Planck 2015 Results: Cosmological Parameter Name Tags

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This table summarises cosmological parameters used in the *Planck* chains. For a full description see the parameters paper.

Parameter	Tag	baseline	Definitions
$\Omega_b h^2$	omegabh2	-	Baryon density today
$\Omega_c h^2$	omegach2	-	Cold dark matter density today
$100\theta_{\rm MC}$	theta	-	100× approximation to r_s/D_A (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	The 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 number of massive and massless neutrinos (see text)
Y_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_s	ns	-	Scalar spectrum power-law index ($k_0 = 0.05{\rm Mpc}^{-1}$)
n_t	nt	Inflation	Tensor spectrum power-law index ($k_0 = 0.05{\rm Mpc}^{-1}$)
${\rm d}\ln n_s/{\rm d}\ln k$	nrun	0	Running of the spectral index
$\log[10^{10}A_s]$	logA	-	log power of the primordial curvature perturbations ($k_0 = 0.05{\rm Mpc}^{-1}$)
$r_{0.05}$	r	0	Tensor power spectrum amplitude ($k_0 = 0.05{\rm Mpc}^{-1}$)
Ω_Λ	omegal	-	Dark energy density divided by the critical density today
Age/Gyr	age	-	Time since the start of the hot big bang
Ω_m	omegam	-	Matter density (incl. massive neutrinos) today divided by the critical density
σ_8	sigma8	-	RMS matter fluctuations today in linear theory
$\langle d^2\rangle^{1/2}$	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
H_0	H0	-	Current expansion rate in ${\rm km\,s^{-1}Mpc^{-1}}$
$10^9 A_s$	A	-	Power of the primordial curvature perturbations ($k_0 = 0.05{\rm Mpc}^{-1}$)
$10^9 A_s e^{-2\tau}$	clamp	-	Parameter determining the small-scale CMB power)
$\Omega_m h^2$	omegamh2	-	Total matter density today (incl. massive neutrinos)
$\Omega_m h^3$	omegamh3	-	h×total matter density today
Y_P	yheused	bbn	Fraction of baryonic mass in Helium
$Y_P^{\rm BBN}$	YpBBN	bbn	Nucleon fraction in Helium
$10^5 D/H$	DHBBN	bbn	10^5 Deuterium-Helium ratio from BBN prediction

Parameter	Tag	baseline	Definitions
z_*	zstar	-	Redshift for which the optical depth equals unity
$r_* = r_s(z_*)$	rstar	-	Comoving size of the sound horizon at $z = z_*$
$100\theta_*$	thetastar	-	100× Angular size of the sound horizon at last scattering
$D_{\rm A}$/Gpc	DAstar	-	Comoving angular diameter distance to last scattering
$z_{\rm drag}$	zdrag	-	Redshift at which baryon-drag optical depth equals unity
$r_{\rm drag} = r_s(z_{\rm drag})$	rdrag	-	Comoving size of the sound horizon at $z = z_{\rm drag}$
k_D	kd	-	Characteristic damping comoving wavenumber (Mpc^{-1})
$100\theta_D$	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	-	$l(l+1)C_l^{TT}/2\pi$ at $l = 40$ in μK^2
D_{220}	D40	-	$l(l+1)C_l^{TT}/2\pi$ at $l = 220$ in μK^2
D_{810}	D40	-	$l(l+1)C_l^{TT}/2\pi$ at $l = 810$ in μK^2
D_{1420}	D40	-	$l(l+1)C_l^{TT}/2\pi$ at $l = 1420$ in μK^2
D_{2000}	D40	-	$l(l+1)C_l^{TT}/2\pi$ at $l = 2000$ in μK^2
$n_{s,0.002}$	ns02	-	scalar spectral index at $k = 0.002$Mpc^{-1}
$r_{0.002}$	r02	0	tensor/scalar ratio at $k = 0.002$Mpc^{-1}
$r_{0.01}$	rBB	0	tensor/scalar ratio at $k = 0.01$Mpc^{-1} (roughly BB peak)
r_{10}	r10	0	tensor-scalar temperature C_l amplitude at $l = 10$
A_T	AT	0	$10^9 A_t$ ($k_0 = 0.05$Mpc^{-1})
$10^9 A_t e^{-2\tau}$	ctlamp	0	parameter determining $l \sim 100$ tensor C_l amplitude
$f\sigma_8(0.57)$	fsigma8z057	-	growth parameter $f\sigma_8$ at $z = 0.57$
$\sigma_8(0.57)$	sigma8z057	-	σ_8 at $z = 0.57$
$r_{\rm drag}/D_V(0.57)$	rsDv057	-	Isotropised BAO ratio at $z = 0.57$
$H(0.57$	Hubble057	-	Hubble at $z = 0.57$ (km s^{-1}Mpc^{-1})
$D_A(0.57)$	DA057	-	Comoving $D_{\rm A}$ at $z = 0.57$ (Mpc)
$F_{\rm AP}(0.57)$	FAP057	-	Alcock-Paczynski parameter $F_{\rm AP}$ at $z = 0.57$
f_{2000}^{143}	f2000_143	-	Total temperature foreground power at $l = 2000$ in 143Ghz C_l
$f_{2000}^{143\times217}$	f2000_x	-	Total temperature foreground power at $l = 2000$ in 217Ghz × 143Ghz C_l
f_{2000}^{217}	f2000_217	-	Total temperature foreground power at $l = 2000$ in 217Ghz C_l