{c_{100}}$	0.99965	0.99961 ± 0.00062	$D_M(z_*)$/Gpc	13.8906	13.886 ± 0.037	f_{2000}^{143}	29.57	31 ± 4
$\boldsymbol{c_{217}}$	0.99824	0.99827 ± 0.00063	z_{drag}	1059.17	1059.4 ± 1.2	$f_{2000}^{143\times217}$	32.63	33.6 ± 2.9
H_0	67.01	67.02 ± 0.88	r_{drag}	147.345	147.30 ± 0.42	f_{2000}^{217}	107.03	108.1 ± 2.6
Ω_Λ	0.6817	0.681 ± 0.011	k_D	0.14065	0.14049 ± 0.00067	$\chi^2_{lensing}$	8.83	9.48 ± 0.91
Ω_m	0.3183	0.319 ± 0.011	$100\theta_D$	0.16080	0.16105 ± 0.00076	χ^2_{simall}	395.86	396.8 ± 1.6
$\Omega_m h^2$	0.14291	0.1430 ± 0.0015	z_{eq}	3399.8	3403 ± 36	χ^2_{lowl}	23.69	23.9 ± 1.8
$\Omega_m h^3$	0.09577	0.09585 ± 0.00078	k_{eq}	0.010376	0.01038 ± 0.00011	χ^2_{plik}	758.8	771.8 ± 5.6
σ_8	0.8096	0.8101 ± 0.0076	$100\theta_{eq}$	0.8128	0.8125 ± 0.0069	χ^2_{prior}	1.30	7.3 ± 3.7
S_8	0.8339	0.835 ± 0.016	$100\theta_{s,eq}$	0.44932	0.4492 ± 0.0035	χ^2_{CMB}	1187.2	1202.1 ± 5.7

Best-fit $\chi^2_{eff} = 1188.45$; $\Delta\chi^2_{eff} = -0.12$; $\bar{\chi}^2_{eff} = 1209.39$; $\Delta\bar{\chi}^2_{eff} = 0.98$; $R - 1 = 0.00784$

χ^2_{eff}: CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.83 (Δ -0.07) simall_100x143_offlike5_EE_Aplanck_B: 395.86 (Δ -0.00) commander_dx12_v3_2_29: 23.69 (Δ 0.46) plik_rd12_HM_v22_TT: 758.77 (Δ -0.55)

20.4 base_yhe_plikHM_TT_lowl_lowE_post_BAO_lensing

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022238	0.02226 ± 0.00025	$\sigma_8/h^{0.5}$	0.9849	0.9850 ± 0.0096	$H(0.51)$	89.663	89.72 ± 0.38
$\boldsymbol{\Omega_c h^2}$	0.11918	0.1191 ± 0.0011	$r_{\rm drag} h$	99.65	99.74 ± 0.90	$D_{\rm M}(0.51)$	1982.2	1981 ± 13
$\boldsymbol{100\theta_{MC}}$	1.04106	1.04118 ± 0.00074	$\langle d^2 \rangle^{1/2}$	2.4323	2.431 ± 0.023	$H(0.61)$	95.276	95.33 ± 0.35
$\boldsymbol{\tau}$	0.0549	0.0548 ± 0.0073	$z_{\rm re}$	7.77	7.76 ± 0.74	$D_{\rm M}(0.61)$	2306.6	2305 ± 14
$\boldsymbol{Y_P}$	0.2480	0.251 ± 0.018	$10^9 A_{\rm s}$	2.0982	2.100 ± 0.032	$H(2.33)$	235.90	235.91 ± 0.75
$\boldsymbol{\ln(10^{10} A_s)}$	3.0437	3.045 ± 0.015	$10^9 A_{\rm s} e^{-2\tau}$	1.8802	1.882 ± 0.014	$D_{\rm M}(2.33)$	5765.6	5763 ± 19
$\boldsymbol{n_s}$	0.9674	0.9681 ± 0.0082	D_{40}	1224.6	1224 ± 17	$f\sigma_8(0.15)$	0.4562	0.4560 ± 0.0063
$\boldsymbol{y_{cal}}$	1.00054	1.0006 ± 0.0024	D_{220}	5720.1	5724 ± 40	$\sigma_8(0.15)$	0.7482	0.7487 ± 0.0072
$\boldsymbol{A_{217}^{CIB}}$	50.2	48 ± 7	D_{810}	2537.4	2538 ± 14	$f\sigma_8(0.38)$	0.4746	0.4746 ± 0.0054
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.12	—	D_{1420}	815.7	814.9 ± 5.2	$\sigma_8(0.38)$	0.6633	0.6638 ± 0.0065
$\boldsymbol{A_{143}^{tSZ}}$	7.21	4.9 ± 2.0	D_{2000}	229.90	229.4 ± 2.4	$f\sigma_8(0.51)$	0.47324	0.4733 ± 0.0050
$\boldsymbol{A_{100}^{PS}}$	256.4	266 ± 28	$n_{\rm s,0.002}$	0.9674	0.9681 ± 0.0082	$\sigma_8(0.51)$	0.6207	0.6213 ± 0.0061
$\boldsymbol{A_{143}^{PS}}$	46.8	50 ± 9	$Y_{\rm P}$	0.2480	0.251 ± 0.018	$f\sigma_8(0.61)$	0.46831	0.4684 ± 0.0047
$\boldsymbol{A_{143\times217}^{PS}}$	41.9	44 ± 9	$Y_{\rm P}^{\rm BBN}$	0.2494	0.253 ± 0.019	$\sigma_8(0.61)$	0.5906	0.5912 ± 0.0059
$\boldsymbol{A_{217}^{PS}}$	117.1	115 ± 10	Age/Gyr	13.8032	13.797 ± 0.043	$f\sigma_8(2.33)$	0.29783	0.2981 ± 0.0031
$\boldsymbol{A^{kSZ}}$	0.00	< 5.18	z_*	1090.13	1090.25 ± 0.64	$\sigma_8(2.33)$	0.30706	0.3074 ± 0.0033
$\boldsymbol{A_{100}^{dust TT}}$	8.95	9.0 ± 1.8	r_*	144.736	144.72 ± 0.35	f_{2000}^{143}	30.76	32 ± 4
$\boldsymbol{A_{143}^{dust TT}}$	10.80	10.7 ± 1.8	$100\theta_*$	1.041187	1.04121 ± 0.00043	$f_{2000}^{143\times217}$	33.49	34.0 ± 2.8
$\boldsymbol{A_{143\times217}^{dust TT}}$	19.20	18.3 ± 3.3	$D_{\rm M}(z_*)$/Gpc	13.9010	13.899 ± 0.035	f_{2000}^{217}	107.99	108.6 ± 2.5
$\boldsymbol{A_{217}^{dust TT}}$	94.2	93.2 ± 7.2	$z_{\rm drag}$	1059.67	1059.8 ± 1.1	$\chi^2_{\rm lensing}$	8.88	9.36 ± 0.76
$\boldsymbol{c_{100}}$	0.99965	0.99962 ± 0.00063	$r_{\rm drag}$	147.448	147.42 ± 0.40	$\chi^2_{\rm simall}$	396.18	397.0 ± 1.8
$\boldsymbol{c_{217}}$	0.99826	0.99827 ± 0.00062	$k_{\rm D}$	0.14028	0.14018 ± 0.00057	$\chi^2_{\rm lowl}$	22.92	23.0 ± 1.3
H_0	67.58	67.65 ± 0.59	$100\theta_{\rm D}$	0.16110	0.16125 ± 0.00072	$\chi^2_{\rm plik}$	759.5	772.7 ± 5.6
Ω_Λ	0.6890	0.6895 ± 0.0070	$z_{\rm eq}$	3379.3	3379 ± 26	$\chi^2_{\rm 6DF}$	0.0293	0.057 ± 0.073
$\Omega_{\rm m}$	0.3110	0.3105 ± 0.0070	$k_{\rm eq}$	0.010314	0.010313 ± 0.000080	$\chi^2_{\rm MGS}$	1.217	1.33 ± 0.50
$\Omega_{\rm m} h^2$	0.14206	0.1421 ± 0.0011	$100\theta_{\rm eq}$	0.81714	0.8174 ± 0.0047	$\chi^2_{\rm DR12BAO}$	4.37	4.8 ± 1.6
$\Omega_{\rm m} h^3$	0.09601	0.09610 ± 0.00074	$100\theta_{\rm s,eq}$	0.45149	0.4516 ± 0.0025	$\chi^2_{\rm prior}$	1.54	7.3 ± 3.7
σ_8	0.8096	0.8101 ± 0.0077	$H(0.15)$	72.85	72.92 ± 0.52	$\chi^2_{\rm CMB}$	1187.5	1202.1 ± 5.6
S_8	0.8244	0.824 ± 0.012	$D_{\rm M}(0.15)$	641.5	640.9 ± 5.1	$\chi^2_{\rm BAO}$	5.62	6.2 ± 1.3
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4515	0.4514 ± 0.0067	$H(0.38)$	82.954	83.01 ± 0.43			
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.6046	0.6047 ± 0.0067	$D_{\rm M}(0.38)$	1530.1	1529 ± 11			

Best-fit $\chi^2_{\rm eff} = 1194.68$; $\Delta\chi^2_{\rm eff} = -0.00$; $\bar{\chi}^2_{\rm eff} = 1215.53$; $\Delta\bar{\chi}^2_{\rm eff} = 0.80$; $R - 1 = 0.01408$

$\chi^2_{\rm eff}$: BAO - 6DF: 0.03 (Δ 0.00) MGS: 1.22 (Δ 0.00) DR12BAO: 4.37 (Δ 0.00) CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.88 (Δ 0.00) simall_100x143_offlike5_EE_Aplanck_l 396.18 (Δ 0.09) commander_dx12_v3_2_29: 22.92 (Δ -0.04) plik_rd12_HM_v22_TT: 759.54 (Δ -0.26)

20.5 base_yhe_plikHM_TT_lowl_lowE_post_Riess18

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022537	0.02257 ± 0.00028	$\sigma_8\Omega_m^{0.5}$	0.4379	0.437 ± 0.012	$H(0.15)$	74.00	$74.14^{+0.83}_{-0.98}$
$\boldsymbol{\Omega_c h^2}$	0.11695	$0.1168^{+0.0021}_{-0.0019}$	$\sigma_8\Omega_m^{0.25}$	0.5940	0.594 ± 0.011	$D_M(0.15)$	630.5	$629.3^{+9.0}_{-8.1}$
$\boldsymbol{100\theta_{MC}}$	1.04184	1.04204 ± 0.00081	$\sigma_8/h^{0.5}$	0.9709	0.970 ± 0.016	$H(0.38)$	83.83	$83.96^{+0.65}_{-0.75}$
$\boldsymbol{\tau}$	0.0566	$0.0567^{+0.0079}_{-0.0089}$	$r_{drag}h$	101.72	$101.9^{+1.5}_{-1.9}$	$D_M(0.38)$	1507.6	1505^{+18}_{-17}
$\boldsymbol{Y_P}$	0.2625	$0.268^{+0.020}_{-0.018}$	$\langle d^2\rangle^{1/2}$	2.3869	$2.382^{+0.042}_{-0.038}$	$H(0.51)$	90.39	$90.50^{+0.55}_{-0.62}$
$\boldsymbol{\ln(10^{10}A_s)}$	3.0460	$3.047^{+0.016}_{-0.019}$	z_{re}	7.91	7.91 ± 0.86	$D_M(0.51)$	1955.5	1952^{+22}_{-20}
$\boldsymbol{n_s}$	0.9787	0.981 ± 0.010	$10^9 A_s$	2.1030	$2.105^{+0.033}_{-0.040}$	$H(0.61)$	95.89	95.99 ± 0.49
$\boldsymbol{y_{cal}}$	1.00063	1.0004 ± 0.0027	$10^9 A_s e^{-2\tau}$	1.8778	$1.879^{+0.016}_{-0.014}$	$D_M(0.61)$	2277.5	2274^{+24}_{-22}
$\boldsymbol{A^{CIB}_{217}}$	50.3	50 ± 7	D_{40}	1203.8	1201^{+22}_{-20}	$H(2.33)$	234.81	234.8 ± 1.2
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.17	—	D_{220}	5729.5	5729 ± 44	$D_M(2.33)$	5737.2	5733 ± 23
$\boldsymbol{A^{tSZ}_{143}}$	6.87	4.7 ± 2.0	D_{810}	2539.4	2538 ± 15	$f\sigma_8(0.15)$	0.4437	0.443 ± 0.012
$\boldsymbol{A^{PS}_{100}}$	258.8	271 ± 28	D_{1420}	816.3	814.7 ± 5.4	$\sigma_8(0.15)$	0.7462	$0.7467^{+0.0079}_{-0.0095}$
$\boldsymbol{A^{PS}_{143}}$	49.2	52 ± 9	D_{2000}	229.42	228.5 ± 2.4	$f\sigma_8(0.38)$	0.4656	0.4650 ± 0.0094
$\boldsymbol{A^{PS}_{143\times217}}$	43.9	44^{+9}_{-10}	$n_{s,0.002}$	0.9787	0.981 ± 0.010	$\sigma_8(0.38)$	0.6633	$0.6638^{+0.0066}_{-0.0081}$
$\boldsymbol{A^{PS}_{217}}$	117.7	114 ± 10	Y_P	0.2625	$0.268^{+0.020}_{-0.018}$	$f\sigma_8(0.51)$	0.4661	0.4657 ± 0.0082
$\boldsymbol{A^{kSZ}}$	0.60	$4.4^{+1.6}_{-4.0}$	Y_P^{BBN}	0.2639	$0.270^{+0.020}_{-0.018}$	$\sigma_8(0.51)$	0.6215	$0.6221^{+0.0062}_{-0.0075}$
$\boldsymbol{A^{dustTT}_{100}}$	8.98	9.0 ± 1.9	Age/Gyr	13.740	13.730 ± 0.053	$f\sigma_8(0.61)$	0.4624	0.4622 ± 0.0075
$\boldsymbol{A^{dustTT}_{143}}$	10.87	10.8 ± 1.8	z_*	1090.14	1090.34 ± 0.64	$\sigma_8(0.61)$	0.5918	$0.5924^{+0.0059}_{-0.0071}$
$\boldsymbol{A^{dustTT}_{143\times217}}$	19.16	18.3 ± 3.3	r_*	145.035	145.03 ± 0.47	$f\sigma_8(2.33)$	0.29905	$0.2994^{+0.0031}_{-0.0036}$
$\boldsymbol{A^{dustTT}_{217}}$	93.9	92.4 ± 7.2	$100\theta_*$	1.041563	1.04160 ± 0.00047	$\sigma_8(2.33)$	0.30906	$0.3095^{+0.0034}_{-0.0039}$
$\boldsymbol{c_{100}}$	0.99963	0.99963 ± 0.00064	$D_M(z_*)$/Gpc	13.9247	13.924 ± 0.045	f^{143}_{2000}	31.75	33.1 ± 3.7
$\boldsymbol{c_{217}}$	0.99825	0.99827 ± 0.00060	z_{drag}	1060.66	1060.9 ± 1.1	$f^{143\times217}_{2000}$	34.33	35.1 ± 2.8
H_0	68.88	$69.04^{+0.95}_{-1.1}$	r_{drag}	147.67	147.65 ± 0.49	f^{217}_{2000}	108.73	109.5 ± 2.6
Ω_Λ	0.7047	0.706 ± 0.012	k_D	0.13970	0.13949 ± 0.00072	χ^2_{simall}	396.26	397.3 ± 2.2
Ω_m	0.2953	0.294 ± 0.012	$100\theta_D$	0.16150	0.16176 ± 0.00075	χ^2_{lowl}	21.31	21.4 ± 1.1
$\Omega_m h^2$	0.14014	0.1400 ± 0.0019	z_{eq}	3333.4	3331 ± 45	χ^2_{plik}	764.1	778.0 ± 6.8
$\Omega_m h^3$	0.09653	0.09666 ± 0.00074	k_{eq}	0.010174	0.01017 ± 0.00014	$\chi^2_{H073p45}$	7.56	7.4 ± 3.3
σ_8	0.8058	$0.8061^{+0.0091}_{-0.011}$	$100\theta_{eq}$	0.8270	$0.8279^{+0.0081}_{-0.0097}$	χ^2_{prior}	1.63	7.5 ± 3.9
S_8	0.7995	0.798 ± 0.022	$100\theta_{s,eq}$	0.45643	$0.4569^{+0.0042}_{-0.0050}$	χ^2_{CMB}	1181.6	1196.7 ± 6.4

Best-fit $\chi^2_{eff} = 1190.84$; $\Delta\chi^2_{eff} = -0.73$; $\bar{\chi}^2_{eff} = 1211.61$; $\Delta\bar{\chi}^2_{eff} = -0.47$; $R - 1 = 0.08259$

χ^2_{eff}: CMB - simall_100x143_offlike5_EE_Aplanck_B: 396.26 (Δ 0.19) commander_dx12_v3_2_29: 21.31 (Δ -0.77) plik_rd12_HM_v22_TT: 764.07 (Δ 1.05) Hubble - H073p45: 7.57 (Δ -1.42)

20.6 base_yhe_plikHM_TT_lowl_lowE_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02213 ± 0.00030	$\sigma_8\Omega_m^{0.5}$	0.460 ± 0.013	$H(0.15)$	72.33 ± 0.95
$\boldsymbol{\Omega_c h^2}$	0.1205 ± 0.0021	$\sigma_8\Omega_m^{0.25}$	0.611 ± 0.012	$D_M(0.15)$	647.0 ± 9.5
$\boldsymbol{100\theta_{MC}}$	1.04084 ± 0.00088	$\sigma_8/h^{0.5}$	0.993 ± 0.016	$H(0.38)$	82.58 ± 0.72
$\boldsymbol{\tau}$	$0.0536^{+0.0046}_{-0.0083}$	$r_{drag}h$	98.6 ± 1.8	$D_M(0.38)$	1541 ± 19
$\boldsymbol{Y_P}$	0.247 ± 0.020	$\langle d^2\rangle^{1/2}$	2.455 ± 0.042	$H(0.51)$	89.37 ± 0.60
$\boldsymbol{\ln(10^{10}A_s)}$	$3.043^{+0.012}_{-0.017}$	z_{re}	$7.66^{+0.52}_{-0.84}$	$D_M(0.51)$	1995 ± 23
$\boldsymbol{n_s}$	0.964 ± 0.011	$10^9 A_s$	$2.098^{+0.026}_{-0.036}$	$H(0.61)$	95.05 ± 0.51
$\boldsymbol{y_{cal}}$	1.0004 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.885 ± 0.015	$D_M(0.61)$	2320 ± 25
$\boldsymbol{A^{CIB}_{217}}$	48 ± 7	D_{40}	1233 ± 22	$H(2.33)$	236.7 ± 1.3
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{220}	5713 ± 41	$D_M(2.33)$	5776 ± 25
$\boldsymbol{A^{tSZ}_{143}}$	5.0 ± 2.0	D_{810}	2536 ± 14	$f\sigma_8(0.15)$	0.464 ± 0.012
$\boldsymbol{A^{PS}_{100}}$	264 ± 29	D_{1420}	814.2 ± 5.3	$\sigma_8(0.15)$	$0.7503^{+0.0073}_{-0.0082}$
$\boldsymbol{A^{PS}_{143}}$	49 ± 9	D_{2000}	229.4 ± 2.4	$f\sigma_8(0.38)$	0.4800 ± 0.0095
$\boldsymbol{A^{PS}_{143\times217}}$	43 ± 9	$n_{s,0.002}$	0.964 ± 0.011	$\sigma_8(0.38)$	$0.6642^{+0.0060}_{-0.0072}$
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	Y_P	0.247 ± 0.020	$f\sigma_8(0.51)$	0.4776 ± 0.0081
$\boldsymbol{A^{kSZ}}$	< 5.01	Y_P^{BBN}	0.248 ± 0.020	$\sigma_8(0.51)$	$0.6212^{+0.0056}_{-0.0067}$
$\boldsymbol{A^{dustTT}_{100}}$	9.0 ± 1.8	Age/Gyr	13.825 ± 0.058	$f\sigma_8(0.61)$	0.4720 ± 0.0071
$\boldsymbol{A^{dustTT}_{143}}$	10.7 ± 1.8	z_*	1090.34 ± 0.65	$\sigma_8(0.61)$	$0.5909^{+0.0053}_{-0.0065}$
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.3 ± 3.3	r_*	144.47 ± 0.48	$f\sigma_8(2.33)$	$0.2976^{+0.0028}_{-0.0034}$
$\boldsymbol{A^{dustTT}_{217}}$	93.2 ± 7.3	$100\theta_*$	1.04101 ± 0.00050	$\sigma_8(2.33)$	$0.3065^{+0.0031}_{-0.0037}$
$\boldsymbol{c_{100}}$	0.99961 ± 0.00062	$D_M(z_*)$/Gpc	13.878 ± 0.045	f^{143}_{2000}	31 ± 4
$\boldsymbol{c_{217}}$	0.99827 ± 0.00062	z_{drag}	1059.5 ± 1.2	$f^{143\times217}_{2000}$	33.7 ± 2.9
H_0	67.0 ± 1.1	r_{drag}	147.22 ± 0.50	f^{217}_{2000}	108.3 ± 2.6
Ω_Λ	0.680 ± 0.015	k_D	0.14049 ± 0.00075	χ^2_{simall}	396.8 ± 1.6
Ω_m	0.320 ± 0.015	$100\theta_D$	0.16114 ± 0.00076	χ^2_{lowl}	23.9 ± 2.0
$\Omega_m h^2$	0.1433 ± 0.0020	z_{eq}	3409 ± 48	χ^2_{plik}	772.1 ± 5.8
$\Omega_m h^3$	0.09594 ± 0.00078	k_{eq}	0.01040 ± 0.00015	χ^2_{prior}	7.3 ± 3.7
σ_8	0.8129 ± 0.0090	$100\theta_{eq}$	0.8115 ± 0.0092	χ^2_{CMB}	1192.9 ± 5.6
S_8	0.839 ± 0.025	$100\theta_{s,eq}$	0.4486 ± 0.0047		

$\bar{\chi}^2_{eff} = 1200.15$; $\Delta\bar{\chi}^2_{eff} = 0.83$; $R - 1 = 0.00514$

20.7 base_yhe_plikHM_TT_lowl_lowE_post_BAO_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02228 ± 0.00025	$\sigma_8\Omega_m^{0.25}$	0.6039 ± 0.0082	$H(0.38)$	83.08 ± 0.44
$\boldsymbol{\Omega_c h^2}$	0.1190 ± 0.0012	$\sigma_8/h^{0.5}$	0.984 ± 0.012	$D_M(0.38)$	1527 ± 11
$\boldsymbol{100\theta_{MC}}$	1.04126 ± 0.00074	$r_{drag}h$	99.89 ± 0.98	$H(0.51)$	89.77 ± 0.39
$\boldsymbol{\tau}$	$0.0549^{+0.0054}_{-0.0078}$	$\langle d^2\rangle^{1/2}$	2.426 ± 0.028	$D_M(0.51)$	1979 ± 13
$\boldsymbol{Y_P}$	0.253 ± 0.018	z_{re}	$7.76^{+0.58}_{-0.81}$	$H(0.61)$	95.37 ± 0.35
$\boldsymbol{\ln(10^{10}A_s)}$	$3.044^{+0.013}_{-0.017}$	$10^9 A_s$	$2.100^{+0.027}_{-0.037}$	$D_M(0.61)$	2303 ± 14
$\boldsymbol{n_s}$	0.9695 ± 0.0082	$10^9 A_s e^{-2\tau}$	1.881 ± 0.015	$H(2.33)$	235.83 ± 0.84
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	D_{40}	1221 ± 17	$D_M(2.33)$	5761 ± 19
$\boldsymbol{A_{217}^{CIB}}$	49 ± 7	D_{220}	5719 ± 40	$f\sigma_8(0.15)$	0.4551 ± 0.0077
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{810}	2537 ± 14	$\sigma_8(0.15)$	$0.7486^{+0.0071}_{-0.0082}$
$\boldsymbol{A_{143}^{tSZ}}$	4.9 ± 2.0	D_{1420}	814.5 ± 5.3	$f\sigma_8(0.38)$	0.4739 ± 0.0066
$\boldsymbol{A_{100}^{PS}}$	267 ± 28	D_{2000}	229.1 ± 2.4	$\sigma_8(0.38)$	$0.6638^{+0.0062}_{-0.0072}$
$\boldsymbol{A_{143}^{PS}}$	50 ± 9	$n_{s,0.002}$	0.9695 ± 0.0082	$f\sigma_8(0.51)$	0.4728 ± 0.0060
$\boldsymbol{A_{143\times217}^{PS}}$	44 ± 9	Y_P	0.253 ± 0.018	$\sigma_8(0.51)$	$0.6213^{+0.0058}_{-0.0067}$
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	Y_P^{BBN}	0.255 ± 0.019	$f\sigma_8(0.61)$	$0.4680^{+0.0053}_{-0.0059}$
$\boldsymbol{A^{kSZ}}$	< 5.26	Age/Gyr	13.792 ± 0.043	$\sigma_8(0.61)$	$0.5913^{+0.0055}_{-0.0064}$
$\boldsymbol{A_{100}^{dustTT}}$	9.0 ± 1.8	z_*	1090.29 ± 0.65	$f\sigma_8(2.33)$	$0.2982^{+0.0028}_{-0.0033}$
$\boldsymbol{A_{143}^{dustTT}}$	10.8 ± 1.8	r_*	144.74 ± 0.38	$\sigma_8(2.33)$	$0.3076^{+0.0029}_{-0.0034}$
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.3 ± 3.3	$100\theta_*$	1.04124 ± 0.00043	f_{2000}^{143}	32 ± 4
$\boldsymbol{A_{217}^{dustTT}}$	93.1 ± 7.3	$D_M(z_*)$/Gpc	13.900 ± 0.038	$f_{2000}^{143\times217}$	34.2 ± 2.8
$\boldsymbol{c_{100}}$	0.99961 ± 0.00063	z_{drag}	1059.9 ± 1.1	f_{2000}^{217}	108.7 ± 2.6
$\boldsymbol{c_{217}}$	0.99827 ± 0.00062	r_{drag}	147.44 ± 0.43	χ^2_{simall}	396.9 ± 1.8
H_0	67.75 ± 0.62	k_D	0.14009 ± 0.00058	χ^2_{lowl}	22.8 ± 1.3
Ω_Λ	0.6907 ± 0.0076	$100\theta_D$	0.16133 ± 0.00073	χ^2_{plik}	773.2 ± 5.7
Ω_m	0.3093 ± 0.0076	z_{eq}	3376 ± 29	χ^2_{6DF}	0.055 ± 0.074
$\Omega_m h^2$	0.1419 ± 0.0012	k_{eq}	0.010303 ± 0.000090	χ^2_{MGS}	1.43 ± 0.55
$\Omega_m h^3$	0.09614 ± 0.00074	$100\theta_{eq}$	0.8181 ± 0.0053	$\chi^2_{DR12BAO}$	4.7 ± 1.6
σ_8	$0.8099^{+0.0079}_{-0.0091}$	$100\theta_{s,eq}$	0.4520 ± 0.0028	χ^2_{prior}	7.3 ± 3.7
S_8	0.822 ± 0.015	$H(0.15)$	73.01 ± 0.55	χ^2_{BAO}	6.1 ± 1.3
$\sigma_8\Omega_m^{0.5}$	0.4504 ± 0.0082	$D_M(0.15)$	640.1 ± 5.3	χ^2_{CMB}	1192.9 ± 5.6

$\bar{\chi}^2_{eff} = 1206.38$; $\Delta\bar{\chi}^2_{eff} = 0.62$; $R - 1 = 0.01225$

20.8 base_yhe_plikHM_TT_lowl_lowE_post_lensing_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02215 ± 0.00028	$\sigma_8\Omega_m^{0.5}$	0.4569 ± 0.0090	$H(0.15)$	72.45 ± 0.75
$\boldsymbol{\Omega_c h^2}$	0.1201 ± 0.0016	$\sigma_8\Omega_m^{0.25}$	0.6087 ± 0.0077	$D_M(0.15)$	645.7 ± 7.5
$\boldsymbol{100\theta_{MC}}$	1.04083 ± 0.00084	$\sigma_8/h^{0.5}$	0.990 ± 0.011	$H(0.38)$	82.65 ± 0.59
$\boldsymbol{\tau}$	$0.0536^{+0.0048}_{-0.0079}$	$r_{drag}h$	98.9 ± 1.3	$D_M(0.38)$	1538 ± 15
$\boldsymbol{Y_P}$	0.245 ± 0.020	$\langle d^2\rangle^{1/2}$	2.448 ± 0.029	$H(0.51)$	89.42 ± 0.50
$\boldsymbol{\ln(10^{10}A_s)}$	$3.042^{+0.012}_{-0.016}$	z_{re}	$7.64^{+0.52}_{-0.82}$	$D_M(0.51)$	1992 ± 18
$\boldsymbol{n_s}$	0.9636 ± 0.0097	10^9A_s	$2.095^{+0.024}_{-0.034}$	$H(0.61)$	95.08 ± 0.44
$\boldsymbol{y_{cal}}$	1.0004 ± 0.0025	$10^9A_se^{-2\tau}$	1.882 ± 0.014	$D_M(0.61)$	2317 ± 20
$\boldsymbol{A^{CIB}_{217}}$	48 ± 7	D_{40}	1232 ± 19	$H(2.33)$	236.40 ± 0.93
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{220}	5716 ± 41	$D_M(2.33)$	5775 ± 23
$\boldsymbol{A^{tSZ}_{143}}$	5.0 ± 2.0	D_{810}	2536 ± 14	$f\sigma_8(0.15)$	0.4610 ± 0.0082
$\boldsymbol{A^{PS}_{100}}$	264 ± 29	D_{1420}	814.4 ± 5.3	$\sigma_8(0.15)$	$0.7488^{+0.0062}_{-0.0070}$
$\boldsymbol{A^{PS}_{143}}$	49 ± 9	D_{2000}	229.5 ± 2.4	$f\sigma_8(0.38)$	0.4780 ± 0.0063
$\boldsymbol{A^{PS}_{143\times217}}$	43 ± 9	$n_{s,0.002}$	0.9636 ± 0.0097	$\sigma_8(0.38)$	$0.6631^{+0.0057}_{-0.0065}$
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	Y_P	0.245 ± 0.020	$f\sigma_8(0.51)$	0.4759 ± 0.0054
$\boldsymbol{A^{kSZ}}$	< 4.98	Y_P^{BBN}	0.246 ± 0.020	$\sigma_8(0.51)$	$0.6203^{+0.0054}_{-0.0063}$
$\boldsymbol{A^{dustTT}_{100}}$	8.9 ± 1.9	Age/Gyr	13.823 ± 0.052	$f\sigma_8(0.61)$	0.4704 ± 0.0049
$\boldsymbol{A^{dustTT}_{143}}$	10.7 ± 1.8	z_*	1090.23 ± 0.64	$\sigma_8(0.61)$	$0.5901^{+0.0052}_{-0.0061}$
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.3 ± 3.3	r_*	144.58 ± 0.38	$f\sigma_8(2.33)$	$0.2973^{+0.0028}_{-0.0033}$
$\boldsymbol{A^{dustTT}_{217}}$	93.1 ± 7.2	$100\theta_*$	1.04103 ± 0.00047	$\sigma_8(2.33)$	$0.3063^{+0.0031}_{-0.0036}$
$\boldsymbol{c_{100}}$	0.99961 ± 0.00063	$D_M(z_*)$/Gpc	13.888 ± 0.037	f^{143}_{2000}	31 ± 4
$\boldsymbol{c_{217}}$	0.99827 ± 0.00062	z_{drag}	1059.4 ± 1.2	$f^{143\times217}_{2000}$	33.6 ± 2.9
H_0	67.11 ± 0.85	r_{drag}	147.32 ± 0.42	f^{217}_{2000}	108.1 ± 2.6
Ω_Λ	0.682 ± 0.011	k_D	0.14045 ± 0.00066	$\chi^2_{lensing}$	9.46 ± 0.91
Ω_m	0.318 ± 0.011	$100\theta_D$	0.16107 ± 0.00076	χ^2_{simall}	396.7 ± 1.5
$\Omega_m h^2$	0.1429 ± 0.0015	z_{eq}	3399 ± 35	χ^2_{lowl}	23.8 ± 1.8
$\Omega_m h^3$	0.09588 ± 0.00078	k_{eq}	0.01038 ± 0.00011	χ^2_{plik}	771.8 ± 5.6
σ_8	$0.8110^{+0.0068}_{-0.0076}$	$100\theta_{eq}$	0.8132 ± 0.0067	χ^2_{prior}	7.3 ± 3.7
S_8	0.834 ± 0.016	$100\theta_{s,eq}$	0.4495 ± 0.0034	χ^2_{CMB}	1201.8 ± 5.6

$\bar{\chi}^2_{eff} = 1209.13$; $\Delta\bar{\chi}^2_{eff} = 0.97$; $R - 1 = 0.00826$

20.9 base_yhe_plikHM_TT_lowl_lowE_post_BAO_lensing_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02226 ± 0.00025	$\sigma_8/h^{0.5}$	0.9854 ± 0.0095	$H(0.51)$	89.73 ± 0.38
$\boldsymbol{\Omega_c h^2}$	0.1191 ± 0.0011	$r_{\rm drag} h$	99.76 ± 0.89	$D_{\rm M}(0.51)$	1980 ± 13
$\boldsymbol{100\theta_{MC}}$	1.04119 ± 0.00074	$\langle d^2 \rangle^{1/2}$	2.432 ± 0.023	$H(0.61)$	95.33 ± 0.35
$\boldsymbol{\tau}$	$0.0556^{+0.0057}_{-0.0074}$	$z_{\rm re}$	$7.83^{+0.61}_{-0.75}$	$D_{\rm M}(0.61)$	2304 ± 14
$\boldsymbol{Y_P}$	0.251 ± 0.018	$10^9 A_{\rm s}$	$2.103^{+0.026}_{-0.033}$	$H(2.33)$	235.89 ± 0.75
$\boldsymbol{\ln(10^{10} A_s)}$	$3.046^{+0.013}_{-0.016}$	$10^9 A_{\rm s} e^{-2\tau}$	1.882 ± 0.014	$D_{\rm M}(2.33)$	5763 ± 19
$\boldsymbol{n_s}$	0.9683 ± 0.0082	D_{40}	1224 ± 17	$f\sigma_8(0.15)$	0.4561 ± 0.0063
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0024	D_{220}	5723 ± 40	$\sigma_8(0.15)$	0.7492 ± 0.0069
$\boldsymbol{A^{CIB}_{217}}$	48 ± 7	D_{810}	2537 ± 13	$f\sigma_8(0.38)$	0.4748 ± 0.0054
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{1420}	814.8 ± 5.2	$\sigma_8(0.38)$	0.6642 ± 0.0062
$\boldsymbol{A^{tSZ}_{143}}$	4.9 ± 2.0	D_{2000}	229.4 ± 2.4	$f\sigma_8(0.51)$	0.4735 ± 0.0049
$\boldsymbol{A^{PS}_{100}}$	266 ± 28	$n_{\rm s,0.002}$	0.9683 ± 0.0082	$\sigma_8(0.51)$	0.6217 ± 0.0059
$\boldsymbol{A^{PS}_{143}}$	50 ± 9	$Y_{\rm P}$	0.251 ± 0.018	$f\sigma_8(0.61)$	0.4687 ± 0.0046
$\boldsymbol{A^{PS}_{143\times217}}$	44 ± 9	$Y_{\rm P}^{\rm BBN}$	0.253 ± 0.018	$\sigma_8(0.61)$	0.5916 ± 0.0056
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	Age/Gyr	13.797 ± 0.043	$f\sigma_8(2.33)$	0.2983 ± 0.0029
$\boldsymbol{A^{kSZ}}$	< 5.17	z_*	1090.24 ± 0.64	$\sigma_8(2.33)$	$0.3076^{+0.0029}_{-0.0033}$
$\boldsymbol{A^{dustTT}_{100}}$	9.0 ± 1.8	r_*	144.72 ± 0.35	f^{143}_{2000}	32 ± 4
$\boldsymbol{A^{dustTT}_{143}}$	10.7 ± 1.8	$100\theta_*$	1.04121 ± 0.00043	$f^{143\times217}_{2000}$	34.0 ± 2.8
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.3 ± 3.3	$D_{\rm M}(z_*)$/Gpc	13.899 ± 0.035	f^{217}_{2000}	108.6 ± 2.5
$\boldsymbol{A^{dustTT}_{217}}$	93.2 ± 7.2	$z_{\rm drag}$	1059.8 ± 1.1	$\chi^2_{\rm lensing}$	9.32 ± 0.71
$\boldsymbol{c_{100}}$	0.99962 ± 0.00063	$r_{\rm drag}$	147.43 ± 0.41	$\chi^2_{\rm simall}$	397.0 ± 1.8
$\boldsymbol{c_{217}}$	0.99827 ± 0.00062	$k_{\rm D}$	0.14017 ± 0.00057	$\chi^2_{\rm lowl}$	23.0 ± 1.3
H_0	67.67 ± 0.58	$100\theta_{\rm D}$	0.16126 ± 0.00072	$\chi^2_{\rm plik}$	772.6 ± 5.6
Ω_Λ	0.6898 ± 0.0070	$z_{\rm eq}$	3378 ± 26	$\chi^2_{\rm 6DF}$	0.055 ± 0.070
$\Omega_{\rm m}$	0.3102 ± 0.0070	$k_{\rm eq}$	0.010311 ± 0.000080	$\chi^2_{\rm MGS}$	1.35 ± 0.49
$\Omega_{\rm m} h^2$	0.1420 ± 0.0011	$100\theta_{\rm eq}$	0.8175 ± 0.0047	$\chi^2_{\rm DR12BAO}$	4.7 ± 1.5
$\Omega_{\rm m} h^3$	0.09610 ± 0.00074	$100\theta_{\rm s,eq}$	0.4517 ± 0.0024	$\chi^2_{\rm prior}$	7.3 ± 3.7
σ_8	0.8106 ± 0.0074	$H(0.15)$	72.94 ± 0.52	$\chi^2_{\rm CMB}$	1202.0 ± 5.6
S_8	0.824 ± 0.012	$D_{\rm M}(0.15)$	640.8 ± 5.0	$\chi^2_{\rm BAO}$	6.1 ± 1.2
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4515 ± 0.0067	$H(0.38)$	83.02 ± 0.42		
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.6049 ± 0.0066	$D_{\rm M}(0.38)$	1529 ± 10		

$\bar{\chi}^2_{\rm eff} = 1215.38$; $\Delta\bar{\chi}^2_{\rm eff} = 0.80$; $R - 1 = 0.01428$

20.10 base_yhe_plikHM_TT_lowl_lowE_post_Riess18_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02258 ± 0.00028	$\sigma_8\Omega_m^{0.5}$	0.437 ± 0.012	$H(0.15)$	$74.17^{+0.85}_{-0.97}$
$\boldsymbol{\Omega_c h^2}$	$0.1168^{+0.0021}_{-0.0019}$	$\sigma_8\Omega_m^{0.25}$	0.594 ± 0.011	$D_M(0.15)$	$629.0^{+9.0}_{-8.2}$
$\boldsymbol{100\theta_{MC}}$	1.04205 ± 0.00082	$\sigma_8/h^{0.5}$	0.971 ± 0.016	$H(0.38)$	$83.97^{+0.66}_{-0.75}$
$\boldsymbol{\tau}$	$0.0576^{+0.0065}_{-0.0089}$	$r_{drag}h$	$102.0^{+1.5}_{-1.9}$	$D_M(0.38)$	1504^{+19}_{-17}
$\boldsymbol{Y_P}$	$0.268^{+0.020}_{-0.018}$	$\langle d^2\rangle^{1/2}$	$2.383^{+0.043}_{-0.037}$	$H(0.51)$	90.52 ± 0.58
$\boldsymbol{\ln(10^{10}A_s)}$	$3.048^{+0.014}_{-0.019}$	z_{re}	$8.00^{+0.65}_{-0.91}$	$D_M(0.51)$	1952^{+22}_{-20}
$\boldsymbol{n_s}$	0.981 ± 0.010	$10^9 A_s$	$2.109^{+0.028}_{-0.040}$	$H(0.61)$	96.00 ± 0.50
$\boldsymbol{y_{cal}}$	1.0004 ± 0.0027	$10^9 A_s e^{-2\tau}$	$1.879^{+0.016}_{-0.014}$	$D_M(0.61)$	2273^{+24}_{-22}
$\boldsymbol{A^{CIB}_{217}}$	50 ± 7	D_{40}	1201^{+22}_{-20}	$H(2.33)$	234.7 ± 1.2
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{220}	5729 ± 44	$D_M(2.33)$	5732 ± 23
$\boldsymbol{A^{tSZ}_{143}}$	4.7 ± 2.0	D_{810}	2538 ± 15	$f\sigma_8(0.15)$	0.443 ± 0.012
$\boldsymbol{A^{PS}_{100}}$	271 ± 28	D_{1420}	814.6 ± 5.4	$\sigma_8(0.15)$	$0.7472^{+0.0075}_{-0.0093}$
$\boldsymbol{A^{PS}_{143}}$	52 ± 9	D_{2000}	228.5 ± 2.4	$f\sigma_8(0.38)$	0.4652 ± 0.0095
$\boldsymbol{A^{PS}_{143\times217}}$	44^{+9}_{-10}	$n_{s,0.002}$	0.981 ± 0.010	$\sigma_8(0.38)$	$0.6644^{+0.0062}_{-0.0080}$
$\boldsymbol{A^{PS}_{217}}$	114 ± 10	Y_P	$0.268^{+0.020}_{-0.018}$	$f\sigma_8(0.51)$	0.4659 ± 0.0083
$\boldsymbol{A^{kSZ}}$	$4.4^{+1.6}_{-4.0}$	Y_P^{BBN}	$0.270^{+0.020}_{-0.018}$	$\sigma_8(0.51)$	$0.6226^{+0.0056}_{-0.0074}$
$\boldsymbol{A^{dustTT}_{100}}$	9.0 ± 1.9	Age/Gyr	13.728 ± 0.053	$f\sigma_8(0.61)$	0.4624 ± 0.0074
$\boldsymbol{A^{dustTT}_{143}}$	10.8 ± 1.8	z_*	1090.34 ± 0.64	$\sigma_8(0.61)$	$0.5929^{+0.0054}_{-0.0070}$
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.2 ± 3.3	r_*	145.04 ± 0.48	$f\sigma_8(2.33)$	$0.2997^{+0.0028}_{-0.0035}$
$\boldsymbol{A^{dustTT}_{217}}$	92.4 ± 7.1	$100\theta_*$	1.04161 ± 0.00047	$\sigma_8(2.33)$	$0.3098^{+0.0031}_{-0.0038}$
$\boldsymbol{c_{100}}$	0.99963 ± 0.00065	$D_M(z_*)$/Gpc	13.924 ± 0.045	f^{143}_{2000}	33.1 ± 3.7
$\boldsymbol{c_{217}}$	0.99827 ± 0.00060	z_{drag}	1061.0 ± 1.1	$f^{143\times217}_{2000}$	35.1 ± 2.8
H_0	$69.07^{+0.96}_{-1.1}$	r_{drag}	147.66 ± 0.49	f^{217}_{2000}	109.5 ± 2.6
Ω_Λ	0.706 ± 0.012	k_D	0.13948 ± 0.00073	χ^2_{simall}	397.3 ± 2.2
Ω_m	0.294 ± 0.012	$100\theta_D$	0.16177 ± 0.00075	χ^2_{lowl}	21.4 ± 1.1
$\Omega_m h^2$	0.1400 ± 0.0019	z_{eq}	3330 ± 45	χ^2_{plik}	777.9 ± 6.7
$\Omega_m h^3$	0.09667 ± 0.00074	k_{eq}	0.01016 ± 0.00014	$\chi^2_{H073p45}$	7.3 ± 3.2
σ_8	$0.8067^{+0.0089}_{-0.011}$	$100\theta_{eq}$	$0.8281^{+0.0082}_{-0.0098}$	χ^2_{prior}	7.5 ± 3.9
S_8	0.798 ± 0.023	$100\theta_{s,eq}$	$0.4570^{+0.0042}_{-0.0050}$	χ^2_{CMB}	1196.6 ± 6.3

$\bar{\chi}^2_{eff} = 1211.44$; $\Delta\bar{\chi}^2_{eff} = -0.37$; $R - 1 = 0.09941$

20.11 base_yhe_plikHM_TTTEEE_lowl_lowE

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022281	0.02229 ± 0.00020	$\Omega_m h^2$	0.14325	0.1432 ± 0.0013	$100\theta_{eq}$	0.8118	0.8122 ± 0.0058
$\boldsymbol{\Omega_c h^2}$	0.12033	0.1202 ± 0.0014	$\Omega_m h^3$	0.09606	0.09611 ± 0.00053	$100\theta_{s,eq}$	0.44865	0.4489 ± 0.0030
$\boldsymbol{100\theta_{MC}}$	1.04058	1.04069 ± 0.00055	σ_8	0.8109	0.8105 ± 0.0082	$H(0.15)$	72.41	72.48 ± 0.60
$\boldsymbol{\tau}$	0.0540	0.0538 ± 0.0081	S_8	0.8357	0.834 ± 0.016	$D_M(0.15)$	646.0	645.4 ± 6.0
$\boldsymbol{Y_P}$	0.2365	0.240 ± 0.013	$\sigma_8 \Omega_m^{0.5}$	0.4577	0.4569 ± 0.0088	$H(0.38)$	82.642	82.70 ± 0.46
$\boldsymbol{\ln(10^{10} A_s)}$	3.0431	3.042 ± 0.017	$\sigma_8 \Omega_m^{0.25}$	0.6093	0.6085 ± 0.0083	$D_M(0.38)$	1539.0	1538 ± 12
$\boldsymbol{n_s}$	0.9621	0.9622 ± 0.0072	$\sigma_8/h^{0.5}$	0.9903	0.989 ± 0.012	$H(0.51)$	89.430	89.48 ± 0.38
$\boldsymbol{y_{cal}}$	1.00057	1.0006 ± 0.0024	$r_{drag} h$	98.65	98.8 ± 1.1	$D_M(0.51)$	1992.5	1991 ± 14
$\boldsymbol{A_{217}^{CIB}}$	44.3	46 ± 7	$\langle d^2 \rangle^{1/2}$	2.4544	2.452 ± 0.030	$H(0.61)$	95.102	95.15 ± 0.33
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.85	—	z_{re}	7.63	7.61 ± 0.82	$D_M(0.61)$	2317.7	2316 ± 15
$\boldsymbol{A_{143}^{tSZ}}$	6.95	5.5 ± 2.0	$10^9 A_s$	2.0970	2.096 ± 0.036	$H(2.33)$	236.66	236.62 ± 0.81
$\boldsymbol{A_{100}^{PS}}$	244.6	257 ± 28	$10^9 A_s e^{-2\tau}$	1.8823	1.882 ± 0.012	$D_M(2.33)$	5772.5	5770 ± 16
$\boldsymbol{A_{143}^{PS}}$	51.3	45 ± 8	D_{40}	1236.4	1236 ± 16	$f\sigma_8(0.15)$	0.4617	0.4610 ± 0.0082
$\boldsymbol{A_{143\times217}^{PS}}$	56.6	42 ± 9	D_{220}	5732.6	5733 ± 39	$\sigma_8(0.15)$	0.7487	0.7483 ± 0.0074
$\boldsymbol{A_{217}^{PS}}$	123.5	115 ± 10	D_{810}	2541.3	2538 ± 13	$f\sigma_8(0.38)$	0.4785	0.4779 ± 0.0067
$\boldsymbol{A^{kSZ}}$	0.01	< 4.10	D_{1420}	819.43	817.5 ± 4.7	$\sigma_8(0.38)$	0.6629	0.6626 ± 0.0065
$\boldsymbol{A_{100}^{dust TT}}$	8.71	8.9 ± 1.8	D_{2000}	232.13	231.2 ± 1.8	$f\sigma_8(0.51)$	0.4763	0.4757 ± 0.0060
$\boldsymbol{A_{143}^{dust TT}}$	10.88	10.8 ± 1.8	$n_{s,0.002}$	0.9621	0.9622 ± 0.0072	$\sigma_8(0.51)$	0.6200	0.6198 ± 0.0061
$\boldsymbol{A_{143\times217}^{dust TT}}$	20.13	18.5 ± 3.3	Y_P	0.2365	0.240 ± 0.013	$f\sigma_8(0.61)$	0.4707	0.4702 ± 0.0055
$\boldsymbol{A_{217}^{dust TT}}$	95.7	93.7 ± 7.3	Y_P^{BBN}	0.2378	0.241 ± 0.013	$\sigma_8(0.61)$	0.5898	0.5896 ± 0.0058
$\boldsymbol{A_{100}^{dust TE}}$	0.1140	0.114 ± 0.038	Age/Gyr	13.8179	13.813 ± 0.037	$f\sigma_8(2.33)$	0.29708	0.2970 ± 0.0030
$\boldsymbol{A_{100\times143}^{dust TE}}$	0.1345	0.134 ± 0.030	z_*	1089.707	1089.81 ± 0.42	$\sigma_8(2.33)$	0.30597	0.3060 ± 0.0032
$\boldsymbol{A_{100\times217}^{dust TE}}$	0.484	0.482 ± 0.085	r_*	144.445	144.45 ± 0.32	f_{2000}^{143}	27.45	28.9 ± 3.1
$\boldsymbol{A_{143}^{dust TE}}$	0.224	0.224 ± 0.053	$100\theta_*$	1.041004	1.04103 ± 0.00033	$f_{2000}^{143\times217}$	31.09	31.7 ± 2.2
$\boldsymbol{A_{143\times217}^{dust TE}}$	0.665	0.666 ± 0.080	$D_M(z_*)$/Gpc	13.8756	13.876 ± 0.030	f_{2000}^{217}	105.68	106.6 ± 2.1
$\boldsymbol{A_{217}^{dust TE}}$	2.089	2.09 ± 0.27	z_{drag}	1059.47	1059.58 ± 0.78	χ^2_{simall}	396.06	397.1 ± 2.0
$\boldsymbol{c_{100}}$	0.99975	0.99967 ± 0.00061	r_{drag}	147.129	147.13 ± 0.33	χ^2_{lowl}	23.94	24.1 ± 1.5
$\boldsymbol{c_{217}}$	0.99815	0.99819 ± 0.00063	k_D	0.141113	0.14099 ± 0.00041	χ^2_{plik}	2343.8	2359.9 ± 6.0
H_0	67.05	67.13 ± 0.69	$100\theta_D$	0.160447	0.16059 ± 0.00046	χ^2_{prior}	1.44	11.5 ± 4.5
Ω_Λ	0.6814	0.6821 ± 0.0090	z_{eq}	3407.9	3406 ± 31	χ^2_{CMB}	2763.8	2781.1 ± 6.0
Ω_m	0.3186	0.3179 ± 0.0090	k_{eq}	0.010401	0.010396 ± 0.000093			

Best-fit $\chi^2_{eff} = 2765.27$; $\Delta\chi^2_{eff} = -0.51$; $\bar{\chi}^2_{eff} = 2792.56$; $\Delta\bar{\chi}^2_{eff} = 0.80$; $R - 1 = 0.00867$

χ^2_{eff}: CMB - simall_100x143_offlike5_EE_Aplanck_B: 396.06 (Δ 0.01) commander_dx12_v3_2_29: 23.95 (Δ 0.69) plik_rd12_HM_v22b_TTTEEE: 2343.82 (Δ -0.83)

20.12 base_yhe_plikHM_TTTEEE_lowl_lowE_post_BAO

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022389	0.02239 ± 0.00018	$\Omega_m h^3$	0.09619	0.09623 ± 0.00051	$H(0.15)$	72.868	72.90 ± 0.44
$\boldsymbol{\Omega_c h^2}$	0.11930	0.1193 ± 0.0010	σ_8	0.8090	0.8090 ± 0.0083	$D_M(0.15)$	641.45	641.1 ± 4.3
$\boldsymbol{100\theta_{MC}}$	1.04082	1.04091 ± 0.00051	S_8	0.8244	0.824 ± 0.013	$H(0.38)$	82.984	83.01 ± 0.34
$\boldsymbol{\tau}$	0.0553	0.0556 ± 0.0082	$\sigma_8 \Omega_m^{0.5}$	0.4516	0.4514 ± 0.0071	$D_M(0.38)$	1529.8	1529.1 ± 8.8
$\boldsymbol{Y_P}$	0.2402	0.243 ± 0.012	$\sigma_8 \Omega_m^{0.25}$	0.6044	0.6043 ± 0.0074	$H(0.51)$	89.704	89.73 ± 0.30
$\boldsymbol{\ln(10^{10} A_s)}$	3.0444	3.044 ± 0.018	$\sigma_8/h^{0.5}$	0.9840	0.984 ± 0.011	$D_M(0.51)$	1981.7	1981 ± 10
$\boldsymbol{n_s}$	0.9658	0.9658 ± 0.0062	$r_{drag} h$	99.54	99.59 ± 0.80	$H(0.61)$	95.325	95.35 ± 0.26
$\boldsymbol{y_{cal}}$	1.00071	1.0006 ± 0.0024	$\langle d^2 \rangle^{1/2}$	2.4372	2.437 ± 0.026	$D_M(0.61)$	2305.9	2305 ± 11
$\boldsymbol{A_{217}^{CIB}}$	44.9	47 ± 7	z_{re}	7.75	7.76 ± 0.83	$H(2.33)$	236.11	236.10 ± 0.65
$\boldsymbol{\xi^{tSZ \times CIB}}$	0.78	—	$10^9 A_s$	2.0998	2.100 ± 0.037	$D_M(2.33)$	5762.4	5761 ± 14
$\boldsymbol{A_{143}^{tSZ}}$	6.99	$5.5^{+2.2}_{-1.9}$	$10^9 A_s e^{-2\tau}$	1.8798	1.879 ± 0.012	$f\sigma_8(0.15)$	0.4561	0.4560 ± 0.0067
$\boldsymbol{A_{100}^{PS}}$	245.8	257 ± 28	D_{40}	1229.6	1229 ± 15	$\sigma_8(0.15)$	0.7475	0.7476 ± 0.0076
$\boldsymbol{A_{143}^{PS}}$	50.9	45 ± 8	D_{220}	5738.9	5737 ± 39	$f\sigma_8(0.38)$	0.4744	0.4743 ± 0.0059
$\boldsymbol{A_{143\times217}^{PS}}$	55.1	42 ± 9	D_{810}	2541.4	2539 ± 13	$\sigma_8(0.38)$	0.6626	0.6627 ± 0.0067
$\boldsymbol{A_{217}^{PS}}$	122.6	115 ± 10	D_{1420}	819.78	817.9 ± 4.7	$f\sigma_8(0.51)$	0.4730	0.4729 ± 0.0055
$\boldsymbol{A^{kSZ}}$	0.00	< 4.18	D_{2000}	232.10	231.3 ± 1.8	$\sigma_8(0.51)$	0.6201	0.6202 ± 0.0063
$\boldsymbol{A_{100}^{dust TT}}$	8.79	8.9 ± 1.8	$n_{s,0.002}$	0.9658	0.9658 ± 0.0062	$f\sigma_8(0.61)$	0.4680	0.4680 ± 0.0052
$\boldsymbol{A_{143}^{dust TT}}$	10.95	10.9 ± 1.8	Y_P	0.2402	0.243 ± 0.012	$\sigma_8(0.61)$	0.5900	0.5902 ± 0.0060
$\boldsymbol{A_{143\times217}^{dust TT}}$	20.17	18.6 ± 3.3	Y_P^{BBN}	0.2415	0.244 ± 0.012	$f\sigma_8(2.33)$	0.29749	0.2976 ± 0.0031
$\boldsymbol{A_{217}^{dust TT}}$	95.7	93.7 ± 7.3	Age/Gyr	13.7954	13.793 ± 0.031	$\sigma_8(2.33)$	0.30669	0.3068 ± 0.0032
$\boldsymbol{A_{100}^{dust TE}}$	0.1135	0.113 ± 0.038	z_*	1089.623	1089.73 ± 0.41	f_{2000}^{143}	27.76	29.0 ± 3.1
$\boldsymbol{A_{100\times143}^{dust TE}}$	0.1355	0.134 ± 0.030	r_*	144.617	144.61 ± 0.28	$f_{2000}^{143\times217}$	31.26	31.7 ± 2.2
$\boldsymbol{A_{100\times217}^{dust TE}}$	0.482	0.482 ± 0.086	$100\theta_*$	1.041145	1.04116 ± 0.00030	f_{2000}^{217}	105.85	106.6 ± 2.1
$\boldsymbol{A_{143}^{dust TE}}$	0.227	0.222 ± 0.053	$D_M(z_*)$/Gpc	13.8902	13.890 ± 0.027	χ^2_{small}	396.22	397.4 ± 2.2
$\boldsymbol{A_{143\times217}^{dust TE}}$	0.664	0.665 ± 0.079	z_{drag}	1059.74	1059.84 ± 0.73	χ^2_{lowl}	23.25	23.4 ± 1.2
$\boldsymbol{A_{217}^{dust TE}}$	2.072	2.08 ± 0.27	r_{drag}	147.273	147.27 ± 0.30	χ^2_{plik}	2344.9	2360.4 ± 6.0
$\boldsymbol{c_{100}}$	0.99974	0.99966 ± 0.00061	k_D	0.140902	0.14080 ± 0.00036	χ^2_{6DF}	0.0379	0.061 ± 0.071
$\boldsymbol{c_{217}}$	0.99818	0.99819 ± 0.00062	$100\theta_D$	0.160519	0.16064 ± 0.00045	χ^2_{MGS}	1.156	1.24 ± 0.43
H_0	67.59	67.62 ± 0.50	z_{eq}	3385.8	3385 ± 23	$\chi^2_{DR12BAO}$	4.62	5.0 ± 1.5
Ω_Λ	0.6884	0.6887 ± 0.0063	k_{eq}	0.010334	0.010333 ± 0.000071	χ^2_{prior}	1.55	11.6 ± 4.5
Ω_m	0.3116	0.3113 ± 0.0063	$100\theta_{eq}$	0.81621	0.8164 ± 0.0043	χ^2_{BAO}	5.82	6.3 ± 1.3
$\Omega_m h^2$	0.14233	0.14231 ± 0.00098	$100\theta_{s,eq}$	0.45089	0.4510 ± 0.0022	χ^2_{CMB}	2764.3	2781.1 ± 6.0

Best-fit $\chi^2_{eff} = 2771.70$; $\Delta\chi^2_{eff} = -0.21$; $\bar{\chi}^2_{eff} = 2798.91$; $\Delta\bar{\chi}^2_{eff} = 1.00$; $R - 1 = 0.02958$

χ^2_{eff}: BAO - 6DF: 0.04 (Δ 0.01) MGS: 1.16 (Δ -0.06) DR12BAO: 4.62 (Δ 0.21) CMB - simall_100x143_offlike5_EE_Aplanck_B: 396.22 (Δ 0.02) commander_dx12_v3_2_29: 23.25 (Δ 0.38) plik_rd12_HM_v22b_TTTEEE: 2344.87 (Δ -0.64)

20.13 base_yhe_plikHM_TTTEEE_lowl_lowE_post_lensing

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022304	0.02230 ± 0.00020	$\Omega_m h^2$	0.14297	0.1430 ± 0.0011	$100\theta_{eq}$	0.8131	0.8129 ± 0.0051
$\boldsymbol{\Omega_c h^2}$	0.12002	0.1201 ± 0.0012	$\Omega_m h^3$	0.09606	0.09609 ± 0.00053	$100\theta_{s,eq}$	0.44931	0.4492 ± 0.0026
$\boldsymbol{100\theta_{MC}}$	1.04061	1.04067 ± 0.00055	σ_8	0.8097	0.8095 ± 0.0069	$H(0.15)$	72.52	72.53 ± 0.55
$\boldsymbol{\tau}$	0.0541	0.0537 ± 0.0077	S_8	0.8319	0.832 ± 0.013	$D_M(0.15)$	644.9	644.9 ± 5.4
$\boldsymbol{Y_P}$	0.2366	0.239 ± 0.013	$\sigma_8 \Omega_m^{0.5}$	0.4557	0.4557 ± 0.0069	$H(0.38)$	82.724	82.73 ± 0.42
$\boldsymbol{\ln(10^{10} A_s)}$	3.0422	3.042 ± 0.016	$\sigma_8 \Omega_m^{0.25}$	0.6074	0.6073 ± 0.0064	$D_M(0.38)$	1536.7	1537 ± 11
$\boldsymbol{n_s}$	0.9629	0.9621 ± 0.0070	$\sigma_8/h^{0.5}$	0.9878	0.9876 ± 0.0091	$H(0.51)$	89.492	89.50 ± 0.36
$\boldsymbol{y_{cal}}$	1.00046	1.0005 ± 0.0024	$r_{drag} h$	98.89	98.9 ± 1.0	$D_M(0.51)$	1989.8	1990 ± 13
$\boldsymbol{A_{217}^{CIB}}$	44.7	46 ± 7	$\langle d^2 \rangle^{1/2}$	2.4484	2.450 ± 0.023	$H(0.61)$	95.150	95.16 ± 0.31
$\boldsymbol{\xi^{tSZ \times CIB}}$	0.78	—	z_{re}	7.64	7.59 ± 0.78	$D_M(0.61)$	2314.8	2315 ± 14
$\boldsymbol{A_{143}^{tSZ}}$	7.00	$5.5^{+2.1}_{-1.9}$	$10^9 A_s$	2.0951	2.094 ± 0.033	$H(2.33)$	236.48	236.51 ± 0.72
$\boldsymbol{A_{100}^{PS}}$	244.9	257 ± 28	$10^9 A_s e^{-2\tau}$	1.8801	1.881 ± 0.012	$D_M(2.33)$	5770.5	5770 ± 16
$\boldsymbol{A_{143}^{PS}}$	50.0	45 ± 8	D_{40}	1234.0	1236 ± 15	$f\sigma_8(0.15)$	0.4598	0.4598 ± 0.0064
$\boldsymbol{A_{143\times217}^{PS}}$	54.6	42 ± 9	D_{220}	5731.3	5735 ± 39	$\sigma_8(0.15)$	0.7477	0.7475 ± 0.0064
$\boldsymbol{A_{217}^{PS}}$	122.5	115 ± 10	D_{810}	2540.0	2538 ± 13	$f\sigma_8(0.38)$	0.4770	0.4769 ± 0.0052
$\boldsymbol{A^{kSZ}}$	0.01	< 4.10	D_{1420}	819.29	817.5 ± 4.8	$\sigma_8(0.38)$	0.6622	0.6620 ± 0.0058
$\boldsymbol{A_{100}^{dust TT}}$	8.70	8.9 ± 1.8	D_{2000}	232.10	231.3 ± 1.8	$f\sigma_8(0.51)$	0.47498	0.4749 ± 0.0047
$\boldsymbol{A_{143}^{dust TT}}$	10.94	10.8 ± 1.8	$n_{s,0.002}$	0.9629	0.9621 ± 0.0070	$\sigma_8(0.51)$	0.6195	0.6193 ± 0.0056
$\boldsymbol{A_{143\times217}^{dust TT}}$	20.05	18.6 ± 3.3	Y_P	0.2366	0.239 ± 0.013	$f\sigma_8(0.61)$	0.46959	0.4695 ± 0.0043
$\boldsymbol{A_{217}^{dust TT}}$	95.7	93.9 ± 7.3	Y_P^{BBN}	0.2379	0.240 ± 0.013	$\sigma_8(0.61)$	0.5893	0.5891 ± 0.0054
$\boldsymbol{A_{100}^{dust TE}}$	0.1152	0.113 ± 0.038	Age/Gyr	13.8135	13.812 ± 0.036	$f\sigma_8(2.33)$	0.29694	0.2968 ± 0.0028
$\boldsymbol{A_{100\times143}^{dust TE}}$	0.1356	0.134 ± 0.030	z_*	1089.656	1089.76 ± 0.41	$\sigma_8(2.33)$	0.30591	0.3058 ± 0.0031
$\boldsymbol{A_{100\times217}^{dust TE}}$	0.482	0.482 ± 0.086	r_*	144.508	144.49 ± 0.28	f_{2000}^{143}	27.38	28.8 ± 3.1
$\boldsymbol{A_{143}^{dust TE}}$	0.226	0.224 ± 0.054	$100\theta_*$	1.041023	1.04103 ± 0.00032	$f_{2000}^{143\times217}$	31.01	31.6 ± 2.2
$\boldsymbol{A_{143\times217}^{dust TE}}$	0.666	0.667 ± 0.080	$D_M(z_*)$/Gpc	13.8813	13.880 ± 0.027	f_{2000}^{217}	105.61	106.5 ± 2.1
$\boldsymbol{A_{217}^{dust TE}}$	2.091	2.08 ± 0.27	z_{drag}	1059.51	1059.56 ± 0.77	$\chi^2_{lensing}$	8.756	9.18 ± 0.69
$\boldsymbol{c_{100}}$	0.99973	0.99967 ± 0.00061	r_{drag}	147.185	147.17 ± 0.30	χ^2_{simall}	396.05	397.0 ± 1.7
$\boldsymbol{c_{217}}$	0.99818	0.99819 ± 0.00062	k_D	0.141070	0.14098 ± 0.00039	χ^2_{lowl}	23.75	24.0 ± 1.4
H_0	67.19	67.19 ± 0.63	$100\theta_D$	0.160430	0.16055 ± 0.00045	χ^2_{plik}	2344.0	2359.6 ± 5.9
Ω_Λ	0.6833	0.6831 ± 0.0081	z_{eq}	3401.0	3402 ± 27	χ^2_{prior}	1.51	11.5 ± 4.5
Ω_m	0.3167	0.3169 ± 0.0081	k_{eq}	0.010380	0.010384 ± 0.000082	χ^2_{CMB}	2772.6	2789.9 ± 6.0

Best-fit $\chi^2_{eff} = 2774.06$; $\Delta\chi^2_{eff} = -0.57$; $\bar{\chi}^2_{eff} = 2801.34$; $\Delta\bar{\chi}^2_{eff} = 0.65$; $R - 1 = 0.01603$

χ^2_{eff}: CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.76 (Δ -0.11) simall_100x143_offlike5_EE_Aplanck_B: 396.05 (Δ -0.00) commander_dx12_v3_2_29: 23.75 (Δ 0.50) plik_rd12_HM_v22b_TTTEEE: 2344.00 (Δ -0.93)

20.14 base_yhe_plikHM_TTTEEE_lowl_lowE_post_BAO_lensing

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022390	0.02239 ± 0.00018	σ_8	0.8089	0.8095 ± 0.0070	$H(0.38)$	82.983	83.00 ± 0.34
$\boldsymbol{\Omega_c h^2}$	0.11926	0.11930 ± 0.00094	S_8	0.8243	0.825 ± 0.011	$D_M(0.38)$	1529.8	1529.5 ± 8.5
$\boldsymbol{100\theta_{MC}}$	1.04080	1.04088 ± 0.00051	$\sigma_8\Omega_m^{0.5}$	0.4515	0.4518 ± 0.0058	$H(0.51)$	89.702	89.72 ± 0.29
$\boldsymbol{\tau}$	0.0559	0.0562 ± 0.0075	$\sigma_8\Omega_m^{0.25}$	0.6043	0.6047 ± 0.0060	$D_M(0.51)$	1981.7	1981 ± 10
$\boldsymbol{Y_P}$	0.2395	0.242 ± 0.012	$\sigma_8/h^{0.5}$	0.9840	0.9846 ± 0.0088	$H(0.61)$	95.321	95.34 ± 0.26
$\boldsymbol{\ln(10^{10}A_s)}$	3.0450	3.046 ± 0.016	$r_{drag}h$	99.55	99.56 ± 0.76	$D_M(0.61)$	2305.9	2306 ± 11
$\boldsymbol{n_s}$	0.9653	0.9653 ± 0.0062	$\langle d^2\rangle^{1/2}$	2.4386	2.440 ± 0.022	$H(2.33)$	236.08	236.11 ± 0.60
$\boldsymbol{y_{cal}}$	1.00070	1.0007 ± 0.0024	z_{re}	7.80	7.82 ± 0.75	$D_M(2.33)$	5762.6	5762 ± 14
$\boldsymbol{A_{217}^{CIB}}$	46.0	46 ± 7	$10^9 A_s$	2.1011	2.103 ± 0.033	$f\sigma_8(0.15)$	0.4561	0.4564 ± 0.0055
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.57	—	$10^9 A_s e^{-2\tau}$	1.8788	1.879 ± 0.011	$\sigma_8(0.15)$	0.7475	0.7480 ± 0.0065
$\boldsymbol{A_{143}^{tSZ}}$	7.15	$5.5^{+2.2}_{-1.9}$	D_{40}	1230.4	1231 ± 14	$f\sigma_8(0.38)$	0.47437	0.4747 ± 0.0048
$\boldsymbol{A_{100}^{PS}}$	247.5	257 ± 28	D_{220}	5739.5	5740 ± 38	$\sigma_8(0.38)$	0.6626	0.6631 ± 0.0058
$\boldsymbol{A_{143}^{PS}}$	47.5	45 ± 8	D_{810}	2540.4	2539 ± 13	$f\sigma_8(0.51)$	0.47297	0.4733 ± 0.0045
$\boldsymbol{A_{143\times217}^{PS}}$	49.7	42 ± 9	D_{1420}	819.44	818.2 ± 4.7	$\sigma_8(0.51)$	0.6201	0.6205 ± 0.0055
$\boldsymbol{A_{217}^{PS}}$	120.5	115 ± 10	D_{2000}	232.04	231.4 ± 1.8	$f\sigma_8(0.61)$	0.46800	0.4683 ± 0.0043
$\boldsymbol{A^{kSZ}}$	0.00	< 4.08	$n_{s,0.002}$	0.9653	0.9653 ± 0.0062	$\sigma_8(0.61)$	0.5900	0.5904 ± 0.0053
$\boldsymbol{A_{100}^{dustTT}}$	8.80	8.9 ± 1.8	Y_P	0.2395	0.242 ± 0.012	$f\sigma_8(2.33)$	0.29749	0.2977 ± 0.0027
$\boldsymbol{A_{143}^{dustTT}}$	10.92	10.9 ± 1.8	Y_P^{BBN}	0.2408	0.243 ± 0.012	$\sigma_8(2.33)$	0.30670	0.3069 ± 0.0029
$\boldsymbol{A_{143\times217}^{dustTT}}$	19.83	18.6 ± 3.3	Age/Gyr	13.7960	13.794 ± 0.031	f_{2000}^{143}	27.80	28.8 ± 3.1
$\boldsymbol{A_{217}^{dustTT}}$	95.3	93.8 ± 7.3	z_*	1089.594	1089.70 ± 0.40	$f_{2000}^{143\times217}$	31.23	31.6 ± 2.2
$\boldsymbol{A_{100}^{dustTE}}$	0.1140	0.112 ± 0.038	r_*	144.627	144.61 ± 0.26	f_{2000}^{217}	105.95	106.5 ± 2.1
$\boldsymbol{A_{100\times143}^{dustTE}}$	0.1339	0.134 ± 0.030	$100\theta_*$	1.041135	1.04115 ± 0.00030	$\chi^2_{lensing}$	8.664	9.08 ± 0.61
$\boldsymbol{A_{100\times217}^{dustTE}}$	0.483	0.482 ± 0.086	$D_M(z_*)$/Gpc	13.8913	13.890 ± 0.026	χ^2_{simall}	396.33	397.3 ± 2.0
$\boldsymbol{A_{143}^{dustTE}}$	0.224	0.222 ± 0.054	z_{drag}	1059.74	1059.81 ± 0.73	χ^2_{lowl}	23.34	23.5 ± 1.2
$\boldsymbol{A_{143\times217}^{dustTE}}$	0.664	0.666 ± 0.079	r_{drag}	147.281	147.27 ± 0.29	χ^2_{plik}	2344.6	2360.0 ± 5.9
$\boldsymbol{A_{217}^{dustTE}}$	2.079	2.08 ± 0.27	k_D	0.140918	0.14083 ± 0.00035	χ^2_{6DF}	0.0372	0.060 ± 0.068
$\boldsymbol{c_{100}}$	0.99974	0.99966 ± 0.00061	$100\theta_D$	0.160488	0.16061 ± 0.00045	χ^2_{MGS}	1.156	1.22 ± 0.41
$\boldsymbol{c_{217}}$	0.99818	0.99819 ± 0.00062	z_{eq}	3385.1	3386 ± 22	$\chi^2_{DR12BAO}$	4.61	5.0 ± 1.5
H_0	67.588	67.60 ± 0.48	k_{eq}	0.010332	0.010334 ± 0.000066	χ^2_{prior}	1.65	11.6 ± 4.5
Ω_Λ	0.6885	0.6885 ± 0.0060	$100\theta_{eq}$	0.81633	0.8163 ± 0.0040	χ^2_{CMB}	2773.0	2789.8 ± 6.0
Ω_m	0.3115	0.3115 ± 0.0060	$100\theta_{s,eq}$	0.45095	0.4509 ± 0.0020	χ^2_{BAO}	5.80	6.2 ± 1.2
$\Omega_m h^2$	0.14230	0.14233 ± 0.00090	$H(0.15)$	72.870	72.88 ± 0.42			
$\Omega_m h^3$	0.09618	0.09621 ± 0.00051	$D_M(0.15)$	641.42	641.3 ± 4.2			

Best-fit $\chi^2_{eff} = 2780.41$; $\Delta\chi^2_{eff} = -0.29$; $\bar{\chi}^2_{eff} = 2807.64$; $\Delta\bar{\chi}^2_{eff} = 0.79$; $R - 1 = 0.02881$

χ^2_{eff}: BAO - 6DF: 0.04 (Δ 0.01) MGS: 1.16 (Δ -0.06) DR12BAO: 4.61 (Δ 0.19) CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.66 (Δ -0.07) simall_100x143_offlike5_EE_Aplanck 396.33 (Δ -0.19) commander_dx12_v3_2_29: 23.34 (Δ 0.45) plik_rd12_HM_v22b_TTTEEE: 2344.62 (Δ -0.70)

20.15 base_yhe_plikHM_TTTEEE_lowl_lowE_post_Riess18

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022494	0.02250 ± 0.00019	$\Omega_m h^2$	0.14177	0.1417 ± 0.0012	$100\theta_{eq}$	0.8191	0.8195 ± 0.0055
$\boldsymbol{\Omega_c h^2}$	0.11863	0.1186 ± 0.0013	$\Omega_m h^3$	0.09639	0.09644 ± 0.00052	$100\theta_{s,eq}$	0.45232	0.4525 ± 0.0028
$\boldsymbol{100\theta_{MC}}$	1.04107	1.04118 ± 0.00054	σ_8	0.8080	$0.8090^{+0.0080}_{-0.0090}$	$H(0.15)$	73.22	73.28 ± 0.55
$\boldsymbol{\tau}$	0.0563	$0.0575^{+0.0074}_{-0.0088}$	S_8	0.8169	0.817 ± 0.015	$D_M(0.15)$	638.0	637.5 ± 5.4
$\boldsymbol{Y_P}$	0.2448	0.247 ± 0.012	$\sigma_8 \Omega_m^{0.5}$	0.4475	0.4476 ± 0.0082	$H(0.38)$	83.260	83.31 ± 0.43
$\boldsymbol{\ln(10^{10} A_s)}$	3.0454	$3.048^{+0.016}_{-0.019}$	$\sigma_8 \Omega_m^{0.25}$	0.6013	0.6017 ± 0.0081	$D_M(0.38)$	1522.7	1522 ± 11
$\boldsymbol{n_s}$	0.9694	0.9697 ± 0.0068	$\sigma_8/h^{0.5}$	0.9799	0.981 ± 0.012	$H(0.51)$	89.934	89.98 ± 0.36
$\boldsymbol{y_{cal}}$	1.00050	1.0007 ± 0.0024	$r_{drag} h$	100.16	100.3 ± 1.0	$D_M(0.51)$	1973.2	1972 ± 13
$\boldsymbol{A^{CIB}_{217}}$	45.6	47 ± 7	$\langle d^2 \rangle^{1/2}$	2.4233	$2.425^{+0.027}_{-0.030}$	$H(0.61)$	95.520	95.56 ± 0.31
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.70	—	z_{re}	7.83	$7.94^{+0.76}_{-0.85}$	$D_M(0.61)$	2296.8	2295 ± 14
$\boldsymbol{A^{tSZ}_{143}}$	7.11	5.5 ± 1.9	$10^9 A_s$	2.1018	$2.108^{+0.034}_{-0.041}$	$H(2.33)$	235.80	235.78 ± 0.78
$\boldsymbol{A^{PS}_{100}}$	247.4	259 ± 27	$10^9 A_s e^{-2\tau}$	1.8779	1.878 ± 0.012	$D_M(2.33)$	5753.1	5751 ± 15
$\boldsymbol{A^{PS}_{143}}$	49.9	45 ± 8	D_{40}	1222.2	1223 ± 15	$f\sigma_8(0.15)$	0.4524	0.4526 ± 0.0077
$\boldsymbol{A^{PS}_{143\times 217}}$	53.4	42 ± 10	D_{220}	5738.3	5740 ± 38	$\sigma_8(0.15)$	0.7471	$0.7481^{+0.0072}_{-0.0082}$
$\boldsymbol{A^{PS}_{217}}$	121.9	115 ± 10	D_{810}	2540.5	2539 ± 13	$f\sigma_8(0.38)$	0.4718	0.4721 ± 0.0066
$\boldsymbol{A^{kSZ}}$	0.00	< 4.32	D_{1420}	819.55	818.3 ± 4.8	$\sigma_8(0.38)$	0.6628	$0.6638^{+0.0062}_{-0.0073}$
$\boldsymbol{A^{dustTT}_{100}}$	8.82	9.0 ± 1.9	D_{2000}	231.85	231.3 ± 1.8	$f\sigma_8(0.51)$	0.4710	0.4713 ± 0.0060
$\boldsymbol{A^{dustTT}_{143}}$	11.09	11.0 ± 1.8	$n_{s,0.002}$	0.9694	0.9697 ± 0.0068	$\sigma_8(0.51)$	0.6205	$0.6214^{+0.0058}_{-0.0069}$
$\boldsymbol{A^{dustTT}_{143\times 217}}$	20.20	18.6 ± 3.2	Y_P	0.2448	0.247 ± 0.012	$f\sigma_8(0.61)$	0.4664	0.4668 ± 0.0056
$\boldsymbol{A^{dustTT}_{217}}$	95.5	93.9 ± 7.2	Y_P^{BBN}	0.2461	0.249 ± 0.012	$\sigma_8(0.61)$	0.5905	$0.5914^{+0.0055}_{-0.0066}$
$\boldsymbol{A^{dustTE}_{100}}$	0.1135	0.112 ± 0.037	Age/Gyr	13.7745	13.770 ± 0.035	$f\sigma_8(2.33)$	0.29794	$0.2984^{+0.0028}_{-0.0033}$
$\boldsymbol{A^{dustTE}_{100\times 143}}$	0.1350	0.133 ± 0.030	z_*	1089.620	1089.72 ± 0.41	$\sigma_8(2.33)$	0.30738	$0.3079^{+0.0030}_{-0.0035}$
$\boldsymbol{A^{dustTE}_{100\times 217}}$	0.481	0.484 ± 0.087	r_*	144.692	144.69 ± 0.32	f^{143}_{2000}	27.99	29.2 ± 3.1
$\boldsymbol{A^{dustTE}_{143}}$	0.222	0.221 ± 0.053	$100\theta_*$	1.041265	$1.04130^{+0.00031}_{-0.00035}$	$f^{143\times 217}_{2000}$	31.48	32.0 ± 2.2
$\boldsymbol{A^{dustTE}_{143\times 217}}$	0.661	0.665 ± 0.079	$D_M(z_*)$/Gpc	13.8958	13.895 ± 0.030	f^{217}_{2000}	106.05	106.8 ± 2.1
$\boldsymbol{A^{dustTE}_{217}}$	2.071	2.08 ± 0.27	z_{drag}	1060.12	1060.21 ± 0.74	χ^2_{simall}	396.34	397.7 ± 2.6
$\boldsymbol{c_{100}}$	0.99973	0.99966 ± 0.00060	r_{drag}	147.315	147.32 ± 0.33	χ^2_{lowl}	22.65	22.8 ± 1.2
$\boldsymbol{c_{217}}$	0.99817	$0.99819^{+0.00064}_{-0.00058}$	k_D	0.140749	$0.14064^{+0.00042}_{-0.00038}$	χ^2_{plik}	2346.5	2362.1 ± 6.6
H_0	67.99	68.06 ± 0.63	$100\theta_D$	0.160628	0.16076 ± 0.00045	$\chi^2_{H073p45}$	10.82	10.7 ± 2.5
Ω_Λ	0.6933	0.6939 ± 0.0080	z_{eq}	3372.5	3371 ± 29	χ^2_{prior}	1.61	11.6 ± 4.8
Ω_m	0.3067	0.3061 ± 0.0080	k_{eq}	0.010293	0.010290 ± 0.000089	χ^2_{CMB}	2765.5	2782.6 ± 6.4

Best-fit $\chi^2_{eff} = 2777.94$; $\Delta\chi^2_{eff} = 0.01$; $\bar{\chi}^2_{eff} = 2804.95$; $\Delta\bar{\chi}^2_{eff} = 0.78$; $R - 1 = 0.08230$

χ^2_{eff}: CMB - simall_100x143_offlike5_EE_Aplanck_B: 396.34 (Δ -0.13) commander_dx12_v3_2_29: 22.65 (Δ 0.11) plik_rd12_HM_v22b_TTTEEE: 2346.53 (Δ -0.23) Hubble - H073p45: 10.82 (Δ 0.23)

20.16 base_yhe_plikHM_TTTEEE_lowl_lowE_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02230 ± 0.00020	$\Omega_m h^2$	0.1432 ± 0.0013	$100\theta_{eq}$	0.8124 ± 0.0058
$\boldsymbol{\Omega_c h^2}$	0.1202 ± 0.0014	$\Omega_m h^3$	0.09613 ± 0.00053	$100\theta_{s,eq}$	0.4490 ± 0.0030
$\boldsymbol{100\theta_{MC}}$	1.04071 ± 0.00055	σ_8	$0.8115^{+0.0070}_{-0.0079}$	$H(0.15)$	72.50 ± 0.60
$\boldsymbol{\tau}$	$0.0552^{+0.0051}_{-0.0085}$	S_8	0.835 ± 0.016	$D_M(0.15)$	645.2 ± 5.9
$\boldsymbol{Y_P}$	0.240 ± 0.013	$\sigma_8 \Omega_m^{0.5}$	0.4573 ± 0.0087	$H(0.38)$	82.72 ± 0.46
$\boldsymbol{\ln(10^{10} A_s)}$	$3.045^{+0.013}_{-0.017}$	$\sigma_8 \Omega_m^{0.25}$	0.6091 ± 0.0081	$D_M(0.38)$	1537 ± 12
$\boldsymbol{n_s}$	0.9625 ± 0.0072	$\sigma_8/h^{0.5}$	0.990 ± 0.011	$H(0.51)$	89.49 ± 0.38
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0024	$r_{drag} h$	98.8 ± 1.1	$D_M(0.51)$	1990 ± 14
$\boldsymbol{A_{217}^{CIB}}$	46 ± 7	$\langle d^2 \rangle^{1/2}$	2.455 ± 0.029	$H(0.61)$	95.16 ± 0.32
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	z_{re}	$7.75^{+0.56}_{-0.85}$	$D_M(0.61)$	2315 ± 15
$\boldsymbol{A_{143}^{tSZ}}$	5.5 ± 1.9	$10^9 A_s$	$2.101^{+0.026}_{-0.036}$	$H(2.33)$	236.61 ± 0.81
$\boldsymbol{A_{100}^{PS}}$	257 ± 28	$10^9 A_s e^{-2\tau}$	1.882 ± 0.012	$D_M(2.33)$	5770 ± 16
$\boldsymbol{A_{143}^{PS}}$	45 ± 8	D_{40}	1236 ± 16	$f\sigma_8(0.15)$	0.4614 ± 0.0081
$\boldsymbol{A_{143\times217}^{PS}}$	42 ± 9	D_{220}	5733 ± 38	$\sigma_8(0.15)$	$0.7493^{+0.0061}_{-0.0072}$
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	D_{810}	2538 ± 13	$f\sigma_8(0.38)$	0.4783 ± 0.0066
$\boldsymbol{A^{kSZ}}$	< 4.05	D_{1420}	817.5 ± 4.7	$\sigma_8(0.38)$	$0.6635^{+0.0052}_{-0.0064}$
$\boldsymbol{A_{100}^{dustTT}}$	8.9 ± 1.8	D_{2000}	231.3 ± 1.8	$f\sigma_8(0.51)$	0.4762 ± 0.0058
$\boldsymbol{A_{143}^{dustTT}}$	10.8 ± 1.8	$n_{s,0.002}$	0.9625 ± 0.0072	$\sigma_8(0.51)$	$0.6207^{+0.0048}_{-0.0061}$
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.5 ± 3.3	Y_P	0.240 ± 0.013	$f\sigma_8(0.61)$	0.4708 ± 0.0053
$\boldsymbol{A_{217}^{dustTT}}$	93.7 ± 7.3	Y_P^{BBN}	0.241 ± 0.013	$\sigma_8(0.61)$	$0.5904^{+0.0046}_{-0.0058}$
$\boldsymbol{A_{100}^{dustTE}}$	0.114 ± 0.038	Age/Gyr	13.812 ± 0.037	$f\sigma_8(2.33)$	$0.2975^{+0.0023}_{-0.0030}$
$\boldsymbol{A_{100\times143}^{dustTE}}$	0.134 ± 0.030	z_*	1089.81 ± 0.42	$\sigma_8(2.33)$	$0.3064^{+0.0025}_{-0.0032}$
$\boldsymbol{A_{100\times217}^{dustTE}}$	0.481 ± 0.085	r_*	144.45 ± 0.32	f_{2000}^{143}	28.9 ± 3.1
$\boldsymbol{A_{143}^{dustTE}}$	0.224 ± 0.053	$100\theta_*$	1.04103 ± 0.00033	$f_{2000}^{143\times217}$	31.7 ± 2.2
$\boldsymbol{A_{143\times217}^{dustTE}}$	0.666 ± 0.080	$D_M(z_*)$/Gpc	13.876 ± 0.030	f_{2000}^{217}	106.6 ± 2.1
$\boldsymbol{A_{217}^{dustTE}}$	2.09 ± 0.27	z_{drag}	1059.61 ± 0.78	χ^2_{simall}	397.1 ± 2.0
$\boldsymbol{c_{100}}$	0.99967 ± 0.00061	r_{drag}	147.13 ± 0.33	χ^2_{lowl}	24.1 ± 1.5
$\boldsymbol{c_{217}}$	0.99819 ± 0.00063	k_D	0.14099 ± 0.00041	χ^2_{plik}	2359.7 ± 6.0
H_0	67.15 ± 0.69	$100\theta_D$	0.16059 ± 0.00046	χ^2_{prior}	11.5 ± 4.5
Ω_Λ	0.6824 ± 0.0090	z_{eq}	3406 ± 31	χ^2_{CMB}	2780.8 ± 5.9
Ω_m	0.3176 ± 0.0090	k_{eq}	0.010394 ± 0.000093		

$\bar{\chi}^2_{eff} = 2792.32$; $\Delta\bar{\chi}^2_{eff} = 0.79$; $R - 1 = 0.01241$

20.17 base_yhe_plikHM_TTTEEE_lowl_lowE_post_BAO_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02239 ± 0.00018	$\Omega_m h^3$	0.09624 ± 0.00051	$H(0.15)$	72.91 ± 0.44
$\boldsymbol{\Omega_c h^2}$	0.1193 ± 0.0010	σ_8	$0.8099^{+0.0071}_{-0.0083}$	$D_M(0.15)$	641.0 ± 4.3
$\boldsymbol{100\theta_{MC}}$	1.04092 ± 0.00051	S_8	0.825 ± 0.013	$H(0.38)$	83.02 ± 0.34
$\boldsymbol{\tau}$	$0.0566^{+0.0058}_{-0.0083}$	$\sigma_8\Omega_m^{0.5}$	0.4517 ± 0.0070	$D_M(0.38)$	1528.9 ± 8.8
$\boldsymbol{Y_P}$	0.243 ± 0.012	$\sigma_8\Omega_m^{0.25}$	0.6048 ± 0.0071	$H(0.51)$	89.74 ± 0.29
$\boldsymbol{\ln(10^{10}A_s)}$	$3.047^{+0.014}_{-0.018}$	$\sigma_8/h^{0.5}$	0.985 ± 0.010	$D_M(0.51)$	1981 ± 10
$\boldsymbol{n_s}$	0.9660 ± 0.0062	$r_{drag}h$	99.60 ± 0.80	$H(0.61)$	95.36 ± 0.26
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0024	$\langle d^2\rangle^{1/2}$	2.439 ± 0.025	$D_M(0.61)$	2305 ± 11
$\boldsymbol{A^{CIB}_{217}}$	47 ± 7	z_{re}	$7.87^{+0.62}_{-0.84}$	$H(2.33)$	236.10 ± 0.65
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	10^9A_s	$2.104^{+0.028}_{-0.038}$	$D_M(2.33)$	5761 ± 14
$\boldsymbol{A^{tSZ}_{143}}$	5.5 ± 2.0	$10^9A_se^{-2\tau}$	1.879 ± 0.012	$f\sigma_8(0.15)$	0.4563 ± 0.0066
$\boldsymbol{A^{PS}_{100}}$	257 ± 28	D_{40}	1229 ± 15	$\sigma_8(0.15)$	$0.7484^{+0.0064}_{-0.0076}$
$\boldsymbol{A^{PS}_{143}}$	45 ± 8	D_{220}	5736 ± 39	$f\sigma_8(0.38)$	0.4747 ± 0.0058
$\boldsymbol{A^{PS}_{143\times217}}$	42 ± 9	D_{810}	2539 ± 13	$\sigma_8(0.38)$	$0.6634^{+0.0055}_{-0.0067}$
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	D_{1420}	817.9 ± 4.7	$f\sigma_8(0.51)$	0.4734 ± 0.0053
$\boldsymbol{A^{kSZ}}$	< 4.14	D_{2000}	231.3 ± 1.8	$\sigma_8(0.51)$	$0.6209^{+0.0052}_{-0.0063}$
$\boldsymbol{A^{dustTT}_{100}}$	8.9 ± 1.8	$n_{s,0.002}$	0.9660 ± 0.0062	$f\sigma_8(0.61)$	0.4684 ± 0.0050
$\boldsymbol{A^{dustTT}_{143}}$	10.9 ± 1.8	Y_P	0.243 ± 0.012	$\sigma_8(0.61)$	$0.5908^{+0.0049}_{-0.0060}$
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.6 ± 3.3	Y_P^{BBN}	0.244 ± 0.012	$f\sigma_8(2.33)$	$0.2979^{+0.0025}_{-0.0031}$
$\boldsymbol{A^{dustTT}_{217}}$	93.8 ± 7.3	Age/Gyr	13.792 ± 0.031	$\sigma_8(2.33)$	$0.3071^{+0.0026}_{-0.0032}$
$\boldsymbol{A^{dustTE}_{100}}$	0.113 ± 0.038	z_*	1089.73 ± 0.41	f^{143}_{2000}	28.9 ± 3.1
$\boldsymbol{A^{dustTE}_{100\times143}}$	0.134 ± 0.030	r_*	144.61 ± 0.28	$f^{143\times217}_{2000}$	31.7 ± 2.2
$\boldsymbol{A^{dustTE}_{100\times217}}$	0.482 ± 0.086	$100\theta_*$	1.04117 ± 0.00030	f^{217}_{2000}	106.6 ± 2.1
$\boldsymbol{A^{dustTE}_{143}}$	0.222 ± 0.053	$D_M(z_*)$/Gpc	13.889 ± 0.027	χ^2_{simall}	397.3 ± 2.3
$\boldsymbol{A^{dustTE}_{143\times217}}$	0.665 ± 0.079	z_{drag}	1059.86 ± 0.73	χ^2_{lowl}	23.4 ± 1.2
$\boldsymbol{A^{dustTE}_{217}}$	2.08 ± 0.27	r_{drag}	147.27 ± 0.31	χ^2_{plik}	2360.2 ± 6.0
$\boldsymbol{c_{100}}$	0.99966 ± 0.00061	k_D	0.14080 ± 0.00036	χ^2_{6DF}	0.060 ± 0.070
$\boldsymbol{c_{217}}$	0.99819 ± 0.00062	$100\theta_D$	0.16065 ± 0.00045	χ^2_{MGS}	1.25 ± 0.43
H_0	67.63 ± 0.50	z_{eq}	3385 ± 23	$\chi^2_{DR12BAO}$	4.9 ± 1.5
Ω_Λ	0.6888 ± 0.0063	k_{eq}	0.010332 ± 0.000071	χ^2_{prior}	11.6 ± 4.5
Ω_m	0.3112 ± 0.0063	$100\theta_{eq}$	0.8164 ± 0.0043	χ^2_{BAO}	6.2 ± 1.2
$\Omega_m h^2$	0.14230 ± 0.00098	$100\theta_{s,eq}$	0.4510 ± 0.0022	χ^2_{CMB}	2780.9 ± 5.9

$\bar{\chi}^2_{eff} = 2798.67$; $\Delta\bar{\chi}^2_{eff} = 0.96$; $R - 1 = 0.03223$

20.18 base_yhe_plikHM_TTTEEE_lowl_lowE_post_lensing_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02231 ± 0.00020	$\Omega_m h^2$	0.1430 ± 0.0011	$100\theta_{eq}$	0.8133 ± 0.0050
$\boldsymbol{\Omega_c h^2}$	0.1200 ± 0.0012	$\Omega_m h^3$	0.09610 ± 0.00052	$100\theta_{s,eq}$	0.4494 ± 0.0026
$\boldsymbol{100\theta_{MC}}$	1.04070 ± 0.00054	σ_8	$0.8103^{+0.0059}_{-0.0067}$	$H(0.15)$	72.56 ± 0.54
$\boldsymbol{\tau}$	$0.0549^{+0.0052}_{-0.0080}$	S_8	0.832 ± 0.013	$D_M(0.15)$	644.5 ± 5.3
$\boldsymbol{Y_P}$	0.239 ± 0.013	$\sigma_8 \Omega_m^{0.5}$	0.4557 ± 0.0069	$H(0.38)$	82.76 ± 0.42
$\boldsymbol{\ln(10^{10} A_s)}$	$3.044^{+0.012}_{-0.016}$	$\sigma_8 \Omega_m^{0.25}$	0.6077 ± 0.0063	$D_M(0.38)$	1536 ± 11
$\boldsymbol{n_s}$	0.9625 ± 0.0069	$\sigma_8/h^{0.5}$	0.9882 ± 0.0089	$H(0.51)$	89.52 ± 0.35
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0024	$r_{drag} h$	98.95 ± 0.98	$D_M(0.51)$	1989 ± 13
$\boldsymbol{A_{217}^{CIB}}$	46 ± 7	$\langle d^2 \rangle^{1/2}$	2.451 ± 0.023	$H(0.61)$	95.18 ± 0.31
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	z_{re}	$7.71^{+0.56}_{-0.81}$	$D_M(0.61)$	2314 ± 14
$\boldsymbol{A_{143}^{tSZ}}$	$5.5^{+2.1}_{-1.9}$	$10^9 A_s$	$2.099^{+0.025}_{-0.033}$	$H(2.33)$	236.48 ± 0.71
$\boldsymbol{A_{100}^{PS}}$	257 ± 28	$10^9 A_s e^{-2\tau}$	1.880 ± 0.012	$D_M(2.33)$	5769 ± 15
$\boldsymbol{A_{143}^{PS}}$	45 ± 8	D_{40}	1236 ± 15	$f\sigma_8(0.15)$	0.4599 ± 0.0064
$\boldsymbol{A_{143\times217}^{PS}}$	42 ± 9	D_{220}	5735 ± 39	$\sigma_8(0.15)$	$0.7483^{+0.0054}_{-0.0063}$
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	D_{810}	2538 ± 13	$f\sigma_8(0.38)$	0.4771 ± 0.0052
$\boldsymbol{A^{kSZ}}$	< 4.08	D_{1420}	817.5 ± 4.8	$\sigma_8(0.38)$	$0.6628^{+0.0048}_{-0.0058}$
$\boldsymbol{A_{100}^{dustTT}}$	8.9 ± 1.8	D_{2000}	231.3 ± 1.8	$f\sigma_8(0.51)$	0.4752 ± 0.0046
$\boldsymbol{A_{143}^{dustTT}}$	10.8 ± 1.8	$n_{s,0.002}$	0.9625 ± 0.0069	$\sigma_8(0.51)$	$0.6200^{+0.0045}_{-0.0055}$
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.6 ± 3.3	Y_P	0.239 ± 0.013	$f\sigma_8(0.61)$	0.4698 ± 0.0042
$\boldsymbol{A_{217}^{dustTT}}$	93.8 ± 7.3	Y_P^{BBN}	0.240 ± 0.013	$\sigma_8(0.61)$	$0.5898^{+0.0043}_{-0.0053}$
$\boldsymbol{A_{100}^{dustTE}}$	0.113 ± 0.038	Age/Gyr	13.810 ± 0.036	$f\sigma_8(2.33)$	$0.2972^{+0.0023}_{-0.0028}$
$\boldsymbol{A_{100\times143}^{dustTE}}$	0.134 ± 0.030	z_*	1089.76 ± 0.41	$\sigma_8(2.33)$	$0.3062^{+0.0025}_{-0.0031}$
$\boldsymbol{A_{100\times217}^{dustTE}}$	0.482 ± 0.086	r_*	144.50 ± 0.28	f_{2000}^{143}	28.8 ± 3.1
$\boldsymbol{A_{143}^{dustTE}}$	0.224 ± 0.054	$100\theta_*$	1.04104 ± 0.00032	$f_{2000}^{143\times217}$	31.6 ± 2.2
$\boldsymbol{A_{143\times217}^{dustTE}}$	0.667 ± 0.080	$D_M(z_*)$/Gpc	13.880 ± 0.027	f_{2000}^{217}	106.5 ± 2.1
$\boldsymbol{A_{217}^{dustTE}}$	2.08 ± 0.27	z_{drag}	1059.59 ± 0.77	$\chi^2_{lensing}$	9.17 ± 0.69
$\boldsymbol{c_{100}}$	0.99967 ± 0.00061	r_{drag}	147.18 ± 0.30	χ^2_{simall}	396.9 ± 1.8
$\boldsymbol{c_{217}}$	0.99819 ± 0.00062	k_D	0.14097 ± 0.00039	χ^2_{lowl}	24.0 ± 1.4
H_0	67.23 ± 0.61	$100\theta_D$	0.16056 ± 0.00045	χ^2_{plik}	2359.5 ± 5.8
Ω_Λ	0.6836 ± 0.0079	z_{eq}	3401 ± 26	χ^2_{prior}	11.5 ± 4.5
Ω_m	0.3164 ± 0.0079	k_{eq}	0.010379 ± 0.000081	χ^2_{CMB}	2789.6 ± 5.9

$\bar{\chi}^2_{eff} = 2801.11$; $\Delta\bar{\chi}^2_{eff} = 0.60$; $R - 1 = 0.01737$

20.19 base_yhe_plikHM_TTTEEE_lowl_lowE_post_BAO_lensing_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02239 ± 0.00018	σ_8	$0.8099^{+0.0062}_{-0.0070}$	$H(0.38)$	83.01 ± 0.33
$\boldsymbol{\Omega_c h^2}$	0.11927 ± 0.00093	S_8	0.825 ± 0.011	$D_{\rm M}(0.38)$	1529.3 ± 8.4
$\boldsymbol{100\theta_{MC}}$	1.04089 ± 0.00050	$\sigma_8\Omega_{\rm m}^{0.5}$	0.4519 ± 0.0058	$H(0.51)$	89.72 ± 0.29
$\boldsymbol{\tau}$	$0.0568^{+0.0059}_{-0.0076}$	$\sigma_8\Omega_{\rm m}^{0.25}$	0.6050 ± 0.0059	$D_{\rm M}(0.51)$	1981 ± 10
$\boldsymbol{Y_P}$	0.242 ± 0.012	$\sigma_8/h^{0.5}$	0.9850 ± 0.0086	$H(0.61)$	95.34 ± 0.26
$\boldsymbol{\ln(10^{10}A_s)}$	$3.047^{+0.013}_{-0.016}$	$r_{\rm drag}h$	99.58 ± 0.75	$D_{\rm M}(0.61)$	2305 ± 11
$\boldsymbol{n_s}$	0.9655 ± 0.0062	$\langle d^2\rangle^{1/2}$	2.441 ± 0.021	$H(2.33)$	236.10 ± 0.60
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0024	$z_{\rm re}$	$7.89^{+0.63}_{-0.76}$	$D_{\rm M}(2.33)$	5762 ± 13
$\boldsymbol{A^{CIB}_{217}}$	46 ± 7	$10^9 A_{\rm s}$	$2.106^{+0.027}_{-0.033}$	$f\sigma_8(0.15)$	0.4565 ± 0.0055
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$10^9 A_{\rm s}e^{-2\tau}$	1.879 ± 0.011	$\sigma_8(0.15)$	$0.7484^{+0.0057}_{-0.0065}$
$\boldsymbol{A^{tSZ}_{143}}$	5.5 ± 2.0	D_{40}	1231 ± 14	$f\sigma_8(0.38)$	0.4749 ± 0.0047
$\boldsymbol{A^{PS}_{100}}$	257 ± 28	D_{220}	5740 ± 38	$\sigma_8(0.38)$	$0.6635^{+0.0050}_{-0.0059}$
$\boldsymbol{A^{PS}_{143}}$	45 ± 8	D_{810}	2539 ± 13	$f\sigma_8(0.51)$	0.4735 ± 0.0044
$\boldsymbol{A^{PS}_{143\times217}}$	42 ± 9	D_{1420}	818.2 ± 4.7	$\sigma_8(0.51)$	$0.6209^{+0.0048}_{-0.0056}$
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	D_{2000}	231.4 ± 1.8	$f\sigma_8(0.61)$	0.4685 ± 0.0041
$\boldsymbol{A^{kSZ}}$	< 4.06	$n_{\rm s,0.002}$	0.9655 ± 0.0062	$\sigma_8(0.61)$	$0.5908^{+0.0046}_{-0.0054}$
$\boldsymbol{A^{dustTT}_{100}}$	8.9 ± 1.8	$Y_{\rm P}$	0.242 ± 0.012	$f\sigma_8(2.33)$	$0.2979^{+0.0024}_{-0.0028}$
$\boldsymbol{A^{dustTT}_{143}}$	10.9 ± 1.8	$Y_{\rm P}^{\rm BBN}$	0.243 ± 0.012	$\sigma_8(2.33)$	$0.3071^{+0.0025}_{-0.0030}$
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.6 ± 3.3	Age/Gyr	13.793 ± 0.031	f^{143}_{2000}	28.8 ± 3.1
$\boldsymbol{A^{dustTT}_{217}}$	93.8 ± 7.3	z_*	1089.70 ± 0.40	$f^{143\times217}_{2000}$	31.6 ± 2.2
$\boldsymbol{A^{dustTE}_{100}}$	0.112 ± 0.038	r_*	144.62 ± 0.26	f^{217}_{2000}	106.5 ± 2.1
$\boldsymbol{A^{dustTE}_{100\times143}}$	0.134 ± 0.030	$100\theta_*$	1.04115 ± 0.00030	$\chi^2_{\rm lensing}$	9.05 ± 0.57
$\boldsymbol{A^{dustTE}_{100\times217}}$	0.482 ± 0.086	$D_{\rm M}(z_*)$/Gpc	13.890 ± 0.026	$\chi^2_{\rm simall}$	397.3 ± 2.1
$\boldsymbol{A^{dustTE}_{143}}$	0.222 ± 0.054	$z_{\rm drag}$	1059.82 ± 0.73	$\chi^2_{\rm lowl}$	23.5 ± 1.2
$\boldsymbol{A^{dustTE}_{143\times217}}$	0.665 ± 0.079	$r_{\rm drag}$	147.27 ± 0.29	$\chi^2_{\rm plik}$	2359.9 ± 5.9
$\boldsymbol{A^{dustTE}_{217}}$	2.08 ± 0.27	$k_{\rm D}$	0.14082 ± 0.00035	$\chi^2_{\rm 6DF}$	0.058 ± 0.065
$\boldsymbol{c_{100}}$	0.99966 ± 0.00061	$100\theta_{\rm D}$	0.16061 ± 0.00045	$\chi^2_{\rm MGS}$	1.23 ± 0.41
$\boldsymbol{c_{217}}$	0.99819 ± 0.00062	$z_{\rm eq}$	3385 ± 21	$\chi^2_{\rm DR12BAO}$	4.9 ± 1.4
H_0	67.62 ± 0.48	$k_{\rm eq}$	0.010332 ± 0.000065	$\chi^2_{\rm prior}$	11.6 ± 4.5
Ω_Λ	0.6887 ± 0.0059	$100\theta_{\rm eq}$	0.8164 ± 0.0040	$\chi^2_{\rm CMB}$	2789.7 ± 5.9
$\Omega_{\rm m}$	0.3113 ± 0.0059	$100\theta_{\rm s,eq}$	0.4510 ± 0.0020	$\chi^2_{\rm BAO}$	6.2 ± 1.1
$\Omega_{\rm m}h^2$	0.14231 ± 0.00090	$H(0.15)$	72.90 ± 0.42		
$\Omega_{\rm m}h^3$	0.09622 ± 0.00051	$D_{\rm M}(0.15)$	641.2 ± 4.1		

$\bar{\chi}^2_{\rm eff} = 2807.47$; $\Delta\bar{\chi}^2_{\rm eff} = 0.75$; $R - 1 = 0.03003$

20.20 base_yhe_plikHM_TTTEEE_lowl_lowE_post_Riess18_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02251 ± 0.00019	$\Omega_m h^2$	0.1417 ± 0.0012	$100\theta_{eq}$	0.8196 ± 0.0056
$\boldsymbol{\Omega_c h^2}$	0.1186 ± 0.0013	$\Omega_m h^3$	0.09645 ± 0.00052	$100\theta_{s,eq}$	0.4526 ± 0.0028
$\boldsymbol{100\theta_{MC}}$	1.04119 ± 0.00054	σ_8	$0.8096^{+0.0074}_{-0.0089}$	$H(0.15)$	73.30 ± 0.55
$\boldsymbol{\tau}$	$0.0583^{+0.0061}_{-0.0088}$	S_8	0.818 ± 0.015	$D_M(0.15)$	637.3 ± 5.4
$\boldsymbol{Y_P}$	0.248 ± 0.012	$\sigma_8 \Omega_m^{0.5}$	0.4478 ± 0.0082	$H(0.38)$	83.32 ± 0.43
$\boldsymbol{\ln(10^{10} A_s)}$	$3.050^{+0.014}_{-0.019}$	$\sigma_8 \Omega_m^{0.25}$	0.6021 ± 0.0080	$D_M(0.38)$	1521 ± 11
$\boldsymbol{n_s}$	0.9699 ± 0.0068	$\sigma_8/h^{0.5}$	0.981 ± 0.011	$H(0.51)$	89.99 ± 0.36
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0024	$r_{drag} h$	100.3 ± 1.0	$D_M(0.51)$	1972 ± 13
$\boldsymbol{A^{CIB}_{217}}$	47 ± 7	$\langle d^2 \rangle^{1/2}$	$2.426^{+0.027}_{-0.030}$	$H(0.61)$	95.57 ± 0.31
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	z_{re}	$8.02^{+0.63}_{-0.88}$	$D_M(0.61)$	2295 ± 14
$\boldsymbol{A^{tSZ}_{143}}$	5.5 ± 1.9	$10^9 A_s$	$2.111^{+0.029}_{-0.040}$	$H(2.33)$	235.77 ± 0.78
$\boldsymbol{A^{PS}_{100}}$	259 ± 27	$10^9 A_s e^{-2\tau}$	1.878 ± 0.012	$D_M(2.33)$	5751 ± 15
$\boldsymbol{A^{PS}_{143}}$	45 ± 8	D_{40}	1223 ± 15	$f\sigma_8(0.15)$	0.4528 ± 0.0077
$\boldsymbol{A^{PS}_{143\times217}}$	42 ± 10	D_{220}	5740 ± 38	$\sigma_8(0.15)$	$0.7487^{+0.0066}_{-0.0081}$
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	D_{810}	2539 ± 13	$f\sigma_8(0.38)$	0.4723 ± 0.0065
$\boldsymbol{A^{kSZ}}$	< 4.31	D_{1420}	818.3 ± 4.7	$\sigma_8(0.38)$	$0.6643^{+0.0056}_{-0.0072}$
$\boldsymbol{A^{dustTT}_{100}}$	9.0 ± 1.9	D_{2000}	231.3 ± 1.8	$f\sigma_8(0.51)$	0.4716 ± 0.0058
$\boldsymbol{A^{dustTT}_{143}}$	11.0 ± 1.8	$n_{s,0.002}$	0.9699 ± 0.0068	$\sigma_8(0.51)$	$0.6219^{+0.0052}_{-0.0068}$
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.6 ± 3.2	Y_P	0.248 ± 0.012	$f\sigma_8(0.61)$	0.4671 ± 0.0054
$\boldsymbol{A^{dustTT}_{217}}$	93.9 ± 7.2	Y_P^{BBN}	0.249 ± 0.012	$\sigma_8(0.61)$	$0.5919^{+0.0049}_{-0.0065}$
$\boldsymbol{A^{dustTE}_{100}}$	0.111 ± 0.037	Age/Gyr	13.769 ± 0.035	$f\sigma_8(2.33)$	$0.2987^{+0.0025}_{-0.0033}$
$\boldsymbol{A^{dustTE}_{100\times143}}$	0.133 ± 0.030	z_*	1089.72 ± 0.41	$\sigma_8(2.33)$	$0.3082^{+0.0026}_{-0.0035}$
$\boldsymbol{A^{dustTE}_{100\times217}}$	0.484 ± 0.087	r_*	144.69 ± 0.32	f^{143}_{2000}	29.2 ± 3.1
$\boldsymbol{A^{dustTE}_{143}}$	0.222 ± 0.053	$100\theta_*$	$1.04130^{+0.00031}_{-0.00035}$	$f^{143\times217}_{2000}$	32.0 ± 2.2
$\boldsymbol{A^{dustTE}_{143\times217}}$	0.666 ± 0.079	$D_M(z_*)$/Gpc	13.896 ± 0.030	f^{217}_{2000}	106.8 ± 2.1
$\boldsymbol{A^{dustTE}_{217}}$	2.08 ± 0.27	z_{drag}	1060.22 ± 0.74	χ^2_{simall}	397.7 ± 2.7
$\boldsymbol{c_{100}}$	0.99966 ± 0.00060	r_{drag}	147.32 ± 0.34	χ^2_{lowl}	22.8 ± 1.2
$\boldsymbol{c_{217}}$	0.99819 ± 0.00061	k_D	0.14064 ± 0.00041	χ^2_{plik}	2362.0 ± 6.6
H_0	68.07 ± 0.63	$100\theta_D$	0.16076 ± 0.00045	$\chi^2_{H073p45}$	10.6 ± 2.5
Ω_Λ	0.6941 ± 0.0080	z_{eq}	3371 ± 29	χ^2_{prior}	11.6 ± 4.8
Ω_m	0.3059 ± 0.0080	k_{eq}	0.010288 ± 0.000089	χ^2_{CMB}	2782.5 ± 6.4

$\bar{\chi}^2_{eff} = 2804.74$; $\Delta\bar{\chi}^2_{eff} = 0.86$; $R - 1 = 0.08577$

20.21 base_yhe_CamSpecHM_TT_lowl_lowE

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02211 ± 0.00030	S_8	0.838 ± 0.025	$100\theta_{s,eq}$	0.4486 ± 0.0049
$\boldsymbol{\Omega_c h^2}$	0.1205 ± 0.0022	$\sigma_8\Omega_m^{0.5}$	0.459 ± 0.014	$H(0.15)$	72.27 ± 0.99
$\boldsymbol{100\theta_{MC}}$	1.04075 ± 0.00089	$\sigma_8\Omega_m^{0.25}$	0.610 ± 0.012	$D_M(0.15)$	647.5 ± 9.9
$\boldsymbol{\tau}$	0.0522 ± 0.0082	$\sigma_8/h^{0.5}$	0.991 ± 0.016	$H(0.38)$	82.53 ± 0.74
$\boldsymbol{Y_P}$	0.242 ± 0.021	$r_{drag}h$	98.5 ± 1.9	$D_M(0.38)$	1542 ± 20
$\boldsymbol{\ln(10^{10}A_s)}$	3.038 ± 0.018	$\langle d^2\rangle^{1/2}$	2.451 ± 0.044	$H(0.51)$	89.33 ± 0.61
$\boldsymbol{n_s}$	0.963 ± 0.011	z_{re}	7.50 ± 0.85	$D_M(0.51)$	1996 ± 24
$\boldsymbol{y_{cal}}$	1.0004 ± 0.0025	$10^9 A_s$	2.088 ± 0.037	$H(0.61)$	95.01 ± 0.52
$\boldsymbol{A_{100}^{PS}}$	242 ± 26	$10^9 A_s e^{-2\tau}$	1.880 ± 0.015	$D_M(0.61)$	2322 ± 26
$\boldsymbol{A_{143}^{PS}}$	40 ± 10	D_{40}	1232 ± 22	$H(2.33)$	236.6 ± 1.3
$\boldsymbol{A_{217}^{PS}}$	101 ± 10	D_{220}	5703 ± 42	$D_M(2.33)$	5778 ± 26
$\boldsymbol{A_{217}^{CIB}}$	41^{+7}_{-8}	D_{810}	2534 ± 14	$f\sigma_8(0.15)$	0.463 ± 0.013
$\boldsymbol{A_{143}^{tSZ}}$	$3.7^{+1.8}_{-2.6}$	D_{1420}	814.4 ± 5.4	$\sigma_8(0.15)$	0.7482 ± 0.0086
$\boldsymbol{r_{143\times217}^{PS}}$	0.65 ± 0.13	D_{2000}	229.8 ± 2.5	$f\sigma_8(0.38)$	0.4790 ± 0.0099
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.57^{+0.42}_{-0.13}$	$n_{s,0.002}$	0.963 ± 0.011	$\sigma_8(0.38)$	0.6623 ± 0.0074
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P	0.242 ± 0.021	$f\sigma_8(0.51)$	0.4765 ± 0.0084
$\boldsymbol{A^{kSZ}}$	—	Y_P^{BBN}	0.244 ± 0.021	$\sigma_8(0.51)$	0.6194 ± 0.0070
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.20	Age/Gyr	13.831 ± 0.058	$f\sigma_8(0.61)$	0.4708 ± 0.0075
$\boldsymbol{A_{143}^{dust}}$	0.97 ± 0.17	z_*	1090.20 ± 0.68	$\sigma_8(0.61)$	0.5892 ± 0.0067
$\boldsymbol{A_{217}^{dust}}$	0.97 ± 0.10	r_*	144.50 ± 0.49	$f\sigma_8(2.33)$	0.2967 ± 0.0035
$\boldsymbol{A_{143\times217}^{dust}}$	1.03 ± 0.16	$100\theta_*$	1.04103 ± 0.00050	$\sigma_8(2.33)$	0.3056 ± 0.0038
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	$D_M(z_*)$/Gpc	13.881 ± 0.046	f_{2000}^{143}	30 ± 4
$\boldsymbol{c_{217}}$	1.0012 ± 0.0016	z_{drag}	1059.3 ± 1.2	f_{2000}^{217}	107.3 ± 2.8
H_0	66.9 ± 1.1	r_{drag}	147.25 ± 0.50	$f_{2000}^{143\times217}$	32.7 ± 3.1
Ω_Λ	$0.679^{+0.016}_{-0.014}$	k_D	0.14060 ± 0.00078	χ^2_{simall}	397.0 ± 1.7
Ω_m	0.321 ± 0.015	$100\theta_D$	0.16097 ± 0.00080	χ^2_{lowl}	23.9 ± 2.1
$\Omega_m h^2$	0.1433 ± 0.0021	z_{eq}	3409 ± 50	$\chi^2_{CamSpec}$	7063.9 ± 5.6
$\Omega_m h^3$	0.09585 ± 0.00076	k_{eq}	0.01040 ± 0.00015	χ^2_{prior}	7.6 ± 3.4
σ_8	0.8107 ± 0.0098	$100\theta_{eq}$	0.8114 ± 0.0096	χ^2_{CMB}	7484.8 ± 5.7

$\bar{\chi}^2_{eff} = 7492.39$; $\Delta\bar{\chi}^2_{eff} = 0.85$; $R - 1 = 0.00648$

20.22 base_yhe_CamSpecHM_TT_lowl_lowE_post_BAO

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02226 ± 0.00024	$\sigma_8\Omega_m^{0.25}$	0.6025 ± 0.0085	$D_M(0.38)$	1527 ± 11
$\boldsymbol{\Omega_c h^2}$	0.1189 ± 0.0012	$\sigma_8/h^{0.5}$	0.982 ± 0.012	$H(0.51)$	89.75 ± 0.38
$\boldsymbol{100\theta_{MC}}$	1.04119 ± 0.00074	$r_{drag}h$	99.91 ± 0.98	$D_M(0.51)$	1979 ± 13
$\boldsymbol{\tau}$	0.0541 ± 0.0079	$\langle d^2\rangle^{1/2}$	2.422 ± 0.029	$H(0.61)$	95.35 ± 0.35
$\boldsymbol{Y_P}$	0.250 ± 0.019	z_{re}	7.67 ± 0.81	$D_M(0.61)$	2303 ± 14
$\boldsymbol{\ln(10^{10}A_s)}$	3.041 ± 0.018	$10^9 A_s$	2.092 ± 0.037	$H(2.33)$	235.76 ± 0.82
$\boldsymbol{n_s}$	0.9691 ± 0.0083	$10^9 A_s e^{-2\tau}$	1.877 ± 0.015	$D_M(2.33)$	5762 ± 18
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	D_{40}	1219 ± 17	$f\sigma_8(0.15)$	0.4540 ± 0.0078
$\boldsymbol{A_{100}^{PS}}$	244 ± 26	D_{220}	5709 ± 41	$\sigma_8(0.15)$	0.7469 ± 0.0084
$\boldsymbol{A_{143}^{PS}}$	41 ± 9	D_{810}	2534 ± 14	$f\sigma_8(0.38)$	0.4728 ± 0.0068
$\boldsymbol{A_{217}^{PS}}$	101 ± 10	D_{1420}	814.6 ± 5.3	$\sigma_8(0.38)$	0.6623 ± 0.0074
$\boldsymbol{A_{217}^{CIB}}$	41^{+7}_{-8}	D_{2000}	229.5 ± 2.5	$f\sigma_8(0.51)$	0.4717 ± 0.0063
$\boldsymbol{A_{143}^{tSZ}}$	$3.7^{+1.7}_{-2.7}$	$n_{s,0.002}$	0.9691 ± 0.0083	$\sigma_8(0.51)$	0.6199 ± 0.0069
$\boldsymbol{r_{143\times217}^{PS}}$	0.65 ± 0.13	Y_P	0.250 ± 0.019	$f\sigma_8(0.61)$	0.4669 ± 0.0059
$\boldsymbol{r_{143\times217}^{CIB}}$	> 0.463	Y_P^{BBN}	0.251 ± 0.019	$\sigma_8(0.61)$	0.5899 ± 0.0066
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Age/Gyr	13.796 ± 0.043	$f\sigma_8(2.33)$	0.2976 ± 0.0034
$\boldsymbol{A^{kSZ}}$	—	z_*	1090.16 ± 0.68	$\sigma_8(2.33)$	0.3069 ± 0.0035
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.20	r_*	144.78 ± 0.37	f_{2000}^{143}	31 ± 4
$\boldsymbol{A_{143}^{dust}}$	0.98 ± 0.17	$100\theta_*$	1.04127 ± 0.00042	f_{2000}^{217}	107.8 ± 2.7
$\boldsymbol{A_{217}^{dust}}$	0.97 ± 0.10	$D_M(z_*)$/Gpc	13.904 ± 0.037	$f_{2000}^{143\times217}$	33.2 ± 3.0
$\boldsymbol{A_{143\times217}^{dust}}$	1.03 ± 0.16	z_{drag}	1059.8 ± 1.1	χ^2_{simall}	397.1 ± 1.8
$\boldsymbol{c_{100}}$	$0.9975^{+0.0011}_{-0.00099}$	r_{drag}	147.49 ± 0.42	χ^2_{lowl}	22.7 ± 1.3
$\boldsymbol{c_{217}}$	1.0012 ± 0.0016	k_D	0.14018 ± 0.00061	$\chi^2_{CamSpec}$	7064.8 ± 5.6
H_0	67.74 ± 0.62	$100\theta_D$	0.16119 ± 0.00076	χ^2_{6DF}	0.054 ± 0.074
Ω_Λ	0.6908 ± 0.0076	z_{eq}	3374 ± 29	χ^2_{MGS}	1.43 ± 0.56
Ω_m	0.3092 ± 0.0076	k_{eq}	0.010297 ± 0.000089	$\chi^2_{DR12BAO}$	4.6 ± 1.6
$\Omega_m h^2$	0.1418 ± 0.0012	$100\theta_{eq}$	0.8184 ± 0.0053	χ^2_{prior}	7.7 ± 3.5
$\Omega_m h^3$	0.09606 ± 0.00072	$100\theta_{s,eq}$	0.4521 ± 0.0027	χ^2_{BAO}	6.1 ± 1.3
σ_8	0.8080 ± 0.0092	$H(0.15)$	72.99 ± 0.55	χ^2_{CMB}	7484.5 ± 5.5
S_8	0.820 ± 0.015	$D_M(0.15)$	640.2 ± 5.3		
$\sigma_8\Omega_m^{0.5}$	0.4493 ± 0.0083	$H(0.38)$	83.06 ± 0.44		

$\bar{\chi}^2_{eff} = 7498.32$; $\Delta\bar{\chi}^2_{eff} = 0.77$; $R - 1 = 0.01513$

20.23 base_yhe_CamSpecHM_TT_lowl_lowE_post_lensing

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02211 ± 0.00028	$\sigma_8\Omega_m^{0.5}$	0.4574 ± 0.0091	$D_M(0.15)$	646.9 ± 7.8
$\boldsymbol{\Omega_c h^2}$	0.1203 ± 0.0016	$\sigma_8\Omega_m^{0.25}$	0.6086 ± 0.0078	$H(0.38)$	82.56 ± 0.61
$\boldsymbol{100\theta_{MC}}$	1.04071 ± 0.00085	$\sigma_8/h^{0.5}$	0.990 ± 0.011	$D_M(0.38)$	1541 ± 16
$\boldsymbol{\tau}$	0.0526 ± 0.0081	$r_{drag}h$	98.7 ± 1.4	$H(0.51)$	89.35 ± 0.52
$\boldsymbol{Y_P}$	0.241 ± 0.021	$\langle d^2\rangle^{1/2}$	2.449 ± 0.029	$D_M(0.51)$	1995 ± 19
$\boldsymbol{\ln(10^{10}A_s)}$	3.038 ± 0.017	z_{re}	7.52 ± 0.83	$H(0.61)$	95.02 ± 0.45
$\boldsymbol{n_s}$	0.962 ± 0.010	$10^9 A_s$	2.087 ± 0.036	$D_M(0.61)$	2320 ± 21
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.879 ± 0.014	$H(2.33)$	236.48 ± 0.97
$\boldsymbol{A_{100}^{PS}}$	241 ± 26	D_{40}	1232 ± 19	$D_M(2.33)$	5778 ± 23
$\boldsymbol{A_{143}^{PS}}$	40 ± 9	D_{220}	5707 ± 41	$f\sigma_8(0.15)$	0.4613 ± 0.0083
$\boldsymbol{A_{217}^{PS}}$	101 ± 10	D_{810}	2533 ± 14	$\sigma_8(0.15)$	0.7475 ± 0.0073
$\boldsymbol{A_{217}^{CIB}}$	40^{+7}_{-8}	D_{1420}	814.7 ± 5.3	$f\sigma_8(0.38)$	0.4779 ± 0.0064
$\boldsymbol{A_{143}^{tSZ}}$	$3.8^{+1.8}_{-2.6}$	D_{2000}	230.0 ± 2.5	$\sigma_8(0.38)$	0.6618 ± 0.0068
$\boldsymbol{r_{143\times217}^{PS}}$	0.65 ± 0.13	$n_{s,0.002}$	0.962 ± 0.010	$f\sigma_8(0.51)$	0.4756 ± 0.0055
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.57^{+0.42}_{-0.14}$	Y_P	0.241 ± 0.021	$\sigma_8(0.51)$	0.6190 ± 0.0066
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	0.242 ± 0.021	$f\sigma_8(0.61)$	0.4701 ± 0.0050
$\boldsymbol{A^{kSZ}}$	—	Age/Gyr	13.831 ± 0.053	$\sigma_8(0.61)$	0.5888 ± 0.0064
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.20	z_*	1090.10 ± 0.67	$f\sigma_8(2.33)$	0.2966 ± 0.0035
$\boldsymbol{A_{143}^{dust}}$	0.97 ± 0.17	r_*	144.57 ± 0.39	$\sigma_8(2.33)$	0.3055 ± 0.0039
$\boldsymbol{A_{217}^{dust}}$	0.97 ± 0.10	$100\theta_*$	1.04103 ± 0.00047	f_{2000}^{143}	30 ± 4
$\boldsymbol{A_{143\times217}^{dust}}$	1.03 ± 0.16	$D_M(z_*)$/Gpc	13.887 ± 0.037	f_{2000}^{217}	107.1 ± 2.8
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	z_{drag}	1059.2 ± 1.2	$f_{2000}^{143\times217}$	32.5 ± 3.1
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	r_{drag}	147.31 ± 0.41	$\chi^2_{lensing}$	9.50 ± 0.91
H_0	66.97 ± 0.90	k_D	0.14061 ± 0.00069	χ^2_{simall}	396.9 ± 1.7
Ω_Λ	0.681 ± 0.011	$100\theta_D$	0.16089 ± 0.00079	χ^2_{lowl}	23.9 ± 1.8
Ω_m	0.319 ± 0.011	z_{eq}	3403 ± 36	$\chi^2_{CamSpec}$	7063.4 ± 5.4
$\Omega_m h^2$	0.1431 ± 0.0015	k_{eq}	0.01039 ± 0.00011	χ^2_{prior}	7.5 ± 3.4
$\Omega_m h^3$	0.09580 ± 0.00076	$100\theta_{eq}$	0.8123 ± 0.0070	χ^2_{CMB}	7493.8 ± 5.6
σ_8	0.8098 ± 0.0078	$100\theta_{s,eq}$	0.4491 ± 0.0036		
S_8	0.835 ± 0.017	$H(0.15)$	72.33 ± 0.79		

$\bar{\chi}^2_{eff} = 7501.32$; $\Delta\bar{\chi}^2_{eff} = 1.07$; $R - 1 = 0.00730$

20.24 base_yhe_CamSpecHM_TT_lowl_lowE_post_BAO_lensing

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02225 ± 0.00024	$\sigma_8\Omega_m^{0.25}$	0.6046 ± 0.0067	$D_M(0.38)$	1529 ± 10
$\boldsymbol{\Omega_c h^2}$	0.1191 ± 0.0011	$\sigma_8/h^{0.5}$	0.9849 ± 0.0096	$H(0.51)$	89.70 ± 0.37
$\boldsymbol{100\theta_{MC}}$	1.04112 ± 0.00073	$r_{drag}h$	99.73 ± 0.89	$D_M(0.51)$	1981 ± 13
$\boldsymbol{\tau}$	0.0558 ± 0.0074	$\langle d^2\rangle^{1/2}$	2.432 ± 0.024	$H(0.61)$	95.31 ± 0.34
$\boldsymbol{Y_P}$	0.248 ± 0.019	z_{re}	7.84 ± 0.74	$D_M(0.61)$	2305 ± 14
$\boldsymbol{\ln(10^{10}A_s)}$	3.045 ± 0.016	$10^9 A_s$	2.101 ± 0.033	$H(2.33)$	235.88 ± 0.73
$\boldsymbol{n_s}$	0.9678 ± 0.0082	$10^9 A_s e^{-2\tau}$	1.878 ± 0.014	$D_M(2.33)$	5764 ± 18
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0024	D_{40}	1223 ± 17	$f\sigma_8(0.15)$	0.4560 ± 0.0062
$\boldsymbol{A_{100}^{PS}}$	243 ± 26	D_{220}	5715 ± 40	$\sigma_8(0.15)$	0.7485 ± 0.0072
$\boldsymbol{A_{143}^{PS}}$	41 ± 9	D_{810}	2535 ± 14	$f\sigma_8(0.38)$	0.4745 ± 0.0054
$\boldsymbol{A_{217}^{PS}}$	101 ± 10	D_{1420}	815.1 ± 5.2	$\sigma_8(0.38)$	0.6636 ± 0.0066
$\boldsymbol{A_{217}^{CIB}}$	41^{+7}_{-8}	D_{2000}	229.8 ± 2.5	$f\sigma_8(0.51)$	0.4732 ± 0.0050
$\boldsymbol{A_{143}^{tSZ}}$	$3.7^{+1.7}_{-2.7}$	$n_{s,0.002}$	0.9678 ± 0.0082	$\sigma_8(0.51)$	0.6211 ± 0.0062
$\boldsymbol{r_{143\times217}^{PS}}$	0.65 ± 0.13	Y_P	0.248 ± 0.019	$f\sigma_8(0.61)$	0.4683 ± 0.0047
$\boldsymbol{r_{143\times217}^{CIB}}$	> 0.461	Y_P^{BBN}	0.249 ± 0.019	$\sigma_8(0.61)$	0.5910 ± 0.0060
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Age/Gyr	13.800 ± 0.042	$f\sigma_8(2.33)$	0.2980 ± 0.0031
$\boldsymbol{A^{kSZ}}$	—	z_*	1090.12 ± 0.66	$\sigma_8(2.33)$	0.3073 ± 0.0033
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.20	r_*	144.74 ± 0.34	f_{2000}^{143}	31 ± 4
$\boldsymbol{A_{143}^{dust}}$	0.97 ± 0.17	$100\theta_*$	1.04124 ± 0.00042	f_{2000}^{217}	107.6 ± 2.7
$\boldsymbol{A_{217}^{dust}}$	0.97 ± 0.10	$D_M(z_*)$/Gpc	13.901 ± 0.034	$f_{2000}^{143\times217}$	33.0 ± 3.0
$\boldsymbol{A_{143\times217}^{dust}}$	1.03 ± 0.16	z_{drag}	1059.7 ± 1.1	$\chi^2_{lensing}$	9.42 ± 0.83
$\boldsymbol{c_{100}}$	$0.9975^{+0.0011}_{-0.00098}$	r_{drag}	147.45 ± 0.39	χ^2_{simall}	397.2 ± 1.9
$\boldsymbol{c_{217}}$	1.0012 ± 0.0016	k_D	0.14028 ± 0.00059	χ^2_{lowl}	23.0 ± 1.3
H_0	67.64 ± 0.58	$100\theta_D$	0.16111 ± 0.00075	$\chi^2_{CamSpec}$	7064.1 ± 5.4
Ω_Λ	0.6895 ± 0.0070	z_{eq}	3378 ± 26	χ^2_{6DF}	0.057 ± 0.074
Ω_m	0.3105 ± 0.0070	k_{eq}	0.010311 ± 0.000078	χ^2_{MGS}	1.33 ± 0.49
$\Omega_m h^2$	0.1420 ± 0.0011	$100\theta_{eq}$	0.8175 ± 0.0047	$\chi^2_{DR12BAO}$	4.8 ± 1.6
$\Omega_m h^3$	0.09605 ± 0.00071	$100\theta_{s,eq}$	0.4516 ± 0.0024	χ^2_{prior}	7.6 ± 3.5
σ_8	0.8100 ± 0.0078	$H(0.15)$	72.90 ± 0.52	χ^2_{CMB}	7493.7 ± 5.6
S_8	0.824 ± 0.012	$D_M(0.15)$	641.1 ± 5.1	χ^2_{BAO}	6.2 ± 1.3
$\sigma_8\Omega_m^{0.5}$	0.4513 ± 0.0066	$H(0.38)$	83.00 ± 0.42		

$\bar{\chi}^2_{eff} = 7507.45$; $\Delta\bar{\chi}^2_{eff} = 0.97$; $R - 1 = 0.01905$

20.25 base_yhe_CamSpecHM_TT_lowl_lowE_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02213 ± 0.00029	S_8	0.838 ± 0.025	$100\theta_{s,eq}$	0.4488 ± 0.0049
$\boldsymbol{\Omega_c h^2}$	0.1204 ± 0.0022	$\sigma_8\Omega_m^{0.5}$	0.459 ± 0.014	$H(0.15)$	72.33 ± 0.98
$\boldsymbol{100\theta_{MC}}$	1.04079 ± 0.00088	$\sigma_8\Omega_m^{0.25}$	0.610 ± 0.012	$D_M(0.15)$	646.9 ± 9.8
$\boldsymbol{\tau}$	$0.0540^{+0.0047}_{-0.0084}$	$\sigma_8/h^{0.5}$	0.992 ± 0.016	$H(0.38)$	82.57 ± 0.74
$\boldsymbol{Y_P}$	0.243 ± 0.021	$r_{drag}h$	98.6 ± 1.8	$D_M(0.38)$	1541 ± 20
$\boldsymbol{\ln(10^{10}A_s)}$	$3.042^{+0.013}_{-0.017}$	$\langle d^2\rangle^{1/2}$	2.453 ± 0.044	$H(0.51)$	89.36 ± 0.61
$\boldsymbol{n_s}$	0.963 ± 0.011	z_{re}	$7.69^{+0.52}_{-0.86}$	$D_M(0.51)$	1995 ± 23
$\boldsymbol{y_{cal}}$	1.0004 ± 0.0025	$10^9 A_s$	$2.095^{+0.027}_{-0.036}$	$H(0.61)$	95.04 ± 0.51
$\boldsymbol{A^{PS}_{100}}$	242 ± 26	$10^9 A_s e^{-2\tau}$	1.880 ± 0.015	$D_M(0.61)$	2320 ± 25
$\boldsymbol{A^{PS}_{143}}$	40 ± 10	D_{40}	1231 ± 22	$H(2.33)$	236.6 ± 1.3
$\boldsymbol{A^{PS}_{217}}$	101 ± 10	D_{220}	5704 ± 42	$D_M(2.33)$	5777 ± 25
$\boldsymbol{A^{CIB}_{217}}$	41 ± 8	D_{810}	2534 ± 14	$f\sigma_8(0.15)$	0.463 ± 0.013
$\boldsymbol{A^{tSZ}_{143}}$	$3.8^{+1.8}_{-2.6}$	D_{1420}	814.3 ± 5.4	$\sigma_8(0.15)$	0.7494 ± 0.0080
$\boldsymbol{r^{PS}_{143\times217}}$	0.65 ± 0.13	D_{2000}	229.8 ± 2.5	$f\sigma_8(0.38)$	0.4793 ± 0.0099
$\boldsymbol{r^{CIB}_{143\times217}}$	> 0.450	$n_{s,0.002}$	0.963 ± 0.011	$\sigma_8(0.38)$	$0.6635^{+0.0062}_{-0.0072}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P	0.243 ± 0.021	$f\sigma_8(0.51)$	0.4770 ± 0.0084
$\boldsymbol{A^{kSZ}}$	—	Y_P^{BBN}	0.244 ± 0.021	$\sigma_8(0.51)$	$0.6205^{+0.0057}_{-0.0068}$
$\boldsymbol{A^{dust}_{100}}$	1.01 ± 0.20	Age/Gyr	13.828 ± 0.058	$f\sigma_8(0.61)$	0.4714 ± 0.0074
$\boldsymbol{A^{dust}_{143}}$	0.97 ± 0.17	z_*	1090.20 ± 0.68	$\sigma_8(0.61)$	$0.5902^{+0.0055}_{-0.0065}$
$\boldsymbol{A^{dust}_{217}}$	0.97 ± 0.10	r_*	144.52 ± 0.49	$f\sigma_8(2.33)$	$0.2973^{+0.0028}_{-0.0034}$
$\boldsymbol{A^{dust}_{143\times217}}$	1.03 ± 0.16	$100\theta_*$	1.04104 ± 0.00050	$\sigma_8(2.33)$	$0.3062^{+0.0032}_{-0.0037}$
$\boldsymbol{c_{100}}$	0.9975 ± 0.0010	$D_M(z_*)$/Gpc	13.882 ± 0.046	f^{143}_{2000}	30 ± 4
$\boldsymbol{c_{217}}$	1.0012 ± 0.0016	z_{drag}	1059.3 ± 1.2	f^{217}_{2000}	107.4 ± 2.8
H_0	67.0 ± 1.1	r_{drag}	147.26 ± 0.50	$f^{143\times217}_{2000}$	32.7 ± 3.1
Ω_Λ	$0.680^{+0.015}_{-0.014}$	k_D	0.14057 ± 0.00077	χ^2_{simall}	396.9 ± 1.7
Ω_m	0.320 ± 0.015	$100\theta_D$	0.16100 ± 0.00079	χ^2_{lowl}	23.8 ± 2.1
$\Omega_m h^2$	0.1432 ± 0.0021	z_{eq}	3407 ± 50	$\chi^2_{CamSpec}$	7063.8 ± 5.6
$\Omega_m h^3$	0.09588 ± 0.00076	k_{eq}	0.01040 ± 0.00015	χ^2_{prior}	7.6 ± 3.4
σ_8	0.8119 ± 0.0093	$100\theta_{eq}$	0.8119 ± 0.0095	χ^2_{CMB}	7484.5 ± 5.6

$\bar{\chi}^2_{eff} = 7492.12$; $\Delta\bar{\chi}^2_{eff} = 0.86$; $R - 1 = 0.00634$

20.26 base_yhe_CamSpecHM_TT_lowl_lowE_post_BAO_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02227 ± 0.00024	$\sigma_8\Omega_m^{0.25}$	0.6031 ± 0.0082	$D_M(0.38)$	1527 ± 11
$\boldsymbol{\Omega_c h^2}$	0.1189 ± 0.0012	$\sigma_8/h^{0.5}$	0.983 ± 0.012	$H(0.51)$	89.76 ± 0.38
$\boldsymbol{100\theta_{MC}}$	1.04121 ± 0.00073	$r_{drag}h$	99.93 ± 0.98	$D_M(0.51)$	1979 ± 13
$\boldsymbol{\tau}$	$0.0553^{+0.0055}_{-0.0080}$	$\langle d^2\rangle^{1/2}$	2.425 ± 0.028	$H(0.61)$	95.36 ± 0.35
$\boldsymbol{Y_P}$	0.250 ± 0.019	z_{re}	$7.80^{+0.60}_{-0.82}$	$D_M(0.61)$	2303 ± 14
$\boldsymbol{\ln(10^{10}A_s)}$	$3.043^{+0.014}_{-0.017}$	$10^9 A_s$	$2.097^{+0.029}_{-0.037}$	$H(2.33)$	235.76 ± 0.82
$\boldsymbol{n_s}$	0.9692 ± 0.0082	$10^9 A_s e^{-2\tau}$	$1.877^{+0.014}_{-0.016}$	$D_M(2.33)$	5762 ± 18
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	D_{40}	1219 ± 17	$f\sigma_8(0.15)$	0.4545 ± 0.0077
$\boldsymbol{A^{PS}_{100}}$	244 ± 26	D_{220}	5710 ± 41	$\sigma_8(0.15)$	$0.7478^{+0.0074}_{-0.0083}$
$\boldsymbol{A^{PS}_{143}}$	41 ± 9	D_{810}	2534 ± 14	$f\sigma_8(0.38)$	0.4733 ± 0.0066
$\boldsymbol{A^{PS}_{217}}$	101 ± 10	D_{1420}	814.6 ± 5.3	$\sigma_8(0.38)$	$0.6631^{+0.0065}_{-0.0072}$
$\boldsymbol{A^{CIB}_{217}}$	41^{+7}_{-8}	D_{2000}	229.5 ± 2.5	$f\sigma_8(0.51)$	0.4722 ± 0.0061
$\boldsymbol{A^{tSZ}_{143}}$	$3.7^{+1.7}_{-2.7}$	$n_{s,0.002}$	0.9692 ± 0.0082	$\sigma_8(0.51)$	$0.6207^{+0.0061}_{-0.0068}$
$\boldsymbol{r^{PS}_{143\times217}}$	0.65 ± 0.13	Y_P	0.250 ± 0.019	$f\sigma_8(0.61)$	0.4674 ± 0.0057
$\boldsymbol{r^{CIB}_{143\times217}}$	> 0.464	Y_P^{BBN}	0.251 ± 0.019	$\sigma_8(0.61)$	$0.5907^{+0.0058}_{-0.0064}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Age/Gyr	13.795 ± 0.042	$f\sigma_8(2.33)$	0.2979 ± 0.0031
$\boldsymbol{A^{kSZ}}$	—	z_*	1090.16 ± 0.67	$\sigma_8(2.33)$	0.3073 ± 0.0033
$\boldsymbol{A^{dust}_{100}}$	1.01 ± 0.20	r_*	144.78 ± 0.37	f^{143}_{2000}	31 ± 4
$\boldsymbol{A^{dust}_{143}}$	0.98 ± 0.17	$100\theta_*$	1.04127 ± 0.00042	f^{217}_{2000}	107.8 ± 2.7
$\boldsymbol{A^{dust}_{217}}$	0.97 ± 0.10	$D_M(z_*)$/Gpc	13.904 ± 0.037	$f^{143\times217}_{2000}$	33.2 ± 3.0
$\boldsymbol{A^{dust}_{143\times217}}$	1.03 ± 0.16	z_{drag}	1059.8 ± 1.1	χ^2_{simall}	397.0 ± 1.8
$\boldsymbol{c_{100}}$	$0.9975^{+0.0011}_{-0.00099}$	r_{drag}	147.49 ± 0.42	χ^2_{lowl}	22.7 ± 1.3
$\boldsymbol{c_{217}}$	1.0012 ± 0.0016	k_D	0.14018 ± 0.00060	$\chi^2_{CamSpec}$	7064.7 ± 5.6
H_0	67.76 ± 0.62	$100\theta_D$	0.16119 ± 0.00075	χ^2_{6DF}	0.053 ± 0.072
Ω_Λ	0.6910 ± 0.0076	z_{eq}	3373 ± 29	χ^2_{MGS}	1.45 ± 0.56
Ω_m	0.3090 ± 0.0076	k_{eq}	0.010296 ± 0.000089	$\chi^2_{DR12BAO}$	4.6 ± 1.5
$\Omega_m h^2$	0.1418 ± 0.0012	$100\theta_{eq}$	0.8184 ± 0.0053	χ^2_{prior}	7.7 ± 3.5
$\Omega_m h^3$	0.09608 ± 0.00072	$100\theta_{s,eq}$	0.4522 ± 0.0027	χ^2_{BAO}	6.1 ± 1.3
σ_8	0.8090 ± 0.0087	$H(0.15)$	73.01 ± 0.55	χ^2_{CMB}	7484.4 ± 5.5
S_8	0.821 ± 0.015	$D_M(0.15)$	640.1 ± 5.3		
$\sigma_8\Omega_m^{0.5}$	0.4497 ± 0.0082	$H(0.38)$	83.07 ± 0.44		

$\bar{\chi}^2_{eff} = 7498.14$; $\Delta\bar{\chi}^2_{eff} = 0.82$; $R - 1 = 0.01531$

20.27 base_yhe_CamSpecHM_TT_lowl_lowE_post_lensing_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02213 ± 0.00028	$\sigma_8\Omega_m^{0.5}$	0.4571 ± 0.0091	$D_M(0.15)$	646.1 ± 7.5
$\boldsymbol{\Omega_c h^2}$	0.1201 ± 0.0016	$\sigma_8\Omega_m^{0.25}$	0.6087 ± 0.0078	$H(0.38)$	82.62 ± 0.59
$\boldsymbol{100\theta_{MC}}$	1.04076 ± 0.00084	$\sigma_8/h^{0.5}$	0.990 ± 0.011	$D_M(0.38)$	1539 ± 15
$\boldsymbol{\tau}$	$0.0542^{+0.0048}_{-0.0084}$	$r_{drag}h$	98.8 ± 1.4	$H(0.51)$	89.39 ± 0.50
$\boldsymbol{Y_P}$	0.242 ± 0.021	$\langle d^2\rangle^{1/2}$	2.449 ± 0.029	$D_M(0.51)$	1993 ± 18
$\boldsymbol{\ln(10^{10}A_s)}$	$3.041^{+0.013}_{-0.017}$	z_{re}	$7.69^{+0.53}_{-0.86}$	$H(0.61)$	95.06 ± 0.44
$\boldsymbol{n_s}$	0.9632 ± 0.0097	$10^9 A_s$	$2.094^{+0.026}_{-0.035}$	$D_M(0.61)$	2318 ± 20
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.879 ± 0.014	$H(2.33)$	236.40 ± 0.94
$\boldsymbol{A_{100}^{PS}}$	241 ± 26	D_{40}	1231 ± 19	$D_M(2.33)$	5776 ± 23
$\boldsymbol{A_{143}^{PS}}$	40 ± 9	D_{220}	5707 ± 41	$f\sigma_8(0.15)$	0.4611 ± 0.0083
$\boldsymbol{A_{217}^{PS}}$	101 ± 10	D_{810}	2533 ± 14	$\sigma_8(0.15)$	0.7485 ± 0.0069
$\boldsymbol{A_{217}^{CIB}}$	41^{+7}_{-8}	D_{1420}	814.7 ± 5.3	$f\sigma_8(0.38)$	0.4780 ± 0.0064
$\boldsymbol{A_{143}^{tSZ}}$	$3.8^{+1.8}_{-2.6}$	D_{2000}	230.0 ± 2.5	$\sigma_8(0.38)$	$0.6628^{+0.0058}_{-0.0066}$
$\boldsymbol{r_{143\times217}^{PS}}$	0.65 ± 0.13	$n_{s,0.002}$	0.9632 ± 0.0097	$f\sigma_8(0.51)$	0.4758 ± 0.0055
$\boldsymbol{r_{143\times217}^{CIB}}$	> 0.444	Y_P	0.242 ± 0.021	$\sigma_8(0.51)$	$0.6200^{+0.0056}_{-0.0064}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	0.243 ± 0.021	$f\sigma_8(0.61)$	0.4704 ± 0.0050
$\boldsymbol{A^{kSZ}}$	—	Age/Gyr	13.827 ± 0.052	$\sigma_8(0.61)$	$0.5898^{+0.0054}_{-0.0062}$
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.20	z_*	1090.10 ± 0.67	$f\sigma_8(2.33)$	$0.2971^{+0.0029}_{-0.0034}$
$\boldsymbol{A_{143}^{dust}}$	0.97 ± 0.17	r_*	144.59 ± 0.38	$\sigma_8(2.33)$	$0.3061^{+0.0032}_{-0.0037}$
$\boldsymbol{A_{217}^{dust}}$	0.97 ± 0.10	$100\theta_*$	1.04106 ± 0.00047	f_{2000}^{143}	30 ± 4
$\boldsymbol{A_{143\times217}^{dust}}$	1.03 ± 0.16	$D_M(z_*)$/Gpc	13.889 ± 0.037	f_{2000}^{217}	107.2 ± 2.8
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	z_{drag}	1059.3 ± 1.2	$f_{2000}^{143\times217}$	32.5 ± 3.1
$\boldsymbol{c_{217}}$	1.0012 ± 0.0016	r_{drag}	147.33 ± 0.41	$\chi^2_{lensing}$	9.48 ± 0.91
H_0	67.06 ± 0.86	k_D	0.14057 ± 0.00068	χ^2_{simall}	396.9 ± 1.7
Ω_Λ	0.682 ± 0.011	$100\theta_D$	0.16092 ± 0.00079	χ^2_{lowl}	23.8 ± 1.7
Ω_m	0.318 ± 0.011	z_{eq}	3400 ± 35	$\chi^2_{CamSpec}$	7063.4 ± 5.4
$\Omega_m h^2$	0.1429 ± 0.0015	k_{eq}	0.01038 ± 0.00011	χ^2_{prior}	7.5 ± 3.4
$\Omega_m h^3$	0.09584 ± 0.00076	$100\theta_{eq}$	0.8130 ± 0.0068	χ^2_{CMB}	7493.5 ± 5.6
σ_8	0.8107 ± 0.0074	$100\theta_{s,eq}$	0.4494 ± 0.0035		
S_8	0.835 ± 0.017	$H(0.15)$	72.41 ± 0.76		

$\bar{\chi}^2_{eff} = 7501.05$; $\Delta\bar{\chi}^2_{eff} = 1.04$; $R - 1 = 0.00841$

20.28 base_yhe_CamSpecHM_TT_lowl_lowE_post_BAO_lensing_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02226 ± 0.00024	$\sigma_8\Omega_m^{0.25}$	0.6048 ± 0.0066	$D_M(0.38)$	1529 ± 10
$\boldsymbol{\Omega_c h^2}$	0.1191 ± 0.0011	$\sigma_8/h^{0.5}$	0.9852 ± 0.0095	$H(0.51)$	89.71 ± 0.37
$\boldsymbol{100\theta_{MC}}$	1.04113 ± 0.00073	$r_{drag}h$	99.76 ± 0.88	$D_M(0.51)$	1981 ± 12
$\boldsymbol{\tau}$	$0.0564^{+0.0059}_{-0.0077}$	$\langle d^2\rangle^{1/2}$	2.433 ± 0.023	$H(0.61)$	95.32 ± 0.34
$\boldsymbol{Y_P}$	0.248 ± 0.019	z_{re}	$7.91^{+0.63}_{-0.75}$	$D_M(0.61)$	2305 ± 14
$\boldsymbol{\ln(10^{10}A_s)}$	$3.046^{+0.014}_{-0.016}$	$10^9 A_s$	$2.103^{+0.028}_{-0.033}$	$H(2.33)$	235.87 ± 0.73
$\boldsymbol{n_s}$	0.9680 ± 0.0082	$10^9 A_s e^{-2\tau}$	$1.878^{+0.013}_{-0.015}$	$D_M(2.33)$	5764 ± 18
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0024	D_{40}	1223 ± 17	$f\sigma_8(0.15)$	0.4561 ± 0.0062
$\boldsymbol{A_{100}^{PS}}$	244 ± 26	D_{220}	5715 ± 40	$\sigma_8(0.15)$	0.7489 ± 0.0070
$\boldsymbol{A_{143}^{PS}}$	41 ± 9	D_{810}	2535 ± 14	$f\sigma_8(0.38)$	0.4747 ± 0.0053
$\boldsymbol{A_{217}^{PS}}$	101 ± 10	D_{1420}	815.1 ± 5.2	$\sigma_8(0.38)$	0.6640 ± 0.0063
$\boldsymbol{A_{217}^{CIB}}$	41^{+7}_{-8}	D_{2000}	229.8 ± 2.4	$f\sigma_8(0.51)$	0.4734 ± 0.0049
$\boldsymbol{A_{143}^{tSZ}}$	$3.8^{+1.7}_{-2.7}$	$n_{s,0.002}$	0.9680 ± 0.0082	$\sigma_8(0.51)$	0.6215 ± 0.0060
$\boldsymbol{r_{143\times217}^{PS}}$	0.65 ± 0.13	Y_P	0.248 ± 0.019	$f\sigma_8(0.61)$	0.4685 ± 0.0046
$\boldsymbol{r_{143\times217}^{CIB}}$	> 0.462	Y_P^{BBN}	0.249 ± 0.019	$\sigma_8(0.61)$	0.5914 ± 0.0057
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Age/Gyr	13.799 ± 0.042	$f\sigma_8(2.33)$	0.2982 ± 0.0030
$\boldsymbol{A^{kSZ}}$	—	z_*	1090.12 ± 0.66	$\sigma_8(2.33)$	0.3075 ± 0.0032
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.20	r_*	144.74 ± 0.34	f_{2000}^{143}	31 ± 4
$\boldsymbol{A_{143}^{dust}}$	0.97 ± 0.17	$100\theta_*$	1.04125 ± 0.00042	f_{2000}^{217}	107.6 ± 2.7
$\boldsymbol{A_{217}^{dust}}$	0.97 ± 0.10	$D_M(z_*)$/Gpc	13.901 ± 0.034	$f_{2000}^{143\times217}$	33.0 ± 3.0
$\boldsymbol{A_{143\times217}^{dust}}$	1.03 ± 0.16	z_{drag}	1059.7 ± 1.1	$\chi^2_{lensing}$	9.38 ± 0.78
$\boldsymbol{c_{100}}$	$0.9975^{+0.0011}_{-0.00098}$	r_{drag}	147.45 ± 0.39	χ^2_{simall}	397.2 ± 1.9
$\boldsymbol{c_{217}}$	1.0012 ± 0.0016	k_D	0.14027 ± 0.00059	χ^2_{lowl}	22.9 ± 1.3
H_0	67.65 ± 0.58	$100\theta_D$	0.16111 ± 0.00075	$\chi^2_{CamSpec}$	7064.1 ± 5.4
Ω_Λ	0.6897 ± 0.0069	z_{eq}	3378 ± 26	χ^2_{6DF}	0.055 ± 0.071
Ω_m	0.3103 ± 0.0069	k_{eq}	0.010309 ± 0.000078	χ^2_{MGS}	1.34 ± 0.49
$\Omega_m h^2$	0.1420 ± 0.0011	$100\theta_{eq}$	0.8176 ± 0.0046	$\chi^2_{DR12BAO}$	4.7 ± 1.5
$\Omega_m h^3$	0.09606 ± 0.00071	$100\theta_{s,eq}$	0.4517 ± 0.0024	χ^2_{prior}	7.6 ± 3.5
σ_8	0.8104 ± 0.0075	$H(0.15)$	72.92 ± 0.52	χ^2_{CMB}	7493.6 ± 5.5
S_8	0.824 ± 0.012	$D_M(0.15)$	640.9 ± 5.0	χ^2_{BAO}	6.1 ± 1.2
$\sigma_8\Omega_m^{0.5}$	0.4514 ± 0.0066	$H(0.38)$	83.01 ± 0.42		

$\bar{\chi}^2_{eff} = 7507.34$; $\Delta\bar{\chi}^2_{eff} = 1.01$; $R - 1 = 0.01969$

20.29 base_yhe_CamSpecHM_TTTEEE_lowl_lowE

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02230 ± 0.00021	σ_8	0.8081 ± 0.0084	$100\theta_{s,eq}$	0.4504 ± 0.0031
$\boldsymbol{\Omega_c h^2}$	0.1196 ± 0.0014	S_8	0.826 ± 0.017	$H(0.15)$	72.74 ± 0.67
$\boldsymbol{100\theta_{MC}}$	1.04090 ± 0.00071	$\sigma_8\Omega_m^{0.5}$	0.4524 ± 0.0091	$D_M(0.15)$	642.7 ± 6.6
$\boldsymbol{\tau}$	0.0527 ± 0.0080	$\sigma_8\Omega_m^{0.25}$	0.6046 ± 0.0085	$H(0.38)$	82.89 ± 0.52
$\boldsymbol{Y_P}$	0.246 ± 0.018	$\sigma_8/h^{0.5}$	0.984 ± 0.012	$D_M(0.38)$	1532 ± 13
$\boldsymbol{\ln(10^{10}A_s)}$	3.039 ± 0.017	$r_{drag}h$	99.3 ± 1.2	$H(0.51)$	89.62 ± 0.44
$\boldsymbol{n_s}$	0.9662 ± 0.0085	$\langle d^2\rangle^{1/2}$	2.433 ± 0.032	$D_M(0.51)$	1985 ± 16
$\boldsymbol{y_{cal}}$	1.0004 ± 0.0025	z_{re}	7.51 ± 0.82	$H(0.61)$	95.26 ± 0.38
$\boldsymbol{A_{100}^{PS}}$	240 ± 26	$10^9 A_s$	2.088 ± 0.036	$D_M(0.61)$	2309 ± 17
$\boldsymbol{A_{143}^{PS}}$	40 ± 9	$10^9 A_s e^{-2\tau}$	1.879 ± 0.013	$H(2.33)$	236.21 ± 0.84
$\boldsymbol{A_{217}^{PS}}$	102 ± 10	D_{40}	1226 ± 17	$D_M(2.33)$	5766 ± 19
$\boldsymbol{A_{217}^{CIB}}$	40 ± 7	D_{220}	5718 ± 39	$f\sigma_8(0.15)$	0.4568 ± 0.0085
$\boldsymbol{A_{143}^{tSZ}}$	$3.8^{+1.8}_{-2.5}$	D_{810}	2535 ± 14	$\sigma_8(0.15)$	0.7465 ± 0.0077
$\boldsymbol{r_{143\times217}^{PS}}$	0.66 ± 0.13	D_{1420}	815.5 ± 5.1	$f\sigma_8(0.38)$	0.4747 ± 0.0069
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.57^{+0.41}_{-0.16}$	D_{2000}	230.1 ± 2.3	$\sigma_8(0.38)$	0.6615 ± 0.0068
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$n_{s,0.002}$	0.9662 ± 0.0085	$f\sigma_8(0.51)$	0.4730 ± 0.0062
$\boldsymbol{A^{kSZ}}$	$4.8^{+2.3}_{-3.9}$	Y_P	0.246 ± 0.018	$\sigma_8(0.51)$	0.6190 ± 0.0064
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.20	Y_P^{BBN}	0.247 ± 0.018	$f\sigma_8(0.61)$	0.4679 ± 0.0057
$\boldsymbol{A_{143}^{dust}}$	0.96 ± 0.17	Age/Gyr	13.803 ± 0.043	$\sigma_8(0.61)$	0.5889 ± 0.0061
$\boldsymbol{A_{217}^{dust}}$	0.97 ± 0.10	z_*	1090.01 ± 0.58	$f\sigma_8(2.33)$	0.2969 ± 0.0032
$\boldsymbol{A_{143\times217}^{dust}}$	1.03 ± 0.16	r_*	144.59 ± 0.33	$\sigma_8(2.33)$	0.3060 ± 0.0034
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	$100\theta_*$	1.04107 ± 0.00035	f_{2000}^{143}	30 ± 4
$\boldsymbol{c_{217}}$	1.0012 ± 0.0016	$D_M(z_*)$/Gpc	13.889 ± 0.031	f_{2000}^{217}	107.0 ± 2.6
$\boldsymbol{c_{TE}}$	0.9969 ± 0.0054	z_{drag}	1059.77 ± 0.96	$f_{2000}^{143\times217}$	32.3 ± 2.8
$\boldsymbol{c_{EE}}$	0.9925 ± 0.0066	r_{drag}	147.28 ± 0.34	χ^2_{simall}	396.9 ± 1.7
H_0	67.44 ± 0.77	k_D	0.14058 ± 0.00058	χ^2_{lowl}	23.2 ± 1.4
Ω_Λ	0.6865 ± 0.0097	$100\theta_D$	0.16090 ± 0.00069	$\chi^2_{CamSpec}$	11515.4 ± 5.8
Ω_m	0.3135 ± 0.0097	z_{eq}	3391 ± 32	χ^2_{prior}	7.9 ± 3.5
$\Omega_m h^2$	0.1425 ± 0.0013	k_{eq}	0.010348 ± 0.000097	χ^2_{CMB}	11935.5 ± 5.9
$\Omega_m h^3$	0.09612 ± 0.00060	$100\theta_{eq}$	0.8152 ± 0.0062		

$\bar{\chi}^2_{eff} = 11943.34$; $\Delta\bar{\chi}^2_{eff} = 0.88$; $R - 1 = 0.01242$

20.30 base_yhe_CamSpecHM_TTTEEE_lowl_lowE_post_BAO

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02237 ± 0.00019	S_8	0.819 ± 0.013	$D_M(0.15)$	639.7 ± 4.7
$\boldsymbol{\Omega_c h^2}$	0.1189 ± 0.0010	$\sigma_8\Omega_m^{0.5}$	0.4487 ± 0.0071	$H(0.38)$	83.12 ± 0.38
$\boldsymbol{100\theta_{MC}}$	1.04112 ± 0.00064	$\sigma_8\Omega_m^{0.25}$	0.6018 ± 0.0075	$D_M(0.38)$	1526.2 ± 9.6
$\boldsymbol{\tau}$	0.0536 ± 0.0081	$\sigma_8/h^{0.5}$	0.980 ± 0.011	$H(0.51)$	89.81 ± 0.33
$\boldsymbol{Y_P}$	0.250 ± 0.017	$r_{drag}h$	99.91 ± 0.85	$D_M(0.51)$	1977 ± 11
$\boldsymbol{\ln(10^{10}A_s)}$	3.040 ± 0.018	$\langle d^2\rangle^{1/2}$	2.421 ± 0.027	$H(0.61)$	95.41 ± 0.30
$\boldsymbol{n_s}$	0.9691 ± 0.0073	z_{re}	7.59 ± 0.83	$D_M(0.61)$	2301 ± 12
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	$10^9 A_s$	2.091 ± 0.037	$H(2.33)$	235.87 ± 0.66
$\boldsymbol{A_{100}^{PS}}$	242 ± 25	$10^9 A_s e^{-2\tau}$	1.878 ± 0.013	$D_M(2.33)$	5759 ± 15
$\boldsymbol{A_{143}^{PS}}$	40 ± 9	D_{40}	1220 ± 16	$f\sigma_8(0.15)$	0.4534 ± 0.0068
$\boldsymbol{A_{217}^{PS}}$	102 ± 10	D_{220}	5721 ± 39	$\sigma_8(0.15)$	0.7462 ± 0.0078
$\boldsymbol{A_{217}^{CIB}}$	40 ± 7	D_{810}	2535 ± 14	$f\sigma_8(0.38)$	0.4723 ± 0.0060
$\boldsymbol{A_{143}^{tSZ}}$	$3.8^{+1.8}_{-2.6}$	D_{1420}	815.5 ± 5.1	$\sigma_8(0.38)$	0.6618 ± 0.0069
$\boldsymbol{r_{143\times217}^{PS}}$	0.65 ± 0.13	D_{2000}	229.9 ± 2.3	$f\sigma_8(0.51)$	0.4712 ± 0.0056
$\boldsymbol{r_{143\times217}^{CIB}}$	> 0.440	$n_{s,0.002}$	0.9691 ± 0.0073	$\sigma_8(0.51)$	0.6194 ± 0.0065
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P	0.250 ± 0.017	$f\sigma_8(0.61)$	0.4664 ± 0.0053
$\boldsymbol{A^{kSZ}}$	—	Y_P^{BBN}	0.251 ± 0.017	$\sigma_8(0.61)$	0.5895 ± 0.0062
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.20	Age/Gyr	13.787 ± 0.036	$f\sigma_8(2.33)$	0.2973 ± 0.0032
$\boldsymbol{A_{143}^{dust}}$	0.97 ± 0.17	z_*	1090.02 ± 0.58	$\sigma_8(2.33)$	0.3067 ± 0.0033
$\boldsymbol{A_{217}^{dust}}$	0.97 ± 0.10	r_*	144.69 ± 0.29	f_{2000}^{143}	30 ± 4
$\boldsymbol{A_{143\times217}^{dust}}$	1.03 ± 0.16	$100\theta_*$	1.04118 ± 0.00032	f_{2000}^{217}	107.3 ± 2.6
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	$D_M(z_*)$/Gpc	13.897 ± 0.028	$f_{2000}^{143\times217}$	32.6 ± 2.8
$\boldsymbol{c_{217}}$	1.0012 ± 0.0016	z_{drag}	1060.01 ± 0.88	χ^2_{simall}	397.0 ± 1.8
$\boldsymbol{c_{TE}}$	0.9975 ± 0.0053	r_{drag}	147.36 ± 0.32	χ^2_{lowl}	22.7 ± 1.1
$\boldsymbol{c_{EE}}$	0.9936 ± 0.0063	k_D	0.14039 ± 0.00051	$\chi^2_{CamSpec}$	11515.5 ± 5.7
H_0	67.80 ± 0.54	$100\theta_D$	0.16103 ± 0.00067	χ^2_{6DF}	0.044 ± 0.057
Ω_Λ	0.6911 ± 0.0066	z_{eq}	3377 ± 24	χ^2_{MGS}	1.42 ± 0.49
Ω_m	0.3089 ± 0.0066	k_{eq}	0.010306 ± 0.000072	$\chi^2_{DR12BAO}$	4.5 ± 1.3
$\Omega_m h^2$	0.14194 ± 0.00099	$100\theta_{eq}$	0.8181 ± 0.0044	χ^2_{prior}	7.9 ± 3.5
$\Omega_m h^3$	0.09623 ± 0.00058	$100\theta_{s,eq}$	0.4519 ± 0.0023	χ^2_{BAO}	6.0 ± 1.0
σ_8	0.8073 ± 0.0085	$H(0.15)$	73.05 ± 0.48	χ^2_{CMB}	11935.2 ± 5.7

$\bar{\chi}^2_{eff} = 11949.00$; $\Delta\bar{\chi}^2_{eff} = 0.71$; $R - 1 = 0.01838$

20.31 base_yhe_CamSpecHM_TTTEEE_lowl_lowE_post_lensing

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02228 ± 0.00021	σ_8	0.8089 ± 0.0072	$100\theta_{s,eq}$	0.4501 ± 0.0027
$\boldsymbol{\Omega_c h^2}$	0.1197 ± 0.0012	S_8	0.828 ± 0.013	$H(0.15)$	72.67 ± 0.60
$\boldsymbol{100\theta_{MC}}$	1.04082 ± 0.00070	$\sigma_8\Omega_m^{0.5}$	0.4536 ± 0.0072	$D_M(0.15)$	643.5 ± 5.9
$\boldsymbol{\tau}$	0.0536 ± 0.0075	$\sigma_8\Omega_m^{0.25}$	0.6058 ± 0.0066	$H(0.38)$	82.83 ± 0.47
$\boldsymbol{Y_P}$	0.244 ± 0.017	$\sigma_8/h^{0.5}$	0.9857 ± 0.0093	$D_M(0.38)$	1534 ± 12
$\boldsymbol{\ln(10^{10}A_s)}$	3.041 ± 0.016	$r_{drag}h$	99.2 ± 1.1	$H(0.51)$	89.57 ± 0.40
$\boldsymbol{n_s}$	0.9651 ± 0.0081	$\langle d^2\rangle^{1/2}$	2.439 ± 0.025	$D_M(0.51)$	1987 ± 14
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0025	z_{re}	7.60 ± 0.77	$H(0.61)$	95.21 ± 0.35
$\boldsymbol{A_{100}^{PS}}$	240 ± 26	$10^9 A_s$	2.092 ± 0.033	$D_M(0.61)$	2311 ± 16
$\boldsymbol{A_{143}^{PS}}$	39 ± 9	$10^9 A_s e^{-2\tau}$	1.879 ± 0.013	$H(2.33)$	236.27 ± 0.73
$\boldsymbol{A_{217}^{PS}}$	102 ± 10	D_{40}	1229 ± 16	$D_M(2.33)$	5768 ± 18
$\boldsymbol{A_{217}^{CIB}}$	40 ± 7	D_{220}	5721 ± 39	$f\sigma_8(0.15)$	0.4579 ± 0.0066
$\boldsymbol{A_{143}^{tSZ}}$	$3.9^{+1.9}_{-2.5}$	D_{810}	2535 ± 13	$\sigma_8(0.15)$	0.7472 ± 0.0067
$\boldsymbol{r_{143\times217}^{PS}}$	0.66 ± 0.13	D_{1420}	815.9 ± 5.0	$f\sigma_8(0.38)$	0.4756 ± 0.0053
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.56^{+0.42}_{-0.15}$	D_{2000}	230.4 ± 2.2	$\sigma_8(0.38)$	0.6620 ± 0.0062
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$n_{s,0.002}$	0.9651 ± 0.0081	$f\sigma_8(0.51)$	0.4738 ± 0.0048
$\boldsymbol{A^{kSZ}}$	$4.7^{+1.9}_{-4.3}$	Y_P	0.244 ± 0.017	$\sigma_8(0.51)$	0.6194 ± 0.0059
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.19	Y_P^{BBN}	0.245 ± 0.018	$f\sigma_8(0.61)$	0.4686 ± 0.0044
$\boldsymbol{A_{143}^{dust}}$	0.96 ± 0.17	Age/Gyr	13.808 ± 0.041	$\sigma_8(0.61)$	0.5893 ± 0.0057
$\boldsymbol{A_{217}^{dust}}$	0.98 ± 0.10	z_*	1089.96 ± 0.57	$f\sigma_8(2.33)$	0.2970 ± 0.0030
$\boldsymbol{A_{143\times217}^{dust}}$	1.02 ± 0.16	r_*	144.58 ± 0.30	$\sigma_8(2.33)$	0.3061 ± 0.0033
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	$100\theta_*$	1.04104 ± 0.00034	f_{2000}^{143}	30 ± 4
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	$D_M(z_*)$/Gpc	13.888 ± 0.029	f_{2000}^{217}	106.8 ± 2.6
$\boldsymbol{c_{TE}}$	0.9965 ± 0.0054	z_{drag}	1059.68 ± 0.94	$f_{2000}^{143\times217}$	32.0 ± 2.8
$\boldsymbol{c_{EE}}$	0.9919 ± 0.0065	r_{drag}	147.27 ± 0.31	$\chi^2_{lensing}$	9.29 ± 0.74
H_0	67.36 ± 0.69	k_D	0.14066 ± 0.00056	χ^2_{simall}	396.9 ± 1.7
Ω_Λ	0.6855 ± 0.0086	$100\theta_D$	0.16082 ± 0.00068	χ^2_{lowl}	23.4 ± 1.4
Ω_m	0.3145 ± 0.0086	z_{eq}	3393 ± 28	$\chi^2_{CamSpec}$	11514.7 ± 5.6
$\Omega_m h^2$	0.1426 ± 0.0012	k_{eq}	0.010356 ± 0.000084	χ^2_{prior}	7.8 ± 3.4
$\Omega_m h^3$	0.09607 ± 0.00060	$100\theta_{eq}$	0.8147 ± 0.0054	χ^2_{CMB}	11944.3 ± 5.8

$\bar{\chi}^2_{eff} = 11952.12$; $\Delta\bar{\chi}^2_{eff} = 0.68$; $R - 1 = 0.01489$

20.32 base_yhe_CamSpecHM_TTTEEE_lowl_lowE_post_BAO_lensing

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02236 ± 0.00018	$\sigma_8\Omega_m^{0.5}$	0.4505 ± 0.0059	$D_M(0.38)$	1527.7 ± 9.2
$\boldsymbol{\Omega_c h^2}$	0.11908 ± 0.00095	$\sigma_8\Omega_m^{0.25}$	0.6037 ± 0.0060	$H(0.51)$	89.76 ± 0.32
$\boldsymbol{100\theta_{MC}}$	1.04105 ± 0.00064	$\sigma_8/h^{0.5}$	0.9834 ± 0.0089	$D_M(0.51)$	1979 ± 11
$\boldsymbol{\tau}$	0.0554 ± 0.0074	$r_{drag}h$	99.76 ± 0.79	$H(0.61)$	95.37 ± 0.29
$\boldsymbol{Y_P}$	0.248 ± 0.016	$\langle d^2\rangle^{1/2}$	2.430 ± 0.022	$D_M(0.61)$	2303 ± 12
$\boldsymbol{\ln(10^{10}A_s)}$	3.044 ± 0.015	z_{re}	7.78 ± 0.74	$H(2.33)$	235.95 ± 0.61
$\boldsymbol{n_s}$	0.9681 ± 0.0072	$10^9 A_s$	2.099 ± 0.032	$D_M(2.33)$	5760 ± 15
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.879 ± 0.013	$f\sigma_8(0.15)$	0.4552 ± 0.0055
$\boldsymbol{A_{100}^{PS}}$	241 ± 26	D_{40}	1224 ± 15	$\sigma_8(0.15)$	0.7479 ± 0.0067
$\boldsymbol{A_{143}^{PS}}$	40 ± 9	D_{220}	5725 ± 39	$f\sigma_8(0.38)$	0.4738 ± 0.0048
$\boldsymbol{A_{217}^{PS}}$	102 ± 10	D_{810}	2536 ± 13	$\sigma_8(0.38)$	0.6631 ± 0.0061
$\boldsymbol{A_{217}^{CIB}}$	40 ± 7	D_{1420}	816.0 ± 5.0	$f\sigma_8(0.51)$	0.4726 ± 0.0045
$\boldsymbol{A_{143}^{tSZ}}$	$3.8^{+1.8}_{-2.5}$	D_{2000}	230.2 ± 2.2	$\sigma_8(0.51)$	0.6206 ± 0.0058
$\boldsymbol{r_{143\times217}^{PS}}$	0.66 ± 0.13	$n_{s,0.002}$	0.9681 ± 0.0072	$f\sigma_8(0.61)$	0.4678 ± 0.0043
$\boldsymbol{r_{143\times217}^{CIB}}$	> 0.433	Y_P	0.248 ± 0.016	$\sigma_8(0.61)$	0.5906 ± 0.0056
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	0.250 ± 0.016	$f\sigma_8(2.33)$	0.2978 ± 0.0029
$\boldsymbol{A^{kSZ}}$	$4.8^{+2.3}_{-3.9}$	Age/Gyr	13.791 ± 0.035	$\sigma_8(2.33)$	0.3071 ± 0.0031
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.20	z_*	1089.99 ± 0.57	f_{2000}^{143}	30 ± 4
$\boldsymbol{A_{143}^{dust}}$	0.96 ± 0.17	r_*	144.67 ± 0.27	f_{2000}^{217}	107.1 ± 2.5
$\boldsymbol{A_{217}^{dust}}$	0.97 ± 0.10	$100\theta_*$	1.04115 ± 0.00032	$f_{2000}^{143\times217}$	32.4 ± 2.8
$\boldsymbol{A_{143\times217}^{dust}}$	1.02 ± 0.16	$D_M(z_*)$/Gpc	13.895 ± 0.027	$\chi^2_{lensing}$	9.33 ± 0.78
$\boldsymbol{c_{100}}$	0.9976 ± 0.0011	z_{drag}	1059.94 ± 0.87	χ^2_{simall}	397.1 ± 1.8
$\boldsymbol{c_{217}}$	1.0012 ± 0.0016	r_{drag}	147.34 ± 0.30	χ^2_{lowl}	22.9 ± 1.2
$\boldsymbol{c_{TE}}$	0.9970 ± 0.0053	k_D	0.14047 ± 0.00050	$\chi^2_{CamSpec}$	11514.8 ± 5.6
$\boldsymbol{c_{EE}}$	0.9932 ± 0.0063	$100\theta_D$	0.16096 ± 0.00066	χ^2_{6DF}	0.048 ± 0.059
H_0	67.71 ± 0.52	z_{eq}	3380 ± 22	χ^2_{MGS}	1.34 ± 0.44
Ω_Λ	0.6900 ± 0.0062	k_{eq}	0.010316 ± 0.000067	$\chi^2_{DR12BAO}$	4.7 ± 1.3
Ω_m	0.3100 ± 0.0062	$100\theta_{eq}$	0.8174 ± 0.0041	χ^2_{prior}	7.8 ± 3.5
$\Omega_m h^2$	0.14209 ± 0.00091	$100\theta_{s,eq}$	0.4515 ± 0.0021	χ^2_{CMB}	11944.2 ± 5.8
$\Omega_m h^3$	0.09620 ± 0.00057	$H(0.15)$	72.98 ± 0.46	χ^2_{BAO}	6.0 ± 1.0
σ_8	0.8091 ± 0.0072	$D_M(0.15)$	640.4 ± 4.4		
S_8	0.822 ± 0.011	$H(0.38)$	83.06 ± 0.37		

$\bar{\chi}^2_{eff} = 11958.04$; $\Delta\bar{\chi}^2_{eff} = 0.63$; $R - 1 = 0.02077$

20.33 base_yhe_CamSpecHM_TTTEEE_lowl_lowE_post_Riess18

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02255 ± 0.00021	σ_8	0.8068 ± 0.0087	$100\theta_{s,eq}$	0.4545 ± 0.0030
$\boldsymbol{\Omega_c h^2}$	0.1178 ± 0.0013	S_8	0.807 ± 0.016	$H(0.15)$	73.71 ± 0.63
$\boldsymbol{100\theta_{MC}}$	1.04164 ± 0.00067	$\sigma_8\Omega_m^{0.5}$	0.4420 ± 0.0086	$D_M(0.15)$	633.3 ± 6.0
$\boldsymbol{\tau}$	0.0555 ± 0.0084	$\sigma_8\Omega_m^{0.25}$	0.5972 ± 0.0084	$H(0.38)$	83.63 ± 0.49
$\boldsymbol{Y_P}$	$0.261^{+0.018}_{-0.016}$	$\sigma_8/h^{0.5}$	0.975 ± 0.012	$D_M(0.38)$	1513 ± 12
$\boldsymbol{\ln(10^{10}A_s)}$	3.044 ± 0.018	$r_{drag}h$	101.1 ± 1.1	$H(0.51)$	90.24 ± 0.42
$\boldsymbol{n_s}$	0.9762 ± 0.0082	$\langle d^2\rangle^{1/2}$	2.398 ± 0.030	$D_M(0.51)$	1962 ± 15
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0024	z_{re}	7.78 ± 0.85	$H(0.61)$	95.78 ± 0.36
$\boldsymbol{A_{100}^{PS}}$	244 ± 25	$10^9 A_s$	2.099 ± 0.037	$D_M(0.61)$	2285 ± 16
$\boldsymbol{A_{143}^{PS}}$	42 ± 9	$10^9 A_s e^{-2\tau}$	1.879 ± 0.013	$H(2.33)$	235.33 ± 0.79
$\boldsymbol{A_{217}^{PS}}$	101 ± 10	D_{40}	1208 ± 17	$D_M(2.33)$	5741 ± 18
$\boldsymbol{A_{217}^{CIB}}$	41 ± 7	D_{220}	5727 ± 37	$f\sigma_8(0.15)$	0.4474 ± 0.0081
$\boldsymbol{A_{143}^{tSZ}}$	$3.7^{+1.7}_{-2.6}$	D_{810}	2537 ± 13	$\sigma_8(0.15)$	0.7467 ± 0.0079
$\boldsymbol{r_{143\times217}^{PS}}$	0.65 ± 0.12	D_{1420}	815.5 ± 5.1	$f\sigma_8(0.38)$	0.4682 ± 0.0069
$\boldsymbol{r_{143\times217}^{CIB}}$	> 0.442	D_{2000}	229.3 ± 2.2	$\sigma_8(0.38)$	0.6632 ± 0.0070
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$n_{s,0.002}$	0.9762 ± 0.0082	$f\sigma_8(0.51)$	0.4682 ± 0.0062
$\boldsymbol{A^{kSZ}}$	$5.2^{+3.7}_{-2.4}$	Y_P	$0.261^{+0.018}_{-0.016}$	$\sigma_8(0.51)$	0.6211 ± 0.0066
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.20	Y_P^{BBN}	$0.262^{+0.018}_{-0.016}$	$f\sigma_8(0.61)$	0.4641 ± 0.0058
$\boldsymbol{A_{143}^{dust}}$	0.97 ± 0.17	Age/Gyr	13.748 ± 0.041	$\sigma_8(0.61)$	0.5913 ± 0.0063
$\boldsymbol{A_{217}^{dust}}$	0.97 ± 0.10	z_*	1090.14 ± 0.57	$f\sigma_8(2.33)$	0.2986 ± 0.0032
$\boldsymbol{A_{143\times217}^{dust}}$	1.04 ± 0.16	r_*	144.82 ± 0.32	$\sigma_8(2.33)$	0.3084 ± 0.0035
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	$100\theta_*$	1.04140 ± 0.00033	f_{2000}^{143}	31 ± 4
$\boldsymbol{c_{217}}$	1.0013 ± 0.0016	$D_M(z_*)$/Gpc	13.907 ± 0.031	f_{2000}^{217}	108.1 ± 2.6
$\boldsymbol{c_{TE}}$	0.9990 ± 0.0053	z_{drag}	1060.71 ± 0.93	$f_{2000}^{143\times217}$	33.5 ± 2.7
$\boldsymbol{c_{EE}}$	0.9964 ± 0.0064	r_{drag}	147.44 ± 0.34	χ^2_{simall}	397.2 ± 2.0
H_0	68.54 ± 0.71	k_D	$0.14000^{+0.00051}_{-0.00060}$	χ^2_{lowl}	21.8 ± 1.1
Ω_Λ	$0.6999^{+0.0091}_{-0.0082}$	$100\theta_D$	$0.16137^{+0.00071}_{-0.00063}$	$\chi^2_{CamSpec}$	11518.2 ± 6.4
Ω_m	$0.3001^{+0.0082}_{-0.0091}$	z_{eq}	3353 ± 30	$\chi^2_{H073p45}$	8.9 ± 2.6
$\Omega_m h^2$	0.1409 ± 0.0012	k_{eq}	0.010233 ± 0.000091	χ^2_{prior}	7.9 ± 3.5
$\Omega_m h^3$	0.09660 ± 0.00059	$100\theta_{eq}$	0.8233 ± 0.0058	χ^2_{CMB}	11937.2 ± 6.2

$\bar{\chi}^2_{eff} = 11954.03$; $\Delta\bar{\chi}^2_{eff} = -0.24$; $R - 1 = 0.04865$

20.34 base_yhe_CamSpecHM_TTTEEE_lowl_lowE_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02231 ± 0.00021	σ_8	$0.8093^{+0.0072}_{-0.0081}$	$100\theta_{s,eq}$	0.4505 ± 0.0031
$\boldsymbol{\Omega_c h^2}$	0.1195 ± 0.0014	S_8	0.827 ± 0.016	$H(0.15)$	72.77 ± 0.67
$\boldsymbol{100\theta_{MC}}$	1.04092 ± 0.00071	$\sigma_8\Omega_m^{0.5}$	0.4529 ± 0.0090	$D_M(0.15)$	642.5 ± 6.6
$\boldsymbol{\tau}$	$0.0543^{+0.0047}_{-0.0082}$	$\sigma_8\Omega_m^{0.25}$	0.6054 ± 0.0082	$H(0.38)$	82.91 ± 0.52
$\boldsymbol{Y_P}$	0.246 ± 0.018	$\sigma_8/h^{0.5}$	0.985 ± 0.012	$D_M(0.38)$	1532 ± 13
$\boldsymbol{\ln(10^{10}A_s)}$	$3.042^{+0.013}_{-0.017}$	$r_{drag}h$	99.4 ± 1.2	$H(0.51)$	89.64 ± 0.43
$\boldsymbol{n_s}$	0.9666 ± 0.0084	$\langle d^2\rangle^{1/2}$	2.435 ± 0.031	$D_M(0.51)$	1984 ± 16
$\boldsymbol{y_{cal}}$	1.0004 ± 0.0025	z_{re}	$7.68^{+0.53}_{-0.82}$	$H(0.61)$	95.27 ± 0.38
$\boldsymbol{A^{PS}_{100}}$	240 ± 26	$10^9 A_s$	$2.094^{+0.026}_{-0.035}$	$D_M(0.61)$	2309 ± 17
$\boldsymbol{A^{PS}_{143}}$	40 ± 9	$10^9 A_s e^{-2\tau}$	1.879 ± 0.013	$H(2.33)$	236.20 ± 0.83
$\boldsymbol{A^{PS}_{217}}$	102 ± 10	D_{40}	1225 ± 17	$D_M(2.33)$	5765 ± 19
$\boldsymbol{A^{CIB}_{217}}$	40 ± 7	D_{220}	5717 ± 39	$f\sigma_8(0.15)$	0.4573 ± 0.0083
$\boldsymbol{A^{tSZ}_{143}}$	$3.8^{+1.8}_{-2.5}$	D_{810}	2535 ± 14	$\sigma_8(0.15)$	$0.7477^{+0.0064}_{-0.0073}$
$\boldsymbol{r^{PS}_{143\times217}}$	0.66 ± 0.13	D_{1420}	815.5 ± 5.1	$f\sigma_8(0.38)$	0.4752 ± 0.0067
$\boldsymbol{r^{CIB}_{143\times217}}$	$0.56^{+0.41}_{-0.16}$	D_{2000}	230.1 ± 2.3	$\sigma_8(0.38)$	$0.6626^{+0.0056}_{-0.0065}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$n_{s,0.002}$	0.9666 ± 0.0084	$f\sigma_8(0.51)$	0.4736 ± 0.0059
$\boldsymbol{A^{kSZ}}$	$4.8^{+2.4}_{-3.9}$	Y_P	0.246 ± 0.018	$\sigma_8(0.51)$	$0.6200^{+0.0052}_{-0.0061}$
$\boldsymbol{A^{dust}_{100}}$	1.01 ± 0.20	Y_P^{BBN}	0.248 ± 0.018	$f\sigma_8(0.61)$	0.4685 ± 0.0054
$\boldsymbol{A^{dust}_{143}}$	0.96 ± 0.17	Age/Gyr	13.801 ± 0.043	$\sigma_8(0.61)$	$0.5899^{+0.0050}_{-0.0059}$
$\boldsymbol{A^{dust}_{217}}$	0.97 ± 0.10	z_*	1090.01 ± 0.57	$f\sigma_8(2.33)$	$0.2974^{+0.0026}_{-0.0031}$
$\boldsymbol{A^{dust}_{143\times217}}$	1.03 ± 0.16	r_*	144.59 ± 0.32	$\sigma_8(2.33)$	$0.3065^{+0.0028}_{-0.0033}$
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	$100\theta_*$	1.04108 ± 0.00035	f^{143}_{2000}	30 ± 4
$\boldsymbol{c_{217}}$	1.0012 ± 0.0016	$D_M(z_*)$/Gpc	13.889 ± 0.031	f^{217}_{2000}	107.0 ± 2.6
$\boldsymbol{c_{TE}}$	0.9968 ± 0.0054	z_{drag}	1059.80 ± 0.95	$f^{143\times217}_{2000}$	32.3 ± 2.8
$\boldsymbol{c_{EE}}$	0.9925 ± 0.0066	r_{drag}	147.28 ± 0.34	χ^2_{simall}	396.8 ± 1.7
H_0	67.47 ± 0.76	k_D	0.14057 ± 0.00058	χ^2_{lowl}	23.2 ± 1.4
Ω_Λ	0.6868 ± 0.0096	$100\theta_D$	0.16091 ± 0.00068	$\chi^2_{CamSpec}$	11515.2 ± 5.8
Ω_m	0.3132 ± 0.0096	z_{eq}	3390 ± 32	χ^2_{prior}	7.9 ± 3.5
$\Omega_m h^2$	0.1425 ± 0.0013	k_{eq}	0.010346 ± 0.000096	χ^2_{CMB}	11935.1 ± 5.8
$\Omega_m h^3$	0.09613 ± 0.00060	$100\theta_{eq}$	0.8154 ± 0.0061		

$\bar{\chi}^2_{eff} = 11943.03$; $\Delta\bar{\chi}^2_{eff} = 0.84$; $R - 1 = 0.01121$

20.35 base_yhe_CamSpecHM_TTTEEE_lowl_lowE_post_BAO_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02237 ± 0.00019	S_8	0.820 ± 0.013	$D_M(0.15)$	639.6 ± 4.6
$\boldsymbol{\Omega_c h^2}$	0.1189 ± 0.0010	$\sigma_8\Omega_m^{0.5}$	0.4492 ± 0.0069	$H(0.38)$	83.13 ± 0.38
$\boldsymbol{100\theta_{MC}}$	1.04113 ± 0.00064	$\sigma_8\Omega_m^{0.25}$	0.6026 ± 0.0070	$D_M(0.38)$	1526.0 ± 9.5
$\boldsymbol{\tau}$	$0.0550^{+0.0052}_{-0.0080}$	$\sigma_8/h^{0.5}$	0.982 ± 0.010	$H(0.51)$	89.82 ± 0.33
$\boldsymbol{Y_P}$	0.250 ± 0.016	$r_{drag}h$	99.93 ± 0.85	$D_M(0.51)$	1977 ± 11
$\boldsymbol{\ln(10^{10}A_s)}$	$3.043^{+0.013}_{-0.017}$	$\langle d^2\rangle^{1/2}$	2.424 ± 0.025	$H(0.61)$	95.42 ± 0.30
$\boldsymbol{n_s}$	0.9693 ± 0.0073	z_{re}	$7.75^{+0.57}_{-0.81}$	$D_M(0.61)$	2301 ± 12
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	$10^9 A_s$	$2.097^{+0.027}_{-0.036}$	$H(2.33)$	235.87 ± 0.66
$\boldsymbol{A_{100}^{PS}}$	242 ± 25	$10^9 A_s e^{-2\tau}$	1.878 ± 0.013	$D_M(2.33)$	5758 ± 15
$\boldsymbol{A_{143}^{PS}}$	40 ± 9	D_{40}	1220 ± 16	$f\sigma_8(0.15)$	0.4540 ± 0.0066
$\boldsymbol{A_{217}^{PS}}$	102 ± 10	D_{220}	5720 ± 39	$\sigma_8(0.15)$	$0.7473^{+0.0064}_{-0.0076}$
$\boldsymbol{A_{217}^{CIB}}$	40 ± 7	D_{810}	2535 ± 14	$f\sigma_8(0.38)$	0.4729 ± 0.0057
$\boldsymbol{A_{143}^{tSZ}}$	$3.8^{+1.8}_{-2.5}$	D_{1420}	815.5 ± 5.1	$\sigma_8(0.38)$	$0.6628^{+0.0056}_{-0.0068}$
$\boldsymbol{r_{143\times217}^{PS}}$	0.66 ± 0.13	D_{2000}	229.9 ± 2.3	$f\sigma_8(0.51)$	0.4718 ± 0.0052
$\boldsymbol{r_{143\times217}^{CIB}}$	> 0.436	$n_{s,0.002}$	0.9693 ± 0.0073	$\sigma_8(0.51)$	$0.6204^{+0.0053}_{-0.0063}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P	0.250 ± 0.016	$f\sigma_8(0.61)$	0.4671 ± 0.0049
$\boldsymbol{A^{kSZ}}$	$4.9^{+2.8}_{-3.5}$	Y_P^{BBN}	0.251 ± 0.017	$\sigma_8(0.61)$	$0.5904^{+0.0050}_{-0.0061}$
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.20	Age/Gyr	13.786 ± 0.036	$f\sigma_8(2.33)$	$0.2978^{+0.0026}_{-0.0031}$
$\boldsymbol{A_{143}^{dust}}$	0.97 ± 0.17	z_*	1090.02 ± 0.57	$\sigma_8(2.33)$	$0.3071^{+0.0027}_{-0.0033}$
$\boldsymbol{A_{217}^{dust}}$	0.97 ± 0.10	r_*	144.69 ± 0.29	f_{2000}^{143}	30 ± 4
$\boldsymbol{A_{143\times217}^{dust}}$	1.03 ± 0.16	$100\theta_*$	1.04118 ± 0.00032	f_{2000}^{217}	107.3 ± 2.5
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	$D_M(z_*)$/Gpc	13.897 ± 0.028	$f_{2000}^{143\times217}$	32.6 ± 2.8
$\boldsymbol{c_{217}}$	1.0012 ± 0.0016	z_{drag}	1060.03 ± 0.87	χ^2_{simall}	396.9 ± 1.8
$\boldsymbol{c_{TE}}$	0.9974 ± 0.0053	r_{drag}	147.36 ± 0.31	χ^2_{lowl}	22.7 ± 1.1
$\boldsymbol{c_{EE}}$	0.9936 ± 0.0063	k_D	0.14039 ± 0.00051	$\chi^2_{CamSpec}$	11515.3 ± 5.7
H_0	67.81 ± 0.54	$100\theta_D$	0.16103 ± 0.00066	χ^2_{6DF}	0.043 ± 0.056
Ω_Λ	0.6912 ± 0.0066	z_{eq}	3376 ± 24	χ^2_{MGS}	1.43 ± 0.49
Ω_m	0.3088 ± 0.0066	k_{eq}	0.010305 ± 0.000072	$\chi^2_{DR12BAO}$	4.5 ± 1.3
$\Omega_m h^2$	0.14193 ± 0.00099	$100\theta_{eq}$	0.8181 ± 0.0044	χ^2_{prior}	7.9 ± 3.4
$\Omega_m h^3$	0.09624 ± 0.00058	$100\theta_{s,eq}$	0.4519 ± 0.0023	χ^2_{BAO}	5.95 ± 0.98
σ_8	$0.8084^{+0.0071}_{-0.0083}$	$H(0.15)$	73.06 ± 0.48	χ^2_{CMB}	11934.9 ± 5.7

$\bar{\chi}^2_{eff} = 11948.72$; $\Delta\bar{\chi}^2_{eff} = 0.73$; $R - 1 = 0.01724$

20.36 base_yhe_CamSpecHM_TTTEEE_lowl_lowE_post_lensing_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02229 ± 0.00020	σ_8	0.8097 ± 0.0067	$100\theta_{s,eq}$	0.4503 ± 0.0027
$\boldsymbol{\Omega_c h^2}$	0.1196 ± 0.0012	S_8	0.828 ± 0.013	$H(0.15)$	72.70 ± 0.59
$\boldsymbol{100\theta_{MC}}$	1.04084 ± 0.00069	$\sigma_8\Omega_m^{0.5}$	0.4537 ± 0.0071	$D_M(0.15)$	643.1 ± 5.8
$\boldsymbol{\tau}$	$0.0547^{+0.0050}_{-0.0078}$	$\sigma_8\Omega_m^{0.25}$	0.6061 ± 0.0065	$H(0.38)$	82.86 ± 0.46
$\boldsymbol{Y_P}$	0.244 ± 0.017	$\sigma_8/h^{0.5}$	0.9863 ± 0.0091	$D_M(0.38)$	1533 ± 12
$\boldsymbol{\ln(10^{10}A_s)}$	$3.043^{+0.012}_{-0.016}$	$r_{drag}h$	99.3 ± 1.1	$H(0.51)$	89.60 ± 0.40
$\boldsymbol{n_s}$	$0.9655^{+0.0075}_{-0.0083}$	$\langle d^2\rangle^{1/2}$	2.440 ± 0.024	$D_M(0.51)$	1986 ± 14
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	z_{re}	$7.72^{+0.55}_{-0.79}$	$H(0.61)$	95.23 ± 0.35
$\boldsymbol{A_{100}^{PS}}$	240 ± 26	$10^9 A_s$	$2.096^{+0.025}_{-0.033}$	$D_M(0.61)$	2310 ± 15
$\boldsymbol{A_{143}^{PS}}$	39 ± 9	$10^9 A_s e^{-2\tau}$	1.879 ± 0.013	$H(2.33)$	236.23 ± 0.72
$\boldsymbol{A_{217}^{PS}}$	102 ± 10	D_{40}	1228 ± 16	$D_M(2.33)$	5767 ± 18
$\boldsymbol{A_{217}^{CIB}}$	40 ± 7	D_{220}	5721 ± 39	$f\sigma_8(0.15)$	0.4580 ± 0.0066
$\boldsymbol{A_{143}^{tSZ}}$	$3.9^{+1.9}_{-2.5}$	D_{810}	2535 ± 13	$\sigma_8(0.15)$	$0.7479^{+0.0059}_{-0.0066}$
$\boldsymbol{r_{143\times217}^{PS}}$	0.66 ± 0.13	D_{1420}	815.8 ± 5.0	$f\sigma_8(0.38)$	0.4758 ± 0.0053
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.56^{+0.43}_{-0.14}$	D_{2000}	230.4 ± 2.2	$\sigma_8(0.38)$	$0.6627^{+0.0053}_{-0.0061}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$n_{s,0.002}$	$0.9655^{+0.0075}_{-0.0083}$	$f\sigma_8(0.51)$	0.4741 ± 0.0047
$\boldsymbol{A^{kSZ}}$	$4.7^{+1.9}_{-4.3}$	Y_P	0.244 ± 0.017	$\sigma_8(0.51)$	$0.6201^{+0.0051}_{-0.0059}$
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.20	Y_P^{BBN}	0.246 ± 0.017	$f\sigma_8(0.61)$	0.4689 ± 0.0043
$\boldsymbol{A_{143}^{dust}}$	0.96 ± 0.17	Age/Gyr	13.806 ± 0.041	$\sigma_8(0.61)$	$0.5900^{+0.0049}_{-0.0057}$
$\boldsymbol{A_{217}^{dust}}$	0.98 ± 0.10	z_*	1089.96 ± 0.57	$f\sigma_8(2.33)$	$0.2974^{+0.0026}_{-0.0030}$
$\boldsymbol{A_{143\times217}^{dust}}$	1.02 ± 0.16	r_*	144.59 ± 0.29	$\sigma_8(2.33)$	$0.3065^{+0.0028}_{-0.0033}$
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	$100\theta_*$	1.04105 ± 0.00034	f_{2000}^{143}	30 ± 4
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	$D_M(z_*)$/Gpc	13.889 ± 0.028	f_{2000}^{217}	106.8 ± 2.6
$\boldsymbol{c_{TE}}$	0.9964 ± 0.0054	z_{drag}	1059.71 ± 0.93	$f_{2000}^{143\times217}$	32.1 ± 2.8
$\boldsymbol{c_{EE}}$	0.9920 ± 0.0065	r_{drag}	147.28 ± 0.31	$\chi^2_{lensing}$	9.26 ± 0.69
H_0	67.40 ± 0.67	k_D	0.14064 ± 0.00055	χ^2_{smallI}	396.9 ± 1.7
Ω_Λ	0.6860 ± 0.0084	$100\theta_D$	0.16084 ± 0.00068	χ^2_{lowl}	23.4 ± 1.4
Ω_m	0.3140 ± 0.0084	z_{eq}	3392 ± 27	$\chi^2_{CamSpec}$	11514.6 ± 5.6
$\Omega_m h^2$	0.1426 ± 0.0011	k_{eq}	0.010351 ± 0.000083	χ^2_{prior}	7.8 ± 3.4
$\Omega_m h^3$	0.09608 ± 0.00059	$100\theta_{eq}$	0.8150 ± 0.0053	χ^2_{CMB}	11944.1 ± 5.8

$\bar{\chi}^2_{eff} = 11951.89$; $\Delta\bar{\chi}^2_{eff} = 0.64$; $R - 1 = 0.01571$

20.37 base_yhe_CamSpecHM_TTTEEE_lowl_lowE_post_BAO_lensing_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02236 ± 0.00018	$\sigma_8\Omega_m^{0.5}$	0.4506 ± 0.0058	$D_M(0.38)$	1527.5 ± 9.1
$\boldsymbol{\Omega_c h^2}$	0.11906 ± 0.00094	$\sigma_8\Omega_m^{0.25}$	0.6040 ± 0.0059	$H(0.51)$	89.77 ± 0.32
$\boldsymbol{100\theta_{MC}}$	1.04105 ± 0.00064	$\sigma_8/h^{0.5}$	0.9838 ± 0.0086	$D_M(0.51)$	1979 ± 11
$\boldsymbol{\tau}$	$0.0561^{+0.0056}_{-0.0076}$	$r_{drag}h$	$99.79^{+0.74}_{-0.83}$	$H(0.61)$	95.38 ± 0.29
$\boldsymbol{Y_P}$	0.248 ± 0.016	$\langle d^2\rangle^{1/2}$	2.431 ± 0.022	$D_M(0.61)$	2303 ± 12
$\boldsymbol{\ln(10^{10}A_s)}$	$3.045^{+0.013}_{-0.016}$	z_{re}	$7.85^{+0.61}_{-0.74}$	$H(2.33)$	235.94 ± 0.61
$\boldsymbol{n_s}$	0.9682 ± 0.0072	$10^9 A_s$	$2.102^{+0.027}_{-0.033}$	$D_M(2.33)$	5760 ± 15
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.879 ± 0.013	$f\sigma_8(0.15)$	0.4553 ± 0.0055
$\boldsymbol{A_{100}^{PS}}$	241 ± 26	D_{40}	1224 ± 15	$\sigma_8(0.15)$	0.7483 ± 0.0064
$\boldsymbol{A_{143}^{PS}}$	40 ± 9	D_{220}	5725 ± 38	$f\sigma_8(0.38)$	0.4740 ± 0.0048
$\boldsymbol{A_{217}^{PS}}$	102 ± 10	D_{810}	2536 ± 13	$\sigma_8(0.38)$	$0.6635^{+0.0054}_{-0.0062}$
$\boldsymbol{A_{217}^{CIB}}$	40 ± 7	D_{1420}	815.9 ± 5.0	$f\sigma_8(0.51)$	0.4728 ± 0.0044
$\boldsymbol{A_{143}^{tSZ}}$	$3.8^{+1.8}_{-2.5}$	D_{2000}	230.2 ± 2.2	$\sigma_8(0.51)$	$0.6210^{+0.0051}_{-0.0059}$
$\boldsymbol{r_{143\times217}^{PS}}$	0.66 ± 0.13	$n_{s,0.002}$	0.9682 ± 0.0072	$f\sigma_8(0.61)$	0.4680 ± 0.0042
$\boldsymbol{r_{143\times217}^{CIB}}$	> 0.433	Y_P	0.248 ± 0.016	$\sigma_8(0.61)$	$0.5909^{+0.0049}_{-0.0056}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	0.250 ± 0.016	$f\sigma_8(2.33)$	$0.2980^{+0.0026}_{-0.0029}$
$\boldsymbol{A^{kSZ}}$	$4.8^{+2.3}_{-3.9}$	Age/Gyr	13.790 ± 0.035	$\sigma_8(2.33)$	$0.3073^{+0.0027}_{-0.0031}$
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.20	z_*	1089.98 ± 0.57	f_{2000}^{143}	30 ± 4
$\boldsymbol{A_{143}^{dust}}$	0.96 ± 0.17	r_*	144.67 ± 0.27	f_{2000}^{217}	107.1 ± 2.5
$\boldsymbol{A_{217}^{dust}}$	0.97 ± 0.10	$100\theta_*$	1.04116 ± 0.00031	$f_{2000}^{143\times217}$	32.4 ± 2.8
$\boldsymbol{A_{143\times217}^{dust}}$	1.02 ± 0.16	$D_M(z_*)$/Gpc	13.895 ± 0.027	$\chi^2_{lensing}$	9.28 ± 0.71
$\boldsymbol{c_{100}}$	0.9976 ± 0.0011	z_{drag}	1059.95 ± 0.86	χ^2_{simall}	397.1 ± 1.9
$\boldsymbol{c_{217}}$	1.0012 ± 0.0016	r_{drag}	147.34 ± 0.30	χ^2_{lowl}	22.9 ± 1.2
$\boldsymbol{c_{TE}}$	0.9970 ± 0.0053	k_D	0.14046 ± 0.00050	$\chi^2_{CamSpec}$	11514.8 ± 5.6
$\boldsymbol{c_{EE}}$	0.9932 ± 0.0063	$100\theta_D$	0.16096 ± 0.00066	χ^2_{6DF}	0.046 ± 0.057
H_0	$67.72^{+0.48}_{-0.53}$	z_{eq}	3379 ± 22	χ^2_{MGS}	1.35 ± 0.44
Ω_Λ	0.6902 ± 0.0061	k_{eq}	0.010314 ± 0.000066	$\chi^2_{DR12BAO}$	4.6 ± 1.3
Ω_m	0.3098 ± 0.0061	$100\theta_{eq}$	0.8175 ± 0.0040	χ^2_{prior}	7.8 ± 3.5
$\Omega_m h^2$	0.14206 ± 0.00091	$100\theta_{s,eq}$	0.4516 ± 0.0021	χ^2_{CMB}	11944.0 ± 5.7
$\Omega_m h^3$	0.09621 ± 0.00057	$H(0.15)$	$72.99^{+0.43}_{-0.47}$	χ^2_{BAO}	6.00 ± 0.98
σ_8	0.8096 ± 0.0069	$D_M(0.15)$	640.3 ± 4.4		
S_8	0.823 ± 0.011	$H(0.38)$	83.07 ± 0.37		

$\bar{\chi}^2_{eff} = 11957.86$; $\Delta\bar{\chi}^2_{eff} = 0.60$; $R - 1 = 0.02091$

20.38 base_yhe_CamSpecHM_TTTEEE_lowl_lowE_post_Riess18_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02256 ± 0.00021	σ_8	$0.8077^{+0.0077}_{-0.0086}$	$100\theta_{\rm s,eq}$	0.4546 ± 0.0030
$\boldsymbol{\Omega_c h^2}$	0.1177 ± 0.0013	S_8	0.808 ± 0.016	$H(0.15)$	73.73 ± 0.62
$\boldsymbol{100\theta_{MC}}$	1.04165 ± 0.00067	$\sigma_8\Omega_{\rm m}^{0.5}$	0.4423 ± 0.0085	$D_{\rm M}(0.15)$	633.2 ± 6.0
$\boldsymbol{\tau}$	$0.0567^{+0.0060}_{-0.0084}$	$\sigma_8\Omega_{\rm m}^{0.25}$	0.5977 ± 0.0081	$H(0.38)$	83.65 ± 0.49
$\boldsymbol{Y_P}$	$0.261^{+0.018}_{-0.016}$	$\sigma_8/h^{0.5}$	0.975 ± 0.012	$D_{\rm M}(0.38)$	1513 ± 12
$\boldsymbol{\ln(10^{10}A_s)}$	$3.046^{+0.014}_{-0.017}$	$r_{\rm drag}h$	101.1 ± 1.1	$H(0.51)$	90.25 ± 0.41
$\boldsymbol{n_s}$	0.9764 ± 0.0082	$\langle d^2\rangle^{1/2}$	2.400 ± 0.030	$D_{\rm M}(0.51)$	1962 ± 15
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0024	$z_{\rm re}$	$7.90^{+0.64}_{-0.84}$	$H(0.61)$	95.79 ± 0.36
$\boldsymbol{A^{PS}_{100}}$	244 ± 25	$10^9 A_{\rm s}$	$2.104^{+0.030}_{-0.037}$	$D_{\rm M}(0.61)$	2284 ± 16
$\boldsymbol{A^{PS}_{143}}$	42 ± 9	$10^9 A_{\rm s}e^{-2\tau}$	1.878 ± 0.013	$H(2.33)$	235.32 ± 0.79
$\boldsymbol{A^{PS}_{217}}$	101 ± 10	D_{40}	1208 ± 16	$D_{\rm M}(2.33)$	5741 ± 18
$\boldsymbol{A^{CIB}_{217}}$	41 ± 7	D_{220}	5727 ± 37	$f\sigma_8(0.15)$	0.4478 ± 0.0080
$\boldsymbol{A^{tSZ}_{143}}$	$3.7^{+1.7}_{-2.6}$	D_{810}	2537 ± 13	$\sigma_8(0.15)$	$0.7475^{+0.0069}_{-0.0079}$
$\boldsymbol{r^{PS}_{143\times217}}$	0.65 ± 0.12	D_{1420}	815.4 ± 5.1	$f\sigma_8(0.38)$	0.4686 ± 0.0067
$\boldsymbol{r^{CIB}_{143\times217}}$	> 0.442	D_{2000}	229.3 ± 2.2	$\sigma_8(0.38)$	$0.6639^{+0.0060}_{-0.0070}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$n_{\rm s,0.002}$	0.9764 ± 0.0082	$f\sigma_8(0.51)$	0.4686 ± 0.0060
$\boldsymbol{A^{kSZ}}$	$5.3^{+3.8}_{-2.4}$	$Y_{\rm P}$	$0.261^{+0.018}_{-0.016}$	$\sigma_8(0.51)$	$0.6218^{+0.0056}_{-0.0066}$
$\boldsymbol{A^{dust}_{100}}$	1.01 ± 0.19	$Y_{\rm P}^{\rm BBN}$	$0.262^{+0.018}_{-0.016}$	$f\sigma_8(0.61)$	0.4646 ± 0.0055
$\boldsymbol{A^{dust}_{143}}$	0.97 ± 0.17	Age/Gyr	13.747 ± 0.041	$\sigma_8(0.61)$	$0.5920^{+0.0054}_{-0.0063}$
$\boldsymbol{A^{dust}_{217}}$	0.97 ± 0.10	z_*	1090.14 ± 0.57	$f\sigma_8(2.33)$	$0.2990^{+0.0028}_{-0.0033}$
$\boldsymbol{A^{dust}_{143\times217}}$	1.04 ± 0.16	r_*	144.82 ± 0.32	$\sigma_8(2.33)$	$0.3088^{+0.0030}_{-0.0035}$
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	$100\theta_*$	1.04140 ± 0.00033	f^{143}_{2000}	31 ± 4
$\boldsymbol{c_{217}}$	1.0013 ± 0.0016	$D_{\rm M}(z_*)$/Gpc	13.907 ± 0.031	f^{217}_{2000}	108.1 ± 2.6
$\boldsymbol{c_{TE}}$	0.9990 ± 0.0053	$z_{\rm drag}$	1060.73 ± 0.93	$f^{143\times217}_{2000}$	33.5 ± 2.7
$\boldsymbol{c_{EE}}$	0.9964 ± 0.0064	$r_{\rm drag}$	147.44 ± 0.34	$\chi^2_{\rm simall}$	397.1 ± 2.0
H_0	68.56 ± 0.71	$k_{\rm D}$	$0.13999^{+0.00051}_{-0.00060}$	$\chi^2_{\rm lowl}$	21.8 ± 1.1
Ω_Λ	$0.7001^{+0.0091}_{-0.0081}$	$100\theta_{\rm D}$	$0.16138^{+0.00071}_{-0.00063}$	$\chi^2_{\rm CamSpec}$	11518.1 ± 6.4
$\Omega_{\rm m}$	$0.2999^{+0.0081}_{-0.0091}$	$z_{\rm eq}$	3352 ± 30	$\chi^2_{\rm H073p45}$	8.9 ± 2.5
$\Omega_{\rm m}h^2$	0.1409 ± 0.0012	$k_{\rm eq}$	0.010232 ± 0.000090	$\chi^2_{\rm prior}$	7.9 ± 3.5
$\Omega_{\rm m}h^3$	0.09662 ± 0.00059	$100\theta_{\rm eq}$	0.8235 ± 0.0058	$\chi^2_{\rm CMB}$	11937.0 ± 6.1

$\bar{\chi}^2_{\rm eff} = 11953.75$; $\Delta\bar{\chi}^2_{\rm eff} = -0.26$; $R - 1 = 0.05858$

20.39 base_yhe_plikHM_TE_lowE

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022177	$0.02222^{+0.00033}_{-0.00038}$	$r_{\rm drag}h$	99.37	$99.6^{+2.0}_{-2.3}$	$H(0.15)$	72.47	$72.6^{+1.1}_{-1.4}$
$\boldsymbol{\Omega_c h^2}$	0.11849	0.1184 ± 0.0021	$\langle d^2\rangle^{1/2}$	2.434	$2.426^{+0.064}_{-0.057}$	$D_{\rm M}(0.15)$	645.1	644^{+13}_{-11}
$\boldsymbol{100\theta_{\rm MC}}$	1.03933	$1.0396^{+0.0014}_{-0.0022}$	$z_{\rm re}$	7.00	$6.89^{+0.88}_{-0.75}$	$H(0.38)$	82.57	$82.70^{+0.85}_{-1.1}$
$\boldsymbol{\tau}$	0.0498	0.0488 ± 0.0083	$10^9 A_{\rm s}$	2.0448	2.042 ± 0.040	$D_{\rm M}(0.38)$	1538.1	1535^{+27}_{-23}
$\boldsymbol{Y_{\rm P}}$	0.186	$0.191^{+0.045}_{-0.063}$	$10^9 A_{\rm s} e^{-2\tau}$	1.8509	1.852 ± 0.018	$H(0.51)$	89.27	$89.39^{+0.72}_{-1.0}$
$\boldsymbol{\ln(10^{10} A_{\rm s})}$	3.0179	3.016 ± 0.020	D_{40}	1251.4	1247^{+46}_{-41}	$D_{\rm M}(0.51)$	1992.2	1989^{+33}_{-27}
$\boldsymbol{n_{\rm s}}$	0.9500	$0.952^{+0.017}_{-0.020}$	D_{220}	5746	5741 ± 73	$H(0.61)$	94.88	$94.99^{+0.62}_{-0.90}$
$\boldsymbol{A_{100}^{{\rm dust}TE}}$	0.1142	0.114 ± 0.038	D_{810}	2531.9	2530^{+34}_{-30}	$D_{\rm M}(0.61)$	2318.1	2314^{+36}_{-30}
$\boldsymbol{A_{100\times143}^{{\rm dust}TE}}$	0.1365	0.135 ± 0.030	D_{1420}	826.4	825^{+22}_{-18}	$H(2.33)$	235.22	235.2 ± 1.2
$\boldsymbol{A_{100\times217}^{{\rm dust}TE}}$	0.477	0.479 ± 0.084	D_{2000}	237.6	$237^{+11}_{-8.5}$	$D_{\rm M}(2.33)$	5788.9	5783^{+46}_{-33}
$\boldsymbol{A_{143}^{{\rm dust}TE}}$	0.223	0.222 ± 0.054	$n_{\rm s,0.002}$	0.9500	$0.952^{+0.017}_{-0.020}$	$f\sigma_8(0.15)$	0.4465	0.445 ± 0.013
$\boldsymbol{A_{143\times217}^{{\rm dust}TE}}$	0.658	0.657 ± 0.080	$Y_{\rm P}$	0.186	$0.191^{+0.045}_{-0.061}$	$\sigma_8(0.15)$	0.7302	0.730 ± 0.010
$\boldsymbol{A_{217}^{{\rm dust}TE}}$	2.046	2.04 ± 0.27	$Y_{\rm P}^{\rm BBN}$	0.187	$0.192^{+0.046}_{-0.062}$	$f\sigma_8(0.38)$	0.4641	0.463 ± 0.010
$\boldsymbol{c_{100}}$	1.00016	1.00016 ± 0.00070	Age/Gyr	13.858	$13.85^{+0.11}_{-0.076}$	$\sigma_8(0.38)$	0.6471	0.6471 ± 0.0090
$\boldsymbol{c_{217}}$	0.99798	0.99800 ± 0.00065	z_*	1087.79	$1088.0^{+1.2}_{-1.9}$	$f\sigma_8(0.51)$	0.4625	0.4618 ± 0.0090
$\boldsymbol{y_{\rm cal}}$	0.99999	1.0001 ± 0.0025	r_*	145.17	145.14 ± 0.50	$\sigma_8(0.51)$	0.6055	0.6056 ± 0.0085
H_0	67.19	$67.4^{+1.3}_{-1.5}$	$100\theta_*$	1.04097	$1.04103^{+0.00066}_{-0.00078}$	$f\sigma_8(0.61)$	0.4576	0.4570 ± 0.0081
Ω_Λ	0.6870	0.688 ± 0.016	$D_{\rm M}(z_*)$/Gpc	13.945	13.942 ± 0.050	$\sigma_8(0.61)$	0.5761	0.5762 ± 0.0082
$\Omega_{\rm m}$	0.3130	0.312 ± 0.016	$z_{\rm drag}$	1057.53	$1057.9^{+1.7}_{-2.6}$	$f\sigma_8(2.33)$	0.29044	$0.2905^{+0.0040}_{-0.0045}$
$\Omega_{\rm m}h^2$	0.14131	0.1413 ± 0.0020	$r_{\rm drag}$	147.88	147.83 ± 0.54	$\sigma_8(2.33)$	0.29936	$0.2996^{+0.0043}_{-0.0051}$
$\Omega_{\rm m}h^3$	0.09495	$0.0951^{+0.0010}_{-0.0015}$	$k_{\rm D}$	0.14219	$0.1420^{+0.0019}_{-0.0014}$	$\chi^2_{\rm simall}$	395.56	396.7 ± 1.5
σ_8	0.7904	0.790 ± 0.011	$100\theta_{\rm D}$	0.15843	$0.1587^{+0.0015}_{-0.0024}$	$\chi^2_{\rm plikTE}$	851.83	859.4 ± 3.8
S_8	0.8073	0.805 ± 0.026	$z_{\rm eq}$	3361.4	3360 ± 47	$\chi^2_{\rm prior}$	0.44	7.4 ± 3.7
$\sigma_8\Omega_{\rm m}^{0.5}$	0.4422	0.441 ± 0.014	$k_{\rm eq}$	0.010259	0.01026 ± 0.00014	$\chi^2_{\rm CMB}$	1247.39	1256.1 ± 4.1
$\sigma_8\Omega_{\rm m}^{0.25}$	0.5912	0.590 ± 0.013	$100\theta_{\rm eq}$	0.8189	0.8195 ± 0.0097			
$\sigma_8/h^{0.5}$	0.9642	0.963 ± 0.018	$100\theta_{\rm s,eq}$	0.45241	0.4527 ± 0.0050			

Best-fit $\chi^2_{\rm eff} = 1247.84$; $\Delta\chi^2_{\rm eff} = -1.15$; $\bar{\chi}^2_{\rm eff} = 1263.54$; $\Delta\bar{\chi}^2_{\rm eff} = -0.46$; $R - 1 = 0.00777$
$\chi^2_{\rm eff}$: CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.56 (Δ -0.12) plik_rd12_HM_v22_TE: 851.83 (Δ -1.02)

20.40 base_yhe_plikHM_TE_lowE_post_BAO

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022249	0.02230 ± 0.00028	$\langle d^2 \rangle^{1/2}$	2.4156	2.409 ± 0.038	$H(0.38)$	82.87	$82.98^{+0.53}_{-0.60}$
$\boldsymbol{\Omega_c h^2}$	0.11773	0.1178 ± 0.0013	$z_{\rm re}$	7.01	$6.95^{+0.88}_{-0.74}$	$D_{\rm M}(0.38)$	1530.0	1528 ± 13
$\boldsymbol{100\theta_{MC}}$	1.03971	$1.0400^{+0.0014}_{-0.0016}$	$10^9 A_{\rm s}$	2.0425	2.041 ± 0.040	$H(0.51)$	89.52	$89.62^{+0.49}_{-0.56}$
$\boldsymbol{\tau}$	0.0498	$0.0493^{+0.0084}_{-0.0076}$	$10^9 A_{\rm s} e^{-2\tau}$	1.8489	1.850 ± 0.017	$D_{\rm M}(0.51)$	1982.7	1980 ± 16
$\boldsymbol{Y_P}$	0.1954	0.201 ± 0.044	D_{40}	1242.6	1237 ± 33	$H(0.61)$	95.09	$95.19^{+0.47}_{-0.53}$
$\boldsymbol{\ln(10^{10} A_s)}$	3.0168	3.016 ± 0.020	D_{220}	5742	5733 ± 69	$D_{\rm M}(0.61)$	2307.7	2305 ± 18
$\boldsymbol{n_s}$	0.9539	0.956 ± 0.014	D_{810}	2528.3	2526 ± 30	$H(2.33)$	234.82	234.92 ± 0.96
$\boldsymbol{y_{cal}}$	1.00013	1.0001 ± 0.0025	D_{1420}	823.9	822 ± 19	$D_{\rm M}(2.33)$	5778.9	5774 ± 27
$\boldsymbol{A_{100}^{dustTE}}$	0.1137	0.114 ± 0.038	D_{2000}	236.2	235.3 ± 8.9	$f\sigma_8(0.15)$	0.4419	0.4418 ± 0.0083
$\boldsymbol{A_{100\times143}^{dustTE}}$	0.1361	0.135 ± 0.029	$n_{\rm s,0.002}$	0.9539	0.956 ± 0.014	$\sigma_8(0.15)$	0.7291	0.730 ± 0.010
$\boldsymbol{A_{100\times217}^{dustTE}}$	0.478	0.479 ± 0.084	$Y_{\rm P}$	0.1954	0.201 ± 0.044	$f\sigma_8(0.38)$	0.4607	0.4607 ± 0.0075
$\boldsymbol{A_{143}^{dustTE}}$	0.222	0.220 ± 0.055	$Y_{\rm P}^{\rm BBN}$	0.1966	0.203 ± 0.045	$\sigma_8(0.38)$	0.6468	0.6475 ± 0.0091
$\boldsymbol{A_{143\times217}^{dustTE}}$	0.658	0.655 ± 0.079	Age/Gyr	13.836	$13.824^{+0.068}_{-0.061}$	$f\sigma_8(0.51)$	0.4598	0.4599 ± 0.0071
$\boldsymbol{A_{217}^{dustTE}}$	2.034	2.03 ± 0.27	z_*	1087.98	$1088.2^{+1.4}_{-1.7}$	$\sigma_8(0.51)$	0.6055	0.6062 ± 0.0086
$\boldsymbol{c_{100}}$	1.00018	1.00016 ± 0.00069	r_*	145.281	145.21 ± 0.49	$f\sigma_8(0.61)$	0.4553	0.4555 ± 0.0068
$\boldsymbol{c_{217}}$	0.99799	0.99799 ± 0.00065	$100\theta_*$	1.04113	1.04119 ± 0.00057	$\sigma_8(0.61)$	0.5762	0.5769 ± 0.0082
H_0	67.65	67.77 ± 0.72	$D_{\rm M}(z_*)$/Gpc	13.954	13.947 ± 0.051	$f\sigma_8(2.33)$	0.29071	0.2911 ± 0.0042
Ω_Λ	0.6928	0.6935 ± 0.0078	$z_{\rm drag}$	1057.95	$1058.3^{+1.7}_{-2.0}$	$\sigma_8(2.33)$	0.29989	0.3003 ± 0.0044
$\Omega_{\rm m}$	0.3072	0.3065 ± 0.0078	$r_{\rm drag}$	147.97	147.89 ± 0.55	$\chi^2_{\rm simall}$	395.61	396.7 ± 1.5
$\Omega_{\rm m} h^2$	0.14062	0.1407 ± 0.0013	$k_{\rm D}$	0.14179	0.1416 ± 0.0013	$\chi^2_{\rm plikTE}$	852.01	859.0 ± 3.7
$\Omega_{\rm m} h^3$	0.09514	$0.0954^{+0.0011}_{-0.0012}$	$100\theta_{\rm D}$	0.15878	$0.1591^{+0.0016}_{-0.0019}$	$\chi^2_{\rm 6DF}$	0.0060	0.047 ± 0.065
σ_8	0.7886	0.789 ± 0.011	$z_{\rm eq}$	3345.0	3347 ± 31	$\chi^2_{\rm MGS}$	1.47	1.62 ± 0.61
S_8	0.7981	0.798 ± 0.016	$k_{\rm eq}$	0.010209	0.010215 ± 0.000096	$\chi^2_{\rm DR12BAO}$	3.79	4.4 ± 1.3
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4371	0.4369 ± 0.0087	$100\theta_{\rm eq}$	0.8224	0.8224 ± 0.0054	$\chi^2_{\rm prior}$	0.43	7.4 ± 3.7
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.5871	0.5872 ± 0.0094	$100\theta_{\rm s,eq}$	0.45419	0.4542 ± 0.0028	$\chi^2_{\rm BAO}$	5.26	6.0 ± 1.2
$\sigma_8 / h^{0.5}$	0.9588	0.959 ± 0.014	$H(0.15)$	72.87	72.98 ± 0.66	$\chi^2_{\rm CMB}$	1247.62	1255.7 ± 4.0
$r_{\rm drag} h$	100.11	100.2 ± 1.0	$D_{\rm M}(0.15)$	641.1	640.1 ± 6.3			

Best-fit $\chi^2_{\rm eff} = 1253.32$; $\Delta\chi^2_{\rm eff} = -0.92$; $\bar{\chi}^2_{\rm eff} = 1269.20$; $\Delta\bar{\chi}^2_{\rm eff} = -0.22$; $R - 1 = 0.01067$

$\chi^2_{\rm eff}$: BAO - 6DF: 0.01 (Δ 0.01) MGS: 1.47 (Δ -0.27) DR12BAO: 3.79 (Δ 0.35) CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.61 (Δ -0.05) plik_rd12_HM_v22_TE: 852.01 (Δ -0.92)

20.41 base_yhe_plikHM_TE_lowE_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	$0.02226^{+0.00033}_{-0.00039}$	$r_{\rm drag}h$	$99.8^{+2.0}_{-2.3}$	$H(0.15)$	$72.7^{+1.1}_{-1.4}$
$\boldsymbol{\Omega_c h^2}$	0.1182 ± 0.0021	$\langle d^2\rangle^{1/2}$	$2.429^{+0.064}_{-0.057}$	$D_{\rm M}(0.15)$	643^{+13}_{-11}
$\boldsymbol{100\theta_{MC}}$	$1.0397^{+0.0015}_{-0.0022}$	$z_{\rm re}$	< 7.53	$H(0.38)$	$82.80^{+0.86}_{-1.1}$
$\boldsymbol{\tau}$	$0.0529^{+0.0034}_{-0.0070}$	$10^9 A_{\rm s}$	$2.059^{+0.026}_{-0.035}$	$D_{\rm M}(0.38)$	1533^{+27}_{-23}
$\boldsymbol{Y_P}$	$0.196^{+0.048}_{-0.062}$	$10^9 A_{\rm s} e^{-2\tau}$	1.852 ± 0.018	$H(0.51)$	$89.48^{+0.73}_{-1.0}$
$\boldsymbol{\ln(10^{10} A_s)}$	$3.025^{+0.013}_{-0.017}$	D_{40}	1243 ± 43	$D_{\rm M}(0.51)$	1986^{+33}_{-27}
$\boldsymbol{n_s}$	$0.955^{+0.017}_{-0.020}$	D_{220}	5736 ± 73	$H(0.61)$	$95.07^{+0.64}_{-0.90}$
$\boldsymbol{A^{\rm dust TE}_{100}}$	0.114 ± 0.038	D_{810}	2529^{+35}_{-30}	$D_{\rm M}(0.61)$	2311^{+36}_{-30}
$\boldsymbol{A^{\rm dust TE}_{100\times143}}$	0.135 ± 0.029	D_{1420}	824^{+22}_{-19}	$H(2.33)$	235.2 ± 1.2
$\boldsymbol{A^{\rm dust TE}_{100\times217}}$	0.479 ± 0.084	D_{2000}	$236^{+11}_{-8.7}$	$D_{\rm M}(2.33)$	5779^{+46}_{-34}
$\boldsymbol{A^{\rm dust TE}_{143}}$	0.221 ± 0.054	$n_{\rm s,0.002}$	$0.955^{+0.017}_{-0.020}$	$f\sigma_8(0.15)$	0.446 ± 0.013
$\boldsymbol{A^{\rm dust TE}_{143\times217}}$	0.657 ± 0.080	$Y_{\rm P}$	$0.196^{+0.047}_{-0.061}$	$\sigma_8(0.15)$	$0.7333^{+0.0080}_{-0.0094}$
$\boldsymbol{A^{\rm dust TE}_{217}}$	2.04 ± 0.27	$Y_{\rm P}^{\rm BBN}$	$0.197^{+0.047}_{-0.061}$	$f\sigma_8(0.38)$	0.465 ± 0.010
$\boldsymbol{c_{100}}$	1.00017 ± 0.00070	Age/Gyr	$13.84^{+0.11}_{-0.078}$	$\sigma_8(0.38)$	$0.6502^{+0.0067}_{-0.0085}$
$\boldsymbol{c_{217}}$	0.99800 ± 0.00065	z_*	$1088.1^{+1.3}_{-1.9}$	$f\sigma_8(0.51)$	0.4633 ± 0.0087
$\boldsymbol{y_{\rm cal}}$	1.0001 ± 0.0025	r_*	145.14 ± 0.51	$\sigma_8(0.51)$	$0.6085^{+0.0063}_{-0.0081}$
H_0	$67.5^{+1.3}_{-1.5}$	$100\theta_*$	$1.04108^{+0.00067}_{-0.00078}$	$f\sigma_8(0.61)$	0.4586 ± 0.0077
Ω_Λ	0.690 ± 0.016	$D_{\rm M}(z_*)$/Gpc	13.941 ± 0.050	$\sigma_8(0.61)$	$0.5791^{+0.0060}_{-0.0078}$
$\Omega_{\rm m}$	0.310 ± 0.016	$z_{\rm drag}$	$1058.1^{+1.8}_{-2.6}$	$f\sigma_8(2.33)$	$0.2920^{+0.0032}_{-0.0042}$
$\Omega_{\rm m}h^2$	0.1411 ± 0.0020	$r_{\rm drag}$	147.82 ± 0.54	$\sigma_8(2.33)$	$0.3012^{+0.0035}_{-0.0048}$
$\Omega_{\rm m}h^3$	$0.0952^{+0.0011}_{-0.0015}$	$k_{\rm D}$	$0.1419^{+0.0019}_{-0.0014}$	$\chi^2_{\rm simall}$	396.4 ± 1.2
σ_8	$0.7934^{+0.0093}_{-0.010}$	$100\theta_{\rm D}$	$0.1589^{+0.0016}_{-0.0024}$	$\chi^2_{\rm plikTE}$	859.5 ± 3.9
S_8	0.807 ± 0.026	$z_{\rm eq}$	3357 ± 47	$\chi^2_{\rm prior}$	7.4 ± 3.7
$\sigma_8\Omega_{\rm m}^{0.5}$	0.442 ± 0.014	$k_{\rm eq}$	0.01025 ± 0.00014	$\chi^2_{\rm CMB}$	1255.9 ± 4.1
$\sigma_8\Omega_{\rm m}^{0.25}$	0.592 ± 0.012	$100\theta_{\rm eq}$	$0.8203^{+0.0092}_{-0.010}$		
$\sigma_8/h^{0.5}$	0.966 ± 0.017	$100\theta_{\rm s,eq}$	$0.4531^{+0.0047}_{-0.0052}$		

$\bar{\chi}^2_{\rm eff} = 1263.26$; $\Delta\bar{\chi}^2_{\rm eff} = -0.38$; $R - 1 = 0.00933$

20.42 base_yhe_plikHM_TE_lowE_post_BAO_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02231 ± 0.00028	$\langle d^2 \rangle^{1/2}$	2.417 ± 0.036	$H(0.38)$	$83.01^{+0.52}_{-0.60}$
$\boldsymbol{\Omega_c h^2}$	0.1178 ± 0.0013	$z_{\rm re}$	$7.35^{+0.23}_{-0.83}$	$D_{\rm M}(0.38)$	1527 ± 13
$\boldsymbol{100\theta_{MC}}$	$1.0400^{+0.0013}_{-0.0016}$	$10^9 A_{\rm s}$	$2.058^{+0.026}_{-0.035}$	$H(0.51)$	$89.65^{+0.48}_{-0.56}$
$\boldsymbol{\tau}$	$0.0531^{+0.0037}_{-0.0069}$	$10^9 A_{\rm s} e^{-2\tau}$	1.851 ± 0.018	$D_{\rm M}(0.51)$	1979 ± 16
$\boldsymbol{Y_P}$	0.203 ± 0.044	D_{40}	1236 ± 33	$H(0.61)$	$95.21^{+0.46}_{-0.53}$
$\boldsymbol{\ln(10^{10} A_s)}$	$3.024^{+0.013}_{-0.017}$	D_{220}	5731 ± 69	$D_{\rm M}(0.61)$	2304^{+18}_{-17}
$\boldsymbol{n_s}$	0.958 ± 0.014	D_{810}	2527 ± 30	$H(2.33)$	234.93 ± 0.97
$\boldsymbol{y_{cal}}$	1.0001 ± 0.0025	D_{1420}	822 ± 19	$D_{\rm M}(2.33)$	5772^{+29}_{-26}
$\boldsymbol{A_{100}^{dustTE}}$	0.114 ± 0.038	D_{2000}	235.4 ± 8.8	$f\sigma_8(0.15)$	0.4436 ± 0.0079
$\boldsymbol{A_{100\times143}^{dustTE}}$	0.135 ± 0.029	$n_{\rm s,0.002}$	0.958 ± 0.014	$\sigma_8(0.15)$	$0.7331^{+0.0081}_{-0.0097}$
$\boldsymbol{A_{100\times217}^{dustTE}}$	0.478 ± 0.084	$Y_{\rm P}$	0.203 ± 0.044	$f\sigma_8(0.38)$	0.4627 ± 0.0070
$\boldsymbol{A_{143}^{dustTE}}$	0.221 ± 0.055	$Y_{\rm P}^{\rm BBN}$	0.204 ± 0.044	$\sigma_8(0.38)$	$0.6504^{+0.0072}_{-0.0086}$
$\boldsymbol{A_{143\times217}^{dustTE}}$	0.656 ± 0.079	Age/Gyr	$13.820^{+0.068}_{-0.060}$	$f\sigma_8(0.51)$	0.4619 ± 0.0065
$\boldsymbol{A_{217}^{dustTE}}$	2.03 ± 0.27	z_*	$1088.3^{+1.4}_{-1.6}$	$\sigma_8(0.51)$	$0.6089^{+0.0067}_{-0.0081}$
$\boldsymbol{c_{100}}$	1.00015 ± 0.00068	r_*	145.20 ± 0.49	$f\sigma_8(0.61)$	0.4575 ± 0.0062
$\boldsymbol{c_{217}}$	0.99799 ± 0.00066	$100\theta_*$	1.04121 ± 0.00057	$\sigma_8(0.61)$	$0.5796^{+0.0065}_{-0.0077}$
H_0	67.81 ± 0.71	$D_{\rm M}(z_*)$/Gpc	13.945 ± 0.051	$f\sigma_8(2.33)$	$0.2924^{+0.0033}_{-0.0039}$
Ω_Λ	0.6938 ± 0.0078	$z_{\rm drag}$	$1058.4^{+1.7}_{-1.9}$	$\sigma_8(2.33)$	$0.3017^{+0.0035}_{-0.0042}$
$\Omega_{\rm m}$	0.3062 ± 0.0078	$r_{\rm drag}$	147.87 ± 0.55	$\chi^2_{\rm simall}$	396.4 ± 1.2
$\Omega_{\rm m} h^2$	0.1407 ± 0.0013	$k_{\rm D}$	0.1416 ± 0.0012	$\chi^2_{\rm plikTE}$	859.1 ± 3.8
$\Omega_{\rm m} h^3$	$0.0954^{+0.0011}_{-0.0012}$	$100\theta_{\rm D}$	$0.1591^{+0.0016}_{-0.0019}$	$\chi^2_{\rm 6DF}$	0.046 ± 0.064
σ_8	$0.7928^{+0.0089}_{-0.010}$	$z_{\rm eq}$	3347 ± 31	$\chi^2_{\rm MGS}$	1.64 ± 0.61
S_8	0.801 ± 0.015	$k_{\rm eq}$	0.010216 ± 0.000096	$\chi^2_{\rm DR12BAO}$	4.3 ± 1.3
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4387 ± 0.0083	$100\theta_{\rm eq}$	0.8225 ± 0.0054	$\chi^2_{\rm prior}$	7.4 ± 3.7
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.5897 ± 0.0086	$100\theta_{\rm s,eq}$	0.4542 ± 0.0028	$\chi^2_{\rm BAO}$	6.0 ± 1.1
$\sigma_8/h^{0.5}$	0.963 ± 0.012	$H(0.15)$	73.02 ± 0.65	$\chi^2_{\rm CMB}$	1255.4 ± 4.0
$r_{\rm drag} h$	100.3 ± 1.0	$D_{\rm M}(0.15)$	639.8 ± 6.2		

$\bar{\chi}^2_{\rm eff} = 1268.83$; $\Delta\bar{\chi}^2_{\rm eff} = -0.16$; $R - 1 = 0.01490$

20.43 base_yhe_plikHM_EE_lowE

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02336	0.0235 ± 0.0014	D_{40}	1259	1254^{+57}_{-45}	$H(0.38)$	83.65	$84.0^{+2.2}_{-2.5}$
$\boldsymbol{\Omega_c h^2}$	0.11607	0.1160 ± 0.0047	D_{220}	5977	5981 ± 200	$D_{\rm M}(0.38)$	1511	1506 ± 56
$\boldsymbol{100\theta_{MC}}$	1.03825	$1.0386^{+0.0019}_{-0.0030}$	D_{810}	2611.6	2606^{+50}_{-45}	$H(0.51)$	90.22	$90.6^{+1.8}_{-2.2}$
$\boldsymbol{\tau}$	0.0521	0.0520 ± 0.0088	D_{1420}	859.4	856^{+30}_{-25}	$D_{\rm M}(0.51)$	1960	1954 ± 67
$\boldsymbol{Y_P}$	0.196	$0.204^{+0.034}_{-0.098}$	D_{2000}	249.1	247^{+14}_{-11}	$H(0.61)$	95.73	$96.0^{+1.6}_{-2.0}$
$\boldsymbol{\ln(10^{10} A_s)}$	3.0493	3.050 ± 0.022	$n_{\rm s,0.002}$	0.9659	$0.969^{+0.020}_{-0.027}$	$D_{\rm M}(0.61)$	2283	2275 ± 74
$\boldsymbol{n_s}$	0.9659	$0.969^{+0.020}_{-0.027}$	$Y_{\rm P}$	0.196	$0.204^{+0.041}_{-0.090}$	$H(2.33)$	234.70	234.9 ± 2.2
$\boldsymbol{y_{cal}}$	1.00009	1.0001 ± 0.0025	$Y_{\rm P}^{\rm BBN}$	0.197	$0.205^{+0.041}_{-0.090}$	$D_{\rm M}(2.33)$	5746	5732^{+98}_{-86}
H_0	68.67	69.0 ± 3.2	Age/Gyr	13.760	$13.73^{+0.22}_{-0.20}$	$f\sigma_8(0.15)$	0.4379	0.437 ± 0.030
Ω_Λ	0.7030	$0.703^{+0.037}_{-0.028}$	z_*	1086.58	$1086.9^{+1.9}_{-2.5}$	$\sigma_8(0.15)$	0.7344	0.734 ± 0.015
$\Omega_{\rm m}$	0.2970	$0.297^{+0.028}_{-0.037}$	r_*	144.85	$144.70^{+0.98}_{-0.82}$	$f\sigma_8(0.38)$	0.4590	0.458 ± 0.023
$\Omega_{\rm m} h^2$	0.14008	0.1402 ± 0.0037	$100\theta_*$	1.03950	$1.0396^{+0.0010}_{-0.0012}$	$\sigma_8(0.38)$	0.6526	0.652 ± 0.012
$\Omega_{\rm m} h^3$	0.09620	$0.0967^{+0.0025}_{-0.0033}$	$D_{\rm M}(z_*)$/Gpc	13.935	$13.92^{+0.10}_{-0.081}$	$f\sigma_8(0.51)$	0.4594	0.458 ± 0.020
σ_8	0.7933	0.793 ± 0.019	$z_{\rm drag}$	1060.39	$1061.1^{+3.9}_{-4.8}$	$\sigma_8(0.51)$	0.6114	$0.6113^{+0.0097}_{-0.011}$
S_8	0.789	$0.787^{+0.054}_{-0.062}$	$r_{\rm drag}$	147.18	$147.0^{+1.2}_{-0.95}$	$f\sigma_8(0.61)$	0.4556	$0.454^{+0.018}_{-0.016}$
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4323	$0.431^{+0.030}_{-0.034}$	$k_{\rm D}$	0.14341	$0.1433^{+0.0018}_{-0.0016}$	$\sigma_8(0.61)$	0.5822	$0.5822^{+0.0089}_{-0.011}$
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.5856	0.584 ± 0.028	$100\theta_{\rm D}$	0.15721	$0.1576^{+0.0019}_{-0.0028}$	$f\sigma_8(2.33)$	0.2941	$0.2942^{+0.0044}_{-0.0058}$
$\sigma_8/h^{0.5}$	0.9572	0.955 ± 0.040	$z_{\rm eq}$	3332	3334 ± 89	$\sigma_8(2.33)$	0.3039	$0.3042^{+0.0050}_{-0.0066}$
$r_{\rm drag} h$	101.07	101.5 ± 4.4	$k_{\rm eq}$	0.010170	0.01018 ± 0.00027	$\chi^2_{\rm simall}$	395.57	396.7 ± 1.5
$\langle d^2 \rangle^{1/2}$	2.411	2.403 ± 0.091	$100\theta_{\rm eq}$	0.8267	0.828 ± 0.020	$\chi^2_{\rm plikEE}$	738.53	744.0 ± 3.4
$z_{\rm re}$	6.99	6.97 ± 0.87	$100\theta_{\rm s,eq}$	0.4556	0.4558 ± 0.0094	$\chi^2_{\rm prior}$	0.001	0.99 ± 1.4
$10^9 A_{\rm s}$	2.1100	2.111 ± 0.047	$H(0.15)$	73.80	74.2 ± 2.9	$\chi^2_{\rm CMB}$	1134.10	1140.7 ± 3.7
$10^9 A_{\rm s} e^{-2\tau}$	1.9013	1.902 ± 0.024	$D_{\rm M}(0.15)$	632.3	630 ± 27			

Best-fit $\chi^2_{\rm eff} = 1134.10$; $\Delta\chi^2_{\rm eff} = -0.45$; $\bar{\chi}^2_{\rm eff} = 1141.72$; $\Delta\bar{\chi}^2_{\rm eff} = 0.10$; $R - 1 = 0.00767$

$\chi^2_{\rm eff}$: CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.57 (Δ -0.03) plik_rd12_HM_v22_EE: 738.53 (Δ -0.42)

20.44 base_yhe_plikHM_EE_lowE_post_BAO

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02321	0.02326 ± 0.00070	D_{220}	5981	5957 ± 160	$H(0.51)$	89.97	$90.10^{+0.73}_{-0.88}$
$\boldsymbol{\Omega_c h^2}$	0.11641	$0.1167^{+0.0018}_{-0.0020}$	D_{810}	2610.2	2605^{+51}_{-40}	$D_{\rm M}(0.51)$	1968.3	1966 ± 22
$\boldsymbol{100\theta_{MC}}$	1.03789	$1.0384^{+0.0016}_{-0.0025}$	D_{1420}	858.9	855^{+30}_{-22}	$H(0.61)$	95.50	$95.63^{+0.71}_{-0.88}$
$\boldsymbol{\tau}$	0.0512	0.0518 ± 0.0082	D_{2000}	249.3	248^{+14}_{-10}	$D_{\rm M}(0.61)$	2291.8	2289 ± 25
$\boldsymbol{Y_P}$	0.188	$0.198^{+0.035}_{-0.088}$	$n_{\rm s,0.002}$	0.9608	$0.965^{+0.014}_{-0.019}$	$H(2.33)$	234.74	$235.0^{+1.4}_{-1.8}$
$\boldsymbol{\ln(10^{10} A_s)}$	3.0468	3.049 ± 0.021	$Y_{\rm P}$	0.188	$0.198^{+0.040}_{-0.079}$	$D_{\rm M}(2.33)$	5757.8	5750^{+50}_{-40}
$\boldsymbol{n_s}$	0.9608	$0.965^{+0.014}_{-0.019}$	$Y_{\rm P}^{\rm BBN}$	0.189	$0.199^{+0.041}_{-0.080}$	$f\sigma_8(0.15)$	0.4397	0.442 ± 0.011
$\boldsymbol{y_{cal}}$	0.99994	1.0001 ± 0.0025	Age/Gyr	13.787	$13.77^{+0.12}_{-0.095}$	$\sigma_8(0.15)$	0.7332	$0.736^{+0.011}_{-0.014}$
H_0	68.31	68.41 ± 0.96	z_*	1086.49	$1087.0^{+1.4}_{-2.5}$	$f\sigma_8(0.38)$	0.4600	$0.4620^{+0.0090}_{-0.010}$
Ω_Λ	0.6994	0.6994 ± 0.0089	r_*	144.90	$144.7^{+1.0}_{-0.77}$	$\sigma_8(0.38)$	0.6511	$0.6540^{+0.0095}_{-0.012}$
$\Omega_{\rm m}$	0.3006	0.3006 ± 0.0089	$100\theta_*$	1.03934	$1.03951^{+0.00091}_{-0.0010}$	$f\sigma_8(0.51)$	0.4599	$0.4619^{+0.0084}_{-0.0095}$
$\Omega_{\rm m}h^2$	0.14026	$0.1406^{+0.0018}_{-0.0023}$	$D_{\rm M}(z_*)$/Gpc	13.942	$13.92^{+0.11}_{-0.079}$	$\sigma_8(0.51)$	0.6098	$0.6125^{+0.0088}_{-0.011}$
$\Omega_{\rm m}h^3$	0.09581	$0.0962^{+0.0017}_{-0.0024}$	$z_{\rm drag}$	1059.86	$1060.4^{+2.3}_{-3.5}$	$f\sigma_8(0.61)$	0.4559	$0.4579^{+0.0079}_{-0.0092}$
σ_8	0.7923	$0.796^{+0.012}_{-0.015}$	$r_{\rm drag}$	147.27	$147.1^{+1.2}_{-0.95}$	$\sigma_8(0.61)$	0.5805	$0.5832^{+0.0084}_{-0.011}$
S_8	0.7931	0.797 ± 0.020	$k_{\rm D}$	0.14351	$0.1432^{+0.0018}_{-0.0015}$	$f\sigma_8(2.33)$	0.29315	$0.2945^{+0.0042}_{-0.0055}$
$\sigma_8\Omega_{\rm m}^{0.5}$	0.4344	0.436 ± 0.011	$100\theta_{\rm D}$	0.15702	$0.1576^{+0.0017}_{-0.0029}$	$\sigma_8(2.33)$	0.3027	$0.3041^{+0.0044}_{-0.0057}$
$\sigma_8\Omega_{\rm m}^{0.25}$	0.5866	$0.589^{+0.011}_{-0.013}$	$z_{\rm eq}$	3336.4	3345^{+44}_{-54}	$\chi^2_{\rm simall}$	395.52	396.7 ± 1.5
$\sigma_8/h^{0.5}$	0.9586	0.962 ± 0.017	$k_{\rm eq}$	0.010183	$0.01021^{+0.00013}_{-0.00017}$	$\chi^2_{\rm plikEE}$	738.52	743.1 ± 3.1
$r_{\rm drag}h$	100.60	100.6 ± 1.1	$100\theta_{\rm eq}$	0.8252	0.8242 ± 0.0074	$\chi^2_{\rm 6DF}$	0.0003	0.054 ± 0.077
$\langle d^2\rangle^{1/2}$	2.4234	2.419 ± 0.040	$100\theta_{\rm s,eq}$	0.45489	0.4544 ± 0.0039	$\chi^2_{\rm MGS}$	1.75	1.84 ± 0.70
$z_{\rm re}$	6.91	6.99 ± 0.85	$H(0.15)$	73.47	73.58 ± 0.90	$\chi^2_{\rm DR12BAO}$	3.72	4.5 ± 1.3
$10^9 A_{\rm s}$	2.1049	2.109 ± 0.044	$D_{\rm M}(0.15)$	635.4	634.6 ± 8.3	$\chi^2_{\rm prior}$	0.001	0.98 ± 1.4
$10^9 A_{\rm s}e^{-2\tau}$	1.8998	1.902 ± 0.024	$H(0.38)$	83.37	$83.50^{+0.76}_{-0.89}$	$\chi^2_{\rm BAO}$	5.47	6.4 ± 1.3
D_{40}	1269.1	1259^{+51}_{-42}	$D_{\rm M}(0.38)$	1518.1	1516 ± 18	$\chi^2_{\rm CMB}$	1134.05	1139.8 ± 3.5

Best-fit $\chi^2_{\rm eff} = 1139.52$; $\Delta\chi^2_{\rm eff} = -0.65$; $\bar{\chi}^2_{\rm eff} = 1147.22$; $\Delta\bar{\chi}^2_{\rm eff} = -0.14$; $R - 1 = 0.01379$

$\chi^2_{\rm eff}$: BAO - 6DF: 0.00 (Δ -0.00) MGS: 1.75 (Δ -0.14) DR12BAO: 3.72 (Δ 0.13) CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.52 (Δ -0.09) plik_rd12_HM_v22_EE: 738.52 (Δ -0.52)

20.45 base_yhe_plikHM_EE_lowE_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.0236 ± 0.0014	D_{40}	1249^{+57}_{-46}	$H(0.38)$	$84.1^{+2.2}_{-2.5}$
$\boldsymbol{\Omega_c h^2}$	0.1160 ± 0.0047	D_{220}	5966 ± 200	$D_{\rm M}(0.38)$	1505 ± 56
$\boldsymbol{100\theta_{MC}}$	$1.0389^{+0.0020}_{-0.0030}$	D_{810}	2602^{+51}_{-45}	$H(0.51)$	$90.6^{+1.9}_{-2.2}$
$\boldsymbol{\tau}$	$0.0558^{+0.0048}_{-0.0077}$	D_{1420}	853^{+30}_{-25}	$D_{\rm M}(0.51)$	1952 ± 67
$\boldsymbol{Y_P}$	$0.211^{+0.047}_{-0.091}$	D_{2000}	246^{+14}_{-11}	$H(0.61)$	$96.1^{+1.7}_{-2.1}$
$\boldsymbol{\ln(10^{10} A_s)}$	$3.057^{+0.017}_{-0.020}$	$n_{\rm s,0.002}$	$0.971^{+0.021}_{-0.027}$	$D_{\rm M}(0.61)$	2273 ± 74
$\boldsymbol{n_s}$	$0.971^{+0.021}_{-0.027}$	$Y_{\rm P}$	$0.211^{+0.048}_{-0.087}$	$H(2.33)$	235.0 ± 2.2
$\boldsymbol{y_{cal}}$	1.0001 ± 0.0025	$Y_{\rm P}^{\rm BBN}$	$0.212^{+0.049}_{-0.088}$	$D_{\rm M}(2.33)$	5728^{+99}_{-87}
H_0	69.1 ± 3.2	Age/Gyr	$13.72^{+0.22}_{-0.20}$	$f\sigma_8(0.15)$	0.438 ± 0.030
Ω_Λ	$0.704^{+0.037}_{-0.028}$	z_*	$1087.1^{+1.9}_{-2.5}$	$\sigma_8(0.15)$	0.738 ± 0.014
$\Omega_{\rm m}$	$0.296^{+0.028}_{-0.037}$	r_*	$144.65^{+0.99}_{-0.83}$	$f\sigma_8(0.38)$	0.460 ± 0.023
$\Omega_{\rm m}h^2$	0.1403 ± 0.0037	$100\theta_*$	$1.0397^{+0.0010}_{-0.0012}$	$\sigma_8(0.38)$	$0.6557^{+0.0098}_{-0.012}$
$\Omega_{\rm m}h^3$	$0.0969^{+0.0026}_{-0.0034}$	$D_{\rm M}(z_*)$/Gpc	$13.91^{+0.10}_{-0.083}$	$f\sigma_8(0.51)$	0.460 ± 0.020
σ_8	0.797 ± 0.018	$z_{\rm drag}$	$1061.4^{+4.0}_{-4.9}$	$\sigma_8(0.51)$	$0.6144^{+0.0084}_{-0.011}$
S_8	0.791 ± 0.059	$r_{\rm drag}$	$146.9^{+1.2}_{-0.97}$	$f\sigma_8(0.61)$	$0.457^{+0.018}_{-0.016}$
$\sigma_8\Omega_{\rm m}^{0.5}$	0.433 ± 0.032	$k_{\rm D}$	$0.1431^{+0.0018}_{-0.0016}$	$\sigma_8(0.61)$	$0.5852^{+0.0076}_{-0.010}$
$\sigma_8\Omega_{\rm m}^{0.25}$	0.587 ± 0.028	$100\theta_{\rm D}$	$0.1579^{+0.0020}_{-0.0028}$	$f\sigma_8(2.33)$	$0.2958^{+0.0038}_{-0.0055}$
$\sigma_8/h^{0.5}$	0.959 ± 0.039	$z_{\rm eq}$	3336 ± 89	$\sigma_8(2.33)$	$0.3058^{+0.0046}_{-0.0062}$
$r_{\rm drag}h$	101.6 ± 4.4	$k_{\rm eq}$	0.01018 ± 0.00027	$\chi^2_{\rm simall}$	396.5 ± 1.4
$\langle d^2\rangle^{1/2}$	2.407 ± 0.092	$100\theta_{\rm eq}$	0.828 ± 0.020	$\chi^2_{\rm plikEE}$	744.0 ± 3.4
$z_{\rm re}$	< 7.58	$100\theta_{\rm s,eq}$	0.4558 ± 0.0094	$\chi^2_{\rm prior}$	1.0 ± 1.4
$10^9 A_{\rm s}$	$2.127^{+0.036}_{-0.043}$	$H(0.15)$	74.2 ± 2.9	$\chi^2_{\rm CMB}$	1140.4 ± 3.7
$10^9 A_{\rm s}e^{-2\tau}$	1.902 ± 0.024	$D_{\rm M}(0.15)$	629 ± 27		

$\bar{\chi}^2_{\rm eff} = 1141.45$; $\Delta\bar{\chi}^2_{\rm eff} = 0.14$; $R - 1 = 0.00566$

20.46 base_yhe_plikHM_EE_lowE_post_BAO_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02325 ± 0.00070	D_{220}	5943 ± 160	$H(0.51)$	$90.13^{+0.74}_{-0.89}$
$\boldsymbol{\Omega_c h^2}$	$0.1168^{+0.0018}_{-0.0020}$	D_{810}	2601^{+51}_{-42}	$D_{\rm M}(0.51)$	1965 ± 22
$\boldsymbol{100\theta_{MC}}$	$1.0386^{+0.0016}_{-0.0026}$	D_{1420}	853^{+31}_{-23}	$H(0.61)$	$95.67^{+0.72}_{-0.89}$
$\boldsymbol{\tau}$	$0.0554^{+0.0041}_{-0.0071}$	D_{2000}	246^{+14}_{-11}	$D_{\rm M}(0.61)$	2288 ± 25
$\boldsymbol{Y_P}$	$0.204^{+0.042}_{-0.084}$	$n_{\rm s,0.002}$	$0.967^{+0.014}_{-0.019}$	$H(2.33)$	$235.1^{+1.4}_{-1.9}$
$\boldsymbol{\ln(10^{10} A_s)}$	$3.056^{+0.016}_{-0.019}$	$Y_{\rm P}$	$0.204^{+0.047}_{-0.076}$	$D_{\rm M}(2.33)$	5748^{+51}_{-41}
$\boldsymbol{n_s}$	$0.967^{+0.014}_{-0.019}$	$Y_{\rm P}^{\rm BBN}$	$0.205^{+0.047}_{-0.076}$	$f\sigma_8(0.15)$	0.444 ± 0.010
$\boldsymbol{y_{cal}}$	1.0001 ± 0.0025	Age/Gyr	$13.76^{+0.12}_{-0.097}$	$\sigma_8(0.15)$	$0.7399^{+0.0096}_{-0.013}$
H_0	68.43 ± 0.96	z_*	$1087.2^{+1.5}_{-2.5}$	$f\sigma_8(0.38)$	$0.4642^{+0.0084}_{-0.0098}$
Ω_Λ	0.6993 ± 0.0089	r_*	$144.7^{+1.0}_{-0.80}$	$\sigma_8(0.38)$	$0.6570^{+0.0083}_{-0.012}$
$\Omega_{\rm m}$	0.3007 ± 0.0089	$100\theta_*$	$1.03958^{+0.00092}_{-0.0010}$	$f\sigma_8(0.51)$	$0.4641^{+0.0077}_{-0.0093}$
$\Omega_{\rm m}h^2$	$0.1407^{+0.0019}_{-0.0023}$	$D_{\rm M}(z_*)$/Gpc	$13.92^{+0.11}_{-0.081}$	$\sigma_8(0.51)$	$0.6154^{+0.0078}_{-0.011}$
$\Omega_{\rm m}h^3$	$0.0963^{+0.0018}_{-0.0024}$	$z_{\rm drag}$	$1060.5^{+2.4}_{-3.5}$	$f\sigma_8(0.61)$	$0.4601^{+0.0072}_{-0.0090}$
σ_8	$0.800^{+0.011}_{-0.015}$	$r_{\rm drag}$	$147.1^{+1.2}_{-0.97}$	$\sigma_8(0.61)$	$0.5859^{+0.0074}_{-0.011}$
S_8	0.800 ± 0.020	$k_{\rm D}$	$0.1431^{+0.0018}_{-0.0015}$	$f\sigma_8(2.33)$	$0.2958^{+0.0037}_{-0.0053}$
$\sigma_8\Omega_{\rm m}^{0.5}$	0.438 ± 0.011	$100\theta_{\rm D}$	$0.1578^{+0.0018}_{-0.0029}$	$\sigma_8(2.33)$	$0.3055^{+0.0039}_{-0.0056}$
$\sigma_8\Omega_{\rm m}^{0.25}$	$0.592^{+0.010}_{-0.012}$	$z_{\rm eq}$	3348^{+44}_{-55}	$\chi^2_{\rm simall}$	396.5 ± 1.4
$\sigma_8/h^{0.5}$	$0.967^{+0.014}_{-0.017}$	$k_{\rm eq}$	$0.01022^{+0.00014}_{-0.00017}$	$\chi^2_{\rm plikEE}$	743.1 ± 3.1
$r_{\rm drag}h$	100.6 ± 1.1	$100\theta_{\rm eq}$	0.8239 ± 0.0074	$\chi^2_{\rm 6DF}$	0.054 ± 0.076
$\langle d^2\rangle^{1/2}$	2.425 ± 0.039	$100\theta_{\rm s,eq}$	0.4542 ± 0.0040	$\chi^2_{\rm MGS}$	1.85 ± 0.70
$z_{\rm re}$	< 7.57	$H(0.15)$	73.60 ± 0.91	$\chi^2_{\rm DR12BAO}$	4.5 ± 1.3
$10^9 A_{\rm s}$	$2.124^{+0.034}_{-0.041}$	$D_{\rm M}(0.15)$	634.4 ± 8.3	$\chi^2_{\rm prior}$	1.0 ± 1.4
$10^9 A_{\rm s}e^{-2\tau}$	1.901 ± 0.025	$H(0.38)$	$83.52^{+0.77}_{-0.90}$	$\chi^2_{\rm BAO}$	6.4 ± 1.3
D_{40}	1256^{+51}_{-43}	$D_{\rm M}(0.38)$	1516 ± 18	$\chi^2_{\rm CMB}$	1139.6 ± 3.4

$\bar{\chi}^2_{\rm eff} = 1146.96$; $\Delta\bar{\chi}^2_{\rm eff} = -0.10$; $R - 1 = 0.01420$

20.47 base_yhe_plikHM_TT_lowl_lowE_Aver15

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02209 ± 0.00022	$\sigma_8\Omega_m^{0.5}$	0.460 ± 0.013	$H(0.15)$	72.21 ± 0.78
$\boldsymbol{\Omega_c h^2}$	0.1207 ± 0.0021	$\sigma_8\Omega_m^{0.25}$	0.611 ± 0.012	$D_M(0.15)$	648.1 ± 7.9
$\boldsymbol{100\theta_{MC}}$	1.04074 ± 0.00049	$\sigma_8/h^{0.5}$	0.993 ± 0.016	$H(0.38)$	82.49 ± 0.56
$\boldsymbol{\tau}$	0.0519 ± 0.0081	$r_{drag}h$	98.4 ± 1.6	$D_M(0.38)$	1543 ± 16
$\boldsymbol{Y_P}$	0.2437 ± 0.0040	$\langle d^2\rangle^{1/2}$	2.455 ± 0.037	$H(0.51)$	89.29 ± 0.44
$\boldsymbol{\ln(10^{10}A_s)}$	3.040 ± 0.016	z_{re}	7.48 ± 0.84	$D_M(0.51)$	1997 ± 18
$\boldsymbol{n_s}$	0.9621 ± 0.0059	$10^9 A_s$	2.091 ± 0.034	$H(0.61)$	94.98 ± 0.35
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.884 ± 0.014	$D_M(0.61)$	2323 ± 20
$\boldsymbol{A_{217}^{CIB}}$	48 ± 7	D_{40}	1235 ± 15	$H(2.33)$	236.7 ± 1.3
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{220}	5712 ± 41	$D_M(2.33)$	5779 ± 16
$\boldsymbol{A_{143}^{tSZ}}$	5.1 ± 2.0	D_{810}	2536 ± 14	$f\sigma_8(0.15)$	0.464 ± 0.012
$\boldsymbol{A_{100}^{PS}}$	263 ± 28	D_{1420}	814.7 ± 5.0	$\sigma_8(0.15)$	0.7490 ± 0.0075
$\boldsymbol{A_{143}^{PS}}$	49 ± 8	D_{2000}	229.7 ± 1.8	$f\sigma_8(0.38)$	0.4799 ± 0.0094
$\boldsymbol{A_{143\times217}^{PS}}$	44 ± 9	$n_{s,0.002}$	0.9621 ± 0.0059	$\sigma_8(0.38)$	0.6629 ± 0.0060
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	Y_P	0.2437 ± 0.0040	$f\sigma_8(0.51)$	0.4773 ± 0.0080
$\boldsymbol{A^{kSZ}}$	< 4.72	Y_P^{BBN}	0.2450 ± 0.0040	$\sigma_8(0.51)$	0.6199 ± 0.0055
$\boldsymbol{A_{100}^{dustTT}}$	8.9 ± 1.8	Age/Gyr	13.833 ± 0.037	$f\sigma_8(0.61)$	0.4716 ± 0.0071
$\boldsymbol{A_{143}^{dustTT}}$	10.7 ± 1.8	z_*	1090.27 ± 0.41	$\sigma_8(0.61)$	0.5896 ± 0.0052
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.3 ± 3.3	r_*	144.47 ± 0.48	$f\sigma_8(2.33)$	0.2969 ± 0.0026
$\boldsymbol{A_{217}^{dustTT}}$	93.5 ± 7.4	$100\theta_*$	1.04099 ± 0.00046	$\sigma_8(2.33)$	0.3057 ± 0.0027
$\boldsymbol{c_{100}}$	0.99960 ± 0.00061	$D_M(z_*)$/Gpc	13.879 ± 0.045	f_{2000}^{143}	31.0 ± 2.9
$\boldsymbol{c_{217}}$	0.99826 ± 0.00062	z_{drag}	1059.29 ± 0.49	$f_{2000}^{143\times217}$	33.4 ± 2.1
H_0	66.84 ± 0.91	r_{drag}	147.23 ± 0.49	f_{2000}^{217}	108.0 ± 1.9
Ω_Λ	$0.679^{+0.014}_{-0.012}$	k_D	0.14057 ± 0.00054	χ^2_{simall}	397.0 ± 1.7
Ω_m	0.321 ± 0.013	$100\theta_D$	0.16103 ± 0.00030	χ^2_{lowl}	24.0 ± 1.3
$\Omega_m h^2$	0.1434 ± 0.0020	z_{eq}	3412 ± 48	χ^2_{plik}	771.3 ± 5.5
$\Omega_m h^3$	0.09584 ± 0.00047	k_{eq}	0.01041 ± 0.00015	χ^2_{Aver15}	0.98 ± 1.4
σ_8	0.8116 ± 0.0088	$100\theta_{eq}$	0.8108 ± 0.0089	χ^2_{prior}	7.3 ± 3.7
S_8	0.840 ± 0.024	$100\theta_{s,eq}$	0.4483 ± 0.0046	χ^2_{CMB}	1192.2 ± 5.6

$\bar{\chi}^2_{eff} = 1200.47$; $R - 1 = 0.00717$

20.48 base_yhe_plikHM_TT_lowl_lowE_Aver15_post_BAO

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02219 ± 0.00019	$\sigma_8/h^{0.5}$	0.982 ± 0.012	$H(0.51)$	89.63 ± 0.29
$\boldsymbol{\Omega_c h^2}$	0.1190 ± 0.0012	$r_{\rm drag}h$	99.74 ± 0.93	$D_{\rm M}(0.51)$	1982 ± 11
$\boldsymbol{100\theta_{MC}}$	1.04097 ± 0.00043	$\langle d^2\rangle^{1/2}$	2.429 ± 0.028	$H(0.61)$	95.24 ± 0.25
$\boldsymbol{\tau}$	0.0540 ± 0.0079	$z_{\rm re}$	7.64 ± 0.81	$D_{\rm M}(0.61)$	2307 ± 12
$\boldsymbol{Y_P}$	0.2440 ± 0.0039	$10^9 A_{\rm s}$	2.091 ± 0.034	$H(2.33)$	235.71 ± 0.79
$\boldsymbol{\ln(10^{10} A_s)}$	3.040 ± 0.016	$10^9 A_{\rm s} e^{-2\tau}$	1.877 ± 0.012	$D_{\rm M}(2.33)$	5768 ± 12
$\boldsymbol{n_s}$	0.9660 ± 0.0044	D_{40}	1226 ± 13	$f\sigma_8(0.15)$	0.4544 ± 0.0077
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0024	D_{220}	5719 ± 39	$\sigma_8(0.15)$	0.7460 ± 0.0069
$\boldsymbol{A^{CIB}_{217}}$	48 ± 7	D_{810}	2535 ± 13	$f\sigma_8(0.38)$	0.4729 ± 0.0065
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{1420}	815.5 ± 4.8	$\sigma_8(0.38)$	0.6613 ± 0.0059
$\boldsymbol{A^{tSZ}_{143}}$	5.1 ± 2.0	D_{2000}	230.0 ± 1.7	$f\sigma_8(0.51)$	0.4716 ± 0.0059
$\boldsymbol{A^{PS}_{100}}$	262 ± 28	$n_{\rm s,0.002}$	0.9660 ± 0.0044	$\sigma_8(0.51)$	0.6190 ± 0.0055
$\boldsymbol{A^{PS}_{143}}$	48 ± 8	$Y_{\rm P}$	0.2440 ± 0.0039	$f\sigma_8(0.61)$	0.4667 ± 0.0054
$\boldsymbol{A^{PS}_{143\times217}}$	43 ± 9	$Y_{\rm P}^{\rm BBN}$	0.2454 ± 0.0039	$\sigma_8(0.61)$	0.5890 ± 0.0052
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	Age/Gyr	13.810 ± 0.028	$f\sigma_8(2.33)$	0.2970 ± 0.0026
$\boldsymbol{A^{kSZ}}$	< 4.73	z_*	1090.01 ± 0.31	$\sigma_8(2.33)$	0.3063 ± 0.0027
$\boldsymbol{A^{dustTT}_{100}}$	8.9 ± 1.8	r_*	144.84 ± 0.32	f^{143}_{2000}	30.8 ± 2.9
$\boldsymbol{A^{dustTT}_{143}}$	10.7 ± 1.8	$100\theta_*$	1.04121 ± 0.00041	$f^{143\times217}_{2000}$	33.2 ± 2.0
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.3 ± 3.3	$D_{\rm M}(z_*)$/Gpc	13.911 ± 0.032	f^{217}_{2000}	107.8 ± 1.9
$\boldsymbol{A^{dustTT}_{217}}$	93.3 ± 7.4	$z_{\rm drag}$	1059.40 ± 0.48	$\chi^2_{\rm simall}$	397.1 ± 1.9
$\boldsymbol{c_{100}}$	0.99961 ± 0.00061	$r_{\rm drag}$	147.57 ± 0.35	$\chi^2_{\rm lowl}$	23.15 ± 0.93
$\boldsymbol{c_{217}}$	0.99824 ± 0.00062	$k_{\rm D}$	0.14027 ± 0.00046	$\chi^2_{\rm plik}$	772.1 ± 5.4
H_0	67.59 ± 0.54	$100\theta_{\rm D}$	0.16100 ± 0.00029	$\chi^2_{\rm Aver15}$	0.98 ± 1.4
Ω_Λ	0.6895 ± 0.0073	$z_{\rm eq}$	3373 ± 29	$\chi^2_{\rm 6DF}$	0.060 ± 0.077
$\Omega_{\rm m}$	0.3105 ± 0.0073	$k_{\rm eq}$	0.010296 ± 0.000087	$\chi^2_{\rm MGS}$	1.34 ± 0.52
$\Omega_{\rm m}h^2$	0.1418 ± 0.0012	$100\theta_{\rm eq}$	0.8181 ± 0.0053	$\chi^2_{\rm DR12BAO}$	4.8 ± 1.6
$\Omega_{\rm m}h^3$	0.09584 ± 0.00047	$100\theta_{\rm s,eq}$	0.4520 ± 0.0027	$\chi^2_{\rm prior}$	7.2 ± 3.6
σ_8	0.8072 ± 0.0078	$H(0.15)$	72.85 ± 0.47	$\chi^2_{\rm BAO}$	6.2 ± 1.3
S_8	0.821 ± 0.015	$D_{\rm M}(0.15)$	641.5 ± 4.6	$\chi^2_{\rm CMB}$	1192.3 ± 5.4
$\sigma_8\Omega_{\rm m}^{0.5}$	0.4498 ± 0.0082	$H(0.38)$	82.94 ± 0.35		
$\sigma_8\Omega_{\rm m}^{0.25}$	0.6025 ± 0.0080	$D_{\rm M}(0.38)$	1530.3 ± 9.3		

$\bar{\chi}^2_{\rm eff} = 1206.67$; $R - 1 = 0.01453$

20.49 base_yhe_plikHM_TT_lowl_lowE_Aver15_post_lensing

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02212 ± 0.00021	$\sigma_8\Omega_m^{0.25}$	0.6087 ± 0.0076	$H(0.38)$	82.59 ± 0.45
$\boldsymbol{\Omega_c h^2}$	0.1202 ± 0.0016	$\sigma_8/h^{0.5}$	0.990 ± 0.010	$D_M(0.38)$	1540 ± 12
$\boldsymbol{100\theta_{MC}}$	1.04078 ± 0.00046	$r_{drag}h$	98.7 ± 1.2	$H(0.51)$	89.37 ± 0.36
$\boldsymbol{\tau}$	0.0522 ± 0.0079	$\langle d^2\rangle^{1/2}$	2.448 ± 0.025	$D_M(0.51)$	1994 ± 14
$\boldsymbol{Y_P}$	0.2437 ± 0.0039	z_{re}	7.49 ± 0.81	$H(0.61)$	95.04 ± 0.30
$\boldsymbol{\ln(10^{10}A_s)}$	3.039 ± 0.015	$10^9 A_s$	2.090 ± 0.031	$D_M(0.61)$	2319 ± 16
$\boldsymbol{n_s}$	0.9628 ± 0.0050	$10^9 A_s e^{-2\tau}$	1.882 ± 0.012	$H(2.33)$	236.46 ± 0.96
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0024	D_{40}	1233 ± 13	$D_M(2.33)$	5777 ± 14
$\boldsymbol{A_{217}^{CIB}}$	48 ± 7	D_{220}	5715 ± 40	$f\sigma_8(0.15)$	0.4613 ± 0.0081
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{810}	2536 ± 13	$\sigma_8(0.15)$	0.7480 ± 0.0056
$\boldsymbol{A_{143}^{tSZ}}$	5.1 ± 2.0	D_{1420}	814.8 ± 5.0	$f\sigma_8(0.38)$	0.4780 ± 0.0062
$\boldsymbol{A_{100}^{PS}}$	263 ± 28	D_{2000}	229.8 ± 1.8	$\sigma_8(0.38)$	0.6623 ± 0.0049
$\boldsymbol{A_{143}^{PS}}$	49 ± 8	$n_{s,0.002}$	0.9628 ± 0.0050	$f\sigma_8(0.51)$	0.4758 ± 0.0053
$\boldsymbol{A_{143\times217}^{PS}}$	43 ± 9	Y_P	0.2437 ± 0.0039	$\sigma_8(0.51)$	0.6195 ± 0.0046
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	Y_P^{BBN}	0.2450 ± 0.0039	$f\sigma_8(0.61)$	0.4702 ± 0.0047
$\boldsymbol{A^{kSZ}}$	< 4.76	Age/Gyr	13.828 ± 0.033	$\sigma_8(0.61)$	0.5893 ± 0.0044
$\boldsymbol{A_{100}^{dustTT}}$	8.9 ± 1.8	z_*	1090.20 ± 0.36	$f\sigma_8(2.33)$	0.2968 ± 0.0024
$\boldsymbol{A_{143}^{dustTT}}$	10.7 ± 1.8	r_*	144.57 ± 0.37	$\sigma_8(2.33)$	0.3057 ± 0.0026
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.3 ± 3.3	$100\theta_*$	1.04103 ± 0.00044	f_{2000}^{143}	31.0 ± 3.0
$\boldsymbol{A_{217}^{dustTT}}$	93.5 ± 7.3	$D_M(z_*)$/Gpc	13.887 ± 0.035	$f_{2000}^{143\times217}$	33.4 ± 2.1
$\boldsymbol{c_{100}}$	0.99961 ± 0.00061	z_{drag}	1059.31 ± 0.49	f_{2000}^{217}	108.0 ± 1.9
$\boldsymbol{c_{217}}$	0.99825 ± 0.00062	r_{drag}	147.31 ± 0.39	$\chi^2_{lensing}$	9.45 ± 0.89
H_0	67.01 ± 0.71	k_D	0.14050 ± 0.00048	χ^2_{simall}	396.9 ± 1.6
Ω_Λ	0.6814 ± 0.0098	$100\theta_D$	0.16102 ± 0.00030	χ^2_{lowl}	23.8 ± 1.1
Ω_m	0.3186 ± 0.0098	z_{eq}	3402 ± 36	χ^2_{plik}	771.1 ± 5.3
$\Omega_m h^2$	0.1430 ± 0.0015	k_{eq}	0.01038 ± 0.00011	χ^2_{Aver15}	0.97 ± 1.4
$\Omega_m h^3$	0.09583 ± 0.00047	$100\theta_{eq}$	0.8126 ± 0.0067	χ^2_{prior}	7.2 ± 3.6
σ_8	0.8102 ± 0.0063	$100\theta_{s,eq}$	0.4492 ± 0.0034	χ^2_{CMB}	1201.2 ± 5.5
S_8	0.835 ± 0.016	$H(0.15)$	72.36 ± 0.61		
$\sigma_8\Omega_m^{0.5}$	0.4573 ± 0.0088	$D_M(0.15)$	646.5 ± 6.1		

$\bar{\chi}^2_{eff} = 1209.34$; $R - 1 = 0.01600$

20.50 base_yhe_plikHM_TT_lowl_lowE_Aver15_post_BAO_lensing

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02219 ± 0.00019	$\sigma_8/h^{0.5}$	0.9842 ± 0.0089	$H(0.51)$	89.61 ± 0.27
$\boldsymbol{\Omega_c h^2}$	0.1191 ± 0.0011	$r_{\rm drag} h$	99.63 ± 0.84	$D_{\rm M}(0.51)$	1984 ± 10
$\boldsymbol{100\theta_{MC}}$	1.04095 ± 0.00043	$\langle d^2 \rangle^{1/2}$	2.436 ± 0.021	$H(0.61)$	95.22 ± 0.24
$\boldsymbol{\tau}$	0.0552 ± 0.0073	$z_{\rm re}$	7.77 ± 0.74	$D_{\rm M}(0.61)$	2308 ± 11
$\boldsymbol{Y_P}$	0.2440 ± 0.0039	$10^9 A_{\rm s}$	2.098 ± 0.030	$H(2.33)$	235.80 ± 0.71
$\boldsymbol{\ln(10^{10} A_s)}$	3.043 ± 0.014	$10^9 A_{\rm s} e^{-2\tau}$	$1.878^{+0.011}_{-0.010}$	$D_{\rm M}(2.33)$	5769 ± 12
$\boldsymbol{n_s}$	0.9655 ± 0.0042	D_{40}	1228 ± 12	$f\sigma_8(0.15)$	0.4559 ± 0.0061
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0024	D_{220}	5723 ± 39	$\sigma_8(0.15)$	0.7474 ± 0.0056
$\boldsymbol{A^{CIB}_{217}}$	47 ± 7	D_{810}	2537 ± 13	$f\sigma_8(0.38)$	0.4742 ± 0.0050
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{1420}	815.7 ± 4.8	$\sigma_8(0.38)$	0.6625 ± 0.0049
$\boldsymbol{A^{tSZ}_{143}}$	5.1 ± 2.0	D_{2000}	230.1 ± 1.7	$f\sigma_8(0.51)$	0.4728 ± 0.0045
$\boldsymbol{A^{PS}_{100}}$	262 ± 28	$n_{\rm s,0.002}$	0.9655 ± 0.0042	$\sigma_8(0.51)$	0.6200 ± 0.0046
$\boldsymbol{A^{PS}_{143}}$	48 ± 8	$Y_{\rm P}$	0.2440 ± 0.0039	$f\sigma_8(0.61)$	0.4679 ± 0.0042
$\boldsymbol{A^{PS}_{143\times217}}$	43 ± 9	$Y_{\rm P}^{\rm BBN}$	0.2453 ± 0.0039	$\sigma_8(0.61)$	0.5900 ± 0.0044
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	Age/Gyr	13.811 ± 0.028	$f\sigma_8(2.33)$	0.2975 ± 0.0023
$\boldsymbol{A^{kSZ}}$	< 4.68	z_*	1090.02 ± 0.30	$\sigma_8(2.33)$	0.3067 ± 0.0024
$\boldsymbol{A^{dustTT}_{100}}$	8.9 ± 1.8	r_*	144.80 ± 0.29	f^{143}_{2000}	30.7 ± 2.9
$\boldsymbol{A^{dustTT}_{143}}$	10.7 ± 1.8	$100\theta_*$	1.04119 ± 0.00041	$f^{143\times217}_{2000}$	33.1 ± 2.0
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.3 ± 3.3	$D_{\rm M}(z_*)$/Gpc	13.907 ± 0.029	f^{217}_{2000}	107.8 ± 1.9
$\boldsymbol{A^{dustTT}_{217}}$	93.4 ± 7.4	$z_{\rm drag}$	1059.41 ± 0.48	$\chi^2_{\rm lensing}$	9.25 ± 0.72
$\boldsymbol{c_{100}}$	0.99961 ± 0.00061	$r_{\rm drag}$	147.53 ± 0.33	$\chi^2_{\rm simall}$	397.1 ± 1.9
$\boldsymbol{c_{217}}$	0.99824 ± 0.00062	$k_{\rm D}$	0.14032 ± 0.00044	$\chi^2_{\rm lowl}$	23.30 ± 0.88
H_0	67.53 ± 0.49	$100\theta_{\rm D}$	0.16099 ± 0.00029	$\chi^2_{\rm plik}$	771.5 ± 5.2
Ω_Λ	0.6886 ± 0.0065	$z_{\rm eq}$	3377 ± 26	$\chi^2_{\rm Aver15}$	0.98 ± 1.4
$\Omega_{\rm m}$	0.3114 ± 0.0065	$k_{\rm eq}$	0.010306 ± 0.000078	$\chi^2_{\rm 6DF}$	0.060 ± 0.072
$\Omega_{\rm m} h^2$	0.1420 ± 0.0011	$100\theta_{\rm eq}$	0.8174 ± 0.0047	$\chi^2_{\rm MGS}$	1.27 ± 0.46
$\Omega_{\rm m} h^3$	0.09586 ± 0.00047	$100\theta_{\rm s,eq}$	0.4517 ± 0.0024	$\chi^2_{\rm DR12BAO}$	4.9 ± 1.5
σ_8	0.8088 ± 0.0062	$H(0.15)$	72.80 ± 0.43	$\chi^2_{\rm prior}$	7.2 ± 3.6
S_8	0.824 ± 0.012	$D_{\rm M}(0.15)$	642.0 ± 4.2	$\chi^2_{\rm CMB}$	1201.2 ± 5.4
$\sigma_8 \Omega_{\rm m}^{0.5}$	0.4513 ± 0.0065	$H(0.38)$	82.90 ± 0.33	$\chi^2_{\rm BAO}$	6.2 ± 1.3
$\sigma_8 \Omega_{\rm m}^{0.25}$	0.6041 ± 0.0062	$D_{\rm M}(0.38)$	1531.2 ± 8.6		

$\bar{\chi}^2_{\rm eff} = 1215.53$; $R - 1 = 0.02107$

20.51 base_yhe_plikHM_TT_lowl_lowE_Aver15_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02210 ± 0.00022	$\sigma_8\Omega_m^{0.5}$	0.460 ± 0.013	$H(0.15)$	72.26 ± 0.77
$\boldsymbol{\Omega_c h^2}$	0.1206 ± 0.0021	$\sigma_8\Omega_m^{0.25}$	0.611 ± 0.011	$D_M(0.15)$	647.6 ± 7.8
$\boldsymbol{100\theta_{MC}}$	1.04075 ± 0.00049	$\sigma_8/h^{0.5}$	0.994 ± 0.016	$H(0.38)$	82.51 ± 0.56
$\boldsymbol{\tau}$	$0.0537^{+0.0045}_{-0.0084}$	$r_{drag}h$	98.5 ± 1.6	$D_M(0.38)$	1542 ± 16
$\boldsymbol{Y_P}$	0.2437 ± 0.0039	$\langle d^2\rangle^{1/2}$	2.457 ± 0.037	$H(0.51)$	89.32 ± 0.44
$\boldsymbol{\ln(10^{10}A_s)}$	$3.043^{+0.012}_{-0.016}$	z_{re}	$7.66^{+0.50}_{-0.85}$	$D_M(0.51)$	1996 ± 18
$\boldsymbol{n_s}$	0.9624 ± 0.0058	$10^9 A_s$	$2.097^{+0.024}_{-0.034}$	$H(0.61)$	95.00 ± 0.35
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0024	$10^9 A_s e^{-2\tau}$	1.883 ± 0.013	$D_M(0.61)$	2322 ± 20
$\boldsymbol{A_{217}^{CIB}}$	48 ± 7	D_{40}	1234 ± 15	$H(2.33)$	236.7 ± 1.3
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{220}	5712 ± 40	$D_M(2.33)$	5778 ± 16
$\boldsymbol{A_{143}^{tSZ}}$	5.1 ± 2.0	D_{810}	2536 ± 13	$f\sigma_8(0.15)$	0.464 ± 0.012
$\boldsymbol{A_{100}^{PS}}$	262 ± 28	D_{1420}	814.7 ± 5.0	$\sigma_8(0.15)$	0.7500 ± 0.0070
$\boldsymbol{A_{143}^{PS}}$	49 ± 8	D_{2000}	229.8 ± 1.8	$f\sigma_8(0.38)$	0.4802 ± 0.0094
$\boldsymbol{A_{143\times217}^{PS}}$	43 ± 9	$n_{s,0.002}$	0.9624 ± 0.0058	$\sigma_8(0.38)$	$0.6638^{+0.0050}_{-0.0058}$
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	Y_P	0.2437 ± 0.0039	$f\sigma_8(0.51)$	0.4777 ± 0.0080
$\boldsymbol{A^{kSZ}}$	< 4.68	Y_P^{BBN}	0.2451 ± 0.0040	$\sigma_8(0.51)$	$0.6208^{+0.0044}_{-0.0053}$
$\boldsymbol{A_{100}^{dustTT}}$	8.9 ± 1.8	Age/Gyr	13.832 ± 0.036	$f\sigma_8(0.61)$	0.4720 ± 0.0070
$\boldsymbol{A_{143}^{dustTT}}$	10.7 ± 1.8	z_*	1090.25 ± 0.41	$\sigma_8(0.61)$	$0.5905^{+0.0040}_{-0.0050}$
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.3 ± 3.3	r_*	144.50 ± 0.48	$f\sigma_8(2.33)$	$0.2974^{+0.0019}_{-0.0025}$
$\boldsymbol{A_{217}^{dustTT}}$	93.5 ± 7.4	$100\theta_*$	1.04100 ± 0.00046	$\sigma_8(2.33)$	$0.3062^{+0.0019}_{-0.0027}$
$\boldsymbol{c_{100}}$	0.99960 ± 0.00061	$D_M(z_*)$/Gpc	13.880 ± 0.044	f_{2000}^{143}	30.9 ± 2.9
$\boldsymbol{c_{217}}$	0.99826 ± 0.00063	z_{drag}	1059.30 ± 0.49	$f_{2000}^{143\times217}$	33.4 ± 2.1
H_0	66.88 ± 0.90	r_{drag}	147.25 ± 0.48	f_{2000}^{217}	108.0 ± 1.9
Ω_Λ	0.679 ± 0.013	k_D	0.14056 ± 0.00054	χ^2_{simall}	396.8 ± 1.7
Ω_m	0.321 ± 0.013	$100\theta_D$	0.16103 ± 0.00030	χ^2_{lowl}	24.0 ± 1.3
$\Omega_m h^2$	0.1433 ± 0.0020	z_{eq}	3410 ± 47	χ^2_{plik}	771.1 ± 5.4
$\Omega_m h^3$	0.09584 ± 0.00047	k_{eq}	0.01041 ± 0.00014	χ^2_{Aver15}	0.98 ± 1.4
σ_8	0.8126 ± 0.0084	$100\theta_{eq}$	0.8112 ± 0.0088	χ^2_{prior}	7.2 ± 3.7
S_8	0.840 ± 0.024	$100\theta_{s,eq}$	0.4485 ± 0.0045	χ^2_{CMB}	1191.9 ± 5.4

$\bar{\chi}^2_{eff} = 1200.15$; $R - 1 = 0.00690$

20.52 base_yhe_plikHM_TT_lowl_lowE_Aver15_post_BAO_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02219 ± 0.00020	$\sigma_8/h^{0.5}$	0.983 ± 0.011	$H(0.51)$	89.64 ± 0.29
$\boldsymbol{\Omega_c h^2}$	0.1189 ± 0.0012	$r_{\rm drag}h$	99.77 ± 0.93	$D_{\rm M}(0.51)$	1982 ± 11
$\boldsymbol{100\theta_{MC}}$	1.04098 ± 0.00043	$\langle d^2\rangle^{1/2}$	2.431 ± 0.027	$H(0.61)$	95.25 ± 0.25
$\boldsymbol{\tau}$	$0.0550^{+0.0054}_{-0.0081}$	$z_{\rm re}$	$7.76^{+0.58}_{-0.83}$	$D_{\rm M}(0.61)$	2307 ± 12
$\boldsymbol{Y_P}$	0.2441 ± 0.0039	$10^9 A_{\rm s}$	$2.095^{+0.026}_{-0.034}$	$H(2.33)$	235.69 ± 0.79
$\boldsymbol{\ln(10^{10} A_s)}$	$3.042^{+0.013}_{-0.016}$	$10^9 A_{\rm s} e^{-2\tau}$	1.877 ± 0.012	$D_{\rm M}(2.33)$	5768 ± 12
$\boldsymbol{n_s}$	0.9662 ± 0.0044	D_{40}	1226 ± 13	$f\sigma_8(0.15)$	0.4547 ± 0.0076
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0024	D_{220}	5719 ± 39	$\sigma_8(0.15)$	$0.7467^{+0.0059}_{-0.0068}$
$\boldsymbol{A^{CIB}_{217}}$	48 ± 7	D_{810}	2535 ± 13	$f\sigma_8(0.38)$	0.4733 ± 0.0064
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{1420}	815.5 ± 4.8	$\sigma_8(0.38)$	$0.6620^{+0.0049}_{-0.0058}$
$\boldsymbol{A^{tSZ}_{143}}$	5.1 ± 2.0	D_{2000}	230.0 ± 1.7	$f\sigma_8(0.51)$	0.4720 ± 0.0057
$\boldsymbol{A^{PS}_{100}}$	262 ± 28	$n_{\rm s,0.002}$	0.9662 ± 0.0044	$\sigma_8(0.51)$	$0.6196^{+0.0044}_{-0.0054}$
$\boldsymbol{A^{PS}_{143}}$	48 ± 8	$Y_{\rm P}$	0.2441 ± 0.0039	$f\sigma_8(0.61)$	0.4671 ± 0.0052
$\boldsymbol{A^{PS}_{143\times217}}$	43 ± 9	$Y_{\rm P}^{\rm BBN}$	0.2454 ± 0.0039	$\sigma_8(0.61)$	$0.5896^{+0.0041}_{-0.0051}$
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	Age/Gyr	13.809 ± 0.028	$f\sigma_8(2.33)$	$0.2973^{+0.0020}_{-0.0026}$
$\boldsymbol{A^{kSZ}}$	< 4.72	z_*	1090.00 ± 0.31	$\sigma_8(2.33)$	$0.3066^{+0.0021}_{-0.0027}$
$\boldsymbol{A^{dustTT}_{100}}$	8.9 ± 1.8	r_*	144.85 ± 0.32	f^{143}_{2000}	30.7 ± 2.9
$\boldsymbol{A^{dustTT}_{143}}$	10.7 ± 1.8	$100\theta_*$	1.04121 ± 0.00041	$f^{143\times217}_{2000}$	33.2 ± 2.0
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.3 ± 3.3	$D_{\rm M}(z_*)$/Gpc	13.911 ± 0.032	f^{217}_{2000}	107.8 ± 1.9
$\boldsymbol{A^{dustTT}_{217}}$	93.4 ± 7.4	$z_{\rm drag}$	1059.41 ± 0.48	$\chi^2_{\rm simall}$	397.0 ± 1.9
$\boldsymbol{c_{100}}$	0.99960 ± 0.00061	$r_{\rm drag}$	147.57 ± 0.35	$\chi^2_{\rm lowl}$	23.16 ± 0.93
$\boldsymbol{c_{217}}$	0.99824 ± 0.00062	$k_{\rm D}$	0.14027 ± 0.00046	$\chi^2_{\rm plik}$	771.9 ± 5.3
H_0	67.60 ± 0.54	$100\theta_{\rm D}$	0.16100 ± 0.00029	$\chi^2_{\rm Aver15}$	0.97 ± 1.4
Ω_Λ	0.6897 ± 0.0072	$z_{\rm eq}$	3373 ± 29	$\chi^2_{\rm 6DF}$	0.058 ± 0.075
$\Omega_{\rm m}$	0.3103 ± 0.0072	$k_{\rm eq}$	0.010294 ± 0.000087	$\chi^2_{\rm MGS}$	1.35 ± 0.52
$\Omega_{\rm m}h^2$	0.1418 ± 0.0012	$100\theta_{\rm eq}$	0.8182 ± 0.0053	$\chi^2_{\rm DR12BAO}$	4.8 ± 1.6
$\Omega_{\rm m}h^3$	0.09584 ± 0.00047	$100\theta_{\rm s,eq}$	0.4521 ± 0.0027	$\chi^2_{\rm prior}$	7.2 ± 3.6
σ_8	$0.8079^{+0.0068}_{-0.0077}$	$H(0.15)$	72.87 ± 0.46	$\chi^2_{\rm BAO}$	6.2 ± 1.3
S_8	0.822 ± 0.015	$D_{\rm M}(0.15)$	641.4 ± 4.6	$\chi^2_{\rm CMB}$	1192.1 ± 5.3
$\sigma_8\Omega_{\rm m}^{0.5}$	0.4501 ± 0.0081	$H(0.38)$	82.95 ± 0.35		
$\sigma_8\Omega_{\rm m}^{0.25}$	0.6030 ± 0.0078	$D_{\rm M}(0.38)$	1530.0 ± 9.3		

$\bar{\chi}^2_{\rm eff} = 1206.42$; $R - 1 = 0.01542$

20.53 base_yhe_plikHM_TT_lowl_lowE_Aver15_post_lensing_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02213 ± 0.00021	$\sigma_8\Omega_m^{0.25}$	0.6088 ± 0.0077	$H(0.38)$	82.63 ± 0.44
$\boldsymbol{\Omega_c h^2}$	0.1201 ± 0.0015	$\sigma_8/h^{0.5}$	0.990 ± 0.010	$D_M(0.38)$	1539 ± 12
$\boldsymbol{100\theta_{MC}}$	1.04079 ± 0.00046	$r_{drag}h$	98.8 ± 1.2	$H(0.51)$	89.40 ± 0.35
$\boldsymbol{\tau}$	$0.0537^{+0.0048}_{-0.0081}$	$\langle d^2\rangle^{1/2}$	2.449 ± 0.025	$D_M(0.51)$	1993 ± 14
$\boldsymbol{Y_P}$	0.2437 ± 0.0039	z_{re}	$7.66^{+0.52}_{-0.82}$	$H(0.61)$	95.06 ± 0.29
$\boldsymbol{\ln(10^{10}A_s)}$	$3.042^{+0.011}_{-0.015}$	$10^9 A_s$	$2.095^{+0.022}_{-0.031}$	$D_M(0.61)$	2318 ± 15
$\boldsymbol{n_s}$	0.9632 ± 0.0049	$10^9 A_s e^{-2\tau}$	1.881 ± 0.011	$H(2.33)$	236.38 ± 0.94
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0024	D_{40}	1232 ± 13	$D_M(2.33)$	5776 ± 14
$\boldsymbol{A_{217}^{CIB}}$	48 ± 7	D_{220}	5715 ± 40	$f\sigma_8(0.15)$	0.4611 ± 0.0081
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{810}	2536 ± 13	$\sigma_8(0.15)$	0.7487 ± 0.0052
$\boldsymbol{A_{143}^{tSZ}}$	5.1 ± 2.0	D_{1420}	814.8 ± 4.9	$f\sigma_8(0.38)$	0.4780 ± 0.0063
$\boldsymbol{A_{100}^{PS}}$	263 ± 28	D_{2000}	229.8 ± 1.8	$\sigma_8(0.38)$	$0.6630^{+0.0040}_{-0.0047}$
$\boldsymbol{A_{143}^{PS}}$	49 ± 8	$n_{s,0.002}$	0.9632 ± 0.0049	$f\sigma_8(0.51)$	0.4759 ± 0.0053
$\boldsymbol{A_{143\times217}^{PS}}$	43 ± 9	Y_P	0.2437 ± 0.0039	$\sigma_8(0.51)$	$0.6202^{+0.0037}_{-0.0045}$
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	Y_P^{BBN}	0.2450 ± 0.0039	$f\sigma_8(0.61)$	0.4704 ± 0.0047
$\boldsymbol{A^{kSZ}}$	< 4.71	Age/Gyr	13.826 ± 0.032	$\sigma_8(0.61)$	$0.5900^{+0.0035}_{-0.0043}$
$\boldsymbol{A_{100}^{dustTT}}$	8.9 ± 1.8	z_*	1090.18 ± 0.35	$f\sigma_8(2.33)$	$0.2972^{+0.0018}_{-0.0023}$
$\boldsymbol{A_{143}^{dustTT}}$	10.7 ± 1.8	r_*	144.60 ± 0.37	$\sigma_8(2.33)$	$0.3062^{+0.0019}_{-0.0026}$
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.3 ± 3.3	$100\theta_*$	1.04104 ± 0.00043	f_{2000}^{143}	30.9 ± 3.0
$\boldsymbol{A_{217}^{dustTT}}$	93.5 ± 7.4	$D_M(z_*)$/Gpc	13.890 ± 0.035	$f_{2000}^{143\times217}$	33.3 ± 2.0
$\boldsymbol{c_{100}}$	0.99961 ± 0.00061	z_{drag}	1059.32 ± 0.49	f_{2000}^{217}	107.9 ± 1.9
$\boldsymbol{c_{217}}$	0.99825 ± 0.00062	r_{drag}	147.34 ± 0.38	$\chi^2_{lensing}$	9.43 ± 0.89
H_0	67.08 ± 0.69	k_D	0.14048 ± 0.00047	χ^2_{simall}	396.8 ± 1.6
Ω_Λ	0.6823 ± 0.0095	$100\theta_D$	0.16101 ± 0.00030	χ^2_{lowl}	23.7 ± 1.0
Ω_m	0.3177 ± 0.0095	z_{eq}	3399 ± 35	χ^2_{plik}	770.9 ± 5.3
$\Omega_m h^2$	0.1429 ± 0.0015	k_{eq}	0.01037 ± 0.00011	χ^2_{Aver15}	0.97 ± 1.4
$\Omega_m h^3$	0.09583 ± 0.00047	$100\theta_{eq}$	0.8132 ± 0.0065	χ^2_{prior}	7.2 ± 3.6
σ_8	0.8109 ± 0.0060	$100\theta_{s,eq}$	0.4495 ± 0.0033	χ^2_{CMB}	1200.9 ± 5.5
S_8	0.834 ± 0.016	$H(0.15)$	72.42 ± 0.59		
$\sigma_8\Omega_m^{0.5}$	0.4570 ± 0.0088	$D_M(0.15)$	645.9 ± 6.0		

$\bar{\chi}^2_{eff} = 1209.04$; $R - 1 = 0.01844$

20.54 base_yhe_plikHM_TT_lowl_lowE_Aver15_post_BAO_lensing_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02219 ± 0.00019	$\sigma_8/h^{0.5}$	0.9845 ± 0.0088	$H(0.51)$	89.62 ± 0.27
$\boldsymbol{\Omega_c h^2}$	0.1191 ± 0.0011	$r_{\rm drag}h$	99.66 ± 0.83	$D_{\rm M}(0.51)$	1983 ± 10
$\boldsymbol{100\theta_{MC}}$	1.04096 ± 0.00043	$\langle d^2\rangle^{1/2}$	2.436 ± 0.021	$H(0.61)$	95.23 ± 0.24
$\boldsymbol{\tau}$	$0.0558^{+0.0058}_{-0.0075}$	$z_{\rm re}$	$7.84^{+0.61}_{-0.75}$	$D_{\rm M}(0.61)$	2308 ± 11
$\boldsymbol{Y_P}$	0.2440 ± 0.0039	$10^9 A_{\rm s}$	$2.100^{+0.025}_{-0.030}$	$H(2.33)$	235.78 ± 0.70
$\boldsymbol{\ln(10^{10} A_s)}$	$3.044^{+0.012}_{-0.014}$	$10^9 A_{\rm s} e^{-2\tau}$	$1.878^{+0.011}_{-0.010}$	$D_{\rm M}(2.33)$	5769 ± 12
$\boldsymbol{n_s}$	0.9656 ± 0.0042	D_{40}	1228 ± 12	$f\sigma_8(0.15)$	0.4559 ± 0.0061
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0024	D_{220}	5722 ± 39	$\sigma_8(0.15)$	0.7477 ± 0.0054
$\boldsymbol{A^{CIB}_{217}}$	47 ± 7	D_{810}	2536 ± 13	$f\sigma_8(0.38)$	0.4743 ± 0.0050
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	D_{1420}	815.7 ± 4.8	$\sigma_8(0.38)$	$0.6628^{+0.0043}_{-0.0049}$
$\boldsymbol{A^{tSZ}_{143}}$	5.1 ± 2.0	D_{2000}	230.1 ± 1.7	$f\sigma_8(0.51)$	0.4730 ± 0.0045
$\boldsymbol{A^{PS}_{100}}$	262 ± 28	$n_{\rm s,0.002}$	0.9656 ± 0.0042	$\sigma_8(0.51)$	$0.6203^{+0.0040}_{-0.0046}$
$\boldsymbol{A^{PS}_{143}}$	48 ± 8	$Y_{\rm P}$	0.2440 ± 0.0039	$f\sigma_8(0.61)$	0.4680 ± 0.0041
$\boldsymbol{A^{PS}_{143\times217}}$	43 ± 9	$Y_{\rm P}^{\rm BBN}$	0.2453 ± 0.0039	$\sigma_8(0.61)$	$0.5903^{+0.0038}_{-0.0044}$
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	Age/Gyr	13.810 ± 0.028	$f\sigma_8(2.33)$	$0.2976^{+0.0019}_{-0.0023}$
$\boldsymbol{A^{kSZ}}$	< 4.68	z_*	1090.01 ± 0.30	$\sigma_8(2.33)$	$0.3069^{+0.0021}_{-0.0024}$
$\boldsymbol{A^{dustTT}_{100}}$	8.9 ± 1.8	r_*	144.81 ± 0.29	f^{143}_{2000}	30.7 ± 2.9
$\boldsymbol{A^{dustTT}_{143}}$	10.7 ± 1.8	$100\theta_*$	1.04120 ± 0.00041	$f^{143\times217}_{2000}$	33.1 ± 2.0
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.3 ± 3.3	$D_{\rm M}(z_*)$/Gpc	13.908 ± 0.029	f^{217}_{2000}	107.8 ± 1.9
$\boldsymbol{A^{dustTT}_{217}}$	93.4 ± 7.4	$z_{\rm drag}$	1059.41 ± 0.48	$\chi^2_{\rm lensing}$	9.22 ± 0.68
$\boldsymbol{c_{100}}$	0.99961 ± 0.00061	$r_{\rm drag}$	147.54 ± 0.33	$\chi^2_{\rm simall}$	397.1 ± 1.9
$\boldsymbol{c_{217}}$	0.99824 ± 0.00062	$k_{\rm D}$	0.14031 ± 0.00044	$\chi^2_{\rm lowl}$	23.30 ± 0.88
H_0	67.55 ± 0.49	$100\theta_{\rm D}$	0.16099 ± 0.00029	$\chi^2_{\rm plik}$	771.4 ± 5.2
Ω_Λ	0.6889 ± 0.0064	$z_{\rm eq}$	3376 ± 25	$\chi^2_{\rm Aver15}$	0.97 ± 1.4
$\Omega_{\rm m}$	0.3111 ± 0.0064	$k_{\rm eq}$	0.010304 ± 0.000077	$\chi^2_{\rm 6DF}$	0.057 ± 0.069
$\Omega_{\rm m}h^2$	0.1419 ± 0.0011	$100\theta_{\rm eq}$	0.8176 ± 0.0046	$\chi^2_{\rm MGS}$	1.28 ± 0.45
$\Omega_{\rm m}h^3$	0.09586 ± 0.00047	$100\theta_{\rm s,eq}$	0.4517 ± 0.0024	$\chi^2_{\rm DR12BAO}$	4.8 ± 1.5
σ_8	0.8091 ± 0.0060	$H(0.15)$	72.82 ± 0.42	$\chi^2_{\rm prior}$	7.2 ± 3.5
S_8	0.824 ± 0.012	$D_{\rm M}(0.15)$	641.9 ± 4.2	$\chi^2_{\rm CMB}$	1201.0 ± 5.3
$\sigma_8\Omega_{\rm m}^{0.5}$	0.4513 ± 0.0065	$H(0.38)$	82.91 ± 0.32	$\chi^2_{\rm BAO}$	6.1 ± 1.2
$\sigma_8\Omega_{\rm m}^{0.25}$	0.6043 ± 0.0062	$D_{\rm M}(0.38)$	1530.9 ± 8.5		

$\bar{\chi}^2_{\rm eff} = 1215.36$; $R - 1 = 0.02251$

20.55 base_yhe_plikHM_TTTEEE_lowl_lowE_Aver15

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02233 ± 0.00015	$\Omega_m h^2$	0.1432 ± 0.0013	$100\theta_{eq}$	0.8123 ± 0.0058
$\boldsymbol{\Omega_c h^2}$	0.1202 ± 0.0014	$\Omega_m h^3$	0.09625 ± 0.00032	$100\theta_{s,eq}$	0.4489 ± 0.0030
$\boldsymbol{100\theta_{MC}}$	1.04083 ± 0.00034	σ_8	0.8115 ± 0.0075	$H(0.15)$	72.55 ± 0.52
$\boldsymbol{\tau}$	0.0541 ± 0.0079	S_8	0.834 ± 0.016	$D_M(0.15)$	644.7 ± 5.3
$\boldsymbol{Y_P}$	0.2433 ± 0.0038	$\sigma_8 \Omega_m^{0.5}$	0.4570 ± 0.0088	$H(0.38)$	82.77 ± 0.38
$\boldsymbol{\ln(10^{10} A_s)}$	3.044 ± 0.016	$\sigma_8 \Omega_m^{0.25}$	0.6090 ± 0.0083	$D_M(0.38)$	1536 ± 11
$\boldsymbol{n_s}$	0.9638 ± 0.0046	$\sigma_8/h^{0.5}$	0.990 ± 0.012	$H(0.51)$	89.54 ± 0.30
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0025	$r_{drag} h$	98.9 ± 1.1	$D_M(0.51)$	1989 ± 12
$\boldsymbol{A_{217}^{CIB}}$	47 ± 7	$\langle d^2 \rangle^{1/2}$	2.450 ± 0.028	$H(0.61)$	95.21 ± 0.24
$\boldsymbol{\xi^{tSZ \times CIB}}$	—	z_{re}	7.64 ± 0.80	$D_M(0.61)$	2314 ± 13
$\boldsymbol{A_{143}^{tSZ}}$	$5.5^{+2.1}_{-1.9}$	$10^9 A_s$	2.099 ± 0.034	$H(2.33)$	236.67 ± 0.82
$\boldsymbol{A_{100}^{PS}}$	257 ± 28	$10^9 A_s e^{-2\tau}$	1.884 ± 0.012	$D_M(2.33)$	5767 ± 11
$\boldsymbol{A_{143}^{PS}}$	46 ± 8	D_{40}	1234 ± 13	$f\sigma_8(0.15)$	0.4611 ± 0.0082
$\boldsymbol{A_{143\times217}^{PS}}$	43 ± 9	D_{220}	5732 ± 38	$\sigma_8(0.15)$	0.7493 ± 0.0066
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	D_{810}	2540 ± 14	$f\sigma_8(0.38)$	0.4782 ± 0.0067
$\boldsymbol{A^{kSZ}}$	< 4.08	D_{1420}	817.5 ± 4.8	$\sigma_8(0.38)$	0.6636 ± 0.0057
$\boldsymbol{A_{100}^{dustTT}}$	8.9 ± 1.8	D_{2000}	231.1 ± 1.6	$f\sigma_8(0.51)$	0.4761 ± 0.0059
$\boldsymbol{A_{143}^{dustTT}}$	10.9 ± 1.8	$n_{s,0.002}$	0.9638 ± 0.0046	$\sigma_8(0.51)$	0.6208 ± 0.0052
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.6 ± 3.3	Y_P	0.2433 ± 0.0038	$f\sigma_8(0.61)$	0.4707 ± 0.0054
$\boldsymbol{A_{217}^{dustTT}}$	93.7 ± 7.3	Y_P^{BBN}	0.2446 ± 0.0038	$\sigma_8(0.61)$	0.5905 ± 0.0050
$\boldsymbol{A_{100}^{dustTE}}$	0.115 ± 0.038	Age/Gyr	13.805 ± 0.026	$f\sigma_8(2.33)$	0.2975 ± 0.0025
$\boldsymbol{A_{100\times143}^{dustTE}}$	0.135 ± 0.029	z_*	1089.91 ± 0.29	$\sigma_8(2.33)$	0.3065 ± 0.0026
$\boldsymbol{A_{100\times217}^{dustTE}}$	0.484 ± 0.084	r_*	144.41 ± 0.31	f_{2000}^{143}	29.3 ± 2.8
$\boldsymbol{A_{143}^{dustTE}}$	0.225 ± 0.054	$100\theta_*$	1.04107 ± 0.00031	$f_{2000}^{143\times217}$	32.0 ± 1.9
$\boldsymbol{A_{143\times217}^{dustTE}}$	0.668 ± 0.080	$D_M(z_*)$/Gpc	13.871 ± 0.029	f_{2000}^{217}	106.9 ± 1.8
$\boldsymbol{A_{217}^{dustTE}}$	2.09 ± 0.27	z_{drag}	1059.79 ± 0.37	χ^2_{simall}	397.1 ± 1.8
$\boldsymbol{c_{100}}$	0.99967 ± 0.00061	r_{drag}	147.08 ± 0.30	χ^2_{lowl}	23.7 ± 1.0
$\boldsymbol{c_{217}}$	0.99818 ± 0.00062	k_D	0.14093 ± 0.00033	χ^2_{plik}	2359.5 ± 5.9
H_0	67.21 ± 0.61	$100\theta_D$	0.16071 ± 0.00022	χ^2_{Aver15}	0.9 ± 1.2
Ω_Λ	0.6828 ± 0.0085	z_{eq}	3407 ± 31	χ^2_{prior}	11.5 ± 4.5
Ω_m	0.3172 ± 0.0085	k_{eq}	0.010399 ± 0.000094	χ^2_{CMB}	2780.3 ± 5.9

$\bar{\chi}^2_{eff} = 2792.71$; $R - 1 = 0.01459$

20.56 base_yhe_plikHM_TTTEEE_lowl_lowE_Aver15_post_BAO

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02239 ± 0.00014	σ_8	0.8092 ± 0.0072	$H(0.38)$	83.02 ± 0.29
$\boldsymbol{\Omega_c h^2}$	0.1193 ± 0.0010	S_8	0.824 ± 0.012	$D_{\rm M}(0.38)$	1529.0 ± 7.7
$\boldsymbol{100\theta_{MC}}$	1.04095 ± 0.00031	$\sigma_8\Omega_{\rm m}^{0.5}$	0.4515 ± 0.0068	$H(0.51)$	89.74 ± 0.23
$\boldsymbol{\tau}$	0.0554 ± 0.0079	$\sigma_8\Omega_{\rm m}^{0.25}$	0.6045 ± 0.0069	$D_{\rm M}(0.51)$	1980.7 ± 9.1
$\boldsymbol{Y_P}$	0.2435 ± 0.0037	$\sigma_8/h^{0.5}$	0.984 ± 0.010	$H(0.61)$	95.36 ± 0.19
$\boldsymbol{\ln(10^{10}A_s)}$	3.044 ± 0.016	$r_{\rm drag}h$	99.59 ± 0.77	$D_{\rm M}(0.61)$	2304.8 ± 9.8
$\boldsymbol{n_s}$	0.9661 ± 0.0040	$\langle d^2\rangle^{1/2}$	2.437 ± 0.025	$H(2.33)$	236.13 ± 0.62
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0025	$z_{\rm re}$	7.75 ± 0.80	$D_{\rm M}(2.33)$	5760.6 ± 9.4
$\boldsymbol{A_{217}^{CIB}}$	47 ± 7	$10^9 A_{\rm s}$	2.100 ± 0.034	$f\sigma_8(0.15)$	0.4561 ± 0.0065
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$10^9 A_{\rm s}e^{-2\tau}$	1.880 ± 0.011	$\sigma_8(0.15)$	0.7478 ± 0.0065
$\boldsymbol{A_{143}^{tSZ}}$	$5.5^{+2.1}_{-1.8}$	D_{40}	1229 ± 12	$f\sigma_8(0.38)$	0.4744 ± 0.0056
$\boldsymbol{A_{100}^{PS}}$	257 ± 28	D_{220}	5737 ± 38	$\sigma_8(0.38)$	0.6629 ± 0.0057
$\boldsymbol{A_{143}^{PS}}$	45 ± 8	D_{810}	2539 ± 13	$f\sigma_8(0.51)$	0.4731 ± 0.0051
$\boldsymbol{A_{143\times217}^{PS}}$	42 ± 9	D_{1420}	818.0 ± 4.8	$\sigma_8(0.51)$	0.6204 ± 0.0053
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	D_{2000}	231.3 ± 1.6	$f\sigma_8(0.61)$	0.4681 ± 0.0048
$\boldsymbol{A^{kSZ}}$	< 4.09	$n_{\rm s,0.002}$	0.9661 ± 0.0040	$\sigma_8(0.61)$	0.5903 ± 0.0050
$\boldsymbol{A_{100}^{dustTT}}$	8.9 ± 1.8	$Y_{\rm P}$	0.2435 ± 0.0037	$f\sigma_8(2.33)$	0.2976 ± 0.0025
$\boldsymbol{A_{143}^{dustTT}}$	10.9 ± 1.8	$Y_{\rm P}^{\rm BBN}$	0.2448 ± 0.0037	$\sigma_8(2.33)$	0.3069 ± 0.0026
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.6 ± 3.3	Age/Gyr	13.791 ± 0.021	f_{2000}^{143}	29.1 ± 2.8
$\boldsymbol{A_{217}^{dustTT}}$	93.8 ± 7.3	z_*	1089.76 ± 0.25	$f_{2000}^{143\times217}$	31.9 ± 1.9
$\boldsymbol{A_{100}^{dustTE}}$	0.115 ± 0.037	r_*	144.60 ± 0.24	f_{2000}^{217}	106.8 ± 1.8
$\boldsymbol{A_{100\times143}^{dustTE}}$	0.134 ± 0.029	$100\theta_*$	1.04118 ± 0.00029	$\chi^2_{\rm simall}$	397.3 ± 2.0
$\boldsymbol{A_{100\times217}^{dustTE}}$	0.482 ± 0.087	$D_{\rm M}(z_*)/{\rm Gpc}$	13.888 ± 0.023	$\chi^2_{\rm lowl}$	23.26 ± 0.86
$\boldsymbol{A_{143}^{dustTE}}$	0.224 ± 0.053	$z_{\rm drag}$	1059.88 ± 0.36	$\chi^2_{\rm plik}$	2359.8 ± 6.0
$\boldsymbol{A_{143\times217}^{dustTE}}$	0.664 ± 0.081	$r_{\rm drag}$	147.25 ± 0.25	$\chi^2_{\rm Aver15}$	0.9 ± 1.2
$\boldsymbol{A_{217}^{dustTE}}$	2.08 ± 0.27	$k_{\rm D}$	0.14079 ± 0.00030	$\chi^2_{\rm 6DF}$	0.059 ± 0.068
$\boldsymbol{c_{100}}$	0.99967 ± 0.00062	$100\theta_{\rm D}$	0.16067 ± 0.00021	$\chi^2_{\rm MGS}$	1.24 ± 0.42
$\boldsymbol{c_{217}}$	0.99819 ± 0.00062	$z_{\rm eq}$	3386 ± 23	$\chi^2_{\rm DR12BAO}$	4.9 ± 1.5
H_0	67.63 ± 0.45	$k_{\rm eq}$	0.010335 ± 0.000070	$\chi^2_{\rm prior}$	11.5 ± 4.5
Ω_Λ	0.6887 ± 0.0061	$100\theta_{\rm eq}$	0.8163 ± 0.0043	$\chi^2_{\rm BAO}$	6.2 ± 1.2
$\Omega_{\rm m}$	0.3113 ± 0.0061	$100\theta_{\rm s,eq}$	0.4509 ± 0.0022	$\chi^2_{\rm CMB}$	2780.4 ± 5.9
$\Omega_{\rm m}h^2$	0.14235 ± 0.00096	$H(0.15)$	72.91 ± 0.39		
$\Omega_{\rm m}h^3$	0.09627 ± 0.00032	$D_{\rm M}(0.15)$	641.1 ± 3.8		

$\bar{\chi}^2_{\rm eff} = 2799.01$; $R - 1 = 0.02003$

20.57 base_yhe_plikHM_TTTEEE_lowl_lowE_Aver15_post_lensing

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02234 ± 0.00015	$\Omega_m h^3$	0.09624 ± 0.00032	$H(0.15)$	72.63 ± 0.47
$\boldsymbol{\Omega_c h^2}$	0.1200 ± 0.0012	σ_8	0.8106 ± 0.0060	$D_M(0.15)$	643.9 ± 4.7
$\boldsymbol{100\theta_{MC}}$	1.04084 ± 0.00033	S_8	0.832 ± 0.013	$H(0.38)$	82.82 ± 0.35
$\boldsymbol{\tau}$	0.0540 ± 0.0075	$\sigma_8 \Omega_m^{0.5}$	0.4555 ± 0.0070	$D_M(0.38)$	1534.6 ± 9.4
$\boldsymbol{Y_P}$	0.2432 ± 0.0038	$\sigma_8 \Omega_m^{0.25}$	0.6077 ± 0.0063	$H(0.51)$	89.58 ± 0.28
$\boldsymbol{\ln(10^{10} A_s)}$	3.043 ± 0.014	$\sigma_8/h^{0.5}$	0.9881 ± 0.0090	$D_M(0.51)$	1987 ± 11
$\boldsymbol{n_s}$	0.9641 ± 0.0044	$r_{drag} h$	99.01 ± 0.93	$H(0.61)$	95.24 ± 0.23
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0025	$\langle d^2 \rangle^{1/2}$	2.447 ± 0.022	$D_M(0.61)$	2312 ± 12
$\boldsymbol{A_{217}^{CIB}}$	47 ± 7	z_{re}	7.63 ± 0.75	$H(2.33)$	236.55 ± 0.72
$\boldsymbol{\xi^{tSZ \times CIB}}$	—	$10^9 A_s$	2.097 ± 0.030	$D_M(2.33)$	5766 ± 11
$\boldsymbol{A_{143}^{tSZ}}$	$5.5^{+2.2}_{-1.9}$	$10^9 A_s e^{-2\tau}$	1.883 ± 0.011	$f\sigma_8(0.15)$	0.4598 ± 0.0064
$\boldsymbol{A_{100}^{PS}}$	258 ± 28	D_{40}	1233 ± 12	$\sigma_8(0.15)$	0.7486 ± 0.0054
$\boldsymbol{A_{143}^{PS}}$	46 ± 8	D_{220}	5734 ± 38	$f\sigma_8(0.38)$	0.4771 ± 0.0052
$\boldsymbol{A_{143\times217}^{PS}}$	42 ± 9	D_{810}	2539 ± 13	$\sigma_8(0.38)$	0.6631 ± 0.0048
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	D_{1420}	817.5 ± 4.8	$f\sigma_8(0.51)$	0.4752 ± 0.0045
$\boldsymbol{A^{kSZ}}$	< 4.20	D_{2000}	231.0 ± 1.6	$\sigma_8(0.51)$	0.6204 ± 0.0045
$\boldsymbol{A_{100}^{dust TT}}$	8.9 ± 1.8	$n_{s,0.002}$	0.9641 ± 0.0044	$f\sigma_8(0.61)$	0.4699 ± 0.0041
$\boldsymbol{A_{143}^{dust TT}}$	10.9 ± 1.8	Y_P	0.2432 ± 0.0038	$\sigma_8(0.61)$	0.5902 ± 0.0043
$\boldsymbol{A_{143\times217}^{dust TT}}$	18.6 ± 3.3	Y_P^{BBN}	0.2445 ± 0.0038	$f\sigma_8(2.33)$	0.2974 ± 0.0023
$\boldsymbol{A_{217}^{dust TT}}$	93.8 ± 7.4	Age/Gyr	13.802 ± 0.024	$\sigma_8(2.33)$	0.3064 ± 0.0024
$\boldsymbol{A_{100}^{dust TE}}$	0.115 ± 0.037	z_*	1089.87 ± 0.27	f_{2000}^{143}	29.3 ± 2.8
$\boldsymbol{A_{100\times143}^{dust TE}}$	0.135 ± 0.029	r_*	144.45 ± 0.27	$f_{2000}^{143\times217}$	32.1 ± 1.9
$\boldsymbol{A_{100\times217}^{dust TE}}$	0.483 ± 0.085	$100\theta_*$	1.04109 ± 0.00031	f_{2000}^{217}	106.9 ± 1.8
$\boldsymbol{A_{143}^{dust TE}}$	0.225 ± 0.053	$D_M(z_*)$/Gpc	13.875 ± 0.025	$\chi^2_{lensing}$	9.21 ± 0.67
$\boldsymbol{A_{143\times217}^{dust TE}}$	0.666 ± 0.080	z_{drag}	1059.80 ± 0.37	χ^2_{simall}	397.0 ± 1.7
$\boldsymbol{A_{217}^{dust TE}}$	2.09 ± 0.27	r_{drag}	147.12 ± 0.27	χ^2_{lowl}	23.64 ± 0.93
$\boldsymbol{c_{100}}$	0.99966 ± 0.00061	k_D	0.14090 ± 0.00031	χ^2_{plik}	2359.3 ± 5.7
$\boldsymbol{c_{217}}$	0.99819 ± 0.00062	$100\theta_D$	0.16069 ± 0.00021	χ^2_{Aver15}	0.9 ± 1.2
H_0	67.30 ± 0.55	z_{eq}	3402 ± 27	χ^2_{prior}	11.5 ± 4.5
Ω_Λ	0.6841 ± 0.0075	k_{eq}	0.010384 ± 0.000082	χ^2_{CMB}	2789.1 ± 5.9
Ω_m	0.3159 ± 0.0075	$100\theta_{eq}$	0.8132 ± 0.0051		
$\Omega_m h^2$	0.1430 ± 0.0011	$100\theta_{s,eq}$	0.4493 ± 0.0026		

$\bar{\chi}^2_{eff} = 2801.50$; $R - 1 = 0.01555$

20.58 base_yhe_plikHM_TTTEEE_lowl_lowE_Aver15_post_BAO_lensing

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02240 ± 0.00014	σ_8	0.8098 ± 0.0060	$H(0.38)$	83.02 ± 0.27
$\boldsymbol{\Omega_c h^2}$	0.11932 ± 0.00093	S_8	0.825 ± 0.010	$D_{\rm M}(0.38)$	1529.0 ± 7.3
$\boldsymbol{100\theta_{MC}}$	1.04095 ± 0.00031	$\sigma_8\Omega_{\rm m}^{0.5}$	0.4518 ± 0.0057	$H(0.51)$	89.74 ± 0.22
$\boldsymbol{\tau}$	0.0560 ± 0.0073	$\sigma_8\Omega_{\rm m}^{0.25}$	0.6049 ± 0.0056	$D_{\rm M}(0.51)$	1980.8 ± 8.6
$\boldsymbol{Y_P}$	0.2434 ± 0.0037	$\sigma_8/h^{0.5}$	0.9847 ± 0.0083	$H(0.61)$	95.36 ± 0.19
$\boldsymbol{\ln(10^{10}A_s)}$	3.046 ± 0.014	$r_{\rm drag}h$	99.58 ± 0.72	$D_{\rm M}(0.61)$	2304.9 ± 9.3
$\boldsymbol{n_s}$	0.9659 ± 0.0039	$\langle d^2\rangle^{1/2}$	2.439 ± 0.020	$H(2.33)$	236.14 ± 0.57
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0024	$z_{\rm re}$	7.81 ± 0.73	$D_{\rm M}(2.33)$	5760.6 ± 9.2
$\boldsymbol{A_{217}^{CIB}}$	46 ± 7	$10^9 A_{\rm s}$	2.103 ± 0.030	$f\sigma_8(0.15)$	0.4564 ± 0.0054
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$10^9 A_{\rm s}e^{-2\tau}$	1.880 ± 0.010	$\sigma_8(0.15)$	0.7483 ± 0.0055
$\boldsymbol{A_{143}^{tSZ}}$	$5.5^{+2.1}_{-1.9}$	D_{40}	1230 ± 11	$f\sigma_8(0.38)$	0.4748 ± 0.0046
$\boldsymbol{A_{100}^{PS}}$	257 ± 28	D_{220}	5739 ± 37	$\sigma_8(0.38)$	0.6633 ± 0.0048
$\boldsymbol{A_{143}^{PS}}$	45 ± 8	D_{810}	2539 ± 13	$f\sigma_8(0.51)$	0.4734 ± 0.0041
$\boldsymbol{A_{143\times217}^{PS}}$	42 ± 9	D_{1420}	818.1 ± 4.8	$\sigma_8(0.51)$	0.6208 ± 0.0046
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	D_{2000}	231.3 ± 1.6	$f\sigma_8(0.61)$	0.4684 ± 0.0039
$\boldsymbol{A^{kSZ}}$	< 4.10	$n_{\rm s,0.002}$	0.9659 ± 0.0039	$\sigma_8(0.61)$	0.5907 ± 0.0044
$\boldsymbol{A_{100}^{dust}}$	8.9 ± 1.8	$Y_{\rm P}$	0.2434 ± 0.0037	$f\sigma_8(2.33)$	0.2978 ± 0.0022
$\boldsymbol{A_{143}^{dust}}$	10.9 ± 1.8	$Y_{\rm P}^{\rm BBN}$	0.2448 ± 0.0038	$\sigma_8(2.33)$	0.3071 ± 0.0024
$\boldsymbol{A_{143\times217}^{dust}}$	18.6 ± 3.3	Age/Gyr	13.791 ± 0.021	f_{2000}^{143}	29.1 ± 2.8
$\boldsymbol{A_{217}^{dust}}$	93.8 ± 7.3	z_*	1089.75 ± 0.24	$f_{2000}^{143\times217}$	31.9 ± 1.9
$\boldsymbol{A_{100}^{dust}}$	0.116 ± 0.037	r_*	144.59 ± 0.23	f_{2000}^{217}	106.8 ± 1.8
$\boldsymbol{A_{100\times143}^{dust}}$	0.134 ± 0.029	$100\theta_*$	1.04118 ± 0.00029	$\chi^2_{\rm lensing}$	9.08 ± 0.56
$\boldsymbol{A_{100\times217}^{dust}}$	0.482 ± 0.086	$D_{\rm M}(z_*)/{\rm Gpc}$	13.888 ± 0.022	$\chi^2_{\rm simall}$	397.2 ± 1.9
$\boldsymbol{A_{143}^{dust}}$	0.224 ± 0.053	$z_{\rm drag}$	1059.88 ± 0.36	$\chi^2_{\rm lowl}$	23.32 ± 0.82
$\boldsymbol{A_{143\times217}^{dust}}$	0.665 ± 0.081	$r_{\rm drag}$	147.25 ± 0.24	$\chi^2_{\rm plik}$	2359.4 ± 5.8
$\boldsymbol{A_{217}^{dust}}$	2.08 ± 0.27	$k_{\rm D}$	0.14080 ± 0.00029	$\chi^2_{\rm Aver15}$	0.9 ± 1.2
$\boldsymbol{c_{100}}$	0.99967 ± 0.00061	$100\theta_{\rm D}$	0.16067 ± 0.00021	$\chi^2_{\rm 6DF}$	0.056 ± 0.062
$\boldsymbol{c_{217}}$	0.99818 ± 0.00062	$z_{\rm eq}$	3387 ± 21	$\chi^2_{\rm MGS}$	1.23 ± 0.39
H_0	67.62 ± 0.42	$k_{\rm eq}$	0.010336 ± 0.000065	$\chi^2_{\rm DR12BAO}$	4.9 ± 1.4
Ω_Λ	0.6886 ± 0.0057	$100\theta_{\rm eq}$	0.8162 ± 0.0040	$\chi^2_{\rm prior}$	11.5 ± 4.5
$\Omega_{\rm m}$	0.3114 ± 0.0057	$100\theta_{\rm s,eq}$	0.4509 ± 0.0020	$\chi^2_{\rm CMB}$	2789.1 ± 5.9
$\Omega_{\rm m}h^2$	0.14236 ± 0.00089	$H(0.15)$	72.91 ± 0.37	$\chi^2_{\rm BAO}$	6.2 ± 1.1
$\Omega_{\rm m}h^3$	0.09627 ± 0.00032	$D_{\rm M}(0.15)$	641.1 ± 3.6		

$\bar{\chi}^2_{\rm eff} = 2807.65$; $R - 1 = 0.02242$

20.59 base_yhe_plikHM_TTTEEE_lowl_lowE_Aver15_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02233 ± 0.00015	$\Omega_m h^2$	0.1432 ± 0.0013	$100\theta_{eq}$	0.8125 ± 0.0058
$\boldsymbol{\Omega_c h^2}$	0.1202 ± 0.0014	$\Omega_m h^3$	0.09625 ± 0.00032	$100\theta_{s,eq}$	0.4490 ± 0.0030
$\boldsymbol{100\theta_{MC}}$	1.04084 ± 0.00034	σ_8	0.8123 ± 0.0070	$H(0.15)$	72.57 ± 0.52
$\boldsymbol{\tau}$	$0.0553^{+0.0054}_{-0.0081}$	S_8	0.835 ± 0.016	$D_M(0.15)$	644.5 ± 5.3
$\boldsymbol{Y_P}$	0.2433 ± 0.0038	$\sigma_8\Omega_m^{0.5}$	0.4573 ± 0.0088	$H(0.38)$	82.78 ± 0.38
$\boldsymbol{\ln(10^{10} A_s)}$	$3.046^{+0.012}_{-0.016}$	$\sigma_8\Omega_m^{0.25}$	0.6095 ± 0.0081	$D_M(0.38)$	1536 ± 11
$\boldsymbol{n_s}$	0.9640 ± 0.0046	$\sigma_8/h^{0.5}$	0.991 ± 0.011	$H(0.51)$	89.55 ± 0.30
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0025	$r_{drag}h$	98.9 ± 1.1	$D_M(0.51)$	1989 ± 12
$\boldsymbol{A_{217}^{CIB}}$	47 ± 7	$\langle d^2\rangle^{1/2}$	2.452 ± 0.028	$H(0.61)$	95.22 ± 0.24
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	z_{re}	$7.77^{+0.59}_{-0.80}$	$D_M(0.61)$	2313 ± 13
$\boldsymbol{A_{143}^{tSZ}}$	$5.5^{+2.1}_{-1.9}$	$10^9 A_s$	$2.104^{+0.025}_{-0.034}$	$H(2.33)$	236.65 ± 0.82
$\boldsymbol{A_{100}^{PS}}$	257 ± 28	$10^9 A_s e^{-2\tau}$	1.883 ± 0.012	$D_M(2.33)$	5767 ± 11
$\boldsymbol{A_{143}^{PS}}$	46 ± 8	D_{40}	1234 ± 13	$f\sigma_8(0.15)$	0.4614 ± 0.0082
$\boldsymbol{A_{143\times217}^{PS}}$	43 ± 9	D_{220}	5732 ± 38	$\sigma_8(0.15)$	$0.7501^{+0.0057}_{-0.0064}$
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	D_{810}	2539 ± 13	$f\sigma_8(0.38)$	0.4786 ± 0.0066
$\boldsymbol{A^{kSZ}}$	< 4.05	D_{1420}	817.5 ± 4.8	$\sigma_8(0.38)$	$0.6643^{+0.0046}_{-0.0055}$
$\boldsymbol{A_{100}^{dust TT}}$	8.9 ± 1.8	D_{2000}	231.1 ± 1.6	$f\sigma_8(0.51)$	0.4765 ± 0.0058
$\boldsymbol{A_{143}^{dust TT}}$	10.8 ± 1.8	$n_{s,0.002}$	0.9640 ± 0.0046	$\sigma_8(0.51)$	$0.6215^{+0.0042}_{-0.0051}$
$\boldsymbol{A_{143\times217}^{dust TT}}$	18.5 ± 3.3	Y_P	0.2433 ± 0.0038	$f\sigma_8(0.61)$	0.4711 ± 0.0052
$\boldsymbol{A_{217}^{dust TT}}$	93.7 ± 7.3	Y_P^{BBN}	0.2446 ± 0.0038	$\sigma_8(0.61)$	$0.5912^{+0.0039}_{-0.0049}$
$\boldsymbol{A_{100}^{dust TE}}$	0.115 ± 0.038	Age/Gyr	13.804 ± 0.026	$f\sigma_8(2.33)$	$0.2979^{+0.0019}_{-0.0025}$
$\boldsymbol{A_{100\times143}^{dust TE}}$	0.135 ± 0.029	z_*	1089.90 ± 0.29	$\sigma_8(2.33)$	$0.3069^{+0.0020}_{-0.0026}$
$\boldsymbol{A_{100\times217}^{dust TE}}$	0.484 ± 0.084	r_*	144.42 ± 0.30	f_{2000}^{143}	29.2 ± 2.8
$\boldsymbol{A_{143}^{dust TE}}$	0.225 ± 0.053	$100\theta_*$	1.04108 ± 0.00032	$f_{2000}^{143\times217}$	32.0 ± 1.9
$\boldsymbol{A_{143\times217}^{dust TE}}$	0.668 ± 0.080	$D_M(z_*)$/Gpc	13.872 ± 0.028	f_{2000}^{217}	106.9 ± 1.8
$\boldsymbol{A_{217}^{dust TE}}$	2.08 ± 0.27	z_{drag}	1059.80 ± 0.37	χ^2_{simall}	397.1 ± 1.9
$\boldsymbol{c_{100}}$	0.99967 ± 0.00061	r_{drag}	147.09 ± 0.30	χ^2_{lowl}	23.7 ± 1.0
$\boldsymbol{c_{217}}$	0.99818 ± 0.00062	k_D	0.14093 ± 0.00033	χ^2_{plik}	2359.3 ± 5.8
H_0	67.23 ± 0.61	$100\theta_D$	0.16070 ± 0.00022	χ^2_{Aver15}	0.9 ± 1.2
Ω_Λ	0.6831 ± 0.0085	z_{eq}	3406 ± 31	χ^2_{prior}	11.5 ± 4.5
Ω_m	0.3169 ± 0.0085	k_{eq}	0.010396 ± 0.000094	χ^2_{CMB}	2780.1 ± 5.8

$\bar{\chi}^2_{eff} = 2792.46$; $R - 1 = 0.01390$

20.60 base_yhe_plikHM_TTTEEE_lowl_lowE_Aver15_post_BAO_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02240 ± 0.00014	σ_8	$0.8099^{+0.0062}_{-0.0072}$	$H(0.38)$	83.03 ± 0.29
$\boldsymbol{\Omega_c h^2}$	0.1193 ± 0.0010	S_8	0.825 ± 0.012	$D_{\rm M}(0.38)$	1528.8 ± 7.7
$\boldsymbol{100\theta_{MC}}$	1.04096 ± 0.00031	$\sigma_8\Omega_{\rm m}^{0.5}$	0.4518 ± 0.0068	$H(0.51)$	89.74 ± 0.23
$\boldsymbol{\tau}$	$0.0563^{+0.0057}_{-0.0081}$	$\sigma_8\Omega_{\rm m}^{0.25}$	0.6049 ± 0.0067	$D_{\rm M}(0.51)$	1980.5 ± 9.1
$\boldsymbol{Y_P}$	0.2436 ± 0.0037	$\sigma_8/h^{0.5}$	0.9848 ± 0.0097	$H(0.61)$	95.36 ± 0.19
$\boldsymbol{\ln(10^{10}A_s)}$	$3.046^{+0.013}_{-0.016}$	$r_{\rm drag}h$	99.60 ± 0.77	$D_{\rm M}(0.61)$	2304.6 ± 9.8
$\boldsymbol{n_s}$	0.9662 ± 0.0040	$\langle d^2\rangle^{1/2}$	2.438 ± 0.024	$H(2.33)$	236.12 ± 0.62
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0025	$z_{\rm re}$	$7.85^{+0.62}_{-0.81}$	$D_{\rm M}(2.33)$	5760.4 ± 9.4
$\boldsymbol{A^{CIB}_{217}}$	46 ± 7	$10^9 A_{\rm s}$	$2.104^{+0.026}_{-0.035}$	$f\sigma_8(0.15)$	0.4564 ± 0.0064
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$10^9 A_{\rm s}e^{-2\tau}$	1.880 ± 0.011	$\sigma_8(0.15)$	$0.7485^{+0.0055}_{-0.0065}$
$\boldsymbol{A^{tSZ}_{143}}$	$5.5^{+2.1}_{-1.8}$	D_{40}	1229 ± 12	$f\sigma_8(0.38)$	0.4748 ± 0.0054
$\boldsymbol{A^{PS}_{100}}$	257 ± 28	D_{220}	5737 ± 38	$\sigma_8(0.38)$	$0.6635^{+0.0046}_{-0.0057}$
$\boldsymbol{A^{PS}_{143}}$	45 ± 8	D_{810}	2539 ± 13	$f\sigma_8(0.51)$	0.4734 ± 0.0049
$\boldsymbol{A^{PS}_{143\times217}}$	42 ± 9	D_{1420}	818.0 ± 4.8	$\sigma_8(0.51)$	$0.6209^{+0.0043}_{-0.0053}$
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	D_{2000}	231.3 ± 1.6	$f\sigma_8(0.61)$	0.4685 ± 0.0046
$\boldsymbol{A^{kSZ}}$	< 4.08	$n_{\rm s,0.002}$	0.9662 ± 0.0040	$\sigma_8(0.61)$	$0.5908^{+0.0040}_{-0.0050}$
$\boldsymbol{A^{dustTT}_{100}}$	8.9 ± 1.8	$Y_{\rm P}$	0.2436 ± 0.0037	$f\sigma_8(2.33)$	$0.2979^{+0.0020}_{-0.0026}$
$\boldsymbol{A^{dustTT}_{143}}$	10.9 ± 1.8	$Y_{\rm P}^{\rm BBN}$	0.2449 ± 0.0037	$\sigma_8(2.33)$	$0.3072^{+0.0021}_{-0.0027}$
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.6 ± 3.3	Age/Gyr	13.791 ± 0.021	f^{143}_{2000}	29.1 ± 2.8
$\boldsymbol{A^{dustTT}_{217}}$	93.8 ± 7.4	z_*	1089.75 ± 0.25	$f^{143\times217}_{2000}$	31.9 ± 1.9
$\boldsymbol{A^{dustTE}_{100}}$	0.116 ± 0.037	r_*	144.60 ± 0.24	f^{217}_{2000}	106.8 ± 1.8
$\boldsymbol{A^{dustTE}_{100\times143}}$	0.134 ± 0.029	$100\theta_*$	1.04119 ± 0.00029	$\chi^2_{\rm simall}$	397.2 ± 2.1
$\boldsymbol{A^{dustTE}_{100\times217}}$	0.483 ± 0.087	$D_{\rm M}(z_*)/{\rm Gpc}$	13.888 ± 0.023	$\chi^2_{\rm lowl}$	23.27 ± 0.87
$\boldsymbol{A^{dustTE}_{143}}$	0.224 ± 0.054	$z_{\rm drag}$	1059.88 ± 0.36	$\chi^2_{\rm plik}$	2359.7 ± 6.0
$\boldsymbol{A^{dustTE}_{143\times217}}$	0.664 ± 0.081	$r_{\rm drag}$	147.26 ± 0.25	$\chi^2_{\rm Aver15}$	0.9 ± 1.2
$\boldsymbol{A^{dustTE}_{217}}$	2.07 ± 0.27	$k_{\rm D}$	0.14079 ± 0.00030	$\chi^2_{\rm 6DF}$	0.058 ± 0.067
$\boldsymbol{c_{100}}$	0.99966 ± 0.00062	$100\theta_{\rm D}$	0.16067 ± 0.00021	$\chi^2_{\rm MGS}$	1.25 ± 0.42
$\boldsymbol{c_{217}}$	0.99819 ± 0.00062	$z_{\rm eq}$	3386 ± 23	$\chi^2_{\rm DR12BAO}$	4.9 ± 1.5
H_0	67.64 ± 0.45	$k_{\rm eq}$	0.010334 ± 0.000070	$\chi^2_{\rm prior}$	11.5 ± 4.5
Ω_Λ	0.6888 ± 0.0061	$100\theta_{\rm eq}$	0.8163 ± 0.0043	$\chi^2_{\rm BAO}$	6.2 ± 1.2
$\Omega_{\rm m}$	0.3112 ± 0.0061	$100\theta_{\rm s,eq}$	0.4510 ± 0.0022	$\chi^2_{\rm CMB}$	2780.2 ± 5.9
$\Omega_{\rm m}h^2$	0.14233 ± 0.00096	$H(0.15)$	72.92 ± 0.39		
$\Omega_{\rm m}h^3$	0.09627 ± 0.00032	$D_{\rm M}(0.15)$	641.0 ± 3.8		

$\bar{\chi}^2_{\rm eff} = 2798.81$; $R - 1 = 0.02120$

20.61 base_yhe_plikHM_TTTEEE_lowl_lowE_Aver15_post_lensing_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02235 ± 0.00015	$\Omega_m h^3$	0.09625 ± 0.00032	$H(0.15)$	72.65 ± 0.46
$\boldsymbol{\Omega_c h^2}$	0.1200 ± 0.0012	σ_8	0.8111 ± 0.0057	$D_M(0.15)$	643.7 ± 4.6
$\boldsymbol{100\theta_{MC}}$	1.04085 ± 0.00033	S_8	0.832 ± 0.013	$H(0.38)$	82.84 ± 0.34
$\boldsymbol{\tau}$	$0.0550^{+0.0055}_{-0.0076}$	$\sigma_8\Omega_m^{0.5}$	0.4556 ± 0.0070	$D_M(0.38)$	1534.1 ± 9.2
$\boldsymbol{Y_P}$	0.2433 ± 0.0038	$\sigma_8\Omega_m^{0.25}$	0.6079 ± 0.0063	$H(0.51)$	89.60 ± 0.27
$\boldsymbol{\ln(10^{10}A_s)}$	$3.045^{+0.011}_{-0.014}$	$\sigma_8/h^{0.5}$	0.9886 ± 0.0088	$D_M(0.51)$	1987 ± 11
$\boldsymbol{n_s}$	0.9643 ± 0.0043	$r_{drag}h$	99.06 ± 0.92	$H(0.61)$	95.25 ± 0.22
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0025	$\langle d^2\rangle^{1/2}$	2.448 ± 0.021	$D_M(0.61)$	2311 ± 12
$\boldsymbol{A_{217}^{CIB}}$	47 ± 7	z_{re}	$7.73^{+0.59}_{-0.76}$	$H(2.33)$	236.51 ± 0.70
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	10^9A_s	$2.101^{+0.023}_{-0.031}$	$D_M(2.33)$	5765 ± 11
$\boldsymbol{A_{143}^{tSZ}}$	$5.5^{+2.1}_{-1.9}$	$10^9A_se^{-2\tau}$	1.882 ± 0.011	$f\sigma_8(0.15)$	0.4598 ± 0.0064
$\boldsymbol{A_{100}^{PS}}$	257 ± 28	D_{40}	1233 ± 12	$\sigma_8(0.15)$	0.7492 ± 0.0050
$\boldsymbol{A_{143}^{PS}}$	45 ± 8	D_{220}	5734 ± 38	$f\sigma_8(0.38)$	0.4773 ± 0.0051
$\boldsymbol{A_{143\times217}^{PS}}$	42 ± 9	D_{810}	2539 ± 13	$\sigma_8(0.38)$	$0.6636^{+0.0041}_{-0.0047}$
$\boldsymbol{A_{217}^{PS}}$	115 ± 10	D_{1420}	817.4 ± 4.8	$f\sigma_8(0.51)$	0.4754 ± 0.0045
$\boldsymbol{A^{kSZ}}$	< 4.20	D_{2000}	231.1 ± 1.6	$\sigma_8(0.51)$	$0.6209^{+0.0038}_{-0.0045}$
$\boldsymbol{A_{100}^{dustTT}}$	8.9 ± 1.8	$n_{s,0.002}$	0.9643 ± 0.0043	$f\sigma_8(0.61)$	0.4701 ± 0.0041
$\boldsymbol{A_{143}^{dustTT}}$	10.9 ± 1.8	Y_P	0.2433 ± 0.0038	$\sigma_8(0.61)$	$0.5907^{+0.0036}_{-0.0043}$
$\boldsymbol{A_{143\times217}^{dustTT}}$	18.6 ± 3.3	Y_P^{BBN}	0.2446 ± 0.0038	$f\sigma_8(2.33)$	$0.2977^{+0.0018}_{-0.0023}$
$\boldsymbol{A_{217}^{dustTT}}$	93.8 ± 7.4	Age/Gyr	13.801 ± 0.024	$\sigma_8(2.33)$	$0.3067^{+0.0020}_{-0.0024}$
$\boldsymbol{A_{100}^{dustTE}}$	0.116 ± 0.037	z_*	1089.86 ± 0.27	f_{2000}^{143}	29.3 ± 2.8
$\boldsymbol{A_{100\times143}^{dustTE}}$	0.135 ± 0.029	r_*	144.47 ± 0.26	$f_{2000}^{143\times217}$	32.0 ± 1.9
$\boldsymbol{A_{100\times217}^{dustTE}}$	0.484 ± 0.085	$100\theta_*$	1.04109 ± 0.00031	f_{2000}^{217}	106.9 ± 1.8
$\boldsymbol{A_{143}^{dustTE}}$	0.225 ± 0.053	$D_M(z_*)$/Gpc	13.876 ± 0.025	$\chi^2_{lensing}$	9.20 ± 0.67
$\boldsymbol{A_{143\times217}^{dustTE}}$	0.666 ± 0.080	z_{drag}	1059.81 ± 0.37	χ^2_{simall}	396.9 ± 1.7
$\boldsymbol{A_{217}^{dustTE}}$	2.08 ± 0.27	r_{drag}	147.13 ± 0.27	χ^2_{lowl}	23.62 ± 0.93
$\boldsymbol{c_{100}}$	0.99965 ± 0.00061	k_D	0.14089 ± 0.00031	χ^2_{plik}	2359.1 ± 5.7
$\boldsymbol{c_{217}}$	0.99819 ± 0.00062	$100\theta_D$	0.16069 ± 0.00021	χ^2_{Aver15}	0.9 ± 1.3
H_0	67.33 ± 0.54	z_{eq}	3401 ± 26	χ^2_{prior}	11.5 ± 4.5
Ω_Λ	0.6845 ± 0.0073	k_{eq}	0.010380 ± 0.000081	χ^2_{CMB}	2788.9 ± 5.8
Ω_m	0.3155 ± 0.0073	$100\theta_{eq}$	0.8135 ± 0.0050		
$\Omega_m h^2$	0.1430 ± 0.0011	$100\theta_{s,eq}$	0.4495 ± 0.0025		

$\bar{\chi}^2_{eff} = 2801.26$; $R - 1 = 0.01556$

20.62 base_yhe_plikHM_TTTEEE_lowl_lowE_Aver15_post_BAO_lensing_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02240 ± 0.00014	σ_8	0.8101 ± 0.0057	$H(0.38)$	83.03 ± 0.27
$\boldsymbol{\Omega_c h^2}$	0.11929 ± 0.00093	S_8	0.825 ± 0.010	$D_{\rm M}(0.38)$	1528.8 ± 7.3
$\boldsymbol{100\theta_{MC}}$	1.04095 ± 0.00031	$\sigma_8\Omega_{\rm m}^{0.5}$	0.4519 ± 0.0057	$H(0.51)$	89.74 ± 0.22
$\boldsymbol{\tau}$	$0.0566^{+0.0058}_{-0.0076}$	$\sigma_8\Omega_{\rm m}^{0.25}$	0.6051 ± 0.0056	$D_{\rm M}(0.51)$	1980.5 ± 8.5
$\boldsymbol{Y_P}$	0.2435 ± 0.0037	$\sigma_8/h^{0.5}$	0.9851 ± 0.0081	$H(0.61)$	95.36 ± 0.19
$\boldsymbol{\ln(10^{10}A_s)}$	$3.047^{+0.012}_{-0.015}$	$r_{\rm drag}h$	99.60 ± 0.72	$D_{\rm M}(0.61)$	2304.7 ± 9.2
$\boldsymbol{n_s}$	0.9660 ± 0.0039	$\langle d^2\rangle^{1/2}$	2.439 ± 0.020	$H(2.33)$	236.13 ± 0.57
$\boldsymbol{y_{cal}}$	1.0007 ± 0.0024	$z_{\rm re}$	$7.87^{+0.62}_{-0.74}$	$D_{\rm M}(2.33)$	5760.4 ± 9.2
$\boldsymbol{A^{CIB}_{217}}$	46 ± 7	$10^9 A_{\rm s}$	$2.105^{+0.025}_{-0.031}$	$f\sigma_8(0.15)$	0.4565 ± 0.0054
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$10^9 A_{\rm s}e^{-2\tau}$	1.880 ± 0.010	$\sigma_8(0.15)$	0.7486 ± 0.0052
$\boldsymbol{A^{tSZ}_{143}}$	$5.5^{+2.1}_{-1.9}$	D_{40}	1230 ± 11	$f\sigma_8(0.38)$	0.4749 ± 0.0045
$\boldsymbol{A^{PS}_{100}}$	257 ± 28	D_{220}	5739 ± 37	$\sigma_8(0.38)$	$0.6636^{+0.0043}_{-0.0049}$
$\boldsymbol{A^{PS}_{143}}$	45 ± 8	D_{810}	2539 ± 13	$f\sigma_8(0.51)$	0.4736 ± 0.0041
$\boldsymbol{A^{PS}_{143\times217}}$	42 ± 9	D_{1420}	818.1 ± 4.8	$\sigma_8(0.51)$	$0.6211^{+0.0040}_{-0.0046}$
$\boldsymbol{A^{PS}_{217}}$	115 ± 10	D_{2000}	231.3 ± 1.6	$f\sigma_8(0.61)$	0.4686 ± 0.0038
$\boldsymbol{A^{kSZ}}$	< 4.10	$n_{\rm s,0.002}$	0.9660 ± 0.0039	$\sigma_8(0.61)$	$0.5910^{+0.0038}_{-0.0044}$
$\boldsymbol{A^{dustTT}_{100}}$	8.9 ± 1.8	$Y_{\rm P}$	0.2435 ± 0.0037	$f\sigma_8(2.33)$	$0.2980^{+0.0019}_{-0.0023}$
$\boldsymbol{A^{dustTT}_{143}}$	10.9 ± 1.8	$Y_{\rm P}^{\rm BBN}$	0.2448 ± 0.0038	$\sigma_8(2.33)$	$0.3072^{+0.0020}_{-0.0024}$
$\boldsymbol{A^{dustTT}_{143\times217}}$	18.6 ± 3.3	Age/Gyr	13.791 ± 0.021	f^{143}_{2000}	29.1 ± 2.8
$\boldsymbol{A^{dustTT}_{217}}$	93.8 ± 7.4	z_*	1089.75 ± 0.24	$f^{143\times217}_{2000}$	31.8 ± 1.9
$\boldsymbol{A^{dustTE}_{100}}$	0.116 ± 0.037	r_*	144.60 ± 0.22	f^{217}_{2000}	106.8 ± 1.8
$\boldsymbol{A^{dustTE}_{100\times143}}$	0.134 ± 0.029	$100\theta_*$	1.04118 ± 0.00029	$\chi^2_{\rm lensing}$	9.05 ± 0.52
$\boldsymbol{A^{dustTE}_{100\times217}}$	0.483 ± 0.086	$D_{\rm M}(z_*)$/Gpc	13.888 ± 0.022	$\chi^2_{\rm simall}$	397.2 ± 1.9
$\boldsymbol{A^{dustTE}_{143}}$	0.224 ± 0.053	$z_{\rm drag}$	1059.89 ± 0.36	$\chi^2_{\rm lowl}$	23.32 ± 0.82
$\boldsymbol{A^{dustTE}_{143\times217}}$	0.664 ± 0.081	$r_{\rm drag}$	147.25 ± 0.24	$\chi^2_{\rm plik}$	2359.4 ± 5.8
$\boldsymbol{A^{dustTE}_{217}}$	2.08 ± 0.27	$k_{\rm D}$	0.14080 ± 0.00029	$\chi^2_{\rm Aver15}$	0.9 ± 1.2
$\boldsymbol{c_{100}}$	0.99966 ± 0.00061	$100\theta_{\rm D}$	0.16066 ± 0.00021	$\chi^2_{\rm 6DF}$	0.055 ± 0.061
$\boldsymbol{c_{217}}$	0.99818 ± 0.00062	$z_{\rm eq}$	3386 ± 21	$\chi^2_{\rm MGS}$	1.24 ± 0.39
H_0	67.64 ± 0.42	$k_{\rm eq}$	0.010335 ± 0.000064	$\chi^2_{\rm DR12BAO}$	4.9 ± 1.3
Ω_Λ	0.6888 ± 0.0056	$100\theta_{\rm eq}$	0.8163 ± 0.0039	$\chi^2_{\rm prior}$	11.5 ± 4.5
$\Omega_{\rm m}$	0.3112 ± 0.0056	$100\theta_{\rm s,eq}$	0.4509 ± 0.0020	$\chi^2_{\rm CMB}$	2789.0 ± 5.9
$\Omega_{\rm m}h^2$	0.14234 ± 0.00088	$H(0.15)$	72.92 ± 0.36	$\chi^2_{\rm BAO}$	6.2 ± 1.1
$\Omega_{\rm m}h^3$	0.09627 ± 0.00032	$D_{\rm M}(0.15)$	641.0 ± 3.6		

$\bar{\chi}^2_{\rm eff} = 2807.50$; $R - 1 = 0.02309$

20.63 base_yhe_CamSpecHM_TTTEEE_lowl_lowE_Aver15

Parameter	Best fit	68% limits	Parameter	Best fit	68% limits	Parameter	Best fit	68% limits
$\boldsymbol{\Omega_b h^2}$	0.022378	0.02228 ± 0.00016	σ_8	0.8229	0.8075 ± 0.0076	$100\theta_{s,eq}$	0.45159	0.4503 ± 0.0031
$\boldsymbol{\Omega_c h^2}$	0.11902	0.1196 ± 0.0014	S_8	0.8360	0.826 ± 0.016	$H(0.15)$	72.99	72.68 ± 0.54
$\boldsymbol{100\theta_{MC}}$	1.040990	1.04081 ± 0.00035	$\sigma_8\Omega_m^{0.5}$	0.4579	0.4526 ± 0.0090	$D_M(0.15)$	640.2	643.3 ± 5.4
$\boldsymbol{\tau}$	0.0706	0.0526 ± 0.0079	$\sigma_8\Omega_m^{0.25}$	0.6138	0.6045 ± 0.0084	$H(0.38)$	83.071	82.84 ± 0.39
$\boldsymbol{Y_P}$	0.24470	0.2438 ± 0.0038	$\sigma_8/h^{0.5}$	0.9999	0.984 ± 0.012	$D_M(0.38)$	1527.4	1534 ± 11
$\boldsymbol{\ln(10^{10}A_s)}$	3.0785	3.038 ± 0.016	$r_{drag}h$	99.79	99.2 ± 1.1	$H(0.51)$	89.771	89.58 ± 0.31
$\boldsymbol{n_s}$	0.96812	0.9651 ± 0.0048	$\langle d^2\rangle^{1/2}$	2.4714	2.434 ± 0.029	$D_M(0.51)$	1978.9	1986 ± 13
$\boldsymbol{y_{cal}}$	1.00295	1.0004 ± 0.0025	z_{re}	9.24	7.49 ± 0.82	$H(0.61)$	95.377	95.21 ± 0.25
$\boldsymbol{A_{100}^{PS}}$	234.5	240 ± 25	$10^9 A_s$	2.1726	2.086 ± 0.034	$D_M(0.61)$	2302.9	2311 ± 14
$\boldsymbol{A_{143}^{PS}}$	42.8	39 ± 8	$10^9 A_s e^{-2\tau}$	1.8866	1.877 ± 0.012	$H(2.33)$	235.93	236.21 ± 0.85
$\boldsymbol{A_{217}^{PS}}$	105.0	102 ± 10	D_{40}	1234.2	1227 ± 13	$D_M(2.33)$	5760.1	5768 ± 12
$\boldsymbol{A_{217}^{CIB}}$	40.7	40 ± 7	D_{220}	5752.7	5717 ± 39	$f\sigma_8(0.15)$	0.4627	0.4569 ± 0.0084
$\boldsymbol{A_{143}^{tSZ}}$	5.24	$3.9^{+1.8}_{-2.6}$	D_{810}	2548.6	2534 ± 13	$\sigma_8(0.15)$	0.7605	0.7459 ± 0.0067
$\boldsymbol{r_{143\times217}^{PS}}$	0.674	0.66 ± 0.13	D_{1420}	821.00	815.5 ± 4.8	$f\sigma_8(0.38)$	0.4818	0.4746 ± 0.0069
$\boldsymbol{r_{143\times217}^{CIB}}$	0.730	$0.56^{+0.40}_{-0.17}$	D_{2000}	232.37	230.3 ± 1.6	$\sigma_8(0.38)$	0.6744	0.6609 ± 0.0057
$\boldsymbol{\xi^{tSZ\times CIB}}$	0.54	—	$n_{s,0.002}$	0.96812	0.9651 ± 0.0048	$f\sigma_8(0.51)$	0.4806	0.4729 ± 0.0061
$\boldsymbol{A^{kSZ}}$	1.73	$4.7^{+2.4}_{-3.9}$	Y_P	0.24470	0.2438 ± 0.0038	$\sigma_8(0.51)$	0.6312	0.6184 ± 0.0053
$\boldsymbol{A_{100}^{dust}}$	1.009	1.01 ± 0.20	Y_P^{BBN}	0.24602	0.2451 ± 0.0039	$f\sigma_8(0.61)$	0.4756	0.4677 ± 0.0055
$\boldsymbol{A_{143}^{dust}}$	0.953	0.96 ± 0.18	Age/Gyr	13.7905	13.808 ± 0.026	$\sigma_8(0.61)$	0.60063	0.5884 ± 0.0050
$\boldsymbol{A_{217}^{dust}}$	0.981	0.97 ± 0.10	z_*	1089.795	1089.94 ± 0.31	$f\sigma_8(2.33)$	0.30292	0.2966 ± 0.0025
$\boldsymbol{A_{143\times217}^{dust}}$	0.997	1.03 ± 0.16	r_*	144.681	144.61 ± 0.32	$\sigma_8(2.33)$	0.31238	0.3056 ± 0.0026
$\boldsymbol{c_{100}}$	0.99773	0.9975 ± 0.0011	$100\theta_*$	1.041190	1.04105 ± 0.00031	f_{2000}^{143}	28.79	29.6 ± 2.9
$\boldsymbol{c_{217}}$	1.00116	1.0011 ± 0.0016	$D_M(z_*)$/Gpc	13.8957	13.890 ± 0.030	f_{2000}^{217}	106.37	106.8 ± 1.9
$\boldsymbol{c_{TE}}$	0.99506	0.9965 ± 0.0049	z_{drag}	1059.856	1059.64 ± 0.39	$f_{2000}^{143\times217}$	31.21	32.1 ± 2.1
$\boldsymbol{c_{EE}}$	0.99156	0.9918 ± 0.0050	r_{drag}	147.344	147.30 ± 0.32	χ^2_{simall}	402.51	396.9 ± 1.7
H_0	67.73	67.38 ± 0.63	k_D	0.140635	0.14064 ± 0.00037	χ^2_{lowl}	23.31	23.3 ± 1.0
Ω_Λ	0.6903	0.6859 ± 0.0087	$100\theta_D$	0.160759	0.16082 ± 0.00024	$\chi^2_{CamSpec}$	11498.1	11514.6 ± 5.6
Ω_m	0.3097	0.3141 ± 0.0087	z_{eq}	3379.0	3391 ± 32	χ^2_{Aver15}	0.079	0.9 ± 1.3
$\Omega_m h^2$	0.14204	0.1425 ± 0.0013	k_{eq}	0.010313	0.010350 ± 0.000097	χ^2_{prior}	3.37	7.8 ± 3.4
$\Omega_m h^3$	0.096203	0.09604 ± 0.00034	$100\theta_{eq}$	0.8175	0.8150 ± 0.0060	χ^2_{CMB}	11923.9	11934.8 ± 5.7

Best-fit $\chi^2_{eff} = 11927.35$; $\bar{\chi}^2_{eff} = 11943.52$; $R - 1 = 0.01118$

χ^2_{eff}: Abund - Yp_Aver2015: 0.08 CMB - simall_100x143_offlike5_EE_Aplanck_B: 402.51 commander_dx12_v3_2_29: 23.31 CamSpec like_10.7HM_1400_unified: 11498.08

20.64 base_yhe_CamSpecHM_TTTEEE_lowl_lowE_Aver15_post_BAO

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02232 ± 0.00015	$\sigma_8\Omega_m^{0.5}$	0.4484 ± 0.0070	$D_M(0.38)$	1528.2 ± 7.9
$\boldsymbol{\Omega_c h^2}$	0.1189 ± 0.0010	$\sigma_8\Omega_m^{0.25}$	0.6011 ± 0.0070	$H(0.51)$	89.73 ± 0.24
$\boldsymbol{100\theta_{MC}}$	1.04091 ± 0.00033	$\sigma_8/h^{0.5}$	0.979 ± 0.010	$D_M(0.51)$	1979.9 ± 9.3
$\boldsymbol{\tau}$	0.0535 ± 0.0079	$r_{drag}h$	99.81 ± 0.79	$H(0.61)$	95.33 ± 0.20
$\boldsymbol{Y_P}$	0.2439 ± 0.0038	$\langle d^2\rangle^{1/2}$	2.424 ± 0.025	$D_M(0.61)$	2304 ± 10
$\boldsymbol{\ln(10^{10}A_s)}$	3.038 ± 0.016	z_{re}	7.56 ± 0.80	$H(2.33)$	235.80 ± 0.64
$\boldsymbol{n_s}$	0.9668 ± 0.0042	$10^9 A_s$	2.087 ± 0.034	$D_M(2.33)$	5763.2 ± 9.8
$\boldsymbol{y_{cal}}$	1.0004 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.875 ± 0.011	$f\sigma_8(0.15)$	0.4531 ± 0.0066
$\boldsymbol{A_{100}^{PS}}$	239 ± 25	D_{40}	1224 ± 12	$\sigma_8(0.15)$	0.7447 ± 0.0065
$\boldsymbol{A_{143}^{PS}}$	39 ± 8	D_{220}	5721 ± 39	$f\sigma_8(0.38)$	0.4717 ± 0.0057
$\boldsymbol{A_{217}^{PS}}$	102 ± 10	D_{810}	2534 ± 13	$\sigma_8(0.38)$	0.6604 ± 0.0057
$\boldsymbol{A_{217}^{CIB}}$	40 ± 7	D_{1420}	816.0 ± 4.7	$f\sigma_8(0.51)$	0.4705 ± 0.0052
$\boldsymbol{A_{143}^{tSZ}}$	$3.9^{+1.9}_{-2.6}$	D_{2000}	230.4 ± 1.6	$\sigma_8(0.51)$	0.6181 ± 0.0053
$\boldsymbol{r_{143\times217}^{PS}}$	0.66 ± 0.13	$n_{s,0.002}$	0.9668 ± 0.0042	$f\sigma_8(0.61)$	0.4657 ± 0.0048
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.55^{+0.38}_{-0.19}$	Y_P	0.2439 ± 0.0038	$\sigma_8(0.61)$	0.5882 ± 0.0050
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	0.2453 ± 0.0038	$f\sigma_8(2.33)$	0.2966 ± 0.0025
$\boldsymbol{A^{kSZ}}$	$4.7^{+2.1}_{-4.1}$	Age/Gyr	13.798 ± 0.022	$\sigma_8(2.33)$	0.3059 ± 0.0026
$\boldsymbol{A_{100}^{dust}}$	1.00 ± 0.20	z_*	1089.83 ± 0.26	f_{2000}^{143}	29.5 ± 2.9
$\boldsymbol{A_{143}^{dust}}$	0.97 ± 0.18	r_*	144.75 ± 0.25	f_{2000}^{217}	106.6 ± 2.0
$\boldsymbol{A_{217}^{dust}}$	0.97 ± 0.10	$100\theta_*$	1.04113 ± 0.00029	$f_{2000}^{143\times217}$	31.9 ± 2.0
$\boldsymbol{A_{143\times217}^{dust}}$	1.03 ± 0.16	$D_M(z_*)$/Gpc	13.903 ± 0.024	χ^2_{simall}	397.0 ± 1.7
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	z_{drag}	1059.70 ± 0.38	χ^2_{lowl}	22.93 ± 0.86
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	r_{drag}	147.44 ± 0.27	$\chi^2_{CamSpec}$	11514.7 ± 5.6
$\boldsymbol{c_{TE}}$	0.9966 ± 0.0049	k_D	0.14053 ± 0.00034	χ^2_{Aver15}	0.9 ± 1.3
$\boldsymbol{c_{EE}}$	0.9922 ± 0.0050	$100\theta_D$	0.16080 ± 0.00024	χ^2_{6DF}	0.046 ± 0.058
H_0	67.69 ± 0.46	z_{eq}	3375 ± 24	χ^2_{MGS}	1.36 ± 0.45
Ω_Λ	0.6903 ± 0.0062	k_{eq}	0.010301 ± 0.000072	$\chi^2_{DR12BAO}$	4.6 ± 1.3
Ω_m	0.3097 ± 0.0062	$100\theta_{eq}$	0.8180 ± 0.0044	χ^2_{prior}	7.8 ± 3.4
$\Omega_m h^2$	0.14188 ± 0.00098	$100\theta_{s,eq}$	0.4519 ± 0.0023	χ^2_{BAO}	6.0 ± 1.0
$\Omega_m h^3$	0.09604 ± 0.00034	$H(0.15)$	72.95 ± 0.40	χ^2_{CMB}	11934.6 ± 5.6
σ_8	0.8057 ± 0.0073	$D_M(0.15)$	640.6 ± 3.9		
S_8	0.819 ± 0.013	$H(0.38)$	83.03 ± 0.30		

$\bar{\chi}^2_{eff} = 11949.33$; $R - 1 = 0.01547$

20.65 base_yhe_CamSpecHM_TTTEEE_lowl_lowE_Aver15_post_lensing

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02228 ± 0.00016	S_8	0.828 ± 0.013	$D_M(0.15)$	643.6 ± 4.8
$\boldsymbol{\Omega_c h^2}$	0.1197 ± 0.0012	$\sigma_8 \Omega_m^{0.5}$	0.4536 ± 0.0071	$H(0.38)$	82.81 ± 0.36
$\boldsymbol{100\theta_{MC}}$	1.04080 ± 0.00034	$\sigma_8 \Omega_m^{0.25}$	0.6057 ± 0.0065	$D_M(0.38)$	1534.3 ± 9.7
$\boldsymbol{\tau}$	0.0535 ± 0.0076	$\sigma_8/h^{0.5}$	0.9855 ± 0.0092	$H(0.51)$	89.56 ± 0.29
$\boldsymbol{Y_P}$	0.2437 ± 0.0038	$r_{drag} h$	99.17 ± 0.96	$D_M(0.51)$	1987 ± 11
$\boldsymbol{\ln(10^{10} A_s)}$	3.040 ± 0.015	$\langle d^2 \rangle^{1/2}$	2.439 ± 0.022	$H(0.61)$	95.20 ± 0.23
$\boldsymbol{n_s}$	0.9646 ± 0.0046	z_{re}	7.59 ± 0.77	$D_M(0.61)$	2312 ± 12
$\boldsymbol{y_{cal}}$	1.0005 ± 0.0025	$10^9 A_s$	2.091 ± 0.031	$H(2.33)$	236.27 ± 0.74
$\boldsymbol{A_{100}^{PS}}$	240 ± 25	$10^9 A_s e^{-2\tau}$	1.878 ± 0.011	$D_M(2.33)$	5769 ± 11
$\boldsymbol{A_{143}^{PS}}$	39 ± 8	D_{40}	1229 ± 12	$f\sigma_8(0.15)$	0.4579 ± 0.0066
$\boldsymbol{A_{217}^{PS}}$	102 ± 10	D_{220}	5720 ± 40	$\sigma_8(0.15)$	0.7470 ± 0.0055
$\boldsymbol{A_{217}^{CIB}}$	40^{+7}_{-7}	D_{810}	2535 ± 13	$f\sigma_8(0.38)$	0.4755 ± 0.0053
$\boldsymbol{A_{143}^{tSZ}}$	$3.9^{+1.8}_{-2.6}$	D_{1420}	815.6 ± 4.8	$\sigma_8(0.38)$	0.6618 ± 0.0049
$\boldsymbol{r_{143\times217}^{PS}}$	0.66 ± 0.13	D_{2000}	230.3 ± 1.6	$f\sigma_8(0.51)$	0.4737 ± 0.0047
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.56^{+0.42}_{-0.16}$	$n_{s,0.002}$	0.9646 ± 0.0046	$\sigma_8(0.51)$	0.6192 ± 0.0046
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P	0.2437 ± 0.0038	$f\sigma_8(0.61)$	0.4685 ± 0.0042
$\boldsymbol{A^{kSZ}}$	$4.7^{+1.9}_{-4.3}$	Y_P^{BBN}	0.2450 ± 0.0038	$\sigma_8(0.61)$	0.5891 ± 0.0044
$\boldsymbol{A_{100}^{dust}}$	1.00 ± 0.20	Age/Gyr	13.809 ± 0.025	$f\sigma_8(2.33)$	0.2969 ± 0.0023
$\boldsymbol{A_{143}^{dust}}$	0.96 ± 0.18	z_*	1089.95 ± 0.29	$\sigma_8(2.33)$	0.3059 ± 0.0025
$\boldsymbol{A_{217}^{dust}}$	0.97 ± 0.10	r_*	144.58 ± 0.28	f_{2000}^{143}	29.6 ± 2.9
$\boldsymbol{A_{143\times217}^{dust}}$	1.03 ± 0.16	$100\theta_*$	1.04103 ± 0.00031	f_{2000}^{217}	106.8 ± 2.0
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	$D_M(z_*)$/Gpc	13.888 ± 0.026	$f_{2000}^{143\times217}$	32.1 ± 2.1
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	z_{drag}	1059.64 ± 0.39	$\chi^2_{lensing}$	9.28 ± 0.70
$\boldsymbol{c_{TE}}$	0.9964 ± 0.0049	r_{drag}	147.27 ± 0.29	χ^2_{simall}	396.9 ± 1.6
$\boldsymbol{c_{EE}}$	0.9918 ± 0.0050	k_D	0.14067 ± 0.00034	χ^2_{lowl}	23.40 ± 0.94
H_0	67.34 ± 0.56	$100\theta_D$	0.16081 ± 0.00024	$\chi^2_{CamSpec}$	11514.0 ± 5.4
Ω_Λ	0.6853 ± 0.0077	z_{eq}	3393 ± 28	χ^2_{Aver15}	0.9 ± 1.3
Ω_m	0.3147 ± 0.0077	k_{eq}	0.010357 ± 0.000085	χ^2_{prior}	7.9 ± 3.4
$\Omega_m h^2$	0.1426 ± 0.0012	$100\theta_{eq}$	0.8146 ± 0.0052	χ^2_{CMB}	11943.6 ± 5.7
$\Omega_m h^3$	0.09605 ± 0.00034	$100\theta_{s,eq}$	0.4501 ± 0.0027		
σ_8	0.8087 ± 0.0061	$H(0.15)$	72.65 ± 0.48		

$\bar{\chi}^2_{eff} = 11952.40$; $R - 1 = 0.01479$

20.66 base_yhe_CamSpecHM_TTTEEE_lowl_lowE_Aver15_post_BAO_lensing

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02232 ± 0.00015	$\sigma_8\Omega_m^{0.5}$	0.4502 ± 0.0059	$D_M(0.38)$	1529.1 ± 7.5
$\boldsymbol{\Omega_c h^2}$	0.11907 ± 0.00095	$\sigma_8\Omega_m^{0.25}$	0.6031 ± 0.0058	$H(0.51)$	89.70 ± 0.23
$\boldsymbol{100\theta_{MC}}$	1.04089 ± 0.00033	$\sigma_8/h^{0.5}$	0.9824 ± 0.0085	$D_M(0.51)$	1981.0 ± 8.9
$\boldsymbol{\tau}$	0.0553 ± 0.0073	$r_{drag}h$	99.69 ± 0.74	$H(0.61)$	95.31 ± 0.20
$\boldsymbol{Y_P}$	0.2439 ± 0.0038	$\langle d^2\rangle^{1/2}$	2.432 ± 0.021	$D_M(0.61)$	2305.3 ± 9.6
$\boldsymbol{\ln(10^{10}A_s)}$	3.042 ± 0.015	z_{re}	7.75 ± 0.73	$H(2.33)$	235.90 ± 0.59
$\boldsymbol{n_s}$	0.9663 ± 0.0041	$10^9 A_s$	2.096 ± 0.030	$D_M(2.33)$	5763.8 ± 9.7
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.876 ± 0.011	$f\sigma_8(0.15)$	0.4548 ± 0.0055
$\boldsymbol{A_{100}^{PS}}$	239^{+26}_{-23}	D_{40}	1226 ± 12	$\sigma_8(0.15)$	0.7466 ± 0.0055
$\boldsymbol{A_{143}^{PS}}$	39 ± 8	D_{220}	5725 ± 39	$f\sigma_8(0.38)$	0.4733 ± 0.0047
$\boldsymbol{A_{217}^{PS}}$	102 ± 10	D_{810}	2535 ± 13	$\sigma_8(0.38)$	0.6619 ± 0.0049
$\boldsymbol{A_{217}^{CIB}}$	39 ± 7	D_{1420}	816.2 ± 4.7	$f\sigma_8(0.51)$	0.4720 ± 0.0043
$\boldsymbol{A_{143}^{tSZ}}$	$3.9^{+1.8}_{-2.6}$	D_{2000}	230.5 ± 1.6	$\sigma_8(0.51)$	0.6195 ± 0.0046
$\boldsymbol{r_{143\times217}^{PS}}$	0.66 ± 0.13	$n_{s,0.002}$	0.9663 ± 0.0041	$f\sigma_8(0.61)$	0.4672 ± 0.0040
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.55^{+0.39}_{-0.19}$	Y_P	0.2439 ± 0.0038	$\sigma_8(0.61)$	0.5895 ± 0.0044
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	0.2452 ± 0.0038	$f\sigma_8(2.33)$	0.2973 ± 0.0023
$\boldsymbol{A^{kSZ}}$	< 6.13	Age/Gyr	13.799 ± 0.022	$\sigma_8(2.33)$	0.3065 ± 0.0024
$\boldsymbol{A_{100}^{dust}}$	1.00 ± 0.20	z_*	1089.84 ± 0.25	f_{2000}^{143}	29.4 ± 2.8
$\boldsymbol{A_{143}^{dust}}$	0.96 ± 0.18	r_*	144.71 ± 0.24	f_{2000}^{217}	106.6 ± 1.9
$\boldsymbol{A_{217}^{dust}}$	0.98 ± 0.10	$100\theta_*$	1.04112 ± 0.00029	$f_{2000}^{143\times217}$	31.8 ± 2.0
$\boldsymbol{A_{143\times217}^{dust}}$	1.03 ± 0.16	$D_M(z_*)$/Gpc	13.900 ± 0.023	$\chi^2_{lensing}$	9.29 ± 0.77
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	z_{drag}	1059.71 ± 0.38	χ^2_{simall}	397.1 ± 1.8
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	r_{drag}	147.40 ± 0.25	χ^2_{lowl}	23.11 ± 0.83
$\boldsymbol{c_{TE}}$	0.9965 ± 0.0048	k_D	0.14057 ± 0.00032	$\chi^2_{CamSpec}$	11514.1 ± 5.5
$\boldsymbol{c_{EE}}$	0.9921 ± 0.0050	$100\theta_D$	0.16079 ± 0.00023	χ^2_{Aver15}	0.9 ± 1.3
H_0	67.63 ± 0.44	z_{eq}	3379 ± 22	χ^2_{6DF}	0.050 ± 0.059
Ω_Λ	0.6894 ± 0.0058	k_{eq}	0.010312 ± 0.000067	χ^2_{MGS}	1.29 ± 0.41
Ω_m	0.3106 ± 0.0058	$100\theta_{eq}$	0.8174 ± 0.0041	$\chi^2_{DR12BAO}$	4.7 ± 1.3
$\Omega_m h^2$	0.14204 ± 0.00091	$100\theta_{s,eq}$	0.4515 ± 0.0021	χ^2_{prior}	7.8 ± 3.4
$\Omega_m h^3$	0.09606 ± 0.00034	$H(0.15)$	72.90 ± 0.38	χ^2_{CMB}	11943.5 ± 5.6
σ_8	0.8079 ± 0.0061	$D_M(0.15)$	641.1 ± 3.7	χ^2_{BAO}	6.1 ± 1.0
S_8	0.822 ± 0.011	$H(0.38)$	83.00 ± 0.28		

$\bar{\chi}^2_{eff} = 11958.34$; $R - 1 = 0.01579$

20.67 base_yhe_CamSpecHM_TTTEEE_lowl_lowE_Aver15_post_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02228 ± 0.00016	σ_8	0.8086 ± 0.0070	$100\theta_{s,eq}$	0.4505 ± 0.0031
$\boldsymbol{\Omega_c h^2}$	0.1196 ± 0.0014	S_8	0.827 ± 0.016	$H(0.15)$	72.71 ± 0.54
$\boldsymbol{100\theta_{MC}}$	1.04082 ± 0.00035	$\sigma_8\Omega_m^{0.5}$	0.4529 ± 0.0090	$D_M(0.15)$	643.1 ± 5.4
$\boldsymbol{\tau}$	$0.0542^{+0.0047}_{-0.0081}$	$\sigma_8\Omega_m^{0.25}$	0.6052 ± 0.0083	$H(0.38)$	82.85 ± 0.39
$\boldsymbol{Y_P}$	0.2438 ± 0.0038	$\sigma_8/h^{0.5}$	0.985 ± 0.012	$D_M(0.38)$	1533 ± 11
$\boldsymbol{\ln(10^{10}A_s)}$	$3.041^{+0.012}_{-0.016}$	$r_{drag}h$	99.3 ± 1.1	$H(0.51)$	89.59 ± 0.31
$\boldsymbol{n_s}$	0.9653 ± 0.0048	$\langle d^2\rangle^{1/2}$	2.437 ± 0.028	$D_M(0.51)$	1986 ± 13
$\boldsymbol{y_{cal}}$	1.0004 ± 0.0025	z_{re}	$7.66^{+0.52}_{-0.82}$	$H(0.61)$	95.23 ± 0.25
$\boldsymbol{A_{100}^{PS}}$	240 ± 25	$10^9 A_s$	$2.092^{+0.024}_{-0.034}$	$D_M(0.61)$	2310 ± 14
$\boldsymbol{A_{143}^{PS}}$	39 ± 8	$10^9 A_s e^{-2\tau}$	1.877 ± 0.012	$H(2.33)$	236.18 ± 0.84
$\boldsymbol{A_{217}^{PS}}$	102 ± 10	D_{40}	1227 ± 13	$D_M(2.33)$	5768 ± 12
$\boldsymbol{A_{217}^{CIB}}$	40 ± 7	D_{220}	5717 ± 40	$f\sigma_8(0.15)$	0.4573 ± 0.0084
$\boldsymbol{A_{143}^{tSZ}}$	$3.9^{+1.8}_{-2.6}$	D_{810}	2534 ± 13	$\sigma_8(0.15)$	0.7470 ± 0.0061
$\boldsymbol{r_{143\times217}^{PS}}$	0.66 ± 0.13	D_{1420}	815.5 ± 4.8	$f\sigma_8(0.38)$	0.4751 ± 0.0068
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.56^{+0.39}_{-0.18}$	D_{2000}	230.3 ± 1.6	$\sigma_8(0.38)$	$0.6619^{+0.0046}_{-0.0055}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	$n_{s,0.002}$	0.9653 ± 0.0048	$f\sigma_8(0.51)$	0.4734 ± 0.0059
$\boldsymbol{A^{kSZ}}$	$4.7^{+2.3}_{-3.9}$	Y_P	0.2438 ± 0.0038	$\sigma_8(0.51)$	$0.6194^{+0.0041}_{-0.0051}$
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.19	Y_P^{BBN}	0.2451 ± 0.0038	$f\sigma_8(0.61)$	0.4683 ± 0.0053
$\boldsymbol{A_{143}^{dust}}$	0.96 ± 0.18	Age/Gyr	13.807 ± 0.026	$\sigma_8(0.61)$	$0.5893^{+0.0038}_{-0.0048}$
$\boldsymbol{A_{217}^{dust}}$	0.97 ± 0.10	z_*	1089.93 ± 0.30	$f\sigma_8(2.33)$	$0.2970^{+0.0018}_{-0.0024}$
$\boldsymbol{A_{143\times217}^{dust}}$	1.03 ± 0.16	r_*	144.62 ± 0.32	$\sigma_8(2.33)$	$0.3061^{+0.0019}_{-0.0026}$
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	$100\theta_*$	1.04105 ± 0.00031	f_{2000}^{143}	29.6 ± 2.9
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	$D_M(z_*)$/Gpc	13.891 ± 0.030	f_{2000}^{217}	106.7 ± 1.9
$\boldsymbol{c_{TE}}$	0.9964 ± 0.0049	z_{drag}	1059.65 ± 0.39	$f_{2000}^{143\times217}$	32.0 ± 2.0
$\boldsymbol{c_{EE}}$	0.9918 ± 0.0050	r_{drag}	147.31 ± 0.32	χ^2_{simall}	396.8 ± 1.7
H_0	67.40 ± 0.63	k_D	0.14063 ± 0.00037	χ^2_{lowl}	23.3 ± 1.0
Ω_Λ	0.6862 ± 0.0086	$100\theta_D$	0.16081 ± 0.00024	$\chi^2_{CamSpec}$	11514.4 ± 5.6
Ω_m	0.3138 ± 0.0086	z_{eq}	3390 ± 32	χ^2_{Aver15}	0.9 ± 1.3
$\Omega_m h^2$	0.1425 ± 0.0013	k_{eq}	0.010346 ± 0.000097	χ^2_{prior}	7.8 ± 3.4
$\Omega_m h^3$	0.09604 ± 0.00034	$100\theta_{eq}$	0.8153 ± 0.0060	χ^2_{CMB}	11934.5 ± 5.6

$\bar{\chi}^2_{eff} = 11943.23$; $R - 1 = 0.01041$

20.68 base_yhe_CamSpecHM_TTTEEE_lowl_lowE_Aver15_post_BAO_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02233 ± 0.00015	$\sigma_8\Omega_m^{0.5}$	0.4488 ± 0.0069	$D_M(0.38)$	1527.9 ± 7.9
$\boldsymbol{\Omega_c h^2}$	0.1189 ± 0.0010	$\sigma_8\Omega_m^{0.25}$	0.6017 ± 0.0068	$H(0.51)$	89.73 ± 0.24
$\boldsymbol{100\theta_{MC}}$	1.04091 ± 0.00033	$\sigma_8/h^{0.5}$	0.9804 ± 0.0099	$D_M(0.51)$	1979.6 ± 9.3
$\boldsymbol{\tau}$	$0.0549^{+0.0050}_{-0.0082}$	$r_{drag}h$	99.83 ± 0.79	$H(0.61)$	95.33 ± 0.20
$\boldsymbol{Y_P}$	0.2440 ± 0.0038	$\langle d^2\rangle^{1/2}$	2.427 ± 0.024	$D_M(0.61)$	2304 ± 10
$\boldsymbol{\ln(10^{10}A_s)}$	$3.041^{+0.012}_{-0.016}$	z_{re}	$7.71^{+0.55}_{-0.83}$	$H(2.33)$	235.78 ± 0.64
$\boldsymbol{n_s}$	0.9670 ± 0.0042	$10^9 A_s$	$2.092^{+0.024}_{-0.035}$	$D_M(2.33)$	5763.0 ± 9.8
$\boldsymbol{y_{cal}}$	1.0004 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.874 ± 0.011	$f\sigma_8(0.15)$	0.4535 ± 0.0065
$\boldsymbol{A_{100}^{PS}}$	239 ± 25	D_{40}	1224 ± 12	$\sigma_8(0.15)$	$0.7457^{+0.0054}_{-0.0065}$
$\boldsymbol{A_{143}^{PS}}$	39 ± 8	D_{220}	5721 ± 39	$f\sigma_8(0.38)$	0.4722 ± 0.0055
$\boldsymbol{A_{217}^{PS}}$	102 ± 10	D_{810}	2534 ± 13	$\sigma_8(0.38)$	$0.6612^{+0.0045}_{-0.0056}$
$\boldsymbol{A_{217}^{CIB}}$	40 ± 7	D_{1420}	815.9 ± 4.7	$f\sigma_8(0.51)$	0.4711 ± 0.0050
$\boldsymbol{A_{143}^{tSZ}}$	$3.9^{+1.9}_{-2.6}$	D_{2000}	230.4 ± 1.6	$\sigma_8(0.51)$	$0.6189^{+0.0041}_{-0.0052}$
$\boldsymbol{r_{143\times217}^{PS}}$	0.66 ± 0.13	$n_{s,0.002}$	0.9670 ± 0.0042	$f\sigma_8(0.61)$	0.4663 ± 0.0046
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.55^{+0.39}_{-0.19}$	Y_P	0.2440 ± 0.0038	$\sigma_8(0.61)$	$0.5889^{+0.0039}_{-0.0050}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	0.2453 ± 0.0038	$f\sigma_8(2.33)$	$0.2970^{+0.0019}_{-0.0025}$
$\boldsymbol{A^{kSZ}}$	$4.7^{+1.9}_{-4.2}$	Age/Gyr	13.797 ± 0.022	$\sigma_8(2.33)$	$0.3063^{+0.0020}_{-0.0026}$
$\boldsymbol{A_{100}^{dust}}$	1.00 ± 0.19	z_*	1089.82 ± 0.26	f_{2000}^{143}	29.4 ± 2.9
$\boldsymbol{A_{143}^{dust}}$	0.97 ± 0.18	r_*	144.76 ± 0.25	f_{2000}^{217}	106.6 ± 1.9
$\boldsymbol{A_{217}^{dust}}$	0.97 ± 0.10	$100\theta_*$	1.04113 ± 0.00030	$f_{2000}^{143\times217}$	31.9 ± 2.0
$\boldsymbol{A_{143\times217}^{dust}}$	1.03 ± 0.16	$D_M(z_*)$/Gpc	13.904 ± 0.024	χ^2_{simall}	396.9 ± 1.8
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	z_{drag}	1059.71 ± 0.38	χ^2_{lowl}	22.95 ± 0.86
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	r_{drag}	147.44 ± 0.27	$\chi^2_{CamSpec}$	11514.5 ± 5.6
$\boldsymbol{c_{TE}}$	0.9965 ± 0.0049	k_D	0.14052 ± 0.00034	χ^2_{Aver15}	0.9 ± 1.3
$\boldsymbol{c_{EE}}$	0.9922 ± 0.0050	$100\theta_D$	0.16079 ± 0.00024	χ^2_{6DF}	0.044 ± 0.057
H_0	67.71 ± 0.46	z_{eq}	3375 ± 24	χ^2_{MGS}	1.37 ± 0.45
Ω_Λ	0.6905 ± 0.0062	k_{eq}	0.010300 ± 0.000072	$\chi^2_{DR12BAO}$	4.6 ± 1.3
Ω_m	0.3095 ± 0.0062	$100\theta_{eq}$	0.8182 ± 0.0044	χ^2_{prior}	7.8 ± 3.4
$\Omega_m h^2$	0.14186 ± 0.00099	$100\theta_{s,eq}$	0.4520 ± 0.0023	χ^2_{BAO}	5.97 ± 0.99
$\Omega_m h^3$	0.09605 ± 0.00034	$H(0.15)$	72.97 ± 0.40	χ^2_{CMB}	11934.4 ± 5.6
σ_8	$0.8067^{+0.0061}_{-0.0072}$	$D_M(0.15)$	640.5 ± 3.9		
S_8	0.819 ± 0.013	$H(0.38)$	83.04 ± 0.30		

$\bar{\chi}^2_{eff} = 11949.07$; $R - 1 = 0.01536$

20.69 base_yhe_CamSpecHM_TTTEEE_lowl_lowE_Aver15_post_lensing_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02228 ± 0.00016	S_8	0.828 ± 0.013	$D_M(0.15)$	643.3 ± 4.7
$\boldsymbol{\Omega_c h^2}$	0.1196 ± 0.0012	$\sigma_8\Omega_m^{0.5}$	0.4537 ± 0.0071	$H(0.38)$	82.83 ± 0.35
$\boldsymbol{100\theta_{MC}}$	1.04081 ± 0.00034	$\sigma_8\Omega_m^{0.25}$	0.6059 ± 0.0064	$D_M(0.38)$	1533.6 ± 9.4
$\boldsymbol{\tau}$	$0.0547^{+0.0051}_{-0.0078}$	$\sigma_8/h^{0.5}$	0.9861 ± 0.0090	$H(0.51)$	89.58 ± 0.28
$\boldsymbol{Y_P}$	0.2437 ± 0.0038	$r_{drag}h$	99.23 ± 0.94	$D_M(0.51)$	1986 ± 11
$\boldsymbol{\ln(10^{10}A_s)}$	$3.042^{+0.011}_{-0.015}$	$\langle d^2\rangle^{1/2}$	2.441 ± 0.022	$H(0.61)$	$95.21^{+0.22}_{-0.24}$
$\boldsymbol{n_s}$	0.9649 ± 0.0045	z_{re}	$7.71^{+0.55}_{-0.78}$	$D_M(0.61)$	2311 ± 12
$\boldsymbol{y_{cal}}$	1.0004 ± 0.0025	$10^9 A_s$	$2.095^{+0.023}_{-0.031}$	$H(2.33)$	236.23 ± 0.73
$\boldsymbol{A^{PS}_{100}}$	240 ± 25	$10^9 A_s e^{-2\tau}$	1.878 ± 0.011	$D_M(2.33)$	5768 ± 11
$\boldsymbol{A^{PS}_{143}}$	39 ± 8	D_{40}	1229 ± 12	$f\sigma_8(0.15)$	0.4580 ± 0.0066
$\boldsymbol{A^{PS}_{217}}$	102 ± 10	D_{220}	5720 ± 40	$\sigma_8(0.15)$	0.7476 ± 0.0051
$\boldsymbol{A^{CIB}_{217}}$	40^{+7}_{-7}	D_{810}	2534 ± 13	$f\sigma_8(0.38)$	0.4757 ± 0.0053
$\boldsymbol{A^{tSZ}_{143}}$	$3.9^{+1.8}_{-2.7}$	D_{1420}	815.6 ± 4.8	$\sigma_8(0.38)$	$0.6624^{+0.0041}_{-0.0047}$
$\boldsymbol{r^{PS}_{143\times217}}$	0.66 ± 0.13	D_{2000}	230.3 ± 1.6	$f\sigma_8(0.51)$	0.4740 ± 0.0046
$\boldsymbol{r^{CIB}_{143\times217}}$	$0.56^{+0.41}_{-0.17}$	$n_{s,0.002}$	0.9649 ± 0.0045	$\sigma_8(0.51)$	$0.6198^{+0.0038}_{-0.0045}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P	0.2437 ± 0.0038	$f\sigma_8(0.61)$	0.4688 ± 0.0041
$\boldsymbol{A^{kSZ}}$	$4.7^{+1.8}_{-4.4}$	Y_P^{BBN}	0.2450 ± 0.0038	$\sigma_8(0.61)$	$0.5897^{+0.0036}_{-0.0043}$
$\boldsymbol{A^{dust}_{100}}$	1.00 ± 0.20	Age/Gyr	13.808 ± 0.025	$f\sigma_8(2.33)$	$0.2972^{+0.0018}_{-0.0023}$
$\boldsymbol{A^{dust}_{143}}$	0.96 ± 0.18	z_*	1089.93 ± 0.28	$\sigma_8(2.33)$	$0.3063^{+0.0019}_{-0.0024}$
$\boldsymbol{A^{dust}_{217}}$	0.97 ± 0.10	r_*	144.60 ± 0.28	f^{143}_{2000}	29.6 ± 2.9
$\boldsymbol{A^{dust}_{143\times217}}$	1.03 ± 0.16	$100\theta_*$	1.04104 ± 0.00031	f^{217}_{2000}	106.7 ± 1.9
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	$D_M(z_*)$/Gpc	13.890 ± 0.026	$f^{143\times217}_{2000}$	32.0 ± 2.0
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	z_{drag}	1059.65 ± 0.39	$\chi^2_{lensing}$	9.23 ± 0.66
$\boldsymbol{c_{TE}}$	0.9964 ± 0.0049	r_{drag}	147.29 ± 0.28	χ^2_{simall}	396.9 ± 1.6
$\boldsymbol{c_{EE}}$	0.9918 ± 0.0049	k_D	0.14066 ± 0.00034	χ^2_{lowl}	23.38 ± 0.93
H_0	67.37 ± 0.55	$100\theta_D$	0.16081 ± 0.00024	$\chi^2_{CamSpec}$	11513.9 ± 5.4
Ω_Λ	0.6858 ± 0.0074	z_{eq}	3392 ± 27	χ^2_{Aver15}	0.9 ± 1.3
Ω_m	0.3142 ± 0.0074	k_{eq}	0.010352 ± 0.000083	χ^2_{prior}	7.9 ± 3.4
$\Omega_m h^2$	0.1426 ± 0.0011	$100\theta_{eq}$	0.8149 ± 0.0051	χ^2_{CMB}	11943.4 ± 5.6
$\Omega_m h^3$	0.09605 ± 0.00034	$100\theta_{s,eq}$	0.4503 ± 0.0026		
σ_8	0.8094 ± 0.0057	$H(0.15)$	72.68 ± 0.47		

$\bar{\chi}^2_{eff} = 11952.14$; $R - 1 = 0.01491$

20.70 base_yhe_CamSpecHM_TTTEEE_lowl_lowE_Aver15_post_BAO_lensing_zre6p5

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02233 ± 0.00015	$\sigma_8\Omega_m^{0.5}$	0.4503 ± 0.0059	$D_M(0.38)$	1528.9 ± 7.5
$\boldsymbol{\Omega_c h^2}$	0.11904 ± 0.00095	$\sigma_8\Omega_m^{0.25}$	0.6033 ± 0.0057	$H(0.51)$	89.71 ± 0.23
$\boldsymbol{100\theta_{MC}}$	1.04089 ± 0.00033	$\sigma_8/h^{0.5}$	0.9828 ± 0.0082	$D_M(0.51)$	1980.8 ± 8.8
$\boldsymbol{\tau}$	$0.0560^{+0.0055}_{-0.0077}$	$r_{drag}h$	99.71 ± 0.74	$H(0.61)$	95.32 ± 0.20
$\boldsymbol{Y_P}$	0.2439 ± 0.0038	$\langle d^2\rangle^{1/2}$	2.433 ± 0.020	$D_M(0.61)$	2305.0 ± 9.5
$\boldsymbol{\ln(10^{10}A_s)}$	$3.044^{+0.012}_{-0.015}$	z_{re}	$7.82^{+0.59}_{-0.76}$	$H(2.33)$	235.88 ± 0.59
$\boldsymbol{n_s}$	0.9664 ± 0.0040	$10^9 A_s$	$2.099^{+0.025}_{-0.031}$	$D_M(2.33)$	5763.6 ± 9.7
$\boldsymbol{y_{cal}}$	1.0006 ± 0.0025	$10^9 A_s e^{-2\tau}$	1.876 ± 0.011	$f\sigma_8(0.15)$	0.4550 ± 0.0055
$\boldsymbol{A_{100}^{PS}}$	239 ± 25	D_{40}	1226 ± 12	$\sigma_8(0.15)$	0.7471 ± 0.0052
$\boldsymbol{A_{143}^{PS}}$	39 ± 8	D_{220}	5725 ± 39	$f\sigma_8(0.38)$	0.4735 ± 0.0046
$\boldsymbol{A_{217}^{PS}}$	102 ± 10	D_{810}	2535 ± 13	$\sigma_8(0.38)$	$0.6623^{+0.0043}_{-0.0049}$
$\boldsymbol{A_{217}^{CIB}}$	39 ± 7	D_{1420}	816.2 ± 4.7	$f\sigma_8(0.51)$	0.4723 ± 0.0042
$\boldsymbol{A_{143}^{tSZ}}$	$3.9^{+1.9}_{-2.6}$	D_{2000}	230.5 ± 1.6	$\sigma_8(0.51)$	$0.6199^{+0.0040}_{-0.0046}$
$\boldsymbol{r_{143\times217}^{PS}}$	0.66 ± 0.13	$n_{s,0.002}$	0.9664 ± 0.0040	$f\sigma_8(0.61)$	0.4674 ± 0.0039
$\boldsymbol{r_{143\times217}^{CIB}}$	$0.55^{+0.39}_{-0.19}$	Y_P	0.2439 ± 0.0038	$\sigma_8(0.61)$	$0.5899^{+0.0038}_{-0.0044}$
$\boldsymbol{\xi^{tSZ\times CIB}}$	—	Y_P^{BBN}	0.2452 ± 0.0038	$f\sigma_8(2.33)$	$0.2975^{+0.0019}_{-0.0023}$
$\boldsymbol{A^{kSZ}}$	< 6.11	Age/Gyr	13.799 ± 0.022	$\sigma_8(2.33)$	$0.3067^{+0.0020}_{-0.0024}$
$\boldsymbol{A_{100}^{dust}}$	1.00 ± 0.20	z_*	1089.84 ± 0.25	f_{2000}^{143}	29.4 ± 2.8
$\boldsymbol{A_{143}^{dust}}$	0.96 ± 0.18	r_*	144.72 ± 0.24	f_{2000}^{217}	106.6 ± 1.9
$\boldsymbol{A_{217}^{dust}}$	0.97 ± 0.10	$100\theta_*$	1.04112 ± 0.00029	$f_{2000}^{143\times217}$	31.8 ± 2.0
$\boldsymbol{A_{143\times217}^{dust}}$	1.03 ± 0.16	$D_M(z_*)$/Gpc	13.900 ± 0.023	$\chi^2_{lensing}$	9.23 ± 0.70
$\boldsymbol{c_{100}}$	0.9975 ± 0.0011	z_{drag}	1059.71 ± 0.38	χ^2_{simall}	397.1 ± 1.8
$\boldsymbol{c_{217}}$	1.0011 ± 0.0016	r_{drag}	147.40 ± 0.25	χ^2_{lowl}	23.11 ± 0.84
$\boldsymbol{c_{TE}}$	0.9964 ± 0.0048	k_D	0.14056 ± 0.00032	$\chi^2_{CamSpec}$	11514.0 ± 5.5
$\boldsymbol{c_{EE}}$	0.9921 ± 0.0049	$100\theta_D$	0.16079 ± 0.00023	χ^2_{Aver15}	0.9 ± 1.3
H_0	67.65 ± 0.43	z_{eq}	3378 ± 22	χ^2_{6DF}	0.048 ± 0.057
Ω_Λ	0.6896 ± 0.0058	k_{eq}	0.010311 ± 0.000066	χ^2_{MGS}	1.30 ± 0.41
Ω_m	0.3104 ± 0.0058	$100\theta_{eq}$	0.8175 ± 0.0041	$\chi^2_{DR12BAO}$	4.7 ± 1.3
$\Omega_m h^2$	0.14201 ± 0.00091	$100\theta_{s,eq}$	0.4516 ± 0.0021	χ^2_{prior}	7.8 ± 3.4
$\Omega_m h^3$	0.09606 ± 0.00034	$H(0.15)$	72.91 ± 0.38	χ^2_{CMB}	11943.4 ± 5.6
σ_8	0.8083 ± 0.0058	$D_M(0.15)$	641.0 ± 3.7	χ^2_{BAO}	6.02 ± 0.99
S_8	0.822 ± 0.011	$H(0.38)$	83.00 ± 0.28		

$\bar{\chi}^2_{eff} = 11958.15$; $R - 1 = 0.01663$

20.71 base_yhe_CleanedCamSpecHM_TT_lowl_lowE

Parameter	68% limits	Parameter	68% limits	Parameter	68% limits
$\boldsymbol{\Omega_b h^2}$	0.02212 ± 0.00030	$\sigma_8\Omega_m^{0.25}$	0.608 ± 0.012	$H(0.15)$	72.38 ± 0.98
$\boldsymbol{\Omega_c h^2}$	0.1203 ± 0.0022	$\sigma_8/h^{0.5}$	0.989 ± 0.016	$D_M(0.15)$	646.5 ± 9.9
$\boldsymbol{100\theta_{MC}}$	1.04084 ± 0.00091	$r_{drag}h$	98.7 ± 1.8	$H(0.38)$	82.60 ± 0.75
$\boldsymbol{\tau}$	0.0520 ± 0.0081	$\langle d^2\rangle^{1/2}$	2.447 ± 0.044	$D_M(0.38)$	1540 ± 20
$\boldsymbol{Y_P}$	0.246 ± 0.022	z_{re}	7.49 ± 0.84	$H(0.51)$	89.39 ± 0.62
$\boldsymbol{\ln(10^{10}A_s)}$	3.038 ± 0.018	$10^9 A_s$	2.087 ± 0.037	$D_M(0.51)$	1994 ± 24
$\boldsymbol{n_s}$	0.963 ± 0.011	$10^9 A_s e^{-2\tau}$	1.880 ± 0.016	$H(0.61)$	95.05 ± 0.53
$\boldsymbol{y_{cal}}$	1.0004 ± 0.0025	D_{40}	1231 ± 22	$D_M(0.61)$	2319 ± 26
$\boldsymbol{A_{100}^{PS}}$	257 ± 30	D_{220}	5707 ± 41	$H(2.33)$	236.5 ± 1.3
$\boldsymbol{A_{143}^{tSZ}}$	$3.8^{+1.7}_{-2.8}$	D_{810}	2531 ± 14	$D_M(2.33)$	5776 ± 26
$\boldsymbol{A^{kSZ}}$	—	D_{1420}	812.4 ± 5.6	$f\sigma_8(0.15)$	0.461 ± 0.013
$\boldsymbol{A_{100}^{dust}}$	1.01 ± 0.19	D_{2000}	228.8 ± 2.6	$\sigma_8(0.15)$	0.7476 ± 0.0086
$\boldsymbol{A_{143}^{power}}$	$10.7^{+2.5}_{-3.2}$	$n_{s,0.002}$	0.963 ± 0.011	$f\sigma_8(0.38)$	0.4777 ± 0.0098
$\boldsymbol{A_{217}^{power}}$	$8.5^{+1.7}_{-3.5}$	Y_P	0.246 ± 0.022	$\sigma_8(0.38)$	0.6619 ± 0.0074
$\boldsymbol{A_{143\times217}^{power}}$	$4.6^{+1.7}_{-3.5}$	Y_P^{BBN}	0.247 ± 0.022	$f\sigma_8(0.51)$	0.4755 ± 0.0083
$\boldsymbol{\gamma_{143}^{power}}$	$1.32^{+0.41}_{-0.54}$	Age/Gyr	13.827 ± 0.060	$\sigma_8(0.51)$	0.6191 ± 0.0070
$\boldsymbol{\gamma_{217}^{power}}$	$1.34^{+0.73}_{-0.64}$	z_*	1090.31 ± 0.69	$f\sigma_8(0.61)$	0.4699 ± 0.0074
$\boldsymbol{\gamma_{143\times217}^{power}}$	1.30 ± 0.59	r_*	144.55 ± 0.48	$\sigma_8(0.61)$	0.5889 ± 0.0067
$\boldsymbol{c_{100}}$	0.9978 ± 0.0011	$100\theta_*$	1.04102 ± 0.00050	$f\sigma_8(2.33)$	0.2967 ± 0.0035
$\boldsymbol{c_{217}}$	$0.9994^{+0.0013}_{-0.0017}$	$D_M(z_*)$/Gpc	13.885 ± 0.045	$\sigma_8(2.33)$	0.3056 ± 0.0038
H_0	67.0 ± 1.1	z_{drag}	1059.4 ± 1.2	f_{2000}^{143}	24 ± 4
Ω_Λ	$0.681^{+0.016}_{-0.014}$	r_{drag}	147.30 ± 0.50	f_{2000}^{217}	17.1 ± 2.9
Ω_m	$0.319^{+0.014}_{-0.016}$	k_D	0.14042 ± 0.00076	$f_{2000}^{143\times217}$	$11.4^{+3.0}_{-3.3}$
$\Omega_m h^2$	0.1431 ± 0.0020	$100\theta_D$	0.16113 ± 0.00081	χ^2_{simall}	396.9 ± 1.7
$\Omega_m h^3$	0.09586 ± 0.00079	z_{eq}	3403 ± 49	χ^2_{lowl}	23.9 ± 2.1
σ_8	0.8098 ± 0.0098	k_{eq}	0.01039 ± 0.00015	$\chi^2_{CamSpec}$	6717.0 ± 5.5
S_8	0.835 ± 0.025	$100\theta_{eq}$	0.8125 ± 0.0094	χ^2_{prior}	5.3 ± 2.9
$\sigma_8\Omega_m^{0.5}$	0.457 ± 0.014	$100\theta_{s,eq}$	0.4491 ± 0.0048	χ^2_{CMB}	7137.8 ± 5.5

$\bar{\chi}^2_{eff} = 7143.10$; $\Delta\bar{\chi}^2_{eff} = 0.90$; $R - 1 = 0.00767$