Planck 2013 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	-	$100\times$ 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 neutrino masses 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
n_s	ns	-	Scalar spectrum power-law index ($k_0 = 0.05{\rm Mpc}^{-1}$)
n_t	nt	Inflation	Tensor spectrum power-law index ($k_0 = 0.05{\rm Mpc}^{-1}$)
$d\ln n_s/d\ln k$	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
$z_{\rm re}$	zrei	-	Redshift at which universe is half reionized
H_0	H0	-	Current expansion rate in ${\rm km\,s^{-1}Mpc^{-1}}$
r	r02	0	Ratio of tensor power to scalar power at $k_0 = 0.002{\rm Mpc}^{-1}$
$10^9 A_s$	A	-	Power of the primordial curvature perturbations ($k_0 = 0.05{\rm Mpc}^{-1}$)
$\omega_m \equiv \Omega_m h^2$	omegamh2	-	Total matter density today (incl. massive neutrinos)
$\Omega_m h^3$	omegamh3	-	$h\times$total matter density today
Y_P	yheused	bbn	Fraction of baryonic mass in Helium
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	-	$100\times$ Angular size of the sound horizon at 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 (${\rm Mpc}^{-1}$)
$100\theta_D$	thetad	-	$100\times$ angular extent of photon diffusion at last scattering
$z_{\rm EQ}$	zeq	-	Redshift of matter-radiation equality (massless neutrinos)
$100\theta_{\rm EQ}$	thetaeq	-	$100\times$ angular size of the comoving Horizon at matter-radiation equality