

Planck 2018 Results: Cosmological Parameter Tables

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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 <i>Planck</i> power spectra (plik cross-half-mission, $30 \leq \ell \leq 2508$).
CamSpecHM	CamSpec high- ℓ <i>Planck</i> power spectra.
CleanedCamSpecHM	Foreground-cleaned CamSpec high- ℓ <i>Planck</i> power spectra.
lowl	Low- ℓ <i>Planck</i> temperature (Commander , $2 \leq \ell \leq 29$).
lowE	Low- ℓ HFI <i>EE</i> polarization only (SimAll , $2 \leq \ell \leq 29$).
lensing	<i>Planck</i> 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.
Pantheon18	Supernova data from the Pantheon sample, with updated main distance file with heliocentric redshifts.
JLA	Supernova data from the SDSS-II/SNLS3 Joint Light-curve Analysis.
Riess18	Hubble parameter measurement from SHOES (Riess et al. 2018a, $H_0 = 73.45 \pm 1.66$).
BK15	Bicep-Keck (+Planck/WMAP) 2015 analysis (arXiv:1810.05216).
zre6p5	A hard prior, $z_{\text{re}} > 6.5$.
reion	A hard prior, $z_{\text{re}} > 6.5$, combined with a Gaussian prior, $z_{\text{re}} = 7 \pm 1$.
lenspriors	Standard base parameters with $n_s = 0.96 \pm 0.02$, $\Omega_b h^2 = 0.0222 \pm 0.0005$, $100 > H_0 > 40$, $\tau = 0.055$.
DESpriors	DES cosmological parameter priors (flat on $0.1 < \Omega_m < 0.9$, $0.03 < \Omega_b < 0.07$, $55 < H_0 < 91$, $0.5 < 10^9 A_s < 5$, $Y_P = 0.245341$ and, if varied, $0.05\text{eV} < \sum m_\nu < 1\text{eV}$).
CookeDH	A Gaussian prior $\Omega_b h^2 = 0.0222 \pm 0.0005$ (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 $N_{\text{eff}} = 3.046$.
Aver15	A Gaussian constraint on $Y_P^{\text{BBN}} = 0.2449 \pm 0.0040$ (Aver et al. 2015).
theta	A Gaussian prior $100\theta_{\text{MC}} = 1.0409 \pm 0.0006$ (acoustic scale from <i>Planck</i> 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.
DESw	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 **nnu** is specified in the file name, the neutrino mass sum is fixed to $\sum_\nu m_\nu = 0.06\text{eV}$ (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 $\chi_{\text{eff}}^2 = -2\log(\text{likelihood})$ 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 $\bar{\chi}_{\text{eff}}^2$. The tables also give the χ_{eff}^2 of the various component parts of the likelihood, where quoted values are the best-fit and mean, standard

deviation (in the case of 1σ 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
$\Omega_b h^2$	omegab2	...	Baryon density today
$\Omega_c h^2$	omegac2	...	Cold dark matter density today
$100\theta_{\text{MC}}$	theta	...	$100\times$ approximation to r_s/D_M (CosmoMC)
τ	tau	...	Thomson scattering optical depth due to reionization
Ω_K	omegak	0	$\Omega_{\text{tot}} = 1 - \Omega_K$
Σm_ν	mnu	0.06	Sum of active neutrino masses in eV
$m_{\nu, \text{sterile}}^{\text{eff}}$	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_{eff}	nnu	3.046	Total effective 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_L	Alens	1	Amplitude of the lensing power relative to the physical value
$A_L^{\phi\phi}$	Aphiphi	1	Amplitude of the lensing reconstruction power relative to the physical value
A_L^{fid}	Alensf	...	Amplitude of the lensing power relative to a fixed fiducial spectrum
n_s	ns	...	Scalar spectrum power-law index ($k_0 = 0.05\text{Mpc}^{-1}$)
n_t	nt	Inflation	Tensor spectrum power-law index ($k_0 = 0.05\text{Mpc}^{-1}$)
$d \ln n_s / d \ln k$	nrun	0	Running of the spectral index
$\log[10^{10} A_s]$	logA	...	Log power of the primordial curvature perturbations ($k_0 = 0.05\text{Mpc}^{-1}$)
$r_{0.05}$	r	0	Tensor power spectrum amplitude ($k_0 = 0.05\text{Mpc}^{-1}$)
H_0	H0	...	Current expansion rate in $\text{km s}^{-1}\text{Mpc}^{-1}$
Ω_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
$\Omega_m h^2$	omegamh2	...	Total matter density today (incl. massive neutrinos)
$\Omega_m h^3$	omegamh3	...	$h \times$ total matter density today
σ_8	sigma8	...	RMS matter fluctuations today in linear theory
S_8	S8	...	$\sigma_8(\Omega_m/0.3)^{0.5}$
$\sigma_8 \Omega_m^{0.5}$	s8omegamp5	...	$\sigma_8 \Omega_m^{0.5}$ constrained by low-redshift lensing
$\sigma_8 \Omega_m^{0.25}$	s8omegamp25	...	$\sigma_8 \Omega_m^{0.25}$ constrained by CMB lensing
$\sigma_8 / h^{0.5}$	s8h5	...	$\sigma_8 / h^{0.5}$
$\sigma_8 / h^{0.5}$	rdragh	...	$r_{\text{drag}} h$ in Mpc
$\langle d^2 \rangle^{1/2}$	rmsdeflect	...	RMS CMB lensing deflection angle in arcmin (approx. using $2 \leq L \leq 2000$)
z_{re}	zrei	...	Redshift at which Universe is half reionized
$10^9 A_s$	A	...	Power of the primordial curvature perturbations ($k_0 = 0.05\text{Mpc}^{-1}$)
$10^9 A_s e^{-2\tau}$	clamp	...	Parameter determining the small-scale CMB power
Y_P	yheused	bbn	Fraction of baryonic mass in helium
Y_P^{BBN}	YpBBN	bbn	Nucleon fraction in helium
10^5D/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
$r_* = r_s(z_*)$	rstar	...	Comoving size of the sound horizon at $z = z_*$
$100\theta_*$	thetastar	...	100× Angular size of the sound horizon at last scattering
$D_M/\text{Gpc}(z_*)$	DAstar	...	Comoving angular diameter distance to last scattering
z_{drag}	zdrag	...	Redshift at which baryon-drag optical depth equals unity
$r_{\text{drag}} = r_s(z_{\text{drag}})$	rdrag	...	Comoving size of the sound horizon at $z = z_{\text{drag}}$
k_D	kd	...	Characteristic damping comoving wavenumber (Mpc^{-1})
$100\theta_D$	thetad	...	100× angular extent of photon diffusion at last scattering
z_{eq}	zeq	...	Redshift of matter-radiation equality (massless neutrinos)
k_{eq}	keq	...	$[a(z_{\text{eq}})H(z_{\text{eq}})]^{-1}$
$100\theta_{\text{eq}}$	thetaeq	...	100× angular size of the comoving Horizon at matter-radiation equality
$100\theta_{s,\text{eq}}$	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 μK^2
D_{220}	D200	...	$\ell(\ell+1)C_\ell^{TT}/2\pi$ at $\ell = 220$ in μK^2
D_{810}	D810	...	$\ell(\ell+1)C_\ell^{TT}/2\pi$ at $\ell = 810$ in μK^2
D_{1420}	D1420	...	$\ell(\ell+1)C_\ell^{TT}/2\pi$ at $\ell = 1420$ in μK^2
D_{2000}	D2000	...	$\ell(\ell+1)C_\ell^{TT}/2\pi$ at $\ell = 2000$ in μK^2
$n_{s,0.002}$	ns02	...	Scalar spectral index at $k = 0.002\text{Mpc}^{-1}$
$r_{0.002}$	r02	0	Tensor/scalar ratio at $k = 0.002\text{Mpc}^{-1}$
$r_{0.01}$	rBB	0	Tensor/scalar ratio at $k = 0.01\text{Mpc}^{-1}$ (roughly BB peak)
r_{10}	r10	0	Tensor-scalar temperature C_ℓ amplitude at $\ell = 10$
A_t	AT	0	$10^9 A_t$ ($k_0 = 0.05\text{Mpc}^{-1}$)
$10^9 A_t e^{-2\tau}$	ctlamp	0	Parameter determining $\ell \simeq 100$ tensor C_ℓ amplitude
$H(z)$	Hubble{100z}	...	Hubble parameter at redshift z ($\text{km s}^{-1}\text{Mpc}^{-1}$)
$D_M(z)$	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
$f_{2000}^{143 \times 217}$	f2000_x	...	Total temperature foreground power at $\ell = 2000$ in $217\text{GHz} \times 143\text{GHz}$ C_ℓ
f_{2000}^{217}	f2000_217	...	Total temperature foreground power at $\ell = 2000$ in 217GHz C_ℓ
χ_x^2	chi2_x	...	$-2\log(\text{likelihood})$ for likelihood x ; (most are normalized like a χ^2).

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9.14	base_nnu_nnu_CamSpecHM_TTTEEE_lowl_lowE_BAO_post_Pantheon18_zre6p5/base_nnu_nnu_plikHM_TTTEEE_lowl_lowE_BAO_post_Pantheon18_zre6p5	220
9.15	base_nnu_nnu_CamSpecHM_TT_lowl_lowE_lensing_BAO/base_nnu_nnu_plikHM_TT_lowl_lowE_lensing_BAO	221
9.16	base_nnu_nnu_CamSpecHM_TT_lowl_lowE_lensing_BAO_post_Pantheon18/base_nnu_nnu_plikHM_TT_lowl_lowE_lensing_BAO_post_Pantheon18	222
9.17	base_nnu_nnu_CamSpecHM_TT_lowl_lowE_lensing_BAO_post_Aver15/base_nnu_nnu_plikHM_TT_lowl_lowE_lensing_BAO_post_Aver15	223
9.18	base_nnu_nnu_CamSpecHM_TT_lowl_lowE_lensing_BAO_post_Cooke17_Aver15/base_nnu_nnu_plikHM_TT_lowl_lowE_lensing_BAO_post_Cooke17_Aver15	224
9.19	base_nnu_nnu_CamSpecHM_TT_lowl_lowE_lensing_BAO_post_Pantheon18_zre6p5/base_nnu_nnu_plikHM_TT_lowl_lowE_lensing_BAO_post_Pantheon18_zre6p5	225
9.20	base_nnu_nnu_CamSpecHM_TTTEEE_lowl_lowE_lensing_BAO/base_nnu_nnu_plikHM_TTTEEE_lowl_lowE_lensing_BAO	226
9.21	base_nnu_nnu_CamSpecHM_TTTEEE_lowl_lowE_lensing_BAO_post_Pantheon18/base_nnu_nnu_plikHM_TTTEEE_lowl_lowE_lensing_BAO_post_Pantheon18	227
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9.23	base_nnu_nnu_CamSpecHM_TTTEEE_lowl_lowE_lensing_BAO_post_Cooke17_Aver15/base_nnu_nnu_plikHM_TTTEEE_lowl_lowE_lensing_BAO_post_Cooke17_Aver15	229
9.24	base_nnu_nnu_CamSpecHM_TTTEEE_lowl_lowE_lensing_BAO_post_Pantheon18_zre6p5/base_nnu_nnu_plikHM_TTTEEE_lowl_lowE_lensing_BAO_post_Pantheon18_zre6p5	230
10	nnu+nrn	231
11	nnu+yhe	232
11.1	base_nnu_yhe_CamSpecHM_TTTEEE_lowl_lowE/base_nnu_yhe_plikHM_TTTEEE_lowl_lowE	232
11.2	base_nnu_yhe_CamSpecHM_TTTEEE_lowl_lowE_post_BAO/base_nnu_yhe_plikHM_TTTEEE_lowl_lowE_post_BAO	233
11.3	base_nnu_yhe_CamSpecHM_TTTEEE_lowl_lowE_post_lensing/base_nnu_yhe_plikHM_TTTEEE_lowl_lowE_post_lensing	234
11.4	base_nnu_yhe_CamSpecHM_TTTEEE_lowl_lowE_post_BAO_lensing/base_nnu_yhe_plikHM_TTTEEE_lowl_lowE_post_BAO_lensing	235
11.5	base_nnu_yhe_CamSpecHM_TTTEEE_lowl_lowE_post_zre6p5/base_nnu_yhe_plikHM_TTTEEE_lowl_lowE_post_zre6p5	236
11.6	base_nnu_yhe_CamSpecHM_TTTEEE_lowl_lowE_post_BAO_zre6p5/base_nnu_yhe_plikHM_TTTEEE_lowl_lowE_post_BAO_zre6p5	237
11.7	base_nnu_yhe_CamSpecHM_TTTEEE_lowl_lowE_post_lensing_zre6p5/base_nnu_yhe_plikHM_TTTEEE_lowl_lowE_post_lensing_zre6p5	238
11.8	base_nnu_yhe_CamSpecHM_TTTEEE_lowl_lowE_post_BAO_lensing_zre6p5/base_nnu_yhe_plikHM_TTTEEE_lowl_lowE_post_BAO_lensing_zre6p5	239
11.9	base_nnu_yhe_CamSpecHM_TTTEEE_lowl_lowE_Aver15/base_nnu_yhe_plikHM_TTTEEE_lowl_lowE_Aver15	240
11.10	base_nnu_yhe_CamSpecHM_TTTEEE_lowl_lowE_Aver15_post_BAO/base_nnu_yhe_plikHM_TTTEEE_lowl_lowE_Aver15_post_BAO	241
11.11	base_nnu_yhe_CamSpecHM_TTTEEE_lowl_lowE_Aver15_post_lensing/base_nnu_yhe_plikHM_TTTEEE_lowl_lowE_Aver15_post_lensing	242
11.12	base_nnu_yhe_CamSpecHM_TTTEEE_lowl_lowE_Aver15_post_BAO_lensing/base_nnu_yhe_plikHM_TTTEEE_lowl_lowE_Aver15_post_BAO_lensing	243
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11.14	base_nnu_yhe_CamSpecHM_TTTEEE_lowl_lowE_Aver15_post_BAO_zre6p5/base_nnu_yhe_plikHM_TTTEEE_lowl_lowE_Aver15_post_BAO_zre6p5	245
11.15	base_nnu_yhe_CamSpecHM_TTTEEE_lowl_lowE_Aver15_post_lensing_zre6p5/base_nnu_yhe_plikHM_TTTEEE_lowl_lowE_Aver15_post_lensing_zre6p5	246
11.16	base_nnu_yhe_CamSpecHM_TTTEEE_lowl_lowE_Aver15_post_BAO_lensing_zre6p5/base_nnu_yhe_plikHM_TTTEEE_lowl_lowE_Aver15_post_BAO_lensing_zre6p5	247
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12.1	base_nrn_CamSpecHM_TT_lowl_lowE/base_nrn_plikHM_TT_lowl_lowE	248
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12.3	base_nrn_CamSpecHM_TT_lowl_lowE_post_lensing/base_nrn_plikHM_TT_lowl_lowE_post_lensing	250
12.4	base_nrn_CamSpecHM_TT_lowl_lowE_post_BAO_lensing/base_nrn_plikHM_TT_lowl_lowE_post_BAO_lensing	251
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12.6	base_nrn_CamSpecHM_TT_lowl_lowE_post_BAO_zre6p5/base_nrn_plikHM_TT_lowl_lowE_post_BAO_zre6p5	253
12.7	base_nrn_CamSpecHM_TT_lowl_lowE_post_lensing_zre6p5/base_nrn_plikHM_TT_lowl_lowE_post_lensing_zre6p5	254
12.8	base_nrn_CamSpecHM_TT_lowl_lowE_post_BAO_lensing_zre6p5/base_nrn_plikHM_TT_lowl_lowE_post_BAO_lensing_zre6p5	255
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12.10	base_nrn_CamSpecHM_TTTEEE_lowl_lowE_post_BAO/base_nrn_plikHM_TTTEEE_lowl_lowE_post_BAO	257

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12.14	base_nrun_CamSpecHM.TTTEEE_lowl_lowE_post_zre6p5/base_nrun_plikHM.TTTEEE_lowl_lowE_post_zre6p5	261
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12.16	base_nrun_CamSpecHM.TTTEEE_lowl_lowE_post_lensing_zre6p5/base_nrun_plikHM.TTTEEE_lowl_lowE_post_lensing_zre6p5	263
12.17	base_nrun_CamSpecHM.TTTEEE_lowl_lowE_post_BAO_lensing_zre6p5/base_nrun_plikHM.TTTEEE_lowl_lowE_post_BAO_lensing_zre6p5	264
12.18	base_nrun_CamSpecHM.TTTEEE_lowl_lowE_post_Riess18_zre6p5/base_nrun_plikHM.TTTEEE_lowl_lowE_post_Riess18_zre6p5	265
13	nrun+nnu+w+mnu	266
14	nrun+nrunrun	267
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15.3	base_nrun_r_CamSpecHM.TT_lowl_lowE_post_zre6p5/base_nrun_r_plikHM.TT_lowl_lowE_post_zre6p5	270
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15.5	base_nrun_r_CamSpecHM.TTTEEE_lowl_lowE_lensing/base_nrun_r_plikHM.TTTEEE_lowl_lowE_lensing	272
15.6	base_nrun_r_CamSpecHM.TTTEEE_lowl_lowE_lensing_post_BAO/base_nrun_r_plikHM.TTTEEE_lowl_lowE_lensing_post_BAO	273
15.7	base_nrun_r_CamSpecHM.TTTEEE_lowl_lowE_lensing_post_zre6p5/base_nrun_r_plikHM.TTTEEE_lowl_lowE_lensing_post_zre6p5	274
15.8	base_nrun_r_CamSpecHM.TTTEEE_lowl_lowE_lensing_post_BAO_zre6p5/base_nrun_r_plikHM.TTTEEE_lowl_lowE_lensing_post_BAO_zre6p5	275
15.9	base_nrun_r_CamSpecHM.TT_lowl_lowE_BK15/base_nrun_r_plikHM.TT_lowl_lowE_BK15	276
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15.15	base_nrun_r_CamSpecHM.TT_lowl_lowE_BK15_post_lensing_zre6p5/base_nrun_r_plikHM.TT_lowl_lowE_BK15_post_lensing_zre6p5	282
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15.17	base_nrun_r_CamSpecHM.TTTEEE_lowl_lowE_BK15/base_nrun_r_plikHM.TTTEEE_lowl_lowE_BK15	284
15.18	base_nrun_r_CamSpecHM.TTTEEE_lowl_lowE_BK15_post_BAO/base_nrun_r_plikHM.TTTEEE_lowl_lowE_BK15_post_BAO	285
15.19	base_nrun_r_CamSpecHM.TTTEEE_lowl_lowE_BK15_post_lensing/base_nrun_r_plikHM.TTTEEE_lowl_lowE_BK15_lensing	286
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15.21	base_nrun_r_CamSpecHM.TTTEEE_lowl_lowE_BK15_post_zre6p5/base_nrun_r_plikHM.TTTEEE_lowl_lowE_BK15_post_zre6p5	288
15.22	base_nrun_r_CamSpecHM.TTTEEE_lowl_lowE_BK15_post_BAO_zre6p5/base_nrun_r_plikHM.TTTEEE_lowl_lowE_BK15_post_BAO_zre6p5	289
15.23	base_nrun_r_CamSpecHM.TTTEEE_lowl_lowE_BK15_post_lensing_zre6p5/base_nrun_r_plikHM.TTTEEE_lowl_lowE_BK15_lensing_post_zre6p5	290
15.24	base_nrun_r_CamSpecHM.TTTEEE_lowl_lowE_BK15_post_BAO_lensing_zre6p5/base_nrun_r_plikHM.TTTEEE_lowl_lowE_BK15_lensing_post_BAO_zre6p5	291
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16.4	base_omegak_CamSpecHM.TTTEEE_lowl_lowE_post_zre6p5/base_omegak_plikHM.TTTEEE_lowl_lowE_post_zre6p5	295
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16.7	base_omegak_CamSpecHM.TT_lowl_lowE_BAO_post_lensing_Pantheon18/base_omegak_plikHM.TT_lowl_lowE_BAO_post_lensing_Pantheon18	298
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16.9	base_omegak_CamSpecHM.TT_lowl_lowE_BAO_post_lensing_zre6p5/base_omegak_plikHM.TT_lowl_lowE_BAO_post_lensing_zre6p5	300
16.10	base_omegak_CamSpecHM.TT_lowl_lowE_BAO_post_lensing_Pantheon18_zre6p5/base_omegak_plikHM.TT_lowl_lowE_BAO_post_lensing_Pantheon18_zre6p5	301
16.11	base_omegak_CamSpecHM.TTTEEE_lowl_lowE_BAO/base_omegak_plikHM.TTTEEE_lowl_lowE_BAO	302
16.12	base_omegak_CamSpecHM.TTTEEE_lowl_lowE_BAO_post_lensing/base_omegak_plikHM.TTTEEE_lowl_lowE_BAO_post_lensing	303
16.13	base_omegak_CamSpecHM.TTTEEE_lowl_lowE_BAO_post_lensing_Pantheon18/base_omegak_plikHM.TTTEEE_lowl_lowE_BAO_post_lensing_Pantheon18	304
16.14	base_omegak_CamSpecHM.TTTEEE_lowl_lowE_BAO_post_zre6p5/base_omegak_plikHM.TTTEEE_lowl_lowE_BAO_post_zre6p5	305
16.15	base_omegak_CamSpecHM.TTTEEE_lowl_lowE_BAO_post_lensing_zre6p5/base_omegak_plikHM.TTTEEE_lowl_lowE_BAO_post_lensing_zre6p5	306
16.16	base_omegak_CamSpecHM.TTTEEE_lowl_lowE_BAO_post_lensing_Pantheon18_zre6p5/base_omegak_plikHM.TTTEEE_lowl_lowE_BAO_post_lensing_Pantheon18_zre6p5	307
16.17	base_omegak_CamSpecHM.TT_lowl_lowE_lensing/base_omegak_plikHM.TT_lowl_lowE_lensing	308
16.18	base_omegak_CamSpecHM.TT_lowl_lowE_lensing_post_zre6p5/base_omegak_plikHM.TT_lowl_lowE_lensing_post_zre6p5	309
16.19	base_omegak_CamSpecHM.TTTEEE_lowl_lowE_lensing/base_omegak_plikHM.TTTEEE_lowl_lowE_lensing	310
16.20	base_omegak_CamSpecHM.TTTEEE_lowl_lowE_lensing_post_zre6p5/base_omegak_plikHM.TTTEEE_lowl_lowE_lensing_post_zre6p5	311
17	r	312
17.1	base_r_CamSpecHM.TT_lowl_lowE/base_r_plikHM.TT_lowl_lowE	312
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17.3	base_r_CamSpecHM.TT_lowl_lowE_post_zre6p5/base_r_plikHM.TT_lowl_lowE_post_zre6p5	314
17.4	base_r_CamSpecHM.TT_lowl_lowE_post_BAO_zre6p5/base_r_plikHM.TT_lowl_lowE_post_BAO_zre6p5	315
17.5	base_r_CamSpecHM.TTTEEE_lowl_lowE/base_r_plikHM.TTTEEE_lowl_lowE	316
17.6	base_r_CamSpecHM.TTTEEE_lowl_lowE_post_BAO/base_r_plikHM.TTTEEE_lowl_lowE_post_BAO	317
17.7	base_r_CamSpecHM.TTTEEE_lowl_lowE_post_zre6p5/base_r_plikHM.TTTEEE_lowl_lowE_post_zre6p5	318

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17.9	base_r_CamSpecHM_TTTEEE_lowl_lowE_lensing/base_r_plikHM_TTTEEE_lowl_lowE_lensing	320
17.10	base_r_CamSpecHM_TTTEEE_lowl_lowE_lensing_post_BAO/base_r_plikHM_TTTEEE_lowl_lowE_lensing_post_BAO	321
17.11	base_r_CamSpecHM_TTTEEE_lowl_lowE_lensing_post_zre6p5/base_r_plikHM_TTTEEE_lowl_lowE_lensing_post_zre6p5	322
17.12	base_r_CamSpecHM_TTTEEE_lowl_lowE_lensing_post_BAO_zre6p5/base_r_plikHM_TTTEEE_lowl_lowE_lensing_post_BAO_zre6p5	323
17.13	base_r_CamSpecHM_TT_lowl_lowE_BK15/base_r_plikHM_TT_lowl_lowE_BK15	324
17.14	base_r_CamSpecHM_TT_lowl_lowE_BK15_post_BAO/base_r_plikHM_TT_lowl_lowE_BK15_post_BAO	325
17.15	base_r_CamSpecHM_TT_lowl_lowE_BK15_post_lensing/base_r_plikHM_TT_lowl_lowE_BK15_post_lensing	326
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17.17	base_r_CamSpecHM_TT_lowl_lowE_BK15_post_zre6p5/base_r_plikHM_TT_lowl_lowE_BK15_post_zre6p5	328
17.18	base_r_CamSpecHM_TT_lowl_lowE_BK15_post_BAO_zre6p5/base_r_plikHM_TT_lowl_lowE_BK15_post_BAO_zre6p5	329
17.19	base_r_CamSpecHM_TT_lowl_lowE_BK15_post_lensing_zre6p5/base_r_plikHM_TT_lowl_lowE_BK15_post_lensing_zre6p5	330
17.20	base_r_CamSpecHM_TT_lowl_lowE_BK15_post_BAO_lensing_zre6p5/base_r_plikHM_TT_lowl_lowE_BK15_post_BAO_lensing_zre6p5	331
17.21	base_r_CamSpecHM_TTTEEE_lowl_lowE_BK15/base_r_plikHM_TTTEEE_lowl_lowE_BK15	332
17.22	base_r_CamSpecHM_TTTEEE_lowl_lowE_BK15_post_BAO/base_r_plikHM_TTTEEE_lowl_lowE_BK15_post_BAO	333
17.23	base_r_CamSpecHM_TTTEEE_lowl_lowE_BK15_post_lensing/base_r_plikHM_TTTEEE_lowl_lowE_BK15_lensing	334
17.24	base_r_CamSpecHM_TTTEEE_lowl_lowE_BK15_post_BAO_lensing/base_r_plikHM_TTTEEE_lowl_lowE_BK15_lensing_post_BAO	335
17.25	base_r_CamSpecHM_TTTEEE_lowl_lowE_BK15_post_zre6p5/base_r_plikHM_TTTEEE_lowl_lowE_BK15_post_zre6p5	336
17.26	base_r_CamSpecHM_TTTEEE_lowl_lowE_BK15_post_BAO_zre6p5/base_r_plikHM_TTTEEE_lowl_lowE_BK15_post_BAO_zre6p5	337
17.27	base_r_CamSpecHM_TTTEEE_lowl_lowE_BK15_post_lensing_zre6p5/base_r_plikHM_TTTEEE_lowl_lowE_BK15_lensing_post_zre6p5	338
17.28	base_r_CamSpecHM_TTTEEE_lowl_lowE_BK15_post_BAO_lensing_zre6p5/base_r_plikHM_TTTEEE_lowl_lowE_BK15_lensing_post_BAO_zre6p5	339
18	w	340
18.1	base_w_CamSpecHM_TT_lowl_lowE/base_w_plikHM_TT_lowl_lowE	340
18.2	base_w_CamSpecHM_TT_lowl_lowE_post_lensing/base_w_plikHM_TT_lowl_lowE_post_lensing	341
18.3	base_w_CamSpecHM_TT_lowl_lowE_post_zre6p5/base_w_plikHM_TT_lowl_lowE_post_zre6p5	342
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18.5	base_w_CamSpecHM_TTTEEE_lowl_lowE/base_w_plikHM_TTTEEE_lowl_lowE	344
18.6	base_w_CamSpecHM_TTTEEE_lowl_lowE_post_lensing/base_w_plikHM_TTTEEE_lowl_lowE_post_lensing	345
18.7	base_w_CamSpecHM_TTTEEE_lowl_lowE_post_Riess18/base_w_plikHM_TTTEEE_lowl_lowE_post_Riess18	346
18.8	base_w_CamSpecHM_TTTEEE_lowl_lowE_post_zre6p5/base_w_plikHM_TTTEEE_lowl_lowE_post_zre6p5	347
18.9	base_w_CamSpecHM_TTTEEE_lowl_lowE_post_lensing_zre6p5/base_w_plikHM_TTTEEE_lowl_lowE_post_lensing_zre6p5	348
18.10	base_w_CamSpecHM_TTTEEE_lowl_lowE_post_Riess18_zre6p5/base_w_plikHM_TTTEEE_lowl_lowE_post_Riess18_zre6p5	349
18.11	base_w_CamSpecHM_TTTEEE_lowl_lowE_BAO/base_w_plikHM_TTTEEE_lowl_lowE_BAO	350
18.12	base_w_CamSpecHM_TTTEEE_lowl_lowE_BAO_post_lensing/base_w_plikHM_TTTEEE_lowl_lowE_BAO_post_lensing	351
18.13	base_w_CamSpecHM_TTTEEE_lowl_lowE_BAO_post_zre6p5/base_w_plikHM_TTTEEE_lowl_lowE_BAO_post_zre6p5	352
18.14	base_w_CamSpecHM_TTTEEE_lowl_lowE_BAO_post_lensing_zre6p5/base_w_plikHM_TTTEEE_lowl_lowE_BAO_post_lensing_zre6p5	353
18.15	base_w_CamSpecHM_TT_lowl_lowE_BAO_Pantheon18/base_w_plikHM_TT_lowl_lowE_BAO_Pantheon18	354
18.16	base_w_CamSpecHM_TT_lowl_lowE_BAO_Pantheon18_post_lensing/base_w_plikHM_TT_lowl_lowE_BAO_Pantheon18_post_lensing	355
18.17	base_w_CamSpecHM_TT_lowl_lowE_BAO_Pantheon18_post_zre6p5/base_w_plikHM_TT_lowl_lowE_BAO_Pantheon18_post_zre6p5	356
18.18	base_w_CamSpecHM_TT_lowl_lowE_BAO_Pantheon18_post_lensing_zre6p5/base_w_plikHM_TT_lowl_lowE_BAO_Pantheon18_post_lensing_zre6p5	357
18.19	base_w_CamSpecHM_TTTEEE_lowl_lowE_BAO_Pantheon18/base_w_plikHM_TTTEEE_lowl_lowE_BAO_Pantheon18	358
18.20	base_w_CamSpecHM_TTTEEE_lowl_lowE_BAO_Pantheon18_post_lensing/base_w_plikHM_TTTEEE_lowl_lowE_BAO_Pantheon18_post_lensing	359
18.21	base_w_CamSpecHM_TTTEEE_lowl_lowE_BAO_Pantheon18_post_zre6p5/base_w_plikHM_TTTEEE_lowl_lowE_BAO_Pantheon18_post_zre6p5	360
18.22	base_w_CamSpecHM_TTTEEE_lowl_lowE_BAO_Pantheon18_post_lensing_zre6p5/base_w_plikHM_TTTEEE_lowl_lowE_BAO_Pantheon18_post_lensing_zre6p5	361
18.23	base_w_CamSpecHM_TT_lowl_lowE_BAO_Riess18_Pantheon18/base_w_plikHM_TT_lowl_lowE_BAO_Riess18_Pantheon18	362
18.24	base_w_CamSpecHM_TT_lowl_lowE_BAO_Riess18_Pantheon18_post_lensing/base_w_plikHM_TT_lowl_lowE_BAO_Riess18_Pantheon18_post_lensing	363
18.25	base_w_CamSpecHM_TT_lowl_lowE_BAO_Riess18_Pantheon18_post_zre6p5/base_w_plikHM_TT_lowl_lowE_BAO_Riess18_Pantheon18_post_zre6p5	364
18.26	base_w_CamSpecHM_TT_lowl_lowE_BAO_Riess18_Pantheon18_post_lensing_zre6p5/base_w_plikHM_TT_lowl_lowE_BAO_Riess18_Pantheon18_post_lensing_zre6p5365	
18.27	base_w_CamSpecHM_TTTEEE_lowl_lowE_BAO_Riess18_Pantheon18/base_w_plikHM_TTTEEE_lowl_lowE_BAO_Riess18_Pantheon18	366
18.28	base_w_CamSpecHM_TTTEEE_lowl_lowE_BAO_Riess18_Pantheon18_post_lensing/base_w_plikHM_TTTEEE_lowl_lowE_BAO_Riess18_Pantheon18_post_lensing	367
18.29	base_w_CamSpecHM_TTTEEE_lowl_lowE_BAO_Riess18_Pantheon18_post_zre6p5/base_w_plikHM_TTTEEE_lowl_lowE_BAO_Riess18_Pantheon18_post_zre6p5	368
18.30	base_w_CamSpecHM_TTTEEE_lowl_lowE_BAO_Riess18_Pantheon18_post_lensing_zre6p5/base_w_plikHM_TTTEEE_lowl_lowE_BAO_Riess18_Pantheon18_post_lensing_zre6p5369	
19	w+wa	370
19.1	base_w_wa_CamSpecHM_TT_lowl_lowE_BAO_Pantheon18/base_w_wa_plikHM_TT_lowl_lowE_BAO_Pantheon18	370
19.2	base_w_wa_CamSpecHM_TT_lowl_lowE_BAO_Pantheon18_post_lensing/base_w_wa_plikHM_TT_lowl_lowE_BAO_Pantheon18_post_lensing	371
19.3	base_w_wa_CamSpecHM_TT_lowl_lowE_BAO_Pantheon18_post_zre6p5/base_w_wa_plikHM_TT_lowl_lowE_BAO_Pantheon18_post_zre6p5	372
19.4	base_w_wa_CamSpecHM_TT_lowl_lowE_BAO_Pantheon18_post_lensing_zre6p5/base_w_wa_plikHM_TT_lowl_lowE_BAO_Pantheon18_post_lensing_zre6p5	373
19.5	base_w_wa_CamSpecHM_TTTEEE_lowl_lowE_BAO_Pantheon18/base_w_wa_plikHM_TTTEEE_lowl_lowE_BAO_Pantheon18	374
19.6	base_w_wa_CamSpecHM_TTTEEE_lowl_lowE_BAO_Pantheon18_post_lensing/base_w_wa_plikHM_TTTEEE_lowl_lowE_BAO_Pantheon18_post_lensing	375
19.7	base_w_wa_CamSpecHM_TTTEEE_lowl_lowE_BAO_Pantheon18_post_zre6p5/base_w_wa_plikHM_TTTEEE_lowl_lowE_BAO_Pantheon18_post_zre6p5	376
19.8	base_w_wa_CamSpecHM_TTTEEE_lowl_lowE_BAO_Pantheon18_post_lensing_zre6p5/base_w_wa_plikHM_TTTEEE_lowl_lowE_BAO_Pantheon18_post_lensing_zre6p5377	
19.9	base_w_wa_CamSpecHM_TT_lowl_lowE_BAO_Riess18_Pantheon18/base_w_wa_plikHM_TT_lowl_lowE_BAO_Riess18_Pantheon18	378
19.10	base_w_wa_CamSpecHM_TT_lowl_lowE_BAO_Riess18_Pantheon18_post_lensing/base_w_wa_plikHM_TT_lowl_lowE_BAO_Riess18_Pantheon18_post_lensing	379
19.11	base_w_wa_CamSpecHM_TT_lowl_lowE_BAO_Riess18_Pantheon18_post_zre6p5/base_w_wa_plikHM_TT_lowl_lowE_BAO_Riess18_Pantheon18_post_zre6p5	380
19.12	base_w_wa_CamSpecHM_TT_lowl_lowE_BAO_Riess18_Pantheon18_post_lensing_zre6p5/base_w_wa_plikHM_TT_lowl_lowE_BAO_Riess18_Pantheon18_post_lensing_zre6p5381	
19.13	base_w_wa_CamSpecHM_TTTEEE_lowl_lowE_BAO_Riess18_Pantheon18/base_w_wa_plikHM_TTTEEE_lowl_lowE_BAO_Riess18_Pantheon18	382
19.14	base_w_wa_CamSpecHM_TTTEEE_lowl_lowE_BAO_Riess18_Pantheon18_post_lensing/base_w_wa_plikHM_TTTEEE_lowl_lowE_BAO_Riess18_Pantheon18_post_lensing383	

19.15 base_w_wa_CamSpecHM_TTTEEE_lowl_lowE_BAO_Riess18_Pantheon18_post_zre6p5/base_w_wa_plikHM_TTTEEE_lowl_lowE_BAO_Riess18_Pantheon18_post_zre6p5384

19.16 base_w_wa_CamSpecHM_TTTEEE_lowl_lowE_BAO_Riess18_Pantheon18_post_lensing_zre6p5/base_w_wa_plikHM_TTTEEE_lowl_lowE_BAO_Riess18_Pantheon18_post_lensing_zre6p5385

20	yhe	386
20.1	base_yhe_CamSpecHM_TT_lowl_lowE/base_yhe_plikHM_TT_lowl_lowE	386
20.2	base_yhe_CamSpecHM_TT_lowl_lowE_post_BAO/base_yhe_plikHM_TT_lowl_lowE_post_BAO	387
20.3	base_yhe_CamSpecHM_TT_lowl_lowE_post_lensing/base_yhe_plikHM_TT_lowl_lowE_post_lensing	388
20.4	base_yhe_CamSpecHM_TT_lowl_lowE_post_BAO_lensing/base_yhe_plikHM_TT_lowl_lowE_post_BAO_lensing	389
20.5	base_yhe_CamSpecHM_TT_lowl_lowE_post_zre6p5/base_yhe_plikHM_TT_lowl_lowE_post_zre6p5	390
20.6	base_yhe_CamSpecHM_TT_lowl_lowE_post_BAO_zre6p5/base_yhe_plikHM_TT_lowl_lowE_post_BAO_zre6p5	391
20.7	base_yhe_CamSpecHM_TT_lowl_lowE_post_lensing_zre6p5/base_yhe_plikHM_TT_lowl_lowE_post_lensing_zre6p5	392
20.8	base_yhe_CamSpecHM_TT_lowl_lowE_post_BAO_lensing_zre6p5/base_yhe_plikHM_TT_lowl_lowE_post_BAO_lensing_zre6p5	393
20.9	base_yhe_CamSpecHM_TTTEEE_lowl_lowE/base_yhe_plikHM_TTTEEE_lowl_lowE	394
20.10	base_yhe_CamSpecHM_TTTEEE_lowl_lowE_post_BAO/base_yhe_plikHM_TTTEEE_lowl_lowE_post_BAO	395
20.11	base_yhe_CamSpecHM_TTTEEE_lowl_lowE_post_lensing/base_yhe_plikHM_TTTEEE_lowl_lowE_post_lensing	396
20.12	base_yhe_CamSpecHM_TTTEEE_lowl_lowE_post_BAO_lensing/base_yhe_plikHM_TTTEEE_lowl_lowE_post_BAO_lensing	397
20.13	base_yhe_CamSpecHM_TTTEEE_lowl_lowE_post_Riess18/base_yhe_plikHM_TTTEEE_lowl_lowE_post_Riess18	398
20.14	base_yhe_CamSpecHM_TTTEEE_lowl_lowE_post_zre6p5/base_yhe_plikHM_TTTEEE_lowl_lowE_post_zre6p5	399
20.15	base_yhe_CamSpecHM_TTTEEE_lowl_lowE_post_BAO_zre6p5/base_yhe_plikHM_TTTEEE_lowl_lowE_post_BAO_zre6p5	400
20.16	base_yhe_CamSpecHM_TTTEEE_lowl_lowE_post_lensing_zre6p5/base_yhe_plikHM_TTTEEE_lowl_lowE_post_lensing_zre6p5	401
20.17	base_yhe_CamSpecHM_TTTEEE_lowl_lowE_post_BAO_lensing_zre6p5/base_yhe_plikHM_TTTEEE_lowl_lowE_post_BAO_lensing_zre6p5	402
20.18	base_yhe_CamSpecHM_TTTEEE_lowl_lowE_post_Riess18_zre6p5/base_yhe_plikHM_TTTEEE_lowl_lowE_post_Riess18_zre6p5	403
20.19	base_yhe_CamSpecHM_TTTEEE_lowl_lowE_Aver15/base_yhe_plikHM_TTTEEE_lowl_lowE_Aver15	404
20.20	base_yhe_CamSpecHM_TTTEEE_lowl_lowE_Aver15_post_BAO/base_yhe_plikHM_TTTEEE_lowl_lowE_Aver15_post_BAO	405
20.21	base_yhe_CamSpecHM_TTTEEE_lowl_lowE_Aver15_post_lensing/base_yhe_plikHM_TTTEEE_lowl_lowE_Aver15_post_lensing	406
20.22	base_yhe_CamSpecHM_TTTEEE_lowl_lowE_Aver15_post_BAO_lensing/base_yhe_plikHM_TTTEEE_lowl_lowE_Aver15_post_BAO_lensing	407
20.23	base_yhe_CamSpecHM_TTTEEE_lowl_lowE_Aver15_post_zre6p5/base_yhe_plikHM_TTTEEE_lowl_lowE_Aver15_post_zre6p5	408
20.24	base_yhe_CamSpecHM_TTTEEE_lowl_lowE_Aver15_post_BAO_zre6p5/base_yhe_plikHM_TTTEEE_lowl_lowE_Aver15_post_BAO_zre6p5	409
20.25	base_yhe_CamSpecHM_TTTEEE_lowl_lowE_Aver15_post_lensing_zre6p5/base_yhe_plikHM_TTTEEE_lowl_lowE_Aver15_post_lensing_zre6p5	410
20.26	base_yhe_CamSpecHM_TTTEEE_lowl_lowE_Aver15_post_BAO_lensing_zre6p5/base_yhe_plikHM_TTTEEE_lowl_lowE_Aver15_post_BAO_lensing_zre6p5	411

2 Baseline model

2.1 base_CamSpecHM_TT_lowl_lowE/base_plikHM_TT_lowl_lowE

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02213^{+0.00044}_{-0.00043}$	$\langle d^2 \rangle^{1/2}$	$2.451^{+0.075}_{-0.074}$	$D_M(0.15)$	647^{+16}_{-16}
$\Omega_c h^2$	$0.1206^{+0.0041}_{-0.0041}$	z_{re}	$7.5^{+1.6}_{-1.7}$	$H(0.38)$	$82.6^{+1.1}_{-1.1}$
$100\theta_{MC}$	$1.04080^{+0.00093}_{-0.00093}$	$10^9 A_s$	$2.090^{+0.068}_{-0.066}$	$D_M(0.38)$	1541^{+31}_{-31}
τ	$0.052^{+0.016}_{-0.015}$	$10^9 A_s e^{-2\tau}$	$1.883^{+0.027}_{-0.027}$	$H(0.51)$	$89.35^{+0.90}_{-0.84}$
$\ln(10^{10} A_s)$	$3.040^{+0.032}_{-0.032}$	D_{40}	1232^{+30}_{-30}	$D_M(0.51)$	1995^{+36}_{-37}
n_s	$0.963^{+0.011}_{-0.011}$	D_{220}	5708^{+83}_{-84}	$H(0.61)$	$95.03^{+0.72}_{-0.67}$
y_{cal}	$1.0005^{+0.0049}_{-0.0050}$	D_{810}	2535^{+27}_{-27}	$D_M(0.61)$	2321^{+39}_{-39}
A_{217}^{CIB}	44^{+20}_{-20}	D_{1420}	814^{+10}_{-10}	$H(2.33)$	$236.7^{+2.5}_{-2.5}$
$\xi^{tSZ-CIB}$	—	D_{2000}	$229.6^{+3.6}_{-3.5}$	$D_M(2.33)$	5777^{+32}_{-33}
A_{143}^{tSZ}	$4.4^{+3.7}_{-4.3}$	$n_{s,0.002}$	$0.963^{+0.011}_{-0.011}$	$f\sigma_8(0.15)$	$0.463^{+0.024}_{-0.024}$
A_{100}^{PS}	253^{+60}_{-50}	Y_P	$0.24529^{+0.00018}_{-0.00021}$	$\sigma_8(0.15)$	$0.749^{+0.015}_{-0.015}$
A_{143}^{PS}	45^{+20}_{-20}	Y_P^{BBN}	$0.24662^{+0.00018}_{-0.00021}$	$f\sigma_8(0.38)$	$0.479^{+0.019}_{-0.019}$
A_{217}^{PS}	108^{+30}_{-30}	$10^5 D/H$	$2.632^{+0.083}_{-0.081}$	$\sigma_8(0.38)$	$0.663^{+0.012}_{-0.012}$
A^{kSZ}	—	Age/Gyr	$13.828^{+0.072}_{-0.073}$	$f\sigma_8(0.51)$	$0.477^{+0.016}_{-0.016}$
c_{100}	$0.9985^{+0.0022}_{-0.0027}$	z_*	$1090.28^{+0.80}_{-0.80}$	$\sigma_8(0.51)$	$0.620^{+0.011}_{-0.011}$
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	r_*	$144.48^{+0.94}_{-0.94}$	$f\sigma_8(0.61)$	$0.471^{+0.014}_{-0.014}$
H_0	$66.9^{+1.8}_{-1.8}$	$100\theta_*$	$1.04101^{+0.00091}_{-0.00091}$	$\sigma_8(0.61)$	$0.590^{+0.010}_{-0.010}$
Ω_Λ	$0.680^{+0.025}_{-0.027}$	$D_M(z_*)/\text{Gpc}$	$13.879^{+0.086}_{-0.086}$	$f\sigma_8(2.33)$	$0.2970^{+0.0050}_{-0.0049}$
Ω_m	$0.320^{+0.027}_{-0.025}$	z_{drag}	$1059.41^{+0.91}_{-0.89}$	$\sigma_8(2.33)$	$0.3059^{+0.0053}_{-0.0051}$
$\Omega_m h^2$	$0.1433^{+0.0039}_{-0.0039}$	r_{drag}	$147.22^{+0.94}_{-0.94}$	f_{2000}^{143}	31^{+6}_{-6}
$\Omega_m h^3$	$0.09591^{+0.00090}_{-0.00089}$	k_D	$0.1405^{+0.0010}_{-0.0010}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-4}
σ_8	$0.811^{+0.017}_{-0.018}$	$100\theta_D$	$0.16107^{+0.00053}_{-0.00052}$	f_{2000}^{217}	$107.9^{+3.9}_{-3.9}$
S_8	$0.838^{+0.048}_{-0.047}$	z_{eq}	3410^{+94}_{-93}	χ_{simall}^2	$396.9 (\nu: 1.4)$
$\sigma_8 \Omega_m^{0.5}$	$0.459^{+0.026}_{-0.025}$	k_{eq}	$0.01041^{+0.00029}_{-0.00028}$	χ_{lowl}^2	$23.7 (\nu: 0.8)$
$\sigma_8 \Omega_m^{0.25}$	$0.610^{+0.023}_{-0.023}$	$100\theta_{\text{eq}}$	$0.811^{+0.018}_{-0.017}$	χ_{prior}^2	$7.5 (\nu: 6.6)$
$\sigma_8/h^{0.5}$	$0.992^{+0.031}_{-0.032}$	$100\theta_{s,\text{eq}}$	$0.4485^{+0.0091}_{-0.0089}$	χ_{CMB}^2	$4338 (\nu: 4947996.8)$
$r_{\text{drag}} h$	$98.5^{+3.2}_{-3.1}$	$H(0.15)$	$72.3^{+1.6}_{-1.5}$		

Best-fit $\chi_{\text{eff}}^2 = 7471.74$; $\Delta\chi_{\text{eff}}^2 = 6292.16$; $\bar{\chi}_{\text{eff}}^2 = 7491.54$; $\Delta\bar{\chi}_{\text{eff}}^2 = 6291.96$; $R - 1 = 0.00710$

χ_{eff}^2 : CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.83 (Δ -0.04) commander_dx12_v3_2_29: 23.40 (Δ -0.21) CamSpec like_10.7HM: 7050.34

2.2 base_CamSpecHM_TT_lowl_lowE_post_BAO/base_plikHM_TT_lowl_lowE_post_BAO

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02222^{+0.00039}_{-0.00039}$	z_{re}	$7.6^{+1.6}_{-1.7}$	$D_{\text{M}}(0.38)$	1529^{+18}_{-18}
$\Omega_c h^2$	$0.1189^{+0.0024}_{-0.0024}$	$10^9 A_s$	$2.090^{+0.071}_{-0.068}$	$H(0.51)$	$89.67^{+0.58}_{-0.56}$
$100\theta_{MC}$	$1.04102^{+0.00083}_{-0.00082}$	$10^9 A_s e^{-2\tau}$	$1.876^{+0.023}_{-0.023}$	$D_{\text{M}}(0.51)$	1981^{+22}_{-22}
τ	$0.054^{+0.016}_{-0.016}$	D_{40}	1224^{+26}_{-25}	$H(0.61)$	$95.28^{+0.49}_{-0.48}$
$\ln(10^{10} A_s)$	$3.039^{+0.033}_{-0.033}$	D_{220}	5716^{+82}_{-83}	$D_{\text{M}}(0.61)$	2306^{+23}_{-24}
n_s	$0.9669^{+0.0082}_{-0.0085}$	D_{810}	2535^{+27}_{-28}	$H(2.33)$	$235.7^{+1.5}_{-1.5}$
y_{cal}	$1.0006^{+0.0048}_{-0.0050}$	D_{1420}	815^{+10}_{-10}	$D_{\text{M}}(2.33)$	5766^{+24}_{-24}
A_{217}^{CIB}	44^{+20}_{-20}	D_{2000}	$229.9^{+3.5}_{-3.5}$	$f\sigma_8(0.15)$	$0.454^{+0.015}_{-0.015}$
$\xi^{tSZ-CIB}$	—	$n_{s,0.002}$	$0.9669^{+0.0082}_{-0.0085}$	$\sigma_8(0.15)$	$0.746^{+0.014}_{-0.014}$
A_{143}^{tSZ}	$4.5^{+3.7}_{-4.3}$	Y_P	$0.24533^{+0.00016}_{-0.00017}$	$f\sigma_8(0.38)$	$0.473^{+0.013}_{-0.013}$
A_{100}^{PS}	252^{+60}_{-60}	Y_P^{BBN}	$0.24666^{+0.00016}_{-0.00017}$	$\sigma_8(0.38)$	$0.661^{+0.012}_{-0.012}$
A_{143}^{PS}	44^{+20}_{-20}	$10^5 D/H$	$2.614^{+0.075}_{-0.071}$	$f\sigma_8(0.51)$	$0.471^{+0.012}_{-0.011}$
A_{217}^{PS}	108^{+20}_{-30}	Age/Gyr	$13.805^{+0.055}_{-0.056}$	$\sigma_8(0.51)$	$0.619^{+0.011}_{-0.011}$
A^{kSZ}	—	z_*	$1090.02^{+0.59}_{-0.58}$	$f\sigma_8(0.61)$	$0.467^{+0.011}_{-0.011}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	r_*	$144.82^{+0.62}_{-0.62}$	$\sigma_8(0.61)$	$0.589^{+0.010}_{-0.010}$
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	$100\theta_*$	$1.04122^{+0.00083}_{-0.00081}$	$f\sigma_8(2.33)$	$0.2970^{+0.0053}_{-0.0051}$
H_0	$67.6^{+1.1}_{-1.1}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.909^{+0.061}_{-0.060}$	$\sigma_8(2.33)$	$0.3063^{+0.0055}_{-0.0053}$
Ω_{Λ}	$0.690^{+0.014}_{-0.015}$	z_{drag}	$1059.51^{+0.88}_{-0.88}$	f_{2000}^{143}	31^{+6}_{-6}
Ω_m	$0.310^{+0.015}_{-0.014}$	r_{drag}	$147.54^{+0.67}_{-0.67}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-4}
$\Omega_m h^2$	$0.1418^{+0.0024}_{-0.0023}$	k_{D}	$0.14028^{+0.00087}_{-0.00087}$	f_{2000}^{217}	$107.6^{+3.9}_{-3.9}$
$\Omega_m h^3$	$0.09591^{+0.00090}_{-0.00088}$	$100\theta_{\text{D}}$	$0.16102^{+0.00052}_{-0.00050}$	χ_{small}^2	$397.1 (\nu: 1.7)$
σ_8	$0.807^{+0.015}_{-0.015}$	z_{eq}	3373^{+56}_{-55}	χ_{lowl}^2	$22.95 (\nu: 0.4)$
S_8	$0.820^{+0.030}_{-0.029}$	k_{eq}	$0.01030^{+0.00017}_{-0.00017}$	$\chi_{6\text{DF}}^2$	$0.057 (\nu: 0.0)$
$\sigma_8 \Omega_m^{0.5}$	$0.449^{+0.016}_{-0.016}$	$100\theta_{\text{eq}}$	$0.818^{+0.010}_{-0.010}$	χ_{MGS}^2	$1.37 (\nu: 0.1)$
$\sigma_8 \Omega_m^{0.25}$	$0.602^{+0.016}_{-0.016}$	$100\theta_{\text{s,eq}}$	$0.4521^{+0.0054}_{-0.0053}$	χ_{DR12BAO}^2	$4.7 (\nu: 1.3)$
$\sigma_8/h^{0.5}$	$0.981^{+0.023}_{-0.023}$	$H(0.15)$	$72.90^{+0.93}_{-0.92}$	χ_{prior}^2	$7.6 (\nu: 6.6)$
$r_{\text{drag}} h$	$99.8^{+1.8}_{-1.8}$	$D_{\text{M}}(0.15)$	$641.1^{+9.2}_{-9.1}$	χ_{BAO}^2	$6.2 (\nu: 0.8)$
$\langle d^2 \rangle^{1/2}$	$2.426^{+0.054}_{-0.054}$	$H(0.38)$	$82.98^{+0.70}_{-0.68}$	χ_{CMB}^2	$4338 (\nu: 4947705.2)$

$$\bar{\chi}_{\text{eff}}^2 = 7497.55; \Delta \bar{\chi}_{\text{eff}}^2 = 6291.53; R - 1 = 0.01113$$

2.3 base_CamSpecHM_TT_lowl_lowE_post_Riess18/base_plikHM_TT_lowl_lowE_post_Riess18

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02238^{+0.00045}_{-0.00042}$	$\langle d^2 \rangle^{1/2}$	$2.398^{+0.069}_{-0.068}$	$D_M(0.15)$	634^{+14}_{-13}
$\Omega_c h^2$	$0.1171^{+0.0036}_{-0.0034}$	z_{re}	$7.8^{+1.6}_{-1.6}$	$H(0.38)$	$83.5^{+1.1}_{-1.0}$
$100\theta_{MC}$	$1.04130^{+0.00088}_{-0.00089}$	$10^9 A_s$	$2.091^{+0.072}_{-0.072}$	$D_M(0.38)$	1514^{+28}_{-27}
τ	$0.056^{+0.017}_{-0.016}$	$10^9 A_s e^{-2\tau}$	$1.869^{+0.026}_{-0.027}$	$H(0.51)$	$90.12^{+0.91}_{-0.81}$
$\ln(10^{10} A_s)$	$3.040^{+0.034}_{-0.035}$	D_{40}	1215^{+29}_{-28}	$D_M(0.51)$	1964^{+32}_{-32}
n_s	$0.971^{+0.010}_{-0.010}$	D_{220}	5728^{+87}_{-83}	$H(0.61)$	$95.63^{+0.70}_{-0.67}$
y_{cal}	$1.0007^{+0.0052}_{-0.0053}$	D_{810}	2534^{+28}_{-29}	$D_M(0.61)$	2287^{+35}_{-35}
A_{217}^{CIB}	44^{+20}_{-10}	D_{1420}	$816.9^{+9.5}_{-9.9}$	$H(2.33)$	$234.7^{+2.2}_{-2.1}$
$\xi^{tSZ-CIB}$	—	D_{2000}	$230.6^{+3.2}_{-3.5}$	$D_M(2.33)$	5751^{+30}_{-32}
A_{143}^{tSZ}	$4.5^{+3.7}_{-4.2}$	$n_{s,0.002}$	$0.971^{+0.010}_{-0.010}$	$f\sigma_8(0.15)$	$0.444^{+0.021}_{-0.024}$
A_{100}^{PS}	251^{+60}_{-50}	Y_P	$0.24540^{+0.00017}_{-0.00017}$	$\sigma_8(0.15)$	$0.742^{+0.015}_{-0.016}$
A_{143}^{PS}	43^{+20}_{-20}	Y_P^{BBN}	$0.24672^{+0.00017}_{-0.00017}$	$f\sigma_8(0.38)$	$0.465^{+0.017}_{-0.019}$
A_{217}^{PS}	108^{+20}_{-30}	$10^5 D/H$	$2.584^{+0.079}_{-0.080}$	$\sigma_8(0.38)$	$0.659^{+0.013}_{-0.013}$
A^{kSZ}	—	Age/Gyr	$13.772^{+0.067}_{-0.068}$	$f\sigma_8(0.51)$	$0.465^{+0.015}_{-0.017}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	z_*	$1089.66^{+0.73}_{-0.79}$	$\sigma_8(0.51)$	$0.618^{+0.012}_{-0.012}$
c_{217}	$0.9997^{+0.0035}_{-0.0027}$	r_*	$145.17^{+0.88}_{-0.86}$	$f\sigma_8(0.61)$	$0.461^{+0.014}_{-0.014}$
H_0	$68.5^{+1.6}_{-1.6}$	$100\theta_*$	$1.04148^{+0.00088}_{-0.00087}$	$\sigma_8(0.61)$	$0.588^{+0.011}_{-0.011}$
Ω_Λ	$0.701^{+0.020}_{-0.022}$	$D_M(z_*)/\text{Gpc}$	$13.939^{+0.086}_{-0.080}$	$f\sigma_8(2.33)$	$0.2970^{+0.0053}_{-0.0053}$
Ω_m	$0.299^{+0.022}_{-0.020}$	z_{drag}	$1059.75^{+0.94}_{-0.93}$	$\sigma_8(2.33)$	$0.3068^{+0.0054}_{-0.0053}$
$\Omega_m h^2$	$0.1401^{+0.0035}_{-0.0034}$	r_{drag}	$147.85^{+0.87}_{-0.87}$	f_{2000}^{143}	30^{+6}_{-6}
$\Omega_m h^3$	$0.09601^{+0.00093}_{-0.00094}$	k_D	$0.14008^{+0.00099}_{-0.00096}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-4}
σ_8	$0.802^{+0.018}_{-0.018}$	$100\theta_D$	$0.16090^{+0.00052}_{-0.00053}$	f_{2000}^{217}	$107.2^{+3.9}_{-3.8}$
S_8	$0.800^{+0.042}_{-0.046}$	z_{eq}	3334^{+83}_{-80}	χ_{small}^2	$397.3 (\nu: 2.0)$
$\sigma_8 \Omega_m^{0.5}$	$0.438^{+0.023}_{-0.025}$	k_{eq}	$0.01017^{+0.00025}_{-0.00025}$	χ_{lowl}^2	$22.24 (\nu: 0.5)$
$\sigma_8 \Omega_m^{0.25}$	$0.593^{+0.021}_{-0.023}$	$100\theta_{\text{eq}}$	$0.826^{+0.016}_{-0.016}$	χ_{H073p45}^2	$9.1 (\nu: 4.6)$
$\sigma_8/h^{0.5}$	$0.969^{+0.029}_{-0.034}$	$100\theta_{\text{s,eq}}$	$0.4561^{+0.0083}_{-0.0081}$	χ_{prior}^2	$7.5 (\nu: 6.5)$
$r_{\text{drag}} h$	$101.3^{+2.9}_{-2.9}$	$H(0.15)$	$73.7^{+1.4}_{-1.4}$	χ_{CMB}^2	$4341 (\nu: 4946693.2)$

$\bar{\chi}_{\text{eff}}^2 = 7502.88$; $\Delta\bar{\chi}_{\text{eff}}^2 = 6290.80$; $R - 1 = 0.07941$

2.4 base_CamSpecHM_TT_lowl_lowE_post_zre6p5/base_plikHM_TT_lowl_lowE_post_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02213^{+0.00043}_{-0.00043}$	$\langle d^2 \rangle^{1/2}$	$2.453^{+0.074}_{-0.073}$	$D_M(0.15)$	647^{+16}_{-15}
$\Omega_c h^2$	$0.1205^{+0.0041}_{-0.0041}$	z_{re}	< 8.85	$H(0.38)$	$82.6^{+1.1}_{-1.1}$
$100\theta_{MC}$	$1.04082^{+0.00093}_{-0.00093}$	$10^9 A_s$	$2.097^{+0.059}_{-0.054}$	$D_M(0.38)$	1541^{+31}_{-31}
τ	$0.054^{+0.013}_{-0.011}$	$10^9 A_s e^{-2\tau}$	$1.883^{+0.027}_{-0.027}$	$H(0.51)$	$89.37^{+0.90}_{-0.84}$
$\ln(10^{10} A_s)$	$3.043^{+0.028}_{-0.026}$	D_{40}	1231^{+31}_{-30}	$D_M(0.51)$	1995^{+36}_{-36}
n_s	$0.963^{+0.011}_{-0.011}$	D_{220}	5709^{+83}_{-83}	$H(0.61)$	$95.04^{+0.72}_{-0.67}$
y_{cal}	$1.0005^{+0.0049}_{-0.0049}$	D_{810}	2535^{+27}_{-27}	$D_M(0.61)$	2320^{+39}_{-39}
A_{217}^{CIB}	44^{+20}_{-20}	D_{1420}	814^{+10}_{-10}	$H(2.33)$	$236.6^{+2.5}_{-2.5}$
$\xi^{tSZ-CIB}$	—	D_{2000}	$229.6^{+3.6}_{-3.5}$	$D_M(2.33)$	5776^{+32}_{-32}
A_{143}^{tSZ}	$4.4^{+3.7}_{-4.3}$	$n_{s,0.002}$	$0.963^{+0.011}_{-0.011}$	$f\sigma_8(0.15)$	$0.463^{+0.024}_{-0.024}$
A_{100}^{PS}	253^{+60}_{-50}	Y_P	$0.24529^{+0.00018}_{-0.00021}$	$\sigma_8(0.15)$	$0.750^{+0.014}_{-0.013}$
A_{143}^{PS}	45^{+20}_{-20}	Y_P^{BBN}	$0.24662^{+0.00018}_{-0.00021}$	$f\sigma_8(0.38)$	$0.480^{+0.019}_{-0.019}$
A_{217}^{PS}	108^{+30}_{-30}	$10^5 D/H$	$2.631^{+0.083}_{-0.081}$	$\sigma_8(0.38)$	$0.664^{+0.011}_{-0.010}$
A^{kSZ}	—	Age/Gyr	$13.826^{+0.072}_{-0.072}$	$f\sigma_8(0.51)$	$0.477^{+0.016}_{-0.016}$
c_{100}	$0.9985^{+0.0022}_{-0.0027}$	z_*	$1090.27^{+0.80}_{-0.80}$	$\sigma_8(0.51)$	$0.621^{+0.010}_{-0.0089}$
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	r_*	$144.49^{+0.94}_{-0.94}$	$f\sigma_8(0.61)$	$0.472^{+0.014}_{-0.014}$
H_0	$67.0^{+1.8}_{-1.8}$	$100\theta_*$	$1.04102^{+0.00092}_{-0.00091}$	$\sigma_8(0.61)$	$0.5906^{+0.0094}_{-0.0082}$
Ω_Λ	$0.680^{+0.025}_{-0.026}$	$D_M(z_*)/\text{Gpc}$	$13.880^{+0.086}_{-0.086}$	$f\sigma_8(2.33)$	$0.2975^{+0.0044}_{-0.0041}$
Ω_m	$0.320^{+0.026}_{-0.025}$	z_{drag}	$1059.42^{+0.90}_{-0.90}$	$\sigma_8(2.33)$	$0.3064^{+0.0046}_{-0.0042}$
$\Omega_m h^2$	$0.1433^{+0.0039}_{-0.0039}$	r_{drag}	$147.23^{+0.94}_{-0.94}$	f_{2000}^{143}	31^{+6}_{-6}
$\Omega_m h^3$	$0.09592^{+0.00090}_{-0.00089}$	k_D	$0.1405^{+0.0010}_{-0.0010}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-4}
σ_8	$0.812^{+0.017}_{-0.016}$	$100\theta_D$	$0.16106^{+0.00053}_{-0.00052}$	f_{2000}^{217}	$107.8^{+3.9}_{-3.9}$
S_8	$0.839^{+0.048}_{-0.046}$	z_{eq}	3408^{+94}_{-92}	χ_{small}^2	$396.8 (\nu: 1.4)$
$\sigma_8 \Omega_m^{0.5}$	$0.459^{+0.026}_{-0.025}$	k_{eq}	$0.01040^{+0.00029}_{-0.00028}$	χ_{lowl}^2	$23.7 (\nu: 0.8)$
$\sigma_8 \Omega_m^{0.25}$	$0.611^{+0.023}_{-0.023}$	$100\theta_{\text{eq}}$	$0.812^{+0.018}_{-0.017}$	χ_{prior}^2	$7.5 (\nu: 6.5)$
$\sigma_8/h^{0.5}$	$0.993^{+0.031}_{-0.031}$	$100\theta_{\text{s,eq}}$	$0.4487^{+0.0090}_{-0.0089}$	χ_{CMB}^2	$4338 (\nu: 4947918.4)$
$r_{\text{drag}} h$	$98.6^{+3.2}_{-3.1}$	$H(0.15)$	$72.3^{+1.6}_{-1.5}$		

$\bar{\chi}_{\text{eff}}^2 = 7491.26$; $\Delta\bar{\chi}_{\text{eff}}^2 = 6291.94$; $R - 1 = 0.00680$

2.5 base_CamSpecHM_TT_lowl_lowE_post_BAO_zre6p5/base_plikHM_TT_lowl_lowE_post_BAO_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02222^{+0.00039}_{-0.00039}$	z_{re}	< 8.98	$D_{\text{M}}(0.38)$	1529^{+18}_{-18}
$\Omega_c h^2$	$0.1189^{+0.0024}_{-0.0023}$	$10^9 A_s$	$2.095^{+0.062}_{-0.057}$	$H(0.51)$	$89.68^{+0.58}_{-0.56}$
$100\theta_{MC}$	$1.04102^{+0.00083}_{-0.00082}$	$10^9 A_s e^{-2\tau}$	$1.876^{+0.023}_{-0.023}$	$D_{\text{M}}(0.51)$	1981^{+22}_{-22}
τ	$0.055^{+0.013}_{-0.012}$	D_{40}	1224^{+26}_{-25}	$H(0.61)$	$95.28^{+0.49}_{-0.48}$
$\ln(10^{10} A_s)$	$3.042^{+0.029}_{-0.027}$	D_{220}	5716^{+82}_{-83}	$D_{\text{M}}(0.61)$	2305^{+23}_{-24}
n_s	$0.9670^{+0.0082}_{-0.0085}$	D_{810}	2535^{+27}_{-27}	$H(2.33)$	$235.7^{+1.5}_{-1.5}$
y_{cal}	$1.0006^{+0.0048}_{-0.0050}$	D_{1420}	$815^{+10}_{-9.9}$	$D_{\text{M}}(2.33)$	5766^{+24}_{-24}
A_{217}^{CIB}	44^{+20}_{-20}	D_{2000}	$230.0^{+3.4}_{-3.5}$	$f\sigma_8(0.15)$	$0.454^{+0.015}_{-0.014}$
$\xi^{tSZ-CIB}$	—	$n_{s,0.002}$	$0.9670^{+0.0082}_{-0.0085}$	$\sigma_8(0.15)$	$0.747^{+0.013}_{-0.012}$
A_{143}^{tSZ}	$4.5^{+3.7}_{-4.3}$	Y_P	$0.24533^{+0.00016}_{-0.00017}$	$f\sigma_8(0.38)$	$0.473^{+0.012}_{-0.012}$
A_{100}^{PS}	252^{+60}_{-60}	Y_P^{BBN}	$0.24666^{+0.00016}_{-0.00017}$	$\sigma_8(0.38)$	$0.662^{+0.011}_{-0.010}$
A_{143}^{PS}	44^{+20}_{-20}	$10^5 D/H$	$2.614^{+0.075}_{-0.071}$	$f\sigma_8(0.51)$	$0.472^{+0.011}_{-0.011}$
A_{217}^{PS}	108^{+20}_{-30}	Age/Gyr	$13.805^{+0.055}_{-0.056}$	$\sigma_8(0.51)$	$0.6197^{+0.0098}_{-0.0091}$
A^{kSZ}	—	z_*	$1090.01^{+0.59}_{-0.58}$	$f\sigma_8(0.61)$	$0.467^{+0.010}_{-0.0098}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	r_*	$144.82^{+0.63}_{-0.62}$	$\sigma_8(0.61)$	$0.5897^{+0.0092}_{-0.0086}$
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	$100\theta_*$	$1.04122^{+0.00083}_{-0.00081}$	$f\sigma_8(2.33)$	$0.2974^{+0.0046}_{-0.0043}$
H_0	$67.7^{+1.1}_{-1.1}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.909^{+0.061}_{-0.060}$	$\sigma_8(2.33)$	$0.3067^{+0.0048}_{-0.0044}$
Ω_{Λ}	$0.690^{+0.014}_{-0.014}$	z_{drag}	$1059.52^{+0.87}_{-0.88}$	f_{2000}^{143}	31^{+6}_{-6}
Ω_m	$0.310^{+0.014}_{-0.014}$	r_{drag}	$147.54^{+0.68}_{-0.67}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-4}
$\Omega_m h^2$	$0.1418^{+0.0023}_{-0.0023}$	k_{D}	$0.14028^{+0.00087}_{-0.00087}$	f_{2000}^{217}	$107.6^{+3.9}_{-3.9}$
$\Omega_m h^3$	$0.09592^{+0.00090}_{-0.00088}$	$100\theta_{\text{D}}$	$0.16101^{+0.00052}_{-0.00049}$	χ_{small}^2	$397.0 (\nu: 1.7)$
σ_8	$0.808^{+0.015}_{-0.013}$	z_{eq}	3373^{+56}_{-55}	χ_{lowl}^2	$22.97 (\nu: 0.4)$
S_8	$0.821^{+0.029}_{-0.028}$	k_{eq}	$0.01029^{+0.00017}_{-0.00017}$	$\chi_{6\text{DF}}^2$	$0.056 (\nu: 0.0)$
$\sigma_8 \Omega_m^{0.5}$	$0.450^{+0.016}_{-0.015}$	$100\theta_{\text{eq}}$	$0.818^{+0.010}_{-0.010}$	χ_{MGS}^2	$1.38 (\nu: 0.1)$
$\sigma_8 \Omega_m^{0.25}$	$0.603^{+0.015}_{-0.015}$	$100\theta_{\text{s,eq}}$	$0.4521^{+0.0054}_{-0.0053}$	χ_{DR12BAO}^2	$4.7 (\nu: 1.2)$
$\sigma_8/h^{0.5}$	$0.982^{+0.022}_{-0.021}$	$H(0.15)$	$72.91^{+0.93}_{-0.91}$	χ_{prior}^2	$7.5 (\nu: 6.5)$
$r_{\text{drag}} h$	$99.8^{+1.8}_{-1.8}$	$D_{\text{M}}(0.15)$	$641.0^{+9.1}_{-9.1}$	χ_{BAO}^2	$6.1 (\nu: 0.8)$
$\langle d^2 \rangle^{1/2}$	$2.429^{+0.052}_{-0.051}$	$H(0.38)$	$82.98^{+0.70}_{-0.68}$	χ_{CMB}^2	$4338 (\nu: 4947664.3)$

$$\bar{\chi}_{\text{eff}}^2 = 7497.31; \Delta \bar{\chi}_{\text{eff}}^2 = 6291.56; R - 1 = 0.01176$$

2.6 base_CamSpecHM_TT_lowl_lowE_post_Riess18_zre6p5/base_plikHM_TT_lowl_lowE_post_Riess18_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02239^{+0.00044}_{-0.00042}$	$\langle d^2 \rangle^{1/2}$	$2.400^{+0.068}_{-0.064}$	$D_M(0.15)$	634^{+14}_{-13}
$\Omega_c h^2$	$0.1171^{+0.0036}_{-0.0037}$	z_{re}	< 9.14	$H(0.38)$	$83.5^{+1.1}_{-1.0}$
$100\theta_{MC}$	$1.04130^{+0.00088}_{-0.00088}$	$10^9 A_s$	$2.095^{+0.069}_{-0.059}$	$D_M(0.38)$	1514^{+27}_{-27}
τ	$0.057^{+0.015}_{-0.013}$	$10^9 A_s e^{-2\tau}$	$1.869^{+0.026}_{-0.027}$	$H(0.51)$	$90.12^{+0.91}_{-0.80}$
$\ln(10^{10} A_s)$	$3.042^{+0.033}_{-0.029}$	D_{40}	1216^{+29}_{-28}	$D_M(0.51)$	1964^{+32}_{-31}
n_s	$0.971^{+0.010}_{-0.010}$	D_{220}	5728^{+87}_{-83}	$H(0.61)$	$95.64^{+0.69}_{-0.67}$
y_{cal}	$1.0007^{+0.0051}_{-0.0052}$	D_{810}	2534^{+28}_{-29}	$D_M(0.61)$	2287^{+35}_{-34}
A_{217}^{CIB}	44^{+20}_{-10}	D_{1420}	$816.9^{+9.5}_{-9.9}$	$H(2.33)$	$234.7^{+2.2}_{-2.1}$
$\xi^{tSZ-CIB}$	—	D_{2000}	$230.6^{+3.3}_{-3.5}$	$D_M(2.33)$	5751^{+30}_{-32}
A_{143}^{tSZ}	$4.5^{+3.7}_{-4.3}$	$n_{s,0.002}$	$0.971^{+0.010}_{-0.010}$	$f\sigma_8(0.15)$	$0.444^{+0.021}_{-0.023}$
A_{100}^{PS}	251^{+60}_{-50}	Y_P	$0.24540^{+0.00017}_{-0.00017}$	$\sigma_8(0.15)$	$0.743^{+0.015}_{-0.013}$
A_{143}^{PS}	43^{+20}_{-20}	Y_P^{BBN}	$0.24672^{+0.00017}_{-0.00017}$	$f\sigma_8(0.38)$	$0.465^{+0.018}_{-0.018}$
A_{217}^{PS}	107^{+20}_{-30}	$10^5 D/H$	$2.584^{+0.079}_{-0.080}$	$\sigma_8(0.38)$	$0.660^{+0.012}_{-0.011}$
A^{kSZ}	—	Age/Gyr	$13.772^{+0.067}_{-0.068}$	$f\sigma_8(0.51)$	$0.465^{+0.015}_{-0.017}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	z_*	$1089.65^{+0.72}_{-0.79}$	$\sigma_8(0.51)$	$0.618^{+0.011}_{-0.0094}$
c_{217}	$0.9997^{+0.0035}_{-0.0027}$	r_*	$145.18^{+0.88}_{-0.86}$	$f\sigma_8(0.61)$	$0.461^{+0.013}_{-0.015}$
H_0	$68.5^{+1.6}_{-1.6}$	$100\theta_*$	$1.04148^{+0.00087}_{-0.00087}$	$\sigma_8(0.61)$	$0.589^{+0.010}_{-0.0089}$
Ω_Λ	$0.701^{+0.020}_{-0.022}$	$D_M(z_*)/\text{Gpc}$	$13.939^{+0.085}_{-0.079}$	$f\sigma_8(2.33)$	$0.2973^{+0.0051}_{-0.0042}$
Ω_m	$0.299^{+0.022}_{-0.020}$	z_{drag}	$1059.76^{+0.94}_{-0.93}$	$\sigma_8(2.33)$	$0.3071^{+0.0049}_{-0.0046}$
$\Omega_m h^2$	$0.1401^{+0.0034}_{-0.0033}$	r_{drag}	$147.85^{+0.87}_{-0.87}$	f_{2000}^{143}	30^{+6}_{-6}
$\Omega_m h^3$	$0.09602^{+0.00093}_{-0.00095}$	k_D	$0.14008^{+0.00099}_{-0.00097}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
σ_8	$0.803^{+0.017}_{-0.015}$	$100\theta_D$	$0.16089^{+0.00052}_{-0.00052}$	f_{2000}^{217}	$107.1^{+3.8}_{-3.8}$
S_8	$0.801^{+0.042}_{-0.045}$	z_{eq}	3333^{+82}_{-80}	χ_{small}^2	$397.2 (\nu: 2.1)$
$\sigma_8 \Omega_m^{0.5}$	$0.439^{+0.023}_{-0.024}$	k_{eq}	$0.01017^{+0.00025}_{-0.00024}$	χ_{lowl}^2	$22.25 (\nu: 0.5)$
$\sigma_8 \Omega_m^{0.25}$	$0.593^{+0.021}_{-0.021}$	$100\theta_{\text{eq}}$	$0.826^{+0.016}_{-0.016}$	χ_{H073p45}^2	$9.0 (\nu: 4.5)$
$\sigma_8/h^{0.5}$	$0.970^{+0.029}_{-0.031}$	$100\theta_{\text{s,eq}}$	$0.4561^{+0.0083}_{-0.0081}$	χ_{prior}^2	$7.5 (\nu: 6.4)$
$r_{\text{drag}} h$	$101.3^{+2.9}_{-2.8}$	$H(0.15)$	$73.7^{+1.4}_{-1.4}$	χ_{CMB}^2	$4341 (\nu: 4946912.0)$

$\bar{\chi}_{\text{eff}}^2 = 7502.64$; $\Delta\bar{\chi}_{\text{eff}}^2 = 6290.83$; $R - 1 = 0.09766$

2.7 base_CamSpecHM_TTTEEE_lowl_lowE/base_plikHM_TTTEEE_lowl_lowE

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02233^{+0.00030}_{-0.00031}$	$\langle d^2 \rangle^{1/2}$	$2.441^{+0.056}_{-0.057}$	$D_M(0.15)$	644^{+10}_{-10}
$\Omega_c h^2$	$0.1199^{+0.0027}_{-0.0028}$	z_{re}	$7.6^{+1.6}_{-1.6}$	$H(0.38)$	$82.84^{+0.76}_{-0.74}$
$100\theta_{MC}$	$1.04089^{+0.00060}_{-0.00061}$	$10^9 A_s$	$2.095^{+0.070}_{-0.067}$	$D_M(0.38)$	1534^{+20}_{-21}
τ	$0.054^{+0.016}_{-0.016}$	$10^9 A_s e^{-2\tau}$	$1.881^{+0.023}_{-0.023}$	$H(0.51)$	$89.60^{+0.60}_{-0.58}$
$\ln(10^{10} A_s)$	$3.042^{+0.033}_{-0.032}$	D_{40}	1229^{+25}_{-25}	$D_M(0.51)$	1987^{+24}_{-24}
n_s	$0.9653^{+0.0087}_{-0.0088}$	D_{220}	5724^{+77}_{-76}	$H(0.61)$	$95.25^{+0.48}_{-0.46}$
y_{cal}	$1.0005^{+0.0049}_{-0.0049}$	D_{810}	2537^{+27}_{-27}	$D_M(0.61)$	2311^{+26}_{-26}
A_{217}^{CIB}	43^{+10}_{-20}	D_{1420}	$816.4^{+9.5}_{-9.6}$	$H(2.33)$	$236.5^{+1.7}_{-1.7}$
$\xi^{tSZ-CIB}$	—	D_{2000}	$230.5^{+3.2}_{-3.2}$	$D_M(2.33)$	5766^{+22}_{-22}
A_{143}^{tSZ}	$4.7^{+3.9}_{-4.3}$	$n_{s,0.002}$	$0.9653^{+0.0087}_{-0.0088}$	$f\sigma_8(0.15)$	$0.459^{+0.017}_{-0.016}$
A_{100}^{PS}	249^{+60}_{-50}	Y_P	$0.24538^{+0.00012}_{-0.00013}$	$\sigma_8(0.15)$	$0.748^{+0.013}_{-0.013}$
A_{143}^{PS}	43^{+20}_{-20}	Y_P^{BBN}	$0.24670^{+0.00012}_{-0.00013}$	$f\sigma_8(0.38)$	$0.477^{+0.014}_{-0.014}$
A_{217}^{PS}	109^{+30}_{-30}	$10^5 D/H$	$2.594^{+0.059}_{-0.055}$	$\sigma_8(0.38)$	$0.663^{+0.011}_{-0.011}$
A^{kSZ}	—	Age/Gyr	$13.802^{+0.049}_{-0.048}$	$f\sigma_8(0.51)$	$0.475^{+0.012}_{-0.012}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	z_*	$1089.97^{+0.56}_{-0.54}$	$\sigma_8(0.51)$	$0.620^{+0.011}_{-0.010}$
c_{217}	$0.9997^{+0.0038}_{-0.0027}$	r_*	$144.49^{+0.64}_{-0.62}$	$f\sigma_8(0.61)$	$0.469^{+0.011}_{-0.011}$
H_0	$67.3^{+1.2}_{-1.2}$	$100\theta_*$	$1.04108^{+0.00059}_{-0.00060}$	$\sigma_8(0.61)$	$0.590^{+0.010}_{-0.0099}$
Ω_Λ	$0.685^{+0.017}_{-0.017}$	$D_M(z_*)/\text{Gpc}$	$13.878^{+0.060}_{-0.058}$	$f\sigma_8(2.33)$	$0.2973^{+0.0050}_{-0.0049}$
Ω_m	$0.315^{+0.017}_{-0.017}$	z_{drag}	$1059.83^{+0.64}_{-0.66}$	$\sigma_8(2.33)$	$0.3064^{+0.0053}_{-0.0051}$
$\Omega_m h^2$	$0.1429^{+0.0026}_{-0.0026}$	r_{drag}	$147.16^{+0.64}_{-0.62}$	f_{2000}^{143}	30^{+6}_{-5}
$\Omega_m h^3$	$0.09622^{+0.00062}_{-0.00064}$	k_D	$0.14076^{+0.00069}_{-0.00072}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
σ_8	$0.810^{+0.015}_{-0.015}$	$100\theta_D$	$0.16082^{+0.00039}_{-0.00036}$	f_{2000}^{217}	$106.9^{+3.7}_{-3.6}$
S_8	$0.830^{+0.033}_{-0.032}$	z_{eq}	3399^{+62}_{-63}	χ_{small}^2	$397.0 (\nu: 1.7)$
$\sigma_8 \Omega_m^{0.5}$	$0.455^{+0.018}_{-0.018}$	k_{eq}	$0.01037^{+0.00019}_{-0.00019}$	χ_{lowl}^2	$23.35 (\nu: 0.5)$
$\sigma_8 \Omega_m^{0.25}$	$0.607^{+0.017}_{-0.017}$	$100\theta_{\text{eq}}$	$0.814^{+0.012}_{-0.012}$	χ_{prior}^2	$9.7 (\nu: 9.9)$
$\sigma_8/h^{0.5}$	$0.987^{+0.024}_{-0.024}$	$100\theta_{s,\text{eq}}$	$0.4496^{+0.0061}_{-0.0059}$	χ_{CMB}^2	$7357 (\nu: 10475571.6)$
$r_{\text{drag}} h$	$99.1^{+2.1}_{-2.1}$	$H(0.15)$	$72.7^{+1.0}_{-1.0}$		

Best-fit $\chi_{\text{eff}}^2 = 11920.76$; $\Delta\chi_{\text{eff}}^2 = 9154.99$; $\bar{\chi}_{\text{eff}}^2 = 11942.46$; $\Delta\bar{\chi}_{\text{eff}}^2 = 9150.69$; $R - 1 = 0.01233$

χ_{eff}^2 : CMB - small_100x143_offlike5_EE_Aplanck_B: 395.90 (Δ -0.15) commander_dx12_v3_2_29: 23.00 (Δ -0.26) CamSpec like_10.7HM_1400_unified: 11499.65

2.8 base_CamSpecHM_TTTEEE_lowl_lowE_post_BAO/base_plikHM_TTTEEE_lowl_lowE_post_BAO

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02238^{+0.00028}_{-0.00030}$	z_{re}	$7.7^{+1.6}_{-1.6}$	$D_{\text{M}}(0.38)$	1528^{+15}_{-15}
$\Omega_c h^2$	$0.1191^{+0.0020}_{-0.0020}$	$10^9 A_s$	$2.096^{+0.072}_{-0.067}$	$H(0.51)$	$89.76^{+0.45}_{-0.45}$
$100\theta_{MC}$	$1.04099^{+0.00056}_{-0.00059}$	$10^9 A_s e^{-2\tau}$	$1.878^{+0.022}_{-0.021}$	$D_{\text{M}}(0.51)$	1980^{+18}_{-18}
τ	$0.055^{+0.016}_{-0.016}$	D_{40}	1225^{+23}_{-24}	$H(0.61)$	$95.37^{+0.38}_{-0.37}$
$\ln(10^{10} A_s)$	$3.043^{+0.034}_{-0.032}$	D_{220}	5728^{+76}_{-75}	$D_{\text{M}}(0.61)$	2304^{+19}_{-19}
n_s	$0.9672^{+0.0076}_{-0.0075}$	D_{810}	2537^{+27}_{-27}	$H(2.33)$	$236.0^{+1.3}_{-1.3}$
y_{cal}	$1.0006^{+0.0049}_{-0.0049}$	D_{1420}	$817.0^{+9.6}_{-9.6}$	$D_{\text{M}}(2.33)$	5760^{+18}_{-18}
A_{217}^{CIB}	43^{+10}_{-20}	D_{2000}	$230.8^{+3.2}_{-3.2}$	$f\sigma_8(0.15)$	$0.455^{+0.013}_{-0.013}$
$\xi^{tSZ-CIB}$	—	$n_{s,0.002}$	$0.9672^{+0.0076}_{-0.0075}$	$\sigma_8(0.15)$	$0.747^{+0.013}_{-0.013}$
A_{143}^{tSZ}	$4.7^{+3.9}_{-4.3}$	Y_P	$0.24540^{+0.00011}_{-0.00011}$	$f\sigma_8(0.38)$	$0.473^{+0.011}_{-0.012}$
A_{100}^{PS}	249^{+60}_{-50}	Y_P^{BBN}	$0.24672^{+0.00011}_{-0.00011}$	$\sigma_8(0.38)$	$0.662^{+0.011}_{-0.011}$
A_{143}^{PS}	42^{+20}_{-20}	$10^5 D/H$	$2.584^{+0.056}_{-0.050}$	$f\sigma_8(0.51)$	$0.472^{+0.010}_{-0.010}$
A_{217}^{PS}	109^{+20}_{-30}	Age/Gyr	$13.791^{+0.041}_{-0.041}$	$\sigma_8(0.51)$	$0.620^{+0.011}_{-0.010}$
A^{kSZ}	—	z_*	$1089.83^{+0.46}_{-0.44}$	$f\sigma_8(0.61)$	$0.4673^{+0.0097}_{-0.0098}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	r_*	$144.65^{+0.50}_{-0.49}$	$\sigma_8(0.61)$	$0.590^{+0.010}_{-0.0098}$
c_{217}	$0.9996^{+0.0038}_{-0.0027}$	$100\theta_*$	$1.04117^{+0.00056}_{-0.00058}$	$f\sigma_8(2.33)$	$0.2974^{+0.0052}_{-0.0049}$
H_0	$67.69^{+0.90}_{-0.87}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.893^{+0.048}_{-0.047}$	$\sigma_8(2.33)$	$0.3067^{+0.0054}_{-0.0051}$
Ω_Λ	$0.690^{+0.012}_{-0.012}$	z_{drag}	$1059.89^{+0.61}_{-0.65}$	f_{2000}^{143}	29^{+5}_{-5}
Ω_m	$0.310^{+0.012}_{-0.012}$	r_{drag}	$147.31^{+0.54}_{-0.52}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
$\Omega_m h^2$	$0.1422^{+0.0019}_{-0.0020}$	k_{D}	$0.14064^{+0.00063}_{-0.00066}$	f_{2000}^{217}	$106.8^{+3.7}_{-3.5}$
$\Omega_m h^3$	$0.09622^{+0.00063}_{-0.00064}$	$100\theta_{\text{D}}$	$0.16079^{+0.00039}_{-0.00035}$	χ_{small}^2	$397.2 (\nu: 2.0)$
σ_8	$0.808^{+0.015}_{-0.014}$	z_{eq}	3382^{+46}_{-47}	χ_{lowl}^2	$23.00 (\nu: 0.3)$
S_8	$0.822^{+0.025}_{-0.025}$	k_{eq}	$0.01032^{+0.00014}_{-0.00014}$	$\chi_{6\text{DF}}^2$	$0.051 (\nu: 0.0)$
$\sigma_8 \Omega_m^{0.5}$	$0.450^{+0.014}_{-0.014}$	$100\theta_{\text{eq}}$	$0.8171^{+0.0089}_{-0.0085}$	χ_{MGS}^2	$1.31 (\nu: 0.1)$
$\sigma_8 \Omega_m^{0.25}$	$0.603^{+0.014}_{-0.014}$	$100\theta_{\text{s,eq}}$	$0.4513^{+0.0046}_{-0.0044}$	χ_{DR12BAO}^2	$4.7 (\nu: 0.9)$
$\sigma_8/h^{0.5}$	$0.982^{+0.021}_{-0.021}$	$H(0.15)$	$72.96^{+0.77}_{-0.76}$	χ_{prior}^2	$9.7 (\nu: 10.0)$
$r_{\text{drag}} h$	$99.7^{+1.6}_{-1.5}$	$D_{\text{M}}(0.15)$	$640.6^{+7.5}_{-7.6}$	χ_{BAO}^2	$6.1 (\nu: 0.6)$
$\langle d^2 \rangle^{1/2}$	$2.430^{+0.050}_{-0.050}$	$H(0.38)$	$83.05^{+0.57}_{-0.56}$	χ_{CMB}^2	$7357 (\nu: 10475424.8)$

$$\bar{\chi}_{\text{eff}}^2 = 11948.28; \Delta\bar{\chi}_{\text{eff}}^2 = 9150.37; R - 1 = 0.01864$$

2.9 base_CamSpecHM_TTTEEE_lowl_lowE_post_Riess18/base_plikHM_TTTEEE_lowl_lowE_post_Riess18

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02245^{+0.00028}_{-0.00029}$	$\langle d^2 \rangle^{1/2}$	$2.419^{+0.055}_{-0.054}$	$D_M(0.15)$	$637.4^{+9.6}_{-9.2}$
$\Omega_c h^2$	$0.1183^{+0.0026}_{-0.0026}$	z_{re}	$7.8^{+1.6}_{-1.6}$	$H(0.38)$	$83.29^{+0.68}_{-0.70}$
$100\theta_{MC}$	$1.04109^{+0.00059}_{-0.00061}$	$10^9 A_s$	$2.099^{+0.073}_{-0.068}$	$D_M(0.38)$	1522^{+19}_{-19}
τ	$0.056^{+0.017}_{-0.016}$	$10^9 A_s e^{-2\tau}$	$1.875^{+0.023}_{-0.022}$	$H(0.51)$	$89.95^{+0.54}_{-0.55}$
$\ln(10^{10} A_s)$	$3.044^{+0.034}_{-0.033}$	D_{40}	1222^{+25}_{-25}	$D_M(0.51)$	1972^{+22}_{-22}
n_s	$0.9691^{+0.0084}_{-0.0084}$	D_{220}	5735^{+75}_{-75}	$H(0.61)$	$95.52^{+0.42}_{-0.45}$
y_{cal}	$1.0006^{+0.0048}_{-0.0050}$	D_{810}	2537^{+26}_{-28}	$D_M(0.61)$	2296^{+24}_{-23}
A_{217}^{CIB}	43^{+10}_{-10}	D_{1420}	$817.7^{+9.3}_{-9.9}$	$H(2.33)$	$235.6^{+1.6}_{-1.6}$
$\xi^{tSZ-CIB}$	—	D_{2000}	$231.1^{+3.2}_{-3.3}$	$D_M(2.33)$	5754^{+21}_{-19}
A_{143}^{tSZ}	$4.7^{+3.9}_{-4.3}$	$n_{s,0.002}$	$0.9691^{+0.0084}_{-0.0084}$	$f\sigma_8(0.15)$	$0.451^{+0.016}_{-0.015}$
A_{100}^{PS}	248^{+60}_{-50}	Y_P	$0.24543^{+0.00011}_{-0.00011}$	$\sigma_8(0.15)$	$0.746^{+0.014}_{-0.013}$
A_{143}^{PS}	41^{+20}_{-20}	Y_P^{BBN}	$0.24675^{+0.00011}_{-0.00011}$	$f\sigma_8(0.38)$	$0.470^{+0.013}_{-0.013}$
A_{217}^{PS}	109^{+20}_{-30}	$10^5 D/H$	$2.571^{+0.054}_{-0.051}$	$\sigma_8(0.38)$	$0.662^{+0.012}_{-0.012}$
A^{kSZ}	—	Age/Gyr	$13.777^{+0.046}_{-0.043}$	$f\sigma_8(0.51)$	$0.470^{+0.012}_{-0.012}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	z_*	$1089.67^{+0.52}_{-0.49}$	$\sigma_8(0.51)$	$0.620^{+0.011}_{-0.011}$
c_{217}	$0.9996^{+0.0037}_{-0.0027}$	r_*	$144.80^{+0.59}_{-0.60}$	$f\sigma_8(0.61)$	$0.465^{+0.011}_{-0.011}$
H_0	$68.1^{+1.1}_{-1.1}$	$100\theta_*$	$1.04126^{+0.00057}_{-0.00060}$	$\sigma_8(0.61)$	$0.590^{+0.010}_{-0.010}$
Ω_Λ	$0.695^{+0.015}_{-0.016}$	$D_M(z_*)/\text{Gpc}$	$13.906^{+0.057}_{-0.057}$	$f\sigma_8(2.33)$	$0.2976^{+0.0052}_{-0.0050}$
Ω_m	$0.305^{+0.016}_{-0.015}$	z_{drag}	$1060.01^{+0.57}_{-0.61}$	$\sigma_8(2.33)$	$0.3071^{+0.0054}_{-0.0052}$
$\Omega_m h^2$	$0.1414^{+0.0025}_{-0.0025}$	r_{drag}	$147.44^{+0.61}_{-0.61}$	f_{2000}^{143}	29^{+5}_{-6}
$\Omega_m h^3$	$0.09627^{+0.00063}_{-0.00062}$	k_D	$0.14056^{+0.00068}_{-0.00073}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
σ_8	$0.806^{+0.016}_{-0.015}$	$100\theta_D$	$0.16072^{+0.00037}_{-0.00034}$	f_{2000}^{217}	$106.5^{+3.6}_{-3.6}$
S_8	$0.814^{+0.030}_{-0.029}$	z_{eq}	3364^{+59}_{-59}	χ_{small}^2	$397.4 (\nu: 2.4)$
$\sigma_8 \Omega_m^{0.5}$	$0.446^{+0.017}_{-0.016}$	k_{eq}	$0.01027^{+0.00018}_{-0.00018}$	χ_{lowl}^2	$22.69 (\nu: 0.4)$
$\sigma_8 \Omega_m^{0.25}$	$0.599^{+0.016}_{-0.016}$	$100\theta_{\text{eq}}$	$0.821^{+0.011}_{-0.011}$	χ_{H073p45}^2	$10.6 (\nu: 2.6)$
$\sigma_8/h^{0.5}$	$0.977^{+0.023}_{-0.023}$	$100\theta_{\text{s,eq}}$	$0.4531^{+0.0057}_{-0.0057}$	χ_{prior}^2	$9.8 (\nu: 10.6)$
$r_{\text{drag}} h$	$100.4^{+2.0}_{-2.0}$	$H(0.15)$	$73.29^{+0.95}_{-0.96}$	χ_{CMB}^2	$7359 (\nu: 10475706.7)$

$$\bar{\chi}_{\text{eff}}^2 = 11954.26; \Delta\bar{\chi}_{\text{eff}}^2 = 9150.10; R - 1 = 0.03390$$

2.10 base_CamSpecHM_TTTEEE_lowl_lowE_post_zre6p5/base_plikHM_TTTEEE_lowl_lowE_post_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02233^{+0.00030}_{-0.00031}$	$\langle d^2 \rangle^{1/2}$	$2.444^{+0.055}_{-0.054}$	$D_M(0.15)$	643^{+10}_{-10}
$\Omega_c h^2$	$0.1199^{+0.0027}_{-0.0028}$	z_{re}	< 8.95	$H(0.38)$	$82.85^{+0.76}_{-0.73}$
$100\theta_{MC}$	$1.04090^{+0.00060}_{-0.00061}$	$10^9 A_s$	$2.100^{+0.060}_{-0.055}$	$D_M(0.38)$	1534^{+20}_{-21}
τ	$0.055^{+0.013}_{-0.012}$	$10^9 A_s e^{-2\tau}$	$1.881^{+0.023}_{-0.023}$	$H(0.51)$	$89.61^{+0.59}_{-0.57}$
$\ln(10^{10} A_s)$	$3.044^{+0.028}_{-0.026}$	D_{40}	1229^{+25}_{-25}	$D_M(0.51)$	1986^{+24}_{-24}
n_s	$0.9655^{+0.0087}_{-0.0088}$	D_{220}	5724^{+77}_{-76}	$H(0.61)$	$95.25^{+0.48}_{-0.46}$
y_{cal}	$1.0005^{+0.0049}_{-0.0049}$	D_{810}	2537^{+27}_{-27}	$D_M(0.61)$	2311^{+26}_{-26}
A_{217}^{CIB}	43^{+10}_{-20}	D_{1420}	$816.4^{+9.5}_{-9.6}$	$H(2.33)$	$236.4^{+1.7}_{-1.7}$
$\xi^{tSZ-CIB}$	—	D_{2000}	$230.6^{+3.2}_{-3.2}$	$D_M(2.33)$	5765^{+22}_{-22}
A_{143}^{tSZ}	$4.7^{+3.9}_{-4.3}$	$n_{s,0.002}$	$0.9655^{+0.0087}_{-0.0088}$	$f\sigma_8(0.15)$	$0.459^{+0.016}_{-0.016}$
A_{100}^{PS}	249^{+60}_{-50}	Y_P	$0.24538^{+0.00011}_{-0.00013}$	$\sigma_8(0.15)$	$0.749^{+0.013}_{-0.011}$
A_{143}^{PS}	43^{+20}_{-20}	Y_P^{BBN}	$0.24670^{+0.00012}_{-0.00013}$	$f\sigma_8(0.38)$	$0.477^{+0.013}_{-0.013}$
A_{217}^{PS}	109^{+30}_{-30}	$10^5 D/H$	$2.593^{+0.059}_{-0.055}$	$\sigma_8(0.38)$	$0.664^{+0.010}_{-0.0097}$
A^{kSZ}	—	Age/Gyr	$13.802^{+0.048}_{-0.048}$	$f\sigma_8(0.51)$	$0.475^{+0.012}_{-0.012}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	z_*	$1089.96^{+0.56}_{-0.54}$	$\sigma_8(0.51)$	$0.6209^{+0.0094}_{-0.0088}$
c_{217}	$0.9997^{+0.0038}_{-0.0027}$	r_*	$144.49^{+0.64}_{-0.62}$	$f\sigma_8(0.61)$	$0.470^{+0.011}_{-0.010}$
H_0	$67.4^{+1.2}_{-1.2}$	$100\theta_*$	$1.04109^{+0.00059}_{-0.00060}$	$\sigma_8(0.61)$	$0.5907^{+0.0089}_{-0.0083}$
Ω_Λ	$0.685^{+0.017}_{-0.017}$	$D_M(z_*)/\text{Gpc}$	$13.879^{+0.060}_{-0.058}$	$f\sigma_8(2.33)$	$0.2977^{+0.0044}_{-0.0041}$
Ω_m	$0.315^{+0.017}_{-0.017}$	z_{drag}	$1059.83^{+0.63}_{-0.66}$	$\sigma_8(2.33)$	$0.3068^{+0.0046}_{-0.0042}$
$\Omega_m h^2$	$0.1429^{+0.0026}_{-0.0026}$	r_{drag}	$147.17^{+0.64}_{-0.62}$	f_{2000}^{143}	30^{+6}_{-5}
$\Omega_m h^3$	$0.09622^{+0.00062}_{-0.00064}$	k_D	$0.14075^{+0.00069}_{-0.00072}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
σ_8	$0.811^{+0.015}_{-0.013}$	$100\theta_D$	$0.16082^{+0.00039}_{-0.00036}$	f_{2000}^{217}	$106.9^{+3.6}_{-3.6}$
S_8	$0.831^{+0.033}_{-0.032}$	z_{eq}	3398^{+62}_{-62}	χ_{small}^2	$397.0 (\nu: 1.8)$
$\sigma_8 \Omega_m^{0.5}$	$0.455^{+0.018}_{-0.017}$	k_{eq}	$0.01037^{+0.00019}_{-0.00019}$	χ_{lowl}^2	$23.36 (\nu: 0.5)$
$\sigma_8 \Omega_m^{0.25}$	$0.608^{+0.016}_{-0.016}$	$100\theta_{\text{eq}}$	$0.814^{+0.012}_{-0.012}$	χ_{prior}^2	$9.7 (\nu: 9.9)$
$\sigma_8/h^{0.5}$	$0.988^{+0.023}_{-0.022}$	$100\theta_{s,\text{eq}}$	$0.4497^{+0.0061}_{-0.0060}$	χ_{CMB}^2	$7357 (\nu: 10475419.6)$
$r_{\text{drag}} h$	$99.1^{+2.1}_{-2.1}$	$H(0.15)$	$72.7^{+1.0}_{-1.0}$		

$$\bar{\chi}_{\text{eff}}^2 = 11942.19; \Delta\bar{\chi}_{\text{eff}}^2 = 9150.65; R - 1 = 0.01099$$

2.11 base_CamSpecHM_TTTEEE_lowl_lowE_post_BAO_zre6p5/base_plikHM_TTTEEE_lowl_lowE_post_BAO_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02238^{+0.00028}_{-0.00030}$	z_{re}	< 9.07	$D_{\text{M}}(0.38)$	1528^{+15}_{-15}
$\Omega_c h^2$	$0.1191^{+0.0020}_{-0.0020}$	$10^9 A_s$	$2.100^{+0.062}_{-0.057}$	$H(0.51)$	$89.76^{+0.45}_{-0.45}$
$100\theta_{MC}$	$1.04099^{+0.00056}_{-0.00059}$	$10^9 A_s e^{-2\tau}$	$1.878^{+0.022}_{-0.021}$	$D_{\text{M}}(0.51)$	1979^{+18}_{-18}
τ	$0.056^{+0.014}_{-0.012}$	D_{40}	1225^{+23}_{-23}	$H(0.61)$	$95.38^{+0.37}_{-0.38}$
$\ln(10^{10} A_s)$	$3.045^{+0.030}_{-0.027}$	D_{220}	5728^{+76}_{-75}	$D_{\text{M}}(0.61)$	2303^{+19}_{-19}
n_s	$0.9673^{+0.0075}_{-0.0074}$	D_{810}	2537^{+27}_{-27}	$H(2.33)$	$236.0^{+1.3}_{-1.3}$
y_{cal}	$1.0006^{+0.0049}_{-0.0049}$	D_{1420}	$816.9^{+9.6}_{-9.6}$	$D_{\text{M}}(2.33)$	5760^{+18}_{-18}
A_{217}^{CIB}	43^{+10}_{-20}	D_{2000}	$230.8^{+3.2}_{-3.2}$	$f\sigma_8(0.15)$	$0.455^{+0.013}_{-0.013}$
$\xi^{tSZ-CIB}$	—	$n_{s,0.002}$	$0.9673^{+0.0075}_{-0.0074}$	$\sigma_8(0.15)$	$0.748^{+0.012}_{-0.011}$
A_{143}^{tSZ}	$4.7^{+3.9}_{-4.3}$	Y_P	$0.24540^{+0.00011}_{-0.00011}$	$f\sigma_8(0.38)$	$0.474^{+0.011}_{-0.011}$
A_{100}^{PS}	249^{+60}_{-50}	Y_P^{BBN}	$0.24672^{+0.00011}_{-0.00011}$	$\sigma_8(0.38)$	$0.663^{+0.010}_{-0.0097}$
A_{143}^{PS}	42^{+20}_{-20}	$10^5 D/H$	$2.584^{+0.056}_{-0.050}$	$f\sigma_8(0.51)$	$0.473^{+0.010}_{-0.0096}$
A_{217}^{PS}	109^{+20}_{-30}	Age/Gyr	$13.790^{+0.041}_{-0.041}$	$\sigma_8(0.51)$	$0.6205^{+0.0096}_{-0.0090}$
A^{kSZ}	—	z_*	$1089.83^{+0.46}_{-0.43}$	$f\sigma_8(0.61)$	$0.4678^{+0.0093}_{-0.0088}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	r_*	$144.65^{+0.50}_{-0.49}$	$\sigma_8(0.61)$	$0.5904^{+0.0091}_{-0.0085}$
c_{217}	$0.9996^{+0.0037}_{-0.0027}$	$100\theta_*$	$1.04117^{+0.00056}_{-0.00058}$	$f\sigma_8(2.33)$	$0.2978^{+0.0046}_{-0.0042}$
H_0	$67.70^{+0.90}_{-0.88}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.893^{+0.048}_{-0.047}$	$\sigma_8(2.33)$	$0.3070^{+0.0048}_{-0.0044}$
Ω_Λ	$0.690^{+0.012}_{-0.012}$	z_{drag}	$1059.90^{+0.61}_{-0.65}$	f_{2000}^{143}	29^{+5}_{-5}
Ω_m	$0.310^{+0.012}_{-0.012}$	r_{drag}	$147.31^{+0.54}_{-0.52}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
$\Omega_m h^2$	$0.1421^{+0.0019}_{-0.0020}$	k_{D}	$0.14064^{+0.00064}_{-0.00066}$	f_{2000}^{217}	$106.8^{+3.6}_{-3.5}$
$\Omega_m h^3$	$0.09623^{+0.00063}_{-0.00064}$	$100\theta_{\text{D}}$	$0.16078^{+0.00039}_{-0.00035}$	χ_{small}^2	$397.1 (\nu: 2.0)$
σ_8	$0.809^{+0.014}_{-0.012}$	z_{eq}	3381^{+46}_{-47}	χ_{lowl}^2	$23.01 (\nu: 0.3)$
S_8	$0.823^{+0.025}_{-0.025}$	k_{eq}	$0.01032^{+0.00014}_{-0.00014}$	$\chi_{6\text{DF}}^2$	$0.050 (\nu: 0.0)$
$\sigma_8 \Omega_m^{0.5}$	$0.451^{+0.014}_{-0.014}$	$100\theta_{\text{eq}}$	$0.8172^{+0.0089}_{-0.0085}$	χ_{MGS}^2	$1.32 (\nu: 0.1)$
$\sigma_8 \Omega_m^{0.25}$	$0.604^{+0.014}_{-0.013}$	$100\theta_{\text{s,eq}}$	$0.4514^{+0.0045}_{-0.0044}$	χ_{DR12BAO}^2	$4.7 (\nu: 0.9)$
$\sigma_8/h^{0.5}$	$0.983^{+0.020}_{-0.019}$	$H(0.15)$	$72.97^{+0.78}_{-0.75}$	χ_{prior}^2	$9.7 (\nu: 10.0)$
$r_{\text{drag}} h$	$99.7^{+1.6}_{-1.5}$	$D_{\text{M}}(0.15)$	$640.5^{+7.5}_{-7.6}$	χ_{BAO}^2	$6.1 (\nu: 0.6)$
$\langle d^2 \rangle^{1/2}$	$2.432^{+0.048}_{-0.046}$	$H(0.38)$	$83.06^{+0.57}_{-0.56}$	χ_{CMB}^2	$7357 (\nu: 10475184.8)$

$$\bar{\chi}_{\text{eff}}^2 = 11947.99; \Delta\bar{\chi}_{\text{eff}}^2 = 9150.27; R - 1 = 0.01741$$

2.12 base_CamSpecHM_TTTEEE_lowl_lowE_post_Riess18_zre6p5/base_plikHM_TTTEEE_lowl_lowE_post_Riess18_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02246^{+0.00027}_{-0.00030}$	$\langle d^2 \rangle^{1/2}$	$2.421^{+0.054}_{-0.052}$	$D_M(0.15)$	$637.3^{+9.6}_{-9.2}$
$\Omega_c h^2$	$0.1183^{+0.0026}_{-0.0026}$	z_{re}	< 9.18	$H(0.38)$	$83.30^{+0.67}_{-0.70}$
$100\theta_{MC}$	$1.04109^{+0.00057}_{-0.00060}$	$10^9 A_s$	$2.102^{+0.065}_{-0.060}$	$D_M(0.38)$	1521^{+19}_{-19}
τ	$0.057^{+0.015}_{-0.013}$	$10^9 A_s e^{-2\tau}$	$1.875^{+0.023}_{-0.022}$	$H(0.51)$	$89.95^{+0.53}_{-0.55}$
$\ln(10^{10} A_s)$	$3.046^{+0.031}_{-0.029}$	D_{40}	1222^{+24}_{-25}	$D_M(0.51)$	1972^{+22}_{-22}
n_s	$0.9692^{+0.0085}_{-0.0084}$	D_{220}	5735^{+75}_{-74}	$H(0.61)$	$95.53^{+0.43}_{-0.45}$
y_{cal}	$1.0006^{+0.0048}_{-0.0050}$	D_{810}	2537^{+26}_{-27}	$D_M(0.61)$	2295^{+24}_{-23}
A_{217}^{CIB}	43^{+10}_{-10}	D_{1420}	$817.7^{+9.3}_{-9.7}$	$H(2.33)$	$235.5^{+1.6}_{-1.6}$
$\xi^{tSZ-CIB}$	—	D_{2000}	$231.1^{+3.2}_{-3.2}$	$D_M(2.33)$	5754^{+21}_{-19}
A_{143}^{tSZ}	$4.7^{+3.9}_{-4.3}$	$n_{s,0.002}$	$0.9692^{+0.0085}_{-0.0084}$	$f\sigma_8(0.15)$	$0.451^{+0.015}_{-0.015}$
A_{100}^{PS}	248^{+60}_{-50}	Y_P	$0.24543^{+0.00011}_{-0.00011}$	$\sigma_8(0.15)$	$0.746^{+0.013}_{-0.012}$
A_{143}^{PS}	41^{+20}_{-20}	Y_P^{BBN}	$0.24675^{+0.00011}_{-0.00011}$	$f\sigma_8(0.38)$	$0.471^{+0.013}_{-0.013}$
A_{217}^{PS}	109^{+20}_{-30}	$10^5 D/H$	$2.570^{+0.053}_{-0.051}$	$\sigma_8(0.38)$	$0.662^{+0.011}_{-0.0099}$
A^{kSZ}	—	Age/Gyr	$13.776^{+0.046}_{-0.042}$	$f\sigma_8(0.51)$	$0.470^{+0.011}_{-0.011}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	z_*	$1089.67^{+0.52}_{-0.49}$	$\sigma_8(0.51)$	$0.620^{+0.010}_{-0.0094}$
c_{217}	$0.9996^{+0.0037}_{-0.0027}$	r_*	$144.80^{+0.60}_{-0.60}$	$f\sigma_8(0.61)$	$0.465^{+0.011}_{-0.010}$
H_0	$68.1^{+1.1}_{-1.1}$	$100\theta_*$	$1.04127^{+0.00056}_{-0.00059}$	$\sigma_8(0.61)$	$0.5902^{+0.0096}_{-0.0089}$
Ω_Λ	$0.695^{+0.015}_{-0.015}$	$D_M(z_*)/\text{Gpc}$	$13.907^{+0.057}_{-0.057}$	$f\sigma_8(2.33)$	$0.2978^{+0.0048}_{-0.0044}$
Ω_m	$0.305^{+0.015}_{-0.015}$	z_{drag}	$1060.01^{+0.57}_{-0.61}$	$\sigma_8(2.33)$	$0.3074^{+0.0049}_{-0.0045}$
$\Omega_m h^2$	$0.1414^{+0.0025}_{-0.0025}$	r_{drag}	$147.45^{+0.62}_{-0.61}$	f_{2000}^{143}	29^{+5}_{-6}
$\Omega_m h^3$	$0.09627^{+0.00063}_{-0.00062}$	k_D	$0.14056^{+0.00068}_{-0.00073}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
σ_8	$0.807^{+0.015}_{-0.014}$	$100\theta_D$	$0.16072^{+0.00037}_{-0.00034}$	f_{2000}^{217}	$106.5^{+3.6}_{-3.6}$
S_8	$0.814^{+0.030}_{-0.029}$	z_{eq}	3364^{+59}_{-59}	χ_{small}^2	$397.4 (\nu: 2.5)$
$\sigma_8 \Omega_m^{0.5}$	$0.446^{+0.017}_{-0.016}$	k_{eq}	$0.01027^{+0.00018}_{-0.00018}$	χ_{lowl}^2	$22.70 (\nu: 0.4)$
$\sigma_8 \Omega_m^{0.25}$	$0.600^{+0.016}_{-0.015}$	$100\theta_{\text{eq}}$	$0.821^{+0.011}_{-0.011}$	χ_{H073p45}^2	$10.6 (\nu: 2.5)$
$\sigma_8/h^{0.5}$	$0.978^{+0.022}_{-0.021}$	$100\theta_{\text{s,eq}}$	$0.4531^{+0.0058}_{-0.0057}$	χ_{prior}^2	$9.7 (\nu: 10.0)$
$r_{\text{drag}} h$	$100.4^{+2.0}_{-2.0}$	$H(0.15)$	$73.30^{+0.95}_{-0.96}$	χ_{CMB}^2	$7359 (\nu: 10475663.8)$

$$\bar{\chi}_{\text{eff}}^2 = 11954.01; \Delta\bar{\chi}_{\text{eff}}^2 = 9150.12; R - 1 = 0.03572$$

2.13 base_CamSpecHM_TE_lowE/base_plikHM_TE_lowE

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02249^{+0.00050}_{-0.00049}$	D_{220}	5704^{+120}_{-120}	$H(0.38)$	$83.6^{+1.2}_{-1.1}$
$\Omega_c h^2$	$0.1173^{+0.0041}_{-0.0041}$	D_{810}	2526^{+63}_{-60}	$D_M(0.38)$	1513^{+31}_{-31}
$100\theta_{MC}$	$1.04140^{+0.00098}_{-0.00099}$	D_{1420}	816^{+29}_{-27}	$H(0.51)$	$90.20^{+0.95}_{-0.90}$
τ	$0.050^{+0.016}_{-0.018}$	D_{2000}	$230^{+10}_{-9.8}$	$D_M(0.51)$	1962^{+36}_{-36}
$\ln(10^{10} A_s)$	$3.024^{+0.041}_{-0.043}$	$n_{s,0.002}$	$0.973^{+0.025}_{-0.024}$	$H(0.61)$	$95.72^{+0.77}_{-0.73}$
n_s	$0.973^{+0.025}_{-0.024}$	Y_P	$0.24544^{+0.00021}_{-0.00020}$	$D_M(0.61)$	2285^{+39}_{-39}
y_{cal}	$0.99999^{+0.0049}_{-0.0049}$	Y_P^{BBN}	$0.24676^{+0.00021}_{-0.00020}$	$H(2.33)$	$234.9^{+2.5}_{-2.5}$
H_0	$68.6^{+1.9}_{-1.8}$	$10^5 D/H$	$2.565^{+0.092}_{-0.090}$	$D_M(2.33)$	5746^{+33}_{-34}
Ω_Λ	$0.701^{+0.023}_{-0.024}$	Age/Gyr	$13.759^{+0.075}_{-0.076}$	$f\sigma_8(0.15)$	$0.441^{+0.024}_{-0.025}$
Ω_m	$0.299^{+0.024}_{-0.023}$	z_*	$1089.54^{+0.84}_{-0.83}$	$\sigma_8(0.15)$	$0.737^{+0.020}_{-0.020}$
$\Omega_m h^2$	$0.1404^{+0.0039}_{-0.0039}$	r_*	$145.1^{+1.0}_{-0.97}$	$f\sigma_8(0.38)$	$0.461^{+0.020}_{-0.021}$
$\Omega_m h^3$	$0.0963^{+0.0010}_{-0.0010}$	$100\theta_*$	$1.04157^{+0.00096}_{-0.00098}$	$\sigma_8(0.38)$	$0.655^{+0.017}_{-0.017}$
σ_8	$0.796^{+0.023}_{-0.023}$	$D_M(z_*)/\text{Gpc}$	$13.926^{+0.093}_{-0.090}$	$f\sigma_8(0.51)$	$0.461^{+0.018}_{-0.018}$
S_8	$0.794^{+0.047}_{-0.047}$	z_{drag}	$1060.0^{+1.1}_{-1.1}$	$\sigma_8(0.51)$	$0.613^{+0.016}_{-0.016}$
$\sigma_8 \Omega_m^{0.5}$	$0.435^{+0.026}_{-0.026}$	r_{drag}	$147.7^{+1.0}_{-1.0}$	$f\sigma_8(0.61)$	$0.458^{+0.016}_{-0.017}$
$\sigma_8 \Omega_m^{0.25}$	$0.589^{+0.025}_{-0.025}$	k_D	$0.1403^{+0.0012}_{-0.0012}$	$\sigma_8(0.61)$	$0.584^{+0.015}_{-0.015}$
$\sigma_8/h^{0.5}$	$0.961^{+0.035}_{-0.036}$	$100\theta_D$	$0.16077^{+0.00062}_{-0.00062}$	$f\sigma_8(2.33)$	$0.2949^{+0.0074}_{-0.0074}$
$r_{\text{drag}} h$	$101.3^{+3.3}_{-3.2}$	z_{eq}	3340^{+93}_{-94}	$\sigma_8(2.33)$	$0.3046^{+0.0077}_{-0.0077}$
$\langle d^2 \rangle^{1/2}$	$2.377^{+0.083}_{-0.087}$	k_{eq}	$0.01019^{+0.00028}_{-0.00029}$	χ^2_{small}	$396.8 (\nu: 1.2)$
z_{re}	$7.1^{+1.7}_{-1.8}$	$100\theta_{\text{eq}}$	$0.825^{+0.018}_{-0.018}$	χ^2_{prior}	$9.2 (\nu: 5.5)$
$10^9 A_s$	$2.058^{+0.085}_{-0.088}$	$100\theta_{s,\text{eq}}$	$0.4556^{+0.0094}_{-0.0090}$	χ^2_{CMB}	$2117 (\nu: 370371.3)$
$10^9 A_s e^{-2\tau}$	$1.862^{+0.043}_{-0.041}$	$H(0.15)$	$73.7^{+1.6}_{-1.6}$		
D_{40}	1206^{+53}_{-53}	$D_M(0.15)$	633^{+15}_{-15}		

Best-fit $\chi^2_{\text{eff}} = 2981.64$; $\Delta\chi^2_{\text{eff}} = 1732.66$; $\bar{\chi}^2_{\text{eff}} = 2988.91$; $\Delta\bar{\chi}^2_{\text{eff}} = 1724.91$; $R - 1 = 0.00640$

χ^2_{eff} : CMB - small_100x143_offlike5_EE_Aplanck_B: 395.67 (Δ -0.02) CamSpec like_10.7HM_1400_unified: 2575.95

2.14 base_CamSpecHM_TE_lowE_post_zre6p5/base_plikHM_TE_lowE_post_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02250^{+0.00050}_{-0.00049}$	D_{220}	5704^{+120}_{-120}	$H(0.38)$	$83.6^{+1.2}_{-1.1}$
$\Omega_c h^2$	$0.1172^{+0.0040}_{-0.0040}$	D_{810}	2527^{+63}_{-60}	$D_M(0.38)$	1512^{+31}_{-30}
$100\theta_{MC}$	$1.04140^{+0.00097}_{-0.00098}$	D_{1420}	816^{+29}_{-27}	$H(0.51)$	$90.22^{+0.94}_{-0.90}$
τ	$0.053^{+0.012}_{-0.010}$	D_{2000}	$231^{+10}_{-9.7}$	$D_M(0.51)$	1961^{+36}_{-36}
$\ln(10^{10} A_s)$	$3.031^{+0.034}_{-0.033}$	$n_{s,0.002}$	$0.973^{+0.025}_{-0.024}$	$H(0.61)$	$95.74^{+0.77}_{-0.73}$
n_s	$0.973^{+0.025}_{-0.024}$	Y_P	$0.24544^{+0.00021}_{-0.00020}$	$D_M(0.61)$	2284^{+39}_{-39}
y_{cal}	$0.99999^{+0.0049}_{-0.0049}$	Y_P^{BBN}	$0.24677^{+0.00021}_{-0.00020}$	$H(2.33)$	$234.9^{+2.5}_{-2.5}$
H_0	$68.6^{+1.8}_{-1.8}$	$10^5 D/H$	$2.564^{+0.093}_{-0.091}$	$D_M(2.33)$	5745^{+33}_{-34}
Ω_Λ	$0.702^{+0.023}_{-0.024}$	Age/Gyr	$13.758^{+0.075}_{-0.075}$	$f\sigma_8(0.15)$	$0.442^{+0.024}_{-0.024}$
Ω_m	$0.298^{+0.024}_{-0.023}$	z_*	$1089.52^{+0.84}_{-0.83}$	$\sigma_8(0.15)$	$0.739^{+0.019}_{-0.018}$
$\Omega_m h^2$	$0.1403^{+0.0039}_{-0.0039}$	r_*	$145.1^{+1.0}_{-0.97}$	$f\sigma_8(0.38)$	$0.463^{+0.020}_{-0.020}$
$\Omega_m h^3$	$0.0963^{+0.0010}_{-0.0010}$	$100\theta_*$	$1.04158^{+0.00096}_{-0.00097}$	$\sigma_8(0.38)$	$0.657^{+0.016}_{-0.014}$
σ_8	$0.799^{+0.021}_{-0.020}$	$D_M(z_*)/\text{Gpc}$	$13.927^{+0.093}_{-0.090}$	$f\sigma_8(0.51)$	$0.463^{+0.017}_{-0.018}$
S_8	$0.796^{+0.047}_{-0.046}$	z_{drag}	$1060.0^{+1.1}_{-1.1}$	$\sigma_8(0.51)$	$0.615^{+0.015}_{-0.013}$
$\sigma_8 \Omega_m^{0.5}$	$0.436^{+0.026}_{-0.025}$	r_{drag}	$147.7^{+1.0}_{-1.0}$	$f\sigma_8(0.61)$	$0.459^{+0.016}_{-0.016}$
$\sigma_8 \Omega_m^{0.25}$	$0.590^{+0.024}_{-0.024}$	k_D	$0.1403^{+0.0012}_{-0.0012}$	$\sigma_8(0.61)$	$0.586^{+0.014}_{-0.012}$
$\sigma_8/h^{0.5}$	$0.964^{+0.033}_{-0.034}$	$100\theta_D$	$0.16076^{+0.00062}_{-0.00061}$	$f\sigma_8(2.33)$	$0.2959^{+0.0065}_{-0.0063}$
$r_{\text{drag}} h$	$101.4^{+3.3}_{-3.2}$	z_{eq}	3338^{+93}_{-93}	$\sigma_8(2.33)$	$0.3057^{+0.0067}_{-0.0065}$
$\langle d^2 \rangle^{1/2}$	$2.383^{+0.081}_{-0.083}$	k_{eq}	$0.01019^{+0.00028}_{-0.00028}$	χ_{small}^2	$396.4 (\nu: 0.7)$
z_{re}	< 8.60	$100\theta_{\text{eq}}$	$0.826^{+0.018}_{-0.018}$	χ_{prior}^2	$9.2 (\nu: 5.5)$
$10^9 A_s$	$2.072^{+0.071}_{-0.067}$	$100\theta_{s,\text{eq}}$	$0.4558^{+0.0094}_{-0.0090}$	χ_{CMB}^2	$2117 (\nu: 370354.7)$
$10^9 A_s e^{-2\tau}$	$1.862^{+0.043}_{-0.041}$	$H(0.15)$	$73.8^{+1.6}_{-1.5}$		
D_{40}	1206^{+52}_{-52}	$D_M(0.15)$	633^{+15}_{-15}		

$$\bar{\chi}_{\text{eff}}^2 = 2988.52; \Delta \bar{\chi}_{\text{eff}}^2 = 1724.88; R - 1 = 0.00517$$

2.15 base_CamSpecHM_EE_lowE/base_plikHM_EE_lowE

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.0236^{+0.0025}_{-0.0023}$	D_{220}	5955^{+380}_{-370}	$H(0.38)$	$84.0^{+4.1}_{-3.7}$
$\Omega_c h^2$	$0.118^{+0.010}_{-0.0095}$	D_{810}	2594^{+76}_{-76}	$D_M(0.38)$	1507^{+97}_{-96}
$100\theta_{MC}$	$1.0396^{+0.0019}_{-0.0018}$	D_{1420}	842^{+37}_{-37}	$H(0.51)$	$90.7^{+3.4}_{-3.2}$
τ	$0.052^{+0.017}_{-0.018}$	D_{2000}	240^{+14}_{-14}	$D_M(0.51)$	1954^{+110}_{-110}
$\ln(10^{10} A_s)$	$3.055^{+0.043}_{-0.044}$	$n_{s,0.002}$	$0.974^{+0.031}_{-0.029}$	$H(0.61)$	$96.2^{+2.9}_{-2.8}$
n_s	$0.974^{+0.031}_{-0.029}$	Y_P	$0.24589^{+0.00097}_{-0.00097}$	$D_M(0.61)$	2275^{+120}_{-130}
y_{cal}	$0.99997^{+0.0050}_{-0.0048}$	Y_P^{BBN}	$0.24722^{+0.00098}_{-0.00097}$	$H(2.33)$	$236.1^{+4.6}_{-4.2}$
H_0	$68.9^{+5.8}_{-5.4}$	$10^5 D/H$	$2.38^{+0.41}_{-0.38}$	$D_M(2.33)$	5719^{+130}_{-140}
Ω_Λ	$0.699^{+0.062}_{-0.066}$	Age/Gyr	$13.70^{+0.29}_{-0.32}$	$f\sigma_8(0.15)$	$0.445^{+0.062}_{-0.060}$
Ω_m	$0.301^{+0.066}_{-0.062}$	z_*	$1088.3^{+3.6}_{-3.3}$	$\sigma_8(0.15)$	$0.742^{+0.028}_{-0.030}$
$\Omega_m h^2$	$0.1418^{+0.0080}_{-0.0075}$	r_*	$144.1^{+1.3}_{-1.3}$	$f\sigma_8(0.38)$	$0.465^{+0.047}_{-0.048}$
$\Omega_m h^3$	$0.0976^{+0.0037}_{-0.0033}$	$100\theta_*$	$1.0397^{+0.0018}_{-0.0018}$	$\sigma_8(0.38)$	$0.659^{+0.019}_{-0.022}$
σ_8	$0.802^{+0.036}_{-0.038}$	$D_M(z_*)/\text{Gpc}$	$13.86^{+0.12}_{-0.12}$	$f\sigma_8(0.51)$	$0.465^{+0.039}_{-0.042}$
S_8	$0.80^{+0.12}_{-0.12}$	z_{drag}	$1062.6^{+4.9}_{-4.7}$	$\sigma_8(0.51)$	$0.618^{+0.016}_{-0.018}$
$\sigma_8 \Omega_m^{0.5}$	$0.440^{+0.068}_{-0.063}$	r_{drag}	$146.4^{+1.4}_{-1.4}$	$f\sigma_8(0.61)$	$0.461^{+0.034}_{-0.037}$
$\sigma_8 \Omega_m^{0.25}$	$0.594^{+0.058}_{-0.057}$	k_D	$0.1425^{+0.0024}_{-0.0025}$	$\sigma_8(0.61)$	$0.588^{+0.015}_{-0.016}$
$\sigma_8/h^{0.5}$	$0.967^{+0.081}_{-0.081}$	$100\theta_D$	$0.1591^{+0.0027}_{-0.0024}$	$f\sigma_8(2.33)$	$0.2969^{+0.0069}_{-0.0071}$
$r_{\text{drag}} h$	$100.9^{+8.5}_{-8.1}$	z_{eq}	3373^{+190}_{-180}	$\sigma_8(2.33)$	$0.3068^{+0.0073}_{-0.0074}$
$\langle d^2 \rangle^{1/2}$	$2.41^{+0.16}_{-0.16}$	k_{eq}	$0.01029^{+0.00059}_{-0.00055}$	χ^2_{simall}	$396.8 (\nu: 1.2)$
z_{re}	$7.1^{+1.7}_{-1.7}$	$100\theta_{\text{eq}}$	$0.822^{+0.040}_{-0.039}$	χ^2_{prior}	$6.0 (\nu: 13.6)$
$10^9 A_s$	$2.123^{+0.093}_{-0.093}$	$100\theta_{s,\text{eq}}$	$0.453^{+0.019}_{-0.019}$	χ^2_{CMB}	$1714 (\nu: 164654.9)$
$10^9 A_s e^{-2\tau}$	$1.914^{+0.053}_{-0.051}$	$H(0.15)$	$74.1^{+5.2}_{-4.8}$		
D_{40}	1245^{+67}_{-65}	$D_M(0.15)$	631^{+48}_{-46}		

Best-fit $\chi^2_{\text{eff}} = 2292.16$; $\Delta\chi^2_{\text{eff}} = 1157.61$; $\bar{\chi}^2_{\text{eff}} = 2299.35$; $\Delta\bar{\chi}^2_{\text{eff}} = 1157.74$; $R - 1 = 0.00959$

χ^2_{eff} : CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.62 (Δ 0.02) CamSpec like_10.7HM_1400_unified: 1886.52

2.16 base_CamSpecHM_EE_lowE_post_zre6p5/base_plikHM_EE_lowE_post_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.0236^{+0.0026}_{-0.0023}$	D_{220}	5949^{+380}_{-370}	$H(0.38)$	$84.0^{+4.2}_{-3.7}$
$\Omega_c h^2$	$0.117^{+0.010}_{-0.0096}$	D_{810}	2593^{+76}_{-76}	$D_M(0.38)$	1507^{+98}_{-96}
$100\theta_{MC}$	$1.0396^{+0.0019}_{-0.0018}$	D_{1420}	842^{+37}_{-37}	$H(0.51)$	$90.6^{+3.4}_{-3.2}$
τ	$0.055^{+0.013}_{-0.012}$	D_{2000}	240^{+14}_{-14}	$D_M(0.51)$	1954^{+120}_{-120}
$\ln(10^{10} A_s)$	$3.061^{+0.039}_{-0.036}$	$n_{s,0.002}$	$0.974^{+0.031}_{-0.029}$	$H(0.61)$	$96.2^{+3.0}_{-2.8}$
n_s	$0.974^{+0.031}_{-0.029}$	Y_P	$0.24588^{+0.00098}_{-0.00097}$	$D_M(0.61)$	2275^{+130}_{-130}
y_{cal}	$0.99998^{+0.0050}_{-0.0049}$	Y_P^{BBN}	$0.24721^{+0.00099}_{-0.00097}$	$H(2.33)$	$236.0^{+4.7}_{-4.2}$
H_0	$68.9^{+5.8}_{-5.5}$	$10^5 D/H$	$2.38^{+0.41}_{-0.38}$	$D_M(2.33)$	5720^{+130}_{-140}
Ω_Λ	$0.699^{+0.063}_{-0.067}$	Age/Gyr	$13.70^{+0.29}_{-0.32}$	$f\sigma_8(0.15)$	$0.446^{+0.063}_{-0.060}$
Ω_m	$0.301^{+0.067}_{-0.063}$	z_*	$1088.3^{+3.6}_{-3.4}$	$\sigma_8(0.15)$	$0.745^{+0.027}_{-0.029}$
$\Omega_m h^2$	$0.1417^{+0.0081}_{-0.0076}$	r_*	$144.1^{+1.3}_{-1.3}$	$f\sigma_8(0.38)$	$0.467^{+0.047}_{-0.049}$
$\Omega_m h^3$	$0.0976^{+0.0037}_{-0.0033}$	$100\theta_*$	$1.0397^{+0.0018}_{-0.0018}$	$\sigma_8(0.38)$	$0.661^{+0.018}_{-0.020}$
σ_8	$0.805^{+0.035}_{-0.038}$	$D_M(z_*)/\text{Gpc}$	$13.86^{+0.12}_{-0.12}$	$f\sigma_8(0.51)$	$0.467^{+0.039}_{-0.042}$
S_8	$0.81^{+0.13}_{-0.12}$	z_{drag}	$1062.5^{+5.0}_{-4.7}$	$\sigma_8(0.51)$	$0.620^{+0.015}_{-0.016}$
$\sigma_8 \Omega_m^{0.5}$	$0.441^{+0.069}_{-0.064}$	r_{drag}	$146.4^{+1.4}_{-1.4}$	$f\sigma_8(0.61)$	$0.463^{+0.034}_{-0.037}$
$\sigma_8 \Omega_m^{0.25}$	$0.596^{+0.058}_{-0.057}$	k_D	$0.1424^{+0.0025}_{-0.0025}$	$\sigma_8(0.61)$	$0.590^{+0.014}_{-0.014}$
$\sigma_8/h^{0.5}$	$0.971^{+0.080}_{-0.081}$	$100\theta_D$	$0.1591^{+0.0027}_{-0.0024}$	$f\sigma_8(2.33)$	$0.2979^{+0.0062}_{-0.0058}$
$r_{\text{drag}} h$	$100.9^{+8.5}_{-8.2}$	z_{eq}	3372^{+190}_{-180}	$\sigma_8(2.33)$	$0.3078^{+0.0067}_{-0.0061}$
$\langle d^2 \rangle^{1/2}$	$2.42^{+0.16}_{-0.16}$	k_{eq}	$0.01029^{+0.00059}_{-0.00055}$	χ_{simall}^2	$396.5 (\nu: 0.9)$
z_{re}	< 8.52	$100\theta_{\text{eq}}$	$0.822^{+0.041}_{-0.040}$	χ_{prior}^2	$6.0 (\nu: 13.6)$
$10^9 A_s$	$2.136^{+0.085}_{-0.076}$	$100\theta_{s,\text{eq}}$	$0.453^{+0.020}_{-0.019}$	χ_{CMB}^2	$1714 (\nu: 164636.7)$
$10^9 A_s e^{-2\tau}$	$1.914^{+0.053}_{-0.051}$	$H(0.15)$	$74.1^{+5.2}_{-4.8}$		
D_{40}	1244^{+67}_{-65}	$D_M(0.15)$	631^{+48}_{-46}		

$\bar{\chi}_{\text{eff}}^2 = 2298.97$; $\Delta\bar{\chi}_{\text{eff}}^2 = 1157.66$; $R - 1 = 0.00869$

2.17 base_CamSpecHM_TE_lowE_BAO/base_plikHM_TE_lowE_BAO

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02244^{+0.00045}_{-0.00046}$	D_{810}	2527^{+62}_{-62}	$H(0.51)$	$90.04^{+0.59}_{-0.59}$
$\Omega_c h^2$	$0.1180^{+0.0024}_{-0.0023}$	D_{1420}	815^{+28}_{-28}	$D_M(0.51)$	1968^{+22}_{-21}
$100\theta_{MC}$	$1.04132^{+0.00090}_{-0.00092}$	D_{2000}	$230.2^{+9.8}_{-9.8}$	$H(0.61)$	$95.59^{+0.52}_{-0.51}$
τ	$0.049^{+0.017}_{-0.017}$	$n_{s,0.002}$	$0.970^{+0.022}_{-0.022}$	$D_M(0.61)$	2292^{+23}_{-23}
$\ln(10^{10} A_s)$	$3.025^{+0.040}_{-0.044}$	Y_P	$0.24542^{+0.00018}_{-0.00019}$	$H(2.33)$	$235.3^{+1.6}_{-1.6}$
n_s	$0.970^{+0.022}_{-0.022}$	Y_P^{BBN}	$0.24674^{+0.00018}_{-0.00019}$	$D_M(2.33)$	5751^{+26}_{-26}
y_{cal}	$1.0000^{+0.0049}_{-0.0049}$	$10^5 D/H$	$2.574^{+0.087}_{-0.082}$	$f\sigma_8(0.15)$	$0.445^{+0.017}_{-0.017}$
H_0	$68.3^{+1.1}_{-1.1}$	Age/Gyr	$13.770^{+0.060}_{-0.060}$	$\sigma_8(0.15)$	$0.738^{+0.019}_{-0.020}$
Ω_Λ	$0.697^{+0.013}_{-0.014}$	z_*	$1089.66^{+0.64}_{-0.63}$	$f\sigma_8(0.38)$	$0.464^{+0.015}_{-0.015}$
Ω_m	$0.303^{+0.014}_{-0.013}$	r_*	$144.90^{+0.67}_{-0.66}$	$\sigma_8(0.38)$	$0.656^{+0.016}_{-0.017}$
$\Omega_m h^2$	$0.1411^{+0.0024}_{-0.0023}$	$100\theta_*$	$1.04150^{+0.00089}_{-0.00091}$	$f\sigma_8(0.51)$	$0.464^{+0.014}_{-0.014}$
$\Omega_m h^3$	$0.0963^{+0.0010}_{-0.0010}$	$D_M(z_*)/\text{Gpc}$	$13.913^{+0.066}_{-0.066}$	$\sigma_8(0.51)$	$0.614^{+0.015}_{-0.016}$
σ_8	$0.798^{+0.021}_{-0.022}$	z_{drag}	$1059.9^{+1.0}_{-1.1}$	$f\sigma_8(0.61)$	$0.460^{+0.013}_{-0.014}$
S_8	$0.802^{+0.032}_{-0.031}$	r_{drag}	$147.55^{+0.74}_{-0.75}$	$\sigma_8(0.61)$	$0.584^{+0.015}_{-0.015}$
$\sigma_8 \Omega_m^{0.5}$	$0.439^{+0.018}_{-0.017}$	k_D	$0.1404^{+0.0010}_{-0.0010}$	$f\sigma_8(2.33)$	$0.2950^{+0.0074}_{-0.0076}$
$\sigma_8 \Omega_m^{0.25}$	$0.592^{+0.019}_{-0.019}$	$100\theta_D$	$0.16080^{+0.00063}_{-0.00060}$	$\sigma_8(2.33)$	$0.3045^{+0.0077}_{-0.0080}$
$\sigma_8/h^{0.5}$	$0.966^{+0.028}_{-0.028}$	z_{eq}	3356^{+57}_{-56}	χ^2_{small}	$396.8 (\nu: 1.3)$
$r_{\text{drag}} h$	$100.7^{+1.8}_{-1.8}$	k_{eq}	$0.01024^{+0.00017}_{-0.00017}$	$\chi^2_{6\text{DF}}$	$0.039 (\nu: 0.0)$
$\langle d^2 \rangle^{1/2}$	$2.390^{+0.064}_{-0.065}$	$100\theta_{\text{eq}}$	$0.822^{+0.010}_{-0.010}$	χ^2_{MGS}	$1.91 (\nu: 0.2)$
z_{re}	$7.1^{+1.7}_{-1.8}$	$100\theta_{s,\text{eq}}$	$0.4540^{+0.0054}_{-0.0053}$	χ^2_{DR12BAO}	$3.95 (\nu: 0.3)$
$10^9 A_s$	$2.059^{+0.085}_{-0.090}$	$H(0.15)$	$73.45^{+0.92}_{-0.92}$	χ^2_{prior}	$9.2 (\nu: 5.5)$
$10^9 A_s e^{-2\tau}$	$1.865^{+0.040}_{-0.040}$	$D_M(0.15)$	$635.8^{+9.0}_{-8.8}$	χ^2_{BAO}	$5.90 (\nu: 0.5)$
D_{40}	1211^{+48}_{-48}	$H(0.38)$	$83.41^{+0.71}_{-0.70}$	χ^2_{CMB}	$2117 (\nu: 370267.5)$
D_{220}	5705^{+120}_{-110}	$D_M(0.38)$	1518^{+18}_{-18}		

Best-fit $\chi^2_{\text{eff}} = 2987.15$; $\Delta\chi^2_{\text{eff}} = 1732.92$; $\bar{\chi}^2_{\text{eff}} = 2994.10$; $\Delta\bar{\chi}^2_{\text{eff}} = 1724.69$; $R - 1 = 0.00951$
 χ^2_{eff} : BAO - 6DF: 0.00 (Δ 0.00) MGS: 1.89 (Δ 0.14) DR12BAO: 3.37 (Δ -0.07) CMB - small_100x143_offlike5_EE_Aplanck_B: 395.71 (Δ 0.04) CamSpec like_10.7HM_1400_unified: 2576.15

2.18 base_CamSpecHM_TE_lowE_BAO_post_lensing/base_plikHM_TE_lowE_BAO_post_lensing

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02248^{+0.00045}_{-0.00046}$	D_{810}	2542^{+47}_{-47}	$H(0.51)$	$89.99^{+0.59}_{-0.58}$
$\Omega_c h^2$	$0.1185^{+0.0024}_{-0.0023}$	D_{1420}	821^{+22}_{-23}	$D_M(0.51)$	1971^{+22}_{-21}
$100\theta_{MC}$	$1.04129^{+0.00088}_{-0.00092}$	D_{2000}	$232.2^{+8.0}_{-8.1}$	$H(0.61)$	$95.57^{+0.52}_{-0.51}$
τ	$0.053^{+0.015}_{-0.014}$	$n_{s,0.002}$	$0.972^{+0.021}_{-0.021}$	$D_M(0.61)$	2294^{+24}_{-23}
$\ln(10^{10} A_s)$	$3.040^{+0.028}_{-0.029}$	Y_P	$0.24543^{+0.00018}_{-0.00019}$	$H(2.33)$	$235.7^{+1.5}_{-1.5}$
n_s	$0.972^{+0.021}_{-0.021}$	Y_P^{BBN}	$0.24676^{+0.00018}_{-0.00019}$	$D_M(2.33)$	5751^{+25}_{-26}
y_{cal}	$1.0004^{+0.0049}_{-0.0049}$	$10^5 D/H$	$2.567^{+0.086}_{-0.082}$	$f\sigma_8(0.15)$	$0.451^{+0.013}_{-0.012}$
H_0	$68.1^{+1.0}_{-1.1}$	Age/Gyr	$13.769^{+0.058}_{-0.059}$	$\sigma_8(0.15)$	$0.746^{+0.013}_{-0.012}$
Ω_Λ	$0.694^{+0.013}_{-0.014}$	z_*	$1089.66^{+0.64}_{-0.63}$	$f\sigma_8(0.38)$	$0.470^{+0.011}_{-0.010}$
Ω_m	$0.306^{+0.014}_{-0.013}$	r_*	$144.74^{+0.63}_{-0.63}$	$\sigma_8(0.38)$	$0.662^{+0.011}_{-0.011}$
$\Omega_m h^2$	$0.1416^{+0.0022}_{-0.0022}$	$100\theta_*$	$1.04146^{+0.00087}_{-0.00091}$	$f\sigma_8(0.51)$	$0.4695^{+0.0097}_{-0.0093}$
$\Omega_m h^3$	$0.0964^{+0.0010}_{-0.0010}$	$D_M(z_*)/\text{Gpc}$	$13.898^{+0.061}_{-0.061}$	$\sigma_8(0.51)$	$0.619^{+0.011}_{-0.010}$
σ_8	$0.806^{+0.014}_{-0.013}$	z_{drag}	$1060.1^{+1.0}_{-1.0}$	$f\sigma_8(0.61)$	$0.4650^{+0.0090}_{-0.0087}$
S_8	$0.814^{+0.025}_{-0.024}$	r_{drag}	$147.37^{+0.70}_{-0.73}$	$\sigma_8(0.61)$	$0.590^{+0.010}_{-0.0099}$
$\sigma_8 \Omega_m^{0.5}$	$0.446^{+0.013}_{-0.013}$	k_D	$0.1407^{+0.0010}_{-0.00097}$	$f\sigma_8(2.33)$	$0.2975^{+0.0052}_{-0.0051}$
$\sigma_8 \Omega_m^{0.25}$	$0.599^{+0.013}_{-0.013}$	$100\theta_D$	$0.16072^{+0.00061}_{-0.00059}$	$\sigma_8(2.33)$	$0.3070^{+0.0056}_{-0.0055}$
$\sigma_8/h^{0.5}$	$0.977^{+0.019}_{-0.018}$	z_{eq}	3369^{+53}_{-54}	χ^2_{lensing}	$10.0 (\nu: 1.3)$
$r_{\text{drag}} h$	$100.4^{+1.8}_{-1.8}$	k_{eq}	$0.01028^{+0.00016}_{-0.00016}$	χ^2_{small}	$396.8 (\nu: 1.1)$
$\langle d^2 \rangle^{1/2}$	$2.410^{+0.061}_{-0.059}$	$100\theta_{\text{eq}}$	$0.820^{+0.010}_{-0.010}$	$\chi^2_{6\text{DF}}$	$0.035 (\nu: 0.0)$
z_{re}	$7.5^{+1.4}_{-1.5}$	$100\theta_{s,\text{eq}}$	$0.4528^{+0.0052}_{-0.0051}$	χ^2_{MGS}	$1.69 (\nu: 0.1)$
$10^9 A_s$	$2.090^{+0.060}_{-0.061}$	$H(0.15)$	$73.32^{+0.91}_{-0.92}$	χ^2_{DR12BAO}	$4.1 (\nu: 0.5)$
$10^9 A_s e^{-2\tau}$	$1.878^{+0.029}_{-0.029}$	$D_M(0.15)$	$637.1^{+9.2}_{-8.7}$	χ^2_{prior}	$9.2 (\nu: 5.4)$
D_{40}	1216^{+49}_{-48}	$H(0.38)$	$83.33^{+0.70}_{-0.71}$	χ^2_{CMB}	$2127 (\nu: 369375.7)$
D_{220}	5726^{+110}_{-110}	$D_M(0.38)$	1521^{+18}_{-18}	χ^2_{BAO}	$5.83 (\nu: 0.4)$

$$\bar{\chi}^2_{\text{eff}} = 3003.21; \Delta \bar{\chi}^2_{\text{eff}} = 1722.52; R - 1 = 0.01219$$

2.19 base_CamSpecHM_TE_lowE_BAO_post_zre6p5/base_plikHM_TE_lowE_BAO_post_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02245^{+0.00045}_{-0.00046}$	D_{810}	2528^{+61}_{-62}	$H(0.51)$	$90.05^{+0.60}_{-0.59}$
$\Omega_c h^2$	$0.1180^{+0.0024}_{-0.0024}$	D_{1420}	816^{+27}_{-28}	$D_M(0.51)$	1968^{+22}_{-21}
$100\theta_{MC}$	$1.04132^{+0.00090}_{-0.00091}$	D_{2000}	$230.5^{+9.6}_{-9.9}$	$H(0.61)$	$95.60^{+0.52}_{-0.51}$
τ	$0.0526^{+0.012}_{-0.0095}$	$n_{s,0.002}$	$0.971^{+0.022}_{-0.022}$	$D_M(0.61)$	2291^{+24}_{-23}
$\ln(10^{10} A_s)$	$3.032^{+0.035}_{-0.031}$	Y_P	$0.24542^{+0.00018}_{-0.00019}$	$H(2.33)$	$235.3^{+1.6}_{-1.6}$
n_s	$0.971^{+0.022}_{-0.022}$	Y_P^{BBN}	$0.24675^{+0.00018}_{-0.00019}$	$D_M(2.33)$	5750^{+26}_{-26}
y_{cal}	$1.0000^{+0.0048}_{-0.0049}$	$10^5 D/H$	$2.573^{+0.087}_{-0.081}$	$f\sigma_8(0.15)$	$0.446^{+0.016}_{-0.016}$
H_0	$68.3^{+1.1}_{-1.1}$	Age/Gyr	$13.769^{+0.060}_{-0.060}$	$\sigma_8(0.15)$	$0.741^{+0.017}_{-0.016}$
Ω_Λ	$0.697^{+0.013}_{-0.014}$	z_*	$1089.65^{+0.64}_{-0.63}$	$f\sigma_8(0.38)$	$0.466^{+0.014}_{-0.014}$
Ω_m	$0.303^{+0.014}_{-0.013}$	r_*	$144.90^{+0.68}_{-0.66}$	$\sigma_8(0.38)$	$0.658^{+0.015}_{-0.014}$
$\Omega_m h^2$	$0.1411^{+0.0024}_{-0.0024}$	$100\theta_*$	$1.04150^{+0.00089}_{-0.00090}$	$f\sigma_8(0.51)$	$0.466^{+0.013}_{-0.013}$
$\Omega_m h^3$	$0.0963^{+0.0010}_{-0.0010}$	$D_M(z_*)/\text{Gpc}$	$13.913^{+0.067}_{-0.066}$	$\sigma_8(0.51)$	$0.616^{+0.014}_{-0.013}$
σ_8	$0.801^{+0.019}_{-0.018}$	z_{drag}	$1060.0^{+1.0}_{-1.1}$	$f\sigma_8(0.61)$	$0.461^{+0.012}_{-0.012}$
S_8	$0.805^{+0.031}_{-0.030}$	r_{drag}	$147.55^{+0.75}_{-0.74}$	$\sigma_8(0.61)$	$0.587^{+0.013}_{-0.012}$
$\sigma_8 \Omega_m^{0.5}$	$0.441^{+0.017}_{-0.016}$	k_D	$0.1404^{+0.0010}_{-0.0010}$	$f\sigma_8(2.33)$	$0.2961^{+0.0066}_{-0.0061}$
$\sigma_8 \Omega_m^{0.25}$	$0.594^{+0.018}_{-0.017}$	$100\theta_D$	$0.16078^{+0.00063}_{-0.00060}$	$\sigma_8(2.33)$	$0.3057^{+0.0068}_{-0.0063}$
$\sigma_8/h^{0.5}$	$0.970^{+0.026}_{-0.025}$	z_{eq}	3355^{+57}_{-57}	χ^2_{small}	$396.4 (\nu: 0.6)$
$r_{\text{drag}} h$	$100.7^{+1.8}_{-1.8}$	k_{eq}	$0.01024^{+0.00017}_{-0.00017}$	$\chi^2_{6\text{DF}}$	$0.039 (\nu: 0.0)$
$\langle d^2 \rangle^{1/2}$	$2.396^{+0.061}_{-0.059}$	$100\theta_{\text{eq}}$	$0.822^{+0.010}_{-0.010}$	χ^2_{MGS}	$1.92 (\nu: 0.2)$
z_{re}	< 8.55	$100\theta_{\text{s,eq}}$	$0.4540^{+0.0054}_{-0.0054}$	χ^2_{DR12BAO}	$3.95 (\nu: 0.3)$
$10^9 A_s$	$2.073^{+0.071}_{-0.066}$	$H(0.15)$	$73.46^{+0.92}_{-0.93}$	χ^2_{prior}	$9.2 (\nu: 5.5)$
$10^9 A_s e^{-2\tau}$	$1.866^{+0.040}_{-0.040}$	$D_M(0.15)$	$635.6^{+9.1}_{-8.8}$	χ^2_{BAO}	$5.92 (\nu: 0.5)$
D_{40}	1211^{+47}_{-47}	$H(0.38)$	$83.42^{+0.71}_{-0.70}$	χ^2_{CMB}	$2116 (\nu: 370272.9)$
D_{220}	5705^{+110}_{-110}	$D_M(0.38)$	1518^{+18}_{-18}		

$$\bar{\chi}^2_{\text{eff}} = 2993.70; \Delta \bar{\chi}^2_{\text{eff}} = 1724.70; R - 1 = 0.01568$$

2.20 base_CamSpecHM_TE_lowE_BAO_post_lensing_zre6p5/base_plikHM_TE_lowE_BAO_post_lensing_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02248^{+0.00046}_{-0.00045}$	D_{810}	2542^{+47}_{-47}	$H(0.51)$	$90.00^{+0.59}_{-0.58}$
$\Omega_c h^2$	$0.1185^{+0.0024}_{-0.0023}$	D_{1420}	821^{+22}_{-23}	$D_M(0.51)$	1971^{+22}_{-21}
$100\theta_{MC}$	$1.04129^{+0.00088}_{-0.00092}$	D_{2000}	$232.2^{+7.9}_{-8.1}$	$H(0.61)$	$95.58^{+0.52}_{-0.50}$
τ	$0.055^{+0.012}_{-0.011}$	$n_{s,0.002}$	$0.972^{+0.021}_{-0.021}$	$D_M(0.61)$	2294^{+24}_{-23}
$\ln(10^{10} A_s)$	$3.042^{+0.027}_{-0.024}$	Y_P	$0.24543^{+0.00018}_{-0.00018}$	$H(2.33)$	$235.7^{+1.5}_{-1.5}$
n_s	$0.972^{+0.021}_{-0.021}$	Y_P^{BBN}	$0.24676^{+0.00018}_{-0.00018}$	$D_M(2.33)$	5751^{+25}_{-26}
y_{cal}	$1.0003^{+0.0048}_{-0.0049}$	$10^5 D/H$	$2.567^{+0.085}_{-0.082}$	$f\sigma_8(0.15)$	$0.451^{+0.013}_{-0.012}$
H_0	$68.1^{+1.0}_{-1.1}$	Age/Gyr	$13.769^{+0.057}_{-0.059}$	$\sigma_8(0.15)$	$0.746^{+0.012}_{-0.011}$
Ω_Λ	$0.695^{+0.013}_{-0.014}$	z_*	$1089.65^{+0.64}_{-0.63}$	$f\sigma_8(0.38)$	$0.471^{+0.010}_{-0.010}$
Ω_m	$0.305^{+0.014}_{-0.013}$	r_*	$144.75^{+0.63}_{-0.63}$	$\sigma_8(0.38)$	$0.662^{+0.011}_{-0.0098}$
$\Omega_m h^2$	$0.1416^{+0.0022}_{-0.0022}$	$100\theta_*$	$1.04146^{+0.00088}_{-0.00090}$	$f\sigma_8(0.51)$	$0.4699^{+0.0094}_{-0.0090}$
$\Omega_m h^3$	$0.0964^{+0.0010}_{-0.00099}$	$D_M(z_*)/\text{Gpc}$	$13.899^{+0.061}_{-0.061}$	$\sigma_8(0.51)$	$0.620^{+0.010}_{-0.0093}$
σ_8	$0.807^{+0.013}_{-0.012}$	z_{drag}	$1060.1^{+1.0}_{-1.0}$	$f\sigma_8(0.61)$	$0.4654^{+0.0087}_{-0.0082}$
S_8	$0.814^{+0.025}_{-0.024}$	r_{drag}	$147.38^{+0.70}_{-0.73}$	$\sigma_8(0.61)$	$0.5901^{+0.0095}_{-0.0089}$
$\sigma_8 \Omega_m^{0.5}$	$0.446^{+0.014}_{-0.013}$	k_D	$0.1406^{+0.0010}_{-0.00097}$	$f\sigma_8(2.33)$	$0.2978^{+0.0050}_{-0.0046}$
$\sigma_8 \Omega_m^{0.25}$	$0.600^{+0.013}_{-0.012}$	$100\theta_D$	$0.16072^{+0.00061}_{-0.00059}$	$\sigma_8(2.33)$	$0.3073^{+0.0053}_{-0.0050}$
$\sigma_8/h^{0.5}$	$0.978^{+0.019}_{-0.017}$	z_{eq}	3368^{+54}_{-54}	χ^2_{lensing}	$9.9 (\nu: 1.1)$
$r_{\text{drag}} h$	$100.4^{+1.8}_{-1.8}$	k_{eq}	$0.01028^{+0.00016}_{-0.00016}$	χ^2_{small}	$396.7 (\nu: 1.1)$
$\langle d^2 \rangle^{1/2}$	$2.412^{+0.060}_{-0.057}$	$100\theta_{\text{eq}}$	$0.820^{+0.010}_{-0.010}$	$\chi^2_{6\text{DF}}$	$0.035 (\nu: 0.0)$
z_{re}	< 8.77	$100\theta_{s,\text{eq}}$	$0.4529^{+0.0052}_{-0.0052}$	χ^2_{MGS}	$1.71 (\nu: 0.2)$
$10^9 A_s$	$2.094^{+0.056}_{-0.052}$	$H(0.15)$	$73.33^{+0.90}_{-0.92}$	χ^2_{DR12BAO}	$4.08 (\nu: 0.5)$
$10^9 A_s e^{-2\tau}$	$1.877^{+0.029}_{-0.029}$	$D_M(0.15)$	$637.0^{+9.2}_{-8.7}$	χ^2_{prior}	$9.2 (\nu: 5.4)$
D_{40}	1215^{+49}_{-48}	$H(0.38)$	$83.34^{+0.70}_{-0.70}$	χ^2_{CMB}	$2127 (\nu: 369310.5)$
D_{220}	5725^{+110}_{-110}	$D_M(0.38)$	1521^{+18}_{-18}	χ^2_{BAO}	$5.82 (\nu: 0.4)$

$$\bar{\chi}^2_{\text{eff}} = 3002.87; \Delta \bar{\chi}^2_{\text{eff}} = 1722.35; R - 1 = 0.01685$$

2.21 base_CamSpecHM_EE_lowE_BAO/base_plikHM_EE_lowE_BAO

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.0235^{+0.0013}_{-0.0013}$	D_{810}	2592^{+69}_{-71}	$H(0.51)$	$90.5^{+1.2}_{-1.1}$
$\Omega_c h^2$	$0.1177^{+0.0029}_{-0.0028}$	D_{1420}	841^{+29}_{-29}	$D_M(0.51)$	1957^{+36}_{-36}
$100\theta_{MC}$	$1.0397^{+0.0016}_{-0.0016}$	D_{2000}	240^{+11}_{-11}	$H(0.61)$	$96.0^{+1.1}_{-1.1}$
τ	$0.051^{+0.016}_{-0.017}$	$n_{s,0.002}$	$0.973^{+0.019}_{-0.019}$	$D_M(0.61)$	2279^{+39}_{-40}
$\ln(10^{10} A_s)$	$3.054^{+0.042}_{-0.044}$	Y_P	$0.24585^{+0.00049}_{-0.00051}$	$H(2.33)$	$236.1^{+1.9}_{-1.9}$
n_s	$0.973^{+0.019}_{-0.019}$	Y_P^{BBN}	$0.24718^{+0.00049}_{-0.00051}$	$D_M(2.33)$	5725^{+56}_{-58}
y_{cal}	$1.0001^{+0.0049}_{-0.0048}$	$10^5 D/H$	$2.39^{+0.22}_{-0.20}$	$f\sigma_8(0.15)$	$0.446^{+0.019}_{-0.019}$
H_0	$68.7^{+1.7}_{-1.6}$	Age/Gyr	$13.71^{+0.13}_{-0.14}$	$\sigma_8(0.15)$	$0.744^{+0.018}_{-0.018}$
Ω_Λ	$0.699^{+0.017}_{-0.018}$	z_*	$1088.4^{+1.6}_{-1.5}$	$f\sigma_8(0.38)$	$0.467^{+0.016}_{-0.016}$
Ω_m	$0.301^{+0.018}_{-0.017}$	r_*	$144.2^{+1.0}_{-1.0}$	$\sigma_8(0.38)$	$0.660^{+0.015}_{-0.015}$
$\Omega_m h^2$	$0.1418^{+0.0027}_{-0.0027}$	$100\theta_*$	$1.0397^{+0.0017}_{-0.0016}$	$f\sigma_8(0.51)$	$0.466^{+0.015}_{-0.015}$
$\Omega_m h^3$	$0.0974^{+0.0024}_{-0.0023}$	$D_M(z_*)/\text{Gpc}$	$13.87^{+0.10}_{-0.10}$	$\sigma_8(0.51)$	$0.619^{+0.014}_{-0.014}$
σ_8	$0.804^{+0.020}_{-0.020}$	z_{drag}	$1062.3^{+2.8}_{-2.8}$	$f\sigma_8(0.61)$	$0.462^{+0.014}_{-0.014}$
S_8	$0.805^{+0.037}_{-0.036}$	r_{drag}	$146.5^{+1.4}_{-1.4}$	$\sigma_8(0.61)$	$0.589^{+0.013}_{-0.013}$
$\sigma_8 \Omega_m^{0.5}$	$0.441^{+0.020}_{-0.020}$	k_D	$0.1424^{+0.0022}_{-0.0022}$	$f\sigma_8(2.33)$	$0.2973^{+0.0066}_{-0.0068}$
$\sigma_8 \Omega_m^{0.25}$	$0.595^{+0.020}_{-0.020}$	$100\theta_D$	$0.1592^{+0.0017}_{-0.0015}$	$\sigma_8(2.33)$	$0.3071^{+0.0068}_{-0.0070}$
$\sigma_8/h^{0.5}$	$0.970^{+0.030}_{-0.030}$	z_{eq}	3374^{+65}_{-65}	χ^2_{small}	$396.7 (\nu: 1.1)$
$r_{\text{drag}} h$	$100.6^{+2.2}_{-2.2}$	k_{eq}	$0.01030^{+0.00020}_{-0.00020}$	$\chi^2_{6\text{DF}}$	$0.054 (\nu: 0.0)$
$\langle d^2 \rangle^{1/2}$	$2.415^{+0.072}_{-0.072}$	$100\theta_{\text{eq}}$	$0.821^{+0.012}_{-0.012}$	χ^2_{MGS}	$1.83 (\nu: 0.2)$
z_{re}	$7.1^{+1.6}_{-1.7}$	$100\theta_{\text{s,eq}}$	$0.4523^{+0.0061}_{-0.0059}$	χ^2_{DR12BAO}	$4.5 (\nu: 0.9)$
$10^9 A_s$	$2.121^{+0.090}_{-0.092}$	$H(0.15)$	$73.9^{+1.5}_{-1.5}$	χ^2_{prior}	$6.0 (\nu: 13.5)$
$10^9 A_s e^{-2\tau}$	$1.913^{+0.051}_{-0.053}$	$D_M(0.15)$	632^{+14}_{-14}	χ^2_{BAO}	$6.4 (\nu: 0.8)$
D_{40}	1245^{+64}_{-65}	$H(0.38)$	$83.8^{+1.3}_{-1.2}$	χ^2_{CMB}	$1714 (\nu: 164597.9)$
D_{220}	5941^{+280}_{-280}	$D_M(0.38)$	1510^{+30}_{-29}		

Best-fit $\chi^2_{\text{eff}} = 2297.82$; $\Delta\chi^2_{\text{eff}} = 1157.65$; $\bar{\chi}^2_{\text{eff}} = 2304.89$; $\Delta\bar{\chi}^2_{\text{eff}} = 1157.53$; $R - 1 = 0.00669$
 χ^2_{eff} : BAO - 6DF: 0.00 (Δ -0.00) MGS: 1.68 (Δ -0.21) DR12BAO: 3.85 (Δ 0.25) CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.59 (Δ -0.03) CamSpec like_10.7HM_1400_unified: 1886.67

2.22 base_CamSpecHM_EE_lowE_BAO_post_lensing/base_plikHM_EE_lowE_BAO_post_lensing

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.0233^{+0.0011}_{-0.0010}$	D_{810}	2578^{+50}_{-50}	$H(0.51)$	$90.4^{+1.2}_{-1.1}$
$\Omega_c h^2$	$0.1173^{+0.0027}_{-0.0026}$	D_{1420}	835^{+23}_{-22}	$D_M(0.51)$	1958^{+35}_{-35}
$100\theta_{MC}$	$1.0397^{+0.0016}_{-0.0016}$	D_{2000}	$237.5^{+8.4}_{-8.2}$	$H(0.61)$	$96.0^{+1.1}_{-1.0}$
τ	$0.050^{+0.015}_{-0.017}$	$n_{s,0.002}$	$0.972^{+0.020}_{-0.019}$	$D_M(0.61)$	2280^{+39}_{-39}
$\ln(10^{10} A_s)$	$3.045^{+0.030}_{-0.032}$	Y_P	$0.24579^{+0.00041}_{-0.00042}$	$H(2.33)$	$235.6^{+1.6}_{-1.6}$
n_s	$0.972^{+0.020}_{-0.019}$	Y_P^{BBN}	$0.24712^{+0.00041}_{-0.00043}$	$D_M(2.33)$	5731^{+53}_{-55}
y_{cal}	$0.9999^{+0.0048}_{-0.0047}$	$10^5 D/H$	$2.42^{+0.18}_{-0.18}$	$f\sigma_8(0.15)$	$0.443^{+0.017}_{-0.017}$
H_0	$68.7^{+1.6}_{-1.6}$	Age/Gyr	$13.72^{+0.12}_{-0.13}$	$\sigma_8(0.15)$	$0.740^{+0.014}_{-0.014}$
Ω_Λ	$0.701^{+0.017}_{-0.017}$	z_*	$1088.5^{+1.4}_{-1.4}$	$f\sigma_8(0.38)$	$0.463^{+0.014}_{-0.014}$
Ω_m	$0.299^{+0.017}_{-0.017}$	r_*	$144.39^{+0.76}_{-0.79}$	$\sigma_8(0.38)$	$0.657^{+0.012}_{-0.012}$
$\Omega_m h^2$	$0.1413^{+0.0023}_{-0.0023}$	$100\theta_*$	$1.0398^{+0.0016}_{-0.0016}$	$f\sigma_8(0.51)$	$0.463^{+0.012}_{-0.012}$
$\Omega_m h^3$	$0.0971^{+0.0021}_{-0.0020}$	$D_M(z_*)/\text{Gpc}$	$13.887^{+0.079}_{-0.081}$	$\sigma_8(0.51)$	$0.615^{+0.011}_{-0.011}$
σ_8	$0.799^{+0.015}_{-0.016}$	z_{drag}	$1061.9^{+2.4}_{-2.3}$	$f\sigma_8(0.61)$	$0.459^{+0.011}_{-0.011}$
S_8	$0.798^{+0.032}_{-0.033}$	r_{drag}	$146.7^{+1.0}_{-1.0}$	$\sigma_8(0.61)$	$0.586^{+0.010}_{-0.011}$
$\sigma_8 \Omega_m^{0.5}$	$0.437^{+0.018}_{-0.018}$	k_D	$0.1419^{+0.0018}_{-0.0017}$	$f\sigma_8(2.33)$	$0.2958^{+0.0052}_{-0.0054}$
$\sigma_8 \Omega_m^{0.25}$	$0.591^{+0.017}_{-0.017}$	$100\theta_D$	$0.1594^{+0.0014}_{-0.0013}$	$\sigma_8(2.33)$	$0.3056^{+0.0054}_{-0.0055}$
$\sigma_8/h^{0.5}$	$0.964^{+0.025}_{-0.025}$	z_{eq}	3361^{+56}_{-55}	χ^2_{lensing}	$9.2 (\nu: 0.8)$
$r_{\text{drag}} h$	$100.8^{+2.2}_{-2.1}$	k_{eq}	$0.01026^{+0.00017}_{-0.00017}$	χ^2_{small}	$396.6 (\nu: 0.9)$
$\langle d^2 \rangle^{1/2}$	$2.403^{+0.060}_{-0.059}$	$100\theta_{\text{eq}}$	$0.823^{+0.011}_{-0.011}$	$\chi^2_{6\text{DF}}$	$0.054 (\nu: 0.0)$
z_{re}	$7.0^{+1.6}_{-1.7}$	$100\theta_{s,\text{eq}}$	$0.4535^{+0.0053}_{-0.0052}$	χ^2_{MGS}	$1.96 (\nu: 0.2)$
$10^9 A_s$	$2.101^{+0.063}_{-0.066}$	$H(0.15)$	$73.9^{+1.5}_{-1.5}$	χ^2_{DR12BAO}	$4.3 (\nu: 0.6)$
$10^9 A_s e^{-2\tau}$	$1.902^{+0.035}_{-0.034}$	$D_M(0.15)$	632^{+14}_{-14}	χ^2_{prior}	$6.0 (\nu: 13.6)$
D_{40}	1240^{+57}_{-57}	$H(0.38)$	$83.8^{+1.3}_{-1.2}$	χ^2_{CMB}	$1723 (\nu: 164885.5)$
D_{220}	5906^{+220}_{-220}	$D_M(0.38)$	1510^{+29}_{-29}	χ^2_{BAO}	$6.3 (\nu: 0.8)$

$$\bar{\chi}^2_{\text{eff}} = 2314.19; \Delta\bar{\chi}^2_{\text{eff}} = 1158.51; R - 1 = 0.00959$$

2.23 base_CamSpecHM_EE_lowE_BAO_post_zre6p5/base_plikHM_EE_lowE_BAO_post_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.0235^{+0.0013}_{-0.0013}$	D_{810}	2591^{+69}_{-71}	$H(0.51)$	$90.5^{+1.2}_{-1.1}$
$\Omega_c h^2$	$0.1177^{+0.0028}_{-0.0028}$	D_{1420}	841^{+29}_{-29}	$D_M(0.51)$	1958^{+36}_{-36}
$100\theta_{MC}$	$1.0397^{+0.0016}_{-0.0016}$	D_{2000}	240^{+11}_{-11}	$H(0.61)$	$96.0^{+1.1}_{-1.1}$
τ	$0.0546^{+0.012}_{-0.0099}$	$n_{s,0.002}$	$0.973^{+0.020}_{-0.019}$	$D_M(0.61)$	2279^{+40}_{-39}
$\ln(10^{10} A_s)$	$3.060^{+0.039}_{-0.036}$	Y_P	$0.24584^{+0.00049}_{-0.00051}$	$H(2.33)$	$236.0^{+1.9}_{-1.9}$
n_s	$0.973^{+0.020}_{-0.019}$	Y_P^{BBN}	$0.24717^{+0.00049}_{-0.00051}$	$D_M(2.33)$	5726^{+56}_{-58}
y_{cal}	$1.0000^{+0.0048}_{-0.0048}$	$10^5 D/H$	$2.39^{+0.22}_{-0.20}$	$f\sigma_8(0.15)$	$0.447^{+0.019}_{-0.018}$
H_0	$68.7^{+1.7}_{-1.6}$	Age/Gyr	$13.71^{+0.13}_{-0.14}$	$\sigma_8(0.15)$	$0.746^{+0.016}_{-0.015}$
Ω_Λ	$0.699^{+0.017}_{-0.018}$	z_*	$1088.4^{+1.6}_{-1.5}$	$f\sigma_8(0.38)$	$0.468^{+0.016}_{-0.015}$
Ω_m	$0.301^{+0.018}_{-0.017}$	r_*	$144.2^{+1.0}_{-1.0}$	$\sigma_8(0.38)$	$0.662^{+0.014}_{-0.013}$
$\Omega_m h^2$	$0.1418^{+0.0027}_{-0.0027}$	$100\theta_*$	$1.0397^{+0.0017}_{-0.0016}$	$f\sigma_8(0.51)$	$0.468^{+0.014}_{-0.014}$
$\Omega_m h^3$	$0.0974^{+0.0024}_{-0.0023}$	$D_M(z_*)/\text{Gpc}$	$13.867^{+0.099}_{-0.10}$	$\sigma_8(0.51)$	$0.620^{+0.013}_{-0.012}$
σ_8	$0.806^{+0.019}_{-0.017}$	z_{drag}	$1062.3^{+2.8}_{-2.8}$	$f\sigma_8(0.61)$	$0.464^{+0.013}_{-0.013}$
S_8	$0.807^{+0.036}_{-0.035}$	r_{drag}	$146.5^{+1.3}_{-1.4}$	$\sigma_8(0.61)$	$0.591^{+0.012}_{-0.011}$
$\sigma_8 \Omega_m^{0.5}$	$0.442^{+0.020}_{-0.019}$	k_D	$0.1423^{+0.0022}_{-0.0022}$	$f\sigma_8(2.33)$	$0.2983^{+0.0061}_{-0.0055}$
$\sigma_8 \Omega_m^{0.25}$	$0.597^{+0.019}_{-0.019}$	$100\theta_D$	$0.1592^{+0.0017}_{-0.0015}$	$\sigma_8(2.33)$	$0.3080^{+0.0063}_{-0.0058}$
$\sigma_8/h^{0.5}$	$0.973^{+0.028}_{-0.027}$	z_{eq}	3373^{+64}_{-65}	χ^2_{small}	$396.5 (\nu: 0.9)$
$r_{\text{drag}} h$	$100.6^{+2.2}_{-2.2}$	k_{eq}	$0.01030^{+0.00020}_{-0.00020}$	$\chi^2_{6\text{DF}}$	$0.054 (\nu: 0.0)$
$\langle d^2 \rangle^{1/2}$	$2.422^{+0.069}_{-0.068}$	$100\theta_{\text{eq}}$	$0.821^{+0.012}_{-0.012}$	χ^2_{MGS}	$1.83 (\nu: 0.2)$
z_{re}	< 8.50	$100\theta_{\text{s,eq}}$	$0.4524^{+0.0061}_{-0.0059}$	χ^2_{DR12BAO}	$4.5 (\nu: 0.9)$
$10^9 A_s$	$2.133^{+0.083}_{-0.077}$	$H(0.15)$	$73.9^{+1.5}_{-1.5}$	χ^2_{prior}	$6.0 (\nu: 13.4)$
$10^9 A_s e^{-2\tau}$	$1.912^{+0.052}_{-0.053}$	$D_M(0.15)$	632^{+14}_{-14}	χ^2_{BAO}	$6.4 (\nu: 0.8)$
D_{40}	1245^{+65}_{-65}	$H(0.38)$	$83.8^{+1.3}_{-1.2}$	χ^2_{CMB}	$1713 (\nu: 164583.3)$
D_{220}	5935^{+280}_{-280}	$D_M(0.38)$	1510^{+30}_{-29}		

$$\bar{\chi}^2_{\text{eff}} = 2304.51; \Delta\bar{\chi}^2_{\text{eff}} = 1157.44; R - 1 = 0.01190$$

2.24 base_CamSpecHM_EE_lowE_BAO_post_lensing_zre6p5/base_plikHM_EE_lowE_BAO_post_lensing_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.0233^{+0.0011}_{-0.0010}$	D_{810}	2574^{+48}_{-50}	$H(0.51)$	$90.4^{+1.1}_{-1.1}$
$\Omega_c h^2$	$0.1172^{+0.0027}_{-0.0026}$	D_{1420}	834^{+22}_{-22}	$D_M(0.51)$	1958^{+36}_{-35}
$100\theta_{MC}$	$1.0397^{+0.0016}_{-0.0015}$	D_{2000}	$237.0^{+8.3}_{-8.3}$	$H(0.61)$	$95.9^{+1.0}_{-1.0}$
τ	$0.0533^{+0.011}_{-0.0087}$	$n_s, 0.002$	$0.972^{+0.020}_{-0.019}$	$D_M(0.61)$	2280^{+39}_{-38}
$\ln(10^{10} A_s)$	$3.050^{+0.026}_{-0.024}$	Y_P	$0.24576^{+0.00040}_{-0.00042}$	$H(2.33)$	$235.5^{+1.6}_{-1.6}$
n_s	$0.972^{+0.020}_{-0.019}$	Y_P^{BBN}	$0.24709^{+0.00041}_{-0.00043}$	$D_M(2.33)$	5734^{+52}_{-54}
y_{cal}	$0.9998^{+0.0047}_{-0.0047}$	$10^5 D/H$	$2.43^{+0.18}_{-0.18}$	$f\sigma_8(0.15)$	$0.444^{+0.016}_{-0.016}$
H_0	$68.7^{+1.6}_{-1.6}$	Age/Gyr	$13.73^{+0.12}_{-0.12}$	$\sigma_8(0.15)$	$0.742^{+0.012}_{-0.012}$
Ω_Λ	$0.701^{+0.017}_{-0.017}$	z_*	$1088.6^{+1.4}_{-1.3}$	$f\sigma_8(0.38)$	$0.465^{+0.013}_{-0.014}$
Ω_m	$0.299^{+0.017}_{-0.017}$	r_*	$144.46^{+0.73}_{-0.76}$	$\sigma_8(0.38)$	$0.659^{+0.010}_{-0.0097}$
$\Omega_m h^2$	$0.1411^{+0.0023}_{-0.0022}$	$100\theta_*$	$1.0398^{+0.0016}_{-0.0015}$	$f\sigma_8(0.51)$	$0.465^{+0.012}_{-0.012}$
$\Omega_m h^3$	$0.0969^{+0.0020}_{-0.0019}$	$D_M(z_*)/\text{Gpc}$	$13.893^{+0.076}_{-0.080}$	$\sigma_8(0.51)$	$0.6171^{+0.0097}_{-0.0091}$
σ_8	$0.801^{+0.014}_{-0.013}$	z_{drag}	$1061.8^{+2.3}_{-2.2}$	$f\sigma_8(0.61)$	$0.461^{+0.010}_{-0.011}$
S_8	$0.800^{+0.032}_{-0.032}$	r_{drag}	$146.83^{+0.99}_{-1.0}$	$\sigma_8(0.61)$	$0.5875^{+0.0092}_{-0.0085}$
$\sigma_8 \Omega_m^{0.5}$	$0.438^{+0.018}_{-0.017}$	k_D	$0.1418^{+0.0017}_{-0.0017}$	$f\sigma_8(2.33)$	$0.2967^{+0.0047}_{-0.0042}$
$\sigma_8 \Omega_m^{0.25}$	$0.593^{+0.016}_{-0.016}$	$100\theta_D$	$0.1595^{+0.0013}_{-0.0013}$	$\sigma_8(2.33)$	$0.3065^{+0.0049}_{-0.0045}$
$\sigma_8/h^{0.5}$	$0.967^{+0.024}_{-0.024}$	z_{eq}	3357^{+56}_{-54}	χ^2_{lensing}	$9.3 (\nu: 0.9)$
$r_{\text{drag}} h$	$100.9^{+2.1}_{-2.1}$	k_{eq}	$0.01025^{+0.00017}_{-0.00016}$	χ^2_{small}	$396.24 (\nu: 0.5)$
$\langle d^2 \rangle^{1/2}$	$2.408^{+0.057}_{-0.055}$	$100\theta_{\text{eq}}$	$0.823^{+0.010}_{-0.011}$	$\chi^2_{6\text{DF}}$	$0.054 (\nu: 0.0)$
z_{re}	< 8.31	$100\theta_{\text{s,eq}}$	$0.4537^{+0.0052}_{-0.0052}$	χ^2_{MGS}	$1.98 (\nu: 0.2)$
$10^9 A_s$	$2.113^{+0.055}_{-0.051}$	$H(0.15)$	$73.9^{+1.5}_{-1.5}$	χ^2_{DR12BAO}	$4.3 (\nu: 0.5)$
$10^9 A_s e^{-2\tau}$	$1.899^{+0.033}_{-0.033}$	$D_M(0.15)$	632^{+14}_{-14}	χ^2_{prior}	$5.9 (\nu: 13.4)$
D_{40}	1238^{+56}_{-56}	$H(0.38)$	$83.8^{+1.2}_{-1.2}$	χ^2_{CMB}	$1722 (\nu: 164864.5)$
D_{220}	5892^{+220}_{-220}	$D_M(0.38)$	1510^{+30}_{-29}	χ^2_{BAO}	$6.3 (\nu: 0.7)$

$$\bar{\chi}^2_{\text{eff}} = 2313.75; \Delta\bar{\chi}^2_{\text{eff}} = 1158.36; R - 1 = 0.00861$$

2.25 base_CamSpecHM_TE_lowE_lensing/base_plikHM_TE_lowE_lensing

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02247^{+0.00050}_{-0.00049}$	D_{220}	5725^{+110}_{-110}	$H(0.38)$	$83.3^{+1.1}_{-1.0}$
$\Omega_c h^2$	$0.1187^{+0.0036}_{-0.0036}$	D_{810}	2542^{+51}_{-51}	$D_M(0.38)$	1522^{+28}_{-28}
$100\theta_{MC}$	$1.04125^{+0.00097}_{-0.00096}$	D_{1420}	821^{+25}_{-25}	$H(0.51)$	$89.96^{+0.86}_{-0.82}$
τ	$0.053^{+0.015}_{-0.015}$	D_{2000}	$232.1^{+9.0}_{-8.7}$	$D_M(0.51)$	1973^{+32}_{-33}
$\ln(10^{10} A_s)$	$3.039^{+0.031}_{-0.031}$	$n_{s,0.002}$	$0.971^{+0.024}_{-0.024}$	$H(0.61)$	$95.55^{+0.71}_{-0.67}$
n_s	$0.971^{+0.024}_{-0.024}$	Y_P	$0.24543^{+0.00020}_{-0.00020}$	$D_M(0.61)$	2296^{+35}_{-36}
y_{cal}	$1.0003^{+0.0049}_{-0.0049}$	Y_P^{BBN}	$0.24676^{+0.00020}_{-0.00020}$	$H(2.33)$	$235.8^{+2.2}_{-2.2}$
H_0	$68.0^{+1.7}_{-1.6}$	$10^5 D/H$	$2.569^{+0.092}_{-0.090}$	$D_M(2.33)$	5752^{+32}_{-33}
Ω_Λ	$0.693^{+0.021}_{-0.022}$	Age/Gyr	$13.772^{+0.072}_{-0.074}$	$f\sigma_8(0.15)$	$0.451^{+0.017}_{-0.018}$
Ω_m	$0.307^{+0.022}_{-0.021}$	z_*	$1089.68^{+0.81}_{-0.81}$	$\sigma_8(0.15)$	$0.745^{+0.012}_{-0.013}$
$\Omega_m h^2$	$0.1418^{+0.0034}_{-0.0034}$	r_*	$144.70^{+0.85}_{-0.84}$	$f\sigma_8(0.38)$	$0.471^{+0.013}_{-0.014}$
$\Omega_m h^3$	$0.0964^{+0.0010}_{-0.0010}$	$100\theta_*$	$1.04142^{+0.00096}_{-0.00095}$	$\sigma_8(0.38)$	$0.661^{+0.011}_{-0.011}$
σ_8	$0.806^{+0.014}_{-0.014}$	$D_M(z_*)/\text{Gpc}$	$13.895^{+0.081}_{-0.079}$	$f\sigma_8(0.51)$	$0.470^{+0.011}_{-0.012}$
S_8	$0.815^{+0.035}_{-0.035}$	z_{drag}	$1060.1^{+1.0}_{-1.0}$	$\sigma_8(0.51)$	$0.619^{+0.011}_{-0.011}$
$\sigma_8 \Omega_m^{0.5}$	$0.446^{+0.019}_{-0.019}$	r_{drag}	$147.34^{+0.89}_{-0.87}$	$f\sigma_8(0.61)$	$0.465^{+0.010}_{-0.011}$
$\sigma_8 \Omega_m^{0.25}$	$0.600^{+0.016}_{-0.017}$	k_D	$0.1407^{+0.0010}_{-0.0011}$	$\sigma_8(0.61)$	$0.589^{+0.010}_{-0.010}$
$\sigma_8/h^{0.5}$	$0.978^{+0.022}_{-0.023}$	$100\theta_D$	$0.16072^{+0.00063}_{-0.00061}$	$f\sigma_8(2.33)$	$0.2973^{+0.0056}_{-0.0055}$
$r_{\text{drag}} h$	$100.2^{+2.9}_{-2.8}$	z_{eq}	3373^{+82}_{-82}	$\sigma_8(2.33)$	$0.3067^{+0.0063}_{-0.0061}$
$\langle d^2 \rangle^{1/2}$	$2.412^{+0.073}_{-0.073}$	k_{eq}	$0.01029^{+0.00025}_{-0.00025}$	χ^2_{lensing}	$10.0 (\nu: 1.3)$
z_{re}	$7.5^{+1.5}_{-1.6}$	$100\theta_{\text{eq}}$	$0.819^{+0.016}_{-0.015}$	χ^2_{small}	$396.8 (\nu: 1.0)$
$10^9 A_s$	$2.088^{+0.065}_{-0.063}$	$100\theta_{s,\text{eq}}$	$0.4524^{+0.0082}_{-0.0078}$	χ^2_{prior}	$9.2 (\nu: 5.6)$
$10^9 A_s e^{-2\tau}$	$1.878^{+0.030}_{-0.029}$	$H(0.15)$	$73.3^{+1.4}_{-1.4}$	χ^2_{CMB}	$2128 (\nu: 369442.7)$
D_{40}	1216^{+52}_{-52}	$D_M(0.15)$	638^{+14}_{-14}		

Best-fit $\chi^2_{\text{eff}} = 2991.07$; $\Delta\chi^2_{\text{eff}} = 1730.83$; $\bar{\chi}^2_{\text{eff}} = 2998.15$; $\Delta\bar{\chi}^2_{\text{eff}} = 1722.75$; $R - 1 = 0.00781$
 χ^2_{eff} : CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.95 (Δ -0.59) small_100x143_offlike5_EE_Aplanck_B: 395.77 (Δ -0.09) CamSpec like_10.7HM_1400_unified: 2576.31

2.26 base_CamSpecHM_TE_lowE_lensing_post_zre6p5/base_plikHM_TE_lowE_lensing_post_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02247^{+0.00050}_{-0.00049}$	D_{220}	5723^{+110}_{-110}	$H(0.38)$	$83.3^{+1.1}_{-1.0}$
$\Omega_c h^2$	$0.1186^{+0.0036}_{-0.0036}$	D_{810}	2541^{+50}_{-51}	$D_M(0.38)$	1521^{+27}_{-28}
$100\theta_{MC}$	$1.04126^{+0.00097}_{-0.00095}$	D_{1420}	821^{+25}_{-25}	$H(0.51)$	$89.98^{+0.86}_{-0.81}$
τ	$0.055^{+0.012}_{-0.011}$	D_{2000}	$232.2^{+8.9}_{-8.7}$	$D_M(0.51)$	1972^{+32}_{-33}
$\ln(10^{10} A_s)$	$3.041^{+0.027}_{-0.026}$	$n_{s,0.002}$	$0.972^{+0.024}_{-0.024}$	$H(0.61)$	$95.56^{+0.71}_{-0.67}$
n_s	$0.972^{+0.024}_{-0.024}$	Y_P	$0.24543^{+0.00020}_{-0.00020}$	$D_M(0.61)$	2295^{+35}_{-36}
y_{cal}	$1.0003^{+0.0049}_{-0.0049}$	Y_P^{BBN}	$0.24676^{+0.00021}_{-0.00020}$	$H(2.33)$	$235.7^{+2.1}_{-2.2}$
H_0	$68.1^{+1.7}_{-1.6}$	$10^5 D/H$	$2.568^{+0.093}_{-0.090}$	$D_M(2.33)$	5751^{+32}_{-33}
Ω_Λ	$0.694^{+0.021}_{-0.022}$	Age/Gyr	$13.771^{+0.071}_{-0.074}$	$f\sigma_8(0.15)$	$0.451^{+0.017}_{-0.018}$
Ω_m	$0.306^{+0.022}_{-0.021}$	z_*	$1089.67^{+0.80}_{-0.80}$	$\sigma_8(0.15)$	$0.746^{+0.012}_{-0.011}$
$\Omega_m h^2$	$0.1417^{+0.0034}_{-0.0034}$	r_*	$144.73^{+0.85}_{-0.82}$	$f\sigma_8(0.38)$	$0.471^{+0.013}_{-0.014}$
$\Omega_m h^3$	$0.0964^{+0.0010}_{-0.0010}$	$100\theta_*$	$1.04143^{+0.00096}_{-0.00094}$	$\sigma_8(0.38)$	$0.662^{+0.011}_{-0.0098}$
σ_8	$0.807^{+0.013}_{-0.013}$	$D_M(z_*)/\text{Gpc}$	$13.897^{+0.080}_{-0.078}$	$f\sigma_8(0.51)$	$0.470^{+0.011}_{-0.012}$
S_8	$0.815^{+0.035}_{-0.035}$	z_{drag}	$1060.1^{+1.0}_{-1.1}$	$\sigma_8(0.51)$	$0.620^{+0.010}_{-0.0092}$
$\sigma_8 \Omega_m^{0.5}$	$0.446^{+0.019}_{-0.019}$	r_{drag}	$147.36^{+0.88}_{-0.84}$	$f\sigma_8(0.61)$	$0.466^{+0.010}_{-0.010}$
$\sigma_8 \Omega_m^{0.25}$	$0.600^{+0.016}_{-0.017}$	k_D	$0.1407^{+0.0010}_{-0.0011}$	$\sigma_8(0.61)$	$0.5900^{+0.0099}_{-0.0089}$
$\sigma_8/h^{0.5}$	$0.978^{+0.022}_{-0.022}$	$100\theta_D$	$0.16072^{+0.00063}_{-0.00061}$	$f\sigma_8(2.33)$	$0.2977^{+0.0053}_{-0.0047}$
$r_{\text{drag}} h$	$100.3^{+2.9}_{-2.8}$	z_{eq}	3370^{+80}_{-82}	$\sigma_8(2.33)$	$0.3072^{+0.0060}_{-0.0053}$
$\langle d^2 \rangle^{1/2}$	$2.413^{+0.072}_{-0.072}$	k_{eq}	$0.01029^{+0.00024}_{-0.00025}$	χ^2_{lensing}	$9.99 (\nu: 1.2)$
z_{re}	< 8.77	$100\theta_{\text{eq}}$	$0.820^{+0.016}_{-0.015}$	χ^2_{small}	$396.7 (\nu: 1.0)$
$10^9 A_s$	$2.094^{+0.057}_{-0.054}$	$100\theta_{s,\text{eq}}$	$0.4527^{+0.0081}_{-0.0078}$	χ^2_{prior}	$9.3 (\nu: 5.6)$
$10^9 A_s e^{-2\tau}$	$1.877^{+0.029}_{-0.029}$	$H(0.15)$	$73.3^{+1.4}_{-1.4}$	χ^2_{CMB}	$2127 (\nu: 369431.7)$
D_{40}	1215^{+52}_{-52}	$D_M(0.15)$	637^{+14}_{-14}		

$$\bar{\chi}^2_{\text{eff}} = 2997.86; \Delta\bar{\chi}^2_{\text{eff}} = 1722.71; R - 1 = 0.00847$$

2.27 base_CamSpecHM_EE_lowE_lensing/base_plikHM_EE_lowE_lensing

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.0238^{+0.0020}_{-0.0019}$	D_{220}	5975^{+320}_{-310}	$H(0.38)$	$84.5^{+3.0}_{-2.7}$
$\Omega_c h^2$	$0.1158^{+0.0061}_{-0.0058}$	D_{810}	2591^{+67}_{-68}	$D_M(0.38)$	1494^{+66}_{-66}
$100\theta_{MC}$	$1.0398^{+0.0017}_{-0.0017}$	D_{1420}	842^{+33}_{-34}	$H(0.51)$	$91.0^{+2.6}_{-2.3}$
τ	$0.051^{+0.017}_{-0.019}$	D_{2000}	240^{+13}_{-13}	$D_M(0.51)$	1939^{+79}_{-80}
$\ln(10^{10} A_s)$	$3.049^{+0.037}_{-0.038}$	$n_{s,0.002}$	$0.976^{+0.026}_{-0.025}$	$H(0.61)$	$96.5^{+2.2}_{-2.1}$
n_s	$0.976^{+0.026}_{-0.025}$	Y_P	$0.24596^{+0.00079}_{-0.00076}$	$D_M(0.61)$	2259^{+87}_{-89}
y_{cal}	$0.9999^{+0.0049}_{-0.0049}$	Y_P^{BBN}	$0.24729^{+0.00079}_{-0.00077}$	$H(2.33)$	$235.2^{+2.5}_{-2.4}$
H_0	$69.7^{+4.0}_{-3.7}$	$10^5 D/H$	$2.35^{+0.33}_{-0.30}$	$D_M(2.33)$	5706^{+100}_{-110}
Ω_Λ	$0.710^{+0.040}_{-0.041}$	Age/Gyr	$13.67^{+0.23}_{-0.25}$	$f\sigma_8(0.15)$	$0.434^{+0.036}_{-0.036}$
Ω_m	$0.290^{+0.041}_{-0.040}$	z_*	$1087.9^{+2.7}_{-2.5}$	$\sigma_8(0.15)$	$0.736^{+0.015}_{-0.017}$
$\Omega_m h^2$	$0.1403^{+0.0045}_{-0.0043}$	r_*	$144.41^{+0.81}_{-0.81}$	$f\sigma_8(0.38)$	$0.456^{+0.027}_{-0.028}$
$\Omega_m h^3$	$0.0977^{+0.0033}_{-0.0030}$	$100\theta_*$	$1.0398^{+0.0017}_{-0.0016}$	$\sigma_8(0.38)$	$0.655^{+0.012}_{-0.013}$
σ_8	$0.794^{+0.019}_{-0.021}$	$D_M(z_*)/\text{Gpc}$	$13.888^{+0.083}_{-0.082}$	$f\sigma_8(0.51)$	$0.457^{+0.022}_{-0.024}$
S_8	$0.781^{+0.071}_{-0.069}$	z_{drag}	$1062.9^{+4.1}_{-3.9}$	$\sigma_8(0.51)$	$0.614^{+0.011}_{-0.011}$
$\sigma_8 \Omega_m^{0.5}$	$0.428^{+0.039}_{-0.038}$	r_{drag}	$146.6^{+1.1}_{-1.1}$	$f\sigma_8(0.61)$	$0.454^{+0.019}_{-0.021}$
$\sigma_8 \Omega_m^{0.25}$	$0.583^{+0.032}_{-0.033}$	k_D	$0.1423^{+0.0023}_{-0.0022}$	$\sigma_8(0.61)$	$0.585^{+0.010}_{-0.011}$
$\sigma_8/h^{0.5}$	$0.952^{+0.046}_{-0.048}$	$100\theta_D$	$0.1589^{+0.0022}_{-0.0020}$	$f\sigma_8(2.33)$	$0.2958^{+0.0055}_{-0.0056}$
$r_{\text{drag}} h$	$102.1^{+5.4}_{-5.3}$	z_{eq}	3337^{+110}_{-100}	$\sigma_8(2.33)$	$0.3061^{+0.0066}_{-0.0068}$
$\langle d^2 \rangle^{1/2}$	$2.382^{+0.094}_{-0.096}$	k_{eq}	$0.01019^{+0.00033}_{-0.00031}$	χ^2_{lensing}	$9.3 (\nu: 0.8)$
z_{re}	$6.9^{+1.6}_{-1.7}$	$100\theta_{\text{eq}}$	$0.828^{+0.024}_{-0.024}$	χ^2_{small}	$396.7 (\nu: 1.1)$
$10^9 A_s$	$2.110^{+0.079}_{-0.079}$	$100\theta_{s,\text{eq}}$	$0.456^{+0.011}_{-0.011}$	χ^2_{prior}	$6.0 (\nu: 13.3)$
$10^9 A_s e^{-2\tau}$	$1.906^{+0.037}_{-0.037}$	$H(0.15)$	$74.7^{+3.6}_{-3.3}$	χ^2_{CMB}	$1723 (\nu: 165040.4)$
D_{40}	1240^{+57}_{-56}	$D_M(0.15)$	624^{+32}_{-31}		

Best-fit $\chi^2_{\text{eff}} = 2301.54$; $\Delta\chi^2_{\text{eff}} = 1158.85$; $\bar{\chi}^2_{\text{eff}} = 2308.71$; $\Delta\bar{\chi}^2_{\text{eff}} = 1158.96$; $R - 1 = 0.00642$
 χ^2_{eff} : CMB - smicadx12_Dec5_ftl_mv2_ndclpp.p_teb_consext8: 8.34 (Δ 0.18) small_100x143_offlike5_EE_Aplanck_B: 395.63 (Δ 0.04) CamSpec like_10.7HM_1400_unified: 1887.54

2.28 base_CamSpecHM_EE_lowE_lensing_post_zre6p5/base_plikHM_EE_lowE_lensing_post_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.0238^{+0.0020}_{-0.0019}$	D_{220}	5971^{+320}_{-310}	$H(0.38)$	$84.6^{+2.9}_{-2.7}$
$\Omega_c h^2$	$0.1155^{+0.0059}_{-0.0058}$	D_{810}	2589^{+66}_{-68}	$D_M(0.38)$	1492^{+65}_{-66}
$100\theta_{MC}$	$1.0398^{+0.0017}_{-0.0017}$	D_{1420}	842^{+33}_{-33}	$H(0.51)$	$91.1^{+2.6}_{-2.3}$
τ	$0.055^{+0.012}_{-0.011}$	D_{2000}	240^{+13}_{-13}	$D_M(0.51)$	1936^{+78}_{-79}
$\ln(10^{10} A_s)$	$3.056^{+0.033}_{-0.029}$	$n_{s,0.002}$	$0.977^{+0.026}_{-0.025}$	$H(0.61)$	$96.5^{+2.2}_{-2.1}$
n_s	$0.977^{+0.026}_{-0.025}$	Y_P	$0.24597^{+0.00079}_{-0.00076}$	$D_M(0.61)$	2256^{+86}_{-87}
y_{cal}	$0.9999^{+0.0050}_{-0.0049}$	Y_P^{BBN}	$0.24730^{+0.00079}_{-0.00076}$	$H(2.33)$	$235.0^{+2.4}_{-2.3}$
H_0	$69.8^{+3.9}_{-3.7}$	$10^5 D/H$	$2.34^{+0.32}_{-0.30}$	$D_M(2.33)$	5705^{+100}_{-110}
Ω_Λ	$0.712^{+0.037}_{-0.041}$	Age/Gyr	$13.67^{+0.23}_{-0.25}$	$f\sigma_8(0.15)$	$0.433^{+0.036}_{-0.035}$
Ω_m	$0.288^{+0.041}_{-0.037}$	z_*	$1087.9^{+2.7}_{-2.5}$	$\sigma_8(0.15)$	$0.738^{+0.014}_{-0.016}$
$\Omega_m h^2$	$0.1400^{+0.0043}_{-0.0041}$	r_*	$144.49^{+0.79}_{-0.77}$	$f\sigma_8(0.38)$	$0.456^{+0.027}_{-0.028}$
$\Omega_m h^3$	$0.0977^{+0.0033}_{-0.0030}$	$100\theta_*$	$1.0398^{+0.0017}_{-0.0016}$	$\sigma_8(0.38)$	$0.657^{+0.011}_{-0.011}$
σ_8	$0.796^{+0.019}_{-0.020}$	$D_M(z_*)/\text{Gpc}$	$13.895^{+0.081}_{-0.079}$	$f\sigma_8(0.51)$	$0.458^{+0.022}_{-0.024}$
S_8	$0.780^{+0.070}_{-0.068}$	z_{drag}	$1062.9^{+4.1}_{-3.9}$	$\sigma_8(0.51)$	$0.6158^{+0.0099}_{-0.0094}$
$\sigma_8 \Omega_m^{0.5}$	$0.427^{+0.039}_{-0.037}$	r_{drag}	$146.7^{+1.1}_{-1.1}$	$f\sigma_8(0.61)$	$0.455^{+0.019}_{-0.021}$
$\sigma_8 \Omega_m^{0.25}$	$0.583^{+0.032}_{-0.033}$	k_D	$0.1423^{+0.0023}_{-0.0022}$	$\sigma_8(0.61)$	$0.5867^{+0.0093}_{-0.0087}$
$\sigma_8/h^{0.5}$	$0.953^{+0.046}_{-0.047}$	$100\theta_D$	$0.1589^{+0.0022}_{-0.0020}$	$f\sigma_8(2.33)$	$0.2968^{+0.0049}_{-0.0045}$
$r_{\text{drag}} h$	$102.4^{+5.3}_{-5.2}$	z_{eq}	3330^{+100}_{-99}	$\sigma_8(2.33)$	$0.3072^{+0.0059}_{-0.0056}$
$\langle d^2 \rangle^{1/2}$	$2.385^{+0.092}_{-0.096}$	k_{eq}	$0.01016^{+0.00031}_{-0.00030}$	χ^2_{lensing}	$9.3 (\nu: 0.8)$
z_{re}	< 8.33	$100\theta_{\text{eq}}$	$0.830^{+0.024}_{-0.023}$	χ^2_{small}	$396.3 (\nu: 0.5)$
$10^9 A_s$	$2.124^{+0.071}_{-0.062}$	$100\theta_{\text{s,eq}}$	$0.457^{+0.011}_{-0.011}$	χ^2_{prior}	$6.0 (\nu: 13.3)$
$10^9 A_s e^{-2\tau}$	$1.904^{+0.036}_{-0.036}$	$H(0.15)$	$74.9^{+3.5}_{-3.3}$	χ^2_{CMB}	$1723 (\nu: 164998.7)$
D_{40}	1238^{+56}_{-55}	$D_M(0.15)$	623^{+31}_{-31}		

$$\bar{\chi}^2_{\text{eff}} = 2308.23; \Delta \bar{\chi}^2_{\text{eff}} = 1158.83; R - 1 = 0.00344$$

2.29 base_CamSpecHM_TE_lowE_lensing_BAO_CookeDH/base_plikHM_TE_lowE_lensing_BAO_CookeDH

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02243^{+0.00041}_{-0.00041}$	D_{810}	2540^{+47}_{-48}	$H(0.51)$	$89.94^{+0.55}_{-0.55}$
$\Omega_c h^2$	$0.1186^{+0.0023}_{-0.0023}$	D_{1420}	820^{+22}_{-23}	$D_M(0.51)$	1973^{+21}_{-20}
$100\theta_{MC}$	$1.04127^{+0.00093}_{-0.00092}$	D_{2000}	$231.7^{+7.8}_{-8.0}$	$H(0.61)$	$95.53^{+0.48}_{-0.48}$
τ	$0.054^{+0.015}_{-0.015}$	$n_{s,0.002}$	$0.971^{+0.021}_{-0.021}$	$D_M(0.61)$	2296^{+22}_{-22}
$\ln(10^{10} A_s)$	$3.039^{+0.030}_{-0.029}$	Y_P	$0.24542^{+0.00016}_{-0.00017}$	$H(2.33)$	$235.7^{+1.5}_{-1.5}$
n_s	$0.971^{+0.021}_{-0.021}$	Y_P^{BBN}	$0.24674^{+0.00016}_{-0.00017}$	$D_M(2.33)$	5753^{+24}_{-24}
y_{cal}	$1.0003^{+0.0048}_{-0.0048}$	$10^5 D/H$	$2.576^{+0.076}_{-0.074}$	$f\sigma_8(0.15)$	$0.451^{+0.012}_{-0.012}$
H_0	$68.0^{+1.0}_{-1.0}$	Age/Gyr	$13.775^{+0.056}_{-0.055}$	$\sigma_8(0.15)$	$0.745^{+0.012}_{-0.012}$
Ω_Λ	$0.694^{+0.013}_{-0.014}$	z_*	$1089.72^{+0.59}_{-0.57}$	$f\sigma_8(0.38)$	$0.470^{+0.010}_{-0.010}$
Ω_m	$0.306^{+0.014}_{-0.013}$	r_*	$144.76^{+0.62}_{-0.62}$	$\sigma_8(0.38)$	$0.661^{+0.011}_{-0.011}$
$\Omega_m h^2$	$0.1417^{+0.0023}_{-0.0023}$	$100\theta_*$	$1.04145^{+0.00092}_{-0.00092}$	$f\sigma_8(0.51)$	$0.4697^{+0.0095}_{-0.0094}$
$\Omega_m h^3$	$0.09636^{+0.00097}_{-0.00095}$	$D_M(z_*)/\text{Gpc}$	$13.899^{+0.061}_{-0.062}$	$\sigma_8(0.51)$	$0.619^{+0.010}_{-0.010}$
σ_8	$0.806^{+0.014}_{-0.013}$	z_{drag}	$1059.97^{+0.92}_{-0.91}$	$f\sigma_8(0.61)$	$0.4652^{+0.0088}_{-0.0087}$
S_8	$0.814^{+0.024}_{-0.024}$	r_{drag}	$147.40^{+0.70}_{-0.69}$	$\sigma_8(0.61)$	$0.589^{+0.010}_{-0.0098}$
$\sigma_8 \Omega_m^{0.5}$	$0.446^{+0.013}_{-0.013}$	k_D	$0.14058^{+0.00093}_{-0.00092}$	$f\sigma_8(2.33)$	$0.2974^{+0.0052}_{-0.0051}$
$\sigma_8 \Omega_m^{0.25}$	$0.600^{+0.013}_{-0.013}$	$100\theta_D$	$0.16078^{+0.00056}_{-0.00055}$	$\sigma_8(2.33)$	$0.3068^{+0.0055}_{-0.0054}$
$\sigma_8/h^{0.5}$	$0.977^{+0.019}_{-0.018}$	z_{eq}	3370^{+55}_{-54}	χ^2_{lensing}	$10.0 (\nu: 1.3)$
$r_{\text{drag}} h$	$100.3^{+1.8}_{-1.8}$	k_{eq}	$0.01028^{+0.00017}_{-0.00017}$	χ^2_{small}	$396.8 (\nu: 1.1)$
$\langle d^2 \rangle^{1/2}$	$2.413^{+0.060}_{-0.059}$	$100\theta_{\text{eq}}$	$0.820^{+0.010}_{-0.010}$	$\chi^2_{6\text{DF}}$	$0.035 (\nu: 0.0)$
z_{re}	$7.5^{+1.5}_{-1.5}$	$100\theta_{\text{s,eq}}$	$0.4527^{+0.0052}_{-0.0052}$	χ^2_{MGS}	$1.64 (\nu: 0.1)$
$10^9 A_s$	$2.089^{+0.063}_{-0.060}$	$H(0.15)$	$73.25^{+0.88}_{-0.88}$	χ^2_{DR12BAO}	$4.2 (\nu: 0.6)$
$10^9 A_s e^{-2\tau}$	$1.877^{+0.029}_{-0.029}$	$D_M(0.15)$	$637.7^{+8.7}_{-8.5}$	χ^2_{prior}	$9.6 (\nu: 5.4)$
D_{40}	1218^{+49}_{-48}	$H(0.38)$	$83.28^{+0.67}_{-0.67}$	χ^2_{CMB}	$2127 (\nu: 369414.0)$
D_{220}	5725^{+110}_{-110}	$D_M(0.38)$	1522^{+18}_{-17}	χ^2_{BAO}	$5.82 (\nu: 0.4)$

Best-fit $\chi^2_{\text{eff}} = 2996.49$; $\Delta\chi^2_{\text{eff}} = 1730.51$; $\bar{\chi}^2_{\text{eff}} = 3003.53$; $\Delta\bar{\chi}^2_{\text{eff}} = 1722.40$; $R - 1 = 0.00799$
 χ^2_{eff} : BAO - 6DF: 0.00 (Δ -0.01) MGS: 1.75 (Δ 0.34) DR12BAO: 3.44 (Δ -0.49) CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.95 (Δ -1.04) small_100x143_offlike5_EE_Aplanc: 395.71 (Δ -0.15) CamSpec like_10.7HM_1400_unified: 2576.42

2.30 base_CamSpecHM_EE_lowE_lensing_BAO_CookeDH/base_plikHM_EE_lowE_lensing_BAO_CookeDH

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02272^{+0.00072}_{-0.00072}$	D_{810}	2558^{+44}_{-43}	$H(0.51)$	$89.84^{+0.79}_{-0.76}$
$\Omega_c h^2$	$0.1181^{+0.0025}_{-0.0025}$	D_{1420}	826^{+20}_{-19}	$D_M(0.51)$	1975^{+26}_{-26}
$100\theta_{MC}$	$1.0397^{+0.0016}_{-0.0016}$	D_{2000}	$234.0^{+7.1}_{-7.0}$	$H(0.61)$	$95.42^{+0.72}_{-0.70}$
τ	$0.051^{+0.015}_{-0.016}$	$n_{s,0.002}$	$0.971^{+0.019}_{-0.019}$	$D_M(0.61)$	2299^{+29}_{-28}
$\ln(10^{10} A_s)$	$3.040^{+0.029}_{-0.030}$	Y_P	$0.24553^{+0.00031}_{-0.00029}$	$H(2.33)$	$235.5^{+1.6}_{-1.6}$
n_s	$0.971^{+0.019}_{-0.019}$	Y_P^{BBN}	$0.24686^{+0.00031}_{-0.00029}$	$D_M(2.33)$	5759^{+37}_{-38}
y_{cal}	$0.99997^{+0.0050}_{-0.0049}$	$10^5 D/H$	$2.52^{+0.13}_{-0.13}$	$f\sigma_8(0.15)$	$0.449^{+0.015}_{-0.015}$
H_0	$67.9^{+1.2}_{-1.2}$	Age/Gyr	$13.790^{+0.087}_{-0.088}$	$\sigma_8(0.15)$	$0.742^{+0.013}_{-0.013}$
Ω_Λ	$0.693^{+0.014}_{-0.015}$	z_*	$1089.3^{+1.0}_{-0.96}$	$f\sigma_8(0.38)$	$0.468^{+0.012}_{-0.012}$
Ω_m	$0.307^{+0.015}_{-0.014}$	r_*	$144.66^{+0.68}_{-0.70}$	$\sigma_8(0.38)$	$0.658^{+0.012}_{-0.012}$
$\Omega_m h^2$	$0.1415^{+0.0024}_{-0.0023}$	$100\theta_*$	$1.0399^{+0.0016}_{-0.0016}$	$f\sigma_8(0.51)$	$0.468^{+0.011}_{-0.011}$
$\Omega_m h^3$	$0.0961^{+0.0015}_{-0.0015}$	$D_M(z_*)/\text{Gpc}$	$13.911^{+0.073}_{-0.074}$	$\sigma_8(0.51)$	$0.616^{+0.011}_{-0.011}$
σ_8	$0.802^{+0.015}_{-0.015}$	z_{drag}	$1060.6^{+1.6}_{-1.6}$	$f\sigma_8(0.61)$	$0.463^{+0.010}_{-0.010}$
S_8	$0.811^{+0.029}_{-0.028}$	r_{drag}	$147.21^{+0.83}_{-0.84}$	$\sigma_8(0.61)$	$0.586^{+0.010}_{-0.010}$
$\sigma_8 \Omega_m^{0.5}$	$0.444^{+0.016}_{-0.016}$	k_D	$0.1410^{+0.0013}_{-0.0013}$	$f\sigma_8(2.33)$	$0.2958^{+0.0052}_{-0.0052}$
$\sigma_8 \Omega_m^{0.25}$	$0.597^{+0.015}_{-0.015}$	$100\theta_D$	$0.1602^{+0.0010}_{-0.00094}$	$\sigma_8(2.33)$	$0.3052^{+0.0055}_{-0.0055}$
$\sigma_8/h^{0.5}$	$0.973^{+0.022}_{-0.022}$	z_{eq}	3365^{+57}_{-56}	χ^2_{lensing}	$9.2 (\nu: 0.6)$
$r_{\text{drag}} h$	$99.99^{+1.9}_{-1.8}$	k_{eq}	$0.01027^{+0.00017}_{-0.00017}$	χ^2_{small}	$396.7 (\nu: 0.9)$
$\langle d^2 \rangle^{1/2}$	$2.411^{+0.059}_{-0.059}$	$100\theta_{\text{eq}}$	$0.820^{+0.010}_{-0.010}$	$\chi^2_{6\text{DF}}$	$0.048 (\nu: 0.0)$
z_{re}	$7.2^{+1.6}_{-1.6}$	$100\theta_{s,\text{eq}}$	$0.4526^{+0.0052}_{-0.0053}$	χ^2_{MGS}	$1.46 (\nu: 0.1)$
$10^9 A_s$	$2.091^{+0.062}_{-0.062}$	$H(0.15)$	$73.1^{+1.1}_{-1.1}$	χ^2_{DR12BAO}	$4.7 (\nu: 1.1)$
$10^9 A_s e^{-2\tau}$	$1.889^{+0.031}_{-0.031}$	$D_M(0.15)$	639^{+11}_{-10}	χ^2_{prior}	$7.6 (\nu: 14.5)$
D_{40}	1227^{+56}_{-54}	$H(0.38)$	$83.17^{+0.89}_{-0.87}$	χ^2_{CMB}	$1723 (\nu: 164799.2)$
D_{220}	5799^{+180}_{-180}	$D_M(0.38)$	1524^{+22}_{-22}	χ^2_{BAO}	$6.2 (\nu: 0.7)$

Best-fit $\chi^2_{\text{eff}} = 2309.08$; $\Delta\chi^2_{\text{eff}} = 1157.91$; $\bar{\chi}^2_{\text{eff}} = 2316.30$; $\Delta\bar{\chi}^2_{\text{eff}} = 1158.03$; $R - 1 = 0.00893$
 χ^2_{eff} : BAO - 6DF: 0.01 (Δ 0.00) MGS: 1.41 (Δ 0.00) DR12BAO: 4.12 (Δ 0.02) CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.37 (Δ -0.16) simall_100x143_offlike5_EE_Aplanck: 395.66 (Δ -0.05) CamSpec like_10.7HM_1400_unified: 1888.53

2.31 base_CamSpecHM_TE_lowE_lensing_CookeDH/base_plikHM_TE_lowE_lensing_CookeDH

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02242^{+0.00045}_{-0.00044}$	D_{220}	5722^{+120}_{-110}	$H(0.38)$	$83.22^{+0.99}_{-0.95}$
$\Omega_c h^2$	$0.1188^{+0.0035}_{-0.0035}$	D_{810}	2539^{+50}_{-50}	$D_M(0.38)$	1524^{+26}_{-26}
$100\theta_{MC}$	$1.04124^{+0.00095}_{-0.00098}$	D_{1420}	819^{+24}_{-24}	$H(0.51)$	$89.90^{+0.79}_{-0.75}$
τ	$0.053^{+0.016}_{-0.015}$	D_{2000}	$231.5^{+8.6}_{-8.4}$	$D_M(0.51)$	1975^{+31}_{-31}
$\ln(10^{10} A_s)$	$3.038^{+0.031}_{-0.030}$	$n_{s,0.002}$	$0.970^{+0.024}_{-0.024}$	$H(0.61)$	$95.49^{+0.65}_{-0.61}$
n_s	$0.970^{+0.024}_{-0.024}$	Y_P	$0.24541^{+0.00017}_{-0.00018}$	$D_M(0.61)$	2298^{+33}_{-33}
y_{cal}	$1.0003^{+0.0050}_{-0.0048}$	Y_P^{BBN}	$0.24674^{+0.00017}_{-0.00018}$	$H(2.33)$	$235.8^{+2.2}_{-2.2}$
H_0	$67.9^{+1.6}_{-1.5}$	$10^5 D/H$	$2.578^{+0.083}_{-0.080}$	$D_M(2.33)$	5755^{+29}_{-30}
Ω_Λ	$0.692^{+0.020}_{-0.021}$	Age/Gyr	$13.778^{+0.066}_{-0.067}$	$f\sigma_8(0.15)$	$0.452^{+0.017}_{-0.017}$
Ω_m	$0.308^{+0.021}_{-0.020}$	z_*	$1089.76^{+0.73}_{-0.72}$	$\sigma_8(0.15)$	$0.745^{+0.012}_{-0.012}$
$\Omega_m h^2$	$0.1419^{+0.0034}_{-0.0034}$	r_*	$144.71^{+0.85}_{-0.84}$	$f\sigma_8(0.38)$	$0.471^{+0.013}_{-0.014}$
$\Omega_m h^3$	$0.09635^{+0.00097}_{-0.00097}$	$100\theta_*$	$1.04142^{+0.00095}_{-0.00097}$	$\sigma_8(0.38)$	$0.661^{+0.011}_{-0.011}$
σ_8	$0.806^{+0.014}_{-0.014}$	$D_M(z_*)/\text{Gpc}$	$13.896^{+0.081}_{-0.079}$	$f\sigma_8(0.51)$	$0.470^{+0.011}_{-0.012}$
S_8	$0.816^{+0.034}_{-0.034}$	z_{drag}	$1059.95^{+0.93}_{-0.98}$	$\sigma_8(0.51)$	$0.619^{+0.011}_{-0.010}$
$\sigma_8 \Omega_m^{0.5}$	$0.447^{+0.018}_{-0.019}$	r_{drag}	$147.36^{+0.88}_{-0.87}$	$f\sigma_8(0.61)$	$0.4655^{+0.0098}_{-0.010}$
$\sigma_8 \Omega_m^{0.25}$	$0.600^{+0.016}_{-0.016}$	k_D	$0.1406^{+0.0010}_{-0.0010}$	$\sigma_8(0.61)$	$0.589^{+0.010}_{-0.010}$
$\sigma_8/h^{0.5}$	$0.978^{+0.021}_{-0.022}$	$100\theta_D$	$0.16079^{+0.00057}_{-0.00055}$	$f\sigma_8(2.33)$	$0.2972^{+0.0056}_{-0.0053}$
$r_{drag}h$	$100.1^{+2.7}_{-2.7}$	z_{eq}	3374^{+80}_{-81}	$\sigma_8(2.33)$	$0.3066^{+0.0063}_{-0.0060}$
$\langle d^2 \rangle^{1/2}$	$2.415^{+0.071}_{-0.071}$	k_{eq}	$0.01030^{+0.00025}_{-0.00025}$	$\chi^2_{lensing}$	$10.0 (\nu: 1.2)$
z_{re}	$7.5^{+1.5}_{-1.6}$	$100\theta_{eq}$	$0.819^{+0.015}_{-0.015}$	χ^2_{small}	$396.8 (\nu: 1.2)$
$10^9 A_s$	$2.087^{+0.066}_{-0.062}$	$100\theta_{s,eq}$	$0.4522^{+0.0080}_{-0.0077}$	χ^2_{prior}	$9.6 (\nu: 5.6)$
$10^9 A_s e^{-2\tau}$	$1.877^{+0.029}_{-0.029}$	$H(0.15)$	$73.2^{+1.3}_{-1.3}$	χ^2_{CMB}	$2127 (\nu: 369562.1)$
D_{40}	1219^{+53}_{-52}	$D_M(0.15)$	639^{+13}_{-13}		

Best-fit $\chi^2_{\text{eff}} = 2991.29$; $\Delta\chi^2_{\text{eff}} = 1730.84$; $\bar{\chi}^2_{\text{eff}} = 2998.52$; $\Delta\bar{\chi}^2_{\text{eff}} = 1722.97$; $R - 1 = 0.00490$
 χ^2_{eff} : CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 9.01 (Δ -0.60) small_100x143_offlike5_EE_Aplanck_B: 395.72 (Δ -0.13) CamSpec like_10.7HM_1400_unified: 2576.36

2.32 base_CamSpecHM_EE_lowE_lensing_CookeDH/base_plikHM_EE_lowE_lensing_CookeDH

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02253^{+0.00084}_{-0.00085}$	D_{220}	5777^{+190}_{-190}	$H(0.38)$	$82.7^{+1.4}_{-1.4}$
$\Omega_c h^2$	$0.1193^{+0.0040}_{-0.0040}$	D_{810}	2552^{+46}_{-46}	$D_M(0.38)$	1536^{+36}_{-35}
$100\theta_{MC}$	$1.0396^{+0.0016}_{-0.0016}$	D_{1420}	822^{+22}_{-21}	$H(0.51)$	$89.5^{+1.1}_{-1.1}$
τ	$0.048^{+0.016}_{-0.017}$	D_{2000}	$232.5^{+8.0}_{-7.9}$	$D_M(0.51)$	1989^{+43}_{-41}
$\ln(10^{10} A_s)$	$3.036^{+0.031}_{-0.031}$	$n_{s,0.002}$	$0.967^{+0.022}_{-0.021}$	$H(0.61)$	$95.14^{+0.99}_{-0.98}$
n_s	$0.967^{+0.022}_{-0.021}$	Y_P	$0.24546^{+0.00036}_{-0.00038}$	$D_M(0.61)$	2314^{+47}_{-45}
y_{cal}	$0.9999^{+0.0050}_{-0.0050}$	Y_P^{BBN}	$0.24678^{+0.00036}_{-0.00038}$	$H(2.33)$	$236.2^{+2.2}_{-2.2}$
H_0	$67.3^{+2.0}_{-2.0}$	$10^5 D/H$	$2.56^{+0.16}_{-0.15}$	$D_M(2.33)$	5773^{+50}_{-49}
Ω_Λ	$0.685^{+0.025}_{-0.027}$	Age/Gyr	$13.82^{+0.11}_{-0.11}$	$f\sigma_8(0.15)$	$0.456^{+0.022}_{-0.022}$
Ω_m	$0.315^{+0.027}_{-0.025}$	z_*	$1089.7^{+1.3}_{-1.3}$	$\sigma_8(0.15)$	$0.743^{+0.013}_{-0.013}$
$\Omega_m h^2$	$0.1425^{+0.0035}_{-0.0035}$	r_*	$144.48^{+0.82}_{-0.80}$	$f\sigma_8(0.38)$	$0.473^{+0.017}_{-0.017}$
$\Omega_m h^3$	$0.0959^{+0.0015}_{-0.0016}$	$100\theta_*$	$1.0397^{+0.0016}_{-0.0016}$	$\sigma_8(0.38)$	$0.658^{+0.012}_{-0.011}$
σ_8	$0.804^{+0.016}_{-0.015}$	$D_M(z_*)/\text{Gpc}$	$13.896^{+0.082}_{-0.082}$	$f\sigma_8(0.51)$	$0.471^{+0.014}_{-0.014}$
S_8	$0.824^{+0.044}_{-0.043}$	z_{drag}	$1060.3^{+1.8}_{-1.8}$	$\sigma_8(0.51)$	$0.616^{+0.011}_{-0.011}$
$\sigma_8 \Omega_m^{0.5}$	$0.451^{+0.024}_{-0.023}$	r_{drag}	$147.09^{+0.88}_{-0.86}$	$f\sigma_8(0.61)$	$0.466^{+0.012}_{-0.013}$
$\sigma_8 \Omega_m^{0.25}$	$0.602^{+0.020}_{-0.020}$	k_D	$0.1410^{+0.0013}_{-0.0013}$	$\sigma_8(0.61)$	$0.586^{+0.010}_{-0.010}$
$\sigma_8/h^{0.5}$	$0.980^{+0.028}_{-0.028}$	$100\theta_D$	$0.1604^{+0.0011}_{-0.0010}$	$f\sigma_8(2.33)$	$0.2951^{+0.0054}_{-0.0054}$
$r_{\text{drag}} h$	$98.9^{+3.2}_{-3.1}$	z_{eq}	3390^{+84}_{-84}	$\sigma_8(2.33)$	$0.3041^{+0.0059}_{-0.0060}$
$\langle d^2 \rangle^{1/2}$	$2.428^{+0.071}_{-0.070}$	k_{eq}	$0.01035^{+0.00026}_{-0.00026}$	χ^2_{lensing}	$9.6 (\nu: 1.0)$
z_{re}	$7.0^{+1.7}_{-1.7}$	$100\theta_{\text{eq}}$	$0.815^{+0.017}_{-0.016}$	χ^2_{small}	$396.8 (\nu: 1.1)$
$10^9 A_s$	$2.082^{+0.064}_{-0.065}$	$100\theta_{s,\text{eq}}$	$0.4501^{+0.0083}_{-0.0080}$	χ^2_{prior}	$7.2 (\nu: 14.5)$
$10^9 A_s e^{-2\tau}$	$1.890^{+0.031}_{-0.031}$	$H(0.15)$	$72.6^{+1.7}_{-1.8}$	χ^2_{CMB}	$1724 (\nu: 164738.0)$
D_{40}	1232^{+56}_{-56}	$D_M(0.15)$	644^{+18}_{-17}		

Best-fit $\chi^2_{\text{eff}} = 2303.11$; $\Delta\chi^2_{\text{eff}} = 1157.94$; $\bar{\chi}^2_{\text{eff}} = 2310.16$; $\Delta\bar{\chi}^2_{\text{eff}} = 1157.90$; $R - 1 = 0.00957$
 χ^2_{eff} : CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.77 (Δ 0.10) small_100x143_offlike5_EE_Aplanck_B: 395.72 (Δ 0.04) CamSpec like_10.7HM_1400_unified: 1888.23

2.33 base_CamSpecHM_TT_lowl/base_plikHM_TT_lowl

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02240^{+0.00054}_{-0.00053}$	$\langle d^2 \rangle^{1/2}$	$2.54^{+0.11}_{-0.12}$	$D_M(0.15)$	636^{+20}_{-19}
$\Omega_c h^2$	$0.1179^{+0.0051}_{-0.0049}$	z_{re}	$12.5^{+4.9}_{-5.4}$	$H(0.38)$	$83.4^{+1.5}_{-1.4}$
$100\theta_{MC}$	$1.0412^{+0.0010}_{-0.0010}$	$10^9 A_s$	$2.34^{+0.29}_{-0.28}$	$D_M(0.38)$	1519^{+39}_{-39}
τ	$0.111^{+0.063}_{-0.067}$	$10^9 A_s e^{-2\tau}$	$1.870^{+0.030}_{-0.030}$	$H(0.51)$	$90.0^{+1.2}_{-1.1}$
$\ln(10^{10} A_s)$	$3.15^{+0.12}_{-0.13}$	D_{40}	1239^{+32}_{-31}	$D_M(0.51)$	1969^{+46}_{-46}
n_s	$0.972^{+0.016}_{-0.015}$	D_{220}	5713^{+82}_{-81}	$H(0.61)$	$95.55^{+0.98}_{-0.90}$
y_{cal}	$1.0003^{+0.0049}_{-0.0049}$	D_{810}	2530^{+27}_{-27}	$D_M(0.61)$	2293^{+50}_{-50}
A_{217}^{CIB}	42^{+20}_{-20}	D_{1420}	815^{+10}_{-10}	$H(2.33)$	$235.2^{+3.0}_{-2.9}$
$\xi^{tSZ-CIB}$	—	D_{2000}	$231.5^{+4.2}_{-4.2}$	$D_M(2.33)$	5754^{+41}_{-42}
A_{143}^{tSZ}	$4.7^{+3.9}_{-4.2}$	$n_{s,0.002}$	$0.972^{+0.016}_{-0.015}$	$f\sigma_8(0.15)$	$0.473^{+0.026}_{-0.026}$
A_{100}^{PS}	244^{+60}_{-60}	Y_P	$0.24540^{+0.00022}_{-0.00023}$	$\sigma_8(0.15)$	$0.786^{+0.042}_{-0.045}$
A_{143}^{PS}	40^{+20}_{-20}	Y_P^{BBN}	$0.24673^{+0.00022}_{-0.00023}$	$f\sigma_8(0.38)$	$0.494^{+0.024}_{-0.025}$
A_{217}^{PS}	109^{+20}_{-30}	$10^5 D/H$	$2.58^{+0.10}_{-0.098}$	$\sigma_8(0.38)$	$0.698^{+0.039}_{-0.041}$
A^{kSZ}	< 8.57	Age/Gyr	$13.777^{+0.091}_{-0.093}$	$f\sigma_8(0.51)$	$0.494^{+0.024}_{-0.025}$
c_{100}	$0.9985^{+0.0022}_{-0.0027}$	z_*	$1089.7^{+1.0}_{-1.0}$	$\sigma_8(0.51)$	$0.654^{+0.037}_{-0.039}$
c_{217}	$0.9996^{+0.0036}_{-0.0026}$	r_*	$145.0^{+1.1}_{-1.1}$	$f\sigma_8(0.61)$	$0.490^{+0.024}_{-0.025}$
H_0	$68.2^{+2.3}_{-2.3}$	$100\theta_*$	$1.0414^{+0.0010}_{-0.00099}$	$\sigma_8(0.61)$	$0.622^{+0.036}_{-0.038}$
Ω_Λ	$0.697^{+0.029}_{-0.032}$	$D_M(z_*)/\text{Gpc}$	$13.920^{+0.098}_{-0.099}$	$f\sigma_8(2.33)$	$0.314^{+0.019}_{-0.020}$
Ω_m	$0.303^{+0.032}_{-0.029}$	z_{drag}	$1059.9^{+1.0}_{-1.0}$	$\sigma_8(2.33)$	$0.324^{+0.021}_{-0.021}$
$\Omega_m h^2$	$0.1409^{+0.0047}_{-0.0046}$	r_{drag}	$147.6^{+1.0}_{-1.0}$	f_{2000}^{143}	28^{+7}_{-7}
$\Omega_m h^3$	$0.09613^{+0.00096}_{-0.00093}$	k_D	$0.1403^{+0.0010}_{-0.0010}$	$f_{2000}^{143 \times 217}$	31^{+5}_{-5}
σ_8	$0.850^{+0.044}_{-0.047}$	$100\theta_D$	$0.16083^{+0.00058}_{-0.00057}$	f_{2000}^{217}	$105.7^{+4.6}_{-4.7}$
S_8	$0.854^{+0.050}_{-0.049}$	z_{eq}	3353^{+110}_{-110}	χ_{lowl}^2	$24.9 (\nu: 1.5)$
$\sigma_8 \Omega_m^{0.5}$	$0.468^{+0.027}_{-0.027}$	k_{eq}	$0.01023^{+0.00035}_{-0.00034}$	χ_{prior}^2	$7.3 (\nu: 6.0)$
$\sigma_8 \Omega_m^{0.25}$	$0.631^{+0.031}_{-0.032}$	$100\theta_{\text{eq}}$	$0.823^{+0.022}_{-0.022}$	χ_{CMB}^2	$3939 (\nu: 4948385.4)$
$\sigma_8/h^{0.5}$	$1.029^{+0.049}_{-0.052}$	$100\theta_{\text{s,eq}}$	$0.454^{+0.011}_{-0.011}$		
$r_{\text{drag}} h$	$100.7^{+4.1}_{-4.0}$	$H(0.15)$	$73.4^{+2.0}_{-2.0}$		

Best-fit $\chi_{\text{eff}}^2 = 7072.29$; $\Delta\chi_{\text{eff}}^2 = 6292.81$; $\bar{\chi}_{\text{eff}}^2 = 7092.24$; $\Delta\bar{\chi}_{\text{eff}}^2 = 6292.04$; $R - 1 = 0.00797$
 χ_{eff}^2 : CMB - commander_dx12_v3_2_29: 24.50 (Δ -0.39) CamSpec like_10.7HM: 7046.38

2.34 base_CamSpecHM_TTTEEE_lowl/base_plikHM_TTTEEE_lowl

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02247^{+0.00035}_{-0.00035}$	$\langle d^2 \rangle^{1/2}$	$2.52^{+0.10}_{-0.11}$	$D_M(0.15)$	638^{+12}_{-12}
$\Omega_c h^2$	$0.1184^{+0.0030}_{-0.0030}$	z_{re}	$11.7^{+4.3}_{-4.7}$	$H(0.38)$	$83.28^{+0.90}_{-0.87}$
$100\theta_{MC}$	$1.04105^{+0.00064}_{-0.00065}$	$10^9 A_s$	$2.29^{+0.23}_{-0.24}$	$D_M(0.38)$	1522^{+24}_{-24}
τ	$0.0999^{+0.051}_{-0.057}$	$10^9 A_s e^{-2\tau}$	$1.874^{+0.024}_{-0.024}$	$H(0.51)$	$89.94^{+0.72}_{-0.69}$
$\ln(10^{10} A_s)$	$3.130^{+0.098}_{-0.11}$	D_{40}	1237^{+29}_{-28}	$D_M(0.51)$	1973^{+28}_{-28}
n_s	$0.971^{+0.011}_{-0.010}$	D_{220}	5723^{+76}_{-75}	$H(0.61)$	$95.52^{+0.58}_{-0.56}$
y_{cal}	$1.0003^{+0.0049}_{-0.0047}$	D_{810}	2532^{+27}_{-26}	$D_M(0.61)$	2296^{+30}_{-30}
A_{217}^{CIB}	41^{+20}_{-20}	D_{1420}	$816.1^{+9.3}_{-9.2}$	$H(2.33)$	$235.6^{+1.8}_{-1.8}$
$\xi^{tSZ-CIB}$	—	D_{2000}	$231.7^{+3.4}_{-3.4}$	$D_M(2.33)$	5754^{+25}_{-26}
A_{143}^{tSZ}	$4.9^{+4.0}_{-4.2}$	$n_{s,0.002}$	$0.971^{+0.011}_{-0.010}$	$f\sigma_8(0.15)$	$0.471^{+0.021}_{-0.023}$
A_{100}^{PS}	242^{+60}_{-50}	Y_P	$0.24543^{+0.00013}_{-0.00014}$	$\sigma_8(0.15)$	$0.780^{+0.036}_{-0.039}$
A_{143}^{PS}	40^{+20}_{-20}	Y_P^{BBN}	$0.24676^{+0.00013}_{-0.00014}$	$f\sigma_8(0.38)$	$0.492^{+0.021}_{-0.023}$
A_{217}^{PS}	110^{+20}_{-30}	$10^5 D/H$	$2.568^{+0.065}_{-0.063}$	$\sigma_8(0.38)$	$0.692^{+0.033}_{-0.036}$
A^{kSZ}	< 8.36	Age/Gyr	$13.777^{+0.057}_{-0.057}$	$f\sigma_8(0.51)$	$0.491^{+0.021}_{-0.023}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	z_*	$1089.66^{+0.64}_{-0.63}$	$\sigma_8(0.51)$	$0.648^{+0.032}_{-0.034}$
c_{217}	$0.9995^{+0.0037}_{-0.0027}$	r_*	$144.76^{+0.67}_{-0.66}$	$f\sigma_8(0.61)$	$0.486^{+0.021}_{-0.023}$
H_0	$68.0^{+1.4}_{-1.4}$	$100\theta_*$	$1.04122^{+0.00063}_{-0.00064}$	$\sigma_8(0.61)$	$0.616^{+0.030}_{-0.033}$
Ω_Λ	$0.694^{+0.018}_{-0.019}$	$D_M(z_*)/\text{Gpc}$	$13.903^{+0.061}_{-0.061}$	$f\sigma_8(2.33)$	$0.311^{+0.016}_{-0.017}$
Ω_m	$0.306^{+0.019}_{-0.018}$	z_{drag}	$1060.06^{+0.68}_{-0.70}$	$\sigma_8(2.33)$	$0.321^{+0.017}_{-0.018}$
$\Omega_m h^2$	$0.1416^{+0.0028}_{-0.0028}$	r_{drag}	$147.39^{+0.65}_{-0.64}$	f_{2000}^{143}	27^{+6}_{-6}
$\Omega_m h^3$	$0.09630^{+0.00063}_{-0.00065}$	k_D	$0.14063^{+0.00068}_{-0.00070}$	$f_{2000}^{143 \times 217}$	30^{+4}_{-4}
σ_8	$0.843^{+0.039}_{-0.042}$	$100\theta_D$	$0.16069^{+0.00040}_{-0.00038}$	f_{2000}^{217}	$105.5^{+4.0}_{-3.9}$
S_8	$0.851^{+0.039}_{-0.041}$	z_{eq}	3367^{+68}_{-68}	χ_{lowl}^2	$24.5 (\nu: 1.1)$
$\sigma_8 \Omega_m^{0.5}$	$0.466^{+0.021}_{-0.023}$	k_{eq}	$0.01028^{+0.00021}_{-0.00021}$	χ_{prior}^2	$9.5 (\nu: 9.4)$
$\sigma_8 \Omega_m^{0.25}$	$0.627^{+0.027}_{-0.029}$	$100\theta_{\text{eq}}$	$0.820^{+0.013}_{-0.013}$	χ_{CMB}^2	$6958 (\nu: 10481652.1)$
$\sigma_8/h^{0.5}$	$1.022^{+0.044}_{-0.048}$	$100\theta_{s,\text{eq}}$	$0.4528^{+0.0068}_{-0.0066}$		
$r_{\text{drag}} h$	$100.3^{+2.4}_{-2.4}$	$H(0.15)$	$73.3^{+1.2}_{-1.2}$		

Best-fit $\chi_{\text{eff}}^2 = 11522.05$; $\Delta\chi_{\text{eff}}^2 = 9158.41$; $\bar{\chi}_{\text{eff}}^2 = 11544.10$; $\Delta\bar{\chi}_{\text{eff}}^2 = 9153.56$; $R - 1 = 0.00836$
 χ_{eff}^2 : CMB - commander_dx12_v3_2_29: 23.92 (Δ -0.85) CamSpec like_10.7HM_1400_unified: 11496.23

2.35 base_CamSpecHM_TT_lowl_lowE_lensing/base_plikHM_TT_lowl_lowE_lensing

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02214^{+0.00040}_{-0.00039}$	$\langle d^2 \rangle^{1/2}$	$2.447^{+0.049}_{-0.049}$	$D_M(0.15)$	646^{+12}_{-12}
$\Omega_c h^2$	$0.1202^{+0.0030}_{-0.0031}$	z_{re}	$7.5^{+1.6}_{-1.6}$	$H(0.38)$	$82.63^{+0.88}_{-0.85}$
$100\theta_{MC}$	$1.04083^{+0.00089}_{-0.00089}$	$10^9 A_s$	$2.090^{+0.064}_{-0.061}$	$D_M(0.38)$	1539^{+24}_{-24}
τ	$0.053^{+0.016}_{-0.015}$	$10^9 A_s e^{-2\tau}$	$1.881^{+0.022}_{-0.022}$	$H(0.51)$	$89.40^{+0.71}_{-0.68}$
$\ln(10^{10} A_s)$	$3.040^{+0.030}_{-0.029}$	D_{40}	1231^{+25}_{-24}	$D_M(0.51)$	1993^{+28}_{-28}
n_s	$0.9637^{+0.0094}_{-0.0095}$	D_{220}	5711^{+81}_{-80}	$H(0.61)$	$95.07^{+0.59}_{-0.56}$
y_{cal}	$1.0004^{+0.0049}_{-0.0048}$	D_{810}	2535^{+27}_{-26}	$D_M(0.61)$	2318^{+30}_{-30}
A_{217}^{CIB}	44^{+10}_{-20}	D_{1420}	814^{+10}_{-10}	$H(2.33)$	$236.5^{+1.9}_{-1.9}$
$\xi^{tSZ-CIB}$	—	D_{2000}	$229.5^{+3.5}_{-3.5}$	$D_M(2.33)$	5775^{+27}_{-28}
A_{143}^{tSZ}	$4.4^{+3.8}_{-4.2}$	$n_{s,0.002}$	$0.9637^{+0.0094}_{-0.0095}$	$f\sigma_8(0.15)$	$0.461^{+0.016}_{-0.016}$
A_{100}^{PS}	253^{+60}_{-50}	Y_P	$0.24530^{+0.00016}_{-0.00019}$	$\sigma_8(0.15)$	$0.748^{+0.011}_{-0.011}$
A_{143}^{PS}	45^{+20}_{-20}	Y_P^{BBN}	$0.24662^{+0.00016}_{-0.00019}$	$f\sigma_8(0.38)$	$0.478^{+0.012}_{-0.012}$
A_{217}^{PS}	108^{+30}_{-30}	$10^5 D/H$	$2.629^{+0.076}_{-0.075}$	$\sigma_8(0.38)$	$0.6626^{+0.0099}_{-0.0096}$
A^{kSZ}	—	Age/Gyr	$13.824^{+0.062}_{-0.063}$	$f\sigma_8(0.51)$	$0.476^{+0.010}_{-0.011}$
c_{100}	$0.9985^{+0.0022}_{-0.0027}$	z_*	$1090.23^{+0.67}_{-0.67}$	$\sigma_8(0.51)$	$0.6198^{+0.0094}_{-0.0090}$
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	r_*	$144.55^{+0.72}_{-0.71}$	$f\sigma_8(0.61)$	$0.4703^{+0.0092}_{-0.0095}$
H_0	$67.1^{+1.4}_{-1.4}$	$100\theta_*$	$1.04103^{+0.00088}_{-0.00088}$	$\sigma_8(0.61)$	$0.5895^{+0.0090}_{-0.0086}$
Ω_Λ	$0.682^{+0.019}_{-0.019}$	$D_M(z_*)/\text{Gpc}$	$13.885^{+0.067}_{-0.067}$	$f\sigma_8(2.33)$	$0.2970^{+0.0048}_{-0.0045}$
Ω_m	$0.318^{+0.019}_{-0.019}$	z_{drag}	$1059.42^{+0.85}_{-0.86}$	$\sigma_8(2.33)$	$0.3059^{+0.0052}_{-0.0050}$
$\Omega_m h^2$	$0.1430^{+0.0029}_{-0.0029}$	r_{drag}	$147.29^{+0.74}_{-0.73}$	f_{2000}^{143}	31^{+6}_{-6}
$\Omega_m h^3$	$0.09590^{+0.00088}_{-0.00086}$	k_D	$0.14048^{+0.00087}_{-0.00087}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-4}
σ_8	$0.810^{+0.012}_{-0.013}$	$100\theta_D$	$0.16106^{+0.00050}_{-0.00050}$	f_{2000}^{217}	$107.9^{+3.8}_{-3.9}$
S_8	$0.835^{+0.032}_{-0.031}$	z_{eq}	3402^{+69}_{-69}	χ^2_{lensing}	$9.48 (\nu: 0.4)$
$\sigma_8 \Omega_m^{0.5}$	$0.457^{+0.017}_{-0.017}$	k_{eq}	$0.01038^{+0.00021}_{-0.00021}$	χ^2_{small}	$396.9 (\nu: 1.3)$
$\sigma_8 \Omega_m^{0.25}$	$0.609^{+0.015}_{-0.015}$	$100\theta_{\text{eq}}$	$0.813^{+0.013}_{-0.013}$	χ^2_{lowl}	$23.6 (\nu: 0.5)$
$\sigma_8/h^{0.5}$	$0.990^{+0.020}_{-0.021}$	$100\theta_{s,\text{eq}}$	$0.4492^{+0.0068}_{-0.0065}$	χ^2_{prior}	$7.5 (\nu: 6.4)$
$r_{\text{drag}} h$	$98.8^{+2.4}_{-2.3}$	$H(0.15)$	$72.4^{+1.2}_{-1.2}$	χ^2_{CMB}	$4347 (\nu: 4947877.0)$

Best-fit $\chi^2_{\text{eff}} = 7480.67$; $\Delta\chi^2_{\text{eff}} = 6292.11$; $\bar{\chi}^2_{\text{eff}} = 7500.24$; $\Delta\bar{\chi}^2_{\text{eff}} = 6291.83$; $R - 1 = 0.00500$
 χ^2_{eff} : CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.91 (Δ 0.01) small_100x143_offlike5_EE_Aplanck_B: 395.87 (Δ 0.01) commander_dx12_v3_2_29: 23.42 (Δ 0.19) CamSpec like_10.7HM: 7050.18

2.36 base_CamSpecHM_TT_lowl_lowE_lensing_post_BAO/base_plikHM_TT_lowl_lowE_lensing_post_BAO

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02221^{+0.00038}_{-0.00037}$	$10^9 A_s$	$2.098^{+0.064}_{-0.060}$	$D_M(0.51)$	1983^{+20}_{-20}
$\Omega_c h^2$	$0.1191^{+0.0021}_{-0.0021}$	$10^9 A_s e^{-2\tau}$	$1.878^{+0.021}_{-0.021}$	$H(0.61)$	$95.25^{+0.46}_{-0.45}$
$100\theta_{MC}$	$1.04100^{+0.00083}_{-0.00082}$	D_{40}	1227^{+24}_{-23}	$D_M(0.61)$	2307^{+21}_{-21}
τ	$0.055^{+0.015}_{-0.014}$	D_{220}	5719^{+80}_{-77}	$H(2.33)$	$235.8^{+1.4}_{-1.4}$
$\ln(10^{10} A_s)$	$3.043^{+0.030}_{-0.029}$	D_{810}	2536^{+27}_{-26}	$D_M(2.33)$	5767^{+23}_{-23}
n_s	$0.9662^{+0.0080}_{-0.0081}$	D_{1420}	$815.4^{+9.8}_{-9.9}$	$f\sigma_8(0.15)$	$0.456^{+0.012}_{-0.012}$
y_{cal}	$1.0007^{+0.0050}_{-0.0049}$	D_{2000}	$230.0^{+3.4}_{-3.4}$	$\sigma_8(0.15)$	$0.748^{+0.011}_{-0.011}$
A_{217}^{CIB}	44^{+10}_{-20}	$n_{s,0.002}$	$0.9662^{+0.0080}_{-0.0081}$	$f\sigma_8(0.38)$	$0.474^{+0.010}_{-0.0099}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.24533^{+0.00015}_{-0.00017}$	$\sigma_8(0.38)$	$0.663^{+0.010}_{-0.0097}$
A_{143}^{tSZ}	$4.4^{+3.8}_{-4.2}$	Y_P^{BBN}	$0.24666^{+0.00015}_{-0.00017}$	$f\sigma_8(0.51)$	$0.4729^{+0.0089}_{-0.0089}$
A_{100}^{PS}	253^{+60}_{-50}	$10^5 D/H$	$2.615^{+0.070}_{-0.070}$	$\sigma_8(0.51)$	$0.6202^{+0.0095}_{-0.0091}$
A_{143}^{PS}	45^{+20}_{-20}	Age/Gyr	$13.807^{+0.052}_{-0.053}$	$f\sigma_8(0.61)$	$0.4680^{+0.0083}_{-0.0082}$
A_{217}^{PS}	108^{+20}_{-30}	z_*	$1090.04^{+0.55}_{-0.56}$	$\sigma_8(0.61)$	$0.5902^{+0.0091}_{-0.0087}$
A^{kSZ}	—	r_*	$144.77^{+0.56}_{-0.56}$	$f\sigma_8(2.33)$	$0.2976^{+0.0047}_{-0.0044}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	$100\theta_*$	$1.04120^{+0.00082}_{-0.00081}$	$\sigma_8(2.33)$	$0.3068^{+0.0051}_{-0.0047}$
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	$D_M(z_*)/\text{Gpc}$	$13.904^{+0.055}_{-0.056}$	f_{2000}^{143}	31^{+6}_{-6}
H_0	$67.56^{+0.96}_{-0.96}$	z_{drag}	$1059.51^{+0.84}_{-0.84}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-4}
Ω_Λ	$0.689^{+0.013}_{-0.013}$	r_{drag}	$147.49^{+0.62}_{-0.63}$	f_{2000}^{217}	$107.7^{+3.8}_{-3.9}$
Ω_m	$0.311^{+0.013}_{-0.013}$	k_D	$0.14032^{+0.00083}_{-0.00082}$	χ^2_{lensing}	$9.33 (\nu: 0.3)$
$\Omega_m h^2$	$0.1420^{+0.0021}_{-0.0021}$	$100\theta_D$	$0.16102^{+0.00049}_{-0.00050}$	χ^2_{small}	$397.2 (\nu: 1.7)$
$\Omega_m h^3$	$0.09593^{+0.00088}_{-0.00084}$	z_{eq}	3378^{+50}_{-49}	χ^2_{lowl}	$23.14 (\nu: 0.4)$
σ_8	$0.809^{+0.012}_{-0.012}$	k_{eq}	$0.01031^{+0.00015}_{-0.00015}$	$\chi^2_{6\text{DF}}$	$0.059 (\nu: 0.0)$
S_8	$0.824^{+0.024}_{-0.023}$	$100\theta_{\text{eq}}$	$0.8173^{+0.0093}_{-0.0091}$	χ^2_{MGS}	$1.27 (\nu: 0.1)$
$\sigma_8 \Omega_m^{0.5}$	$0.451^{+0.013}_{-0.013}$	$100\theta_{s,\text{eq}}$	$0.4516^{+0.0048}_{-0.0047}$	χ^2_{DR12BAO}	$4.9 (\nu: 1.2)$
$\sigma_8 \Omega_m^{0.25}$	$0.604^{+0.012}_{-0.012}$	$H(0.15)$	$72.83^{+0.84}_{-0.83}$	χ^2_{prior}	$7.4 (\nu: 6.3)$
$\sigma_8/h^{0.5}$	$0.984^{+0.018}_{-0.018}$	$D_M(0.15)$	$641.8^{+8.3}_{-8.2}$	χ^2_{CMB}	$4347 (\nu: 4947891.1)$
$r_{\text{drag}} h$	$99.6^{+1.6}_{-1.6}$	$H(0.38)$	$82.93^{+0.64}_{-0.63}$	χ^2_{BAO}	$6.2 (\nu: 0.8)$
$\langle d^2 \rangle^{1/2}$	$2.434^{+0.042}_{-0.042}$	$D_M(0.38)$	1531^{+17}_{-17}		
z_{re}	$7.8^{+1.5}_{-1.5}$	$H(0.51)$	$89.64^{+0.53}_{-0.52}$		

$$\bar{\chi}^2_{\text{eff}} = 7506.48; \Delta\bar{\chi}^2_{\text{eff}} = 6291.75; R - 1 = 0.00781$$

2.37 base_CamSpecHM_TT_lowl_lowE_lensing_post_Riess18/base_plikHM_TT_lowl_lowE_lensing_post_Riess18

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02232^{+0.00036}_{-0.00039}$	z_{re}	$8.0^{+1.5}_{-1.6}$	$D_{\text{M}}(0.38)$	1522^{+22}_{-22}
$\Omega_c h^2$	$0.1182^{+0.0029}_{-0.0030}$	$10^9 A_s$	$2.107^{+0.064}_{-0.063}$	$H(0.51)$	$89.90^{+0.70}_{-0.67}$
$100\theta_{MC}$	$1.04118^{+0.00088}_{-0.00087}$	$10^9 A_s e^{-2\tau}$	$1.875^{+0.023}_{-0.023}$	$D_{\text{M}}(0.51)$	1973^{+26}_{-26}
τ	$0.058^{+0.017}_{-0.015}$	D_{40}	1223^{+25}_{-26}	$H(0.61)$	$95.46^{+0.59}_{-0.56}$
$\ln(10^{10} A_s)$	$3.048^{+0.030}_{-0.030}$	D_{220}	5730^{+78}_{-78}	$D_{\text{M}}(0.61)$	2296^{+28}_{-28}
n_s	$0.9688^{+0.0098}_{-0.0093}$	D_{810}	2537^{+27}_{-27}	$H(2.33)$	$235.3^{+1.8}_{-1.8}$
y_{cal}	$1.0009^{+0.0049}_{-0.0047}$	D_{1420}	$816.8^{+9.7}_{-9.8}$	$D_{\text{M}}(2.33)$	5758^{+27}_{-27}
A_{217}^{CIB}	44^{+20}_{-20}	D_{2000}	$230.6^{+3.3}_{-3.5}$	$f\sigma_8(0.15)$	$0.451^{+0.015}_{-0.015}$
$\xi^{tSZ-CIB}$	—	$n_{s,0.002}$	$0.9688^{+0.0098}_{-0.0093}$	$\sigma_8(0.15)$	$0.747^{+0.011}_{-0.011}$
A_{143}^{tSZ}	$4.5^{+3.8}_{-4.1}$	Y_P	$0.24537^{+0.00015}_{-0.00016}$	$f\sigma_8(0.38)$	$0.471^{+0.012}_{-0.012}$
A_{100}^{PS}	251^{+60}_{-50}	Y_P^{BBN}	$0.24670^{+0.00015}_{-0.00016}$	$\sigma_8(0.38)$	$0.6631^{+0.0099}_{-0.0097}$
A_{143}^{PS}	44^{+20}_{-20}	$10^5 D/H$	$2.595^{+0.072}_{-0.068}$	$f\sigma_8(0.51)$	$0.470^{+0.010}_{-0.010}$
A_{217}^{PS}	108^{+30}_{-30}	Age/Gyr	$13.786^{+0.060}_{-0.060}$	$\sigma_8(0.51)$	$0.6209^{+0.0095}_{-0.0093}$
A^{kSZ}	—	z_*	$1089.82^{+0.63}_{-0.60}$	$f\sigma_8(0.61)$	$0.4658^{+0.0093}_{-0.0093}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	r_*	$144.95^{+0.69}_{-0.70}$	$\sigma_8(0.61)$	$0.5910^{+0.0093}_{-0.0090}$
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	$100\theta_*$	$1.04137^{+0.00087}_{-0.00086}$	$f\sigma_8(2.33)$	$0.2982^{+0.0049}_{-0.0047}$
H_0	$68.1^{+1.3}_{-1.3}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.919^{+0.066}_{-0.067}$	$\sigma_8(2.33)$	$0.3078^{+0.0055}_{-0.0050}$
Ω_Λ	$0.695^{+0.018}_{-0.018}$	z_{drag}	$1059.70^{+0.81}_{-0.87}$	f_{2000}^{143}	30^{+6}_{-6}
Ω_m	$0.305^{+0.018}_{-0.018}$	r_{drag}	$147.63^{+0.76}_{-0.74}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-4}
$\Omega_m h^2$	$0.1411^{+0.0028}_{-0.0028}$	k_{D}	$0.14026^{+0.00088}_{-0.00092}$	f_{2000}^{217}	$107.3^{+4.1}_{-3.9}$
$\Omega_m h^3$	$0.09604^{+0.00084}_{-0.00083}$	$100\theta_{\text{D}}$	$0.16092^{+0.00050}_{-0.00048}$	χ^2_{lensing}	$9.7 (\nu: 0.8)$
σ_8	$0.808^{+0.013}_{-0.013}$	z_{eq}	3357^{+66}_{-67}	χ^2_{simall}	$397.8 (\nu: 3.0)$
S_8	$0.814^{+0.030}_{-0.029}$	k_{eq}	$0.01025^{+0.00020}_{-0.00021}$	χ^2_{lowl}	$22.78 (\nu: 0.4)$
$\sigma_8 \Omega_m^{0.5}$	$0.446^{+0.016}_{-0.016}$	$100\theta_{\text{eq}}$	$0.822^{+0.013}_{-0.012}$	χ^2_{H073p45}	$10.7 (\nu: 3.5)$
$\sigma_8 \Omega_m^{0.25}$	$0.600^{+0.015}_{-0.014}$	$100\theta_{\text{s,eq}}$	$0.4538^{+0.0068}_{-0.0064}$	χ^2_{prior}	$7.4 (\nu: 6.2)$
$\sigma_8/h^{0.5}$	$0.979^{+0.020}_{-0.020}$	$H(0.15)$	$73.3^{+1.1}_{-1.1}$	χ^2_{CMB}	$4349 (\nu: 4948189.6)$
$r_{\text{drag}} h$	$100.5^{+2.3}_{-2.4}$	$D_{\text{M}}(0.15)$	638^{+11}_{-11}		
$\langle d^2 \rangle^{1/2}$	$2.424^{+0.047}_{-0.048}$	$H(0.38)$	$83.25^{+0.84}_{-0.83}$		

$\bar{\chi}^2_{\text{eff}} = 7512.86$; $\Delta \bar{\chi}^2_{\text{eff}} = 6291.69$; $R - 1 = 0.03322$

2.38 base_CamSpecHM_TT_lowl_lowE_lensing_post_BAO_Riess18/base_plikHM_TT_lowl_lowE_lensing_post_BAO_Riess18

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02232^{+0.00035}_{-0.00037}$	$10^9 A_s$	$2.107^{+0.063}_{-0.061}$	$D_M(0.51)$	1973^{+19}_{-19}
$\Omega_c h^2$	$0.1182^{+0.0021}_{-0.0020}$	$10^9 A_s e^{-2\tau}$	$1.875^{+0.021}_{-0.020}$	$H(0.61)$	$95.45^{+0.46}_{-0.44}$
$100\theta_{MC}$	$1.04117^{+0.00082}_{-0.00080}$	D_{40}	1223^{+23}_{-23}	$D_M(0.61)$	2297^{+21}_{-21}
τ	$0.058^{+0.015}_{-0.015}$	D_{220}	5730^{+79}_{-77}	$H(2.33)$	$235.3^{+1.4}_{-1.3}$
$\ln(10^{10} A_s)$	$3.048^{+0.030}_{-0.029}$	D_{810}	2537^{+27}_{-26}	$D_M(2.33)$	5758^{+22}_{-23}
n_s	$0.9687^{+0.0080}_{-0.0081}$	D_{1420}	$816.8^{+9.6}_{-9.7}$	$f\sigma_8(0.15)$	$0.451^{+0.012}_{-0.012}$
y_{cal}	$1.0009^{+0.0049}_{-0.0048}$	D_{2000}	$230.6^{+3.3}_{-3.4}$	$\sigma_8(0.15)$	$0.747^{+0.011}_{-0.011}$
A_{217}^{CIB}	44^{+10}_{-20}	$n_{s,0.002}$	$0.9687^{+0.0080}_{-0.0081}$	$f\sigma_8(0.38)$	$0.4710^{+0.0098}_{-0.0099}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.24537^{+0.00014}_{-0.00015}$	$\sigma_8(0.38)$	$0.663^{+0.010}_{-0.0099}$
A_{143}^{tSZ}	$4.5^{+3.8}_{-4.2}$	Y_P^{BBN}	$0.24670^{+0.00014}_{-0.00015}$	$f\sigma_8(0.51)$	$0.4704^{+0.0088}_{-0.0090}$
A_{100}^{PS}	251^{+60}_{-50}	$10^5 D/H$	$2.595^{+0.070}_{-0.064}$	$\sigma_8(0.51)$	$0.6208^{+0.0095}_{-0.0093}$
A_{143}^{PS}	44^{+20}_{-20}	Age/Gyr	$13.787^{+0.051}_{-0.051}$	$f\sigma_8(0.61)$	$0.4660^{+0.0082}_{-0.0083}$
A_{217}^{PS}	108^{+30}_{-30}	z_*	$1089.83^{+0.54}_{-0.51}$	$\sigma_8(0.61)$	$0.5909^{+0.0091}_{-0.0089}$
A^{kSZ}	—	r_*	$144.94^{+0.55}_{-0.57}$	$f\sigma_8(2.33)$	$0.2982^{+0.0047}_{-0.0046}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	$100\theta_*$	$1.04136^{+0.00080}_{-0.00080}$	$\sigma_8(2.33)$	$0.3077^{+0.0050}_{-0.0048}$
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	$D_M(z_*)/\text{Gpc}$	$13.918^{+0.055}_{-0.056}$	f_{2000}^{143}	30^{+6}_{-6}
H_0	$68.03^{+0.95}_{-0.93}$	z_{drag}	$1059.69^{+0.81}_{-0.87}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-4}
Ω_Λ	$0.695^{+0.012}_{-0.012}$	r_{drag}	$147.62^{+0.61}_{-0.63}$	f_{2000}^{217}	$107.3^{+4.0}_{-4.0}$
Ω_m	$0.305^{+0.012}_{-0.012}$	k_D	$0.14027^{+0.00083}_{-0.00082}$	χ^2_{lensing}	$9.5 (\nu: 0.5)$
$\Omega_m h^2$	$0.1412^{+0.0020}_{-0.0020}$	$100\theta_D$	$0.16092^{+0.00050}_{-0.00048}$	χ^2_{small}	$397.7 (\nu: 2.5)$
$\Omega_m h^3$	$0.09604^{+0.00084}_{-0.00084}$	z_{eq}	3358^{+49}_{-47}	χ^2_{lowl}	$22.78 (\nu: 0.3)$
σ_8	$0.808^{+0.013}_{-0.012}$	k_{eq}	$0.01025^{+0.00015}_{-0.00014}$	χ^2_{H073p45}	$10.7 (\nu: 1.8)$
S_8	$0.815^{+0.023}_{-0.023}$	$100\theta_{\text{eq}}$	$0.8214^{+0.0090}_{-0.0090}$	$\chi^2_{6\text{DF}}$	$0.028 (\nu: 0.0)$
$\sigma_8 \Omega_m^{0.5}$	$0.446^{+0.012}_{-0.012}$	$100\theta_{s,\text{eq}}$	$0.4536^{+0.0046}_{-0.0047}$	χ^2_{MGS}	$1.73 (\nu: 0.1)$
$\sigma_8 \Omega_m^{0.25}$	$0.600^{+0.012}_{-0.012}$	$H(0.15)$	$73.24^{+0.83}_{-0.81}$	χ^2_{DR12BAO}	$3.93 (\nu: 0.3)$
$\sigma_8/h^{0.5}$	$0.980^{+0.017}_{-0.018}$	$D_M(0.15)$	$637.7^{+7.9}_{-7.9}$	χ^2_{prior}	$7.4 (\nu: 6.3)$
$r_{\text{drag}} h$	$100.4^{+1.6}_{-1.6}$	$H(0.38)$	$83.24^{+0.63}_{-0.61}$	χ^2_{CMB}	$4348 (\nu: 4948023.7)$
$\langle d^2 \rangle^{1/2}$	$2.424^{+0.043}_{-0.043}$	$D_M(0.38)$	1522^{+16}_{-16}	χ^2_{BAO}	$5.69 (\nu: 0.3)$
z_{re}	$8.0^{+1.4}_{-1.5}$	$H(0.51)$	$89.89^{+0.53}_{-0.51}$		

$$\bar{\chi}^2_{\text{eff}} = 7518.00; \Delta\bar{\chi}^2_{\text{eff}} = 6291.55; R - 1 = 0.02714$$

2.39 base_CamSpecHM_TT_lowl_lowE_lensing_post_Pantheon18/base_plikHM_TT_lowl_lowE_lensing_post_Pantheon18

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02218^{+0.00040}_{-0.00038}$	z_{re}	$7.6^{+1.5}_{-1.6}$	$D_{\text{M}}(0.38)$	1535^{+22}_{-22}
$\Omega_c h^2$	$0.1198^{+0.0028}_{-0.0028}$	$10^9 A_s$	$2.094^{+0.064}_{-0.060}$	$H(0.51)$	$89.51^{+0.66}_{-0.64}$
$100\theta_{MC}$	$1.04089^{+0.00087}_{-0.00087}$	$10^9 A_s e^{-2\tau}$	$1.880^{+0.022}_{-0.022}$	$D_{\text{M}}(0.51)$	1989^{+26}_{-26}
τ	$0.054^{+0.016}_{-0.015}$	D_{40}	1229^{+25}_{-24}	$H(0.61)$	$95.15^{+0.56}_{-0.54}$
$\ln(10^{10} A_s)$	$3.041^{+0.030}_{-0.029}$	D_{220}	5715^{+80}_{-79}	$D_{\text{M}}(0.61)$	2313^{+28}_{-28}
n_s	$0.9648^{+0.0091}_{-0.0090}$	D_{810}	2535^{+27}_{-26}	$H(2.33)$	$236.2^{+1.7}_{-1.7}$
y_{cal}	$1.0006^{+0.0049}_{-0.0048}$	D_{1420}	815^{+10}_{-10}	$D_{\text{M}}(2.33)$	5772^{+26}_{-27}
A_{217}^{CIB}	44^{+10}_{-20}	D_{2000}	$229.7^{+3.5}_{-3.5}$	$f\sigma_8(0.15)$	$0.459^{+0.015}_{-0.015}$
$\xi^{tSZ-CIB}$	—	$n_{s,0.002}$	$0.9648^{+0.0091}_{-0.0090}$	$\sigma_8(0.15)$	$0.748^{+0.011}_{-0.011}$
A_{143}^{tSZ}	$4.4^{+3.8}_{-4.2}$	Y_P	$0.24531^{+0.00016}_{-0.00018}$	$f\sigma_8(0.38)$	$0.476^{+0.012}_{-0.012}$
A_{100}^{PS}	253^{+60}_{-50}	Y_P^{BBN}	$0.24664^{+0.00016}_{-0.00018}$	$\sigma_8(0.38)$	$0.6627^{+0.0099}_{-0.0096}$
A_{143}^{PS}	45^{+20}_{-20}	$10^5 D/H$	$2.623^{+0.074}_{-0.074}$	$f\sigma_8(0.51)$	$0.475^{+0.010}_{-0.010}$
A_{217}^{PS}	108^{+20}_{-30}	Age/Gyr	$13.817^{+0.059}_{-0.060}$	$\sigma_8(0.51)$	$0.6200^{+0.0095}_{-0.0091}$
A^{kSZ}	—	z_*	$1090.15^{+0.63}_{-0.64}$	$f\sigma_8(0.61)$	$0.4693^{+0.0092}_{-0.0091}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	r_*	$144.64^{+0.68}_{-0.66}$	$\sigma_8(0.61)$	$0.5898^{+0.0091}_{-0.0087}$
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	$100\theta_*$	$1.04110^{+0.00086}_{-0.00086}$	$f\sigma_8(2.33)$	$0.2973^{+0.0048}_{-0.0045}$
H_0	$67.3^{+1.3}_{-1.2}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.893^{+0.064}_{-0.063}$	$\sigma_8(2.33)$	$0.3063^{+0.0052}_{-0.0049}$
Ω_Λ	$0.685^{+0.017}_{-0.018}$	z_{drag}	$1059.47^{+0.84}_{-0.83}$	f_{2000}^{143}	31^{+6}_{-6}
Ω_m	$0.315^{+0.018}_{-0.017}$	r_{drag}	$147.37^{+0.72}_{-0.69}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-4}
$\Omega_m h^2$	$0.1426^{+0.0026}_{-0.0027}$	k_{D}	$0.14042^{+0.00085}_{-0.00086}$	f_{2000}^{217}	$107.8^{+3.8}_{-3.9}$
$\Omega_m h^3$	$0.09591^{+0.00088}_{-0.00085}$	$100\theta_{\text{D}}$	$0.16103^{+0.00049}_{-0.00050}$	χ^2_{lensing}	$9.40 (\nu: 0.3)$
σ_8	$0.810^{+0.013}_{-0.012}$	z_{eq}	3392^{+63}_{-64}	χ^2_{small}	$397.0 (\nu: 1.5)$
S_8	$0.830^{+0.029}_{-0.029}$	k_{eq}	$0.01035^{+0.00019}_{-0.00020}$	χ^2_{lowl}	$23.39 (\nu: 0.5)$
$\sigma_8 \Omega_m^{0.5}$	$0.455^{+0.016}_{-0.016}$	$100\theta_{\text{eq}}$	$0.815^{+0.012}_{-0.012}$	χ^2_{JLA}	$1035.42 (\nu: 0.2)$
$\sigma_8 \Omega_m^{0.25}$	$0.607^{+0.014}_{-0.014}$	$100\theta_{\text{s,eq}}$	$0.4502^{+0.0063}_{-0.0060}$	χ^2_{prior}	$7.5 (\nu: 6.4)$
$\sigma_8/h^{0.5}$	$0.987^{+0.020}_{-0.020}$	$H(0.15)$	$72.6^{+1.1}_{-1.1}$	χ^2_{CMB}	$4347 (\nu: 4947920.9)$
$r_{\text{drag}} h$	$99.1^{+2.2}_{-2.1}$	$D_{\text{M}}(0.15)$	644^{+11}_{-11}		
$\langle d^2 \rangle^{1/2}$	$2.441^{+0.047}_{-0.047}$	$H(0.38)$	$82.76^{+0.82}_{-0.79}$		

Best-fit $\chi^2_{\text{eff}} = 8516.03$; $\Delta\chi^2_{\text{eff}} = 6292.15$; $\bar{\chi}^2_{\text{eff}} = 8535.63$; $\Delta\bar{\chi}^2_{\text{eff}} = 6291.83$; $R - 1 = 0.00582$
 χ^2_{eff} : CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.88 (Δ 0.04) small_100x143_offlike5_EE_Aplanck_B: 396.05 (Δ 0.18) commander_dx12_v3.2.29: 23.24 (Δ 0.01) CamSpec like_10.7HM: 7050.35 SN - JLA Pantheon18: 1035.29 (Δ 0.03)

2.40 base_CamSpecHM_TT_lowl_lowE_lensing_post_BAO_JLA_Riess18/base_plikHM_TT_lowl_lowE_lensing_post_BAO_JLA_Riess18

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02233^{+0.00036}_{-0.00037}$	$10^9 A_s$	$2.107^{+0.063}_{-0.063}$	$D_M(0.51)$	1972^{+19}_{-19}
$\Omega_c h^2$	$0.1181^{+0.0021}_{-0.0021}$	$10^9 A_s e^{-2\tau}$	$1.875^{+0.022}_{-0.020}$	$H(0.61)$	$95.47^{+0.47}_{-0.44}$
$100\theta_{MC}$	$1.04117^{+0.00081}_{-0.00081}$	D_{40}	1223^{+23}_{-23}	$D_M(0.61)$	2296^{+20}_{-20}
τ	$0.058^{+0.015}_{-0.015}$	D_{220}	5731^{+79}_{-75}	$H(2.33)$	$235.3^{+1.4}_{-1.3}$
$\ln(10^{10} A_s)$	$3.048^{+0.030}_{-0.030}$	D_{810}	2537^{+27}_{-26}	$D_M(2.33)$	5758^{+22}_{-23}
n_s	$0.9688^{+0.0080}_{-0.0080}$	D_{1420}	$816.8^{+9.8}_{-9.9}$	$f\sigma_8(0.15)$	$0.451^{+0.012}_{-0.012}$
y_{cal}	$1.0009^{+0.0051}_{-0.0048}$	D_{2000}	$230.6^{+3.3}_{-3.5}$	$\sigma_8(0.15)$	$0.747^{+0.012}_{-0.011}$
A_{217}^{CIB}	44^{+20}_{-20}	$n_{s,0.002}$	$0.9688^{+0.0080}_{-0.0080}$	$f\sigma_8(0.38)$	$0.4707^{+0.0097}_{-0.0099}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.24538^{+0.00014}_{-0.00015}$	$\sigma_8(0.38)$	$0.663^{+0.010}_{-0.010}$
A_{143}^{tSZ}	$4.5^{+3.8}_{-4.2}$	Y_P^{BBN}	$0.24670^{+0.00014}_{-0.00015}$	$f\sigma_8(0.51)$	$0.4701^{+0.0088}_{-0.0089}$
A_{100}^{PS}	252^{+60}_{-50}	$10^5 D/H$	$2.594^{+0.070}_{-0.066}$	$\sigma_8(0.51)$	$0.6208^{+0.0096}_{-0.0097}$
A_{143}^{PS}	44^{+20}_{-20}	Age/Gyr	$13.786^{+0.051}_{-0.053}$	$f\sigma_8(0.61)$	$0.4657^{+0.0082}_{-0.0081}$
A_{217}^{PS}	108^{+30}_{-30}	z_*	$1089.81^{+0.53}_{-0.53}$	$\sigma_8(0.61)$	$0.5909^{+0.0090}_{-0.0091}$
A^{kSZ}	—	r_*	$144.95^{+0.55}_{-0.57}$	$f\sigma_8(2.33)$	$0.2982^{+0.0046}_{-0.0047}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	$100\theta_*$	$1.04136^{+0.00081}_{-0.00080}$	$\sigma_8(2.33)$	$0.3078^{+0.0048}_{-0.0049}$
c_{217}	$0.9997^{+0.0038}_{-0.0028}$	$D_M(z_*)/\text{Gpc}$	$13.920^{+0.053}_{-0.057}$	f_{2000}^{143}	30^{+6}_{-6}
H_0	$68.07^{+0.97}_{-0.92}$	z_{drag}	$1059.70^{+0.80}_{-0.84}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-4}
Ω_Λ	$0.695^{+0.012}_{-0.012}$	r_{drag}	$147.64^{+0.60}_{-0.63}$	f_{2000}^{217}	$107.3^{+4.1}_{-4.0}$
Ω_m	$0.305^{+0.012}_{-0.012}$	k_D	$0.14025^{+0.00084}_{-0.00082}$	χ^2_{lensing}	$9.6 (\nu: 0.6)$
$\Omega_m h^2$	$0.1411^{+0.0020}_{-0.0020}$	$100\theta_D$	$0.16092^{+0.00051}_{-0.00050}$	χ^2_{small}	$397.7 (\nu: 2.5)$
$\Omega_m h^3$	$0.09604^{+0.00085}_{-0.00083}$	z_{eq}	3356^{+49}_{-47}	χ^2_{lowl}	$22.76 (\nu: 0.3)$
σ_8	$0.808^{+0.012}_{-0.013}$	k_{eq}	$0.01024^{+0.00015}_{-0.00014}$	χ^2_{H073p45}	$10.6 (\nu: 1.7)$
S_8	$0.814^{+0.022}_{-0.023}$	$100\theta_{\text{eq}}$	$0.8217^{+0.0091}_{-0.0089}$	χ^2_{JLA}	$706.62 (\nu: 0.0)$
$\sigma_8 \Omega_m^{0.5}$	$0.446^{+0.012}_{-0.012}$	$100\theta_{s,\text{eq}}$	$0.4538^{+0.0047}_{-0.0046}$	$\chi^2_{6\text{DF}}$	$0.027 (\nu: 0.0)$
$\sigma_8 \Omega_m^{0.25}$	$0.600^{+0.012}_{-0.012}$	$H(0.15)$	$73.28^{+0.83}_{-0.80}$	χ^2_{MGS}	$1.77 (\nu: 0.1)$
$\sigma_8/h^{0.5}$	$0.979^{+0.017}_{-0.018}$	$D_M(0.15)$	$637.4^{+7.9}_{-8.1}$	χ^2_{DR12BAO}	$3.88 (\nu: 0.3)$
$r_{\text{drag}} h$	$100.5^{+1.6}_{-1.6}$	$H(0.38)$	$83.26^{+0.62}_{-0.61}$	χ^2_{prior}	$7.5 (\nu: 6.4)$
$\langle d^2 \rangle^{1/2}$	$2.423^{+0.042}_{-0.044}$	$D_M(0.38)$	1522^{+16}_{-16}	χ^2_{CMB}	$4349 (\nu: 4948336.7)$
z_{re}	$8.0^{+1.4}_{-1.5}$	$H(0.51)$	$89.90^{+0.53}_{-0.51}$	χ^2_{BAO}	$5.68 (\nu: 0.2)$

$$\bar{\chi}^2_{\text{eff}} = 8224.73; \Delta \bar{\chi}^2_{\text{eff}} = 6291.68; R - 1 = 0.08459$$

2.41 base_CamSpecHM_TT_lowl_lowE_lensing_post_BAO_Pantheon18/base_plikHM_TT_lowl_lowE_lensing_post_BAO_Pantheon18

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02223^{+0.00037}_{-0.00036}$	$10^9 A_s$	$2.099^{+0.063}_{-0.060}$	$D_M(0.51)$	1981^{+19}_{-19}
$\Omega_c h^2$	$0.1190^{+0.0020}_{-0.0021}$	$10^9 A_s e^{-2\tau}$	$1.877^{+0.021}_{-0.020}$	$H(0.61)$	$95.28^{+0.45}_{-0.44}$
$100\theta_{MC}$	$1.04102^{+0.00082}_{-0.00082}$	D_{40}	1226^{+24}_{-23}	$D_M(0.61)$	2306^{+21}_{-21}
τ	$0.056^{+0.015}_{-0.014}$	D_{220}	5720^{+79}_{-77}	$H(2.33)$	$235.8^{+1.3}_{-1.3}$
$\ln(10^{10} A_s)$	$3.044^{+0.030}_{-0.029}$	D_{810}	2536^{+27}_{-26}	$D_M(2.33)$	5766^{+22}_{-22}
n_s	$0.9666^{+0.0079}_{-0.0080}$	D_{1420}	$815.5^{+9.8}_{-9.8}$	$f\sigma_8(0.15)$	$0.455^{+0.012}_{-0.012}$
y_{cal}	$1.0007^{+0.0050}_{-0.0048}$	D_{2000}	$230.0^{+3.4}_{-3.4}$	$\sigma_8(0.15)$	$0.748^{+0.011}_{-0.011}$
A_{217}^{CIB}	44^{+10}_{-20}	$n_{s,0.002}$	$0.9666^{+0.0079}_{-0.0080}$	$f\sigma_8(0.38)$	$0.4738^{+0.0097}_{-0.0097}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.24533^{+0.00015}_{-0.00016}$	$\sigma_8(0.38)$	$0.663^{+0.010}_{-0.0097}$
A_{143}^{tSZ}	$4.4^{+3.8}_{-4.2}$	Y_P^{BBN}	$0.24666^{+0.00015}_{-0.00016}$	$f\sigma_8(0.51)$	$0.4725^{+0.0088}_{-0.0088}$
A_{100}^{PS}	253^{+60}_{-50}	$10^5 D/H$	$2.613^{+0.069}_{-0.069}$	$\sigma_8(0.51)$	$0.6203^{+0.0095}_{-0.0091}$
A_{143}^{PS}	45^{+20}_{-20}	Age/Gyr	$13.805^{+0.051}_{-0.052}$	$f\sigma_8(0.61)$	$0.4676^{+0.0082}_{-0.0082}$
A_{217}^{PS}	108^{+20}_{-30}	z_*	$1090.01^{+0.54}_{-0.54}$	$\sigma_8(0.61)$	$0.5903^{+0.0091}_{-0.0088}$
A^{kSZ}	—	r_*	$144.80^{+0.55}_{-0.55}$	$f\sigma_8(2.33)$	$0.2977^{+0.0047}_{-0.0045}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	$100\theta_*$	$1.04121^{+0.00082}_{-0.00081}$	$\sigma_8(2.33)$	$0.3069^{+0.0051}_{-0.0047}$
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	$D_M(z_*)/\text{Gpc}$	$13.907^{+0.054}_{-0.055}$	f_{2000}^{143}	31^{+6}_{-6}
H_0	$67.63^{+0.93}_{-0.92}$	z_{drag}	$1059.53^{+0.86}_{-0.82}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-4}
Ω_Λ	$0.690^{+0.012}_{-0.012}$	r_{drag}	$147.52^{+0.62}_{-0.62}$	f_{2000}^{217}	$107.6^{+3.8}_{-4.0}$
Ω_m	$0.310^{+0.012}_{-0.012}$	k_D	$0.14030^{+0.00083}_{-0.00082}$	χ^2_{lensing}	$9.34 (\nu: 0.3)$
$\Omega_m h^2$	$0.1419^{+0.0020}_{-0.0020}$	$100\theta_D$	$0.16101^{+0.00049}_{-0.00049}$	χ^2_{small}	$397.2 (\nu: 1.8)$
$\Omega_m h^3$	$0.09593^{+0.00088}_{-0.00083}$	z_{eq}	3374^{+48}_{-48}	χ^2_{lowl}	$23.08 (\nu: 0.4)$
σ_8	$0.809^{+0.012}_{-0.012}$	k_{eq}	$0.01030^{+0.00015}_{-0.00015}$	χ^2_{JLA}	$1035.07 (\nu: 0.0)$
S_8	$0.822^{+0.023}_{-0.022}$	$100\theta_{\text{eq}}$	$0.8180^{+0.0090}_{-0.0088}$	$\chi^2_{6\text{DF}}$	$0.049 (\nu: 0.0)$
$\sigma_8 \Omega_m^{0.5}$	$0.450^{+0.012}_{-0.012}$	$100\theta_{s,\text{eq}}$	$0.4519^{+0.0046}_{-0.0045}$	χ^2_{MGS}	$1.34 (\nu: 0.1)$
$\sigma_8 \Omega_m^{0.25}$	$0.604^{+0.012}_{-0.012}$	$H(0.15)$	$72.89^{+0.81}_{-0.80}$	χ^2_{DR12BAO}	$4.6 (\nu: 0.9)$
$\sigma_8/h^{0.5}$	$0.984^{+0.018}_{-0.017}$	$D_M(0.15)$	$641.2^{+7.9}_{-7.9}$	χ^2_{prior}	$7.4 (\nu: 6.3)$
$r_{\text{drag}} h$	$99.8^{+1.6}_{-1.6}$	$H(0.38)$	$82.97^{+0.61}_{-0.61}$	χ^2_{CMB}	$4347 (\nu: 4947900.5)$
$\langle d^2 \rangle^{1/2}$	$2.433^{+0.042}_{-0.042}$	$D_M(0.38)$	1529^{+16}_{-16}	χ^2_{BAO}	$6.0 (\nu: 0.6)$
z_{re}	$7.8^{+1.5}_{-1.5}$	$H(0.51)$	$89.67^{+0.52}_{-0.51}$		

Best-fit $\chi^2_{\text{eff}} = 8521.87$; $\Delta\chi^2_{\text{eff}} = 6292.16$; $\bar{\chi}^2_{\text{eff}} = 8541.50$; $\Delta\bar{\chi}^2_{\text{eff}} = 6291.72$; $R - 1 = 0.00920$
 χ^2_{eff} : BAO - 6DF: 0.02 (Δ 0.01) MGS: 1.28 (Δ -0.06) DR12BAO: 4.18 (Δ 0.15) CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 9.02 (Δ 0.14) small_100x143_offlike5_EE_Aplanck: 396.23 (Δ -0.14) commander_dx12_v3.2_29: 22.86 (Δ 0.04) CamSpec like_10.7HM: 7051.17 SN - JLA Pantheon18: 1034.99 (Δ 0.04)

2.42 base_CamSpecHM_TT_lowl_lowE_lensing_post_BAO_Pantheon18_Riess18/base_plikHM_TT_lowl_lowE_lensing_post_BAO_Pantheon18

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02233^{+0.00035}_{-0.00037}$	$10^9 A_s$	$2.107^{+0.063}_{-0.062}$	$D_M(0.51)$	1973^{+18}_{-18}
$\Omega_c h^2$	$0.1181^{+0.0020}_{-0.0020}$	$10^9 A_s e^{-2\tau}$	$1.875^{+0.021}_{-0.020}$	$H(0.61)$	$95.46^{+0.45}_{-0.43}$
$100\theta_{MC}$	$1.04117^{+0.00081}_{-0.00080}$	D_{40}	1223^{+23}_{-23}	$D_M(0.61)$	2296^{+20}_{-20}
τ	$0.058^{+0.015}_{-0.014}$	D_{220}	5730^{+79}_{-76}	$H(2.33)$	$235.3^{+1.3}_{-1.3}$
$\ln(10^{10} A_s)$	$3.048^{+0.030}_{-0.030}$	D_{810}	2537^{+26}_{-26}	$D_M(2.33)$	5758^{+22}_{-22}
n_s	$0.9688^{+0.0079}_{-0.0080}$	D_{1420}	$816.8^{+9.6}_{-9.7}$	$f\sigma_8(0.15)$	$0.451^{+0.011}_{-0.011}$
y_{cal}	$1.0009^{+0.0049}_{-0.0048}$	D_{2000}	$230.6^{+3.3}_{-3.4}$	$\sigma_8(0.15)$	$0.747^{+0.011}_{-0.011}$
A_{217}^{CIB}	44^{+10}_{-20}	$n_{s,0.002}$	$0.9688^{+0.0079}_{-0.0080}$	$f\sigma_8(0.38)$	$0.4708^{+0.0097}_{-0.0098}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.24538^{+0.00014}_{-0.00015}$	$\sigma_8(0.38)$	$0.663^{+0.010}_{-0.0099}$
A_{143}^{tSZ}	$4.5^{+3.8}_{-4.2}$	Y_P^{BBN}	$0.24670^{+0.00014}_{-0.00015}$	$f\sigma_8(0.51)$	$0.4702^{+0.0087}_{-0.0089}$
A_{100}^{PS}	251^{+60}_{-50}	$10^5 D/H$	$2.594^{+0.070}_{-0.063}$	$\sigma_8(0.51)$	$0.6209^{+0.0095}_{-0.0094}$
A_{143}^{PS}	44^{+20}_{-20}	Age/Gyr	$13.786^{+0.051}_{-0.050}$	$f\sigma_8(0.61)$	$0.4658^{+0.0082}_{-0.0082}$
A_{217}^{PS}	108^{+30}_{-30}	z_*	$1089.81^{+0.53}_{-0.50}$	$\sigma_8(0.61)$	$0.5910^{+0.0091}_{-0.0090}$
A^{kSZ}	—	r_*	$144.95^{+0.54}_{-0.56}$	$f\sigma_8(2.33)$	$0.2983^{+0.0047}_{-0.0046}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	$100\theta_*$	$1.04137^{+0.00079}_{-0.00080}$	$\sigma_8(2.33)$	$0.3078^{+0.0049}_{-0.0048}$
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	$D_M(z_*)/\text{Gpc}$	$13.919^{+0.054}_{-0.056}$	f_{2000}^{143}	30^{+6}_{-6}
H_0	$68.07^{+0.92}_{-0.90}$	z_{drag}	$1059.70^{+0.81}_{-0.83}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-4}
Ω_Λ	$0.695^{+0.012}_{-0.012}$	r_{drag}	$147.64^{+0.59}_{-0.62}$	f_{2000}^{217}	$107.3^{+4.1}_{-4.0}$
Ω_m	$0.305^{+0.012}_{-0.012}$	k_D	$0.14026^{+0.00083}_{-0.00082}$	χ^2_{lensing}	$9.5 (\nu: 0.6)$
$\Omega_m h^2$	$0.1411^{+0.0020}_{-0.0019}$	$100\theta_D$	$0.16092^{+0.00050}_{-0.00048}$	χ^2_{small}	$397.7 (\nu: 2.6)$
$\Omega_m h^3$	$0.09604^{+0.00084}_{-0.00084}$	z_{eq}	3356^{+48}_{-45}	χ^2_{lowl}	$22.76 (\nu: 0.3)$
σ_8	$0.808^{+0.013}_{-0.012}$	k_{eq}	$0.01024^{+0.00015}_{-0.00014}$	χ^2_{H073p45}	$10.6 (\nu: 1.6)$
S_8	$0.814^{+0.022}_{-0.022}$	$100\theta_{\text{eq}}$	$0.8217^{+0.0087}_{-0.0087}$	χ^2_{JLA}	$1034.87 (\nu: 0.0)$
$\sigma_8 \Omega_m^{0.5}$	$0.446^{+0.012}_{-0.012}$	$100\theta_{s,\text{eq}}$	$0.4538^{+0.0044}_{-0.0045}$	$\chi^2_{6\text{DF}}$	$0.026 (\nu: 0.0)$
$\sigma_8 \Omega_m^{0.25}$	$0.600^{+0.012}_{-0.012}$	$H(0.15)$	$73.27^{+0.80}_{-0.78}$	χ^2_{MGS}	$1.77 (\nu: 0.1)$
$\sigma_8/h^{0.5}$	$0.979^{+0.017}_{-0.017}$	$D_M(0.15)$	$637.4^{+7.6}_{-7.7}$	χ^2_{DR12BAO}	$3.87 (\nu: 0.3)$
$r_{\text{drag}} h$	$100.5^{+1.5}_{-1.5}$	$H(0.38)$	$83.26^{+0.61}_{-0.59}$	χ^2_{prior}	$7.4 (\nu: 6.3)$
$\langle d^2 \rangle^{1/2}$	$2.423^{+0.042}_{-0.042}$	$D_M(0.38)$	1522^{+15}_{-16}	χ^2_{CMB}	$4348 (\nu: 4948047.8)$
z_{re}	$8.0^{+1.4}_{-1.5}$	$H(0.51)$	$89.90^{+0.52}_{-0.50}$	χ^2_{BAO}	$5.66 (\nu: 0.2)$

Best-fit $\chi^2_{\text{eff}} = 8533.26$; $\Delta\chi^2_{\text{eff}} = 6292.25$; $\bar{\chi}^2_{\text{eff}} = 8552.81$; $\Delta\bar{\chi}^2_{\text{eff}} = 6291.55$; $R - 1 = 0.02978$
 χ^2_{eff} : BAO - 6DF: 0.00 (Δ 0.00) MGS: 1.68 (Δ -0.07) DR12BAO: 3.49 (Δ 0.05) CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 9.17 (Δ 0.17) small_100x143_offlike5_EE_Aplanck: 396.83 (Δ -0.06) commander_dx12_v3.2_29: 22.60 (Δ -0.00) CamSpec like_10.7HM: 7051.98 Hubble - H073p45: 10.58 (Δ 0.26) SN - JLA Pantheon18: 1034.81 (Δ 0.02)

2.43 base_CamSpecHM_TT_lowl_lowE_lensing_post_zre6p5/base_plikHM_TT_lowl_lowE_lensing_post_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02215^{+0.00040}_{-0.00039}$	$\langle d^2 \rangle^{1/2}$	$2.448^{+0.049}_{-0.048}$	$D_M(0.15)$	646^{+11}_{-12}
$\Omega_c h^2$	$0.1201^{+0.0029}_{-0.0030}$	z_{re}	< 8.85	$H(0.38)$	$82.66^{+0.86}_{-0.83}$
$100\theta_{MC}$	$1.04084^{+0.00089}_{-0.00088}$	$10^9 A_s$	$2.095^{+0.055}_{-0.050}$	$D_M(0.38)$	1538^{+23}_{-23}
τ	$0.054^{+0.013}_{-0.011}$	$10^9 A_s e^{-2\tau}$	$1.881^{+0.022}_{-0.022}$	$H(0.51)$	$89.43^{+0.70}_{-0.66}$
$\ln(10^{10} A_s)$	$3.042^{+0.026}_{-0.024}$	D_{40}	1230^{+25}_{-24}	$D_M(0.51)$	1992^{+27}_{-27}
n_s	$0.9640^{+0.0093}_{-0.0092}$	D_{220}	5711^{+81}_{-80}	$H(0.61)$	$95.09^{+0.58}_{-0.55}$
y_{cal}	$1.0004^{+0.0048}_{-0.0048}$	D_{810}	2534^{+26}_{-26}	$D_M(0.61)$	2317^{+29}_{-29}
A_{217}^{CIB}	44^{+10}_{-20}	D_{1420}	814^{+10}_{-10}	$H(2.33)$	$236.4^{+1.8}_{-1.8}$
$\xi^{tSZ-CIB}$	—	D_{2000}	$229.6^{+3.5}_{-3.5}$	$D_M(2.33)$	5774^{+27}_{-28}
A_{143}^{tSZ}	$4.4^{+3.8}_{-4.2}$	$n_{s,0.002}$	$0.9640^{+0.0093}_{-0.0092}$	$f\sigma_8(0.15)$	$0.461^{+0.016}_{-0.016}$
A_{100}^{PS}	253^{+60}_{-50}	Y_P	$0.24530^{+0.00016}_{-0.00018}$	$\sigma_8(0.15)$	$0.749^{+0.011}_{-0.0098}$
A_{143}^{PS}	45^{+20}_{-20}	Y_P^{BBN}	$0.24663^{+0.00016}_{-0.00018}$	$f\sigma_8(0.38)$	$0.478^{+0.012}_{-0.012}$
A_{217}^{PS}	108^{+20}_{-30}	$10^5 D/H$	$2.627^{+0.075}_{-0.075}$	$\sigma_8(0.38)$	$0.6633^{+0.0090}_{-0.0084}$
A^{kSZ}	—	Age/Gyr	$13.822^{+0.062}_{-0.062}$	$f\sigma_8(0.51)$	$0.476^{+0.010}_{-0.011}$
c_{100}	$0.9985^{+0.0022}_{-0.0027}$	z_*	$1090.21^{+0.65}_{-0.66}$	$\sigma_8(0.51)$	$0.6205^{+0.0084}_{-0.0078}$
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	r_*	$144.57^{+0.71}_{-0.69}$	$f\sigma_8(0.61)$	$0.4705^{+0.0091}_{-0.0094}$
H_0	$67.1^{+1.3}_{-1.3}$	$100\theta_*$	$1.04105^{+0.00088}_{-0.00087}$	$\sigma_8(0.61)$	$0.5903^{+0.0080}_{-0.0074}$
Ω_Λ	$0.683^{+0.018}_{-0.019}$	$D_M(z_*)/\text{Gpc}$	$13.887^{+0.067}_{-0.065}$	$f\sigma_8(2.33)$	$0.2974^{+0.0042}_{-0.0038}$
Ω_m	$0.317^{+0.019}_{-0.018}$	z_{drag}	$1059.44^{+0.84}_{-0.84}$	$\sigma_8(2.33)$	$0.3063^{+0.0046}_{-0.0041}$
$\Omega_m h^2$	$0.1429^{+0.0028}_{-0.0029}$	r_{drag}	$147.31^{+0.73}_{-0.72}$	f_{2000}^{143}	31^{+6}_{-6}
$\Omega_m h^3$	$0.09590^{+0.00088}_{-0.00085}$	k_D	$0.14047^{+0.00086}_{-0.00086}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-4}
σ_8	$0.811^{+0.012}_{-0.012}$	$100\theta_D$	$0.16105^{+0.00050}_{-0.00050}$	f_{2000}^{217}	$107.8^{+3.8}_{-3.9}$
S_8	$0.834^{+0.032}_{-0.031}$	z_{eq}	3400^{+67}_{-68}	χ^2_{lensing}	$9.46 (\nu: 0.4)$
$\sigma_8 \Omega_m^{0.5}$	$0.457^{+0.017}_{-0.017}$	k_{eq}	$0.01038^{+0.00020}_{-0.00021}$	χ^2_{small}	$396.8 (\nu: 1.3)$
$\sigma_8 \Omega_m^{0.25}$	$0.609^{+0.015}_{-0.015}$	$100\theta_{\text{eq}}$	$0.813^{+0.013}_{-0.012}$	χ^2_{lowl}	$23.6 (\nu: 0.5)$
$\sigma_8/h^{0.5}$	$0.990^{+0.020}_{-0.021}$	$100\theta_{s,\text{eq}}$	$0.4495^{+0.0067}_{-0.0063}$	χ^2_{prior}	$7.5 (\nu: 6.3)$
$r_{\text{drag}} h$	$98.9^{+2.3}_{-2.3}$	$H(0.15)$	$72.5^{+1.2}_{-1.1}$	χ^2_{CMB}	$4347 (\nu: 4947908.3)$

$$\bar{\chi}^2_{\text{eff}} = 7500.01; \Delta\bar{\chi}^2_{\text{eff}} = 6291.85; R - 1 = 0.00502$$

2.44 base_CamSpecHM_TT_lowl_lowE_lensing_post_BAO_zre6p5/base_plikHM_TT_lowl_lowE_lensing_post_BAO_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02222^{+0.00038}_{-0.00037}$	$10^9 A_s$	$2.101^{+0.058}_{-0.053}$	$D_M(0.51)$	1983^{+20}_{-20}
$\Omega_c h^2$	$0.1191^{+0.0021}_{-0.0021}$	$10^9 A_s e^{-2\tau}$	$1.878^{+0.021}_{-0.020}$	$H(0.61)$	$95.25^{+0.46}_{-0.44}$
$100\theta_{MC}$	$1.04100^{+0.00083}_{-0.00082}$	D_{40}	1226^{+24}_{-23}	$D_M(0.61)$	2307^{+21}_{-21}
τ	$0.056^{+0.013}_{-0.012}$	D_{220}	5719^{+80}_{-77}	$H(2.33)$	$235.8^{+1.4}_{-1.3}$
$\ln(10^{10} A_s)$	$3.045^{+0.027}_{-0.025}$	D_{810}	2535^{+27}_{-26}	$D_M(2.33)$	5767^{+23}_{-23}
n_s	$0.9663^{+0.0079}_{-0.0080}$	D_{1420}	$815.3^{+9.8}_{-9.8}$	$f\sigma_8(0.15)$	$0.456^{+0.012}_{-0.012}$
y_{cal}	$1.0007^{+0.0050}_{-0.0048}$	D_{2000}	$230.0^{+3.4}_{-3.4}$	$\sigma_8(0.15)$	$0.748^{+0.011}_{-0.0098}$
A_{217}^{CIB}	44^{+10}_{-20}	$n_{s,0.002}$	$0.9663^{+0.0079}_{-0.0080}$	$f\sigma_8(0.38)$	$0.4745^{+0.0099}_{-0.0098}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.24533^{+0.00015}_{-0.00017}$	$\sigma_8(0.38)$	$0.6632^{+0.0099}_{-0.0086}$
A_{143}^{tSZ}	$4.4^{+3.8}_{-4.2}$	Y_P^{BBN}	$0.24666^{+0.00015}_{-0.00017}$	$f\sigma_8(0.51)$	$0.4731^{+0.0088}_{-0.0086}$
A_{100}^{PS}	253^{+60}_{-50}	$10^5 D/H$	$2.615^{+0.070}_{-0.069}$	$\sigma_8(0.51)$	$0.6206^{+0.0092}_{-0.0080}$
A_{143}^{PS}	45^{+20}_{-20}	Age/Gyr	$13.807^{+0.052}_{-0.053}$	$f\sigma_8(0.61)$	$0.4682^{+0.0082}_{-0.0079}$
A_{217}^{PS}	108^{+20}_{-30}	z_*	$1090.04^{+0.55}_{-0.55}$	$\sigma_8(0.61)$	$0.5906^{+0.0084}_{-0.0078}$
A^{kSZ}	—	r_*	$144.78^{+0.56}_{-0.56}$	$f\sigma_8(2.33)$	$0.2978^{+0.0043}_{-0.0040}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	$100\theta_*$	$1.04120^{+0.00082}_{-0.00081}$	$\sigma_8(2.33)$	$0.3070^{+0.0046}_{-0.0042}$
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	$D_M(z_*)/\text{Gpc}$	$13.905^{+0.055}_{-0.056}$	f_{2000}^{143}	31^{+6}_{-6}
H_0	$67.57^{+0.96}_{-0.95}$	z_{drag}	$1059.52^{+0.84}_{-0.84}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-4}
Ω_Λ	$0.689^{+0.012}_{-0.013}$	r_{drag}	$147.50^{+0.62}_{-0.62}$	f_{2000}^{217}	$107.6^{+3.8}_{-3.9}$
Ω_m	$0.311^{+0.013}_{-0.012}$	k_D	$0.14032^{+0.00083}_{-0.00082}$	$\chi^2_{lensing}$	$9.29 (\nu: 0.3)$
$\Omega_m h^2$	$0.1420^{+0.0021}_{-0.0021}$	$100\theta_D$	$0.16101^{+0.00049}_{-0.00050}$	χ^2_{small}	$397.2 (\nu: 1.8)$
$\Omega_m h^3$	$0.09593^{+0.00088}_{-0.00084}$	z_{eq}	3377^{+49}_{-49}	χ^2_{lowl}	$23.14 (\nu: 0.4)$
σ_8	$0.809^{+0.012}_{-0.011}$	k_{eq}	$0.01031^{+0.00015}_{-0.00015}$	χ^2_{6DF}	$0.057 (\nu: 0.0)$
S_8	$0.824^{+0.023}_{-0.023}$	$100\theta_{eq}$	$0.8174^{+0.0092}_{-0.0090}$	χ^2_{MGS}	$1.29 (\nu: 0.1)$
$\sigma_8 \Omega_m^{0.5}$	$0.451^{+0.013}_{-0.013}$	$100\theta_{s,eq}$	$0.4517^{+0.0048}_{-0.0047}$	$\chi^2_{DR12BAO}$	$4.8 (\nu: 1.1)$
$\sigma_8 \Omega_m^{0.25}$	$0.604^{+0.012}_{-0.012}$	$H(0.15)$	$72.84^{+0.84}_{-0.83}$	χ^2_{prior}	$7.4 (\nu: 6.3)$
$\sigma_8/h^{0.5}$	$0.985^{+0.018}_{-0.017}$	$D_M(0.15)$	$641.7^{+8.2}_{-8.2}$	χ^2_{CMB}	$4347 (\nu: 4947884.4)$
$r_{drag} h$	$99.7^{+1.6}_{-1.6}$	$H(0.38)$	$82.94^{+0.64}_{-0.62}$	χ^2_{BAO}	$6.1 (\nu: 0.7)$
$\langle d^2 \rangle^{1/2}$	$2.435^{+0.042}_{-0.042}$	$D_M(0.38)$	1530^{+17}_{-17}		
z_{re}	$7.9^{+1.2}_{-1.3}$	$H(0.51)$	$89.64^{+0.53}_{-0.52}$		

$$\bar{\chi}^2_{\text{eff}} = 7506.32; \Delta \bar{\chi}^2_{\text{eff}} = 6291.75; R - 1 = 0.00854$$

2.45 base_CamSpecHM_TT_lowl_lowE_lensing_post_Riess18_zre6p5/base_plikHM_TT_lowl_lowE_lensing_post_Riess18_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02233^{+0.00036}_{-0.00039}$	z_{re}	$8.1^{+1.4}_{-1.5}$	$D_{\text{M}}(0.38)$	1522^{+22}_{-22}
$\Omega_c h^2$	$0.1181^{+0.0028}_{-0.0030}$	$10^9 A_s$	$2.109^{+0.063}_{-0.055}$	$H(0.51)$	$89.91^{+0.69}_{-0.66}$
$100\theta_{MC}$	$1.04118^{+0.00088}_{-0.00087}$	$10^9 A_s e^{-2\tau}$	$1.875^{+0.022}_{-0.023}$	$D_{\text{M}}(0.51)$	1972^{+26}_{-26}
τ	$0.059^{+0.015}_{-0.014}$	D_{40}	1223^{+25}_{-25}	$H(0.61)$	$95.47^{+0.58}_{-0.55}$
$\ln(10^{10} A_s)$	$3.049^{+0.029}_{-0.026}$	D_{220}	5730^{+78}_{-78}	$D_{\text{M}}(0.61)$	2296^{+28}_{-28}
n_s	$0.9689^{+0.0097}_{-0.0093}$	D_{810}	2537^{+27}_{-27}	$H(2.33)$	$235.3^{+1.8}_{-1.8}$
y_{cal}	$1.0009^{+0.0049}_{-0.0047}$	D_{1420}	$816.8^{+9.7}_{-9.9}$	$D_{\text{M}}(2.33)$	5757^{+26}_{-27}
A_{217}^{CIB}	44^{+20}_{-20}	D_{2000}	$230.6^{+3.3}_{-3.5}$	$f\sigma_8(0.15)$	$0.451^{+0.015}_{-0.015}$
$\xi^{tSZ-CIB}$	—	$n_{s,0.002}$	$0.9689^{+0.0097}_{-0.0093}$	$\sigma_8(0.15)$	$0.747^{+0.011}_{-0.011}$
A_{143}^{tSZ}	$4.5^{+3.8}_{-4.1}$	Y_P	$0.24538^{+0.00015}_{-0.00016}$	$f\sigma_8(0.38)$	$0.471^{+0.012}_{-0.012}$
A_{100}^{PS}	251^{+60}_{-50}	Y_P^{BBN}	$0.24670^{+0.00015}_{-0.00016}$	$\sigma_8(0.38)$	$0.6633^{+0.0098}_{-0.0091}$
A_{143}^{PS}	44^{+20}_{-20}	$10^5 D/H$	$2.594^{+0.074}_{-0.065}$	$f\sigma_8(0.51)$	$0.470^{+0.010}_{-0.010}$
A_{217}^{PS}	108^{+30}_{-30}	Age/Gyr	$13.786^{+0.059}_{-0.060}$	$\sigma_8(0.51)$	$0.6211^{+0.0092}_{-0.0084}$
A^{kSZ}	—	z_*	$1089.81^{+0.63}_{-0.60}$	$f\sigma_8(0.61)$	$0.4659^{+0.0093}_{-0.0092}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	r_*	$144.95^{+0.70}_{-0.69}$	$\sigma_8(0.61)$	$0.5912^{+0.0091}_{-0.0080}$
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	$100\theta_*$	$1.04137^{+0.00087}_{-0.00086}$	$f\sigma_8(2.33)$	$0.2984^{+0.0048}_{-0.0042}$
H_0	$68.1^{+1.3}_{-1.3}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.920^{+0.066}_{-0.066}$	$\sigma_8(2.33)$	$0.3079^{+0.0054}_{-0.0046}$
Ω_Λ	$0.695^{+0.018}_{-0.017}$	z_{drag}	$1059.70^{+0.80}_{-0.87}$	f_{2000}^{143}	30^{+6}_{-6}
Ω_m	$0.305^{+0.017}_{-0.018}$	r_{drag}	$147.64^{+0.76}_{-0.73}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-4}
$\Omega_m h^2$	$0.1411^{+0.0027}_{-0.0028}$	k_{D}	$0.14025^{+0.00088}_{-0.00091}$	f_{2000}^{217}	$107.2^{+4.1}_{-3.9}$
$\Omega_m h^3$	$0.09604^{+0.00084}_{-0.00083}$	$100\theta_{\text{D}}$	$0.16092^{+0.00050}_{-0.00048}$	χ^2_{lensing}	$9.7 (\nu: 0.8)$
σ_8	$0.808^{+0.012}_{-0.012}$	z_{eq}	3356^{+66}_{-67}	χ^2_{small}	$397.8 (\nu: 3.1)$
S_8	$0.814^{+0.030}_{-0.029}$	k_{eq}	$0.01024^{+0.00020}_{-0.00021}$	χ^2_{lowl}	$22.77 (\nu: 0.4)$
$\sigma_8 \Omega_m^{0.5}$	$0.446^{+0.016}_{-0.016}$	$100\theta_{\text{eq}}$	$0.822^{+0.013}_{-0.012}$	χ^2_{H073p45}	$10.6 (\nu: 3.4)$
$\sigma_8 \Omega_m^{0.25}$	$0.600^{+0.014}_{-0.014}$	$100\theta_{\text{s,eq}}$	$0.4538^{+0.0067}_{-0.0063}$	χ^2_{prior}	$7.4 (\nu: 6.2)$
$\sigma_8/h^{0.5}$	$0.979^{+0.020}_{-0.020}$	$H(0.15)$	$73.3^{+1.1}_{-1.1}$	χ^2_{CMB}	$4349 (\nu: 4948193.2)$
$r_{\text{drag}} h$	$100.5^{+2.3}_{-2.3}$	$D_{\text{M}}(0.15)$	637^{+11}_{-11}		
$\langle d^2 \rangle^{1/2}$	$2.424^{+0.047}_{-0.049}$	$H(0.38)$	$83.27^{+0.83}_{-0.82}$		

$$\bar{\chi}^2_{\text{eff}} = 7512.76; \Delta \bar{\chi}^2_{\text{eff}} = 6291.70; R - 1 = 0.03489$$

2.46 base_CamSpecHM_TT_lowl_lowE_lensing_post_BAO_Riess18_zre6p5/base_plikHM_TT_lowl_lowE_lensing_post_BAO_Riess18_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02232^{+0.00035}_{-0.00037}$	$10^9 A_s$	$2.108^{+0.062}_{-0.055}$	$D_M(0.51)$	1973^{+19}_{-19}
$\Omega_c h^2$	$0.1182^{+0.0021}_{-0.0020}$	$10^9 A_s e^{-2\tau}$	$1.875^{+0.021}_{-0.020}$	$H(0.61)$	$95.45^{+0.46}_{-0.44}$
$100\theta_{MC}$	$1.04117^{+0.00081}_{-0.00081}$	D_{40}	1223^{+23}_{-23}	$D_M(0.61)$	2297^{+20}_{-21}
τ	$0.059^{+0.015}_{-0.013}$	D_{220}	5730^{+79}_{-77}	$H(2.33)$	$235.3^{+1.4}_{-1.3}$
$\ln(10^{10} A_s)$	$3.048^{+0.029}_{-0.026}$	D_{810}	2537^{+27}_{-26}	$D_M(2.33)$	5758^{+22}_{-23}
n_s	$0.9687^{+0.0079}_{-0.0081}$	D_{1420}	$816.8^{+9.6}_{-9.7}$	$f\sigma_8(0.15)$	$0.451^{+0.012}_{-0.012}$
y_{cal}	$1.0009^{+0.0049}_{-0.0048}$	D_{2000}	$230.6^{+3.3}_{-3.4}$	$\sigma_8(0.15)$	$0.747^{+0.011}_{-0.010}$
A_{217}^{CIB}	44^{+10}_{-20}	$n_{s,0.002}$	$0.9687^{+0.0079}_{-0.0081}$	$f\sigma_8(0.38)$	$0.4711^{+0.0097}_{-0.0098}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.24537^{+0.00014}_{-0.00015}$	$\sigma_8(0.38)$	$0.663^{+0.010}_{-0.0090}$
A_{143}^{tSZ}	$4.5^{+3.9}_{-4.2}$	Y_P^{BBN}	$0.24670^{+0.00014}_{-0.00015}$	$f\sigma_8(0.51)$	$0.4705^{+0.0088}_{-0.0089}$
A_{100}^{PS}	251^{+60}_{-50}	$10^5 D/H$	$2.595^{+0.070}_{-0.064}$	$\sigma_8(0.51)$	$0.6211^{+0.0094}_{-0.0085}$
A_{143}^{PS}	44^{+20}_{-20}	Age/Gyr	$13.787^{+0.051}_{-0.051}$	$f\sigma_8(0.61)$	$0.4661^{+0.0082}_{-0.0083}$
A_{217}^{PS}	108^{+30}_{-30}	z_*	$1089.82^{+0.53}_{-0.51}$	$\sigma_8(0.61)$	$0.5911^{+0.0090}_{-0.0081}$
A^{kSZ}	—	r_*	$144.94^{+0.55}_{-0.57}$	$f\sigma_8(2.33)$	$0.2983^{+0.0046}_{-0.0041}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	$100\theta_*$	$1.04136^{+0.00079}_{-0.00080}$	$\sigma_8(2.33)$	$0.3079^{+0.0049}_{-0.0044}$
c_{217}	$0.9997^{+0.0038}_{-0.0029}$	$D_M(z_*)/\text{Gpc}$	$13.918^{+0.054}_{-0.056}$	f_{2000}^{143}	30^{+6}_{-6}
H_0	$68.04^{+0.95}_{-0.92}$	z_{drag}	$1059.69^{+0.81}_{-0.83}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-4}
Ω_Λ	$0.695^{+0.012}_{-0.012}$	r_{drag}	$147.63^{+0.60}_{-0.63}$	f_{2000}^{217}	$107.3^{+4.0}_{-4.0}$
Ω_m	$0.305^{+0.012}_{-0.012}$	k_D	$0.14026^{+0.00083}_{-0.00082}$	χ^2_{lensing}	$9.5 (\nu: 0.5)$
$\Omega_m h^2$	$0.1411^{+0.0020}_{-0.0019}$	$100\theta_D$	$0.16092^{+0.00050}_{-0.00048}$	χ^2_{small}	$397.7 (\nu: 2.6)$
$\Omega_m h^3$	$0.09604^{+0.00084}_{-0.00084}$	z_{eq}	3358^{+49}_{-46}	χ^2_{lowl}	$22.78 (\nu: 0.3)$
σ_8	$0.808^{+0.012}_{-0.012}$	k_{eq}	$0.01025^{+0.00015}_{-0.00014}$	χ^2_{H073p45}	$10.7 (\nu: 1.7)$
S_8	$0.815^{+0.023}_{-0.023}$	$100\theta_{\text{eq}}$	$0.8214^{+0.0089}_{-0.0090}$	$\chi^2_{6\text{DF}}$	$0.028 (\nu: 0.0)$
$\sigma_8 \Omega_m^{0.5}$	$0.446^{+0.012}_{-0.012}$	$100\theta_{s,\text{eq}}$	$0.4537^{+0.0046}_{-0.0046}$	χ^2_{MGS}	$1.74 (\nu: 0.1)$
$\sigma_8 \Omega_m^{0.25}$	$0.601^{+0.012}_{-0.012}$	$H(0.15)$	$73.25^{+0.82}_{-0.80}$	χ^2_{DR12BAO}	$3.92 (\nu: 0.3)$
$\sigma_8/h^{0.5}$	$0.980^{+0.017}_{-0.017}$	$D_M(0.15)$	$637.6^{+7.9}_{-8.0}$	χ^2_{prior}	$7.4 (\nu: 6.3)$
$r_{\text{drag}} h$	$100.5^{+1.6}_{-1.6}$	$H(0.38)$	$83.24^{+0.63}_{-0.61}$	χ^2_{CMB}	$4348 (\nu: 4948039.0)$
$\langle d^2 \rangle^{1/2}$	$2.425^{+0.042}_{-0.041}$	$D_M(0.38)$	1522^{+16}_{-16}	χ^2_{BAO}	$5.69 (\nu: 0.2)$
z_{re}	$8.1^{+1.3}_{-1.4}$	$H(0.51)$	$89.89^{+0.53}_{-0.51}$		

$$\bar{\chi}^2_{\text{eff}} = 7517.92; \Delta \bar{\chi}^2_{\text{eff}} = 6291.57; R - 1 = 0.02825$$

2.47 base_CamSpecHM_TT_lowl_lowE_lensing_post_Pantheon18_zre6p5/base_plikHM_TT_lowl_lowE_lensing_post_Pantheon18_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02218^{+0.00039}_{-0.00038}$	z_{re}	< 8.95	$D_{\text{M}}(0.38)$	1535^{+21}_{-22}
$\Omega_c h^2$	$0.1197^{+0.0027}_{-0.0028}$	$10^9 A_s$	$2.098^{+0.057}_{-0.051}$	$H(0.51)$	$89.52^{+0.66}_{-0.63}$
$100\theta_{MC}$	$1.04090^{+0.00087}_{-0.00087}$	$10^9 A_s e^{-2\tau}$	$1.880^{+0.022}_{-0.021}$	$D_{\text{M}}(0.51)$	1988^{+25}_{-25}
τ	$0.055^{+0.013}_{-0.012}$	D_{40}	1229^{+25}_{-24}	$H(0.61)$	$95.16^{+0.55}_{-0.53}$
$\ln(10^{10} A_s)$	$3.043^{+0.027}_{-0.024}$	D_{220}	5715^{+80}_{-78}	$D_{\text{M}}(0.61)$	2313^{+27}_{-28}
n_s	$0.9650^{+0.0090}_{-0.0089}$	D_{810}	2535^{+27}_{-26}	$H(2.33)$	$236.2^{+1.7}_{-1.7}$
y_{cal}	$1.0005^{+0.0049}_{-0.0048}$	D_{1420}	815^{+10}_{-10}	$D_{\text{M}}(2.33)$	5771^{+26}_{-26}
A_{217}^{CIB}	44^{+10}_{-20}	D_{2000}	$229.8^{+3.5}_{-3.5}$	$f\sigma_8(0.15)$	$0.459^{+0.015}_{-0.015}$
$\xi^{tSZ-CIB}$	—	$n_{s,0.002}$	$0.9650^{+0.0090}_{-0.0089}$	$\sigma_8(0.15)$	$0.749^{+0.011}_{-0.010}$
A_{143}^{tSZ}	$4.4^{+3.8}_{-4.2}$	Y_P	$0.24532^{+0.00016}_{-0.00018}$	$f\sigma_8(0.38)$	$0.477^{+0.012}_{-0.012}$
A_{100}^{PS}	253^{+60}_{-50}	Y_P^{BBN}	$0.24664^{+0.00016}_{-0.00018}$	$\sigma_8(0.38)$	$0.6632^{+0.0096}_{-0.0083}$
A_{143}^{PS}	45^{+20}_{-20}	$10^5 D/H$	$2.621^{+0.074}_{-0.073}$	$f\sigma_8(0.51)$	$0.475^{+0.010}_{-0.010}$
A_{217}^{PS}	108^{+20}_{-30}	Age/Gyr	$13.815^{+0.059}_{-0.059}$	$\sigma_8(0.51)$	$0.6205^{+0.0090}_{-0.0077}$
A^{kSZ}	—	z_*	$1090.13^{+0.62}_{-0.64}$	$f\sigma_8(0.61)$	$0.4695^{+0.0090}_{-0.0089}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	r_*	$144.66^{+0.67}_{-0.65}$	$\sigma_8(0.61)$	$0.5904^{+0.0082}_{-0.0076}$
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	$100\theta_*$	$1.04111^{+0.00086}_{-0.00086}$	$f\sigma_8(2.33)$	$0.2976^{+0.0043}_{-0.0039}$
H_0	$67.3^{+1.3}_{-1.2}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.895^{+0.064}_{-0.062}$	$\sigma_8(2.33)$	$0.3066^{+0.0046}_{-0.0042}$
Ω_{Λ}	$0.685^{+0.017}_{-0.017}$	z_{drag}	$1059.48^{+0.84}_{-0.84}$	f_{2000}^{143}	31^{+6}_{-6}
Ω_m	$0.315^{+0.017}_{-0.017}$	r_{drag}	$147.39^{+0.71}_{-0.69}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-4}
$\Omega_m h^2$	$0.1425^{+0.0026}_{-0.0026}$	k_{D}	$0.14041^{+0.00086}_{-0.00086}$	f_{2000}^{217}	$107.7^{+3.8}_{-3.9}$
$\Omega_m h^3$	$0.09591^{+0.00088}_{-0.00085}$	$100\theta_{\text{D}}$	$0.16103^{+0.00049}_{-0.00049}$	χ^2_{lensing}	$9.37 (\nu: 0.3)$
σ_8	$0.810^{+0.012}_{-0.011}$	z_{eq}	3390^{+62}_{-63}	χ^2_{small}	$397.0 (\nu: 1.5)$
S_8	$0.830^{+0.029}_{-0.029}$	k_{eq}	$0.01035^{+0.00019}_{-0.00019}$	χ^2_{lowl}	$23.38 (\nu: 0.5)$
$\sigma_8 \Omega_m^{0.5}$	$0.455^{+0.016}_{-0.016}$	$100\theta_{\text{eq}}$	$0.815^{+0.012}_{-0.011}$	χ^2_{JLA}	$1035.38 (\nu: 0.2)$
$\sigma_8 \Omega_m^{0.25}$	$0.607^{+0.014}_{-0.014}$	$100\theta_{\text{s,eq}}$	$0.4504^{+0.0062}_{-0.0059}$	χ^2_{prior}	$7.5 (\nu: 6.4)$
$\sigma_8/h^{0.5}$	$0.988^{+0.020}_{-0.019}$	$H(0.15)$	$72.6^{+1.1}_{-1.1}$	χ^2_{CMB}	$4347 (\nu: 4947911.8)$
$r_{\text{drag}} h$	$99.2^{+2.2}_{-2.1}$	$D_{\text{M}}(0.15)$	644^{+11}_{-11}		
$\langle d^2 \rangle^{1/2}$	$2.442^{+0.047}_{-0.047}$	$H(0.38)$	$82.78^{+0.81}_{-0.78}$		

$\bar{\chi}^2_{\text{eff}} = 8535.44$; $\Delta \bar{\chi}^2_{\text{eff}} = 6291.83$; $R - 1 = 0.00636$

2.48 base_CamSpecHM_TT_lowl_lowE_lensing_post_BAO_JLA_Riess18_zre6p5/base_plikHM_TT_lowl_lowE_lensing_post_BAO_JLA_Riess18

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02233^{+0.00036}_{-0.00036}$	$10^9 A_s$	$2.108^{+0.061}_{-0.056}$	$D_M(0.51)$	1972^{+19}_{-19}
$\Omega_c h^2$	$0.1181^{+0.0020}_{-0.0021}$	$10^9 A_s e^{-2\tau}$	$1.875^{+0.022}_{-0.020}$	$H(0.61)$	$95.47^{+0.46}_{-0.44}$
$100\theta_{MC}$	$1.04118^{+0.00081}_{-0.00081}$	D_{40}	1223^{+23}_{-23}	$D_M(0.61)$	2296^{+20}_{-20}
τ	$0.059^{+0.015}_{-0.013}$	D_{220}	5731^{+79}_{-75}	$H(2.33)$	$235.3^{+1.3}_{-1.3}$
$\ln(10^{10} A_s)$	$3.048^{+0.029}_{-0.027}$	D_{810}	2537^{+27}_{-26}	$D_M(2.33)$	5758^{+22}_{-23}
n_s	$0.9689^{+0.0079}_{-0.0080}$	D_{1420}	$816.8^{+9.8}_{-9.9}$	$f\sigma_8(0.15)$	$0.451^{+0.012}_{-0.012}$
y_{cal}	$1.0009^{+0.0051}_{-0.0048}$	D_{2000}	$230.6^{+3.3}_{-3.5}$	$\sigma_8(0.15)$	$0.747^{+0.011}_{-0.010}$
A_{217}^{CIB}	44^{+20}_{-20}	$n_{s,0.002}$	$0.9689^{+0.0079}_{-0.0080}$	$f\sigma_8(0.38)$	$0.4708^{+0.0097}_{-0.0099}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.24538^{+0.00014}_{-0.00015}$	$\sigma_8(0.38)$	$0.663^{+0.010}_{-0.0090}$
A_{143}^{tSZ}	$4.5^{+3.8}_{-4.2}$	Y_P^{BBN}	$0.24670^{+0.00014}_{-0.00015}$	$f\sigma_8(0.51)$	$0.4702^{+0.0087}_{-0.0089}$
A_{100}^{PS}	252^{+60}_{-50}	$10^5 D/H$	$2.594^{+0.069}_{-0.065}$	$\sigma_8(0.51)$	$0.6210^{+0.0093}_{-0.0085}$
A_{143}^{PS}	44^{+20}_{-20}	Age/Gyr	$13.786^{+0.051}_{-0.052}$	$f\sigma_8(0.61)$	$0.4658^{+0.0080}_{-0.0081}$
A_{217}^{PS}	108^{+30}_{-30}	z_*	$1089.81^{+0.53}_{-0.52}$	$\sigma_8(0.61)$	$0.5911^{+0.0089}_{-0.0081}$
A^{kSZ}	—	r_*	$144.96^{+0.54}_{-0.56}$	$f\sigma_8(2.33)$	$0.2983^{+0.0045}_{-0.0041}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	$100\theta_*$	$1.04137^{+0.00081}_{-0.00080}$	$\sigma_8(2.33)$	$0.3079^{+0.0048}_{-0.0044}$
c_{217}	$0.9997^{+0.0038}_{-0.0028}$	$D_M(z_*)/\text{Gpc}$	$13.920^{+0.053}_{-0.057}$	f_{2000}^{143}	30^{+6}_{-6}
H_0	$68.08^{+0.96}_{-0.92}$	z_{drag}	$1059.70^{+0.80}_{-0.84}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-4}
Ω_Λ	$0.696^{+0.012}_{-0.012}$	r_{drag}	$147.65^{+0.60}_{-0.62}$	f_{2000}^{217}	$107.3^{+4.1}_{-4.0}$
Ω_m	$0.304^{+0.012}_{-0.012}$	k_D	$0.14025^{+0.00083}_{-0.00081}$	χ^2_{lensing}	$9.5 (\nu: 0.5)$
$\Omega_m h^2$	$0.1411^{+0.0020}_{-0.0020}$	$100\theta_D$	$0.16092^{+0.00051}_{-0.00050}$	χ^2_{small}	$397.7 (\nu: 2.6)$
$\Omega_m h^3$	$0.09604^{+0.00085}_{-0.00083}$	z_{eq}	3356^{+48}_{-47}	χ^2_{lowl}	$22.76 (\nu: 0.3)$
σ_8	$0.808^{+0.012}_{-0.012}$	k_{eq}	$0.01024^{+0.00015}_{-0.00014}$	χ^2_{H073p45}	$10.5 (\nu: 1.7)$
S_8	$0.814^{+0.022}_{-0.023}$	$100\theta_{\text{eq}}$	$0.8218^{+0.0091}_{-0.0088}$	χ^2_{JLA}	$706.61 (\nu: 0.0)$
$\sigma_8 \Omega_m^{0.5}$	$0.446^{+0.012}_{-0.013}$	$100\theta_{\text{s,eq}}$	$0.4539^{+0.0046}_{-0.0046}$	$\chi^2_{6\text{DF}}$	$0.027 (\nu: 0.0)$
$\sigma_8 \Omega_m^{0.25}$	$0.600^{+0.012}_{-0.012}$	$H(0.15)$	$73.28^{+0.82}_{-0.80}$	χ^2_{MGS}	$1.78 (\nu: 0.1)$
$\sigma_8/h^{0.5}$	$0.979^{+0.017}_{-0.018}$	$D_M(0.15)$	$637.3^{+7.9}_{-8.0}$	χ^2_{DR12BAO}	$3.87 (\nu: 0.3)$
$r_{\text{drag}} h$	$100.5^{+1.6}_{-1.6}$	$H(0.38)$	$83.27^{+0.63}_{-0.61}$	χ^2_{prior}	$7.5 (\nu: 6.5)$
$\langle d^2 \rangle^{1/2}$	$2.424^{+0.041}_{-0.042}$	$D_M(0.38)$	1522^{+16}_{-16}	χ^2_{CMB}	$4348 (\nu: 4948308.8)$
z_{re}	$8.1^{+1.3}_{-1.4}$	$H(0.51)$	$89.91^{+0.52}_{-0.51}$	χ^2_{BAO}	$5.68 (\nu: 0.2)$

$$\bar{\chi}^2_{\text{eff}} = 8224.63; \Delta \bar{\chi}^2_{\text{eff}} = 6291.68; R - 1 = 0.08788$$

2.49 base_CamSpecHM_TT_lowl_lowE_lensing_post_BAO_Pantheon18_zre6p5/base_plikHM_TT_lowl_lowE_lensing_post_BAO_Pantheon18

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02223^{+0.00037}_{-0.00036}$	$10^9 A_s$	$2.101^{+0.058}_{-0.053}$	$D_M(0.51)$	1981^{+19}_{-19}
$\Omega_c h^2$	$0.1190^{+0.0020}_{-0.0021}$	$10^9 A_s e^{-2\tau}$	$1.877^{+0.021}_{-0.020}$	$H(0.61)$	$95.28^{+0.45}_{-0.44}$
$100\theta_{MC}$	$1.04102^{+0.00082}_{-0.00082}$	D_{40}	1226^{+24}_{-23}	$D_M(0.61)$	2306^{+20}_{-20}
τ	$0.056^{+0.013}_{-0.012}$	D_{220}	5720^{+79}_{-77}	$H(2.33)$	$235.7^{+1.3}_{-1.3}$
$\ln(10^{10} A_s)$	$3.045^{+0.028}_{-0.025}$	D_{810}	2536^{+27}_{-26}	$D_M(2.33)$	5766^{+22}_{-22}
n_s	$0.9667^{+0.0079}_{-0.0080}$	D_{1420}	$815.5^{+9.8}_{-9.8}$	$f\sigma_8(0.15)$	$0.455^{+0.012}_{-0.011}$
y_{cal}	$1.0007^{+0.0050}_{-0.0048}$	D_{2000}	$230.0^{+3.4}_{-3.4}$	$\sigma_8(0.15)$	$0.748^{+0.011}_{-0.010}$
A_{217}^{CIB}	44^{+10}_{-20}	$n_{s,0.002}$	$0.9667^{+0.0079}_{-0.0080}$	$f\sigma_8(0.38)$	$0.4739^{+0.0096}_{-0.0096}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.24534^{+0.00014}_{-0.00016}$	$\sigma_8(0.38)$	$0.6631^{+0.0099}_{-0.0086}$
A_{143}^{tSZ}	$4.5^{+3.8}_{-4.2}$	Y_P^{BBN}	$0.24666^{+0.00015}_{-0.00016}$	$f\sigma_8(0.51)$	$0.4727^{+0.0086}_{-0.0085}$
A_{100}^{PS}	253^{+60}_{-50}	$10^5 D/H$	$2.613^{+0.069}_{-0.068}$	$\sigma_8(0.51)$	$0.6207^{+0.0093}_{-0.0080}$
A_{143}^{PS}	45^{+20}_{-20}	Age/Gyr	$13.804^{+0.051}_{-0.052}$	$f\sigma_8(0.61)$	$0.4678^{+0.0081}_{-0.0078}$
A_{217}^{PS}	108^{+20}_{-30}	z_*	$1090.01^{+0.54}_{-0.54}$	$\sigma_8(0.61)$	$0.5906^{+0.0088}_{-0.0076}$
A^{kSZ}	—	r_*	$144.81^{+0.55}_{-0.55}$	$f\sigma_8(2.33)$	$0.2978^{+0.0044}_{-0.0040}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	$100\theta_*$	$1.04122^{+0.00082}_{-0.00081}$	$\sigma_8(2.33)$	$0.3071^{+0.0046}_{-0.0043}$
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	$D_M(z_*)/\text{Gpc}$	$13.908^{+0.054}_{-0.055}$	f_{2000}^{143}	31^{+6}_{-6}
H_0	$67.64^{+0.92}_{-0.91}$	z_{drag}	$1059.53^{+0.86}_{-0.82}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-4}
Ω_Λ	$0.690^{+0.012}_{-0.012}$	r_{drag}	$147.53^{+0.61}_{-0.61}$	f_{2000}^{217}	$107.6^{+3.8}_{-4.0}$
Ω_m	$0.310^{+0.012}_{-0.012}$	k_D	$0.14030^{+0.00083}_{-0.00082}$	χ^2_{lensing}	$9.30 (\nu: 0.3)$
$\Omega_m h^2$	$0.1418^{+0.0020}_{-0.0020}$	$100\theta_D$	$0.16101^{+0.00049}_{-0.00049}$	χ^2_{small}	$397.2 (\nu: 1.9)$
$\Omega_m h^3$	$0.09593^{+0.00087}_{-0.00084}$	z_{eq}	3374^{+48}_{-48}	χ^2_{lowl}	$23.08 (\nu: 0.4)$
σ_8	$0.809^{+0.012}_{-0.011}$	k_{eq}	$0.01030^{+0.00015}_{-0.00015}$	χ^2_{JLA}	$1035.06 (\nu: 0.0)$
S_8	$0.823^{+0.023}_{-0.022}$	$100\theta_{\text{eq}}$	$0.8181^{+0.0089}_{-0.0087}$	$\chi^2_{6\text{DF}}$	$0.047 (\nu: 0.0)$
$\sigma_8 \Omega_m^{0.5}$	$0.451^{+0.012}_{-0.012}$	$100\theta_{s,\text{eq}}$	$0.4520^{+0.0046}_{-0.0045}$	χ^2_{MGS}	$1.35 (\nu: 0.1)$
$\sigma_8 \Omega_m^{0.25}$	$0.604^{+0.012}_{-0.012}$	$H(0.15)$	$72.90^{+0.80}_{-0.79}$	χ^2_{DR12BAO}	$4.6 (\nu: 0.9)$
$\sigma_8/h^{0.5}$	$0.984^{+0.017}_{-0.017}$	$D_M(0.15)$	$641.1^{+7.9}_{-7.8}$	χ^2_{prior}	$7.4 (\nu: 6.3)$
$r_{\text{drag}} h$	$99.8^{+1.6}_{-1.6}$	$H(0.38)$	$82.98^{+0.61}_{-0.60}$	χ^2_{CMB}	$4347 (\nu: 4947900.0)$
$\langle d^2 \rangle^{1/2}$	$2.434^{+0.041}_{-0.041}$	$D_M(0.38)$	1529^{+16}_{-16}	χ^2_{BAO}	$6.0 (\nu: 0.5)$
z_{re}	$7.9^{+1.2}_{-1.3}$	$H(0.51)$	$89.68^{+0.52}_{-0.50}$		

$$\bar{\chi}^2_{\text{eff}} = 8541.35; \Delta \bar{\chi}^2_{\text{eff}} = 6291.73; R - 1 = 0.00983$$

2.50 base_CamSpecHM_TT_lowl_lowE_lensing_post_BAO_Pantheon18_Riess18_zre6p5/base_plikHM_TT_lowl_lowE_lensing_post_BAO_Pa

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02233^{+0.00035}_{-0.00037}$	$10^9 A_s$	$2.109^{+0.062}_{-0.056}$	$D_M(0.51)$	1972^{+18}_{-18}
$\Omega_c h^2$	$0.1181^{+0.0020}_{-0.0020}$	$10^9 A_s e^{-2\tau}$	$1.875^{+0.021}_{-0.020}$	$H(0.61)$	$95.47^{+0.46}_{-0.43}$
$100\theta_{MC}$	$1.04118^{+0.00081}_{-0.00080}$	D_{40}	1223^{+23}_{-23}	$D_M(0.61)$	2296^{+20}_{-20}
τ	$0.059^{+0.015}_{-0.013}$	D_{220}	5730^{+79}_{-77}	$H(2.33)$	$235.3^{+1.3}_{-1.3}$
$\ln(10^{10} A_s)$	$3.048^{+0.029}_{-0.027}$	D_{810}	2537^{+27}_{-26}	$D_M(2.33)$	5758^{+22}_{-22}
n_s	$0.9689^{+0.0079}_{-0.0080}$	D_{1420}	$816.8^{+9.6}_{-9.7}$	$f\sigma_8(0.15)$	$0.451^{+0.011}_{-0.011}$
y_{cal}	$1.0009^{+0.0049}_{-0.0048}$	D_{2000}	$230.6^{+3.3}_{-3.4}$	$\sigma_8(0.15)$	$0.747^{+0.011}_{-0.010}$
A_{217}^{CIB}	44^{+10}_{-20}	$n_{s,0.002}$	$0.9689^{+0.0079}_{-0.0080}$	$f\sigma_8(0.38)$	$0.4709^{+0.0096}_{-0.0096}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.24538^{+0.00014}_{-0.00015}$	$\sigma_8(0.38)$	$0.663^{+0.010}_{-0.0091}$
A_{143}^{tSZ}	$4.5^{+3.9}_{-4.2}$	Y_P^{BBN}	$0.24670^{+0.00014}_{-0.00015}$	$f\sigma_8(0.51)$	$0.4703^{+0.0086}_{-0.0088}$
A_{100}^{PS}	251^{+60}_{-50}	$10^5 D/H$	$2.594^{+0.070}_{-0.063}$	$\sigma_8(0.51)$	$0.6211^{+0.0094}_{-0.0085}$
A_{143}^{PS}	44^{+20}_{-20}	Age/Gyr	$13.786^{+0.050}_{-0.050}$	$f\sigma_8(0.61)$	$0.4659^{+0.0081}_{-0.0082}$
A_{217}^{PS}	108^{+30}_{-30}	z_*	$1089.81^{+0.53}_{-0.50}$	$\sigma_8(0.61)$	$0.5912^{+0.0090}_{-0.0081}$
A^{kSZ}	—	r_*	$144.95^{+0.54}_{-0.55}$	$f\sigma_8(2.33)$	$0.2984^{+0.0046}_{-0.0041}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	$100\theta_*$	$1.04137^{+0.00079}_{-0.00080}$	$\sigma_8(2.33)$	$0.3079^{+0.0048}_{-0.0044}$
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	$D_M(z_*)/\text{Gpc}$	$13.920^{+0.054}_{-0.056}$	f_{2000}^{143}	30^{+6}_{-6}
H_0	$68.08^{+0.92}_{-0.89}$	z_{drag}	$1059.70^{+0.80}_{-0.84}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-4}
Ω_Λ	$0.696^{+0.012}_{-0.012}$	r_{drag}	$147.64^{+0.59}_{-0.62}$	f_{2000}^{217}	$107.2^{+4.1}_{-4.0}$
Ω_m	$0.304^{+0.012}_{-0.012}$	k_D	$0.14025^{+0.00083}_{-0.00082}$	χ_{lensing}^2	$9.5 (\nu: 0.5)$
$\Omega_m h^2$	$0.1411^{+0.0020}_{-0.0019}$	$100\theta_D$	$0.16092^{+0.00050}_{-0.00048}$	χ_{small}^2	$397.7 (\nu: 2.6)$
$\Omega_m h^3$	$0.09604^{+0.00084}_{-0.00084}$	z_{eq}	3356^{+47}_{-45}	χ_{lowl}^2	$22.75 (\nu: 0.3)$
σ_8	$0.808^{+0.012}_{-0.012}$	k_{eq}	$0.01024^{+0.00014}_{-0.00014}$	χ_{H073p45}^2	$10.6 (\nu: 1.6)$
S_8	$0.814^{+0.022}_{-0.022}$	$100\theta_{\text{eq}}$	$0.8218^{+0.0086}_{-0.0087}$	χ_{JLA}^2	$1034.87 (\nu: 0.0)$
$\sigma_8 \Omega_m^{0.5}$	$0.446^{+0.012}_{-0.012}$	$100\theta_{\text{s,eq}}$	$0.4538^{+0.0044}_{-0.0045}$	$\chi_{6\text{DF}}^2$	$0.026 (\nu: 0.0)$
$\sigma_8 \Omega_m^{0.25}$	$0.600^{+0.012}_{-0.012}$	$H(0.15)$	$73.28^{+0.80}_{-0.77}$	χ_{MGS}^2	$1.77 (\nu: 0.1)$
$\sigma_8/h^{0.5}$	$0.979^{+0.017}_{-0.017}$	$D_M(0.15)$	$637.4^{+7.6}_{-7.7}$	χ_{DR12BAO}^2	$3.86 (\nu: 0.2)$
$r_{\text{drag}} h$	$100.5^{+1.5}_{-1.5}$	$H(0.38)$	$83.26^{+0.61}_{-0.59}$	χ_{prior}^2	$7.4 (\nu: 6.3)$
$\langle d^2 \rangle^{1/2}$	$2.424^{+0.042}_{-0.041}$	$D_M(0.38)$	1522^{+15}_{-16}	χ_{CMB}^2	$4348 (\nu: 4948064.1)$
z_{re}	$8.1^{+1.3}_{-1.4}$	$H(0.51)$	$89.90^{+0.52}_{-0.50}$	χ_{BAO}^2	$5.66 (\nu: 0.2)$

$$\bar{\chi}_{\text{eff}}^2 = 8552.73; \Delta \bar{\chi}_{\text{eff}}^2 = 6291.56; R - 1 = 0.03088$$

2.51 base_CamSpecHM_TTTEEE_lowl_lowE_lensing/base_plikHM_TTTEEE_lowl_lowE_lensing

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02233^{+0.00030}_{-0.00031}$	$\langle d^2 \rangle^{1/2}$	$2.442^{+0.044}_{-0.044}$	$D_M(0.15)$	$643.3^{+9.2}_{-8.8}$
$\Omega_c h^2$	$0.1198^{+0.0024}_{-0.0023}$	z_{re}	$7.6^{+1.5}_{-1.5}$	$H(0.38)$	$82.86^{+0.65}_{-0.66}$
$100\theta_{MC}$	$1.04089^{+0.00060}_{-0.00062}$	$10^9 A_s$	$2.096^{+0.062}_{-0.058}$	$D_M(0.38)$	1533^{+18}_{-18}
τ	$0.054^{+0.015}_{-0.014}$	$10^9 A_s e^{-2\tau}$	$1.881^{+0.022}_{-0.021}$	$H(0.51)$	$89.61^{+0.52}_{-0.53}$
$\ln(10^{10} A_s)$	$3.043^{+0.029}_{-0.028}$	D_{40}	1230^{+24}_{-23}	$D_M(0.51)$	1986^{+22}_{-21}
n_s	$0.9652^{+0.0083}_{-0.0082}$	D_{220}	5728^{+78}_{-78}	$H(0.61)$	$95.26^{+0.43}_{-0.43}$
y_{cal}	$1.0006^{+0.0048}_{-0.0048}$	D_{810}	2537^{+27}_{-26}	$D_M(0.61)$	2310^{+23}_{-22}
A_{217}^{CIB}	43^{+10}_{-20}	D_{1420}	$816.5^{+9.6}_{-9.6}$	$H(2.33)$	$236.4^{+1.4}_{-1.4}$
$\xi^{tSZ-CIB}$	—	D_{2000}	$230.6^{+3.2}_{-3.2}$	$D_M(2.33)$	5765^{+20}_{-20}
A_{143}^{tSZ}	$4.6^{+3.9}_{-4.3}$	$n_{s,0.002}$	$0.9652^{+0.0083}_{-0.0082}$	$f\sigma_8(0.15)$	$0.459^{+0.013}_{-0.013}$
A_{100}^{PS}	250^{+60}_{-50}	Y_P	$0.24538^{+0.00011}_{-0.00013}$	$\sigma_8(0.15)$	$0.748^{+0.011}_{-0.011}$
A_{143}^{PS}	43^{+20}_{-20}	Y_P^{BBN}	$0.24671^{+0.00011}_{-0.00013}$	$f\sigma_8(0.38)$	$0.476^{+0.011}_{-0.010}$
A_{217}^{PS}	109^{+20}_{-30}	$10^5 D/H$	$2.593^{+0.058}_{-0.055}$	$\sigma_8(0.38)$	$0.6630^{+0.0095}_{-0.0091}$
A^{kSZ}	—	Age/Gyr	$13.801^{+0.046}_{-0.045}$	$f\sigma_8(0.51)$	$0.4746^{+0.0092}_{-0.0092}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	z_*	$1089.95^{+0.51}_{-0.50}$	$\sigma_8(0.51)$	$0.6203^{+0.0090}_{-0.0086}$
c_{217}	$0.9997^{+0.0038}_{-0.0027}$	r_*	$144.50^{+0.55}_{-0.54}$	$f\sigma_8(0.61)$	$0.4694^{+0.0084}_{-0.0084}$
H_0	$67.4^{+1.0}_{-1.1}$	$100\theta_*$	$1.04108^{+0.00059}_{-0.00062}$	$\sigma_8(0.61)$	$0.5901^{+0.0086}_{-0.0082}$
Ω_Λ	$0.685^{+0.014}_{-0.015}$	$D_M(z_*)/\text{Gpc}$	$13.880^{+0.052}_{-0.051}$	$f\sigma_8(2.33)$	$0.2974^{+0.0045}_{-0.0042}$
Ω_m	$0.315^{+0.015}_{-0.014}$	z_{drag}	$1059.84^{+0.63}_{-0.67}$	$\sigma_8(2.33)$	$0.3065^{+0.0048}_{-0.0046}$
$\Omega_m h^2$	$0.1428^{+0.0022}_{-0.0022}$	r_{drag}	$147.18^{+0.57}_{-0.55}$	f_{2000}^{143}	30^{+6}_{-5}
$\Omega_m h^3$	$0.09622^{+0.00062}_{-0.00065}$	k_D	$0.14075^{+0.00064}_{-0.00068}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
σ_8	$0.810^{+0.012}_{-0.012}$	$100\theta_D$	$0.16081^{+0.00039}_{-0.00037}$	f_{2000}^{217}	$107.0^{+3.6}_{-3.6}$
S_8	$0.830^{+0.026}_{-0.025}$	z_{eq}	3397^{+53}_{-53}	χ^2_{lensing}	$9.27 (\nu: 0.2)$
$\sigma_8 \Omega_m^{0.5}$	$0.454^{+0.014}_{-0.014}$	k_{eq}	$0.01037^{+0.00016}_{-0.00016}$	χ^2_{small}	$396.9 (\nu: 1.4)$
$\sigma_8 \Omega_m^{0.25}$	$0.607^{+0.013}_{-0.013}$	$100\theta_{\text{eq}}$	$0.814^{+0.010}_{-0.010}$	χ^2_{lowl}	$23.38 (\nu: 0.4)$
$\sigma_8/h^{0.5}$	$0.987^{+0.018}_{-0.018}$	$100\theta_{s,\text{eq}}$	$0.4498^{+0.0052}_{-0.0051}$	χ^2_{prior}	$9.7 (\nu: 9.6)$
$r_{\text{drag}} h$	$99.2^{+1.8}_{-1.8}$	$H(0.15)$	$72.69^{+0.89}_{-0.91}$	χ^2_{CMB}	$7366 (\nu: 10475328.5)$

Best-fit $\chi^2_{\text{eff}} = 11929.66$; $\Delta\chi^2_{\text{eff}} = 9155.02$; $\bar{\chi}^2_{\text{eff}} = 11951.44$; $\Delta\bar{\chi}^2_{\text{eff}} = 9150.75$; $R - 1 = 0.00801$
 χ^2_{eff} : CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb.consext8: 8.83 (Δ -0.04) small_100x143_offlike5_EE_Aplanck_B: 395.87 (Δ -0.18) commander_dx12_v3_2_29: 23.22 (Δ -0.03) CamSpec like_10.7HM_1400_unified: 11499.65

2.52 base_CamSpecHM_TTTEEE_lowl_lowE_lensing_post_BAO/base_plikHM_TTTEEE_lowl_lowE_lensing_post_BAO

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02238^{+0.00028}_{-0.00029}$	$10^9 A_s$	$2.101^{+0.061}_{-0.057}$	$D_M(0.51)$	1980^{+17}_{-16}
$\Omega_c h^2$	$0.1192^{+0.0018}_{-0.0018}$	$10^9 A_s e^{-2\tau}$	$1.879^{+0.021}_{-0.021}$	$H(0.61)$	$95.36^{+0.35}_{-0.37}$
$100\theta_{MC}$	$1.04098^{+0.00057}_{-0.00060}$	D_{40}	1227^{+23}_{-23}	$D_M(0.61)$	2304^{+18}_{-18}
τ	$0.056^{+0.015}_{-0.014}$	D_{220}	5733^{+80}_{-77}	$H(2.33)$	$236.0^{+1.1}_{-1.1}$
$\ln(10^{10} A_s)$	$3.045^{+0.029}_{-0.028}$	D_{810}	2538^{+27}_{-26}	$D_M(2.33)$	5761^{+18}_{-17}
n_s	$0.9668^{+0.0076}_{-0.0074}$	D_{1420}	$817.1^{+9.4}_{-9.4}$	$f\sigma_8(0.15)$	$0.456^{+0.011}_{-0.011}$
y_{cal}	$1.0007^{+0.0049}_{-0.0048}$	D_{2000}	$230.8^{+3.1}_{-3.2}$	$\sigma_8(0.15)$	$0.748^{+0.011}_{-0.010}$
A_{217}^{CIB}	43^{+20}_{-20}	$n_{s,0.002}$	$0.9668^{+0.0076}_{-0.0074}$	$f\sigma_8(0.38)$	$0.4742^{+0.0092}_{-0.0092}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.24540^{+0.00011}_{-0.00012}$	$\sigma_8(0.38)$	$0.6630^{+0.0096}_{-0.0091}$
A_{143}^{tSZ}	$4.7^{+3.9}_{-4.4}$	Y_P^{BBN}	$0.24672^{+0.00011}_{-0.00012}$	$f\sigma_8(0.51)$	$0.4729^{+0.0084}_{-0.0084}$
A_{100}^{PS}	249^{+60}_{-50}	$10^5 D/H$	$2.584^{+0.056}_{-0.050}$	$\sigma_8(0.51)$	$0.6205^{+0.0091}_{-0.0085}$
A_{143}^{PS}	42^{+20}_{-20}	Age/Gyr	$13.791^{+0.042}_{-0.039}$	$f\sigma_8(0.61)$	$0.4680^{+0.0078}_{-0.0078}$
A_{217}^{PS}	109^{+20}_{-30}	z_*	$1089.84^{+0.45}_{-0.42}$	$\sigma_8(0.61)$	$0.5905^{+0.0087}_{-0.0081}$
A^{kSZ}	—	r_*	$144.63^{+0.46}_{-0.45}$	$f\sigma_8(2.33)$	$0.2978^{+0.0045}_{-0.0042}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	$100\theta_*$	$1.04116^{+0.00056}_{-0.00059}$	$\sigma_8(2.33)$	$0.3070^{+0.0047}_{-0.0044}$
c_{217}	$0.9996^{+0.0038}_{-0.0027}$	$D_M(z_*)/\text{Gpc}$	$13.891^{+0.044}_{-0.043}$	f_{2000}^{143}	29^{+6}_{-5}
H_0	$67.66^{+0.80}_{-0.83}$	z_{drag}	$1059.90^{+0.61}_{-0.65}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
Ω_Λ	$0.689^{+0.011}_{-0.011}$	r_{drag}	$147.29^{+0.50}_{-0.48}$	f_{2000}^{217}	$106.8^{+3.6}_{-3.6}$
Ω_m	$0.311^{+0.011}_{-0.011}$	k_D	$0.14066^{+0.00061}_{-0.00065}$	χ^2_{lensing}	$9.20 (\nu: 0.2)$
$\Omega_m h^2$	$0.1422^{+0.0018}_{-0.0018}$	$100\theta_D$	$0.16078^{+0.00039}_{-0.00036}$	χ^2_{small}	$397.1 (\nu: 1.7)$
$\Omega_m h^3$	$0.09623^{+0.00061}_{-0.00066}$	z_{eq}	3383^{+42}_{-42}	χ^2_{lowl}	$23.11 (\nu: 0.3)$
σ_8	$0.809^{+0.012}_{-0.012}$	k_{eq}	$0.01033^{+0.00013}_{-0.00013}$	$\chi^2_{6\text{DF}}$	$0.050 (\nu: 0.0)$
S_8	$0.824^{+0.021}_{-0.021}$	$100\theta_{\text{eq}}$	$0.8168^{+0.0079}_{-0.0078}$	χ^2_{MGS}	$1.28 (\nu: 0.1)$
$\sigma_8 \Omega_m^{0.5}$	$0.451^{+0.011}_{-0.011}$	$100\theta_{s,\text{eq}}$	$0.4512^{+0.0040}_{-0.0040}$	χ^2_{DR12BAO}	$4.7 (\nu: 0.8)$
$\sigma_8 \Omega_m^{0.25}$	$0.604^{+0.011}_{-0.011}$	$H(0.15)$	$72.94^{+0.70}_{-0.71}$	χ^2_{prior}	$9.7 (\nu: 9.8)$
$\sigma_8/h^{0.5}$	$0.984^{+0.017}_{-0.017}$	$D_M(0.15)$	$640.8^{+7.1}_{-6.8}$	χ^2_{CMB}	$7366 (\nu: 10475435.9)$
$r_{\text{drag}} h$	$99.7^{+1.4}_{-1.4}$	$H(0.38)$	$83.04^{+0.52}_{-0.53}$	χ^2_{BAO}	$6.1 (\nu: 0.5)$
$\langle d^2 \rangle^{1/2}$	$2.434^{+0.041}_{-0.041}$	$D_M(0.38)$	1528^{+14}_{-14}		
z_{re}	$7.8^{+1.4}_{-1.4}$	$H(0.51)$	$89.75^{+0.42}_{-0.43}$		

$$\bar{\chi}^2_{\text{eff}} = 11957.40; \Delta\bar{\chi}^2_{\text{eff}} = 9150.56; R - 1 = 0.01372$$

2.53 base_CamSpecHM_TTTEEE_lowl_lowE_lensing_post_Riess18/base_plikHM_TTTEEE_lowl_lowE_lensing_post_Riess18

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02244^{+0.00029}_{-0.00030}$	z_{re}	$7.9^{+1.5}_{-1.4}$	$D_{\text{M}}(0.38)$	1524^{+17}_{-17}
$\Omega_c h^2$	$0.1186^{+0.0022}_{-0.0022}$	$10^9 A_s$	$2.106^{+0.063}_{-0.058}$	$H(0.51)$	$89.89^{+0.52}_{-0.51}$
$100\theta_{MC}$	$1.04107^{+0.00066}_{-0.00062}$	$10^9 A_s e^{-2\tau}$	$1.878^{+0.021}_{-0.020}$	$D_{\text{M}}(0.51)$	1974^{+20}_{-20}
τ	$0.057^{+0.016}_{-0.014}$	D_{40}	1225^{+24}_{-23}	$H(0.61)$	$95.48^{+0.43}_{-0.42}$
$\ln(10^{10} A_s)$	$3.047^{+0.030}_{-0.028}$	D_{220}	5739^{+77}_{-76}	$D_{\text{M}}(0.61)$	2298^{+22}_{-22}
n_s	$0.9682^{+0.0082}_{-0.0080}$	D_{810}	2538^{+26}_{-26}	$H(2.33)$	$235.7^{+1.4}_{-1.3}$
y_{cal}	$1.0008^{+0.0048}_{-0.0049}$	D_{1420}	$817.9^{+9.5}_{-9.5}$	$D_{\text{M}}(2.33)$	5755^{+20}_{-21}
A_{217}^{CIB}	43^{+20}_{-20}	D_{2000}	$231.2^{+3.1}_{-3.2}$	$f\sigma_8(0.15)$	$0.453^{+0.012}_{-0.012}$
$\xi^{tSZ-CIB}$	—	$n_{s,0.002}$	$0.9682^{+0.0082}_{-0.0080}$	$\sigma_8(0.15)$	$0.748^{+0.011}_{-0.010}$
A_{143}^{tSZ}	$4.7^{+3.9}_{-4.4}$	Y_P	$0.24542^{+0.00011}_{-0.00012}$	$f\sigma_8(0.38)$	$0.472^{+0.010}_{-0.0097}$
A_{100}^{PS}	248^{+60}_{-50}	Y_P^{BBN}	$0.24675^{+0.00011}_{-0.00012}$	$\sigma_8(0.38)$	$0.6632^{+0.0096}_{-0.0093}$
A_{143}^{PS}	42^{+20}_{-20}	$10^5 D/H$	$2.573^{+0.056}_{-0.052}$	$f\sigma_8(0.51)$	$0.4714^{+0.0091}_{-0.0086}$
A_{217}^{PS}	109^{+20}_{-30}	Age/Gyr	$13.780^{+0.045}_{-0.046}$	$\sigma_8(0.51)$	$0.6208^{+0.0090}_{-0.0087}$
A^{kSZ}	—	z_*	$1089.71^{+0.49}_{-0.48}$	$f\sigma_8(0.61)$	$0.4668^{+0.0083}_{-0.0080}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	r_*	$144.73^{+0.53}_{-0.52}$	$\sigma_8(0.61)$	$0.5909^{+0.0087}_{-0.0083}$
c_{217}	$0.9996^{+0.0038}_{-0.0027}$	$100\theta_*$	$1.04125^{+0.00065}_{-0.00061}$	$f\sigma_8(2.33)$	$0.2981^{+0.0045}_{-0.0043}$
H_0	$67.9^{+1.0}_{-1.0}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.900^{+0.051}_{-0.049}$	$\sigma_8(2.33)$	$0.3075^{+0.0049}_{-0.0046}$
Ω_Λ	$0.693^{+0.013}_{-0.014}$	z_{drag}	$1060.00^{+0.62}_{-0.64}$	f_{2000}^{143}	29^{+6}_{-5}
Ω_m	$0.307^{+0.014}_{-0.013}$	r_{drag}	$147.38^{+0.55}_{-0.54}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
$\Omega_m h^2$	$0.1417^{+0.0021}_{-0.0020}$	k_{D}	$0.14062^{+0.00064}_{-0.00068}$	f_{2000}^{217}	$106.6^{+3.6}_{-3.7}$
$\Omega_m h^3$	$0.09629^{+0.00062}_{-0.00065}$	$100\theta_{\text{D}}$	$0.16073^{+0.00038}_{-0.00035}$	χ^2_{lensing}	$9.31 (\nu: 0.4)$
σ_8	$0.809^{+0.012}_{-0.012}$	z_{eq}	3371^{+50}_{-49}	χ^2_{simall}	$397.5 (\nu: 2.2)$
S_8	$0.818^{+0.024}_{-0.023}$	k_{eq}	$0.01029^{+0.00015}_{-0.00015}$	χ^2_{lowl}	$22.91 (\nu: 0.3)$
$\sigma_8 \Omega_m^{0.5}$	$0.448^{+0.013}_{-0.013}$	$100\theta_{\text{eq}}$	$0.8192^{+0.0095}_{-0.0095}$	χ^2_{H073p45}	$11.1 (\nu: 2.1)$
$\sigma_8 \Omega_m^{0.25}$	$0.602^{+0.012}_{-0.012}$	$100\theta_{\text{s,eq}}$	$0.4524^{+0.0048}_{-0.0049}$	χ^2_{prior}	$9.7 (\nu: 9.9)$
$\sigma_8/h^{0.5}$	$0.981^{+0.018}_{-0.017}$	$H(0.15)$	$73.18^{+0.87}_{-0.86}$	χ^2_{CMB}	$7367 (\nu: 10475847.9)$
$r_{\text{drag}} h$	$100.1^{+1.7}_{-1.7}$	$D_{\text{M}}(0.15)$	$638.4^{+8.5}_{-8.6}$		
$\langle d^2 \rangle^{1/2}$	$2.428^{+0.043}_{-0.041}$	$H(0.38)$	$83.22^{+0.64}_{-0.63}$		

$$\bar{\chi}^2_{\text{eff}} = 11963.63; \Delta\bar{\chi}^2_{\text{eff}} = 9150.66; R - 1 = 0.02452$$

2.54 base_CamSpecHM_TTTEEE_lowl_lowE_lensing_post_BAO_Riess18/base_plikHM_TTTEEE_lowl_lowE_lensing_post_BAO_Riess18

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02245^{+0.00028}_{-0.00029}$	$10^9 A_s$	$2.106^{+0.063}_{-0.058}$	$D_M(0.51)$	1973^{+16}_{-16}
$\Omega_c h^2$	$0.1185^{+0.0018}_{-0.0018}$	$10^9 A_s e^{-2\tau}$	$1.877^{+0.021}_{-0.020}$	$H(0.61)$	$95.50^{+0.36}_{-0.36}$
$100\theta_{MC}$	$1.04109^{+0.00057}_{-0.00060}$	D_{40}	1225^{+23}_{-23}	$D_M(0.61)$	2297^{+17}_{-18}
τ	$0.058^{+0.015}_{-0.014}$	D_{220}	5740^{+77}_{-76}	$H(2.33)$	$235.7^{+1.1}_{-1.1}$
$\ln(10^{10} A_s)$	$3.047^{+0.029}_{-0.028}$	D_{810}	2538^{+26}_{-26}	$D_M(2.33)$	5755^{+18}_{-17}
n_s	$0.9685^{+0.0075}_{-0.0074}$	D_{1420}	$818.0^{+9.2}_{-9.5}$	$f\sigma_8(0.15)$	$0.452^{+0.011}_{-0.010}$
y_{cal}	$1.0009^{+0.0047}_{-0.0048}$	D_{2000}	$231.2^{+3.0}_{-3.2}$	$\sigma_8(0.15)$	$0.747^{+0.011}_{-0.010}$
A_{217}^{CIB}	43^{+20}_{-20}	$n_{s,0.002}$	$0.9685^{+0.0075}_{-0.0074}$	$f\sigma_8(0.38)$	$0.4717^{+0.0092}_{-0.0087}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.24542^{+0.00010}_{-0.00011}$	$\sigma_8(0.38)$	$0.6631^{+0.0096}_{-0.0093}$
A_{143}^{tSZ}	$4.7^{+3.9}_{-4.4}$	Y_P^{BBN}	$0.24675^{+0.00010}_{-0.00011}$	$f\sigma_8(0.51)$	$0.4710^{+0.0084}_{-0.0080}$
A_{100}^{PS}	248^{+60}_{-50}	$10^5 D/H$	$2.572^{+0.054}_{-0.049}$	$\sigma_8(0.51)$	$0.6208^{+0.0090}_{-0.0087}$
A_{143}^{PS}	42^{+20}_{-20}	Age/Gyr	$13.778^{+0.040}_{-0.039}$	$f\sigma_8(0.61)$	$0.4664^{+0.0079}_{-0.0076}$
A_{217}^{PS}	109^{+20}_{-30}	z_*	$1089.69^{+0.43}_{-0.42}$	$\sigma_8(0.61)$	$0.5909^{+0.0086}_{-0.0083}$
A^{kSZ}	—	r_*	$144.76^{+0.46}_{-0.44}$	$f\sigma_8(2.33)$	$0.2981^{+0.0045}_{-0.0043}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	$100\theta_*$	$1.04127^{+0.00057}_{-0.00059}$	$\sigma_8(2.33)$	$0.3076^{+0.0048}_{-0.0046}$
c_{217}	$0.9996^{+0.0038}_{-0.0027}$	$D_M(z_*)/\text{Gpc}$	$13.902^{+0.045}_{-0.043}$	f_{2000}^{143}	29^{+6}_{-5}
H_0	$68.01^{+0.80}_{-0.80}$	z_{drag}	$1060.01^{+0.61}_{-0.65}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
Ω_Λ	$0.694^{+0.010}_{-0.011}$	r_{drag}	$147.40^{+0.50}_{-0.47}$	f_{2000}^{217}	$106.6^{+3.6}_{-3.7}$
Ω_m	$0.306^{+0.011}_{-0.010}$	k_D	$0.14060^{+0.00061}_{-0.00064}$	χ^2_{lensing}	$9.30 (\nu: 0.4)$
$\Omega_m h^2$	$0.1416^{+0.0017}_{-0.0017}$	$100\theta_D$	$0.16072^{+0.00038}_{-0.00035}$	χ^2_{small}	$397.5 (\nu: 2.2)$
$\Omega_m h^3$	$0.09629^{+0.00062}_{-0.00065}$	z_{eq}	3368^{+41}_{-41}	χ^2_{lowl}	$22.85 (\nu: 0.3)$
σ_8	$0.808^{+0.012}_{-0.012}$	k_{eq}	$0.01028^{+0.00013}_{-0.00013}$	χ^2_{H073p45}	$10.8 (\nu: 1.3)$
S_8	$0.817^{+0.021}_{-0.019}$	$100\theta_{\text{eq}}$	$0.8198^{+0.0079}_{-0.0077}$	$\chi^2_{6\text{DF}}$	$0.023 (\nu: 0.0)$
$\sigma_8 \Omega_m^{0.5}$	$0.447^{+0.011}_{-0.011}$	$100\theta_{s,\text{eq}}$	$0.4527^{+0.0041}_{-0.0039}$	χ^2_{MGS}	$1.61 (\nu: 0.1)$
$\sigma_8 \Omega_m^{0.25}$	$0.601^{+0.011}_{-0.011}$	$H(0.15)$	$73.23^{+0.70}_{-0.69}$	χ^2_{DR12BAO}	$3.99 (\nu: 0.3)$
$\sigma_8/h^{0.5}$	$0.980^{+0.017}_{-0.016}$	$D_M(0.15)$	$637.9^{+6.8}_{-6.8}$	χ^2_{prior}	$9.7 (\nu: 9.9)$
$r_{\text{drag}} h$	$100.2^{+1.4}_{-1.4}$	$H(0.38)$	$83.26^{+0.52}_{-0.51}$	χ^2_{CMB}	$7367 (\nu: 10475371.5)$
$\langle d^2 \rangle^{1/2}$	$2.427^{+0.041}_{-0.039}$	$D_M(0.38)$	1523^{+14}_{-14}	χ^2_{BAO}	$5.61 (\nu: 0.2)$
z_{re}	$8.0^{+1.4}_{-1.4}$	$H(0.51)$	$89.92^{+0.42}_{-0.42}$		

$$\bar{\chi}^2_{\text{eff}} = 11968.81; \Delta\bar{\chi}^2_{\text{eff}} = 9150.57; R - 1 = 0.02105$$

2.55 base_CamSpecHM_TTTEEE_lowl_lowE_lensing_post_Pantheon18/base_plikHM_TTTEEE_lowl_lowE_lensing_post_Pantheon18

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02235^{+0.00029}_{-0.00030}$	z_{re}	$7.7^{+1.5}_{-1.4}$	$D_{\text{M}}(0.38)$	1531^{+17}_{-17}
$\Omega_c h^2$	$0.1196^{+0.0022}_{-0.0022}$	$10^9 A_s$	$2.098^{+0.061}_{-0.058}$	$H(0.51)$	$89.66^{+0.49}_{-0.50}$
$100\theta_{MC}$	$1.04092^{+0.00059}_{-0.00062}$	$10^9 A_s e^{-2\tau}$	$1.881^{+0.021}_{-0.021}$	$D_{\text{M}}(0.51)$	1984^{+20}_{-20}
τ	$0.055^{+0.015}_{-0.014}$	D_{40}	1229^{+24}_{-23}	$H(0.61)$	$95.30^{+0.41}_{-0.42}$
$\ln(10^{10} A_s)$	$3.043^{+0.029}_{-0.028}$	D_{220}	5730^{+79}_{-78}	$D_{\text{M}}(0.61)$	2308^{+22}_{-21}
n_s	$0.9658^{+0.0081}_{-0.0081}$	D_{810}	2538^{+27}_{-26}	$H(2.33)$	$236.3^{+1.4}_{-1.3}$
y_{cal}	$1.0006^{+0.0049}_{-0.0048}$	D_{1420}	$816.7^{+9.6}_{-9.5}$	$D_{\text{M}}(2.33)$	5763^{+20}_{-19}
A_{217}^{CIB}	43^{+20}_{-20}	D_{2000}	$230.7^{+3.2}_{-3.2}$	$f\sigma_8(0.15)$	$0.458^{+0.012}_{-0.012}$
$\xi^{tSZ-CIB}$	—	$n_{s,0.002}$	$0.9658^{+0.0081}_{-0.0081}$	$\sigma_8(0.15)$	$0.748^{+0.011}_{-0.010}$
A_{143}^{tSZ}	$4.7^{+3.9}_{-4.3}$	Y_P	$0.24539^{+0.00011}_{-0.00012}$	$f\sigma_8(0.38)$	$0.476^{+0.010}_{-0.010}$
A_{100}^{PS}	249^{+60}_{-50}	Y_P^{BBN}	$0.24671^{+0.00011}_{-0.00012}$	$\sigma_8(0.38)$	$0.6630^{+0.0095}_{-0.0091}$
A_{143}^{PS}	43^{+20}_{-20}	$10^5 D/H$	$2.589^{+0.057}_{-0.053}$	$f\sigma_8(0.51)$	$0.4739^{+0.0090}_{-0.0090}$
A_{217}^{PS}	109^{+20}_{-30}	Age/Gyr	$13.797^{+0.046}_{-0.043}$	$\sigma_8(0.51)$	$0.6204^{+0.0090}_{-0.0085}$
A^{kSZ}	—	z_*	$1089.91^{+0.50}_{-0.47}$	$f\sigma_8(0.61)$	$0.4688^{+0.0083}_{-0.0082}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	r_*	$144.55^{+0.53}_{-0.52}$	$\sigma_8(0.61)$	$0.5902^{+0.0086}_{-0.0082}$
c_{217}	$0.9997^{+0.0038}_{-0.0027}$	$100\theta_*$	$1.04111^{+0.00059}_{-0.00061}$	$f\sigma_8(2.33)$	$0.2975^{+0.0045}_{-0.0042}$
H_0	$67.49^{+0.97}_{-1.0}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.884^{+0.049}_{-0.049}$	$\sigma_8(2.33)$	$0.3067^{+0.0048}_{-0.0045}$
Ω_Λ	$0.687^{+0.013}_{-0.014}$	z_{drag}	$1059.86^{+0.64}_{-0.66}$	f_{2000}^{143}	30^{+6}_{-5}
Ω_m	$0.313^{+0.014}_{-0.013}$	r_{drag}	$147.22^{+0.55}_{-0.53}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
$\Omega_m h^2$	$0.1426^{+0.0021}_{-0.0021}$	k_{D}	$0.14072^{+0.00063}_{-0.00068}$	f_{2000}^{217}	$106.9^{+3.6}_{-3.7}$
$\Omega_m h^3$	$0.09622^{+0.00061}_{-0.00065}$	$100\theta_{\text{D}}$	$0.16080^{+0.00038}_{-0.00036}$	χ^2_{lensing}	$9.24 (\nu: 0.2)$
σ_8	$0.810^{+0.012}_{-0.012}$	z_{eq}	3392^{+50}_{-50}	χ^2_{simall}	$397.0 (\nu: 1.5)$
S_8	$0.827^{+0.024}_{-0.024}$	k_{eq}	$0.01035^{+0.00015}_{-0.00015}$	χ^2_{lowl}	$23.27 (\nu: 0.4)$
$\sigma_8 \Omega_m^{0.5}$	$0.453^{+0.013}_{-0.013}$	$100\theta_{\text{eq}}$	$0.8151^{+0.0095}_{-0.0094}$	χ^2_{JLA}	$1035.24 (\nu: 0.1)$
$\sigma_8 \Omega_m^{0.25}$	$0.606^{+0.013}_{-0.012}$	$100\theta_{\text{s,eq}}$	$0.4503^{+0.0049}_{-0.0048}$	χ^2_{prior}	$9.7 (\nu: 9.7)$
$\sigma_8/h^{0.5}$	$0.986^{+0.018}_{-0.018}$	$H(0.15)$	$72.79^{+0.84}_{-0.86}$	χ^2_{CMB}	$7366 (\nu: 10475453.0)$
$r_{\text{drag}} h$	$99.4^{+1.7}_{-1.7}$	$D_{\text{M}}(0.15)$	$642.3^{+8.7}_{-8.3}$		
$\langle d^2 \rangle^{1/2}$	$2.439^{+0.043}_{-0.043}$	$H(0.38)$	$82.93^{+0.62}_{-0.63}$		

Best-fit $\chi^2_{\text{eff}} = 12964.78$; $\Delta\chi^2_{\text{eff}} = 9154.94$; $\bar{\chi}^2_{\text{eff}} = 12986.66$; $\Delta\bar{\chi}^2_{\text{eff}} = 9150.70$; $R - 1 = 0.01285$
 χ^2_{eff} : CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.86 (Δ 0.09) simall_100x143_offlike5_EE_Aplanck_B: 396.07 (Δ -0.09) commander_dx12_v3_2_29: 23.03 (Δ -0.15) CamSpec like_10.7HM_1400_unified: 11499.55 SN - JLA Pantheon18: 1035.10 (Δ -0.08)

2.56 base_CamSpecHM_TTTEEE_lowl_lowE_lensing_post_BAO_JLA_Riess18/base_plikHM_TTTEEE_lowl_lowE_lensing_post_BAO_JLA

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02245^{+0.00028}_{-0.00028}$	$10^9 A_s$	$2.107^{+0.061}_{-0.058}$	$D_M(0.51)$	1973^{+16}_{-16}
$\Omega_c h^2$	$0.1185^{+0.0018}_{-0.0018}$	$10^9 A_s e^{-2\tau}$	$1.877^{+0.021}_{-0.020}$	$H(0.61)$	$95.51^{+0.36}_{-0.36}$
$100\theta_{MC}$	$1.04110^{+0.00056}_{-0.00060}$	D_{40}	1224^{+24}_{-23}	$D_M(0.61)$	2296^{+17}_{-17}
τ	$0.058^{+0.015}_{-0.014}$	D_{220}	5740^{+77}_{-75}	$H(2.33)$	$235.6^{+1.1}_{-1.2}$
$\ln(10^{10} A_s)$	$3.048^{+0.028}_{-0.028}$	D_{810}	2539^{+26}_{-26}	$D_M(2.33)$	5754^{+18}_{-17}
n_s	$0.9687^{+0.0075}_{-0.0075}$	D_{1420}	$818.1^{+9.0}_{-9.2}$	$f\sigma_8(0.15)$	$0.452^{+0.011}_{-0.010}$
y_{cal}	$1.0009^{+0.0047}_{-0.0047}$	D_{2000}	$231.2^{+3.0}_{-3.1}$	$\sigma_8(0.15)$	$0.748^{+0.011}_{-0.010}$
A_{217}^{CIB}	43^{+20}_{-20}	$n_{s,0.002}$	$0.9687^{+0.0075}_{-0.0075}$	$f\sigma_8(0.38)$	$0.4716^{+0.0091}_{-0.0089}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.24542^{+0.00010}_{-0.00011}$	$\sigma_8(0.38)$	$0.6632^{+0.0096}_{-0.0093}$
A_{143}^{tSZ}	$4.8^{+3.9}_{-4.5}$	Y_P^{BBN}	$0.24675^{+0.00010}_{-0.00011}$	$f\sigma_8(0.51)$	$0.4709^{+0.0083}_{-0.0080}$
A_{100}^{PS}	248^{+60}_{-50}	$10^5 D/H$	$2.571^{+0.053}_{-0.050}$	$\sigma_8(0.51)$	$0.6209^{+0.0089}_{-0.0087}$
A_{143}^{PS}	42^{+20}_{-20}	Age/Gyr	$13.777^{+0.040}_{-0.040}$	$f\sigma_8(0.61)$	$0.4664^{+0.0077}_{-0.0075}$
A_{217}^{PS}	109^{+20}_{-30}	z_*	$1089.68^{+0.43}_{-0.42}$	$\sigma_8(0.61)$	$0.5910^{+0.0086}_{-0.0084}$
A^{kSZ}	—	r_*	$144.77^{+0.48}_{-0.44}$	$f\sigma_8(2.33)$	$0.2982^{+0.0044}_{-0.0043}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	$100\theta_*$	$1.04127^{+0.00056}_{-0.00059}$	$\sigma_8(2.33)$	$0.3077^{+0.0048}_{-0.0046}$
c_{217}	$0.9996^{+0.0038}_{-0.0027}$	$D_M(z_*)/\text{Gpc}$	$13.903^{+0.046}_{-0.042}$	f_{2000}^{143}	29^{+6}_{-5}
H_0	$68.03^{+0.81}_{-0.79}$	z_{drag}	$1060.01^{+0.61}_{-0.65}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
Ω_Λ	$0.694^{+0.010}_{-0.011}$	r_{drag}	$147.41^{+0.52}_{-0.48}$	f_{2000}^{217}	$106.6^{+3.6}_{-3.7}$
Ω_m	$0.306^{+0.011}_{-0.010}$	k_D	$0.14059^{+0.00060}_{-0.00066}$	χ^2_{lensing}	$9.31 (\nu: 0.4)$
$\Omega_m h^2$	$0.1416^{+0.0017}_{-0.0018}$	$100\theta_D$	$0.16072^{+0.00038}_{-0.00035}$	χ^2_{small}	$397.5 (\nu: 2.2)$
$\Omega_m h^3$	$0.09629^{+0.00062}_{-0.00066}$	z_{eq}	3367^{+40}_{-42}	χ^2_{lowl}	$22.82 (\nu: 0.3)$
σ_8	$0.808^{+0.012}_{-0.011}$	k_{eq}	$0.01028^{+0.00012}_{-0.00013}$	χ^2_{H073p45}	$10.7 (\nu: 1.2)$
S_8	$0.816^{+0.020}_{-0.020}$	$100\theta_{\text{eq}}$	$0.8200^{+0.0079}_{-0.0075}$	χ^2_{JLA}	$706.63 (\nu: 0.0)$
$\sigma_8 \Omega_m^{0.5}$	$0.447^{+0.011}_{-0.011}$	$100\theta_{s,\text{eq}}$	$0.4528^{+0.0041}_{-0.0039}$	$\chi^2_{6\text{DF}}$	$0.022 (\nu: 0.0)$
$\sigma_8 \Omega_m^{0.25}$	$0.601^{+0.011}_{-0.011}$	$H(0.15)$	$73.25^{+0.70}_{-0.68}$	χ^2_{MGS}	$1.63 (\nu: 0.1)$
$\sigma_8/h^{0.5}$	$0.980^{+0.017}_{-0.016}$	$D_M(0.15)$	$637.7^{+6.7}_{-6.7}$	χ^2_{DR12BAO}	$3.95 (\nu: 0.3)$
$r_{\text{drag}} h$	$100.3^{+1.4}_{-1.3}$	$H(0.38)$	$83.27^{+0.52}_{-0.51}$	χ^2_{prior}	$9.6 (\nu: 9.9)$
$\langle d^2 \rangle^{1/2}$	$2.426^{+0.040}_{-0.039}$	$D_M(0.38)$	1522^{+14}_{-14}	χ^2_{CMB}	$7368 (\nu: 10475936.7)$
z_{re}	$8.0^{+1.4}_{-1.4}$	$H(0.51)$	$89.93^{+0.42}_{-0.42}$	χ^2_{BAO}	$5.60 (\nu: 0.1)$

$$\bar{\chi}^2_{\text{eff}} = 12675.57; \Delta\bar{\chi}^2_{\text{eff}} = 9150.70; R - 1 = 0.05190$$

2.57 base_CamSpecHM_TTTEEE_lowl_lowE_lensing_post_BAO_Pantheon18/base_plikHM_TTTEEE_lowl_lowE_lensing_post_BAO_Panth

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02239^{+0.00028}_{-0.00029}$	$10^9 A_s$	$2.102^{+0.061}_{-0.057}$	$D_M(0.51)$	1979^{+16}_{-16}
$\Omega_c h^2$	$0.1191^{+0.0018}_{-0.0018}$	$10^9 A_s e^{-2\tau}$	$1.879^{+0.021}_{-0.020}$	$H(0.61)$	$95.38^{+0.35}_{-0.36}$
$100\theta_{MC}$	$1.04099^{+0.00056}_{-0.00059}$	D_{40}	1227^{+23}_{-23}	$D_M(0.61)$	2303^{+18}_{-17}
τ	$0.056^{+0.015}_{-0.013}$	D_{220}	5734^{+79}_{-77}	$H(2.33)$	$236.0^{+1.1}_{-1.1}$
$\ln(10^{10} A_s)$	$3.045^{+0.029}_{-0.028}$	D_{810}	2538^{+27}_{-26}	$D_M(2.33)$	5760^{+18}_{-17}
n_s	$0.9670^{+0.0075}_{-0.0073}$	D_{1420}	$817.2^{+9.3}_{-9.4}$	$f\sigma_8(0.15)$	$0.455^{+0.011}_{-0.011}$
y_{cal}	$1.0007^{+0.0049}_{-0.0048}$	D_{2000}	$230.9^{+3.1}_{-3.2}$	$\sigma_8(0.15)$	$0.748^{+0.011}_{-0.010}$
A_{217}^{CIB}	43^{+20}_{-20}	$n_{s,0.002}$	$0.9670^{+0.0075}_{-0.0073}$	$f\sigma_8(0.38)$	$0.4738^{+0.0091}_{-0.0090}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.24540^{+0.00010}_{-0.00012}$	$\sigma_8(0.38)$	$0.6630^{+0.0097}_{-0.0091}$
A_{143}^{tSZ}	$4.7^{+3.9}_{-4.4}$	Y_P^{BBN}	$0.24673^{+0.00010}_{-0.00012}$	$f\sigma_8(0.51)$	$0.4726^{+0.0083}_{-0.0083}$
A_{100}^{PS}	249^{+60}_{-50}	$10^5 D/H$	$2.583^{+0.055}_{-0.050}$	$\sigma_8(0.51)$	$0.6206^{+0.0091}_{-0.0085}$
A_{143}^{PS}	42^{+20}_{-20}	Age/Gyr	$13.790^{+0.041}_{-0.038}$	$f\sigma_8(0.61)$	$0.4677^{+0.0078}_{-0.0077}$
A_{217}^{PS}	109^{+20}_{-30}	z_*	$1089.82^{+0.44}_{-0.41}$	$\sigma_8(0.61)$	$0.5905^{+0.0087}_{-0.0081}$
A^{kSZ}	—	r_*	$144.66^{+0.45}_{-0.44}$	$f\sigma_8(2.33)$	$0.2978^{+0.0045}_{-0.0042}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	$100\theta_*$	$1.04118^{+0.00056}_{-0.00059}$	$\sigma_8(2.33)$	$0.3071^{+0.0047}_{-0.0044}$
c_{217}	$0.9996^{+0.0038}_{-0.0027}$	$D_M(z_*)/\text{Gpc}$	$13.893^{+0.044}_{-0.043}$	f_{2000}^{143}	29^{+6}_{-5}
H_0	$67.72^{+0.78}_{-0.80}$	z_{drag}	$1059.91^{+0.62}_{-0.64}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
Ω_Λ	$0.690^{+0.010}_{-0.011}$	r_{drag}	$147.32^{+0.49}_{-0.48}$	f_{2000}^{217}	$106.8^{+3.6}_{-3.6}$
Ω_m	$0.310^{+0.011}_{-0.010}$	k_D	$0.14064^{+0.00061}_{-0.00064}$	χ^2_{lensing}	$9.21 (\nu: 0.2)$
$\Omega_m h^2$	$0.1421^{+0.0017}_{-0.0017}$	$100\theta_D$	$0.16078^{+0.00038}_{-0.00035}$	χ^2_{small}	$397.2 (\nu: 1.7)$
$\Omega_m h^3$	$0.09623^{+0.00061}_{-0.00066}$	z_{eq}	3381^{+41}_{-41}	χ^2_{lowl}	$23.07 (\nu: 0.3)$
σ_8	$0.809^{+0.012}_{-0.012}$	k_{eq}	$0.01032^{+0.00012}_{-0.00012}$	χ^2_{JLA}	$1035.04 (\nu: 0.0)$
S_8	$0.822^{+0.020}_{-0.020}$	$100\theta_{\text{eq}}$	$0.8173^{+0.0076}_{-0.0075}$	$\chi^2_{6\text{DF}}$	$0.043 (\nu: 0.0)$
$\sigma_8 \Omega_m^{0.5}$	$0.450^{+0.011}_{-0.011}$	$100\theta_{s,\text{eq}}$	$0.4514^{+0.0039}_{-0.0039}$	χ^2_{MGS}	$1.33 (\nu: 0.1)$
$\sigma_8 \Omega_m^{0.25}$	$0.604^{+0.011}_{-0.011}$	$H(0.15)$	$72.98^{+0.68}_{-0.69}$	χ^2_{DR12BAO}	$4.6 (\nu: 0.7)$
$\sigma_8/h^{0.5}$	$0.983^{+0.017}_{-0.016}$	$D_M(0.15)$	$640.3^{+6.9}_{-6.6}$	χ^2_{prior}	$9.7 (\nu: 9.8)$
$r_{\text{drag}} h$	$99.8^{+1.3}_{-1.4}$	$H(0.38)$	$83.07^{+0.50}_{-0.52}$	χ^2_{CMB}	$7366 (\nu: 10475444.9)$
$\langle d^2 \rangle^{1/2}$	$2.433^{+0.040}_{-0.040}$	$D_M(0.38)$	1528^{+14}_{-13}	χ^2_{BAO}	$5.94 (\nu: 0.4)$
z_{re}	$7.8^{+1.4}_{-1.4}$	$H(0.51)$	$89.77^{+0.41}_{-0.42}$		

Best-fit $\chi^2_{\text{eff}} = 12970.49$; $\Delta\chi^2_{\text{eff}} = 9154.81$; $\bar{\chi}^2_{\text{eff}} = 12992.39$; $\Delta\bar{\chi}^2_{\text{eff}} = 9150.54$; $R - 1 = 0.01438$
 χ^2_{eff} : BAO - 6DF: 0.02 (Δ 0.00) MGS: 1.28 (Δ 0.00) DR12BAO: 4.23 (Δ -0.01) CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.97 (Δ 0.25) simall_100x143_offlike5_EE_Aplanck: 396.05 (Δ -0.47) commander_dx12_v3.2_29: 22.77 (Δ -0.11) CamSpec like_10.7HM_1400_unified: 11500.17 SN - JLA Pantheon18: 1034.98 (Δ 0.01)

2.58 base_CamSpecHM_TTTEEE_lowl_lowE_lensing_post_BAO_Pantheon18_Riess18/base_plikHM_TTTEEE_lowl_lowE_lensing_post_BA

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02245^{+0.00027}_{-0.00029}$	$10^9 A_s$	$2.107^{+0.063}_{-0.058}$	$D_M(0.51)$	1973^{+16}_{-16}
$\Omega_c h^2$	$0.1184^{+0.0017}_{-0.0018}$	$10^9 A_s e^{-2\tau}$	$1.877^{+0.021}_{-0.020}$	$H(0.61)$	$95.51^{+0.36}_{-0.35}$
$100\theta_{MC}$	$1.04110^{+0.00057}_{-0.00060}$	D_{40}	1224^{+23}_{-23}	$D_M(0.61)$	2296^{+17}_{-17}
τ	$0.058^{+0.015}_{-0.014}$	D_{220}	5740^{+77}_{-76}	$H(2.33)$	$235.6^{+1.1}_{-1.1}$
$\ln(10^{10} A_s)$	$3.048^{+0.030}_{-0.028}$	D_{810}	2539^{+26}_{-26}	$D_M(2.33)$	5754^{+17}_{-17}
n_s	$0.9687^{+0.0075}_{-0.0073}$	D_{1420}	$818.1^{+9.2}_{-9.5}$	$f\sigma_8(0.15)$	$0.452^{+0.011}_{-0.0098}$
y_{cal}	$1.0009^{+0.0047}_{-0.0048}$	D_{2000}	$231.2^{+3.0}_{-3.2}$	$\sigma_8(0.15)$	$0.747^{+0.011}_{-0.011}$
A_{217}^{CIB}	43^{+20}_{-20}	$n_{s,0.002}$	$0.9687^{+0.0075}_{-0.0073}$	$f\sigma_8(0.38)$	$0.4715^{+0.0091}_{-0.0086}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.24543^{+0.00010}_{-0.00011}$	$\sigma_8(0.38)$	$0.6631^{+0.0096}_{-0.0093}$
A_{143}^{tSZ}	$4.7^{+3.9}_{-4.4}$	Y_P^{BBN}	$0.24675^{+0.00010}_{-0.00011}$	$f\sigma_8(0.51)$	$0.4708^{+0.0083}_{-0.0079}$
A_{100}^{PS}	248^{+60}_{-50}	$10^5 D/H$	$2.571^{+0.053}_{-0.049}$	$\sigma_8(0.51)$	$0.6209^{+0.0090}_{-0.0087}$
A_{143}^{PS}	42^{+20}_{-20}	Age/Gyr	$13.777^{+0.040}_{-0.039}$	$f\sigma_8(0.61)$	$0.4663^{+0.0078}_{-0.0074}$
A_{217}^{PS}	109^{+20}_{-30}	z_*	$1089.68^{+0.42}_{-0.41}$	$\sigma_8(0.61)$	$0.5909^{+0.0087}_{-0.0083}$
A^{kSZ}	—	r_*	$144.77^{+0.46}_{-0.44}$	$f\sigma_8(2.33)$	$0.2982^{+0.0045}_{-0.0043}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	$100\theta_*$	$1.04127^{+0.00057}_{-0.00059}$	$\sigma_8(2.33)$	$0.3077^{+0.0048}_{-0.0046}$
c_{217}	$0.9996^{+0.0038}_{-0.0027}$	$D_M(z_*)/\text{Gpc}$	$13.904^{+0.044}_{-0.042}$	f_{2000}^{143}	29^{+6}_{-5}
H_0	$68.04^{+0.78}_{-0.78}$	z_{drag}	$1060.02^{+0.60}_{-0.66}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
Ω_Λ	$0.694^{+0.010}_{-0.010}$	r_{drag}	$147.41^{+0.49}_{-0.48}$	f_{2000}^{217}	$106.6^{+3.6}_{-3.7}$
Ω_m	$0.306^{+0.010}_{-0.010}$	k_D	$0.14059^{+0.00060}_{-0.00064}$	χ^2_{lensing}	$9.31 (\nu: 0.4)$
$\Omega_m h^2$	$0.1415^{+0.0017}_{-0.0017}$	$100\theta_D$	$0.16072^{+0.00038}_{-0.00034}$	χ^2_{small}	$397.5 (\nu: 2.3)$
$\Omega_m h^3$	$0.09629^{+0.00062}_{-0.00065}$	z_{eq}	3367^{+40}_{-40}	χ^2_{lowl}	$22.83 (\nu: 0.3)$
σ_8	$0.808^{+0.012}_{-0.012}$	k_{eq}	$0.01028^{+0.00012}_{-0.00012}$	χ^2_{H073p45}	$10.7 (\nu: 1.2)$
S_8	$0.816^{+0.020}_{-0.019}$	$100\theta_{\text{eq}}$	$0.8201^{+0.0077}_{-0.0075}$	χ^2_{JLA}	$1034.88 (\nu: 0.0)$
$\sigma_8 \Omega_m^{0.5}$	$0.447^{+0.011}_{-0.010}$	$100\theta_{s,\text{eq}}$	$0.4529^{+0.0039}_{-0.0038}$	$\chi^2_{6\text{DF}}$	$0.021 (\nu: 0.0)$
$\sigma_8 \Omega_m^{0.25}$	$0.601^{+0.011}_{-0.010}$	$H(0.15)$	$73.26^{+0.68}_{-0.67}$	χ^2_{MGS}	$1.64 (\nu: 0.1)$
$\sigma_8/h^{0.5}$	$0.980^{+0.017}_{-0.016}$	$D_M(0.15)$	$637.6^{+6.6}_{-6.6}$	χ^2_{DR12BAO}	$3.92 (\nu: 0.2)$
$r_{\text{drag}} h$	$100.3^{+1.4}_{-1.3}$	$H(0.38)$	$83.27^{+0.51}_{-0.50}$	χ^2_{prior}	$9.7 (\nu: 9.9)$
$\langle d^2 \rangle^{1/2}$	$2.426^{+0.041}_{-0.039}$	$D_M(0.38)$	1522^{+13}_{-13}	χ^2_{CMB}	$7368 (\nu: 10475325.4)$
z_{re}	$8.0^{+1.4}_{-1.4}$	$H(0.51)$	$89.94^{+0.41}_{-0.41}$	χ^2_{BAO}	$5.58 (\nu: 0.1)$

$$\bar{\chi}^2_{\text{eff}} = 13003.64; \Delta\bar{\chi}^2_{\text{eff}} = 9150.54; R - 1 = 0.02217$$

2.59 base_CamSpecHM_TTTEEE_lowl_lowE_lensing_post_zre6p5/base_plikHM_TTTEEE_lowl_lowE_lensing_post_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02234^{+0.00030}_{-0.00031}$	$\langle d^2 \rangle^{1/2}$	$2.443^{+0.043}_{-0.043}$	$D_M(0.15)$	$643.1^{+9.1}_{-8.7}$
$\Omega_c h^2$	$0.1198^{+0.0023}_{-0.0023}$	z_{re}	< 8.88	$H(0.38)$	$82.88^{+0.65}_{-0.65}$
$100\theta_{MC}$	$1.04090^{+0.00060}_{-0.00062}$	$10^9 A_s$	$2.100^{+0.055}_{-0.051}$	$D_M(0.38)$	1533^{+18}_{-17}
τ	$0.055^{+0.013}_{-0.012}$	$10^9 A_s e^{-2\tau}$	$1.881^{+0.021}_{-0.021}$	$H(0.51)$	$89.62^{+0.52}_{-0.52}$
$\ln(10^{10} A_s)$	$3.044^{+0.026}_{-0.024}$	D_{40}	1229^{+24}_{-23}	$D_M(0.51)$	1985^{+21}_{-20}
n_s	$0.9654^{+0.0082}_{-0.0081}$	D_{220}	5728^{+78}_{-78}	$H(0.61)$	$95.27^{+0.43}_{-0.43}$
y_{cal}	$1.0006^{+0.0049}_{-0.0048}$	D_{810}	2537^{+27}_{-26}	$D_M(0.61)$	2310^{+23}_{-22}
A_{217}^{CIB}	43^{+10}_{-20}	D_{1420}	$816.5^{+9.6}_{-9.6}$	$H(2.33)$	$236.4^{+1.4}_{-1.4}$
$\xi^{tSZ-CIB}$	—	D_{2000}	$230.6^{+3.2}_{-3.2}$	$D_M(2.33)$	5765^{+20}_{-20}
A_{143}^{tSZ}	$4.6^{+3.9}_{-4.3}$	$n_{s,0.002}$	$0.9654^{+0.0082}_{-0.0081}$	$f\sigma_8(0.15)$	$0.459^{+0.013}_{-0.013}$
A_{100}^{PS}	249^{+60}_{-50}	Y_P	$0.24538^{+0.00011}_{-0.00013}$	$\sigma_8(0.15)$	$0.749^{+0.011}_{-0.0095}$
A_{143}^{PS}	43^{+20}_{-20}	Y_P^{BBN}	$0.24671^{+0.00011}_{-0.00013}$	$f\sigma_8(0.38)$	$0.477^{+0.010}_{-0.010}$
A_{217}^{PS}	109^{+20}_{-30}	$10^5 D/H$	$2.592^{+0.058}_{-0.054}$	$\sigma_8(0.38)$	$0.6635^{+0.0091}_{-0.0081}$
A^{kSZ}	—	Age/Gyr	$13.800^{+0.046}_{-0.045}$	$f\sigma_8(0.51)$	$0.4748^{+0.0091}_{-0.0090}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	z_*	$1089.94^{+0.51}_{-0.50}$	$\sigma_8(0.51)$	$0.6208^{+0.0082}_{-0.0077}$
c_{217}	$0.9997^{+0.0038}_{-0.0027}$	r_*	$144.51^{+0.55}_{-0.53}$	$f\sigma_8(0.61)$	$0.4696^{+0.0082}_{-0.0081}$
H_0	$67.4^{+1.0}_{-1.0}$	$100\theta_*$	$1.04108^{+0.00059}_{-0.00062}$	$\sigma_8(0.61)$	$0.5906^{+0.0078}_{-0.0074}$
Ω_Λ	$0.686^{+0.014}_{-0.015}$	$D_M(z_*)/\text{Gpc}$	$13.881^{+0.051}_{-0.050}$	$f\sigma_8(2.33)$	$0.2977^{+0.0040}_{-0.0038}$
Ω_m	$0.314^{+0.015}_{-0.014}$	z_{drag}	$1059.85^{+0.62}_{-0.68}$	$\sigma_8(2.33)$	$0.3068^{+0.0043}_{-0.0040}$
$\Omega_m h^2$	$0.1428^{+0.0022}_{-0.0022}$	r_{drag}	$147.19^{+0.57}_{-0.54}$	f_{2000}^{143}	30^{+6}_{-5}
$\Omega_m h^3$	$0.09622^{+0.00062}_{-0.00065}$	k_D	$0.14074^{+0.00064}_{-0.00067}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
σ_8	$0.811^{+0.012}_{-0.011}$	$100\theta_D$	$0.16081^{+0.00039}_{-0.00037}$	f_{2000}^{217}	$106.9^{+3.6}_{-3.6}$
S_8	$0.830^{+0.026}_{-0.025}$	z_{eq}	3396^{+53}_{-53}	χ_{lensing}^2	$9.24 (\nu: 0.2)$
$\sigma_8 \Omega_m^{0.5}$	$0.455^{+0.014}_{-0.014}$	k_{eq}	$0.01037^{+0.00016}_{-0.00016}$	χ_{small}^2	$396.9 (\nu: 1.4)$
$\sigma_8 \Omega_m^{0.25}$	$0.607^{+0.013}_{-0.013}$	$100\theta_{\text{eq}}$	$0.814^{+0.010}_{-0.0099}$	χ_{lowl}^2	$23.37 (\nu: 0.4)$
$\sigma_8/h^{0.5}$	$0.987^{+0.018}_{-0.018}$	$100\theta_{s,\text{eq}}$	$0.4499^{+0.0051}_{-0.0051}$	χ_{prior}^2	$9.7 (\nu: 9.6)$
$r_{\text{drag}} h$	$99.2^{+1.8}_{-1.8}$	$H(0.15)$	$72.71^{+0.88}_{-0.90}$	χ_{CMB}^2	$7366 (\nu: 10475262.7)$

$$\bar{\chi}_{\text{eff}}^2 = 11951.25; \Delta\bar{\chi}_{\text{eff}}^2 = 9150.75; R - 1 = 0.00847$$

2.60 base_CamSpecHM_TTTEEE_lowl_lowE_lensing_post_BAO_zre6p5/base_plikHM_TTTEEE_lowl_lowE_lensing_post_BAO_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02238^{+0.00028}_{-0.00029}$	$10^9 A_s$	$2.103^{+0.056}_{-0.053}$	$D_M(0.51)$	1980^{+17}_{-16}
$\Omega_c h^2$	$0.1192^{+0.0018}_{-0.0018}$	$10^9 A_s e^{-2\tau}$	$1.879^{+0.021}_{-0.020}$	$H(0.61)$	$95.37^{+0.35}_{-0.37}$
$100\theta_{MC}$	$1.04098^{+0.00057}_{-0.00060}$	D_{40}	1227^{+23}_{-23}	$D_M(0.61)$	2304^{+18}_{-17}
τ	$0.056^{+0.013}_{-0.012}$	D_{220}	5732^{+80}_{-77}	$H(2.33)$	$236.0^{+1.1}_{-1.1}$
$\ln(10^{10} A_s)$	$3.046^{+0.027}_{-0.025}$	D_{810}	2538^{+27}_{-26}	$D_M(2.33)$	5760^{+18}_{-17}
n_s	$0.9668^{+0.0075}_{-0.0074}$	D_{1420}	$817.1^{+9.4}_{-9.4}$	$f\sigma_8(0.15)$	$0.456^{+0.011}_{-0.011}$
y_{cal}	$1.0007^{+0.0049}_{-0.0048}$	D_{2000}	$230.8^{+3.1}_{-3.2}$	$\sigma_8(0.15)$	$0.748^{+0.011}_{-0.0096}$
A_{217}^{CIB}	43^{+20}_{-20}	$n_{s,0.002}$	$0.9668^{+0.0075}_{-0.0074}$	$f\sigma_8(0.38)$	$0.4744^{+0.0091}_{-0.0091}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.24540^{+0.00010}_{-0.00012}$	$\sigma_8(0.38)$	$0.6633^{+0.0090}_{-0.0086}$
A_{143}^{tSZ}	$4.7^{+3.9}_{-4.4}$	Y_P^{BBN}	$0.24672^{+0.00010}_{-0.00012}$	$f\sigma_8(0.51)$	$0.4731^{+0.0083}_{-0.0081}$
A_{100}^{PS}	249^{+60}_{-50}	$10^5 D/H$	$2.584^{+0.055}_{-0.050}$	$\sigma_8(0.51)$	$0.6208^{+0.0084}_{-0.0080}$
A_{143}^{PS}	42^{+20}_{-20}	Age/Gyr	$13.791^{+0.041}_{-0.039}$	$f\sigma_8(0.61)$	$0.4682^{+0.0077}_{-0.0074}$
A_{217}^{PS}	109^{+20}_{-30}	z_*	$1089.84^{+0.44}_{-0.42}$	$\sigma_8(0.61)$	$0.5908^{+0.0080}_{-0.0076}$
A^{kSZ}	—	r_*	$144.64^{+0.45}_{-0.45}$	$f\sigma_8(2.33)$	$0.2979^{+0.0041}_{-0.0039}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	$100\theta_*$	$1.04117^{+0.00056}_{-0.00059}$	$\sigma_8(2.33)$	$0.3072^{+0.0043}_{-0.0041}$
c_{217}	$0.9996^{+0.0038}_{-0.0027}$	$D_M(z_*)/\text{Gpc}$	$13.892^{+0.044}_{-0.043}$	f_{2000}^{143}	29^{+5}_{-5}
H_0	$67.67^{+0.80}_{-0.81}$	z_{drag}	$1059.90^{+0.60}_{-0.65}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
Ω_Λ	$0.689^{+0.011}_{-0.011}$	r_{drag}	$147.30^{+0.49}_{-0.48}$	f_{2000}^{217}	$106.8^{+3.6}_{-3.6}$
Ω_m	$0.311^{+0.011}_{-0.011}$	k_D	$0.14066^{+0.00061}_{-0.00065}$	χ^2_{lensing}	$9.17 (\nu: 0.2)$
$\Omega_m h^2$	$0.1422^{+0.0017}_{-0.0017}$	$100\theta_D$	$0.16078^{+0.00039}_{-0.00036}$	χ^2_{small}	$397.1 (\nu: 1.7)$
$\Omega_m h^3$	$0.09623^{+0.00061}_{-0.00066}$	z_{eq}	3383^{+42}_{-42}	χ^2_{lowl}	$23.12 (\nu: 0.3)$
σ_8	$0.810^{+0.012}_{-0.011}$	k_{eq}	$0.01032^{+0.00013}_{-0.00013}$	$\chi^2_{6\text{DF}}$	$0.048 (\nu: 0.0)$
S_8	$0.824^{+0.021}_{-0.021}$	$100\theta_{\text{eq}}$	$0.8169^{+0.0078}_{-0.0077}$	χ^2_{MGS}	$1.29 (\nu: 0.1)$
$\sigma_8 \Omega_m^{0.5}$	$0.451^{+0.011}_{-0.011}$	$100\theta_{s,\text{eq}}$	$0.4512^{+0.0040}_{-0.0040}$	χ^2_{DR12BAO}	$4.7 (\nu: 0.8)$
$\sigma_8 \Omega_m^{0.25}$	$0.604^{+0.011}_{-0.011}$	$H(0.15)$	$72.95^{+0.70}_{-0.70}$	χ^2_{prior}	$9.7 (\nu: 9.8)$
$\sigma_8/h^{0.5}$	$0.984^{+0.017}_{-0.016}$	$D_M(0.15)$	$640.7^{+7.0}_{-6.8}$	χ^2_{CMB}	$7366 (\nu: 10475417.5)$
$r_{\text{drag}} h$	$99.7^{+1.4}_{-1.4}$	$H(0.38)$	$83.04^{+0.51}_{-0.52}$	χ^2_{BAO}	$6.04 (\nu: 0.5)$
$\langle d^2 \rangle^{1/2}$	$2.435^{+0.040}_{-0.039}$	$D_M(0.38)$	1528^{+14}_{-14}		
z_{re}	$7.8^{+1.2}_{-1.3}$	$H(0.51)$	$89.75^{+0.41}_{-0.43}$		

$$\bar{\chi}^2_{\text{eff}} = 11957.26; \Delta\bar{\chi}^2_{\text{eff}} = 9150.54; R - 1 = 0.01434$$

2.61 base_CamSpecHM_TTTEEE_lowl_lowE_lensing_post_Riess18_zre6p5/base_plikHM_TTTEEE_lowl_lowE_lensing_post_Riess18_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02244^{+0.00029}_{-0.00030}$	z_{re}	$8.0^{+1.3}_{-1.3}$	$D_{\text{M}}(0.38)$	1523^{+17}_{-17}
$\Omega_c h^2$	$0.1186^{+0.0022}_{-0.0022}$	$10^9 A_s$	$2.108^{+0.059}_{-0.055}$	$H(0.51)$	$89.90^{+0.52}_{-0.50}$
$100\theta_{MC}$	$1.04107^{+0.00066}_{-0.00062}$	$10^9 A_s e^{-2\tau}$	$1.877^{+0.021}_{-0.020}$	$D_{\text{M}}(0.51)$	1974^{+20}_{-20}
τ	$0.058^{+0.014}_{-0.013}$	D_{40}	1225^{+24}_{-23}	$H(0.61)$	$95.48^{+0.44}_{-0.41}$
$\ln(10^{10} A_s)$	$3.048^{+0.028}_{-0.026}$	D_{220}	5739^{+77}_{-76}	$D_{\text{M}}(0.61)$	2298^{+21}_{-22}
n_s	$0.9683^{+0.0081}_{-0.0080}$	D_{810}	2538^{+26}_{-26}	$H(2.33)$	$235.7^{+1.3}_{-1.3}$
y_{cal}	$1.0008^{+0.0048}_{-0.0049}$	D_{1420}	$817.9^{+9.5}_{-9.5}$	$D_{\text{M}}(2.33)$	5755^{+20}_{-21}
A_{217}^{CIB}	43^{+20}_{-20}	D_{2000}	$231.2^{+3.1}_{-3.2}$	$f\sigma_8(0.15)$	$0.453^{+0.012}_{-0.012}$
$\xi^{tSZ-CIB}$	—	$n_{s,0.002}$	$0.9683^{+0.0081}_{-0.0080}$	$\sigma_8(0.15)$	$0.748^{+0.011}_{-0.010}$
A_{143}^{tSZ}	$4.7^{+3.9}_{-4.4}$	Y_P	$0.24542^{+0.00011}_{-0.00012}$	$f\sigma_8(0.38)$	$0.472^{+0.010}_{-0.0096}$
A_{100}^{PS}	248^{+60}_{-50}	Y_P^{BBN}	$0.24675^{+0.00011}_{-0.00012}$	$\sigma_8(0.38)$	$0.6634^{+0.0093}_{-0.0085}$
A_{143}^{PS}	42^{+20}_{-20}	$10^5 D/H$	$2.573^{+0.056}_{-0.052}$	$f\sigma_8(0.51)$	$0.4715^{+0.0090}_{-0.0085}$
A_{217}^{PS}	109^{+20}_{-30}	Age/Gyr	$13.780^{+0.045}_{-0.046}$	$\sigma_8(0.51)$	$0.6211^{+0.0087}_{-0.0080}$
A^{kSZ}	—	z_*	$1089.71^{+0.48}_{-0.48}$	$f\sigma_8(0.61)$	$0.4669^{+0.0083}_{-0.0078}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	r_*	$144.74^{+0.52}_{-0.52}$	$\sigma_8(0.61)$	$0.5911^{+0.0085}_{-0.0076}$
c_{217}	$0.9996^{+0.0038}_{-0.0027}$	$100\theta_*$	$1.04125^{+0.00066}_{-0.00061}$	$f\sigma_8(2.33)$	$0.2982^{+0.0044}_{-0.0039}$
H_0	$68.0^{+1.0}_{-0.98}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.900^{+0.051}_{-0.049}$	$\sigma_8(2.33)$	$0.3077^{+0.0046}_{-0.0043}$
Ω_Λ	$0.693^{+0.013}_{-0.013}$	z_{drag}	$1060.00^{+0.62}_{-0.64}$	f_{2000}^{143}	29^{+6}_{-5}
Ω_m	$0.307^{+0.013}_{-0.013}$	r_{drag}	$147.38^{+0.55}_{-0.54}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
$\Omega_m h^2$	$0.1417^{+0.0021}_{-0.0020}$	k_{D}	$0.14062^{+0.00064}_{-0.00068}$	f_{2000}^{217}	$106.6^{+3.6}_{-3.8}$
$\Omega_m h^3$	$0.09629^{+0.00062}_{-0.00065}$	$100\theta_{\text{D}}$	$0.16073^{+0.00038}_{-0.00035}$	χ_{lensing}^2	$9.28 (\nu: 0.3)$
σ_8	$0.809^{+0.012}_{-0.011}$	z_{eq}	3371^{+50}_{-48}	χ_{simall}^2	$397.5 (\nu: 2.3)$
S_8	$0.818^{+0.024}_{-0.023}$	k_{eq}	$0.01029^{+0.00015}_{-0.00015}$	χ_{lowl}^2	$22.91 (\nu: 0.3)$
$\sigma_8 \Omega_m^{0.5}$	$0.448^{+0.013}_{-0.013}$	$100\theta_{\text{eq}}$	$0.8193^{+0.0095}_{-0.0093}$	χ_{H073p45}^2	$11.1 (\nu: 2.0)$
$\sigma_8 \Omega_m^{0.25}$	$0.602^{+0.012}_{-0.012}$	$100\theta_{\text{s,eq}}$	$0.4525^{+0.0048}_{-0.0048}$	χ_{prior}^2	$9.7 (\nu: 9.9)$
$\sigma_8/h^{0.5}$	$0.981^{+0.018}_{-0.017}$	$H(0.15)$	$73.19^{+0.88}_{-0.85}$	χ_{CMB}^2	$7367 (\nu: 10475858.3)$
$r_{\text{drag}} h$	$100.2^{+1.7}_{-1.7}$	$D_{\text{M}}(0.15)$	$638.3^{+8.4}_{-8.5}$		
$\langle d^2 \rangle^{1/2}$	$2.429^{+0.042}_{-0.040}$	$H(0.38)$	$83.22^{+0.64}_{-0.62}$		

$$\bar{\chi}_{\text{eff}}^2 = 11963.51; \Delta\bar{\chi}_{\text{eff}}^2 = 9150.65; R - 1 = 0.02593$$

2.62 base_CamSpecHM_TTTEEE_lowl_lowE_lensing_post_BAO_Riess18_zre6p5/base_plikHM_TTTEEE_lowl_lowE_lensing_post_BAO_Riess18_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02245^{+0.00028}_{-0.00029}$	$10^9 A_s$	$2.108^{+0.058}_{-0.055}$	$D_M(0.51)$	1973^{+16}_{-16}
$\Omega_c h^2$	$0.1185^{+0.0018}_{-0.0018}$	$10^9 A_s e^{-2\tau}$	$1.877^{+0.021}_{-0.020}$	$H(0.61)$	$95.50^{+0.36}_{-0.36}$
$100\theta_{MC}$	$1.04109^{+0.00057}_{-0.00060}$	D_{40}	1225^{+23}_{-23}	$D_M(0.61)$	2297^{+17}_{-18}
τ	$0.058^{+0.014}_{-0.013}$	D_{220}	5740^{+77}_{-76}	$H(2.33)$	$235.7^{+1.1}_{-1.1}$
$\ln(10^{10} A_s)$	$3.048^{+0.027}_{-0.026}$	D_{810}	2538^{+26}_{-26}	$D_M(2.33)$	5754^{+18}_{-17}
n_s	$0.9686^{+0.0075}_{-0.0074}$	D_{1420}	$818.0^{+9.2}_{-9.5}$	$f\sigma_8(0.15)$	$0.452^{+0.011}_{-0.010}$
y_{cal}	$1.0009^{+0.0048}_{-0.0048}$	D_{2000}	$231.2^{+3.0}_{-3.2}$	$\sigma_8(0.15)$	$0.748^{+0.011}_{-0.0099}$
A_{217}^{CIB}	43^{+20}_{-20}	$n_{s,0.002}$	$0.9686^{+0.0075}_{-0.0074}$	$f\sigma_8(0.38)$	$0.4719^{+0.0091}_{-0.0086}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.24542^{+0.00010}_{-0.00011}$	$\sigma_8(0.38)$	$0.6634^{+0.0094}_{-0.0086}$
A_{143}^{tSZ}	$4.7^{+4.0}_{-4.4}$	Y_P^{BBN}	$0.24675^{+0.00010}_{-0.00011}$	$f\sigma_8(0.51)$	$0.4711^{+0.0083}_{-0.0079}$
A_{100}^{PS}	248^{+60}_{-50}	$10^5 D/H$	$2.571^{+0.053}_{-0.049}$	$\sigma_8(0.51)$	$0.6210^{+0.0089}_{-0.0080}$
A_{143}^{PS}	42^{+20}_{-20}	Age/Gyr	$13.778^{+0.040}_{-0.040}$	$f\sigma_8(0.61)$	$0.4666^{+0.0078}_{-0.0073}$
A_{217}^{PS}	109^{+20}_{-30}	z_*	$1089.69^{+0.43}_{-0.42}$	$\sigma_8(0.61)$	$0.5911^{+0.0085}_{-0.0076}$
A^{kSZ}	—	r_*	$144.76^{+0.46}_{-0.44}$	$f\sigma_8(2.33)$	$0.2983^{+0.0044}_{-0.0039}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	$100\theta_*$	$1.04127^{+0.00057}_{-0.00059}$	$\sigma_8(2.33)$	$0.3077^{+0.0045}_{-0.0043}$
c_{217}	$0.9996^{+0.0038}_{-0.0027}$	$D_M(z_*)/\text{Gpc}$	$13.903^{+0.045}_{-0.043}$	f_{2000}^{143}	29^{+6}_{-5}
H_0	$68.01^{+0.80}_{-0.79}$	z_{drag}	$1060.01^{+0.61}_{-0.65}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
Ω_Λ	$0.694^{+0.010}_{-0.011}$	r_{drag}	$147.40^{+0.50}_{-0.48}$	f_{2000}^{217}	$106.6^{+3.6}_{-3.7}$
Ω_m	$0.306^{+0.011}_{-0.010}$	k_D	$0.14060^{+0.00061}_{-0.00064}$	χ^2_{lensing}	$9.26 (\nu: 0.3)$
$\Omega_m h^2$	$0.1416^{+0.0017}_{-0.0017}$	$100\theta_D$	$0.16072^{+0.00038}_{-0.00035}$	χ^2_{small}	$397.5 (\nu: 2.3)$
$\Omega_m h^3$	$0.09629^{+0.00062}_{-0.00065}$	z_{eq}	3368^{+41}_{-41}	χ^2_{lowl}	$22.85 (\nu: 0.3)$
σ_8	$0.809^{+0.012}_{-0.011}$	k_{eq}	$0.01028^{+0.00012}_{-0.00013}$	χ^2_{H073p45}	$10.8 (\nu: 1.3)$
S_8	$0.817^{+0.020}_{-0.019}$	$100\theta_{\text{eq}}$	$0.8198^{+0.0079}_{-0.0076}$	$\chi^2_{6\text{DF}}$	$0.022 (\nu: 0.0)$
$\sigma_8 \Omega_m^{0.5}$	$0.447^{+0.011}_{-0.011}$	$100\theta_{s,\text{eq}}$	$0.4527^{+0.0041}_{-0.0039}$	χ^2_{MGS}	$1.61 (\nu: 0.1)$
$\sigma_8 \Omega_m^{0.25}$	$0.601^{+0.011}_{-0.011}$	$H(0.15)$	$73.24^{+0.69}_{-0.68}$	χ^2_{DR12BAO}	$3.98 (\nu: 0.3)$
$\sigma_8/h^{0.5}$	$0.980^{+0.017}_{-0.016}$	$D_M(0.15)$	$637.8^{+6.8}_{-6.7}$	χ^2_{prior}	$9.7 (\nu: 9.9)$
$r_{\text{drag}} h$	$100.3^{+1.4}_{-1.4}$	$H(0.38)$	$83.26^{+0.52}_{-0.51}$	χ^2_{CMB}	$7367 (\nu: 10475373.3)$
$\langle d^2 \rangle^{1/2}$	$2.427^{+0.040}_{-0.038}$	$D_M(0.38)$	1522^{+14}_{-14}	χ^2_{BAO}	$5.61 (\nu: 0.2)$
z_{re}	$8.0^{+1.3}_{-1.3}$	$H(0.51)$	$89.92^{+0.42}_{-0.42}$		

$$\bar{\chi}^2_{\text{eff}} = 11968.71; \Delta\bar{\chi}^2_{\text{eff}} = 9150.56; R - 1 = 0.02252$$

2.63 base_CamSpecHM_TTTEEE_lowl_lowE_lensing_post_Pantheon18_zre6p5/base_plikHM_TTTEEE_lowl_lowE_lensing_post_Pantheon18

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02236^{+0.00029}_{-0.00030}$	z_{re}	< 8.93	$D_{\text{M}}(0.38)$	1531^{+17}_{-17}
$\Omega_c h^2$	$0.1195^{+0.0022}_{-0.0022}$	$10^9 A_s$	$2.101^{+0.055}_{-0.051}$	$H(0.51)$	$89.67^{+0.49}_{-0.50}$
$100\theta_{MC}$	$1.04093^{+0.00059}_{-0.00062}$	$10^9 A_s e^{-2\tau}$	$1.880^{+0.021}_{-0.021}$	$D_{\text{M}}(0.51)$	1983^{+20}_{-19}
τ	$0.055^{+0.013}_{-0.012}$	D_{40}	1229^{+24}_{-23}	$H(0.61)$	$95.31^{+0.41}_{-0.41}$
$\ln(10^{10} A_s)$	$3.045^{+0.026}_{-0.025}$	D_{220}	5730^{+79}_{-79}	$D_{\text{M}}(0.61)$	2308^{+22}_{-21}
n_s	$0.9660^{+0.0081}_{-0.0079}$	D_{810}	2537^{+27}_{-26}	$H(2.33)$	$236.2^{+1.3}_{-1.3}$
y_{cal}	$1.0006^{+0.0049}_{-0.0048}$	D_{1420}	$816.7^{+9.6}_{-9.5}$	$D_{\text{M}}(2.33)$	5763^{+20}_{-19}
A_{217}^{CIB}	43^{+20}_{-20}	D_{2000}	$230.7^{+3.2}_{-3.2}$	$f\sigma_8(0.15)$	$0.458^{+0.012}_{-0.012}$
$\xi^{tSZ-CIB}$	—	$n_{s,0.002}$	$0.9660^{+0.0081}_{-0.0079}$	$\sigma_8(0.15)$	$0.749^{+0.010}_{-0.0095}$
A_{143}^{tSZ}	$4.7^{+3.9}_{-4.4}$	Y_P	$0.24539^{+0.00011}_{-0.00012}$	$f\sigma_8(0.38)$	$0.476^{+0.010}_{-0.0099}$
A_{100}^{PS}	249^{+60}_{-50}	Y_P^{BBN}	$0.24671^{+0.00011}_{-0.00012}$	$\sigma_8(0.38)$	$0.6634^{+0.0092}_{-0.0081}$
A_{143}^{PS}	43^{+20}_{-20}	$10^5 D/H$	$2.589^{+0.057}_{-0.052}$	$f\sigma_8(0.51)$	$0.4741^{+0.0089}_{-0.0087}$
A_{217}^{PS}	109^{+20}_{-30}	Age/Gyr	$13.797^{+0.046}_{-0.043}$	$\sigma_8(0.51)$	$0.6208^{+0.0083}_{-0.0078}$
A^{kSZ}	—	z_*	$1089.90^{+0.49}_{-0.47}$	$f\sigma_8(0.61)$	$0.4690^{+0.0082}_{-0.0079}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	r_*	$144.56^{+0.52}_{-0.51}$	$\sigma_8(0.61)$	$0.5907^{+0.0079}_{-0.0074}$
c_{217}	$0.9996^{+0.0038}_{-0.0027}$	$100\theta_*$	$1.04111^{+0.00058}_{-0.00061}$	$f\sigma_8(2.33)$	$0.2978^{+0.0040}_{-0.0038}$
H_0	$67.51^{+0.97}_{-0.99}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.885^{+0.049}_{-0.049}$	$\sigma_8(2.33)$	$0.3069^{+0.0043}_{-0.0041}$
Ω_Λ	$0.687^{+0.013}_{-0.014}$	z_{drag}	$1059.87^{+0.64}_{-0.66}$	f_{2000}^{143}	30^{+5}_{-5}
Ω_m	$0.313^{+0.014}_{-0.013}$	r_{drag}	$147.23^{+0.55}_{-0.53}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
$\Omega_m h^2$	$0.1425^{+0.0021}_{-0.0021}$	k_{D}	$0.14071^{+0.00063}_{-0.00067}$	f_{2000}^{217}	$106.9^{+3.6}_{-3.7}$
$\Omega_m h^3$	$0.09622^{+0.00061}_{-0.00065}$	$100\theta_{\text{D}}$	$0.16080^{+0.00039}_{-0.00036}$	χ_{lensing}^2	$9.21 (\nu: 0.2)$
σ_8	$0.810^{+0.012}_{-0.011}$	z_{eq}	3391^{+50}_{-50}	χ_{simall}^2	$397.0 (\nu: 1.5)$
S_8	$0.827^{+0.024}_{-0.024}$	k_{eq}	$0.01035^{+0.00015}_{-0.00015}$	χ_{lowl}^2	$23.27 (\nu: 0.4)$
$\sigma_8 \Omega_m^{0.5}$	$0.453^{+0.013}_{-0.013}$	$100\theta_{\text{eq}}$	$0.8153^{+0.0094}_{-0.0093}$	χ_{JLA}^2	$1035.22 (\nu: 0.1)$
$\sigma_8 \Omega_m^{0.25}$	$0.606^{+0.012}_{-0.012}$	$100\theta_{\text{s,eq}}$	$0.4504^{+0.0048}_{-0.0048}$	χ_{prior}^2	$9.7 (\nu: 9.7)$
$\sigma_8/h^{0.5}$	$0.986^{+0.018}_{-0.017}$	$H(0.15)$	$72.80^{+0.84}_{-0.85}$	χ_{CMB}^2	$7366 (\nu: 10475419.1)$
$r_{\text{drag}} h$	$99.4^{+1.7}_{-1.7}$	$D_{\text{M}}(0.15)$	$642.1^{+8.5}_{-8.2}$		
$\langle d^2 \rangle^{1/2}$	$2.440^{+0.042}_{-0.042}$	$H(0.38)$	$82.94^{+0.61}_{-0.62}$		

$$\bar{\chi}_{\text{eff}}^2 = 12986.49; \Delta\bar{\chi}_{\text{eff}}^2 = 9150.67; R - 1 = 0.01335$$

2.64 base_CamSpecHM_TTTEEE_lowl_lowE_lensing_post_BAO_JLA_Riess18_zre6p5/base_plikHM_TTTEEE_lowl_lowE_lensing_post_BAO

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02245^{+0.00028}_{-0.00028}$	$10^9 A_s$	$2.108^{+0.058}_{-0.055}$	$D_M(0.51)$	1973^{+16}_{-16}
$\Omega_c h^2$	$0.1184^{+0.0017}_{-0.0018}$	$10^9 A_s e^{-2\tau}$	$1.877^{+0.021}_{-0.020}$	$H(0.61)$	$95.51^{+0.36}_{-0.35}$
$100\theta_{MC}$	$1.04110^{+0.00057}_{-0.00060}$	D_{40}	1224^{+24}_{-23}	$D_M(0.61)$	2296^{+17}_{-17}
τ	$0.058^{+0.014}_{-0.013}$	D_{220}	5740^{+77}_{-76}	$H(2.33)$	$235.6^{+1.1}_{-1.2}$
$\ln(10^{10} A_s)$	$3.048^{+0.028}_{-0.025}$	D_{810}	2538^{+26}_{-26}	$D_M(2.33)$	5754^{+18}_{-17}
n_s	$0.9687^{+0.0074}_{-0.0075}$	D_{1420}	$818.1^{+9.0}_{-9.2}$	$f\sigma_8(0.15)$	$0.452^{+0.011}_{-0.010}$
y_{cal}	$1.0009^{+0.0047}_{-0.0047}$	D_{2000}	$231.2^{+3.0}_{-3.1}$	$\sigma_8(0.15)$	$0.748^{+0.011}_{-0.0099}$
A_{217}^{CIB}	43^{+20}_{-20}	$n_{s,0.002}$	$0.9687^{+0.0074}_{-0.0075}$	$f\sigma_8(0.38)$	$0.4718^{+0.0090}_{-0.0086}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.24543^{+0.00010}_{-0.00011}$	$\sigma_8(0.38)$	$0.6634^{+0.0094}_{-0.0086}$
A_{143}^{tSZ}	$4.8^{+3.9}_{-4.5}$	Y_P^{BBN}	$0.24675^{+0.00010}_{-0.00011}$	$f\sigma_8(0.51)$	$0.4710^{+0.0082}_{-0.0078}$
A_{100}^{PS}	248^{+60}_{-50}	$10^5 D/H$	$2.571^{+0.053}_{-0.050}$	$\sigma_8(0.51)$	$0.6211^{+0.0088}_{-0.0081}$
A_{143}^{PS}	42^{+20}_{-20}	Age/Gyr	$13.777^{+0.040}_{-0.041}$	$f\sigma_8(0.61)$	$0.4665^{+0.0076}_{-0.0072}$
A_{217}^{PS}	109^{+20}_{-30}	z_*	$1089.68^{+0.42}_{-0.41}$	$\sigma_8(0.61)$	$0.5912^{+0.0085}_{-0.0077}$
A^{kSZ}	—	r_*	$144.77^{+0.48}_{-0.44}$	$f\sigma_8(2.33)$	$0.2983^{+0.0044}_{-0.0039}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	$100\theta_*$	$1.04128^{+0.00056}_{-0.00059}$	$\sigma_8(2.33)$	$0.3078^{+0.0045}_{-0.0043}$
c_{217}	$0.9996^{+0.0038}_{-0.0027}$	$D_M(z_*)/\text{Gpc}$	$13.903^{+0.046}_{-0.042}$	f_{2000}^{143}	29^{+6}_{-5}
H_0	$68.03^{+0.81}_{-0.78}$	z_{drag}	$1060.01^{+0.61}_{-0.65}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
Ω_Λ	$0.694^{+0.010}_{-0.010}$	r_{drag}	$147.41^{+0.52}_{-0.48}$	f_{2000}^{217}	$106.6^{+3.6}_{-3.7}$
Ω_m	$0.306^{+0.010}_{-0.010}$	k_D	$0.14059^{+0.00060}_{-0.00065}$	χ^2_{lensing}	$9.27 (\nu: 0.3)$
$\Omega_m h^2$	$0.1415^{+0.0017}_{-0.0018}$	$100\theta_D$	$0.16072^{+0.00038}_{-0.00035}$	χ^2_{small}	$397.5 (\nu: 2.3)$
$\Omega_m h^3$	$0.09629^{+0.00062}_{-0.00066}$	z_{eq}	3367^{+40}_{-42}	χ^2_{lowl}	$22.83 (\nu: 0.3)$
σ_8	$0.809^{+0.012}_{-0.011}$	k_{eq}	$0.01028^{+0.00012}_{-0.00013}$	χ^2_{H073p45}	$10.7 (\nu: 1.2)$
S_8	$0.816^{+0.020}_{-0.020}$	$100\theta_{\text{eq}}$	$0.8200^{+0.0078}_{-0.0075}$	χ^2_{JLA}	$706.63 (\nu: 0.0)$
$\sigma_8 \Omega_m^{0.5}$	$0.447^{+0.011}_{-0.011}$	$100\theta_{s,\text{eq}}$	$0.4528^{+0.0041}_{-0.0039}$	$\chi^2_{6\text{DF}}$	$0.022 (\nu: 0.0)$
$\sigma_8 \Omega_m^{0.25}$	$0.601^{+0.011}_{-0.011}$	$H(0.15)$	$73.25^{+0.70}_{-0.67}$	χ^2_{MGS}	$1.63 (\nu: 0.1)$
$\sigma_8/h^{0.5}$	$0.980^{+0.016}_{-0.016}$	$D_M(0.15)$	$637.7^{+6.7}_{-6.8}$	χ^2_{DR12BAO}	$3.94 (\nu: 0.3)$
$r_{\text{drag}} h$	$100.3^{+1.4}_{-1.3}$	$H(0.38)$	$83.27^{+0.52}_{-0.50}$	χ^2_{prior}	$9.6 (\nu: 9.9)$
$\langle d^2 \rangle^{1/2}$	$2.427^{+0.040}_{-0.037}$	$D_M(0.38)$	1522^{+13}_{-14}	χ^2_{CMB}	$7368 (\nu: 10476014.4)$
z_{re}	$8.0^{+1.3}_{-1.3}$	$H(0.51)$	$89.93^{+0.42}_{-0.41}$	χ^2_{BAO}	$5.59 (\nu: 0.1)$

$$\bar{\chi}^2_{\text{eff}} = 12675.50; \Delta\bar{\chi}^2_{\text{eff}} = 9150.72; R - 1 = 0.05354$$

2.65 base_CamSpecHM_TTTEEE_lowl_lowE_lensing_post_BAO_Pantheon18_zre6p5/base_plikHM_TTTEEE_lowl_lowE_lensing_post_BAO

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02239^{+0.00028}_{-0.00029}$	$10^9 A_s$	$2.104^{+0.056}_{-0.053}$	$D_M(0.51)$	1979^{+16}_{-16}
$\Omega_c h^2$	$0.1191^{+0.0018}_{-0.0018}$	$10^9 A_s e^{-2\tau}$	$1.879^{+0.021}_{-0.020}$	$H(0.61)$	$95.39^{+0.34}_{-0.36}$
$100\theta_{MC}$	$1.04099^{+0.00056}_{-0.00059}$	D_{40}	1227^{+23}_{-23}	$D_M(0.61)$	2303^{+17}_{-17}
τ	$0.056^{+0.013}_{-0.012}$	D_{220}	5733^{+80}_{-77}	$H(2.33)$	$236.0^{+1.1}_{-1.1}$
$\ln(10^{10} A_s)$	$3.046^{+0.027}_{-0.025}$	D_{810}	2538^{+27}_{-26}	$D_M(2.33)$	5760^{+18}_{-17}
n_s	$0.9671^{+0.0074}_{-0.0073}$	D_{1420}	$817.2^{+9.3}_{-9.4}$	$f\sigma_8(0.15)$	$0.455^{+0.010}_{-0.010}$
y_{cal}	$1.0007^{+0.0049}_{-0.0048}$	D_{2000}	$230.9^{+3.1}_{-3.2}$	$\sigma_8(0.15)$	$0.748^{+0.011}_{-0.0096}$
A_{217}^{CIB}	43^{+20}_{-20}	$n_{s,0.002}$	$0.9671^{+0.0074}_{-0.0073}$	$f\sigma_8(0.38)$	$0.4740^{+0.0090}_{-0.0089}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.24540^{+0.00010}_{-0.00012}$	$\sigma_8(0.38)$	$0.6633^{+0.0091}_{-0.0087}$
A_{143}^{tSZ}	$4.7^{+3.9}_{-4.4}$	Y_P^{BBN}	$0.24673^{+0.00010}_{-0.00012}$	$f\sigma_8(0.51)$	$0.4727^{+0.0082}_{-0.0080}$
A_{100}^{PS}	249^{+60}_{-50}	$10^5 D/H$	$2.582^{+0.055}_{-0.050}$	$\sigma_8(0.51)$	$0.6208^{+0.0085}_{-0.0081}$
A_{143}^{PS}	42^{+20}_{-20}	Age/Gyr	$13.789^{+0.041}_{-0.038}$	$f\sigma_8(0.61)$	$0.4679^{+0.0076}_{-0.0074}$
A_{217}^{PS}	109^{+20}_{-30}	z_*	$1089.82^{+0.43}_{-0.41}$	$\sigma_8(0.61)$	$0.5908^{+0.0081}_{-0.0077}$
A^{kSZ}	—	r_*	$144.66^{+0.45}_{-0.44}$	$f\sigma_8(2.33)$	$0.2979^{+0.0041}_{-0.0039}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	$100\theta_*$	$1.04118^{+0.00056}_{-0.00059}$	$\sigma_8(2.33)$	$0.3072^{+0.0043}_{-0.0041}$
c_{217}	$0.9996^{+0.0038}_{-0.0027}$	$D_M(z_*)/\text{Gpc}$	$13.894^{+0.044}_{-0.042}$	f_{2000}^{143}	29^{+6}_{-5}
H_0	$67.72^{+0.78}_{-0.79}$	z_{drag}	$1059.91^{+0.63}_{-0.64}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
Ω_Λ	$0.690^{+0.010}_{-0.011}$	r_{drag}	$147.32^{+0.49}_{-0.47}$	f_{2000}^{217}	$106.8^{+3.6}_{-3.6}$
Ω_m	$0.310^{+0.011}_{-0.010}$	k_D	$0.14064^{+0.00061}_{-0.00064}$	χ^2_{lensing}	$9.17 (\nu: 0.2)$
$\Omega_m h^2$	$0.1421^{+0.0017}_{-0.0017}$	$100\theta_D$	$0.16077^{+0.00038}_{-0.00036}$	χ^2_{small}	$397.2 (\nu: 1.8)$
$\Omega_m h^3$	$0.09623^{+0.00061}_{-0.00065}$	z_{eq}	3380^{+40}_{-41}	χ^2_{lowl}	$23.07 (\nu: 0.3)$
σ_8	$0.809^{+0.012}_{-0.011}$	k_{eq}	$0.01032^{+0.00012}_{-0.00012}$	χ^2_{JLA}	$1035.04 (\nu: 0.0)$
S_8	$0.823^{+0.020}_{-0.020}$	$100\theta_{\text{eq}}$	$0.8174^{+0.0076}_{-0.0074}$	$\chi^2_{6\text{DF}}$	$0.042 (\nu: 0.0)$
$\sigma_8 \Omega_m^{0.5}$	$0.451^{+0.011}_{-0.011}$	$100\theta_{s,\text{eq}}$	$0.4515^{+0.0039}_{-0.0038}$	χ^2_{MGS}	$1.33 (\nu: 0.1)$
$\sigma_8 \Omega_m^{0.25}$	$0.604^{+0.011}_{-0.011}$	$H(0.15)$	$72.99^{+0.67}_{-0.68}$	χ^2_{DR12BAO}	$4.5 (\nu: 0.7)$
$\sigma_8/h^{0.5}$	$0.984^{+0.016}_{-0.016}$	$D_M(0.15)$	$640.3^{+6.8}_{-6.6}$	χ^2_{prior}	$9.7 (\nu: 9.8)$
$r_{\text{drag}} h$	$99.8^{+1.3}_{-1.3}$	$H(0.38)$	$83.08^{+0.50}_{-0.51}$	χ^2_{CMB}	$7366 (\nu: 10475431.8)$
$\langle d^2 \rangle^{1/2}$	$2.434^{+0.040}_{-0.039}$	$D_M(0.38)$	1527^{+14}_{-13}	χ^2_{BAO}	$5.92 (\nu: 0.4)$
z_{re}	$7.9^{+1.2}_{-1.3}$	$H(0.51)$	$89.78^{+0.41}_{-0.42}$		

$$\bar{\chi}^2_{\text{eff}} = 12992.25; \Delta\bar{\chi}^2_{\text{eff}} = 9150.51; R - 1 = 0.01504$$

2.66 base_CamSpecHM_TTTEEE_lowl_lowE_lensing_post_BAO_Pantheon18_Riess18_zre6p5/base_plikHM_TTTEEE_lowl_lowE_lensing_p

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02246^{+0.00027}_{-0.00029}$	$10^9 A_s$	$2.108^{+0.058}_{-0.055}$	$D_M(0.51)$	1972^{+16}_{-16}
$\Omega_c h^2$	$0.1184^{+0.0017}_{-0.0017}$	$10^9 A_s e^{-2\tau}$	$1.877^{+0.021}_{-0.020}$	$H(0.61)$	$95.51^{+0.36}_{-0.35}$
$100\theta_{MC}$	$1.04110^{+0.00059}_{-0.00060}$	D_{40}	1224^{+23}_{-23}	$D_M(0.61)$	2296^{+17}_{-17}
τ	$0.058^{+0.014}_{-0.013}$	D_{220}	5740^{+77}_{-76}	$H(2.33)$	$235.6^{+1.1}_{-1.1}$
$\ln(10^{10} A_s)$	$3.048^{+0.027}_{-0.026}$	D_{810}	2538^{+26}_{-26}	$D_M(2.33)$	5754^{+17}_{-17}
n_s	$0.9687^{+0.0075}_{-0.0073}$	D_{1420}	$818.1^{+9.1}_{-9.4}$	$f\sigma_8(0.15)$	$0.452^{+0.010}_{-0.0099}$
y_{cal}	$1.0009^{+0.0047}_{-0.0048}$	D_{2000}	$231.2^{+3.0}_{-3.2}$	$\sigma_8(0.15)$	$0.748^{+0.011}_{-0.0099}$
A_{217}^{CIB}	43^{+20}_{-20}	$n_{s,0.002}$	$0.9687^{+0.0075}_{-0.0073}$	$f\sigma_8(0.38)$	$0.4716^{+0.0090}_{-0.0084}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.24543^{+0.00010}_{-0.00011}$	$\sigma_8(0.38)$	$0.6634^{+0.0094}_{-0.0086}$
A_{143}^{tSZ}	$4.7^{+4.0}_{-4.4}$	Y_P^{BBN}	$0.24675^{+0.00010}_{-0.00011}$	$f\sigma_8(0.51)$	$0.4709^{+0.0082}_{-0.0078}$
A_{100}^{PS}	248^{+60}_{-50}	$10^5 D/H$	$2.570^{+0.053}_{-0.049}$	$\sigma_8(0.51)$	$0.6211^{+0.0089}_{-0.0080}$
A_{143}^{PS}	42^{+20}_{-20}	Age/Gyr	$13.777^{+0.040}_{-0.039}$	$f\sigma_8(0.61)$	$0.4664^{+0.0077}_{-0.0073}$
A_{217}^{PS}	109^{+20}_{-30}	z_*	$1089.68^{+0.42}_{-0.41}$	$\sigma_8(0.61)$	$0.5911^{+0.0085}_{-0.0077}$
A^{kSZ}	—	r_*	$144.78^{+0.45}_{-0.43}$	$f\sigma_8(2.33)$	$0.2983^{+0.0044}_{-0.0039}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	$100\theta_*$	$1.04127^{+0.00059}_{-0.00059}$	$\sigma_8(2.33)$	$0.3078^{+0.0045}_{-0.0043}$
c_{217}	$0.9996^{+0.0038}_{-0.0027}$	$D_M(z_*)/\text{Gpc}$	$13.904^{+0.044}_{-0.042}$	f_{2000}^{143}	29^{+6}_{-5}
H_0	$68.04^{+0.77}_{-0.77}$	z_{drag}	$1060.02^{+0.60}_{-0.66}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
Ω_Λ	$0.694^{+0.010}_{-0.010}$	r_{drag}	$147.42^{+0.49}_{-0.47}$	f_{2000}^{217}	$106.6^{+3.6}_{-3.7}$
Ω_m	$0.306^{+0.010}_{-0.010}$	k_D	$0.14059^{+0.00060}_{-0.00064}$	$\chi^2_{lensing}$	$9.28 (\nu: 0.3)$
$\Omega_m h^2$	$0.1415^{+0.0017}_{-0.0017}$	$100\theta_D$	$0.16072^{+0.00038}_{-0.00034}$	χ^2_{small}	$397.5 (\nu: 2.3)$
$\Omega_m h^3$	$0.09629^{+0.00062}_{-0.00065}$	z_{eq}	3367^{+40}_{-40}	χ^2_{lowl}	$22.83 (\nu: 0.3)$
σ_8	$0.808^{+0.012}_{-0.011}$	k_{eq}	$0.01028^{+0.00012}_{-0.00012}$	$\chi^2_{H073p45}$	$10.7 (\nu: 1.2)$
S_8	$0.816^{+0.020}_{-0.019}$	$100\theta_{eq}$	$0.8201^{+0.0077}_{-0.0074}$	χ^2_{JLA}	$1034.88 (\nu: 0.0)$
$\sigma_8 \Omega_m^{0.5}$	$0.447^{+0.011}_{-0.010}$	$100\theta_{s,eq}$	$0.4529^{+0.0040}_{-0.0038}$	χ^2_{6DF}	$0.020 (\nu: 0.0)$
$\sigma_8 \Omega_m^{0.25}$	$0.601^{+0.011}_{-0.010}$	$H(0.15)$	$73.26^{+0.69}_{-0.66}$	χ^2_{MGS}	$1.64 (\nu: 0.1)$
$\sigma_8/h^{0.5}$	$0.980^{+0.017}_{-0.015}$	$D_M(0.15)$	$637.6^{+6.5}_{-6.5}$	$\chi^2_{DR12BAO}$	$3.92 (\nu: 0.2)$
$r_{drag} h$	$100.3^{+1.4}_{-1.3}$	$H(0.38)$	$83.28^{+0.51}_{-0.50}$	χ^2_{prior}	$9.7 (\nu: 9.9)$
$\langle d^2 \rangle^{1/2}$	$2.426^{+0.040}_{-0.037}$	$D_M(0.38)$	1522^{+13}_{-14}	χ^2_{CMB}	$7367 (\nu: 10475327.7)$
z_{re}	$8.0^{+1.3}_{-1.3}$	$H(0.51)$	$89.94^{+0.41}_{-0.41}$	χ^2_{BAO}	$5.58 (\nu: 0.1)$

$$\bar{\chi}^2_{\text{eff}} = 13003.54; \Delta\bar{\chi}^2_{\text{eff}} = 9150.53; R - 1 = 0.02380$$

2.67 base_CamSpecHM_TT/base_plikHM_TT

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02245^{+0.00056}_{-0.00056}$	$r_{\text{drag}} h$	$100.7^{+4.3}_{-4.3}$	$100\theta_{\text{s,eq}}$	$0.454^{+0.012}_{-0.012}$
$\Omega_c h^2$	$0.1180^{+0.0055}_{-0.0052}$	$\langle d^2 \rangle^{1/2}$	$2.59^{+0.12}_{-0.14}$	$H(0.15)$	$73.4^{+2.2}_{-2.2}$
$100\theta_{MC}$	$1.0412^{+0.0011}_{-0.0011}$	z_{re}	$14.1^{+5.1}_{-5.7}$	$D_{\text{M}}(0.15)$	636^{+22}_{-21}
τ	$0.131^{+0.068}_{-0.077}$	$10^9 A_s$	$2.44^{+0.32}_{-0.33}$	$H(0.38)$	$83.4^{+1.6}_{-1.6}$
$\ln(10^{10} A_s)$	$3.19^{+0.13}_{-0.14}$	$10^9 A_s e^{-2\tau}$	$1.871^{+0.033}_{-0.032}$	$D_{\text{M}}(0.38)$	1519^{+43}_{-42}
n_s	$0.972^{+0.017}_{-0.017}$	D_{40}	1254^{+38}_{-35}	$H(0.51)$	$90.0^{+1.3}_{-1.2}$
A_{217}^{CIB}	42^{+20}_{-20}	D_{220}	5721^{+82}_{-81}	$D_{\text{M}}(0.51)$	1969^{+50}_{-49}
$\xi^{tSZ-CIB}$	—	D_{810}	2528^{+28}_{-28}	$H(0.61)$	$95.6^{+1.1}_{-0.98}$
A_{143}^{tSZ}	$4.8^{+3.8}_{-4.2}$	D_{1420}	814^{+10}_{-10}	$D_{\text{M}}(0.61)$	2292^{+54}_{-53}
A_{100}^{PS}	243^{+60}_{-60}	D_{2000}	$231.7^{+4.3}_{-4.3}$	$H(2.33)$	$235.3^{+3.2}_{-3.0}$
A_{143}^{PS}	39^{+20}_{-20}	$n_{s,0.002}$	$0.972^{+0.017}_{-0.017}$	$D_{\text{M}}(2.33)$	5752^{+44}_{-46}
A_{217}^{PS}	109^{+20}_{-30}	Y_P	$0.24542^{+0.00023}_{-0.00024}$	$f\sigma_8(0.15)$	$0.483^{+0.027}_{-0.027}$
A^{kSZ}	< 8.48	Y_P^{BBN}	$0.24675^{+0.00023}_{-0.00024}$	$\sigma_8(0.15)$	$0.802^{+0.046}_{-0.051}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	$10^5 D/H$	$2.57^{+0.11}_{-0.10}$	$f\sigma_8(0.38)$	$0.505^{+0.026}_{-0.027}$
c_{217}	$0.9995^{+0.0036}_{-0.0026}$	Age/Gyr	$13.772^{+0.098}_{-0.099}$	$\sigma_8(0.38)$	$0.712^{+0.043}_{-0.047}$
y_{cal}	$1.0002^{+0.0049}_{-0.0048}$	z_*	$1089.7^{+1.1}_{-1.1}$	$f\sigma_8(0.51)$	$0.504^{+0.026}_{-0.027}$
H_0	$68.2^{+2.5}_{-2.5}$	r_*	$144.9^{+1.1}_{-1.1}$	$\sigma_8(0.51)$	$0.667^{+0.041}_{-0.045}$
Ω_Λ	$0.697^{+0.031}_{-0.034}$	$100\theta_*$	$1.0414^{+0.0010}_{-0.0011}$	$f\sigma_8(0.61)$	$0.500^{+0.026}_{-0.028}$
Ω_m	$0.303^{+0.034}_{-0.031}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.91^{+0.10}_{-0.10}$	$\sigma_8(0.61)$	$0.635^{+0.040}_{-0.044}$
$\Omega_m h^2$	$0.1411^{+0.0051}_{-0.0049}$	z_{drag}	$1060.0^{+1.1}_{-1.1}$	$f\sigma_8(2.33)$	$0.321^{+0.021}_{-0.023}$
$\Omega_m h^3$	$0.09623^{+0.00096}_{-0.00095}$	r_{drag}	$147.5^{+1.1}_{-1.1}$	$\sigma_8(2.33)$	$0.331^{+0.023}_{-0.025}$
σ_8	$0.867^{+0.048}_{-0.053}$	k_{D}	$0.1404^{+0.0011}_{-0.0011}$	f_{2000}^{143}	27^{+7}_{-7}
S_8	$0.872^{+0.052}_{-0.051}$	$100\theta_{\text{D}}$	$0.16077^{+0.00059}_{-0.00058}$	$f_{2000}^{143 \times 217}$	30^{+5}_{-5}
$\sigma_8 \Omega_m^{0.5}$	$0.477^{+0.028}_{-0.028}$	z_{eq}	3356^{+120}_{-120}	f_{2000}^{217}	$105.3^{+4.8}_{-4.9}$
$\sigma_8 \Omega_m^{0.25}$	$0.643^{+0.033}_{-0.034}$	k_{eq}	$0.01024^{+0.00037}_{-0.00035}$	χ^2_{prior}	$7.2 (\nu: 6.0)$
$\sigma_8/h^{0.5}$	$1.050^{+0.053}_{-0.057}$	$100\theta_{\text{eq}}$	$0.822^{+0.023}_{-0.023}$		

Best-fit $\chi^2_{\text{eff}} = 7046.70$; $\Delta\chi^2_{\text{eff}} = 6292.97$; $\bar{\chi}^2_{\text{eff}} = 7066.87$; $\Delta\bar{\chi}^2_{\text{eff}} = 6292.41$; $R - 1 = 0.00646$
 χ^2_{eff} : CMB - CamSpec like_10.7HM: 7045.25

2.68 base_CamSpecHM_TT_lowl/base_plikHM_TT_lowl

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02240^{+0.00054}_{-0.00053}$	$\langle d^2 \rangle^{1/2}$	$2.54^{+0.11}_{-0.12}$	$D_M(0.15)$	636^{+20}_{-19}
$\Omega_c h^2$	$0.1179^{+0.0051}_{-0.0049}$	z_{re}	$12.5^{+4.9}_{-5.4}$	$H(0.38)$	$83.4^{+1.5}_{-1.4}$
$100\theta_{MC}$	$1.0412^{+0.0010}_{-0.0010}$	$10^9 A_s$	$2.34^{+0.29}_{-0.28}$	$D_M(0.38)$	1519^{+39}_{-39}
τ	$0.111^{+0.063}_{-0.067}$	$10^9 A_s e^{-2\tau}$	$1.870^{+0.030}_{-0.030}$	$H(0.51)$	$90.0^{+1.2}_{-1.1}$
$\ln(10^{10} A_s)$	$3.15^{+0.12}_{-0.13}$	D_{40}	1239^{+32}_{-31}	$D_M(0.51)$	1969^{+46}_{-46}
n_s	$0.972^{+0.016}_{-0.015}$	D_{220}	5713^{+82}_{-81}	$H(0.61)$	$95.55^{+0.98}_{-0.90}$
y_{cal}	$1.0003^{+0.0049}_{-0.0049}$	D_{810}	2530^{+27}_{-27}	$D_M(0.61)$	2293^{+50}_{-50}
A_{217}^{CIB}	42^{+20}_{-20}	D_{1420}	815^{+10}_{-10}	$H(2.33)$	$235.2^{+3.0}_{-2.9}$
$\xi^{tSZ-CIB}$	—	D_{2000}	$231.5^{+4.2}_{-4.2}$	$D_M(2.33)$	5754^{+41}_{-42}
A_{143}^{tSZ}	$4.7^{+3.9}_{-4.2}$	$n_{s,0.002}$	$0.972^{+0.016}_{-0.015}$	$f\sigma_8(0.15)$	$0.473^{+0.026}_{-0.026}$
A_{100}^{PS}	244^{+60}_{-60}	Y_P	$0.24540^{+0.00022}_{-0.00023}$	$\sigma_8(0.15)$	$0.786^{+0.042}_{-0.045}$
A_{143}^{PS}	40^{+20}_{-20}	Y_P^{BBN}	$0.24673^{+0.00022}_{-0.00023}$	$f\sigma_8(0.38)$	$0.494^{+0.024}_{-0.025}$
A_{217}^{PS}	109^{+20}_{-30}	$10^5 D/H$	$2.58^{+0.10}_{-0.098}$	$\sigma_8(0.38)$	$0.698^{+0.039}_{-0.041}$
A^{kSZ}	< 8.57	Age/Gyr	$13.777^{+0.091}_{-0.093}$	$f\sigma_8(0.51)$	$0.494^{+0.024}_{-0.025}$
c_{100}	$0.9985^{+0.0022}_{-0.0027}$	z_*	$1089.7^{+1.0}_{-1.0}$	$\sigma_8(0.51)$	$0.654^{+0.037}_{-0.039}$
c_{217}	$0.9996^{+0.0036}_{-0.0026}$	r_*	$145.0^{+1.1}_{-1.1}$	$f\sigma_8(0.61)$	$0.490^{+0.024}_{-0.025}$
H_0	$68.2^{+2.3}_{-2.3}$	$100\theta_*$	$1.0414^{+0.0010}_{-0.00099}$	$\sigma_8(0.61)$	$0.622^{+0.036}_{-0.038}$
Ω_Λ	$0.697^{+0.029}_{-0.032}$	$D_M(z_*)/\text{Gpc}$	$13.920^{+0.098}_{-0.099}$	$f\sigma_8(2.33)$	$0.314^{+0.019}_{-0.020}$
Ω_m	$0.303^{+0.032}_{-0.029}$	z_{drag}	$1059.9^{+1.0}_{-1.0}$	$\sigma_8(2.33)$	$0.324^{+0.021}_{-0.021}$
$\Omega_m h^2$	$0.1409^{+0.0047}_{-0.0046}$	r_{drag}	$147.6^{+1.0}_{-1.0}$	f_{2000}^{143}	28^{+7}_{-7}
$\Omega_m h^3$	$0.09613^{+0.00096}_{-0.00093}$	k_D	$0.1403^{+0.0010}_{-0.0010}$	$f_{2000}^{143 \times 217}$	31^{+5}_{-5}
σ_8	$0.850^{+0.044}_{-0.047}$	$100\theta_D$	$0.16083^{+0.00058}_{-0.00057}$	f_{2000}^{217}	$105.7^{+4.6}_{-4.7}$
S_8	$0.854^{+0.050}_{-0.049}$	z_{eq}	3353^{+110}_{-110}	χ_{lowl}^2	$24.9 (\nu: 1.5)$
$\sigma_8 \Omega_m^{0.5}$	$0.468^{+0.027}_{-0.027}$	k_{eq}	$0.01023^{+0.00035}_{-0.00034}$	χ_{prior}^2	$7.3 (\nu: 6.0)$
$\sigma_8 \Omega_m^{0.25}$	$0.631^{+0.031}_{-0.032}$	$100\theta_{\text{eq}}$	$0.823^{+0.022}_{-0.022}$	χ_{CMB}^2	$3939 (\nu: 4948385.4)$
$\sigma_8/h^{0.5}$	$1.029^{+0.049}_{-0.052}$	$100\theta_{\text{s,eq}}$	$0.454^{+0.011}_{-0.011}$		
$r_{\text{drag}} h$	$100.7^{+4.1}_{-4.0}$	$H(0.15)$	$73.4^{+2.0}_{-2.0}$		

Best-fit $\chi_{\text{eff}}^2 = 7072.29$; $\Delta\chi_{\text{eff}}^2 = 6292.81$; $\bar{\chi}_{\text{eff}}^2 = 7092.24$; $\Delta\bar{\chi}_{\text{eff}}^2 = 6292.04$; $R - 1 = 0.00797$
 χ_{eff}^2 : CMB - commander_dx12_v3_2_29: 24.50 (Δ -0.39) CamSpec like_10.7HM: 7046.38

2.69 base_CamSpecHM_TT_lowl_post_BAO/base_plikHM_TT_lowl_post_BAO

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02238^{+0.00042}_{-0.00042}$	z_{re}	$12.4^{+4.2}_{-4.5}$	$D_{\text{M}}(0.38)$	1521^{+20}_{-20}
$\Omega_c h^2$	$0.1181^{+0.0025}_{-0.0025}$	$10^9 A_s$	$2.33^{+0.24}_{-0.25}$	$H(0.51)$	$89.93^{+0.65}_{-0.63}$
$100\theta_{MC}$	$1.04114^{+0.00086}_{-0.00086}$	$10^9 A_s e^{-2\tau}$	$1.871^{+0.023}_{-0.023}$	$D_{\text{M}}(0.51)$	1972^{+24}_{-24}
τ	$0.108^{+0.051}_{-0.056}$	D_{40}	1238^{+31}_{-30}	$H(0.61)$	$95.50^{+0.56}_{-0.54}$
$\ln(10^{10} A_s)$	$3.15^{+0.10}_{-0.11}$	D_{220}	5712^{+80}_{-79}	$D_{\text{M}}(0.61)$	2295^{+26}_{-26}
n_s	$0.972^{+0.010}_{-0.0097}$	D_{810}	2530^{+27}_{-27}	$H(2.33)$	$235.4^{+1.6}_{-1.6}$
y_{cal}	$1.0003^{+0.0048}_{-0.0049}$	D_{1420}	$815.0^{+9.6}_{-9.9}$	$D_{\text{M}}(2.33)$	5756^{+27}_{-27}
A_{217}^{CIB}	42^{+20}_{-20}	D_{2000}	$231.3^{+3.7}_{-3.8}$	$f\sigma_8(0.15)$	$0.474^{+0.024}_{-0.025}$
$\xi^{tSZ-CIB}$	—	$n_{s,0.002}$	$0.972^{+0.010}_{-0.0097}$	$\sigma_8(0.15)$	$0.785^{+0.039}_{-0.042}$
A_{143}^{tSZ}	$4.7^{+3.9}_{-4.3}$	Y_P	$0.24540^{+0.00016}_{-0.00017}$	$f\sigma_8(0.38)$	$0.495^{+0.024}_{-0.025}$
A_{100}^{PS}	244^{+60}_{-50}	Y_P^{BBN}	$0.24672^{+0.00016}_{-0.00018}$	$\sigma_8(0.38)$	$0.697^{+0.035}_{-0.038}$
A_{143}^{PS}	40^{+20}_{-20}	$10^5 D/H$	$2.585^{+0.079}_{-0.076}$	$f\sigma_8(0.51)$	$0.494^{+0.024}_{-0.025}$
A_{217}^{PS}	109^{+20}_{-30}	Age/Gyr	$13.782^{+0.061}_{-0.062}$	$\sigma_8(0.51)$	$0.653^{+0.033}_{-0.035}$
A^{kSZ}	—	z_*	$1089.75^{+0.64}_{-0.63}$	$f\sigma_8(0.61)$	$0.489^{+0.024}_{-0.025}$
c_{100}	$0.9985^{+0.0022}_{-0.0027}$	r_*	$144.91^{+0.63}_{-0.62}$	$\sigma_8(0.61)$	$0.621^{+0.032}_{-0.034}$
c_{217}	$0.9996^{+0.0036}_{-0.0027}$	$100\theta_*$	$1.04133^{+0.00084}_{-0.00084}$	$f\sigma_8(2.33)$	$0.313^{+0.016}_{-0.017}$
H_0	$68.1^{+1.2}_{-1.2}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.916^{+0.061}_{-0.060}$	$\sigma_8(2.33)$	$0.324^{+0.017}_{-0.018}$
Ω_Λ	$0.696^{+0.015}_{-0.015}$	z_{drag}	$1059.82^{+0.91}_{-0.92}$	f_{2000}^{143}	28^{+6}_{-6}
Ω_m	$0.304^{+0.015}_{-0.015}$	r_{drag}	$147.58^{+0.68}_{-0.67}$	$f_{2000}^{143 \times 217}$	31^{+5}_{-5}
$\Omega_m h^2$	$0.1412^{+0.0024}_{-0.0024}$	k_{D}	$0.14036^{+0.00088}_{-0.00087}$	f_{2000}^{217}	$105.9^{+4.3}_{-4.3}$
$\Omega_m h^3$	$0.09612^{+0.00094}_{-0.00093}$	$100\theta_{\text{D}}$	$0.16084^{+0.00053}_{-0.00053}$	χ_{lowl}^2	$24.8 (\nu: 1.4)$
σ_8	$0.849^{+0.042}_{-0.044}$	z_{eq}	3358^{+57}_{-58}	$\chi_{6\text{DF}}^2$	$0.043 (\nu: 0.0)$
S_8	$0.855^{+0.044}_{-0.045}$	k_{eq}	$0.01025^{+0.00017}_{-0.00018}$	χ_{MGS}^2	$1.78 (\nu: 0.2)$
$\sigma_8 \Omega_m^{0.5}$	$0.468^{+0.024}_{-0.025}$	$100\theta_{\text{eq}}$	$0.822^{+0.011}_{-0.011}$	χ_{DR12BAO}^2	$4.1 (\nu: 0.6)$
$\sigma_8 \Omega_m^{0.25}$	$0.631^{+0.030}_{-0.032}$	$100\theta_{\text{s,eq}}$	$0.4537^{+0.0057}_{-0.0055}$	χ_{prior}^2	$7.3 (\nu: 6.0)$
$\sigma_8/h^{0.5}$	$1.029^{+0.049}_{-0.052}$	$H(0.15)$	$73.3^{+1.0}_{-1.0}$	χ_{BAO}^2	$6.0 (\nu: 0.6)$
$r_{\text{drag}} h$	$100.5^{+2.0}_{-2.0}$	$D_{\text{M}}(0.15)$	$637.1^{+9.9}_{-9.9}$	χ_{CMB}^2	$3938 (\nu: 4948661.7)$
$\langle d^2 \rangle^{1/2}$	$2.54^{+0.11}_{-0.12}$	$H(0.38)$	$83.29^{+0.78}_{-0.76}$		

$$\bar{\chi}_{\text{eff}}^2 = 7097.63; \Delta \bar{\chi}_{\text{eff}}^2 = 6292.21; R - 1 = 0.01179$$

2.70 base_CamSpecHM_TT_lowl_post_zre6p5/base_plikHM_TT_lowl_post_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02241^{+0.00053}_{-0.00051}$	$\langle d^2 \rangle^{1/2}$	$2.54^{+0.11}_{-0.11}$	$D_M(0.15)$	636^{+19}_{-19}
$\Omega_c h^2$	$0.1178^{+0.0049}_{-0.0049}$	z_{re}	$12.7^{+4.4}_{-5.0}$	$H(0.38)$	$83.4^{+1.5}_{-1.4}$
$100\theta_{MC}$	$1.0412^{+0.0010}_{-0.0010}$	$10^9 A_s$	$2.35^{+0.26}_{-0.26}$	$D_M(0.38)$	1519^{+38}_{-39}
τ	$0.112^{+0.061}_{-0.059}$	$10^9 A_s e^{-2\tau}$	$1.870^{+0.029}_{-0.030}$	$H(0.51)$	$90.0^{+1.2}_{-1.1}$
$\ln(10^{10} A_s)$	$3.15^{+0.11}_{-0.11}$	D_{40}	1239^{+32}_{-31}	$D_M(0.51)$	1969^{+45}_{-46}
n_s	$0.973^{+0.016}_{-0.015}$	D_{220}	5713^{+82}_{-81}	$H(0.61)$	$95.57^{+0.97}_{-0.88}$
y_{cal}	$1.0003^{+0.0049}_{-0.0049}$	D_{810}	2529^{+27}_{-27}	$D_M(0.61)$	2292^{+48}_{-49}
A_{217}^{CIB}	42^{+20}_{-20}	D_{1420}	815^{+10}_{-10}	$H(2.33)$	$235.2^{+2.9}_{-2.9}$
$\xi^{tSZ-CIB}$	—	D_{2000}	$231.5^{+4.1}_{-4.1}$	$D_M(2.33)$	5753^{+40}_{-42}
A_{143}^{tSZ}	$4.8^{+3.9}_{-4.2}$	$n_{s,0.002}$	$0.973^{+0.016}_{-0.015}$	$f\sigma_8(0.15)$	$0.474^{+0.026}_{-0.026}$
A_{100}^{PS}	243^{+60}_{-60}	Y_P	$0.24541^{+0.00022}_{-0.00022}$	$\sigma_8(0.15)$	$0.788^{+0.041}_{-0.039}$
A_{143}^{PS}	40^{+20}_{-20}	Y_P^{BBN}	$0.24673^{+0.00022}_{-0.00022}$	$f\sigma_8(0.38)$	$0.495^{+0.024}_{-0.024}$
A_{217}^{PS}	109^{+20}_{-30}	$10^5 D/H$	$2.579^{+0.097}_{-0.097}$	$\sigma_8(0.38)$	$0.699^{+0.037}_{-0.037}$
A^{kSZ}	< 8.53	Age/Gyr	$13.776^{+0.088}_{-0.092}$	$f\sigma_8(0.51)$	$0.495^{+0.023}_{-0.023}$
c_{100}	$0.9985^{+0.0022}_{-0.0027}$	z_*	$1089.68^{+0.99}_{-0.99}$	$\sigma_8(0.51)$	$0.655^{+0.036}_{-0.034}$
c_{217}	$0.9996^{+0.0036}_{-0.0026}$	r_*	$145.0^{+1.1}_{-1.1}$	$f\sigma_8(0.61)$	$0.490^{+0.023}_{-0.023}$
H_0	$68.3^{+2.3}_{-2.2}$	$100\theta_*$	$1.0414^{+0.0010}_{-0.00098}$	$\sigma_8(0.61)$	$0.623^{+0.034}_{-0.034}$
Ω_Λ	$0.697^{+0.029}_{-0.031}$	$D_M(z_*)/\text{Gpc}$	$13.921^{+0.097}_{-0.097}$	$f\sigma_8(2.33)$	$0.315^{+0.018}_{-0.018}$
Ω_m	$0.303^{+0.031}_{-0.029}$	z_{drag}	$1059.9^{+1.1}_{-1.0}$	$\sigma_8(2.33)$	$0.325^{+0.019}_{-0.019}$
$\Omega_m h^2$	$0.1409^{+0.0046}_{-0.0046}$	r_{drag}	$147.6^{+1.0}_{-1.0}$	f_{2000}^{143}	28^{+7}_{-7}
$\Omega_m h^3$	$0.09614^{+0.00095}_{-0.00092}$	k_D	$0.1403^{+0.0010}_{-0.0010}$	$f_{2000}^{143 \times 217}$	31^{+5}_{-5}
σ_8	$0.851^{+0.043}_{-0.041}$	$100\theta_D$	$0.16082^{+0.00057}_{-0.00057}$	f_{2000}^{217}	$105.6^{+4.5}_{-4.6}$
S_8	$0.855^{+0.050}_{-0.049}$	z_{eq}	3351^{+110}_{-110}	χ^2_{lowl}	$24.9 (\nu: 1.5)$
$\sigma_8 \Omega_m^{0.5}$	$0.468^{+0.027}_{-0.027}$	k_{eq}	$0.01023^{+0.00034}_{-0.00033}$	χ^2_{prior}	$7.3 (\nu: 6.0)$
$\sigma_8 \Omega_m^{0.25}$	$0.631^{+0.030}_{-0.030}$	$100\theta_{\text{eq}}$	$0.823^{+0.022}_{-0.021}$	χ^2_{CMB}	$3939 (\nu: 4948425.2)$
$\sigma_8/h^{0.5}$	$1.030^{+0.048}_{-0.048}$	$100\theta_{\text{s,eq}}$	$0.454^{+0.011}_{-0.011}$		
$r_{\text{drag}} h$	$100.8^{+4.0}_{-3.9}$	$H(0.15)$	$73.4^{+2.0}_{-1.9}$		

$\bar{\chi}^2_{\text{eff}} = 7092.14$; $\Delta\bar{\chi}^2_{\text{eff}} = 6292.06$; $R - 1 = 0.00760$

2.71 base_CamSpecHM_TT_lowl_post_BAO_zre6p5/base_plikHM_TT_lowl_post_BAO_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02238^{+0.00042}_{-0.00041}$	z_{re}	$12.5^{+3.8}_{-4.5}$	$D_{\text{M}}(0.38)$	1521^{+20}_{-20}
$\Omega_c h^2$	$0.1181^{+0.0025}_{-0.0025}$	$10^9 A_s$	$2.33^{+0.24}_{-0.23}$	$H(0.51)$	$89.94^{+0.65}_{-0.62}$
$100\theta_{MC}$	$1.04114^{+0.00086}_{-0.00086}$	$10^9 A_s e^{-2\tau}$	$1.871^{+0.023}_{-0.023}$	$D_{\text{M}}(0.51)$	1972^{+23}_{-24}
τ	$0.109^{+0.051}_{-0.052}$	D_{40}	1239^{+31}_{-30}	$H(0.61)$	$95.50^{+0.56}_{-0.53}$
$\ln(10^{10} A_s)$	$3.147^{+0.099}_{-0.10}$	D_{220}	5712^{+80}_{-79}	$D_{\text{M}}(0.61)$	2295^{+25}_{-26}
n_s	$0.9716^{+0.0099}_{-0.0096}$	D_{810}	2530^{+27}_{-27}	$H(2.33)$	$235.4^{+1.5}_{-1.6}$
y_{cal}	$1.0003^{+0.0048}_{-0.0049}$	D_{1420}	$815.0^{+9.6}_{-9.9}$	$D_{\text{M}}(2.33)$	5756^{+26}_{-27}
A_{217}^{CIB}	42^{+20}_{-20}	D_{2000}	$231.4^{+3.7}_{-3.7}$	$f\sigma_8(0.15)$	$0.474^{+0.023}_{-0.023}$
$\xi^{tSZ-CIB}$	—	$n_{s,0.002}$	$0.9716^{+0.0099}_{-0.0096}$	$\sigma_8(0.15)$	$0.786^{+0.039}_{-0.038}$
A_{143}^{tSZ}	$4.7^{+3.9}_{-4.3}$	Y_P	$0.24540^{+0.00016}_{-0.00017}$	$f\sigma_8(0.38)$	$0.495^{+0.023}_{-0.023}$
A_{100}^{PS}	244^{+60}_{-50}	Y_P^{BBN}	$0.24672^{+0.00016}_{-0.00017}$	$\sigma_8(0.38)$	$0.698^{+0.035}_{-0.034}$
A_{143}^{PS}	40^{+20}_{-20}	$10^5 D/H$	$2.584^{+0.078}_{-0.076}$	$f\sigma_8(0.51)$	$0.495^{+0.023}_{-0.023}$
A_{217}^{PS}	109^{+20}_{-30}	Age/Gyr	$13.781^{+0.060}_{-0.061}$	$\sigma_8(0.51)$	$0.653^{+0.033}_{-0.032}$
A^{kSZ}	—	z_*	$1089.74^{+0.63}_{-0.63}$	$f\sigma_8(0.61)$	$0.490^{+0.023}_{-0.023}$
c_{100}	$0.9985^{+0.0022}_{-0.0027}$	r_*	$144.91^{+0.63}_{-0.62}$	$\sigma_8(0.61)$	$0.622^{+0.031}_{-0.031}$
c_{217}	$0.9996^{+0.0036}_{-0.0027}$	$100\theta_*$	$1.04133^{+0.00084}_{-0.00084}$	$f\sigma_8(2.33)$	$0.314^{+0.016}_{-0.016}$
H_0	$68.1^{+1.2}_{-1.2}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.916^{+0.061}_{-0.060}$	$\sigma_8(2.33)$	$0.324^{+0.017}_{-0.017}$
Ω_Λ	$0.696^{+0.015}_{-0.015}$	z_{drag}	$1059.83^{+0.94}_{-0.89}$	f_{2000}^{143}	28^{+6}_{-6}
Ω_m	$0.304^{+0.015}_{-0.015}$	r_{drag}	$147.58^{+0.68}_{-0.67}$	$f_{2000}^{143 \times 217}$	31^{+4}_{-5}
$\Omega_m h^2$	$0.1411^{+0.0024}_{-0.0024}$	k_{D}	$0.14036^{+0.00088}_{-0.00087}$	f_{2000}^{217}	$105.8^{+4.3}_{-4.3}$
$\Omega_m h^3$	$0.09613^{+0.00094}_{-0.00092}$	$100\theta_{\text{D}}$	$0.16084^{+0.00053}_{-0.00052}$	χ_{lowl}^2	$24.9 (\nu: 1.4)$
σ_8	$0.850^{+0.041}_{-0.041}$	z_{eq}	3358^{+57}_{-57}	$\chi_{6\text{DF}}^2$	$0.043 (\nu: 0.0)$
S_8	$0.856^{+0.043}_{-0.042}$	k_{eq}	$0.01025^{+0.00017}_{-0.00018}$	χ_{MGS}^2	$1.79 (\nu: 0.2)$
$\sigma_8 \Omega_m^{0.5}$	$0.469^{+0.024}_{-0.023}$	$100\theta_{\text{eq}}$	$0.822^{+0.011}_{-0.011}$	χ_{DR12BAO}^2	$4.1 (\nu: 0.6)$
$\sigma_8 \Omega_m^{0.25}$	$0.631^{+0.030}_{-0.030}$	$100\theta_{\text{s,eq}}$	$0.4537^{+0.0057}_{-0.0055}$	χ_{prior}^2	$7.3 (\nu: 6.0)$
$\sigma_8/h^{0.5}$	$1.030^{+0.048}_{-0.048}$	$H(0.15)$	$73.3^{+1.0}_{-1.0}$	χ_{BAO}^2	$6.0 (\nu: 0.6)$
$r_{\text{drag}} h$	$100.5^{+2.0}_{-2.0}$	$D_{\text{M}}(0.15)$	$637.1^{+9.8}_{-9.9}$	χ_{CMB}^2	$3938 (\nu: 4948688.2)$
$\langle d^2 \rangle^{1/2}$	$2.54^{+0.11}_{-0.11}$	$H(0.38)$	$83.30^{+0.78}_{-0.75}$		

$$\bar{\chi}_{\text{eff}}^2 = 7097.56; \Delta \bar{\chi}_{\text{eff}}^2 = 6292.23; R - 1 = 0.01150$$

2.72 base_CamSpecHM_TT_lowE/base_plikHM_TT_lowE

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02206^{+0.00043}_{-0.00041}$	$\langle d^2 \rangle^{1/2}$	$2.473^{+0.077}_{-0.077}$	$D_M(0.15)$	651^{+16}_{-16}
$\Omega_c h^2$	$0.1217^{+0.0043}_{-0.0042}$	z_{re}	$7.5^{+1.6}_{-1.7}$	$H(0.38)$	$82.3^{+1.1}_{-1.1}$
$100\theta_{MC}$	$1.04069^{+0.00094}_{-0.00094}$	$10^9 A_s$	$2.094^{+0.069}_{-0.067}$	$D_M(0.38)$	1550^{+32}_{-32}
τ	$0.052^{+0.016}_{-0.016}$	$10^9 A_s e^{-2\tau}$	$1.889^{+0.028}_{-0.027}$	$H(0.51)$	$89.13^{+0.88}_{-0.83}$
$\ln(10^{10} A_s)$	$3.042^{+0.032}_{-0.032}$	D_{40}	1241^{+32}_{-31}	$D_M(0.51)$	2005^{+37}_{-37}
n_s	$0.959^{+0.012}_{-0.012}$	D_{220}	5713^{+82}_{-82}	$H(0.61)$	$94.87^{+0.70}_{-0.65}$
y_{cal}	$1.0004^{+0.0050}_{-0.0050}$	D_{810}	2536^{+28}_{-28}	$D_M(0.61)$	2331^{+39}_{-40}
A_{217}^{CIB}	45^{+20}_{-20}	D_{1420}	813^{+10}_{-10}	$H(2.33)$	$237.3^{+2.6}_{-2.5}$
$\xi^{tSZ-CIB}$	—	D_{2000}	$229.1^{+3.6}_{-3.6}$	$D_M(2.33)$	5783^{+31}_{-32}
A_{143}^{tSZ}	$4.3^{+3.7}_{-4.2}$	$n_{s,0.002}$	$0.959^{+0.012}_{-0.012}$	$f\sigma_8(0.15)$	$0.469^{+0.025}_{-0.024}$
A_{100}^{PS}	256^{+60}_{-50}	Y_P	$0.24526^{+0.00018}_{-0.00020}$	$\sigma_8(0.15)$	$0.751^{+0.015}_{-0.015}$
A_{143}^{PS}	46^{+20}_{-20}	Y_P^{BBN}	$0.24659^{+0.00018}_{-0.00020}$	$f\sigma_8(0.38)$	$0.484^{+0.019}_{-0.019}$
A_{217}^{PS}	108^{+30}_{-30}	$10^5 D/H$	$2.645^{+0.081}_{-0.081}$	$\sigma_8(0.38)$	$0.664^{+0.012}_{-0.012}$
A^{kSZ}	—	Age/Gyr	$13.842^{+0.070}_{-0.072}$	$f\sigma_8(0.51)$	$0.481^{+0.016}_{-0.017}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	z_*	$1090.47^{+0.80}_{-0.80}$	$\sigma_8(0.51)$	$0.621^{+0.011}_{-0.011}$
c_{217}	$0.9998^{+0.0038}_{-0.0028}$	r_*	$144.24^{+0.96}_{-0.96}$	$f\sigma_8(0.61)$	$0.475^{+0.014}_{-0.015}$
H_0	$66.4^{+1.8}_{-1.8}$	$100\theta_*$	$1.04090^{+0.00092}_{-0.00093}$	$\sigma_8(0.61)$	$0.590^{+0.010}_{-0.010}$
Ω_Λ	$0.673^{+0.026}_{-0.028}$	$D_M(z_*)/\text{Gpc}$	$13.857^{+0.088}_{-0.089}$	$f\sigma_8(2.33)$	$0.2971^{+0.0050}_{-0.0049}$
Ω_m	$0.327^{+0.028}_{-0.026}$	z_{drag}	$1059.33^{+0.87}_{-0.85}$	$\sigma_8(2.33)$	$0.3057^{+0.0053}_{-0.0052}$
$\Omega_m h^2$	$0.1444^{+0.0041}_{-0.0040}$	r_{drag}	$147.00^{+0.96}_{-0.97}$	f_{2000}^{143}	32^{+6}_{-6}
$\Omega_m h^3$	$0.09592^{+0.00089}_{-0.00087}$	k_D	$0.1407^{+0.0010}_{-0.0010}$	$f_{2000}^{143 \times 217}$	34^{+4}_{-4}
σ_8	$0.815^{+0.018}_{-0.018}$	$100\theta_D$	$0.16111^{+0.00052}_{-0.00052}$	f_{2000}^{217}	$108.3^{+3.9}_{-3.9}$
S_8	$0.851^{+0.050}_{-0.048}$	z_{eq}	3435^{+97}_{-96}	χ^2_{small}	$397.0 (\nu: 1.4)$
$\sigma_8 \Omega_m^{0.5}$	$0.466^{+0.027}_{-0.026}$	k_{eq}	$0.01048^{+0.00030}_{-0.00029}$	χ^2_{prior}	$7.5 (\nu: 6.5)$
$\sigma_8 \Omega_m^{0.25}$	$0.616^{+0.024}_{-0.024}$	$100\theta_{\text{eq}}$	$0.807^{+0.018}_{-0.018}$	χ^2_{CMB}	$4314 (\nu: 4948356.6)$
$\sigma_8/h^{0.5}$	$0.9997^{+0.032}_{-0.032}$	$100\theta_{s,\text{eq}}$	$0.4461^{+0.0092}_{-0.0090}$		
$r_{\text{drag}} h$	$97.7^{+3.2}_{-3.2}$	$H(0.15)$	$71.9^{+1.6}_{-1.5}$		

Best-fit $\chi^2_{\text{eff}} = 7447.83$; $\Delta\chi^2_{\text{eff}} = 6292.27$; $\bar{\chi}^2_{\text{eff}} = 7467.49$; $\Delta\bar{\chi}^2_{\text{eff}} = 6292.13$; $R - 1 = 0.00861$
 χ^2_{eff} : CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.83 (Δ -0.07) CamSpec like_10.7HM: 7049.71

2.73 base_CamSpecHM_TTTEEE/base_plikHM_TTTEEE

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02250^{+0.00036}_{-0.00036}$	$r_{\text{drag}} h$	$100.3^{+2.6}_{-2.5}$	$100\theta_{\text{s,eq}}$	$0.4527^{+0.0074}_{-0.0071}$
$\Omega_c h^2$	$0.1185^{+0.0033}_{-0.0033}$	$\langle d^2 \rangle^{1/2}$	$2.56^{+0.12}_{-0.12}$	$H(0.15)$	$73.3^{+1.3}_{-1.3}$
$100\theta_{MC}$	$1.04106^{+0.00065}_{-0.00065}$	z_{re}	$12.9^{+4.6}_{-4.7}$	$D_{\text{M}}(0.15)$	638^{+13}_{-13}
τ	$0.115^{+0.059}_{-0.059}$	$10^9 A_s$	$2.36^{+0.28}_{-0.26}$	$H(0.38)$	$83.30^{+0.97}_{-0.91}$
$\ln(10^{10} A_s)$	$3.16^{+0.11}_{-0.12}$	$10^9 A_s e^{-2\tau}$	$1.874^{+0.025}_{-0.025}$	$D_{\text{M}}(0.38)$	1522^{+25}_{-26}
n_s	$0.970^{+0.012}_{-0.011}$	D_{40}	1247^{+33}_{-31}	$H(0.51)$	$89.96^{+0.77}_{-0.72}$
A_{217}^{CIB}	41^{+20}_{-20}	D_{220}	5729^{+78}_{-76}	$D_{\text{M}}(0.51)$	1972^{+29}_{-30}
$\xi^{tSZ-CIB}$	—	D_{810}	2530^{+27}_{-27}	$H(0.61)$	$95.54^{+0.62}_{-0.58}$
A_{143}^{tSZ}	$4.9^{+4.0}_{-4.1}$	D_{1420}	$815.2^{+9.5}_{-9.4}$	$D_{\text{M}}(0.61)$	2296^{+32}_{-32}
A_{100}^{PS}	242^{+60}_{-50}	D_{2000}	$231.7^{+3.5}_{-3.5}$	$H(2.33)$	$235.7^{+1.9}_{-1.9}$
A_{143}^{PS}	39^{+20}_{-20}	$n_{s,0.002}$	$0.970^{+0.012}_{-0.011}$	$D_{\text{M}}(2.33)$	5753^{+26}_{-27}
A_{217}^{PS}	110^{+20}_{-30}	Y_P	$0.24544^{+0.00014}_{-0.00014}$	$f\sigma_8(0.15)$	$0.478^{+0.023}_{-0.023}$
A^{kSZ}	< 8.35	Y_P^{BBN}	$0.24677^{+0.00014}_{-0.00014}$	$\sigma_8(0.15)$	$0.791^{+0.042}_{-0.042}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	$10^5 D/H$	$2.563^{+0.068}_{-0.065}$	$f\sigma_8(0.38)$	$0.499^{+0.023}_{-0.024}$
c_{217}	$0.9995^{+0.0037}_{-0.0026}$	Age/Gyr	$13.774^{+0.058}_{-0.060}$	$\sigma_8(0.38)$	$0.702^{+0.038}_{-0.038}$
y_{cal}	$1.0001^{+0.0049}_{-0.0049}$	z_*	$1089.63^{+0.67}_{-0.66}$	$f\sigma_8(0.51)$	$0.498^{+0.023}_{-0.024}$
H_0	$68.1^{+1.5}_{-1.5}$	r_*	$144.73^{+0.71}_{-0.70}$	$\sigma_8(0.51)$	$0.657^{+0.036}_{-0.036}$
Ω_Λ	$0.694^{+0.020}_{-0.020}$	$100\theta_*$	$1.04123^{+0.00064}_{-0.00064}$	$f\sigma_8(0.61)$	$0.493^{+0.024}_{-0.025}$
Ω_m	$0.306^{+0.020}_{-0.020}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.900^{+0.065}_{-0.064}$	$\sigma_8(0.61)$	$0.625^{+0.035}_{-0.035}$
$\Omega_m h^2$	$0.1416^{+0.0030}_{-0.0031}$	z_{drag}	$1060.12^{+0.69}_{-0.72}$	$f\sigma_8(2.33)$	$0.316^{+0.018}_{-0.018}$
$\Omega_m h^3$	$0.09636^{+0.00063}_{-0.00064}$	r_{drag}	$147.36^{+0.69}_{-0.67}$	$\sigma_8(2.33)$	$0.326^{+0.019}_{-0.019}$
σ_8	$0.855^{+0.044}_{-0.045}$	k_{D}	$0.14068^{+0.00069}_{-0.00072}$	f_{2000}^{143}	27^{+6}_{-6}
S_8	$0.864^{+0.042}_{-0.043}$	$100\theta_{\text{D}}$	$0.16066^{+0.00042}_{-0.00039}$	$f_{2000}^{143 \times 217}$	30^{+4}_{-4}
$\sigma_8 \Omega_m^{0.5}$	$0.473^{+0.023}_{-0.024}$	z_{eq}	3369^{+73}_{-73}	f_{2000}^{217}	$105.3^{+4.1}_{-4.1}$
$\sigma_8 \Omega_m^{0.25}$	$0.636^{+0.030}_{-0.031}$	k_{eq}	$0.01028^{+0.00022}_{-0.00022}$	χ^2_{prior}	$9.5 (\nu: 9.1)$
$\sigma_8/h^{0.5}$	$1.037^{+0.049}_{-0.051}$	$100\theta_{\text{eq}}$	$0.820^{+0.014}_{-0.014}$		

Best-fit $\chi^2_{\text{eff}} = 11497.65$; $\Delta\chi^2_{\text{eff}} = 9159.29$; $\bar{\chi}^2_{\text{eff}} = 11519.77$; $\Delta\bar{\chi}^2_{\text{eff}} = 9154.63$; $R - 1 = 0.00880$
 χ^2_{eff} : CMB - CamSpec like_10.7HM_1400_unified: 11495.79

2.74 base_CamSpecHM_TTTEEE_lowl/base_plikHM_TTTEEE_lowl

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02247^{+0.00035}_{-0.00035}$	$\langle d^2 \rangle^{1/2}$	$2.52^{+0.10}_{-0.11}$	$D_M(0.15)$	638^{+12}_{-12}
$\Omega_c h^2$	$0.1184^{+0.0030}_{-0.0030}$	z_{re}	$11.7^{+4.3}_{-4.7}$	$H(0.38)$	$83.28^{+0.90}_{-0.87}$
$100\theta_{MC}$	$1.04105^{+0.00064}_{-0.00065}$	$10^9 A_s$	$2.29^{+0.23}_{-0.24}$	$D_M(0.38)$	1522^{+24}_{-24}
τ	$0.0999^{+0.051}_{-0.057}$	$10^9 A_s e^{-2\tau}$	$1.874^{+0.024}_{-0.024}$	$H(0.51)$	$89.94^{+0.72}_{-0.69}$
$\ln(10^{10} A_s)$	$3.130^{+0.098}_{-0.11}$	D_{40}	1237^{+29}_{-28}	$D_M(0.51)$	1973^{+28}_{-28}
n_s	$0.971^{+0.011}_{-0.010}$	D_{220}	5723^{+76}_{-75}	$H(0.61)$	$95.52^{+0.58}_{-0.56}$
y_{cal}	$1.0003^{+0.0049}_{-0.0047}$	D_{810}	2532^{+27}_{-26}	$D_M(0.61)$	2296^{+30}_{-30}
A_{217}^{CIB}	41^{+20}_{-20}	D_{1420}	$816.1^{+9.3}_{-9.2}$	$H(2.33)$	$235.6^{+1.8}_{-1.8}$
$\xi^{tSZ-CIB}$	—	D_{2000}	$231.7^{+3.4}_{-3.4}$	$D_M(2.33)$	5754^{+25}_{-26}
A_{143}^{tSZ}	$4.9^{+4.0}_{-4.2}$	$n_{s,0.002}$	$0.971^{+0.011}_{-0.010}$	$f\sigma_8(0.15)$	$0.471^{+0.021}_{-0.023}$
A_{100}^{PS}	242^{+60}_{-50}	Y_P	$0.24543^{+0.00013}_{-0.00014}$	$\sigma_8(0.15)$	$0.780^{+0.036}_{-0.039}$
A_{143}^{PS}	40^{+20}_{-20}	Y_P^{BBN}	$0.24676^{+0.00013}_{-0.00014}$	$f\sigma_8(0.38)$	$0.492^{+0.021}_{-0.023}$
A_{217}^{PS}	110^{+20}_{-30}	$10^5 D/H$	$2.568^{+0.065}_{-0.063}$	$\sigma_8(0.38)$	$0.692^{+0.033}_{-0.036}$
A^{kSZ}	< 8.36	Age/Gyr	$13.777^{+0.057}_{-0.057}$	$f\sigma_8(0.51)$	$0.491^{+0.021}_{-0.023}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	z_*	$1089.66^{+0.64}_{-0.63}$	$\sigma_8(0.51)$	$0.648^{+0.032}_{-0.034}$
c_{217}	$0.9995^{+0.0037}_{-0.0027}$	r_*	$144.76^{+0.67}_{-0.66}$	$f\sigma_8(0.61)$	$0.486^{+0.021}_{-0.023}$
H_0	$68.0^{+1.4}_{-1.4}$	$100\theta_*$	$1.04122^{+0.00063}_{-0.00064}$	$\sigma_8(0.61)$	$0.616^{+0.030}_{-0.033}$
Ω_Λ	$0.694^{+0.018}_{-0.019}$	$D_M(z_*)/\text{Gpc}$	$13.903^{+0.061}_{-0.061}$	$f\sigma_8(2.33)$	$0.311^{+0.016}_{-0.017}$
Ω_m	$0.306^{+0.019}_{-0.018}$	z_{drag}	$1060.06^{+0.68}_{-0.70}$	$\sigma_8(2.33)$	$0.321^{+0.017}_{-0.018}$
$\Omega_m h^2$	$0.1416^{+0.0028}_{-0.0028}$	r_{drag}	$147.39^{+0.65}_{-0.64}$	f_{2000}^{143}	27^{+6}_{-6}
$\Omega_m h^3$	$0.09630^{+0.00063}_{-0.00065}$	k_D	$0.14063^{+0.00068}_{-0.00070}$	$f_{2000}^{143 \times 217}$	30^{+4}_{-4}
σ_8	$0.843^{+0.039}_{-0.042}$	$100\theta_D$	$0.16069^{+0.00040}_{-0.00038}$	f_{2000}^{217}	$105.5^{+4.0}_{-3.9}$
S_8	$0.851^{+0.039}_{-0.041}$	z_{eq}	3367^{+68}_{-68}	χ_{lowl}^2	$24.5 (\nu: 1.1)$
$\sigma_8 \Omega_m^{0.5}$	$0.466^{+0.021}_{-0.023}$	k_{eq}	$0.01028^{+0.00021}_{-0.00021}$	χ_{prior}^2	$9.5 (\nu: 9.4)$
$\sigma_8 \Omega_m^{0.25}$	$0.627^{+0.027}_{-0.029}$	$100\theta_{\text{eq}}$	$0.820^{+0.013}_{-0.013}$	χ_{CMB}^2	$6958 (\nu: 10481652.1)$
$\sigma_8/h^{0.5}$	$1.022^{+0.044}_{-0.048}$	$100\theta_{s,\text{eq}}$	$0.4528^{+0.0068}_{-0.0066}$		
$r_{\text{drag}} h$	$100.3^{+2.4}_{-2.4}$	$H(0.15)$	$73.3^{+1.2}_{-1.2}$		

Best-fit $\chi_{\text{eff}}^2 = 11522.05$; $\Delta\chi_{\text{eff}}^2 = 9158.41$; $\bar{\chi}_{\text{eff}}^2 = 11544.10$; $\Delta\bar{\chi}_{\text{eff}}^2 = 9153.56$; $R - 1 = 0.00836$

χ_{eff}^2 : CMB - commander_dx12_v3_2_29: 23.92 (Δ -0.85) CamSpec like_10.7HM_1400.unified: 11496.23

2.75 **base_CamSpecHM_TTTEEE_lowl_post_BAO/base_plikHM_TTTEEE_lowl_post_BAO**

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02248^{+0.00031}_{-0.00031}$	z_{re}	$11.8^{+3.9}_{-4.2}$	$D_{\text{M}}(0.38)$	1521^{+17}_{-16}
$\Omega_c h^2$	$0.1183^{+0.0021}_{-0.0021}$	$10^9 A_s$	$2.29^{+0.21}_{-0.23}$	$H(0.51)$	$89.96^{+0.51}_{-0.50}$
$100\theta_{MC}$	$1.04107^{+0.00059}_{-0.00058}$	$10^9 A_s e^{-2\tau}$	$1.873^{+0.022}_{-0.022}$	$D_{\text{M}}(0.51)$	1972^{+19}_{-19}
τ	$0.101^{+0.046}_{-0.052}$	D_{40}	1237^{+28}_{-28}	$H(0.61)$	$95.54^{+0.43}_{-0.42}$
$\ln(10^{10} A_s)$	$3.132^{+0.089}_{-0.10}$	D_{220}	5724^{+76}_{-74}	$D_{\text{M}}(0.61)$	2295^{+21}_{-21}
n_s	$0.9710^{+0.0085}_{-0.0083}$	D_{810}	2532^{+26}_{-26}	$H(2.33)$	$235.6^{+1.3}_{-1.3}$
y_{cal}	$1.0002^{+0.0049}_{-0.0048}$	D_{1420}	$816.2^{+9.2}_{-9.2}$	$D_{\text{M}}(2.33)$	5753^{+20}_{-20}
A_{217}^{CIB}	41^{+20}_{-20}	D_{2000}	$231.7^{+3.3}_{-3.3}$	$f\sigma_8(0.15)$	$0.471^{+0.020}_{-0.022}$
$\xi^{tSZ-CIB}$	—	$n_{s,0.002}$	$0.9710^{+0.0085}_{-0.0083}$	$\sigma_8(0.15)$	$0.780^{+0.034}_{-0.038}$
A_{143}^{tSZ}	$4.9^{+4.0}_{-4.2}$	Y_P	$0.24544^{+0.00011}_{-0.00012}$	$f\sigma_8(0.38)$	$0.492^{+0.021}_{-0.023}$
A_{100}^{PS}	242^{+60}_{-50}	Y_P^{BBN}	$0.24676^{+0.00011}_{-0.00012}$	$\sigma_8(0.38)$	$0.692^{+0.031}_{-0.034}$
A_{143}^{PS}	39^{+20}_{-20}	$10^5 D/H$	$2.566^{+0.058}_{-0.055}$	$f\sigma_8(0.51)$	$0.491^{+0.021}_{-0.023}$
A_{217}^{PS}	110^{+20}_{-30}	Age/Gyr	$13.775^{+0.045}_{-0.045}$	$\sigma_8(0.51)$	$0.648^{+0.029}_{-0.033}$
A^{kSZ}	< 8.37	z_*	$1089.64^{+0.50}_{-0.49}$	$f\sigma_8(0.61)$	$0.486^{+0.021}_{-0.023}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	r_*	$144.78^{+0.49}_{-0.50}$	$\sigma_8(0.61)$	$0.617^{+0.028}_{-0.031}$
c_{217}	$0.9995^{+0.0037}_{-0.0027}$	$100\theta_*$	$1.04124^{+0.00058}_{-0.00057}$	$f\sigma_8(2.33)$	$0.311^{+0.014}_{-0.016}$
H_0	$68.09^{+0.97}_{-0.96}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.905^{+0.047}_{-0.047}$	$\sigma_8(2.33)$	$0.321^{+0.015}_{-0.017}$
Ω_Λ	$0.695^{+0.012}_{-0.013}$	z_{drag}	$1060.07^{+0.63}_{-0.67}$	f_{2000}^{143}	27^{+6}_{-6}
Ω_m	$0.305^{+0.013}_{-0.012}$	r_{drag}	$147.41^{+0.52}_{-0.51}$	$f_{2000}^{143 \times 217}$	30^{+4}_{-4}
$\Omega_m h^2$	$0.1415^{+0.0020}_{-0.0020}$	k_{D}	$0.14061^{+0.00061}_{-0.00063}$	f_{2000}^{217}	$105.5^{+3.9}_{-3.8}$
$\Omega_m h^3$	$0.09630^{+0.00063}_{-0.00065}$	$100\theta_{\text{D}}$	$0.16069^{+0.00039}_{-0.00036}$	χ_{lowl}^2	$24.5 (\nu: 1.0)$
σ_8	$0.843^{+0.037}_{-0.041}$	z_{eq}	3365^{+48}_{-47}	$\chi_{6\text{DF}}^2$	$0.030 (\nu: 0.0)$
S_8	$0.851^{+0.037}_{-0.040}$	k_{eq}	$0.01027^{+0.00015}_{-0.00014}$	χ_{MGS}^2	$1.69 (\nu: 0.1)$
$\sigma_8 \Omega_m^{0.5}$	$0.466^{+0.020}_{-0.022}$	$100\theta_{\text{eq}}$	$0.8205^{+0.0091}_{-0.0091}$	χ_{DR12BAO}^2	$4.04 (\nu: 0.4)$
$\sigma_8 \Omega_m^{0.25}$	$0.627^{+0.026}_{-0.029}$	$100\theta_{\text{s,eq}}$	$0.4531^{+0.0047}_{-0.0047}$	χ_{prior}^2	$9.5 (\nu: 9.2)$
$\sigma_8/h^{0.5}$	$1.022^{+0.043}_{-0.048}$	$H(0.15)$	$73.30^{+0.84}_{-0.83}$	χ_{BAO}^2	$5.76 (\nu: 0.3)$
$r_{\text{drag}} h$	$100.4^{+1.7}_{-1.6}$	$D_{\text{M}}(0.15)$	$637.2^{+8.2}_{-8.1}$	χ_{CMB}^2	$6957 (\nu: 10481200.7)$
$\langle d^2 \rangle^{1/2}$	$2.52^{+0.10}_{-0.12}$	$H(0.38)$	$83.31^{+0.63}_{-0.61}$		

$$\bar{\chi}_{\text{eff}}^2 = 11549.23; \Delta\bar{\chi}_{\text{eff}}^2 = 9153.40; R - 1 = 0.01419$$

2.76 **base_CamSpecHM_TTTEEE_lowl_post_zre6p5/base_plikHM_TTTEEE_lowl_post_zre6p5**

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02248^{+0.00035}_{-0.00034}$	$\langle d^2 \rangle^{1/2}$	$2.53^{+0.10}_{-0.10}$	$D_M(0.15)$	637^{+12}_{-12}
$\Omega_c h^2$	$0.1184^{+0.0030}_{-0.0030}$	z_{re}	$11.8^{+3.8}_{-4.2}$	$H(0.38)$	$83.29^{+0.90}_{-0.85}$
$100\theta_{MC}$	$1.04105^{+0.00064}_{-0.00065}$	$10^9 A_s$	$2.30^{+0.21}_{-0.22}$	$D_M(0.38)$	1522^{+23}_{-24}
τ	$0.101^{+0.050}_{-0.048}$	$10^9 A_s e^{-2\tau}$	$1.873^{+0.024}_{-0.023}$	$H(0.51)$	$89.95^{+0.71}_{-0.67}$
$\ln(10^{10} A_s)$	$3.133^{+0.095}_{-0.093}$	D_{40}	1237^{+29}_{-28}	$D_M(0.51)$	1972^{+27}_{-28}
n_s	$0.971^{+0.011}_{-0.010}$	D_{220}	5723^{+76}_{-75}	$H(0.61)$	$95.53^{+0.58}_{-0.54}$
y_{cal}	$1.0002^{+0.0048}_{-0.0047}$	D_{810}	2532^{+27}_{-26}	$D_M(0.61)$	2296^{+29}_{-30}
A_{217}^{CIB}	41^{+20}_{-20}	D_{1420}	$816.1^{+9.3}_{-9.2}$	$H(2.33)$	$235.6^{+1.8}_{-1.8}$
$\xi^{tSZ-CIB}$	—	D_{2000}	$231.7^{+3.4}_{-3.4}$	$D_M(2.33)$	5753^{+25}_{-26}
A_{143}^{tSZ}	$4.9^{+4.0}_{-4.2}$	$n_{s,0.002}$	$0.971^{+0.011}_{-0.010}$	$f\sigma_8(0.15)$	$0.472^{+0.021}_{-0.021}$
A_{100}^{PS}	242^{+60}_{-50}	Y_P	$0.24543^{+0.00013}_{-0.00013}$	$\sigma_8(0.15)$	$0.781^{+0.036}_{-0.034}$
A_{143}^{PS}	39^{+20}_{-20}	Y_P^{BBN}	$0.24676^{+0.00013}_{-0.00013}$	$f\sigma_8(0.38)$	$0.492^{+0.021}_{-0.021}$
A_{217}^{PS}	110^{+20}_{-30}	$10^5 D/H$	$2.567^{+0.063}_{-0.062}$	$\sigma_8(0.38)$	$0.693^{+0.032}_{-0.031}$
A^{kSZ}	< 8.33	Age/Gyr	$13.776^{+0.055}_{-0.056}$	$f\sigma_8(0.51)$	$0.492^{+0.021}_{-0.021}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	z_*	$1089.65^{+0.62}_{-0.63}$	$\sigma_8(0.51)$	$0.648^{+0.031}_{-0.029}$
c_{217}	$0.9995^{+0.0037}_{-0.0027}$	r_*	$144.76^{+0.66}_{-0.65}$	$f\sigma_8(0.61)$	$0.487^{+0.021}_{-0.020}$
H_0	$68.1^{+1.4}_{-1.4}$	$100\theta_*$	$1.04123^{+0.00063}_{-0.00063}$	$\sigma_8(0.61)$	$0.617^{+0.030}_{-0.028}$
Ω_Λ	$0.694^{+0.018}_{-0.018}$	$D_M(z_*)/\text{Gpc}$	$13.903^{+0.061}_{-0.060}$	$f\sigma_8(2.33)$	$0.311^{+0.014}_{-0.015}$
Ω_m	$0.306^{+0.018}_{-0.018}$	z_{drag}	$1060.07^{+0.67}_{-0.71}$	$\sigma_8(2.33)$	$0.321^{+0.015}_{-0.016}$
$\Omega_m h^2$	$0.1415^{+0.0028}_{-0.0028}$	r_{drag}	$147.40^{+0.65}_{-0.64}$	f_{2000}^{143}	27^{+6}_{-6}
$\Omega_m h^3$	$0.09631^{+0.00062}_{-0.00064}$	k_D	$0.14062^{+0.00068}_{-0.00070}$	$f_{2000}^{143 \times 217}$	30^{+4}_{-4}
σ_8	$0.844^{+0.038}_{-0.036}$	$100\theta_D$	$0.16069^{+0.00040}_{-0.00038}$	f_{2000}^{217}	$105.4^{+3.9}_{-3.9}$
S_8	$0.852^{+0.039}_{-0.039}$	z_{eq}	3367^{+67}_{-67}	χ^2_{lowl}	$24.6 (\nu: 1.0)$
$\sigma_8 \Omega_m^{0.5}$	$0.467^{+0.021}_{-0.021}$	k_{eq}	$0.01028^{+0.00020}_{-0.00021}$	χ^2_{prior}	$9.5 (\nu: 9.4)$
$\sigma_8 \Omega_m^{0.25}$	$0.628^{+0.026}_{-0.027}$	$100\theta_{\text{eq}}$	$0.820^{+0.013}_{-0.013}$	χ^2_{CMB}	$6958 (\nu: 10481402.8)$
$\sigma_8/h^{0.5}$	$1.023^{+0.043}_{-0.043}$	$100\theta_{s,\text{eq}}$	$0.4529^{+0.0067}_{-0.0065}$		
$r_{\text{drag}} h$	$100.3^{+2.4}_{-2.3}$	$H(0.15)$	$73.3^{+1.2}_{-1.2}$		

$\bar{\chi}^2_{\text{eff}} = 11543.93$; $\Delta\bar{\chi}^2_{\text{eff}} = 9153.44$; $R - 1 = 0.00900$

2.77 base_CamSpecHM_TTTEEE_lowl_post_BAO_zre6p5/base_plikHM_TTTEEE_lowl_post_BAO_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02248^{+0.00030}_{-0.00030}$	z_{re}	$11.9^{+3.5}_{-4.0}$	$D_{\text{M}}(0.38)$	1521^{+16}_{-16}
$\Omega_c h^2$	$0.1183^{+0.0021}_{-0.0021}$	$10^9 A_s$	$2.30^{+0.21}_{-0.20}$	$H(0.51)$	$89.97^{+0.51}_{-0.49}$
$100\theta_{MC}$	$1.04107^{+0.00058}_{-0.00058}$	$10^9 A_s e^{-2\tau}$	$1.873^{+0.022}_{-0.022}$	$D_{\text{M}}(0.51)$	1971^{+19}_{-19}
τ	$0.102^{+0.045}_{-0.046}$	D_{40}	1237^{+28}_{-28}	$H(0.61)$	$95.54^{+0.43}_{-0.41}$
$\ln(10^{10} A_s)$	$3.134^{+0.087}_{-0.091}$	D_{220}	5724^{+76}_{-74}	$D_{\text{M}}(0.61)$	2295^{+21}_{-21}
n_s	$0.9711^{+0.0084}_{-0.0083}$	D_{810}	2532^{+26}_{-26}	$H(2.33)$	$235.6^{+1.3}_{-1.3}$
y_{cal}	$1.0002^{+0.0049}_{-0.0048}$	D_{1420}	$816.1^{+9.2}_{-9.2}$	$D_{\text{M}}(2.33)$	5753^{+20}_{-20}
A_{217}^{CIB}	41^{+20}_{-20}	D_{2000}	$231.7^{+3.3}_{-3.3}$	$f\sigma_8(0.15)$	$0.472^{+0.020}_{-0.020}$
$\xi^{tSZ-CIB}$	—	$n_{s,0.002}$	$0.9711^{+0.0084}_{-0.0083}$	$\sigma_8(0.15)$	$0.781^{+0.034}_{-0.034}$
A_{143}^{tSZ}	$4.9^{+4.0}_{-4.2}$	Y_P	$0.24544^{+0.00011}_{-0.00012}$	$f\sigma_8(0.38)$	$0.492^{+0.020}_{-0.021}$
A_{100}^{PS}	242^{+60}_{-50}	Y_P^{BBN}	$0.24676^{+0.00011}_{-0.00012}$	$\sigma_8(0.38)$	$0.693^{+0.030}_{-0.031}$
A_{143}^{PS}	39^{+20}_{-20}	$10^5 D/H$	$2.566^{+0.057}_{-0.054}$	$f\sigma_8(0.51)$	$0.491^{+0.020}_{-0.021}$
A_{217}^{PS}	110^{+20}_{-30}	Age/Gyr	$13.775^{+0.044}_{-0.045}$	$\sigma_8(0.51)$	$0.649^{+0.029}_{-0.029}$
A^{kSZ}	< 8.35	z_*	$1089.63^{+0.49}_{-0.48}$	$f\sigma_8(0.61)$	$0.487^{+0.020}_{-0.021}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	r_*	$144.78^{+0.49}_{-0.50}$	$\sigma_8(0.61)$	$0.617^{+0.027}_{-0.028}$
c_{217}	$0.9995^{+0.0037}_{-0.0027}$	$100\theta_*$	$1.04124^{+0.00058}_{-0.00057}$	$f\sigma_8(2.33)$	$0.312^{+0.014}_{-0.014}$
H_0	$68.09^{+0.97}_{-0.95}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.905^{+0.047}_{-0.047}$	$\sigma_8(2.33)$	$0.322^{+0.015}_{-0.015}$
Ω_{Λ}	$0.695^{+0.012}_{-0.013}$	z_{drag}	$1060.07^{+0.62}_{-0.67}$	f_{2000}^{143}	27^{+6}_{-6}
Ω_m	$0.305^{+0.013}_{-0.012}$	r_{drag}	$147.41^{+0.52}_{-0.51}$	$f_{2000}^{143 \times 217}$	30^{+4}_{-4}
$\Omega_m h^2$	$0.1414^{+0.0020}_{-0.0020}$	k_{D}	$0.14061^{+0.00061}_{-0.00063}$	f_{2000}^{217}	$105.4^{+3.8}_{-3.8}$
$\Omega_m h^3$	$0.09631^{+0.00063}_{-0.00064}$	$100\theta_{\text{D}}$	$0.16068^{+0.00038}_{-0.00036}$	χ_{lowl}^2	$24.5 (\nu: 1.0)$
σ_8	$0.844^{+0.036}_{-0.036}$	z_{eq}	3365^{+48}_{-47}	$\chi_{6\text{DF}}^2$	$0.030 (\nu: 0.0)$
S_8	$0.851^{+0.037}_{-0.037}$	k_{eq}	$0.01027^{+0.00015}_{-0.00014}$	χ_{MGS}^2	$1.70 (\nu: 0.1)$
$\sigma_8 \Omega_m^{0.5}$	$0.466^{+0.020}_{-0.021}$	$100\theta_{\text{eq}}$	$0.8205^{+0.0091}_{-0.0090}$	χ_{DR12BAO}^2	$4.03 (\nu: 0.4)$
$\sigma_8 \Omega_m^{0.25}$	$0.627^{+0.026}_{-0.027}$	$100\theta_{\text{s,eq}}$	$0.4531^{+0.0047}_{-0.0046}$	χ_{prior}^2	$9.5 (\nu: 9.2)$
$\sigma_8/h^{0.5}$	$1.023^{+0.042}_{-0.043}$	$H(0.15)$	$73.31^{+0.84}_{-0.82}$	χ_{BAO}^2	$5.76 (\nu: 0.3)$
$r_{\text{drag}} h$	$100.4^{+1.6}_{-1.6}$	$D_{\text{M}}(0.15)$	$637.1^{+8.1}_{-8.1}$	χ_{CMB}^2	$6957 (\nu: 10481013.0)$
$\langle d^2 \rangle^{1/2}$	$2.527^{+0.099}_{-0.10}$	$H(0.38)$	$83.31^{+0.62}_{-0.61}$		

$$\bar{\chi}_{\text{eff}}^2 = 11549.09; \Delta\bar{\chi}_{\text{eff}}^2 = 9153.30; R - 1 = 0.01512$$

2.78 base_CamSpecHM_TTTEEE_lowE/base_plikHM_TTTEEE_lowE

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02230^{+0.00031}_{-0.00031}$	$\langle d^2 \rangle^{1/2}$	$2.452^{+0.059}_{-0.058}$	$D_M(0.15)$	645^{+11}_{-10}
$\Omega_c h^2$	$0.1203^{+0.0028}_{-0.0028}$	z_{re}	$7.6^{+1.6}_{-1.6}$	$H(0.38)$	$82.73^{+0.75}_{-0.74}$
$100\theta_{MC}$	$1.04085^{+0.00062}_{-0.00061}$	$10^9 A_s$	$2.098^{+0.070}_{-0.065}$	$D_M(0.38)$	1537^{+21}_{-21}
τ	$0.054^{+0.016}_{-0.015}$	$10^9 A_s e^{-2\tau}$	$1.884^{+0.024}_{-0.024}$	$H(0.51)$	$89.51^{+0.59}_{-0.58}$
$\ln(10^{10} A_s)$	$3.043^{+0.033}_{-0.032}$	D_{40}	1235^{+27}_{-26}	$D_M(0.51)$	1990^{+24}_{-24}
n_s	$0.9632^{+0.0090}_{-0.0090}$	D_{220}	5732^{+77}_{-77}	$H(0.61)$	$95.18^{+0.47}_{-0.46}$
y_{cal}	$1.0005^{+0.0049}_{-0.0049}$	D_{810}	2538^{+27}_{-27}	$D_M(0.61)$	2315^{+26}_{-26}
A_{217}^{CIB}	44^{+10}_{-20}	D_{1420}	$815.8^{+9.6}_{-9.5}$	$H(2.33)$	$236.7^{+1.7}_{-1.7}$
$\xi^{tSZ-CIB}$	—	D_{2000}	$230.3^{+3.2}_{-3.2}$	$D_M(2.33)$	5768^{+21}_{-22}
A_{143}^{tSZ}	$4.6^{+3.8}_{-4.3}$	$n_{s,0.002}$	$0.9632^{+0.0090}_{-0.0090}$	$f\sigma_8(0.15)$	$0.462^{+0.017}_{-0.017}$
A_{100}^{PS}	251^{+60}_{-50}	Y_P	$0.24536^{+0.00012}_{-0.00013}$	$\sigma_8(0.15)$	$0.749^{+0.014}_{-0.013}$
A_{143}^{PS}	44^{+20}_{-20}	Y_P^{BBN}	$0.24669^{+0.00012}_{-0.00013}$	$f\sigma_8(0.38)$	$0.478^{+0.014}_{-0.014}$
A_{217}^{PS}	108^{+30}_{-30}	$10^5 D/H$	$2.599^{+0.059}_{-0.057}$	$\sigma_8(0.38)$	$0.663^{+0.012}_{-0.011}$
A^{kSZ}	—	Age/Gyr	$13.808^{+0.048}_{-0.049}$	$f\sigma_8(0.51)$	$0.476^{+0.012}_{-0.012}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	z_*	$1090.04^{+0.56}_{-0.55}$	$\sigma_8(0.51)$	$0.621^{+0.011}_{-0.010}$
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	r_*	$144.40^{+0.66}_{-0.64}$	$f\sigma_8(0.61)$	$0.471^{+0.011}_{-0.011}$
H_0	$67.2^{+1.2}_{-1.2}$	$100\theta_*$	$1.04104^{+0.00061}_{-0.00060}$	$\sigma_8(0.61)$	$0.590^{+0.010}_{-0.0096}$
Ω_Λ	$0.682^{+0.017}_{-0.017}$	$D_M(z_*)/\text{Gpc}$	$13.871^{+0.061}_{-0.060}$	$f\sigma_8(2.33)$	$0.2974^{+0.0051}_{-0.0048}$
Ω_m	$0.318^{+0.017}_{-0.017}$	z_{drag}	$1059.80^{+0.63}_{-0.66}$	$\sigma_8(2.33)$	$0.3064^{+0.0053}_{-0.0050}$
$\Omega_m h^2$	$0.1433^{+0.0027}_{-0.0027}$	r_{drag}	$147.08^{+0.67}_{-0.64}$	f_{2000}^{143}	30^{+6}_{-5}
$\Omega_m h^3$	$0.09622^{+0.00064}_{-0.00065}$	k_D	$0.14082^{+0.00070}_{-0.00074}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-4}
σ_8	$0.812^{+0.016}_{-0.015}$	$100\theta_D$	$0.16084^{+0.00039}_{-0.00037}$	f_{2000}^{217}	$107.3^{+3.7}_{-3.6}$
S_8	$0.835^{+0.033}_{-0.033}$	z_{eq}	3409^{+64}_{-64}	χ_{small}^2	$397.1 (\nu: 1.7)$
$\sigma_8 \Omega_m^{0.5}$	$0.457^{+0.018}_{-0.018}$	k_{eq}	$0.01040^{+0.00019}_{-0.00019}$	χ_{prior}^2	$9.6 (\nu: 9.7)$
$\sigma_8 \Omega_m^{0.25}$	$0.609^{+0.017}_{-0.017}$	$100\theta_{\text{eq}}$	$0.812^{+0.012}_{-0.012}$	χ_{CMB}^2	$7334 (\nu: 10475984.0)$
$\sigma_8/h^{0.5}$	$0.990^{+0.024}_{-0.024}$	$100\theta_{s,\text{eq}}$	$0.4487^{+0.0062}_{-0.0060}$		
$r_{\text{drag}} h$	$98.8^{+2.1}_{-2.1}$	$H(0.15)$	$72.5^{+1.0}_{-1.0}$		

Best-fit $\chi_{\text{eff}}^2 = 11897.49$; $\Delta\chi_{\text{eff}}^2 = 9155.25$; $\bar{\chi}_{\text{eff}}^2 = 11919.09$; $\Delta\bar{\chi}_{\text{eff}}^2 = 9150.94$; $R - 1 = 0.00575$

χ_{eff}^2 : CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.86 (Δ -0.20) CamSpec like_10.7HM_1400_unified: 11499.49

3 Alens

3.1 base_Alens_CamSpecHM_TT_lowl_lowE/base_Alens_plikHM_TT_lowl_lowE

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02262^{+0.00057}_{-0.00057}$	$r_{\text{drag}} h$	$101.9^{+4.1}_{-4.0}$	$H(0.15)$	$74.1^{+2.1}_{-2.0}$
$\Omega_c h^2$	$0.1165^{+0.0049}_{-0.0049}$	$\langle d^2 \rangle^{1/2}$	$2.64^{+0.15}_{-0.16}$	$D_{\text{M}}(0.15)$	630^{+20}_{-19}
$100\theta_{MC}$	$1.0414^{+0.0010}_{-0.0010}$	z_{re}	$7.1^{+1.7}_{-1.8}$	$H(0.38)$	$83.9^{+1.6}_{-1.5}$
τ	$0.050^{+0.016}_{-0.018}$	$10^9 A_s$	$2.063^{+0.070}_{-0.077}$	$D_{\text{M}}(0.38)$	1506^{+39}_{-40}
A_L	$1.24^{+0.20}_{-0.18}$	$10^9 A_s e^{-2\tau}$	$1.866^{+0.029}_{-0.028}$	$H(0.51)$	$90.4^{+1.3}_{-1.2}$
$\ln(10^{10} A_s)$	$3.027^{+0.034}_{-0.038}$	D_{40}	1207^{+34}_{-34}	$D_{\text{M}}(0.51)$	1954^{+46}_{-47}
n_s	$0.975^{+0.014}_{-0.014}$	D_{220}	5732^{+85}_{-82}	$H(0.61)$	$95.9^{+1.1}_{-0.96}$
y_{cal}	$1.0001^{+0.0049}_{-0.0049}$	D_{810}	2526^{+28}_{-27}	$D_{\text{M}}(0.61)$	2276^{+50}_{-51}
A_{217}^{CIB}	41^{+20}_{-20}	D_{1420}	814^{+10}_{-10}	$H(2.33)$	$234.6^{+2.8}_{-2.8}$
$\xi^{tSZ-CIB}$	—	D_{2000}	$232.3^{+4.1}_{-4.1}$	$D_{\text{M}}(2.33)$	5738^{+43}_{-46}
A_{143}^{tSZ}	$4.9^{+4.0}_{-4.1}$	$n_{s,0.002}$	$0.975^{+0.014}_{-0.014}$	$f\sigma_8(0.15)$	$0.437^{+0.030}_{-0.029}$
A_{100}^{PS}	239^{+60}_{-50}	Y_P	$0.24549^{+0.00025}_{-0.00023}$	$\sigma_8(0.15)$	$0.736^{+0.018}_{-0.019}$
A_{143}^{PS}	38^{+20}_{-20}	Y_P^{BBN}	$0.24682^{+0.00025}_{-0.00023}$	$f\sigma_8(0.38)$	$0.458^{+0.024}_{-0.024}$
A_{217}^{PS}	110^{+20}_{-30}	$10^5 D/H$	$2.54^{+0.10}_{-0.10}$	$\sigma_8(0.38)$	$0.654^{+0.014}_{-0.015}$
A^{kSZ}	< 8.21	Age/Gyr	$13.742^{+0.095}_{-0.099}$	$f\sigma_8(0.51)$	$0.459^{+0.021}_{-0.021}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	z_*	$1089.3^{+1.0}_{-1.0}$	$\sigma_8(0.51)$	$0.613^{+0.012}_{-0.013}$
c_{217}	$0.9995^{+0.0036}_{-0.0026}$	r_*	$145.2^{+1.0}_{-1.0}$	$f\sigma_8(0.61)$	$0.455^{+0.018}_{-0.019}$
H_0	$69.0^{+2.4}_{-2.3}$	$100\theta_*$	$1.0416^{+0.0010}_{-0.0010}$	$\sigma_8(0.61)$	$0.584^{+0.011}_{-0.012}$
Ω_Λ	$0.706^{+0.028}_{-0.030}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.936^{+0.093}_{-0.093}$	$f\sigma_8(2.33)$	$0.2950^{+0.0052}_{-0.0058}$
Ω_m	$0.294^{+0.030}_{-0.028}$	z_{drag}	$1060.2^{+1.1}_{-1.1}$	$\sigma_8(2.33)$	$0.3050^{+0.0053}_{-0.0059}$
$\Omega_m h^2$	$0.1398^{+0.0045}_{-0.0045}$	r_{drag}	$147.75^{+0.99}_{-0.98}$	f_{2000}^{143}	26^{+7}_{-7}
$\Omega_m h^3$	$0.09639^{+0.00099}_{-0.00099}$	k_{D}	$0.1404^{+0.0010}_{-0.0010}$	$f_{2000}^{143 \times 217}$	30^{+5}_{-5}
σ_8	$0.794^{+0.022}_{-0.022}$	$100\theta_{\text{D}}$	$0.16062^{+0.00061}_{-0.00058}$	f_{2000}^{217}	$104.6^{+4.5}_{-4.6}$
S_8	$0.787^{+0.058}_{-0.057}$	z_{eq}	3325^{+110}_{-110}	χ_{small}^2	$396.8 (\nu: 1.3)$
$\sigma_8 \Omega_m^{0.5}$	$0.431^{+0.032}_{-0.031}$	k_{eq}	$0.01015^{+0.00033}_{-0.00033}$	χ_{lowl}^2	$21.7 (\nu: 0.6)$
$\sigma_8 \Omega_m^{0.25}$	$0.585^{+0.029}_{-0.029}$	$100\theta_{\text{eq}}$	$0.829^{+0.022}_{-0.021}$	χ_{prior}^2	$7.1 (\nu: 5.8)$
$\sigma_8/h^{0.5}$	$0.957^{+0.040}_{-0.040}$	$100\theta_{\text{s,eq}}$	$0.457^{+0.011}_{-0.011}$	χ_{CMB}^2	$4332 (\nu: 4949294.6)$

Best-fit $\chi_{\text{eff}}^2 = 7464.21$; $\Delta\chi_{\text{eff}}^2 = 6293.32$; $\bar{\chi}_{\text{eff}}^2 = 7485.53$; $\Delta\bar{\chi}_{\text{eff}}^2 = 6292.49$; $R - 1 = 0.00653$

χ_{eff}^2 : CMB - small_100x143_offlike5_EE_Aplanck_B: 395.71 (Δ 0.05) commander_dx12_v3.2.29: 21.18 (Δ -0.17) CamSpec like_10.7HM: 7045.95

3.2 base_Alens_CamSpecHM_TT_lowl_lowE_post_BAO/base_Alens_plikHM_TT_lowl_lowE_post_BAO

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02250^{+0.00043}_{-0.00044}$	z_{re}	$7.1^{+1.7}_{-1.9}$	$H(0.51)$	$90.09^{+0.67}_{-0.65}$
$\Omega_c h^2$	$0.1178^{+0.0026}_{-0.0025}$	$10^9 A_s$	$2.066^{+0.070}_{-0.078}$	$D_M(0.51)$	1967^{+24}_{-24}
$100\theta_{MC}$	$1.04123^{+0.00085}_{-0.00086}$	$10^9 A_s e^{-2\tau}$	$1.871^{+0.023}_{-0.023}$	$H(0.61)$	$95.63^{+0.57}_{-0.56}$
τ	$0.049^{+0.016}_{-0.018}$	D_{40}	1213^{+26}_{-26}	$D_M(0.61)$	2290^{+26}_{-26}
A_L	$1.21^{+0.16}_{-0.15}$	D_{220}	5725^{+81}_{-81}	$H(2.33)$	$235.3^{+1.6}_{-1.6}$
$\ln(10^{10} A_s)$	$3.028^{+0.033}_{-0.038}$	D_{810}	2527^{+27}_{-27}	$D_M(2.33)$	5749^{+28}_{-28}
n_s	$0.9714^{+0.0089}_{-0.0088}$	D_{1420}	$814^{+10}_{-9.8}$	$f\sigma_8(0.15)$	$0.444^{+0.016}_{-0.016}$
y_{cal}	$1.0000^{+0.0049}_{-0.0050}$	D_{2000}	$231.8^{+3.6}_{-3.7}$	$\sigma_8(0.15)$	$0.739^{+0.014}_{-0.016}$
A_{217}^{CIB}	41^{+20}_{-20}	$n_{s,0.002}$	$0.9714^{+0.0089}_{-0.0088}$	$f\sigma_8(0.38)$	$0.464^{+0.014}_{-0.014}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.24544^{+0.00017}_{-0.00018}$	$\sigma_8(0.38)$	$0.656^{+0.012}_{-0.013}$
A_{143}^{tSZ}	$4.8^{+4.0}_{-4.1}$	Y_P^{BBN}	$0.24677^{+0.00017}_{-0.00018}$	$f\sigma_8(0.51)$	$0.464^{+0.012}_{-0.013}$
A_{100}^{PS}	241^{+60}_{-50}	$10^5 D/H$	$2.563^{+0.082}_{-0.077}$	$\sigma_8(0.51)$	$0.615^{+0.011}_{-0.012}$
A_{143}^{PS}	39^{+20}_{-20}	Age/Gyr	$13.766^{+0.063}_{-0.063}$	$f\sigma_8(0.61)$	$0.460^{+0.011}_{-0.012}$
A_{217}^{PS}	110^{+20}_{-30}	z_*	$1089.57^{+0.66}_{-0.64}$	$\sigma_8(0.61)$	$0.585^{+0.010}_{-0.012}$
A^{kSZ}	< 8.38	r_*	$144.90^{+0.63}_{-0.61}$	$f\sigma_8(2.33)$	$0.2954^{+0.0051}_{-0.0058}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	$100\theta_*$	$1.04140^{+0.00083}_{-0.00084}$	$\sigma_8(2.33)$	$0.3050^{+0.0053}_{-0.0059}$
c_{217}	$0.9995^{+0.0036}_{-0.0026}$	$D_M(z_*)/\text{Gpc}$	$13.914^{+0.062}_{-0.060}$	f_{2000}^{143}	27^{+6}_{-6}
H_0	$68.3^{+1.2}_{-1.2}$	z_{drag}	$1060.07^{+0.93}_{-0.98}$	$f_{2000}^{143 \times 217}$	30^{+5}_{-5}
Ω_Λ	$0.698^{+0.015}_{-0.015}$	r_{drag}	$147.53^{+0.69}_{-0.66}$	f_{2000}^{217}	$105.2^{+4.2}_{-4.2}$
Ω_m	$0.302^{+0.015}_{-0.015}$	k_D	$0.14050^{+0.00087}_{-0.00088}$	χ_{small}^2	$396.8 (\nu: 1.3)$
$\Omega_m h^2$	$0.1410^{+0.0024}_{-0.0024}$	$100\theta_D$	$0.16070^{+0.00055}_{-0.00052}$	χ_{lowl}^2	$22.12 (\nu: 0.3)$
$\Omega_m h^3$	$0.09633^{+0.00096}_{-0.00098}$	z_{eq}	3354^{+58}_{-57}	$\chi_{6\text{DF}}^2$	$0.048 (\nu: 0.0)$
σ_8	$0.799^{+0.016}_{-0.017}$	k_{eq}	$0.01024^{+0.00018}_{-0.00017}$	χ_{MGS}^2	$1.97 (\nu: 0.2)$
S_8	$0.802^{+0.032}_{-0.031}$	$100\theta_{\text{eq}}$	$0.823^{+0.011}_{-0.011}$	χ_{DR12BAO}^2	$4.06 (\nu: 0.5)$
$\sigma_8 \Omega_m^{0.5}$	$0.439^{+0.017}_{-0.017}$	$100\theta_{\text{s,eq}}$	$0.4542^{+0.0056}_{-0.0056}$	χ_{prior}^2	$7.2 (\nu: 6.0)$
$\sigma_8 \Omega_m^{0.25}$	$0.592^{+0.017}_{-0.017}$	$H(0.15)$	$73.5^{+1.0}_{-1.0}$	χ_{BAO}^2	$6.1 (\nu: 0.7)$
$\sigma_8/h^{0.5}$	$0.967^{+0.024}_{-0.026}$	$D_M(0.15)$	$635^{+10}_{-9.9}$	χ_{CMB}^2	$4332 (\nu: 4949394.3)$
$r_{\text{drag}} h$	$100.8^{+2.0}_{-2.0}$	$H(0.38)$	$83.46^{+0.80}_{-0.78}$		
$\langle d^2 \rangle^{1/2}$	$2.63^{+0.15}_{-0.15}$	$D_M(0.38)$	1517^{+21}_{-20}		

$$\bar{\chi}_{\text{eff}}^2 = 7491.23; \Delta \bar{\chi}_{\text{eff}}^2 = 6292.73; R - 1 = 0.01433$$

3.3 base_Alens_CamSpecHM_TT_lowl_lowE_post_Riess18/base_Alens_plikHM_TT_lowl_lowE_post_Riess18

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02292^{+0.00050}_{-0.00051}$	$\langle d^2 \rangle^{1/2}$	$2.67^{+0.15}_{-0.15}$	$H(0.38)$	$84.9^{+1.3}_{-1.3}$
$\Omega_c h^2$	$0.1134^{+0.0040}_{-0.0038}$	z_{re}	$7.2^{+1.7}_{-1.7}$	$D_{\text{M}}(0.38)$	1480^{+32}_{-31}
$100\theta_{MC}$	$1.04191^{+0.00098}_{-0.00097}$	$10^9 A_s$	$2.057^{+0.072}_{-0.073}$	$H(0.51)$	$91.2^{+1.1}_{-1.0}$
τ	$0.052^{+0.017}_{-0.018}$	$10^9 A_s e^{-2\tau}$	$1.853^{+0.026}_{-0.026}$	$D_{\text{M}}(0.51)$	1923^{+38}_{-37}
A_L	$1.33^{+0.19}_{-0.18}$	D_{40}	1190^{+31}_{-28}	$H(0.61)$	$96.58^{+0.87}_{-0.87}$
$\ln(10^{10} A_s)$	$3.024^{+0.034}_{-0.036}$	D_{220}	5751^{+84}_{-80}	$D_{\text{M}}(0.61)$	2243^{+41}_{-40}
n_s	$0.983^{+0.012}_{-0.012}$	D_{810}	2522^{+28}_{-27}	$H(2.33)$	$232.9^{+2.3}_{-2.2}$
y_{cal}	$1.0001^{+0.0048}_{-0.0050}$	D_{1420}	$816^{+10}_{-9.9}$	$D_{\text{M}}(2.33)$	5709^{+38}_{-39}
A_{217}^{CIB}	40^{+20}_{-20}	D_{2000}	$233.7^{+3.9}_{-3.9}$	$f\sigma_8(0.15)$	$0.418^{+0.024}_{-0.023}$
$\xi^{tSZ-CIB}$	—	$n_{s,0.002}$	$0.983^{+0.012}_{-0.012}$	$\sigma_8(0.15)$	$0.728^{+0.017}_{-0.017}$
A_{143}^{tSZ}	$5.1^{+3.9}_{-4.2}$	Y_P	$0.24562^{+0.00022}_{-0.00021}$	$f\sigma_8(0.38)$	$0.444^{+0.020}_{-0.020}$
A_{100}^{PS}	235^{+60}_{-50}	Y_P^{BBN}	$0.24695^{+0.00022}_{-0.00021}$	$\sigma_8(0.38)$	$0.649^{+0.013}_{-0.014}$
A_{143}^{PS}	34^{+20}_{-20}	$10^5 D/H$	$2.487^{+0.090}_{-0.086}$	$f\sigma_8(0.51)$	$0.446^{+0.018}_{-0.017}$
A_{217}^{PS}	110^{+20}_{-30}	Age/Gyr	$13.681^{+0.084}_{-0.082}$	$\sigma_8(0.51)$	$0.609^{+0.012}_{-0.012}$
A^{kSZ}	< 7.69	z_*	$1088.67^{+0.86}_{-0.81}$	$f\sigma_8(0.61)$	$0.444^{+0.016}_{-0.016}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	r_*	$145.74^{+0.86}_{-0.89}$	$\sigma_8(0.61)$	$0.581^{+0.011}_{-0.011}$
c_{217}	$0.9993^{+0.0035}_{-0.0026}$	$100\theta_*$	$1.04204^{+0.00095}_{-0.00094}$	$f\sigma_8(2.33)$	$0.2943^{+0.0055}_{-0.0056}$
H_0	$70.6^{+1.9}_{-1.9}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.986^{+0.081}_{-0.081}$	$\sigma_8(2.33)$	$0.3052^{+0.0055}_{-0.0056}$
Ω_Λ	$0.725^{+0.021}_{-0.023}$	z_{drag}	$1060.7^{+1.0}_{-1.0}$	f_{2000}^{143}	25^{+6}_{-6}
Ω_m	$0.275^{+0.023}_{-0.021}$	r_{drag}	$148.25^{+0.88}_{-0.87}$	$f_{2000}^{143 \times 217}$	28^{+5}_{-5}
$\Omega_m h^2$	$0.1370^{+0.0037}_{-0.0036}$	k_{D}	$0.14005^{+0.00094}_{-0.00097}$	f_{2000}^{217}	$103.3^{+4.3}_{-4.4}$
$\Omega_m h^3$	$0.09661^{+0.00097}_{-0.00097}$	$100\theta_{\text{D}}$	$0.16039^{+0.00055}_{-0.00053}$	χ_{small}^2	$396.8 (\nu: 1.2)$
σ_8	$0.783^{+0.020}_{-0.019}$	z_{eq}	3257^{+89}_{-85}	χ_{lowl}^2	$20.72 (\nu: 0.2)$
S_8	$0.751^{+0.047}_{-0.044}$	k_{eq}	$0.00994^{+0.00027}_{-0.00026}$	χ_{H073p45}^2	$3.4 (\nu: 2.3)$
$\sigma_8 \Omega_m^{0.5}$	$0.411^{+0.026}_{-0.024}$	$100\theta_{\text{eq}}$	$0.843^{+0.018}_{-0.018}$	χ_{prior}^2	$7.0 (\nu: 5.4)$
$\sigma_8 \Omega_m^{0.25}$	$0.568^{+0.024}_{-0.023}$	$100\theta_{\text{s,eq}}$	$0.4643^{+0.0090}_{-0.0091}$	χ_{CMB}^2	$4334 (\nu: 4949899.2)$
$\sigma_8/h^{0.5}$	$0.933^{+0.034}_{-0.033}$	$H(0.15)$	$75.4^{+1.7}_{-1.7}$		
$r_{\text{drag}} h$	$104.6^{+3.3}_{-3.3}$	$D_{\text{M}}(0.15)$	617^{+16}_{-15}		

$\bar{\chi}_{\text{eff}}^2 = 7490.17$; $\Delta \bar{\chi}_{\text{eff}}^2 = 6292.40$; $R - 1 = 0.03353$

3.4 base_Alens_CamSpecHM_TT_lowl_lowE_post_zre6p5/base_Alens_plikHM_TT_lowl_lowE_post_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02262^{+0.00057}_{-0.00057}$	$r_{\text{drag}} h$	$102.0^{+4.1}_{-4.0}$	$H(0.15)$	$74.1^{+2.1}_{-2.0}$
$\Omega_c h^2$	$0.1165^{+0.0049}_{-0.0048}$	$\langle d^2 \rangle^{1/2}$	$2.64^{+0.15}_{-0.16}$	$D_{\text{M}}(0.15)$	630^{+20}_{-19}
$100\theta_{MC}$	$1.0414^{+0.0010}_{-0.0010}$	z_{re}	< 8.55	$H(0.38)$	$83.9^{+1.6}_{-1.5}$
τ	$0.0534^{+0.012}_{-0.0099}$	$10^9 A_s$	$2.076^{+0.056}_{-0.051}$	$D_{\text{M}}(0.38)$	1506^{+40}_{-40}
A_L	$1.24^{+0.20}_{-0.18}$	$10^9 A_s e^{-2\tau}$	$1.866^{+0.029}_{-0.028}$	$H(0.51)$	$90.4^{+1.3}_{-1.2}$
$\ln(10^{10} A_s)$	$3.033^{+0.027}_{-0.025}$	D_{40}	1207^{+34}_{-34}	$D_{\text{M}}(0.51)$	1954^{+46}_{-47}
n_s	$0.975^{+0.014}_{-0.014}$	D_{220}	5732^{+84}_{-83}	$H(0.61)$	$95.9^{+1.1}_{-0.97}$
y_{cal}	$1.0001^{+0.0049}_{-0.0049}$	D_{810}	2526^{+28}_{-27}	$D_{\text{M}}(0.61)$	2276^{+50}_{-51}
A_{217}^{CIB}	41^{+20}_{-20}	D_{1420}	814^{+10}_{-10}	$H(2.33)$	$234.5^{+2.8}_{-2.7}$
$\xi^{tSZ-CIB}$	—	D_{2000}	$232.3^{+4.1}_{-4.1}$	$D_{\text{M}}(2.33)$	5737^{+43}_{-46}
A_{143}^{tSZ}	$4.9^{+4.0}_{-4.1}$	$n_{s,0.002}$	$0.975^{+0.014}_{-0.014}$	$f\sigma_8(0.15)$	$0.438^{+0.030}_{-0.029}$
A_{100}^{PS}	239^{+60}_{-50}	Y_P	$0.24549^{+0.00025}_{-0.00023}$	$\sigma_8(0.15)$	$0.738^{+0.016}_{-0.016}$
A_{143}^{PS}	37^{+20}_{-20}	Y_P^{BBN}	$0.24682^{+0.00025}_{-0.00023}$	$f\sigma_8(0.38)$	$0.460^{+0.024}_{-0.024}$
A_{217}^{PS}	110^{+20}_{-30}	$10^5 D/H$	$2.54^{+0.10}_{-0.10}$	$\sigma_8(0.38)$	$0.656^{+0.012}_{-0.012}$
A^{kSZ}	< 8.17	Age/Gyr	$13.741^{+0.096}_{-0.10}$	$f\sigma_8(0.51)$	$0.460^{+0.020}_{-0.021}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	z_*	$1089.3^{+1.1}_{-1.0}$	$\sigma_8(0.51)$	$0.615^{+0.011}_{-0.010}$
c_{217}	$0.9995^{+0.0036}_{-0.0026}$	r_*	$145.2^{+1.0}_{-1.0}$	$f\sigma_8(0.61)$	$0.457^{+0.018}_{-0.018}$
H_0	$69.0^{+2.4}_{-2.3}$	$100\theta_*$	$1.0416^{+0.0010}_{-0.0010}$	$\sigma_8(0.61)$	$0.5855^{+0.0098}_{-0.0090}$
Ω_Λ	$0.706^{+0.028}_{-0.030}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.937^{+0.093}_{-0.093}$	$f\sigma_8(2.33)$	$0.2960^{+0.0043}_{-0.0040}$
Ω_m	$0.294^{+0.030}_{-0.028}$	z_{drag}	$1060.3^{+1.1}_{-1.1}$	$\sigma_8(2.33)$	$0.3060^{+0.0042}_{-0.0038}$
$\Omega_m h^2$	$0.1397^{+0.0046}_{-0.0044}$	r_{drag}	$147.76^{+0.99}_{-0.97}$	f_{2000}^{143}	26^{+7}_{-7}
$\Omega_m h^3$	$0.09639^{+0.00098}_{-0.00098}$	k_{D}	$0.14034^{+0.00099}_{-0.0010}$	$f_{2000}^{143 \times 217}$	30^{+5}_{-5}
σ_8	$0.797^{+0.020}_{-0.020}$	$100\theta_{\text{D}}$	$0.16062^{+0.00061}_{-0.00057}$	f_{2000}^{217}	$104.6^{+4.5}_{-4.6}$
S_8	$0.788^{+0.058}_{-0.056}$	z_{eq}	3324^{+110}_{-110}	χ_{small}^2	$396.4 (\nu: 0.6)$
$\sigma_8 \Omega_m^{0.5}$	$0.432^{+0.032}_{-0.031}$	k_{eq}	$0.01014^{+0.00033}_{-0.00032}$	χ_{lowl}^2	$21.7 (\nu: 0.6)$
$\sigma_8 \Omega_m^{0.25}$	$0.587^{+0.029}_{-0.028}$	$100\theta_{\text{eq}}$	$0.829^{+0.022}_{-0.021}$	χ_{prior}^2	$7.1 (\nu: 5.8)$
$\sigma_8/h^{0.5}$	$0.959^{+0.039}_{-0.039}$	$100\theta_{\text{s,eq}}$	$0.457^{+0.011}_{-0.011}$	χ_{CMB}^2	$4332 (\nu: 4949301.0)$

$\bar{\chi}_{\text{eff}}^2 = 7485.10$; $\Delta\bar{\chi}_{\text{eff}}^2 = 6292.48$; $R - 1 = 0.00928$

3.5 base_Alens_CamSpecHM_TT_lowl_lowE_post_BAO_zre6p5/base_Alens_plikHM_TT_lowl_lowE_post_BAO_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02250^{+0.00043}_{-0.00044}$	z_{re}	< 8.50	$H(0.51)$	$90.09^{+0.66}_{-0.65}$
$\Omega_c h^2$	$0.1178^{+0.0026}_{-0.0025}$	$10^9 A_s$	$2.079^{+0.054}_{-0.049}$	$D_{\text{M}}(0.51)$	1967^{+24}_{-24}
$100\theta_{MC}$	$1.04123^{+0.00085}_{-0.00085}$	$10^9 A_s e^{-2\tau}$	$1.871^{+0.023}_{-0.023}$	$H(0.61)$	$95.63^{+0.57}_{-0.56}$
τ	$0.0527^{+0.011}_{-0.0095}$	D_{40}	1214^{+26}_{-26}	$D_{\text{M}}(0.61)$	2290^{+26}_{-26}
A_L	$1.20^{+0.15}_{-0.15}$	D_{220}	5724^{+81}_{-82}	$H(2.33)$	$235.3^{+1.6}_{-1.6}$
$\ln(10^{10} A_s)$	$3.034^{+0.026}_{-0.024}$	D_{810}	2527^{+27}_{-27}	$D_{\text{M}}(2.33)$	5749^{+28}_{-27}
n_s	$0.9715^{+0.0090}_{-0.0088}$	D_{1420}	$813.8^{+9.8}_{-9.8}$	$f\sigma_8(0.15)$	$0.446^{+0.016}_{-0.016}$
y_{cal}	$1.0001^{+0.0050}_{-0.0050}$	D_{2000}	$231.8^{+3.6}_{-3.7}$	$\sigma_8(0.15)$	$0.742^{+0.012}_{-0.011}$
A_{217}^{CIB}	41^{+20}_{-20}	$n_{s,0.002}$	$0.9715^{+0.0090}_{-0.0088}$	$f\sigma_8(0.38)$	$0.466^{+0.013}_{-0.013}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.24544^{+0.00017}_{-0.00018}$	$\sigma_8(0.38)$	$0.6585^{+0.0098}_{-0.0093}$
A_{143}^{tSZ}	$4.9^{+4.0}_{-4.1}$	Y_P^{BBN}	$0.24677^{+0.00017}_{-0.00018}$	$f\sigma_8(0.51)$	$0.466^{+0.011}_{-0.011}$
A_{100}^{PS}	240^{+60}_{-50}	$10^5 D/H$	$2.563^{+0.082}_{-0.077}$	$\sigma_8(0.51)$	$0.6167^{+0.0089}_{-0.0084}$
A_{143}^{PS}	39^{+20}_{-20}	Age/Gyr	$13.766^{+0.063}_{-0.062}$	$f\sigma_8(0.61)$	$0.462^{+0.010}_{-0.010}$
A_{217}^{PS}	110^{+20}_{-30}	z_*	$1089.57^{+0.66}_{-0.64}$	$\sigma_8(0.61)$	$0.5870^{+0.0083}_{-0.0078}$
A^{kSZ}	< 8.37	r_*	$144.90^{+0.63}_{-0.61}$	$f\sigma_8(2.33)$	$0.2964^{+0.0041}_{-0.0037}$
c_{100}	$0.9985^{+0.0022}_{-0.0026}$	$100\theta_*$	$1.04140^{+0.00083}_{-0.00084}$	$\sigma_8(2.33)$	$0.3060^{+0.0042}_{-0.0038}$
c_{217}	$0.9995^{+0.0036}_{-0.0026}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.914^{+0.062}_{-0.060}$	f_{2000}^{143}	27^{+6}_{-6}
H_0	$68.3^{+1.2}_{-1.2}$	z_{drag}	$1060.07^{+0.93}_{-0.98}$	$f_{2000}^{143 \times 217}$	30^{+5}_{-5}
Ω_Λ	$0.698^{+0.015}_{-0.015}$	r_{drag}	$147.53^{+0.69}_{-0.65}$	f_{2000}^{217}	$105.1^{+4.2}_{-4.2}$
Ω_m	$0.302^{+0.015}_{-0.015}$	k_{D}	$0.14050^{+0.00086}_{-0.00089}$	χ_{small}^2	$396.4 (\nu: 0.6)$
$\Omega_m h^2$	$0.1410^{+0.0024}_{-0.0024}$	$100\theta_{\text{D}}$	$0.16071^{+0.00055}_{-0.00052}$	χ_{lowl}^2	$22.17 (\nu: 0.3)$
$\Omega_m h^3$	$0.09632^{+0.00095}_{-0.00097}$	z_{eq}	3353^{+58}_{-57}	$\chi_{6\text{DF}}^2$	$0.048 (\nu: 0.0)$
σ_8	$0.802^{+0.014}_{-0.013}$	k_{eq}	$0.01023^{+0.00018}_{-0.00017}$	χ_{MGS}^2	$1.98 (\nu: 0.2)$
S_8	$0.804^{+0.031}_{-0.030}$	$100\theta_{\text{eq}}$	$0.823^{+0.011}_{-0.011}$	χ_{DR12BAO}^2	$4.05 (\nu: 0.5)$
$\sigma_8 \Omega_m^{0.5}$	$0.440^{+0.017}_{-0.016}$	$100\theta_{\text{s,eq}}$	$0.4542^{+0.0056}_{-0.0056}$	χ_{prior}^2	$7.2 (\nu: 6.0)$
$\sigma_8 \Omega_m^{0.25}$	$0.594^{+0.016}_{-0.016}$	$H(0.15)$	$73.5^{+1.0}_{-1.0}$	χ_{BAO}^2	$6.1 (\nu: 0.7)$
$\sigma_8/h^{0.5}$	$0.970^{+0.022}_{-0.022}$	$D_{\text{M}}(0.15)$	$635^{+10}_{-9.9}$	χ_{CMB}^2	$4331 (\nu: 4949412.5)$
$r_{\text{drag}} h$	$100.8^{+2.0}_{-2.0}$	$H(0.38)$	$83.46^{+0.79}_{-0.78}$		
$\langle d^2 \rangle^{1/2}$	$2.63^{+0.15}_{-0.15}$	$D_{\text{M}}(0.38)$	1517^{+20}_{-20}		

$$\bar{\chi}_{\text{eff}}^2 = 7490.78; \Delta \bar{\chi}_{\text{eff}}^2 = 6292.70; R - 1 = 0.01851$$

3.6 base_Alens_CamSpecHM_TT_lowl_lowE_post_Riess18_zre6p5/base_Alens_plikHM_TT_lowl_lowE_post_Riess18_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02293^{+0.00050}_{-0.00051}$	$\langle d^2 \rangle^{1/2}$	$2.67^{+0.15}_{-0.15}$	$H(0.38)$	$84.9^{+1.3}_{-1.3}$
$\Omega_c h^2$	$0.1133^{+0.0040}_{-0.0038}$	z_{re}	< 8.64	$D_{\text{M}}(0.38)$	1480^{+32}_{-31}
$100\theta_{MC}$	$1.0419^{+0.0010}_{-0.00097}$	$10^9 A_s$	$2.068^{+0.059}_{-0.053}$	$H(0.51)$	$91.3^{+1.0}_{-1.0}$
τ	$0.055^{+0.013}_{-0.011}$	$10^9 A_s e^{-2\tau}$	$1.853^{+0.027}_{-0.026}$	$D_{\text{M}}(0.51)$	1923^{+38}_{-37}
A_L	$1.33^{+0.19}_{-0.18}$	D_{40}	1190^{+31}_{-29}	$H(0.61)$	$96.58^{+0.86}_{-0.87}$
$\ln(10^{10} A_s)$	$3.029^{+0.028}_{-0.025}$	D_{220}	5750^{+83}_{-79}	$D_{\text{M}}(0.61)$	2242^{+41}_{-40}
n_s	$0.983^{+0.012}_{-0.012}$	D_{810}	2522^{+28}_{-28}	$H(2.33)$	$232.8^{+2.3}_{-2.2}$
y_{cal}	$1.0000^{+0.0049}_{-0.0050}$	D_{1420}	$815.6^{+9.8}_{-9.9}$	$D_{\text{M}}(2.33)$	5709^{+38}_{-37}
A_{217}^{CIB}	40^{+20}_{-20}	D_{2000}	$233.7^{+3.8}_{-3.9}$	$f\sigma_8(0.15)$	$0.419^{+0.024}_{-0.023}$
$\xi^{tSZ-CIB}$	—	$n_{s,0.002}$	$0.983^{+0.012}_{-0.012}$	$\sigma_8(0.15)$	$0.730^{+0.016}_{-0.015}$
A_{143}^{tSZ}	$5.1^{+3.9}_{-4.3}$	Y_P	$0.24562^{+0.00022}_{-0.00021}$	$f\sigma_8(0.38)$	$0.445^{+0.020}_{-0.019}$
A_{100}^{PS}	235^{+60}_{-50}	Y_P^{BBN}	$0.24695^{+0.00022}_{-0.00021}$	$\sigma_8(0.38)$	$0.651^{+0.012}_{-0.012}$
A_{143}^{PS}	34^{+20}_{-20}	$10^5 D/H$	$2.487^{+0.090}_{-0.086}$	$f\sigma_8(0.51)$	$0.447^{+0.017}_{-0.017}$
A_{217}^{PS}	110^{+20}_{-30}	Age/Gyr	$13.681^{+0.084}_{-0.082}$	$\sigma_8(0.51)$	$0.611^{+0.011}_{-0.010}$
A^{kSZ}	< 7.69	z_*	$1088.66^{+0.86}_{-0.79}$	$f\sigma_8(0.61)$	$0.446^{+0.015}_{-0.015}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	r_*	$145.75^{+0.85}_{-0.89}$	$\sigma_8(0.61)$	$0.582^{+0.010}_{-0.0092}$
c_{217}	$0.9993^{+0.0035}_{-0.0026}$	$100\theta_*$	$1.04205^{+0.00098}_{-0.00094}$	$f\sigma_8(2.33)$	$0.2951^{+0.0045}_{-0.0042}$
H_0	$70.6^{+1.9}_{-1.9}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.987^{+0.080}_{-0.081}$	$\sigma_8(2.33)$	$0.3060^{+0.0045}_{-0.0040}$
Ω_Λ	$0.725^{+0.021}_{-0.023}$	z_{drag}	$1060.7^{+1.0}_{-1.0}$	f_{2000}^{143}	24^{+6}_{-6}
Ω_m	$0.275^{+0.023}_{-0.021}$	r_{drag}	$148.26^{+0.89}_{-0.86}$	$f_{2000}^{143 \times 217}$	28^{+5}_{-5}
$\Omega_m h^2$	$0.1369^{+0.0037}_{-0.0036}$	k_{D}	$0.14003^{+0.00095}_{-0.00098}$	f_{2000}^{217}	$103.2^{+4.3}_{-4.4}$
$\Omega_m h^3$	$0.09661^{+0.00097}_{-0.00099}$	$100\theta_{\text{D}}$	$0.16039^{+0.00056}_{-0.00055}$	χ_{small}^2	$396.4 (\nu: 0.8)$
σ_8	$0.786^{+0.018}_{-0.018}$	z_{eq}	3256^{+89}_{-86}	χ_{lowl}^2	$20.73 (\nu: 0.2)$
S_8	$0.752^{+0.046}_{-0.044}$	k_{eq}	$0.00994^{+0.00027}_{-0.00026}$	χ_{H073p45}^2	$3.4 (\nu: 2.3)$
$\sigma_8 \Omega_m^{0.5}$	$0.412^{+0.025}_{-0.024}$	$100\theta_{\text{eq}}$	$0.843^{+0.018}_{-0.018}$	χ_{prior}^2	$7.0 (\nu: 5.5)$
$\sigma_8 \Omega_m^{0.25}$	$0.569^{+0.024}_{-0.022}$	$100\theta_{\text{s,eq}}$	$0.4644^{+0.0089}_{-0.0092}$	χ_{CMB}^2	$4333 (\nu: 4949961.7)$
$\sigma_8/h^{0.5}$	$0.935^{+0.033}_{-0.032}$	$H(0.15)$	$75.5^{+1.7}_{-1.7}$		
$r_{\text{drag}} h$	$104.6^{+3.3}_{-3.3}$	$D_{\text{M}}(0.15)$	617^{+16}_{-15}		

$\bar{\chi}_{\text{eff}}^2 = 7489.90$; $\Delta \bar{\chi}_{\text{eff}}^2 = 6292.46$; $R - 1 = 0.05184$

3.7 base_Alens_CamSpecHM_TTTEEE_lowl_lowE/base_Alens_plikHM_TTTEEE_lowl_lowE

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02255^{+0.00036}_{-0.00037}$	$r_{\text{drag}} h$	$100.7^{+2.5}_{-2.4}$	$H(0.15)$	$73.5^{+1.2}_{-1.2}$
$\Omega_c h^2$	$0.1180^{+0.0031}_{-0.0031}$	$\langle d^2 \rangle^{1/2}$	$2.58^{+0.12}_{-0.13}$	$D_{\text{M}}(0.15)$	636^{+12}_{-12}
$100\theta_{MC}$	$1.04111^{+0.00065}_{-0.00064}$	z_{re}	$7.1^{+1.7}_{-1.8}$	$H(0.38)$	$83.44^{+0.92}_{-0.88}$
τ	$0.049^{+0.016}_{-0.018}$	$10^9 A_s$	$2.067^{+0.068}_{-0.075}$	$D_{\text{M}}(0.38)$	1518^{+24}_{-24}
A_L	$1.16^{+0.14}_{-0.14}$	$10^9 A_s e^{-2\tau}$	$1.872^{+0.024}_{-0.023}$	$H(0.51)$	$90.07^{+0.74}_{-0.71}$
$\ln(10^{10} A_s)$	$3.028^{+0.033}_{-0.037}$	D_{40}	1215^{+27}_{-27}	$D_{\text{M}}(0.51)$	1968^{+28}_{-28}
n_s	$0.9710^{+0.0097}_{-0.0097}$	D_{220}	5731^{+76}_{-77}	$H(0.61)$	$95.63^{+0.61}_{-0.57}$
y_{cal}	$1.0000^{+0.0048}_{-0.0047}$	D_{810}	2530^{+27}_{-26}	$D_{\text{M}}(0.61)$	2291^{+30}_{-31}
A_{217}^{CIB}	41^{+10}_{-20}	D_{1420}	$815.1^{+9.4}_{-9.3}$	$H(2.33)$	$235.4^{+1.8}_{-1.8}$
$\xi^{tSZ-CIB}$	—	D_{2000}	$231.9^{+3.2}_{-3.4}$	$D_{\text{M}}(2.33)$	5749^{+26}_{-27}
A_{143}^{tSZ}	$4.9^{+4.0}_{-4.2}$	$n_{s,0.002}$	$0.9710^{+0.0097}_{-0.0097}$	$f\sigma_8(0.15)$	$0.445^{+0.019}_{-0.019}$
A_{100}^{PS}	240^{+60}_{-50}	Y_P	$0.24546^{+0.00015}_{-0.00015}$	$\sigma_8(0.15)$	$0.739^{+0.014}_{-0.016}$
A_{143}^{PS}	39^{+20}_{-20}	Y_P^{BBN}	$0.24679^{+0.00015}_{-0.00015}$	$f\sigma_8(0.38)$	$0.465^{+0.016}_{-0.016}$
A_{217}^{PS}	110^{+20}_{-30}	$10^5 D/H$	$2.554^{+0.069}_{-0.065}$	$\sigma_8(0.38)$	$0.656^{+0.012}_{-0.013}$
A^{kSZ}	< 8.17	Age/Gyr	$13.765^{+0.059}_{-0.059}$	$f\sigma_8(0.51)$	$0.465^{+0.014}_{-0.014}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	z_*	$1089.52^{+0.66}_{-0.65}$	$\sigma_8(0.51)$	$0.615^{+0.011}_{-0.012}$
c_{217}	$0.9995^{+0.0037}_{-0.0027}$	r_*	$144.82^{+0.66}_{-0.66}$	$f\sigma_8(0.61)$	$0.460^{+0.013}_{-0.013}$
H_0	$68.3^{+1.4}_{-1.4}$	$100\theta_*$	$1.04127^{+0.00064}_{-0.00062}$	$\sigma_8(0.61)$	$0.585^{+0.010}_{-0.011}$
Ω_Λ	$0.697^{+0.018}_{-0.019}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.908^{+0.062}_{-0.061}$	$f\sigma_8(2.33)$	$0.2953^{+0.0050}_{-0.0055}$
Ω_m	$0.303^{+0.019}_{-0.018}$	z_{drag}	$1060.20^{+0.72}_{-0.77}$	$\sigma_8(2.33)$	$0.3049^{+0.0051}_{-0.0057}$
$\Omega_m h^2$	$0.1412^{+0.0028}_{-0.0029}$	r_{drag}	$147.43^{+0.65}_{-0.65}$	f_{2000}^{143}	27^{+6}_{-6}
$\Omega_m h^3$	$0.09639^{+0.00066}_{-0.00067}$	k_{D}	$0.14065^{+0.00069}_{-0.00070}$	$f_{2000}^{143 \times 217}$	30^{+4}_{-4}
σ_8	$0.799^{+0.017}_{-0.018}$	$100\theta_{\text{D}}$	$0.16061^{+0.00043}_{-0.00040}$	f_{2000}^{217}	$105.1^{+3.9}_{-3.8}$
S_8	$0.803^{+0.038}_{-0.037}$	z_{eq}	3359^{+68}_{-68}	χ_{small}^2	$396.8 (\nu: 1.2)$
$\sigma_8 \Omega_m^{0.5}$	$0.440^{+0.021}_{-0.020}$	k_{eq}	$0.01025^{+0.00021}_{-0.00021}$	χ_{lowl}^2	$22.22 (\nu: 0.4)$
$\sigma_8 \Omega_m^{0.25}$	$0.593^{+0.020}_{-0.020}$	$100\theta_{\text{eq}}$	$0.822^{+0.014}_{-0.013}$	χ_{prior}^2	$9.5 (\nu: 9.1)$
$\sigma_8/h^{0.5}$	$0.967^{+0.028}_{-0.028}$	$100\theta_{\text{s,eq}}$	$0.4537^{+0.0069}_{-0.0067}$	χ_{CMB}^2	$7352 (\nu: 10484160.0)$

Best-fit $\chi_{\text{eff}}^2 = 11915.94$; $\Delta\chi_{\text{eff}}^2 = 9159.83$; $\bar{\chi}_{\text{eff}}^2 = 11938.97$; $\Delta\bar{\chi}_{\text{eff}}^2 = 9154.70$; $R - 1 = 0.01096$

χ_{eff}^2 : CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.68 (Δ 0.01) commander_dx12_v3.2.29: 21.90 (Δ -0.06) CamSpec like_10.7HM_1400_unified: 11496.51

3.8 base_Alens_CamSpecHM_TTTEEE_lowl_lowE_post_BAO/base_Alens_plikHM_TTTEEE_lowl_lowE_post_BAO

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02254^{+0.00032}_{-0.00033}$	z_{re}	$7.1^{+1.7}_{-1.8}$	$H(0.51)$	$90.04^{+0.53}_{-0.51}$
$\Omega_c h^2$	$0.1181^{+0.0021}_{-0.0021}$	$10^9 A_s$	$2.067^{+0.069}_{-0.076}$	$D_{\text{M}}(0.51)$	1969^{+20}_{-20}
$100\theta_{MC}$	$1.04109^{+0.00059}_{-0.00058}$	$10^9 A_s e^{-2\tau}$	$1.873^{+0.022}_{-0.022}$	$H(0.61)$	$95.60^{+0.44}_{-0.43}$
τ	$0.049^{+0.016}_{-0.018}$	D_{40}	1216^{+24}_{-24}	$D_{\text{M}}(0.61)$	2292^{+21}_{-22}
A_L	$1.16^{+0.13}_{-0.13}$	D_{220}	5730^{+76}_{-76}	$H(2.33)$	$235.5^{+1.3}_{-1.3}$
$\ln(10^{10} A_s)$	$3.028^{+0.033}_{-0.037}$	D_{810}	2530^{+26}_{-26}	$D_{\text{M}}(2.33)$	5750^{+21}_{-20}
n_s	$0.9707^{+0.0080}_{-0.0080}$	D_{1420}	$815.0^{+9.3}_{-9.4}$	$f\sigma_8(0.15)$	$0.446^{+0.014}_{-0.014}$
y_{cal}	$1.0000^{+0.0048}_{-0.0048}$	D_{2000}	$231.8^{+3.2}_{-3.3}$	$\sigma_8(0.15)$	$0.740^{+0.014}_{-0.015}$
A_{217}^{CIB}	41^{+20}_{-20}	$n_{s,0.002}$	$0.9707^{+0.0080}_{-0.0080}$	$f\sigma_8(0.38)$	$0.466^{+0.012}_{-0.013}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.24546^{+0.00012}_{-0.00013}$	$\sigma_8(0.38)$	$0.657^{+0.012}_{-0.013}$
A_{143}^{tSZ}	$4.9^{+3.9}_{-4.1}$	Y_P^{BBN}	$0.24678^{+0.00012}_{-0.00013}$	$f\sigma_8(0.51)$	$0.465^{+0.011}_{-0.012}$
A_{100}^{PS}	241^{+60}_{-50}	$10^5 D/H$	$2.556^{+0.060}_{-0.057}$	$\sigma_8(0.51)$	$0.615^{+0.011}_{-0.012}$
A_{143}^{PS}	39^{+20}_{-20}	Age/Gyr	$13.767^{+0.046}_{-0.045}$	$f\sigma_8(0.61)$	$0.461^{+0.010}_{-0.011}$
A_{217}^{PS}	110^{+20}_{-30}	z_*	$1089.55^{+0.51}_{-0.50}$	$\sigma_8(0.61)$	$0.585^{+0.010}_{-0.011}$
A^{kSZ}	< 8.20	r_*	$144.79^{+0.49}_{-0.49}$	$f\sigma_8(2.33)$	$0.2954^{+0.0050}_{-0.0056}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	$100\theta_*$	$1.04126^{+0.00058}_{-0.00057}$	$\sigma_8(2.33)$	$0.3049^{+0.0051}_{-0.0058}$
c_{217}	$0.9995^{+0.0037}_{-0.0027}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.905^{+0.047}_{-0.047}$	f_{2000}^{143}	27^{+6}_{-6}
H_0	$68.21^{+0.99}_{-0.98}$	z_{drag}	$1060.19^{+0.66}_{-0.71}$	$f_{2000}^{143 \times 217}$	30^{+4}_{-4}
Ω_Λ	$0.696^{+0.013}_{-0.013}$	r_{drag}	$147.40^{+0.52}_{-0.51}$	f_{2000}^{217}	$105.1^{+3.8}_{-3.7}$
Ω_m	$0.304^{+0.013}_{-0.013}$	k_{D}	$0.14066^{+0.00063}_{-0.00065}$	χ_{small}^2	$396.8 (\nu: 1.3)$
$\Omega_m h^2$	$0.1413^{+0.0020}_{-0.0020}$	$100\theta_{\text{D}}$	$0.16062^{+0.00041}_{-0.00038}$	χ_{lowl}^2	$22.25 (\nu: 0.3)$
$\Omega_m h^3$	$0.09639^{+0.00066}_{-0.00066}$	z_{eq}	3361^{+48}_{-48}	$\chi_{6\text{DF}}^2$	$0.030 (\nu: 0.0)$
σ_8	$0.800^{+0.015}_{-0.016}$	k_{eq}	$0.01026^{+0.00015}_{-0.00015}$	χ_{MGS}^2	$1.80 (\nu: 0.1)$
S_8	$0.805^{+0.028}_{-0.027}$	$100\theta_{\text{eq}}$	$0.8213^{+0.0093}_{-0.0091}$	χ_{DR12BAO}^2	$3.94 (\nu: 0.3)$
$\sigma_8 \Omega_m^{0.5}$	$0.441^{+0.015}_{-0.015}$	$100\theta_{\text{s,eq}}$	$0.4534^{+0.0047}_{-0.0047}$	χ_{prior}^2	$9.6 (\nu: 9.3)$
$\sigma_8 \Omega_m^{0.25}$	$0.594^{+0.015}_{-0.016}$	$H(0.15)$	$73.42^{+0.86}_{-0.84}$	χ_{BAO}^2	$5.77 (\nu: 0.3)$
$\sigma_8/h^{0.5}$	$0.968^{+0.022}_{-0.023}$	$D_{\text{M}}(0.15)$	$636.1^{+8.3}_{-8.3}$	χ_{CMB}^2	$7352 (\nu: 10484346.4)$
$r_{\text{drag}} h$	$100.5^{+1.7}_{-1.7}$	$H(0.38)$	$83.40^{+0.65}_{-0.63}$		
$\langle d^2 \rangle^{1/2}$	$2.58^{+0.12}_{-0.13}$	$D_{\text{M}}(0.38)$	1519^{+17}_{-17}		

$$\bar{\chi}_{\text{eff}}^2 = 11944.29; \Delta\bar{\chi}_{\text{eff}}^2 = 9154.75; R - 1 = 0.01598$$

3.9 base_Alens_CamSpecHM_TTTEEE_lowl_lowE_post_Riess18/base_Alens_plikHM_TTTEEE_lowl_lowE_post_Riess18

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02271^{+0.00033}_{-0.00035}$	$\langle d^2 \rangle^{1/2}$	$2.60^{+0.12}_{-0.13}$	$H(0.38)$	$83.97^{+0.82}_{-0.83}$
$\Omega_c h^2$	$0.1163^{+0.0028}_{-0.0025}$	z_{re}	$7.1^{+1.7}_{-1.7}$	$D_{\text{M}}(0.38)$	1504^{+22}_{-21}
$100\theta_{MC}$	$1.04133^{+0.00069}_{-0.00064}$	$10^9 A_s$	$2.063^{+0.068}_{-0.073}$	$H(0.51)$	$90.49^{+0.66}_{-0.67}$
τ	$0.050^{+0.016}_{-0.017}$	$10^9 A_s e^{-2\tau}$	$1.865^{+0.023}_{-0.023}$	$D_{\text{M}}(0.51)$	1951^{+26}_{-24}
A_L	$1.21^{+0.14}_{-0.14}$	D_{40}	1206^{+26}_{-26}	$H(0.61)$	$95.97^{+0.55}_{-0.55}$
$\ln(10^{10} A_s)$	$3.027^{+0.033}_{-0.036}$	D_{220}	5741^{+79}_{-77}	$D_{\text{M}}(0.61)$	2273^{+28}_{-26}
n_s	$0.9755^{+0.0088}_{-0.0093}$	D_{810}	2528^{+26}_{-26}	$H(2.33)$	$234.5^{+1.6}_{-1.5}$
y_{cal}	$0.99998^{+0.0046}_{-0.0047}$	D_{1420}	$815.8^{+8.7}_{-9.2}$	$D_{\text{M}}(2.33)$	5734^{+25}_{-25}
A_{217}^{CIB}	40^{+20}_{-20}	D_{2000}	$232.6^{+3.0}_{-3.2}$	$f\sigma_8(0.15)$	$0.435^{+0.018}_{-0.017}$
$\xi^{tSZ-CIB}$	—	$n_{s,0.002}$	$0.9755^{+0.0088}_{-0.0093}$	$\sigma_8(0.15)$	$0.735^{+0.014}_{-0.016}$
A_{143}^{tSZ}	$5.0^{+3.9}_{-4.2}$	Y_P	$0.24553^{+0.00015}_{-0.00013}$	$f\sigma_8(0.38)$	$0.457^{+0.015}_{-0.015}$
A_{100}^{PS}	237^{+50}_{-50}	Y_P^{BBN}	$0.24685^{+0.00015}_{-0.00013}$	$\sigma_8(0.38)$	$0.654^{+0.012}_{-0.013}$
A_{143}^{PS}	37^{+20}_{-20}	$10^5 D/H$	$2.524^{+0.062}_{-0.059}$	$f\sigma_8(0.51)$	$0.458^{+0.013}_{-0.013}$
A_{217}^{PS}	110^{+20}_{-30}	Age/Gyr	$13.734^{+0.055}_{-0.055}$	$\sigma_8(0.51)$	$0.613^{+0.011}_{-0.011}$
A^{kSZ}	< 7.93	z_*	$1089.18^{+0.60}_{-0.55}$	$f\sigma_8(0.61)$	$0.455^{+0.012}_{-0.012}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	r_*	$145.14^{+0.63}_{-0.61}$	$\sigma_8(0.61)$	$0.5835^{+0.0099}_{-0.011}$
c_{217}	$0.9995^{+0.0037}_{-0.0027}$	$100\theta_*$	$1.04149^{+0.00067}_{-0.00063}$	$f\sigma_8(2.33)$	$0.2950^{+0.0050}_{-0.0053}$
H_0	$69.1^{+1.2}_{-1.3}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.936^{+0.055}_{-0.057}$	$\sigma_8(2.33)$	$0.3050^{+0.0051}_{-0.0055}$
Ω_Λ	$0.707^{+0.015}_{-0.017}$	z_{drag}	$1060.45^{+0.66}_{-0.71}$	f_{2000}^{143}	26^{+6}_{-6}
Ω_m	$0.293^{+0.017}_{-0.015}$	r_{drag}	$147.70^{+0.60}_{-0.60}$	$f_{2000}^{143 \times 217}$	29^{+4}_{-4}
$\Omega_m h^2$	$0.1396^{+0.0026}_{-0.0024}$	k_{D}	$0.14048^{+0.00066}_{-0.00068}$	f_{2000}^{217}	$104.3^{+3.8}_{-3.7}$
$\Omega_m h^3$	$0.09649^{+0.00064}_{-0.00066}$	$100\theta_{\text{D}}$	$0.16048^{+0.00039}_{-0.00036}$	χ_{small}^2	$396.8 (\nu: 1.2)$
σ_8	$0.793^{+0.016}_{-0.018}$	z_{eq}	3322^{+62}_{-57}	χ_{lowl}^2	$21.56 (\nu: 0.3)$
S_8	$0.784^{+0.034}_{-0.032}$	k_{eq}	$0.01014^{+0.00019}_{-0.00017}$	χ_{H073p45}^2	$7.0 (\nu: 2.2)$
$\sigma_8 \Omega_m^{0.5}$	$0.429^{+0.019}_{-0.018}$	$100\theta_{\text{eq}}$	$0.829^{+0.011}_{-0.012}$	χ_{prior}^2	$9.5 (\nu: 9.1)$
$\sigma_8 \Omega_m^{0.25}$	$0.584^{+0.018}_{-0.018}$	$100\theta_{\text{s,eq}}$	$0.4575^{+0.0058}_{-0.0062}$	χ_{CMB}^2	$7353 (\nu: 10485586.2)$
$\sigma_8/h^{0.5}$	$0.955^{+0.026}_{-0.026}$	$H(0.15)$	$74.2^{+1.1}_{-1.1}$		
$r_{\text{drag}} h$	$102.1^{+2.1}_{-2.2}$	$D_{\text{M}}(0.15)$	629^{+11}_{-10}		

$\bar{\chi}_{\text{eff}}^2 = 11947.36$; $\Delta\bar{\chi}_{\text{eff}}^2 = 9155.26$; $R - 1 = 0.04484$

3.10 base_Alens_CamSpecHM_TTTEEE_lowl_lowE_post_zre6p5/base_Alens_plikHM_TTTEEE_lowl_lowE_post_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02255^{+0.00036}_{-0.00038}$	$r_{\text{drag}} h$	$100.7^{+2.5}_{-2.4}$	$H(0.15)$	$73.5^{+1.2}_{-1.2}$
$\Omega_c h^2$	$0.1180^{+0.0031}_{-0.0031}$	$\langle d^2 \rangle^{1/2}$	$2.58^{+0.12}_{-0.13}$	$D_{\text{M}}(0.15)$	635^{+12}_{-12}
$100\theta_{MC}$	$1.04111^{+0.00065}_{-0.00064}$	z_{re}	< 8.50	$H(0.38)$	$83.45^{+0.92}_{-0.90}$
τ	$0.0527^{+0.011}_{-0.0093}$	$10^9 A_s$	$2.080^{+0.054}_{-0.048}$	$D_{\text{M}}(0.38)$	1518^{+24}_{-24}
A_L	$1.16^{+0.13}_{-0.13}$	$10^9 A_s e^{-2\tau}$	$1.872^{+0.024}_{-0.023}$	$H(0.51)$	$90.08^{+0.74}_{-0.72}$
$\ln(10^{10} A_s)$	$3.035^{+0.026}_{-0.023}$	D_{40}	1215^{+27}_{-27}	$D_{\text{M}}(0.51)$	1967^{+28}_{-28}
n_s	$0.9712^{+0.0098}_{-0.0098}$	D_{220}	5731^{+76}_{-77}	$H(0.61)$	$95.63^{+0.61}_{-0.59}$
y_{cal}	$1.0000^{+0.0048}_{-0.0048}$	D_{810}	2530^{+27}_{-26}	$D_{\text{M}}(0.61)$	2290^{+31}_{-31}
A_{217}^{CIB}	41^{+20}_{-20}	D_{1420}	$815.1^{+9.5}_{-9.3}$	$H(2.33)$	$235.4^{+1.8}_{-1.8}$
$\xi^{tSZ-CIB}$	—	D_{2000}	$231.9^{+3.2}_{-3.4}$	$D_{\text{M}}(2.33)$	5748^{+27}_{-27}
A_{143}^{tSZ}	$4.9^{+4.0}_{-4.2}$	$n_{s,0.002}$	$0.9712^{+0.0098}_{-0.0098}$	$f\sigma_8(0.15)$	$0.446^{+0.019}_{-0.019}$
A_{100}^{PS}	240^{+60}_{-50}	Y_P	$0.24546^{+0.00015}_{-0.00015}$	$\sigma_8(0.15)$	$0.742^{+0.013}_{-0.012}$
A_{143}^{PS}	39^{+20}_{-20}	Y_P^{BBN}	$0.24679^{+0.00015}_{-0.00015}$	$f\sigma_8(0.38)$	$0.466^{+0.015}_{-0.015}$
A_{217}^{PS}	110^{+20}_{-30}	$10^5 D/H$	$2.554^{+0.070}_{-0.065}$	$\sigma_8(0.38)$	$0.658^{+0.010}_{-0.0090}$
A^{kSZ}	< 8.18	Age/Gyr	$13.765^{+0.059}_{-0.059}$	$f\sigma_8(0.51)$	$0.466^{+0.013}_{-0.013}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	z_*	$1089.52^{+0.67}_{-0.64}$	$\sigma_8(0.51)$	$0.6166^{+0.0091}_{-0.0083}$
c_{217}	$0.9995^{+0.0037}_{-0.0027}$	r_*	$144.82^{+0.66}_{-0.66}$	$f\sigma_8(0.61)$	$0.462^{+0.012}_{-0.012}$
H_0	$68.3^{+1.4}_{-1.4}$	$100\theta_*$	$1.04128^{+0.00064}_{-0.00063}$	$\sigma_8(0.61)$	$0.5869^{+0.0084}_{-0.0077}$
Ω_Λ	$0.697^{+0.018}_{-0.019}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.908^{+0.062}_{-0.061}$	$f\sigma_8(2.33)$	$0.2963^{+0.0040}_{-0.0036}$
Ω_m	$0.303^{+0.019}_{-0.018}$	z_{drag}	$1060.20^{+0.72}_{-0.77}$	$\sigma_8(2.33)$	$0.3059^{+0.0041}_{-0.0036}$
$\Omega_m h^2$	$0.1412^{+0.0029}_{-0.0029}$	r_{drag}	$147.43^{+0.65}_{-0.65}$	f_{2000}^{143}	27^{+6}_{-6}
$\Omega_m h^3$	$0.09639^{+0.00066}_{-0.00067}$	k_{D}	$0.14064^{+0.00068}_{-0.00071}$	$f_{2000}^{143 \times 217}$	30^{+4}_{-4}
σ_8	$0.802^{+0.015}_{-0.014}$	$100\theta_{\text{D}}$	$0.16061^{+0.00043}_{-0.00040}$	f_{2000}^{217}	$105.0^{+4.0}_{-3.8}$
S_8	$0.805^{+0.037}_{-0.037}$	z_{eq}	3358^{+69}_{-69}	χ_{small}^2	$396.4 (\nu: 0.6)$
$\sigma_8 \Omega_m^{0.5}$	$0.441^{+0.020}_{-0.020}$	k_{eq}	$0.01025^{+0.00021}_{-0.00021}$	χ_{lowl}^2	$22.27 (\nu: 0.4)$
$\sigma_8 \Omega_m^{0.25}$	$0.595^{+0.019}_{-0.019}$	$100\theta_{\text{eq}}$	$0.822^{+0.014}_{-0.013}$	χ_{prior}^2	$9.5 (\nu: 9.2)$
$\sigma_8/h^{0.5}$	$0.970^{+0.026}_{-0.026}$	$100\theta_{\text{s,eq}}$	$0.4538^{+0.0069}_{-0.0067}$	χ_{CMB}^2	$7352 (\nu: 10484321.7)$

$$\bar{\chi}_{\text{eff}}^2 = 11938.62; \Delta\bar{\chi}_{\text{eff}}^2 = 9154.74; R - 1 = 0.01153$$

3.11 base_Alens_CamSpecHM_TTTEEE_lowl_lowE_post_BAO_zre6p5/base_Alens_plikHM_TTTEEE_lowl_lowE_post_BAO_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02254^{+0.00032}_{-0.00033}$	z_{re}	< 8.51	$H(0.51)$	$90.04^{+0.53}_{-0.52}$
$\Omega_c h^2$	$0.1181^{+0.0021}_{-0.0021}$	$10^9 A_s$	$2.081^{+0.053}_{-0.047}$	$D_M(0.51)$	1969^{+20}_{-20}
$100\theta_{MC}$	$1.04110^{+0.00059}_{-0.00058}$	$10^9 A_s e^{-2\tau}$	$1.873^{+0.022}_{-0.022}$	$H(0.61)$	$95.60^{+0.44}_{-0.43}$
τ	$0.0526^{+0.011}_{-0.0093}$	D_{40}	1216^{+24}_{-24}	$D_M(0.61)$	2292^{+21}_{-22}
A_L	$1.15^{+0.12}_{-0.13}$	D_{220}	5730^{+76}_{-76}	$H(2.33)$	$235.5^{+1.3}_{-1.3}$
$\ln(10^{10} A_s)$	$3.035^{+0.026}_{-0.023}$	D_{810}	2530^{+27}_{-26}	$D_M(2.33)$	5750^{+21}_{-20}
n_s	$0.9708^{+0.0081}_{-0.0081}$	D_{1420}	$815.1^{+9.4}_{-9.3}$	$f\sigma_8(0.15)$	$0.447^{+0.014}_{-0.013}$
y_{cal}	$1.0000^{+0.0049}_{-0.0048}$	D_{2000}	$231.8^{+3.2}_{-3.3}$	$\sigma_8(0.15)$	$0.742^{+0.012}_{-0.010}$
A_{217}^{CIB}	41^{+20}_{-20}	$n_{s,0.002}$	$0.9708^{+0.0081}_{-0.0081}$	$f\sigma_8(0.38)$	$0.467^{+0.011}_{-0.011}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.24546^{+0.00012}_{-0.00013}$	$\sigma_8(0.38)$	$0.6587^{+0.0094}_{-0.0086}$
A_{143}^{tSZ}	$4.9^{+3.9}_{-4.2}$	Y_P^{BBN}	$0.24678^{+0.00012}_{-0.00013}$	$f\sigma_8(0.51)$	$0.467^{+0.010}_{-0.0098}$
A_{100}^{PS}	241^{+60}_{-50}	$10^5 D/H$	$2.556^{+0.060}_{-0.057}$	$\sigma_8(0.51)$	$0.6168^{+0.0086}_{-0.0078}$
A_{143}^{PS}	39^{+20}_{-20}	Age/Gyr	$13.767^{+0.046}_{-0.045}$	$f\sigma_8(0.61)$	$0.4624^{+0.0094}_{-0.0089}$
A_{217}^{PS}	111^{+20}_{-30}	z_*	$1089.55^{+0.52}_{-0.50}$	$\sigma_8(0.61)$	$0.5872^{+0.0081}_{-0.0073}$
A^{kSZ}	< 8.25	r_*	$144.79^{+0.50}_{-0.49}$	$f\sigma_8(2.33)$	$0.2964^{+0.0039}_{-0.0035}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	$100\theta_*$	$1.04126^{+0.00058}_{-0.00057}$	$\sigma_8(2.33)$	$0.3059^{+0.0040}_{-0.0036}$
c_{217}	$0.9995^{+0.0037}_{-0.0027}$	$D_M(z_*)/\text{Gpc}$	$13.906^{+0.048}_{-0.046}$	f_{2000}^{143}	27^{+6}_{-6}
H_0	$68.2^{+1.0}_{-0.98}$	z_{drag}	$1060.18^{+0.66}_{-0.71}$	$f_{2000}^{143 \times 217}$	30^{+4}_{-4}
Ω_Λ	$0.696^{+0.013}_{-0.013}$	r_{drag}	$147.41^{+0.52}_{-0.51}$	f_{2000}^{217}	$105.1^{+3.8}_{-3.7}$
Ω_m	$0.304^{+0.013}_{-0.013}$	k_D	$0.14066^{+0.00062}_{-0.00065}$	χ_{small}^2	$396.4 (\nu: 0.6)$
$\Omega_m h^2$	$0.1413^{+0.0020}_{-0.0020}$	$100\theta_D$	$0.16062^{+0.00041}_{-0.00038}$	χ_{lowl}^2	$22.31 (\nu: 0.3)$
$\Omega_m h^3$	$0.09639^{+0.00065}_{-0.00066}$	z_{eq}	3361^{+47}_{-48}	$\chi_{6\text{DF}}^2$	$0.031 (\nu: 0.0)$
σ_8	$0.802^{+0.013}_{-0.012}$	k_{eq}	$0.01026^{+0.00014}_{-0.00015}$	χ_{MGS}^2	$1.81 (\nu: 0.1)$
S_8	$0.807^{+0.027}_{-0.026}$	$100\theta_{\text{eq}}$	$0.8214^{+0.0093}_{-0.0091}$	χ_{DR12BAO}^2	$3.94 (\nu: 0.3)$
$\sigma_8 \Omega_m^{0.5}$	$0.442^{+0.015}_{-0.014}$	$100\theta_{\text{s,eq}}$	$0.4535^{+0.0048}_{-0.0046}$	χ_{prior}^2	$9.6 (\nu: 9.4)$
$\sigma_8 \Omega_m^{0.25}$	$0.596^{+0.014}_{-0.013}$	$H(0.15)$	$73.42^{+0.86}_{-0.85}$	χ_{BAO}^2	$5.78 (\nu: 0.3)$
$\sigma_8/h^{0.5}$	$0.971^{+0.020}_{-0.019}$	$D_M(0.15)$	$636.1^{+8.3}_{-8.3}$	χ_{CMB}^2	$7351 (\nu: 10484309.0)$
$r_{\text{drag}} h$	$100.6^{+1.7}_{-1.7}$	$H(0.38)$	$83.40^{+0.65}_{-0.64}$		
$\langle d^2 \rangle^{1/2}$	$2.58^{+0.12}_{-0.13}$	$D_M(0.38)$	1519^{+17}_{-17}		

$$\bar{\chi}_{\text{eff}}^2 = 11943.89; \Delta\bar{\chi}_{\text{eff}}^2 = 9154.76; R - 1 = 0.01823$$

3.12 base_Alens_CamSpecHM_TTTEEE_lowl_lowE_post_Riess18_zre6p5/base_Alens_plikHM_TTTEEE_lowl_lowE_post_Riess18_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02271^{+0.00033}_{-0.00035}$	$\langle d^2 \rangle^{1/2}$	$2.60^{+0.12}_{-0.13}$	$H(0.38)$	$83.97^{+0.81}_{-0.83}$
$\Omega_c h^2$	$0.1163^{+0.0028}_{-0.0026}$	z_{re}	< 8.54	$D_{\text{M}}(0.38)$	1504^{+22}_{-20}
$100\theta_{MC}$	$1.04134^{+0.00067}_{-0.00064}$	$10^9 A_s$	$2.076^{+0.055}_{-0.049}$	$H(0.51)$	$90.50^{+0.65}_{-0.67}$
τ	$0.0535^{+0.012}_{-0.0098}$	$10^9 A_s e^{-2\tau}$	$1.865^{+0.023}_{-0.023}$	$D_{\text{M}}(0.51)$	1951^{+26}_{-24}
A_L	$1.20^{+0.14}_{-0.13}$	D_{40}	1206^{+26}_{-26}	$H(0.61)$	$95.97^{+0.55}_{-0.55}$
$\ln(10^{10} A_s)$	$3.033^{+0.026}_{-0.024}$	D_{220}	5740^{+76}_{-78}	$D_{\text{M}}(0.61)$	2273^{+28}_{-26}
n_s	$0.9756^{+0.0089}_{-0.0092}$	D_{810}	2527^{+25}_{-27}	$H(2.33)$	$234.5^{+1.6}_{-1.6}$
y_{cal}	$0.99997^{+0.0047}_{-0.0047}$	D_{1420}	$815.8^{+8.7}_{-9.3}$	$D_{\text{M}}(2.33)$	5734^{+25}_{-25}
A_{217}^{CIB}	40^{+20}_{-20}	D_{2000}	$232.6^{+2.9}_{-3.2}$	$f\sigma_8(0.15)$	$0.436^{+0.017}_{-0.015}$
$\xi^{tSZ-CIB}$	—	$n_{s,0.002}$	$0.9756^{+0.0089}_{-0.0092}$	$\sigma_8(0.15)$	$0.737^{+0.013}_{-0.011}$
A_{143}^{tSZ}	$5.0^{+3.9}_{-4.2}$	Y_P	$0.24552^{+0.00014}_{-0.00013}$	$f\sigma_8(0.38)$	$0.458^{+0.014}_{-0.013}$
A_{100}^{PS}	237^{+50}_{-50}	Y_P^{BBN}	$0.24685^{+0.00015}_{-0.00013}$	$\sigma_8(0.38)$	$0.656^{+0.010}_{-0.0090}$
A_{143}^{PS}	37^{+20}_{-20}	$10^5 D/H$	$2.525^{+0.062}_{-0.059}$	$f\sigma_8(0.51)$	$0.459^{+0.013}_{-0.011}$
A_{217}^{PS}	110^{+20}_{-30}	Age/Gyr	$13.734^{+0.054}_{-0.054}$	$\sigma_8(0.51)$	$0.6144^{+0.0095}_{-0.0080}$
A^{kSZ}	< 7.93	z_*	$1089.17^{+0.60}_{-0.55}$	$f\sigma_8(0.61)$	$0.456^{+0.012}_{-0.011}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	r_*	$145.14^{+0.58}_{-0.61}$	$\sigma_8(0.61)$	$0.5852^{+0.0085}_{-0.0078}$
c_{217}	$0.9995^{+0.0037}_{-0.0027}$	$100\theta_*$	$1.04149^{+0.00065}_{-0.00062}$	$f\sigma_8(2.33)$	$0.2959^{+0.0041}_{-0.0037}$
H_0	$69.1^{+1.2}_{-1.3}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.936^{+0.054}_{-0.056}$	$\sigma_8(2.33)$	$0.3059^{+0.0040}_{-0.0037}$
Ω_Λ	$0.708^{+0.014}_{-0.017}$	z_{drag}	$1060.45^{+0.66}_{-0.71}$	f_{2000}^{143}	26^{+6}_{-5}
Ω_m	$0.292^{+0.017}_{-0.014}$	r_{drag}	$147.71^{+0.58}_{-0.60}$	$f_{2000}^{143 \times 217}$	29^{+4}_{-4}
$\Omega_m h^2$	$0.1396^{+0.0026}_{-0.0024}$	k_{D}	$0.14047^{+0.00065}_{-0.00067}$	f_{2000}^{217}	$104.2^{+3.8}_{-3.8}$
$\Omega_m h^3$	$0.09649^{+0.00063}_{-0.00065}$	$100\theta_{\text{D}}$	$0.16048^{+0.00039}_{-0.00037}$	χ_{small}^2	$396.4 (\nu: 0.6)$
σ_8	$0.796^{+0.015}_{-0.013}$	z_{eq}	3321^{+62}_{-56}	χ_{lowl}^2	$21.59 (\nu: 0.3)$
S_8	$0.786^{+0.034}_{-0.029}$	k_{eq}	$0.01014^{+0.00019}_{-0.00017}$	χ_{H073p45}^2	$7.0 (\nu: 2.1)$
$\sigma_8 \Omega_m^{0.5}$	$0.430^{+0.018}_{-0.016}$	$100\theta_{\text{eq}}$	$0.829^{+0.011}_{-0.012}$	χ_{prior}^2	$9.6 (\nu: 9.1)$
$\sigma_8 \Omega_m^{0.25}$	$0.585^{+0.017}_{-0.015}$	$100\theta_{\text{s,eq}}$	$0.4576^{+0.0057}_{-0.0062}$	χ_{CMB}^2	$7353 (\nu: 10485209.6)$
$\sigma_8/h^{0.5}$	$0.957^{+0.025}_{-0.022}$	$H(0.15)$	$74.2^{+1.0}_{-1.1}$		
$r_{\text{drag}} h$	$102.1^{+2.0}_{-2.2}$	$D_{\text{M}}(0.15)$	$629^{+11}_{-9.7}$		

$\bar{\chi}_{\text{eff}}^2 = 11946.84$; $\Delta\bar{\chi}_{\text{eff}}^2 = 9155.07$; $R - 1 = 0.04629$

3.13 base_Alens_CamSpecHM_TE_lowE/base_Alens_plikHM_TE_lowE

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02228^{+0.00078}_{-0.00076}$	D_{40}	1226^{+82}_{-80}	$D_M(0.15)$	638^{+22}_{-22}
$\Omega_c h^2$	$0.1184^{+0.0055}_{-0.0053}$	D_{220}	5693^{+130}_{-120}	$H(0.38)$	$83.2^{+1.7}_{-1.6}$
$100\theta_{MC}$	$1.0413^{+0.0011}_{-0.0010}$	D_{810}	2505^{+96}_{-92}	$D_M(0.38)$	1523^{+45}_{-44}
τ	$0.049^{+0.017}_{-0.018}$	D_{1420}	805^{+47}_{-43}	$H(0.51)$	$89.9^{+1.4}_{-1.3}$
A_L	$0.85^{+0.48}_{-0.45}$	D_{2000}	225^{+21}_{-19}	$D_M(0.51)$	1974^{+52}_{-52}
$\ln(10^{10} A_s)$	$3.017^{+0.050}_{-0.049}$	$n_{s,0.002}$	$0.961^{+0.046}_{-0.045}$	$H(0.61)$	$95.5^{+1.2}_{-1.1}$
n_s	$0.961^{+0.046}_{-0.045}$	Y_P	$0.24535^{+0.00033}_{-0.00034}$	$D_M(0.61)$	2298^{+56}_{-56}
y_{cal}	$1.0000^{+0.0049}_{-0.0049}$	Y_P^{BBN}	$0.24668^{+0.00033}_{-0.00035}$	$H(2.33)$	$235.4^{+3.1}_{-3.0}$
H_0	$68.0^{+2.6}_{-2.6}$	$10^5 D/H$	$2.60^{+0.15}_{-0.14}$	$D_M(2.33)$	5758^{+50}_{-52}
Ω_Λ	$0.694^{+0.032}_{-0.035}$	Age/Gyr	$13.79^{+0.11}_{-0.11}$	$f\sigma_8(0.15)$	$0.444^{+0.027}_{-0.027}$
Ω_m	$0.306^{+0.035}_{-0.032}$	z_*	$1089.9^{+1.4}_{-1.3}$	$\sigma_8(0.15)$	$0.734^{+0.023}_{-0.022}$
$\Omega_m h^2$	$0.1413^{+0.0050}_{-0.0049}$	r_*	$144.9^{+1.1}_{-1.1}$	$f\sigma_8(0.38)$	$0.463^{+0.021}_{-0.021}$
$\Omega_m h^3$	$0.0961^{+0.0012}_{-0.0012}$	$100\theta_*$	$1.0415^{+0.0010}_{-0.0010}$	$\sigma_8(0.38)$	$0.651^{+0.021}_{-0.020}$
σ_8	$0.794^{+0.025}_{-0.024}$	$D_M(z_*)/\text{Gpc}$	$13.92^{+0.10}_{-0.10}$	$f\sigma_8(0.51)$	$0.462^{+0.018}_{-0.019}$
S_8	$0.802^{+0.054}_{-0.053}$	z_{drag}	$1059.6^{+1.6}_{-1.5}$	$\sigma_8(0.51)$	$0.610^{+0.020}_{-0.019}$
$\sigma_8 \Omega_m^{0.5}$	$0.439^{+0.029}_{-0.029}$	r_{drag}	$147.6^{+1.1}_{-1.0}$	$f\sigma_8(0.61)$	$0.458^{+0.017}_{-0.017}$
$\sigma_8 \Omega_m^{0.25}$	$0.590^{+0.026}_{-0.026}$	k_D	$0.1402^{+0.0012}_{-0.0012}$	$\sigma_8(0.61)$	$0.580^{+0.019}_{-0.018}$
$\sigma_8/h^{0.5}$	$0.963^{+0.036}_{-0.036}$	$100\theta_D$	$0.16100^{+0.00093}_{-0.00090}$	$f\sigma_8(2.33)$	$0.293^{+0.010}_{-0.0096}$
$r_{\text{drag}} h$	$100.4^{+4.4}_{-4.3}$	z_{eq}	3361^{+120}_{-120}	$\sigma_8(2.33)$	$0.302^{+0.011}_{-0.011}$
$\langle d^2 \rangle^{1/2}$	$2.18^{+0.54}_{-0.57}$	k_{eq}	$0.01026^{+0.00036}_{-0.00036}$	χ^2_{small}	$396.9 (\nu: 1.4)$
z_{re}	$7.1^{+1.8}_{-1.8}$	$100\theta_{\text{eq}}$	$0.821^{+0.024}_{-0.023}$	χ^2_{prior}	$9.2 (\nu: 5.5)$
$10^9 A_s$	$2.04^{+0.10}_{-0.099}$	$100\theta_{s,\text{eq}}$	$0.453^{+0.012}_{-0.012}$	χ^2_{CMB}	$2118 (\nu: 370805.9)$
$10^9 A_s e^{-2\tau}$	$1.851^{+0.058}_{-0.055}$	$H(0.15)$	$73.2^{+2.3}_{-2.2}$		

Best-fit $\chi^2_{\text{eff}} = 2981.49$; $\Delta\chi^2_{\text{eff}} = 1733.88$; $\bar{\chi}^2_{\text{eff}} = 2989.81$; $\Delta\bar{\chi}^2_{\text{eff}} = 1725.95$; $R - 1 = 0.00461$

χ^2_{eff} : CMB - small_100x143_offlike5_EE_Aplanck_B: 395.66 (Δ 0.02) CamSpec like_10.7HM_1400_unified: 2575.80

3.14 base_Alens_CamSpecHM_TE_lowE_post_BAO/base_Alens_plikHM_TE_lowE_post_BAO

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02228^{+0.00061}_{-0.00059}$	D_{220}	5694^{+120}_{-120}	$D_M(0.38)$	1523^{+22}_{-22}
$\Omega_c h^2$	$0.1183^{+0.0026}_{-0.0026}$	D_{810}	2505^{+87}_{-83}	$H(0.51)$	$89.88^{+0.74}_{-0.70}$
$100\theta_{MC}$	$1.04131^{+0.00094}_{-0.00090}$	D_{1420}	805^{+41}_{-37}	$D_M(0.51)$	1974^{+26}_{-26}
τ	$0.049^{+0.017}_{-0.018}$	D_{2000}	225^{+17}_{-16}	$H(0.61)$	$95.45^{+0.65}_{-0.62}$
A_L	$0.84^{+0.38}_{-0.37}$	$n_{s,0.002}$	$0.960^{+0.035}_{-0.034}$	$D_M(0.61)$	2297^{+28}_{-28}
$\ln(10^{10} A_s)$	$3.016^{+0.048}_{-0.047}$	Y_P	$0.24535^{+0.00024}_{-0.00027}$	$H(2.33)$	$235.4^{+1.6}_{-1.6}$
n_s	$0.960^{+0.035}_{-0.034}$	Y_P^{BBN}	$0.24668^{+0.00024}_{-0.00027}$	$D_M(2.33)$	5758^{+32}_{-32}
y_{cal}	$1.0001^{+0.0049}_{-0.0049}$	$10^5 D/H$	$2.60^{+0.11}_{-0.11}$	$f\sigma_8(0.15)$	$0.444^{+0.017}_{-0.017}$
H_0	$68.0^{+1.3}_{-1.2}$	Age/Gyr	$13.788^{+0.073}_{-0.074}$	$\sigma_8(0.15)$	$0.734^{+0.023}_{-0.022}$
Ω_Λ	$0.694^{+0.015}_{-0.016}$	z_*	$1089.89^{+0.85}_{-0.85}$	$f\sigma_8(0.38)$	$0.463^{+0.016}_{-0.016}$
Ω_m	$0.306^{+0.016}_{-0.015}$	r_*	$144.94^{+0.68}_{-0.67}$	$\sigma_8(0.38)$	$0.651^{+0.021}_{-0.019}$
$\Omega_m h^2$	$0.1412^{+0.0025}_{-0.0025}$	$100\theta_*$	$1.04151^{+0.00094}_{-0.00090}$	$f\sigma_8(0.51)$	$0.462^{+0.015}_{-0.015}$
$\Omega_m h^3$	$0.0960^{+0.0012}_{-0.0012}$	$D_M(z_*)/\text{Gpc}$	$13.916^{+0.068}_{-0.065}$	$\sigma_8(0.51)$	$0.610^{+0.020}_{-0.018}$
σ_8	$0.794^{+0.025}_{-0.023}$	z_{drag}	$1059.6^{+1.3}_{-1.3}$	$f\sigma_8(0.61)$	$0.458^{+0.015}_{-0.014}$
S_8	$0.801^{+0.033}_{-0.032}$	r_{drag}	$147.64^{+0.79}_{-0.77}$	$\sigma_8(0.61)$	$0.580^{+0.019}_{-0.017}$
$\sigma_8 \Omega_m^{0.5}$	$0.439^{+0.018}_{-0.018}$	k_D	$0.1402^{+0.0011}_{-0.0011}$	$f\sigma_8(2.33)$	$0.2929^{+0.0095}_{-0.0089}$
$\sigma_8 \Omega_m^{0.25}$	$0.590^{+0.020}_{-0.019}$	$100\theta_D$	$0.16101^{+0.00081}_{-0.00078}$	$\sigma_8(2.33)$	$0.302^{+0.010}_{-0.0094}$
$\sigma_8/h^{0.5}$	$0.963^{+0.031}_{-0.030}$	z_{eq}	3360^{+59}_{-59}	χ^2_{small}	$396.9 (\nu: 1.4)$
$r_{\text{drag}} h$	$100.4^{+2.0}_{-2.0}$	k_{eq}	$0.01025^{+0.00018}_{-0.00018}$	$\chi^2_{6\text{DF}}$	$0.045 (\nu: 0.0)$
$\langle d^2 \rangle^{1/2}$	$2.19^{+0.47}_{-0.49}$	$100\theta_{\text{eq}}$	$0.821^{+0.011}_{-0.011}$	χ^2_{MGS}	$1.73 (\nu: 0.2)$
z_{re}	$7.1^{+1.8}_{-1.8}$	$100\theta_{s,\text{eq}}$	$0.4535^{+0.0057}_{-0.0057}$	χ^2_{DR12BAO}	$4.2 (\nu: 0.7)$
$10^9 A_s$	$2.04^{+0.10}_{-0.095}$	$H(0.15)$	$73.2^{+1.1}_{-1.1}$	χ^2_{prior}	$9.2 (\nu: 5.5)$
$10^9 A_s e^{-2\tau}$	$1.851^{+0.056}_{-0.054}$	$D_M(0.15)$	638^{+11}_{-11}	χ^2_{BAO}	$6.0 (\nu: 0.6)$
D_{40}	1226^{+61}_{-61}	$H(0.38)$	$83.22^{+0.87}_{-0.83}$	χ^2_{CMB}	$2117 (\nu: 370774.8)$

$$\bar{\chi}^2_{\text{eff}} = 2995.04; \Delta\bar{\chi}^2_{\text{eff}} = 1725.89; R - 1 = 0.00758$$

3.15 base_Alens_CamSpecHM_TE_lowE_post_zre6p5/base_Alens_plikHM_TE_lowE_post_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02230^{+0.00078}_{-0.00076}$	D_{40}	1225^{+81}_{-79}	$D_M(0.15)$	638^{+22}_{-22}
$\Omega_c h^2$	$0.1183^{+0.0055}_{-0.0053}$	D_{220}	5693^{+120}_{-120}	$H(0.38)$	$83.3^{+1.7}_{-1.6}$
$100\theta_{MC}$	$1.0413^{+0.0011}_{-0.0010}$	D_{810}	2507^{+96}_{-91}	$D_M(0.38)$	1522^{+44}_{-44}
τ	$0.053^{+0.012}_{-0.010}$	D_{1420}	806^{+47}_{-43}	$H(0.51)$	$89.9^{+1.4}_{-1.3}$
A_L	$0.85^{+0.48}_{-0.45}$	D_{2000}	225^{+21}_{-19}	$D_M(0.51)$	1973^{+52}_{-52}
$\ln(10^{10} A_s)$	$3.024^{+0.045}_{-0.040}$	$n_{s,0.002}$	$0.962^{+0.046}_{-0.045}$	$H(0.61)$	$95.5^{+1.2}_{-1.1}$
n_s	$0.962^{+0.046}_{-0.045}$	Y_P	$0.24536^{+0.00033}_{-0.00034}$	$D_M(0.61)$	2297^{+56}_{-56}
y_{cal}	$1.0000^{+0.0049}_{-0.0049}$	Y_P^{BBN}	$0.24668^{+0.00033}_{-0.00034}$	$H(2.33)$	$235.4^{+3.1}_{-3.0}$
H_0	$68.1^{+2.6}_{-2.5}$	$10^5 D/H$	$2.60^{+0.15}_{-0.14}$	$D_M(2.33)$	5757^{+49}_{-52}
Ω_Λ	$0.695^{+0.032}_{-0.035}$	Age/Gyr	$13.79^{+0.11}_{-0.11}$	$f\sigma_8(0.15)$	$0.445^{+0.027}_{-0.026}$
Ω_m	$0.305^{+0.035}_{-0.032}$	z_*	$1089.9^{+1.4}_{-1.3}$	$\sigma_8(0.15)$	$0.737^{+0.022}_{-0.020}$
$\Omega_m h^2$	$0.1412^{+0.0050}_{-0.0048}$	r_*	$144.9^{+1.1}_{-1.1}$	$f\sigma_8(0.38)$	$0.464^{+0.021}_{-0.021}$
$\Omega_m h^3$	$0.0961^{+0.0012}_{-0.0012}$	$100\theta_*$	$1.0415^{+0.0010}_{-0.0010}$	$\sigma_8(0.38)$	$0.654^{+0.019}_{-0.018}$
σ_8	$0.797^{+0.024}_{-0.022}$	$D_M(z_*)/\text{Gpc}$	$13.92^{+0.10}_{-0.10}$	$f\sigma_8(0.51)$	$0.464^{+0.018}_{-0.018}$
S_8	$0.804^{+0.053}_{-0.052}$	z_{drag}	$1059.6^{+1.6}_{-1.5}$	$\sigma_8(0.51)$	$0.612^{+0.019}_{-0.017}$
$\sigma_8 \Omega_m^{0.5}$	$0.440^{+0.029}_{-0.028}$	r_{drag}	$147.6^{+1.0}_{-1.0}$	$f\sigma_8(0.61)$	$0.459^{+0.016}_{-0.016}$
$\sigma_8 \Omega_m^{0.25}$	$0.592^{+0.025}_{-0.025}$	k_D	$0.1402^{+0.0012}_{-0.0012}$	$\sigma_8(0.61)$	$0.583^{+0.018}_{-0.016}$
$\sigma_8/h^{0.5}$	$0.966^{+0.035}_{-0.034}$	$100\theta_D$	$0.16099^{+0.00093}_{-0.00090}$	$f\sigma_8(2.33)$	$0.2940^{+0.0096}_{-0.0087}$
$r_{\text{drag}} h$	$100.5^{+4.3}_{-4.3}$	z_{eq}	3359^{+120}_{-120}	$\sigma_8(2.33)$	$0.303^{+0.011}_{-0.0096}$
$\langle d^2 \rangle^{1/2}$	$2.19^{+0.54}_{-0.57}$	k_{eq}	$0.01025^{+0.00036}_{-0.00035}$	χ_{small}^2	$396.5 (\nu: 0.8)$
z_{re}	< 8.61	$100\theta_{\text{eq}}$	$0.821^{+0.023}_{-0.023}$	χ_{prior}^2	$9.2 (\nu: 5.5)$
$10^9 A_s$	$2.057^{+0.089}_{-0.084}$	$100\theta_{s,\text{eq}}$	$0.454^{+0.012}_{-0.012}$	χ_{CMB}^2	$2117 (\nu: 370813.2)$
$10^9 A_s e^{-2\tau}$	$1.852^{+0.058}_{-0.055}$	$H(0.15)$	$73.3^{+2.3}_{-2.2}$		

$\bar{\chi}_{\text{eff}}^2 = 2989.43$; $\Delta\bar{\chi}_{\text{eff}}^2 = 1725.99$; $R - 1 = 0.00501$

3.16 base_Alens_CamSpecHM_TE_lowE_post_BAO_zre6p5/base_Alens_plikHM_TE_lowE_post_BAO_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02228^{+0.00061}_{-0.00060}$	D_{220}	5693^{+120}_{-120}	$D_M(0.38)$	1523^{+22}_{-22}
$\Omega_c h^2$	$0.1183^{+0.0026}_{-0.0026}$	D_{810}	2506^{+88}_{-83}	$H(0.51)$	$89.88^{+0.74}_{-0.70}$
$100\theta_{MC}$	$1.04131^{+0.00093}_{-0.00089}$	D_{1420}	805^{+41}_{-38}	$D_M(0.51)$	1974^{+25}_{-26}
τ	$0.0524^{+0.012}_{-0.0098}$	D_{2000}	225^{+17}_{-16}	$H(0.61)$	$95.45^{+0.65}_{-0.62}$
A_L	$0.84^{+0.39}_{-0.38}$	$n_{s,0.002}$	$0.961^{+0.035}_{-0.034}$	$D_M(0.61)$	2297^{+28}_{-28}
$\ln(10^{10} A_s)$	$3.023^{+0.042}_{-0.040}$	Y_P	$0.24535^{+0.00025}_{-0.00028}$	$H(2.33)$	$235.4^{+1.6}_{-1.6}$
n_s	$0.961^{+0.035}_{-0.034}$	Y_P^{BBN}	$0.24668^{+0.00025}_{-0.00028}$	$D_M(2.33)$	5758^{+32}_{-33}
y_{cal}	$1.0001^{+0.0049}_{-0.0049}$	$10^5 D/H$	$2.60^{+0.12}_{-0.11}$	$f\sigma_8(0.15)$	$0.445^{+0.017}_{-0.016}$
H_0	$68.0^{+1.3}_{-1.2}$	Age/Gyr	$13.788^{+0.073}_{-0.075}$	$\sigma_8(0.15)$	$0.737^{+0.022}_{-0.020}$
Ω_Λ	$0.695^{+0.015}_{-0.016}$	z_*	$1089.89^{+0.86}_{-0.86}$	$f\sigma_8(0.38)$	$0.465^{+0.015}_{-0.014}$
Ω_m	$0.305^{+0.016}_{-0.015}$	r_*	$144.94^{+0.68}_{-0.66}$	$\sigma_8(0.38)$	$0.654^{+0.019}_{-0.018}$
$\Omega_m h^2$	$0.1412^{+0.0025}_{-0.0025}$	$100\theta_*$	$1.04151^{+0.00093}_{-0.00090}$	$f\sigma_8(0.51)$	$0.464^{+0.015}_{-0.013}$
$\Omega_m h^3$	$0.0960^{+0.0012}_{-0.0012}$	$D_M(z_*)/\text{Gpc}$	$13.917^{+0.068}_{-0.065}$	$\sigma_8(0.51)$	$0.612^{+0.018}_{-0.017}$
σ_8	$0.797^{+0.024}_{-0.021}$	z_{drag}	$1059.6^{+1.4}_{-1.3}$	$f\sigma_8(0.61)$	$0.459^{+0.014}_{-0.013}$
S_8	$0.804^{+0.032}_{-0.030}$	r_{drag}	$147.65^{+0.79}_{-0.77}$	$\sigma_8(0.61)$	$0.582^{+0.017}_{-0.016}$
$\sigma_8 \Omega_m^{0.5}$	$0.440^{+0.018}_{-0.016}$	k_D	$0.1402^{+0.0011}_{-0.0011}$	$f\sigma_8(2.33)$	$0.2939^{+0.0090}_{-0.0082}$
$\sigma_8 \Omega_m^{0.25}$	$0.592^{+0.019}_{-0.018}$	$100\theta_D$	$0.16101^{+0.00082}_{-0.00079}$	$\sigma_8(2.33)$	$0.3033^{+0.0096}_{-0.0087}$
$\sigma_8/h^{0.5}$	$0.966^{+0.029}_{-0.026}$	z_{eq}	3359^{+60}_{-59}	χ^2_{small}	$396.5 (\nu: 0.8)$
$r_{\text{drag}} h$	$100.4^{+2.0}_{-2.0}$	k_{eq}	$0.01025^{+0.00018}_{-0.00018}$	$\chi^2_{6\text{DF}}$	$0.045 (\nu: 0.0)$
$\langle d^2 \rangle^{1/2}$	$2.19^{+0.47}_{-0.50}$	$100\theta_{\text{eq}}$	$0.821^{+0.011}_{-0.011}$	χ^2_{MGS}	$1.74 (\nu: 0.2)$
z_{re}	< 8.62	$100\theta_{\text{s,eq}}$	$0.4535^{+0.0057}_{-0.0057}$	χ^2_{DR12BAO}	$4.2 (\nu: 0.7)$
$10^9 A_s$	$2.056^{+0.087}_{-0.081}$	$H(0.15)$	$73.2^{+1.1}_{-1.1}$	χ^2_{prior}	$9.2 (\nu: 5.4)$
$10^9 A_s e^{-2\tau}$	$1.851^{+0.057}_{-0.054}$	$D_M(0.15)$	638^{+11}_{-11}	χ^2_{BAO}	$6.0 (\nu: 0.6)$
D_{40}	1226^{+62}_{-61}	$H(0.38)$	$83.23^{+0.87}_{-0.83}$	χ^2_{CMB}	$2117 (\nu: 370800.7)$

$\bar{\chi}^2_{\text{eff}} = 2994.70$; $\Delta\bar{\chi}^2_{\text{eff}} = 1726.03$; $R - 1 = 0.00997$

3.17 base_Alens_CamSpecHM_EE_lowE/base_Alens_plikHM_EE_lowE

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.0241^{+0.0027}_{-0.0026}$	D_{40}	1239^{+70}_{-69}	$D_M(0.15)$	622^{+52}_{-48}
$\Omega_c h^2$	$0.116^{+0.011}_{-0.0099}$	D_{220}	6012^{+390}_{-400}	$H(0.38)$	$84.8^{+4.5}_{-4.1}$
$100\theta_{MC}$	$1.0397^{+0.0019}_{-0.0019}$	D_{810}	2598^{+75}_{-77}	$D_M(0.38)$	1489^{+110}_{-100}
τ	$0.052^{+0.018}_{-0.018}$	D_{1420}	845^{+36}_{-38}	$H(0.51)$	$91.3^{+3.9}_{-3.5}$
A_L	$1.24^{+0.54}_{-0.48}$	D_{2000}	244^{+16}_{-16}	$D_M(0.51)$	1932^{+130}_{-120}
$\ln(10^{10} A_s)$	$3.057^{+0.043}_{-0.045}$	$n_{s,0.002}$	$0.980^{+0.035}_{-0.033}$	$H(0.61)$	$96.8^{+3.3}_{-3.1}$
n_s	$0.980^{+0.035}_{-0.033}$	Y_P	$0.2461^{+0.0010}_{-0.0011}$	$D_M(0.61)$	2251^{+140}_{-130}
y_{cal}	$0.9999^{+0.0049}_{-0.0049}$	Y_P^{BBN}	$0.2474^{+0.0010}_{-0.0011}$	$H(2.33)$	$235.3^{+4.7}_{-4.4}$
H_0	$70.0^{+6.2}_{-6.1}$	$10^5 D/H$	$2.31^{+0.43}_{-0.41}$	$D_M(2.33)$	5694^{+140}_{-150}
Ω_Λ	$0.711^{+0.064}_{-0.070}$	Age/Gyr	$13.64^{+0.33}_{-0.34}$	$f\sigma_8(0.15)$	$0.433^{+0.068}_{-0.062}$
Ω_m	$0.289^{+0.070}_{-0.064}$	z_*	$1087.6^{+3.7}_{-3.6}$	$\sigma_8(0.15)$	$0.738^{+0.030}_{-0.033}$
$\Omega_m h^2$	$0.1404^{+0.0084}_{-0.0080}$	r_*	$144.3^{+1.3}_{-1.4}$	$f\sigma_8(0.38)$	$0.456^{+0.052}_{-0.051}$
$\Omega_m h^3$	$0.0981^{+0.0040}_{-0.0036}$	$100\theta_*$	$1.0397^{+0.0018}_{-0.0018}$	$\sigma_8(0.38)$	$0.657^{+0.021}_{-0.023}$
σ_8	$0.796^{+0.039}_{-0.041}$	$D_M(z_*)/\text{Gpc}$	$13.87^{+0.12}_{-0.13}$	$f\sigma_8(0.51)$	$0.457^{+0.044}_{-0.044}$
S_8	$0.78^{+0.13}_{-0.12}$	z_{drag}	$1063.4^{+5.2}_{-5.2}$	$\sigma_8(0.51)$	$0.616^{+0.018}_{-0.019}$
$\sigma_8 \Omega_m^{0.5}$	$0.428^{+0.071}_{-0.068}$	r_{drag}	$146.4^{+1.4}_{-1.4}$	$f\sigma_8(0.61)$	$0.454^{+0.038}_{-0.039}$
$\sigma_8 \Omega_m^{0.25}$	$0.583^{+0.064}_{-0.060}$	k_D	$0.1427^{+0.0026}_{-0.0026}$	$\sigma_8(0.61)$	$0.587^{+0.016}_{-0.017}$
$\sigma_8/h^{0.5}$	$0.952^{+0.089}_{-0.086}$	$100\theta_D$	$0.1587^{+0.0028}_{-0.0026}$	$f\sigma_8(2.33)$	$0.2967^{+0.0070}_{-0.0074}$
$r_{drag} h$	$102.5^{+9.1}_{-9.1}$	z_{eq}	3339^{+200}_{-190}	$\sigma_8(2.33)$	$0.3072^{+0.0073}_{-0.0074}$
$\langle d^2 \rangle^{1/2}$	$2.63^{+0.46}_{-0.50}$	k_{eq}	$0.01019^{+0.00061}_{-0.00059}$	χ^2_{simall}	$396.8 (\nu: 1.3)$
z_{re}	$7.0^{+1.7}_{-1.7}$	$100\theta_{eq}$	$0.829^{+0.043}_{-0.044}$	χ^2_{prior}	$6.0 (\nu: 13.6)$
$10^9 A_s$	$2.127^{+0.094}_{-0.095}$	$100\theta_{s,eq}$	$0.456^{+0.020}_{-0.021}$	χ^2_{CMB}	$1715 (\nu: 164953.1)$
$10^9 A_s e^{-2\tau}$	$1.917^{+0.052}_{-0.052}$	$H(0.15)$	$75.1^{+5.6}_{-5.3}$		

Best-fit $\chi^2_{\text{eff}} = 2291.75$; $\Delta\chi^2_{\text{eff}} = 1158.60$; $\bar{\chi}^2_{\text{eff}} = 2300.05$; $\Delta\bar{\chi}^2_{\text{eff}} = 1158.75$; $R - 1 = 0.00814$

χ^2_{eff} : CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.60 (Δ 0.03) CamSpec like_10.7HM_1400_unified: 1886.12

3.18 base_Alens_CamSpecHM_EE_lowE_post_BAO/base_Alens_plikHM_EE_lowE_post_BAO

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.0236^{+0.0013}_{-0.0013}$	D_{220}	5945^{+280}_{-280}	$D_M(0.38)$	1508^{+29}_{-30}
$\Omega_c h^2$	$0.1174^{+0.0030}_{-0.0029}$	D_{810}	2589^{+70}_{-70}	$H(0.51)$	$90.5^{+1.2}_{-1.1}$
$100\theta_{MC}$	$1.0396^{+0.0016}_{-0.0016}$	D_{1420}	839^{+29}_{-29}	$D_M(0.51)$	1955^{+35}_{-36}
τ	$0.051^{+0.017}_{-0.018}$	D_{2000}	241^{+11}_{-11}	$H(0.61)$	$96.1^{+1.1}_{-1.1}$
A_L	$1.20^{+0.48}_{-0.43}$	$n_{s,0.002}$	$0.975^{+0.021}_{-0.020}$	$D_M(0.61)$	2277^{+39}_{-40}
$\ln(10^{10} A_s)$	$3.054^{+0.043}_{-0.046}$	Y_P	$0.24588^{+0.00051}_{-0.00051}$	$H(2.33)$	$236.0^{+2.0}_{-1.9}$
n_s	$0.975^{+0.021}_{-0.020}$	Y_P^{BBN}	$0.24721^{+0.00051}_{-0.00052}$	$D_M(2.33)$	5723^{+57}_{-58}
y_{cal}	$0.9999^{+0.0048}_{-0.0049}$	$10^5 D/H$	$2.38^{+0.22}_{-0.21}$	$f\sigma_8(0.15)$	$0.445^{+0.020}_{-0.019}$
H_0	$68.8^{+1.7}_{-1.6}$	Age/Gyr	$13.71^{+0.13}_{-0.13}$	$\sigma_8(0.15)$	$0.743^{+0.018}_{-0.018}$
Ω_Λ	$0.701^{+0.017}_{-0.018}$	z_*	$1088.3^{+1.6}_{-1.5}$	$f\sigma_8(0.38)$	$0.466^{+0.017}_{-0.016}$
Ω_m	$0.299^{+0.018}_{-0.017}$	r_*	$144.2^{+1.0}_{-1.0}$	$\sigma_8(0.38)$	$0.660^{+0.015}_{-0.016}$
$\Omega_m h^2$	$0.1417^{+0.0028}_{-0.0028}$	$100\theta_*$	$1.0396^{+0.0016}_{-0.0016}$	$f\sigma_8(0.51)$	$0.466^{+0.015}_{-0.015}$
$\Omega_m h^3$	$0.0975^{+0.0024}_{-0.0023}$	$D_M(z_*)/\text{Gpc}$	$13.87^{+0.10}_{-0.10}$	$\sigma_8(0.51)$	$0.618^{+0.014}_{-0.015}$
σ_8	$0.803^{+0.020}_{-0.021}$	z_{drag}	$1062.5^{+2.8}_{-2.8}$	$f\sigma_8(0.61)$	$0.462^{+0.014}_{-0.014}$
S_8	$0.802^{+0.038}_{-0.037}$	r_{drag}	$146.4^{+1.4}_{-1.4}$	$\sigma_8(0.61)$	$0.589^{+0.013}_{-0.014}$
$\sigma_8 \Omega_m^{0.5}$	$0.439^{+0.021}_{-0.020}$	k_D	$0.1424^{+0.0022}_{-0.0023}$	$f\sigma_8(2.33)$	$0.2974^{+0.0068}_{-0.0069}$
$\sigma_8 \Omega_m^{0.25}$	$0.594^{+0.021}_{-0.020}$	$100\theta_D$	$0.1591^{+0.0017}_{-0.0016}$	$\sigma_8(2.33)$	$0.3071^{+0.0069}_{-0.0071}$
$\sigma_8/h^{0.5}$	$0.968^{+0.030}_{-0.030}$	z_{eq}	3370^{+67}_{-66}	χ_{small}^2	$396.8 (\nu: 1.3)$
$r_{\text{drag}} h$	$100.8^{+2.3}_{-2.3}$	k_{eq}	$0.01029^{+0.00021}_{-0.00020}$	$\chi_{6\text{DF}}^2$	$0.058 (\nu: 0.0)$
$\langle d^2 \rangle^{1/2}$	$2.63^{+0.47}_{-0.50}$	$100\theta_{\text{eq}}$	$0.821^{+0.012}_{-0.012}$	χ_{MGS}^2	$1.92 (\nu: 0.3)$
z_{re}	$7.0^{+1.6}_{-1.9}$	$100\theta_{\text{s,eq}}$	$0.4527^{+0.0062}_{-0.0062}$	χ_{DR12BAO}^2	$4.5 (\nu: 0.8)$
$10^9 A_s$	$2.121^{+0.093}_{-0.095}$	$H(0.15)$	$74.0^{+1.5}_{-1.5}$	χ_{prior}^2	$6.0 (\nu: 13.5)$
$10^9 A_s e^{-2\tau}$	$1.915^{+0.052}_{-0.051}$	$D_M(0.15)$	631^{+14}_{-14}	χ_{BAO}^2	$6.5 (\nu: 0.9)$
D_{40}	1242^{+67}_{-67}	$H(0.38)$	$83.9^{+1.3}_{-1.2}$	χ_{CMB}^2	$1714 (\nu: 164804.5)$

$$\bar{\chi}_{\text{eff}}^2 = 2305.61; \Delta\bar{\chi}_{\text{eff}}^2 = 1158.23; R - 1 = 0.01338$$

3.19 base_Alens_CamSpecHM_EE_lowE_post_zre6p5/base_Alens_plikHM_EE_lowE_post_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.0241^{+0.0027}_{-0.0026}$	D_{40}	1239^{+70}_{-69}	$D_M(0.15)$	622^{+53}_{-48}
$\Omega_c h^2$	$0.116^{+0.011}_{-0.0099}$	D_{220}	6005^{+390}_{-390}	$H(0.38)$	$84.8^{+4.5}_{-4.2}$
$100\theta_{MC}$	$1.0397^{+0.0019}_{-0.0019}$	D_{810}	2597^{+75}_{-77}	$D_M(0.38)$	1489^{+110}_{-100}
τ	$0.056^{+0.014}_{-0.012}$	D_{1420}	844^{+36}_{-38}	$H(0.51)$	$91.3^{+3.9}_{-3.5}$
A_L	$1.23^{+0.52}_{-0.48}$	D_{2000}	244^{+16}_{-16}	$D_M(0.51)$	1933^{+130}_{-120}
$\ln(10^{10} A_s)$	$3.064^{+0.039}_{-0.036}$	$n_{s,0.002}$	$0.981^{+0.035}_{-0.033}$	$H(0.61)$	$96.7^{+3.3}_{-3.1}$
n_s	$0.981^{+0.035}_{-0.033}$	Y_P	$0.2461^{+0.0010}_{-0.0011}$	$D_M(0.61)$	2252^{+140}_{-130}
y_{cal}	$0.9999^{+0.0049}_{-0.0049}$	Y_P^{BBN}	$0.2474^{+0.0010}_{-0.0011}$	$H(2.33)$	$235.3^{+4.7}_{-4.5}$
H_0	$70.0^{+6.2}_{-6.1}$	$10^5 D/H$	$2.31^{+0.43}_{-0.41}$	$D_M(2.33)$	5695^{+140}_{-150}
Ω_Λ	$0.711^{+0.064}_{-0.069}$	Age/Gyr	$13.64^{+0.33}_{-0.34}$	$f\sigma_8(0.15)$	$0.435^{+0.069}_{-0.062}$
Ω_m	$0.289^{+0.069}_{-0.064}$	z_*	$1087.7^{+3.8}_{-3.6}$	$\sigma_8(0.15)$	$0.741^{+0.029}_{-0.031}$
$\Omega_m h^2$	$0.1403^{+0.0083}_{-0.0080}$	r_*	$144.3^{+1.3}_{-1.4}$	$f\sigma_8(0.38)$	$0.458^{+0.052}_{-0.051}$
$\Omega_m h^3$	$0.0981^{+0.0040}_{-0.0036}$	$100\theta_*$	$1.0397^{+0.0018}_{-0.0018}$	$\sigma_8(0.38)$	$0.659^{+0.019}_{-0.022}$
σ_8	$0.799^{+0.038}_{-0.040}$	$D_M(z_*)/\text{Gpc}$	$13.88^{+0.12}_{-0.13}$	$f\sigma_8(0.51)$	$0.459^{+0.044}_{-0.044}$
S_8	$0.78^{+0.13}_{-0.12}$	z_{drag}	$1063.4^{+5.2}_{-5.2}$	$\sigma_8(0.51)$	$0.618^{+0.016}_{-0.018}$
$\sigma_8 \Omega_m^{0.5}$	$0.429^{+0.071}_{-0.068}$	r_{drag}	$146.4^{+1.4}_{-1.4}$	$f\sigma_8(0.61)$	$0.456^{+0.038}_{-0.039}$
$\sigma_8 \Omega_m^{0.25}$	$0.586^{+0.064}_{-0.059}$	k_D	$0.1427^{+0.0026}_{-0.0026}$	$\sigma_8(0.61)$	$0.589^{+0.014}_{-0.015}$
$\sigma_8/h^{0.5}$	$0.956^{+0.089}_{-0.084}$	$100\theta_D$	$0.1587^{+0.0028}_{-0.0026}$	$f\sigma_8(2.33)$	$0.2979^{+0.0063}_{-0.0061}$
$r_{drag} h$	$102.5^{+9.0}_{-9.1}$	z_{eq}	3338^{+200}_{-190}	$\sigma_8(2.33)$	$0.3083^{+0.0066}_{-0.0062}$
$\langle d^2 \rangle^{1/2}$	$2.63^{+0.45}_{-0.51}$	k_{eq}	$0.01019^{+0.00061}_{-0.00059}$	χ_{simall}^2	$396.4 (\nu: 0.9)$
z_{re}	< 8.46	$100\theta_{eq}$	$0.829^{+0.042}_{-0.044}$	χ_{prior}^2	$6.0 (\nu: 13.6)$
$10^9 A_s$	$2.142^{+0.085}_{-0.077}$	$100\theta_{s,eq}$	$0.456^{+0.020}_{-0.021}$	χ_{CMB}^2	$1714 (\nu: 164965.7)$
$10^9 A_s e^{-2\tau}$	$1.916^{+0.052}_{-0.052}$	$H(0.15)$	$75.0^{+5.6}_{-5.4}$		

$$\bar{\chi}_{\text{eff}}^2 = 2299.69; \Delta \bar{\chi}_{\text{eff}}^2 = 1158.80; R - 1 = 0.00845$$

3.20 base_Alens_CamSpecHM_EE_lowE_post_BAO_zre6p5/base_Alens_plikHM_EE_lowE_post_BAO_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.0236^{+0.0013}_{-0.0013}$	D_{220}	5940^{+270}_{-280}	$D_M(0.38)$	1508^{+29}_{-29}
$\Omega_c h^2$	$0.1174^{+0.0030}_{-0.0029}$	D_{810}	2589^{+69}_{-68}	$H(0.51)$	$90.5^{+1.2}_{-1.1}$
$100\theta_{MC}$	$1.0395^{+0.0016}_{-0.0017}$	D_{1420}	839^{+29}_{-29}	$D_M(0.51)$	1955^{+35}_{-36}
τ	$0.055^{+0.012}_{-0.010}$	D_{2000}	241^{+11}_{-11}	$H(0.61)$	$96.1^{+1.1}_{-1.1}$
A_L	$1.19^{+0.47}_{-0.43}$	$n_{s,0.002}$	$0.975^{+0.021}_{-0.021}$	$D_M(0.61)$	2277^{+39}_{-40}
$\ln(10^{10} A_s)$	$3.061^{+0.039}_{-0.036}$	Y_P	$0.24587^{+0.00050}_{-0.00051}$	$H(2.33)$	$235.9^{+1.9}_{-1.9}$
n_s	$0.975^{+0.021}_{-0.021}$	Y_P^{BBN}	$0.24720^{+0.00050}_{-0.00051}$	$D_M(2.33)$	5724^{+56}_{-57}
y_{cal}	$0.9999^{+0.0049}_{-0.0050}$	$10^5 D/H$	$2.38^{+0.22}_{-0.20}$	$f\sigma_8(0.15)$	$0.447^{+0.019}_{-0.018}$
H_0	$68.8^{+1.7}_{-1.6}$	Age/Gyr	$13.71^{+0.13}_{-0.13}$	$\sigma_8(0.15)$	$0.746^{+0.016}_{-0.015}$
Ω_Λ	$0.701^{+0.017}_{-0.018}$	z_*	$1088.3^{+1.6}_{-1.5}$	$f\sigma_8(0.38)$	$0.467^{+0.016}_{-0.015}$
Ω_m	$0.299^{+0.018}_{-0.017}$	r_*	$144.2^{+1.0}_{-1.0}$	$\sigma_8(0.38)$	$0.663^{+0.013}_{-0.013}$
$\Omega_m h^2$	$0.1416^{+0.0028}_{-0.0027}$	$100\theta_*$	$1.0396^{+0.0016}_{-0.0017}$	$f\sigma_8(0.51)$	$0.467^{+0.015}_{-0.014}$
$\Omega_m h^3$	$0.0974^{+0.0023}_{-0.0023}$	$D_M(z_*)/\text{Gpc}$	$13.87^{+0.10}_{-0.099}$	$\sigma_8(0.51)$	$0.621^{+0.012}_{-0.012}$
σ_8	$0.806^{+0.018}_{-0.017}$	z_{drag}	$1062.4^{+2.8}_{-2.7}$	$f\sigma_8(0.61)$	$0.463^{+0.013}_{-0.012}$
S_8	$0.805^{+0.037}_{-0.035}$	r_{drag}	$146.5^{+1.4}_{-1.4}$	$\sigma_8(0.61)$	$0.591^{+0.012}_{-0.011}$
$\sigma_8 \Omega_m^{0.5}$	$0.441^{+0.020}_{-0.019}$	k_D	$0.1424^{+0.0022}_{-0.0023}$	$f\sigma_8(2.33)$	$0.2984^{+0.0061}_{-0.0054}$
$\sigma_8 \Omega_m^{0.25}$	$0.596^{+0.020}_{-0.019}$	$100\theta_D$	$0.1591^{+0.0017}_{-0.0016}$	$\sigma_8(2.33)$	$0.3082^{+0.0063}_{-0.0056}$
$\sigma_8/h^{0.5}$	$0.972^{+0.029}_{-0.027}$	z_{eq}	3369^{+67}_{-65}	χ_{small}^2	$396.4 (\nu: 0.9)$
$r_{\text{drag}} h$	$100.8^{+2.2}_{-2.2}$	k_{eq}	$0.01028^{+0.00020}_{-0.00020}$	$\chi_{6\text{DF}}^2$	$0.058 (\nu: 0.0)$
$\langle d^2 \rangle^{1/2}$	$2.62^{+0.47}_{-0.51}$	$100\theta_{\text{eq}}$	$0.822^{+0.012}_{-0.012}$	χ_{MGS}^2	$1.92 (\nu: 0.3)$
z_{re}	< 8.51	$100\theta_{\text{s,eq}}$	$0.4528^{+0.0062}_{-0.0062}$	χ_{DR12BAO}^2	$4.5 (\nu: 0.8)$
$10^9 A_s$	$2.135^{+0.084}_{-0.075}$	$H(0.15)$	$74.0^{+1.5}_{-1.5}$	χ_{prior}^2	$6.0 (\nu: 13.6)$
$10^9 A_s e^{-2\tau}$	$1.915^{+0.051}_{-0.050}$	$D_M(0.15)$	631^{+14}_{-14}	χ_{BAO}^2	$6.5 (\nu: 0.9)$
D_{40}	1241^{+65}_{-67}	$H(0.38)$	$83.9^{+1.3}_{-1.2}$	χ_{CMB}^2	$1714 (\nu: 164809.8)$

$$\bar{\chi}_{\text{eff}}^2 = 2305.22; \Delta\bar{\chi}_{\text{eff}}^2 = 1158.23; R - 1 = 0.01446$$

3.21 base_Alens_CamSpecHM_TTTEEE_lowl_lowE_lensing/base_Alens_plikHM_TTTEEE_lowl_lowE_lensing

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02247^{+0.00035}_{-0.00035}$	$\langle d^2 \rangle^{1/2}$	$2.476^{+0.060}_{-0.060}$	$H(0.38)$	$83.33^{+0.90}_{-0.87}$
$\Omega_c h^2$	$0.1182^{+0.0030}_{-0.0030}$	z_{re}	$7.1^{+1.7}_{-1.7}$	$D_{\text{M}}(0.38)$	1521^{+24}_{-24}
$100\theta_{MC}$	$1.04107^{+0.00063}_{-0.00064}$	$10^9 A_s$	$2.065^{+0.067}_{-0.072}$	$H(0.51)$	$89.98^{+0.72}_{-0.69}$
τ	$0.049^{+0.015}_{-0.017}$	$10^9 A_s e^{-2\tau}$	$1.872^{+0.024}_{-0.024}$	$D_{\text{M}}(0.51)$	1971^{+28}_{-28}
A_L	$1.068^{+0.083}_{-0.079}$	D_{40}	1217^{+28}_{-27}	$H(0.61)$	$95.54^{+0.59}_{-0.56}$
$\ln(10^{10} A_s)$	$3.028^{+0.032}_{-0.035}$	D_{220}	5728^{+79}_{-75}	$D_{\text{M}}(0.61)$	2294^{+30}_{-30}
n_s	$0.9695^{+0.0096}_{-0.0098}$	D_{810}	2532^{+27}_{-27}	$H(2.33)$	$235.5^{+1.8}_{-1.8}$
y_{cal}	$1.0001^{+0.0049}_{-0.0048}$	D_{1420}	$815.7^{+9.7}_{-9.5}$	$D_{\text{M}}(2.33)$	5753^{+26}_{-26}
A_{217}^{CIB}	43^{+20}_{-20}	D_{2000}	$231.0^{+3.2}_{-3.3}$	$f\sigma_8(0.15)$	$0.446^{+0.019}_{-0.019}$
$\xi^{tSZ-CIB}$	—	$n_{s,0.002}$	$0.9695^{+0.0096}_{-0.0098}$	$\sigma_8(0.15)$	$0.739^{+0.014}_{-0.015}$
A_{143}^{tSZ}	$4.8^{+3.9}_{-4.3}$	Y_P	$0.24543^{+0.00013}_{-0.00014}$	$f\sigma_8(0.38)$	$0.466^{+0.016}_{-0.016}$
A_{100}^{PS}	246^{+60}_{-50}	Y_P^{BBN}	$0.24676^{+0.00013}_{-0.00014}$	$\sigma_8(0.38)$	$0.656^{+0.012}_{-0.013}$
A_{143}^{PS}	41^{+20}_{-20}	$10^5 D/H$	$2.568^{+0.065}_{-0.063}$	$f\sigma_8(0.51)$	$0.465^{+0.014}_{-0.014}$
A_{217}^{PS}	109^{+20}_{-30}	Age/Gyr	$13.775^{+0.057}_{-0.057}$	$\sigma_8(0.51)$	$0.614^{+0.011}_{-0.012}$
A^{kSZ}	—	z_*	$1089.64^{+0.63}_{-0.63}$	$f\sigma_8(0.61)$	$0.461^{+0.012}_{-0.013}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	r_*	$144.82^{+0.66}_{-0.65}$	$\sigma_8(0.61)$	$0.5849^{+0.0099}_{-0.011}$
c_{217}	$0.9996^{+0.0037}_{-0.0027}$	$100\theta_*$	$1.04125^{+0.00061}_{-0.00062}$	$f\sigma_8(2.33)$	$0.2952^{+0.0049}_{-0.0053}$
H_0	$68.1^{+1.4}_{-1.4}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.909^{+0.061}_{-0.059}$	$\sigma_8(2.33)$	$0.3046^{+0.0050}_{-0.0054}$
Ω_Λ	$0.695^{+0.018}_{-0.019}$	z_{drag}	$1060.04^{+0.69}_{-0.72}$	f_{2000}^{143}	29^{+6}_{-5}
Ω_m	$0.305^{+0.019}_{-0.018}$	r_{drag}	$147.46^{+0.64}_{-0.63}$	$f_{2000}^{143 \times 217}$	31^{+4}_{-4}
$\Omega_m h^2$	$0.1413^{+0.0028}_{-0.0028}$	k_{D}	$0.14056^{+0.00066}_{-0.00068}$	f_{2000}^{217}	$106.1^{+3.8}_{-3.8}$
$\Omega_m h^3$	$0.09627^{+0.00062}_{-0.00064}$	$100\theta_{\text{D}}$	$0.16070^{+0.00041}_{-0.00039}$	χ^2_{lensing}	$10.2 (\nu: 2.0)$
σ_8	$0.800^{+0.016}_{-0.017}$	z_{eq}	3362^{+68}_{-67}	χ^2_{small}	$396.8 (\nu: 1.1)$
S_8	$0.806^{+0.037}_{-0.036}$	k_{eq}	$0.01026^{+0.00021}_{-0.00021}$	χ^2_{lowl}	$22.42 (\nu: 0.4)$
$\sigma_8 \Omega_m^{0.5}$	$0.441^{+0.020}_{-0.020}$	$100\theta_{\text{eq}}$	$0.821^{+0.013}_{-0.013}$	χ^2_{prior}	$9.6 (\nu: 9.7)$
$\sigma_8 \Omega_m^{0.25}$	$0.594^{+0.019}_{-0.019}$	$100\theta_{\text{s,eq}}$	$0.4534^{+0.0067}_{-0.0066}$	χ^2_{CMB}	$7365 (\nu: 10477587.9)$
$\sigma_8/h^{0.5}$	$0.969^{+0.027}_{-0.028}$	$H(0.15)$	$73.3^{+1.2}_{-1.2}$		
$r_{\text{drag}} h$	$100.5^{+2.4}_{-2.4}$	$D_{\text{M}}(0.15)$	637^{+12}_{-12}		

Best-fit $\chi^2_{\text{eff}} = 11927.65$; $\Delta\chi^2_{\text{eff}} = 9156.45$; $\bar{\chi}^2_{\text{eff}} = 11949.88$; $\Delta\bar{\chi}^2_{\text{eff}} = 9151.48$; $R - 1 = 0.01480$
 χ^2_{eff} : CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb.consext8: 9.02 (Δ -1.15) small_100x143_offlike5_EE_Aplanck_B: 395.66 (Δ -0.00) commander_dx12_v3_2_29: 22.23 (Δ 0.17) CamSpec like_10.7HM_1400_unified: 11498.60

3.22 base_Alens_CamSpecHM_TTTEEE_lowl_lowE_lensing_post_BAO/base_Alens_plikHM_TTTEEE_lowl_lowE_lensing_post_BAO

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02247^{+0.00031}_{-0.00031}$	z_{re}	$7.1^{+1.7}_{-1.7}$	$H(0.51)$	$89.97^{+0.51}_{-0.49}$
$\Omega_c h^2$	$0.1182^{+0.0021}_{-0.0021}$	$10^9 A_s$	$2.065^{+0.068}_{-0.072}$	$D_M(0.51)$	1971^{+19}_{-19}
$100\theta_{MC}$	$1.04107^{+0.00057}_{-0.00058}$	$10^9 A_s e^{-2\tau}$	$1.872^{+0.022}_{-0.022}$	$H(0.61)$	$95.54^{+0.42}_{-0.41}$
τ	$0.049^{+0.015}_{-0.017}$	D_{40}	1217^{+25}_{-24}	$D_M(0.61)$	2294^{+21}_{-21}
A_L	$1.067^{+0.074}_{-0.069}$	D_{220}	5728^{+77}_{-75}	$H(2.33)$	$235.5^{+1.3}_{-1.3}$
$\ln(10^{10} A_s)$	$3.028^{+0.032}_{-0.035}$	D_{810}	2532^{+27}_{-27}	$D_M(2.33)$	5753^{+20}_{-20}
n_s	$0.9695^{+0.0079}_{-0.0080}$	D_{1420}	$815.7^{+9.7}_{-9.6}$	$f\sigma_8(0.15)$	$0.446^{+0.014}_{-0.014}$
y_{cal}	$1.0001^{+0.0049}_{-0.0048}$	D_{2000}	$231.0^{+3.2}_{-3.2}$	$\sigma_8(0.15)$	$0.740^{+0.013}_{-0.014}$
A_{217}^{CIB}	43^{+20}_{-20}	$n_{s,0.002}$	$0.9695^{+0.0079}_{-0.0080}$	$f\sigma_8(0.38)$	$0.466^{+0.012}_{-0.013}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.24543^{+0.00011}_{-0.00012}$	$\sigma_8(0.38)$	$0.656^{+0.011}_{-0.012}$
A_{143}^{tSZ}	$4.8^{+3.9}_{-4.4}$	Y_P^{BBN}	$0.24676^{+0.00011}_{-0.00012}$	$f\sigma_8(0.51)$	$0.465^{+0.011}_{-0.012}$
A_{100}^{PS}	246^{+60}_{-50}	$10^5 D/H$	$2.568^{+0.057}_{-0.055}$	$\sigma_8(0.51)$	$0.615^{+0.010}_{-0.011}$
A_{143}^{PS}	41^{+20}_{-20}	Age/Gyr	$13.775^{+0.044}_{-0.045}$	$f\sigma_8(0.61)$	$0.461^{+0.010}_{-0.011}$
A_{217}^{PS}	109^{+20}_{-30}	z_*	$1089.64^{+0.49}_{-0.48}$	$\sigma_8(0.61)$	$0.5849^{+0.0099}_{-0.011}$
A^{kSZ}	—	r_*	$144.82^{+0.49}_{-0.48}$	$f\sigma_8(2.33)$	$0.2952^{+0.0049}_{-0.0053}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	$100\theta_*$	$1.04125^{+0.00056}_{-0.00057}$	$\sigma_8(2.33)$	$0.3046^{+0.0051}_{-0.0054}$
c_{217}	$0.9996^{+0.0037}_{-0.0027}$	$D_M(z_*)/\text{Gpc}$	$13.908^{+0.048}_{-0.046}$	f_{2000}^{143}	29^{+5}_{-5}
H_0	$68.12^{+0.97}_{-0.96}$	z_{drag}	$1060.03^{+0.66}_{-0.67}$	$f_{2000}^{143 \times 217}$	31^{+4}_{-4}
Ω_Λ	$0.695^{+0.013}_{-0.013}$	r_{drag}	$147.46^{+0.51}_{-0.50}$	f_{2000}^{217}	$106.1^{+3.7}_{-3.7}$
Ω_m	$0.305^{+0.013}_{-0.013}$	k_D	$0.14055^{+0.00061}_{-0.00063}$	χ_{lensing}^2	$10.2 (\nu: 2.0)$
$\Omega_m h^2$	$0.1413^{+0.0020}_{-0.0020}$	$100\theta_D$	$0.16071^{+0.00038}_{-0.00037}$	χ_{simall}^2	$396.8 (\nu: 1.1)$
$\Omega_m h^3$	$0.09627^{+0.00062}_{-0.00064}$	z_{eq}	3362^{+47}_{-48}	χ_{lowl}^2	$22.41 (\nu: 0.3)$
σ_8	$0.800^{+0.015}_{-0.016}$	k_{eq}	$0.01026^{+0.00014}_{-0.00015}$	$\chi_{6\text{DF}}^2$	$0.030 (\nu: 0.0)$
S_8	$0.806^{+0.027}_{-0.028}$	$100\theta_{\text{eq}}$	$0.8210^{+0.0092}_{-0.0090}$	χ_{MGS}^2	$1.74 (\nu: 0.1)$
$\sigma_8 \Omega_m^{0.5}$	$0.441^{+0.015}_{-0.015}$	$100\theta_{s,\text{eq}}$	$0.4533^{+0.0047}_{-0.0046}$	χ_{DR12BAO}^2	$3.99 (\nu: 0.3)$
$\sigma_8 \Omega_m^{0.25}$	$0.594^{+0.015}_{-0.016}$	$H(0.15)$	$73.33^{+0.84}_{-0.83}$	χ_{prior}^2	$9.6 (\nu: 9.7)$
$\sigma_8/h^{0.5}$	$0.969^{+0.022}_{-0.023}$	$D_M(0.15)$	$636.9^{+8.2}_{-8.1}$	χ_{CMB}^2	$7364 (\nu: 10477537.7)$
$r_{\text{drag}} h$	$100.4^{+1.7}_{-1.6}$	$H(0.38)$	$83.32^{+0.63}_{-0.61}$	χ_{BAO}^2	$5.76 (\nu: 0.3)$
$\langle d^2 \rangle^{1/2}$	$2.476^{+0.060}_{-0.060}$	$D_M(0.38)$	1521^{+16}_{-16}		

$$\bar{\chi}_{\text{eff}}^2 = 11955.09; \Delta\bar{\chi}_{\text{eff}}^2 = 9151.42; R - 1 = 0.01872$$

3.23 base_Alens_CamSpecHM_TTTEEE_lowl_lowE_lensing_post_zre6p5/base_Alens_plikHM_TTTEEE_lowl_lowE_lensing_post_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02247^{+0.00035}_{-0.00036}$	$\langle d^2 \rangle^{1/2}$	$2.477^{+0.060}_{-0.060}$	$H(0.38)$	$83.34^{+0.90}_{-0.87}$
$\Omega_c h^2$	$0.1182^{+0.0030}_{-0.0030}$	z_{re}	< 8.47	$D_{\text{M}}(0.38)$	1520^{+24}_{-24}
$100\theta_{MC}$	$1.04107^{+0.00063}_{-0.00064}$	$10^9 A_s$	$2.079^{+0.053}_{-0.047}$	$H(0.51)$	$89.99^{+0.72}_{-0.70}$
τ	$0.0524^{+0.011}_{-0.0091}$	$10^9 A_s e^{-2\tau}$	$1.872^{+0.024}_{-0.024}$	$D_{\text{M}}(0.51)$	1971^{+28}_{-28}
A_L	$1.061^{+0.080}_{-0.076}$	D_{40}	1218^{+28}_{-27}	$H(0.61)$	$95.55^{+0.59}_{-0.56}$
$\ln(10^{10} A_s)$	$3.034^{+0.026}_{-0.023}$	D_{220}	5727^{+79}_{-75}	$D_{\text{M}}(0.61)$	2294^{+30}_{-30}
n_s	$0.9697^{+0.0096}_{-0.0099}$	D_{810}	2531^{+27}_{-27}	$H(2.33)$	$235.5^{+1.8}_{-1.8}$
y_{cal}	$1.0000^{+0.0049}_{-0.0048}$	D_{1420}	$815.7^{+9.7}_{-9.5}$	$D_{\text{M}}(2.33)$	5753^{+26}_{-26}
A_{217}^{CIB}	43^{+20}_{-20}	D_{2000}	$231.0^{+3.2}_{-3.3}$	$f\sigma_8(0.15)$	$0.448^{+0.019}_{-0.018}$
$\xi^{tSZ-CIB}$	—	$n_{s,0.002}$	$0.9697^{+0.0096}_{-0.0099}$	$\sigma_8(0.15)$	$0.742^{+0.013}_{-0.012}$
A_{143}^{tSZ}	$4.8^{+3.9}_{-4.3}$	Y_P	$0.24543^{+0.00013}_{-0.00014}$	$f\sigma_8(0.38)$	$0.467^{+0.015}_{-0.015}$
A_{100}^{PS}	246^{+60}_{-50}	Y_P^{BBN}	$0.24676^{+0.00014}_{-0.00014}$	$\sigma_8(0.38)$	$0.658^{+0.010}_{-0.0090}$
A_{143}^{PS}	41^{+20}_{-20}	$10^5 D/H$	$2.567^{+0.067}_{-0.063}$	$f\sigma_8(0.51)$	$0.467^{+0.013}_{-0.013}$
A_{217}^{PS}	109^{+20}_{-30}	Age/Gyr	$13.774^{+0.057}_{-0.057}$	$\sigma_8(0.51)$	$0.6164^{+0.0088}_{-0.0083}$
A^{kSZ}	—	z_*	$1089.63^{+0.64}_{-0.64}$	$f\sigma_8(0.61)$	$0.462^{+0.012}_{-0.012}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	r_*	$144.83^{+0.66}_{-0.64}$	$\sigma_8(0.61)$	$0.5867^{+0.0082}_{-0.0077}$
c_{217}	$0.9996^{+0.0037}_{-0.0027}$	$100\theta_*$	$1.04125^{+0.00062}_{-0.00063}$	$f\sigma_8(2.33)$	$0.2961^{+0.0039}_{-0.0036}$
H_0	$68.1^{+1.4}_{-1.4}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.909^{+0.061}_{-0.059}$	$\sigma_8(2.33)$	$0.3056^{+0.0040}_{-0.0036}$
Ω_Λ	$0.696^{+0.018}_{-0.019}$	z_{drag}	$1060.04^{+0.69}_{-0.72}$	f_{2000}^{143}	29^{+6}_{-5}
Ω_m	$0.304^{+0.019}_{-0.018}$	r_{drag}	$147.47^{+0.64}_{-0.63}$	$f_{2000}^{143 \times 217}$	31^{+4}_{-4}
$\Omega_m h^2$	$0.1413^{+0.0028}_{-0.0028}$	k_{D}	$0.14055^{+0.00066}_{-0.00068}$	f_{2000}^{217}	$106.1^{+3.8}_{-3.8}$
$\Omega_m h^3$	$0.09626^{+0.00062}_{-0.00065}$	$100\theta_{\text{D}}$	$0.16070^{+0.00041}_{-0.00039}$	χ^2_{lensing}	$10.2 (\nu: 2.0)$
σ_8	$0.802^{+0.015}_{-0.014}$	z_{eq}	3361^{+68}_{-67}	χ^2_{small}	$396.3 (\nu: 0.5)$
S_8	$0.808^{+0.037}_{-0.036}$	k_{eq}	$0.01026^{+0.00021}_{-0.00020}$	χ^2_{lowl}	$22.47 (\nu: 0.4)$
$\sigma_8 \Omega_m^{0.5}$	$0.442^{+0.020}_{-0.020}$	$100\theta_{\text{eq}}$	$0.821^{+0.013}_{-0.013}$	χ^2_{prior}	$9.6 (\nu: 9.8)$
$\sigma_8 \Omega_m^{0.25}$	$0.596^{+0.018}_{-0.018}$	$100\theta_{\text{s,eq}}$	$0.4535^{+0.0067}_{-0.0067}$	χ^2_{CMB}	$7364 (\nu: 10477823.9)$
$\sigma_8/h^{0.5}$	$0.972^{+0.026}_{-0.025}$	$H(0.15)$	$73.4^{+1.2}_{-1.2}$		
$r_{\text{drag}} h$	$100.5^{+2.4}_{-2.4}$	$D_{\text{M}}(0.15)$	637^{+12}_{-12}		

$\bar{\chi}^2_{\text{eff}} = 11949.57$; $\Delta\bar{\chi}^2_{\text{eff}} = 9151.61$; $R - 1 = 0.01602$

3.24 base_Alens_CamSpecHM_TTTEEE_lowl_lowE_lensing_post_BAO_zre6p5/base_Alens_plikHM_TTTEEE_lowl_lowE_lensing_post_BAO

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02247^{+0.00031}_{-0.00031}$	z_{re}	< 8.48	$H(0.51)$	$89.97^{+0.51}_{-0.49}$
$\Omega_c h^2$	$0.1182^{+0.0021}_{-0.0021}$	$10^9 A_s$	$2.079^{+0.054}_{-0.047}$	$D_{\text{M}}(0.51)$	1971^{+19}_{-19}
$100\theta_{MC}$	$1.04107^{+0.00057}_{-0.00058}$	$10^9 A_s e^{-2\tau}$	$1.872^{+0.022}_{-0.022}$	$H(0.61)$	$95.54^{+0.43}_{-0.41}$
τ	$0.0523^{+0.011}_{-0.0091}$	D_{40}	1218^{+25}_{-24}	$D_{\text{M}}(0.61)$	2294^{+21}_{-21}
A_L	$1.061^{+0.069}_{-0.067}$	D_{220}	5727^{+77}_{-74}	$H(2.33)$	$235.5^{+1.3}_{-1.3}$
$\ln(10^{10} A_s)$	$3.034^{+0.026}_{-0.022}$	D_{810}	2532^{+27}_{-27}	$D_{\text{M}}(2.33)$	5753^{+20}_{-20}
n_s	$0.9696^{+0.0079}_{-0.0080}$	D_{1420}	$815.7^{+9.7}_{-9.6}$	$f\sigma_8(0.15)$	$0.448^{+0.014}_{-0.014}$
y_{cal}	$1.0000^{+0.0050}_{-0.0049}$	D_{2000}	$231.0^{+3.1}_{-3.2}$	$\sigma_8(0.15)$	$0.742^{+0.012}_{-0.010}$
A_{217}^{CIB}	43^{+20}_{-20}	$n_{s,0.002}$	$0.9696^{+0.0079}_{-0.0080}$	$f\sigma_8(0.38)$	$0.467^{+0.011}_{-0.011}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.24543^{+0.00012}_{-0.00012}$	$\sigma_8(0.38)$	$0.6584^{+0.0094}_{-0.0086}$
A_{143}^{tSZ}	$4.8^{+3.8}_{-4.4}$	Y_P^{BBN}	$0.24676^{+0.00012}_{-0.00012}$	$f\sigma_8(0.51)$	$0.467^{+0.010}_{-0.010}$
A_{100}^{PS}	246^{+60}_{-50}	$10^5 D/H$	$2.568^{+0.058}_{-0.055}$	$\sigma_8(0.51)$	$0.6165^{+0.0086}_{-0.0078}$
A_{143}^{PS}	41^{+20}_{-20}	Age/Gyr	$13.775^{+0.044}_{-0.045}$	$f\sigma_8(0.61)$	$0.4625^{+0.0093}_{-0.0091}$
A_{217}^{PS}	109^{+20}_{-30}	z_*	$1089.64^{+0.50}_{-0.48}$	$\sigma_8(0.61)$	$0.5868^{+0.0080}_{-0.0073}$
A^{kSZ}	—	r_*	$144.82^{+0.50}_{-0.48}$	$f\sigma_8(2.33)$	$0.2962^{+0.0039}_{-0.0035}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	$100\theta_*$	$1.04125^{+0.00057}_{-0.00058}$	$\sigma_8(2.33)$	$0.3056^{+0.0040}_{-0.0036}$
c_{217}	$0.9996^{+0.0037}_{-0.0027}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.909^{+0.048}_{-0.046}$	f_{2000}^{143}	29^{+5}_{-5}
H_0	$68.13^{+0.98}_{-0.96}$	z_{drag}	$1060.03^{+0.66}_{-0.67}$	$f_{2000}^{143 \times 217}$	31^{+4}_{-4}
Ω_Λ	$0.695^{+0.013}_{-0.013}$	r_{drag}	$147.46^{+0.51}_{-0.50}$	f_{2000}^{217}	$106.1^{+3.7}_{-3.7}$
Ω_m	$0.305^{+0.013}_{-0.013}$	k_{D}	$0.14055^{+0.00061}_{-0.00064}$	χ_{lensing}^2	$10.2 (\nu: 2.0)$
$\Omega_m h^2$	$0.1413^{+0.0020}_{-0.0020}$	$100\theta_{\text{D}}$	$0.16071^{+0.00038}_{-0.00037}$	χ_{simall}^2	$396.3 (\nu: 0.5)$
$\Omega_m h^3$	$0.09626^{+0.00062}_{-0.00065}$	z_{eq}	3361^{+47}_{-48}	χ_{lowl}^2	$22.47 (\nu: 0.3)$
σ_8	$0.802^{+0.013}_{-0.012}$	k_{eq}	$0.01026^{+0.00014}_{-0.00014}$	$\chi_{6\text{DF}}^2$	$0.030 (\nu: 0.0)$
S_8	$0.808^{+0.026}_{-0.026}$	$100\theta_{\text{eq}}$	$0.8211^{+0.0092}_{-0.0090}$	χ_{MGS}^2	$1.74 (\nu: 0.1)$
$\sigma_8 \Omega_m^{0.5}$	$0.443^{+0.014}_{-0.014}$	$100\theta_{\text{s,eq}}$	$0.4534^{+0.0047}_{-0.0046}$	χ_{DR12BAO}^2	$3.98 (\nu: 0.3)$
$\sigma_8 \Omega_m^{0.25}$	$0.596^{+0.014}_{-0.014}$	$H(0.15)$	$73.33^{+0.84}_{-0.83}$	χ_{prior}^2	$9.6 (\nu: 9.7)$
$\sigma_8/h^{0.5}$	$0.972^{+0.020}_{-0.019}$	$D_{\text{M}}(0.15)$	$636.9^{+8.2}_{-8.1}$	χ_{CMB}^2	$7364 (\nu: 10477731.1)$
$r_{\text{drag}} h$	$100.5^{+1.7}_{-1.6}$	$H(0.38)$	$83.33^{+0.63}_{-0.61}$	χ_{BAO}^2	$5.76 (\nu: 0.3)$
$\langle d^2 \rangle^{1/2}$	$2.477^{+0.060}_{-0.059}$	$D_{\text{M}}(0.38)$	1521^{+16}_{-16}		

$$\bar{\chi}_{\text{eff}}^2 = 11954.75; \Delta\bar{\chi}_{\text{eff}}^2 = 9151.56; R - 1 = 0.02132$$

3.25 base_Alens_CamSpecHM_TT/base_Alens_plikHM_TT

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02254^{+0.00061}_{-0.00058}$	$\sigma_8/h^{0.5}$	$1.01^{+0.10}_{-0.094}$	$100\theta_{\text{eq}}$	$0.825^{+0.024}_{-0.023}$
$\Omega_c h^2$	$0.1174^{+0.0055}_{-0.0053}$	$r_{\text{drag}} h$	$101.2^{+4.4}_{-4.3}$	$100\theta_{\text{s,eq}}$	$0.455^{+0.012}_{-0.012}$
$100\theta_{MC}$	$1.0413^{+0.0011}_{-0.0011}$	$\langle d^2 \rangle^{1/2}$	$2.63^{+0.15}_{-0.15}$	$H(0.15)$	$73.7^{+2.2}_{-2.2}$
τ	< 0.183	z_{re}	$10.8^{+7.6}_{-8.2}$	$D_{\text{M}}(0.15)$	633^{+22}_{-21}
A_L	$1.12^{+0.28}_{-0.25}$	$10^9 A_s$	$2.27^{+0.44}_{-0.37}$	$H(0.38)$	$83.6^{+1.7}_{-1.6}$
$\ln(10^{10} A_s)$	$3.12^{+0.18}_{-0.17}$	$10^9 A_s e^{-2\tau}$	$1.869^{+0.031}_{-0.031}$	$D_{\text{M}}(0.38)$	1514^{+43}_{-43}
n_s	$0.973^{+0.017}_{-0.016}$	D_{40}	1234^{+58}_{-52}	$H(0.51)$	$90.2^{+1.4}_{-1.3}$
A_{217}^{CIB}	41^{+20}_{-20}	D_{220}	5728^{+84}_{-83}	$D_{\text{M}}(0.51)$	1963^{+51}_{-51}
$\xi^{tSZ-CIB}$	—	D_{810}	2527^{+28}_{-28}	$H(0.61)$	$95.7^{+1.1}_{-1.0}$
A_{143}^{tSZ}	$4.9^{+4.0}_{-4.1}$	D_{1420}	$814^{+10}_{-9.9}$	$D_{\text{M}}(0.61)$	2285^{+55}_{-55}
A_{100}^{PS}	241^{+60}_{-60}	D_{2000}	$232.0^{+4.2}_{-4.2}$	$H(2.33)$	$235.1^{+3.1}_{-3.1}$
A_{143}^{PS}	38^{+20}_{-20}	$n_{s,0.002}$	$0.973^{+0.017}_{-0.016}$	$D_{\text{M}}(2.33)$	5745^{+46}_{-48}
A_{217}^{PS}	109^{+20}_{-30}	Y_P	$0.24546^{+0.00026}_{-0.00024}$	$f\sigma_8(0.15)$	$0.462^{+0.054}_{-0.048}$
A^{kSZ}	< 8.33	Y_P^{BBN}	$0.24678^{+0.00026}_{-0.00024}$	$\sigma_8(0.15)$	$0.772^{+0.074}_{-0.066}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	$10^5 D/H$	$2.56^{+0.11}_{-0.11}$	$f\sigma_8(0.38)$	$0.484^{+0.051}_{-0.047}$
c_{217}	$0.9995^{+0.0036}_{-0.0026}$	Age/Gyr	$13.76^{+0.10}_{-0.10}$	$\sigma_8(0.38)$	$0.686^{+0.066}_{-0.058}$
y_{cal}	$1.0001^{+0.0049}_{-0.0049}$	z_*	$1089.5^{+1.1}_{-1.1}$	$f\sigma_8(0.51)$	$0.484^{+0.049}_{-0.046}$
H_0	$68.6^{+2.6}_{-2.5}$	r_*	$145.0^{+1.1}_{-1.1}$	$\sigma_8(0.51)$	$0.642^{+0.061}_{-0.054}$
Ω_Λ	$0.700^{+0.031}_{-0.034}$	$100\theta_*$	$1.0415^{+0.0011}_{-0.0010}$	$f\sigma_8(0.61)$	$0.480^{+0.048}_{-0.044}$
Ω_m	$0.300^{+0.034}_{-0.031}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.92^{+0.10}_{-0.10}$	$\sigma_8(0.61)$	$0.612^{+0.058}_{-0.051}$
$\Omega_m h^2$	$0.1406^{+0.0051}_{-0.0049}$	z_{drag}	$1060.1^{+1.1}_{-1.1}$	$f\sigma_8(2.33)$	$0.309^{+0.030}_{-0.026}$
$\Omega_m h^3$	$0.0964^{+0.0010}_{-0.00097}$	r_{drag}	$147.6^{+1.1}_{-1.1}$	$\sigma_8(2.33)$	$0.319^{+0.031}_{-0.027}$
σ_8	$0.834^{+0.081}_{-0.072}$	k_{D}	$0.1405^{+0.0011}_{-0.0010}$	f_{2000}^{143}	27^{+7}_{-7}
S_8	$0.833^{+0.10}_{-0.090}$	$100\theta_{\text{D}}$	$0.16068^{+0.00061}_{-0.00060}$	$f_{2000}^{143 \times 217}$	30^{+5}_{-5}
$\sigma_8 \Omega_m^{0.5}$	$0.457^{+0.055}_{-0.049}$	z_{eq}	3344^{+120}_{-120}	f_{2000}^{217}	$104.9^{+4.8}_{-4.8}$
$\sigma_8 \Omega_m^{0.25}$	$0.617^{+0.064}_{-0.060}$	k_{eq}	$0.01021^{+0.00037}_{-0.00036}$	χ^2_{prior}	$7.1 (\nu: 5.8)$

Best-fit $\chi^2_{\text{eff}} = 7046.45$; $\Delta\chi^2_{\text{eff}} = 6293.22$; $\bar{\chi}^2_{\text{eff}} = 7067.10$; $\Delta\bar{\chi}^2_{\text{eff}} = 6292.84$; $R - 1 = 0.00805$
 χ^2_{eff} : CMB - CamSpec like_10.7HM: 7045.02

3.26 base_Alens_CamSpecHM_TT_post_zre6p5/base_Alens_plikHM_TT_post_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02254^{+0.00061}_{-0.00059}$	$\sigma_8/h^{0.5}$	$1.024^{+0.090}_{-0.082}$	$100\theta_{\text{eq}}$	$0.825^{+0.024}_{-0.023}$
$\Omega_c h^2$	$0.1173^{+0.0054}_{-0.0054}$	$r_{\text{drag}} h$	$101.3^{+4.5}_{-4.4}$	$100\theta_{\text{s,eq}}$	$0.456^{+0.012}_{-0.012}$
$100\theta_{MC}$	$1.0413^{+0.0011}_{-0.0011}$	$\langle d^2 \rangle^{1/2}$	$2.63^{+0.15}_{-0.15}$	$H(0.15)$	$73.8^{+2.3}_{-2.2}$
τ	$0.111^{+0.080}_{-0.068}$	z_{re}	< 18.2	$D_{\text{M}}(0.15)$	633^{+22}_{-21}
A_L	$1.09^{+0.24}_{-0.22}$	$10^9 A_s$	$2.34^{+0.39}_{-0.31}$	$H(0.38)$	$83.6^{+1.7}_{-1.6}$
$\ln(10^{10} A_s)$	$3.15^{+0.16}_{-0.14}$	$10^9 A_s e^{-2\tau}$	$1.868^{+0.031}_{-0.031}$	$D_{\text{M}}(0.38)$	1513^{+43}_{-43}
n_s	$0.974^{+0.017}_{-0.016}$	D_{40}	1240^{+56}_{-52}	$H(0.51)$	$90.2^{+1.4}_{-1.3}$
A_{217}^{CIB}	41^{+20}_{-20}	D_{220}	5726^{+83}_{-82}	$D_{\text{M}}(0.51)$	1961^{+51}_{-51}
$\xi^{tSZ-CIB}$	—	D_{810}	2526^{+28}_{-28}	$H(0.61)$	$95.8^{+1.1}_{-1.0}$
A_{143}^{tSZ}	$4.9^{+4.0}_{-4.1}$	D_{1420}	814^{+10}_{-10}	$D_{\text{M}}(0.61)$	2284^{+55}_{-55}
A_{100}^{PS}	240^{+60}_{-60}	D_{2000}	$232.1^{+4.2}_{-4.2}$	$H(2.33)$	$235.0^{+3.1}_{-3.1}$
A_{143}^{PS}	38^{+20}_{-20}	$n_{s,0.002}$	$0.974^{+0.017}_{-0.016}$	$D_{\text{M}}(2.33)$	5744^{+46}_{-48}
A_{217}^{PS}	110^{+20}_{-30}	Y_P	$0.24546^{+0.00026}_{-0.00024}$	$f\sigma_8(0.15)$	$0.469^{+0.049}_{-0.044}$
A^{kSZ}	< 8.28	Y_P^{BBN}	$0.24679^{+0.00026}_{-0.00024}$	$\sigma_8(0.15)$	$0.785^{+0.065}_{-0.056}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	$10^5 D/H$	$2.56^{+0.11}_{-0.11}$	$f\sigma_8(0.38)$	$0.491^{+0.046}_{-0.042}$
c_{217}	$0.9995^{+0.0036}_{-0.0026}$	Age/Gyr	$13.76^{+0.10}_{-0.10}$	$\sigma_8(0.38)$	$0.697^{+0.058}_{-0.049}$
y_{cal}	$1.0001^{+0.0049}_{-0.0049}$	z_*	$1089.5^{+1.1}_{-1.1}$	$f\sigma_8(0.51)$	$0.491^{+0.044}_{-0.040}$
H_0	$68.6^{+2.6}_{-2.5}$	r_*	$145.0^{+1.1}_{-1.1}$	$\sigma_8(0.51)$	$0.653^{+0.054}_{-0.045}$
Ω_Λ	$0.701^{+0.031}_{-0.034}$	$100\theta_*$	$1.0415^{+0.0011}_{-0.0010}$	$f\sigma_8(0.61)$	$0.487^{+0.043}_{-0.038}$
Ω_m	$0.299^{+0.034}_{-0.031}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.92^{+0.10}_{-0.10}$	$\sigma_8(0.61)$	$0.622^{+0.051}_{-0.043}$
$\Omega_m h^2$	$0.1405^{+0.0050}_{-0.0050}$	z_{drag}	$1060.1^{+1.1}_{-1.1}$	$f\sigma_8(2.33)$	$0.314^{+0.026}_{-0.021}$
$\Omega_m h^3$	$0.0963^{+0.0010}_{-0.00097}$	r_{drag}	$147.6^{+1.1}_{-1.1}$	$\sigma_8(2.33)$	$0.324^{+0.027}_{-0.022}$
σ_8	$0.848^{+0.071}_{-0.061}$	k_{D}	$0.1404^{+0.0011}_{-0.0010}$	f_{2000}^{143}	27^{+7}_{-7}
S_8	$0.846^{+0.092}_{-0.082}$	$100\theta_{\text{D}}$	$0.16068^{+0.00062}_{-0.00060}$	$f_{2000}^{143 \times 217}$	30^{+5}_{-5}
$\sigma_8 \Omega_m^{0.5}$	$0.463^{+0.050}_{-0.045}$	z_{eq}	3341^{+120}_{-120}	f_{2000}^{217}	$104.8^{+4.7}_{-4.8}$
$\sigma_8 \Omega_m^{0.25}$	$0.627^{+0.057}_{-0.053}$	k_{eq}	$0.01020^{+0.00037}_{-0.00036}$	χ^2_{prior}	$7.1 (\nu: 5.8)$

$\bar{\chi}^2_{\text{eff}} = 7067.05$; $\Delta \bar{\chi}^2_{\text{eff}} = 6292.74$; $R - 1 = 0.01053$

3.27 base_Alens_CamSpecHM_TT_lowl/base_Alens_plikHM_TT_lowl

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02264^{+0.00058}_{-0.00058}$	$r_{\text{drag}} h$	$102.1^{+4.2}_{-4.1}$	$H(0.15)$	$74.2^{+2.1}_{-2.1}$
$\Omega_c h^2$	$0.1163^{+0.0050}_{-0.0049}$	$\langle d^2 \rangle^{1/2}$	$2.64^{+0.15}_{-0.15}$	$D_{\text{M}}(0.15)$	629^{+20}_{-20}
$100\theta_{MC}$	$1.0414^{+0.0011}_{-0.0010}$	z_{re}	$7.8^{+6.2}_{-5.7}$	$H(0.38)$	$83.9^{+1.6}_{-1.5}$
τ	< 0.128	$10^9 A_s$	$2.11^{+0.30}_{-0.22}$	$D_{\text{M}}(0.38)$	1505^{+40}_{-40}
A_L	$1.23^{+0.23}_{-0.23}$	$10^9 A_s e^{-2\tau}$	$1.865^{+0.029}_{-0.029}$	$H(0.51)$	$90.5^{+1.3}_{-1.2}$
$\ln(10^{10} A_s)$	$3.05^{+0.14}_{-0.11}$	D_{40}	1211^{+40}_{-36}	$D_{\text{M}}(0.51)$	1952^{+48}_{-48}
n_s	$0.976^{+0.015}_{-0.015}$	D_{220}	5731^{+84}_{-82}	$H(0.61)$	$95.9^{+1.1}_{-0.99}$
y_{cal}	$1.0000^{+0.0049}_{-0.0048}$	D_{810}	2525^{+28}_{-27}	$D_{\text{M}}(0.61)$	2274^{+51}_{-52}
A_{217}^{CIB}	41^{+20}_{-20}	D_{1420}	$815^{+10}_{-9.9}$	$H(2.33)$	$234.5^{+2.9}_{-2.8}$
$\xi^{tSZ-CIB}$	—	D_{2000}	$232.5^{+4.1}_{-4.1}$	$D_{\text{M}}(2.33)$	5736^{+44}_{-46}
A_{143}^{tSZ}	$4.9^{+4.0}_{-4.1}$	$n_{s,0.002}$	$0.976^{+0.015}_{-0.015}$	$f\sigma_8(0.15)$	$0.440^{+0.039}_{-0.037}$
A_{100}^{PS}	238^{+60}_{-60}	Y_P	$0.24550^{+0.00026}_{-0.00023}$	$\sigma_8(0.15)$	$0.743^{+0.053}_{-0.043}$
A_{143}^{PS}	37^{+20}_{-20}	Y_P^{BBN}	$0.24683^{+0.00026}_{-0.00023}$	$f\sigma_8(0.38)$	$0.462^{+0.037}_{-0.034}$
A_{217}^{PS}	110^{+20}_{-30}	$10^5 D/H$	$2.54^{+0.11}_{-0.10}$	$\sigma_8(0.38)$	$0.661^{+0.047}_{-0.037}$
A^{kSZ}	< 8.13	Age/Gyr	$13.738^{+0.098}_{-0.10}$	$f\sigma_8(0.51)$	$0.463^{+0.036}_{-0.032}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	z_*	$1089.3^{+1.1}_{-1.0}$	$\sigma_8(0.51)$	$0.619^{+0.044}_{-0.034}$
c_{217}	$0.9995^{+0.0036}_{-0.0026}$	r_*	$145.2^{+1.0}_{-1.0}$	$f\sigma_8(0.61)$	$0.460^{+0.035}_{-0.031}$
H_0	$69.1^{+2.4}_{-2.4}$	$100\theta_*$	$1.0416^{+0.0010}_{-0.0010}$	$\sigma_8(0.61)$	$0.590^{+0.042}_{-0.032}$
Ω_Λ	$0.707^{+0.029}_{-0.031}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.939^{+0.095}_{-0.094}$	$f\sigma_8(2.33)$	$0.298^{+0.021}_{-0.016}$
Ω_m	$0.293^{+0.031}_{-0.029}$	z_{drag}	$1060.3^{+1.1}_{-1.1}$	$\sigma_8(2.33)$	$0.308^{+0.022}_{-0.016}$
$\Omega_m h^2$	$0.1396^{+0.0046}_{-0.0045}$	r_{drag}	$147.78^{+0.99}_{-1.0}$	f_{2000}^{143}	26^{+7}_{-7}
$\Omega_m h^3$	$0.09641^{+0.00099}_{-0.00098}$	k_{D}	$0.1403^{+0.0010}_{-0.0010}$	$f_{2000}^{143 \times 217}$	29^{+5}_{-5}
σ_8	$0.802^{+0.058}_{-0.048}$	$100\theta_{\text{D}}$	$0.16060^{+0.00061}_{-0.00059}$	f_{2000}^{217}	$104.4^{+4.6}_{-4.7}$
S_8	$0.793^{+0.073}_{-0.070}$	z_{eq}	3321^{+110}_{-110}	χ_{lowl}^2	$22.1 (\nu: 1.1)$
$\sigma_8 \Omega_m^{0.5}$	$0.434^{+0.040}_{-0.038}$	k_{eq}	$0.01014^{+0.00034}_{-0.00033}$	χ_{prior}^2	$7.1 (\nu: 5.8)$
$\sigma_8 \Omega_m^{0.25}$	$0.590^{+0.047}_{-0.042}$	$100\theta_{\text{eq}}$	$0.830^{+0.022}_{-0.022}$	χ_{CMB}^2	$3936 (\nu: 4949752.4)$
$\sigma_8/h^{0.5}$	$0.965^{+0.074}_{-0.065}$	$100\theta_{\text{s,eq}}$	$0.458^{+0.011}_{-0.011}$		

Best-fit $\chi_{\text{eff}}^2 = 7068.30$; $\Delta\chi_{\text{eff}}^2 = 6293.30$; $\bar{\chi}_{\text{eff}}^2 = 7089.14$; $\Delta\bar{\chi}_{\text{eff}}^2 = 6292.70$; $R - 1 = 0.00730$
 χ_{eff}^2 : CMB - commander_dx12_v3_2_29: 20.86 (Δ -0.12) CamSpec like_10.7HM: 7046.06

3.28 base_Alens_CamSpecHM_TT_lowl_post_zre6p5/base_Alens_plikHM_TT_lowl_post_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02266^{+0.00058}_{-0.00059}$	$r_{\text{drag}} h$	$102.3^{+4.2}_{-4.1}$	$H(0.15)$	$74.3^{+2.1}_{-2.1}$
$\Omega_c h^2$	$0.1160^{+0.0050}_{-0.0049}$	$\langle d^2 \rangle^{1/2}$	$2.64^{+0.15}_{-0.15}$	$D_{\text{M}}(0.15)$	628^{+20}_{-20}
$100\theta_{MC}$	$1.0415^{+0.0011}_{-0.0010}$	z_{re}	< 14.5	$H(0.38)$	$84.0^{+1.6}_{-1.5}$
τ	$0.082^{+0.056}_{-0.040}$	$10^9 A_s$	$2.20^{+0.25}_{-0.18}$	$D_{\text{M}}(0.38)$	1502^{+41}_{-40}
A_L	$1.18^{+0.21}_{-0.20}$	$10^9 A_s e^{-2\tau}$	$1.863^{+0.029}_{-0.029}$	$H(0.51)$	$90.5^{+1.3}_{-1.2}$
$\ln(10^{10} A_s)$	$3.09^{+0.11}_{-0.082}$	D_{40}	1215^{+40}_{-37}	$D_{\text{M}}(0.51)$	1949^{+48}_{-48}
n_s	$0.977^{+0.015}_{-0.015}$	D_{220}	5730^{+84}_{-83}	$H(0.61)$	$96.0^{+1.1}_{-1.0}$
y_{cal}	$1.0001^{+0.0049}_{-0.0048}$	D_{810}	2525^{+28}_{-27}	$D_{\text{M}}(0.61)$	2271^{+52}_{-52}
A_{217}^{CIB}	40^{+20}_{-20}	D_{1420}	$815^{+10}_{-9.8}$	$H(2.33)$	$234.3^{+2.9}_{-2.8}$
$\xi^{tSZ-CIB}$	—	D_{2000}	$232.7^{+4.1}_{-4.1}$	$D_{\text{M}}(2.33)$	5734^{+45}_{-47}
A_{143}^{tSZ}	$4.9^{+4.0}_{-4.2}$	$n_{s,0.002}$	$0.977^{+0.015}_{-0.015}$	$f\sigma_8(0.15)$	$0.448^{+0.038}_{-0.034}$
A_{100}^{PS}	237^{+60}_{-60}	Y_P	$0.24551^{+0.00026}_{-0.00024}$	$\sigma_8(0.15)$	$0.759^{+0.044}_{-0.036}$
A_{143}^{PS}	37^{+20}_{-20}	Y_P^{BBN}	$0.24683^{+0.00026}_{-0.00024}$	$f\sigma_8(0.38)$	$0.471^{+0.035}_{-0.030}$
A_{217}^{PS}	110^{+20}_{-30}	$10^5 D/H$	$2.53^{+0.11}_{-0.10}$	$\sigma_8(0.38)$	$0.675^{+0.039}_{-0.030}$
A^{kSZ}	< 8.00	Age/Gyr	$13.733^{+0.099}_{-0.10}$	$f\sigma_8(0.51)$	$0.472^{+0.032}_{-0.029}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	z_*	$1089.2^{+1.1}_{-1.0}$	$\sigma_8(0.51)$	$0.633^{+0.036}_{-0.028}$
c_{217}	$0.9995^{+0.0035}_{-0.0026}$	r_*	$145.3^{+1.0}_{-1.0}$	$f\sigma_8(0.61)$	$0.469^{+0.030}_{-0.027}$
H_0	$69.2^{+2.4}_{-2.4}$	$100\theta_*$	$1.0416^{+0.0010}_{-0.0010}$	$\sigma_8(0.61)$	$0.602^{+0.035}_{-0.026}$
Ω_Λ	$0.709^{+0.029}_{-0.031}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.945^{+0.094}_{-0.095}$	$f\sigma_8(2.33)$	$0.305^{+0.017}_{-0.013}$
Ω_m	$0.291^{+0.031}_{-0.029}$	z_{drag}	$1060.3^{+1.1}_{-1.1}$	$\sigma_8(2.33)$	$0.315^{+0.018}_{-0.013}$
$\Omega_m h^2$	$0.1393^{+0.0046}_{-0.0045}$	r_{drag}	$147.84^{+0.99}_{-1.0}$	f_{2000}^{143}	26^{+7}_{-7}
$\Omega_m h^3$	$0.09641^{+0.00099}_{-0.00099}$	k_{D}	$0.1403^{+0.0010}_{-0.0010}$	$f_{2000}^{143 \times 217}$	29^{+5}_{-5}
σ_8	$0.819^{+0.049}_{-0.040}$	$100\theta_{\text{D}}$	$0.16059^{+0.00062}_{-0.00059}$	f_{2000}^{217}	$104.2^{+4.6}_{-4.7}$
S_8	$0.806^{+0.072}_{-0.064}$	z_{eq}	3314^{+110}_{-110}	χ_{lowl}^2	$22.5 (\nu: 1.3)$
$\sigma_8 \Omega_m^{0.5}$	$0.442^{+0.039}_{-0.035}$	k_{eq}	$0.01011^{+0.00034}_{-0.00033}$	χ_{prior}^2	$7.2 (\nu: 5.9)$
$\sigma_8 \Omega_m^{0.25}$	$0.601^{+0.042}_{-0.038}$	$100\theta_{\text{eq}}$	$0.831^{+0.022}_{-0.022}$	χ_{CMB}^2	$3936 (\nu: 4949575.6)$
$\sigma_8/h^{0.5}$	$0.984^{+0.064}_{-0.058}$	$100\theta_{\text{s,eq}}$	$0.458^{+0.011}_{-0.011}$		

$\bar{\chi}_{\text{eff}}^2 = 7089.50$; $\Delta \bar{\chi}_{\text{eff}}^2 = 6292.58$; $R - 1 = 0.00995$

3.29 base_Alens_CamSpecHM_TT_lowE/base_Alens_plikHM_TT_lowE

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02251^{+0.00060}_{-0.00059}$	$r_{\text{drag}} h$	$100.8^{+4.4}_{-4.3}$	$H(0.15)$	$73.5^{+2.2}_{-2.2}$
$\Omega_c h^2$	$0.1178^{+0.0054}_{-0.0053}$	$\langle d^2 \rangle^{1/2}$	$2.63^{+0.15}_{-0.15}$	$D_{\text{M}}(0.15)$	635^{+22}_{-21}
$100\theta_{MC}$	$1.0412^{+0.0011}_{-0.0011}$	z_{re}	$7.2^{+1.7}_{-1.8}$	$H(0.38)$	$83.5^{+1.7}_{-1.6}$
τ	$0.050^{+0.016}_{-0.017}$	$10^9 A_s$	$2.070^{+0.071}_{-0.075}$	$D_{\text{M}}(0.38)$	1517^{+44}_{-43}
A_L	$1.21^{+0.20}_{-0.19}$	$10^9 A_s e^{-2\tau}$	$1.872^{+0.031}_{-0.030}$	$H(0.51)$	$90.1^{+1.3}_{-1.3}$
$\ln(10^{10} A_s)$	$3.030^{+0.034}_{-0.037}$	D_{40}	1217^{+39}_{-38}	$D_{\text{M}}(0.51)$	1966^{+51}_{-50}
n_s	$0.971^{+0.016}_{-0.016}$	D_{220}	5734^{+83}_{-82}	$H(0.61)$	$95.7^{+1.1}_{-1.0}$
y_{cal}	$1.0001^{+0.0049}_{-0.0048}$	D_{810}	2527^{+28}_{-28}	$D_{\text{M}}(0.61)$	2289^{+55}_{-55}
A_{217}^{CIB}	42^{+20}_{-20}	D_{1420}	813^{+10}_{-10}	$H(2.33)$	$235.3^{+3.1}_{-3.0}$
$\xi^{tSZ-CIB}$	—	D_{2000}	$231.6^{+4.2}_{-4.3}$	$D_{\text{M}}(2.33)$	5748^{+46}_{-48}
A_{143}^{tSZ}	$4.8^{+3.8}_{-4.2}$	$n_{s,0.002}$	$0.971^{+0.016}_{-0.016}$	$f\sigma_8(0.15)$	$0.445^{+0.033}_{-0.032}$
A_{100}^{PS}	243^{+60}_{-50}	Y_P	$0.24545^{+0.00026}_{-0.00025}$	$\sigma_8(0.15)$	$0.739^{+0.018}_{-0.019}$
A_{143}^{PS}	39^{+20}_{-20}	Y_P^{BBN}	$0.24677^{+0.00026}_{-0.00025}$	$f\sigma_8(0.38)$	$0.465^{+0.026}_{-0.026}$
A_{217}^{PS}	109^{+20}_{-30}	$10^5 D/H$	$2.56^{+0.11}_{-0.11}$	$\sigma_8(0.38)$	$0.657^{+0.014}_{-0.015}$
A^{kSZ}	< 8.50	Age/Gyr	$13.76^{+0.10}_{-0.10}$	$f\sigma_8(0.51)$	$0.464^{+0.022}_{-0.023}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	z_*	$1089.6^{+1.1}_{-1.1}$	$\sigma_8(0.51)$	$0.615^{+0.012}_{-0.013}$
c_{217}	$0.9995^{+0.0036}_{-0.0026}$	r_*	$144.9^{+1.1}_{-1.1}$	$f\sigma_8(0.61)$	$0.460^{+0.020}_{-0.020}$
H_0	$68.4^{+2.6}_{-2.5}$	$100\theta_*$	$1.0414^{+0.0010}_{-0.0010}$	$\sigma_8(0.61)$	$0.585^{+0.011}_{-0.012}$
Ω_Λ	$0.698^{+0.031}_{-0.034}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.912^{+0.099}_{-0.10}$	$f\sigma_8(2.33)$	$0.2955^{+0.0053}_{-0.0056}$
Ω_m	$0.302^{+0.034}_{-0.031}$	z_{drag}	$1060.1^{+1.1}_{-1.1}$	$\sigma_8(2.33)$	$0.3051^{+0.0054}_{-0.0057}$
$\Omega_m h^2$	$0.1410^{+0.0050}_{-0.0049}$	r_{drag}	$147.5^{+1.0}_{-1.1}$	f_{2000}^{143}	27^{+7}_{-7}
$\Omega_m h^3$	$0.09636^{+0.00099}_{-0.00097}$	k_{D}	$0.1405^{+0.0011}_{-0.0010}$	$f_{2000}^{143 \times 217}$	30^{+5}_{-5}
σ_8	$0.799^{+0.023}_{-0.024}$	$100\theta_{\text{D}}$	$0.16069^{+0.00063}_{-0.00061}$	f_{2000}^{217}	$105.3^{+4.7}_{-4.7}$
S_8	$0.802^{+0.065}_{-0.062}$	z_{eq}	3354^{+120}_{-120}	χ_{small}^2	$396.8 (\nu: 1.2)$
$\sigma_8 \Omega_m^{0.5}$	$0.439^{+0.036}_{-0.034}$	k_{eq}	$0.01024^{+0.00037}_{-0.00035}$	χ_{prior}^2	$7.1 (\nu: 5.8)$
$\sigma_8 \Omega_m^{0.25}$	$0.593^{+0.032}_{-0.031}$	$100\theta_{\text{eq}}$	$0.823^{+0.023}_{-0.023}$	χ_{CMB}^2	$4310 (\nu: 4949487.3)$
$\sigma_8/h^{0.5}$	$0.967^{+0.043}_{-0.043}$	$100\theta_{\text{s,eq}}$	$0.454^{+0.012}_{-0.012}$		

Best-fit $\chi_{\text{eff}}^2 = 7442.68$; $\Delta\chi_{\text{eff}}^2 = 6293.39$; $\bar{\chi}_{\text{eff}}^2 = 7463.85$; $\Delta\bar{\chi}_{\text{eff}}^2 = 6292.77$; $R - 1 = 0.00741$
 χ_{eff}^2 : CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.67 (Δ 0.01) CamSpec like_10.7HM: 7045.62

3.30 base_Alens_CamSpecHM_TTTEEE/base_Alens_plikHM_TTTEEE

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02252^{+0.00037}_{-0.00038}$	$\sigma_8/h^{0.5}$	$1.02^{+0.11}_{-0.091}$	$100\theta_{\text{eq}}$	$0.820^{+0.014}_{-0.014}$
$\Omega_c h^2$	$0.1183^{+0.0032}_{-0.0032}$	$r_{\text{drag}} h$	$100.4^{+2.6}_{-2.5}$	$100\theta_{\text{s,eq}}$	$0.4530^{+0.0071}_{-0.0069}$
$100\theta_{MC}$	$1.04108^{+0.00065}_{-0.00065}$	$\langle d^2 \rangle^{1/2}$	$2.58^{+0.13}_{-0.13}$	$H(0.15)$	$73.3^{+1.3}_{-1.2}$
τ	< 0.199	z_{re}	$11.2^{+8.5}_{-8.4}$	$D_{\text{M}}(0.15)$	637^{+12}_{-12}
A_L	$1.05^{+0.24}_{-0.24}$	$10^9 A_s$	$2.29^{+0.50}_{-0.38}$	$H(0.38)$	$83.34^{+0.94}_{-0.91}$
$\ln(10^{10} A_s)$	$3.13^{+0.21}_{-0.17}$	$10^9 A_s e^{-2\tau}$	$1.873^{+0.025}_{-0.025}$	$D_{\text{M}}(0.38)$	1521^{+25}_{-25}
n_s	$0.971^{+0.012}_{-0.011}$	D_{40}	1243^{+64}_{-49}	$H(0.51)$	$90.00^{+0.76}_{-0.73}$
A_{217}^{CIB}	41^{+20}_{-20}	D_{220}	5729^{+79}_{-81}	$D_{\text{M}}(0.51)$	1971^{+29}_{-29}
$\xi^{tSZ-CIB}$	—	D_{810}	2530^{+27}_{-27}	$H(0.61)$	$95.57^{+0.62}_{-0.59}$
A_{143}^{tSZ}	$4.9^{+4.0}_{-4.2}$	D_{1420}	$815.0^{+9.4}_{-9.5}$	$D_{\text{M}}(0.61)$	2294^{+31}_{-32}
A_{100}^{PS}	241^{+60}_{-50}	D_{2000}	$231.8^{+3.4}_{-3.5}$	$H(2.33)$	$235.6^{+1.9}_{-1.9}$
A_{143}^{PS}	39^{+20}_{-20}	$n_{s,0.002}$	$0.971^{+0.012}_{-0.011}$	$D_{\text{M}}(2.33)$	5751^{+27}_{-27}
A_{217}^{PS}	110^{+20}_{-30}	Y_P	$0.24545^{+0.00015}_{-0.00015}$	$f\sigma_8(0.15)$	$0.470^{+0.052}_{-0.045}$
A^{kSZ}	< 8.23	Y_P^{BBN}	$0.24678^{+0.00015}_{-0.00015}$	$\sigma_8(0.15)$	$0.779^{+0.083}_{-0.067}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	$10^5 D/H$	$2.560^{+0.070}_{-0.067}$	$f\sigma_8(0.38)$	$0.491^{+0.053}_{-0.045}$
c_{217}	$0.9995^{+0.0036}_{-0.0026}$	Age/Gyr	$13.771^{+0.059}_{-0.060}$	$\sigma_8(0.38)$	$0.691^{+0.074}_{-0.060}$
y_{cal}	$1.0000^{+0.0049}_{-0.0049}$	z_*	$1089.59^{+0.68}_{-0.67}$	$f\sigma_8(0.51)$	$0.490^{+0.053}_{-0.044}$
H_0	$68.1^{+1.5}_{-1.5}$	r_*	$144.76^{+0.68}_{-0.68}$	$\sigma_8(0.51)$	$0.647^{+0.069}_{-0.056}$
Ω_Λ	$0.695^{+0.019}_{-0.020}$	$100\theta_*$	$1.04125^{+0.00063}_{-0.00063}$	$f\sigma_8(0.61)$	$0.485^{+0.052}_{-0.043}$
Ω_m	$0.305^{+0.020}_{-0.019}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.902^{+0.064}_{-0.063}$	$\sigma_8(0.61)$	$0.616^{+0.066}_{-0.053}$
$\Omega_m h^2$	$0.1415^{+0.0030}_{-0.0030}$	z_{drag}	$1060.15^{+0.73}_{-0.75}$	$f\sigma_8(2.33)$	$0.311^{+0.033}_{-0.027}$
$\Omega_m h^3$	$0.09637^{+0.00065}_{-0.00067}$	r_{drag}	$147.38^{+0.67}_{-0.67}$	$\sigma_8(2.33)$	$0.321^{+0.034}_{-0.028}$
σ_8	$0.842^{+0.090}_{-0.073}$	k_{D}	$0.14068^{+0.00070}_{-0.00072}$	f_{2000}^{143}	27^{+6}_{-6}
S_8	$0.849^{+0.095}_{-0.083}$	$100\theta_{\text{D}}$	$0.16064^{+0.00044}_{-0.00040}$	$f_{2000}^{143 \times 217}$	30^{+4}_{-4}
$\sigma_8 \Omega_m^{0.5}$	$0.465^{+0.052}_{-0.045}$	z_{eq}	3366^{+71}_{-71}	f_{2000}^{217}	$105.1^{+4.1}_{-4.1}$
$\sigma_8 \Omega_m^{0.25}$	$0.626^{+0.068}_{-0.057}$	k_{eq}	$0.01027^{+0.00022}_{-0.00022}$	χ^2_{prior}	$9.6 (\nu: 9.2)$

Best-fit $\chi^2_{\text{eff}} = 11497.50$; $\Delta\chi^2_{\text{eff}} = 9159.61$; $\bar{\chi}^2_{\text{eff}} = 11520.05$; $\Delta\bar{\chi}^2_{\text{eff}} = 9154.66$; $R - 1 = 0.00760$
 χ^2_{eff} : CMB - CamSpec like_10.7HM_1400_unified: 11495.71

3.31 base_Alens_CamSpecHM_TTTEEE_post_zre6p5/base_Alens_plikHM_TTTEEE_post_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02252^{+0.00037}_{-0.00038}$	$\sigma_8/h^{0.5}$	$1.036^{+0.098}_{-0.078}$	$100\theta_{\text{eq}}$	$0.821^{+0.014}_{-0.013}$
$\Omega_c h^2$	$0.1183^{+0.0032}_{-0.0032}$	$r_{\text{drag}} h$	$100.4^{+2.6}_{-2.5}$	$100\theta_{\text{s,eq}}$	$0.4532^{+0.0071}_{-0.0069}$
$100\theta_{MC}$	$1.04108^{+0.00065}_{-0.00065}$	$\langle d^2 \rangle^{1/2}$	$2.58^{+0.13}_{-0.13}$	$H(0.15)$	$73.4^{+1.3}_{-1.2}$
τ	$0.115^{+0.090}_{-0.071}$	z_{re}	< 19.2	$D_{\text{M}}(0.15)$	637^{+12}_{-12}
A_L	$1.02^{+0.21}_{-0.21}$	$10^9 A_s$	$2.37^{+0.44}_{-0.33}$	$H(0.38)$	$83.36^{+0.95}_{-0.91}$
$\ln(10^{10} A_s)$	$3.16^{+0.18}_{-0.14}$	$10^9 A_s e^{-2\tau}$	$1.872^{+0.025}_{-0.025}$	$D_{\text{M}}(0.38)$	1520^{+25}_{-25}
n_s	$0.971^{+0.012}_{-0.011}$	D_{40}	1249^{+61}_{-49}	$H(0.51)$	$90.01^{+0.76}_{-0.73}$
A_{217}^{CIB}	41^{+20}_{-20}	D_{220}	5728^{+79}_{-81}	$D_{\text{M}}(0.51)$	1970^{+29}_{-29}
$\xi^{tSZ-CIB}$	—	D_{810}	2530^{+27}_{-28}	$H(0.61)$	$95.58^{+0.62}_{-0.58}$
A_{143}^{tSZ}	$4.9^{+4.0}_{-4.2}$	D_{1420}	$815.1^{+9.5}_{-9.6}$	$D_{\text{M}}(0.61)$	2294^{+31}_{-32}
A_{100}^{PS}	241^{+60}_{-50}	D_{2000}	$231.9^{+3.4}_{-3.5}$	$H(2.33)$	$235.6^{+1.9}_{-1.9}$
A_{143}^{PS}	39^{+20}_{-20}	$n_{s,0.002}$	$0.971^{+0.012}_{-0.011}$	$D_{\text{M}}(2.33)$	5751^{+27}_{-27}
A_{217}^{PS}	110^{+20}_{-30}	Y_P	$0.24545^{+0.00014}_{-0.00015}$	$f\sigma_8(0.15)$	$0.477^{+0.047}_{-0.040}$
A^{kSZ}	< 8.20	Y_P^{BBN}	$0.24678^{+0.00015}_{-0.00015}$	$\sigma_8(0.15)$	$0.791^{+0.073}_{-0.057}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	$10^5 D/H$	$2.559^{+0.070}_{-0.066}$	$f\sigma_8(0.38)$	$0.498^{+0.048}_{-0.039}$
c_{217}	$0.9995^{+0.0036}_{-0.0026}$	Age/Gyr	$13.770^{+0.059}_{-0.060}$	$\sigma_8(0.38)$	$0.702^{+0.065}_{-0.050}$
y_{cal}	$1.0000^{+0.0049}_{-0.0049}$	z_*	$1089.58^{+0.68}_{-0.66}$	$f\sigma_8(0.51)$	$0.498^{+0.047}_{-0.038}$
H_0	$68.1^{+1.5}_{-1.4}$	r_*	$144.77^{+0.69}_{-0.68}$	$\sigma_8(0.51)$	$0.657^{+0.061}_{-0.047}$
Ω_Λ	$0.695^{+0.019}_{-0.020}$	$100\theta_*$	$1.04125^{+0.00064}_{-0.00063}$	$f\sigma_8(0.61)$	$0.493^{+0.046}_{-0.037}$
Ω_m	$0.305^{+0.020}_{-0.019}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.903^{+0.064}_{-0.063}$	$\sigma_8(0.61)$	$0.626^{+0.058}_{-0.044}$
$\Omega_m h^2$	$0.1414^{+0.0030}_{-0.0030}$	z_{drag}	$1060.15^{+0.73}_{-0.75}$	$f\sigma_8(2.33)$	$0.316^{+0.029}_{-0.022}$
$\Omega_m h^3$	$0.09637^{+0.00065}_{-0.00067}$	r_{drag}	$147.39^{+0.67}_{-0.66}$	$\sigma_8(2.33)$	$0.326^{+0.030}_{-0.023}$
σ_8	$0.855^{+0.080}_{-0.062}$	k_{D}	$0.14066^{+0.00070}_{-0.00072}$	f_{2000}^{143}	27^{+6}_{-6}
S_8	$0.862^{+0.085}_{-0.074}$	$100\theta_{\text{D}}$	$0.16064^{+0.00043}_{-0.00040}$	$f_{2000}^{143 \times 217}$	30^{+4}_{-4}
$\sigma_8 \Omega_m^{0.5}$	$0.472^{+0.047}_{-0.040}$	z_{eq}	3364^{+71}_{-71}	f_{2000}^{217}	$105.0^{+4.1}_{-4.1}$
$\sigma_8 \Omega_m^{0.25}$	$0.635^{+0.060}_{-0.049}$	k_{eq}	$0.01027^{+0.00022}_{-0.00022}$	χ^2_{prior}	$9.6 (\nu: 9.3)$

$\bar{\chi}^2_{\text{eff}} = 11520.01$; $\Delta\bar{\chi}^2_{\text{eff}} = 9154.57$; $R - 1 = 0.00786$

3.32 base_Alens_CamSpecHM_TTTEEE_lowl/base_Alens_plikHM_TTTEEE_lowl

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02255^{+0.00036}_{-0.00037}$	$r_{\text{drag}} h$	$100.7^{+2.5}_{-2.4}$	$H(0.15)$	$73.5^{+1.2}_{-1.2}$
$\Omega_c h^2$	$0.1179^{+0.0031}_{-0.0031}$	$\langle d^2 \rangle^{1/2}$	$2.58^{+0.13}_{-0.13}$	$D_{\text{M}}(0.15)$	635^{+12}_{-12}
$100\theta_{MC}$	$1.04111^{+0.00065}_{-0.00065}$	z_{re}	$7.4^{+5.9}_{-5.3}$	$H(0.38)$	$83.46^{+0.92}_{-0.89}$
τ	< 0.117	$10^9 A_s$	$2.10^{+0.27}_{-0.20}$	$D_{\text{M}}(0.38)$	1517^{+24}_{-24}
A_L	$1.15^{+0.18}_{-0.19}$	$10^9 A_s e^{-2\tau}$	$1.872^{+0.024}_{-0.024}$	$H(0.51)$	$90.09^{+0.74}_{-0.71}$
$\ln(10^{10} A_s)$	$3.04^{+0.13}_{-0.097}$	D_{40}	1218^{+33}_{-32}	$D_{\text{M}}(0.51)$	1967^{+28}_{-28}
n_s	$0.971^{+0.010}_{-0.0099}$	D_{220}	5730^{+77}_{-79}	$H(0.61)$	$95.64^{+0.60}_{-0.57}$
y_{cal}	$1.0000^{+0.0049}_{-0.0049}$	D_{810}	2530^{+27}_{-27}	$D_{\text{M}}(0.61)$	2290^{+31}_{-31}
A_{217}^{CIB}	41^{+10}_{-20}	D_{1420}	$815.2^{+9.4}_{-9.4}$	$H(2.33)$	$235.4^{+1.8}_{-1.8}$
$\xi^{tSZ-CIB}$	—	D_{2000}	$231.9^{+3.4}_{-3.4}$	$D_{\text{M}}(2.33)$	5748^{+26}_{-26}
A_{143}^{tSZ}	$4.9^{+4.0}_{-4.2}$	$n_{s,0.002}$	$0.971^{+0.010}_{-0.0099}$	$f\sigma_8(0.15)$	$0.448^{+0.033}_{-0.030}$
A_{100}^{PS}	240^{+60}_{-50}	Y_P	$0.24546^{+0.00014}_{-0.00014}$	$\sigma_8(0.15)$	$0.744^{+0.049}_{-0.038}$
A_{143}^{PS}	38^{+20}_{-20}	Y_P^{BBN}	$0.24679^{+0.00014}_{-0.00014}$	$f\sigma_8(0.38)$	$0.468^{+0.033}_{-0.028}$
A_{217}^{PS}	110^{+20}_{-30}	$10^5 D/H$	$2.553^{+0.067}_{-0.064}$	$\sigma_8(0.38)$	$0.661^{+0.043}_{-0.033}$
A^{kSZ}	< 8.17	Age/Gyr	$13.764^{+0.058}_{-0.058}$	$f\sigma_8(0.51)$	$0.467^{+0.032}_{-0.027}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	z_*	$1089.51^{+0.66}_{-0.63}$	$\sigma_8(0.51)$	$0.619^{+0.040}_{-0.031}$
c_{217}	$0.9995^{+0.0037}_{-0.0026}$	r_*	$144.83^{+0.66}_{-0.66}$	$f\sigma_8(0.61)$	$0.463^{+0.032}_{-0.026}$
H_0	$68.3^{+1.4}_{-1.4}$	$100\theta_*$	$1.04128^{+0.00063}_{-0.00064}$	$\sigma_8(0.61)$	$0.589^{+0.038}_{-0.029}$
Ω_Λ	$0.697^{+0.018}_{-0.019}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.909^{+0.061}_{-0.061}$	$f\sigma_8(2.33)$	$0.297^{+0.019}_{-0.015}$
Ω_m	$0.303^{+0.019}_{-0.018}$	z_{drag}	$1060.21^{+0.72}_{-0.73}$	$\sigma_8(2.33)$	$0.307^{+0.020}_{-0.015}$
$\Omega_m h^2$	$0.1411^{+0.0029}_{-0.0028}$	r_{drag}	$147.44^{+0.65}_{-0.65}$	f_{2000}^{143}	27^{+6}_{-6}
$\Omega_m h^3$	$0.09639^{+0.00065}_{-0.00067}$	k_{D}	$0.14063^{+0.00069}_{-0.00070}$	$f_{2000}^{143 \times 217}$	30^{+4}_{-4}
σ_8	$0.804^{+0.053}_{-0.042}$	$100\theta_{\text{D}}$	$0.16061^{+0.00042}_{-0.00040}$	f_{2000}^{217}	$105.0^{+4.0}_{-4.0}$
S_8	$0.808^{+0.062}_{-0.055}$	z_{eq}	3357^{+69}_{-68}	χ_{lowl}^2	$22.6 (\nu: 1.0)$
$\sigma_8 \Omega_m^{0.5}$	$0.442^{+0.034}_{-0.030}$	k_{eq}	$0.01025^{+0.00021}_{-0.00021}$	χ_{prior}^2	$9.5 (\nu: 9.1)$
$\sigma_8 \Omega_m^{0.25}$	$0.597^{+0.042}_{-0.036}$	$100\theta_{\text{eq}}$	$0.822^{+0.013}_{-0.013}$	χ_{CMB}^2	$6956 (\nu: 10484622.9)$
$\sigma_8/h^{0.5}$	$0.973^{+0.067}_{-0.056}$	$100\theta_{\text{s,eq}}$	$0.4539^{+0.0069}_{-0.0067}$		

Best-fit $\chi_{\text{eff}}^2 = 11519.71$; $\Delta\chi_{\text{eff}}^2 = 9159.69$; $\bar{\chi}_{\text{eff}}^2 = 11542.67$; $\Delta\bar{\chi}_{\text{eff}}^2 = 9154.94$; $R - 1 = 0.01017$
 χ_{eff}^2 : CMB - commander_dx12_v3_2_29: 21.34 (Δ -0.09) CamSpec like_10.7HM_1400_unified: 11496.50

3.33 base_Alens_CamSpecHM_TTTEEE_lowl_post_zre6p5/base_Alens_plikHM_TTTEEE_lowl_post_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02256^{+0.00036}_{-0.00037}$	$r_{\text{drag}} h$	$100.8^{+2.5}_{-2.5}$	$H(0.15)$	$73.5^{+1.2}_{-1.2}$
$\Omega_c h^2$	$0.1178^{+0.0031}_{-0.0031}$	$\langle d^2 \rangle^{1/2}$	$2.58^{+0.12}_{-0.13}$	$D_{\text{M}}(0.15)$	635^{+12}_{-12}
$100\theta_{MC}$	$1.04112^{+0.00065}_{-0.00065}$	z_{re}	< 13.9	$H(0.38)$	$83.49^{+0.93}_{-0.90}$
τ	$0.078^{+0.050}_{-0.036}$	$10^9 A_s$	$2.19^{+0.23}_{-0.16}$	$D_{\text{M}}(0.38)$	1517^{+24}_{-24}
A_L	$1.11^{+0.16}_{-0.16}$	$10^9 A_s e^{-2\tau}$	$1.871^{+0.025}_{-0.024}$	$H(0.51)$	$90.11^{+0.74}_{-0.71}$
$\ln(10^{10} A_s)$	$3.09^{+0.10}_{-0.076}$	D_{40}	1224^{+33}_{-32}	$D_{\text{M}}(0.51)$	1966^{+28}_{-28}
n_s	$0.972^{+0.010}_{-0.010}$	D_{220}	5728^{+77}_{-79}	$H(0.61)$	$95.66^{+0.60}_{-0.58}$
y_{cal}	$1.0000^{+0.0049}_{-0.0049}$	D_{810}	2529^{+27}_{-26}	$D_{\text{M}}(0.61)$	2289^{+31}_{-31}
A_{217}^{CIB}	41^{+10}_{-20}	D_{1420}	$815.4^{+9.5}_{-9.3}$	$H(2.33)$	$235.3^{+1.8}_{-1.8}$
$\xi^{tSZ-CIB}$	—	D_{2000}	$232.1^{+3.3}_{-3.4}$	$D_{\text{M}}(2.33)$	5747^{+26}_{-27}
A_{143}^{tSZ}	$5.0^{+4.0}_{-4.2}$	$n_{s,0.002}$	$0.972^{+0.010}_{-0.010}$	$f\sigma_8(0.15)$	$0.457^{+0.029}_{-0.027}$
A_{100}^{PS}	239^{+60}_{-50}	Y_P	$0.24547^{+0.00014}_{-0.00014}$	$\sigma_8(0.15)$	$0.761^{+0.041}_{-0.031}$
A_{143}^{PS}	38^{+20}_{-20}	Y_P^{BBN}	$0.24679^{+0.00015}_{-0.00014}$	$f\sigma_8(0.38)$	$0.478^{+0.028}_{-0.025}$
A_{217}^{PS}	111^{+20}_{-30}	$10^5 D/H$	$2.552^{+0.068}_{-0.065}$	$\sigma_8(0.38)$	$0.675^{+0.036}_{-0.027}$
A^{kSZ}	< 8.08	Age/Gyr	$13.763^{+0.059}_{-0.058}$	$f\sigma_8(0.51)$	$0.478^{+0.027}_{-0.023}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	z_*	$1089.49^{+0.66}_{-0.64}$	$\sigma_8(0.51)$	$0.633^{+0.034}_{-0.025}$
c_{217}	$0.9995^{+0.0036}_{-0.0026}$	r_*	$144.86^{+0.68}_{-0.67}$	$f\sigma_8(0.61)$	$0.473^{+0.027}_{-0.022}$
H_0	$68.4^{+1.4}_{-1.4}$	$100\theta_*$	$1.04129^{+0.00063}_{-0.00064}$	$\sigma_8(0.61)$	$0.602^{+0.032}_{-0.024}$
Ω_Λ	$0.698^{+0.018}_{-0.019}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.911^{+0.062}_{-0.062}$	$f\sigma_8(2.33)$	$0.304^{+0.016}_{-0.012}$
Ω_m	$0.302^{+0.019}_{-0.018}$	z_{drag}	$1060.22^{+0.71}_{-0.74}$	$\sigma_8(2.33)$	$0.314^{+0.017}_{-0.012}$
$\Omega_m h^2$	$0.1410^{+0.0029}_{-0.0029}$	r_{drag}	$147.46^{+0.66}_{-0.65}$	f_{2000}^{143}	27^{+6}_{-6}
$\Omega_m h^3$	$0.09639^{+0.00065}_{-0.00066}$	k_{D}	$0.14062^{+0.00069}_{-0.00071}$	$f_{2000}^{143 \times 217}$	30^{+4}_{-4}
σ_8	$0.822^{+0.044}_{-0.035}$	$100\theta_{\text{D}}$	$0.16060^{+0.00042}_{-0.00039}$	f_{2000}^{217}	$104.8^{+3.9}_{-3.9}$
S_8	$0.825^{+0.054}_{-0.050}$	z_{eq}	3354^{+69}_{-69}	χ_{lowl}^2	$23.2 (\nu: 1.2)$
$\sigma_8 \Omega_m^{0.5}$	$0.452^{+0.030}_{-0.027}$	k_{eq}	$0.01024^{+0.00021}_{-0.00021}$	χ_{prior}^2	$9.5 (\nu: 9.1)$
$\sigma_8 \Omega_m^{0.25}$	$0.609^{+0.036}_{-0.031}$	$100\theta_{\text{eq}}$	$0.823^{+0.014}_{-0.013}$	χ_{CMB}^2	$6956 (\nu: 10484640.0)$
$\sigma_8/h^{0.5}$	$0.994^{+0.056}_{-0.048}$	$100\theta_{\text{s,eq}}$	$0.4542^{+0.0069}_{-0.0068}$		

$$\bar{\chi}_{\text{eff}}^2 = 11543.27; \Delta\bar{\chi}_{\text{eff}}^2 = 9154.98; R - 1 = 0.01232$$

3.34 base_Alens_CamSpecHM_TTTEEE_lowE/base_Alens_plikHM_TTTEEE_lowE

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02251^{+0.00037}_{-0.00038}$	$r_{\text{drag}} h$	$100.2^{+2.5}_{-2.5}$	$H(0.15)$	$73.3^{+1.2}_{-1.2}$
$\Omega_c h^2$	$0.1185^{+0.0031}_{-0.0031}$	$\langle d^2 \rangle^{1/2}$	$2.58^{+0.13}_{-0.13}$	$D_{\text{M}}(0.15)$	638^{+12}_{-12}
$100\theta_{MC}$	$1.04106^{+0.00066}_{-0.00066}$	z_{re}	$7.1^{+1.7}_{-1.8}$	$H(0.38)$	$83.29^{+0.92}_{-0.91}$
τ	$0.050^{+0.016}_{-0.018}$	$10^9 A_s$	$2.071^{+0.071}_{-0.077}$	$D_{\text{M}}(0.38)$	1522^{+25}_{-24}
A_L	$1.15^{+0.14}_{-0.14}$	$10^9 A_s e^{-2\tau}$	$1.875^{+0.025}_{-0.025}$	$H(0.51)$	$89.96^{+0.74}_{-0.73}$
$\ln(10^{10} A_s)$	$3.031^{+0.034}_{-0.038}$	D_{40}	1221^{+29}_{-28}	$D_{\text{M}}(0.51)$	1972^{+29}_{-29}
n_s	$0.969^{+0.010}_{-0.010}$	D_{220}	5736^{+78}_{-78}	$H(0.61)$	$95.54^{+0.60}_{-0.59}$
y_{cal}	$1.0001^{+0.0050}_{-0.0049}$	D_{810}	2531^{+28}_{-27}	$D_{\text{M}}(0.61)$	2296^{+31}_{-31}
A_{217}^{CIB}	42^{+20}_{-10}	D_{1420}	$814.7^{+9.5}_{-9.5}$	$H(2.33)$	$235.7^{+1.8}_{-1.8}$
$\xi^{tSZ-CIB}$	—	D_{2000}	$231.5^{+3.4}_{-3.4}$	$D_{\text{M}}(2.33)$	5752^{+27}_{-27}
A_{143}^{tSZ}	$4.8^{+4.0}_{-4.2}$	$n_{s,0.002}$	$0.969^{+0.010}_{-0.010}$	$f\sigma_8(0.15)$	$0.448^{+0.020}_{-0.020}$
A_{100}^{PS}	243^{+60}_{-50}	Y_P	$0.24545^{+0.00014}_{-0.00015}$	$\sigma_8(0.15)$	$0.741^{+0.015}_{-0.016}$
A_{143}^{PS}	40^{+20}_{-20}	Y_P^{BBN}	$0.24677^{+0.00014}_{-0.00015}$	$f\sigma_8(0.38)$	$0.468^{+0.016}_{-0.017}$
A_{217}^{PS}	110^{+20}_{-30}	$10^5 D/H$	$2.561^{+0.070}_{-0.066}$	$\sigma_8(0.38)$	$0.657^{+0.012}_{-0.013}$
A^{kSZ}	< 8.44	Age/Gyr	$13.773^{+0.060}_{-0.059}$	$f\sigma_8(0.51)$	$0.467^{+0.014}_{-0.015}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	z_*	$1089.62^{+0.69}_{-0.66}$	$\sigma_8(0.51)$	$0.616^{+0.011}_{-0.012}$
c_{217}	$0.9995^{+0.0037}_{-0.0027}$	r_*	$144.71^{+0.67}_{-0.66}$	$f\sigma_8(0.61)$	$0.462^{+0.013}_{-0.013}$
H_0	$68.0^{+1.4}_{-1.4}$	$100\theta_*$	$1.04123^{+0.00064}_{-0.00065}$	$\sigma_8(0.61)$	$0.586^{+0.010}_{-0.011}$
Ω_Λ	$0.694^{+0.018}_{-0.020}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.898^{+0.062}_{-0.061}$	$f\sigma_8(2.33)$	$0.2956^{+0.0052}_{-0.0056}$
Ω_m	$0.306^{+0.020}_{-0.018}$	z_{drag}	$1060.15^{+0.74}_{-0.75}$	$\sigma_8(2.33)$	$0.3050^{+0.0053}_{-0.0057}$
$\Omega_m h^2$	$0.1417^{+0.0029}_{-0.0029}$	r_{drag}	$147.33^{+0.65}_{-0.64}$	f_{2000}^{143}	28^{+6}_{-6}
$\Omega_m h^3$	$0.09639^{+0.00065}_{-0.00067}$	k_{D}	$0.14072^{+0.00068}_{-0.00072}$	$f_{2000}^{143 \times 217}$	30^{+4}_{-4}
σ_8	$0.801^{+0.017}_{-0.018}$	$100\theta_{\text{D}}$	$0.16064^{+0.00043}_{-0.00041}$	f_{2000}^{217}	$105.4^{+4.0}_{-4.0}$
S_8	$0.810^{+0.039}_{-0.038}$	z_{eq}	3370^{+70}_{-68}	χ_{small}^2	$396.9 (\nu: 1.3)$
$\sigma_8 \Omega_m^{0.5}$	$0.443^{+0.021}_{-0.021}$	k_{eq}	$0.01029^{+0.00021}_{-0.00021}$	χ_{prior}^2	$9.5 (\nu: 9.2)$
$\sigma_8 \Omega_m^{0.25}$	$0.596^{+0.020}_{-0.020}$	$100\theta_{\text{eq}}$	$0.820^{+0.013}_{-0.013}$	χ_{CMB}^2	$7330 (\nu: 10484150.4)$
$\sigma_8/h^{0.5}$	$0.972^{+0.028}_{-0.029}$	$100\theta_{\text{s,eq}}$	$0.4526^{+0.0068}_{-0.0068}$		

Best-fit $\chi_{\text{eff}}^2 = 11893.69$; $\Delta\chi_{\text{eff}}^2 = 9159.64$; $\bar{\chi}_{\text{eff}}^2 = 11916.80$; $\Delta\bar{\chi}_{\text{eff}}^2 = 9154.73$; $R - 1 = 0.00486$

χ_{eff}^2 : CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.68 (Δ -0.03) CamSpec like_10.7HM_1400_unified: 11496.17

5 alpha1

5.1 base_alpha1_CamSpecHM_TT_lowl_lowE/base_alpha1_plikHM_TT_lowl_lowE

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02219^{+0.00045}_{-0.00045}$	$r_{\text{drag}} h$	$98.0^{+3.4}_{-3.3}$	$H(0.15)$	$72.1^{+1.6}_{-1.6}$
$\Omega_c h^2$	$0.1212^{+0.0044}_{-0.0043}$	$\langle d^2 \rangle^{1/2}$	$2.461^{+0.078}_{-0.078}$	$D_{\text{M}}(0.15)$	649^{+16}_{-16}
$100\theta_{MC}$	$1.0405^{+0.0011}_{-0.0011}$	z_{re}	$7.7^{+1.6}_{-1.7}$	$H(0.38)$	$82.4^{+1.2}_{-1.1}$
τ	$0.054^{+0.017}_{-0.016}$	$10^9 A_s$	$2.104^{+0.076}_{-0.074}$	$D_{\text{M}}(0.38)$	1546^{+32}_{-33}
α_{-1}	$-0.0013^{+0.0029}_{-0.0041}$	$10^9 A_s e^{-2\tau}$	$1.889^{+0.030}_{-0.030}$	$H(0.51)$	$89.25^{+0.92}_{-0.86}$
$\ln(10^{10} A_s)$	$3.046^{+0.036}_{-0.036}$	D_{40}	1217^{+46}_{-38}	$D_{\text{M}}(0.51)$	2000^{+38}_{-38}
n_s	$0.959^{+0.016}_{-0.014}$	D_{220}	5714^{+83}_{-82}	$H(0.61)$	$94.97^{+0.73}_{-0.67}$
y_{cal}	$1.0005^{+0.0050}_{-0.0050}$	D_{810}	2538^{+28}_{-28}	$D_{\text{M}}(0.61)$	2326^{+40}_{-41}
A_{217}^{CIB}	45^{+10}_{-20}	D_{1420}	814^{+10}_{-10}	$H(2.33)$	$237.2^{+2.7}_{-2.7}$
$\xi^{tSZ-CIB}$	—	D_{2000}	$229.4^{+3.6}_{-3.6}$	$D_{\text{M}}(2.33)$	5779^{+32}_{-33}
A_{143}^{tSZ}	$4.3^{+3.7}_{-4.2}$	$n_{s,0.002}$	$0.959^{+0.016}_{-0.014}$	$f\sigma_8(0.15)$	$0.466^{+0.025}_{-0.025}$
A_{100}^{PS}	254^{+60}_{-50}	Y_P	$0.24532^{+0.00019}_{-0.00020}$	$\sigma_8(0.15)$	$0.749^{+0.015}_{-0.015}$
A_{143}^{PS}	45^{+20}_{-20}	Y_P^{BBN}	$0.24664^{+0.00019}_{-0.00020}$	$f\sigma_8(0.38)$	$0.481^{+0.019}_{-0.019}$
A_{217}^{PS}	108^{+20}_{-30}	$10^5 D/H$	$2.619^{+0.087}_{-0.083}$	$\sigma_8(0.38)$	$0.662^{+0.012}_{-0.012}$
A^{kSZ}	—	Age/Gyr	$13.831^{+0.072}_{-0.073}$	$f\sigma_8(0.51)$	$0.478^{+0.016}_{-0.016}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	z_*	$1090.25^{+0.80}_{-0.79}$	$\sigma_8(0.51)$	$0.619^{+0.011}_{-0.011}$
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	r_*	$144.3^{+1.1}_{-1.0}$	$f\sigma_8(0.61)$	$0.472^{+0.014}_{-0.014}$
H_0	$66.7^{+1.9}_{-1.9}$	$100\theta_*$	$1.0407^{+0.0011}_{-0.0011}$	$\sigma_8(0.61)$	$0.589^{+0.010}_{-0.010}$
Ω_Λ	$0.676^{+0.027}_{-0.028}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.861^{+0.095}_{-0.093}$	$f\sigma_8(2.33)$	$0.2965^{+0.0052}_{-0.0051}$
Ω_m	$0.324^{+0.028}_{-0.027}$	z_{drag}	$1059.61^{+0.97}_{-1.0}$	$\sigma_8(2.33)$	$0.3052^{+0.0055}_{-0.0054}$
$\Omega_m h^2$	$0.1441^{+0.0042}_{-0.0042}$	r_{drag}	$147.0^{+1.1}_{-1.1}$	f_{2000}^{143}	31^{+6}_{-6}
$\Omega_m h^3$	$0.09602^{+0.00092}_{-0.00092}$	k_{D}	$0.1409^{+0.0012}_{-0.0013}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-4}
σ_8	$0.812^{+0.018}_{-0.018}$	$100\theta_{\text{D}}$	$0.16091^{+0.00064}_{-0.00058}$	f_{2000}^{217}	$108.0^{+3.9}_{-3.9}$
S_8	$0.844^{+0.050}_{-0.049}$	z_{eq}	3427^{+100}_{-100}	χ_{small}^2	$397.1 (\nu: 1.5)$
$\sigma_8 \Omega_m^{0.5}$	$0.462^{+0.027}_{-0.027}$	k_{eq}	$0.01046^{+0.00031}_{-0.00031}$	χ_{lowl}^2	$22.2 (\nu: 2.5)$
$\sigma_8 \Omega_m^{0.25}$	$0.613^{+0.024}_{-0.024}$	$100\theta_{\text{eq}}$	$0.808^{+0.019}_{-0.018}$	χ_{prior}^2	$7.5 (\nu: 6.4)$
$\sigma_8/h^{0.5}$	$0.994^{+0.032}_{-0.032}$	$100\theta_{\text{s,eq}}$	$0.4469^{+0.0098}_{-0.0094}$	χ_{CMB}^2	$4339 (\nu: 4948435.9)$

Best-fit $\chi_{\text{eff}}^2 = 7471.39$; $\Delta\chi_{\text{eff}}^2 = 6292.24$; $\bar{\chi}_{\text{eff}}^2 = 7492.71$; $\Delta\bar{\chi}_{\text{eff}}^2 = 6292.16$; $R - 1 = 0.00444$

χ_{eff}^2 : CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.89 (Δ 0.00) commander_dx12_v3.2.29: 22.30 (Δ 0.12) CamSpec like_10.7HM: 7050.85

5.2 base_alpha1_CamSpecHM_TT_lowl_lowE_post_BAO/base_alpha1_plikHM_TT_lowl_lowE_post_BAO

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02228^{+0.00043}_{-0.00045}$	z_{re}	$7.7^{+1.6}_{-1.7}$	$H(0.51)$	$89.68^{+0.58}_{-0.56}$
$\Omega_c h^2$	$0.1190^{+0.0024}_{-0.0024}$	$10^9 A_s$	$2.098^{+0.079}_{-0.074}$	$D_{\text{M}}(0.51)$	1981^{+22}_{-21}
$100\theta_{MC}$	$1.04091^{+0.00096}_{-0.00092}$	$10^9 A_s e^{-2\tau}$	$1.879^{+0.025}_{-0.025}$	$H(0.61)$	$95.29^{+0.49}_{-0.48}$
τ	$0.055^{+0.017}_{-0.016}$	D_{40}	1215^{+47}_{-40}	$D_{\text{M}}(0.61)$	2306^{+24}_{-23}
α_{-1}	$-0.0008^{+0.0030}_{-0.0038}$	D_{220}	5720^{+82}_{-82}	$H(2.33)$	$235.8^{+1.6}_{-1.6}$
$\ln(10^{10} A_s)$	$3.043^{+0.037}_{-0.036}$	D_{810}	2536^{+28}_{-28}	$D_{\text{M}}(2.33)$	5765^{+24}_{-24}
n_s	$0.965^{+0.012}_{-0.011}$	D_{1420}	815^{+10}_{-10}	$f\sigma_8(0.15)$	$0.454^{+0.015}_{-0.015}$
y_{cal}	$1.0006^{+0.0049}_{-0.0050}$	D_{2000}	$229.9^{+3.5}_{-3.6}$	$\sigma_8(0.15)$	$0.745^{+0.013}_{-0.013}$
A_{217}^{CIB}	44^{+10}_{-20}	$n_{s,0.002}$	$0.965^{+0.012}_{-0.011}$	$f\sigma_8(0.38)$	$0.472^{+0.013}_{-0.012}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.24535^{+0.00018}_{-0.00019}$	$\sigma_8(0.38)$	$0.661^{+0.011}_{-0.012}$
A_{143}^{tSZ}	$4.4^{+3.8}_{-4.3}$	Y_P^{BBN}	$0.24668^{+0.00018}_{-0.00019}$	$f\sigma_8(0.51)$	$0.471^{+0.011}_{-0.011}$
A_{100}^{PS}	253^{+60}_{-60}	$10^5 D/H$	$2.604^{+0.085}_{-0.079}$	$\sigma_8(0.51)$	$0.618^{+0.011}_{-0.011}$
A_{143}^{PS}	44^{+20}_{-20}	Age/Gyr	$13.803^{+0.056}_{-0.054}$	$f\sigma_8(0.61)$	$0.466^{+0.011}_{-0.010}$
A_{217}^{PS}	107^{+30}_{-30}	z_*	$1089.95^{+0.64}_{-0.61}$	$\sigma_8(0.61)$	$0.588^{+0.010}_{-0.010}$
A^{kSZ}	—	r_*	$144.76^{+0.68}_{-0.67}$	$f\sigma_8(2.33)$	$0.2967^{+0.0051}_{-0.0052}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	$100\theta_*$	$1.04110^{+0.00097}_{-0.00092}$	$\sigma_8(2.33)$	$0.3060^{+0.0053}_{-0.0053}$
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.904^{+0.064}_{-0.063}$	f_{2000}^{143}	31^{+6}_{-6}
H_0	$67.6^{+1.1}_{-1.1}$	z_{drag}	$1059.65^{+0.97}_{-1.1}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-4}
Ω_Λ	$0.689^{+0.014}_{-0.015}$	r_{drag}	$147.46^{+0.77}_{-0.75}$	f_{2000}^{217}	$107.7^{+3.8}_{-4.0}$
Ω_m	$0.311^{+0.015}_{-0.014}$	k_{D}	$0.1404^{+0.0010}_{-0.0011}$	χ_{small}^2	$397.1 (\nu: 1.8)$
$\Omega_m h^2$	$0.1419^{+0.0024}_{-0.0024}$	$100\theta_{\text{D}}$	$0.16092^{+0.00067}_{-0.00061}$	χ_{lowl}^2	$22 (\nu: 3.3)$
$\Omega_m h^3$	$0.09598^{+0.00093}_{-0.00093}$	z_{eq}	3377^{+58}_{-57}	$\chi_{6\text{DF}}^2$	$0.064 (\nu: 0.0)$
σ_8	$0.806^{+0.015}_{-0.015}$	k_{eq}	$0.01031^{+0.00018}_{-0.00017}$	χ_{MGS}^2	$1.32 (\nu: 0.1)$
S_8	$0.820^{+0.030}_{-0.029}$	$100\theta_{\text{eq}}$	$0.818^{+0.011}_{-0.011}$	χ_{DR12BAO}^2	$4.9 (\nu: 1.6)$
$\sigma_8 \Omega_m^{0.5}$	$0.449^{+0.016}_{-0.016}$	$100\theta_{\text{s,eq}}$	$0.4517^{+0.0055}_{-0.0055}$	χ_{prior}^2	$7.5 (\nu: 6.5)$
$\sigma_8 \Omega_m^{0.25}$	$0.602^{+0.016}_{-0.015}$	$H(0.15)$	$72.89^{+0.91}_{-0.92}$	χ_{BAO}^2	$6.3 (\nu: 1.1)$
$\sigma_8/h^{0.5}$	$0.981^{+0.023}_{-0.022}$	$D_{\text{M}}(0.15)$	$641.2^{+9.2}_{-9.0}$	χ_{CMB}^2	$4339 (\nu: 4948367.9)$
$r_{\text{drag}} h$	$99.7^{+1.9}_{-1.9}$	$H(0.38)$	$82.98^{+0.70}_{-0.69}$		
$\langle d^2 \rangle^{1/2}$	$2.427^{+0.055}_{-0.054}$	$D_{\text{M}}(0.38)$	1530^{+18}_{-18}		

$$\bar{\chi}_{\text{eff}}^2 = 7499.33; \Delta \bar{\chi}_{\text{eff}}^2 = 6292.09; R - 1 = 0.01534$$

5.3 base_alpha1_CamSpecHM_TT_lowl_lowE_post_lensing/base_alpha1_plikHM_TT_lowl_lowE_post_lensing

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02222^{+0.00044}_{-0.00045}$	$\langle d^2 \rangle^{1/2}$	$2.451^{+0.050}_{-0.050}$	$H(0.38)$	$82.56^{+0.92}_{-0.88}$
$\Omega_c h^2$	$0.1206^{+0.0032}_{-0.0032}$	z_{re}	$7.6^{+1.5}_{-1.6}$	$D_{\text{M}}(0.38)$	1542^{+25}_{-25}
$100\theta_{MC}$	$1.0406^{+0.0010}_{-0.0010}$	$10^9 A_s$	$2.101^{+0.067}_{-0.065}$	$H(0.51)$	$89.36^{+0.74}_{-0.70}$
τ	$0.054^{+0.016}_{-0.016}$	$10^9 A_s e^{-2\tau}$	$1.886^{+0.025}_{-0.025}$	$D_{\text{M}}(0.51)$	1995^{+29}_{-29}
α_{-1}	$-0.0013^{+0.0029}_{-0.0040}$	D_{40}	1216^{+46}_{-37}	$H(0.61)$	$95.05^{+0.61}_{-0.58}$
$\ln(10^{10} A_s)$	$3.045^{+0.031}_{-0.031}$	D_{220}	5717^{+83}_{-82}	$D_{\text{M}}(0.61)$	2321^{+31}_{-32}
n_s	$0.960^{+0.014}_{-0.012}$	D_{810}	2537^{+27}_{-27}	$H(2.33)$	$236.8^{+2.0}_{-2.0}$
y_{cal}	$1.0005^{+0.0049}_{-0.0050}$	D_{1420}	814^{+10}_{-10}	$D_{\text{M}}(2.33)$	5775^{+28}_{-29}
A_{217}^{CIB}	45^{+10}_{-20}	D_{2000}	$229.4^{+3.6}_{-3.6}$	$f\sigma_8(0.15)$	$0.462^{+0.016}_{-0.016}$
$\xi^{tSZ-CIB}$	—	$n_{s,0.002}$	$0.960^{+0.014}_{-0.012}$	$\sigma_8(0.15)$	$0.747^{+0.011}_{-0.011}$
A_{143}^{tSZ}	$4.3^{+3.7}_{-4.3}$	Y_P	$0.24533^{+0.00018}_{-0.00019}$	$f\sigma_8(0.38)$	$0.479^{+0.012}_{-0.013}$
A_{100}^{PS}	255^{+60}_{-50}	Y_P^{BBN}	$0.24666^{+0.00018}_{-0.00020}$	$\sigma_8(0.38)$	$0.6615^{+0.0098}_{-0.0097}$
A_{143}^{PS}	45^{+20}_{-20}	$10^5 D/H$	$2.614^{+0.086}_{-0.080}$	$f\sigma_8(0.51)$	$0.476^{+0.010}_{-0.011}$
A_{217}^{PS}	107^{+20}_{-30}	Age/Gyr	$13.824^{+0.064}_{-0.065}$	$\sigma_8(0.51)$	$0.6187^{+0.0094}_{-0.0092}$
A^{kSZ}	—	z_*	$1090.16^{+0.71}_{-0.70}$	$f\sigma_8(0.61)$	$0.4704^{+0.0091}_{-0.0095}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	r_*	$144.38^{+0.82}_{-0.78}$	$\sigma_8(0.61)$	$0.5885^{+0.0091}_{-0.0089}$
c_{217}	$0.9998^{+0.0037}_{-0.0027}$	$100\theta_*$	$1.0408^{+0.0010}_{-0.0010}$	$f\sigma_8(2.33)$	$0.2964^{+0.0049}_{-0.0048}$
H_0	$66.9^{+1.5}_{-1.4}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.873^{+0.074}_{-0.072}$	$\sigma_8(2.33)$	$0.3052^{+0.0054}_{-0.0053}$
Ω_Λ	$0.679^{+0.020}_{-0.021}$	z_{drag}	$1059.64^{+0.94}_{-1.0}$	f_{2000}^{143}	31^{+6}_{-6}
Ω_m	$0.321^{+0.021}_{-0.020}$	r_{drag}	$147.09^{+0.88}_{-0.83}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-4}
$\Omega_m h^2$	$0.1435^{+0.0031}_{-0.0032}$	k_{D}	$0.1408^{+0.0010}_{-0.0011}$	f_{2000}^{217}	$107.9^{+3.9}_{-3.9}$
$\Omega_m h^3$	$0.09601^{+0.00091}_{-0.00091}$	$100\theta_{\text{D}}$	$0.16090^{+0.00064}_{-0.00058}$	χ^2_{lensing}	$9.52 (\nu: 0.4)$
σ_8	$0.810^{+0.012}_{-0.012}$	z_{eq}	3414^{+74}_{-75}	χ^2_{small}	$397.0 (\nu: 1.3)$
S_8	$0.837^{+0.032}_{-0.033}$	k_{eq}	$0.01042^{+0.00023}_{-0.00023}$	χ^2_{lowl}	$22.1 (\nu: 2.6)$
$\sigma_8 \Omega_m^{0.5}$	$0.459^{+0.018}_{-0.018}$	$100\theta_{\text{eq}}$	$0.811^{+0.014}_{-0.014}$	χ^2_{prior}	$7.5 (\nu: 6.3)$
$\sigma_8 \Omega_m^{0.25}$	$0.609^{+0.015}_{-0.015}$	$100\theta_{\text{s,eq}}$	$0.4481^{+0.0073}_{-0.0070}$	χ^2_{CMB}	$4348 (\nu: 4948290.2)$
$\sigma_8/h^{0.5}$	$0.990^{+0.020}_{-0.021}$	$H(0.15)$	$72.3^{+1.3}_{-1.2}$		
$r_{\text{drag}} h$	$98.4^{+2.6}_{-2.5}$	$D_{\text{M}}(0.15)$	647^{+13}_{-13}		

$\bar{\chi}^2_{\text{eff}} = 7501.64$; $\Delta \bar{\chi}^2_{\text{eff}} = 6292.11$; $R - 1 = 0.00636$

5.4 base_alpha1_CamSpecHM_TT_lowl_lowE_post_BAO_lensing/base_alpha1_plikHM_TT_lowl_lowE_post_BAO_lensing

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02229^{+0.00043}_{-0.00044}$	z_{re}	$7.9^{+1.5}_{-1.5}$	$H(0.51)$	$89.65^{+0.55}_{-0.53}$
$\Omega_c h^2$	$0.1192^{+0.0022}_{-0.0022}$	$10^9 A_s$	$2.106^{+0.071}_{-0.065}$	$D_{\text{M}}(0.51)$	1983^{+20}_{-20}
$100\theta_{MC}$	$1.04088^{+0.00093}_{-0.00091}$	$10^9 A_s e^{-2\tau}$	$1.881^{+0.023}_{-0.023}$	$H(0.61)$	$95.27^{+0.47}_{-0.46}$
τ	$0.057^{+0.016}_{-0.015}$	D_{40}	1216^{+47}_{-39}	$D_{\text{M}}(0.61)$	2307^{+22}_{-22}
α_{-1}	$-0.0008^{+0.0030}_{-0.0039}$	D_{220}	5725^{+82}_{-80}	$H(2.33)$	$235.9^{+1.4}_{-1.4}$
$\ln(10^{10} A_s)$	$3.047^{+0.033}_{-0.031}$	D_{810}	2537^{+27}_{-26}	$D_{\text{M}}(2.33)$	5766^{+24}_{-23}
n_s	$0.964^{+0.012}_{-0.011}$	D_{1420}	$815^{+10}_{-9.9}$	$f\sigma_8(0.15)$	$0.456^{+0.012}_{-0.012}$
y_{cal}	$1.0008^{+0.0049}_{-0.0049}$	D_{2000}	$230.0^{+3.5}_{-3.5}$	$\sigma_8(0.15)$	$0.747^{+0.011}_{-0.011}$
A_{217}^{CIB}	44^{+10}_{-20}	$n_{s,0.002}$	$0.964^{+0.012}_{-0.011}$	$f\sigma_8(0.38)$	$0.4740^{+0.0099}_{-0.010}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.24536^{+0.00018}_{-0.00019}$	$\sigma_8(0.38)$	$0.6621^{+0.0098}_{-0.0098}$
A_{143}^{tSZ}	$4.4^{+3.7}_{-4.3}$	Y_P^{BBN}	$0.24668^{+0.00018}_{-0.00019}$	$f\sigma_8(0.51)$	$0.4726^{+0.0088}_{-0.0089}$
A_{100}^{PS}	253^{+60}_{-50}	$10^5 D/H$	$2.602^{+0.084}_{-0.079}$	$\sigma_8(0.51)$	$0.6196^{+0.0091}_{-0.0092}$
A_{143}^{PS}	44^{+20}_{-20}	Age/Gyr	$13.804^{+0.055}_{-0.054}$	$f\sigma_8(0.61)$	$0.4676^{+0.0082}_{-0.0082}$
A_{217}^{PS}	108^{+20}_{-30}	z_*	$1089.96^{+0.62}_{-0.60}$	$\sigma_8(0.61)$	$0.5896^{+0.0088}_{-0.0088}$
A^{kSZ}	—	r_*	$144.70^{+0.62}_{-0.61}$	$f\sigma_8(2.33)$	$0.2973^{+0.0046}_{-0.0045}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	$100\theta_*$	$1.04107^{+0.00094}_{-0.00091}$	$\sigma_8(2.33)$	$0.3065^{+0.0049}_{-0.0049}$
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.899^{+0.059}_{-0.057}$	f_{2000}^{143}	31^{+6}_{-6}
H_0	$67.55^{+0.99}_{-0.98}$	z_{drag}	$1059.68^{+0.98}_{-1.0}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-4}
Ω_Λ	$0.688^{+0.013}_{-0.013}$	r_{drag}	$147.40^{+0.73}_{-0.69}$	f_{2000}^{217}	$107.7^{+3.8}_{-3.9}$
Ω_m	$0.312^{+0.013}_{-0.013}$	k_{D}	$0.14048^{+0.00096}_{-0.0010}$	χ_{lensing}^2	$9.30 (\nu: 0.3)$
$\Omega_m h^2$	$0.1421^{+0.0021}_{-0.0022}$	$100\theta_{\text{D}}$	$0.16090^{+0.00065}_{-0.00060}$	χ_{small}^2	$397.3 (\nu: 1.8)$
$\Omega_m h^3$	$0.09601^{+0.00090}_{-0.00092}$	z_{eq}	3381^{+51}_{-52}	χ_{lowl}^2	$22 (\nu: 3.3)$
σ_8	$0.808^{+0.012}_{-0.012}$	k_{eq}	$0.01032^{+0.00016}_{-0.00016}$	$\chi_{6\text{DF}}^2$	$0.066 (\nu: 0.0)$
S_8	$0.824^{+0.024}_{-0.023}$	$100\theta_{\text{eq}}$	$0.8169^{+0.0095}_{-0.0094}$	χ_{MGS}^2	$1.24 (\nu: 0.1)$
$\sigma_8 \Omega_m^{0.5}$	$0.451^{+0.013}_{-0.013}$	$100\theta_{\text{s,eq}}$	$0.4513^{+0.0050}_{-0.0049}$	χ_{DR12BAO}^2	$5.0 (\nu: 1.4)$
$\sigma_8 \Omega_m^{0.25}$	$0.604^{+0.012}_{-0.012}$	$H(0.15)$	$72.83^{+0.86}_{-0.85}$	χ_{prior}^2	$7.4 (\nu: 6.4)$
$\sigma_8/h^{0.5}$	$0.984^{+0.018}_{-0.018}$	$D_{\text{M}}(0.15)$	$641.8^{+8.5}_{-8.4}$	χ_{CMB}^2	$4348 (\nu: 4948422.2)$
$r_{\text{drag}} h$	$99.6^{+1.7}_{-1.7}$	$H(0.38)$	$82.94^{+0.66}_{-0.64}$	χ_{BAO}^2	$6.3 (\nu: 1.0)$
$\langle d^2 \rangle^{1/2}$	$2.435^{+0.043}_{-0.042}$	$D_{\text{M}}(0.38)$	1531^{+17}_{-17}		

$$\bar{\chi}_{\text{eff}}^2 = 7508.28; \Delta \bar{\chi}_{\text{eff}}^2 = 6292.19; R - 1 = 0.01595$$

5.5 base_alpha1_CamSpecHM_TT_lowl_lowE_post_zre6p5/base_alpha1_plikHM_TT_lowl_lowE_post_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02220^{+0.00045}_{-0.00045}$	$r_{\text{drag}} h$	$98.0^{+3.4}_{-3.3}$	$H(0.15)$	$72.1^{+1.6}_{-1.6}$
$\Omega_c h^2$	$0.1212^{+0.0044}_{-0.0043}$	$\langle d^2 \rangle^{1/2}$	$2.463^{+0.077}_{-0.076}$	$D_{\text{M}}(0.15)$	649^{+16}_{-16}
$100\theta_{MC}$	$1.0405^{+0.0011}_{-0.0011}$	z_{re}	< 9.05	$H(0.38)$	$82.4^{+1.2}_{-1.1}$
τ	$0.055^{+0.014}_{-0.012}$	$10^9 A_s$	$2.110^{+0.067}_{-0.063}$	$D_{\text{M}}(0.38)$	1545^{+32}_{-32}
α_{-1}	$-0.0014^{+0.0029}_{-0.0042}$	$10^9 A_s e^{-2\tau}$	$1.889^{+0.030}_{-0.030}$	$H(0.51)$	$89.27^{+0.91}_{-0.85}$
$\ln(10^{10} A_s)$	$3.049^{+0.031}_{-0.030}$	D_{40}	1217^{+43}_{-40}	$D_{\text{M}}(0.51)$	2000^{+38}_{-38}
n_s	$0.959^{+0.016}_{-0.014}$	D_{220}	5714^{+83}_{-82}	$H(0.61)$	$94.98^{+0.73}_{-0.67}$
y_{cal}	$1.0005^{+0.0049}_{-0.0049}$	D_{810}	2538^{+28}_{-28}	$D_{\text{M}}(0.61)$	2326^{+40}_{-41}
A_{217}^{CIB}	45^{+10}_{-20}	D_{1420}	814^{+10}_{-10}	$H(2.33)$	$237.1^{+2.7}_{-2.7}$
$\xi^{tSZ-CIB}$	—	D_{2000}	$229.4^{+3.6}_{-3.6}$	$D_{\text{M}}(2.33)$	5778^{+31}_{-33}
A_{143}^{tSZ}	$4.3^{+3.7}_{-4.2}$	$n_{s,0.002}$	$0.959^{+0.016}_{-0.014}$	$f\sigma_8(0.15)$	$0.466^{+0.025}_{-0.024}$
A_{100}^{PS}	254^{+60}_{-50}	Y_P	$0.24532^{+0.00018}_{-0.00021}$	$\sigma_8(0.15)$	$0.750^{+0.014}_{-0.014}$
A_{143}^{PS}	45^{+20}_{-20}	Y_P^{BBN}	$0.24665^{+0.00018}_{-0.00021}$	$f\sigma_8(0.38)$	$0.482^{+0.019}_{-0.019}$
A_{217}^{PS}	108^{+20}_{-30}	$10^5 D/H$	$2.618^{+0.086}_{-0.082}$	$\sigma_8(0.38)$	$0.663^{+0.011}_{-0.011}$
A^{kSZ}	—	Age/Gyr	$13.830^{+0.071}_{-0.073}$	$f\sigma_8(0.51)$	$0.479^{+0.016}_{-0.016}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	z_*	$1090.24^{+0.79}_{-0.79}$	$\sigma_8(0.51)$	$0.620^{+0.010}_{-0.0094}$
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	r_*	$144.3^{+1.1}_{-1.0}$	$f\sigma_8(0.61)$	$0.473^{+0.014}_{-0.014}$
H_0	$66.7^{+1.9}_{-1.8}$	$100\theta_*$	$1.0407^{+0.0011}_{-0.0011}$	$\sigma_8(0.61)$	$0.5897^{+0.0094}_{-0.0091}$
Ω_Λ	$0.676^{+0.027}_{-0.028}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.861^{+0.095}_{-0.093}$	$f\sigma_8(2.33)$	$0.2969^{+0.0047}_{-0.0045}$
Ω_m	$0.324^{+0.028}_{-0.027}$	z_{drag}	$1059.63^{+0.95}_{-1.0}$	$\sigma_8(2.33)$	$0.3056^{+0.0050}_{-0.0048}$
$\Omega_m h^2$	$0.1440^{+0.0042}_{-0.0042}$	r_{drag}	$147.0^{+1.1}_{-1.0}$	f_{2000}^{143}	31^{+6}_{-6}
$\Omega_m h^3$	$0.09603^{+0.00092}_{-0.00092}$	k_{D}	$0.1409^{+0.0012}_{-0.0013}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-4}
σ_8	$0.813^{+0.017}_{-0.017}$	$100\theta_{\text{D}}$	$0.16090^{+0.00063}_{-0.00058}$	f_{2000}^{217}	$107.9^{+3.9}_{-3.9}$
S_8	$0.845^{+0.050}_{-0.048}$	z_{eq}	3426^{+100}_{-100}	χ_{small}^2	$397.0 (\nu: 1.5)$
$\sigma_8 \Omega_m^{0.5}$	$0.463^{+0.027}_{-0.027}$	k_{eq}	$0.01046^{+0.00031}_{-0.00031}$	χ_{lowl}^2	$22.1 (\nu: 2.4)$
$\sigma_8 \Omega_m^{0.25}$	$0.613^{+0.023}_{-0.023}$	$100\theta_{\text{eq}}$	$0.808^{+0.019}_{-0.018}$	χ_{prior}^2	$7.5 (\nu: 6.4)$
$\sigma_8/h^{0.5}$	$0.995^{+0.031}_{-0.031}$	$100\theta_{\text{s,eq}}$	$0.4469^{+0.0098}_{-0.0094}$	χ_{CMB}^2	$4339 (\nu: 4948433.8)$

$\bar{\chi}_{\text{eff}}^2 = 7492.46$; $\Delta \bar{\chi}_{\text{eff}}^2 = 6292.16$; $R - 1 = 0.00453$

5.6 base_alpha1_CamSpecHM_TT_lowl_lowE_post_BAO_zre6p5/base_alpha1_plikHM_TT_lowl_lowE_post_BAO_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02229^{+0.00043}_{-0.00044}$	z_{re}	< 9.11	$H(0.51)$	$89.69^{+0.57}_{-0.56}$
$\Omega_c h^2$	$0.1190^{+0.0024}_{-0.0024}$	$10^9 A_s$	$2.103^{+0.068}_{-0.064}$	$D_{\text{M}}(0.51)$	1981^{+22}_{-21}
$100\theta_{MC}$	$1.04090^{+0.00096}_{-0.00093}$	$10^9 A_s e^{-2\tau}$	$1.879^{+0.025}_{-0.025}$	$H(0.61)$	$95.29^{+0.48}_{-0.48}$
τ	$0.056^{+0.014}_{-0.013}$	D_{40}	1214^{+47}_{-40}	$D_{\text{M}}(0.61)$	2306^{+23}_{-23}
α_{-1}	$-0.0008^{+0.0030}_{-0.0038}$	D_{220}	5720^{+81}_{-81}	$H(2.33)$	$235.8^{+1.6}_{-1.6}$
$\ln(10^{10} A_s)$	$3.046^{+0.032}_{-0.030}$	D_{810}	2536^{+28}_{-27}	$D_{\text{M}}(2.33)$	5765^{+24}_{-24}
n_s	$0.965^{+0.012}_{-0.011}$	D_{1420}	815^{+10}_{-10}	$f\sigma_8(0.15)$	$0.454^{+0.015}_{-0.014}$
y_{cal}	$1.0006^{+0.0049}_{-0.0049}$	D_{2000}	$229.9^{+3.5}_{-3.5}$	$\sigma_8(0.15)$	$0.746^{+0.013}_{-0.012}$
A_{217}^{CIB}	44^{+10}_{-20}	$n_{s,0.002}$	$0.965^{+0.012}_{-0.011}$	$f\sigma_8(0.38)$	$0.473^{+0.012}_{-0.012}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.24536^{+0.00018}_{-0.00019}$	$\sigma_8(0.38)$	$0.661^{+0.011}_{-0.010}$
A_{143}^{tSZ}	$4.4^{+3.8}_{-4.3}$	Y_P^{BBN}	$0.24668^{+0.00018}_{-0.00019}$	$f\sigma_8(0.51)$	$0.472^{+0.011}_{-0.011}$
A_{100}^{PS}	253^{+60}_{-60}	$10^5 D/H$	$2.602^{+0.084}_{-0.078}$	$\sigma_8(0.51)$	$0.619^{+0.010}_{-0.0094}$
A_{143}^{PS}	44^{+20}_{-20}	Age/Gyr	$13.802^{+0.056}_{-0.054}$	$f\sigma_8(0.61)$	$0.467^{+0.010}_{-0.0098}$
A_{217}^{PS}	107^{+30}_{-30}	z_*	$1089.94^{+0.63}_{-0.61}$	$\sigma_8(0.61)$	$0.5890^{+0.0096}_{-0.0088}$
A^{kSZ}	—	r_*	$144.75^{+0.68}_{-0.67}$	$f\sigma_8(2.33)$	$0.2970^{+0.0049}_{-0.0045}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	$100\theta_*$	$1.04109^{+0.00097}_{-0.00092}$	$\sigma_8(2.33)$	$0.3063^{+0.0051}_{-0.0046}$
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.904^{+0.064}_{-0.063}$	f_{2000}^{143}	31^{+6}_{-6}
H_0	$67.6^{+1.1}_{-1.1}$	z_{drag}	$1059.67^{+0.99}_{-1.0}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-4}
Ω_Λ	$0.690^{+0.014}_{-0.015}$	r_{drag}	$147.45^{+0.77}_{-0.75}$	f_{2000}^{217}	$107.7^{+3.8}_{-3.9}$
Ω_m	$0.310^{+0.015}_{-0.014}$	k_{D}	$0.1404^{+0.0010}_{-0.0011}$	χ_{small}^2	$397.1 (\nu: 1.8)$
$\Omega_m h^2$	$0.1419^{+0.0024}_{-0.0024}$	$100\theta_{\text{D}}$	$0.16091^{+0.00066}_{-0.00060}$	χ_{lowl}^2	$22 (\nu: 3.2)$
$\Omega_m h^3$	$0.09599^{+0.00092}_{-0.00092}$	z_{eq}	3377^{+58}_{-57}	$\chi_{6\text{DF}}^2$	$0.063 (\nu: 0.0)$
σ_8	$0.807^{+0.015}_{-0.014}$	k_{eq}	$0.01031^{+0.00018}_{-0.00017}$	χ_{MGS}^2	$1.33 (\nu: 0.1)$
S_8	$0.821^{+0.029}_{-0.028}$	$100\theta_{\text{eq}}$	$0.818^{+0.011}_{-0.011}$	χ_{DR12BAO}^2	$4.9 (\nu: 1.6)$
$\sigma_8 \Omega_m^{0.5}$	$0.450^{+0.016}_{-0.015}$	$100\theta_{\text{s,eq}}$	$0.4517^{+0.0055}_{-0.0055}$	χ_{prior}^2	$7.5 (\nu: 6.4)$
$\sigma_8 \Omega_m^{0.25}$	$0.602^{+0.015}_{-0.015}$	$H(0.15)$	$72.90^{+0.92}_{-0.92}$	χ_{BAO}^2	$6.3 (\nu: 1.1)$
$\sigma_8/h^{0.5}$	$0.982^{+0.022}_{-0.021}$	$D_{\text{M}}(0.15)$	$641.1^{+9.2}_{-9.0}$	χ_{CMB}^2	$4339 (\nu: 4948293.6)$
$r_{\text{drag}} h$	$99.7^{+1.9}_{-1.9}$	$H(0.38)$	$82.98^{+0.69}_{-0.68}$		
$\langle d^2 \rangle^{1/2}$	$2.430^{+0.053}_{-0.051}$	$D_{\text{M}}(0.38)$	1529^{+18}_{-18}		

$$\bar{\chi}_{\text{eff}}^2 = 7499.10; \Delta \bar{\chi}_{\text{eff}}^2 = 6292.05; R - 1 = 0.01710$$

5.7 base_alpha1_CamSpecHM_TT_lowl_lowE_post_lensing_zre6p5/base_alpha1_plikHM_TT_lowl_lowE_post_lensing_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02223^{+0.00043}_{-0.00044}$	$\langle d^2 \rangle^{1/2}$	$2.452^{+0.049}_{-0.050}$	$H(0.38)$	$82.59^{+0.91}_{-0.86}$
$\Omega_c h^2$	$0.1205^{+0.0031}_{-0.0032}$	z_{re}	< 8.96	$D_{\text{M}}(0.38)$	1541^{+24}_{-25}
$100\theta_{MC}$	$1.0406^{+0.0010}_{-0.0010}$	$10^9 A_s$	$2.105^{+0.059}_{-0.055}$	$H(0.51)$	$89.38^{+0.73}_{-0.68}$
τ	$0.055^{+0.013}_{-0.012}$	$10^9 A_s e^{-2\tau}$	$1.886^{+0.024}_{-0.025}$	$D_{\text{M}}(0.51)$	1994^{+28}_{-29}
α_{-1}	$-0.0013^{+0.0028}_{-0.0040}$	D_{40}	1215^{+46}_{-36}	$H(0.61)$	$95.06^{+0.60}_{-0.56}$
$\ln(10^{10} A_s)$	$3.047^{+0.028}_{-0.026}$	D_{220}	5717^{+83}_{-82}	$D_{\text{M}}(0.61)$	2320^{+30}_{-31}
n_s	$0.960^{+0.014}_{-0.012}$	D_{810}	2537^{+27}_{-27}	$H(2.33)$	$236.7^{+1.9}_{-2.0}$
y_{cal}	$1.0005^{+0.0049}_{-0.0050}$	D_{1420}	814^{+10}_{-10}	$D_{\text{M}}(2.33)$	5774^{+27}_{-28}
A_{217}^{CIB}	45^{+10}_{-20}	D_{2000}	$229.4^{+3.6}_{-3.6}$	$f\sigma_8(0.15)$	$0.462^{+0.016}_{-0.016}$
$\xi^{tSZ-CIB}$	—	$n_{s,0.002}$	$0.960^{+0.014}_{-0.012}$	$\sigma_8(0.15)$	$0.748^{+0.011}_{-0.010}$
A_{143}^{tSZ}	$4.3^{+3.7}_{-4.3}$	Y_P	$0.24534^{+0.00018}_{-0.00019}$	$f\sigma_8(0.38)$	$0.479^{+0.012}_{-0.013}$
A_{100}^{PS}	254^{+60}_{-50}	Y_P^{BBN}	$0.24666^{+0.00018}_{-0.00019}$	$\sigma_8(0.38)$	$0.6622^{+0.0094}_{-0.0086}$
A_{143}^{PS}	45^{+20}_{-20}	$10^5 D/H$	$2.612^{+0.085}_{-0.079}$	$f\sigma_8(0.51)$	$0.476^{+0.010}_{-0.011}$
A_{217}^{PS}	107^{+20}_{-30}	Age/Gyr	$13.822^{+0.063}_{-0.064}$	$\sigma_8(0.51)$	$0.6193^{+0.0089}_{-0.0080}$
A^{kSZ}	—	z_*	$1090.14^{+0.69}_{-0.69}$	$f\sigma_8(0.61)$	$0.4706^{+0.0090}_{-0.0094}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	r_*	$144.40^{+0.82}_{-0.77}$	$\sigma_8(0.61)$	$0.5890^{+0.0087}_{-0.0077}$
c_{217}	$0.9998^{+0.0037}_{-0.0027}$	$100\theta_*$	$1.0408^{+0.0010}_{-0.0010}$	$f\sigma_8(2.33)$	$0.2967^{+0.0044}_{-0.0042}$
H_0	$67.0^{+1.4}_{-1.4}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.874^{+0.073}_{-0.071}$	$\sigma_8(2.33)$	$0.3055^{+0.0049}_{-0.0047}$
Ω_Λ	$0.680^{+0.020}_{-0.020}$	z_{drag}	$1059.66^{+0.96}_{-0.98}$	f_{2000}^{143}	31^{+6}_{-6}
Ω_m	$0.320^{+0.020}_{-0.020}$	r_{drag}	$147.11^{+0.87}_{-0.82}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-4}
$\Omega_m h^2$	$0.1434^{+0.0030}_{-0.0031}$	k_{D}	$0.1407^{+0.0010}_{-0.0011}$	f_{2000}^{217}	$107.9^{+3.8}_{-3.9}$
$\Omega_m h^3$	$0.09601^{+0.00091}_{-0.00091}$	$100\theta_{\text{D}}$	$0.16089^{+0.00063}_{-0.00058}$	χ^2_{lensing}	$9.50 (\nu: 0.5)$
σ_8	$0.810^{+0.012}_{-0.012}$	z_{eq}	3411^{+72}_{-74}	χ^2_{small}	$396.9 (\nu: 1.3)$
S_8	$0.837^{+0.032}_{-0.033}$	k_{eq}	$0.01041^{+0.00022}_{-0.00023}$	χ^2_{lowl}	$22.1 (\nu: 2.5)$
$\sigma_8 \Omega_m^{0.5}$	$0.458^{+0.017}_{-0.018}$	$100\theta_{\text{eq}}$	$0.811^{+0.014}_{-0.013}$	χ^2_{prior}	$7.5 (\nu: 6.3)$
$\sigma_8 \Omega_m^{0.25}$	$0.609^{+0.015}_{-0.015}$	$100\theta_{\text{s,eq}}$	$0.4483^{+0.0072}_{-0.0068}$	χ^2_{CMB}	$4348 (\nu: 4948272.1)$
$\sigma_8/h^{0.5}$	$0.990^{+0.020}_{-0.021}$	$H(0.15)$	$72.3^{+1.2}_{-1.2}$		
$r_{\text{drag}} h$	$98.5^{+2.5}_{-2.4}$	$D_{\text{M}}(0.15)$	647^{+12}_{-12}		

$\bar{\chi}^2_{\text{eff}} = 7501.39$; $\Delta \bar{\chi}^2_{\text{eff}} = 6292.10$; $R - 1 = 0.00867$

5.8 base_alpha1_CamSpecHM_TT_lowl_lowE_post_BAO_lensing_zre6p5/base_alpha1_plikHM_TT_lowl_lowE_post_BAO_lensing_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02229^{+0.00043}_{-0.00044}$	z_{re}	$8.0^{+1.3}_{-1.4}$	$H(0.51)$	$89.66^{+0.55}_{-0.53}$
$\Omega_c h^2$	$0.1192^{+0.0022}_{-0.0022}$	$10^9 A_s$	$2.109^{+0.063}_{-0.061}$	$D_M(0.51)$	1983^{+20}_{-20}
$100\theta_{MC}$	$1.04088^{+0.00092}_{-0.00091}$	$10^9 A_s e^{-2\tau}$	$1.880^{+0.023}_{-0.023}$	$H(0.61)$	$95.28^{+0.47}_{-0.46}$
τ	$0.057^{+0.014}_{-0.013}$	D_{40}	1216^{+46}_{-39}	$D_M(0.61)$	2307^{+22}_{-22}
α_{-1}	$-0.0009^{+0.0029}_{-0.0039}$	D_{220}	5725^{+82}_{-79}	$H(2.33)$	$235.9^{+1.4}_{-1.4}$
$\ln(10^{10} A_s)$	$3.049^{+0.030}_{-0.029}$	D_{810}	2537^{+27}_{-26}	$D_M(2.33)$	5766^{+24}_{-23}
n_s	$0.964^{+0.012}_{-0.010}$	D_{1420}	$815^{+10}_{-9.9}$	$f\sigma_8(0.15)$	$0.456^{+0.012}_{-0.012}$
y_{cal}	$1.0007^{+0.0048}_{-0.0049}$	D_{2000}	$230.0^{+3.5}_{-3.4}$	$\sigma_8(0.15)$	$0.747^{+0.011}_{-0.011}$
A_{217}^{CIB}	44^{+10}_{-20}	$n_{s,0.002}$	$0.964^{+0.012}_{-0.010}$	$f\sigma_8(0.38)$	$0.4741^{+0.0098}_{-0.0099}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.24536^{+0.00018}_{-0.00019}$	$\sigma_8(0.38)$	$0.6624^{+0.0095}_{-0.0092}$
A_{143}^{tSZ}	$4.3^{+3.7}_{-4.3}$	Y_P^{BBN}	$0.24669^{+0.00018}_{-0.00019}$	$f\sigma_8(0.51)$	$0.4727^{+0.0087}_{-0.0088}$
A_{100}^{PS}	253^{+60}_{-50}	$10^5 D/H$	$2.601^{+0.083}_{-0.078}$	$\sigma_8(0.51)$	$0.6199^{+0.0089}_{-0.0086}$
A_{143}^{PS}	44^{+20}_{-20}	Age/Gyr	$13.803^{+0.055}_{-0.053}$	$f\sigma_8(0.61)$	$0.4678^{+0.0081}_{-0.0081}$
A_{217}^{PS}	108^{+20}_{-30}	z_*	$1089.95^{+0.61}_{-0.60}$	$\sigma_8(0.61)$	$0.5899^{+0.0086}_{-0.0082}$
A^{kSZ}	—	r_*	$144.71^{+0.62}_{-0.61}$	$f\sigma_8(2.33)$	$0.2974^{+0.0045}_{-0.0042}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	$100\theta_*$	$1.04107^{+0.00093}_{-0.00091}$	$\sigma_8(2.33)$	$0.3066^{+0.0048}_{-0.0045}$
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	$D_M(z_*)/\text{Gpc}$	$13.900^{+0.059}_{-0.057}$	f_{2000}^{143}	31^{+6}_{-6}
H_0	$67.57^{+0.98}_{-0.97}$	z_{drag}	$1059.69^{+0.97}_{-1.0}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-4}
Ω_Λ	$0.689^{+0.013}_{-0.013}$	r_{drag}	$147.40^{+0.73}_{-0.69}$	f_{2000}^{217}	$107.7^{+3.8}_{-3.9}$
Ω_m	$0.311^{+0.013}_{-0.013}$	k_D	$0.14048^{+0.00095}_{-0.0010}$	χ_{lensing}^2	$9.27 (\nu: 0.3)$
$\Omega_m h^2$	$0.1421^{+0.0021}_{-0.0022}$	$100\theta_D$	$0.16089^{+0.00064}_{-0.00059}$	χ_{small}^2	$397.3 (\nu: 1.9)$
$\Omega_m h^3$	$0.09601^{+0.00090}_{-0.00092}$	z_{eq}	3381^{+51}_{-52}	χ_{lowl}^2	$22 (\nu: 3.2)$
σ_8	$0.809^{+0.012}_{-0.012}$	k_{eq}	$0.01032^{+0.00016}_{-0.00016}$	$\chi_{6\text{DF}}^2$	$0.065 (\nu: 0.0)$
S_8	$0.824^{+0.023}_{-0.023}$	$100\theta_{\text{eq}}$	$0.8169^{+0.0095}_{-0.0093}$	χ_{MGS}^2	$1.25 (\nu: 0.1)$
$\sigma_8 \Omega_m^{0.5}$	$0.451^{+0.013}_{-0.013}$	$100\theta_{s,\text{eq}}$	$0.4513^{+0.0050}_{-0.0048}$	χ_{DR12BAO}^2	$5.0 (\nu: 1.4)$
$\sigma_8 \Omega_m^{0.25}$	$0.604^{+0.012}_{-0.012}$	$H(0.15)$	$72.84^{+0.85}_{-0.84}$	χ_{prior}^2	$7.4 (\nu: 6.3)$
$\sigma_8/h^{0.5}$	$0.984^{+0.017}_{-0.017}$	$D_M(0.15)$	$641.7^{+8.4}_{-8.4}$	χ_{CMB}^2	$4348 (\nu: 4948340.0)$
$r_{\text{drag}} h$	$99.6^{+1.7}_{-1.7}$	$H(0.38)$	$82.95^{+0.66}_{-0.63}$	χ_{BAO}^2	$6.3 (\nu: 0.9)$
$\langle d^2 \rangle^{1/2}$	$2.436^{+0.042}_{-0.041}$	$D_M(0.38)$	1530^{+17}_{-17}		

$$\bar{\chi}_{\text{eff}}^2 = 7508.12; \Delta \bar{\chi}_{\text{eff}}^2 = 6292.15; R - 1 = 0.01736$$

6 mnu

6.1 base_mnu_CamSpecHM_TT_lowl_lowE/base_mnu_plikHM_TT_lowl_lowE

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02205^{+0.00047}_{-0.00050}$	$r_{\text{drag}} h$	$96.7^{+5.5}_{-7.1}$	$D_{\text{M}}(0.15)$	659^{+43}_{-31}
$\Omega_c h^2$	$0.1210^{+0.0044}_{-0.0043}$	$\langle d^2 \rangle^{1/2}$	$2.446^{+0.074}_{-0.074}$	$H(0.38)$	$81.7^{+2.2}_{-3.0}$
$100\theta_{MC}$	$1.04067^{+0.00097}_{-0.0010}$	z_{re}	$7.5^{+1.6}_{-1.7}$	$D_{\text{M}}(0.38)$	1564^{+85}_{-62}
τ	$0.052^{+0.016}_{-0.015}$	$10^9 A_s$	$2.090^{+0.069}_{-0.065}$	$H(0.51)$	$88.7^{+1.8}_{-2.5}$
Σm_ν	< 0.553	$10^9 A_s e^{-2\tau}$	$1.884^{+0.027}_{-0.027}$	$D_{\text{M}}(0.51)$	2022^{+100}_{-72}
$\ln(10^{10} A_s)$	$3.039^{+0.033}_{-0.031}$	D_{40}	1232^{+30}_{-30}	$H(0.61)$	$94.5^{+1.5}_{-2.1}$
n_s	$0.962^{+0.012}_{-0.013}$	D_{220}	5707^{+82}_{-82}	$D_{\text{M}}(0.61)$	2350^{+110}_{-78}
y_{cal}	$1.0005^{+0.0049}_{-0.0050}$	D_{810}	2536^{+27}_{-28}	$H(2.33)$	$237.6^{+3.9}_{-3.5}$
A_{217}^{CIB}	45^{+10}_{-20}	D_{1420}	814^{+10}_{-10}	$D_{\text{M}}(2.33)$	5806^{+110}_{-73}
$\xi^{tSZ-CIB}$	—	D_{2000}	$229.2^{+3.7}_{-3.8}$	$f\sigma_8(0.15)$	$0.460^{+0.025}_{-0.027}$
A_{143}^{tSZ}	$4.3^{+3.7}_{-4.2}$	$n_{s,0.002}$	$0.962^{+0.012}_{-0.013}$	$\sigma_8(0.15)$	$0.726^{+0.047}_{-0.079}$
A_{100}^{PS}	255^{+60}_{-50}	Y_P	$0.24526^{+0.00021}_{-0.00023}$	$f\sigma_8(0.38)$	$0.473^{+0.027}_{-0.030}$
A_{143}^{PS}	46^{+20}_{-20}	Y_P^{BBN}	$0.24658^{+0.00021}_{-0.00023}$	$\sigma_8(0.38)$	$0.642^{+0.043}_{-0.074}$
A_{217}^{PS}	108^{+30}_{-30}	$10^5 D/H$	$2.647^{+0.099}_{-0.089}$	$f\sigma_8(0.51)$	$0.469^{+0.026}_{-0.034}$
A^{kSZ}	—	Age/Gyr	$13.90^{+0.25}_{-0.17}$	$\sigma_8(0.51)$	$0.600^{+0.041}_{-0.071}$
c_{100}	$0.9985^{+0.0022}_{-0.0027}$	z_*	$1090.44^{+0.98}_{-0.95}$	$f\sigma_8(0.61)$	$0.462^{+0.026}_{-0.036}$
c_{217}	$0.9998^{+0.0038}_{-0.0028}$	r_*	$144.39^{+0.97}_{-1.0}$	$\sigma_8(0.61)$	$0.570^{+0.039}_{-0.068}$
H_0	$65.7^{+3.4}_{-4.6}$	$100\theta_*$	$1.04094^{+0.00092}_{-0.00094}$	$f\sigma_8(2.33)$	$0.288^{+0.018}_{-0.032}$
Ω_Λ	$0.663^{+0.048}_{-0.066}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.871^{+0.090}_{-0.094}$	$\sigma_8(2.33)$	$0.295^{+0.021}_{-0.037}$
Ω_m	$0.337^{+0.066}_{-0.048}$	z_{drag}	$1059.28^{+0.96}_{-0.95}$	f_{2000}^{143}	32^{+6}_{-6}
$\Omega_m h^2$	$0.1450^{+0.0068}_{-0.0058}$	r_{drag}	$147.15^{+0.95}_{-0.99}$	$f_{2000}^{143 \times 217}$	34^{+4}_{-4}
$\Omega_\nu h^2$	< 0.00595	k_{D}	$0.1406^{+0.0010}_{-0.0010}$	f_{2000}^{217}	$108.3^{+4.2}_{-4.1}$
$\Omega_m h^3$	$0.0952^{+0.0019}_{-0.0028}$	$100\theta_{\text{D}}$	$0.16112^{+0.00054}_{-0.00053}$	χ_{small}^2	$397.0 (\nu: 1.5)$
σ_8	$0.788^{+0.051}_{-0.082}$	z_{eq}	3419^{+99}_{-97}	χ_{lowl}^2	$23.8 (\nu: 0.8)$
S_8	$0.833^{+0.049}_{-0.050}$	k_{eq}	$0.01044^{+0.00031}_{-0.00030}$	χ_{prior}^2	$7.5 (\nu: 6.4)$
$\sigma_8 \Omega_m^{0.5}$	$0.457^{+0.027}_{-0.028}$	$100\theta_{\text{eq}}$	$0.810^{+0.018}_{-0.018}$	χ_{CMB}^2	$4339 (\nu: 4948166.2)$
$\sigma_8 \Omega_m^{0.25}$	$0.600^{+0.036}_{-0.044}$	$100\theta_{\text{s,eq}}$	$0.4477^{+0.0094}_{-0.0092}$		
$\sigma_8/h^{0.5}$	$0.972^{+0.057}_{-0.076}$	$H(0.15)$	$71.2^{+3.0}_{-4.0}$		

Best-fit $\chi_{\text{eff}}^2 = 7471.23$; $\Delta\chi_{\text{eff}}^2 = 6292.27$; $\bar{\chi}_{\text{eff}}^2 = 7492.77$; $\Delta\chi_{\text{eff}}^2 = 6292.03$; $R - 1 = 0.00611$

χ_{eff}^2 : CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.71 (Δ -0.16) commander_dx12_v3_2_29: 23.54 (Δ -0.12) CamSpec like_10.7HM: 7049.70

6.2 base_mnu_CamSpecHM_TT_lowl_lowE_post_zre6p5/base_mnu_plikHM_TT_lowl_lowE_post_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02206^{+0.00047}_{-0.00050}$	$r_{\text{drag}} h$	$96.8^{+5.5}_{-7.1}$	$D_{\text{M}}(0.15)$	658^{+43}_{-31}
$\Omega_c h^2$	$0.1209^{+0.0044}_{-0.0043}$	$\langle d^2 \rangle^{1/2}$	$2.448^{+0.073}_{-0.074}$	$H(0.38)$	$81.8^{+2.2}_{-3.0}$
$100\theta_{MC}$	$1.04068^{+0.00098}_{-0.0010}$	z_{re}	< 8.86	$D_{\text{M}}(0.38)$	1564^{+85}_{-62}
τ	$0.053^{+0.013}_{-0.011}$	$10^9 A_s$	$2.096^{+0.059}_{-0.054}$	$H(0.51)$	$88.7^{+1.8}_{-2.5}$
Σm_ν	< 0.554	$10^9 A_s e^{-2\tau}$	$1.884^{+0.027}_{-0.027}$	$D_{\text{M}}(0.51)$	2022^{+100}_{-72}
$\ln(10^{10} A_s)$	$3.043^{+0.028}_{-0.026}$	D_{40}	1232^{+30}_{-30}	$H(0.61)$	$94.5^{+1.5}_{-2.1}$
n_s	$0.962^{+0.012}_{-0.012}$	D_{220}	5707^{+82}_{-83}	$D_{\text{M}}(0.61)$	2349^{+110}_{-78}
y_{cal}	$1.0005^{+0.0049}_{-0.0050}$	D_{810}	2536^{+27}_{-28}	$H(2.33)$	$237.5^{+3.9}_{-3.5}$
A_{217}^{CIB}	45^{+10}_{-20}	D_{1420}	814^{+10}_{-10}	$D_{\text{M}}(2.33)$	5806^{+110}_{-73}
$\xi^{tSZ-CIB}$	—	D_{2000}	$229.2^{+3.7}_{-3.8}$	$f\sigma_8(0.15)$	$0.460^{+0.025}_{-0.027}$
A_{143}^{tSZ}	$4.3^{+3.7}_{-4.2}$	$n_{s,0.002}$	$0.962^{+0.012}_{-0.012}$	$\sigma_8(0.15)$	$0.727^{+0.047}_{-0.079}$
A_{100}^{PS}	255^{+60}_{-50}	Y_P	$0.24526^{+0.00021}_{-0.00023}$	$f\sigma_8(0.38)$	$0.473^{+0.026}_{-0.030}$
A_{143}^{PS}	46^{+20}_{-20}	Y_P^{BBN}	$0.24658^{+0.00021}_{-0.00023}$	$\sigma_8(0.38)$	$0.642^{+0.042}_{-0.074}$
A_{217}^{PS}	108^{+30}_{-30}	$10^5 D/H$	$2.645^{+0.099}_{-0.089}$	$f\sigma_8(0.51)$	$0.469^{+0.026}_{-0.034}$
A^{kSZ}	—	Age/Gyr	$13.89^{+0.25}_{-0.17}$	$\sigma_8(0.51)$	$0.600^{+0.040}_{-0.071}$
c_{100}	$0.9985^{+0.0022}_{-0.0027}$	z_*	$1090.42^{+0.97}_{-0.95}$	$f\sigma_8(0.61)$	$0.463^{+0.026}_{-0.036}$
c_{217}	$0.9998^{+0.0038}_{-0.0028}$	r_*	$144.40^{+0.97}_{-1.0}$	$\sigma_8(0.61)$	$0.571^{+0.038}_{-0.068}$
H_0	$65.7^{+3.4}_{-4.6}$	$100\theta_*$	$1.04095^{+0.00092}_{-0.00093}$	$f\sigma_8(2.33)$	$0.289^{+0.018}_{-0.032}$
Ω_Λ	$0.663^{+0.048}_{-0.066}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.872^{+0.090}_{-0.093}$	$\sigma_8(2.33)$	$0.296^{+0.021}_{-0.037}$
Ω_m	$0.337^{+0.066}_{-0.048}$	z_{drag}	$1059.29^{+0.94}_{-0.96}$	f_{2000}^{143}	32^{+6}_{-6}
$\Omega_m h^2$	$0.1449^{+0.0068}_{-0.0058}$	r_{drag}	$147.17^{+0.95}_{-0.98}$	$f_{2000}^{143 \times 217}$	34^{+4}_{-4}
$\Omega_\nu h^2$	< 0.00595	k_{D}	$0.1406^{+0.0010}_{-0.0010}$	f_{2000}^{217}	$108.3^{+4.1}_{-4.1}$
$\Omega_m h^3$	$0.0952^{+0.0019}_{-0.0028}$	$100\theta_{\text{D}}$	$0.16112^{+0.00054}_{-0.00053}$	χ_{small}^2	$396.9 (\nu: 1.5)$
σ_8	$0.789^{+0.050}_{-0.082}$	z_{eq}	3417^{+99}_{-96}	χ_{lowl}^2	$23.7 (\nu: 0.8)$
S_8	$0.834^{+0.048}_{-0.050}$	k_{eq}	$0.01043^{+0.00030}_{-0.00029}$	χ_{prior}^2	$7.5 (\nu: 6.4)$
$\sigma_8 \Omega_m^{0.5}$	$0.457^{+0.026}_{-0.028}$	$100\theta_{\text{eq}}$	$0.810^{+0.018}_{-0.018}$	χ_{CMB}^2	$4339 (\nu: 4948177.5)$
$\sigma_8 \Omega_m^{0.25}$	$0.600^{+0.036}_{-0.044}$	$100\theta_{\text{s,eq}}$	$0.4479^{+0.0093}_{-0.0092}$		
$\sigma_8/h^{0.5}$	$0.973^{+0.057}_{-0.076}$	$H(0.15)$	$71.3^{+3.0}_{-4.0}$		

$\bar{\chi}_{\text{eff}}^2 = 7492.51$; $\Delta \bar{\chi}_{\text{eff}}^2 = 6292.02$; $R - 1 = 0.00841$

6.3 base_mnu_CamSpecHM_TTTEEE_lowl_lowE/base_mnu_plikHM_TTTEEE_lowl_lowE

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02231^{+0.00032}_{-0.00033}$	$r_{\text{drag}} h$	$98.5^{+3.4}_{-4.0}$	$D_{\text{M}}(0.15)$	648^{+23}_{-19}
$\Omega_c h^2$	$0.1200^{+0.0029}_{-0.0028}$	$\langle d^2 \rangle^{1/2}$	$2.437^{+0.058}_{-0.060}$	$H(0.38)$	$82.5^{+1.4}_{-1.7}$
$100\theta_{MC}$	$1.04086^{+0.00064}_{-0.00065}$	z_{re}	$7.6^{+1.6}_{-1.6}$	$D_{\text{M}}(0.38)$	1542^{+47}_{-38}
τ	$0.054^{+0.016}_{-0.015}$	$10^9 A_s$	$2.095^{+0.070}_{-0.066}$	$H(0.51)$	$89.4^{+1.1}_{-1.5}$
Σm_ν	< 0.321	$10^9 A_s e^{-2\tau}$	$1.882^{+0.024}_{-0.023}$	$D_{\text{M}}(0.51)$	1996^{+55}_{-44}
$\ln(10^{10} A_s)$	$3.042^{+0.033}_{-0.032}$	D_{40}	1230^{+26}_{-26}	$H(0.61)$	$95.04^{+0.95}_{-1.2}$
n_s	$0.9649^{+0.0089}_{-0.0090}$	D_{220}	5726^{+76}_{-76}	$D_{\text{M}}(0.61)$	2321^{+60}_{-48}
y_{cal}	$1.0006^{+0.0048}_{-0.0048}$	D_{810}	2538^{+26}_{-26}	$H(2.33)$	$236.8^{+2.2}_{-2.1}$
A_{217}^{CIB}	43^{+10}_{-20}	D_{1420}	$816.6^{+9.3}_{-9.5}$	$D_{\text{M}}(2.33)$	5776^{+62}_{-46}
$\xi^{tSZ-CIB}$	—	D_{2000}	$230.5^{+3.2}_{-3.3}$	$f\sigma_8(0.15)$	$0.458^{+0.018}_{-0.019}$
A_{143}^{tSZ}	$4.6^{+3.9}_{-4.3}$	$n_{s,0.002}$	$0.9649^{+0.0089}_{-0.0090}$	$\sigma_8(0.15)$	$0.739^{+0.033}_{-0.049}$
A_{100}^{PS}	250^{+60}_{-50}	Y_P	$0.24537^{+0.00013}_{-0.00013}$	$f\sigma_8(0.38)$	$0.474^{+0.018}_{-0.020}$
A_{143}^{PS}	43^{+20}_{-20}	Y_P^{BBN}	$0.24669^{+0.00013}_{-0.00013}$	$\sigma_8(0.38)$	$0.654^{+0.030}_{-0.045}$
A_{217}^{PS}	109^{+30}_{-30}	$10^5 D/H$	$2.598^{+0.063}_{-0.059}$	$f\sigma_8(0.51)$	$0.471^{+0.018}_{-0.021}$
A^{kSZ}	—	Age/Gyr	$13.83^{+0.14}_{-0.10}$	$\sigma_8(0.51)$	$0.612^{+0.029}_{-0.043}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	z_*	$1090.00^{+0.62}_{-0.57}$	$f\sigma_8(0.61)$	$0.466^{+0.018}_{-0.022}$
c_{217}	$0.9997^{+0.0038}_{-0.0027}$	r_*	$144.48^{+0.64}_{-0.65}$	$\sigma_8(0.61)$	$0.582^{+0.027}_{-0.042}$
H_0	$66.9^{+2.1}_{-2.6}$	$100\theta_*$	$1.04107^{+0.00061}_{-0.00061}$	$f\sigma_8(2.33)$	$0.294^{+0.013}_{-0.019}$
Ω_Λ	$0.679^{+0.028}_{-0.034}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.878^{+0.061}_{-0.061}$	$\sigma_8(2.33)$	$0.302^{+0.015}_{-0.022}$
Ω_m	$0.321^{+0.034}_{-0.028}$	z_{drag}	$1059.79^{+0.67}_{-0.70}$	f_{2000}^{143}	30^{+6}_{-5}
$\Omega_m h^2$	$0.1435^{+0.0039}_{-0.0035}$	r_{drag}	$147.16^{+0.65}_{-0.65}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
$\Omega_\nu h^2$	< 0.00346	k_{D}	$0.14075^{+0.00071}_{-0.00073}$	f_{2000}^{217}	$107.1^{+3.7}_{-3.7}$
$\Omega_m h^3$	$0.0960^{+0.0012}_{-0.0016}$	$100\theta_{\text{D}}$	$0.16084^{+0.00039}_{-0.00037}$	χ_{small}^2	$397.1 (\nu: 1.7)$
σ_8	$0.801^{+0.036}_{-0.051}$	z_{eq}	3400^{+64}_{-63}	χ_{lowl}^2	$23.35 (\nu: 0.5)$
S_8	$0.828^{+0.034}_{-0.036}$	k_{eq}	$0.01038^{+0.00020}_{-0.00019}$	χ_{prior}^2	$9.6 (\nu: 9.8)$
$\sigma_8 \Omega_m^{0.5}$	$0.453^{+0.019}_{-0.019}$	$100\theta_{\text{eq}}$	$0.814^{+0.012}_{-0.012}$	χ_{CMB}^2	$7358 (\nu: 10476097.3)$
$\sigma_8 \Omega_m^{0.25}$	$0.602^{+0.025}_{-0.029}$	$100\theta_{\text{s,eq}}$	$0.4495^{+0.0061}_{-0.0061}$		
$\sigma_8/h^{0.5}$	$0.979^{+0.040}_{-0.049}$	$H(0.15)$	$72.3^{+1.9}_{-2.3}$		

Best-fit $\chi_{\text{eff}}^2 = 11920.07$; $\Delta\chi_{\text{eff}}^2 = 9155.33$; $\bar{\chi}_{\text{eff}}^2 = 11943.39$; $\Delta\bar{\chi}_{\text{eff}}^2 = 9150.98$; $R - 1 = 0.01661$

χ_{eff}^2 : CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.78 (Δ -0.42) commander_dx12_v3_2_29: 23.03 (Δ -0.21) CamSpec like_10.7HM_1400_unified: 11499.19

6.4 base_mnu_CamSpecHM_TTTEEE_lowl_lowE_post_Riess18/base_mnu_plikHM_TTTEEE_lowl_lowE_post_Riess18

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02246^{+0.00030}_{-0.00030}$	$r_{\text{drag}} h$	$100.8^{+2.0}_{-2.2}$	$D_{\text{M}}(0.15)$	635^{+11}_{-10}
$\Omega_c h^2$	$0.1183^{+0.0026}_{-0.0024}$	$\langle d^2 \rangle^{1/2}$	$2.422^{+0.056}_{-0.056}$	$H(0.38)$	$83.50^{+0.79}_{-0.84}$
$100\theta_{MC}$	$1.04112^{+0.00064}_{-0.00060}$	z_{re}	$7.8^{+1.5}_{-1.6}$	$D_{\text{M}}(0.38)$	1516^{+22}_{-21}
τ	$0.056^{+0.016}_{-0.016}$	$10^9 A_s$	$2.098^{+0.073}_{-0.067}$	$H(0.51)$	$90.13^{+0.64}_{-0.69}$
Σm_ν	< 0.104	$10^9 A_s e^{-2\tau}$	$1.875^{+0.022}_{-0.022}$	$D_{\text{M}}(0.51)$	1966^{+26}_{-24}
$\ln(10^{10} A_s)$	$3.043^{+0.034}_{-0.032}$	D_{40}	1223^{+25}_{-24}	$H(0.61)$	$95.68^{+0.53}_{-0.57}$
n_s	$0.9691^{+0.0084}_{-0.0084}$	D_{220}	5736^{+77}_{-78}	$D_{\text{M}}(0.61)$	2289^{+28}_{-26}
y_{cal}	$1.0007^{+0.0049}_{-0.0047}$	D_{810}	2537^{+27}_{-26}	$H(2.33)$	$235.4^{+1.6}_{-1.5}$
A_{217}^{CIB}	43^{+10}_{-10}	D_{1420}	$817.6^{+9.4}_{-9.8}$	$D_{\text{M}}(2.33)$	5746^{+26}_{-25}
$\xi^{tSZ-CIB}$	—	D_{2000}	$231.2^{+3.2}_{-3.3}$	$f\sigma_8(0.15)$	$0.452^{+0.016}_{-0.015}$
A_{143}^{tSZ}	$4.7^{+4.0}_{-4.3}$	$n_{s,0.002}$	$0.9691^{+0.0084}_{-0.0084}$	$\sigma_8(0.15)$	$0.752^{+0.018}_{-0.020}$
A_{100}^{PS}	248^{+50}_{-50}	Y_P	$0.24543^{+0.00011}_{-0.00012}$	$f\sigma_8(0.38)$	$0.472^{+0.014}_{-0.015}$
A_{143}^{PS}	42^{+20}_{-20}	Y_P^{BBN}	$0.24676^{+0.00011}_{-0.00012}$	$\sigma_8(0.38)$	$0.667^{+0.016}_{-0.018}$
A_{217}^{PS}	108^{+20}_{-30}	$10^5 D/H$	$2.569^{+0.057}_{-0.054}$	$f\sigma_8(0.51)$	$0.472^{+0.012}_{-0.013}$
A^{kSZ}	—	Age/Gyr	$13.760^{+0.060}_{-0.056}$	$\sigma_8(0.51)$	$0.625^{+0.015}_{-0.017}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	z_*	$1089.65^{+0.52}_{-0.48}$	$f\sigma_8(0.61)$	$0.468^{+0.012}_{-0.013}$
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	r_*	$144.81^{+0.57}_{-0.60}$	$\sigma_8(0.61)$	$0.595^{+0.014}_{-0.016}$
H_0	$68.4^{+1.2}_{-1.3}$	$100\theta_*$	$1.04129^{+0.00064}_{-0.00059}$	$f\sigma_8(2.33)$	$0.3000^{+0.0065}_{-0.0080}$
Ω_Λ	$0.698^{+0.015}_{-0.017}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.907^{+0.053}_{-0.056}$	$\sigma_8(2.33)$	$0.3099^{+0.0075}_{-0.0084}$
Ω_m	$0.302^{+0.017}_{-0.015}$	z_{drag}	$1060.02^{+0.63}_{-0.66}$	f_{2000}^{143}	29^{+5}_{-5}
$\Omega_m h^2$	$0.1411^{+0.0026}_{-0.0024}$	r_{drag}	$147.45^{+0.61}_{-0.60}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
$\Omega_\nu h^2$	< 0.00112	k_{D}	$0.14056^{+0.00069}_{-0.00069}$	f_{2000}^{217}	$106.5^{+3.6}_{-3.5}$
$\Omega_m h^3$	$0.09648^{+0.00074}_{-0.00075}$	$100\theta_{\text{D}}$	$0.16072^{+0.00038}_{-0.00036}$	χ_{small}^2	$397.3 (\nu: 2.1)$
σ_8	$0.813^{+0.020}_{-0.021}$	z_{eq}	3364^{+57}_{-57}	χ_{lowl}^2	$22.77 (\nu: 0.4)$
S_8	$0.816^{+0.031}_{-0.030}$	k_{eq}	$0.01027^{+0.00018}_{-0.00017}$	χ_{H073p45}^2	$9.5 (\nu: 3.0)$
$\sigma_8 \Omega_m^{0.5}$	$0.447^{+0.017}_{-0.016}$	$100\theta_{\text{eq}}$	$0.821^{+0.010}_{-0.011}$	χ_{prior}^2	$9.4 (\nu: 9.6)$
$\sigma_8 \Omega_m^{0.25}$	$0.603^{+0.017}_{-0.018}$	$100\theta_{\text{s,eq}}$	$0.4532^{+0.0054}_{-0.0057}$	χ_{CMB}^2	$7358 (\nu: 10476902.0)$
$\sigma_8/h^{0.5}$	$0.983^{+0.026}_{-0.028}$	$H(0.15)$	$73.5^{+1.1}_{-1.1}$		

$$\bar{\chi}_{\text{eff}}^2 = 11952.66; \Delta\bar{\chi}_{\text{eff}}^2 = 9150.83; R - 1 = 0.05737$$

6.5 base_mnu_CamSpecHM_TTTEEE_lowl_lowE_post_zre6p5/base_mnu_plikHM_TTTEEE_lowl_lowE_post_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02231^{+0.00032}_{-0.00033}$	$r_{\text{drag}} h$	$98.5^{+3.4}_{-4.0}$	$D_{\text{M}}(0.15)$	647^{+23}_{-19}
$\Omega_c h^2$	$0.1199^{+0.0028}_{-0.0028}$	$\langle d^2 \rangle^{1/2}$	$2.439^{+0.057}_{-0.058}$	$H(0.38)$	$82.6^{+1.4}_{-1.7}$
$100\theta_{MC}$	$1.04086^{+0.00064}_{-0.00065}$	z_{re}	< 8.95	$D_{\text{M}}(0.38)$	1542^{+47}_{-38}
τ	$0.055^{+0.013}_{-0.012}$	$10^9 A_s$	$2.100^{+0.061}_{-0.056}$	$H(0.51)$	$89.4^{+1.1}_{-1.5}$
Σm_ν	< 0.322	$10^9 A_s e^{-2\tau}$	$1.881^{+0.024}_{-0.023}$	$D_{\text{M}}(0.51)$	1996^{+55}_{-44}
$\ln(10^{10} A_s)$	$3.045^{+0.029}_{-0.027}$	D_{40}	1230^{+26}_{-26}	$H(0.61)$	$95.04^{+0.96}_{-1.2}$
n_s	$0.9651^{+0.0088}_{-0.0089}$	D_{220}	5726^{+76}_{-76}	$D_{\text{M}}(0.61)$	2321^{+60}_{-48}
y_{cal}	$1.0006^{+0.0048}_{-0.0048}$	D_{810}	2538^{+26}_{-26}	$H(2.33)$	$236.7^{+2.2}_{-2.1}$
A_{217}^{CIB}	43^{+10}_{-20}	D_{1420}	$816.5^{+9.3}_{-9.5}$	$D_{\text{M}}(2.33)$	5776^{+62}_{-46}
$\xi^{tSZ-CIB}$	—	D_{2000}	$230.5^{+3.2}_{-3.3}$	$f\sigma_8(0.15)$	$0.458^{+0.017}_{-0.019}$
A_{143}^{tSZ}	$4.7^{+3.9}_{-4.3}$	$n_{s,0.002}$	$0.9651^{+0.0088}_{-0.0089}$	$\sigma_8(0.15)$	$0.740^{+0.033}_{-0.049}$
A_{100}^{PS}	250^{+60}_{-50}	Y_P	$0.24537^{+0.00013}_{-0.00013}$	$f\sigma_8(0.38)$	$0.474^{+0.018}_{-0.020}$
A_{143}^{PS}	43^{+20}_{-20}	Y_P^{BBN}	$0.24670^{+0.00013}_{-0.00013}$	$\sigma_8(0.38)$	$0.655^{+0.030}_{-0.045}$
A_{217}^{PS}	109^{+20}_{-30}	$10^5 D/H$	$2.597^{+0.063}_{-0.059}$	$f\sigma_8(0.51)$	$0.472^{+0.018}_{-0.021}$
A^{kSZ}	—	Age/Gyr	$13.83^{+0.14}_{-0.10}$	$\sigma_8(0.51)$	$0.613^{+0.028}_{-0.043}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	z_*	$1090.00^{+0.61}_{-0.57}$	$f\sigma_8(0.61)$	$0.466^{+0.018}_{-0.022}$
c_{217}	$0.9997^{+0.0038}_{-0.0027}$	r_*	$144.48^{+0.64}_{-0.65}$	$\sigma_8(0.61)$	$0.583^{+0.027}_{-0.041}$
H_0	$66.9^{+2.1}_{-2.6}$	$100\theta_*$	$1.04108^{+0.00061}_{-0.00061}$	$f\sigma_8(2.33)$	$0.294^{+0.013}_{-0.019}$
Ω_Λ	$0.679^{+0.028}_{-0.034}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.878^{+0.060}_{-0.060}$	$\sigma_8(2.33)$	$0.303^{+0.014}_{-0.022}$
Ω_m	$0.321^{+0.034}_{-0.028}$	z_{drag}	$1059.80^{+0.67}_{-0.67}$	f_{2000}^{143}	30^{+6}_{-5}
$\Omega_m h^2$	$0.1434^{+0.0039}_{-0.0035}$	r_{drag}	$147.17^{+0.65}_{-0.65}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
$\Omega_\nu h^2$	< 0.00346	k_{D}	$0.14075^{+0.00071}_{-0.00072}$	f_{2000}^{217}	$107.1^{+3.7}_{-3.7}$
$\Omega_m h^3$	$0.0960^{+0.0012}_{-0.0016}$	$100\theta_{\text{D}}$	$0.16083^{+0.00039}_{-0.00037}$	χ_{small}^2	$397.0 (\nu: 1.8)$
σ_8	$0.801^{+0.035}_{-0.051}$	z_{eq}	3399^{+64}_{-63}	χ_{lowl}^2	$23.36 (\nu: 0.5)$
S_8	$0.828^{+0.034}_{-0.035}$	k_{eq}	$0.01038^{+0.00020}_{-0.00019}$	χ_{prior}^2	$9.6 (\nu: 9.8)$
$\sigma_8 \Omega_m^{0.5}$	$0.454^{+0.019}_{-0.019}$	$100\theta_{\text{eq}}$	$0.814^{+0.012}_{-0.012}$	χ_{CMB}^2	$7358 (\nu: 10475970.6)$
$\sigma_8 \Omega_m^{0.25}$	$0.603^{+0.025}_{-0.029}$	$100\theta_{\text{s,eq}}$	$0.4496^{+0.0061}_{-0.0060}$		
$\sigma_8/h^{0.5}$	$0.980^{+0.040}_{-0.049}$	$H(0.15)$	$72.3^{+1.9}_{-2.3}$		

$$\bar{\chi}_{\text{eff}}^2 = 11943.12; \Delta\bar{\chi}_{\text{eff}}^2 = 9150.92; R - 1 = 0.01799$$

6.6 base_mnu_CamSpecHM_TTTEEE_lowl_lowE_post_Riess18_zre6p5/base_mnu_plikHM_TTTEEE_lowl_lowE_post_Riess18_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02247^{+0.00030}_{-0.00030}$	$r_{\text{drag}} h$	$100.8^{+2.1}_{-2.2}$	$D_{\text{M}}(0.15)$	635^{+11}_{-10}
$\Omega_c h^2$	$0.1183^{+0.0026}_{-0.0024}$	$\langle d^2 \rangle^{1/2}$	$2.424^{+0.055}_{-0.056}$	$H(0.38)$	$83.51^{+0.79}_{-0.84}$
$100\theta_{MC}$	$1.04113^{+0.00065}_{-0.00060}$	z_{re}	$7.9^{+1.2}_{-1.3}$	$D_{\text{M}}(0.38)$	1516^{+22}_{-21}
τ	$0.057^{+0.014}_{-0.013}$	$10^9 A_s$	$2.102^{+0.065}_{-0.059}$	$H(0.51)$	$90.14^{+0.64}_{-0.69}$
Σm_ν	< 0.104	$10^9 A_s e^{-2\tau}$	$1.875^{+0.022}_{-0.022}$	$D_{\text{M}}(0.51)$	1966^{+26}_{-24}
$\ln(10^{10} A_s)$	$3.045^{+0.031}_{-0.028}$	D_{40}	1223^{+25}_{-25}	$H(0.61)$	$95.68^{+0.54}_{-0.57}$
n_s	$0.9692^{+0.0084}_{-0.0084}$	D_{220}	5736^{+78}_{-79}	$D_{\text{M}}(0.61)$	2288^{+28}_{-26}
y_{cal}	$1.0007^{+0.0049}_{-0.0048}$	D_{810}	2537^{+27}_{-27}	$H(2.33)$	$235.4^{+1.6}_{-1.5}$
A_{217}^{CIB}	43^{+10}_{-20}	D_{1420}	$817.6^{+9.5}_{-9.8}$	$D_{\text{M}}(2.33)$	5746^{+27}_{-25}
$\xi^{tSZ-CIB}$	—	D_{2000}	$231.2^{+3.3}_{-3.3}$	$f\sigma_8(0.15)$	$0.452^{+0.016}_{-0.015}$
A_{143}^{tSZ}	$4.7^{+3.9}_{-4.3}$	$n_{s,0.002}$	$0.9692^{+0.0084}_{-0.0084}$	$\sigma_8(0.15)$	$0.752^{+0.018}_{-0.019}$
A_{100}^{PS}	248^{+50}_{-50}	Y_P	$0.24543^{+0.00011}_{-0.00012}$	$f\sigma_8(0.38)$	$0.472^{+0.014}_{-0.013}$
A_{143}^{PS}	41^{+20}_{-20}	Y_P^{BBN}	$0.24676^{+0.00011}_{-0.00012}$	$\sigma_8(0.38)$	$0.668^{+0.016}_{-0.017}$
A_{217}^{PS}	109^{+20}_{-30}	$10^5 D/H$	$2.568^{+0.057}_{-0.053}$	$f\sigma_8(0.51)$	$0.472^{+0.012}_{-0.013}$
A^{kSZ}	—	Age/Gyr	$13.759^{+0.059}_{-0.056}$	$\sigma_8(0.51)$	$0.626^{+0.015}_{-0.016}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	z_*	$1089.65^{+0.51}_{-0.48}$	$f\sigma_8(0.61)$	$0.468^{+0.011}_{-0.012}$
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	r_*	$144.81^{+0.57}_{-0.60}$	$\sigma_8(0.61)$	$0.595^{+0.014}_{-0.015}$
H_0	$68.4^{+1.2}_{-1.3}$	$100\theta_*$	$1.04129^{+0.00064}_{-0.00059}$	$f\sigma_8(2.33)$	$0.3003^{+0.0063}_{-0.0077}$
Ω_Λ	$0.698^{+0.015}_{-0.017}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.907^{+0.053}_{-0.056}$	$\sigma_8(2.33)$	$0.3102^{+0.0073}_{-0.0082}$
Ω_m	$0.302^{+0.017}_{-0.015}$	z_{drag}	$1060.03^{+0.63}_{-0.63}$	f_{2000}^{143}	29^{+5}_{-5}
$\Omega_m h^2$	$0.1411^{+0.0026}_{-0.0024}$	r_{drag}	$147.45^{+0.60}_{-0.60}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
$\Omega_\nu h^2$	< 0.00112	k_{D}	$0.14056^{+0.00070}_{-0.00069}$	f_{2000}^{217}	$106.5^{+3.5}_{-3.5}$
$\Omega_m h^3$	$0.09649^{+0.00074}_{-0.00075}$	$100\theta_{\text{D}}$	$0.16072^{+0.00038}_{-0.00035}$	χ_{small}^2	$397.3 (\nu: 2.1)$
σ_8	$0.813^{+0.020}_{-0.021}$	z_{eq}	3363^{+59}_{-55}	χ_{lowl}^2	$22.78 (\nu: 0.4)$
S_8	$0.816^{+0.031}_{-0.029}$	k_{eq}	$0.01026^{+0.00018}_{-0.00017}$	χ_{H073p45}^2	$9.5 (\nu: 2.9)$
$\sigma_8 \Omega_m^{0.5}$	$0.447^{+0.017}_{-0.016}$	$100\theta_{\text{eq}}$	$0.821^{+0.011}_{-0.011}$	χ_{prior}^2	$9.4 (\nu: 9.5)$
$\sigma_8 \Omega_m^{0.25}$	$0.603^{+0.017}_{-0.018}$	$100\theta_{\text{s,eq}}$	$0.4532^{+0.0053}_{-0.0057}$	χ_{CMB}^2	$7358 (\nu: 10476865.0)$
$\sigma_8/h^{0.5}$	$0.984^{+0.025}_{-0.027}$	$H(0.15)$	$73.6^{+1.1}_{-1.1}$		

$\bar{\chi}_{\text{eff}}^2 = 11952.44$; $\Delta\bar{\chi}_{\text{eff}}^2 = 9150.81$; $R - 1 = 0.06967$

6.7 base_mnu_CamSpecHM_TTTEEE_lowl_lowE_lensing/base_mnu_plikHM_TTTEEE_lowl_lowE_lensing

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02232^{+0.00032}_{-0.00032}$	$r_{\text{drag}} h$	$98.6^{+3.1}_{-3.6}$	$D_{\text{M}}(0.15)$	646^{+20}_{-17}
$\Omega_c h^2$	$0.1200^{+0.0026}_{-0.0025}$	$\langle d^2 \rangle^{1/2}$	$2.441^{+0.044}_{-0.043}$	$H(0.38)$	$82.6^{+1.3}_{-1.5}$
$100\theta_{MC}$	$1.04085^{+0.00063}_{-0.00064}$	z_{re}	$7.7^{+1.5}_{-1.5}$	$D_{\text{M}}(0.38)$	1540^{+41}_{-34}
τ	$0.054^{+0.016}_{-0.015}$	$10^9 A_s$	$2.099^{+0.065}_{-0.061}$	$H(0.51)$	$89.4^{+1.0}_{-1.3}$
Σm_ν	< 0.260	$10^9 A_s e^{-2\tau}$	$1.882^{+0.022}_{-0.022}$	$D_{\text{M}}(0.51)$	1993^{+49}_{-40}
$\ln(10^{10} A_s)$	$3.044^{+0.031}_{-0.029}$	D_{40}	1231^{+24}_{-24}	$H(0.61)$	$95.10^{+0.86}_{-1.1}$
n_s	$0.9649^{+0.0084}_{-0.0084}$	D_{220}	5729^{+77}_{-77}	$D_{\text{M}}(0.61)$	2318^{+53}_{-43}
y_{cal}	$1.0007^{+0.0049}_{-0.0048}$	D_{810}	2538^{+27}_{-26}	$H(2.33)$	$236.7^{+2.1}_{-2.0}$
A_{217}^{CIB}	43^{+10}_{-20}	D_{1420}	$816.7^{+9.5}_{-9.5}$	$D_{\text{M}}(2.33)$	5773^{+52}_{-41}
$\xi^{tSZ-CIB}$	—	D_{2000}	$230.6^{+3.2}_{-3.2}$	$f\sigma_8(0.15)$	$0.459^{+0.013}_{-0.013}$
A_{143}^{tSZ}	$4.6^{+3.9}_{-4.3}$	$n_{s,0.002}$	$0.9649^{+0.0084}_{-0.0084}$	$\sigma_8(0.15)$	$0.743^{+0.026}_{-0.035}$
A_{100}^{PS}	250^{+60}_{-50}	Y_P	$0.24537^{+0.00012}_{-0.00014}$	$f\sigma_8(0.38)$	$0.475^{+0.011}_{-0.013}$
A_{143}^{PS}	43^{+20}_{-20}	Y_P^{BBN}	$0.24670^{+0.00012}_{-0.00014}$	$\sigma_8(0.38)$	$0.658^{+0.024}_{-0.033}$
A_{217}^{PS}	109^{+30}_{-30}	$10^5 D/H$	$2.596^{+0.061}_{-0.058}$	$f\sigma_8(0.51)$	$0.473^{+0.012}_{-0.013}$
A^{kSZ}	—	Age/Gyr	$13.82^{+0.12}_{-0.093}$	$\sigma_8(0.51)$	$0.615^{+0.023}_{-0.032}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	z_*	$1089.99^{+0.59}_{-0.55}$	$f\sigma_8(0.61)$	$0.468^{+0.012}_{-0.014}$
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	r_*	$144.47^{+0.60}_{-0.59}$	$\sigma_8(0.61)$	$0.585^{+0.022}_{-0.030}$
H_0	$67.0^{+1.9}_{-2.3}$	$100\theta_*$	$1.04106^{+0.00061}_{-0.00060}$	$f\sigma_8(2.33)$	$0.295^{+0.010}_{-0.014}$
Ω_Λ	$0.681^{+0.025}_{-0.031}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.877^{+0.057}_{-0.056}$	$\sigma_8(2.33)$	$0.304^{+0.012}_{-0.017}$
Ω_m	$0.319^{+0.031}_{-0.025}$	z_{drag}	$1059.82^{+0.65}_{-0.68}$	f_{2000}^{143}	30^{+6}_{-6}
$\Omega_m h^2$	$0.1433^{+0.0036}_{-0.0033}$	r_{drag}	$147.15^{+0.62}_{-0.59}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
$\Omega_\nu h^2$	< 0.00279	k_{D}	$0.14077^{+0.00066}_{-0.00071}$	f_{2000}^{217}	$107.1^{+3.7}_{-3.7}$
$\Omega_m h^3$	$0.0961^{+0.0010}_{-0.0013}$	$100\theta_{\text{D}}$	$0.16082^{+0.00039}_{-0.00038}$	χ^2_{lensing}	$9.36 (\nu: 0.3)$
σ_8	$0.804^{+0.027}_{-0.036}$	z_{eq}	3401^{+58}_{-58}	χ^2_{small}	$397.1 (\nu: 1.7)$
S_8	$0.830^{+0.025}_{-0.025}$	k_{eq}	$0.01038^{+0.00018}_{-0.00018}$	χ^2_{lowl}	$23.42 (\nu: 0.4)$
$\sigma_8 \Omega_m^{0.5}$	$0.454^{+0.014}_{-0.014}$	$100\theta_{\text{eq}}$	$0.813^{+0.011}_{-0.011}$	χ^2_{prior}	$9.7 (\nu: 9.9)$
$\sigma_8 \Omega_m^{0.25}$	$0.605^{+0.017}_{-0.018}$	$100\theta_{\text{s,eq}}$	$0.4495^{+0.0056}_{-0.0056}$	χ^2_{CMB}	$7367 (\nu: 10476126.9)$
$\sigma_8/h^{0.5}$	$0.983^{+0.028}_{-0.032}$	$H(0.15)$	$72.4^{+1.7}_{-2.0}$		

Best-fit $\chi^2_{\text{eff}} = 11929.03$; $\Delta\chi^2_{\text{eff}} = 9155.18$; $\bar{\chi}^2_{\text{eff}} = 11952.30$; $\Delta\bar{\chi}^2_{\text{eff}} = 9150.95$; $R - 1 = 0.01307$
 χ^2_{eff} : CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.92 (Δ -0.10) simall_100x143_offlike5_EE_Aplanck_B: 395.86 (Δ 0.01) commander_dx12_v3_2_29: 22.93 (Δ -0.34) CamSpec like_10.7HM_1400_unified: 11499.28

6.8 base_mnu_CamSpecHM_TTTEEE_lowl_lowE_lensing_post_zre6p5/base_mnu_plikHM_TTTEEE_lowl_lowE_lensing_post_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02232^{+0.00032}_{-0.00032}$	$r_{\text{drag}} h$	$98.7^{+3.1}_{-3.7}$	$D_{\text{M}}(0.15)$	646^{+21}_{-17}
$\Omega_c h^2$	$0.1199^{+0.0026}_{-0.0025}$	$\langle d^2 \rangle^{1/2}$	$2.442^{+0.043}_{-0.042}$	$H(0.38)$	$82.6^{+1.3}_{-1.6}$
$100\theta_{MC}$	$1.04086^{+0.00063}_{-0.00063}$	z_{re}	< 8.98	$D_{\text{M}}(0.38)$	1539^{+42}_{-34}
τ	$0.055^{+0.013}_{-0.012}$	$10^9 A_s$	$2.103^{+0.058}_{-0.053}$	$H(0.51)$	$89.4^{+1.0}_{-1.3}$
Σm_ν	< 0.263	$10^9 A_s e^{-2\tau}$	$1.882^{+0.022}_{-0.022}$	$D_{\text{M}}(0.51)$	1993^{+49}_{-40}
$\ln(10^{10} A_s)$	$3.046^{+0.027}_{-0.025}$	D_{40}	1231^{+24}_{-24}	$H(0.61)$	$95.10^{+0.86}_{-1.1}$
n_s	$0.9650^{+0.0084}_{-0.0083}$	D_{220}	5728^{+77}_{-77}	$D_{\text{M}}(0.61)$	2318^{+54}_{-43}
y_{cal}	$1.0007^{+0.0049}_{-0.0048}$	D_{810}	2538^{+26}_{-26}	$H(2.33)$	$236.7^{+2.2}_{-2.0}$
A_{217}^{CIB}	43^{+10}_{-20}	D_{1420}	$816.7^{+9.4}_{-9.5}$	$D_{\text{M}}(2.33)$	5773^{+53}_{-42}
$\xi^{tSZ-CIB}$	—	D_{2000}	$230.6^{+3.2}_{-3.3}$	$f\sigma_8(0.15)$	$0.459^{+0.013}_{-0.013}$
A_{143}^{tSZ}	$4.7^{+3.9}_{-4.3}$	$n_{s,0.002}$	$0.9650^{+0.0084}_{-0.0083}$	$\sigma_8(0.15)$	$0.743^{+0.026}_{-0.035}$
A_{100}^{PS}	250^{+60}_{-50}	Y_P	$0.24537^{+0.00012}_{-0.00013}$	$f\sigma_8(0.38)$	$0.475^{+0.012}_{-0.013}$
A_{143}^{PS}	43^{+20}_{-20}	Y_P^{BBN}	$0.24670^{+0.00012}_{-0.00014}$	$\sigma_8(0.38)$	$0.658^{+0.024}_{-0.033}$
A_{217}^{PS}	109^{+20}_{-30}	$10^5 D/H$	$2.595^{+0.061}_{-0.058}$	$f\sigma_8(0.51)$	$0.473^{+0.012}_{-0.013}$
A^{kSZ}	—	Age/Gyr	$13.82^{+0.12}_{-0.094}$	$\sigma_8(0.51)$	$0.615^{+0.023}_{-0.032}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	z_*	$1089.98^{+0.58}_{-0.55}$	$f\sigma_8(0.61)$	$0.468^{+0.012}_{-0.014}$
c_{217}	$0.9996^{+0.0037}_{-0.0027}$	r_*	$144.48^{+0.60}_{-0.59}$	$\sigma_8(0.61)$	$0.585^{+0.022}_{-0.031}$
H_0	$67.0^{+1.9}_{-2.3}$	$100\theta_*$	$1.04107^{+0.00061}_{-0.00060}$	$f\sigma_8(2.33)$	$0.296^{+0.010}_{-0.014}$
Ω_Λ	$0.681^{+0.025}_{-0.031}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.878^{+0.056}_{-0.055}$	$\sigma_8(2.33)$	$0.304^{+0.012}_{-0.017}$
Ω_m	$0.319^{+0.031}_{-0.025}$	z_{drag}	$1059.82^{+0.65}_{-0.65}$	f_{2000}^{143}	30^{+6}_{-6}
$\Omega_m h^2$	$0.1433^{+0.0037}_{-0.0033}$	r_{drag}	$147.16^{+0.62}_{-0.59}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
$\Omega_\nu h^2$	< 0.00283	k_{D}	$0.14076^{+0.00066}_{-0.00071}$	f_{2000}^{217}	$107.0^{+3.7}_{-3.7}$
$\Omega_m h^3$	$0.0961^{+0.0011}_{-0.0013}$	$100\theta_{\text{D}}$	$0.16082^{+0.00039}_{-0.00038}$	χ^2_{lensing}	$9.34 (\nu: 0.3)$
σ_8	$0.805^{+0.027}_{-0.036}$	z_{eq}	3400^{+58}_{-58}	χ^2_{small}	$397.1 (\nu: 1.8)$
S_8	$0.830^{+0.025}_{-0.025}$	k_{eq}	$0.01038^{+0.00018}_{-0.00018}$	χ^2_{lowl}	$23.41 (\nu: 0.4)$
$\sigma_8 \Omega_m^{0.5}$	$0.454^{+0.014}_{-0.014}$	$100\theta_{\text{eq}}$	$0.814^{+0.011}_{-0.011}$	χ^2_{prior}	$9.7 (\nu: 9.9)$
$\sigma_8 \Omega_m^{0.25}$	$0.605^{+0.017}_{-0.019}$	$100\theta_{\text{s,eq}}$	$0.4496^{+0.0055}_{-0.0055}$	χ^2_{CMB}	$7367 (\nu: 10476085.4)$
$\sigma_8/h^{0.5}$	$0.983^{+0.028}_{-0.032}$	$H(0.15)$	$72.4^{+1.7}_{-2.0}$		

$$\bar{\chi}^2_{\text{eff}} = 11952.13; \Delta\bar{\chi}^2_{\text{eff}} = 9150.95; R - 1 = 0.01210$$

6.9 base_mnu_CamSpecHM_TT_lowl_lowE_BAO/base_mnu_plikHM_TT_lowl_lowE_BAO

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02222^{+0.00038}_{-0.00037}$	$\langle d^2 \rangle^{1/2}$	$2.426^{+0.058}_{-0.062}$	$D_M(0.38)$	1529^{+21}_{-20}
$\Omega_c h^2$	$0.1190^{+0.0025}_{-0.0026}$	z_{re}	$7.6^{+1.6}_{-1.6}$	$H(0.51)$	$89.71^{+0.63}_{-0.68}$
$100\theta_{MC}$	$1.04102^{+0.00081}_{-0.00084}$	$10^9 A_s$	$2.089^{+0.070}_{-0.067}$	$D_M(0.51)$	1980^{+24}_{-23}
τ	$0.054^{+0.016}_{-0.015}$	$10^9 A_s e^{-2\tau}$	$1.876^{+0.023}_{-0.024}$	$H(0.61)$	$95.31^{+0.55}_{-0.60}$
Σm_ν	< 0.158	D_{40}	1224^{+26}_{-25}	$D_M(0.61)$	2305^{+27}_{-25}
$\ln(10^{10} A_s)$	$3.039^{+0.033}_{-0.032}$	D_{220}	5714^{+80}_{-79}	$H(2.33)$	$235.7^{+1.5}_{-1.5}$
n_s	$0.9669^{+0.0086}_{-0.0084}$	D_{810}	2534^{+27}_{-27}	$D_M(2.33)$	5765^{+31}_{-27}
y_{cal}	$1.0005^{+0.0050}_{-0.0050}$	D_{1420}	815^{+10}_{-10}	$f\sigma_8(0.15)$	$0.455^{+0.017}_{-0.019}$
A_{217}^{CIB}	44^{+20}_{-20}	D_{2000}	$229.9^{+3.6}_{-3.5}$	$\sigma_8(0.15)$	$0.747^{+0.023}_{-0.028}$
$\xi^{tSZ-CIB}$	—	$n_{s,0.002}$	$0.9669^{+0.0086}_{-0.0084}$	$f\sigma_8(0.38)$	$0.473^{+0.016}_{-0.017}$
A_{143}^{tSZ}	$4.4^{+3.8}_{-4.2}$	Y_P	$0.24533^{+0.00016}_{-0.00016}$	$\sigma_8(0.38)$	$0.663^{+0.020}_{-0.025}$
A_{100}^{PS}	252^{+60}_{-50}	Y_P^{BBN}	$0.24666^{+0.00016}_{-0.00016}$	$f\sigma_8(0.51)$	$0.472^{+0.015}_{-0.016}$
A_{143}^{PS}	44^{+20}_{-20}	$10^5 D/H$	$2.614^{+0.072}_{-0.069}$	$\sigma_8(0.51)$	$0.620^{+0.019}_{-0.023}$
A_{217}^{PS}	108^{+30}_{-30}	Age/Gyr	$13.801^{+0.071}_{-0.063}$	$f\sigma_8(0.61)$	$0.467^{+0.014}_{-0.016}$
A^{kSZ}	—	z_*	$1090.02^{+0.57}_{-0.57}$	$\sigma_8(0.61)$	$0.590^{+0.018}_{-0.022}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	r_*	$144.82^{+0.66}_{-0.64}$	$f\sigma_8(2.33)$	$0.2977^{+0.0081}_{-0.0098}$
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	$100\theta_*$	$1.04123^{+0.00081}_{-0.00084}$	$\sigma_8(2.33)$	$0.3069^{+0.0090}_{-0.011}$
H_0	$67.7^{+1.1}_{-1.2}$	$D_M(z_*)/\text{Gpc}$	$13.908^{+0.063}_{-0.062}$	f_{2000}^{143}	31^{+6}_{-6}
Ω_Λ	$0.690^{+0.014}_{-0.015}$	z_{drag}	$1059.51^{+0.84}_{-0.88}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-4}
Ω_m	$0.310^{+0.015}_{-0.014}$	r_{drag}	$147.54^{+0.71}_{-0.69}$	f_{2000}^{217}	$107.6^{+3.8}_{-3.8}$
$\Omega_m h^2$	$0.1418^{+0.0023}_{-0.0023}$	k_D	$0.14028^{+0.00088}_{-0.00089}$	χ_{small}^2	$397.0 (\nu: 1.7)$
$\Omega_\nu h^2$	< 0.00169	$100\theta_D$	$0.16102^{+0.00051}_{-0.00049}$	χ_{lowl}^2	$22.98 (\nu: 0.4)$
$\Omega_m h^3$	$0.09599^{+0.00098}_{-0.0011}$	z_{eq}	3374^{+59}_{-60}	$\chi_{6\text{DF}}^2$	$0.057 (\nu: 0.0)$
σ_8	$0.808^{+0.025}_{-0.030}$	k_{eq}	$0.01030^{+0.00018}_{-0.00018}$	χ_{MGS}^2	$1.40 (\nu: 0.1)$
S_8	$0.821^{+0.032}_{-0.036}$	$100\theta_{\text{eq}}$	$0.818^{+0.011}_{-0.011}$	χ_{DR12BAO}^2	$4.7 (\nu: 1.3)$
$\sigma_8 \Omega_m^{0.5}$	$0.450^{+0.018}_{-0.020}$	$100\theta_{s,\text{eq}}$	$0.4520^{+0.0059}_{-0.0056}$	χ_{prior}^2	$7.5 (\nu: 6.5)$
$\sigma_8 \Omega_m^{0.25}$	$0.603^{+0.021}_{-0.023}$	$H(0.15)$	$72.94^{+0.99}_{-1.0}$	χ_{BAO}^2	$6.1 (\nu: 0.9)$
$\sigma_8/h^{0.5}$	$0.983^{+0.032}_{-0.036}$	$D_M(0.15)$	$641^{+10}_{-9.6}$	χ_{CMB}^2	$4338 (\nu: 4948178.9)$
$r_{\text{drag}} h$	$99.9^{+1.9}_{-1.9}$	$H(0.38)$	$83.01^{+0.76}_{-0.79}$		

Best-fit $\chi_{\text{eff}}^2 = 7476.59$; $\Delta\chi_{\text{eff}}^2 = 6292.20$; $\bar{\chi}_{\text{eff}}^2 = 7497.48$; $\Delta\bar{\chi}_{\text{eff}}^2 = 6291.87$; $R - 1 = 0.00749$
 χ_{eff}^2 : BAO - 6DF: 0.00 (Δ -0.01) MGS: 1.54 (Δ 0.13) DR12BAO: 3.66 (Δ -0.24) CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.87 (Δ 0.00) commander_dx12_v3_2_29: 22.93 (Δ -0.33) CamSpec like_10.7HM: 7050.52

6.10 base_mnu_CamSpecHM_TT_lowl_lowE_BAO_post_Pantheon18/base_mnu_plikHM_TT_lowl_lowE_BAO_post_Pantheon18

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02223^{+0.00037}_{-0.00037}$	$\langle d^2 \rangle^{1/2}$	$2.424^{+0.058}_{-0.062}$	$D_M(0.38)$	1527^{+19}_{-19}
$\Omega_c h^2$	$0.1188^{+0.0025}_{-0.0025}$	z_{re}	$7.6^{+1.6}_{-1.6}$	$H(0.51)$	$89.75^{+0.61}_{-0.64}$
$100\theta_{MC}$	$1.04104^{+0.00082}_{-0.00084}$	$10^9 A_s$	$2.089^{+0.071}_{-0.066}$	$D_M(0.51)$	1979^{+23}_{-22}
τ	$0.054^{+0.016}_{-0.015}$	$10^9 A_s e^{-2\tau}$	$1.876^{+0.023}_{-0.024}$	$H(0.61)$	$95.34^{+0.53}_{-0.56}$
Σm_ν	< 0.151	D_{40}	1223^{+25}_{-25}	$D_M(0.61)$	2303^{+25}_{-24}
$\ln(10^{10} A_s)$	$3.039^{+0.033}_{-0.032}$	D_{220}	5715^{+80}_{-79}	$H(2.33)$	$235.6^{+1.5}_{-1.4}$
n_s	$0.9673^{+0.0085}_{-0.0083}$	D_{810}	2534^{+27}_{-27}	$D_M(2.33)$	5763^{+29}_{-27}
y_{cal}	$1.0005^{+0.0050}_{-0.0050}$	D_{1420}	815^{+10}_{-10}	$f\sigma_8(0.15)$	$0.454^{+0.016}_{-0.018}$
A_{217}^{CIB}	44^{+20}_{-20}	D_{2000}	$230.0^{+3.6}_{-3.4}$	$\sigma_8(0.15)$	$0.747^{+0.022}_{-0.027}$
$\xi^{tSZ-CIB}$	—	$n_{s,0.002}$	$0.9673^{+0.0085}_{-0.0083}$	$f\sigma_8(0.38)$	$0.473^{+0.015}_{-0.017}$
A_{143}^{tSZ}	$4.4^{+3.8}_{-4.3}$	Y_P	$0.24534^{+0.00015}_{-0.00016}$	$\sigma_8(0.38)$	$0.663^{+0.020}_{-0.024}$
A_{100}^{PS}	252^{+60}_{-50}	Y_P^{BBN}	$0.24666^{+0.00015}_{-0.00016}$	$f\sigma_8(0.51)$	$0.472^{+0.015}_{-0.016}$
A_{143}^{PS}	44^{+20}_{-20}	$10^5 D/H$	$2.612^{+0.071}_{-0.069}$	$\sigma_8(0.51)$	$0.620^{+0.018}_{-0.023}$
A_{217}^{PS}	108^{+30}_{-30}	Age/Gyr	$13.798^{+0.067}_{-0.061}$	$f\sigma_8(0.61)$	$0.467^{+0.014}_{-0.016}$
A^{kSZ}	—	z_*	$1089.99^{+0.56}_{-0.56}$	$\sigma_8(0.61)$	$0.590^{+0.018}_{-0.021}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	r_*	$144.85^{+0.64}_{-0.62}$	$f\sigma_8(2.33)$	$0.2979^{+0.0080}_{-0.0095}$
c_{217}	$0.9997^{+0.0038}_{-0.0027}$	$100\theta_*$	$1.04124^{+0.00081}_{-0.00083}$	$\sigma_8(2.33)$	$0.3072^{+0.0089}_{-0.011}$
H_0	$67.8^{+1.1}_{-1.1}$	$D_M(z_*)/\text{Gpc}$	$13.911^{+0.062}_{-0.061}$	f_{2000}^{143}	31^{+6}_{-6}
Ω_Λ	$0.691^{+0.014}_{-0.014}$	z_{drag}	$1059.53^{+0.83}_{-0.85}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-4}
Ω_m	$0.309^{+0.014}_{-0.014}$	r_{drag}	$147.56^{+0.70}_{-0.68}$	f_{2000}^{217}	$107.6^{+3.8}_{-3.9}$
$\Omega_m h^2$	$0.1417^{+0.0022}_{-0.0022}$	k_D	$0.14026^{+0.00087}_{-0.00089}$	χ_{small}^2	$397.0 (\nu: 1.7)$
$\Omega_\nu h^2$	< 0.00162	$100\theta_D$	$0.16101^{+0.00051}_{-0.00049}$	χ_{lowl}^2	$22.92 (\nu: 0.4)$
$\Omega_m h^3$	$0.09601^{+0.00098}_{-0.0011}$	z_{eq}	3371^{+57}_{-59}	χ_{JLA}^2	$1035.03 (\nu: 0.1)$
σ_8	$0.809^{+0.025}_{-0.030}$	k_{eq}	$0.01029^{+0.00017}_{-0.00018}$	$\chi_{6\text{DF}}^2$	$0.045 (\nu: 0.0)$
S_8	$0.820^{+0.032}_{-0.036}$	$100\theta_{\text{eq}}$	$0.819^{+0.011}_{-0.011}$	χ_{MGS}^2	$1.48 (\nu: 0.1)$
$\sigma_8 \Omega_m^{0.5}$	$0.449^{+0.017}_{-0.019}$	$100\theta_{s,\text{eq}}$	$0.4523^{+0.0057}_{-0.0054}$	χ_{DR12BAO}^2	$4.4 (\nu: 0.9)$
$\sigma_8 \Omega_m^{0.25}$	$0.603^{+0.020}_{-0.023}$	$H(0.15)$	$73.01^{+0.94}_{-0.96}$	χ_{prior}^2	$7.5 (\nu: 6.5)$
$\sigma_8/h^{0.5}$	$0.982^{+0.031}_{-0.035}$	$D_M(0.15)$	$640.0^{+9.6}_{-9.2}$	χ_{BAO}^2	$6.0 (\nu: 0.6)$
$r_{\text{drag}} h$	$100.0^{+1.8}_{-1.8}$	$H(0.38)$	$83.07^{+0.72}_{-0.75}$	χ_{CMB}^2	$4338 (\nu: 4948120.3)$

Best-fit $\chi_{\text{eff}}^2 = 8511.39$; $\Delta\chi_{\text{eff}}^2 = 6292.10$; $\bar{\chi}_{\text{eff}}^2 = 8532.36$; $\Delta\bar{\chi}_{\text{eff}}^2 = 6291.82$; $R - 1 = 0.00853$
 χ_{eff}^2 : BAO - 6DF: 0.00 (Δ -0.00) MGS: 1.54 (Δ 0.07) DR12BAO: 3.66 (Δ -0.11) CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.76 (Δ -0.12) commander_dx12_v3_2_29: 23.01 (Δ -0.20) CamSpec like_10.7HM: 7050.38 SN - JLA Pantheon18: 1034.85 (Δ -0.03)

6.11 base_mnu_CamSpecHM_TT_lowl_lowE_BAO_post_zre6p5/base_mnu_plikHM_TT_lowl_lowE_BAO_post_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02222^{+0.00038}_{-0.00038}$	$\langle d^2 \rangle^{1/2}$	$2.429^{+0.057}_{-0.061}$	$D_M(0.38)$	1528^{+21}_{-20}
$\Omega_c h^2$	$0.1189^{+0.0025}_{-0.0026}$	z_{re}	< 8.95	$H(0.51)$	$89.71^{+0.63}_{-0.68}$
$100\theta_{MC}$	$1.04103^{+0.00082}_{-0.00084}$	$10^9 A_s$	$2.094^{+0.061}_{-0.056}$	$D_M(0.51)$	1980^{+25}_{-23}
τ	$0.055^{+0.013}_{-0.012}$	$10^9 A_s e^{-2\tau}$	$1.876^{+0.023}_{-0.024}$	$H(0.61)$	$95.31^{+0.55}_{-0.60}$
Σm_ν	< 0.158	D_{40}	1224^{+26}_{-25}	$D_M(0.61)$	2304^{+27}_{-25}
$\ln(10^{10} A_s)$	$3.041^{+0.029}_{-0.027}$	D_{220}	5714^{+80}_{-79}	$H(2.33)$	$235.7^{+1.5}_{-1.5}$
n_s	$0.9670^{+0.0086}_{-0.0084}$	D_{810}	2534^{+27}_{-27}	$D_M(2.33)$	5764^{+31}_{-27}
y_{cal}	$1.0005^{+0.0050}_{-0.0050}$	D_{1420}	815^{+10}_{-10}	$f\sigma_8(0.15)$	$0.455^{+0.017}_{-0.018}$
A_{217}^{CIB}	44^{+20}_{-20}	D_{2000}	$230.0^{+3.6}_{-3.5}$	$\sigma_8(0.15)$	$0.748^{+0.022}_{-0.028}$
$\xi^{tSZ-CIB}$	—	$n_{s,0.002}$	$0.9670^{+0.0086}_{-0.0084}$	$f\sigma_8(0.38)$	$0.474^{+0.016}_{-0.017}$
A_{143}^{tSZ}	$4.4^{+3.8}_{-4.2}$	Y_P	$0.24533^{+0.00016}_{-0.00016}$	$\sigma_8(0.38)$	$0.663^{+0.019}_{-0.025}$
A_{100}^{PS}	252^{+60}_{-50}	Y_P^{BBN}	$0.24666^{+0.00016}_{-0.00016}$	$f\sigma_8(0.51)$	$0.473^{+0.015}_{-0.016}$
A_{143}^{PS}	44^{+20}_{-20}	$10^5 D/H$	$2.614^{+0.072}_{-0.069}$	$\sigma_8(0.51)$	$0.621^{+0.018}_{-0.023}$
A_{217}^{PS}	108^{+30}_{-30}	Age/Gyr	$13.801^{+0.071}_{-0.063}$	$f\sigma_8(0.61)$	$0.468^{+0.014}_{-0.016}$
A^{kSZ}	—	z_*	$1090.01^{+0.57}_{-0.57}$	$\sigma_8(0.61)$	$0.591^{+0.017}_{-0.022}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	r_*	$144.82^{+0.66}_{-0.64}$	$f\sigma_8(2.33)$	$0.2980^{+0.0079}_{-0.0097}$
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	$100\theta_*$	$1.04123^{+0.00082}_{-0.00083}$	$\sigma_8(2.33)$	$0.3072^{+0.0088}_{-0.011}$
H_0	$67.7^{+1.1}_{-1.2}$	$D_M(z_*)/\text{Gpc}$	$13.909^{+0.063}_{-0.062}$	f_{2000}^{143}	31^{+6}_{-6}
Ω_Λ	$0.690^{+0.014}_{-0.015}$	z_{drag}	$1059.52^{+0.83}_{-0.84}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-4}
Ω_m	$0.310^{+0.015}_{-0.014}$	r_{drag}	$147.54^{+0.71}_{-0.69}$	f_{2000}^{217}	$107.6^{+3.8}_{-3.8}$
$\Omega_m h^2$	$0.1418^{+0.0023}_{-0.0023}$	k_D	$0.14028^{+0.00087}_{-0.00089}$	χ_{small}^2	$396.9 (\nu: 1.7)$
$\Omega_\nu h^2$	< 0.00170	$100\theta_D$	$0.16102^{+0.00051}_{-0.00049}$	χ_{lowl}^2	$22.99 (\nu: 0.4)$
$\Omega_m h^3$	$0.09599^{+0.00098}_{-0.0011}$	z_{eq}	3374^{+59}_{-60}	$\chi_{6\text{DF}}^2$	$0.056 (\nu: 0.0)$
σ_8	$0.809^{+0.024}_{-0.030}$	k_{eq}	$0.01030^{+0.00018}_{-0.00018}$	χ_{MGS}^2	$1.41 (\nu: 0.2)$
S_8	$0.822^{+0.032}_{-0.036}$	$100\theta_{\text{eq}}$	$0.818^{+0.011}_{-0.011}$	χ_{DR12BAO}^2	$4.7 (\nu: 1.3)$
$\sigma_8 \Omega_m^{0.5}$	$0.450^{+0.018}_{-0.020}$	$100\theta_{s,\text{eq}}$	$0.4520^{+0.0059}_{-0.0056}$	χ_{prior}^2	$7.5 (\nu: 6.5)$
$\sigma_8 \Omega_m^{0.25}$	$0.604^{+0.021}_{-0.023}$	$H(0.15)$	$72.94^{+0.99}_{-1.0}$	χ_{BAO}^2	$6.1 (\nu: 0.9)$
$\sigma_8/h^{0.5}$	$0.984^{+0.031}_{-0.036}$	$D_M(0.15)$	$641^{+10}_{-9.6}$	χ_{CMB}^2	$4338 (\nu: 4948256.3)$
$r_{\text{drag}} h$	$99.9^{+1.9}_{-1.9}$	$H(0.38)$	$83.02^{+0.75}_{-0.79}$		

$\bar{\chi}_{\text{eff}}^2 = 7497.29$; $\Delta \bar{\chi}_{\text{eff}}^2 = 6291.93$; $R - 1 = 0.00759$

6.12 base_mnu_CamSpecHM_TT_lowl_lowE_BAO_post_Pantheon18_zre6p5/base_mnu_plikHM_TT_lowl_lowE_BAO_post_Pantheon18_zre

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02223^{+0.00037}_{-0.00037}$	$\langle d^2 \rangle^{1/2}$	$2.427^{+0.056}_{-0.060}$	$D_M(0.38)$	1527^{+19}_{-19}
$\Omega_c h^2$	$0.1188^{+0.0024}_{-0.0025}$	z_{re}	< 8.96	$H(0.51)$	$89.75^{+0.60}_{-0.64}$
$100\theta_{MC}$	$1.04105^{+0.00082}_{-0.00084}$	$10^9 A_s$	$2.094^{+0.061}_{-0.056}$	$D_M(0.51)$	1978^{+23}_{-22}
τ	$0.055^{+0.013}_{-0.012}$	$10^9 A_s e^{-2\tau}$	$1.876^{+0.023}_{-0.023}$	$H(0.61)$	$95.35^{+0.54}_{-0.56}$
Σm_ν	< 0.151	D_{40}	1223^{+25}_{-25}	$D_M(0.61)$	2303^{+25}_{-24}
$\ln(10^{10} A_s)$	$3.041^{+0.029}_{-0.027}$	D_{220}	5715^{+80}_{-78}	$H(2.33)$	$235.6^{+1.5}_{-1.4}$
n_s	$0.9674^{+0.0084}_{-0.0083}$	D_{810}	2534^{+27}_{-27}	$D_M(2.33)$	5763^{+29}_{-27}
y_{cal}	$1.0005^{+0.0050}_{-0.0050}$	D_{1420}	$815^{+10}_{-9.9}$	$f\sigma_8(0.15)$	$0.454^{+0.016}_{-0.018}$
A_{217}^{CIB}	44^{+20}_{-20}	D_{2000}	$230.0^{+3.6}_{-3.4}$	$\sigma_8(0.15)$	$0.748^{+0.022}_{-0.027}$
$\xi^{tSZ-CIB}$	—	$n_{s,0.002}$	$0.9674^{+0.0084}_{-0.0083}$	$f\sigma_8(0.38)$	$0.473^{+0.015}_{-0.016}$
A_{143}^{tSZ}	$4.4^{+3.8}_{-4.3}$	Y_P	$0.24534^{+0.00015}_{-0.00016}$	$\sigma_8(0.38)$	$0.664^{+0.019}_{-0.024}$
A_{100}^{PS}	252^{+60}_{-50}	Y_P^{BBN}	$0.24666^{+0.00015}_{-0.00016}$	$f\sigma_8(0.51)$	$0.472^{+0.014}_{-0.016}$
A_{143}^{PS}	44^{+20}_{-20}	$10^5 D/H$	$2.612^{+0.071}_{-0.069}$	$\sigma_8(0.51)$	$0.621^{+0.018}_{-0.022}$
A_{217}^{PS}	108^{+30}_{-30}	Age/Gyr	$13.798^{+0.067}_{-0.062}$	$f\sigma_8(0.61)$	$0.468^{+0.014}_{-0.015}$
A^{kSZ}	—	z_*	$1089.99^{+0.56}_{-0.56}$	$\sigma_8(0.61)$	$0.591^{+0.017}_{-0.021}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	r_*	$144.85^{+0.64}_{-0.62}$	$f\sigma_8(2.33)$	$0.2982^{+0.0079}_{-0.0094}$
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	$100\theta_*$	$1.04124^{+0.00081}_{-0.00083}$	$\sigma_8(2.33)$	$0.3075^{+0.0087}_{-0.011}$
H_0	$67.8^{+1.1}_{-1.1}$	$D_M(z_*)/\text{Gpc}$	$13.911^{+0.062}_{-0.061}$	f_{2000}^{143}	31^{+6}_{-6}
Ω_Λ	$0.692^{+0.014}_{-0.014}$	z_{drag}	$1059.53^{+0.86}_{-0.86}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-4}
Ω_m	$0.308^{+0.014}_{-0.014}$	r_{drag}	$147.57^{+0.70}_{-0.68}$	f_{2000}^{217}	$107.5^{+3.8}_{-3.9}$
$\Omega_m h^2$	$0.1417^{+0.0022}_{-0.0022}$	k_D	$0.14026^{+0.00086}_{-0.00089}$	χ_{small}^2	$396.9 (\nu: 1.7)$
$\Omega_\nu h^2$	< 0.00163	$100\theta_D$	$0.16101^{+0.00050}_{-0.00049}$	χ_{lowl}^2	$22.94 (\nu: 0.4)$
$\Omega_m h^3$	$0.09601^{+0.00098}_{-0.0011}$	z_{eq}	3370^{+57}_{-58}	χ_{JLA}^2	$1035.02 (\nu: 0.1)$
σ_8	$0.809^{+0.024}_{-0.029}$	k_{eq}	$0.01029^{+0.00017}_{-0.00018}$	$\chi_{6\text{DF}}^2$	$0.045 (\nu: 0.0)$
S_8	$0.821^{+0.031}_{-0.036}$	$100\theta_{\text{eq}}$	$0.819^{+0.011}_{-0.011}$	χ_{MGS}^2	$1.49 (\nu: 0.1)$
$\sigma_8 \Omega_m^{0.5}$	$0.450^{+0.017}_{-0.020}$	$100\theta_{\text{s,eq}}$	$0.4523^{+0.0058}_{-0.0054}$	χ_{DR12BAO}^2	$4.4 (\nu: 0.9)$
$\sigma_8 \Omega_m^{0.25}$	$0.603^{+0.020}_{-0.022}$	$H(0.15)$	$73.02^{+0.94}_{-0.97}$	χ_{prior}^2	$7.5 (\nu: 6.5)$
$\sigma_8/h^{0.5}$	$0.983^{+0.031}_{-0.035}$	$D_M(0.15)$	$639.9^{+9.6}_{-9.1}$	χ_{BAO}^2	$5.9 (\nu: 0.6)$
$r_{\text{drag}} h$	$100.0^{+1.8}_{-1.8}$	$H(0.38)$	$83.07^{+0.72}_{-0.75}$	χ_{CMB}^2	$4338 (\nu: 4948201.4)$

$$\bar{\chi}_{\text{eff}}^2 = 8532.17; \Delta \bar{\chi}_{\text{eff}}^2 = 6291.88; R - 1 = 0.00943$$

6.13 base_mnu_CamSpecHM_TTTEEE_lowl_lowE_BAO/base_mnu_plikHM_TTTEEE_lowl_lowE_BAO

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02237^{+0.00028}_{-0.00029}$	$\langle d^2 \rangle^{1/2}$	$2.431^{+0.054}_{-0.055}$	$D_M(0.38)$	1527^{+19}_{-17}
$\Omega_c h^2$	$0.1192^{+0.0021}_{-0.0022}$	z_{re}	$7.6^{+1.6}_{-1.6}$	$H(0.51)$	$89.81^{+0.57}_{-0.60}$
$100\theta_{MC}$	$1.04098^{+0.00058}_{-0.00059}$	$10^9 A_s$	$2.094^{+0.071}_{-0.066}$	$D_M(0.51)$	1978^{+23}_{-20}
τ	$0.054^{+0.016}_{-0.015}$	$10^9 A_s e^{-2\tau}$	$1.879^{+0.023}_{-0.023}$	$H(0.61)$	$95.42^{+0.49}_{-0.52}$
Σm_ν	< 0.144	D_{40}	1226^{+24}_{-24}	$D_M(0.61)$	2302^{+25}_{-22}
$\ln(10^{10} A_s)$	$3.041^{+0.033}_{-0.032}$	D_{220}	5729^{+75}_{-77}	$H(2.33)$	$236.0^{+1.3}_{-1.3}$
n_s	$0.9671^{+0.0077}_{-0.0075}$	D_{810}	2537^{+27}_{-27}	$D_M(2.33)$	5758^{+26}_{-24}
y_{cal}	$1.0006^{+0.0049}_{-0.0049}$	D_{1420}	$817.0^{+9.5}_{-9.6}$	$f\sigma_8(0.15)$	$0.456^{+0.014}_{-0.016}$
A_{217}^{CIB}	43^{+10}_{-20}	D_{2000}	$230.8^{+3.2}_{-3.2}$	$\sigma_8(0.15)$	$0.749^{+0.021}_{-0.025}$
$\xi^{tSZ-CIB}$	—	$n_{s,0.002}$	$0.9671^{+0.0077}_{-0.0075}$	$f\sigma_8(0.38)$	$0.475^{+0.014}_{-0.014}$
A_{143}^{tSZ}	$4.7^{+3.9}_{-4.3}$	Y_P	$0.24539^{+0.00011}_{-0.00012}$	$\sigma_8(0.38)$	$0.664^{+0.019}_{-0.023}$
A_{100}^{PS}	249^{+60}_{-50}	Y_P^{BBN}	$0.24672^{+0.00011}_{-0.00012}$	$f\sigma_8(0.51)$	$0.473^{+0.013}_{-0.014}$
A_{143}^{PS}	42^{+20}_{-20}	$10^5 D/H$	$2.585^{+0.054}_{-0.051}$	$\sigma_8(0.51)$	$0.622^{+0.018}_{-0.021}$
A_{217}^{PS}	109^{+30}_{-30}	Age/Gyr	$13.786^{+0.060}_{-0.055}$	$f\sigma_8(0.61)$	$0.469^{+0.013}_{-0.014}$
A^{kSZ}	—	z_*	$1089.84^{+0.45}_{-0.45}$	$\sigma_8(0.61)$	$0.592^{+0.017}_{-0.020}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	r_*	$144.64^{+0.54}_{-0.51}$	$f\sigma_8(2.33)$	$0.2984^{+0.0078}_{-0.0090}$
c_{217}	$0.9996^{+0.0037}_{-0.0027}$	$100\theta_*$	$1.04116^{+0.00058}_{-0.00058}$	$\sigma_8(2.33)$	$0.3077^{+0.0086}_{-0.010}$
H_0	$67.8^{+1.0}_{-1.1}$	$D_M(z_*)/\text{Gpc}$	$13.892^{+0.052}_{-0.049}$	f_{2000}^{143}	29^{+5}_{-5}
Ω_Λ	$0.690^{+0.013}_{-0.014}$	z_{drag}	$1059.88^{+0.62}_{-0.64}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
Ω_m	$0.310^{+0.014}_{-0.013}$	r_{drag}	$147.31^{+0.57}_{-0.53}$	f_{2000}^{217}	$106.8^{+3.6}_{-3.6}$
$\Omega_m h^2$	$0.1422^{+0.0020}_{-0.0020}$	k_D	$0.14064^{+0.00064}_{-0.00070}$	χ_{small}^2	$397.0 (\nu: 1.7)$
$\Omega_\nu h^2$	< 0.00155	$100\theta_D$	$0.16079^{+0.00038}_{-0.00036}$	χ_{lowl}^2	$23.05 (\nu: 0.4)$
$\Omega_m h^3$	$0.09632^{+0.00081}_{-0.00087}$	z_{eq}	3383^{+48}_{-50}	$\chi_{6\text{DF}}^2$	$0.050 (\nu: 0.0)$
σ_8	$0.811^{+0.023}_{-0.027}$	k_{eq}	$0.01033^{+0.00015}_{-0.00015}$	χ_{MGS}^2	$1.37 (\nu: 0.1)$
S_8	$0.824^{+0.028}_{-0.030}$	$100\theta_{\text{eq}}$	$0.8168^{+0.0094}_{-0.0088}$	χ_{DR12BAO}^2	$4.6 (\nu: 1.1)$
$\sigma_8 \Omega_m^{0.5}$	$0.451^{+0.015}_{-0.017}$	$100\theta_{\text{s,eq}}$	$0.4512^{+0.0049}_{-0.0046}$	χ_{prior}^2	$9.7 (\nu: 9.9)$
$\sigma_8 \Omega_m^{0.25}$	$0.605^{+0.018}_{-0.020}$	$H(0.15)$	$73.02^{+0.87}_{-0.96}$	χ_{BAO}^2	$6.1 (\nu: 0.7)$
$\sigma_8/h^{0.5}$	$0.985^{+0.029}_{-0.031}$	$D_M(0.15)$	$640.0^{+9.5}_{-8.4}$	χ_{CMB}^2	$7357 (\nu: 10476533.6)$
$r_{\text{drag}} h$	$99.8^{+1.7}_{-1.7}$	$H(0.38)$	$83.11^{+0.66}_{-0.75}$		

Best-fit $\chi_{\text{eff}}^2 = 11925.28$; $\Delta\chi_{\text{eff}}^2 = 9155.19$; $\bar{\chi}_{\text{eff}}^2 = 11948.38$; $\Delta\bar{\chi}_{\text{eff}}^2 = 9151.06$; $R - 1 = 0.01113$
 χ_{eff}^2 : BAO - 6DF: 0.00 (Δ -0.01) MGS: 1.61 (Δ 0.14) DR12BAO: 3.59 (Δ -0.22) CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.85 (Δ -0.23) commander_dx12_v3_2_29: 22.91 (Δ -0.30) CamSpec like_10.7HM_1400_unified: 11499.17

6.14 base_mnu_CamSpecHM_TTTEEE_lowl_lowE_BAO_post_Pantheon18/base_mnu_plikHM_TTTEEE_lowl_lowE_BAO_post_Pantheon18

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02238^{+0.00028}_{-0.00029}$	$\langle d^2 \rangle^{1/2}$	$2.430^{+0.053}_{-0.055}$	$D_M(0.38)$	1525^{+18}_{-16}
$\Omega_c h^2$	$0.1191^{+0.0020}_{-0.0021}$	z_{re}	$7.6^{+1.6}_{-1.6}$	$H(0.51)$	$89.85^{+0.52}_{-0.60}$
$100\theta_{MC}$	$1.04099^{+0.00058}_{-0.00058}$	$10^9 A_s$	$2.094^{+0.070}_{-0.066}$	$D_M(0.51)$	1977^{+21}_{-19}
τ	$0.054^{+0.016}_{-0.015}$	$10^9 A_s e^{-2\tau}$	$1.878^{+0.022}_{-0.022}$	$H(0.61)$	$95.45^{+0.47}_{-0.49}$
Σm_ν	< 0.136	D_{40}	1225^{+24}_{-24}	$D_M(0.61)$	2300^{+23}_{-21}
$\ln(10^{10} A_s)$	$3.042^{+0.033}_{-0.032}$	D_{220}	5729^{+74}_{-78}	$H(2.33)$	$235.9^{+1.2}_{-1.2}$
n_s	$0.9673^{+0.0077}_{-0.0073}$	D_{810}	2537^{+27}_{-27}	$D_M(2.33)$	5757^{+25}_{-23}
y_{cal}	$1.0006^{+0.0049}_{-0.0049}$	D_{1420}	$817.0^{+9.5}_{-9.6}$	$f\sigma_8(0.15)$	$0.455^{+0.014}_{-0.015}$
A_{217}^{CIB}	43^{+10}_{-20}	D_{2000}	$230.8^{+3.2}_{-3.2}$	$\sigma_8(0.15)$	$0.750^{+0.021}_{-0.024}$
$\xi^{tSZ-CIB}$	—	$n_{s,0.002}$	$0.9673^{+0.0077}_{-0.0073}$	$f\sigma_8(0.38)$	$0.474^{+0.014}_{-0.014}$
A_{143}^{tSZ}	$4.7^{+3.9}_{-4.3}$	Y_P	$0.24540^{+0.00010}_{-0.00012}$	$\sigma_8(0.38)$	$0.665^{+0.018}_{-0.022}$
A_{100}^{PS}	248^{+60}_{-50}	Y_P^{BBN}	$0.24672^{+0.00011}_{-0.00012}$	$f\sigma_8(0.51)$	$0.473^{+0.013}_{-0.014}$
A_{143}^{PS}	42^{+20}_{-20}	$10^5 D/H$	$2.584^{+0.054}_{-0.051}$	$\sigma_8(0.51)$	$0.622^{+0.017}_{-0.020}$
A_{217}^{PS}	109^{+20}_{-30}	Age/Gyr	$13.783^{+0.057}_{-0.053}$	$f\sigma_8(0.61)$	$0.469^{+0.013}_{-0.013}$
A^{kSZ}	—	z_*	$1089.82^{+0.45}_{-0.44}$	$\sigma_8(0.61)$	$0.592^{+0.016}_{-0.019}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	r_*	$144.66^{+0.54}_{-0.49}$	$f\sigma_8(2.33)$	$0.2986^{+0.0075}_{-0.0086}$
c_{217}	$0.9996^{+0.0037}_{-0.0027}$	$100\theta_*$	$1.04117^{+0.00058}_{-0.00058}$	$\sigma_8(2.33)$	$0.3080^{+0.0083}_{-0.0098}$
H_0	$67.83^{+0.95}_{-1.0}$	$D_M(z_*)/\text{Gpc}$	$13.894^{+0.051}_{-0.047}$	f_{2000}^{143}	29^{+6}_{-5}
Ω_Λ	$0.691^{+0.012}_{-0.013}$	z_{drag}	$1059.89^{+0.61}_{-0.65}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
Ω_m	$0.309^{+0.013}_{-0.012}$	r_{drag}	$147.32^{+0.57}_{-0.52}$	f_{2000}^{217}	$106.8^{+3.6}_{-3.6}$
$\Omega_m h^2$	$0.1420^{+0.0019}_{-0.0019}$	k_D	$0.14063^{+0.00064}_{-0.00069}$	χ_{simall}^2	$397.1 (\nu: 1.7)$
$\Omega_\nu h^2$	< 0.00147	$100\theta_D$	$0.16079^{+0.00038}_{-0.00036}$	χ_{lowl}^2	$23.01 (\nu: 0.4)$
$\Omega_m h^3$	$0.09634^{+0.00080}_{-0.00084}$	z_{eq}	3381^{+47}_{-49}	χ_{JLA}^2	$1035.01 (\nu: 0.0)$
σ_8	$0.811^{+0.023}_{-0.026}$	k_{eq}	$0.01032^{+0.00014}_{-0.00015}$	$\chi_{6\text{DF}}^2$	$0.041 (\nu: 0.0)$
S_8	$0.823^{+0.027}_{-0.030}$	$100\theta_{\text{eq}}$	$0.8172^{+0.0092}_{-0.0086}$	χ_{MGS}^2	$1.43 (\nu: 0.1)$
$\sigma_8 \Omega_m^{0.5}$	$0.451^{+0.015}_{-0.016}$	$100\theta_{\text{s,eq}}$	$0.4514^{+0.0047}_{-0.0044}$	χ_{DR12BAO}^2	$4.4 (\nu: 0.8)$
$\sigma_8 \Omega_m^{0.25}$	$0.605^{+0.018}_{-0.019}$	$H(0.15)$	$73.09^{+0.82}_{-0.90}$	χ_{prior}^2	$9.7 (\nu: 10.0)$
$\sigma_8/h^{0.5}$	$0.985^{+0.028}_{-0.030}$	$D_M(0.15)$	$639.4^{+8.9}_{-8.0}$	χ_{BAO}^2	$5.91 (\nu: 0.5)$
$r_{\text{drag}} h$	$99.9^{+1.6}_{-1.6}$	$H(0.38)$	$83.15^{+0.63}_{-0.70}$	χ_{CMB}^2	$7357 (\nu: 10476394.6)$

Best-fit $\chi_{\text{eff}}^2 = 12960.09$; $\Delta\chi_{\text{eff}}^2 = 9155.15$; $\bar{\chi}_{\text{eff}}^2 = 12983.16$; $\Delta\bar{\chi}_{\text{eff}}^2 = 9151.01$; $R - 1 = 0.01385$
 χ_{eff}^2 : BAO - 6DF: 0.00 (Δ -0.00) MGS: 1.61 (Δ 0.07) DR12BAO: 3.60 (Δ -0.11) CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.86 (Δ -0.36) commander_dx12_v3_2_29: 22.93 (Δ -0.15) CamSpec like_10.7HM_1400_unified: 11499.25 SN - JLA Pantheon18: 1034.82 (Δ -0.02)

6.15 base_mnu_CamSpecHM_TTTEEE_lowl_lowE_BAO_post_zre6p5/base_mnu_plikHM_TTTEEE_lowl_lowE_BAO_post_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02238^{+0.00028}_{-0.00029}$	$\langle d^2 \rangle^{1/2}$	$2.433^{+0.053}_{-0.054}$	$D_M(0.38)$	1527^{+19}_{-17}
$\Omega_c h^2$	$0.1192^{+0.0021}_{-0.0022}$	z_{re}	< 8.96	$H(0.51)$	$89.81^{+0.57}_{-0.60}$
$100\theta_{MC}$	$1.04098^{+0.00058}_{-0.00059}$	$10^9 A_s$	$2.099^{+0.062}_{-0.056}$	$D_M(0.51)$	1978^{+23}_{-20}
τ	$0.055^{+0.013}_{-0.012}$	$10^9 A_s e^{-2\tau}$	$1.879^{+0.023}_{-0.023}$	$H(0.61)$	$95.42^{+0.49}_{-0.52}$
Σm_ν	< 0.145	D_{40}	1226^{+24}_{-24}	$D_M(0.61)$	2302^{+25}_{-22}
$\ln(10^{10} A_s)$	$3.044^{+0.029}_{-0.027}$	D_{220}	5728^{+75}_{-77}	$H(2.33)$	$236.0^{+1.3}_{-1.3}$
n_s	$0.9672^{+0.0077}_{-0.0075}$	D_{810}	2537^{+27}_{-27}	$D_M(2.33)$	5758^{+26}_{-24}
y_{cal}	$1.0006^{+0.0049}_{-0.0049}$	D_{1420}	$817.0^{+9.5}_{-9.6}$	$f\sigma_8(0.15)$	$0.456^{+0.014}_{-0.015}$
A_{217}^{CIB}	43^{+10}_{-20}	D_{2000}	$230.8^{+3.2}_{-3.2}$	$\sigma_8(0.15)$	$0.750^{+0.021}_{-0.025}$
$\xi^{tSZ-CIB}$	—	$n_{s,0.002}$	$0.9672^{+0.0077}_{-0.0075}$	$f\sigma_8(0.38)$	$0.475^{+0.014}_{-0.014}$
A_{143}^{tSZ}	$4.7^{+3.9}_{-4.3}$	Y_P	$0.24540^{+0.00011}_{-0.00012}$	$\sigma_8(0.38)$	$0.665^{+0.018}_{-0.023}$
A_{100}^{PS}	248^{+60}_{-50}	Y_P^{BBN}	$0.24672^{+0.00011}_{-0.00012}$	$f\sigma_8(0.51)$	$0.474^{+0.013}_{-0.014}$
A_{143}^{PS}	42^{+20}_{-20}	$10^5 D/H$	$2.585^{+0.054}_{-0.051}$	$\sigma_8(0.51)$	$0.622^{+0.017}_{-0.021}$
A_{217}^{PS}	109^{+30}_{-30}	Age/Gyr	$13.786^{+0.060}_{-0.055}$	$f\sigma_8(0.61)$	$0.469^{+0.013}_{-0.014}$
A^{kSZ}	—	z_*	$1089.84^{+0.45}_{-0.45}$	$\sigma_8(0.61)$	$0.592^{+0.016}_{-0.020}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	r_*	$144.65^{+0.54}_{-0.51}$	$f\sigma_8(2.33)$	$0.2987^{+0.0076}_{-0.0090}$
c_{217}	$0.9996^{+0.0037}_{-0.0027}$	$100\theta_*$	$1.04116^{+0.00058}_{-0.00058}$	$\sigma_8(2.33)$	$0.3080^{+0.0084}_{-0.010}$
H_0	$67.8^{+1.0}_{-1.1}$	$D_M(z_*)/\text{Gpc}$	$13.893^{+0.052}_{-0.049}$	f_{2000}^{143}	29^{+5}_{-5}
Ω_Λ	$0.690^{+0.013}_{-0.014}$	z_{drag}	$1059.89^{+0.62}_{-0.64}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
Ω_m	$0.310^{+0.014}_{-0.013}$	r_{drag}	$147.31^{+0.58}_{-0.53}$	f_{2000}^{217}	$106.8^{+3.6}_{-3.6}$
$\Omega_m h^2$	$0.1421^{+0.0020}_{-0.0020}$	k_D	$0.14064^{+0.00064}_{-0.00070}$	χ_{small}^2	$397.0 (\nu: 1.7)$
$\Omega_\nu h^2$	< 0.00156	$100\theta_D$	$0.16079^{+0.00038}_{-0.00036}$	χ_{lowl}^2	$23.06 (\nu: 0.4)$
$\Omega_m h^3$	$0.09632^{+0.00081}_{-0.00087}$	z_{eq}	3382^{+48}_{-50}	$\chi_{6\text{DF}}^2$	$0.050 (\nu: 0.0)$
σ_8	$0.811^{+0.023}_{-0.027}$	k_{eq}	$0.01032^{+0.00015}_{-0.00015}$	χ_{MGS}^2	$1.38 (\nu: 0.1)$
S_8	$0.824^{+0.028}_{-0.030}$	$100\theta_{\text{eq}}$	$0.8169^{+0.0094}_{-0.0089}$	χ_{DR12BAO}^2	$4.6 (\nu: 1.1)$
$\sigma_8 \Omega_m^{0.5}$	$0.451^{+0.015}_{-0.016}$	$100\theta_{\text{s,eq}}$	$0.4513^{+0.0049}_{-0.0046}$	χ_{prior}^2	$9.7 (\nu: 9.9)$
$\sigma_8 \Omega_m^{0.25}$	$0.605^{+0.018}_{-0.020}$	$H(0.15)$	$73.03^{+0.87}_{-0.96}$	χ_{BAO}^2	$6.1 (\nu: 0.7)$
$\sigma_8/h^{0.5}$	$0.986^{+0.028}_{-0.031}$	$D_M(0.15)$	$639.9^{+9.5}_{-8.5}$	χ_{CMB}^2	$7357 (\nu: 10476516.7)$
$r_{\text{drag}} h$	$99.8^{+1.7}_{-1.7}$	$H(0.38)$	$83.11^{+0.66}_{-0.75}$		

$$\bar{\chi}_{\text{eff}}^2 = 11948.19; \Delta\bar{\chi}_{\text{eff}}^2 = 9151.06; R - 1 = 0.01072$$

6.16 base_mnu_CamSpecHM_TTTEEE_lowl_lowE_BAO_post_Pantheon18_zre6p5/base_mnu_plikHM_TTTEEE_lowl_lowE_BAO_post_Pan

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02238^{+0.00028}_{-0.00029}$	$\langle d^2 \rangle^{1/2}$	$2.432^{+0.052}_{-0.053}$	$D_M(0.38)$	1525^{+18}_{-16}
$\Omega_c h^2$	$0.1191^{+0.0020}_{-0.0021}$	z_{re}	< 8.98	$H(0.51)$	$89.85^{+0.52}_{-0.60}$
$100\theta_{MC}$	$1.04099^{+0.00058}_{-0.00058}$	$10^9 A_s$	$2.099^{+0.062}_{-0.056}$	$D_M(0.51)$	1976^{+21}_{-19}
τ	$0.055^{+0.013}_{-0.012}$	$10^9 A_s e^{-2\tau}$	$1.878^{+0.022}_{-0.022}$	$H(0.61)$	$95.45^{+0.47}_{-0.49}$
Σm_ν	< 0.137	D_{40}	1226^{+24}_{-24}	$D_M(0.61)$	2300^{+23}_{-21}
$\ln(10^{10} A_s)$	$3.044^{+0.029}_{-0.027}$	D_{220}	5729^{+75}_{-78}	$H(2.33)$	$235.9^{+1.2}_{-1.2}$
n_s	$0.9674^{+0.0076}_{-0.0074}$	D_{810}	2537^{+27}_{-27}	$D_M(2.33)$	5757^{+25}_{-23}
y_{cal}	$1.0006^{+0.0049}_{-0.0049}$	D_{1420}	$817.0^{+9.5}_{-9.6}$	$f\sigma_8(0.15)$	$0.456^{+0.014}_{-0.015}$
A_{217}^{CIB}	43^{+10}_{-20}	D_{2000}	$230.8^{+3.2}_{-3.1}$	$\sigma_8(0.15)$	$0.751^{+0.020}_{-0.024}$
$\xi^{tSZ-CIB}$	—	$n_{s,0.002}$	$0.9674^{+0.0076}_{-0.0074}$	$f\sigma_8(0.38)$	$0.475^{+0.013}_{-0.014}$
A_{143}^{tSZ}	$4.7^{+3.9}_{-4.3}$	Y_P	$0.24540^{+0.00010}_{-0.00012}$	$\sigma_8(0.38)$	$0.666^{+0.018}_{-0.022}$
A_{100}^{PS}	248^{+60}_{-50}	Y_P^{BBN}	$0.24673^{+0.00010}_{-0.00012}$	$f\sigma_8(0.51)$	$0.474^{+0.013}_{-0.014}$
A_{143}^{PS}	42^{+20}_{-20}	$10^5 D/H$	$2.584^{+0.054}_{-0.050}$	$\sigma_8(0.51)$	$0.623^{+0.017}_{-0.020}$
A_{217}^{PS}	109^{+20}_{-30}	Age/Gyr	$13.782^{+0.057}_{-0.053}$	$f\sigma_8(0.61)$	$0.469^{+0.012}_{-0.013}$
A^{kSZ}	—	z_*	$1089.82^{+0.45}_{-0.44}$	$\sigma_8(0.61)$	$0.593^{+0.016}_{-0.019}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	r_*	$144.67^{+0.53}_{-0.50}$	$f\sigma_8(2.33)$	$0.2990^{+0.0073}_{-0.0085}$
c_{217}	$0.9996^{+0.0037}_{-0.0027}$	$100\theta_*$	$1.04117^{+0.00058}_{-0.00058}$	$\sigma_8(2.33)$	$0.3083^{+0.0081}_{-0.0097}$
H_0	$67.84^{+0.95}_{-1.0}$	$D_M(z_*)/\text{Gpc}$	$13.895^{+0.051}_{-0.047}$	f_{2000}^{143}	29^{+6}_{-5}
Ω_Λ	$0.691^{+0.012}_{-0.013}$	z_{drag}	$1059.90^{+0.61}_{-0.65}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
Ω_m	$0.309^{+0.013}_{-0.012}$	r_{drag}	$147.33^{+0.57}_{-0.52}$	f_{2000}^{217}	$106.8^{+3.5}_{-3.6}$
$\Omega_m h^2$	$0.1420^{+0.0019}_{-0.0019}$	k_D	$0.14062^{+0.00064}_{-0.00069}$	χ_{small}^2	$397.0 (\nu: 1.8)$
$\Omega_\nu h^2$	< 0.00148	$100\theta_D$	$0.16079^{+0.00038}_{-0.00035}$	χ_{lowl}^2	$23.02 (\nu: 0.4)$
$\Omega_m h^3$	$0.09634^{+0.00080}_{-0.00084}$	z_{eq}	3380^{+47}_{-49}	χ_{JLA}^2	$1035.01 (\nu: 0.0)$
σ_8	$0.812^{+0.022}_{-0.026}$	k_{eq}	$0.01032^{+0.00014}_{-0.00015}$	$\chi_{6\text{DF}}^2$	$0.040 (\nu: 0.0)$
S_8	$0.823^{+0.027}_{-0.029}$	$100\theta_{\text{eq}}$	$0.8173^{+0.0092}_{-0.0086}$	χ_{MGS}^2	$1.44 (\nu: 0.1)$
$\sigma_8 \Omega_m^{0.5}$	$0.451^{+0.015}_{-0.016}$	$100\theta_{\text{s,eq}}$	$0.4515^{+0.0047}_{-0.0044}$	χ_{DR12BAO}^2	$4.4 (\nu: 0.8)$
$\sigma_8 \Omega_m^{0.25}$	$0.605^{+0.018}_{-0.019}$	$H(0.15)$	$73.09^{+0.82}_{-0.90}$	χ_{prior}^2	$9.6 (\nu: 10.0)$
$\sigma_8/h^{0.5}$	$0.986^{+0.027}_{-0.030}$	$D_M(0.15)$	$639.3^{+8.9}_{-8.0}$	χ_{BAO}^2	$5.90 (\nu: 0.5)$
$r_{\text{drag}} h$	$99.9^{+1.6}_{-1.6}$	$H(0.38)$	$83.16^{+0.63}_{-0.70}$	χ_{CMB}^2	$7357 (\nu: 10476295.0)$

$\bar{\chi}_{\text{eff}}^2 = 12982.95$; $\Delta\bar{\chi}_{\text{eff}}^2 = 9150.98$; $R - 1 = 0.01405$

6.17 base_mnu_CamSpecHM_TTTEEE_lowl_lowE_lensing_BAO/base_mnu_plikHM_TTTEEE_lowl_lowE_lensing_BAO

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02238^{+0.00028}_{-0.00029}$	$\langle d^2 \rangle^{1/2}$	$2.435^{+0.041}_{-0.041}$	$D_M(0.38)$	1526^{+18}_{-17}
$\Omega_c h^2$	$0.1192^{+0.0018}_{-0.0018}$	z_{re}	$7.7^{+1.4}_{-1.5}$	$H(0.51)$	$89.83^{+0.55}_{-0.59}$
$100\theta_{MC}$	$1.04097^{+0.00058}_{-0.00059}$	$10^9 A_s$	$2.097^{+0.062}_{-0.059}$	$D_M(0.51)$	1977^{+22}_{-20}
τ	$0.055^{+0.015}_{-0.014}$	$10^9 A_s e^{-2\tau}$	$1.879^{+0.021}_{-0.021}$	$H(0.61)$	$95.44^{+0.45}_{-0.53}$
Σm_ν	< 0.126	D_{40}	1227^{+23}_{-22}	$D_M(0.61)$	2301^{+23}_{-22}
$\ln(10^{10} A_s)$	$3.043^{+0.029}_{-0.028}$	D_{220}	5731^{+76}_{-75}	$H(2.33)$	$236.0^{+1.2}_{-1.2}$
n_s	$0.9668^{+0.0074}_{-0.0074}$	D_{810}	2537^{+26}_{-26}	$D_M(2.33)$	5757^{+25}_{-23}
y_{cal}	$1.0006^{+0.0049}_{-0.0049}$	D_{1420}	$816.9^{+9.4}_{-9.4}$	$f\sigma_8(0.15)$	$0.457^{+0.011}_{-0.011}$
A_{217}^{CIB}	43^{+20}_{-20}	D_{2000}	$230.8^{+3.1}_{-3.1}$	$\sigma_8(0.15)$	$0.751^{+0.016}_{-0.019}$
$\xi^{tSZ-CIB}$	—	$n_{s,0.002}$	$0.9668^{+0.0074}_{-0.0074}$	$f\sigma_8(0.38)$	$0.4754^{+0.0099}_{-0.011}$
A_{143}^{tSZ}	$4.7^{+3.9}_{-4.3}$	Y_P	$0.24540^{+0.00010}_{-0.00012}$	$\sigma_8(0.38)$	$0.666^{+0.015}_{-0.018}$
A_{100}^{PS}	249^{+60}_{-50}	Y_P^{BBN}	$0.24672^{+0.00010}_{-0.00012}$	$f\sigma_8(0.51)$	$0.4743^{+0.0094}_{-0.011}$
A_{143}^{PS}	42^{+20}_{-20}	$10^5 D/H$	$2.585^{+0.055}_{-0.050}$	$\sigma_8(0.51)$	$0.623^{+0.014}_{-0.017}$
A_{217}^{PS}	109^{+20}_{-30}	Age/Gyr	$13.783^{+0.057}_{-0.053}$	$f\sigma_8(0.61)$	$0.4695^{+0.0090}_{-0.010}$
A^{kSZ}	—	z_*	$1089.84^{+0.44}_{-0.43}$	$\sigma_8(0.61)$	$0.593^{+0.013}_{-0.016}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	r_*	$144.63^{+0.45}_{-0.45}$	$f\sigma_8(2.33)$	$0.2991^{+0.0062}_{-0.0072}$
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	$100\theta_*$	$1.04115^{+0.00057}_{-0.00058}$	$\sigma_8(2.33)$	$0.3085^{+0.0070}_{-0.0084}$
H_0	$67.80^{+0.95}_{-1.1}$	$D_M(z_*)/\text{Gpc}$	$13.892^{+0.044}_{-0.044}$	f_{2000}^{143}	29^{+5}_{-5}
Ω_Λ	$0.691^{+0.012}_{-0.014}$	z_{drag}	$1059.89^{+0.61}_{-0.65}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
Ω_m	$0.309^{+0.014}_{-0.012}$	r_{drag}	$147.29^{+0.49}_{-0.48}$	f_{2000}^{217}	$106.8^{+3.7}_{-3.6}$
$\Omega_m h^2$	$0.1421^{+0.0019}_{-0.0018}$	k_D	$0.14065^{+0.00060}_{-0.00064}$	χ^2_{lensing}	$9.32 (\nu: 0.3)$
$\Omega_\nu h^2$	< 0.00136	$100\theta_D$	$0.16079^{+0.00038}_{-0.00035}$	χ^2_{small}	$397.0 (\nu: 1.5)$
$\Omega_m h^3$	$0.09636^{+0.00074}_{-0.00079}$	z_{eq}	3384^{+42}_{-42}	χ^2_{lowl}	$23.14 (\nu: 0.3)$
σ_8	$0.813^{+0.018}_{-0.020}$	k_{eq}	$0.01033^{+0.00013}_{-0.00013}$	$\chi^2_{6\text{DF}}$	$0.046 (\nu: 0.0)$
S_8	$0.825^{+0.022}_{-0.022}$	$100\theta_{\text{eq}}$	$0.8167^{+0.0078}_{-0.0078}$	χ^2_{MGS}	$1.39 (\nu: 0.1)$
$\sigma_8 \Omega_m^{0.5}$	$0.452^{+0.012}_{-0.012}$	$100\theta_{s,\text{eq}}$	$0.4511^{+0.0040}_{-0.0040}$	χ^2_{DR12BAO}	$4.5 (\nu: 1.0)$
$\sigma_8 \Omega_m^{0.25}$	$0.606^{+0.013}_{-0.015}$	$H(0.15)$	$73.06^{+0.83}_{-0.95}$	χ^2_{prior}	$9.7 (\nu: 9.9)$
$\sigma_8/h^{0.5}$	$0.987^{+0.021}_{-0.022}$	$D_M(0.15)$	$639.6^{+9.0}_{-8.4}$	χ^2_{CMB}	$7366 (\nu: 10475734.4)$
$r_{\text{drag}} h$	$99.9^{+1.6}_{-1.7}$	$H(0.38)$	$83.14^{+0.63}_{-0.73}$	χ^2_{BAO}	$6.0 (\nu: 0.6)$

Best-fit $\chi^2_{\text{eff}} = 11934.26$; $\Delta\chi^2_{\text{eff}} = 9155.13$; $\bar{\chi}^2_{\text{eff}} = 11957.14$; $\Delta\bar{\chi}^2_{\text{eff}} = 9150.70$; $R - 1 = 0.00745$
 χ^2_{eff} : BAO - 6DF: 0.00 (Δ -0.00) MGS: 1.61 (Δ 0.07) DR12BAO: 3.60 (Δ -0.11) CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.89 (Δ -0.08) small_100x143_offlike5_EE_Aplanc
395.87 (Δ -0.02) commander_dx12_v3.2_29: 22.96 (Δ -0.12) CamSpec like_10.7HM_1400_unified: 11499.19

6.18 base_mnu_CamSpecHM_TTTEEE_lowl_lowE_lensing_BAO_post_Pantheon18/base_mnu_plikHM_TTTEEE_lowl_lowE_lensing_BAO_p

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02238^{+0.00028}_{-0.00029}$	z_{re}	$7.7^{+1.4}_{-1.5}$	$D_{\text{M}}(0.51)$	1976^{+21}_{-18}
$\Omega_c h^2$	$0.1191^{+0.0018}_{-0.0018}$	$10^9 A_s$	$2.098^{+0.062}_{-0.059}$	$H(0.61)$	$95.47^{+0.43}_{-0.50}$
$100\theta_{MC}$	$1.04098^{+0.00058}_{-0.00060}$	$10^9 A_s e^{-2\tau}$	$1.879^{+0.021}_{-0.020}$	$D_{\text{M}}(0.61)$	2300^{+23}_{-20}
τ	$0.055^{+0.015}_{-0.014}$	D_{40}	1227^{+22}_{-22}	$H(2.33)$	$235.9^{+1.2}_{-1.1}$
Σm_ν	< 0.120	D_{220}	5731^{+76}_{-75}	$D_{\text{M}}(2.33)$	5755^{+24}_{-22}
$\ln(10^{10} A_s)$	$3.043^{+0.029}_{-0.028}$	D_{810}	2537^{+26}_{-26}	$f\sigma_8(0.15)$	$0.456^{+0.011}_{-0.011}$
n_s	$0.9670^{+0.0073}_{-0.0074}$	D_{1420}	$817.0^{+9.5}_{-9.2}$	$\sigma_8(0.15)$	$0.752^{+0.016}_{-0.019}$
y_{cal}	$1.0006^{+0.0049}_{-0.0048}$	D_{2000}	$230.8^{+3.1}_{-3.1}$	$f\sigma_8(0.38)$	$0.4753^{+0.0097}_{-0.011}$
A_{217}^{CIB}	43^{+20}_{-20}	$n_{s,0.002}$	$0.9670^{+0.0073}_{-0.0074}$	$\sigma_8(0.38)$	$0.667^{+0.014}_{-0.017}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.24540^{+0.00010}_{-0.00012}$	$f\sigma_8(0.51)$	$0.4742^{+0.0092}_{-0.010}$
A_{143}^{tSZ}	$4.7^{+3.9}_{-4.3}$	Y_P^{BBN}	$0.24673^{+0.00010}_{-0.00012}$	$\sigma_8(0.51)$	$0.624^{+0.014}_{-0.016}$
A_{100}^{PS}	248^{+60}_{-50}	$10^5 D/H$	$2.583^{+0.055}_{-0.050}$	$f\sigma_8(0.61)$	$0.4695^{+0.0089}_{-0.010}$
A_{143}^{PS}	42^{+20}_{-20}	Age/Gyr	$13.780^{+0.054}_{-0.051}$	$\sigma_8(0.61)$	$0.594^{+0.013}_{-0.015}$
A_{217}^{PS}	109^{+20}_{-30}	z_*	$1089.82^{+0.43}_{-0.43}$	$f\sigma_8(2.33)$	$0.2993^{+0.0060}_{-0.0068}$
A^{kSZ}	—	r_*	$144.65^{+0.44}_{-0.45}$	$\sigma_8(2.33)$	$0.3088^{+0.0068}_{-0.0079}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	$100\theta_*$	$1.04116^{+0.00058}_{-0.00058}$	f_{2000}^{143}	29^{+5}_{-5}
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.893^{+0.044}_{-0.043}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
H_0	$67.87^{+0.90}_{-1.0}$	z_{drag}	$1059.90^{+0.60}_{-0.66}$	f_{2000}^{217}	$106.8^{+3.7}_{-3.6}$
Ω_Λ	$0.692^{+0.011}_{-0.013}$	r_{drag}	$147.31^{+0.49}_{-0.47}$	χ_{lensing}^2	$9.30 (\nu: 0.3)$
Ω_m	$0.308^{+0.013}_{-0.011}$	k_{D}	$0.14064^{+0.00060}_{-0.00063}$	χ_{small}^2	$397.0 (\nu: 1.5)$
$\Omega_m h^2$	$0.1420^{+0.0018}_{-0.0017}$	$100\theta_{\text{D}}$	$0.16078^{+0.00039}_{-0.00035}$	χ_{lowl}^2	$23.10 (\nu: 0.3)$
$\Omega_\nu h^2$	< 0.00129	z_{eq}	3382^{+42}_{-41}	χ_{JLA}^2	$1034.99 (\nu: 0.0)$
$\Omega_m h^3$	$0.09638^{+0.00069}_{-0.00080}$	k_{eq}	$0.01032^{+0.00013}_{-0.00012}$	$\chi_{6\text{DF}}^2$	$0.037 (\nu: 0.0)$
σ_8	$0.813^{+0.017}_{-0.020}$	$100\theta_{\text{eq}}$	$0.8170^{+0.0077}_{-0.0076}$	χ_{MGS}^2	$1.45 (\nu: 0.1)$
S_8	$0.824^{+0.021}_{-0.021}$	$100\theta_{\text{s,eq}}$	$0.4513^{+0.0039}_{-0.0039}$	χ_{DR12BAO}^2	$4.4 (\nu: 0.7)$
$\sigma_8 \Omega_m^{0.5}$	$0.452^{+0.012}_{-0.012}$	$H(0.15)$	$73.12^{+0.79}_{-0.88}$	χ_{prior}^2	$9.7 (\nu: 10.2)$
$\sigma_8 \Omega_m^{0.25}$	$0.606^{+0.013}_{-0.014}$	$D_{\text{M}}(0.15)$	$639.1^{+8.7}_{-7.6}$	χ_{CMB}^2	$7366 (\nu: 10475998.9)$
$\sigma_8/h^{0.5}$	$0.987^{+0.020}_{-0.023}$	$H(0.38)$	$83.18^{+0.60}_{-0.68}$	χ_{BAO}^2	$5.85 (\nu: 0.4)$
$r_{\text{drag}} h$	$99.97^{+1.5}_{-1.6}$	$D_{\text{M}}(0.38)$	1525^{+18}_{-16}		
$\langle d^2 \rangle^{1/2}$	$2.434^{+0.041}_{-0.041}$	$H(0.51)$	$89.87^{+0.50}_{-0.58}$		

Best-fit $\chi_{\text{eff}}^2 = 12968.97$; $\Delta\chi_{\text{eff}}^2 = 9155.00$; $\bar{\chi}_{\text{eff}}^2 = 12991.94$; $\Delta\bar{\chi}_{\text{eff}}^2 = 9150.74$; $R - 1 = 0.00817$
 χ_{eff}^2 : BAO - 6DF: 0.00 (Δ -0.00) MGS: 1.68 (Δ 0.14) DR12BAO: 3.52 (Δ -0.18) CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.88 (Δ -0.08) small_100x143_offlike5_EE_Aplanc
395.86 (Δ -0.02) commander_dx12_v3.2.29: 22.90 (Δ -0.15) CamSpec like_10.7HM_1400_unified: 11499.28 SN - JLA Pantheon18: 1034.80 (Δ -0.04)

6.19 base_mnu_CamSpecHM_TTTEEE_lowl_lowE_lensing_BAO_post_zre6p5/base_mnu_plikHM_TTTEEE_lowl_lowE_lensing_BAO_post_z

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02238^{+0.00028}_{-0.00029}$	$\langle d^2 \rangle^{1/2}$	$2.436^{+0.040}_{-0.039}$	$D_M(0.38)$	1526^{+18}_{-17}
$\Omega_c h^2$	$0.1192^{+0.0018}_{-0.0018}$	z_{re}	$7.8^{+1.1}_{-1.3}$	$H(0.51)$	$89.84^{+0.55}_{-0.59}$
$100\theta_{MC}$	$1.04097^{+0.00058}_{-0.00059}$	$10^9 A_s$	$2.101^{+0.055}_{-0.052}$	$D_M(0.51)$	1977^{+23}_{-19}
τ	$0.056^{+0.013}_{-0.012}$	$10^9 A_s e^{-2\tau}$	$1.879^{+0.021}_{-0.020}$	$H(0.61)$	$95.44^{+0.45}_{-0.53}$
Σm_ν	< 0.128	D_{40}	1227^{+23}_{-22}	$D_M(0.61)$	2301^{+23}_{-22}
$\ln(10^{10} A_s)$	$3.045^{+0.026}_{-0.025}$	D_{220}	5730^{+76}_{-75}	$H(2.33)$	$236.0^{+1.2}_{-1.2}$
n_s	$0.9669^{+0.0074}_{-0.0074}$	D_{810}	2537^{+26}_{-26}	$D_M(2.33)$	5757^{+25}_{-23}
y_{cal}	$1.0006^{+0.0049}_{-0.0049}$	D_{1420}	$816.9^{+9.5}_{-9.4}$	$f\sigma_8(0.15)$	$0.457^{+0.011}_{-0.011}$
A_{217}^{CIB}	43^{+20}_{-20}	D_{2000}	$230.8^{+3.1}_{-3.1}$	$\sigma_8(0.15)$	$0.752^{+0.016}_{-0.019}$
$\xi^{tSZ-CIB}$	—	$n_{s,0.002}$	$0.9669^{+0.0074}_{-0.0074}$	$f\sigma_8(0.38)$	$0.4756^{+0.0098}_{-0.011}$
A_{143}^{tSZ}	$4.7^{+3.9}_{-4.3}$	Y_P	$0.24540^{+0.00010}_{-0.00012}$	$\sigma_8(0.38)$	$0.666^{+0.015}_{-0.018}$
A_{100}^{PS}	249^{+60}_{-50}	Y_P^{BBN}	$0.24672^{+0.00010}_{-0.00012}$	$f\sigma_8(0.51)$	$0.4745^{+0.0092}_{-0.010}$
A_{143}^{PS}	42^{+20}_{-20}	$10^5 D/H$	$2.584^{+0.054}_{-0.050}$	$\sigma_8(0.51)$	$0.624^{+0.014}_{-0.017}$
A_{217}^{PS}	109^{+20}_{-30}	Age/Gyr	$13.783^{+0.057}_{-0.053}$	$f\sigma_8(0.61)$	$0.4697^{+0.0089}_{-0.010}$
A^{kSZ}	—	z_*	$1089.84^{+0.43}_{-0.43}$	$\sigma_8(0.61)$	$0.594^{+0.013}_{-0.016}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	r_*	$144.64^{+0.45}_{-0.45}$	$f\sigma_8(2.33)$	$0.2992^{+0.0061}_{-0.0071}$
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	$100\theta_*$	$1.04115^{+0.00057}_{-0.00058}$	$\sigma_8(2.33)$	$0.3086^{+0.0070}_{-0.0083}$
H_0	$67.81^{+0.95}_{-1.1}$	$D_M(z_*)/\text{Gpc}$	$13.892^{+0.044}_{-0.043}$	f_{2000}^{143}	29^{+5}_{-5}
Ω_Λ	$0.691^{+0.012}_{-0.014}$	z_{drag}	$1059.90^{+0.61}_{-0.65}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
Ω_m	$0.309^{+0.014}_{-0.012}$	r_{drag}	$147.30^{+0.49}_{-0.48}$	f_{2000}^{217}	$106.8^{+3.7}_{-3.6}$
$\Omega_m h^2$	$0.1421^{+0.0019}_{-0.0018}$	k_D	$0.14065^{+0.00060}_{-0.00064}$	χ^2_{lensing}	$9.28 (\nu: 0.2)$
$\Omega_\nu h^2$	< 0.00137	$100\theta_D$	$0.16078^{+0.00038}_{-0.00035}$	χ^2_{small}	$397.0 (\nu: 1.6)$
$\Omega_m h^3$	$0.09635^{+0.00075}_{-0.00079}$	z_{eq}	3383^{+42}_{-42}	χ^2_{lowl}	$23.14 (\nu: 0.3)$
σ_8	$0.813^{+0.017}_{-0.020}$	k_{eq}	$0.01033^{+0.00013}_{-0.00013}$	$\chi^2_{6\text{DF}}$	$0.045 (\nu: 0.0)$
S_8	$0.825^{+0.021}_{-0.021}$	$100\theta_{\text{eq}}$	$0.8168^{+0.0078}_{-0.0077}$	χ^2_{MGS}	$1.40 (\nu: 0.1)$
$\sigma_8 \Omega_m^{0.5}$	$0.452^{+0.012}_{-0.012}$	$100\theta_{s,\text{eq}}$	$0.4512^{+0.0040}_{-0.0040}$	χ^2_{DR12BAO}	$4.5 (\nu: 1.0)$
$\sigma_8 \Omega_m^{0.25}$	$0.606^{+0.013}_{-0.015}$	$H(0.15)$	$73.06^{+0.83}_{-0.95}$	χ^2_{prior}	$9.7 (\nu: 9.9)$
$\sigma_8/h^{0.5}$	$0.987^{+0.021}_{-0.022}$	$D_M(0.15)$	$639.6^{+9.4}_{-8.1}$	χ^2_{CMB}	$7366 (\nu: 10475692.0)$
$r_{\text{drag}} h$	$99.9^{+1.6}_{-1.7}$	$H(0.38)$	$83.14^{+0.63}_{-0.73}$	χ^2_{BAO}	$6.0 (\nu: 0.6)$

$$\bar{\chi}^2_{\text{eff}} = 11956.94; \Delta\bar{\chi}^2_{\text{eff}} = 9150.67; R - 1 = 0.00819$$

6.20 base_mnu_CamSpecHM_TTTEEE_lowl_lowE_lensing_BAO_post_Pantheon18_zre6p5/base_mnu_plikHM_TTTEEE_lowl_lowE_lensing

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02239^{+0.00028}_{-0.00029}$	z_{re}	$7.8^{+1.2}_{-1.3}$	$D_{\text{M}}(0.51)$	1976^{+21}_{-18}
$\Omega_c h^2$	$0.1191^{+0.0018}_{-0.0018}$	$10^9 A_s$	$2.101^{+0.056}_{-0.052}$	$H(0.61)$	$95.47^{+0.43}_{-0.50}$
$100\theta_{MC}$	$1.04098^{+0.00058}_{-0.00059}$	$10^9 A_s e^{-2\tau}$	$1.879^{+0.020}_{-0.020}$	$D_{\text{M}}(0.61)$	2299^{+23}_{-20}
τ	$0.056^{+0.013}_{-0.012}$	D_{40}	1227^{+22}_{-22}	$H(2.33)$	$235.9^{+1.1}_{-1.1}$
Σm_ν	< 0.120	D_{220}	5731^{+76}_{-75}	$D_{\text{M}}(2.33)$	5755^{+24}_{-22}
$\ln(10^{10} A_s)$	$3.045^{+0.026}_{-0.025}$	D_{810}	2537^{+26}_{-26}	$f\sigma_8(0.15)$	$0.456^{+0.011}_{-0.011}$
n_s	$0.9671^{+0.0073}_{-0.0073}$	D_{1420}	$816.9^{+9.4}_{-9.2}$	$\sigma_8(0.15)$	$0.752^{+0.016}_{-0.018}$
y_{cal}	$1.0006^{+0.0049}_{-0.0049}$	D_{2000}	$230.8^{+3.1}_{-3.1}$	$f\sigma_8(0.38)$	$0.4755^{+0.0096}_{-0.010}$
A_{217}^{CIB}	43^{+20}_{-20}	$n_{s,0.002}$	$0.9671^{+0.0073}_{-0.0073}$	$\sigma_8(0.38)$	$0.667^{+0.014}_{-0.017}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.24540^{+0.00010}_{-0.00012}$	$f\sigma_8(0.51)$	$0.4745^{+0.0091}_{-0.010}$
A_{143}^{tSZ}	$4.7^{+3.9}_{-4.3}$	Y_P^{BBN}	$0.24673^{+0.00010}_{-0.00012}$	$\sigma_8(0.51)$	$0.624^{+0.013}_{-0.016}$
A_{100}^{PS}	248^{+60}_{-50}	$10^5 D/H$	$2.583^{+0.054}_{-0.050}$	$f\sigma_8(0.61)$	$0.4697^{+0.0087}_{-0.010}$
A_{143}^{PS}	42^{+20}_{-20}	Age/Gyr	$13.780^{+0.054}_{-0.051}$	$\sigma_8(0.61)$	$0.594^{+0.013}_{-0.015}$
A_{217}^{PS}	109^{+20}_{-30}	z_*	$1089.82^{+0.42}_{-0.42}$	$f\sigma_8(2.33)$	$0.2995^{+0.0059}_{-0.0068}$
A^{kSZ}	—	r_*	$144.65^{+0.44}_{-0.44}$	$\sigma_8(2.33)$	$0.3090^{+0.0067}_{-0.0079}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	$100\theta_*$	$1.04116^{+0.00057}_{-0.00058}$	f_{2000}^{143}	29^{+5}_{-5}
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.894^{+0.044}_{-0.043}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
H_0	$67.87^{+0.90}_{-1.0}$	z_{drag}	$1059.91^{+0.60}_{-0.66}$	f_{2000}^{217}	$106.7^{+3.7}_{-3.6}$
Ω_Λ	$0.692^{+0.011}_{-0.013}$	r_{drag}	$147.31^{+0.49}_{-0.47}$	χ_{lensing}^2	$9.27 (\nu: 0.2)$
Ω_m	$0.308^{+0.013}_{-0.011}$	k_{D}	$0.14064^{+0.00060}_{-0.00063}$	χ_{small}^2	$397.0 (\nu: 1.6)$
$\Omega_m h^2$	$0.1420^{+0.0018}_{-0.0017}$	$100\theta_{\text{D}}$	$0.16078^{+0.00038}_{-0.00035}$	χ_{lowl}^2	$23.11 (\nu: 0.3)$
$\Omega_\nu h^2$	< 0.00129	z_{eq}	3381^{+41}_{-41}	χ_{JLA}^2	$1034.99 (\nu: 0.0)$
$\Omega_m h^3$	$0.09637^{+0.00073}_{-0.00077}$	k_{eq}	$0.01032^{+0.00012}_{-0.00012}$	$\chi_{6\text{DF}}^2$	$0.036 (\nu: 0.0)$
σ_8	$0.814^{+0.017}_{-0.020}$	$100\theta_{\text{eq}}$	$0.8171^{+0.0076}_{-0.0075}$	χ_{MGS}^2	$1.46 (\nu: 0.1)$
S_8	$0.825^{+0.021}_{-0.021}$	$100\theta_{\text{s,eq}}$	$0.4514^{+0.0039}_{-0.0039}$	χ_{DR12BAO}^2	$4.3 (\nu: 0.7)$
$\sigma_8 \Omega_m^{0.5}$	$0.452^{+0.012}_{-0.011}$	$H(0.15)$	$73.12^{+0.79}_{-0.88}$	χ_{prior}^2	$9.7 (\nu: 10.2)$
$\sigma_8 \Omega_m^{0.25}$	$0.606^{+0.013}_{-0.014}$	$D_{\text{M}}(0.15)$	$639.0^{+8.7}_{-7.6}$	χ_{CMB}^2	$7366 (\nu: 10475981.3)$
$\sigma_8/h^{0.5}$	$0.987^{+0.020}_{-0.022}$	$H(0.38)$	$83.19^{+0.60}_{-0.68}$	χ_{BAO}^2	$5.83 (\nu: 0.4)$
$r_{\text{drag}} h$	$99.99^{+1.5}_{-1.6}$	$D_{\text{M}}(0.38)$	1525^{+18}_{-16}		
$\langle d^2 \rangle^{1/2}$	$2.435^{+0.040}_{-0.039}$	$H(0.51)$	$89.87^{+0.50}_{-0.58}$		

$$\bar{\chi}_{\text{eff}}^2 = 12991.75; \Delta\bar{\chi}_{\text{eff}}^2 = 9150.73; R - 1 = 0.00951$$

7 nnu

7.1 base_nnu_CamSpecHM_TT_lowl_lowE/base_nnu_plikHM_TT_lowl_lowE

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02206^{+0.00061}_{-0.00061}$	$r_{\text{drag}} h$	$98.1^{+4.4}_{-4.2}$	$H(0.15)$	$71.7^{+4.6}_{-4.4}$
$\Omega_c h^2$	$0.1196^{+0.0082}_{-0.0078}$	$\langle d^2 \rangle^{1/2}$	$2.457^{+0.090}_{-0.088}$	$D_{\text{M}}(0.15)$	653^{+44}_{-43}
$100\theta_{MC}$	$1.0409^{+0.0012}_{-0.0011}$	z_{re}	$7.4^{+1.6}_{-1.7}$	$H(0.38)$	$82.0^{+4.5}_{-4.2}$
τ	$0.051^{+0.016}_{-0.016}$	$10^9 A_s$	$2.081^{+0.085}_{-0.085}$	$D_{\text{M}}(0.38)$	1555^{+97}_{-94}
N_{eff}	$2.97^{+0.58}_{-0.55}$	$10^9 A_s e^{-2\tau}$	$1.877^{+0.044}_{-0.046}$	$H(0.51)$	$88.8^{+4.4}_{-4.2}$
$\ln(10^{10} A_s)$	$3.035^{+0.040}_{-0.041}$	D_{40}	1236^{+44}_{-43}	$D_{\text{M}}(0.51)$	2012^{+120}_{-120}
n_s	$0.960^{+0.026}_{-0.026}$	D_{220}	5707^{+82}_{-82}	$H(0.61)$	$94.5^{+4.4}_{-4.2}$
y_{cal}	$1.0005^{+0.0049}_{-0.0049}$	D_{810}	2534^{+29}_{-28}	$D_{\text{M}}(0.61)$	2340^{+140}_{-130}
A_{217}^{CIB}	44^{+20}_{-20}	D_{1420}	815^{+10}_{-10}	$H(2.33)$	$235.7^{+7.3}_{-7.1}$
$\xi^{tSZ-CIB}$	—	D_{2000}	$230.0^{+4.5}_{-4.5}$	$D_{\text{M}}(2.33)$	5814^{+260}_{-250}
A_{143}^{tSZ}	$4.5^{+3.7}_{-4.3}$	$n_{s,0.002}$	$0.960^{+0.026}_{-0.026}$	$f\sigma_8(0.15)$	$0.463^{+0.024}_{-0.024}$
A_{100}^{PS}	251^{+60}_{-60}	Y_P	$0.2442^{+0.0078}_{-0.0079}$	$\sigma_8(0.15)$	$0.746^{+0.026}_{-0.026}$
A_{143}^{PS}	44^{+20}_{-20}	Y_P^{BBN}	$0.2455^{+0.0078}_{-0.0079}$	$f\sigma_8(0.38)$	$0.479^{+0.019}_{-0.019}$
A_{217}^{PS}	108^{+30}_{-30}	$10^5 D/H$	$2.62^{+0.14}_{-0.14}$	$\sigma_8(0.38)$	$0.660^{+0.025}_{-0.024}$
A^{kSZ}	—	Age/Gyr	$13.92^{+0.61}_{-0.59}$	$f\sigma_8(0.51)$	$0.476^{+0.017}_{-0.017}$
c_{100}	$0.9985^{+0.0022}_{-0.0027}$	z_*	$1090.20^{+0.98}_{-0.97}$	$\sigma_8(0.51)$	$0.617^{+0.024}_{-0.024}$
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	r_*	$145.2^{+5.1}_{-5.0}$	$f\sigma_8(0.61)$	$0.470^{+0.016}_{-0.016}$
H_0	$66.3^{+4.8}_{-4.5}$	$100\theta_*$	$1.0412^{+0.0014}_{-0.0014}$	$\sigma_8(0.61)$	$0.587^{+0.023}_{-0.023}$
Ω_Λ	$0.676^{+0.035}_{-0.038}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.95^{+0.48}_{-0.47}$	$f\sigma_8(2.33)$	$0.295^{+0.013}_{-0.012}$
Ω_m	$0.324^{+0.038}_{-0.035}$	z_{drag}	$1059.1^{+2.2}_{-2.2}$	$\sigma_8(2.33)$	$0.304^{+0.014}_{-0.014}$
$\Omega_m h^2$	$0.1423^{+0.0085}_{-0.0081}$	r_{drag}	$148.0^{+5.3}_{-5.2}$	f_{2000}^{143}	30^{+7}_{-7}
$\Omega_m h^3$	$0.094^{+0.011}_{-0.011}$	k_{D}	$0.1400^{+0.0038}_{-0.0037}$	$f_{2000}^{143 \times 217}$	33^{+5}_{-5}
σ_8	$0.808^{+0.027}_{-0.027}$	$100\theta_{\text{D}}$	$0.1609^{+0.0013}_{-0.0013}$	f_{2000}^{217}	$107.5^{+4.8}_{-4.9}$
S_8	$0.840^{+0.049}_{-0.048}$	z_{eq}	3422^{+130}_{-130}	χ_{small}^2	$396.9 (\nu: 1.3)$
$\sigma_8 \Omega_m^{0.5}$	$0.460^{+0.027}_{-0.026}$	k_{eq}	$0.01039^{+0.00032}_{-0.00031}$	χ_{lowl}^2	$24.4 (\nu: 2.6)$
$\sigma_8 \Omega_m^{0.25}$	$0.610^{+0.023}_{-0.023}$	$100\theta_{\text{eq}}$	$0.809^{+0.024}_{-0.023}$	χ_{prior}^2	$7.4 (\nu: 6.2)$
$\sigma_8/h^{0.5}$	$0.993^{+0.032}_{-0.032}$	$100\theta_{\text{s,eq}}$	$0.447^{+0.012}_{-0.012}$	χ_{CMB}^2	$4339 (\nu: 4948142.5)$

Best-fit $\chi_{\text{eff}}^2 = 7471.42$; $\Delta\chi_{\text{eff}}^2 = 6292.16$; $\bar{\chi}_{\text{eff}}^2 = 7492.17$; $\Delta\bar{\chi}_{\text{eff}}^2 = 6291.99$; $R - 1 = 0.00609$

χ_{eff}^2 : CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.70 (Δ -0.16) commander_dx12_v3_2_29: 24.43 (Δ -0.06) CamSpec like_10.7HM: 7049.22

7.2 base_nnu_CamSpecHM_TT_lowl_lowE_post_lensing/base_nnu_plikHM_TT_lowl_lowE_post_lensing

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02204^{+0.00058}_{-0.00058}$	$\langle d^2 \rangle^{1/2}$	$2.455^{+0.062}_{-0.062}$	$H(0.38)$	$81.7^{+4.1}_{-4.0}$
$\Omega_c h^2$	$0.1186^{+0.0077}_{-0.0074}$	z_{re}	$7.4^{+1.6}_{-1.7}$	$D_{\text{M}}(0.38)$	1560^{+90}_{-86}
$100\theta_{MC}$	$1.0410^{+0.0011}_{-0.0011}$	$10^9 A_s$	$2.075^{+0.085}_{-0.084}$	$H(0.51)$	$88.5^{+4.1}_{-4.0}$
τ	$0.051^{+0.016}_{-0.016}$	$10^9 A_s e^{-2\tau}$	$1.872^{+0.043}_{-0.045}$	$D_{\text{M}}(0.51)$	2019^{+110}_{-110}
N_{eff}	$2.92^{+0.56}_{-0.53}$	D_{40}	1237^{+37}_{-37}	$H(0.61)$	$94.1^{+4.2}_{-4.0}$
$\ln(10^{10} A_s)$	$3.032^{+0.040}_{-0.041}$	D_{220}	5710^{+82}_{-81}	$D_{\text{M}}(0.61)$	2348^{+130}_{-120}
n_s	$0.958^{+0.024}_{-0.024}$	D_{810}	2533^{+28}_{-27}	$H(2.33)$	$234.9^{+7.1}_{-7.0}$
y_{cal}	$1.0005^{+0.0049}_{-0.0049}$	D_{1420}	815^{+10}_{-10}	$D_{\text{M}}(2.33)$	5834^{+250}_{-240}
A_{217}^{CIB}	44^{+20}_{-20}	D_{2000}	$230.3^{+4.5}_{-4.5}$	$f\sigma_8(0.15)$	$0.461^{+0.016}_{-0.016}$
$\xi^{tSZ-CIB}$	—	$n_{s,0.002}$	$0.958^{+0.024}_{-0.024}$	$\sigma_8(0.15)$	$0.743^{+0.025}_{-0.025}$
A_{143}^{tSZ}	$4.5^{+3.8}_{-4.3}$	Y_P	$0.2435^{+0.0075}_{-0.0077}$	$f\sigma_8(0.38)$	$0.477^{+0.013}_{-0.013}$
A_{100}^{PS}	250^{+60}_{-60}	Y_P^{BBN}	$0.2448^{+0.0076}_{-0.0077}$	$\sigma_8(0.38)$	$0.657^{+0.025}_{-0.024}$
A_{143}^{PS}	44^{+20}_{-20}	$10^5 D/H$	$2.60^{+0.14}_{-0.13}$	$f\sigma_8(0.51)$	$0.474^{+0.013}_{-0.012}$
A_{217}^{PS}	108^{+30}_{-30}	Age/Gyr	$13.96^{+0.59}_{-0.57}$	$\sigma_8(0.51)$	$0.614^{+0.024}_{-0.023}$
A^{kSZ}	—	z_*	$1090.08^{+0.93}_{-0.91}$	$f\sigma_8(0.61)$	$0.468^{+0.013}_{-0.013}$
c_{100}	$0.9985^{+0.0022}_{-0.0027}$	r_*	$145.8^{+5.2}_{-4.9}$	$\sigma_8(0.61)$	$0.584^{+0.023}_{-0.023}$
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	$100\theta_*$	$1.0413^{+0.0014}_{-0.0014}$	$f\sigma_8(2.33)$	$0.294^{+0.012}_{-0.012}$
H_0	$66.1^{+4.3}_{-4.1}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$14.00^{+0.48}_{-0.46}$	$\sigma_8(2.33)$	$0.303^{+0.014}_{-0.014}$
Ω_Λ	$0.676^{+0.029}_{-0.031}$	z_{drag}	$1059.0^{+2.1}_{-2.2}$	f_{2000}^{143}	30^{+7}_{-7}
Ω_m	$0.324^{+0.031}_{-0.029}$	r_{drag}	$148.6^{+5.4}_{-5.1}$	$f_{2000}^{143 \times 217}$	33^{+5}_{-5}
$\Omega_m h^2$	$0.1413^{+0.0080}_{-0.0078}$	k_{D}	$0.1396^{+0.0037}_{-0.0037}$	f_{2000}^{217}	$107.2^{+4.8}_{-4.8}$
$\Omega_m h^3$	$0.093^{+0.011}_{-0.010}$	$100\theta_{\text{D}}$	$0.1608^{+0.0013}_{-0.0013}$	χ^2_{lensing}	$9.35 (\nu: 0.5)$
σ_8	$0.805^{+0.026}_{-0.025}$	z_{eq}	3420^{+100}_{-100}	χ^2_{small}	$396.8 (\nu: 1.2)$
S_8	$0.836^{+0.033}_{-0.032}$	k_{eq}	$0.01035^{+0.00027}_{-0.00027}$	χ^2_{lowl}	$24.5 (\nu: 2.0)$
$\sigma_8 \Omega_m^{0.5}$	$0.458^{+0.018}_{-0.018}$	$100\theta_{\text{eq}}$	$0.809^{+0.019}_{-0.019}$	χ^2_{prior}	$7.4 (\nu: 6.2)$
$\sigma_8 \Omega_m^{0.25}$	$0.607^{+0.017}_{-0.016}$	$100\theta_{\text{s,eq}}$	$0.4475^{+0.0098}_{-0.0096}$	χ^2_{CMB}	$4348 (\nu: 4948271.5)$
$\sigma_8/h^{0.5}$	$0.990^{+0.021}_{-0.021}$	$H(0.15)$	$71.5^{+4.2}_{-4.0}$		
$r_{\text{drag}} h$	$98.2^{+3.5}_{-3.4}$	$D_{\text{M}}(0.15)$	655^{+41}_{-39}		

$\bar{\chi}^2_{\text{eff}} = 7500.99$; $\Delta \bar{\chi}^2_{\text{eff}} = 6292.01$; $R - 1 = 0.00870$

7.3 base_nnu_CamSpecHM_TT_lowl_lowE_post_Cooke17_Aver15/base_nnu_plikHM_TT_lowl_lowE_post_Cooke17_Aver15

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02204^{+0.00052}_{-0.00052}$	$\langle d^2 \rangle^{1/2}$	$2.459^{+0.083}_{-0.081}$	$H(0.38)$	$81.8^{+3.1}_{-3.0}$
$\Omega_c h^2$	$0.1194^{+0.0059}_{-0.0058}$	z_{re}	$7.4^{+1.6}_{-1.7}$	$D_{\text{M}}(0.38)$	1558^{+71}_{-68}
$100\theta_{MC}$	$1.0409^{+0.0010}_{-0.00098}$	$10^9 A_s$	$2.079^{+0.077}_{-0.074}$	$H(0.51)$	$88.6^{+3.0}_{-2.9}$
τ	$0.051^{+0.016}_{-0.015}$	$10^9 A_s e^{-2\tau}$	$1.877^{+0.035}_{-0.035}$	$D_{\text{M}}(0.51)$	2016^{+87}_{-84}
N_{eff}	$2.95^{+0.37}_{-0.36}$	D_{40}	1237^{+37}_{-37}	$H(0.61)$	$94.3^{+3.0}_{-2.9}$
$\ln(10^{10} A_s)$	$3.034^{+0.036}_{-0.036}$	D_{220}	5707^{+81}_{-81}	$D_{\text{M}}(0.61)$	2344^{+97}_{-95}
n_s	$0.959^{+0.020}_{-0.019}$	D_{810}	2534^{+28}_{-27}	$H(2.33)$	$235.5^{+5.0}_{-4.9}$
y_{cal}	$1.0005^{+0.0049}_{-0.0049}$	D_{1420}	$814.8^{+9.9}_{-9.8}$	$D_{\text{M}}(2.33)$	5821^{+170}_{-170}
A_{217}^{CIB}	44^{+20}_{-20}	D_{2000}	$230.0^{+3.7}_{-3.8}$	$f\sigma_8(0.15)$	$0.464^{+0.024}_{-0.023}$
$\xi^{tSZ-CIB}$	—	$n_{s,0.002}$	$0.959^{+0.020}_{-0.019}$	$\sigma_8(0.15)$	$0.745^{+0.020}_{-0.020}$
A_{143}^{tSZ}	$4.5^{+3.8}_{-4.3}$	Y_P	$0.2439^{+0.0051}_{-0.0052}$	$f\sigma_8(0.38)$	$0.479^{+0.018}_{-0.018}$
A_{100}^{PS}	251^{+60}_{-50}	Y_P^{BBN}	$0.2452^{+0.0051}_{-0.0052}$	$\sigma_8(0.38)$	$0.659^{+0.018}_{-0.018}$
A_{143}^{PS}	44^{+20}_{-20}	$10^5 D/H$	$2.614^{+0.097}_{-0.095}$	$f\sigma_8(0.51)$	$0.476^{+0.016}_{-0.016}$
A_{217}^{PS}	109^{+30}_{-30}	Age/Gyr	$13.93^{+0.41}_{-0.40}$	$\sigma_8(0.51)$	$0.616^{+0.018}_{-0.018}$
A^{kSZ}	—	z_*	$1090.19^{+0.79}_{-0.78}$	$f\sigma_8(0.61)$	$0.470^{+0.014}_{-0.014}$
c_{100}	$0.9985^{+0.0022}_{-0.0027}$	r_*	$145.4^{+3.4}_{-3.3}$	$\sigma_8(0.61)$	$0.586^{+0.017}_{-0.017}$
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	$100\theta_*$	$1.0412^{+0.0011}_{-0.0011}$	$f\sigma_8(2.33)$	$0.2949^{+0.0091}_{-0.0089}$
H_0	$66.2^{+3.5}_{-3.4}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.96^{+0.32}_{-0.31}$	$\sigma_8(2.33)$	$0.304^{+0.010}_{-0.0098}$
Ω_Λ	$0.675^{+0.030}_{-0.033}$	z_{drag}	$1059.0^{+1.7}_{-1.6}$	f_{2000}^{143}	30^{+6}_{-6}
Ω_m	$0.325^{+0.033}_{-0.030}$	r_{drag}	$148.1^{+3.6}_{-3.5}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-5}
$\Omega_m h^2$	$0.1421^{+0.0060}_{-0.0059}$	k_{D}	$0.1399^{+0.0026}_{-0.0026}$	f_{2000}^{217}	$107.4^{+4.2}_{-4.2}$
$\Omega_m h^3$	$0.0940^{+0.0075}_{-0.0070}$	$100\theta_{\text{D}}$	$0.16087^{+0.00087}_{-0.00086}$	χ_{small}^2	$396.8 (\nu: 1.2)$
σ_8	$0.808^{+0.022}_{-0.022}$	z_{eq}	3425^{+110}_{-110}	χ_{lowl}^2	$24.4 (\nu: 1.8)$
S_8	$0.840^{+0.049}_{-0.047}$	k_{eq}	$0.01038^{+0.00029}_{-0.00029}$	χ_{Aver15}^2	$0.44 (\nu: 0.2)$
$\sigma_8 \Omega_m^{0.5}$	$0.460^{+0.027}_{-0.026}$	$100\theta_{\text{eq}}$	$0.808^{+0.021}_{-0.021}$	χ_{Cooke17}^2	$0.28 (\nu: 0.1)$
$\sigma_8 \Omega_m^{0.25}$	$0.610^{+0.023}_{-0.022}$	$100\theta_{\text{s,eq}}$	$0.447^{+0.011}_{-0.011}$	χ_{prior}^2	$7.4 (\nu: 6.1)$
$\sigma_8/h^{0.5}$	$0.993^{+0.032}_{-0.031}$	$H(0.15)$	$71.6^{+3.3}_{-3.2}$	χ_{CMB}^2	$4338 (\nu: 4948253.7)$
$r_{\text{drag}} h$	$98.0^{+3.8}_{-3.7}$	$D_{\text{M}}(0.15)$	655^{+33}_{-31}	χ_{Abund}^2	$0.72 (\nu: 0.4)$

$$\bar{\chi}_{\text{eff}}^2 = 7492.26; \Delta \bar{\chi}_{\text{eff}}^2 = 6292.06; R - 1 = 0.00836$$

7.4 base_nnu_CamSpecHM_TT_lowl_lowE_post_zre6p5/base_nnu_plikHM_TT_lowl_lowE_post_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02208^{+0.00060}_{-0.00060}$	$r_{\text{drag}} h$	$98.3^{+4.3}_{-4.2}$	$H(0.15)$	$71.9^{+4.6}_{-4.4}$
$\Omega_c h^2$	$0.1197^{+0.0082}_{-0.0078}$	$\langle d^2 \rangle^{1/2}$	$2.459^{+0.089}_{-0.088}$	$D_{\text{M}}(0.15)$	652^{+44}_{-42}
$100\theta_{MC}$	$1.0409^{+0.0012}_{-0.0011}$	z_{re}	< 8.81	$H(0.38)$	$82.1^{+4.4}_{-4.2}$
τ	$0.053^{+0.013}_{-0.011}$	$10^9 A_s$	$2.090^{+0.079}_{-0.068}$	$D_{\text{M}}(0.38)$	1551^{+96}_{-93}
N_{eff}	$2.99^{+0.57}_{-0.55}$	$10^9 A_s e^{-2\tau}$	$1.878^{+0.044}_{-0.046}$	$H(0.51)$	$88.9^{+4.4}_{-4.2}$
$\ln(10^{10} A_s)$	$3.040^{+0.037}_{-0.033}$	D_{40}	1235^{+43}_{-42}	$D_{\text{M}}(0.51)$	2008^{+120}_{-120}
n_s	$0.961^{+0.026}_{-0.026}$	D_{220}	5708^{+82}_{-82}	$H(0.61)$	$94.6^{+4.4}_{-4.2}$
y_{cal}	$1.0005^{+0.0050}_{-0.0049}$	D_{810}	2534^{+29}_{-28}	$D_{\text{M}}(0.61)$	2335^{+130}_{-130}
A_{217}^{CIB}	44^{+20}_{-20}	D_{1420}	815^{+10}_{-10}	$H(2.33)$	$235.9^{+7.3}_{-7.1}$
$\xi^{tSZ-CIB}$	—	D_{2000}	$229.9^{+4.5}_{-4.5}$	$D_{\text{M}}(2.33)$	5805^{+250}_{-250}
A_{143}^{tSZ}	$4.5^{+3.7}_{-4.3}$	$n_{s,0.002}$	$0.961^{+0.026}_{-0.026}$	$f\sigma_8(0.15)$	$0.464^{+0.024}_{-0.024}$
A_{100}^{PS}	251^{+60}_{-60}	Y_P	$0.2444^{+0.0077}_{-0.0078}$	$\sigma_8(0.15)$	$0.747^{+0.025}_{-0.024}$
A_{143}^{PS}	44^{+20}_{-20}	Y_P^{BBN}	$0.2457^{+0.0077}_{-0.0078}$	$f\sigma_8(0.38)$	$0.479^{+0.019}_{-0.019}$
A_{217}^{PS}	108^{+30}_{-30}	$10^5 D/H$	$2.62^{+0.14}_{-0.14}$	$\sigma_8(0.38)$	$0.661^{+0.024}_{-0.023}$
A^{kSZ}	—	Age/Gyr	$13.90^{+0.60}_{-0.58}$	$f\sigma_8(0.51)$	$0.477^{+0.016}_{-0.017}$
c_{100}	$0.9985^{+0.0022}_{-0.0026}$	z_*	$1090.20^{+0.98}_{-0.97}$	$\sigma_8(0.51)$	$0.619^{+0.023}_{-0.022}$
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	r_*	$145.1^{+5.1}_{-5.0}$	$f\sigma_8(0.61)$	$0.471^{+0.015}_{-0.015}$
H_0	$66.5^{+4.7}_{-4.5}$	$100\theta_*$	$1.0412^{+0.0014}_{-0.0014}$	$\sigma_8(0.61)$	$0.588^{+0.023}_{-0.021}$
Ω_Λ	$0.677^{+0.034}_{-0.037}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.93^{+0.47}_{-0.46}$	$f\sigma_8(2.33)$	$0.296^{+0.012}_{-0.012}$
Ω_m	$0.323^{+0.037}_{-0.034}$	z_{drag}	$1059.2^{+2.1}_{-2.2}$	$\sigma_8(2.33)$	$0.305^{+0.013}_{-0.013}$
$\Omega_m h^2$	$0.1425^{+0.0085}_{-0.0081}$	r_{drag}	$147.8^{+5.3}_{-5.2}$	f_{2000}^{143}	30^{+7}_{-7}
$\Omega_m h^3$	$0.095^{+0.011}_{-0.011}$	k_{D}	$0.1401^{+0.0037}_{-0.0037}$	$f_{2000}^{143 \times 217}$	33^{+5}_{-5}
σ_8	$0.810^{+0.026}_{-0.025}$	$100\theta_{\text{D}}$	$0.1609^{+0.0013}_{-0.0013}$	f_{2000}^{217}	$107.5^{+4.8}_{-4.9}$
S_8	$0.840^{+0.049}_{-0.048}$	z_{eq}	3417^{+130}_{-130}	χ_{simall}^2	$396.8 (\nu: 1.3)$
$\sigma_8 \Omega_m^{0.5}$	$0.460^{+0.027}_{-0.026}$	k_{eq}	$0.01038^{+0.00032}_{-0.00031}$	χ_{lowl}^2	$24.3 (\nu: 2.5)$
$\sigma_8 \Omega_m^{0.25}$	$0.610^{+0.023}_{-0.023}$	$100\theta_{\text{eq}}$	$0.810^{+0.024}_{-0.023}$	χ_{prior}^2	$7.4 (\nu: 6.1)$
$\sigma_8/h^{0.5}$	$0.994^{+0.032}_{-0.032}$	$100\theta_{\text{s,eq}}$	$0.448^{+0.012}_{-0.012}$	χ_{CMB}^2	$4338 (\nu: 4948046.8)$

$\bar{\chi}_{\text{eff}}^2 = 7491.86$; $\Delta\bar{\chi}_{\text{eff}}^2 = 6291.93$; $R - 1 = 0.00538$

7.5 base_nnu_CamSpecHM_TT_lowl_lowE_post_lensing_zre6p5/base_nnu_plikHM_TT_lowl_lowE_post_lensing_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02207^{+0.00057}_{-0.00056}$	$\langle d^2 \rangle^{1/2}$	$2.455^{+0.062}_{-0.062}$	$H(0.38)$	$81.9^{+4.1}_{-4.0}$
$\Omega_c h^2$	$0.1187^{+0.0077}_{-0.0075}$	z_{re}	< 8.77	$D_{\text{M}}(0.38)$	1555^{+88}_{-84}
$100\theta_{MC}$	$1.0410^{+0.0011}_{-0.0011}$	$10^9 A_s$	$2.084^{+0.078}_{-0.068}$	$H(0.51)$	$88.6^{+4.1}_{-4.0}$
τ	$0.053^{+0.013}_{-0.011}$	$10^9 A_s e^{-2\tau}$	$1.873^{+0.043}_{-0.045}$	$D_{\text{M}}(0.51)$	2013^{+110}_{-110}
N_{eff}	$2.94^{+0.55}_{-0.53}$	D_{40}	1236^{+36}_{-36}	$H(0.61)$	$94.3^{+4.1}_{-4.0}$
$\ln(10^{10} A_s)$	$3.037^{+0.037}_{-0.033}$	D_{220}	5710^{+82}_{-81}	$D_{\text{M}}(0.61)$	2341^{+130}_{-120}
n_s	$0.960^{+0.023}_{-0.023}$	D_{810}	2533^{+29}_{-27}	$H(2.33)$	$235.0^{+7.0}_{-7.1}$
y_{cal}	$1.0004^{+0.0049}_{-0.0049}$	D_{1420}	815^{+10}_{-10}	$D_{\text{M}}(2.33)$	5824^{+250}_{-240}
A_{217}^{CIB}	44^{+20}_{-20}	D_{2000}	$230.2^{+4.5}_{-4.4}$	$f\sigma_8(0.15)$	$0.461^{+0.016}_{-0.016}$
$\xi^{tSZ-CIB}$	—	$n_{s,0.002}$	$0.960^{+0.023}_{-0.023}$	$\sigma_8(0.15)$	$0.745^{+0.024}_{-0.024}$
A_{143}^{tSZ}	$4.5^{+3.8}_{-4.3}$	Y_P	$0.2437^{+0.0075}_{-0.0077}$	$f\sigma_8(0.38)$	$0.477^{+0.013}_{-0.013}$
A_{100}^{PS}	250^{+60}_{-60}	Y_P^{BBN}	$0.2451^{+0.0075}_{-0.0077}$	$\sigma_8(0.38)$	$0.659^{+0.023}_{-0.023}$
A_{143}^{PS}	44^{+20}_{-20}	$10^5 D/H$	$2.60^{+0.14}_{-0.13}$	$f\sigma_8(0.51)$	$0.475^{+0.012}_{-0.012}$
A_{217}^{PS}	108^{+30}_{-30}	Age/Gyr	$13.94^{+0.59}_{-0.56}$	$\sigma_8(0.51)$	$0.616^{+0.023}_{-0.022}$
A^{kSZ}	—	z_*	$1090.07^{+0.93}_{-0.90}$	$f\sigma_8(0.61)$	$0.469^{+0.012}_{-0.012}$
c_{100}	$0.9985^{+0.0022}_{-0.0027}$	r_*	$145.6^{+5.1}_{-4.9}$	$\sigma_8(0.61)$	$0.586^{+0.022}_{-0.022}$
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	$100\theta_*$	$1.0413^{+0.0014}_{-0.0014}$	$f\sigma_8(2.33)$	$0.295^{+0.012}_{-0.011}$
H_0	$66.3^{+4.2}_{-4.1}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.98^{+0.48}_{-0.45}$	$\sigma_8(2.33)$	$0.304^{+0.013}_{-0.013}$
Ω_Λ	$0.678^{+0.027}_{-0.029}$	z_{drag}	$1059.0^{+2.1}_{-2.1}$	f_{2000}^{143}	30^{+7}_{-7}
Ω_m	$0.322^{+0.029}_{-0.027}$	r_{drag}	$148.4^{+5.4}_{-5.0}$	$f_{2000}^{143 \times 217}$	33^{+5}_{-5}
$\Omega_m h^2$	$0.1414^{+0.0080}_{-0.0079}$	k_{D}	$0.1397^{+0.0036}_{-0.0037}$	f_{2000}^{217}	$107.2^{+4.7}_{-4.8}$
$\Omega_m h^3$	$0.094^{+0.011}_{-0.010}$	$100\theta_{\text{D}}$	$0.1608^{+0.0013}_{-0.0013}$	χ^2_{lensing}	$9.36 (\nu: 0.5)$
σ_8	$0.807^{+0.025}_{-0.024}$	z_{eq}	3414^{+98}_{-98}	χ^2_{small}	$396.7 (\nu: 1.2)$
S_8	$0.835^{+0.033}_{-0.032}$	k_{eq}	$0.01034^{+0.00027}_{-0.00026}$	χ^2_{lowl}	$24.3 (\nu: 1.8)$
$\sigma_8 \Omega_m^{0.5}$	$0.457^{+0.018}_{-0.017}$	$100\theta_{\text{eq}}$	$0.811^{+0.019}_{-0.018}$	χ^2_{prior}	$7.4 (\nu: 6.2)$
$\sigma_8 \Omega_m^{0.25}$	$0.607^{+0.016}_{-0.016}$	$100\theta_{\text{s,eq}}$	$0.4482^{+0.0095}_{-0.0092}$	χ^2_{CMB}	$4347 (\nu: 4948211.3)$
$\sigma_8/h^{0.5}$	$0.991^{+0.021}_{-0.021}$	$H(0.15)$	$71.7^{+4.1}_{-4.0}$		
$r_{\text{drag}} h$	$98.4^{+3.4}_{-3.3}$	$D_{\text{M}}(0.15)$	653^{+40}_{-38}		

$\bar{\chi}^2_{\text{eff}} = 7500.70$; $\Delta\bar{\chi}^2_{\text{eff}} = 6291.97$; $R - 1 = 0.00702$

7.6 base_nnu_CamSpecHM_TT_lowl_lowE_post_Cooke17_Aver15_zre6p5/base_nnu_plikHM_TT_lowl_lowE_post_Cooke17_Aver15_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02206^{+0.00052}_{-0.00052}$	$\langle d^2 \rangle^{1/2}$	$2.461^{+0.083}_{-0.081}$	$H(0.38)$	$81.9^{+3.1}_{-3.0}$
$\Omega_c h^2$	$0.1194^{+0.0058}_{-0.0058}$	z_{re}	< 8.77	$D_{\text{M}}(0.38)$	1556^{+69}_{-68}
$100\theta_{MC}$	$1.0409^{+0.0010}_{-0.00097}$	$10^9 A_s$	$2.088^{+0.066}_{-0.061}$	$H(0.51)$	$88.7^{+3.0}_{-2.9}$
τ	$0.053^{+0.012}_{-0.011}$	$10^9 A_s e^{-2\tau}$	$1.877^{+0.036}_{-0.035}$	$D_{\text{M}}(0.51)$	2013^{+85}_{-84}
N_{eff}	$2.96^{+0.37}_{-0.36}$	D_{40}	1236^{+37}_{-37}	$H(0.61)$	$94.4^{+2.9}_{-2.9}$
$\ln(10^{10} A_s)$	$3.038^{+0.032}_{-0.029}$	D_{220}	5707^{+81}_{-81}	$D_{\text{M}}(0.61)$	2341^{+96}_{-94}
n_s	$0.960^{+0.019}_{-0.019}$	D_{810}	2534^{+28}_{-27}	$H(2.33)$	$235.6^{+5.0}_{-4.9}$
y_{cal}	$1.0004^{+0.0049}_{-0.0049}$	D_{1420}	$814.8^{+9.9}_{-9.8}$	$D_{\text{M}}(2.33)$	5816^{+170}_{-170}
A_{217}^{CIB}	44^{+20}_{-20}	D_{2000}	$230.1^{+3.7}_{-3.8}$	$f\sigma_8(0.15)$	$0.464^{+0.024}_{-0.023}$
$\xi^{tSZ-CIB}$	—	$n_{s,0.002}$	$0.960^{+0.019}_{-0.019}$	$\sigma_8(0.15)$	$0.747^{+0.019}_{-0.018}$
A_{143}^{tSZ}	$4.5^{+3.8}_{-4.3}$	Y_P	$0.2440^{+0.0051}_{-0.0051}$	$f\sigma_8(0.38)$	$0.479^{+0.018}_{-0.018}$
A_{100}^{PS}	250^{+60}_{-50}	Y_P^{BBN}	$0.2454^{+0.0051}_{-0.0051}$	$\sigma_8(0.38)$	$0.660^{+0.018}_{-0.016}$
A_{143}^{PS}	44^{+20}_{-20}	$10^5 D/H$	$2.614^{+0.097}_{-0.095}$	$f\sigma_8(0.51)$	$0.477^{+0.016}_{-0.016}$
A_{217}^{PS}	109^{+30}_{-30}	Age/Gyr	$13.92^{+0.40}_{-0.39}$	$\sigma_8(0.51)$	$0.618^{+0.017}_{-0.016}$
A^{kSZ}	—	z_*	$1090.18^{+0.79}_{-0.77}$	$f\sigma_8(0.61)$	$0.471^{+0.014}_{-0.014}$
c_{100}	$0.9985^{+0.0022}_{-0.0027}$	r_*	$145.3^{+3.4}_{-3.3}$	$\sigma_8(0.61)$	$0.587^{+0.016}_{-0.015}$
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	$100\theta_*$	$1.0412^{+0.0011}_{-0.0011}$	$f\sigma_8(2.33)$	$0.2957^{+0.0087}_{-0.0081}$
H_0	$66.3^{+3.5}_{-3.3}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.95^{+0.32}_{-0.31}$	$\sigma_8(2.33)$	$0.3043^{+0.0097}_{-0.0090}$
Ω_Λ	$0.676^{+0.030}_{-0.033}$	z_{drag}	$1059.1^{+1.6}_{-1.6}$	f_{2000}^{143}	30^{+6}_{-6}
Ω_m	$0.324^{+0.033}_{-0.030}$	r_{drag}	$148.1^{+3.5}_{-3.4}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-5}
$\Omega_m h^2$	$0.1421^{+0.0060}_{-0.0059}$	k_{D}	$0.1400^{+0.0026}_{-0.0026}$	f_{2000}^{217}	$107.4^{+4.1}_{-4.2}$
$\Omega_m h^3$	$0.0942^{+0.0074}_{-0.0070}$	$100\theta_{\text{D}}$	$0.16088^{+0.00087}_{-0.00086}$	χ_{small}^2	$396.7 (\nu: 1.2)$
σ_8	$0.809^{+0.021}_{-0.020}$	z_{eq}	3422^{+110}_{-110}	χ_{lowl}^2	$24.3 (\nu: 1.7)$
S_8	$0.841^{+0.049}_{-0.046}$	k_{eq}	$0.01038^{+0.00029}_{-0.00028}$	χ_{Aver15}^2	$0.44 (\nu: 0.2)$
$\sigma_8 \Omega_m^{0.5}$	$0.460^{+0.027}_{-0.025}$	$100\theta_{\text{eq}}$	$0.809^{+0.021}_{-0.020}$	χ_{Cooke17}^2	$0.28 (\nu: 0.1)$
$\sigma_8 \Omega_m^{0.25}$	$0.610^{+0.023}_{-0.022}$	$100\theta_{\text{s,eq}}$	$0.447^{+0.011}_{-0.010}$	χ_{prior}^2	$7.4 (\nu: 6.1)$
$\sigma_8/h^{0.5}$	$0.994^{+0.031}_{-0.031}$	$H(0.15)$	$71.7^{+3.3}_{-3.2}$	χ_{CMB}^2	$4338 (\nu: 4948253.0)$
$r_{\text{drag}} h$	$98.1^{+3.7}_{-3.7}$	$D_{\text{M}}(0.15)$	654^{+32}_{-31}	χ_{Abund}^2	$0.72 (\nu: 0.4)$

$$\bar{\chi}_{\text{eff}}^2 = 7491.99; \Delta \bar{\chi}_{\text{eff}}^2 = 6292.11; R - 1 = 0.00722$$

7.7 base_nnu_CamSpecHM_TTTEEE_lowl_lowE/base_nnu_plikHM_TTTEEE_lowl_lowE

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02222^{+0.00044}_{-0.00043}$	$r_{\text{drag}} h$	$98.6^{+2.6}_{-2.5}$	$H(0.15)$	$71.8^{+3.1}_{-3.0}$
$\Omega_c h^2$	$0.1181^{+0.0062}_{-0.0062}$	$\langle d^2 \rangle^{1/2}$	$2.448^{+0.062}_{-0.062}$	$D_{\text{M}}(0.15)$	652^{+29}_{-28}
$100\theta_{MC}$	$1.04110^{+0.00091}_{-0.00087}$	z_{re}	$7.5^{+1.6}_{-1.6}$	$H(0.38)$	$81.9^{+3.0}_{-2.9}$
τ	$0.053^{+0.016}_{-0.015}$	$10^9 A_s$	$2.080^{+0.080}_{-0.076}$	$D_{\text{M}}(0.38)$	1553^{+65}_{-63}
N_{eff}	$2.92^{+0.41}_{-0.40}$	$10^9 A_s e^{-2\tau}$	$1.872^{+0.036}_{-0.038}$	$H(0.51)$	$88.7^{+3.0}_{-3.0}$
$\ln(10^{10} A_s)$	$3.035^{+0.038}_{-0.037}$	D_{40}	1235^{+33}_{-32}	$D_{\text{M}}(0.51)$	2011^{+81}_{-79}
n_s	$0.960^{+0.018}_{-0.018}$	D_{220}	5725^{+78}_{-77}	$H(0.61)$	$94.3^{+3.1}_{-3.0}$
y_{cal}	$1.0006^{+0.0049}_{-0.0049}$	D_{810}	2536^{+28}_{-27}	$D_{\text{M}}(0.61)$	2339^{+91}_{-90}
A_{217}^{CIB}	43^{+20}_{-20}	D_{1420}	$817.2^{+9.8}_{-9.7}$	$H(2.33)$	$234.8^{+5.6}_{-5.6}$
$\xi^{tSZ-CIB}$	—	D_{2000}	$231.3^{+3.8}_{-3.9}$	$D_{\text{M}}(2.33)$	5822^{+180}_{-180}
A_{143}^{tSZ}	$4.7^{+3.9}_{-4.3}$	$n_{s,0.002}$	$0.960^{+0.018}_{-0.018}$	$f\sigma_8(0.15)$	$0.458^{+0.016}_{-0.017}$
A_{100}^{PS}	246^{+60}_{-50}	Y_P	$0.2436^{+0.0056}_{-0.0058}$	$\sigma_8(0.15)$	$0.743^{+0.022}_{-0.021}$
A_{143}^{PS}	41^{+20}_{-20}	Y_P^{BBN}	$0.2449^{+0.0056}_{-0.0058}$	$f\sigma_8(0.38)$	$0.475^{+0.014}_{-0.014}$
A_{217}^{PS}	109^{+20}_{-30}	$10^5 D/H$	$2.57^{+0.10}_{-0.098}$	$\sigma_8(0.38)$	$0.657^{+0.020}_{-0.020}$
A^{kSZ}	—	Age/Gyr	$13.94^{+0.43}_{-0.42}$	$f\sigma_8(0.51)$	$0.473^{+0.013}_{-0.013}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	z_*	$1089.82^{+0.74}_{-0.73}$	$\sigma_8(0.51)$	$0.615^{+0.019}_{-0.019}$
c_{217}	$0.9996^{+0.0037}_{-0.0027}$	r_*	$145.7^{+4.0}_{-3.8}$	$f\sigma_8(0.61)$	$0.467^{+0.013}_{-0.013}$
H_0	$66.5^{+3.1}_{-3.0}$	$100\theta_*$	$1.0414^{+0.0012}_{-0.0011}$	$\sigma_8(0.61)$	$0.585^{+0.019}_{-0.018}$
Ω_Λ	$0.681^{+0.021}_{-0.022}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.99^{+0.37}_{-0.35}$	$f\sigma_8(2.33)$	$0.2946^{+0.0099}_{-0.0095}$
Ω_m	$0.319^{+0.022}_{-0.021}$	z_{drag}	$1059.3^{+1.6}_{-1.6}$	$\sigma_8(2.33)$	$0.303^{+0.011}_{-0.010}$
$\Omega_m h^2$	$0.1410^{+0.0065}_{-0.0065}$	r_{drag}	$148.4^{+4.1}_{-3.9}$	f_{2000}^{143}	29^{+6}_{-6}
$\Omega_m h^3$	$0.0938^{+0.0081}_{-0.0078}$	k_{D}	$0.1399^{+0.0029}_{-0.0029}$	$f_{2000}^{143 \times 217}$	31^{+4}_{-5}
σ_8	$0.804^{+0.023}_{-0.023}$	$100\theta_{\text{D}}$	$0.16056^{+0.00094}_{-0.00092}$	f_{2000}^{217}	$106.4^{+4.1}_{-4.1}$
S_8	$0.830^{+0.032}_{-0.033}$	z_{eq}	3413^{+76}_{-77}	χ_{small}^2	$396.9 (\nu: 1.4)$
$\sigma_8 \Omega_m^{0.5}$	$0.455^{+0.018}_{-0.018}$	k_{eq}	$0.01032^{+0.00024}_{-0.00024}$	χ_{lowl}^2	$24.1 (\nu: 1.2)$
$\sigma_8 \Omega_m^{0.25}$	$0.605^{+0.018}_{-0.018}$	$100\theta_{\text{eq}}$	$0.811^{+0.015}_{-0.014}$	χ_{prior}^2	$9.7 (\nu: 9.9)$
$\sigma_8/h^{0.5}$	$0.987^{+0.023}_{-0.024}$	$100\theta_{\text{s,eq}}$	$0.4484^{+0.0075}_{-0.0072}$	χ_{CMB}^2	$7358 (\nu: 10475909.8)$

Best-fit $\chi_{\text{eff}}^2 = 11920.27$; $\Delta\chi_{\text{eff}}^2 = 9155.55$; $\bar{\chi}_{\text{eff}}^2 = 11943.05$; $\Delta\bar{\chi}_{\text{eff}}^2 = 9150.95$; $R - 1 = 0.00888$

χ_{eff}^2 : CMB - small_100x143_offlike5_EE_Aplanck_B: 395.87 (Δ -0.16) commander_dx12_v3_2_29: 23.68 (Δ -0.73) CamSpec like_10.7HM_1400_unified: 11498.65

7.8 base_nnu_CamSpecHM_TTTEEE_lowl_lowE_post_lensing/base_nnu_plikHM_TTTEEE_lowl_lowE_post_lensing

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02220^{+0.00044}_{-0.00043}$	$\langle d^2 \rangle^{1/2}$	$2.451^{+0.049}_{-0.049}$	$H(0.38)$	$81.7^{+3.0}_{-2.9}$
$\Omega_c h^2$	$0.1177^{+0.0060}_{-0.0061}$	z_{re}	$7.5^{+1.4}_{-1.5}$	$D_{\text{M}}(0.38)$	1557^{+64}_{-63}
$100\theta_{MC}$	$1.04114^{+0.00089}_{-0.00087}$	$10^9 A_s$	$2.079^{+0.072}_{-0.069}$	$H(0.51)$	$88.5^{+3.0}_{-3.0}$
τ	$0.053^{+0.015}_{-0.014}$	$10^9 A_s e^{-2\tau}$	$1.870^{+0.035}_{-0.036}$	$D_{\text{M}}(0.51)$	2016^{+80}_{-79}
N_{eff}	$2.89^{+0.41}_{-0.41}$	D_{40}	1237^{+30}_{-30}	$H(0.61)$	$94.1^{+3.1}_{-3.0}$
$\ln(10^{10} A_s)$	$3.034^{+0.034}_{-0.034}$	D_{220}	5727^{+77}_{-77}	$D_{\text{M}}(0.61)$	2345^{+91}_{-89}
n_s	$0.959^{+0.017}_{-0.017}$	D_{810}	2536^{+27}_{-26}	$H(2.33)$	$234.3^{+5.4}_{-5.6}$
y_{cal}	$1.0007^{+0.0049}_{-0.0049}$	D_{1420}	$817.5^{+9.7}_{-9.6}$	$D_{\text{M}}(2.33)$	5836^{+180}_{-180}
A_{217}^{CIB}	42^{+20}_{-20}	D_{2000}	$231.4^{+3.8}_{-3.8}$	$f\sigma_8(0.15)$	$0.458^{+0.013}_{-0.013}$
$\xi^{tSZ-CIB}$	—	$n_{s,0.002}$	$0.959^{+0.017}_{-0.017}$	$\sigma_8(0.15)$	$0.741^{+0.021}_{-0.020}$
A_{143}^{tSZ}	$4.8^{+4.0}_{-4.3}$	Y_P	$0.2432^{+0.0056}_{-0.0058}$	$f\sigma_8(0.38)$	$0.475^{+0.011}_{-0.011}$
A_{100}^{PS}	246^{+60}_{-50}	Y_P^{BBN}	$0.2445^{+0.0056}_{-0.0058}$	$\sigma_8(0.38)$	$0.656^{+0.019}_{-0.019}$
A_{143}^{PS}	41^{+20}_{-20}	$10^5 D/H$	$2.56^{+0.10}_{-0.096}$	$f\sigma_8(0.51)$	$0.472^{+0.011}_{-0.011}$
A_{217}^{PS}	109^{+20}_{-30}	Age/Gyr	$13.97^{+0.44}_{-0.42}$	$\sigma_8(0.51)$	$0.614^{+0.019}_{-0.018}$
A^{kSZ}	—	z_*	$1089.77^{+0.71}_{-0.69}$	$f\sigma_8(0.61)$	$0.467^{+0.011}_{-0.011}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	r_*	$146.0^{+4.0}_{-3.8}$	$\sigma_8(0.61)$	$0.584^{+0.018}_{-0.017}$
c_{217}	$0.9996^{+0.0037}_{-0.0027}$	$100\theta_*$	$1.0414^{+0.0011}_{-0.0011}$	$f\sigma_8(2.33)$	$0.2941^{+0.0096}_{-0.0091}$
H_0	$66.3^{+3.1}_{-2.9}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$14.02^{+0.37}_{-0.35}$	$\sigma_8(2.33)$	$0.303^{+0.011}_{-0.010}$
Ω_Λ	$0.680^{+0.020}_{-0.020}$	z_{drag}	$1059.2^{+1.6}_{-1.6}$	f_{2000}^{143}	29^{+6}_{-6}
Ω_m	$0.320^{+0.020}_{-0.020}$	r_{drag}	$148.7^{+4.2}_{-3.9}$	$f_{2000}^{143 \times 217}$	31^{+4}_{-4}
$\Omega_m h^2$	$0.1405^{+0.0063}_{-0.0063}$	k_{D}	$0.1396^{+0.0028}_{-0.0029}$	f_{2000}^{217}	$106.2^{+4.1}_{-4.2}$
$\Omega_m h^3$	$0.0932^{+0.0081}_{-0.0078}$	$100\theta_{\text{D}}$	$0.16049^{+0.00092}_{-0.00091}$	χ_{lensing}^2	$9.05 (\nu: 0.3)$
σ_8	$0.803^{+0.021}_{-0.021}$	z_{eq}	3415^{+68}_{-69}	χ_{small}^2	$396.8 (\nu: 1.1)$
S_8	$0.830^{+0.025}_{-0.025}$	k_{eq}	$0.01031^{+0.00022}_{-0.00022}$	χ_{lowl}^2	$24.2 (\nu: 1.1)$
$\sigma_8 \Omega_m^{0.5}$	$0.455^{+0.014}_{-0.014}$	$100\theta_{\text{eq}}$	$0.811^{+0.013}_{-0.013}$	χ_{prior}^2	$9.7 (\nu: 9.9)$
$\sigma_8 \Omega_m^{0.25}$	$0.604^{+0.014}_{-0.014}$	$100\theta_{\text{s,eq}}$	$0.4481^{+0.0067}_{-0.0064}$	χ_{CMB}^2	$7367 (\nu: 10475621.4)$
$\sigma_8/h^{0.5}$	$0.987^{+0.018}_{-0.018}$	$H(0.15)$	$71.6^{+3.0}_{-2.9}$		
$r_{\text{drag}} h$	$98.5^{+2.4}_{-2.3}$	$D_{\text{M}}(0.15)$	654^{+29}_{-28}		

$\bar{\chi}_{\text{eff}}^2 = 11951.65$; $\Delta\bar{\chi}_{\text{eff}}^2 = 9150.78$; $R - 1 = 0.01144$

7.9 base_nnu_CamSpecHM_TTTEEE_lowl_lowE_post_Cooke17_Aver15/base_nnu_plikHM_TTTEEE_lowl_lowE_post_Cooke17_Aver15

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02222^{+0.00041}_{-0.00039}$	$\langle d^2 \rangle^{1/2}$	$2.448^{+0.061}_{-0.061}$	$H(0.38)$	$82.1^{+2.4}_{-2.3}$
$\Omega_c h^2$	$0.1186^{+0.0049}_{-0.0049}$	z_{re}	$7.5^{+1.5}_{-1.6}$	$D_{\text{M}}(0.38)$	1550^{+51}_{-52}
$100\theta_{MC}$	$1.04104^{+0.00078}_{-0.00076}$	$10^9 A_s$	$2.082^{+0.075}_{-0.072}$	$H(0.51)$	$88.8^{+2.4}_{-2.3}$
τ	$0.053^{+0.015}_{-0.015}$	$10^9 A_s e^{-2\tau}$	$1.874^{+0.031}_{-0.032}$	$D_{\text{M}}(0.51)$	2007^{+64}_{-64}
N_{eff}	$2.94^{+0.32}_{-0.31}$	D_{40}	1234^{+30}_{-30}	$H(0.61)$	$94.5^{+2.4}_{-2.3}$
$\ln(10^{10} A_s)$	$3.036^{+0.036}_{-0.035}$	D_{220}	5723^{+77}_{-77}	$D_{\text{M}}(0.61)$	2334^{+72}_{-72}
n_s	$0.961^{+0.015}_{-0.015}$	D_{810}	2536^{+27}_{-27}	$H(2.33)$	$235.1^{+4.3}_{-4.3}$
y_{cal}	$1.0006^{+0.0049}_{-0.0049}$	D_{1420}	$816.9^{+9.6}_{-9.7}$	$D_{\text{M}}(2.33)$	5812^{+140}_{-140}
A_{217}^{CIB}	43^{+20}_{-20}	D_{2000}	$231.0^{+3.5}_{-3.6}$	$f\sigma_8(0.15)$	$0.459^{+0.016}_{-0.017}$
$\xi^{tSZ-CIB}$	—	$n_{s,0.002}$	$0.961^{+0.015}_{-0.015}$	$\sigma_8(0.15)$	$0.744^{+0.019}_{-0.018}$
A_{143}^{tSZ}	$4.7^{+3.9}_{-4.3}$	Y_P	$0.2439^{+0.0044}_{-0.0043}$	$f\sigma_8(0.38)$	$0.476^{+0.014}_{-0.014}$
A_{100}^{PS}	247^{+60}_{-50}	Y_P^{BBN}	$0.2452^{+0.0044}_{-0.0044}$	$\sigma_8(0.38)$	$0.658^{+0.017}_{-0.017}$
A_{143}^{PS}	42^{+20}_{-20}	$10^5 D/H$	$2.578^{+0.080}_{-0.076}$	$f\sigma_8(0.51)$	$0.473^{+0.013}_{-0.013}$
A_{217}^{PS}	109^{+20}_{-30}	Age/Gyr	$13.91^{+0.33}_{-0.33}$	$\sigma_8(0.51)$	$0.616^{+0.017}_{-0.016}$
A^{kSZ}	—	z_*	$1089.88^{+0.61}_{-0.61}$	$f\sigma_8(0.61)$	$0.468^{+0.012}_{-0.012}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	r_*	$145.5^{+3.0}_{-2.9}$	$\sigma_8(0.61)$	$0.586^{+0.016}_{-0.015}$
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	$100\theta_*$	$1.04130^{+0.00093}_{-0.00091}$	$f\sigma_8(2.33)$	$0.2951^{+0.0083}_{-0.0079}$
H_0	$66.6^{+2.6}_{-2.4}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.97^{+0.28}_{-0.27}$	$\sigma_8(2.33)$	$0.3039^{+0.0090}_{-0.0085}$
Ω_Λ	$0.681^{+0.020}_{-0.020}$	z_{drag}	$1059.4^{+1.3}_{-1.3}$	f_{2000}^{143}	29^{+6}_{-6}
Ω_m	$0.319^{+0.020}_{-0.020}$	r_{drag}	$148.2^{+3.1}_{-3.0}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
$\Omega_m h^2$	$0.1414^{+0.0051}_{-0.0051}$	k_{D}	$0.1400^{+0.0023}_{-0.0023}$	f_{2000}^{217}	$106.6^{+3.9}_{-4.0}$
$\Omega_m h^3$	$0.0942^{+0.0063}_{-0.0060}$	$100\theta_{\text{D}}$	$0.16063^{+0.00073}_{-0.00069}$	χ_{small}^2	$396.9 (\nu: 1.4)$
σ_8	$0.806^{+0.020}_{-0.020}$	z_{eq}	3412^{+71}_{-72}	χ_{lowl}^2	$23.9 (\nu: 0.9)$
S_8	$0.831^{+0.032}_{-0.033}$	k_{eq}	$0.01034^{+0.00021}_{-0.00022}$	χ_{Aver15}^2	$0.31 (\nu: 0.1)$
$\sigma_8 \Omega_m^{0.5}$	$0.455^{+0.017}_{-0.018}$	$100\theta_{\text{eq}}$	$0.811^{+0.014}_{-0.013}$	χ_{Cooke17}^2	$0.37 (\nu: 0.1)$
$\sigma_8 \Omega_m^{0.25}$	$0.606^{+0.017}_{-0.017}$	$100\theta_{\text{s,eq}}$	$0.4484^{+0.0070}_{-0.0067}$	χ_{prior}^2	$9.7 (\nu: 9.8)$
$\sigma_8/h^{0.5}$	$0.987^{+0.023}_{-0.024}$	$H(0.15)$	$71.9^{+2.5}_{-2.4}$	χ_{CMB}^2	$7358 (\nu: 10475344.9)$
$r_{\text{drag}} h$	$98.6^{+2.4}_{-2.3}$	$D_{\text{M}}(0.15)$	651^{+23}_{-23}	χ_{Abund}^2	$0.68 (\nu: 0.2)$

$$\bar{\chi}_{\text{eff}}^2 = 11943.28; \Delta\bar{\chi}_{\text{eff}}^2 = 9150.70; R - 1 = 0.01315$$

7.10 base_nnu_CamSpecHM_TTTEEE_lowl_lowE_post_zre6p5/base_nnu_plikHM_TTTEEE_lowl_lowE_post_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02223^{+0.00044}_{-0.00043}$	$r_{\text{drag}} h$	$98.7^{+2.6}_{-2.5}$	$H(0.15)$	$71.8^{+3.1}_{-2.9}$
$\Omega_c h^2$	$0.1182^{+0.0062}_{-0.0062}$	$\langle d^2 \rangle^{1/2}$	$2.450^{+0.061}_{-0.061}$	$D_{\text{M}}(0.15)$	651^{+29}_{-28}
$100\theta_{MC}$	$1.04109^{+0.00092}_{-0.00087}$	z_{re}	< 8.81	$H(0.38)$	$82.0^{+3.0}_{-2.9}$
τ	$0.054^{+0.012}_{-0.011}$	$10^9 A_s$	$2.087^{+0.070}_{-0.065}$	$D_{\text{M}}(0.38)$	1552^{+64}_{-63}
N_{eff}	$2.93^{+0.41}_{-0.40}$	$10^9 A_s e^{-2\tau}$	$1.873^{+0.036}_{-0.038}$	$H(0.51)$	$88.7^{+3.0}_{-2.9}$
$\ln(10^{10} A_s)$	$3.038^{+0.034}_{-0.031}$	D_{40}	1235^{+33}_{-32}	$D_{\text{M}}(0.51)$	2009^{+80}_{-78}
n_s	$0.961^{+0.018}_{-0.018}$	D_{220}	5725^{+78}_{-78}	$H(0.61)$	$94.4^{+3.1}_{-3.0}$
y_{cal}	$1.0006^{+0.0049}_{-0.0049}$	D_{810}	2536^{+28}_{-27}	$D_{\text{M}}(0.61)$	2337^{+91}_{-89}
A_{217}^{CIB}	43^{+20}_{-20}	D_{1420}	$817.2^{+9.8}_{-9.7}$	$H(2.33)$	$234.8^{+5.6}_{-5.6}$
$\xi^{tSZ-CIB}$	—	D_{2000}	$231.3^{+3.8}_{-3.9}$	$D_{\text{M}}(2.33)$	5819^{+180}_{-180}
A_{143}^{tSZ}	$4.7^{+3.9}_{-4.3}$	$n_{s,0.002}$	$0.961^{+0.018}_{-0.018}$	$f\sigma_8(0.15)$	$0.459^{+0.016}_{-0.017}$
A_{100}^{PS}	246^{+60}_{-50}	Y_P	$0.2437^{+0.0056}_{-0.0057}$	$\sigma_8(0.15)$	$0.744^{+0.021}_{-0.020}$
A_{143}^{PS}	41^{+20}_{-20}	Y_P^{BBN}	$0.2450^{+0.0056}_{-0.0057}$	$f\sigma_8(0.38)$	$0.475^{+0.014}_{-0.014}$
A_{217}^{PS}	109^{+20}_{-30}	$10^5 D/H$	$2.57^{+0.10}_{-0.097}$	$\sigma_8(0.38)$	$0.659^{+0.020}_{-0.019}$
A^{kSZ}	—	Age/Gyr	$13.93^{+0.43}_{-0.42}$	$f\sigma_8(0.51)$	$0.473^{+0.013}_{-0.013}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	z_*	$1089.82^{+0.75}_{-0.73}$	$\sigma_8(0.51)$	$0.616^{+0.019}_{-0.018}$
c_{217}	$0.9996^{+0.0037}_{-0.0027}$	r_*	$145.7^{+4.0}_{-3.8}$	$f\sigma_8(0.61)$	$0.468^{+0.013}_{-0.012}$
H_0	$66.5^{+3.1}_{-3.0}$	$100\theta_*$	$1.0414^{+0.0012}_{-0.0011}$	$\sigma_8(0.61)$	$0.586^{+0.018}_{-0.017}$
Ω_Λ	$0.681^{+0.021}_{-0.022}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.99^{+0.37}_{-0.35}$	$f\sigma_8(2.33)$	$0.2952^{+0.0095}_{-0.0089}$
Ω_m	$0.319^{+0.022}_{-0.021}$	z_{drag}	$1059.4^{+1.6}_{-1.6}$	$\sigma_8(2.33)$	$0.304^{+0.010}_{-0.0097}$
$\Omega_m h^2$	$0.1411^{+0.0064}_{-0.0065}$	r_{drag}	$148.4^{+4.1}_{-3.9}$	f_{2000}^{143}	29^{+6}_{-6}
$\Omega_m h^3$	$0.0939^{+0.0081}_{-0.0078}$	k_{D}	$0.1399^{+0.0028}_{-0.0029}$	$f_{2000}^{143 \times 217}$	31^{+4}_{-5}
σ_8	$0.806^{+0.022}_{-0.021}$	$100\theta_{\text{D}}$	$0.16057^{+0.00094}_{-0.00091}$	f_{2000}^{217}	$106.4^{+4.2}_{-4.1}$
S_8	$0.831^{+0.032}_{-0.032}$	z_{eq}	3411^{+76}_{-77}	χ_{small}^2	$396.8 (\nu: 1.4)$
$\sigma_8 \Omega_m^{0.5}$	$0.455^{+0.017}_{-0.018}$	k_{eq}	$0.01032^{+0.00024}_{-0.00024}$	χ_{lowl}^2	$24.0 (\nu: 1.2)$
$\sigma_8 \Omega_m^{0.25}$	$0.605^{+0.017}_{-0.017}$	$100\theta_{\text{eq}}$	$0.811^{+0.015}_{-0.014}$	χ_{prior}^2	$9.7 (\nu: 9.8)$
$\sigma_8/h^{0.5}$	$0.988^{+0.023}_{-0.023}$	$100\theta_{\text{s,eq}}$	$0.4485^{+0.0075}_{-0.0072}$	χ_{CMB}^2	$7358 (\nu: 10475879.2)$

$$\bar{\chi}_{\text{eff}}^2 = 11942.78; \Delta\bar{\chi}_{\text{eff}}^2 = 9150.97; R - 1 = 0.01065$$

7.11 base_nnu_CamSpecHM_TTTEEE_lowl_lowE_post_lensing_zre6p5/base_nnu_plikHM_TTTEEE_lowl_lowE_post_lensing_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02221^{+0.00044}_{-0.00043}$	$\langle d^2 \rangle^{1/2}$	$2.452^{+0.049}_{-0.049}$	$H(0.38)$	$81.8^{+3.0}_{-2.9}$
$\Omega_c h^2$	$0.1177^{+0.0060}_{-0.0061}$	z_{re}	< 8.75	$D_{\text{M}}(0.38)$	1556^{+64}_{-62}
$100\theta_{MC}$	$1.04114^{+0.00089}_{-0.00087}$	$10^9 A_s$	$2.084^{+0.066}_{-0.061}$	$H(0.51)$	$88.5^{+3.0}_{-3.0}$
τ	$0.054^{+0.012}_{-0.011}$	$10^9 A_s e^{-2\tau}$	$1.870^{+0.035}_{-0.036}$	$D_{\text{M}}(0.51)$	2014^{+80}_{-78}
N_{eff}	$2.89^{+0.41}_{-0.41}$	D_{40}	1236^{+31}_{-30}	$H(0.61)$	$94.1^{+3.0}_{-3.0}$
$\ln(10^{10} A_s)$	$3.037^{+0.032}_{-0.029}$	D_{220}	5726^{+77}_{-78}	$D_{\text{M}}(0.61)$	2343^{+91}_{-89}
n_s	$0.960^{+0.017}_{-0.017}$	D_{810}	2535^{+27}_{-26}	$H(2.33)$	$234.4^{+5.5}_{-5.6}$
y_{cal}	$1.0006^{+0.0049}_{-0.0048}$	D_{1420}	$817.4^{+9.6}_{-9.6}$	$D_{\text{M}}(2.33)$	5833^{+190}_{-180}
A_{217}^{CIB}	42^{+20}_{-20}	D_{2000}	$231.4^{+3.8}_{-3.8}$	$f\sigma_8(0.15)$	$0.458^{+0.013}_{-0.013}$
$\xi^{tSZ-CIB}$	—	$n_{s,0.002}$	$0.960^{+0.017}_{-0.017}$	$\sigma_8(0.15)$	$0.742^{+0.020}_{-0.019}$
A_{143}^{tSZ}	$4.7^{+4.0}_{-4.3}$	Y_P	$0.2432^{+0.0056}_{-0.0058}$	$f\sigma_8(0.38)$	$0.475^{+0.011}_{-0.011}$
A_{100}^{PS}	246^{+60}_{-50}	Y_P^{BBN}	$0.2446^{+0.0056}_{-0.0058}$	$\sigma_8(0.38)$	$0.657^{+0.019}_{-0.018}$
A_{143}^{PS}	41^{+20}_{-20}	$10^5 D/H$	$2.56^{+0.10}_{-0.096}$	$f\sigma_8(0.51)$	$0.473^{+0.011}_{-0.011}$
A_{217}^{PS}	109^{+20}_{-30}	Age/Gyr	$13.96^{+0.44}_{-0.42}$	$\sigma_8(0.51)$	$0.615^{+0.018}_{-0.017}$
A^{kSZ}	—	z_*	$1089.77^{+0.71}_{-0.69}$	$f\sigma_8(0.61)$	$0.467^{+0.010}_{-0.010}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	r_*	$146.0^{+4.0}_{-3.8}$	$\sigma_8(0.61)$	$0.585^{+0.018}_{-0.017}$
c_{217}	$0.9996^{+0.0038}_{-0.0027}$	$100\theta_*$	$1.0414^{+0.0011}_{-0.0011}$	$f\sigma_8(2.33)$	$0.2945^{+0.0094}_{-0.0087}$
H_0	$66.3^{+3.1}_{-2.9}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$14.02^{+0.37}_{-0.35}$	$\sigma_8(2.33)$	$0.303^{+0.010}_{-0.0095}$
Ω_Λ	$0.680^{+0.019}_{-0.020}$	z_{drag}	$1059.3^{+1.6}_{-1.6}$	f_{2000}^{143}	29^{+6}_{-6}
Ω_m	$0.320^{+0.020}_{-0.019}$	r_{drag}	$148.7^{+4.2}_{-3.9}$	$f_{2000}^{143 \times 217}$	31^{+4}_{-4}
$\Omega_m h^2$	$0.1405^{+0.0063}_{-0.0063}$	k_{D}	$0.1397^{+0.0028}_{-0.0029}$	f_{2000}^{217}	$106.2^{+4.2}_{-4.1}$
$\Omega_m h^3$	$0.0933^{+0.0080}_{-0.0078}$	$100\theta_{\text{D}}$	$0.16050^{+0.00093}_{-0.00091}$	χ^2_{lensing}	$9.03 (\nu: 0.3)$
σ_8	$0.804^{+0.021}_{-0.019}$	z_{eq}	3413^{+67}_{-68}	χ^2_{small}	$396.7 (\nu: 1.2)$
S_8	$0.830^{+0.025}_{-0.025}$	k_{eq}	$0.01031^{+0.00021}_{-0.00022}$	χ^2_{lowl}	$24.2 (\nu: 1.1)$
$\sigma_8 \Omega_m^{0.5}$	$0.455^{+0.014}_{-0.014}$	$100\theta_{\text{eq}}$	$0.811^{+0.013}_{-0.012}$	χ^2_{prior}	$9.7 (\nu: 9.9)$
$\sigma_8 \Omega_m^{0.25}$	$0.605^{+0.014}_{-0.014}$	$100\theta_{\text{s,eq}}$	$0.4483^{+0.0066}_{-0.0063}$	χ^2_{CMB}	$7366 (\nu: 10475580.9)$
$\sigma_8/h^{0.5}$	$0.988^{+0.017}_{-0.017}$	$H(0.15)$	$71.6^{+3.0}_{-2.9}$		
$r_{\text{drag}} h$	$98.6^{+2.4}_{-2.2}$	$D_{\text{M}}(0.15)$	653^{+29}_{-28}		

$\bar{\chi}^2_{\text{eff}} = 11951.41$; $\Delta\bar{\chi}^2_{\text{eff}} = 9150.80$; $R - 1 = 0.01353$

7.12 base_nnu_CamSpecHM_TTTEEE_lowl_lowE_post_Cooke17_Aver15_zre6p5/base_nnu_plikHM_TTTEEE_lowl_lowE_post_Cooke17_Aver15_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02223^{+0.00040}_{-0.00039}$	$\langle d^2 \rangle^{1/2}$	$2.450^{+0.059}_{-0.059}$	$H(0.38)$	$82.1^{+2.4}_{-2.3}$
$\Omega_c h^2$	$0.1186^{+0.0049}_{-0.0049}$	z_{re}	< 8.80	$D_{\text{M}}(0.38)$	1549^{+51}_{-51}
$100\theta_{MC}$	$1.04104^{+0.00078}_{-0.00076}$	$10^9 A_s$	$2.089^{+0.065}_{-0.060}$	$H(0.51)$	$88.9^{+2.4}_{-2.3}$
τ	$0.054^{+0.013}_{-0.011}$	$10^9 A_s e^{-2\tau}$	$1.874^{+0.031}_{-0.032}$	$D_{\text{M}}(0.51)$	2006^{+63}_{-64}
N_{eff}	$2.95^{+0.32}_{-0.31}$	D_{40}	1234^{+31}_{-30}	$H(0.61)$	$94.5^{+2.4}_{-2.3}$
$\ln(10^{10} A_s)$	$3.039^{+0.031}_{-0.029}$	D_{220}	5723^{+77}_{-77}	$D_{\text{M}}(0.61)$	2333^{+72}_{-73}
n_s	$0.962^{+0.015}_{-0.015}$	D_{810}	2536^{+27}_{-27}	$H(2.33)$	$235.2^{+4.3}_{-4.3}$
y_{cal}	$1.0006^{+0.0049}_{-0.0048}$	D_{1420}	$816.9^{+9.6}_{-9.6}$	$D_{\text{M}}(2.33)$	5810^{+140}_{-140}
A_{217}^{CIB}	43^{+20}_{-20}	D_{2000}	$231.0^{+3.5}_{-3.5}$	$f\sigma_8(0.15)$	$0.460^{+0.016}_{-0.016}$
$\xi^{tSZ-CIB}$	—	$n_{s,0.002}$	$0.962^{+0.015}_{-0.015}$	$\sigma_8(0.15)$	$0.745^{+0.018}_{-0.017}$
A_{143}^{tSZ}	$4.7^{+3.9}_{-4.3}$	Y_P	$0.2440^{+0.0044}_{-0.0043}$	$f\sigma_8(0.38)$	$0.476^{+0.013}_{-0.014}$
A_{100}^{PS}	247^{+60}_{-50}	Y_P^{BBN}	$0.2453^{+0.0044}_{-0.0044}$	$\sigma_8(0.38)$	$0.660^{+0.017}_{-0.015}$
A_{143}^{PS}	42^{+20}_{-20}	$10^5 D/H$	$2.578^{+0.081}_{-0.076}$	$f\sigma_8(0.51)$	$0.474^{+0.012}_{-0.012}$
A_{217}^{PS}	109^{+20}_{-30}	Age/Gyr	$13.91^{+0.33}_{-0.33}$	$\sigma_8(0.51)$	$0.617^{+0.016}_{-0.015}$
A^{kSZ}	—	z_*	$1089.88^{+0.62}_{-0.61}$	$f\sigma_8(0.61)$	$0.468^{+0.012}_{-0.011}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	r_*	$145.4^{+3.0}_{-2.9}$	$\sigma_8(0.61)$	$0.587^{+0.015}_{-0.014}$
c_{217}	$0.9997^{+0.0038}_{-0.0028}$	$100\theta_*$	$1.04130^{+0.00093}_{-0.00091}$	$f\sigma_8(2.33)$	$0.2956^{+0.0080}_{-0.0073}$
H_0	$66.6^{+2.6}_{-2.4}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.97^{+0.28}_{-0.27}$	$\sigma_8(2.33)$	$0.3045^{+0.0086}_{-0.0080}$
Ω_Λ	$0.681^{+0.020}_{-0.020}$	z_{drag}	$1059.4^{+1.3}_{-1.3}$	f_{2000}^{143}	29^{+6}_{-6}
Ω_m	$0.319^{+0.020}_{-0.020}$	r_{drag}	$148.2^{+3.1}_{-3.0}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
$\Omega_m h^2$	$0.1414^{+0.0051}_{-0.0051}$	k_{D}	$0.1400^{+0.0023}_{-0.0023}$	f_{2000}^{217}	$106.5^{+3.9}_{-4.0}$
$\Omega_m h^3$	$0.0943^{+0.0063}_{-0.0060}$	$100\theta_{\text{D}}$	$0.16064^{+0.00073}_{-0.00069}$	χ_{small}^2	$396.8 (\nu: 1.4)$
σ_8	$0.807^{+0.019}_{-0.018}$	z_{eq}	3410^{+72}_{-73}	χ_{lowl}^2	$23.9 (\nu: 1.0)$
S_8	$0.832^{+0.032}_{-0.032}$	k_{eq}	$0.01034^{+0.00021}_{-0.00022}$	χ_{Aver15}^2	$0.32 (\nu: 0.1)$
$\sigma_8 \Omega_m^{0.5}$	$0.456^{+0.017}_{-0.018}$	$100\theta_{\text{eq}}$	$0.812^{+0.014}_{-0.013}$	χ_{Cooke17}^2	$0.37 (\nu: 0.1)$
$\sigma_8 \Omega_m^{0.25}$	$0.606^{+0.017}_{-0.017}$	$100\theta_{\text{s,eq}}$	$0.4486^{+0.0070}_{-0.0067}$	χ_{prior}^2	$9.7 (\nu: 9.9)$
$\sigma_8/h^{0.5}$	$0.989^{+0.023}_{-0.023}$	$H(0.15)$	$72.0^{+2.5}_{-2.4}$	χ_{CMB}^2	$7357 (\nu: 10475313.7)$
$r_{\text{drag}} h$	$98.7^{+2.4}_{-2.4}$	$D_{\text{M}}(0.15)$	650^{+23}_{-23}	χ_{Abund}^2	$0.68 (\nu: 0.2)$

$\bar{\chi}_{\text{eff}}^2 = 11943.02$; $\Delta\bar{\chi}_{\text{eff}}^2 = 9150.68$; $R - 1 = 0.01235$

7.13 base_nnu_CamSpecHM_TTTEEE_lowl_lowE_BAO/base_nnu_plikHM_TTTEEE_lowl_lowE_BAO

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02235^{+0.00037}_{-0.00037}$	z_{re}	$7.7^{+1.6}_{-1.6}$	$H(0.51)$	$89.5^{+2.6}_{-2.5}$
$\Omega_c h^2$	$0.1184^{+0.0064}_{-0.0061}$	$10^9 A_s$	$2.091^{+0.080}_{-0.075}$	$D_M(0.51)$	1987^{+64}_{-63}
$100\theta_{MC}$	$1.04108^{+0.00090}_{-0.00089}$	$10^9 A_s e^{-2\tau}$	$1.874^{+0.037}_{-0.037}$	$H(0.61)$	$95.1^{+2.7}_{-2.6}$
τ	$0.055^{+0.016}_{-0.015}$	D_{40}	1226^{+28}_{-27}	$D_M(0.61)$	2312^{+73}_{-72}
N_{eff}	$3.00^{+0.38}_{-0.36}$	D_{220}	5728^{+78}_{-77}	$H(2.33)$	$235.3^{+5.5}_{-5.5}$
$\ln(10^{10} A_s)$	$3.040^{+0.038}_{-0.036}$	D_{810}	2536^{+28}_{-28}	$D_M(2.33)$	5780^{+160}_{-160}
n_s	$0.966^{+0.014}_{-0.014}$	D_{1420}	$817.3^{+9.9}_{-9.8}$	$f\sigma_8(0.15)$	$0.454^{+0.014}_{-0.014}$
y_{cal}	$1.0006^{+0.0049}_{-0.0049}$	D_{2000}	$231.0^{+3.9}_{-3.9}$	$\sigma_8(0.15)$	$0.745^{+0.022}_{-0.021}$
A_{217}^{CIB}	43^{+20}_{-20}	$n_{s,0.002}$	$0.966^{+0.014}_{-0.014}$	$f\sigma_8(0.38)$	$0.472^{+0.014}_{-0.014}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.2448^{+0.0051}_{-0.0051}$	$\sigma_8(0.38)$	$0.660^{+0.020}_{-0.019}$
A_{143}^{tSZ}	$4.8^{+3.9}_{-4.3}$	Y_P^{BBN}	$0.2461^{+0.0052}_{-0.0051}$	$f\sigma_8(0.51)$	$0.471^{+0.013}_{-0.013}$
A_{100}^{PS}	247^{+60}_{-50}	$10^5 D/H$	$2.57^{+0.10}_{-0.099}$	$\sigma_8(0.51)$	$0.618^{+0.019}_{-0.018}$
A_{143}^{PS}	42^{+20}_{-20}	Age/Gyr	$13.84^{+0.38}_{-0.37}$	$f\sigma_8(0.61)$	$0.466^{+0.013}_{-0.013}$
A_{217}^{PS}	109^{+20}_{-30}	z_*	$1089.76^{+0.76}_{-0.74}$	$\sigma_8(0.61)$	$0.588^{+0.018}_{-0.018}$
A^{kSZ}	—	r_*	$145.1^{+3.7}_{-3.6}$	$f\sigma_8(2.33)$	$0.2965^{+0.0093}_{-0.0091}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	$100\theta_*$	$1.0413^{+0.0011}_{-0.0011}$	$\sigma_8(2.33)$	$0.306^{+0.010}_{-0.0096}$
c_{217}	$0.9996^{+0.0037}_{-0.0027}$	$D_M(z_*)/\text{Gpc}$	$13.94^{+0.34}_{-0.34}$	f_{2000}^{143}	29^{+6}_{-6}
H_0	$67.4^{+2.5}_{-2.4}$	z_{drag}	$1059.7^{+1.4}_{-1.4}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
Ω_Λ	$0.689^{+0.014}_{-0.014}$	r_{drag}	$147.8^{+3.8}_{-3.8}$	f_{2000}^{217}	$106.6^{+4.2}_{-4.1}$
Ω_m	$0.311^{+0.014}_{-0.014}$	k_D	$0.1403^{+0.0028}_{-0.0027}$	χ_{small}^2	$397.1 (\nu: 1.9)$
$\Omega_m h^2$	$0.1414^{+0.0066}_{-0.0064}$	$100\theta_D$	$0.16070^{+0.00091}_{-0.00087}$	χ_{lowl}^2	$23.2 (\nu: 0.6)$
$\Omega_m h^3$	$0.0954^{+0.0076}_{-0.0071}$	z_{eq}	3383^{+51}_{-52}	$\chi_{6\text{DF}}^2$	$0.061 (\nu: 0.0)$
σ_8	$0.806^{+0.023}_{-0.023}$	k_{eq}	$0.01029^{+0.00024}_{-0.00024}$	χ_{MGS}^2	$1.29 (\nu: 0.1)$
S_8	$0.820^{+0.027}_{-0.027}$	$100\theta_{\text{eq}}$	$0.8168^{+0.0099}_{-0.0096}$	χ_{DR12BAO}^2	$4.9 (\nu: 1.2)$
$\sigma_8 \Omega_m^{0.5}$	$0.449^{+0.015}_{-0.015}$	$100\theta_{s,\text{eq}}$	$0.4512^{+0.0051}_{-0.0049}$	χ_{prior}^2	$9.7 (\nu: 10.0)$
$\sigma_8 \Omega_m^{0.25}$	$0.602^{+0.017}_{-0.017}$	$H(0.15)$	$72.7^{+2.5}_{-2.4}$	χ_{BAO}^2	$6.2 (\nu: 0.8)$
$\sigma_8/h^{0.5}$	$0.981^{+0.022}_{-0.022}$	$D_M(0.15)$	643^{+22}_{-22}	χ_{CMB}^2	$7358 (\nu: 10474921.5)$
$r_{\text{drag}} h$	$99.7^{+1.8}_{-1.7}$	$H(0.38)$	$82.8^{+2.5}_{-2.5}$		
$\langle d^2 \rangle^{1/2}$	$2.430^{+0.052}_{-0.051}$	$D_M(0.38)$	1534^{+51}_{-50}		

Best-fit $\chi_{\text{eff}}^2 = 11926.54$; $\Delta\chi_{\text{eff}}^2 = 9154.92$; $\bar{\chi}_{\text{eff}}^2 = 11949.07$; $\Delta\bar{\chi}_{\text{eff}}^2 = 9150.12$; $R - 1 = 0.00571$
 χ_{eff}^2 : BAO - 6DF: 0.02 (Δ -0.03) MGS: 1.28 (Δ 0.18) DR12BAO: 4.22 (Δ -0.57) CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.88 (Δ -0.28) commander_dx12_v3_2_29: 22.86 (Δ -0.35) CamSpec like_10.7HM_1400_unified: 11499.97

7.14 base_nnu_CamSpecHM_TTTEEE_lowl_lowE_BAO_post_lensing_JLA/base_nnu_plikHM_TTTEEE_lowl_lowE_BAO_post_lensing_JLA

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02234^{+0.00037}_{-0.00037}$	z_{re}	$7.8^{+1.5}_{-1.4}$	$H(0.51)$	$89.4^{+2.5}_{-2.4}$
$\Omega_c h^2$	$0.1183^{+0.0061}_{-0.0057}$	$10^9 A_s$	$2.097^{+0.071}_{-0.066}$	$D_{\text{M}}(0.51)$	1989^{+61}_{-61}
$100\theta_{MC}$	$1.04109^{+0.00084}_{-0.00088}$	$10^9 A_s e^{-2\tau}$	$1.875^{+0.034}_{-0.035}$	$H(0.61)$	$95.0^{+2.6}_{-2.5}$
τ	$0.056^{+0.015}_{-0.014}$	D_{40}	1228^{+26}_{-25}	$D_{\text{M}}(0.61)$	2314^{+70}_{-69}
N_{eff}	$2.99^{+0.37}_{-0.35}$	D_{220}	5732^{+75}_{-76}	$H(2.33)$	$235.2^{+5.3}_{-5.0}$
$\ln(10^{10} A_s)$	$3.043^{+0.033}_{-0.032}$	D_{810}	2538^{+27}_{-27}	$D_{\text{M}}(2.33)$	5784^{+150}_{-150}
n_s	$0.965^{+0.014}_{-0.013}$	D_{1420}	$817.8^{+9.9}_{-10}$	$f\sigma_8(0.15)$	$0.455^{+0.011}_{-0.012}$
y_{cal}	$1.0008^{+0.0048}_{-0.0050}$	D_{2000}	$231.3^{+3.9}_{-4.0}$	$\sigma_8(0.15)$	$0.746^{+0.019}_{-0.019}$
A_{217}^{CIB}	43^{+10}_{-20}	$n_{s,0.002}$	$0.965^{+0.014}_{-0.013}$	$f\sigma_8(0.38)$	$0.473^{+0.011}_{-0.011}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.2446^{+0.0050}_{-0.0048}$	$\sigma_8(0.38)$	$0.661^{+0.017}_{-0.017}$
A_{143}^{tSZ}	$4.8^{+4.0}_{-4.1}$	Y_P^{BBN}	$0.2460^{+0.0050}_{-0.0049}$	$f\sigma_8(0.51)$	$0.472^{+0.011}_{-0.011}$
A_{100}^{PS}	247^{+60}_{-50}	$10^5 D/H$	$2.57^{+0.10}_{-0.093}$	$\sigma_8(0.51)$	$0.619^{+0.017}_{-0.017}$
A_{143}^{PS}	41^{+20}_{-20}	Age/Gyr	$13.85^{+0.36}_{-0.35}$	$f\sigma_8(0.61)$	$0.467^{+0.011}_{-0.011}$
A_{217}^{PS}	109^{+20}_{-30}	z_*	$1089.75^{+0.72}_{-0.68}$	$\sigma_8(0.61)$	$0.589^{+0.016}_{-0.016}$
A^{kSZ}	—	r_*	$145.2^{+3.4}_{-3.5}$	$f\sigma_8(2.33)$	$0.2968^{+0.0083}_{-0.0083}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	$100\theta_*$	$1.0413^{+0.0010}_{-0.0011}$	$\sigma_8(2.33)$	$0.3060^{+0.0089}_{-0.0088}$
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.94^{+0.32}_{-0.32}$	f_{2000}^{143}	29^{+6}_{-6}
H_0	$67.4^{+2.3}_{-2.2}$	z_{drag}	$1059.7^{+1.4}_{-1.4}$	$f_{2000}^{143 \times 217}$	32^{+5}_{-4}
Ω_Λ	$0.689^{+0.013}_{-0.014}$	r_{drag}	$147.9^{+3.6}_{-3.6}$	f_{2000}^{217}	$106.5^{+4.2}_{-4.2}$
Ω_m	$0.311^{+0.014}_{-0.013}$	k_{D}	$0.1403^{+0.0027}_{-0.0026}$	χ_{lensing}^2	$9.18 (\nu: 0.3)$
$\Omega_m h^2$	$0.1413^{+0.0062}_{-0.0058}$	$100\theta_{\text{D}}$	$0.16067^{+0.00088}_{-0.00082}$	χ_{simall}^2	$397.2 (\nu: 1.8)$
$\Omega_m h^3$	$0.0952^{+0.0073}_{-0.0067}$	z_{eq}	3385^{+48}_{-48}	χ_{lowl}^2	$23.3 (\nu: 0.6)$
σ_8	$0.807^{+0.020}_{-0.020}$	k_{eq}	$0.01029^{+0.00022}_{-0.00021}$	χ_{JLA}^2	$706.78 (\nu: 0.0)$
S_8	$0.822^{+0.022}_{-0.022}$	$100\theta_{\text{eq}}$	$0.8164^{+0.0092}_{-0.0090}$	$\chi_{6\text{DF}}^2$	$0.062 (\nu: 0.0)$
$\sigma_8 \Omega_m^{0.5}$	$0.450^{+0.012}_{-0.012}$	$100\theta_{\text{s,eq}}$	$0.4510^{+0.0046}_{-0.0046}$	χ_{MGS}^2	$1.25 (\nu: 0.1)$
$\sigma_8 \Omega_m^{0.25}$	$0.603^{+0.014}_{-0.014}$	$H(0.15)$	$72.6^{+2.4}_{-2.3}$	χ_{DR12BAO}^2	$4.9 (\nu: 1.2)$
$\sigma_8/h^{0.5}$	$0.983^{+0.017}_{-0.017}$	$D_{\text{M}}(0.15)$	644^{+21}_{-21}	χ_{prior}^2	$9.6 (\nu: 9.8)$
$r_{\text{drag}} h$	$99.6^{+1.6}_{-1.6}$	$H(0.38)$	$82.7^{+2.4}_{-2.4}$	χ_{CMB}^2	$7367 (\nu: 10476041.9)$
$\langle d^2 \rangle^{1/2}$	$2.435^{+0.042}_{-0.042}$	$D_{\text{M}}(0.38)$	1535^{+48}_{-48}	χ_{BAO}^2	$6.2 (\nu: 0.8)$

$$\bar{\chi}_{\text{eff}}^2 = 12664.75; \Delta\bar{\chi}_{\text{eff}}^2 = 9150.70; R - 1 = 0.04059$$

7.15 base_nnu_CamSpecHM_TTTEEE_lowl_lowE_BAO_post_lensing_Pantheon18/base_nnu_plikHM_TTTEEE_lowl_lowE_BAO_post_lensi

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02236^{+0.00037}_{-0.00036}$	z_{re}	$7.8^{+1.4}_{-1.4}$	$H(0.51)$	$89.5^{+2.5}_{-2.5}$
$\Omega_c h^2$	$0.1183^{+0.0061}_{-0.0058}$	$10^9 A_s$	$2.098^{+0.070}_{-0.066}$	$D_{\text{M}}(0.51)$	1987^{+61}_{-60}
$100\theta_{MC}$	$1.04109^{+0.00088}_{-0.00086}$	$10^9 A_s e^{-2\tau}$	$1.875^{+0.034}_{-0.035}$	$H(0.61)$	$95.1^{+2.5}_{-2.5}$
τ	$0.056^{+0.015}_{-0.014}$	D_{40}	1228^{+26}_{-25}	$D_{\text{M}}(0.61)$	2312^{+70}_{-68}
N_{eff}	$3.00^{+0.36}_{-0.35}$	D_{220}	5733^{+77}_{-75}	$H(2.33)$	$235.3^{+5.3}_{-5.2}$
$\ln(10^{10} A_s)$	$3.044^{+0.033}_{-0.032}$	D_{810}	2537^{+27}_{-27}	$D_{\text{M}}(2.33)$	5780^{+150}_{-150}
n_s	$0.966^{+0.014}_{-0.014}$	D_{1420}	$818^{+10}_{-9.8}$	$f\sigma_8(0.15)$	$0.455^{+0.011}_{-0.012}$
y_{cal}	$1.0008^{+0.0049}_{-0.0049}$	D_{2000}	$231.2^{+3.8}_{-3.8}$	$\sigma_8(0.15)$	$0.746^{+0.019}_{-0.019}$
A_{217}^{CIB}	43^{+20}_{-20}	$n_{s,0.002}$	$0.966^{+0.014}_{-0.014}$	$f\sigma_8(0.38)$	$0.473^{+0.011}_{-0.011}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.2447^{+0.0049}_{-0.0049}$	$\sigma_8(0.38)$	$0.661^{+0.017}_{-0.017}$
A_{143}^{tSZ}	$4.8^{+3.9}_{-4.2}$	Y_P^{BBN}	$0.2461^{+0.0049}_{-0.0049}$	$f\sigma_8(0.51)$	$0.472^{+0.011}_{-0.011}$
A_{100}^{PS}	247^{+60}_{-50}	$10^5 D/H$	$2.57^{+0.10}_{-0.095}$	$\sigma_8(0.51)$	$0.619^{+0.017}_{-0.017}$
A_{143}^{PS}	41^{+20}_{-20}	Age/Gyr	$13.84^{+0.36}_{-0.35}$	$f\sigma_8(0.61)$	$0.467^{+0.011}_{-0.011}$
A_{217}^{PS}	109^{+20}_{-30}	z_*	$1089.74^{+0.72}_{-0.70}$	$\sigma_8(0.61)$	$0.589^{+0.016}_{-0.016}$
A^{kSZ}	—	r_*	$145.1^{+3.5}_{-3.5}$	$f\sigma_8(2.33)$	$0.2970^{+0.0083}_{-0.0082}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	$100\theta_*$	$1.0413^{+0.0011}_{-0.0011}$	$\sigma_8(2.33)$	$0.3062^{+0.0090}_{-0.0088}$
c_{217}	$0.9996^{+0.0037}_{-0.0027}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.94^{+0.32}_{-0.32}$	f_{2000}^{143}	29^{+6}_{-6}
H_0	$67.4^{+2.3}_{-2.2}$	z_{drag}	$1059.7^{+1.4}_{-1.4}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
Ω_{Λ}	$0.689^{+0.013}_{-0.013}$	r_{drag}	$147.8^{+3.6}_{-3.6}$	f_{2000}^{217}	$106.5^{+4.1}_{-4.2}$
Ω_m	$0.311^{+0.013}_{-0.013}$	k_{D}	$0.1403^{+0.0026}_{-0.0026}$	χ^2_{lensing}	$9.19 (\nu: 0.3)$
$\Omega_m h^2$	$0.1413^{+0.0062}_{-0.0060}$	$100\theta_{\text{D}}$	$0.16068^{+0.00087}_{-0.00084}$	χ^2_{small}	$313 (\nu: 12159.9)$
$\Omega_m h^3$	$0.0954^{+0.0072}_{-0.0069}$	z_{eq}	3383^{+47}_{-47}	χ^2_{lowl}	$107 (\nu: 12182.8)$
σ_8	$0.807^{+0.020}_{-0.020}$	k_{eq}	$0.01029^{+0.00022}_{-0.00022}$	χ^2_{JLA}	$1035.11 (\nu: 0.1)$
S_8	$0.821^{+0.022}_{-0.022}$	$100\theta_{\text{eq}}$	$0.8168^{+0.0091}_{-0.0087}$	$\chi^2_{6\text{DF}}$	$0.32 (\nu: 0.1)$
$\sigma_8 \Omega_m^{0.5}$	$0.450^{+0.012}_{-0.012}$	$100\theta_{\text{s,eq}}$	$0.4512^{+0.0046}_{-0.0044}$	χ^2_{MGS}	$1.02 (\nu: 0.2)$
$\sigma_8 \Omega_m^{0.25}$	$0.603^{+0.014}_{-0.014}$	$H(0.15)$	$72.7^{+2.3}_{-2.3}$	χ^2_{DR12BAO}	$4.8 (\nu: 1.0)$
$\sigma_8/h^{0.5}$	$0.983^{+0.017}_{-0.017}$	$D_{\text{M}}(0.15)$	643^{+21}_{-21}	χ^2_{prior}	$9.6 (\nu: 9.8)$
$r_{\text{drag}} h$	$99.7^{+1.6}_{-1.6}$	$H(0.38)$	$82.8^{+2.4}_{-2.4}$	χ^2_{CMB}	$7367 (\nu: 10475803.6)$
$\langle d^2 \rangle^{1/2}$	$2.434^{+0.042}_{-0.042}$	$D_{\text{M}}(0.38)$	1534^{+49}_{-47}	χ^2_{BAO}	$6.1 (\nu: 0.6)$

Best-fit $\chi^2_{\text{eff}} = 12970.39$; $\Delta\chi^2_{\text{eff}} = 9155.01$; $\bar{\chi}^2_{\text{eff}} = 12993.15$; $\Delta\bar{\chi}^2_{\text{eff}} = 9150.59$; $R - 1 = 0.01037$
 χ^2_{eff} : BAO - 6DF: 0.03 (Δ -0.01) MGS: 1.22 (Δ 0.06) DR12BAO: 4.39 (Δ -0.21) CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.94 (Δ 0.32) small_100x143_offlike5_EE_Aplanck
396.09 (Δ -0.24) commander_dx12_v3.2_29: 23.00 (Δ -0.26) CamSpec like_10.7HM_1400_unified: 11499.66 SN - JLA Pantheon18: 1035.03 (Δ -0.04)

7.16 `base_nnu_CamSpecHM_TTTEEE_lowl_lowE_BAO_post_lensing/base_nnu_plikHM_TTTEEE_lowl_lowE_BAO_post_lensing`

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02234^{+0.00038}_{-0.00037}$	z_{re}	$7.8^{+1.4}_{-1.4}$	$H(0.51)$	$89.3^{+2.5}_{-2.5}$
$\Omega_c h^2$	$0.1182^{+0.0061}_{-0.0058}$	$10^9 A_s$	$2.096^{+0.070}_{-0.066}$	$D_{\text{M}}(0.51)$	1991^{+63}_{-61}
$100\theta_{MC}$	$1.04110^{+0.00088}_{-0.00087}$	$10^9 A_s e^{-2\tau}$	$1.874^{+0.034}_{-0.035}$	$H(0.61)$	$94.9^{+2.6}_{-2.6}$
τ	$0.056^{+0.015}_{-0.014}$	D_{40}	1229^{+26}_{-25}	$D_{\text{M}}(0.61)$	2317^{+72}_{-70}
N_{eff}	$2.98^{+0.37}_{-0.36}$	D_{220}	5732^{+77}_{-76}	$H(2.33)$	$235.1^{+5.3}_{-5.2}$
$\ln(10^{10} A_s)$	$3.042^{+0.033}_{-0.032}$	D_{810}	2537^{+27}_{-27}	$D_{\text{M}}(2.33)$	5788^{+150}_{-150}
n_s	$0.965^{+0.014}_{-0.014}$	D_{1420}	$818^{+10}_{-9.7}$	$f\sigma_8(0.15)$	$0.455^{+0.012}_{-0.012}$
y_{cal}	$1.0008^{+0.0049}_{-0.0049}$	D_{2000}	$231.2^{+3.8}_{-3.9}$	$\sigma_8(0.15)$	$0.745^{+0.019}_{-0.019}$
A_{217}^{CIB}	43^{+20}_{-20}	$n_{s,0.002}$	$0.965^{+0.014}_{-0.014}$	$f\sigma_8(0.38)$	$0.473^{+0.011}_{-0.011}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.2445^{+0.0049}_{-0.0050}$	$\sigma_8(0.38)$	$0.661^{+0.018}_{-0.018}$
A_{143}^{tSZ}	$4.8^{+3.9}_{-4.2}$	Y_P^{BBN}	$0.2458^{+0.0050}_{-0.0050}$	$f\sigma_8(0.51)$	$0.472^{+0.011}_{-0.011}$
A_{100}^{PS}	247^{+60}_{-50}	$10^5 D/H$	$2.57^{+0.10}_{-0.095}$	$\sigma_8(0.51)$	$0.618^{+0.017}_{-0.017}$
A_{143}^{PS}	41^{+20}_{-20}	Age/Gyr	$13.86^{+0.37}_{-0.36}$	$f\sigma_8(0.61)$	$0.467^{+0.011}_{-0.011}$
A_{217}^{PS}	109^{+20}_{-30}	z_*	$1089.74^{+0.72}_{-0.70}$	$\sigma_8(0.61)$	$0.588^{+0.016}_{-0.016}$
A^{kSZ}	—	r_*	$145.3^{+3.5}_{-3.5}$	$f\sigma_8(2.33)$	$0.2966^{+0.0084}_{-0.0084}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	$100\theta_*$	$1.0413^{+0.0011}_{-0.0011}$	$\sigma_8(2.33)$	$0.3057^{+0.0091}_{-0.0090}$
c_{217}	$0.9996^{+0.0037}_{-0.0027}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.95^{+0.33}_{-0.32}$	f_{2000}^{143}	29^{+6}_{-6}
H_0	$67.3^{+2.4}_{-2.3}$	z_{drag}	$1059.7^{+1.4}_{-1.4}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
Ω_Λ	$0.688^{+0.013}_{-0.014}$	r_{drag}	$148.0^{+3.7}_{-3.6}$	f_{2000}^{217}	$106.5^{+4.1}_{-4.2}$
Ω_m	$0.312^{+0.014}_{-0.013}$	k_{D}	$0.1402^{+0.0027}_{-0.0026}$	χ_{lensing}^2	$9.16 (\nu: 0.3)$
$\Omega_m h^2$	$0.1412^{+0.0063}_{-0.0060}$	$100\theta_{\text{D}}$	$0.16065^{+0.00087}_{-0.00085}$	χ_{small}^2	$313 (\nu: 12174.4)$
$\Omega_m h^3$	$0.0950^{+0.0073}_{-0.0069}$	z_{eq}	3387^{+49}_{-50}	χ_{lowl}^2	$107 (\nu: 12197.7)$
σ_8	$0.807^{+0.020}_{-0.020}$	k_{eq}	$0.01029^{+0.00022}_{-0.00022}$	$\chi_{6\text{DF}}^2$	$0.32 (\nu: 0.1)$
S_8	$0.822^{+0.022}_{-0.022}$	$100\theta_{\text{eq}}$	$0.8161^{+0.0095}_{-0.0091}$	χ_{MGS}^2	$0.97 (\nu: 0.2)$
$\sigma_8 \Omega_m^{0.5}$	$0.450^{+0.012}_{-0.012}$	$100\theta_{\text{s,eq}}$	$0.4509^{+0.0048}_{-0.0046}$	χ_{DR12BAO}^2	$5.0 (\nu: 1.3)$
$\sigma_8 \Omega_m^{0.25}$	$0.603^{+0.014}_{-0.014}$	$H(0.15)$	$72.6^{+2.4}_{-2.3}$	χ_{prior}^2	$9.6 (\nu: 9.8)$
$\sigma_8/h^{0.5}$	$0.983^{+0.017}_{-0.017}$	$D_{\text{M}}(0.15)$	644^{+22}_{-22}	χ_{CMB}^2	$7367 (\nu: 10475827.9)$
$r_{\text{drag}} h$	$99.5^{+1.7}_{-1.6}$	$H(0.38)$	$82.6^{+2.5}_{-2.4}$	χ_{BAO}^2	$6.3 (\nu: 0.9)$
$\langle d^2 \rangle^{1/2}$	$2.436^{+0.042}_{-0.042}$	$D_{\text{M}}(0.38)$	1537^{+50}_{-49}		

$$\bar{\chi}_{\text{eff}}^2 = 11958.08; \Delta\bar{\chi}_{\text{eff}}^2 = 9150.63; R - 1 = 0.01000$$

7.17 base_nnu_CamSpecHM_TTTEEE_lowl_lowE_BAO_post_Aver15/base_nnu_plikHM_TTTEEE_lowl_lowE_BAO_post_Aver15

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02233^{+0.00035}_{-0.00034}$	z_{re}	$7.6^{+1.6}_{-1.6}$	$H(0.51)$	$89.3^{+2.2}_{-2.1}$
$\Omega_c h^2$	$0.1180^{+0.0055}_{-0.0053}$	$10^9 A_s$	$2.088^{+0.077}_{-0.073}$	$D_{\text{M}}(0.51)$	1991^{+54}_{-53}
$100\theta_{MC}$	$1.04113^{+0.00081}_{-0.00081}$	$10^9 A_s e^{-2\tau}$	$1.872^{+0.033}_{-0.033}$	$H(0.61)$	$94.9^{+2.2}_{-2.2}$
τ	$0.054^{+0.016}_{-0.015}$	D_{40}	1227^{+27}_{-26}	$D_{\text{M}}(0.61)$	2317^{+61}_{-61}
N_{eff}	$2.98^{+0.31}_{-0.30}$	D_{220}	5728^{+78}_{-76}	$H(2.33)$	$234.9^{+4.7}_{-4.7}$
$\ln(10^{10} A_s)$	$3.039^{+0.036}_{-0.035}$	D_{810}	2536^{+28}_{-28}	$D_{\text{M}}(2.33)$	5791^{+130}_{-130}
n_s	$0.965^{+0.013}_{-0.012}$	D_{1420}	$817.5^{+9.9}_{-9.8}$	$f\sigma_8(0.15)$	$0.453^{+0.014}_{-0.014}$
y_{cal}	$1.0006^{+0.0049}_{-0.0049}$	D_{2000}	$231.2^{+3.6}_{-3.7}$	$\sigma_8(0.15)$	$0.743^{+0.020}_{-0.019}$
A_{217}^{CIB}	43^{+20}_{-20}	$n_{s,0.002}$	$0.965^{+0.013}_{-0.012}$	$f\sigma_8(0.38)$	$0.472^{+0.013}_{-0.013}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.2444^{+0.0043}_{-0.0042}$	$\sigma_8(0.38)$	$0.659^{+0.018}_{-0.018}$
A_{143}^{tSZ}	$4.8^{+3.9}_{-4.3}$	Y_P^{BBN}	$0.2457^{+0.0043}_{-0.0043}$	$f\sigma_8(0.51)$	$0.470^{+0.013}_{-0.013}$
A_{100}^{PS}	247^{+60}_{-50}	$10^5 D/H$	$2.569^{+0.090}_{-0.087}$	$\sigma_8(0.51)$	$0.617^{+0.017}_{-0.017}$
A_{143}^{PS}	41^{+20}_{-20}	Age/Gyr	$13.86^{+0.31}_{-0.31}$	$f\sigma_8(0.61)$	$0.465^{+0.012}_{-0.012}$
A_{217}^{PS}	109^{+20}_{-30}	z_*	$1089.72^{+0.67}_{-0.66}$	$\sigma_8(0.61)$	$0.587^{+0.016}_{-0.016}$
A^{kSZ}	—	r_*	$145.4^{+3.1}_{-3.1}$	$f\sigma_8(2.33)$	$0.2959^{+0.0082}_{-0.0080}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	$100\theta_*$	$1.04136^{+0.00098}_{-0.00097}$	$\sigma_8(2.33)$	$0.3051^{+0.0087}_{-0.0085}$
c_{217}	$0.9996^{+0.0037}_{-0.0027}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.96^{+0.29}_{-0.29}$	f_{2000}^{143}	29^{+6}_{-6}
H_0	$67.3^{+2.1}_{-2.0}$	z_{drag}	$1059.6^{+1.2}_{-1.2}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
Ω_{Λ}	$0.689^{+0.013}_{-0.014}$	r_{drag}	$148.1^{+3.2}_{-3.2}$	f_{2000}^{217}	$106.4^{+4.0}_{-4.0}$
Ω_m	$0.311^{+0.014}_{-0.013}$	k_{D}	$0.1401^{+0.0024}_{-0.0023}$	χ_{small}^2	313 (ν : 12212.2)
$\Omega_m h^2$	$0.1409^{+0.0056}_{-0.0055}$	$100\theta_{\text{D}}$	$0.16064^{+0.00077}_{-0.00075}$	χ_{lowl}^2	108 (ν : 12242.7)
$\Omega_m h^3$	$0.0948^{+0.0063}_{-0.0060}$	z_{eq}	3385^{+50}_{-50}	χ_{Aver15}^2	0.34 (ν : 0.1)
σ_8	$0.805^{+0.021}_{-0.021}$	k_{eq}	$0.01028^{+0.00022}_{-0.00021}$	$\chi_{6\text{DF}}^2$	0.32 (ν : 0.1)
S_8	$0.820^{+0.027}_{-0.027}$	$100\theta_{\text{eq}}$	$0.8165^{+0.0095}_{-0.0093}$	χ_{MGS}^2	1.00 (ν : 0.2)
$\sigma_8 \Omega_m^{0.5}$	$0.449^{+0.015}_{-0.015}$	$100\theta_{\text{s,eq}}$	$0.4511^{+0.0048}_{-0.0048}$	χ_{DR12BAO}^2	4.9 (ν : 1.2)
$\sigma_8 \Omega_m^{0.25}$	$0.601^{+0.017}_{-0.017}$	$H(0.15)$	$72.5^{+2.1}_{-2.0}$	χ_{prior}^2	9.7 (ν : 9.9)
$\sigma_8/h^{0.5}$	$0.981^{+0.021}_{-0.022}$	$D_{\text{M}}(0.15)$	645^{+19}_{-19}	χ_{BAO}^2	6.3 (ν : 0.8)
$r_{\text{drag}} h$	$99.6^{+1.7}_{-1.6}$	$H(0.38)$	$82.6^{+2.1}_{-2.0}$	χ_{CMB}^2	7358 (ν : 10475218.7)
$\langle d^2 \rangle^{1/2}$	$2.431^{+0.051}_{-0.050}$	$D_{\text{M}}(0.38)$	1537^{+42}_{-42}		

$$\bar{\chi}_{\text{eff}}^2 = 11949.20; \Delta\bar{\chi}_{\text{eff}}^2 = 9150.29; R - 1 = 0.00729$$

7.18 base_nnu_CamSpecHM_TTTEEE_lowl_lowE_BAO_post_Cooke17_Aver15/base_nnu_plikHM_TTTEEE_lowl_lowE_BAO_post_Cooke17

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02233^{+0.00035}_{-0.00034}$	$10^9 A_s$	$2.090^{+0.077}_{-0.073}$	$H(0.61)$	$95.0^{+2.1}_{-2.1}$
$\Omega_c h^2$	$0.1184^{+0.0051}_{-0.0049}$	$10^9 A_s e^{-2\tau}$	$1.874^{+0.032}_{-0.032}$	$D_M(0.61)$	2313^{+59}_{-59}
$100\theta_{MC}$	$1.04107^{+0.00078}_{-0.00078}$	D_{40}	1227^{+27}_{-25}	$H(2.33)$	$235.3^{+4.5}_{-4.3}$
τ	$0.054^{+0.016}_{-0.015}$	D_{220}	5727^{+78}_{-75}	$D_M(2.33)$	5781^{+120}_{-120}
N_{eff}	$3.00^{+0.30}_{-0.29}$	D_{810}	2536^{+28}_{-28}	$f\sigma_8(0.15)$	$0.454^{+0.014}_{-0.014}$
$\ln(10^{10} A_s)$	$3.040^{+0.036}_{-0.035}$	D_{1420}	$817.1^{+9.8}_{-9.6}$	$\sigma_8(0.15)$	$0.745^{+0.019}_{-0.018}$
n_s	$0.966^{+0.012}_{-0.012}$	D_{2000}	$231.0^{+3.5}_{-3.6}$	$f\sigma_8(0.38)$	$0.472^{+0.013}_{-0.013}$
y_{cal}	$1.0006^{+0.0049}_{-0.0049}$	$n_{s,0.002}$	$0.966^{+0.012}_{-0.012}$	$\sigma_8(0.38)$	$0.660^{+0.017}_{-0.017}$
A_{217}^{CIB}	43^{+20}_{-20}	Y_P	$0.2447^{+0.0040}_{-0.0040}$	$f\sigma_8(0.51)$	$0.471^{+0.012}_{-0.012}$
$\xi^{tSZ-CIB}$	—	Y_P^{BBN}	$0.2461^{+0.0040}_{-0.0040}$	$\sigma_8(0.51)$	$0.618^{+0.016}_{-0.016}$
A_{143}^{tSZ}	$4.7^{+3.9}_{-4.3}$	$10^5 D/H$	$2.578^{+0.081}_{-0.079}$	$f\sigma_8(0.61)$	$0.466^{+0.012}_{-0.012}$
A_{100}^{PS}	248^{+60}_{-50}	Age/Gyr	$13.84^{+0.30}_{-0.29}$	$\sigma_8(0.61)$	$0.588^{+0.016}_{-0.015}$
A_{143}^{PS}	42^{+20}_{-20}	z_*	$1089.79^{+0.61}_{-0.60}$	$f\sigma_8(2.33)$	$0.2964^{+0.0080}_{-0.0077}$
A_{217}^{PS}	109^{+20}_{-30}	r_*	$145.1^{+2.9}_{-2.9}$	$\sigma_8(2.33)$	$0.3056^{+0.0085}_{-0.0082}$
A^{kSZ}	—	$100\theta_*$	$1.04129^{+0.00092}_{-0.00092}$	f_{2000}^{143}	29^{+6}_{-6}
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	$D_M(z_*)/\text{Gpc}$	$13.94^{+0.27}_{-0.27}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
c_{217}	$0.9996^{+0.0037}_{-0.0027}$	z_{drag}	$1059.7^{+1.2}_{-1.2}$	f_{2000}^{217}	$106.6^{+3.9}_{-3.9}$
H_0	$67.4^{+2.0}_{-2.0}$	r_{drag}	$147.8^{+3.0}_{-3.0}$	χ_{small}^2	$314 (\nu: 12120.7)$
Ω_Λ	$0.689^{+0.013}_{-0.014}$	k_D	$0.1403^{+0.0023}_{-0.0022}$	χ_{lowl}^2	$107 (\nu: 12150.1)$
Ω_m	$0.311^{+0.014}_{-0.013}$	$100\theta_D$	$0.16071^{+0.00069}_{-0.00068}$	χ_{Aver15}^2	$0.35 (\nu: 0.1)$
$\Omega_m h^2$	$0.1414^{+0.0053}_{-0.0051}$	z_{eq}	3384^{+50}_{-50}	χ_{Cooke17}^2	$0.37 (\nu: 0.1)$
$\Omega_m h^3$	$0.0953^{+0.0060}_{-0.0056}$	k_{eq}	$0.01030^{+0.00021}_{-0.00020}$	$\chi_{6\text{DF}}^2$	$0.31 (\nu: 0.1)$
σ_8	$0.806^{+0.020}_{-0.020}$	$100\theta_{\text{eq}}$	$0.8166^{+0.0094}_{-0.0093}$	χ_{MGS}^2	$1.01 (\nu: 0.2)$
S_8	$0.821^{+0.027}_{-0.026}$	$100\theta_{\text{s,eq}}$	$0.4511^{+0.0048}_{-0.0047}$	χ_{DR12BAO}^2	$4.9 (\nu: 1.2)$
$\sigma_8 \Omega_m^{0.5}$	$0.450^{+0.015}_{-0.014}$	$H(0.15)$	$72.7^{+2.0}_{-1.9}$	χ_{prior}^2	$9.7 (\nu: 10.0)$
$\sigma_8 \Omega_m^{0.25}$	$0.602^{+0.016}_{-0.016}$	$D_M(0.15)$	643^{+18}_{-18}	χ_{BAO}^2	$6.3 (\nu: 0.8)$
$\sigma_8/h^{0.5}$	$0.982^{+0.021}_{-0.021}$	$H(0.38)$	$82.7^{+2.0}_{-2.0}$	χ_{CMB}^2	$7358 (\nu: 10475110.0)$
$r_{\text{drag}} h$	$99.6^{+1.7}_{-1.7}$	$D_M(0.38)$	1534^{+41}_{-41}	χ_{Abund}^2	$0.72 (\nu: 0.2)$
$\langle d^2 \rangle^{1/2}$	$2.431^{+0.051}_{-0.050}$	$H(0.51)$	$89.4^{+2.1}_{-2.0}$		
z_{re}	$7.7^{+1.6}_{-1.6}$	$D_M(0.51)$	1988^{+52}_{-51}		

$$\bar{\chi}_{\text{eff}}^2 = 11949.40; \Delta\bar{\chi}_{\text{eff}}^2 = 9150.14; R - 1 = 0.00827$$

7.19 base_nnu_CamSpecHM_TTTEEE_lowl_lowE_BAO_post_zre6p5/base_nnu_plikHM_TTTEEE_lowl_lowE_BAO_post_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02235^{+0.00037}_{-0.00037}$	z_{re}	< 8.99	$H(0.51)$	$89.5^{+2.6}_{-2.5}$
$\Omega_c h^2$	$0.1184^{+0.0064}_{-0.0062}$	$10^9 A_s$	$2.095^{+0.072}_{-0.068}$	$D_{\text{M}}(0.51)$	1986^{+64}_{-63}
$100\theta_{MC}$	$1.04108^{+0.00090}_{-0.00089}$	$10^9 A_s e^{-2\tau}$	$1.874^{+0.037}_{-0.037}$	$H(0.61)$	$95.1^{+2.7}_{-2.6}$
τ	$0.056^{+0.013}_{-0.012}$	D_{40}	1226^{+28}_{-27}	$D_{\text{M}}(0.61)$	2311^{+73}_{-73}
N_{eff}	$3.01^{+0.38}_{-0.36}$	D_{220}	5728^{+78}_{-76}	$H(2.33)$	$235.4^{+5.5}_{-5.5}$
$\ln(10^{10} A_s)$	$3.042^{+0.034}_{-0.032}$	D_{810}	2536^{+28}_{-28}	$D_{\text{M}}(2.33)$	5779^{+160}_{-160}
n_s	$0.966^{+0.014}_{-0.014}$	D_{1420}	$817^{+10}_{-9.8}$	$f\sigma_8(0.15)$	$0.454^{+0.014}_{-0.014}$
y_{cal}	$1.0006^{+0.0049}_{-0.0049}$	D_{2000}	$231.0^{+3.9}_{-3.9}$	$\sigma_8(0.15)$	$0.746^{+0.021}_{-0.021}$
A_{217}^{CIB}	43^{+20}_{-20}	$n_{s,0.002}$	$0.966^{+0.014}_{-0.014}$	$f\sigma_8(0.38)$	$0.473^{+0.014}_{-0.013}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.2448^{+0.0051}_{-0.0051}$	$\sigma_8(0.38)$	$0.661^{+0.019}_{-0.019}$
A_{143}^{tSZ}	$4.7^{+3.9}_{-4.3}$	Y_P^{BBN}	$0.2461^{+0.0052}_{-0.0051}$	$f\sigma_8(0.51)$	$0.471^{+0.013}_{-0.013}$
A_{100}^{PS}	247^{+60}_{-50}	$10^5 D/H$	$2.57^{+0.10}_{-0.099}$	$\sigma_8(0.51)$	$0.619^{+0.018}_{-0.018}$
A_{143}^{PS}	42^{+20}_{-20}	Age/Gyr	$13.83^{+0.38}_{-0.37}$	$f\sigma_8(0.61)$	$0.467^{+0.013}_{-0.013}$
A_{217}^{PS}	109^{+20}_{-30}	z_*	$1089.76^{+0.76}_{-0.74}$	$\sigma_8(0.61)$	$0.589^{+0.018}_{-0.017}$
A^{kSZ}	—	r_*	$145.1^{+3.7}_{-3.6}$	$f\sigma_8(2.33)$	$0.2968^{+0.0091}_{-0.0086}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	$100\theta_*$	$1.0413^{+0.0011}_{-0.0011}$	$\sigma_8(2.33)$	$0.3061^{+0.0097}_{-0.0092}$
c_{217}	$0.9996^{+0.0037}_{-0.0027}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.93^{+0.34}_{-0.34}$	f_{2000}^{143}	29^{+6}_{-6}
H_0	$67.5^{+2.5}_{-2.3}$	z_{drag}	$1059.7^{+1.4}_{-1.4}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
Ω_{Λ}	$0.689^{+0.014}_{-0.014}$	r_{drag}	$147.8^{+3.8}_{-3.8}$	f_{2000}^{217}	$106.5^{+4.2}_{-4.1}$
Ω_m	$0.311^{+0.014}_{-0.014}$	k_{D}	$0.1403^{+0.0028}_{-0.0027}$	χ_{small}^2	$397.1 (\nu: 1.9)$
$\Omega_m h^2$	$0.1414^{+0.0066}_{-0.0064}$	$100\theta_{\text{D}}$	$0.16070^{+0.00091}_{-0.00087}$	χ_{lowl}^2	$23.2 (\nu: 0.6)$
$\Omega_m h^3$	$0.0954^{+0.0076}_{-0.0071}$	z_{eq}	3383^{+51}_{-52}	$\chi_{6\text{DF}}^2$	$0.060 (\nu: 0.0)$
σ_8	$0.807^{+0.023}_{-0.022}$	k_{eq}	$0.01029^{+0.00024}_{-0.00024}$	χ_{MGS}^2	$1.30 (\nu: 0.1)$
S_8	$0.821^{+0.027}_{-0.026}$	$100\theta_{\text{eq}}$	$0.8169^{+0.0099}_{-0.0095}$	χ_{DR12BAO}^2	$4.8 (\nu: 1.2)$
$\sigma_8 \Omega_m^{0.5}$	$0.450^{+0.015}_{-0.014}$	$100\theta_{\text{s,eq}}$	$0.4513^{+0.0051}_{-0.0048}$	χ_{prior}^2	$9.7 (\nu: 10.0)$
$\sigma_8 \Omega_m^{0.25}$	$0.602^{+0.017}_{-0.017}$	$H(0.15)$	$72.7^{+2.5}_{-2.4}$	χ_{BAO}^2	$6.2 (\nu: 0.8)$
$\sigma_8/h^{0.5}$	$0.982^{+0.021}_{-0.020}$	$D_{\text{M}}(0.15)$	643^{+22}_{-22}	χ_{CMB}^2	$7358 (\nu: 10474802.6)$
$r_{\text{drag}} h$	$99.7^{+1.8}_{-1.7}$	$H(0.38)$	$82.8^{+2.6}_{-2.5}$		
$\langle d^2 \rangle^{1/2}$	$2.432^{+0.050}_{-0.048}$	$D_{\text{M}}(0.38)$	1533^{+51}_{-50}		

$$\bar{\chi}_{\text{eff}}^2 = 11948.82; \Delta\bar{\chi}_{\text{eff}}^2 = 9150.06; R - 1 = 0.00628$$

7.20 base_nnu_CamSpecHM_TTTEEE_lowl_lowE_BAO_post_lensing_JLA_zre6p5/base_nnu_plikHM_TTTEEE_lowl_lowE_BAO_post_lensi

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02235^{+0.00037}_{-0.00037}$	z_{re}	$7.9^{+1.2}_{-1.3}$	$H(0.51)$	$89.4^{+2.5}_{-2.4}$
$\Omega_c h^2$	$0.1183^{+0.0061}_{-0.0056}$	$10^9 A_s$	$2.099^{+0.065}_{-0.062}$	$D_{\text{M}}(0.51)$	1989^{+61}_{-61}
$100\theta_{MC}$	$1.04109^{+0.00084}_{-0.00087}$	$10^9 A_s e^{-2\tau}$	$1.875^{+0.034}_{-0.034}$	$H(0.61)$	$95.0^{+2.6}_{-2.5}$
τ	$0.057^{+0.013}_{-0.012}$	D_{40}	1228^{+26}_{-25}	$D_{\text{M}}(0.61)$	2314^{+70}_{-69}
N_{eff}	$2.99^{+0.37}_{-0.35}$	D_{220}	5732^{+75}_{-76}	$H(2.33)$	$235.2^{+5.3}_{-5.0}$
$\ln(10^{10} A_s)$	$3.044^{+0.032}_{-0.029}$	D_{810}	2537^{+27}_{-27}	$D_{\text{M}}(2.33)$	5783^{+150}_{-150}
n_s	$0.966^{+0.014}_{-0.013}$	D_{1420}	$817.7^{+9.9}_{-10}$	$f\sigma_8(0.15)$	$0.455^{+0.011}_{-0.011}$
y_{cal}	$1.0008^{+0.0048}_{-0.0049}$	D_{2000}	$231.3^{+3.9}_{-4.0}$	$\sigma_8(0.15)$	$0.746^{+0.019}_{-0.018}$
A_{217}^{CIB}	43^{+10}_{-20}	$n_{s,0.002}$	$0.966^{+0.014}_{-0.013}$	$f\sigma_8(0.38)$	$0.473^{+0.011}_{-0.011}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.2446^{+0.0050}_{-0.0048}$	$\sigma_8(0.38)$	$0.661^{+0.017}_{-0.017}$
A_{143}^{tSZ}	$4.8^{+3.9}_{-4.2}$	Y_P^{BBN}	$0.2460^{+0.0050}_{-0.0049}$	$f\sigma_8(0.51)$	$0.472^{+0.011}_{-0.011}$
A_{100}^{PS}	247^{+60}_{-50}	$10^5 D/H$	$2.57^{+0.10}_{-0.093}$	$\sigma_8(0.51)$	$0.619^{+0.016}_{-0.016}$
A_{143}^{PS}	41^{+20}_{-20}	Age/Gyr	$13.85^{+0.36}_{-0.35}$	$f\sigma_8(0.61)$	$0.467^{+0.011}_{-0.011}$
A_{217}^{PS}	109^{+20}_{-30}	z_*	$1089.75^{+0.72}_{-0.68}$	$\sigma_8(0.61)$	$0.589^{+0.016}_{-0.015}$
A^{kSZ}	—	r_*	$145.2^{+3.4}_{-3.5}$	$f\sigma_8(2.33)$	$0.2970^{+0.0082}_{-0.0079}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	$100\theta_*$	$1.0413^{+0.0010}_{-0.0011}$	$\sigma_8(2.33)$	$0.3062^{+0.0088}_{-0.0085}$
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.94^{+0.32}_{-0.32}$	f_{2000}^{143}	29^{+6}_{-6}
H_0	$67.4^{+2.3}_{-2.2}$	z_{drag}	$1059.7^{+1.4}_{-1.4}$	$f_{2000}^{143 \times 217}$	32^{+5}_{-4}
Ω_{Λ}	$0.689^{+0.013}_{-0.014}$	r_{drag}	$147.9^{+3.5}_{-3.6}$	f_{2000}^{217}	$106.5^{+4.2}_{-4.2}$
Ω_m	$0.311^{+0.014}_{-0.013}$	k_{D}	$0.1403^{+0.0027}_{-0.0026}$	χ^2_{lensing}	$9.14 (\nu: 0.3)$
$\Omega_m h^2$	$0.1413^{+0.0062}_{-0.0058}$	$100\theta_{\text{D}}$	$0.16067^{+0.00087}_{-0.00082}$	χ^2_{simall}	$397.2 (\nu: 1.9)$
$\Omega_m h^3$	$0.0952^{+0.0073}_{-0.0067}$	z_{eq}	3385^{+48}_{-48}	χ^2_{lowl}	$23.3 (\nu: 0.6)$
σ_8	$0.807^{+0.020}_{-0.019}$	k_{eq}	$0.01029^{+0.00022}_{-0.00021}$	χ^2_{JLA}	$706.78 (\nu: 0.0)$
S_8	$0.822^{+0.022}_{-0.022}$	$100\theta_{\text{eq}}$	$0.8165^{+0.0091}_{-0.0090}$	$\chi^2_{6\text{DF}}$	$0.060 (\nu: 0.0)$
$\sigma_8 \Omega_m^{0.5}$	$0.450^{+0.012}_{-0.012}$	$100\theta_{\text{s,eq}}$	$0.4511^{+0.0046}_{-0.0046}$	χ^2_{MGS}	$1.26 (\nu: 0.1)$
$\sigma_8 \Omega_m^{0.25}$	$0.603^{+0.014}_{-0.014}$	$H(0.15)$	$72.6^{+2.4}_{-2.2}$	χ^2_{DR12BAO}	$4.9 (\nu: 1.1)$
$\sigma_8/h^{0.5}$	$0.984^{+0.017}_{-0.016}$	$D_{\text{M}}(0.15)$	644^{+21}_{-21}	χ^2_{prior}	$9.6 (\nu: 9.8)$
$r_{\text{drag}} h$	$99.6^{+1.6}_{-1.6}$	$H(0.38)$	$82.7^{+2.4}_{-2.3}$	χ^2_{CMB}	$7367 (\nu: 10475957.3)$
$\langle d^2 \rangle^{1/2}$	$2.436^{+0.042}_{-0.040}$	$D_{\text{M}}(0.38)$	1535^{+48}_{-48}	χ^2_{BAO}	$6.2 (\nu: 0.7)$
$\bar{\chi}^2_{\text{eff}} = 12664.58; \Delta\bar{\chi}^2_{\text{eff}} = 9150.66; R - 1 = 0.04058$					

7.21 base_nnu_CamSpecHM_TTTEEE_lowl_lowE_BAO_post_lensing_Pantheon18_zre6p5/base_nnu_plikHM_TTTEEE_lowl_lowE_BAO_po

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02236^{+0.00037}_{-0.00036}$	z_{re}	$7.9^{+1.2}_{-1.3}$	$H(0.51)$	$89.5^{+2.5}_{-2.4}$
$\Omega_c h^2$	$0.1183^{+0.0060}_{-0.0058}$	$10^9 A_s$	$2.100^{+0.069}_{-0.060}$	$D_{\text{M}}(0.51)$	1987^{+61}_{-59}
$100\theta_{MC}$	$1.04109^{+0.00088}_{-0.00086}$	$10^9 A_s e^{-2\tau}$	$1.875^{+0.034}_{-0.035}$	$H(0.61)$	$95.1^{+2.5}_{-2.5}$
τ	$0.057^{+0.013}_{-0.012}$	D_{40}	1228^{+26}_{-25}	$D_{\text{M}}(0.61)$	2312^{+70}_{-68}
N_{eff}	$3.00^{+0.36}_{-0.35}$	D_{220}	5733^{+77}_{-75}	$H(2.33)$	$235.3^{+5.3}_{-5.1}$
$\ln(10^{10} A_s)$	$3.045^{+0.032}_{-0.029}$	D_{810}	2537^{+27}_{-27}	$D_{\text{M}}(2.33)$	5780^{+150}_{-150}
n_s	$0.966^{+0.014}_{-0.014}$	D_{1420}	$817.6^{+9.9}_{-9.7}$	$f\sigma_8(0.15)$	$0.455^{+0.011}_{-0.011}$
y_{cal}	$1.0008^{+0.0049}_{-0.0049}$	D_{2000}	$231.2^{+3.8}_{-3.8}$	$\sigma_8(0.15)$	$0.746^{+0.019}_{-0.019}$
A_{217}^{CIB}	43^{+20}_{-20}	$n_{s,0.002}$	$0.966^{+0.014}_{-0.014}$	$f\sigma_8(0.38)$	$0.473^{+0.011}_{-0.011}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.2447^{+0.0049}_{-0.0049}$	$\sigma_8(0.38)$	$0.662^{+0.017}_{-0.017}$
A_{143}^{tSZ}	$4.8^{+3.9}_{-4.3}$	Y_P^{BBN}	$0.2461^{+0.0049}_{-0.0049}$	$f\sigma_8(0.51)$	$0.472^{+0.011}_{-0.011}$
A_{100}^{PS}	247^{+60}_{-50}	$10^5 D/H$	$2.57^{+0.10}_{-0.095}$	$\sigma_8(0.51)$	$0.619^{+0.016}_{-0.016}$
A_{143}^{PS}	41^{+20}_{-20}	Age/Gyr	$13.84^{+0.36}_{-0.35}$	$f\sigma_8(0.61)$	$0.467^{+0.011}_{-0.011}$
A_{217}^{PS}	109^{+20}_{-30}	z_*	$1089.74^{+0.72}_{-0.70}$	$\sigma_8(0.61)$	$0.589^{+0.016}_{-0.015}$
A^{kSZ}	—	r_*	$145.1^{+3.5}_{-3.4}$	$f\sigma_8(2.33)$	$0.2971^{+0.0082}_{-0.0080}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	$100\theta_*$	$1.0413^{+0.0011}_{-0.0011}$	$\sigma_8(2.33)$	$0.3064^{+0.0089}_{-0.0086}$
c_{217}	$0.9996^{+0.0037}_{-0.0027}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.94^{+0.32}_{-0.32}$	f_{2000}^{143}	29^{+6}_{-6}
H_0	$67.5^{+2.3}_{-2.2}$	z_{drag}	$1059.7^{+1.4}_{-1.4}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
Ω_{Λ}	$0.689^{+0.013}_{-0.013}$	r_{drag}	$147.8^{+3.6}_{-3.6}$	f_{2000}^{217}	$106.5^{+4.1}_{-4.2}$
Ω_m	$0.311^{+0.013}_{-0.013}$	k_{D}	$0.1403^{+0.0026}_{-0.0026}$	χ_{lensing}^2	$9.15 (\nu: 0.3)$
$\Omega_m h^2$	$0.1413^{+0.0062}_{-0.0060}$	$100\theta_{\text{D}}$	$0.16068^{+0.00086}_{-0.00084}$	χ_{small}^2	$314 (\nu: 12124.5)$
$\Omega_m h^3$	$0.0954^{+0.0072}_{-0.0069}$	z_{eq}	3382^{+46}_{-47}	χ_{lowl}^2	$107 (\nu: 12147.6)$
σ_8	$0.807^{+0.020}_{-0.020}$	k_{eq}	$0.01029^{+0.00022}_{-0.00022}$	χ_{JLA}^2	$1035.10 (\nu: 0.1)$
S_8	$0.822^{+0.022}_{-0.022}$	$100\theta_{\text{eq}}$	$0.8169^{+0.0090}_{-0.0087}$	$\chi_{6\text{DF}}^2$	$0.32 (\nu: 0.1)$
$\sigma_8 \Omega_m^{0.5}$	$0.450^{+0.012}_{-0.012}$	$100\theta_{\text{s,eq}}$	$0.4513^{+0.0046}_{-0.0044}$	χ_{MGS}^2	$1.03 (\nu: 0.2)$
$\sigma_8 \Omega_m^{0.25}$	$0.603^{+0.014}_{-0.014}$	$H(0.15)$	$72.7^{+2.3}_{-2.3}$	χ_{DR12BAO}^2	$4.7 (\nu: 0.9)$
$\sigma_8/h^{0.5}$	$0.983^{+0.017}_{-0.016}$	$D_{\text{M}}(0.15)$	643^{+21}_{-21}	χ_{prior}^2	$9.6 (\nu: 9.8)$
$r_{\text{drag}} h$	$99.7^{+1.6}_{-1.6}$	$H(0.38)$	$82.8^{+2.4}_{-2.4}$	χ_{CMB}^2	$7367 (\nu: 10475818.7)$
$\langle d^2 \rangle^{1/2}$	$2.435^{+0.041}_{-0.040}$	$D_{\text{M}}(0.38)$	1533^{+48}_{-47}	χ_{BAO}^2	$6.1 (\nu: 0.6)$

$$\bar{\chi}_{\text{eff}}^2 = 12993.02; \Delta\bar{\chi}_{\text{eff}}^2 = 9150.61; R - 1 = 0.01132$$

7.22 base_nnu_CamSpecHM_TTTEEE_lowl_lowE_BAO_post_lensing_zre6p5/base_nnu_plikHM_TTTEEE_lowl_lowE_BAO_post_lensing_zr

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02234^{+0.00038}_{-0.00037}$	z_{re}	$7.9^{+1.2}_{-1.3}$	$H(0.51)$	$89.3^{+2.5}_{-2.5}$
$\Omega_c h^2$	$0.1182^{+0.0061}_{-0.0058}$	$10^9 A_s$	$2.098^{+0.068}_{-0.060}$	$D_{\text{M}}(0.51)$	1990^{+63}_{-61}
$100\theta_{MC}$	$1.04110^{+0.00088}_{-0.00087}$	$10^9 A_s e^{-2\tau}$	$1.874^{+0.034}_{-0.035}$	$H(0.61)$	$94.9^{+2.6}_{-2.6}$
τ	$0.056^{+0.013}_{-0.012}$	D_{40}	1229^{+26}_{-25}	$D_{\text{M}}(0.61)$	2316^{+73}_{-70}
N_{eff}	$2.98^{+0.37}_{-0.36}$	D_{220}	5732^{+77}_{-76}	$H(2.33)$	$235.1^{+5.3}_{-5.2}$
$\ln(10^{10} A_s)$	$3.044^{+0.032}_{-0.029}$	D_{810}	2537^{+27}_{-27}	$D_{\text{M}}(2.33)$	5788^{+150}_{-150}
n_s	$0.965^{+0.014}_{-0.014}$	D_{1420}	$817.6^{+9.9}_{-9.7}$	$f\sigma_8(0.15)$	$0.455^{+0.012}_{-0.012}$
y_{cal}	$1.0007^{+0.0049}_{-0.0049}$	D_{2000}	$231.2^{+3.8}_{-3.9}$	$\sigma_8(0.15)$	$0.746^{+0.019}_{-0.019}$
A_{217}^{CIB}	43^{+20}_{-20}	$n_{s,0.002}$	$0.965^{+0.014}_{-0.014}$	$f\sigma_8(0.38)$	$0.473^{+0.011}_{-0.011}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.2445^{+0.0049}_{-0.0050}$	$\sigma_8(0.38)$	$0.661^{+0.017}_{-0.017}$
A_{143}^{tSZ}	$4.8^{+3.9}_{-4.2}$	Y_P^{BBN}	$0.2458^{+0.0050}_{-0.0050}$	$f\sigma_8(0.51)$	$0.472^{+0.011}_{-0.011}$
A_{100}^{PS}	247^{+60}_{-50}	$10^5 D/H$	$2.570^{+0.099}_{-0.095}$	$\sigma_8(0.51)$	$0.619^{+0.017}_{-0.016}$
A_{143}^{PS}	41^{+20}_{-20}	Age/Gyr	$13.86^{+0.37}_{-0.36}$	$f\sigma_8(0.61)$	$0.467^{+0.011}_{-0.011}$
A_{217}^{PS}	109^{+20}_{-30}	z_*	$1089.74^{+0.72}_{-0.71}$	$\sigma_8(0.61)$	$0.589^{+0.016}_{-0.016}$
A^{kSZ}	—	r_*	$145.3^{+3.6}_{-3.5}$	$f\sigma_8(2.33)$	$0.2967^{+0.0083}_{-0.0081}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	$100\theta_*$	$1.0413^{+0.0011}_{-0.0011}$	$\sigma_8(2.33)$	$0.3059^{+0.0090}_{-0.0087}$
c_{217}	$0.9996^{+0.0037}_{-0.0027}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.95^{+0.33}_{-0.32}$	f_{2000}^{143}	29^{+6}_{-6}
H_0	$67.3^{+2.4}_{-2.3}$	z_{drag}	$1059.7^{+1.4}_{-1.4}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
Ω_Λ	$0.688^{+0.013}_{-0.013}$	r_{drag}	$148.0^{+3.7}_{-3.6}$	f_{2000}^{217}	$106.5^{+4.1}_{-4.2}$
Ω_m	$0.312^{+0.013}_{-0.013}$	k_{D}	$0.1402^{+0.0027}_{-0.0026}$	χ_{lensing}^2	$9.12 (\nu: 0.2)$
$\Omega_m h^2$	$0.1412^{+0.0063}_{-0.0060}$	$100\theta_{\text{D}}$	$0.16065^{+0.00087}_{-0.00085}$	χ_{small}^2	$313 (\nu: 12136.5)$
$\Omega_m h^3$	$0.0950^{+0.0073}_{-0.0069}$	z_{eq}	3386^{+49}_{-50}	χ_{lowl}^2	$107 (\nu: 12160.0)$
σ_8	$0.807^{+0.020}_{-0.020}$	k_{eq}	$0.01029^{+0.00022}_{-0.00022}$	$\chi_{6\text{DF}}^2$	$0.32 (\nu: 0.1)$
S_8	$0.822^{+0.022}_{-0.022}$	$100\theta_{\text{eq}}$	$0.8162^{+0.0094}_{-0.0090}$	χ_{MGS}^2	$0.98 (\nu: 0.2)$
$\sigma_8 \Omega_m^{0.5}$	$0.450^{+0.012}_{-0.012}$	$100\theta_{\text{s,eq}}$	$0.4509^{+0.0048}_{-0.0046}$	χ_{DR12BAO}^2	$5.0 (\nu: 1.2)$
$\sigma_8 \Omega_m^{0.25}$	$0.603^{+0.014}_{-0.014}$	$H(0.15)$	$72.6^{+2.4}_{-2.3}$	χ_{prior}^2	$9.6 (\nu: 9.8)$
$\sigma_8/h^{0.5}$	$0.984^{+0.017}_{-0.017}$	$D_{\text{M}}(0.15)$	644^{+22}_{-21}	χ_{CMB}^2	$7367 (\nu: 10475842.3)$
$r_{\text{drag}} h$	$99.6^{+1.7}_{-1.6}$	$H(0.38)$	$82.6^{+2.4}_{-2.4}$	χ_{BAO}^2	$6.3 (\nu: 0.8)$
$\langle d^2 \rangle^{1/2}$	$2.437^{+0.042}_{-0.041}$	$D_{\text{M}}(0.38)$	1537^{+50}_{-48}		

$$\bar{\chi}_{\text{eff}}^2 = 11957.94; \Delta\bar{\chi}_{\text{eff}}^2 = 9150.65; R - 1 = 0.01105$$

7.23 base_nnu_CamSpecHM_TTTEEE_lowl_lowE_BAO_post_Aver15_zre6p5/base_nnu_plikHM_TTTEEE_lowl_lowE_BAO_post_Aver15_zr

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02233^{+0.00035}_{-0.00034}$	z_{re}	< 8.96	$H(0.51)$	$89.3^{+2.2}_{-2.1}$
$\Omega_c h^2$	$0.1180^{+0.0055}_{-0.0053}$	$10^9 A_s$	$2.093^{+0.069}_{-0.065}$	$D_{\text{M}}(0.51)$	1991^{+53}_{-53}
$100\theta_{MC}$	$1.04113^{+0.00081}_{-0.00081}$	$10^9 A_s e^{-2\tau}$	$1.872^{+0.033}_{-0.033}$	$H(0.61)$	$94.9^{+2.2}_{-2.2}$
τ	$0.056^{+0.013}_{-0.012}$	D_{40}	1227^{+27}_{-26}	$D_{\text{M}}(0.61)$	2317^{+61}_{-61}
N_{eff}	$2.98^{+0.31}_{-0.30}$	D_{220}	5728^{+78}_{-76}	$H(2.33)$	$235.0^{+4.7}_{-4.6}$
$\ln(10^{10} A_s)$	$3.041^{+0.033}_{-0.031}$	D_{810}	2536^{+28}_{-28}	$D_{\text{M}}(2.33)$	5790^{+130}_{-130}
n_s	$0.965^{+0.013}_{-0.012}$	D_{1420}	$817.4^{+9.9}_{-9.8}$	$f\sigma_8(0.15)$	$0.454^{+0.014}_{-0.014}$
y_{cal}	$1.0006^{+0.0049}_{-0.0049}$	D_{2000}	$231.2^{+3.7}_{-3.7}$	$\sigma_8(0.15)$	$0.744^{+0.019}_{-0.018}$
A_{217}^{CIB}	43^{+20}_{-20}	$n_{s,0.002}$	$0.965^{+0.013}_{-0.012}$	$f\sigma_8(0.38)$	$0.472^{+0.013}_{-0.013}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.2444^{+0.0043}_{-0.0042}$	$\sigma_8(0.38)$	$0.660^{+0.017}_{-0.016}$
A_{143}^{tSZ}	$4.8^{+3.9}_{-4.3}$	Y_P^{BBN}	$0.2457^{+0.0043}_{-0.0043}$	$f\sigma_8(0.51)$	$0.471^{+0.012}_{-0.012}$
A_{100}^{PS}	247^{+60}_{-50}	$10^5 D/H$	$2.569^{+0.090}_{-0.087}$	$\sigma_8(0.51)$	$0.617^{+0.016}_{-0.015}$
A_{143}^{PS}	41^{+20}_{-20}	Age/Gyr	$13.86^{+0.31}_{-0.31}$	$f\sigma_8(0.61)$	$0.466^{+0.012}_{-0.012}$
A_{217}^{PS}	109^{+20}_{-30}	z_*	$1089.72^{+0.67}_{-0.66}$	$\sigma_8(0.61)$	$0.588^{+0.016}_{-0.015}$
A^{kSZ}	—	r_*	$145.4^{+3.1}_{-3.1}$	$f\sigma_8(2.33)$	$0.2963^{+0.0080}_{-0.0075}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	$100\theta_*$	$1.04136^{+0.00098}_{-0.00097}$	$\sigma_8(2.33)$	$0.3055^{+0.0085}_{-0.0079}$
c_{217}	$0.9996^{+0.0037}_{-0.0027}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.96^{+0.29}_{-0.29}$	f_{2000}^{143}	29^{+6}_{-6}
H_0	$67.3^{+2.1}_{-2.0}$	z_{drag}	$1059.6^{+1.2}_{-1.2}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
Ω_{Λ}	$0.689^{+0.013}_{-0.013}$	r_{drag}	$148.1^{+3.2}_{-3.2}$	f_{2000}^{217}	$106.4^{+4.0}_{-4.0}$
Ω_m	$0.311^{+0.013}_{-0.013}$	k_{D}	$0.1401^{+0.0024}_{-0.0023}$	χ_{small}^2	$313 (\nu: 12155.8)$
$\Omega_m h^2$	$0.1409^{+0.0056}_{-0.0054}$	$100\theta_{\text{D}}$	$0.16064^{+0.00077}_{-0.00074}$	χ_{lowl}^2	$107 (\nu: 12188.2)$
$\Omega_m h^3$	$0.0949^{+0.0063}_{-0.0060}$	z_{eq}	3384^{+50}_{-50}	χ_{Aver15}^2	$0.34 (\nu: 0.1)$
σ_8	$0.805^{+0.021}_{-0.020}$	k_{eq}	$0.01028^{+0.00022}_{-0.00021}$	$\chi_{6\text{DF}}^2$	$0.32 (\nu: 0.1)$
S_8	$0.820^{+0.027}_{-0.026}$	$100\theta_{\text{eq}}$	$0.8166^{+0.0094}_{-0.0092}$	χ_{MGS}^2	$1.01 (\nu: 0.2)$
$\sigma_8 \Omega_m^{0.5}$	$0.449^{+0.015}_{-0.014}$	$100\theta_{\text{s,eq}}$	$0.4511^{+0.0048}_{-0.0047}$	χ_{DR12BAO}^2	$4.9 (\nu: 1.2)$
$\sigma_8 \Omega_m^{0.25}$	$0.602^{+0.016}_{-0.016}$	$H(0.15)$	$72.6^{+2.1}_{-2.0}$	χ_{prior}^2	$9.7 (\nu: 9.9)$
$\sigma_8/h^{0.5}$	$0.982^{+0.021}_{-0.020}$	$D_{\text{M}}(0.15)$	644^{+19}_{-19}	χ_{BAO}^2	$6.2 (\nu: 0.8)$
$r_{\text{drag}} h$	$99.6^{+1.7}_{-1.6}$	$H(0.38)$	$82.6^{+2.1}_{-2.1}$	χ_{CMB}^2	$7358 (\nu: 10475174.0)$
$\langle d^2 \rangle^{1/2}$	$2.433^{+0.050}_{-0.048}$	$D_{\text{M}}(0.38)$	1537^{+42}_{-42}		

$$\bar{\chi}_{\text{eff}}^2 = 11948.97; \Delta\bar{\chi}_{\text{eff}}^2 = 9150.27; R - 1 = 0.00928$$

7.24 base_nnu_CamSpecHM_TTTEEE_lowl_lowE_BAO_post_Cooke17_Aver15_zre6p5/base_nnu_plikHM_TTTEEE_lowl_lowE_BAO_post_

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02233^{+0.00035}_{-0.00034}$	$10^9 A_s$	$2.095^{+0.068}_{-0.064}$	$H(0.61)$	$95.0^{+2.1}_{-2.1}$
$\Omega_c h^2$	$0.1184^{+0.0051}_{-0.0049}$	$10^9 A_s e^{-2\tau}$	$1.874^{+0.032}_{-0.032}$	$D_M(0.61)$	2313^{+59}_{-59}
$100\theta_{MC}$	$1.04107^{+0.00078}_{-0.00078}$	D_{40}	1227^{+27}_{-25}	$H(2.33)$	$235.3^{+4.5}_{-4.3}$
τ	$0.056^{+0.013}_{-0.012}$	D_{220}	5726^{+77}_{-75}	$D_M(2.33)$	5780^{+120}_{-120}
N_{eff}	$3.00^{+0.30}_{-0.29}$	D_{810}	2536^{+28}_{-27}	$f\sigma_8(0.15)$	$0.455^{+0.014}_{-0.013}$
$\ln(10^{10} A_s)$	$3.042^{+0.032}_{-0.031}$	D_{1420}	$817.1^{+9.8}_{-9.6}$	$\sigma_8(0.15)$	$0.746^{+0.018}_{-0.017}$
n_s	$0.966^{+0.012}_{-0.012}$	D_{2000}	$231.0^{+3.6}_{-3.6}$	$f\sigma_8(0.38)$	$0.473^{+0.013}_{-0.012}$
y_{cal}	$1.0006^{+0.0049}_{-0.0049}$	$n_{s,0.002}$	$0.966^{+0.012}_{-0.012}$	$\sigma_8(0.38)$	$0.661^{+0.017}_{-0.015}$
A_{217}^{CIB}	43^{+20}_{-20}	Y_P	$0.2448^{+0.0040}_{-0.0040}$	$f\sigma_8(0.51)$	$0.472^{+0.012}_{-0.012}$
$\xi^{tSZ-CIB}$	—	Y_P^{BBN}	$0.2461^{+0.0040}_{-0.0040}$	$\sigma_8(0.51)$	$0.619^{+0.016}_{-0.015}$
A_{143}^{tSZ}	$4.7^{+3.9}_{-4.3}$	$10^5 D/H$	$2.578^{+0.081}_{-0.079}$	$f\sigma_8(0.61)$	$0.467^{+0.012}_{-0.011}$
A_{100}^{PS}	248^{+60}_{-50}	Age/Gyr	$13.84^{+0.30}_{-0.29}$	$\sigma_8(0.61)$	$0.589^{+0.015}_{-0.014}$
A_{143}^{PS}	42^{+20}_{-20}	z_*	$1089.78^{+0.61}_{-0.60}$	$f\sigma_8(2.33)$	$0.2968^{+0.0077}_{-0.0071}$
A_{217}^{PS}	109^{+20}_{-30}	r_*	$145.1^{+2.9}_{-2.9}$	$\sigma_8(2.33)$	$0.3060^{+0.0082}_{-0.0076}$
A^{kSZ}	—	$100\theta_*$	$1.04129^{+0.00093}_{-0.00092}$	f_{2000}^{143}	29^{+6}_{-6}
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	$D_M(z_*)/\text{Gpc}$	$13.94^{+0.27}_{-0.27}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
c_{217}	$0.9996^{+0.0037}_{-0.0027}$	z_{drag}	$1059.7^{+1.2}_{-1.2}$	f_{2000}^{217}	$106.6^{+3.9}_{-3.9}$
H_0	$67.4^{+2.0}_{-2.0}$	r_{drag}	$147.8^{+3.0}_{-3.0}$	χ_{small}^2	$314 (\nu: 12066.2)$
Ω_Λ	$0.689^{+0.013}_{-0.014}$	k_D	$0.1403^{+0.0023}_{-0.0022}$	χ_{lowl}^2	$106 (\nu: 12097.7)$
Ω_m	$0.311^{+0.014}_{-0.013}$	$100\theta_D$	$0.16071^{+0.00069}_{-0.00068}$	χ_{Aver15}^2	$0.35 (\nu: 0.1)$
$\Omega_m h^2$	$0.1414^{+0.0053}_{-0.0051}$	z_{eq}	3383^{+50}_{-49}	χ_{Cooke17}^2	$0.37 (\nu: 0.1)$
$\Omega_m h^3$	$0.0953^{+0.0059}_{-0.0056}$	k_{eq}	$0.01030^{+0.00021}_{-0.00020}$	$\chi_{6\text{DF}}^2$	$0.31 (\nu: 0.1)$
σ_8	$0.807^{+0.020}_{-0.019}$	$100\theta_{\text{eq}}$	$0.8167^{+0.0094}_{-0.0092}$	χ_{MGS}^2	$1.02 (\nu: 0.2)$
S_8	$0.822^{+0.026}_{-0.026}$	$100\theta_{s,\text{eq}}$	$0.4512^{+0.0048}_{-0.0047}$	χ_{DR12BAO}^2	$4.9 (\nu: 1.2)$
$\sigma_8 \Omega_m^{0.5}$	$0.450^{+0.014}_{-0.014}$	$H(0.15)$	$72.7^{+2.0}_{-1.9}$	χ_{prior}^2	$9.7 (\nu: 9.9)$
$\sigma_8 \Omega_m^{0.25}$	$0.603^{+0.016}_{-0.015}$	$D_M(0.15)$	643^{+18}_{-18}	χ_{BAO}^2	$6.2 (\nu: 0.8)$
$\sigma_8/h^{0.5}$	$0.983^{+0.020}_{-0.020}$	$H(0.38)$	$82.8^{+2.0}_{-2.0}$	χ_{CMB}^2	$7357 (\nu: 10475056.2)$
$r_{\text{drag}} h$	$99.6^{+1.7}_{-1.6}$	$D_M(0.38)$	1534^{+41}_{-41}	χ_{Abund}^2	$0.73 (\nu: 0.2)$
$\langle d^2 \rangle^{1/2}$	$2.433^{+0.050}_{-0.047}$	$H(0.51)$	$89.4^{+2.1}_{-2.0}$		
z_{re}	< 8.96	$D_M(0.51)$	1987^{+52}_{-51}		

$$\bar{\chi}_{\text{eff}}^2 = 11949.15; \Delta\bar{\chi}_{\text{eff}}^2 = 9150.10; R - 1 = 0.01020$$

7.25 **base_nnu_CamSpecHM_TTTEEE_lowl_lowE_Riess18/base_nnu_plikHM_TTTEEE_lowl_lowE_Riess18**

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02263^{+0.00037}_{-0.00037}$	$\langle d^2 \rangle^{1/2}$	$2.409^{+0.057}_{-0.058}$	$H(0.38)$	$85.2^{+2.4}_{-2.3}$
$\Omega_c h^2$	$0.1228^{+0.0060}_{-0.0058}$	z_{re}	$7.9^{+1.6}_{-1.6}$	$D_{\text{M}}(0.38)$	1485^{+47}_{-46}
$100\theta_{MC}$	$1.04061^{+0.00080}_{-0.00081}$	$10^9 A_s$	$2.124^{+0.079}_{-0.074}$	$H(0.51)$	$92.0^{+2.4}_{-2.4}$
τ	$0.057^{+0.017}_{-0.016}$	$10^9 A_s e^{-2\tau}$	$1.896^{+0.032}_{-0.033}$	$D_{\text{M}}(0.51)$	1925^{+59}_{-58}
N_{eff}	$3.34^{+0.35}_{-0.34}$	D_{40}	1211^{+28}_{-28}	$H(0.61)$	$97.6^{+2.5}_{-2.4}$
$\ln(10^{10} A_s)$	$3.056^{+0.037}_{-0.035}$	D_{220}	5733^{+79}_{-77}	$D_{\text{M}}(0.61)$	2242^{+67}_{-66}
n_s	$0.979^{+0.014}_{-0.014}$	D_{810}	2541^{+27}_{-27}	$H(2.33)$	$239.6^{+5.0}_{-4.9}$
y_{cal}	$1.0006^{+0.0049}_{-0.0049}$	D_{1420}	816^{+10}_{-10}	$D_{\text{M}}(2.33)$	5636^{+140}_{-140}
A_{217}^{CIB}	45^{+10}_{-20}	D_{2000}	$229.4^{+3.9}_{-4.0}$	$f\sigma_8(0.15)$	$0.454^{+0.016}_{-0.016}$
$\xi^{tSZ-CIB}$	—	$n_{s,0.002}$	$0.979^{+0.014}_{-0.014}$	$\sigma_8(0.15)$	$0.758^{+0.020}_{-0.020}$
A_{143}^{tSZ}	$4.5^{+3.9}_{-4.3}$	Y_P	$0.2493^{+0.0046}_{-0.0045}$	$f\sigma_8(0.38)$	$0.475^{+0.014}_{-0.014}$
A_{100}^{PS}	255^{+60}_{-50}	Y_P^{BBN}	$0.2507^{+0.0046}_{-0.0045}$	$\sigma_8(0.38)$	$0.674^{+0.018}_{-0.018}$
A_{143}^{PS}	45^{+20}_{-20}	$10^5 D/H$	$2.64^{+0.10}_{-0.096}$	$f\sigma_8(0.51)$	$0.475^{+0.014}_{-0.014}$
A_{217}^{PS}	107^{+30}_{-30}	Age/Gyr	$13.50^{+0.32}_{-0.32}$	$\sigma_8(0.51)$	$0.631^{+0.017}_{-0.017}$
A^{kSZ}	—	z_*	$1090.12^{+0.77}_{-0.74}$	$f\sigma_8(0.61)$	$0.471^{+0.013}_{-0.013}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	r_*	$142.1^{+3.1}_{-3.1}$	$\sigma_8(0.61)$	$0.601^{+0.016}_{-0.016}$
c_{217}	$0.9998^{+0.0038}_{-0.0028}$	$100\theta_*$	$1.04058^{+0.00097}_{-0.00096}$	$f\sigma_8(2.33)$	$0.3034^{+0.0084}_{-0.0084}$
H_0	$69.9^{+2.5}_{-2.4}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.66^{+0.29}_{-0.29}$	$\sigma_8(2.33)$	$0.3134^{+0.0090}_{-0.0090}$
Ω_Λ	$0.701^{+0.017}_{-0.017}$	z_{drag}	$1061.0^{+1.2}_{-1.3}$	f_{2000}^{143}	31^{+6}_{-6}
Ω_m	$0.299^{+0.017}_{-0.017}$	r_{drag}	$144.7^{+3.3}_{-3.2}$	$f_{2000}^{143 \times 217}$	34^{+4}_{-4}
$\Omega_m h^2$	$0.1461^{+0.0060}_{-0.0059}$	k_{D}	$0.1426^{+0.0024}_{-0.0024}$	f_{2000}^{217}	$108.1^{+4.1}_{-4.0}$
$\Omega_m h^3$	$0.1021^{+0.0071}_{-0.0067}$	$100\theta_{\text{D}}$	$0.16136^{+0.00089}_{-0.00082}$	χ_{small}^2	$397.4 (\nu: 2.3)$
σ_8	$0.819^{+0.021}_{-0.021}$	z_{eq}	3344^{+64}_{-66}	χ_{lowl}^2	$21.79 (\nu: 0.4)$
S_8	$0.818^{+0.032}_{-0.031}$	k_{eq}	$0.01041^{+0.00024}_{-0.00024}$	χ_{H073p45}^2	$5.2 (\nu: 5.4)$
$\sigma_8 \Omega_m^{0.5}$	$0.448^{+0.017}_{-0.017}$	$100\theta_{\text{eq}}$	$0.825^{+0.013}_{-0.012}$	χ_{prior}^2	$9.9 (\nu: 10.6)$
$\sigma_8 \Omega_m^{0.25}$	$0.606^{+0.018}_{-0.018}$	$100\theta_{\text{s,eq}}$	$0.4551^{+0.0066}_{-0.0063}$	χ_{CMB}^2	$7362 (\nu: 10475488.3)$
$\sigma_8/h^{0.5}$	$0.980^{+0.023}_{-0.023}$	$H(0.15)$	$75.1^{+2.4}_{-2.4}$		
$r_{\text{drag}} h$	$101.1^{+2.3}_{-2.2}$	$D_{\text{M}}(0.15)$	621^{+21}_{-21}		

Best-fit $\chi_{\text{eff}}^2 = 11928.99$; $\Delta\chi_{\text{eff}}^2 = 9152.66$; $\bar{\chi}_{\text{eff}}^2 = 11951.65$; $\Delta\bar{\chi}_{\text{eff}}^2 = 9148.78$; $R - 1 = 0.01475$
 χ_{eff}^2 : CMB - small.100x143_offlike5_EE_Aplanck_B: 396.09 (Δ -0.53) commander_dx12_v3.2.29: 21.47 (Δ -0.46) CamSpec like_10.7HM_1400_unified: 11505.09 Hubble - H073p45: 3.91 (Δ -2.24)

7.26 `base_nnu_CamSpecHM_TTTEEE_lowl_lowE_Riess18_post_BAO/base_nnu_plikHM_TTTEEE_lowl_lowE_Riess18_post_BAO`

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02260^{+0.00033}_{-0.00033}$	z_{re}	$7.9^{+1.6}_{-1.6}$	$H(0.51)$	$91.8^{+2.2}_{-2.2}$
$\Omega_c h^2$	$0.1229^{+0.0059}_{-0.0058}$	$10^9 A_s$	$2.122^{+0.078}_{-0.074}$	$D_{\text{M}}(0.51)$	1931^{+51}_{-51}
$100\theta_{MC}$	$1.04060^{+0.00081}_{-0.00080}$	$10^9 A_s e^{-2\tau}$	$1.896^{+0.032}_{-0.033}$	$H(0.61)$	$97.4^{+2.3}_{-2.2}$
τ	$0.056^{+0.016}_{-0.016}$	D_{40}	1213^{+26}_{-25}	$D_{\text{M}}(0.61)$	2248^{+58}_{-58}
N_{eff}	$3.32^{+0.34}_{-0.32}$	D_{220}	5731^{+79}_{-76}	$H(2.33)$	$239.5^{+4.9}_{-4.9}$
$\ln(10^{10} A_s)$	$3.055^{+0.036}_{-0.035}$	D_{810}	2541^{+27}_{-27}	$D_{\text{M}}(2.33)$	5645^{+130}_{-130}
n_s	$0.977^{+0.012}_{-0.012}$	D_{1420}	816^{+10}_{-10}	$f\sigma_8(0.15)$	$0.455^{+0.014}_{-0.014}$
y_{cal}	$1.0006^{+0.0049}_{-0.0049}$	D_{2000}	$229.4^{+3.9}_{-4.0}$	$\sigma_8(0.15)$	$0.758^{+0.020}_{-0.020}$
A_{217}^{CIB}	45^{+10}_{-20}	$n_{s,0.002}$	$0.977^{+0.012}_{-0.012}$	$f\sigma_8(0.38)$	$0.476^{+0.013}_{-0.013}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.2491^{+0.0044}_{-0.0043}$	$\sigma_8(0.38)$	$0.673^{+0.018}_{-0.018}$
A_{143}^{tSZ}	$4.5^{+3.9}_{-4.2}$	Y_P^{BBN}	$0.2504^{+0.0044}_{-0.0044}$	$f\sigma_8(0.51)$	$0.476^{+0.013}_{-0.013}$
A_{100}^{PS}	255^{+60}_{-50}	$10^5 D/H$	$2.64^{+0.11}_{-0.095}$	$\sigma_8(0.51)$	$0.630^{+0.017}_{-0.017}$
A_{143}^{PS}	45^{+20}_{-20}	Age/Gyr	$13.52^{+0.31}_{-0.31}$	$f\sigma_8(0.61)$	$0.472^{+0.013}_{-0.012}$
A_{217}^{PS}	108^{+20}_{-30}	z_*	$1090.14^{+0.77}_{-0.73}$	$\sigma_8(0.61)$	$0.600^{+0.016}_{-0.016}$
A^{kSZ}	—	r_*	$142.2^{+3.1}_{-3.1}$	$f\sigma_8(2.33)$	$0.3030^{+0.0082}_{-0.0082}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	$100\theta_*$	$1.04059^{+0.00098}_{-0.00096}$	$\sigma_8(2.33)$	$0.3129^{+0.0087}_{-0.0087}$
c_{217}	$0.9998^{+0.0038}_{-0.0028}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.67^{+0.29}_{-0.29}$	f_{2000}^{143}	31^{+6}_{-6}
H_0	$69.6^{+2.1}_{-2.0}$	z_{drag}	$1060.9^{+1.2}_{-1.2}$	$f_{2000}^{143 \times 217}$	34^{+4}_{-4}
Ω_{Λ}	$0.699^{+0.012}_{-0.012}$	r_{drag}	$144.8^{+3.2}_{-3.2}$	f_{2000}^{217}	$108.1^{+4.1}_{-4.0}$
Ω_m	$0.301^{+0.012}_{-0.012}$	k_{D}	$0.1425^{+0.0024}_{-0.0024}$	χ_{small}^2	$397.3 (\nu: 2.2)$
$\Omega_m h^2$	$0.1461^{+0.0060}_{-0.0059}$	$100\theta_{\text{D}}$	$0.16133^{+0.00089}_{-0.00082}$	χ_{lowl}^2	$21.91 (\nu: 0.3)$
$\Omega_m h^3$	$0.1018^{+0.0068}_{-0.0065}$	z_{eq}	3352^{+48}_{-48}	χ_{H073p45}^2	$5.7 (\nu: 4.3)$
σ_8	$0.819^{+0.022}_{-0.021}$	k_{eq}	$0.01042^{+0.00023}_{-0.00023}$	$\chi_{6\text{DF}}^2$	$0.032 (\nu: 0.0)$
S_8	$0.821^{+0.027}_{-0.027}$	$100\theta_{\text{eq}}$	$0.8230^{+0.0092}_{-0.0090}$	χ_{MGS}^2	$1.94 (\nu: 0.1)$
$\sigma_8 \Omega_m^{0.5}$	$0.450^{+0.015}_{-0.015}$	$100\theta_{\text{s,eq}}$	$0.4543^{+0.0047}_{-0.0046}$	χ_{DR12BAO}^2	$3.87 (\nu: 0.2)$
$\sigma_8 \Omega_m^{0.25}$	$0.607^{+0.017}_{-0.017}$	$H(0.15)$	$74.9^{+2.1}_{-2.0}$	χ_{prior}^2	$9.9 (\nu: 10.5)$
$\sigma_8/h^{0.5}$	$0.982^{+0.021}_{-0.021}$	$D_{\text{M}}(0.15)$	623^{+18}_{-18}	χ_{BAO}^2	$5.84 (\nu: 0.3)$
$r_{\text{drag}} h$	$100.8^{+1.6}_{-1.6}$	$H(0.38)$	$85.0^{+2.2}_{-2.1}$	χ_{CMB}^2	$7361 (\nu: 10474678.5)$
$\langle d^2 \rangle^{1/2}$	$2.414^{+0.050}_{-0.049}$	$D_{\text{M}}(0.38)$	1489^{+40}_{-40}		

$$\bar{\chi}_{\text{eff}}^2 = 11957.32; \Delta\bar{\chi}_{\text{eff}}^2 = 9149.21; R - 1 = 0.01940$$

7.27 base_nnu_CamSpecHM_TTTEEE_lowl_lowE_Riess18_post_BAO_Pantheon18/base_nnu_plikHM_TTTEEE_lowl_lowE_Riess18_post_B

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02261^{+0.00033}_{-0.00033}$	z_{re}	$7.9^{+1.6}_{-1.6}$	$H(0.51)$	$91.8^{+2.2}_{-2.1}$
$\Omega_c h^2$	$0.1229^{+0.0059}_{-0.0058}$	$10^9 A_s$	$2.122^{+0.078}_{-0.074}$	$D_{\text{M}}(0.51)$	1930^{+51}_{-50}
$100\theta_{MC}$	$1.04060^{+0.00081}_{-0.00080}$	$10^9 A_s e^{-2\tau}$	$1.896^{+0.032}_{-0.033}$	$H(0.61)$	$97.4^{+2.3}_{-2.2}$
τ	$0.056^{+0.016}_{-0.015}$	D_{40}	1213^{+26}_{-25}	$D_{\text{M}}(0.61)$	2247^{+58}_{-57}
N_{eff}	$3.32^{+0.34}_{-0.32}$	D_{220}	5731^{+79}_{-76}	$H(2.33)$	$239.6^{+4.9}_{-4.9}$
$\ln(10^{10} A_s)$	$3.055^{+0.036}_{-0.035}$	D_{810}	2541^{+27}_{-27}	$D_{\text{M}}(2.33)$	5645^{+130}_{-130}
n_s	$0.978^{+0.012}_{-0.012}$	D_{1420}	816^{+10}_{-10}	$f\sigma_8(0.15)$	$0.455^{+0.014}_{-0.014}$
y_{cal}	$1.0006^{+0.0049}_{-0.0049}$	D_{2000}	$229.4^{+3.9}_{-4.0}$	$\sigma_8(0.15)$	$0.758^{+0.020}_{-0.020}$
A_{217}^{CIB}	45^{+10}_{-20}	$n_{s,0.002}$	$0.978^{+0.012}_{-0.012}$	$f\sigma_8(0.38)$	$0.476^{+0.013}_{-0.013}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.2491^{+0.0044}_{-0.0043}$	$\sigma_8(0.38)$	$0.673^{+0.018}_{-0.018}$
A_{143}^{tSZ}	$4.5^{+3.9}_{-4.2}$	Y_P^{BBN}	$0.2504^{+0.0044}_{-0.0043}$	$f\sigma_8(0.51)$	$0.476^{+0.013}_{-0.013}$
A_{100}^{PS}	255^{+60}_{-50}	$10^5 D/H$	$2.64^{+0.11}_{-0.095}$	$\sigma_8(0.51)$	$0.631^{+0.017}_{-0.017}$
A_{143}^{PS}	45^{+20}_{-20}	Age/Gyr	$13.52^{+0.30}_{-0.30}$	$f\sigma_8(0.61)$	$0.472^{+0.013}_{-0.012}$
A_{217}^{PS}	108^{+20}_{-30}	z_*	$1090.14^{+0.77}_{-0.73}$	$\sigma_8(0.61)$	$0.600^{+0.016}_{-0.016}$
A^{kSZ}	—	r_*	$142.2^{+3.1}_{-3.0}$	$f\sigma_8(2.33)$	$0.3030^{+0.0082}_{-0.0082}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	$100\theta_*$	$1.04059^{+0.00098}_{-0.00096}$	$\sigma_8(2.33)$	$0.3129^{+0.0086}_{-0.0087}$
c_{217}	$0.9998^{+0.0038}_{-0.0028}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.67^{+0.29}_{-0.28}$	f_{2000}^{143}	31^{+6}_{-6}
H_0	$69.7^{+2.0}_{-2.0}$	z_{drag}	$1060.9^{+1.2}_{-1.2}$	$f_{2000}^{143 \times 217}$	34^{+4}_{-4}
Ω_{Λ}	$0.699^{+0.012}_{-0.012}$	r_{drag}	$144.8^{+3.2}_{-3.2}$	f_{2000}^{217}	$108.1^{+4.1}_{-4.0}$
Ω_m	$0.301^{+0.012}_{-0.012}$	k_{D}	$0.1425^{+0.0024}_{-0.0024}$	χ_{small}^2	$397.3 (\nu: 2.2)$
$\Omega_m h^2$	$0.1461^{+0.0060}_{-0.0059}$	$100\theta_{\text{D}}$	$0.16133^{+0.00089}_{-0.00082}$	χ_{lowl}^2	$21.89 (\nu: 0.3)$
$\Omega_m h^3$	$0.1018^{+0.0068}_{-0.0064}$	z_{eq}	3352^{+46}_{-47}	χ_{H073p45}^2	$5.6 (\nu: 4.1)$
σ_8	$0.819^{+0.022}_{-0.021}$	k_{eq}	$0.01042^{+0.00023}_{-0.00023}$	χ_{JLA}^2	$1034.82 (\nu: 0.0)$
S_8	$0.821^{+0.026}_{-0.026}$	$100\theta_{\text{eq}}$	$0.8231^{+0.0089}_{-0.0087}$	$\chi_{6\text{DF}}^2$	$0.030 (\nu: 0.0)$
$\sigma_8 \Omega_m^{0.5}$	$0.450^{+0.014}_{-0.014}$	$100\theta_{\text{s,eq}}$	$0.4543^{+0.0046}_{-0.0044}$	χ_{MGS}^2	$1.95 (\nu: 0.1)$
$\sigma_8 \Omega_m^{0.25}$	$0.607^{+0.017}_{-0.017}$	$H(0.15)$	$74.9^{+2.0}_{-2.0}$	χ_{DR12BAO}^2	$3.83 (\nu: 0.2)$
$\sigma_8/h^{0.5}$	$0.982^{+0.021}_{-0.021}$	$D_{\text{M}}(0.15)$	623^{+17}_{-17}	χ_{prior}^2	$9.9 (\nu: 10.5)$
$r_{\text{drag}} h$	$100.8^{+1.6}_{-1.5}$	$H(0.38)$	$85.0^{+2.1}_{-2.1}$	χ_{BAO}^2	$5.82 (\nu: 0.3)$
$\langle d^2 \rangle^{1/2}$	$2.413^{+0.050}_{-0.048}$	$D_{\text{M}}(0.38)$	1489^{+40}_{-39}	χ_{CMB}^2	$7361 (\nu: 10474548.6)$

$$\bar{\chi}_{\text{eff}}^2 = 12992.06; \Delta\bar{\chi}_{\text{eff}}^2 = 9149.20; R - 1 = 0.01918$$

7.28 base_nnu_CamSpecHM_TTTEEE_lowl_lowE_Riess18_post_lensing/base_nnu_plikHM_TTTEEE_lowl_lowE_Riess18_post_lensing

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02262^{+0.00037}_{-0.00036}$	$\langle d^2 \rangle^{1/2}$	$2.417^{+0.045}_{-0.045}$	$H(0.38)$	$85.0^{+2.4}_{-2.3}$
$\Omega_c h^2$	$0.1227^{+0.0056}_{-0.0055}$	z_{re}	$8.1^{+1.5}_{-1.5}$	$D_{\text{M}}(0.38)$	1489^{+46}_{-45}
$100\theta_{MC}$	$1.04061^{+0.00079}_{-0.00079}$	$10^9 A_s$	$2.130^{+0.071}_{-0.066}$	$H(0.51)$	$91.8^{+2.4}_{-2.3}$
τ	$0.058^{+0.016}_{-0.015}$	$10^9 A_s e^{-2\tau}$	$1.896^{+0.031}_{-0.031}$	$D_{\text{M}}(0.51)$	1930^{+57}_{-57}
N_{eff}	$3.32^{+0.35}_{-0.33}$	D_{40}	1214^{+26}_{-26}	$H(0.61)$	$97.4^{+2.4}_{-2.4}$
$\ln(10^{10} A_s)$	$3.059^{+0.033}_{-0.031}$	D_{220}	5737^{+80}_{-77}	$D_{\text{M}}(0.61)$	2247^{+66}_{-65}
n_s	$0.977^{+0.013}_{-0.014}$	D_{810}	2542^{+27}_{-26}	$H(2.33)$	$239.5^{+4.8}_{-4.7}$
y_{cal}	$1.0008^{+0.0050}_{-0.0048}$	D_{1420}	816^{+10}_{-10}	$D_{\text{M}}(2.33)$	5645^{+130}_{-130}
A_{217}^{CIB}	45^{+10}_{-20}	D_{2000}	$229.6^{+3.9}_{-3.9}$	$f\sigma_8(0.15)$	$0.455^{+0.013}_{-0.013}$
$\xi^{tSZ-CIB}$	—	$n_{s,0.002}$	$0.977^{+0.013}_{-0.014}$	$\sigma_8(0.15)$	$0.759^{+0.018}_{-0.018}$
A_{143}^{tSZ}	$4.5^{+3.9}_{-4.3}$	Y_P	$0.2491^{+0.0045}_{-0.0044}$	$f\sigma_8(0.38)$	$0.476^{+0.011}_{-0.011}$
A_{100}^{PS}	255^{+60}_{-50}	Y_P^{BBN}	$0.2504^{+0.0045}_{-0.0044}$	$\sigma_8(0.38)$	$0.674^{+0.016}_{-0.016}$
A_{143}^{PS}	45^{+20}_{-20}	$10^5 D/H$	$2.63^{+0.10}_{-0.093}$	$f\sigma_8(0.51)$	$0.476^{+0.011}_{-0.011}$
A_{217}^{PS}	108^{+30}_{-30}	Age/Gyr	$13.52^{+0.32}_{-0.32}$	$\sigma_8(0.51)$	$0.632^{+0.016}_{-0.016}$
A^{kSZ}	—	z_*	$1090.11^{+0.75}_{-0.72}$	$f\sigma_8(0.61)$	$0.472^{+0.010}_{-0.011}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	r_*	$142.2^{+3.1}_{-3.0}$	$\sigma_8(0.61)$	$0.601^{+0.015}_{-0.015}$
c_{217}	$0.9997^{+0.0038}_{-0.0028}$	$100\theta_*$	$1.04060^{+0.00096}_{-0.00095}$	$f\sigma_8(2.33)$	$0.3036^{+0.0080}_{-0.0078}$
H_0	$69.7^{+2.4}_{-2.3}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.67^{+0.28}_{-0.28}$	$\sigma_8(2.33)$	$0.3135^{+0.0087}_{-0.0085}$
Ω_Λ	$0.699^{+0.015}_{-0.016}$	z_{drag}	$1060.9^{+1.2}_{-1.2}$	f_{2000}^{143}	31^{+6}_{-6}
Ω_m	$0.301^{+0.016}_{-0.015}$	r_{drag}	$144.8^{+3.2}_{-3.1}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-4}
$\Omega_m h^2$	$0.1460^{+0.0058}_{-0.0057}$	k_{D}	$0.1425^{+0.0023}_{-0.0024}$	f_{2000}^{217}	$108.0^{+4.1}_{-4.0}$
$\Omega_m h^3$	$0.1017^{+0.0070}_{-0.0066}$	$100\theta_{\text{D}}$	$0.16131^{+0.00089}_{-0.00082}$	χ_{lensing}^2	$9.73 (\nu: 0.4)$
σ_8	$0.821^{+0.019}_{-0.019}$	z_{eq}	3350^{+59}_{-59}	χ_{small}^2	$397.6 (\nu: 2.5)$
S_8	$0.821^{+0.025}_{-0.025}$	k_{eq}	$0.01041^{+0.00022}_{-0.00022}$	χ_{lowl}^2	$21.97 (\nu: 0.4)$
$\sigma_8 \Omega_m^{0.5}$	$0.450^{+0.014}_{-0.013}$	$100\theta_{\text{eq}}$	$0.823^{+0.011}_{-0.011}$	χ_{H073p45}^2	$5.7 (\nu: 5.7)$
$\sigma_8 \Omega_m^{0.25}$	$0.608^{+0.014}_{-0.014}$	$100\theta_{\text{s,eq}}$	$0.4545^{+0.0058}_{-0.0057}$	χ_{prior}^2	$9.8 (\nu: 10.6)$
$\sigma_8/h^{0.5}$	$0.983^{+0.018}_{-0.018}$	$H(0.15)$	$74.9^{+2.4}_{-2.3}$	χ_{CMB}^2	$7371 (\nu: 10476597.5)$
$r_{\text{drag}} h$	$100.9^{+2.0}_{-2.0}$	$D_{\text{M}}(0.15)$	623^{+21}_{-20}		

$\bar{\chi}_{\text{eff}}^2 = 11961.40$; $\Delta\bar{\chi}_{\text{eff}}^2 = 9149.48$; $R - 1 = 0.02109$

7.29 base_nnu_CamSpecHM_TTTEEE_lowl_lowE_Riess18_post_BAO_lensing/base_nnu_plikHM_TTTEEE_lowl_lowE_Riess18_post_BAO.l

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02260^{+0.00033}_{-0.00033}$	z_{re}	$8.0^{+1.4}_{-1.5}$	$H(0.51)$	$91.6^{+2.2}_{-2.1}$
$\Omega_c h^2$	$0.1227^{+0.0056}_{-0.0055}$	$10^9 A_s$	$2.128^{+0.068}_{-0.064}$	$D_{\text{M}}(0.51)$	1934^{+51}_{-50}
$100\theta_{MC}$	$1.04062^{+0.00080}_{-0.00079}$	$10^9 A_s e^{-2\tau}$	$1.896^{+0.031}_{-0.031}$	$H(0.61)$	$97.3^{+2.3}_{-2.2}$
τ	$0.058^{+0.015}_{-0.014}$	D_{40}	1215^{+25}_{-24}	$D_{\text{M}}(0.61)$	2251^{+58}_{-57}
N_{eff}	$3.31^{+0.33}_{-0.31}$	D_{220}	5735^{+79}_{-76}	$H(2.33)$	$239.4^{+4.8}_{-4.7}$
$\ln(10^{10} A_s)$	$3.057^{+0.032}_{-0.030}$	D_{810}	2542^{+27}_{-26}	$D_{\text{M}}(2.33)$	5652^{+130}_{-130}
n_s	$0.977^{+0.012}_{-0.012}$	D_{1420}	$816^{+10}_{-9.9}$	$f\sigma_8(0.15)$	$0.456^{+0.012}_{-0.011}$
y_{cal}	$1.0008^{+0.0050}_{-0.0048}$	D_{2000}	$229.6^{+3.8}_{-4.0}$	$\sigma_8(0.15)$	$0.759^{+0.017}_{-0.017}$
A_{217}^{CIB}	45^{+20}_{-10}	$n_{s,0.002}$	$0.977^{+0.012}_{-0.012}$	$f\sigma_8(0.38)$	$0.477^{+0.011}_{-0.011}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.2489^{+0.0043}_{-0.0042}$	$\sigma_8(0.38)$	$0.674^{+0.016}_{-0.016}$
A_{143}^{tSZ}	$4.5^{+3.9}_{-4.3}$	Y_P^{BBN}	$0.2502^{+0.0043}_{-0.0042}$	$f\sigma_8(0.51)$	$0.476^{+0.011}_{-0.011}$
A_{100}^{PS}	255^{+60}_{-50}	$10^5 D/H$	$2.63^{+0.10}_{-0.093}$	$\sigma_8(0.51)$	$0.631^{+0.015}_{-0.015}$
A_{143}^{PS}	45^{+20}_{-20}	Age/Gyr	$13.53^{+0.30}_{-0.30}$	$f\sigma_8(0.61)$	$0.472^{+0.010}_{-0.010}$
A_{217}^{PS}	108^{+30}_{-30}	z_*	$1090.12^{+0.74}_{-0.71}$	$\sigma_8(0.61)$	$0.601^{+0.014}_{-0.014}$
A^{kSZ}	—	r_*	$142.3^{+3.0}_{-3.0}$	$f\sigma_8(2.33)$	$0.3032^{+0.0075}_{-0.0074}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	$100\theta_*$	$1.04062^{+0.00096}_{-0.00095}$	$\sigma_8(2.33)$	$0.3130^{+0.0080}_{-0.0080}$
c_{217}	$0.9997^{+0.0038}_{-0.0028}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.68^{+0.28}_{-0.27}$	f_{2000}^{143}	31^{+6}_{-6}
H_0	$69.5^{+2.0}_{-2.0}$	z_{drag}	$1060.8^{+1.1}_{-1.2}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-4}
Ω_{Λ}	$0.698^{+0.012}_{-0.012}$	r_{drag}	$144.9^{+3.1}_{-3.0}$	f_{2000}^{217}	$108.0^{+4.1}_{-4.0}$
Ω_m	$0.302^{+0.012}_{-0.012}$	k_{D}	$0.1424^{+0.0023}_{-0.0023}$	χ_{lensing}^2	$9.64 (\nu: 0.3)$
$\Omega_m h^2$	$0.1459^{+0.0058}_{-0.0056}$	$100\theta_{\text{D}}$	$0.16129^{+0.00087}_{-0.00080}$	χ_{simall}^2	$397.5 (\nu: 2.2)$
$\Omega_m h^3$	$0.1014^{+0.0066}_{-0.0063}$	z_{eq}	3355^{+45}_{-46}	χ_{lowl}^2	$22.05 (\nu: 0.3)$
σ_8	$0.820^{+0.019}_{-0.019}$	k_{eq}	$0.01041^{+0.00021}_{-0.00021}$	χ_{H073p45}^2	$6.0 (\nu: 4.5)$
S_8	$0.823^{+0.022}_{-0.022}$	$100\theta_{\text{eq}}$	$0.8225^{+0.0087}_{-0.0085}$	$\chi_{6\text{DF}}^2$	$0.027 (\nu: 0.0)$
$\sigma_8 \Omega_m^{0.5}$	$0.451^{+0.012}_{-0.012}$	$100\theta_{\text{s,eq}}$	$0.4540^{+0.0045}_{-0.0044}$	χ_{MGS}^2	$1.88 (\nu: 0.1)$
$\sigma_8 \Omega_m^{0.25}$	$0.608^{+0.014}_{-0.014}$	$H(0.15)$	$74.8^{+2.1}_{-2.0}$	χ_{DR12BAO}^2	$3.85 (\nu: 0.2)$
$\sigma_8/h^{0.5}$	$0.984^{+0.017}_{-0.017}$	$D_{\text{M}}(0.15)$	625^{+18}_{-17}	χ_{prior}^2	$9.8 (\nu: 10.5)$
$r_{\text{drag}} h$	$100.7^{+1.5}_{-1.5}$	$H(0.38)$	$84.9^{+2.1}_{-2.1}$	χ_{CMB}^2	$7370 (\nu: 10475782.1)$
$\langle d^2 \rangle^{1/2}$	$2.420^{+0.041}_{-0.041}$	$D_{\text{M}}(0.38)$	1492^{+40}_{-40}	χ_{BAO}^2	$5.76 (\nu: 0.2)$

$\bar{\chi}_{\text{eff}}^2 = 11966.84$; $\Delta\bar{\chi}_{\text{eff}}^2 = 9149.67$; $R - 1 = 0.02276$

7.30 base_nnu_CamSpecHM_TTTEEE_lowl_lowE_Riess18_post_BAO_lensing_Pantheon18/base_nnu_plikHM_TTTEEE_lowl_lowE_Riess18

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02260^{+0.00033}_{-0.00033}$	$10^9 A_s$	$2.128^{+0.068}_{-0.063}$	$H(0.61)$	$97.3^{+2.2}_{-2.2}$
$\Omega_c h^2$	$0.1227^{+0.0056}_{-0.0055}$	$10^9 A_s e^{-2\tau}$	$1.896^{+0.031}_{-0.031}$	$D_M(0.61)$	2251^{+57}_{-57}
$100\theta_{MC}$	$1.04062^{+0.00080}_{-0.00079}$	D_{40}	1215^{+25}_{-24}	$H(2.33)$	$239.4^{+4.8}_{-4.7}$
τ	$0.058^{+0.015}_{-0.014}$	D_{220}	5736^{+79}_{-77}	$D_M(2.33)$	5651^{+130}_{-120}
N_{eff}	$3.31^{+0.33}_{-0.31}$	D_{810}	2542^{+27}_{-26}	$f\sigma_8(0.15)$	$0.456^{+0.011}_{-0.011}$
$\ln(10^{10} A_s)$	$3.058^{+0.031}_{-0.030}$	D_{1420}	816^{+10}_{-10}	$\sigma_8(0.15)$	$0.759^{+0.017}_{-0.017}$
n_s	$0.977^{+0.012}_{-0.012}$	D_{2000}	$229.6^{+3.8}_{-4.0}$	$f\sigma_8(0.38)$	$0.477^{+0.011}_{-0.011}$
y_{cal}	$1.0008^{+0.0050}_{-0.0048}$	$n_{s,0.002}$	$0.977^{+0.012}_{-0.012}$	$\sigma_8(0.38)$	$0.674^{+0.016}_{-0.016}$
A_{217}^{CIB}	45^{+20}_{-10}	Y_P	$0.2489^{+0.0042}_{-0.0042}$	$f\sigma_8(0.51)$	$0.476^{+0.011}_{-0.011}$
$\xi^{tSZ-CIB}$	—	Y_P^{BBN}	$0.2502^{+0.0043}_{-0.0042}$	$\sigma_8(0.51)$	$0.631^{+0.015}_{-0.015}$
A_{143}^{tSZ}	$4.5^{+3.9}_{-4.3}$	$10^5 D/H$	$2.63^{+0.10}_{-0.093}$	$f\sigma_8(0.61)$	$0.472^{+0.010}_{-0.010}$
A_{100}^{PS}	255^{+60}_{-50}	Age/Gyr	$13.53^{+0.30}_{-0.30}$	$\sigma_8(0.61)$	$0.601^{+0.014}_{-0.014}$
A_{143}^{PS}	45^{+20}_{-20}	z_*	$1090.12^{+0.74}_{-0.71}$	$f\sigma_8(2.33)$	$0.3032^{+0.0074}_{-0.0074}$
A_{217}^{PS}	108^{+30}_{-30}	r_*	$142.3^{+3.0}_{-3.0}$	$\sigma_8(2.33)$	$0.3131^{+0.0080}_{-0.0079}$
A^{kSZ}	—	$100\theta_*$	$1.04061^{+0.00096}_{-0.00095}$	f_{2000}^{143}	31^{+6}_{-6}
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	$D_M(z_*)/\text{Gpc}$	$13.68^{+0.28}_{-0.27}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-4}
c_{217}	$0.9997^{+0.0038}_{-0.0028}$	z_{drag}	$1060.9^{+1.1}_{-1.2}$	f_{2000}^{217}	$108.0^{+4.1}_{-4.0}$
H_0	$69.5^{+2.0}_{-1.9}$	r_{drag}	$144.9^{+3.1}_{-3.0}$	χ^2_{lensing}	$9.64 (\nu: 0.3)$
Ω_Λ	$0.698^{+0.011}_{-0.011}$	k_D	$0.1424^{+0.0023}_{-0.0023}$	χ^2_{simall}	$397.5 (\nu: 2.2)$
Ω_m	$0.302^{+0.011}_{-0.011}$	$100\theta_D$	$0.16129^{+0.00087}_{-0.00080}$	χ^2_{lowl}	$22.03 (\nu: 0.3)$
$\Omega_m h^2$	$0.1459^{+0.0058}_{-0.0056}$	z_{eq}	3354^{+44}_{-44}	χ^2_{H073p45}	$5.9 (\nu: 4.2)$
$\Omega_m h^3$	$0.1015^{+0.0066}_{-0.0062}$	k_{eq}	$0.01041^{+0.00021}_{-0.00021}$	χ^2_{JLA}	$1034.82 (\nu: 0.0)$
σ_8	$0.820^{+0.019}_{-0.019}$	$100\theta_{\text{eq}}$	$0.8226^{+0.0084}_{-0.0083}$	$\chi^2_{6\text{DF}}$	$0.026 (\nu: 0.0)$
S_8	$0.823^{+0.022}_{-0.021}$	$100\theta_{s,\text{eq}}$	$0.4541^{+0.0043}_{-0.0042}$	χ^2_{MGS}	$1.90 (\nu: 0.1)$
$\sigma_8 \Omega_m^{0.5}$	$0.451^{+0.012}_{-0.012}$	$H(0.15)$	$74.8^{+2.0}_{-2.0}$	χ^2_{DR12BAO}	$3.81 (\nu: 0.2)$
$\sigma_8 \Omega_m^{0.25}$	$0.608^{+0.014}_{-0.014}$	$D_M(0.15)$	624^{+17}_{-17}	χ^2_{prior}	$9.8 (\nu: 10.5)$
$\sigma_8/h^{0.5}$	$0.984^{+0.017}_{-0.017}$	$H(0.38)$	$84.9^{+2.1}_{-2.0}$	χ^2_{CMB}	$7370 (\nu: 10475677.1)$
$r_{\text{drag}} h$	$100.7^{+1.5}_{-1.5}$	$D_M(0.38)$	1491^{+39}_{-39}	χ^2_{BAO}	$5.74 (\nu: 0.2)$
$\langle d^2 \rangle^{1/2}$	$2.419^{+0.041}_{-0.041}$	$H(0.51)$	$91.7^{+2.2}_{-2.1}$		
z_{re}	$8.0^{+1.4}_{-1.4}$	$D_M(0.51)$	1933^{+50}_{-49}		

Best-fit $\chi^2_{\text{eff}} = 12978.85$; $\Delta\chi^2_{\text{eff}} = 9153.73$; $\bar{\chi}^2_{\text{eff}} = 13001.59$; $\Delta\bar{\chi}^2_{\text{eff}} = 9149.66$; $R - 1 = 0.02251$
 χ^2_{eff} : BAO - 6DF: 0.00 (Δ 0.00) MGS: 1.89 (Δ 0.14) DR12BAO: 3.43 (Δ -0.07) CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 9.46 (Δ 0.41) simall_100x143_offlike5_EE_Aplanck: 396.28 (Δ -0.32) commander_dx12_v3.2_29: 21.82 (Δ -0.29) CamSpec like_10.7HM_1400_unified: 11503.77 Hubble - H073p45: 5.08 (Δ -1.56) SN - JLA Pantheon18: 1034.74 (Δ -0.02)

7.31 base_nnu_CamSpecHM_TTTEEE_lowl_lowE_Riess18_post_zre6p5/base_nnu_plikHM_TTTEEE_lowl_lowE_Riess18_post_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02264^{+0.00037}_{-0.00037}$	$\langle d^2 \rangle^{1/2}$	$2.410^{+0.057}_{-0.056}$	$H(0.38)$	$85.2^{+2.4}_{-2.3}$
$\Omega_c h^2$	$0.1228^{+0.0059}_{-0.0058}$	z_{re}	$8.0^{+1.3}_{-1.5}$	$D_{\text{M}}(0.38)$	1484^{+46}_{-46}
$100\theta_{MC}$	$1.04061^{+0.00081}_{-0.00081}$	$10^9 A_s$	$2.127^{+0.072}_{-0.068}$	$H(0.51)$	$92.0^{+2.4}_{-2.4}$
τ	$0.057^{+0.014}_{-0.014}$	$10^9 A_s e^{-2\tau}$	$1.896^{+0.032}_{-0.033}$	$D_{\text{M}}(0.51)$	1925^{+58}_{-58}
N_{eff}	$3.34^{+0.35}_{-0.34}$	D_{40}	1211^{+28}_{-28}	$H(0.61)$	$97.6^{+2.5}_{-2.4}$
$\ln(10^{10} A_s)$	$3.057^{+0.034}_{-0.032}$	D_{220}	5733^{+80}_{-77}	$D_{\text{M}}(0.61)$	2241^{+66}_{-66}
n_s	$0.979^{+0.014}_{-0.014}$	D_{810}	2541^{+27}_{-27}	$H(2.33)$	$239.6^{+5.0}_{-4.9}$
y_{cal}	$1.0006^{+0.0049}_{-0.0049}$	D_{1420}	816^{+10}_{-10}	$D_{\text{M}}(2.33)$	5635^{+140}_{-140}
A_{217}^{CIB}	45^{+10}_{-20}	D_{2000}	$229.4^{+3.9}_{-4.0}$	$f\sigma_8(0.15)$	$0.454^{+0.016}_{-0.016}$
$\xi^{tSZ-CIB}$	—	$n_{s,0.002}$	$0.979^{+0.014}_{-0.014}$	$\sigma_8(0.15)$	$0.759^{+0.020}_{-0.019}$
A_{143}^{tSZ}	$4.5^{+3.9}_{-4.3}$	Y_P	$0.2494^{+0.0046}_{-0.0045}$	$f\sigma_8(0.38)$	$0.475^{+0.014}_{-0.014}$
A_{100}^{PS}	255^{+60}_{-50}	Y_P^{BBN}	$0.2507^{+0.0046}_{-0.0045}$	$\sigma_8(0.38)$	$0.674^{+0.018}_{-0.017}$
A_{143}^{PS}	45^{+20}_{-20}	$10^5 D/H$	$2.64^{+0.10}_{-0.096}$	$f\sigma_8(0.51)$	$0.475^{+0.013}_{-0.013}$
A_{217}^{PS}	108^{+30}_{-30}	Age/Gyr	$13.50^{+0.32}_{-0.32}$	$\sigma_8(0.51)$	$0.631^{+0.017}_{-0.016}$
A^{kSZ}	—	z_*	$1090.11^{+0.77}_{-0.74}$	$f\sigma_8(0.61)$	$0.471^{+0.013}_{-0.013}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	r_*	$142.1^{+3.1}_{-3.1}$	$\sigma_8(0.61)$	$0.601^{+0.016}_{-0.016}$
c_{217}	$0.9998^{+0.0038}_{-0.0028}$	$100\theta_*$	$1.04058^{+0.00097}_{-0.00096}$	$f\sigma_8(2.33)$	$0.3036^{+0.0083}_{-0.0080}$
H_0	$69.9^{+2.5}_{-2.4}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.66^{+0.29}_{-0.29}$	$\sigma_8(2.33)$	$0.3136^{+0.0089}_{-0.0085}$
Ω_Λ	$0.701^{+0.017}_{-0.017}$	z_{drag}	$1061.0^{+1.2}_{-1.3}$	f_{2000}^{143}	31^{+6}_{-6}
Ω_m	$0.299^{+0.017}_{-0.017}$	r_{drag}	$144.6^{+3.3}_{-3.2}$	$f_{2000}^{143 \times 217}$	34^{+4}_{-4}
$\Omega_m h^2$	$0.1461^{+0.0060}_{-0.0059}$	k_{D}	$0.1426^{+0.0024}_{-0.0024}$	f_{2000}^{217}	$108.1^{+4.1}_{-4.0}$
$\Omega_m h^3$	$0.1022^{+0.0071}_{-0.0067}$	$100\theta_{\text{D}}$	$0.16136^{+0.00089}_{-0.00082}$	χ_{small}^2	$397.4 (\nu: 2.4)$
σ_8	$0.820^{+0.021}_{-0.020}$	z_{eq}	3344^{+64}_{-65}	χ_{lowl}^2	$21.78 (\nu: 0.4)$
S_8	$0.819^{+0.031}_{-0.031}$	k_{eq}	$0.01041^{+0.00024}_{-0.00024}$	χ_{H073p45}^2	$5.1 (\nu: 5.3)$
$\sigma_8 \Omega_m^{0.5}$	$0.448^{+0.017}_{-0.017}$	$100\theta_{\text{eq}}$	$0.825^{+0.013}_{-0.012}$	χ_{prior}^2	$9.9 (\nu: 10.6)$
$\sigma_8 \Omega_m^{0.25}$	$0.606^{+0.018}_{-0.017}$	$100\theta_{\text{s,eq}}$	$0.4551^{+0.0065}_{-0.0062}$	χ_{CMB}^2	$7362 (\nu: 10475341.0)$
$\sigma_8/h^{0.5}$	$0.981^{+0.023}_{-0.023}$	$H(0.15)$	$75.2^{+2.4}_{-2.3}$		
$r_{\text{drag}} h$	$101.1^{+2.3}_{-2.2}$	$D_{\text{M}}(0.15)$	621^{+21}_{-21}		

$\bar{\chi}_{\text{eff}}^2 = 11951.46; \Delta\bar{\chi}_{\text{eff}}^2 = 9148.72; R - 1 = 0.01420$

7.32 base_nnu_CamSpecHM_TTTEEE_lowl_lowE_Riess18_post_BAO_zre6p5/base_nnu_plikHM_TTTEEE_lowl_lowE_Riess18_post_BAO_z

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02260^{+0.00033}_{-0.00033}$	z_{re}	$8.0^{+1.3}_{-1.4}$	$H(0.51)$	$91.8^{+2.2}_{-2.2}$
$\Omega_c h^2$	$0.1229^{+0.0059}_{-0.0058}$	$10^9 A_s$	$2.125^{+0.071}_{-0.067}$	$D_{\text{M}}(0.51)$	1930^{+51}_{-51}
$100\theta_{MC}$	$1.04060^{+0.00081}_{-0.00081}$	$10^9 A_s e^{-2\tau}$	$1.896^{+0.032}_{-0.033}$	$H(0.61)$	$97.4^{+2.3}_{-2.2}$
τ	$0.057^{+0.014}_{-0.013}$	D_{40}	1213^{+26}_{-25}	$D_{\text{M}}(0.61)$	2248^{+58}_{-58}
N_{eff}	$3.32^{+0.34}_{-0.32}$	D_{220}	5731^{+80}_{-76}	$H(2.33)$	$239.6^{+4.9}_{-4.9}$
$\ln(10^{10} A_s)$	$3.056^{+0.033}_{-0.032}$	D_{810}	2541^{+27}_{-27}	$D_{\text{M}}(2.33)$	5645^{+130}_{-130}
n_s	$0.978^{+0.012}_{-0.012}$	D_{1420}	816^{+10}_{-10}	$f\sigma_8(0.15)$	$0.456^{+0.014}_{-0.014}$
y_{cal}	$1.0006^{+0.0049}_{-0.0049}$	D_{2000}	$229.4^{+3.9}_{-4.0}$	$\sigma_8(0.15)$	$0.759^{+0.020}_{-0.019}$
A_{217}^{CIB}	45^{+10}_{-20}	$n_{s,0.002}$	$0.978^{+0.012}_{-0.012}$	$f\sigma_8(0.38)$	$0.476^{+0.013}_{-0.013}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.2491^{+0.0044}_{-0.0043}$	$\sigma_8(0.38)$	$0.674^{+0.017}_{-0.017}$
A_{143}^{tSZ}	$4.5^{+3.9}_{-4.2}$	Y_P^{BBN}	$0.2504^{+0.0044}_{-0.0043}$	$f\sigma_8(0.51)$	$0.476^{+0.013}_{-0.012}$
A_{100}^{PS}	255^{+60}_{-50}	$10^5 D/H$	$2.64^{+0.11}_{-0.095}$	$\sigma_8(0.51)$	$0.631^{+0.016}_{-0.016}$
A_{143}^{PS}	45^{+20}_{-20}	Age/Gyr	$13.52^{+0.31}_{-0.31}$	$f\sigma_8(0.61)$	$0.472^{+0.012}_{-0.012}$
A_{217}^{PS}	108^{+20}_{-30}	z_*	$1090.14^{+0.77}_{-0.73}$	$\sigma_8(0.61)$	$0.601^{+0.016}_{-0.015}$
A^{kSZ}	—	r_*	$142.2^{+3.1}_{-3.1}$	$f\sigma_8(2.33)$	$0.3033^{+0.0080}_{-0.0079}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	$100\theta_*$	$1.04059^{+0.00098}_{-0.00096}$	$\sigma_8(2.33)$	$0.3131^{+0.0085}_{-0.0083}$
c_{217}	$0.9997^{+0.0038}_{-0.0028}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.67^{+0.29}_{-0.29}$	f_{2000}^{143}	31^{+6}_{-6}
H_0	$69.6^{+2.1}_{-2.0}$	z_{drag}	$1060.9^{+1.2}_{-1.2}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-4}
Ω_{Λ}	$0.699^{+0.012}_{-0.012}$	r_{drag}	$144.8^{+3.2}_{-3.2}$	f_{2000}^{217}	$108.1^{+4.1}_{-4.0}$
Ω_m	$0.301^{+0.012}_{-0.012}$	k_{D}	$0.1425^{+0.0024}_{-0.0024}$	χ_{small}^2	$397.3 (\nu: 2.2)$
$\Omega_m h^2$	$0.1461^{+0.0060}_{-0.0060}$	$100\theta_{\text{D}}$	$0.16133^{+0.00089}_{-0.00082}$	χ_{lowl}^2	$21.91 (\nu: 0.3)$
$\Omega_m h^3$	$0.1018^{+0.0068}_{-0.0065}$	z_{eq}	3352^{+47}_{-48}	χ_{H073p45}^2	$5.6 (\nu: 4.2)$
σ_8	$0.820^{+0.021}_{-0.020}$	k_{eq}	$0.01042^{+0.00023}_{-0.00023}$	$\chi_{6\text{DF}}^2$	$0.032 (\nu: 0.0)$
S_8	$0.822^{+0.026}_{-0.026}$	$100\theta_{\text{eq}}$	$0.8230^{+0.0092}_{-0.0089}$	χ_{MGS}^2	$1.95 (\nu: 0.1)$
$\sigma_8 \Omega_m^{0.5}$	$0.450^{+0.014}_{-0.014}$	$100\theta_{\text{s,eq}}$	$0.4543^{+0.0047}_{-0.0046}$	χ_{DR12BAO}^2	$3.86 (\nu: 0.2)$
$\sigma_8 \Omega_m^{0.25}$	$0.608^{+0.017}_{-0.016}$	$H(0.15)$	$74.9^{+2.1}_{-2.0}$	χ_{prior}^2	$9.9 (\nu: 10.5)$
$\sigma_8/h^{0.5}$	$0.983^{+0.021}_{-0.020}$	$D_{\text{M}}(0.15)$	623^{+18}_{-18}	χ_{BAO}^2	$5.84 (\nu: 0.3)$
$r_{\text{drag}} h$	$100.8^{+1.6}_{-1.6}$	$H(0.38)$	$85.0^{+2.2}_{-2.1}$	χ_{CMB}^2	$7361 (\nu: 10474500.9)$
$\langle d^2 \rangle^{1/2}$	$2.415^{+0.049}_{-0.047}$	$D_{\text{M}}(0.38)$	1489^{+40}_{-40}		

$$\bar{\chi}_{\text{eff}}^2 = 11957.12; \Delta\bar{\chi}_{\text{eff}}^2 = 9149.13; R - 1 = 0.01923$$

7.33 base_nnu_CamSpecHM_TTTEEE_lowl_lowE_Riess18_post_BAO_Pantheon18_zre6p5/base_nnu_plikHM_TTTEEE_lowl_lowE_Riess18

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02261^{+0.00033}_{-0.00033}$	z_{re}	$8.0^{+1.3}_{-1.4}$	$H(0.51)$	$91.8^{+2.2}_{-2.1}$
$\Omega_c h^2$	$0.1229^{+0.0059}_{-0.0058}$	$10^9 A_s$	$2.125^{+0.071}_{-0.067}$	$D_{\text{M}}(0.51)$	1930^{+51}_{-50}
$100\theta_{MC}$	$1.04060^{+0.00081}_{-0.00081}$	$10^9 A_s e^{-2\tau}$	$1.896^{+0.032}_{-0.033}$	$H(0.61)$	$97.4^{+2.3}_{-2.2}$
τ	$0.057^{+0.014}_{-0.013}$	D_{40}	1213^{+26}_{-25}	$D_{\text{M}}(0.61)$	2247^{+58}_{-57}
N_{eff}	$3.32^{+0.34}_{-0.32}$	D_{220}	5731^{+80}_{-76}	$H(2.33)$	$239.6^{+4.9}_{-4.9}$
$\ln(10^{10} A_s)$	$3.056^{+0.033}_{-0.032}$	D_{810}	2541^{+27}_{-27}	$D_{\text{M}}(2.33)$	5644^{+130}_{-130}
n_s	$0.978^{+0.012}_{-0.012}$	D_{1420}	816^{+10}_{-10}	$f\sigma_8(0.15)$	$0.455^{+0.014}_{-0.014}$
y_{cal}	$1.0006^{+0.0049}_{-0.0049}$	D_{2000}	$229.4^{+3.9}_{-4.0}$	$\sigma_8(0.15)$	$0.759^{+0.020}_{-0.019}$
A_{217}^{CIB}	45^{+10}_{-20}	$n_{s,0.002}$	$0.978^{+0.012}_{-0.012}$	$f\sigma_8(0.38)$	$0.476^{+0.013}_{-0.013}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.2491^{+0.0044}_{-0.0043}$	$\sigma_8(0.38)$	$0.674^{+0.017}_{-0.017}$
A_{143}^{tSZ}	$4.5^{+3.9}_{-4.2}$	Y_P^{BBN}	$0.2505^{+0.0044}_{-0.0043}$	$f\sigma_8(0.51)$	$0.476^{+0.013}_{-0.012}$
A_{100}^{PS}	255^{+60}_{-50}	$10^5 D/H$	$2.64^{+0.11}_{-0.096}$	$\sigma_8(0.51)$	$0.631^{+0.016}_{-0.016}$
A_{143}^{PS}	45^{+20}_{-20}	Age/Gyr	$13.52^{+0.30}_{-0.30}$	$f\sigma_8(0.61)$	$0.472^{+0.012}_{-0.012}$
A_{217}^{PS}	108^{+30}_{-30}	z_*	$1090.14^{+0.77}_{-0.73}$	$\sigma_8(0.61)$	$0.601^{+0.016}_{-0.015}$
A^{kSZ}	—	r_*	$142.2^{+3.1}_{-3.1}$	$f\sigma_8(2.33)$	$0.3033^{+0.0080}_{-0.0078}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	$100\theta_*$	$1.04059^{+0.00098}_{-0.00096}$	$\sigma_8(2.33)$	$0.3132^{+0.0084}_{-0.0082}$
c_{217}	$0.9997^{+0.0038}_{-0.0028}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.66^{+0.29}_{-0.28}$	f_{2000}^{143}	31^{+6}_{-6}
H_0	$69.7^{+2.0}_{-2.0}$	z_{drag}	$1060.9^{+1.2}_{-1.2}$	$f_{2000}^{143 \times 217}$	34^{+4}_{-4}
Ω_{Λ}	$0.699^{+0.012}_{-0.012}$	r_{drag}	$144.7^{+3.2}_{-3.2}$	f_{2000}^{217}	$108.1^{+4.1}_{-4.0}$
Ω_m	$0.301^{+0.012}_{-0.012}$	k_{D}	$0.1425^{+0.0024}_{-0.0024}$	χ_{small}^2	$397.3 (\nu: 2.2)$
$\Omega_m h^2$	$0.1461^{+0.0060}_{-0.0060}$	$100\theta_{\text{D}}$	$0.16133^{+0.00089}_{-0.00082}$	χ_{lowl}^2	$21.90 (\nu: 0.3)$
$\Omega_m h^3$	$0.1018^{+0.0068}_{-0.0064}$	z_{eq}	3351^{+46}_{-47}	χ_{H073p45}^2	$5.6 (\nu: 4.0)$
σ_8	$0.820^{+0.021}_{-0.020}$	k_{eq}	$0.01042^{+0.00023}_{-0.00023}$	χ_{JLA}^2	$1034.82 (\nu: 0.0)$
S_8	$0.822^{+0.026}_{-0.026}$	$100\theta_{\text{eq}}$	$0.8232^{+0.0089}_{-0.0086}$	$\chi_{6\text{DF}}^2$	$0.030 (\nu: 0.0)$
$\sigma_8 \Omega_m^{0.5}$	$0.450^{+0.014}_{-0.014}$	$100\theta_{\text{s,eq}}$	$0.4544^{+0.0046}_{-0.0044}$	χ_{MGS}^2	$1.96 (\nu: 0.1)$
$\sigma_8 \Omega_m^{0.25}$	$0.607^{+0.016}_{-0.016}$	$H(0.15)$	$74.9^{+2.0}_{-2.0}$	χ_{DR12BAO}^2	$3.83 (\nu: 0.2)$
$\sigma_8/h^{0.5}$	$0.983^{+0.021}_{-0.020}$	$D_{\text{M}}(0.15)$	623^{+17}_{-17}	χ_{prior}^2	$9.9 (\nu: 10.5)$
$r_{\text{drag}} h$	$100.8^{+1.6}_{-1.5}$	$H(0.38)$	$85.0^{+2.1}_{-2.1}$	χ_{BAO}^2	$5.82 (\nu: 0.3)$
$\langle d^2 \rangle^{1/2}$	$2.415^{+0.049}_{-0.046}$	$D_{\text{M}}(0.38)$	1489^{+40}_{-39}	χ_{CMB}^2	$7361 (\nu: 10474373.1)$

$$\bar{\chi}_{\text{eff}}^2 = 12991.86; \Delta\bar{\chi}_{\text{eff}}^2 = 9149.12; R - 1 = 0.01898$$

7.34 base_nnu_CamSpecHM_TTTEEE_lowl_lowE_Riess18_post_lensing_zre6p5/base_nnu_plikHM_TTTEEE_lowl_lowE_Riess18_post_lensing

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02262^{+0.00037}_{-0.00036}$	$\langle d^2 \rangle^{1/2}$	$2.418^{+0.045}_{-0.045}$	$H(0.38)$	$85.1^{+2.4}_{-2.3}$
$\Omega_c h^2$	$0.1227^{+0.0056}_{-0.0055}$	z_{re}	$8.1^{+1.4}_{-1.4}$	$D_{\text{M}}(0.38)$	1488^{+46}_{-45}
$100\theta_{MC}$	$1.04061^{+0.00079}_{-0.00079}$	$10^9 A_s$	$2.132^{+0.067}_{-0.064}$	$H(0.51)$	$91.8^{+2.4}_{-2.3}$
τ	$0.059^{+0.014}_{-0.014}$	$10^9 A_s e^{-2\tau}$	$1.896^{+0.031}_{-0.031}$	$D_{\text{M}}(0.51)$	1930^{+57}_{-57}
N_{eff}	$3.32^{+0.35}_{-0.33}$	D_{40}	1214^{+26}_{-26}	$H(0.61)$	$97.4^{+2.4}_{-2.3}$
$\ln(10^{10} A_s)$	$3.059^{+0.032}_{-0.029}$	D_{220}	5737^{+80}_{-77}	$D_{\text{M}}(0.61)$	2247^{+65}_{-65}
n_s	$0.978^{+0.013}_{-0.014}$	D_{810}	2542^{+27}_{-26}	$H(2.33)$	$239.5^{+4.8}_{-4.7}$
y_{cal}	$1.0008^{+0.0050}_{-0.0048}$	D_{1420}	$816^{+10}_{-9.9}$	$D_{\text{M}}(2.33)$	5645^{+130}_{-130}
A_{217}^{CIB}	45^{+10}_{-20}	D_{2000}	$229.6^{+3.9}_{-3.9}$	$f\sigma_8(0.15)$	$0.455^{+0.013}_{-0.013}$
$\xi^{tSZ-CIB}$	—	$n_{s,0.002}$	$0.978^{+0.013}_{-0.014}$	$\sigma_8(0.15)$	$0.760^{+0.018}_{-0.017}$
A_{143}^{tSZ}	$4.5^{+3.9}_{-4.3}$	Y_P	$0.2491^{+0.0045}_{-0.0044}$	$f\sigma_8(0.38)$	$0.476^{+0.011}_{-0.011}$
A_{100}^{PS}	255^{+60}_{-50}	Y_P^{BBN}	$0.2504^{+0.0045}_{-0.0044}$	$\sigma_8(0.38)$	$0.675^{+0.016}_{-0.016}$
A_{143}^{PS}	45^{+20}_{-20}	$10^5 D/H$	$2.63^{+0.10}_{-0.093}$	$f\sigma_8(0.51)$	$0.476^{+0.011}_{-0.011}$
A_{217}^{PS}	108^{+30}_{-30}	Age/Gyr	$13.52^{+0.32}_{-0.32}$	$\sigma_8(0.51)$	$0.632^{+0.016}_{-0.015}$
A^{kSZ}	—	z_*	$1090.10^{+0.74}_{-0.71}$	$f\sigma_8(0.61)$	$0.472^{+0.010}_{-0.010}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	r_*	$142.2^{+3.1}_{-3.0}$	$\sigma_8(0.61)$	$0.601^{+0.015}_{-0.015}$
c_{217}	$0.9997^{+0.0038}_{-0.0028}$	$100\theta_*$	$1.04060^{+0.00096}_{-0.00095}$	$f\sigma_8(2.33)$	$0.3037^{+0.0079}_{-0.0076}$
H_0	$69.7^{+2.4}_{-2.3}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.67^{+0.28}_{-0.28}$	$\sigma_8(2.33)$	$0.3136^{+0.0086}_{-0.0082}$
Ω_Λ	$0.699^{+0.015}_{-0.015}$	z_{drag}	$1060.9^{+1.2}_{-1.3}$	f_{2000}^{143}	31^{+6}_{-6}
Ω_m	$0.301^{+0.015}_{-0.015}$	r_{drag}	$144.8^{+3.2}_{-3.1}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-4}
$\Omega_m h^2$	$0.1460^{+0.0058}_{-0.0057}$	k_{D}	$0.1425^{+0.0023}_{-0.0023}$	f_{2000}^{217}	$108.0^{+4.1}_{-4.0}$
$\Omega_m h^3$	$0.1018^{+0.0070}_{-0.0065}$	$100\theta_{\text{D}}$	$0.16131^{+0.00089}_{-0.00082}$	χ^2_{lensing}	$9.71 (\nu: 0.4)$
σ_8	$0.821^{+0.019}_{-0.018}$	z_{eq}	3349^{+58}_{-58}	χ^2_{small}	$397.6 (\nu: 2.6)$
S_8	$0.822^{+0.025}_{-0.025}$	k_{eq}	$0.01041^{+0.00022}_{-0.00022}$	χ^2_{lowl}	$21.97 (\nu: 0.4)$
$\sigma_8 \Omega_m^{0.5}$	$0.450^{+0.013}_{-0.013}$	$100\theta_{\text{eq}}$	$0.824^{+0.011}_{-0.011}$	χ^2_{H073p45}	$5.6 (\nu: 5.6)$
$\sigma_8 \Omega_m^{0.25}$	$0.608^{+0.014}_{-0.014}$	$100\theta_{\text{s,eq}}$	$0.4546^{+0.0058}_{-0.0056}$	χ^2_{prior}	$9.8 (\nu: 10.6)$
$\sigma_8/h^{0.5}$	$0.983^{+0.018}_{-0.018}$	$H(0.15)$	$75.0^{+2.4}_{-2.3}$	χ^2_{CMB}	$7371 (\nu: 10476517.8)$
$r_{\text{drag}} h$	$100.9^{+2.0}_{-2.0}$	$D_{\text{M}}(0.15)$	623^{+20}_{-20}		

$\bar{\chi}^2_{\text{eff}} = 11961.28$; $\Delta\bar{\chi}^2_{\text{eff}} = 9149.45$; $R - 1 = 0.02116$

7.35 base_nnu_CamSpecHM_TTTEEE_lowl_lowE_Riess18_post_BAO_lensing_Pantheon18_zre6p5/base_nnu_plikHM_TTTEEE_lowl_lowE

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02260^{+0.00033}_{-0.00033}$	$10^9 A_s$	$2.129^{+0.063}_{-0.062}$	$H(0.61)$	$97.3^{+2.2}_{-2.2}$
$\Omega_c h^2$	$0.1227^{+0.0056}_{-0.0055}$	$10^9 A_s e^{-2\tau}$	$1.896^{+0.031}_{-0.031}$	$D_M(0.61)$	2251^{+57}_{-56}
$100\theta_{MC}$	$1.04062^{+0.00080}_{-0.00079}$	D_{40}	1215^{+25}_{-24}	$H(2.33)$	$239.4^{+4.8}_{-4.7}$
τ	$0.058^{+0.014}_{-0.013}$	D_{220}	5735^{+79}_{-76}	$D_M(2.33)$	5651^{+120}_{-120}
N_{eff}	$3.31^{+0.33}_{-0.31}$	D_{810}	2542^{+27}_{-26}	$f\sigma_8(0.15)$	$0.456^{+0.011}_{-0.011}$
$\ln(10^{10} A_s)$	$3.058^{+0.031}_{-0.028}$	D_{1420}	$816^{+10}_{-9.9}$	$\sigma_8(0.15)$	$0.759^{+0.017}_{-0.017}$
n_s	$0.977^{+0.012}_{-0.012}$	D_{2000}	$229.6^{+3.8}_{-3.9}$	$f\sigma_8(0.38)$	$0.477^{+0.011}_{-0.011}$
y_{cal}	$1.0008^{+0.0050}_{-0.0048}$	$n_{s,0.002}$	$0.977^{+0.012}_{-0.012}$	$\sigma_8(0.38)$	$0.674^{+0.016}_{-0.015}$
A_{217}^{CIB}	45^{+20}_{-10}	Y_P	$0.2489^{+0.0042}_{-0.0042}$	$f\sigma_8(0.51)$	$0.477^{+0.011}_{-0.010}$
$\xi^{tSZ-CIB}$	—	Y_P^{BBN}	$0.2502^{+0.0043}_{-0.0042}$	$\sigma_8(0.51)$	$0.631^{+0.015}_{-0.015}$
A_{143}^{tSZ}	$4.5^{+3.9}_{-4.2}$	$10^5 D/H$	$2.63^{+0.10}_{-0.093}$	$f\sigma_8(0.61)$	$0.472^{+0.010}_{-0.010}$
A_{100}^{PS}	255^{+60}_{-50}	Age/Gyr	$13.53^{+0.30}_{-0.30}$	$\sigma_8(0.61)$	$0.601^{+0.014}_{-0.014}$
A_{143}^{PS}	45^{+20}_{-20}	z_*	$1090.11^{+0.74}_{-0.71}$	$f\sigma_8(2.33)$	$0.3033^{+0.0074}_{-0.0072}$
A_{217}^{PS}	108^{+30}_{-30}	r_*	$142.3^{+3.0}_{-3.0}$	$\sigma_8(2.33)$	$0.3132^{+0.0079}_{-0.0077}$
A^{kSZ}	—	$100\theta_*$	$1.04061^{+0.00096}_{-0.00095}$	f_{2000}^{143}	31^{+6}_{-6}
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	$D_M(z_*)/\text{Gpc}$	$13.68^{+0.28}_{-0.27}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-4}
c_{217}	$0.9997^{+0.0038}_{-0.0028}$	z_{drag}	$1060.9^{+1.1}_{-1.2}$	f_{2000}^{217}	$108.0^{+4.1}_{-4.0}$
H_0	$69.5^{+2.0}_{-1.9}$	r_{drag}	$144.9^{+3.1}_{-3.0}$	χ^2_{lensing}	$9.62 (\nu: 0.3)$
Ω_Λ	$0.698^{+0.011}_{-0.011}$	k_D	$0.1424^{+0.0023}_{-0.0023}$	χ^2_{simall}	$397.5 (\nu: 2.3)$
Ω_m	$0.302^{+0.011}_{-0.011}$	$100\theta_D$	$0.16129^{+0.00087}_{-0.00080}$	χ^2_{lowl}	$22.03 (\nu: 0.3)$
$\Omega_m h^2$	$0.1459^{+0.0058}_{-0.0056}$	z_{eq}	3354^{+43}_{-44}	χ^2_{H073p45}	$5.9 (\nu: 4.2)$
$\Omega_m h^3$	$0.1015^{+0.0066}_{-0.0062}$	k_{eq}	$0.01041^{+0.00021}_{-0.00021}$	χ^2_{JLA}	$1034.82 (\nu: 0.0)$
σ_8	$0.820^{+0.018}_{-0.018}$	$100\theta_{\text{eq}}$	$0.8227^{+0.0084}_{-0.0081}$	$\chi^2_{6\text{DF}}$	$0.026 (\nu: 0.0)$
S_8	$0.823^{+0.022}_{-0.021}$	$100\theta_{s,\text{eq}}$	$0.4541^{+0.0043}_{-0.0042}$	χ^2_{MGS}	$1.91 (\nu: 0.1)$
$\sigma_8 \Omega_m^{0.5}$	$0.451^{+0.012}_{-0.012}$	$H(0.15)$	$74.8^{+2.0}_{-2.0}$	χ^2_{DR12BAO}	$3.81 (\nu: 0.1)$
$\sigma_8 \Omega_m^{0.25}$	$0.608^{+0.014}_{-0.014}$	$D_M(0.15)$	624^{+17}_{-17}	χ^2_{prior}	$9.8 (\nu: 10.5)$
$\sigma_8/h^{0.5}$	$0.984^{+0.017}_{-0.016}$	$H(0.38)$	$84.9^{+2.1}_{-2.0}$	χ^2_{CMB}	$7370 (\nu: 10475581.7)$
$r_{\text{drag}} h$	$100.7^{+1.5}_{-1.4}$	$D_M(0.38)$	1491^{+39}_{-39}	χ^2_{BAO}	$5.74 (\nu: 0.2)$
$\langle d^2 \rangle^{1/2}$	$2.420^{+0.040}_{-0.040}$	$H(0.51)$	$91.7^{+2.2}_{-2.1}$		
z_{re}	$8.1^{+1.3}_{-1.4}$	$D_M(0.51)$	1933^{+50}_{-49}		
$\bar{\chi}^2_{\text{eff}} = 13001.46; \Delta\bar{\chi}^2_{\text{eff}} = 9149.61; R - 1 = 0.02255$					

8 nnu+meffsterile

8.1 base_nnu_meffsterile_CamSpecHM_TTTEEE_lowl_lowE/base_nnu_meffsterile_plikHM_TTTEEE_lowl_lowE

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02240^{+0.00034}_{-0.00032}$	$\sigma_8/h^{0.5}$	$0.952^{+0.051}_{-0.062}$	$H(0.15)$	$72.7^{+1.6}_{-1.4}$
$\Omega_c h^2$	$0.1199^{+0.0061}_{-0.0070}$	$r_{\text{drag}} h$	$98.2^{+2.7}_{-3.1}$	$D_{\text{M}}(0.15)$	644^{+14}_{-15}
$100\theta_{MC}$	$1.04071^{+0.00064}_{-0.00070}$	$\langle d^2 \rangle^{1/2}$	$2.439^{+0.059}_{-0.060}$	$H(0.38)$	$83.1^{+1.4}_{-1.1}$
τ	$0.054^{+0.016}_{-0.016}$	z_{re}	$7.7^{+1.6}_{-1.7}$	$D_{\text{M}}(0.38)$	1533^{+29}_{-32}
$m_{\nu, \text{sterile}}^{\text{eff}}$	< 0.752	$10^9 A_s$	$2.103^{+0.075}_{-0.069}$	$H(0.51)$	$89.9^{+1.3}_{-0.95}$
N_{eff}	< 3.36	$10^9 A_s e^{-2\tau}$	$1.888^{+0.027}_{-0.026}$	$D_{\text{M}}(0.51)$	1984^{+34}_{-39}
$\ln(10^{10} A_s)$	$3.046^{+0.035}_{-0.033}$	D_{40}	1226^{+28}_{-29}	$H(0.61)$	$95.7^{+1.3}_{-0.88}$
n_s	$0.966^{+0.012}_{-0.011}$	D_{220}	5725^{+78}_{-80}	$D_{\text{M}}(0.61)$	2308^{+37}_{-43}
y_{cal}	$1.0007^{+0.0050}_{-0.0049}$	D_{810}	2539^{+28}_{-28}	$H(2.33)$	$238.6^{+3.9}_{-3.3}$
A_{217}^{CIB}	44^{+10}_{-20}	D_{1420}	$815.5^{+9.9}_{-9.9}$	$D_{\text{M}}(2.33)$	5737^{+48}_{-73}
$\xi^{tSZ-CIB}$	—	D_{2000}	$229.5^{+3.5}_{-3.7}$	$f\sigma_8(0.15)$	$0.447^{+0.025}_{-0.028}$
A_{143}^{tSZ}	$4.5^{+3.8}_{-4.3}$	$n_{s,0.002}$	$0.966^{+0.012}_{-0.011}$	$\sigma_8(0.15)$	$0.720^{+0.042}_{-0.050}$
A_{100}^{PS}	253^{+50}_{-50}	Y_P	$0.2470^{+0.0027}_{-0.0017}$	$f\sigma_8(0.38)$	$0.462^{+0.025}_{-0.029}$
A_{143}^{PS}	45^{+20}_{-20}	Y_P^{BBN}	$0.2483^{+0.0027}_{-0.0017}$	$\sigma_8(0.38)$	$0.637^{+0.038}_{-0.046}$
A_{217}^{PS}	109^{+30}_{-30}	$10^5 D/H$	$2.622^{+0.078}_{-0.071}$	$f\sigma_8(0.51)$	$0.460^{+0.025}_{-0.029}$
A^{kSZ}	—	Age/Gyr	$13.73^{+0.11}_{-0.17}$	$\sigma_8(0.51)$	$0.596^{+0.036}_{-0.043}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	z_*	$1090.21^{+0.72}_{-0.62}$	$f\sigma_8(0.61)$	$0.454^{+0.025}_{-0.029}$
c_{217}	$0.9997^{+0.0038}_{-0.0028}$	r_*	$143.3^{+1.6}_{-2.0}$	$\sigma_8(0.61)$	$0.567^{+0.035}_{-0.041}$
H_0	$67.3^{+1.8}_{-1.6}$	$100\theta_*$	$1.04084^{+0.00070}_{-0.00074}$	$f\sigma_8(2.33)$	$0.286^{+0.018}_{-0.021}$
Ω_Λ	$0.677^{+0.023}_{-0.024}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.77^{+0.15}_{-0.19}$	$\sigma_8(2.33)$	$0.294^{+0.019}_{-0.022}$
Ω_m	$0.323^{+0.024}_{-0.023}$	z_{drag}	$1060.26^{+0.95}_{-0.87}$	f_{2000}^{143}	31^{+6}_{-6}
$\Omega_m h^2$	$0.1458^{+0.0054}_{-0.0047}$	r_{drag}	$146.0^{+1.6}_{-2.1}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-4}
$\Omega_\nu h^2$	$0.0035^{+0.0052}_{-0.0029}$	k_{D}	$0.1417^{+0.0017}_{-0.0014}$	f_{2000}^{217}	$108.0^{+4.0}_{-3.8}$
$\Omega_m h^3$	$0.0980^{+0.0036}_{-0.0023}$	$100\theta_{\text{D}}$	$0.16098^{+0.00059}_{-0.00051}$	χ_{small}^2	$397.1 (\nu: 1.8)$
σ_8	$0.781^{+0.044}_{-0.054}$	z_{eq}	3347^{+100}_{-130}	χ_{lowl}^2	$23.2 (\nu: 0.6)$
S_8	$0.809^{+0.046}_{-0.050}$	k_{eq}	$0.01033^{+0.00031}_{-0.00037}$	χ_{prior}^2	$9.8 (\nu: 10.4)$
$\sigma_8 \Omega_m^{0.5}$	$0.443^{+0.025}_{-0.028}$	$100\theta_{\text{eq}}$	$0.825^{+0.028}_{-0.021}$	χ_{CMB}^2	$7360 (\nu: 10475302.9)$
$\sigma_8 \Omega_m^{0.25}$	$0.588^{+0.032}_{-0.037}$	$100\theta_{\text{s,eq}}$	$0.456^{+0.015}_{-0.011}$		

Best-fit $\chi_{\text{eff}}^2 = 11921.37$; $\Delta\chi_{\text{eff}}^2 = 9154.70$; $\bar{\chi}_{\text{eff}}^2 = 11945.34$; $\Delta\bar{\chi}_{\text{eff}}^2 = 9150.57$; $R - 1 = 0.02481$

χ_{eff}^2 : CMB - simall_100x143_offlike5_EE_Aplanck_B: 396.18 (Δ -1.41) commander_dx12_v3_2_29: 23.00 (Δ -0.01) CamSpec like_10.7HM_1400_unified: 11499.96

8.2 base_nnu_meffsterile_CamSpecHM_TTTEEE_lowl_lowE_post_lensing/base_nnu_meffsterile_plikHM_TTTEEE_lowl_lowE_post_lensing

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02238^{+0.00033}_{-0.00031}$	$\sigma_8/h^{0.5}$	$0.956^{+0.041}_{-0.049}$	$H(0.15)$	$72.6^{+1.5}_{-1.3}$
$\Omega_c h^2$	$0.1201^{+0.0057}_{-0.0066}$	$r_{\text{drag}} h$	$98.1^{+2.5}_{-2.9}$	$D_{\text{M}}(0.15)$	645^{+13}_{-14}
$100\theta_{MC}$	$1.04070^{+0.00062}_{-0.00070}$	$\langle d^2 \rangle^{1/2}$	$2.446^{+0.046}_{-0.046}$	$H(0.38)$	$83.0^{+1.3}_{-1.0}$
τ	$0.055^{+0.016}_{-0.014}$	z_{re}	$7.8^{+1.5}_{-1.5}$	$D_{\text{M}}(0.38)$	1535^{+27}_{-30}
$m_{\nu, \text{sterile}}^{\text{eff}}$	< 0.678	$10^9 A_s$	$2.109^{+0.069}_{-0.062}$	$H(0.51)$	$89.9^{+1.2}_{-0.86}$
N_{eff}	< 3.34	$10^9 A_s e^{-2\tau}$	$1.890^{+0.026}_{-0.025}$	$D_{\text{M}}(0.51)$	1986^{+32}_{-37}
$\ln(10^{10} A_s)$	$3.048^{+0.032}_{-0.030}$	D_{40}	1229^{+26}_{-26}	$H(0.61)$	$95.6^{+1.2}_{-0.80}$
n_s	$0.966^{+0.011}_{-0.011}$	D_{220}	5727^{+77}_{-78}	$D_{\text{M}}(0.61)$	2310^{+34}_{-40}
y_{cal}	$1.0008^{+0.0050}_{-0.0050}$	D_{810}	2540^{+27}_{-27}	$H(2.33)$	$238.6^{+3.7}_{-3.1}$
A_{217}^{CIB}	44^{+10}_{-20}	D_{1420}	$816^{+10}_{-9.9}$	$D_{\text{M}}(2.33)$	5740^{+45}_{-69}
$\xi^{tSZ-CIB}$	—	D_{2000}	$229.6^{+3.5}_{-3.5}$	$f\sigma_8(0.15)$	$0.449^{+0.019}_{-0.022}$
A_{143}^{tSZ}	$4.5^{+3.8}_{-4.3}$	$n_{s,0.002}$	$0.966^{+0.011}_{-0.011}$	$\sigma_8(0.15)$	$0.723^{+0.036}_{-0.041}$
A_{100}^{PS}	253^{+60}_{-50}	Y_P	$0.2469^{+0.0025}_{-0.0016}$	$f\sigma_8(0.38)$	$0.464^{+0.020}_{-0.023}$
A_{143}^{PS}	45^{+20}_{-20}	Y_P^{BBN}	$0.2482^{+0.0025}_{-0.0016}$	$\sigma_8(0.38)$	$0.640^{+0.033}_{-0.038}$
A_{217}^{PS}	109^{+30}_{-30}	$10^5 D/H$	$2.622^{+0.078}_{-0.069}$	$f\sigma_8(0.51)$	$0.462^{+0.020}_{-0.023}$
A^{kSZ}	—	Age/Gyr	$13.74^{+0.11}_{-0.16}$	$\sigma_8(0.51)$	$0.598^{+0.031}_{-0.036}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	z_*	$1090.22^{+0.70}_{-0.60}$	$f\sigma_8(0.61)$	$0.456^{+0.020}_{-0.024}$
c_{217}	$0.9997^{+0.0038}_{-0.0027}$	r_*	$143.4^{+1.5}_{-1.9}$	$\sigma_8(0.61)$	$0.569^{+0.030}_{-0.035}$
H_0	$67.2^{+1.7}_{-1.5}$	$100\theta_*$	$1.04083^{+0.00068}_{-0.00073}$	$f\sigma_8(2.33)$	$0.287^{+0.016}_{-0.018}$
Ω_Λ	$0.677^{+0.020}_{-0.025}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.77^{+0.14}_{-0.18}$	$\sigma_8(2.33)$	$0.295^{+0.017}_{-0.019}$
Ω_m	$0.323^{+0.025}_{-0.020}$	z_{drag}	$1060.23^{+0.93}_{-0.79}$	f_{2000}^{143}	31^{+6}_{-6}
$\Omega_m h^2$	$0.1458^{+0.0051}_{-0.0044}$	r_{drag}	$146.0^{+1.5}_{-2.0}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-4}
$\Omega_\nu h^2$	$0.0033^{+0.0047}_{-0.0028}$	k_{D}	$0.1417^{+0.0016}_{-0.0013}$	f_{2000}^{217}	$108.0^{+4.1}_{-3.7}$
$\Omega_m h^3$	$0.0979^{+0.0034}_{-0.0022}$	$100\theta_{\text{D}}$	$0.16097^{+0.00059}_{-0.00050}$	χ_{lensing}^2	$9.14 (\nu: 0.3)$
σ_8	$0.784^{+0.038}_{-0.044}$	z_{eq}	3355^{+89}_{-120}	χ_{small}^2	$1021 (\nu: 418443.7)$
S_8	$0.813^{+0.035}_{-0.039}$	k_{eq}	$0.01035^{+0.00028}_{-0.00034}$	χ_{lowl}^2	$23.3 (\nu: 0.5)$
$\sigma_8 \Omega_m^{0.5}$	$0.445^{+0.019}_{-0.022}$	$100\theta_{\text{eq}}$	$0.824^{+0.025}_{-0.018}$	χ_{prior}^2	$9.7 (\nu: 10.3)$
$\sigma_8 \Omega_m^{0.25}$	$0.591^{+0.025}_{-0.029}$	$100\theta_{\text{s,eq}}$	$0.455^{+0.013}_{-0.0093}$	χ_{CMB}^2	$7369 (\nu: 10475763.3)$

$$\bar{\chi}_{\text{eff}}^2 = 11954.00; \Delta\bar{\chi}_{\text{eff}}^2 = 9150.80; R - 1 = 0.02353$$

8.3 base_nnu_meffsterile_CamSpecHM_TTTEEE_lowl_lowE_post_zre6p5/base_nnu_meffsterile_plikHM_TTTEEE_lowl_lowE_post_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02240^{+0.00034}_{-0.00032}$	$\sigma_8/h^{0.5}$	$0.953^{+0.050}_{-0.062}$	$H(0.15)$	$72.7^{+1.6}_{-1.4}$
$\Omega_c h^2$	$0.1199^{+0.0061}_{-0.0070}$	$r_{\text{drag}} h$	$98.2^{+2.7}_{-3.1}$	$D_{\text{M}}(0.15)$	644^{+14}_{-16}
$100\theta_{MC}$	$1.04071^{+0.00064}_{-0.00070}$	$\langle d^2 \rangle^{1/2}$	$2.441^{+0.058}_{-0.058}$	$H(0.38)$	$83.1^{+1.4}_{-1.1}$
τ	$0.055^{+0.013}_{-0.012}$	z_{re}	< 9.01	$D_{\text{M}}(0.38)$	1533^{+29}_{-32}
$m_{\nu, \text{sterile}}^{\text{eff}}$	< 0.746	$10^9 A_s$	$2.108^{+0.065}_{-0.059}$	$H(0.51)$	$89.9^{+1.3}_{-0.95}$
N_{eff}	< 3.36	$10^9 A_s e^{-2\tau}$	$1.888^{+0.027}_{-0.026}$	$D_{\text{M}}(0.51)$	1984^{+34}_{-39}
$\ln(10^{10} A_s)$	$3.048^{+0.031}_{-0.028}$	D_{40}	1226^{+28}_{-29}	$H(0.61)$	$95.7^{+1.3}_{-0.88}$
n_s	$0.967^{+0.012}_{-0.011}$	D_{220}	5725^{+78}_{-80}	$D_{\text{M}}(0.61)$	2307^{+37}_{-43}
y_{cal}	$1.0007^{+0.0050}_{-0.0050}$	D_{810}	2539^{+28}_{-28}	$H(2.33)$	$238.6^{+3.9}_{-3.3}$
A_{217}^{CIB}	44^{+10}_{-20}	D_{1420}	$815.5^{+9.9}_{-9.9}$	$D_{\text{M}}(2.33)$	5737^{+48}_{-73}
$\xi^{tSZ-CIB}$	—	D_{2000}	$229.6^{+3.5}_{-3.7}$	$f\sigma_8(0.15)$	$0.447^{+0.024}_{-0.027}$
A_{143}^{tSZ}	$4.5^{+3.8}_{-4.3}$	$n_{s,0.002}$	$0.967^{+0.012}_{-0.011}$	$\sigma_8(0.15)$	$0.721^{+0.042}_{-0.050}$
A_{100}^{PS}	253^{+50}_{-50}	Y_P	$0.2470^{+0.0027}_{-0.0017}$	$f\sigma_8(0.38)$	$0.463^{+0.025}_{-0.029}$
A_{143}^{PS}	45^{+20}_{-20}	Y_P^{BBN}	$0.2483^{+0.0027}_{-0.0017}$	$\sigma_8(0.38)$	$0.638^{+0.038}_{-0.046}$
A_{217}^{PS}	109^{+30}_{-30}	$10^5 D/H$	$2.622^{+0.078}_{-0.071}$	$f\sigma_8(0.51)$	$0.460^{+0.024}_{-0.029}$
A^{kSZ}	—	Age/Gyr	$13.73^{+0.11}_{-0.17}$	$\sigma_8(0.51)$	$0.597^{+0.036}_{-0.043}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	z_*	$1090.20^{+0.72}_{-0.62}$	$f\sigma_8(0.61)$	$0.455^{+0.024}_{-0.029}$
c_{217}	$0.9997^{+0.0038}_{-0.0028}$	r_*	$143.3^{+1.6}_{-2.1}$	$\sigma_8(0.61)$	$0.568^{+0.034}_{-0.041}$
H_0	$67.3^{+1.8}_{-1.7}$	$100\theta_*$	$1.04084^{+0.00070}_{-0.00075}$	$f\sigma_8(2.33)$	$0.286^{+0.018}_{-0.021}$
Ω_Λ	$0.678^{+0.023}_{-0.024}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.77^{+0.15}_{-0.19}$	$\sigma_8(2.33)$	$0.294^{+0.019}_{-0.022}$
Ω_m	$0.322^{+0.024}_{-0.023}$	z_{drag}	$1060.27^{+0.95}_{-0.87}$	f_{2000}^{143}	31^{+6}_{-6}
$\Omega_m h^2$	$0.1458^{+0.0055}_{-0.0047}$	r_{drag}	$146.0^{+1.6}_{-2.1}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-4}
$\Omega_\nu h^2$	$0.0035^{+0.0051}_{-0.0029}$	k_{D}	$0.1417^{+0.0017}_{-0.0014}$	f_{2000}^{217}	$108.0^{+4.0}_{-3.8}$
$\Omega_m h^3$	$0.0981^{+0.0037}_{-0.0024}$	$100\theta_{\text{D}}$	$0.16098^{+0.00060}_{-0.00051}$	χ_{simall}^2	$397.0 (\nu: 1.9)$
σ_8	$0.781^{+0.044}_{-0.054}$	z_{eq}	3347^{+100}_{-130}	χ_{lowl}^2	$23.2 (\nu: 0.6)$
S_8	$0.810^{+0.045}_{-0.050}$	k_{eq}	$0.01033^{+0.00031}_{-0.00037}$	χ_{prior}^2	$9.8 (\nu: 10.4)$
$\sigma_8 \Omega_m^{0.5}$	$0.443^{+0.025}_{-0.027}$	$100\theta_{\text{eq}}$	$0.825^{+0.028}_{-0.021}$	χ_{CMB}^2	$7360 (\nu: 10475286.2)$
$\sigma_8 \Omega_m^{0.25}$	$0.589^{+0.031}_{-0.037}$	$100\theta_{\text{s,eq}}$	$0.456^{+0.015}_{-0.011}$		

$\bar{\chi}_{\text{eff}}^2 = 11945.16$; $\Delta\bar{\chi}_{\text{eff}}^2 = 9150.59$; $R - 1 = 0.02558$

8.4 base_nnu_meffsterile_CamSpecHM_TTTEEE_lowl_lowE_post_lensing_zre6p5/base_nnu_meffsterile_plikHM_TTTEEE_lowl_lowE_post_

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02239^{+0.00033}_{-0.00031}$	$\sigma_8/h^{0.5}$	$0.956^{+0.041}_{-0.049}$	$H(0.15)$	$72.6^{+1.5}_{-1.3}$
$\Omega_c h^2$	$0.1201^{+0.0057}_{-0.0066}$	$r_{\text{drag}} h$	$98.1^{+2.5}_{-2.9}$	$D_M(0.15)$	645^{+13}_{-14}
$100\theta_{MC}$	$1.04070^{+0.00062}_{-0.00070}$	$\langle d^2 \rangle^{1/2}$	$2.447^{+0.045}_{-0.046}$	$H(0.38)$	$83.0^{+1.3}_{-1.0}$
τ	$0.056^{+0.014}_{-0.012}$	z_{re}	< 9.04	$D_M(0.38)$	1534^{+27}_{-30}
$m_{\nu, \text{sterile}}^{\text{eff}}$	< 0.677	$10^9 A_s$	$2.112^{+0.061}_{-0.056}$	$H(0.51)$	$89.9^{+1.2}_{-0.86}$
N_{eff}	< 3.34	$10^9 A_s e^{-2\tau}$	$1.889^{+0.026}_{-0.024}$	$D_M(0.51)$	1986^{+31}_{-37}
$\ln(10^{10} A_s)$	$3.050^{+0.029}_{-0.027}$	D_{40}	1228^{+25}_{-26}	$H(0.61)$	$95.6^{+1.2}_{-0.80}$
n_s	$0.966^{+0.011}_{-0.011}$	D_{220}	5727^{+78}_{-78}	$D_M(0.61)$	2309^{+34}_{-40}
y_{cal}	$1.0008^{+0.0050}_{-0.0050}$	D_{810}	2540^{+27}_{-27}	$H(2.33)$	$238.6^{+3.7}_{-3.1}$
A_{217}^{CIB}	44^{+10}_{-20}	D_{1420}	$816^{+10}_{-9.9}$	$D_M(2.33)$	5740^{+45}_{-69}
$\xi^{tSZ-CIB}$	—	D_{2000}	$229.6^{+3.5}_{-3.5}$	$f\sigma_8(0.15)$	$0.449^{+0.019}_{-0.022}$
A_{143}^{tSZ}	$4.5^{+3.8}_{-4.3}$	$n_{s,0.002}$	$0.966^{+0.011}_{-0.011}$	$\sigma_8(0.15)$	$0.723^{+0.036}_{-0.042}$
A_{100}^{PS}	253^{+60}_{-50}	Y_P	$0.2469^{+0.0025}_{-0.0016}$	$f\sigma_8(0.38)$	$0.465^{+0.020}_{-0.023}$
A_{143}^{PS}	45^{+20}_{-20}	Y_P^{BBN}	$0.2482^{+0.0025}_{-0.0016}$	$\sigma_8(0.38)$	$0.640^{+0.033}_{-0.038}$
A_{217}^{PS}	109^{+30}_{-30}	$10^5 D/H$	$2.621^{+0.078}_{-0.070}$	$f\sigma_8(0.51)$	$0.462^{+0.020}_{-0.023}$
A^{kSZ}	—	Age/Gyr	$13.74^{+0.11}_{-0.16}$	$\sigma_8(0.51)$	$0.599^{+0.031}_{-0.036}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	z_*	$1090.21^{+0.70}_{-0.60}$	$f\sigma_8(0.61)$	$0.456^{+0.020}_{-0.024}$
c_{217}	$0.9997^{+0.0038}_{-0.0027}$	r_*	$143.4^{+1.5}_{-1.9}$	$\sigma_8(0.61)$	$0.569^{+0.030}_{-0.035}$
H_0	$67.2^{+1.7}_{-1.5}$	$100\theta_*$	$1.04083^{+0.00068}_{-0.00073}$	$f\sigma_8(2.33)$	$0.287^{+0.016}_{-0.018}$
Ω_Λ	$0.677^{+0.020}_{-0.025}$	$D_M(z_*)/\text{Gpc}$	$13.77^{+0.14}_{-0.18}$	$\sigma_8(2.33)$	$0.295^{+0.017}_{-0.019}$
Ω_m	$0.323^{+0.025}_{-0.020}$	z_{drag}	$1060.23^{+0.90}_{-0.83}$	f_{2000}^{143}	31^{+6}_{-6}
$\Omega_m h^2$	$0.1458^{+0.0052}_{-0.0044}$	r_{drag}	$146.0^{+1.5}_{-2.0}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-4}
$\Omega_\nu h^2$	$0.0033^{+0.0046}_{-0.0028}$	k_D	$0.1417^{+0.0016}_{-0.0013}$	f_{2000}^{217}	$107.9^{+4.1}_{-3.8}$
$\Omega_m h^3$	$0.0979^{+0.0034}_{-0.0022}$	$100\theta_D$	$0.16097^{+0.00059}_{-0.00050}$	χ_{lensing}^2	$9.11 (\nu: 0.3)$
σ_8	$0.784^{+0.038}_{-0.044}$	z_{eq}	3354^{+89}_{-120}	χ_{small}^2	$1021 (\nu: 418251.6)$
S_8	$0.813^{+0.035}_{-0.039}$	k_{eq}	$0.01034^{+0.00028}_{-0.00034}$	χ_{lowl}^2	$23.3 (\nu: 0.5)$
$\sigma_8 \Omega_m^{0.5}$	$0.445^{+0.019}_{-0.022}$	$100\theta_{\text{eq}}$	$0.824^{+0.025}_{-0.018}$	χ_{prior}^2	$9.8 (\nu: 10.3)$
$\sigma_8 \Omega_m^{0.25}$	$0.591^{+0.025}_{-0.030}$	$100\theta_{s,\text{eq}}$	$0.455^{+0.013}_{-0.0093}$	χ_{CMB}^2	$7369 (\nu: 10475675.0)$

$$\bar{\chi}_{\text{eff}}^2 = 11953.86; \Delta\bar{\chi}_{\text{eff}}^2 = 9150.76; R - 1 = 0.02344$$

8.5 base_nnu_meffsterile_CamSpecHM_TTTEEE_lowl_lowE_BAO/base_nnu_meffsterile_plikHM_TTTEEE_lowl_lowE_BAO

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02246^{+0.00032}_{-0.00031}$	$r_{\text{drag}} h$	$99.6^{+1.7}_{-1.7}$	$H(0.38)$	$83.5^{+1.5}_{-1.0}$
$\Omega_c h^2$	$0.1187^{+0.0061}_{-0.0079}$	$\langle d^2 \rangle^{1/2}$	$2.423^{+0.052}_{-0.051}$	$D_{\text{M}}(0.38)$	1521^{+24}_{-31}
$100\theta_{MC}$	$1.04087^{+0.00063}_{-0.00071}$	z_{re}	$7.8^{+1.6}_{-1.6}$	$H(0.51)$	$90.2^{+1.5}_{-0.94}$
τ	$0.055^{+0.016}_{-0.015}$	$10^9 A_s$	$2.104^{+0.074}_{-0.067}$	$D_{\text{M}}(0.51)$	1970^{+29}_{-38}
$m_{\nu, \text{sterile}}^{\text{eff}}$	< 0.675	$10^9 A_s e^{-2\tau}$	$1.883^{+0.027}_{-0.024}$	$H(0.61)$	$95.9^{+1.5}_{-0.90}$
N_{eff}	< 3.35	D_{40}	1221^{+26}_{-27}	$D_{\text{M}}(0.61)$	2292^{+32}_{-43}
$\ln(10^{10} A_s)$	$3.046^{+0.035}_{-0.032}$	D_{220}	5730^{+78}_{-78}	$H(2.33)$	$237.4^{+3.3}_{-2.5}$
n_s	$0.970^{+0.011}_{-0.010}$	D_{810}	2538^{+27}_{-27}	$D_{\text{M}}(2.33)$	5729^{+49}_{-86}
y_{cal}	$1.0007^{+0.0048}_{-0.0049}$	D_{1420}	$816.3^{+9.5}_{-9.8}$	$f\sigma_8(0.15)$	$0.445^{+0.021}_{-0.024}$
A_{217}^{CIB}	44^{+10}_{-20}	D_{2000}	$230.0^{+3.3}_{-3.5}$	$\sigma_8(0.15)$	$0.730^{+0.034}_{-0.040}$
$\xi^{tSZ-CIB}$	—	$n_{s,0.002}$	$0.970^{+0.011}_{-0.010}$	$f\sigma_8(0.38)$	$0.463^{+0.021}_{-0.025}$
A_{143}^{tSZ}	$4.6^{+3.9}_{-4.3}$	Y_P	$0.2467^{+0.0028}_{-0.0014}$	$\sigma_8(0.38)$	$0.647^{+0.030}_{-0.036}$
A_{100}^{PS}	251^{+60}_{-50}	Y_P^{BBN}	$0.2481^{+0.0028}_{-0.0014}$	$f\sigma_8(0.51)$	$0.462^{+0.021}_{-0.025}$
A_{143}^{PS}	44^{+20}_{-20}	$10^5 D/H$	$2.603^{+0.074}_{-0.067}$	$\sigma_8(0.51)$	$0.606^{+0.029}_{-0.034}$
A_{217}^{PS}	108^{+30}_{-30}	Age/Gyr	$13.72^{+0.12}_{-0.20}$	$f\sigma_8(0.61)$	$0.457^{+0.021}_{-0.024}$
A^{kSZ}	—	z_*	$1089.95^{+0.56}_{-0.54}$	$\sigma_8(0.61)$	$0.576^{+0.027}_{-0.032}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	r_*	$143.8^{+1.3}_{-2.0}$	$f\sigma_8(2.33)$	$0.291^{+0.014}_{-0.016}$
c_{217}	$0.9997^{+0.0038}_{-0.0028}$	$100\theta_*$	$1.04099^{+0.00070}_{-0.00077}$	$\sigma_8(2.33)$	$0.300^{+0.015}_{-0.017}$
H_0	$68.0^{+1.6}_{-1.3}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.81^{+0.12}_{-0.19}$	f_{2000}^{143}	30^{+6}_{-6}
Ω_{Λ}	$0.689^{+0.013}_{-0.013}$	z_{drag}	$1060.27^{+0.92}_{-0.85}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-4}
Ω_m	$0.311^{+0.013}_{-0.013}$	r_{drag}	$146.4^{+1.4}_{-2.1}$	f_{2000}^{217}	$107.5^{+3.8}_{-3.7}$
$\Omega_m h^2$	$0.1439^{+0.0042}_{-0.0034}$	k_{D}	$0.1413^{+0.0016}_{-0.0012}$	χ_{small}^2	$397.2 (\nu: 2.1)$
$\Omega_{\nu} h^2$	$0.0028^{+0.0052}_{-0.0025}$	$100\theta_{\text{D}}$	$0.16094^{+0.00064}_{-0.00053}$	χ_{lowl}^2	$22.68 (\nu: 0.4)$
$\Omega_m h^3$	$0.0979^{+0.0042}_{-0.0023}$	z_{eq}	3329^{+90}_{-140}	$\chi_{6\text{DF}}^2$	$0.068 (\nu: 0.0)$
σ_8	$0.790^{+0.036}_{-0.043}$	k_{eq}	$0.01026^{+0.00030}_{-0.00038}$	χ_{MGS}^2	$1.23 (\nu: 0.1)$
S_8	$0.805^{+0.040}_{-0.044}$	$100\theta_{\text{eq}}$	$0.828^{+0.029}_{-0.018}$	χ_{DR12BAO}^2	$5.1 (\nu: 1.5)$
$\sigma_8 \Omega_m^{0.5}$	$0.441^{+0.022}_{-0.024}$	$100\theta_{\text{s,eq}}$	$0.457^{+0.015}_{-0.0096}$	χ_{prior}^2	$9.8 (\nu: 10.0)$
$\sigma_8 \Omega_m^{0.25}$	$0.590^{+0.027}_{-0.031}$	$H(0.15)$	$73.3^{+1.5}_{-1.2}$	χ_{BAO}^2	$6.4 (\nu: 1.0)$
$\sigma_8/h^{0.5}$	$0.958^{+0.041}_{-0.049}$	$D_{\text{M}}(0.15)$	638^{+11}_{-14}	χ_{CMB}^2	$7360 (\nu: 10475738.7)$

Best-fit $\chi_{\text{eff}}^2 = 11926.47$; $\Delta\chi_{\text{eff}}^2 = 9154.84$; $\bar{\chi}_{\text{eff}}^2 = 11950.99$; $\Delta\bar{\chi}_{\text{eff}}^2 = 9150.42$; $R - 1 = 0.01562$
 χ_{eff}^2 : BAO - 6DF: 0.02 (Δ -0.01) MGS: 1.34 (Δ 0.13) DR12BAO: 4.08 (Δ -0.35) CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.95 (Δ -0.10) commander_dx12_v3_2_29: 22.71 (Δ -0.16) CamSpec like_10.7HM_1400_unified: 11500.30

8.6 base_nnu_meffsterile_CamSpecHM_TTTEEE_lowl_lowE_BAO_post_Pantheon18/base_nnu_meffsterile_plikHM_TTTEEE_lowl_lowE_BAO

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02247^{+0.00032}_{-0.00030}$	$\langle d^2 \rangle^{1/2}$	$2.420^{+0.050}_{-0.050}$	$H(0.51)$	$90.3^{+1.5}_{-0.96}$
$\Omega_c h^2$	$0.1187^{+0.0063}_{-0.0080}$	z_{re}	$7.8^{+1.6}_{-1.6}$	$D_{\text{M}}(0.51)$	1968^{+29}_{-39}
$100\theta_{MC}$	$1.04087^{+0.00064}_{-0.00071}$	$10^9 A_s$	$2.104^{+0.074}_{-0.067}$	$H(0.61)$	$95.9^{+1.6}_{-0.92}$
τ	$0.056^{+0.016}_{-0.015}$	$10^9 A_s e^{-2\tau}$	$1.883^{+0.028}_{-0.024}$	$D_{\text{M}}(0.61)$	2290^{+32}_{-44}
$m_{\nu, \text{sterile}}^{\text{eff}}$	< 0.665	D_{40}	1221^{+26}_{-27}	$H(2.33)$	$237.4^{+3.5}_{-2.5}$
N_{eff}	< 3.37	D_{220}	5731^{+77}_{-78}	$D_{\text{M}}(2.33)$	5727^{+50}_{-90}
$\ln(10^{10} A_s)$	$3.046^{+0.035}_{-0.032}$	D_{810}	2538^{+27}_{-27}	$f\sigma_8(0.15)$	$0.445^{+0.021}_{-0.024}$
n_s	$0.970^{+0.011}_{-0.010}$	D_{1420}	$816.3^{+9.5}_{-9.8}$	$\sigma_8(0.15)$	$0.730^{+0.034}_{-0.040}$
y_{cal}	$1.0007^{+0.0049}_{-0.0049}$	D_{2000}	$230.1^{+3.4}_{-3.5}$	$f\sigma_8(0.38)$	$0.463^{+0.021}_{-0.025}$
A_{217}^{CIB}	44^{+20}_{-20}	$n_{s,0.002}$	$0.970^{+0.011}_{-0.010}$	$\sigma_8(0.38)$	$0.648^{+0.030}_{-0.036}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.2468^{+0.0029}_{-0.0015}$	$f\sigma_8(0.51)$	$0.462^{+0.021}_{-0.025}$
A_{143}^{tSZ}	$4.6^{+3.9}_{-4.4}$	Y_P^{BBN}	$0.2481^{+0.0030}_{-0.0015}$	$\sigma_8(0.51)$	$0.606^{+0.029}_{-0.034}$
A_{100}^{PS}	252^{+60}_{-50}	$10^5 D/H$	$2.602^{+0.075}_{-0.067}$	$f\sigma_8(0.61)$	$0.457^{+0.021}_{-0.024}$
A_{143}^{PS}	44^{+20}_{-20}	Age/Gyr	$13.71^{+0.12}_{-0.21}$	$\sigma_8(0.61)$	$0.577^{+0.027}_{-0.032}$
A_{217}^{PS}	108^{+30}_{-30}	z_*	$1089.93^{+0.56}_{-0.53}$	$f\sigma_8(2.33)$	$0.291^{+0.014}_{-0.016}$
A^{kSZ}	—	r_*	$143.8^{+1.3}_{-2.1}$	$\sigma_8(2.33)$	$0.300^{+0.015}_{-0.017}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	$100\theta_*$	$1.04100^{+0.00071}_{-0.00078}$	f_{2000}^{143}	30^{+6}_{-6}
c_{217}	$0.9997^{+0.0038}_{-0.0028}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.81^{+0.12}_{-0.20}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-4}
H_0	$68.1^{+1.6}_{-1.3}$	z_{drag}	$1060.29^{+0.94}_{-0.86}$	f_{2000}^{217}	$107.5^{+3.8}_{-3.8}$
Ω_{Λ}	$0.690^{+0.013}_{-0.013}$	r_{drag}	$146.4^{+1.4}_{-2.2}$	χ_{small}^2	$344 (\nu: 8546.7)$
Ω_m	$0.310^{+0.013}_{-0.013}$	k_{D}	$0.1413^{+0.0017}_{-0.0012}$	χ_{lowl}^2	$76 (\nu: 8567.2)$
$\Omega_m h^2$	$0.1438^{+0.0043}_{-0.0034}$	$100\theta_{\text{D}}$	$0.16094^{+0.00065}_{-0.00053}$	χ_{JLA}^2	$1035.08 (\nu: 0.1)$
$\Omega_{\nu} h^2$	$0.0027^{+0.0052}_{-0.0024}$	z_{eq}	3327^{+89}_{-130}	$\chi_{6\text{DF}}^2$	$0.22 (\nu: 0.1)$
$\Omega_m h^3$	$0.0980^{+0.0044}_{-0.0023}$	k_{eq}	$0.01025^{+0.00030}_{-0.00038}$	χ_{MGS}^2	$1.13 (\nu: 0.2)$
σ_8	$0.790^{+0.036}_{-0.043}$	$100\theta_{\text{eq}}$	$0.829^{+0.029}_{-0.018}$	χ_{DR12BAO}^2	$4.8 (\nu: 1.1)$
S_8	$0.804^{+0.039}_{-0.043}$	$100\theta_{\text{s,eq}}$	$0.457^{+0.015}_{-0.0094}$	χ_{prior}^2	$9.8 (\nu: 10.2)$
$\sigma_8 \Omega_m^{0.5}$	$0.440^{+0.021}_{-0.024}$	$H(0.15)$	$73.4^{+1.6}_{-1.2}$	χ_{BAO}^2	$6.2 (\nu: 0.7)$
$\sigma_8 \Omega_m^{0.25}$	$0.590^{+0.027}_{-0.031}$	$D_{\text{M}}(0.15)$	637^{+11}_{-14}	χ_{CMB}^2	$7360 (\nu: 10475396.4)$
$\sigma_8/h^{0.5}$	$0.958^{+0.040}_{-0.049}$	$H(0.38)$	$83.5^{+1.5}_{-1.0}$		
$r_{\text{drag}} h$	$99.7^{+1.6}_{-1.6}$	$D_{\text{M}}(0.38)$	1519^{+23}_{-31}		

$$\bar{\chi}_{\text{eff}}^2 = 12985.86; \Delta\bar{\chi}_{\text{eff}}^2 = 9150.18; R - 1 = 0.01581$$

8.7 base_nnu_meffsterile_CamSpecHM_TTTEEE_lowl_lowE_BAO_post_Aver15/base_nnu_meffsterile_plikHM_TTTEEE_lowl_lowE_BAO_p

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02245^{+0.00031}_{-0.00030}$	$\langle d^2 \rangle^{1/2}$	$2.424^{+0.051}_{-0.050}$	$H(0.51)$	$90.1^{+1.1}_{-0.79}$
$\Omega_c h^2$	$0.1181^{+0.0058}_{-0.0070}$	z_{re}	$7.8^{+1.6}_{-1.6}$	$D_{\text{M}}(0.51)$	1973^{+25}_{-30}
$100\theta_{MC}$	$1.04091^{+0.00061}_{-0.00064}$	$10^9 A_s$	$2.101^{+0.073}_{-0.067}$	$H(0.61)$	$95.7^{+1.1}_{-0.73}$
τ	$0.055^{+0.016}_{-0.015}$	$10^9 A_s e^{-2\tau}$	$1.881^{+0.025}_{-0.023}$	$D_{\text{M}}(0.61)$	2296^{+28}_{-34}
$m_{\nu, \text{sterile}}^{\text{eff}}$	< 0.705	D_{40}	1223^{+25}_{-26}	$H(2.33)$	$237.1^{+2.7}_{-2.1}$
N_{eff}	< 3.28	D_{220}	5730^{+77}_{-78}	$D_{\text{M}}(2.33)$	5738^{+40}_{-65}
$\ln(10^{10} A_s)$	$3.045^{+0.034}_{-0.032}$	D_{810}	2538^{+27}_{-27}	$f\sigma_8(0.15)$	$0.444^{+0.021}_{-0.024}$
n_s	$0.9687^{+0.0099}_{-0.0093}$	D_{1420}	$816.3^{+9.5}_{-9.7}$	$\sigma_8(0.15)$	$0.728^{+0.033}_{-0.039}$
y_{cal}	$1.0007^{+0.0049}_{-0.0049}$	D_{2000}	$230.1^{+3.3}_{-3.4}$	$f\sigma_8(0.38)$	$0.462^{+0.021}_{-0.024}$
A_{217}^{CIB}	44^{+20}_{-20}	$n_{s,0.002}$	$0.9687^{+0.0099}_{-0.0093}$	$\sigma_8(0.38)$	$0.646^{+0.029}_{-0.035}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.2464^{+0.0021}_{-0.0011}$	$f\sigma_8(0.51)$	$0.461^{+0.021}_{-0.024}$
A_{143}^{tSZ}	$4.6^{+3.9}_{-4.4}$	Y_P^{BBN}	$0.2478^{+0.0021}_{-0.0011}$	$\sigma_8(0.51)$	$0.604^{+0.028}_{-0.033}$
A_{100}^{PS}	251^{+60}_{-50}	$10^5 D/H$	$2.598^{+0.065}_{-0.061}$	$f\sigma_8(0.61)$	$0.456^{+0.020}_{-0.024}$
A_{143}^{PS}	44^{+20}_{-20}	Age/Gyr	$13.737^{+0.093}_{-0.15}$	$\sigma_8(0.61)$	$0.575^{+0.026}_{-0.031}$
A_{217}^{PS}	108^{+30}_{-30}	z_*	$1089.92^{+0.53}_{-0.48}$	$f\sigma_8(2.33)$	$0.290^{+0.013}_{-0.016}$
A^{kSZ}	—	r_*	$144.0^{+1.1}_{-1.6}$	$\sigma_8(2.33)$	$0.299^{+0.014}_{-0.017}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	$100\theta_*$	$1.04105^{+0.00062}_{-0.00071}$	f_{2000}^{143}	30^{+6}_{-6}
c_{217}	$0.9997^{+0.0038}_{-0.0028}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.83^{+0.10}_{-0.15}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-4}
H_0	$67.9^{+1.3}_{-1.1}$	z_{drag}	$1060.19^{+0.85}_{-0.75}$	f_{2000}^{217}	$107.4^{+3.7}_{-3.7}$
Ω_{Λ}	$0.688^{+0.013}_{-0.013}$	r_{drag}	$146.6^{+1.1}_{-1.6}$	χ_{small}^2	$344 (\nu: 8481.6)$
Ω_m	$0.312^{+0.013}_{-0.013}$	k_{D}	$0.1412^{+0.0013}_{-0.0011}$	χ_{lowl}^2	$76 (\nu: 8499.1)$
$\Omega_m h^2$	$0.1435^{+0.0034}_{-0.0030}$	$100\theta_{\text{D}}$	$0.16089^{+0.00053}_{-0.00047}$	χ_{Aver15}^2	$0.57 (\nu: 0.1)$
$\Omega_{\nu} h^2$	$0.0029^{+0.0054}_{-0.0027}$	z_{eq}	3325^{+94}_{-140}	$\chi_{6\text{DF}}^2$	$0.22 (\nu: 0.1)$
$\Omega_m h^3$	$0.0974^{+0.0031}_{-0.0018}$	k_{eq}	$0.01023^{+0.00029}_{-0.00037}$	χ_{MGS}^2	$1.06 (\nu: 0.2)$
σ_8	$0.788^{+0.035}_{-0.042}$	$100\theta_{\text{eq}}$	$0.829^{+0.030}_{-0.019}$	χ_{DR12BAO}^2	$5.1 (\nu: 1.4)$
S_8	$0.803^{+0.040}_{-0.044}$	$100\theta_{\text{s,eq}}$	$0.458^{+0.016}_{-0.010}$	χ_{prior}^2	$9.8 (\nu: 10.1)$
$\sigma_8 \Omega_m^{0.5}$	$0.440^{+0.022}_{-0.024}$	$H(0.15)$	$73.2^{+1.2}_{-1.0}$	χ_{BAO}^2	$6.4 (\nu: 1.0)$
$\sigma_8 \Omega_m^{0.25}$	$0.589^{+0.027}_{-0.031}$	$D_{\text{M}}(0.15)$	639^{+10}_{-11}	χ_{CMB}^2	$7359 (\nu: 10475464.5)$
$\sigma_8/h^{0.5}$	$0.957^{+0.041}_{-0.049}$	$H(0.38)$	$83.3^{+1.1}_{-0.87}$		
$r_{\text{drag}} h$	$99.5^{+1.6}_{-1.7}$	$D_{\text{M}}(0.38)$	1523^{+21}_{-24}		

$$\bar{\chi}_{\text{eff}}^2 = 11951.21; \Delta\bar{\chi}_{\text{eff}}^2 = 9150.31; R - 1 = 0.01810$$

8.8 base_nnu_meffsterile_CamSpecHM_TTTEEE_lowl_lowE_BAO_post_Cooke17_Aver15/base_nnu_meffsterile_plikHM_TTTEEE_lowl_lowE_BAO_post_Cooke17_Aver15

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02244^{+0.00030}_{-0.00029}$	$\langle d^2 \rangle^{1/2}$	$2.424^{+0.051}_{-0.050}$	$H(0.51)$	$90.1^{+1.1}_{-0.78}$
$\Omega_c h^2$	$0.1182^{+0.0057}_{-0.0069}$	z_{re}	$7.8^{+1.6}_{-1.6}$	$D_{\text{M}}(0.51)$	1973^{+25}_{-30}
$100\theta_{MC}$	$1.04090^{+0.00061}_{-0.00063}$	$10^9 A_s$	$2.101^{+0.073}_{-0.067}$	$H(0.61)$	$95.7^{+1.1}_{-0.73}$
τ	$0.055^{+0.016}_{-0.015}$	$10^9 A_s e^{-2\tau}$	$1.881^{+0.025}_{-0.023}$	$D_{\text{M}}(0.61)$	2296^{+27}_{-34}
$m_{\nu, \text{sterile}}^{\text{eff}}$	< 0.705	D_{40}	1223^{+25}_{-26}	$H(2.33)$	$237.1^{+2.6}_{-2.1}$
N_{eff}	< 3.27	D_{220}	5730^{+77}_{-77}	$D_{\text{M}}(2.33)$	5738^{+39}_{-64}
$\ln(10^{10} A_s)$	$3.045^{+0.034}_{-0.032}$	D_{810}	2538^{+27}_{-27}	$f\sigma_8(0.15)$	$0.445^{+0.021}_{-0.024}$
n_s	$0.9686^{+0.0099}_{-0.0093}$	D_{1420}	$816.2^{+9.5}_{-9.7}$	$\sigma_8(0.15)$	$0.728^{+0.033}_{-0.039}$
y_{cal}	$1.0007^{+0.0049}_{-0.0049}$	D_{2000}	$230.1^{+3.3}_{-3.3}$	$f\sigma_8(0.38)$	$0.462^{+0.021}_{-0.024}$
A_{217}^{CIB}	44^{+20}_{-20}	$n_{s,0.002}$	$0.9686^{+0.0099}_{-0.0093}$	$\sigma_8(0.38)$	$0.646^{+0.029}_{-0.035}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.2464^{+0.0021}_{-0.0011}$	$f\sigma_8(0.51)$	$0.461^{+0.021}_{-0.024}$
A_{143}^{tSZ}	$4.6^{+3.9}_{-4.3}$	Y_P^{BBN}	$0.2478^{+0.0021}_{-0.0011}$	$\sigma_8(0.51)$	$0.604^{+0.028}_{-0.033}$
A_{100}^{PS}	251^{+60}_{-50}	$10^5 D/H$	$2.600^{+0.061}_{-0.058}$	$f\sigma_8(0.61)$	$0.456^{+0.020}_{-0.024}$
A_{143}^{PS}	44^{+20}_{-20}	Age/Gyr	$13.738^{+0.092}_{-0.15}$	$\sigma_8(0.61)$	$0.575^{+0.026}_{-0.031}$
A_{217}^{PS}	108^{+30}_{-30}	z_*	$1089.93^{+0.50}_{-0.46}$	$f\sigma_8(2.33)$	$0.290^{+0.013}_{-0.016}$
A^{kSZ}	—	r_*	$144.0^{+1.1}_{-1.6}$	$\sigma_8(2.33)$	$0.299^{+0.014}_{-0.017}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	$100\theta_*$	$1.04104^{+0.00062}_{-0.00069}$	f_{2000}^{143}	30^{+6}_{-6}
c_{217}	$0.9997^{+0.0038}_{-0.0028}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.83^{+0.10}_{-0.14}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-4}
H_0	$67.9^{+1.3}_{-1.1}$	z_{drag}	$1060.17^{+0.81}_{-0.77}$	f_{2000}^{217}	$107.4^{+3.7}_{-3.7}$
Ω_{Λ}	$0.688^{+0.013}_{-0.013}$	r_{drag}	$146.6^{+1.1}_{-1.6}$	χ_{small}^2	$343 (\nu: 8609.1)$
Ω_m	$0.312^{+0.013}_{-0.013}$	k_{D}	$0.1412^{+0.0013}_{-0.0011}$	χ_{lowl}^2	$77 (\nu: 8626.9)$
$\Omega_m h^2$	$0.1435^{+0.0034}_{-0.0029}$	$100\theta_{\text{D}}$	$0.16089^{+0.00051}_{-0.00045}$	χ_{Aver15}^2	$0.57 (\nu: 0.1)$
$\Omega_{\nu} h^2$	$0.0029^{+0.0054}_{-0.0027}$	z_{eq}	3326^{+94}_{-140}	χ_{Cooke17}^2	$0.14 (\nu: 0.0)$
$\Omega_m h^3$	$0.0974^{+0.0031}_{-0.0018}$	k_{eq}	$0.01023^{+0.00029}_{-0.00037}$	$\chi_{6\text{DF}}^2$	$0.22 (\nu: 0.1)$
σ_8	$0.788^{+0.035}_{-0.042}$	$100\theta_{\text{eq}}$	$0.829^{+0.030}_{-0.019}$	χ_{MGS}^2	$1.05 (\nu: 0.2)$
S_8	$0.803^{+0.039}_{-0.043}$	$100\theta_{\text{s,eq}}$	$0.458^{+0.016}_{-0.010}$	χ_{DR12BAO}^2	$5.1 (\nu: 1.4)$
$\sigma_8 \Omega_m^{0.5}$	$0.440^{+0.022}_{-0.024}$	$H(0.15)$	$73.2^{+1.2}_{-1.0}$	χ_{prior}^2	$9.8 (\nu: 10.1)$
$\sigma_8 \Omega_m^{0.25}$	$0.589^{+0.027}_{-0.031}$	$D_{\text{M}}(0.15)$	$638.8^{+9.9}_{-11}$	χ_{BAO}^2	$6.4 (\nu: 1.0)$
$\sigma_8/h^{0.5}$	$0.957^{+0.041}_{-0.049}$	$H(0.38)$	$83.3^{+1.1}_{-0.86}$	χ_{CMB}^2	$7359 (\nu: 10475461.7)$
$r_{\text{drag}} h$	$99.5^{+1.6}_{-1.7}$	$D_{\text{M}}(0.38)$	1523^{+21}_{-24}	χ_{Abund}^2	$0.71 (\nu: 0.1)$

$$\bar{\chi}_{\text{eff}}^2 = 11951.25; \Delta\bar{\chi}_{\text{eff}}^2 = 9150.20; R - 1 = 0.01822$$

8.9 base_nnu_meffsterile_CamSpecHM_TTTEEE_lowl_lowE_BAO_post_zre6p5/base_nnu_meffsterile_plikHM_TTTEEE_lowl_lowE_BAO_p

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02246^{+0.00032}_{-0.00031}$	$r_{\text{drag}} h$	$99.6^{+1.7}_{-1.7}$	$H(0.38)$	$83.5^{+1.5}_{-1.0}$
$\Omega_c h^2$	$0.1187^{+0.0061}_{-0.0078}$	$\langle d^2 \rangle^{1/2}$	$2.424^{+0.051}_{-0.049}$	$D_{\text{M}}(0.38)$	1520^{+24}_{-31}
$100\theta_{MC}$	$1.04087^{+0.00063}_{-0.00071}$	z_{re}	< 9.12	$H(0.51)$	$90.2^{+1.5}_{-0.95}$
τ	$0.056^{+0.014}_{-0.013}$	$10^9 A_s$	$2.108^{+0.065}_{-0.060}$	$D_{\text{M}}(0.51)$	1970^{+29}_{-39}
$m_{\nu, \text{sterile}}^{\text{eff}}$	< 0.674	$10^9 A_s e^{-2\tau}$	$1.883^{+0.027}_{-0.024}$	$H(0.61)$	$95.9^{+1.5}_{-0.90}$
N_{eff}	< 3.36	D_{40}	1221^{+26}_{-27}	$D_{\text{M}}(0.61)$	2292^{+32}_{-44}
$\ln(10^{10} A_s)$	$3.048^{+0.031}_{-0.029}$	D_{220}	5730^{+78}_{-77}	$H(2.33)$	$237.4^{+3.4}_{-2.5}$
n_s	$0.970^{+0.011}_{-0.010}$	D_{810}	2538^{+27}_{-27}	$D_{\text{M}}(2.33)$	5729^{+49}_{-86}
y_{cal}	$1.0007^{+0.0049}_{-0.0049}$	D_{1420}	$816.3^{+9.5}_{-9.8}$	$f\sigma_8(0.15)$	$0.446^{+0.021}_{-0.024}$
A_{217}^{CIB}	44^{+10}_{-20}	D_{2000}	$230.1^{+3.3}_{-3.5}$	$\sigma_8(0.15)$	$0.731^{+0.033}_{-0.039}$
$\xi^{tSZ-CIB}$	—	$n_{s,0.002}$	$0.970^{+0.011}_{-0.010}$	$f\sigma_8(0.38)$	$0.464^{+0.021}_{-0.024}$
A_{143}^{tSZ}	$4.6^{+3.9}_{-4.3}$	Y_P	$0.2468^{+0.0029}_{-0.0014}$	$\sigma_8(0.38)$	$0.648^{+0.030}_{-0.035}$
A_{100}^{PS}	251^{+60}_{-50}	Y_P^{BBN}	$0.2481^{+0.0029}_{-0.0014}$	$f\sigma_8(0.51)$	$0.462^{+0.021}_{-0.024}$
A_{143}^{PS}	44^{+20}_{-20}	$10^5 D/H$	$2.603^{+0.075}_{-0.067}$	$\sigma_8(0.51)$	$0.606^{+0.028}_{-0.033}$
A_{217}^{PS}	108^{+30}_{-30}	Age/Gyr	$13.71^{+0.12}_{-0.21}$	$f\sigma_8(0.61)$	$0.458^{+0.021}_{-0.024}$
A^{kSZ}	—	z_*	$1089.95^{+0.56}_{-0.54}$	$\sigma_8(0.61)$	$0.577^{+0.027}_{-0.032}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	r_*	$143.8^{+1.3}_{-2.1}$	$f\sigma_8(2.33)$	$0.291^{+0.014}_{-0.016}$
c_{217}	$0.9997^{+0.0038}_{-0.0028}$	$100\theta_*$	$1.04099^{+0.00070}_{-0.00077}$	$\sigma_8(2.33)$	$0.300^{+0.014}_{-0.017}$
H_0	$68.0^{+1.6}_{-1.3}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.81^{+0.12}_{-0.19}$	f_{2000}^{143}	30^{+6}_{-6}
Ω_{Λ}	$0.689^{+0.013}_{-0.013}$	z_{drag}	$1060.27^{+0.92}_{-0.85}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-4}
Ω_m	$0.311^{+0.013}_{-0.013}$	r_{drag}	$146.4^{+1.4}_{-2.1}$	f_{2000}^{217}	$107.5^{+3.8}_{-3.7}$
$\Omega_m h^2$	$0.1439^{+0.0042}_{-0.0034}$	k_{D}	$0.1413^{+0.0016}_{-0.0012}$	χ_{small}^2	$397.2 (\nu: 2.2)$
$\Omega_{\nu} h^2$	$0.0027^{+0.0052}_{-0.0025}$	$100\theta_{\text{D}}$	$0.16094^{+0.00064}_{-0.00053}$	χ_{lowl}^2	$22.69 (\nu: 0.4)$
$\Omega_m h^3$	$0.0979^{+0.0043}_{-0.0023}$	z_{eq}	3329^{+90}_{-140}	$\chi_{6\text{DF}}^2$	$0.067 (\nu: 0.0)$
σ_8	$0.790^{+0.036}_{-0.042}$	k_{eq}	$0.01026^{+0.00030}_{-0.00038}$	χ_{MGS}^2	$1.23 (\nu: 0.1)$
S_8	$0.805^{+0.039}_{-0.044}$	$100\theta_{\text{eq}}$	$0.828^{+0.029}_{-0.018}$	χ_{DR12BAO}^2	$5.1 (\nu: 1.4)$
$\sigma_8 \Omega_m^{0.5}$	$0.441^{+0.021}_{-0.024}$	$100\theta_{\text{s,eq}}$	$0.457^{+0.015}_{-0.0096}$	χ_{prior}^2	$9.8 (\nu: 10.1)$
$\sigma_8 \Omega_m^{0.25}$	$0.590^{+0.027}_{-0.031}$	$H(0.15)$	$73.3^{+1.5}_{-1.2}$	χ_{BAO}^2	$6.4 (\nu: 1.0)$
$\sigma_8/h^{0.5}$	$0.959^{+0.040}_{-0.049}$	$D_{\text{M}}(0.15)$	638^{+11}_{-14}	χ_{CMB}^2	$7359 (\nu: 10475531.1)$

$$\bar{\chi}_{\text{eff}}^2 = 11950.77; \Delta\bar{\chi}_{\text{eff}}^2 = 9150.32; R - 1 = 0.01713$$

8.10 base_nnu_meffsterile_CamSpecHM_TTTEEE_lowl_lowE_BAO_post_Pantheon18_zre6p5/base_nnu_meffsterile_plikHM_TTTEEE_lowl

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02247^{+0.00032}_{-0.00030}$	$\langle d^2 \rangle^{1/2}$	$2.422^{+0.049}_{-0.048}$	$H(0.51)$	$90.3^{+1.6}_{-0.96}$
$\Omega_c h^2$	$0.1187^{+0.0063}_{-0.0080}$	z_{re}	< 9.12	$D_{\text{M}}(0.51)$	1968^{+29}_{-39}
$100\theta_{MC}$	$1.04087^{+0.00064}_{-0.00071}$	$10^9 A_s$	$2.108^{+0.066}_{-0.061}$	$H(0.61)$	$95.9^{+1.6}_{-0.92}$
τ	$0.056^{+0.014}_{-0.013}$	$10^9 A_s e^{-2\tau}$	$1.883^{+0.028}_{-0.024}$	$D_{\text{M}}(0.61)$	2290^{+32}_{-45}
$m_{\nu, \text{sterile}}^{\text{eff}}$	< 0.664	D_{40}	1221^{+26}_{-27}	$H(2.33)$	$237.4^{+3.5}_{-2.5}$
N_{eff}	< 3.37	D_{220}	5731^{+77}_{-78}	$D_{\text{M}}(2.33)$	5726^{+51}_{-90}
$\ln(10^{10} A_s)$	$3.048^{+0.031}_{-0.029}$	D_{810}	2538^{+27}_{-27}	$f\sigma_8(0.15)$	$0.445^{+0.021}_{-0.024}$
n_s	$0.970^{+0.011}_{-0.010}$	D_{1420}	$816.3^{+9.5}_{-9.8}$	$\sigma_8(0.15)$	$0.731^{+0.033}_{-0.039}$
y_{cal}	$1.0007^{+0.0049}_{-0.0049}$	D_{2000}	$230.1^{+3.3}_{-3.6}$	$f\sigma_8(0.38)$	$0.463^{+0.021}_{-0.024}$
A_{217}^{CIB}	44^{+20}_{-20}	$n_{s,0.002}$	$0.970^{+0.011}_{-0.010}$	$\sigma_8(0.38)$	$0.648^{+0.030}_{-0.035}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.2468^{+0.0030}_{-0.0015}$	$f\sigma_8(0.51)$	$0.462^{+0.021}_{-0.024}$
A_{143}^{tSZ}	$4.6^{+3.9}_{-4.4}$	Y_P^{BBN}	$0.2481^{+0.0030}_{-0.0015}$	$\sigma_8(0.51)$	$0.607^{+0.028}_{-0.033}$
A_{100}^{PS}	251^{+60}_{-50}	$10^5 D/H$	$2.602^{+0.076}_{-0.068}$	$f\sigma_8(0.61)$	$0.458^{+0.020}_{-0.024}$
A_{143}^{PS}	44^{+20}_{-20}	Age/Gyr	$13.71^{+0.12}_{-0.21}$	$\sigma_8(0.61)$	$0.577^{+0.027}_{-0.032}$
A_{217}^{PS}	108^{+30}_{-30}	z_*	$1089.93^{+0.56}_{-0.54}$	$f\sigma_8(2.33)$	$0.291^{+0.014}_{-0.016}$
A^{kSZ}	—	r_*	$143.8^{+1.3}_{-2.1}$	$\sigma_8(2.33)$	$0.300^{+0.014}_{-0.017}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	$100\theta_*$	$1.04100^{+0.00071}_{-0.00078}$	f_{2000}^{143}	30^{+6}_{-6}
c_{217}	$0.9997^{+0.0038}_{-0.0028}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.81^{+0.12}_{-0.20}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-4}
H_0	$68.1^{+1.6}_{-1.3}$	z_{drag}	$1060.29^{+0.94}_{-0.86}$	f_{2000}^{217}	$107.5^{+3.8}_{-3.8}$
Ω_{Λ}	$0.690^{+0.013}_{-0.013}$	r_{drag}	$146.4^{+1.4}_{-2.2}$	χ_{small}^2	$344 (\nu: 8510.3)$
Ω_m	$0.310^{+0.013}_{-0.013}$	k_{D}	$0.1413^{+0.0017}_{-0.0012}$	χ_{lowl}^2	$76 (\nu: 8532.1)$
$\Omega_m h^2$	$0.1438^{+0.0043}_{-0.0034}$	$100\theta_{\text{D}}$	$0.16094^{+0.00066}_{-0.00054}$	χ_{JLA}^2	$1035.08 (\nu: 0.1)$
$\Omega_{\nu} h^2$	$0.0027^{+0.0052}_{-0.0024}$	z_{eq}	3327^{+89}_{-130}	$\chi_{6\text{DF}}^2$	$0.22 (\nu: 0.1)$
$\Omega_m h^3$	$0.0980^{+0.0044}_{-0.0023}$	k_{eq}	$0.01025^{+0.00030}_{-0.00038}$	χ_{MGS}^2	$1.13 (\nu: 0.2)$
σ_8	$0.791^{+0.036}_{-0.042}$	$100\theta_{\text{eq}}$	$0.829^{+0.029}_{-0.018}$	χ_{DR12BAO}^2	$4.8 (\nu: 1.1)$
S_8	$0.804^{+0.039}_{-0.043}$	$100\theta_{\text{s,eq}}$	$0.457^{+0.015}_{-0.0094}$	χ_{prior}^2	$9.8 (\nu: 10.2)$
$\sigma_8 \Omega_m^{0.5}$	$0.440^{+0.021}_{-0.024}$	$H(0.15)$	$73.4^{+1.6}_{-1.2}$	χ_{BAO}^2	$6.2 (\nu: 0.7)$
$\sigma_8 \Omega_m^{0.25}$	$0.590^{+0.027}_{-0.031}$	$D_{\text{M}}(0.15)$	637^{+11}_{-14}	χ_{CMB}^2	$7360 (\nu: 10475173.0)$
$\sigma_8/h^{0.5}$	$0.958^{+0.040}_{-0.048}$	$H(0.38)$	$83.6^{+1.5}_{-1.0}$		
$r_{\text{drag}} h$	$99.7^{+1.6}_{-1.6}$	$D_{\text{M}}(0.38)$	1519^{+23}_{-32}		

$$\bar{\chi}_{\text{eff}}^2 = 12985.64; \Delta\bar{\chi}_{\text{eff}}^2 = 9150.08; R - 1 = 0.01787$$

8.11 base_nnu_meffsterile_CamSpecHM_TTTEEE_lowl_lowE_BAO_post_Aver15_zre6p5/base_nnu_meffsterile_plikHM_TTTEEE_lowl_lowl

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02245^{+0.00031}_{-0.00030}$	$\langle d^2 \rangle^{1/2}$	$2.425^{+0.050}_{-0.047}$	$H(0.51)$	$90.1^{+1.1}_{-0.79}$
$\Omega_c h^2$	$0.1181^{+0.0058}_{-0.0070}$	z_{re}	< 9.08	$D_{\text{M}}(0.51)$	1973^{+25}_{-30}
$100\theta_{MC}$	$1.04090^{+0.00061}_{-0.00064}$	$10^9 A_s$	$2.105^{+0.064}_{-0.059}$	$H(0.61)$	$95.7^{+1.1}_{-0.73}$
τ	$0.056^{+0.014}_{-0.013}$	$10^9 A_s e^{-2\tau}$	$1.881^{+0.025}_{-0.023}$	$D_{\text{M}}(0.61)$	2296^{+28}_{-34}
$m_{\nu, \text{sterile}}^{\text{eff}}$	< 0.705	D_{40}	1223^{+25}_{-26}	$H(2.33)$	$237.1^{+2.7}_{-2.1}$
N_{eff}	< 3.28	D_{220}	5730^{+77}_{-78}	$D_{\text{M}}(2.33)$	5738^{+40}_{-65}
$\ln(10^{10} A_s)$	$3.047^{+0.030}_{-0.028}$	D_{810}	2538^{+27}_{-27}	$f\sigma_8(0.15)$	$0.445^{+0.021}_{-0.024}$
n_s	$0.9688^{+0.0099}_{-0.0093}$	D_{1420}	$816.3^{+9.5}_{-9.7}$	$\sigma_8(0.15)$	$0.729^{+0.032}_{-0.038}$
y_{cal}	$1.0007^{+0.0049}_{-0.0049}$	D_{2000}	$230.2^{+3.3}_{-3.4}$	$f\sigma_8(0.38)$	$0.463^{+0.021}_{-0.024}$
A_{217}^{CIB}	44^{+20}_{-20}	$n_{s,0.002}$	$0.9688^{+0.0099}_{-0.0093}$	$\sigma_8(0.38)$	$0.646^{+0.029}_{-0.034}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.2464^{+0.0021}_{-0.0011}$	$f\sigma_8(0.51)$	$0.461^{+0.021}_{-0.024}$
A_{143}^{tSZ}	$4.6^{+3.9}_{-4.4}$	Y_P^{BBN}	$0.2478^{+0.0021}_{-0.0011}$	$\sigma_8(0.51)$	$0.605^{+0.027}_{-0.032}$
A_{100}^{PS}	251^{+60}_{-50}	$10^5 D/H$	$2.598^{+0.065}_{-0.061}$	$f\sigma_8(0.61)$	$0.457^{+0.020}_{-0.024}$
A_{143}^{PS}	44^{+20}_{-20}	Age/Gyr	$13.737^{+0.093}_{-0.15}$	$\sigma_8(0.61)$	$0.575^{+0.026}_{-0.031}$
A_{217}^{PS}	109^{+30}_{-30}	z_*	$1089.91^{+0.53}_{-0.48}$	$f\sigma_8(2.33)$	$0.290^{+0.013}_{-0.016}$
A^{kSZ}	—	r_*	$144.0^{+1.1}_{-1.6}$	$\sigma_8(2.33)$	$0.299^{+0.014}_{-0.016}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	$100\theta_*$	$1.04104^{+0.00062}_{-0.00071}$	f_{2000}^{143}	30^{+6}_{-6}
c_{217}	$0.9997^{+0.0038}_{-0.0027}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.83^{+0.10}_{-0.15}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-4}
H_0	$67.9^{+1.3}_{-1.2}$	z_{drag}	$1060.19^{+0.85}_{-0.75}$	f_{2000}^{217}	$107.4^{+3.7}_{-3.7}$
Ω_{Λ}	$0.689^{+0.013}_{-0.013}$	r_{drag}	$146.6^{+1.1}_{-1.6}$	χ_{small}^2	$345 (\nu: 8437.7)$
Ω_m	$0.311^{+0.013}_{-0.013}$	k_{D}	$0.1412^{+0.0013}_{-0.0011}$	χ_{lowl}^2	$75 (\nu: 8456.6)$
$\Omega_m h^2$	$0.1435^{+0.0034}_{-0.0030}$	$100\theta_{\text{D}}$	$0.16089^{+0.00053}_{-0.00047}$	χ_{Aver15}^2	$0.58 (\nu: 0.1)$
$\Omega_{\nu} h^2$	$0.0029^{+0.0054}_{-0.0027}$	z_{eq}	3325^{+94}_{-140}	$\chi_{6\text{DF}}^2$	$0.22 (\nu: 0.1)$
$\Omega_m h^3$	$0.0974^{+0.0032}_{-0.0018}$	k_{eq}	$0.01023^{+0.00029}_{-0.00037}$	χ_{MGS}^2	$1.07 (\nu: 0.2)$
σ_8	$0.789^{+0.035}_{-0.041}$	$100\theta_{\text{eq}}$	$0.829^{+0.030}_{-0.019}$	χ_{DR12BAO}^2	$5.1 (\nu: 1.4)$
S_8	$0.804^{+0.039}_{-0.043}$	$100\theta_{\text{s,eq}}$	$0.458^{+0.016}_{-0.010}$	χ_{prior}^2	$9.8 (\nu: 10.1)$
$\sigma_8 \Omega_m^{0.5}$	$0.440^{+0.021}_{-0.024}$	$H(0.15)$	$73.2^{+1.2}_{-1.0}$	χ_{BAO}^2	$6.4 (\nu: 0.9)$
$\sigma_8 \Omega_m^{0.25}$	$0.589^{+0.027}_{-0.031}$	$D_{\text{M}}(0.15)$	639^{+10}_{-11}	χ_{CMB}^2	$7359 (\nu: 10475252.0)$
$\sigma_8/h^{0.5}$	$0.957^{+0.040}_{-0.049}$	$H(0.38)$	$83.4^{+1.2}_{-0.87}$		
$r_{\text{drag}} h$	$99.6^{+1.6}_{-1.7}$	$D_{\text{M}}(0.38)$	1523^{+21}_{-24}		

$$\bar{\chi}_{\text{eff}}^2 = 11950.98; \Delta\bar{\chi}_{\text{eff}}^2 = 9150.21; R - 1 = 0.01936$$

8.12 base_nnu_meffsterile_CamSpecHM_TTTEEE_lowl_lowE_BAO_post_Cooke17_Aver15_zre6p5/base_nnu_meffsterile_plikHM_TTTEEE

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02244^{+0.00030}_{-0.00029}$	$\langle d^2 \rangle^{1/2}$	$2.426^{+0.050}_{-0.047}$	$H(0.51)$	$90.1^{+1.1}_{-0.78}$
$\Omega_c h^2$	$0.1182^{+0.0057}_{-0.0070}$	z_{re}	< 9.08	$D_{\text{M}}(0.51)$	1973^{+25}_{-30}
$100\theta_{MC}$	$1.04090^{+0.00060}_{-0.00063}$	$10^9 A_s$	$2.105^{+0.064}_{-0.059}$	$H(0.61)$	$95.7^{+1.1}_{-0.73}$
τ	$0.056^{+0.014}_{-0.012}$	$10^9 A_s e^{-2\tau}$	$1.881^{+0.025}_{-0.023}$	$D_{\text{M}}(0.61)$	2296^{+27}_{-34}
$m_{\nu, \text{sterile}}^{\text{eff}}$	< 0.705	D_{40}	1223^{+25}_{-26}	$H(2.33)$	$237.1^{+2.6}_{-2.1}$
N_{eff}	< 3.28	D_{220}	5729^{+77}_{-77}	$D_{\text{M}}(2.33)$	5738^{+39}_{-65}
$\ln(10^{10} A_s)$	$3.047^{+0.030}_{-0.028}$	D_{810}	2538^{+27}_{-27}	$f\sigma_8(0.15)$	$0.445^{+0.021}_{-0.024}$
n_s	$0.9687^{+0.0099}_{-0.0093}$	D_{1420}	$816.2^{+9.4}_{-9.7}$	$\sigma_8(0.15)$	$0.729^{+0.032}_{-0.039}$
y_{cal}	$1.0007^{+0.0049}_{-0.0049}$	D_{2000}	$230.1^{+3.2}_{-3.3}$	$f\sigma_8(0.38)$	$0.463^{+0.021}_{-0.024}$
A_{217}^{CIB}	44^{+20}_{-20}	$n_{s,0.002}$	$0.9687^{+0.0099}_{-0.0093}$	$\sigma_8(0.38)$	$0.646^{+0.029}_{-0.034}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.2464^{+0.0021}_{-0.0011}$	$f\sigma_8(0.51)$	$0.461^{+0.020}_{-0.024}$
A_{143}^{tSZ}	$4.6^{+3.9}_{-4.3}$	Y_P^{BBN}	$0.2478^{+0.0021}_{-0.0011}$	$\sigma_8(0.51)$	$0.605^{+0.027}_{-0.032}$
A_{100}^{PS}	251^{+60}_{-50}	$10^5 D/H$	$2.599^{+0.064}_{-0.055}$	$f\sigma_8(0.61)$	$0.457^{+0.020}_{-0.024}$
A_{143}^{PS}	44^{+20}_{-20}	Age/Gyr	$13.737^{+0.092}_{-0.15}$	$\sigma_8(0.61)$	$0.575^{+0.026}_{-0.031}$
A_{217}^{PS}	109^{+30}_{-30}	z_*	$1089.93^{+0.50}_{-0.46}$	$f\sigma_8(2.33)$	$0.290^{+0.013}_{-0.016}$
A^{kSZ}	—	r_*	$144.0^{+1.1}_{-1.6}$	$\sigma_8(2.33)$	$0.299^{+0.014}_{-0.016}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	$100\theta_*$	$1.04104^{+0.00062}_{-0.00069}$	f_{2000}^{143}	30^{+6}_{-5}
c_{217}	$0.9997^{+0.0038}_{-0.0027}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.83^{+0.10}_{-0.15}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-4}
H_0	$67.9^{+1.3}_{-1.1}$	z_{drag}	$1060.18^{+0.81}_{-0.77}$	f_{2000}^{217}	$107.4^{+3.7}_{-3.7}$
Ω_{Λ}	$0.688^{+0.013}_{-0.013}$	r_{drag}	$146.6^{+1.1}_{-1.6}$	χ_{small}^2	$344 (\nu: 8567.7)$
Ω_m	$0.312^{+0.013}_{-0.013}$	k_{D}	$0.1412^{+0.0013}_{-0.0011}$	χ_{lowl}^2	$76 (\nu: 8587.1)$
$\Omega_m h^2$	$0.1435^{+0.0034}_{-0.0029}$	$100\theta_{\text{D}}$	$0.16089^{+0.00051}_{-0.00045}$	χ_{Aver15}^2	$0.57 (\nu: 0.1)$
$\Omega_{\nu} h^2$	$0.0029^{+0.0054}_{-0.0027}$	z_{eq}	3325^{+94}_{-140}	χ_{Cooke17}^2	$0.14 (\nu: 0.0)$
$\Omega_m h^3$	$0.0974^{+0.0031}_{-0.0018}$	k_{eq}	$0.01023^{+0.00029}_{-0.00037}$	$\chi_{6\text{DF}}^2$	$0.22 (\nu: 0.1)$
σ_8	$0.789^{+0.035}_{-0.041}$	$100\theta_{\text{eq}}$	$0.829^{+0.030}_{-0.019}$	χ_{MGS}^2	$1.06 (\nu: 0.2)$
S_8	$0.804^{+0.039}_{-0.043}$	$100\theta_{\text{s,eq}}$	$0.458^{+0.016}_{-0.010}$	χ_{DR12BAO}^2	$5.1 (\nu: 1.4)$
$\sigma_8 \Omega_m^{0.5}$	$0.440^{+0.021}_{-0.024}$	$H(0.15)$	$73.2^{+1.2}_{-1.0}$	χ_{prior}^2	$9.8 (\nu: 10.1)$
$\sigma_8 \Omega_m^{0.25}$	$0.589^{+0.026}_{-0.031}$	$D_{\text{M}}(0.15)$	$638.7^{+9.9}_{-11}$	χ_{BAO}^2	$6.4 (\nu: 1.0)$
$\sigma_8/h^{0.5}$	$0.957^{+0.040}_{-0.049}$	$H(0.38)$	$83.3^{+1.1}_{-0.86}$	χ_{CMB}^2	$7359 (\nu: 10475248.4)$
$r_{\text{drag}} h$	$99.5^{+1.6}_{-1.7}$	$D_{\text{M}}(0.38)$	1523^{+21}_{-24}	χ_{Abund}^2	$0.72 (\nu: 0.1)$

$$\bar{\chi}_{\text{eff}}^2 = 11951.02; \Delta\bar{\chi}_{\text{eff}}^2 = 9150.10; R - 1 = 0.01932$$

8.13 base_nnu_meffsterile_CamSpecHM_TTTEEE_lowl_lowE_lensing_BAO/base_nnu_meffsterile_plikHM_TTTEEE_lowl_lowE_lensing_BA

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02245^{+0.00032}_{-0.00030}$	$\langle d^2 \rangle^{1/2}$	$2.432^{+0.042}_{-0.042}$	$H(0.51)$	$90.2^{+1.4}_{-0.88}$
$\Omega_c h^2$	$0.1190^{+0.0057}_{-0.0073}$	z_{re}	$7.9^{+1.5}_{-1.4}$	$D_{\text{M}}(0.51)$	1973^{+27}_{-36}
$100\theta_{MC}$	$1.04086^{+0.00064}_{-0.00066}$	$10^9 A_s$	$2.112^{+0.069}_{-0.061}$	$H(0.61)$	$95.8^{+1.4}_{-0.84}$
τ	$0.057^{+0.016}_{-0.014}$	$10^9 A_s e^{-2\tau}$	$1.885^{+0.026}_{-0.023}$	$D_{\text{M}}(0.61)$	2295^{+30}_{-41}
$m_{\nu, \text{sterile}}^{\text{eff}}$	< 0.617	D_{40}	1224^{+24}_{-26}	$H(2.33)$	$237.4^{+3.2}_{-2.4}$
N_{eff}	< 3.33	D_{220}	5733^{+75}_{-77}	$D_{\text{M}}(2.33)$	5733^{+46}_{-81}
$\ln(10^{10} A_s)$	$3.050^{+0.032}_{-0.029}$	D_{810}	2540^{+26}_{-26}	$f\sigma_8(0.15)$	$0.448^{+0.018}_{-0.020}$
n_s	$0.969^{+0.011}_{-0.010}$	D_{1420}	$816.6^{+9.3}_{-9.5}$	$\sigma_8(0.15)$	$0.733^{+0.030}_{-0.034}$
y_{cal}	$1.0009^{+0.0049}_{-0.0049}$	D_{2000}	$230.2^{+3.2}_{-3.4}$	$f\sigma_8(0.38)$	$0.466^{+0.018}_{-0.021}$
A_{217}^{CIB}	44^{+10}_{-20}	$n_{s,0.002}$	$0.969^{+0.011}_{-0.010}$	$\sigma_8(0.38)$	$0.650^{+0.027}_{-0.031}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.2466^{+0.0026}_{-0.0013}$	$f\sigma_8(0.51)$	$0.465^{+0.018}_{-0.021}$
A_{143}^{tSZ}	$4.6^{+3.9}_{-4.3}$	Y_P^{BBN}	$0.2479^{+0.0026}_{-0.0013}$	$\sigma_8(0.51)$	$0.608^{+0.026}_{-0.029}$
A_{100}^{PS}	251^{+60}_{-50}	$10^5 D/H$	$2.603^{+0.073}_{-0.065}$	$f\sigma_8(0.61)$	$0.460^{+0.018}_{-0.021}$
A_{143}^{PS}	44^{+20}_{-20}	Age/Gyr	$13.73^{+0.11}_{-0.19}$	$\sigma_8(0.61)$	$0.579^{+0.024}_{-0.028}$
A_{217}^{PS}	109^{+30}_{-30}	z_*	$1089.97^{+0.55}_{-0.52}$	$f\sigma_8(2.33)$	$0.292^{+0.013}_{-0.014}$
A^{kSZ}	—	r_*	$143.8^{+1.2}_{-1.9}$	$\sigma_8(2.33)$	$0.301^{+0.013}_{-0.015}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	$100\theta_*$	$1.04099^{+0.00069}_{-0.00073}$	f_{2000}^{143}	30^{+6}_{-6}
c_{217}	$0.9997^{+0.0038}_{-0.0028}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.81^{+0.12}_{-0.18}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-4}
H_0	$67.9^{+1.5}_{-1.2}$	z_{drag}	$1060.23^{+0.91}_{-0.84}$	f_{2000}^{217}	$107.4^{+3.8}_{-3.8}$
Ω_{Λ}	$0.687^{+0.013}_{-0.013}$	r_{drag}	$146.4^{+1.3}_{-2.0}$	χ_{lensing}^2	$9.32 (\nu: 0.4)$
Ω_m	$0.313^{+0.013}_{-0.013}$	k_{D}	$0.1413^{+0.0015}_{-0.0012}$	χ_{small}^2	$397.5 (\nu: 2.4)$
$\Omega_m h^2$	$0.1440^{+0.0040}_{-0.0032}$	$100\theta_{\text{D}}$	$0.16092^{+0.00062}_{-0.00051}$	χ_{lowl}^2	$22.87 (\nu: 0.4)$
$\Omega_{\nu} h^2$	$0.0026^{+0.0048}_{-0.0023}$	z_{eq}	3339^{+83}_{-120}	$\chi_{6\text{DF}}^2$	$0.079 (\nu: 0.0)$
$\Omega_m h^3$	$0.0977^{+0.0039}_{-0.0021}$	k_{eq}	$0.01028^{+0.00028}_{-0.00034}$	χ_{MGS}^2	$1.14 (\nu: 0.1)$
σ_8	$0.794^{+0.032}_{-0.037}$	$100\theta_{\text{eq}}$	$0.826^{+0.026}_{-0.017}$	χ_{DR12BAO}^2	$5.4 (\nu: 1.7)$
S_8	$0.810^{+0.033}_{-0.037}$	$100\theta_{\text{s,eq}}$	$0.456^{+0.014}_{-0.0087}$	χ_{prior}^2	$9.7 (\nu: 10.0)$
$\sigma_8 \Omega_m^{0.5}$	$0.444^{+0.018}_{-0.020}$	$H(0.15)$	$73.2^{+1.4}_{-1.1}$	χ_{CMB}^2	$7368 (\nu: 10475596.3)$
$\sigma_8 \Omega_m^{0.25}$	$0.593^{+0.023}_{-0.026}$	$D_{\text{M}}(0.15)$	639^{+11}_{-13}	χ_{BAO}^2	$6.6 (\nu: 1.2)$
$\sigma_8/h^{0.5}$	$0.963^{+0.034}_{-0.041}$	$H(0.38)$	$83.4^{+1.4}_{-0.96}$		
$r_{\text{drag}} h$	$99.4^{+1.6}_{-1.6}$	$D_{\text{M}}(0.38)$	1523^{+22}_{-29}		

Best-fit $\chi_{\text{eff}}^2 = 11935.63$; $\Delta\chi_{\text{eff}}^2 = 9155.23$; $\bar{\chi}_{\text{eff}}^2 = 11959.89$; $\Delta\bar{\chi}_{\text{eff}}^2 = 9150.41$; $R - 1 = 0.03604$
 χ_{eff}^2 : 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: 8.94 (Δ 0.19) simall_100x143_offlike5_EE_Aplanck: 396.07 (Δ -0.36) commander_dx12_v3.2_29: 22.86 (Δ -0.19) CamSpec like_10.7HM_1400_unified: 11499.95

8.14 base_nnu_meffsterile_CamSpecHM_TTTEEE_lowl_lowE_lensing_BAO_post_Pantheon18/base_nnu_meffsterile_plikHM_TTTEEE_lowl_lowE_lensing_BAO_post_Pantheon18

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02246^{+0.00032}_{-0.00030}$	$\langle d^2 \rangle^{1/2}$	$2.430^{+0.042}_{-0.042}$	$H(0.51)$	$90.2^{+1.5}_{-0.90}$
$\Omega_c h^2$	$0.1190^{+0.0058}_{-0.0072}$	z_{re}	$8.0^{+1.5}_{-1.4}$	$D_{\text{M}}(0.51)$	1971^{+27}_{-37}
$100\theta_{MC}$	$1.04086^{+0.00065}_{-0.00066}$	$10^9 A_s$	$2.113^{+0.069}_{-0.062}$	$H(0.61)$	$95.9^{+1.5}_{-0.86}$
τ	$0.057^{+0.015}_{-0.014}$	$10^9 A_s e^{-2\tau}$	$1.884^{+0.027}_{-0.023}$	$D_{\text{M}}(0.61)$	2293^{+30}_{-42}
$m_{\nu, \text{sterile}}^{\text{eff}}$	< 0.577	D_{40}	1223^{+25}_{-26}	$H(2.33)$	$237.4^{+3.3}_{-2.4}$
N_{eff}	< 3.34	D_{220}	5734^{+75}_{-78}	$D_{\text{M}}(2.33)$	5731^{+47}_{-85}
$\ln(10^{10} A_s)$	$3.050^{+0.032}_{-0.029}$	D_{810}	2540^{+26}_{-26}	$f\sigma_8(0.15)$	$0.448^{+0.018}_{-0.020}$
n_s	$0.969^{+0.011}_{-0.010}$	D_{1420}	$816.7^{+9.2}_{-9.4}$	$\sigma_8(0.15)$	$0.734^{+0.029}_{-0.034}$
y_{cal}	$1.0009^{+0.0048}_{-0.0048}$	D_{2000}	$230.3^{+3.2}_{-3.4}$	$f\sigma_8(0.38)$	$0.466^{+0.018}_{-0.020}$
A_{217}^{CIB}	44^{+10}_{-20}	$n_{s,0.002}$	$0.969^{+0.011}_{-0.010}$	$\sigma_8(0.38)$	$0.651^{+0.027}_{-0.030}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.2467^{+0.0027}_{-0.0013}$	$f\sigma_8(0.51)$	$0.465^{+0.018}_{-0.020}$
A_{143}^{tSZ}	$4.6^{+3.8}_{-4.3}$	Y_P^{BBN}	$0.2480^{+0.0028}_{-0.0013}$	$\sigma_8(0.51)$	$0.609^{+0.025}_{-0.029}$
A_{100}^{PS}	251^{+60}_{-50}	$10^5 D/H$	$2.602^{+0.075}_{-0.066}$	$f\sigma_8(0.61)$	$0.460^{+0.018}_{-0.020}$
A_{143}^{PS}	44^{+20}_{-20}	Age/Gyr	$13.72^{+0.11}_{-0.20}$	$\sigma_8(0.61)$	$0.580^{+0.024}_{-0.027}$
A_{217}^{PS}	109^{+30}_{-30}	z_*	$1089.95^{+0.56}_{-0.52}$	$f\sigma_8(2.33)$	$0.293^{+0.012}_{-0.014}$
A^{kSZ}	—	r_*	$143.8^{+1.2}_{-2.0}$	$\sigma_8(2.33)$	$0.301^{+0.013}_{-0.015}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	$100\theta_*$	$1.04099^{+0.00070}_{-0.00074}$	f_{2000}^{143}	30^{+6}_{-6}
c_{217}	$0.9997^{+0.0037}_{-0.0028}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.81^{+0.12}_{-0.19}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-4}
H_0	$68.0^{+1.5}_{-1.2}$	z_{drag}	$1060.25^{+0.95}_{-0.85}$	f_{2000}^{217}	$107.4^{+3.8}_{-3.8}$
Ω_{Λ}	$0.688^{+0.012}_{-0.012}$	r_{drag}	$146.4^{+1.3}_{-2.1}$	χ_{lensing}^2	$9.36 (\nu: 0.4)$
Ω_m	$0.312^{+0.012}_{-0.012}$	k_{D}	$0.1413^{+0.0016}_{-0.0012}$	χ_{small}^2	$330 (\nu: 10377.2)$
$\Omega_m h^2$	$0.1439^{+0.0041}_{-0.0032}$	$100\theta_{\text{D}}$	$0.16093^{+0.00064}_{-0.00052}$	χ_{lowl}^2	$90 (\nu: 10388.7)$
$\Omega_{\nu} h^2$	$0.0025^{+0.0045}_{-0.0022}$	z_{eq}	3338^{+80}_{-110}	χ_{JLA}^2	$1035.14 (\nu: 0.1)$
$\Omega_m h^3$	$0.0978^{+0.0041}_{-0.0022}$	k_{eq}	$0.01028^{+0.00028}_{-0.00033}$	$\chi_{6\text{DF}}^2$	$0.27 (\nu: 0.1)$
σ_8	$0.795^{+0.031}_{-0.036}$	$100\theta_{\text{eq}}$	$0.826^{+0.024}_{-0.016}$	χ_{MGS}^2	$1.00 (\nu: 0.2)$
S_8	$0.810^{+0.032}_{-0.036}$	$100\theta_{\text{s,eq}}$	$0.456^{+0.013}_{-0.0084}$	χ_{DR12BAO}^2	$5.1 (\nu: 1.2)$
$\sigma_8 \Omega_m^{0.5}$	$0.444^{+0.018}_{-0.020}$	$H(0.15)$	$73.3^{+1.5}_{-1.1}$	χ_{prior}^2	$9.7 (\nu: 10.0)$
$\sigma_8 \Omega_m^{0.25}$	$0.594^{+0.023}_{-0.026}$	$D_{\text{M}}(0.15)$	638^{+10}_{-13}	χ_{CMB}^2	$7368 (\nu: 10475806.8)$
$\sigma_8/h^{0.5}$	$0.964^{+0.033}_{-0.040}$	$H(0.38)$	$83.5^{+1.5}_{-0.96}$	χ_{BAO}^2	$6.4 (\nu: 0.8)$
$r_{\text{drag}} h$	$99.5^{+1.6}_{-1.5}$	$D_{\text{M}}(0.38)$	1521^{+22}_{-30}		

Best-fit $\chi_{\text{eff}}^2 = 12970.74$; $\bar{\chi}_{\text{eff}}^2 = 12994.91$; $\Delta\chi_{\text{eff}}^2 = 9150.47$; $R - 1 = 0.03797$
 χ_{eff}^2 : BAO - 6DF: 0.02 MGS: 1.34 DR12BAO: 4.09 CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 9.02 small_100x143_offlike5_EE_Aplanck_B: 396.12 commander_dx12_v3_2_29: 22.86 CamSpec like_10.7HM_1400_unified: 11500.05 SN - JLA Pantheon18: 1034.94

8.15 base_nnu_meffsterile_CamSpecHM_TTTEEE_lowl_lowE_lensing_BAO_post_Aver15/base_nnu_meffsterile_plikHM_TTTEEE_lowl_low

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02243^{+0.00030}_{-0.00030}$	$\langle d^2 \rangle^{1/2}$	$2.433^{+0.042}_{-0.041}$	$H(0.51)$	$90.0^{+1.1}_{-0.74}$
$\Omega_c h^2$	$0.1186^{+0.0054}_{-0.0061}$	z_{re}	$7.9^{+1.5}_{-1.4}$	$D_{\text{M}}(0.51)$	1976^{+24}_{-28}
$100\theta_{MC}$	$1.04089^{+0.00059}_{-0.00063}$	$10^9 A_s$	$2.109^{+0.067}_{-0.061}$	$H(0.61)$	$95.7^{+1.1}_{-0.69}$
τ	$0.057^{+0.016}_{-0.014}$	$10^9 A_s e^{-2\tau}$	$1.883^{+0.024}_{-0.022}$	$D_{\text{M}}(0.61)$	2299^{+26}_{-32}
$m_{\nu, \text{sterile}}^{\text{eff}}$	< 0.607	D_{40}	1225^{+24}_{-25}	$H(2.33)$	$237.2^{+2.6}_{-2.0}$
N_{eff}	< 3.26	D_{220}	5733^{+75}_{-77}	$D_{\text{M}}(2.33)$	5741^{+38}_{-63}
$\ln(10^{10} A_s)$	$3.049^{+0.031}_{-0.029}$	D_{810}	2539^{+26}_{-26}	$f\sigma_8(0.15)$	$0.448^{+0.018}_{-0.020}$
n_s	$0.9680^{+0.0096}_{-0.0092}$	D_{1420}	$816.7^{+9.2}_{-9.4}$	$\sigma_8(0.15)$	$0.732^{+0.028}_{-0.033}$
y_{cal}	$1.0008^{+0.0048}_{-0.0048}$	D_{2000}	$230.3^{+3.1}_{-3.3}$	$f\sigma_8(0.38)$	$0.465^{+0.018}_{-0.020}$
A_{217}^{CIB}	44^{+10}_{-20}	$n_{s,0.002}$	$0.9680^{+0.0096}_{-0.0092}$	$\sigma_8(0.38)$	$0.649^{+0.025}_{-0.029}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.2463^{+0.0020}_{-0.0010}$	$f\sigma_8(0.51)$	$0.464^{+0.017}_{-0.020}$
A_{143}^{tSZ}	$4.6^{+3.8}_{-4.3}$	Y_P^{BBN}	$0.2477^{+0.0020}_{-0.0010}$	$\sigma_8(0.51)$	$0.607^{+0.024}_{-0.028}$
A_{100}^{PS}	251^{+60}_{-50}	$10^5 D/H$	$2.599^{+0.065}_{-0.060}$	$f\sigma_8(0.61)$	$0.459^{+0.017}_{-0.020}$
A_{143}^{PS}	44^{+20}_{-20}	Age/Gyr	$13.744^{+0.088}_{-0.15}$	$\sigma_8(0.61)$	$0.578^{+0.023}_{-0.027}$
A_{217}^{PS}	109^{+30}_{-30}	z_*	$1089.94^{+0.50}_{-0.49}$	$f\sigma_8(2.33)$	$0.292^{+0.012}_{-0.014}$
A^{kSZ}	—	r_*	$144.0^{+1.0}_{-1.5}$	$\sigma_8(2.33)$	$0.300^{+0.012}_{-0.014}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	$100\theta_*$	$1.04103^{+0.00061}_{-0.00068}$	f_{2000}^{143}	30^{+6}_{-5}
c_{217}	$0.9997^{+0.0037}_{-0.0028}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.832^{+0.097}_{-0.14}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-4}
H_0	$67.8^{+1.2}_{-1.1}$	z_{drag}	$1060.16^{+0.80}_{-0.77}$	f_{2000}^{217}	$107.3^{+3.7}_{-3.7}$
Ω_{Λ}	$0.687^{+0.012}_{-0.012}$	r_{drag}	$146.6^{+1.1}_{-1.6}$	χ_{lensing}^2	$9.29 (\nu: 0.4)$
Ω_m	$0.313^{+0.012}_{-0.012}$	k_{D}	$0.1412^{+0.0013}_{-0.0010}$	χ_{small}^2	$333 (\nu: 9977.1)$
$\Omega_m h^2$	$0.1437^{+0.0033}_{-0.0028}$	$100\theta_{\text{D}}$	$0.16088^{+0.00052}_{-0.00046}$	χ_{lowl}^2	$87 (\nu: 9990.6)$
$\Omega_{\nu} h^2$	$0.0027^{+0.0050}_{-0.0021}$	z_{eq}	3338^{+84}_{-120}	χ_{Aver15}^2	$0.53 (\nu: 0.1)$
$\Omega_m h^3$	$0.0973^{+0.0031}_{-0.0017}$	k_{eq}	$0.01026^{+0.00026}_{-0.00032}$	$\chi_{6\text{DF}}^2$	$0.26 (\nu: 0.1)$
σ_8	$0.793^{+0.030}_{-0.035}$	$100\theta_{\text{eq}}$	$0.827^{+0.025}_{-0.017}$	χ_{MGS}^2	$0.95 (\nu: 0.2)$
S_8	$0.809^{+0.033}_{-0.036}$	$100\theta_{\text{s,eq}}$	$0.456^{+0.013}_{-0.0088}$	χ_{DR12BAO}^2	$5.4 (\nu: 1.6)$
$\sigma_8 \Omega_m^{0.5}$	$0.443^{+0.018}_{-0.020}$	$H(0.15)$	$73.1^{+1.1}_{-0.98}$	χ_{prior}^2	$9.7 (\nu: 10.0)$
$\sigma_8 \Omega_m^{0.25}$	$0.593^{+0.022}_{-0.026}$	$D_{\text{M}}(0.15)$	$639.7^{+9.4}_{-11}$	χ_{CMB}^2	$7368 (\nu: 10475727.7)$
$\sigma_8/h^{0.5}$	$0.963^{+0.034}_{-0.040}$	$H(0.38)$	$83.3^{+1.1}_{-0.82}$	χ_{BAO}^2	$6.6 (\nu: 1.1)$
$r_{\text{drag}} h$	$99.4^{+1.6}_{-1.5}$	$D_{\text{M}}(0.38)$	1525^{+20}_{-23}		

$$\bar{\chi}_{\text{eff}}^2 = 11960.11; \Delta\bar{\chi}_{\text{eff}}^2 = 9150.55; R - 1 = 0.03672$$

8.16 base_nnu_meffsterile_CamSpecHM_TTTEEE_lowl_lowE_lensing_BAO_post_Cooke17_Aver15/base_nnu_meffsterile_plikHM_TTTEEE

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02243^{+0.00029}_{-0.00029}$	z_{re}	$7.9^{+1.5}_{-1.4}$	$H(0.61)$	$95.7^{+1.1}_{-0.69}$
$\Omega_c h^2$	$0.1186^{+0.0053}_{-0.0060}$	$10^9 A_s$	$2.109^{+0.067}_{-0.061}$	$D_{\text{M}}(0.61)$	2299^{+26}_{-32}
$100\theta_{MC}$	$1.04089^{+0.00059}_{-0.00062}$	$10^9 A_s e^{-2\tau}$	$1.883^{+0.024}_{-0.022}$	$H(2.33)$	$237.2^{+2.5}_{-2.0}$
τ	$0.057^{+0.016}_{-0.014}$	D_{40}	1225^{+24}_{-25}	$D_{\text{M}}(2.33)$	5741^{+37}_{-63}
$m_{\nu, \text{sterile}}^{\text{eff}}$	< 0.610	D_{220}	5732^{+75}_{-77}	$f\sigma_8(0.15)$	$0.448^{+0.018}_{-0.020}$
N_{eff}	< 3.26	D_{810}	2539^{+26}_{-26}	$\sigma_8(0.15)$	$0.732^{+0.028}_{-0.033}$
$\ln(10^{10} A_s)$	$3.049^{+0.031}_{-0.029}$	D_{1420}	$816.6^{+9.2}_{-9.3}$	$f\sigma_8(0.38)$	$0.466^{+0.018}_{-0.020}$
n_s	$0.9680^{+0.0096}_{-0.0092}$	D_{2000}	$230.3^{+3.1}_{-3.2}$	$\sigma_8(0.38)$	$0.649^{+0.025}_{-0.030}$
y_{cal}	$1.0008^{+0.0048}_{-0.0048}$	$n_{s,0.002}$	$0.9680^{+0.0096}_{-0.0092}$	$f\sigma_8(0.51)$	$0.464^{+0.017}_{-0.020}$
A_{217}^{CIB}	44^{+10}_{-20}	Y_P	$0.2463^{+0.0020}_{-0.0010}$	$\sigma_8(0.51)$	$0.607^{+0.024}_{-0.028}$
$\xi^{tSZ-CIB}$	—	Y_P^{BBN}	$0.2477^{+0.0020}_{-0.0010}$	$f\sigma_8(0.61)$	$0.459^{+0.017}_{-0.020}$
A_{143}^{tSZ}	$4.6^{+3.8}_{-4.3}$	$10^5 D/H$	$2.600^{+0.061}_{-0.057}$	$\sigma_8(0.61)$	$0.578^{+0.023}_{-0.027}$
A_{100}^{PS}	251^{+60}_{-50}	Age/Gyr	$13.745^{+0.087}_{-0.15}$	$f\sigma_8(2.33)$	$0.292^{+0.012}_{-0.014}$
A_{143}^{PS}	44^{+20}_{-20}	z_*	$1089.95^{+0.50}_{-0.45}$	$\sigma_8(2.33)$	$0.300^{+0.012}_{-0.014}$
A_{217}^{PS}	109^{+30}_{-30}	r_*	$144.0^{+1.0}_{-1.5}$	f_{2000}^{143}	30^{+6}_{-5}
A^{kSZ}	—	$100\theta_*$	$1.04103^{+0.00060}_{-0.00067}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-4}
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.832^{+0.096}_{-0.14}$	f_{2000}^{217}	$107.4^{+3.7}_{-3.7}$
c_{217}	$0.9997^{+0.0037}_{-0.0028}$	z_{drag}	$1060.15^{+0.80}_{-0.76}$	χ_{lensing}^2	$9.29 (\nu: 0.4)$
H_0	$67.8^{+1.2}_{-1.1}$	r_{drag}	$146.6^{+1.1}_{-1.6}$	χ_{small}^2	$334 (\nu: 9911.1)$
Ω_{Λ}	$0.687^{+0.012}_{-0.012}$	k_{D}	$0.1412^{+0.0012}_{-0.0010}$	χ_{lowl}^2	$87 (\nu: 9925.0)$
Ω_m	$0.313^{+0.012}_{-0.012}$	$100\theta_{\text{D}}$	$0.16089^{+0.00049}_{-0.00044}$	χ_{Aver15}^2	$0.53 (\nu: 0.1)$
$\Omega_m h^2$	$0.1437^{+0.0033}_{-0.0028}$	z_{eq}	3338^{+84}_{-120}	χ_{Cooke17}^2	$0.14 (\nu: 0.0)$
$\Omega_{\nu} h^2$	$0.0027^{+0.0050}_{-0.0021}$	k_{eq}	$0.01026^{+0.00026}_{-0.00032}$	$\chi_{6\text{DF}}^2$	$0.25 (\nu: 0.1)$
$\Omega_m h^3$	$0.0973^{+0.0030}_{-0.0017}$	$100\theta_{\text{eq}}$	$0.826^{+0.025}_{-0.017}$	χ_{MGS}^2	$0.94 (\nu: 0.1)$
σ_8	$0.793^{+0.030}_{-0.035}$	$100\theta_{\text{s,eq}}$	$0.456^{+0.013}_{-0.0088}$	χ_{DR12BAO}^2	$5.4 (\nu: 1.6)$
S_8	$0.810^{+0.033}_{-0.036}$	$H(0.15)$	$73.1^{+1.1}_{-0.98}$	χ_{prior}^2	$9.7 (\nu: 10.0)$
$\sigma_8 \Omega_m^{0.5}$	$0.443^{+0.018}_{-0.020}$	$D_{\text{M}}(0.15)$	$639.8^{+9.4}_{-11}$	χ_{CMB}^2	$7368 (\nu: 10475672.8)$
$\sigma_8 \Omega_m^{0.25}$	$0.593^{+0.022}_{-0.026}$	$H(0.38)$	$83.3^{+1.1}_{-0.82}$	χ_{BAO}^2	$6.6 (\nu: 1.2)$
$\sigma_8/h^{0.5}$	$0.963^{+0.034}_{-0.041}$	$D_{\text{M}}(0.38)$	1525^{+20}_{-23}	χ_{Abund}^2	$0.67 (\nu: 0.1)$
$r_{\text{drag}} h$	$99.4^{+1.6}_{-1.5}$	$H(0.51)$	$90.0^{+1.1}_{-0.73}$		
$\langle d^2 \rangle^{1/2}$	$2.433^{+0.042}_{-0.041}$	$D_{\text{M}}(0.51)$	1976^{+24}_{-28}		

$$\bar{\chi}_{\text{eff}}^2 = 11960.15; \Delta\bar{\chi}_{\text{eff}}^2 = 9150.43; R - 1 = 0.03562$$

8.17 base_nnu_meffsterile_CamSpecHM_TTTEEE_lowl_lowE_lensing_BAO_post_zre6p5/base_nnu_meffsterile_plikHM_TTTEEE_lowl_lowE_lensing_BAO_post_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02245^{+0.00032}_{-0.00030}$	$\langle d^2 \rangle^{1/2}$	$2.433^{+0.042}_{-0.041}$	$H(0.51)$	$90.2^{+1.4}_{-0.88}$
$\Omega_c h^2$	$0.1190^{+0.0057}_{-0.0073}$	z_{re}	$8.0^{+1.3}_{-1.4}$	$D_{\text{M}}(0.51)$	1972^{+27}_{-36}
$100\theta_{MC}$	$1.04086^{+0.00064}_{-0.00066}$	$10^9 A_s$	$2.114^{+0.063}_{-0.059}$	$H(0.61)$	$95.8^{+1.4}_{-0.84}$
τ	$0.057^{+0.014}_{-0.013}$	$10^9 A_s e^{-2\tau}$	$1.884^{+0.026}_{-0.023}$	$D_{\text{M}}(0.61)$	2295^{+30}_{-41}
$m_{\nu, \text{sterile}}^{\text{eff}}$	< 0.617	D_{40}	1224^{+24}_{-26}	$H(2.33)$	$237.5^{+3.2}_{-2.4}$
N_{eff}	< 3.33	D_{220}	5733^{+75}_{-77}	$D_{\text{M}}(2.33)$	5733^{+46}_{-82}
$\ln(10^{10} A_s)$	$3.051^{+0.030}_{-0.028}$	D_{810}	2540^{+26}_{-26}	$f\sigma_8(0.15)$	$0.448^{+0.018}_{-0.020}$
n_s	$0.969^{+0.011}_{-0.010}$	D_{1420}	$816.6^{+9.3}_{-9.5}$	$\sigma_8(0.15)$	$0.733^{+0.030}_{-0.034}$
y_{cal}	$1.0009^{+0.0049}_{-0.0049}$	D_{2000}	$230.2^{+3.3}_{-3.4}$	$f\sigma_8(0.38)$	$0.466^{+0.018}_{-0.021}$
A_{217}^{CIB}	44^{+10}_{-20}	$n_{s,0.002}$	$0.969^{+0.011}_{-0.010}$	$\sigma_8(0.38)$	$0.650^{+0.027}_{-0.031}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.2466^{+0.0026}_{-0.0013}$	$f\sigma_8(0.51)$	$0.465^{+0.018}_{-0.021}$
A_{143}^{tSZ}	$4.6^{+3.9}_{-4.3}$	Y_P^{BBN}	$0.2480^{+0.0026}_{-0.0013}$	$\sigma_8(0.51)$	$0.608^{+0.025}_{-0.029}$
A_{100}^{PS}	251^{+60}_{-50}	$10^5 D/H$	$2.603^{+0.074}_{-0.066}$	$f\sigma_8(0.61)$	$0.460^{+0.018}_{-0.021}$
A_{143}^{PS}	44^{+20}_{-20}	Age/Gyr	$13.72^{+0.11}_{-0.19}$	$\sigma_8(0.61)$	$0.579^{+0.024}_{-0.028}$
A_{217}^{PS}	109^{+30}_{-30}	z_*	$1089.97^{+0.55}_{-0.52}$	$f\sigma_8(2.33)$	$0.292^{+0.013}_{-0.014}$
A^{kSZ}	—	r_*	$143.8^{+1.2}_{-1.9}$	$\sigma_8(2.33)$	$0.301^{+0.013}_{-0.015}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	$100\theta_*$	$1.04099^{+0.00069}_{-0.00073}$	f_{2000}^{143}	30^{+6}_{-6}
c_{217}	$0.9997^{+0.0038}_{-0.0028}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.81^{+0.12}_{-0.18}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-4}
H_0	$67.9^{+1.5}_{-1.2}$	z_{drag}	$1060.24^{+0.91}_{-0.84}$	f_{2000}^{217}	$107.4^{+3.8}_{-3.8}$
Ω_{Λ}	$0.687^{+0.013}_{-0.013}$	r_{drag}	$146.4^{+1.3}_{-2.0}$	χ_{lensing}^2	$9.29 (\nu: 0.4)$
Ω_m	$0.313^{+0.013}_{-0.013}$	k_{D}	$0.1413^{+0.0015}_{-0.0012}$	χ_{small}^2	$397.5 (\nu: 2.4)$
$\Omega_m h^2$	$0.1440^{+0.0040}_{-0.0032}$	$100\theta_{\text{D}}$	$0.16092^{+0.00062}_{-0.00051}$	χ_{lowl}^2	$22.87 (\nu: 0.4)$
$\Omega_{\nu} h^2$	$0.0026^{+0.0048}_{-0.0023}$	z_{eq}	3338^{+83}_{-120}	$\chi_{6\text{DF}}^2$	$0.078 (\nu: 0.0)$
$\Omega_m h^3$	$0.0978^{+0.0039}_{-0.0022}$	k_{eq}	$0.01028^{+0.00028}_{-0.00034}$	χ_{MGS}^2	$1.14 (\nu: 0.1)$
σ_8	$0.794^{+0.032}_{-0.037}$	$100\theta_{\text{eq}}$	$0.826^{+0.026}_{-0.017}$	χ_{DR12BAO}^2	$5.4 (\nu: 1.6)$
S_8	$0.810^{+0.033}_{-0.037}$	$100\theta_{\text{s,eq}}$	$0.456^{+0.014}_{-0.0087}$	χ_{prior}^2	$9.7 (\nu: 10.0)$
$\sigma_8 \Omega_m^{0.5}$	$0.444^{+0.018}_{-0.020}$	$H(0.15)$	$73.2^{+1.4}_{-1.1}$	χ_{CMB}^2	$7368 (\nu: 10475582.4)$
$\sigma_8 \Omega_m^{0.25}$	$0.593^{+0.023}_{-0.026}$	$D_{\text{M}}(0.15)$	639^{+11}_{-13}	χ_{BAO}^2	$6.6 (\nu: 1.2)$
$\sigma_8/h^{0.5}$	$0.963^{+0.034}_{-0.041}$	$H(0.38)$	$83.4^{+1.4}_{-0.96}$		
$r_{\text{drag}} h$	$99.4^{+1.6}_{-1.6}$	$D_{\text{M}}(0.38)$	1523^{+22}_{-29}		

$\bar{\chi}_{\text{eff}}^2 = 11959.80$; $\Delta\bar{\chi}_{\text{eff}}^2 = 9150.40$; $R - 1 = 0.03599$

8.18 base_nnu_meffsterile_CamSpecHM_TTTEEE_lowl_lowE_lensing_BAO_post_Pantheon18_zre6p5/base_nnu_meffsterile_plikHM_TTTE

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02246^{+0.00032}_{-0.00030}$	$\langle d^2 \rangle^{1/2}$	$2.431^{+0.042}_{-0.041}$	$H(0.51)$	$90.2^{+1.5}_{-0.90}$
$\Omega_c h^2$	$0.1190^{+0.0058}_{-0.0072}$	z_{re}	$8.0^{+1.3}_{-1.4}$	$D_{\text{M}}(0.51)$	1970^{+27}_{-37}
$100\theta_{MC}$	$1.04086^{+0.00065}_{-0.00067}$	$10^9 A_s$	$2.114^{+0.063}_{-0.059}$	$H(0.61)$	$95.9^{+1.5}_{-0.86}$
τ	$0.058^{+0.014}_{-0.013}$	$10^9 A_s e^{-2\tau}$	$1.884^{+0.027}_{-0.023}$	$D_{\text{M}}(0.61)$	2293^{+30}_{-42}
$m_{\nu, \text{sterile}}^{\text{eff}}$	< 0.577	D_{40}	1223^{+25}_{-26}	$H(2.33)$	$237.4^{+3.3}_{-2.4}$
N_{eff}	< 3.34	D_{220}	5734^{+75}_{-78}	$D_{\text{M}}(2.33)$	5730^{+47}_{-85}
$\ln(10^{10} A_s)$	$3.051^{+0.030}_{-0.028}$	D_{810}	2540^{+25}_{-26}	$f\sigma_8(0.15)$	$0.448^{+0.018}_{-0.020}$
n_s	$0.969^{+0.011}_{-0.010}$	D_{1420}	$816.7^{+9.1}_{-9.4}$	$\sigma_8(0.15)$	$0.735^{+0.029}_{-0.034}$
y_{cal}	$1.0009^{+0.0048}_{-0.0048}$	D_{2000}	$230.3^{+3.2}_{-3.4}$	$f\sigma_8(0.38)$	$0.466^{+0.018}_{-0.020}$
A_{217}^{CIB}	44^{+10}_{-20}	$n_{s,0.002}$	$0.969^{+0.011}_{-0.010}$	$\sigma_8(0.38)$	$0.651^{+0.026}_{-0.030}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.2467^{+0.0028}_{-0.0014}$	$f\sigma_8(0.51)$	$0.465^{+0.018}_{-0.020}$
A_{143}^{tSZ}	$4.6^{+3.8}_{-4.3}$	Y_P^{BBN}	$0.2480^{+0.0028}_{-0.0014}$	$\sigma_8(0.51)$	$0.609^{+0.025}_{-0.029}$
A_{100}^{PS}	251^{+60}_{-50}	$10^5 D/H$	$2.602^{+0.076}_{-0.066}$	$f\sigma_8(0.61)$	$0.460^{+0.018}_{-0.020}$
A_{143}^{PS}	44^{+20}_{-20}	Age/Gyr	$13.72^{+0.11}_{-0.20}$	$\sigma_8(0.61)$	$0.580^{+0.024}_{-0.027}$
A_{217}^{PS}	109^{+30}_{-30}	z_*	$1089.95^{+0.56}_{-0.52}$	$f\sigma_8(2.33)$	$0.293^{+0.012}_{-0.014}$
A^{kSZ}	—	r_*	$143.8^{+1.3}_{-2.0}$	$\sigma_8(2.33)$	$0.302^{+0.013}_{-0.015}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	$100\theta_*$	$1.04099^{+0.00070}_{-0.00074}$	f_{2000}^{143}	30^{+6}_{-6}
c_{217}	$0.9997^{+0.0037}_{-0.0028}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.81^{+0.12}_{-0.19}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-4}
H_0	$68.0^{+1.5}_{-1.2}$	z_{drag}	$1060.26^{+0.95}_{-0.85}$	f_{2000}^{217}	$107.4^{+3.8}_{-3.8}$
Ω_{Λ}	$0.689^{+0.012}_{-0.012}$	r_{drag}	$146.4^{+1.3}_{-2.1}$	χ_{lensing}^2	$9.33 (\nu: 0.4)$
Ω_m	$0.311^{+0.012}_{-0.012}$	k_{D}	$0.1413^{+0.0016}_{-0.0012}$	χ_{small}^2	$330 (\nu: 10389.3)$
$\Omega_m h^2$	$0.1439^{+0.0041}_{-0.0032}$	$100\theta_{\text{D}}$	$0.16093^{+0.00064}_{-0.00052}$	χ_{lowl}^2	$91 (\nu: 10400.7)$
$\Omega_{\nu} h^2$	$0.0025^{+0.0045}_{-0.0022}$	z_{eq}	3338^{+80}_{-110}	χ_{JLA}^2	$1035.13 (\nu: 0.1)$
$\Omega_m h^3$	$0.0978^{+0.0042}_{-0.0022}$	k_{eq}	$0.01028^{+0.00028}_{-0.00033}$	$\chi_{6\text{DF}}^2$	$0.27 (\nu: 0.1)$
σ_8	$0.795^{+0.031}_{-0.036}$	$100\theta_{\text{eq}}$	$0.826^{+0.024}_{-0.016}$	χ_{MGS}^2	$1.01 (\nu: 0.2)$
S_8	$0.810^{+0.032}_{-0.036}$	$100\theta_{\text{s,eq}}$	$0.456^{+0.013}_{-0.0084}$	χ_{DR12BAO}^2	$5.1 (\nu: 1.2)$
$\sigma_8 \Omega_m^{0.5}$	$0.444^{+0.018}_{-0.020}$	$H(0.15)$	$73.3^{+1.5}_{-1.1}$	χ_{prior}^2	$9.7 (\nu: 10.0)$
$\sigma_8 \Omega_m^{0.25}$	$0.594^{+0.023}_{-0.026}$	$D_{\text{M}}(0.15)$	638^{+10}_{-13}	χ_{CMB}^2	$7368 (\nu: 10475795.4)$
$\sigma_8/h^{0.5}$	$0.964^{+0.033}_{-0.040}$	$H(0.38)$	$83.5^{+1.5}_{-0.96}$	χ_{BAO}^2	$6.3 (\nu: 0.8)$
$r_{\text{drag}} h$	$99.5^{+1.6}_{-1.5}$	$D_{\text{M}}(0.38)$	1521^{+22}_{-30}		

$$\bar{\chi}_{\text{eff}}^2 = 12994.82; \Delta\bar{\chi}_{\text{eff}}^2 = 9150.45; R - 1 = 0.03782$$

8.19 base_nnu_meffsterile_CamSpecHM_TTTEEE_lowl_lowE_lensing_BAO_post_Aver15_zre6p5/base_nnu_meffsterile_plikHM_TTTEEE_lowl_lowE_lensing_BAO_post_Aver15_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02243^{+0.00030}_{-0.00030}$	$\langle d^2 \rangle^{1/2}$	$2.434^{+0.042}_{-0.040}$	$H(0.51)$	$90.0^{+1.1}_{-0.74}$
$\Omega_c h^2$	$0.1186^{+0.0054}_{-0.0061}$	z_{re}	$8.0^{+1.3}_{-1.3}$	$D_{\text{M}}(0.51)$	1975^{+24}_{-28}
$100\theta_{MC}$	$1.04089^{+0.00059}_{-0.00063}$	$10^9 A_s$	$2.111^{+0.061}_{-0.057}$	$H(0.61)$	$95.7^{+1.1}_{-0.69}$
τ	$0.057^{+0.014}_{-0.013}$	$10^9 A_s e^{-2\tau}$	$1.883^{+0.024}_{-0.022}$	$D_{\text{M}}(0.61)$	2299^{+26}_{-32}
$m_{\nu, \text{sterile}}^{\text{eff}}$	< 0.609	D_{40}	1225^{+24}_{-25}	$H(2.33)$	$237.2^{+2.6}_{-2.0}$
N_{eff}	< 3.27	D_{220}	5733^{+75}_{-77}	$D_{\text{M}}(2.33)$	5741^{+38}_{-63}
$\ln(10^{10} A_s)$	$3.050^{+0.029}_{-0.027}$	D_{810}	2539^{+25}_{-26}	$f\sigma_8(0.15)$	$0.448^{+0.018}_{-0.020}$
n_s	$0.9681^{+0.0096}_{-0.0092}$	D_{1420}	$816.6^{+9.1}_{-9.4}$	$\sigma_8(0.15)$	$0.733^{+0.028}_{-0.033}$
y_{cal}	$1.0008^{+0.0048}_{-0.0048}$	D_{2000}	$230.3^{+3.1}_{-3.3}$	$f\sigma_8(0.38)$	$0.466^{+0.018}_{-0.020}$
A_{217}^{CIB}	44^{+10}_{-20}	$n_{s,0.002}$	$0.9681^{+0.0096}_{-0.0092}$	$\sigma_8(0.38)$	$0.649^{+0.025}_{-0.029}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.2463^{+0.0020}_{-0.0010}$	$f\sigma_8(0.51)$	$0.464^{+0.017}_{-0.020}$
A_{143}^{tSZ}	$4.6^{+3.8}_{-4.3}$	Y_P^{BBN}	$0.2477^{+0.0020}_{-0.0010}$	$\sigma_8(0.51)$	$0.608^{+0.024}_{-0.028}$
A_{100}^{PS}	251^{+60}_{-50}	$10^5 D/H$	$2.599^{+0.065}_{-0.060}$	$f\sigma_8(0.61)$	$0.459^{+0.017}_{-0.020}$
A_{143}^{PS}	44^{+20}_{-20}	Age/Gyr	$13.743^{+0.088}_{-0.15}$	$\sigma_8(0.61)$	$0.578^{+0.023}_{-0.027}$
A_{217}^{PS}	109^{+30}_{-30}	z_*	$1089.94^{+0.50}_{-0.49}$	$f\sigma_8(2.33)$	$0.292^{+0.012}_{-0.014}$
A^{kSZ}	—	r_*	$144.0^{+1.0}_{-1.5}$	$\sigma_8(2.33)$	$0.300^{+0.012}_{-0.014}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	$100\theta_*$	$1.04103^{+0.00061}_{-0.00068}$	f_{2000}^{143}	30^{+6}_{-5}
c_{217}	$0.9997^{+0.0037}_{-0.0028}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.832^{+0.097}_{-0.14}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-4}
H_0	$67.8^{+1.2}_{-1.1}$	z_{drag}	$1060.16^{+0.84}_{-0.73}$	f_{2000}^{217}	$107.3^{+3.7}_{-3.7}$
Ω_{Λ}	$0.687^{+0.012}_{-0.012}$	r_{drag}	$146.6^{+1.1}_{-1.6}$	χ_{lensing}^2	$9.26 (\nu: 0.4)$
Ω_m	$0.313^{+0.012}_{-0.012}$	k_{D}	$0.1412^{+0.0013}_{-0.0010}$	χ_{small}^2	$333 (\nu: 9990.9)$
$\Omega_m h^2$	$0.1436^{+0.0033}_{-0.0028}$	$100\theta_{\text{D}}$	$0.16088^{+0.00052}_{-0.00046}$	χ_{lowl}^2	$87 (\nu: 10004.4)$
$\Omega_{\nu} h^2$	$0.0027^{+0.0048}_{-0.0021}$	z_{eq}	3338^{+84}_{-120}	χ_{Aver15}^2	$0.54 (\nu: 0.1)$
$\Omega_m h^3$	$0.0974^{+0.0031}_{-0.0017}$	k_{eq}	$0.01026^{+0.00026}_{-0.00032}$	$\chi_{6\text{DF}}^2$	$0.26 (\nu: 0.1)$
σ_8	$0.793^{+0.030}_{-0.035}$	$100\theta_{\text{eq}}$	$0.827^{+0.025}_{-0.017}$	χ_{MGS}^2	$0.95 (\nu: 0.2)$
S_8	$0.809^{+0.033}_{-0.036}$	$100\theta_{\text{s,eq}}$	$0.456^{+0.013}_{-0.0088}$	χ_{DR12BAO}^2	$5.4 (\nu: 1.5)$
$\sigma_8 \Omega_m^{0.5}$	$0.443^{+0.018}_{-0.020}$	$H(0.15)$	$73.1^{+1.1}_{-0.98}$	χ_{prior}^2	$9.7 (\nu: 10.0)$
$\sigma_8 \Omega_m^{0.25}$	$0.593^{+0.022}_{-0.026}$	$D_{\text{M}}(0.15)$	$639.6^{+9.4}_{-11}$	χ_{CMB}^2	$7368 (\nu: 10475706.1)$
$\sigma_8/h^{0.5}$	$0.963^{+0.034}_{-0.040}$	$H(0.38)$	$83.3^{+1.1}_{-0.82}$	χ_{BAO}^2	$6.6 (\nu: 1.1)$
$r_{\text{drag}} h$	$99.4^{+1.6}_{-1.5}$	$D_{\text{M}}(0.38)$	1525^{+20}_{-23}		

$$\bar{\chi}_{\text{eff}}^2 = 11960.01; \Delta\bar{\chi}_{\text{eff}}^2 = 9150.54; R - 1 = 0.03614$$

8.20 base_nnu_meffsterile_CamSpecHM_TTTEEE_lowl_lowE_lensing_BAO_post_Cooke17_Aver15_zre6p5/base_nnu_meffsterile_plikHM_T

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02243^{+0.00029}_{-0.00029}$	z_{re}	$8.0^{+1.3}_{-1.3}$	$H(0.61)$	$95.7^{+1.1}_{-0.69}$
$\Omega_c h^2$	$0.1186^{+0.0053}_{-0.0060}$	$10^9 A_s$	$2.111^{+0.061}_{-0.057}$	$D_{\text{M}}(0.61)$	2299^{+26}_{-32}
$100\theta_{MC}$	$1.04089^{+0.00059}_{-0.00062}$	$10^9 A_s e^{-2\tau}$	$1.883^{+0.024}_{-0.022}$	$H(2.33)$	$237.2^{+2.5}_{-2.0}$
τ	$0.057^{+0.014}_{-0.013}$	D_{40}	1225^{+24}_{-25}	$D_{\text{M}}(2.33)$	5741^{+37}_{-63}
$m_{\nu, \text{sterile}}^{\text{eff}}$	< 0.611	D_{220}	5732^{+75}_{-76}	$f\sigma_8(0.15)$	$0.448^{+0.018}_{-0.020}$
N_{eff}	< 3.26	D_{810}	2539^{+25}_{-26}	$\sigma_8(0.15)$	$0.733^{+0.028}_{-0.033}$
$\ln(10^{10} A_s)$	$3.050^{+0.029}_{-0.027}$	D_{1420}	$816.6^{+9.1}_{-9.3}$	$f\sigma_8(0.38)$	$0.466^{+0.018}_{-0.020}$
n_s	$0.9680^{+0.0096}_{-0.0092}$	D_{2000}	$230.3^{+3.1}_{-3.2}$	$\sigma_8(0.38)$	$0.649^{+0.025}_{-0.029}$
y_{cal}	$1.0008^{+0.0048}_{-0.0048}$	$n_{s,0.002}$	$0.9680^{+0.0096}_{-0.0092}$	$f\sigma_8(0.51)$	$0.464^{+0.017}_{-0.020}$
A_{217}^{CIB}	44^{+10}_{-20}	Y_P	$0.2463^{+0.0020}_{-0.0010}$	$\sigma_8(0.51)$	$0.607^{+0.024}_{-0.028}$
$\xi^{tSZ-CIB}$	—	Y_P^{BBN}	$0.2477^{+0.0020}_{-0.0010}$	$f\sigma_8(0.61)$	$0.459^{+0.017}_{-0.020}$
A_{143}^{tSZ}	$4.6^{+3.8}_{-4.3}$	$10^5 D/H$	$2.600^{+0.061}_{-0.057}$	$\sigma_8(0.61)$	$0.578^{+0.023}_{-0.027}$
A_{100}^{PS}	251^{+60}_{-50}	Age/Gyr	$13.744^{+0.088}_{-0.15}$	$f\sigma_8(2.33)$	$0.292^{+0.012}_{-0.014}$
A_{143}^{PS}	44^{+20}_{-20}	z_*	$1089.95^{+0.50}_{-0.45}$	$\sigma_8(2.33)$	$0.300^{+0.012}_{-0.014}$
A_{217}^{PS}	109^{+30}_{-30}	r_*	$144.0^{+1.0}_{-1.5}$	f_{2000}^{143}	30^{+6}_{-5}
A^{kSZ}	—	$100\theta_*$	$1.04103^{+0.00060}_{-0.00067}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-4}
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.832^{+0.097}_{-0.14}$	f_{2000}^{217}	$107.4^{+3.7}_{-3.7}$
c_{217}	$0.9997^{+0.0037}_{-0.0028}$	z_{drag}	$1060.15^{+0.80}_{-0.76}$	χ_{lensing}^2	$9.26 (\nu: 0.4)$
H_0	$67.8^{+1.2}_{-1.1}$	r_{drag}	$146.6^{+1.1}_{-1.6}$	χ_{simall}^2	$333 (\nu: 9922.9)$
Ω_{Λ}	$0.687^{+0.012}_{-0.012}$	k_{D}	$0.1412^{+0.0013}_{-0.0010}$	χ_{lowl}^2	$87 (\nu: 9936.7)$
Ω_m	$0.313^{+0.012}_{-0.012}$	$100\theta_{\text{D}}$	$0.16089^{+0.00049}_{-0.00044}$	χ_{Aver15}^2	$0.53 (\nu: 0.1)$
$\Omega_m h^2$	$0.1437^{+0.0033}_{-0.0028}$	z_{eq}	3338^{+84}_{-120}	χ_{Cooke17}^2	$0.14 (\nu: 0.0)$
$\Omega_{\nu} h^2$	$0.0027^{+0.0048}_{-0.0021}$	k_{eq}	$0.01026^{+0.00026}_{-0.00032}$	$\chi_{6\text{DF}}^2$	$0.25 (\nu: 0.1)$
$\Omega_m h^3$	$0.0973^{+0.0030}_{-0.0017}$	$100\theta_{\text{eq}}$	$0.827^{+0.025}_{-0.017}$	χ_{MGS}^2	$0.95 (\nu: 0.1)$
σ_8	$0.793^{+0.030}_{-0.035}$	$100\theta_{\text{s,eq}}$	$0.456^{+0.013}_{-0.0088}$	χ_{DR12BAO}^2	$5.4 (\nu: 1.6)$
S_8	$0.810^{+0.033}_{-0.036}$	$H(0.15)$	$73.1^{+1.1}_{-0.97}$	χ_{prior}^2	$9.7 (\nu: 10.0)$
$\sigma_8 \Omega_m^{0.5}$	$0.443^{+0.018}_{-0.020}$	$D_{\text{M}}(0.15)$	$639.7^{+9.4}_{-11}$	χ_{CMB}^2	$7368 (\nu: 10475642.6)$
$\sigma_8 \Omega_m^{0.25}$	$0.593^{+0.022}_{-0.026}$	$H(0.38)$	$83.3^{+1.1}_{-0.82}$	χ_{BAO}^2	$6.6 (\nu: 1.1)$
$\sigma_8/h^{0.5}$	$0.963^{+0.034}_{-0.041}$	$D_{\text{M}}(0.38)$	1525^{+20}_{-23}	χ_{Abund}^2	$0.67 (\nu: 0.1)$
$r_{\text{drag}} h$	$99.4^{+1.6}_{-1.5}$	$H(0.51)$	$90.0^{+1.1}_{-0.74}$		
$\langle d^2 \rangle^{1/2}$	$2.434^{+0.042}_{-0.040}$	$D_{\text{M}}(0.51)$	1976^{+24}_{-28}		

$$\bar{\chi}_{\text{eff}}^2 = 11960.05; \Delta\bar{\chi}_{\text{eff}}^2 = 9150.42; R - 1 = 0.03510$$

9 nnu+mnu

9.1 base_nnu_mnu_CamSpecHM_TT_lowl_lowE/base_nnu_mnu_plikHM_TT_lowl_lowE

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02191^{+0.00071}_{-0.00078}$	$\sigma_8/h^{0.5}$	$0.969^{+0.062}_{-0.088}$	$H(0.15)$	$69.9^{+6.2}_{-7.0}$
$\Omega_c h^2$	$0.1194^{+0.0082}_{-0.0077}$	$r_{\text{drag}} h$	$95.5^{+7.4}_{-9.7}$	$D_{\text{M}}(0.15)$	673^{+80}_{-60}
$100\theta_{MC}$	$1.0408^{+0.0012}_{-0.0012}$	$\langle d^2 \rangle^{1/2}$	$2.460^{+0.095}_{-0.093}$	$H(0.38)$	$80.5^{+5.3}_{-6.3}$
τ	$0.051^{+0.016}_{-0.016}$	z_{re}	$7.4^{+1.7}_{-1.7}$	$D_{\text{M}}(0.38)$	1595^{+160}_{-140}
Σm_ν	< 0.715	$10^9 A_s$	$2.075^{+0.089}_{-0.087}$	$H(0.51)$	$87.5^{+5.1}_{-5.8}$
N_{eff}	$2.91^{+0.59}_{-0.57}$	$10^9 A_s e^{-2\tau}$	$1.875^{+0.046}_{-0.047}$	$D_{\text{M}}(0.51)$	2061^{+190}_{-170}
$\ln(10^{10} A_s)$	$3.032^{+0.042}_{-0.042}$	D_{40}	1240^{+46}_{-44}	$H(0.61)$	$93.3^{+5.0}_{-5.4}$
n_s	$0.955^{+0.028}_{-0.030}$	D_{220}	5705^{+82}_{-82}	$D_{\text{M}}(0.61)$	2393^{+210}_{-180}
y_{cal}	$1.0004^{+0.0049}_{-0.0050}$	D_{810}	2534^{+29}_{-29}	$H(2.33)$	$236.1^{+7.5}_{-7.3}$
A_{217}^{CIB}	44^{+20}_{-20}	D_{1420}	815^{+10}_{-10}	$D_{\text{M}}(2.33)$	5880^{+320}_{-300}
$\xi^{tSZ-CIB}$	—	D_{2000}	$229.8^{+4.6}_{-4.6}$	$f\sigma_8(0.15)$	$0.460^{+0.026}_{-0.028}$
A_{143}^{tSZ}	$4.4^{+3.7}_{-4.3}$	$n_{s,0.002}$	$0.955^{+0.028}_{-0.030}$	$\sigma_8(0.15)$	$0.715^{+0.065}_{-0.10}$
A_{100}^{PS}	252^{+60}_{-60}	Y_P	$0.2432^{+0.0081}_{-0.0084}$	$f\sigma_8(0.38)$	$0.470^{+0.029}_{-0.037}$
A_{143}^{PS}	45^{+20}_{-20}	Y_P^{BBN}	$0.2445^{+0.0081}_{-0.0084}$	$\sigma_8(0.38)$	$0.631^{+0.062}_{-0.097}$
A_{217}^{PS}	109^{+30}_{-30}	$10^5 D/H$	$2.62^{+0.14}_{-0.14}$	$f\sigma_8(0.51)$	$0.465^{+0.030}_{-0.042}$
A^{kSZ}	—	Age/Gyr	$14.07^{+0.76}_{-0.71}$	$\sigma_8(0.51)$	$0.589^{+0.059}_{-0.093}$
c_{100}	$0.9985^{+0.0022}_{-0.0027}$	z_*	$1090.3^{+1.2}_{-1.1}$	$f\sigma_8(0.61)$	$0.458^{+0.031}_{-0.046}$
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	r_*	$145.7^{+5.3}_{-5.1}$	$\sigma_8(0.61)$	$0.560^{+0.057}_{-0.090}$
H_0	$64.3^{+6.7}_{-7.7}$	$100\theta_*$	$1.0412^{+0.0015}_{-0.0014}$	$f\sigma_8(2.33)$	$0.283^{+0.028}_{-0.044}$
Ω_Λ	$0.650^{+0.068}_{-0.097}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.99^{+0.49}_{-0.48}$	$\sigma_8(2.33)$	$0.289^{+0.032}_{-0.050}$
Ω_m	$0.350^{+0.097}_{-0.068}$	z_{drag}	$1058.7^{+2.3}_{-2.5}$	f_{2000}^{143}	31^{+7}_{-7}
$\Omega_m h^2$	$0.1436^{+0.0093}_{-0.0091}$	r_{drag}	$148.5^{+5.5}_{-5.3}$	$f_{2000}^{143 \times 217}$	33^{+5}_{-5}
$\Omega_\nu h^2$	< 0.00703	k_{D}	$0.1397^{+0.0039}_{-0.0038}$	f_{2000}^{217}	$107.7^{+4.9}_{-4.9}$
$\Omega_m h^3$	$0.092^{+0.012}_{-0.012}$	$100\theta_{\text{D}}$	$0.1608^{+0.0013}_{-0.0013}$	χ_{simall}^2	$396.9 (\nu: 1.4)$
σ_8	$0.777^{+0.067}_{-0.10}$	z_{eq}	3445^{+150}_{-140}	χ_{lowl}^2	$24.9 (\nu: 3.3)$
S_8	$0.835^{+0.051}_{-0.052}$	k_{eq}	$0.01041^{+0.00033}_{-0.00032}$	χ_{prior}^2	$7.5 (\nu: 6.4)$
$\sigma_8 \Omega_m^{0.5}$	$0.458^{+0.028}_{-0.029}$	$100\theta_{\text{eq}}$	$0.805^{+0.026}_{-0.026}$	χ_{CMB}^2	$4340 (\nu: 4947905.9)$
$\sigma_8 \Omega_m^{0.25}$	$0.596^{+0.039}_{-0.051}$	$100\theta_{\text{s,eq}}$	$0.445^{+0.013}_{-0.013}$		

Best-fit $\chi_{\text{eff}}^2 = 7471.08$; $\Delta\chi_{\text{eff}}^2 = 6292.36$; $\bar{\chi}_{\text{eff}}^2 = 7493.68$; $\Delta\bar{\chi}_{\text{eff}}^2 = 6291.85$; $R - 1 = 0.00504$

χ_{eff}^2 : CMB - simall_100x143_offlike5_EE_Aplanck-B: 395.79 (Δ 0.09) commander_dx12_v3.2.29: 24.32 (Δ -0.23) CamSpec like_10.7HM: 7048.88

9.2 base_nnu_mnu_CamSpecHM_TT_lowl_lowE_post_lensing/base_nnu_mnu_plikHM_TT_lowl_lowE_post_lensing

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02188^{+0.00068}_{-0.00075}$	$\sigma_8/h^{0.5}$	$0.974^{+0.040}_{-0.053}$	$H(0.15)$	$69.7^{+5.5}_{-6.5}$
$\Omega_c h^2$	$0.1188^{+0.0079}_{-0.0074}$	$r_{\text{drag}} h$	$95.4^{+6.7}_{-8.5}$	$D_{\text{M}}(0.15)$	675^{+70}_{-59}
$100\theta_{MC}$	$1.0409^{+0.0012}_{-0.0012}$	$\langle d^2 \rangle^{1/2}$	$2.468^{+0.080}_{-0.070}$	$H(0.38)$	$80.2^{+5.1}_{-5.6}$
τ	$0.051^{+0.016}_{-0.015}$	z_{re}	$7.4^{+1.6}_{-1.7}$	$D_{\text{M}}(0.38)$	1601^{+140}_{-130}
Σm_ν	< 0.562	$10^9 A_s$	$2.074^{+0.087}_{-0.084}$	$H(0.51)$	$87.2^{+4.9}_{-5.2}$
N_{eff}	$2.85^{+0.58}_{-0.54}$	$10^9 A_s e^{-2\tau}$	$1.872^{+0.044}_{-0.045}$	$D_{\text{M}}(0.51)$	2067^{+170}_{-150}
$\ln(10^{10} A_s)$	$3.032^{+0.041}_{-0.041}$	D_{40}	1245^{+42}_{-40}	$H(0.61)$	$93.0^{+4.8}_{-4.9}$
n_s	$0.953^{+0.027}_{-0.028}$	D_{220}	5706^{+82}_{-82}	$D_{\text{M}}(0.61)$	2401^{+190}_{-170}
y_{cal}	$1.0005^{+0.0049}_{-0.0050}$	D_{810}	2534^{+28}_{-29}	$H(2.33)$	$235.4^{+7.4}_{-7.1}$
A_{217}^{CIB}	44^{+20}_{-20}	D_{1420}	815^{+10}_{-10}	$D_{\text{M}}(2.33)$	5900^{+310}_{-280}
$\xi^{tSZ-CIB}$	—	D_{2000}	$230.1^{+4.5}_{-4.5}$	$f\sigma_8(0.15)$	$0.462^{+0.016}_{-0.016}$
A_{143}^{tSZ}	$4.5^{+3.8}_{-4.2}$	$n_{s,0.002}$	$0.953^{+0.027}_{-0.028}$	$\sigma_8(0.15)$	$0.718^{+0.056}_{-0.076}$
A_{100}^{PS}	251^{+60}_{-60}	Y_P	$0.2425^{+0.0079}_{-0.0079}$	$f\sigma_8(0.38)$	$0.472^{+0.018}_{-0.021}$
A_{143}^{PS}	44^{+20}_{-20}	Y_P^{BBN}	$0.2438^{+0.0080}_{-0.0079}$	$\sigma_8(0.38)$	$0.633^{+0.054}_{-0.073}$
A_{217}^{PS}	109^{+30}_{-30}	$10^5 D/H$	$2.61^{+0.14}_{-0.13}$	$f\sigma_8(0.51)$	$0.467^{+0.021}_{-0.026}$
A^{kSZ}	—	Age/Gyr	$14.12^{+0.73}_{-0.66}$	$\sigma_8(0.51)$	$0.591^{+0.052}_{-0.071}$
c_{100}	$0.9985^{+0.0022}_{-0.0027}$	z_*	$1090.3^{+1.2}_{-1.0}$	$f\sigma_8(0.61)$	$0.460^{+0.023}_{-0.030}$
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	r_*	$146.1^{+5.0}_{-5.0}$	$\sigma_8(0.61)$	$0.562^{+0.051}_{-0.069}$
H_0	$64.1^{+6.1}_{-6.9}$	$100\theta_*$	$1.0413^{+0.0015}_{-0.0014}$	$f\sigma_8(2.33)$	$0.284^{+0.025}_{-0.033}$
Ω_Λ	$0.650^{+0.061}_{-0.084}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$14.03^{+0.47}_{-0.47}$	$\sigma_8(2.33)$	$0.290^{+0.029}_{-0.038}$
Ω_m	$0.350^{+0.084}_{-0.061}$	z_{drag}	$1058.6^{+2.3}_{-2.4}$	f_{2000}^{143}	30^{+7}_{-7}
$\Omega_m h^2$	$0.1427^{+0.0090}_{-0.0089}$	r_{drag}	$149.0^{+5.3}_{-5.3}$	$f_{2000}^{143 \times 217}$	33^{+5}_{-5}
$\Omega_\nu h^2$	< 0.00547	k_{D}	$0.1393^{+0.0038}_{-0.0036}$	f_{2000}^{217}	$107.4^{+4.9}_{-4.9}$
$\Omega_m h^3$	$0.091^{+0.012}_{-0.011}$	$100\theta_{\text{D}}$	$0.1607^{+0.0013}_{-0.0013}$	χ^2_{lensing}	$9.2 (\nu: 0.6)$
σ_8	$0.780^{+0.056}_{-0.076}$	z_{eq}	3454^{+140}_{-120}	χ^2_{small}	$396.9 (\nu: 1.4)$
S_8	$0.840^{+0.034}_{-0.033}$	k_{eq}	$0.01040^{+0.00032}_{-0.00030}$	χ^2_{lowl}	$25.4 (\nu: 3.0)$
$\sigma_8 \Omega_m^{0.5}$	$0.460^{+0.019}_{-0.018}$	$100\theta_{\text{eq}}$	$0.803^{+0.023}_{-0.026}$	χ^2_{prior}	$7.4 (\nu: 6.3)$
$\sigma_8 \Omega_m^{0.25}$	$0.599^{+0.025}_{-0.030}$	$100\theta_{\text{s,eq}}$	$0.444^{+0.012}_{-0.013}$	χ^2_{CMB}	$4349 (\nu: 4948118.8)$

Best-fit $\chi^2_{\text{eff}} = 7479.93$; $\Delta\chi^2_{\text{eff}} = 6292.18$; $\bar{\chi}^2_{\text{eff}} = 7502.27$; $\Delta\bar{\chi}^2_{\text{eff}} = 6291.92$; $R - 1 = 0.00874$
 χ^2_{eff} : CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consect8: 8.77 (Δ 0.03) small_100x143_offlike5_EE_Aplanck_B: 395.68 (Δ 0.00) commander_dx12_v3.2_29: 24.30 (Δ -0.01) CamSpec like_10.7HM: 7049.15

9.3 base_nnu_mnu_CamSpecHM_TTTEEE_lowl_lowE/base_nnu_mnu_plikHM_TTTEEE_lowl_lowE

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02219^{+0.00045}_{-0.00046}$	$\sigma_8/h^{0.5}$	$0.978^{+0.042}_{-0.051}$	$H(0.15)$	$71.3^{+3.6}_{-3.8}$
$\Omega_c h^2$	$0.1180^{+0.0066}_{-0.0063}$	$r_{\text{drag}} h$	$97.8^{+4.0}_{-4.6}$	$D_M(0.15)$	658^{+38}_{-36}
$100\theta_{MC}$	$1.04109^{+0.00091}_{-0.00091}$	$\langle d^2 \rangle^{1/2}$	$2.445^{+0.063}_{-0.064}$	$H(0.38)$	$81.5^{+3.3}_{-3.6}$
τ	$0.053^{+0.016}_{-0.015}$	z_{re}	$7.5^{+1.6}_{-1.6}$	$D_M(0.38)$	1565^{+82}_{-77}
Σm_ν	< 0.354	$10^9 A_s$	$2.080^{+0.080}_{-0.077}$	$H(0.51)$	$88.3^{+3.3}_{-3.5}$
N_{eff}	$2.90^{+0.43}_{-0.40}$	$10^9 A_s e^{-2\tau}$	$1.871^{+0.037}_{-0.039}$	$D_M(0.51)$	2024^{+100}_{-95}
$\ln(10^{10} A_s)$	$3.035^{+0.038}_{-0.037}$	D_{40}	1236^{+32}_{-32}	$H(0.61)$	$94.0^{+3.3}_{-3.4}$
n_s	$0.959^{+0.018}_{-0.018}$	D_{220}	5724^{+78}_{-80}	$D_M(0.61)$	2354^{+110}_{-110}
y_{cal}	$1.0005^{+0.0050}_{-0.0051}$	D_{810}	2536^{+28}_{-28}	$H(2.33)$	$234.9^{+5.9}_{-5.7}$
A_{217}^{CIB}	43^{+20}_{-20}	D_{1420}	$817.2^{+9.9}_{-10}$	$D_M(2.33)$	5841^{+200}_{-190}
$\xi^{tSZ-CIB}$	—	D_{2000}	$231.2^{+3.9}_{-4.1}$	$f\sigma_8(0.15)$	$0.457^{+0.018}_{-0.020}$
A_{143}^{tSZ}	$4.7^{+3.9}_{-4.3}$	$n_{s,0.002}$	$0.959^{+0.018}_{-0.018}$	$\sigma_8(0.15)$	$0.732^{+0.042}_{-0.056}$
A_{100}^{PS}	247^{+60}_{-50}	Y_P	$0.2434^{+0.0058}_{-0.0057}$	$f\sigma_8(0.38)$	$0.472^{+0.020}_{-0.022}$
A_{143}^{PS}	41^{+20}_{-20}	Y_P^{BBN}	$0.2447^{+0.0058}_{-0.0058}$	$\sigma_8(0.38)$	$0.648^{+0.039}_{-0.052}$
A_{217}^{PS}	109^{+30}_{-30}	$10^5 D/H$	$2.57^{+0.11}_{-0.099}$	$f\sigma_8(0.51)$	$0.469^{+0.021}_{-0.024}$
A^{kSZ}	—	Age/Gyr	$13.98^{+0.48}_{-0.45}$	$\sigma_8(0.51)$	$0.606^{+0.038}_{-0.050}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	z_*	$1089.84^{+0.80}_{-0.75}$	$f\sigma_8(0.61)$	$0.463^{+0.021}_{-0.025}$
c_{217}	$0.9996^{+0.0037}_{-0.0027}$	r_*	$145.8^{+4.0}_{-3.9}$	$\sigma_8(0.61)$	$0.576^{+0.036}_{-0.048}$
H_0	$65.9^{+3.8}_{-4.0}$	$100\theta_*$	$1.0414^{+0.0011}_{-0.0011}$	$f\sigma_8(2.33)$	$0.291^{+0.018}_{-0.023}$
Ω_Λ	$0.673^{+0.034}_{-0.040}$	$D_M(z_*)/\text{Gpc}$	$14.00^{+0.37}_{-0.36}$	$\sigma_8(2.33)$	$0.299^{+0.020}_{-0.026}$
Ω_m	$0.327^{+0.040}_{-0.034}$	z_{drag}	$1059.3^{+1.6}_{-1.6}$	f_{2000}^{143}	29^{+6}_{-6}
$\Omega_m h^2$	$0.1415^{+0.0073}_{-0.0068}$	r_{drag}	$148.6^{+4.1}_{-4.1}$	$f_{2000}^{143 \times 217}$	32^{+5}_{-5}
$\Omega_\nu h^2$	< 0.00362	k_D	$0.1398^{+0.0030}_{-0.0029}$	f_{2000}^{217}	$106.4^{+4.3}_{-4.2}$
$\Omega_m h^3$	$0.0932^{+0.0085}_{-0.0080}$	$100\theta_D$	$0.16054^{+0.00096}_{-0.00091}$	χ^2_{small}	$397.0 (\nu: 1.6)$
σ_8	$0.794^{+0.044}_{-0.058}$	z_{eq}	3417^{+77}_{-78}	χ^2_{lowl}	$24.1 (\nu: 1.2)$
S_8	$0.827^{+0.035}_{-0.036}$	k_{eq}	$0.01033^{+0.00025}_{-0.00024}$	χ^2_{prior}	$9.8 (\nu: 9.7)$
$\sigma_8 \Omega_m^{0.5}$	$0.453^{+0.019}_{-0.020}$	$100\theta_{\text{eq}}$	$0.810^{+0.015}_{-0.014}$	χ^2_{CMB}	$7359 (\nu: 10476165.4)$
$\sigma_8 \Omega_m^{0.25}$	$0.600^{+0.027}_{-0.031}$	$100\theta_{s,\text{eq}}$	$0.4480^{+0.0075}_{-0.0072}$		

Best-fit $\chi^2_{\text{eff}} = 11919.53$; $\Delta\chi^2_{\text{eff}} = 9155.80$; $\bar{\chi}^2_{\text{eff}} = 11944.15$; $\Delta\bar{\chi}^2_{\text{eff}} = 9151.17$; $R - 1 = 0.00883$

χ^2_{eff} : CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.79 (Δ -0.22) commander_dx12_v3_2_29: 23.66 (Δ -0.62) CamSpec like_10.7HM_1400_unified: 11498.05

9.4 base_nnu_mnu_CamSpecHM_TTTEEE_lowl_lowE_post_lensing/base_nnu_mnu_plikHM_TTTEEE_lowl_lowE_post_lensing

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02218^{+0.00045}_{-0.00044}$	$\sigma_8/h^{0.5}$	$0.982^{+0.028}_{-0.033}$	$H(0.15)$	$71.2^{+3.3}_{-3.6}$
$\Omega_c h^2$	$0.1177^{+0.0063}_{-0.0060}$	$r_{\text{drag}} h$	$97.9^{+3.6}_{-4.1}$	$D_M(0.15)$	658^{+35}_{-33}
$100\theta_{MC}$	$1.04114^{+0.00089}_{-0.00090}$	$\langle d^2 \rangle^{1/2}$	$2.451^{+0.049}_{-0.049}$	$H(0.38)$	$81.4^{+3.2}_{-3.3}$
τ	$0.053^{+0.016}_{-0.015}$	z_{re}	$7.6^{+1.5}_{-1.6}$	$D_M(0.38)$	1566^{+75}_{-73}
Σm_ν	< 0.282	$10^9 A_s$	$2.081^{+0.075}_{-0.072}$	$H(0.51)$	$88.2^{+3.2}_{-3.2}$
N_{eff}	$2.88^{+0.41}_{-0.39}$	$10^9 A_s e^{-2\tau}$	$1.870^{+0.037}_{-0.037}$	$D_M(0.51)$	2026^{+97}_{-86}
$\ln(10^{10} A_s)$	$3.035^{+0.036}_{-0.035}$	D_{40}	1239^{+30}_{-30}	$H(0.61)$	$93.8^{+3.2}_{-3.2}$
n_s	$0.958^{+0.018}_{-0.018}$	D_{220}	5727^{+79}_{-80}	$D_M(0.61)$	2356^{+110}_{-97}
y_{cal}	$1.0006^{+0.0050}_{-0.0051}$	D_{810}	2536^{+28}_{-28}	$H(2.33)$	$234.5^{+5.8}_{-5.6}$
A_{217}^{CIB}	42^{+20}_{-20}	D_{1420}	817^{+10}_{-10}	$D_M(2.33)$	5849^{+190}_{-180}
$\xi^{tSZ-CIB}$	—	D_{2000}	$231.4^{+3.9}_{-4.0}$	$f\sigma_8(0.15)$	$0.458^{+0.013}_{-0.013}$
A_{143}^{tSZ}	$4.8^{+3.9}_{-4.3}$	$n_{s,0.002}$	$0.958^{+0.018}_{-0.018}$	$\sigma_8(0.15)$	$0.735^{+0.034}_{-0.041}$
A_{100}^{PS}	246^{+60}_{-50}	Y_P	$0.2430^{+0.0057}_{-0.0057}$	$f\sigma_8(0.38)$	$0.473^{+0.013}_{-0.014}$
A_{143}^{PS}	41^{+20}_{-20}	Y_P^{BBN}	$0.2443^{+0.0057}_{-0.0057}$	$\sigma_8(0.38)$	$0.650^{+0.032}_{-0.039}$
A_{217}^{PS}	109^{+20}_{-30}	$10^5 D/H$	$2.56^{+0.10}_{-0.097}$	$f\sigma_8(0.51)$	$0.470^{+0.014}_{-0.015}$
A^{kSZ}	—	Age/Gyr	$14.00^{+0.45}_{-0.43}$	$\sigma_8(0.51)$	$0.608^{+0.031}_{-0.038}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	z_*	$1089.79^{+0.77}_{-0.73}$	$f\sigma_8(0.61)$	$0.464^{+0.015}_{-0.017}$
c_{217}	$0.9996^{+0.0037}_{-0.0027}$	r_*	$146.1^{+3.9}_{-3.8}$	$\sigma_8(0.61)$	$0.578^{+0.030}_{-0.036}$
H_0	$65.8^{+3.4}_{-3.8}$	$100\theta_*$	$1.0415^{+0.0011}_{-0.0011}$	$f\sigma_8(2.33)$	$0.292^{+0.015}_{-0.017}$
Ω_Λ	$0.674^{+0.030}_{-0.036}$	$D_M(z_*)/\text{Gpc}$	$14.03^{+0.36}_{-0.36}$	$\sigma_8(2.33)$	$0.300^{+0.017}_{-0.020}$
Ω_m	$0.326^{+0.036}_{-0.030}$	z_{drag}	$1059.2^{+1.6}_{-1.6}$	f_{2000}^{143}	29^{+6}_{-6}
$\Omega_m h^2$	$0.1409^{+0.0071}_{-0.0065}$	r_{drag}	$148.8^{+4.0}_{-4.0}$	$f_{2000}^{143 \times 217}$	31^{+4}_{-5}
$\Omega_\nu h^2$	< 0.00286	k_D	$0.1396^{+0.0029}_{-0.0028}$	f_{2000}^{217}	$106.2^{+4.2}_{-4.2}$
$\Omega_m h^3$	$0.0928^{+0.0083}_{-0.0077}$	$100\theta_D$	$0.16048^{+0.00093}_{-0.00091}$	χ^2_{lensing}	$9.14 (\nu: 0.4)$
σ_8	$0.797^{+0.035}_{-0.042}$	z_{eq}	3420^{+74}_{-73}	χ^2_{small}	$397.0 (\nu: 1.5)$
S_8	$0.829^{+0.026}_{-0.025}$	k_{eq}	$0.01032^{+0.00024}_{-0.00023}$	χ^2_{lowl}	$24.4 (\nu: 1.1)$
$\sigma_8 \Omega_m^{0.5}$	$0.454^{+0.014}_{-0.014}$	$100\theta_{\text{eq}}$	$0.810^{+0.014}_{-0.014}$	χ^2_{prior}	$9.7 (\nu: 9.5)$
$\sigma_8 \Omega_m^{0.25}$	$0.602^{+0.019}_{-0.020}$	$100\theta_{s,\text{eq}}$	$0.4477^{+0.0070}_{-0.0069}$	χ^2_{CMB}	$7367 (\nu: 10475842.1)$

Best-fit $\chi^2_{\text{eff}} = 11928.16$; $\Delta\chi^2_{\text{eff}} = 9155.56$; $\bar{\chi}^2_{\text{eff}} = 11952.59$; $\Delta\bar{\chi}^2_{\text{eff}} = 9151.05$; $R - 1 = 0.01252$
 χ^2_{eff} : CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.57 (Δ -0.09) small_100x143_offlike5_EE_Aplanck_B: 395.68 (Δ -0.16) commander_dx12_v3_2_29: 24.10 (Δ -0.15) CamSpec like_10.7HM_1400_unified: 11497.75

9.5 base_nnu_mnu_CamSpecHM_TT_lowl_lowE_BAO/base_nnu_mnu_plikHM_TT_lowl_lowE_BAO

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02225^{+0.00046}_{-0.00046}$	$r_{\text{drag}} h$	$99.9^{+2.1}_{-2.0}$	$H(0.38)$	$83.4^{+3.0}_{-3.0}$
$\Omega_c h^2$	$0.1200^{+0.0079}_{-0.0078}$	$\langle d^2 \rangle^{1/2}$	$2.424^{+0.062}_{-0.067}$	$D_{\text{M}}(0.38)$	1522^{+61}_{-58}
$100\theta_{MC}$	$1.0409^{+0.0012}_{-0.0011}$	z_{re}	$7.6^{+1.6}_{-1.7}$	$H(0.51)$	$90.1^{+3.1}_{-3.1}$
τ	$0.054^{+0.016}_{-0.016}$	$10^9 A_s$	$2.094^{+0.084}_{-0.082}$	$D_{\text{M}}(0.51)$	1971^{+77}_{-73}
Σm_ν	< 0.177	$10^9 A_s e^{-2\tau}$	$1.881^{+0.042}_{-0.044}$	$H(0.61)$	$95.7^{+3.2}_{-3.2}$
N_{eff}	$3.11^{+0.48}_{-0.47}$	D_{40}	1222^{+31}_{-31}	$D_{\text{M}}(0.61)$	2294^{+89}_{-84}
$\ln(10^{10} A_s)$	$3.042^{+0.039}_{-0.040}$	D_{220}	5714^{+80}_{-79}	$H(2.33)$	$236.7^{+6.9}_{-7.0}$
n_s	$0.969^{+0.018}_{-0.018}$	D_{810}	2535^{+28}_{-28}	$D_{\text{M}}(2.33)$	5741^{+190}_{-190}
y_{cal}	$1.0005^{+0.0049}_{-0.0049}$	D_{1420}	815^{+10}_{-10}	$f\sigma_8(0.15)$	$0.455^{+0.018}_{-0.019}$
A_{217}^{CIB}	45^{+20}_{-20}	D_{2000}	$229.5^{+4.5}_{-4.4}$	$\sigma_8(0.15)$	$0.749^{+0.031}_{-0.033}$
$\xi^{tSZ-CIB}$	—	$n_{s,0.002}$	$0.969^{+0.018}_{-0.018}$	$f\sigma_8(0.38)$	$0.474^{+0.018}_{-0.020}$
A_{143}^{tSZ}	$4.4^{+3.7}_{-4.2}$	Y_P	$0.2462^{+0.0063}_{-0.0065}$	$\sigma_8(0.38)$	$0.664^{+0.027}_{-0.032}$
A_{100}^{PS}	254^{+60}_{-60}	Y_P^{BBN}	$0.2475^{+0.0063}_{-0.0065}$	$f\sigma_8(0.51)$	$0.473^{+0.018}_{-0.020}$
A_{143}^{PS}	45^{+20}_{-20}	$10^5 D/H$	$2.63^{+0.14}_{-0.14}$	$\sigma_8(0.51)$	$0.622^{+0.025}_{-0.030}$
A_{217}^{PS}	108^{+30}_{-30}	Age/Gyr	$13.74^{+0.47}_{-0.44}$	$f\sigma_8(0.61)$	$0.468^{+0.017}_{-0.019}$
A^{kSZ}	—	z_*	$1090.13^{+0.98}_{-0.99}$	$\sigma_8(0.61)$	$0.592^{+0.024}_{-0.028}$
c_{100}	$0.9985^{+0.0022}_{-0.0027}$	r_*	$144.2^{+4.6}_{-4.4}$	$f\sigma_8(2.33)$	$0.299^{+0.012}_{-0.013}$
c_{217}	$0.9997^{+0.0038}_{-0.0028}$	$100\theta_*$	$1.0411^{+0.0014}_{-0.0013}$	$\sigma_8(2.33)$	$0.308^{+0.013}_{-0.015}$
H_0	$68.0^{+2.9}_{-2.9}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.85^{+0.43}_{-0.41}$	f_{2000}^{143}	31^{+7}_{-7}
Ω_Λ	$0.691^{+0.016}_{-0.017}$	z_{drag}	$1059.7^{+1.7}_{-1.8}$	$f_{2000}^{143 \times 217}$	33^{+5}_{-5}
Ω_m	$0.309^{+0.017}_{-0.016}$	r_{drag}	$146.9^{+4.8}_{-4.5}$	f_{2000}^{217}	$108.0^{+4.6}_{-4.8}$
$\Omega_m h^2$	$0.1430^{+0.0083}_{-0.0082}$	k_{D}	$0.1407^{+0.0033}_{-0.0034}$	χ_{simall}^2	$397.0 (\nu: 1.6)$
$\Omega_\nu h^2$	< 0.00189	$100\theta_{\text{D}}$	$0.1612^{+0.0012}_{-0.0012}$	χ_{lowl}^2	$22.8 (\nu: 0.8)$
$\Omega_m h^3$	$0.0973^{+0.0094}_{-0.0090}$	z_{eq}	3370^{+66}_{-68}	$\chi_{6\text{DF}}^2$	$0.059 (\nu: 0.0)$
σ_8	$0.810^{+0.033}_{-0.036}$	k_{eq}	$0.01033^{+0.00030}_{-0.00030}$	χ_{MGS}^2	$1.45 (\nu: 0.2)$
S_8	$0.822^{+0.035}_{-0.037}$	$100\theta_{\text{eq}}$	$0.819^{+0.013}_{-0.012}$	χ_{DR12BAO}^2	$4.7 (\nu: 1.4)$
$\sigma_8 \Omega_m^{0.5}$	$0.450^{+0.019}_{-0.021}$	$100\theta_{\text{s,eq}}$	$0.4524^{+0.0067}_{-0.0063}$	χ_{prior}^2	$7.5 (\nu: 6.5)$
$\sigma_8 \Omega_m^{0.25}$	$0.604^{+0.024}_{-0.027}$	$H(0.15)$	$73.3^{+2.9}_{-2.9}$	χ_{BAO}^2	$6.2 (\nu: 0.9)$
$\sigma_8/h^{0.5}$	$0.982^{+0.034}_{-0.038}$	$D_{\text{M}}(0.15)$	638^{+27}_{-25}	χ_{CMB}^2	$4339 (\nu: 4948025.5)$

Best-fit $\chi_{\text{eff}}^2 = 7476.70$; $\Delta\chi_{\text{eff}}^2 = 6292.30$; $\bar{\chi}_{\text{eff}}^2 = 7498.64$; $\Delta\bar{\chi}_{\text{eff}}^2 = 6291.94$; $R - 1 = 0.00711$
 χ_{eff}^2 : BAO - 6DF: 0.00 (Δ -0.01) MGS: 1.54 (Δ 0.13) DR12BAO: 3.66 (Δ -0.25) CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.81 (Δ -0.06) commander_dx12_v3_2_29: 23.10 (Δ -0.22) CamSpec like_10.7HM: 7050.23

9.6 base_nnu_mnu_CamSpecHM_TT_lowl_lowE_BAO_post_Pantheon18/base_nnu_mnu_plikHM_TT_lowl_lowE_BAO_post_Pantheon18

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02227^{+0.00045}_{-0.00045}$	$\langle d^2 \rangle^{1/2}$	$2.422^{+0.061}_{-0.065}$	$H(0.51)$	$90.2^{+3.1}_{-3.1}$
$\Omega_c h^2$	$0.1201^{+0.0079}_{-0.0078}$	z_{re}	$7.6^{+1.6}_{-1.7}$	$D_{\text{M}}(0.51)$	1968^{+75}_{-71}
$100\theta_{MC}$	$1.0409^{+0.0012}_{-0.0011}$	$10^9 A_s$	$2.095^{+0.083}_{-0.082}$	$H(0.61)$	$95.9^{+3.2}_{-3.2}$
τ	$0.054^{+0.016}_{-0.016}$	$10^9 A_s e^{-2\tau}$	$1.881^{+0.042}_{-0.044}$	$D_{\text{M}}(0.61)$	2290^{+86}_{-82}
Σm_ν	< 0.173	D_{40}	1221^{+30}_{-30}	$H(2.33)$	$236.8^{+6.9}_{-6.9}$
N_{eff}	$3.13^{+0.47}_{-0.46}$	D_{220}	5714^{+80}_{-79}	$D_{\text{M}}(2.33)$	5734^{+190}_{-180}
$\ln(10^{10} A_s)$	$3.042^{+0.039}_{-0.040}$	D_{810}	2536^{+28}_{-28}	$f\sigma_8(0.15)$	$0.455^{+0.018}_{-0.019}$
n_s	$0.970^{+0.017}_{-0.017}$	D_{1420}	815^{+10}_{-10}	$\sigma_8(0.15)$	$0.750^{+0.031}_{-0.033}$
y_{cal}	$1.0005^{+0.0049}_{-0.0049}$	D_{2000}	$229.5^{+4.5}_{-4.4}$	$f\sigma_8(0.38)$	$0.474^{+0.018}_{-0.019}$
A_{217}^{CIB}	45^{+20}_{-20}	$n_{s,0.002}$	$0.970^{+0.017}_{-0.017}$	$\sigma_8(0.38)$	$0.665^{+0.026}_{-0.031}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.2464^{+0.0063}_{-0.0063}$	$f\sigma_8(0.51)$	$0.473^{+0.017}_{-0.019}$
A_{143}^{tSZ}	$4.3^{+3.7}_{-4.2}$	Y_P^{BBN}	$0.2477^{+0.0063}_{-0.0064}$	$\sigma_8(0.51)$	$0.623^{+0.025}_{-0.029}$
A_{100}^{PS}	254^{+60}_{-60}	$10^5 D/H$	$2.63^{+0.14}_{-0.13}$	$f\sigma_8(0.61)$	$0.468^{+0.017}_{-0.019}$
A_{143}^{PS}	45^{+20}_{-20}	Age/Gyr	$13.73^{+0.45}_{-0.44}$	$\sigma_8(0.61)$	$0.592^{+0.024}_{-0.028}$
A_{217}^{PS}	108^{+20}_{-30}	z_*	$1090.13^{+0.98}_{-0.98}$	$f\sigma_8(2.33)$	$0.299^{+0.012}_{-0.013}$
A^{kSZ}	—	r_*	$144.1^{+4.6}_{-4.3}$	$\sigma_8(2.33)$	$0.308^{+0.013}_{-0.014}$
c_{100}	$0.9985^{+0.0022}_{-0.0027}$	$100\theta_*$	$1.0411^{+0.0014}_{-0.0013}$	f_{2000}^{143}	31^{+7}_{-7}
c_{217}	$0.9998^{+0.0038}_{-0.0028}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.84^{+0.42}_{-0.40}$	$f_{2000}^{143 \times 217}$	33^{+5}_{-5}
H_0	$68.2^{+2.8}_{-2.8}$	z_{drag}	$1059.8^{+1.7}_{-1.7}$	f_{2000}^{217}	$108.0^{+4.6}_{-4.8}$
Ω_Λ	$0.692^{+0.015}_{-0.015}$	r_{drag}	$146.8^{+4.7}_{-4.5}$	χ_{small}^2	$397.1 (\nu: 1.6)$
Ω_m	$0.308^{+0.015}_{-0.015}$	k_{D}	$0.1408^{+0.0033}_{-0.0034}$	χ_{lowl}^2	$22.7 (\nu: 0.7)$
$\Omega_m h^2$	$0.1430^{+0.0083}_{-0.0082}$	$100\theta_{\text{D}}$	$0.1612^{+0.0012}_{-0.0012}$	χ_{JLA}^2	$1035.02 (\nu: 0.1)$
$\Omega_\nu h^2$	< 0.00184	z_{eq}	3366^{+63}_{-66}	$\chi_{6\text{DF}}^2$	$0.047 (\nu: 0.0)$
$\Omega_m h^3$	$0.0976^{+0.0093}_{-0.0088}$	k_{eq}	$0.01033^{+0.00030}_{-0.00030}$	χ_{MGS}^2	$1.54 (\nu: 0.2)$
σ_8	$0.811^{+0.033}_{-0.035}$	$100\theta_{\text{eq}}$	$0.820^{+0.013}_{-0.012}$	χ_{DR12BAO}^2	$4.4 (\nu: 0.9)$
S_8	$0.821^{+0.035}_{-0.037}$	$100\theta_{\text{s,eq}}$	$0.4528^{+0.0065}_{-0.0060}$	χ_{prior}^2	$7.5 (\nu: 6.4)$
$\sigma_8 \Omega_m^{0.5}$	$0.450^{+0.019}_{-0.020}$	$H(0.15)$	$73.4^{+2.8}_{-2.8}$	χ_{BAO}^2	$6.0 (\nu: 0.6)$
$\sigma_8 \Omega_m^{0.25}$	$0.604^{+0.023}_{-0.027}$	$D_{\text{M}}(0.15)$	636^{+26}_{-25}	χ_{CMB}^2	$4339 (\nu: 4948084.9)$
$\sigma_8/h^{0.5}$	$0.982^{+0.033}_{-0.038}$	$H(0.38)$	$83.5^{+3.0}_{-3.0}$		
$r_{\text{drag}} h$	$100.1^{+1.9}_{-1.9}$	$D_{\text{M}}(0.38)$	1519^{+59}_{-57}		

Best-fit $\chi_{\text{eff}}^2 = 8511.44$; $\Delta\chi_{\text{eff}}^2 = 6292.17$; $\bar{\chi}_{\text{eff}}^2 = 8533.53$; $\Delta\bar{\chi}_{\text{eff}}^2 = 6292.04$; $R - 1 = 0.00839$
 χ_{eff}^2 : BAO - 6DF: 0.00 (Δ -0.01) MGS: 1.68 (Δ 0.20) DR12BAO: 3.50 (Δ -0.28) CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.87 (Δ -0.01) commander_dx12_v3_2_29: 22.77 (Δ -0.45) CamSpec like_10.7HM: 7050.67 SN - JLA Pantheon18: 1034.80 (Δ -0.07)

9.7 base_nnu_mnu_CamSpecHM_TT_lowl_lowE_BAO_post_Aver15/base_nnu_mnu_plikHM_TT_lowl_lowE_BAO_post_Aver15

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02221^{+0.00043}_{-0.00043}$	$\langle d^2 \rangle^{1/2}$	$2.426^{+0.061}_{-0.065}$	$H(0.51)$	$89.6^{+2.4}_{-2.4}$
$\Omega_c h^2$	$0.1188^{+0.0064}_{-0.0063}$	z_{re}	$7.6^{+1.6}_{-1.7}$	$D_{\text{M}}(0.51)$	1983^{+62}_{-59}
$100\theta_{MC}$	$1.0410^{+0.0011}_{-0.0010}$	$10^9 A_s$	$2.087^{+0.077}_{-0.077}$	$H(0.61)$	$95.2^{+2.5}_{-2.5}$
τ	$0.053^{+0.016}_{-0.016}$	$10^9 A_s e^{-2\tau}$	$1.875^{+0.036}_{-0.037}$	$D_{\text{M}}(0.61)$	2307^{+71}_{-68}
Σm_ν	< 0.166	D_{40}	1224^{+29}_{-29}	$H(2.33)$	$235.6^{+5.5}_{-5.5}$
N_{eff}	$3.04^{+0.37}_{-0.36}$	D_{220}	5715^{+80}_{-79}	$D_{\text{M}}(2.33)$	5770^{+150}_{-150}
$\ln(10^{10} A_s)$	$3.038^{+0.036}_{-0.037}$	D_{810}	2534^{+28}_{-28}	$f\sigma_8(0.15)$	$0.454^{+0.018}_{-0.019}$
n_s	$0.967^{+0.015}_{-0.015}$	D_{1420}	815^{+10}_{-10}	$\sigma_8(0.15)$	$0.747^{+0.028}_{-0.031}$
y_{cal}	$1.0005^{+0.0049}_{-0.0049}$	D_{2000}	$230.0^{+4.1}_{-4.1}$	$f\sigma_8(0.38)$	$0.473^{+0.017}_{-0.019}$
A_{217}^{CIB}	44^{+20}_{-20}	$n_{s,0.002}$	$0.967^{+0.015}_{-0.015}$	$\sigma_8(0.38)$	$0.662^{+0.025}_{-0.028}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.2452^{+0.0049}_{-0.0050}$	$f\sigma_8(0.51)$	$0.472^{+0.016}_{-0.019}$
A_{143}^{tSZ}	$4.4^{+3.8}_{-4.2}$	Y_P^{BBN}	$0.2465^{+0.0049}_{-0.0050}$	$\sigma_8(0.51)$	$0.620^{+0.024}_{-0.026}$
A_{100}^{PS}	252^{+60}_{-60}	$10^5 D/H$	$2.61^{+0.12}_{-0.11}$	$f\sigma_8(0.61)$	$0.467^{+0.016}_{-0.018}$
A_{143}^{PS}	44^{+20}_{-20}	Age/Gyr	$13.81^{+0.36}_{-0.35}$	$\sigma_8(0.61)$	$0.590^{+0.023}_{-0.025}$
A_{217}^{PS}	108^{+20}_{-30}	z_*	$1090.01^{+0.86}_{-0.85}$	$f\sigma_8(2.33)$	$0.297^{+0.011}_{-0.011}$
A^{kSZ}	—	r_*	$144.9^{+3.6}_{-3.5}$	$\sigma_8(2.33)$	$0.307^{+0.012}_{-0.013}$
c_{100}	$0.9985^{+0.0022}_{-0.0027}$	$100\theta_*$	$1.0412^{+0.0012}_{-0.0012}$	f_{2000}^{143}	31^{+7}_{-7}
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.92^{+0.33}_{-0.32}$	$f_{2000}^{143 \times 217}$	33^{+5}_{-5}
H_0	$67.6^{+2.3}_{-2.3}$	z_{drag}	$1059.5^{+1.4}_{-1.5}$	f_{2000}^{217}	$107.6^{+4.4}_{-4.5}$
Ω_Λ	$0.690^{+0.016}_{-0.016}$	r_{drag}	$147.7^{+3.7}_{-3.6}$	χ_{small}^2	$397.0 (\nu: 1.5)$
Ω_m	$0.310^{+0.016}_{-0.016}$	k_{D}	$0.1402^{+0.0027}_{-0.0027}$	χ_{lowl}^2	$23.1 (\nu: 0.7)$
$\Omega_m h^2$	$0.1417^{+0.0066}_{-0.0065}$	$100\theta_{\text{D}}$	$0.16101^{+0.00097}_{-0.00097}$	χ_{Aver15}^2	$0.56 (\nu: 0.3)$
$\Omega_\nu h^2$	< 0.00176	z_{eq}	3374^{+63}_{-65}	$\chi_{6\text{DF}}^2$	$0.062 (\nu: 0.0)$
$\Omega_m h^3$	$0.0958^{+0.0072}_{-0.0069}$	k_{eq}	$0.01029^{+0.00026}_{-0.00026}$	χ_{MGS}^2	$1.39 (\nu: 0.2)$
σ_8	$0.808^{+0.031}_{-0.033}$	$100\theta_{\text{eq}}$	$0.818^{+0.012}_{-0.012}$	χ_{DR12BAO}^2	$4.8 (\nu: 1.4)$
S_8	$0.821^{+0.034}_{-0.037}$	$100\theta_{\text{s,eq}}$	$0.4519^{+0.0064}_{-0.0060}$	χ_{prior}^2	$7.5 (\nu: 6.3)$
$\sigma_8 \Omega_m^{0.5}$	$0.450^{+0.019}_{-0.020}$	$H(0.15)$	$72.9^{+2.3}_{-2.3}$	χ_{BAO}^2	$6.2 (\nu: 1.0)$
$\sigma_8 \Omega_m^{0.25}$	$0.603^{+0.022}_{-0.026}$	$D_{\text{M}}(0.15)$	641^{+22}_{-21}	χ_{CMB}^2	$4339 (\nu: 4948281.6)$
$\sigma_8/h^{0.5}$	$0.982^{+0.033}_{-0.037}$	$H(0.38)$	$82.9^{+2.4}_{-2.4}$		
$r_{\text{drag}} h$	$99.8^{+2.0}_{-2.0}$	$D_{\text{M}}(0.38)$	1530^{+49}_{-47}		

Best-fit $\chi_{\text{eff}}^2 = 7476.67$; $\Delta\chi_{\text{eff}}^2 = 6292.21$; $\bar{\chi}_{\text{eff}}^2 = 7498.80$; $\Delta\bar{\chi}_{\text{eff}}^2 = 6292.04$; $R - 1 = 0.00899$
 χ_{eff}^2 : Abund - Yp_Aver2015: 0.05 (Δ 0.00) BAO - 6DF: 0.01 (Δ 0.00) MGS: 1.47 (Δ 0.00) DR12BAO: 3.76 (Δ -0.00) CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.88 (Δ 0.03) commander_dx12_v3_2_29: 23.28 (Δ -0.04) CamSpec like_10.7HM: 7050.02

9.8 base_nnu_mnu_CamSpecHM_TT_lowl_lowE_BAO_post_Cooke17_Aver15/base_nnu_mnu_plikHM_TT_lowl_lowE_BAO_post_Cooke17_A

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02221^{+0.00043}_{-0.00043}$	$\langle d^2 \rangle^{1/2}$	$2.426^{+0.061}_{-0.065}$	$H(0.51)$	$89.7^{+2.3}_{-2.3}$
$\Omega_c h^2$	$0.1189^{+0.0058}_{-0.0057}$	z_{re}	$7.6^{+1.6}_{-1.7}$	$D_{\text{M}}(0.51)$	1982^{+59}_{-56}
$100\theta_{MC}$	$1.0410^{+0.0010}_{-0.00098}$	$10^9 A_s$	$2.087^{+0.076}_{-0.076}$	$H(0.61)$	$95.3^{+2.4}_{-2.4}$
τ	$0.053^{+0.016}_{-0.016}$	$10^9 A_s e^{-2\tau}$	$1.876^{+0.034}_{-0.035}$	$D_{\text{M}}(0.61)$	2307^{+67}_{-64}
Σm_ν	< 0.165	D_{40}	1224^{+28}_{-29}	$H(2.33)$	$235.6^{+5.0}_{-5.0}$
N_{eff}	$3.04^{+0.33}_{-0.33}$	D_{220}	5714^{+79}_{-78}	$D_{\text{M}}(2.33)$	5769^{+140}_{-140}
$\ln(10^{10} A_s)$	$3.038^{+0.036}_{-0.037}$	D_{810}	2534^{+27}_{-28}	$f\sigma_8(0.15)$	$0.455^{+0.017}_{-0.019}$
n_s	$0.967^{+0.014}_{-0.014}$	D_{1420}	$815.2^{+9.9}_{-9.9}$	$\sigma_8(0.15)$	$0.747^{+0.028}_{-0.030}$
y_{cal}	$1.0006^{+0.0049}_{-0.0049}$	D_{2000}	$229.9^{+3.8}_{-3.7}$	$f\sigma_8(0.38)$	$0.473^{+0.016}_{-0.019}$
A_{217}^{CIB}	44^{+20}_{-20}	$n_{s,0.002}$	$0.967^{+0.014}_{-0.014}$	$\sigma_8(0.38)$	$0.662^{+0.025}_{-0.027}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.2452^{+0.0045}_{-0.0046}$	$f\sigma_8(0.51)$	$0.472^{+0.016}_{-0.018}$
A_{143}^{tSZ}	$4.4^{+3.8}_{-4.2}$	Y_P^{BBN}	$0.2466^{+0.0045}_{-0.0046}$	$\sigma_8(0.51)$	$0.620^{+0.023}_{-0.025}$
A_{100}^{PS}	252^{+60}_{-50}	$10^5 D/H$	$2.615^{+0.097}_{-0.098}$	$f\sigma_8(0.61)$	$0.467^{+0.016}_{-0.017}$
A_{143}^{PS}	44^{+20}_{-20}	Age/Gyr	$13.81^{+0.34}_{-0.32}$	$\sigma_8(0.61)$	$0.590^{+0.022}_{-0.024}$
A_{217}^{PS}	108^{+20}_{-30}	z_*	$1090.02^{+0.73}_{-0.74}$	$f\sigma_8(2.33)$	$0.297^{+0.011}_{-0.011}$
A^{kSZ}	—	r_*	$144.9^{+3.3}_{-3.2}$	$\sigma_8(2.33)$	$0.307^{+0.012}_{-0.012}$
c_{100}	$0.9985^{+0.0022}_{-0.0027}$	$100\theta_*$	$1.0412^{+0.0011}_{-0.0011}$	f_{2000}^{143}	31^{+6}_{-6}
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.92^{+0.31}_{-0.30}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-5}
H_0	$67.6^{+2.2}_{-2.2}$	z_{drag}	$1059.5^{+1.4}_{-1.4}$	f_{2000}^{217}	$107.6^{+4.2}_{-4.3}$
Ω_Λ	$0.690^{+0.016}_{-0.016}$	r_{drag}	$147.6^{+3.4}_{-3.3}$	χ_{simall}^2	$397.0 (\nu: 1.5)$
Ω_m	$0.310^{+0.016}_{-0.016}$	k_{D}	$0.1402^{+0.0025}_{-0.0025}$	χ_{lowl}^2	$23.0 (\nu: 0.7)$
$\Omega_m h^2$	$0.1417^{+0.0061}_{-0.0060}$	$100\theta_{\text{D}}$	$0.16102^{+0.00082}_{-0.00084}$	χ_{Aver15}^2	$0.51 (\nu: 0.2)$
$\Omega_\nu h^2$	< 0.00175	z_{eq}	3374^{+63}_{-64}	χ_{Cooke17}^2	$0.28 (\nu: 0.1)$
$\Omega_m h^3$	$0.0959^{+0.0067}_{-0.0065}$	k_{eq}	$0.01029^{+0.00025}_{-0.00024}$	$\chi_{6\text{DF}}^2$	$0.062 (\nu: 0.0)$
σ_8	$0.808^{+0.030}_{-0.033}$	$100\theta_{\text{eq}}$	$0.818^{+0.012}_{-0.012}$	χ_{MGS}^2	$1.39 (\nu: 0.2)$
S_8	$0.821^{+0.034}_{-0.036}$	$100\theta_{\text{s,eq}}$	$0.4519^{+0.0063}_{-0.0060}$	χ_{DR12BAO}^2	$4.8 (\nu: 1.4)$
$\sigma_8 \Omega_m^{0.5}$	$0.450^{+0.018}_{-0.020}$	$H(0.15)$	$72.9^{+2.2}_{-2.2}$	χ_{prior}^2	$7.5 (\nu: 6.3)$
$\sigma_8 \Omega_m^{0.25}$	$0.603^{+0.023}_{-0.024}$	$D_{\text{M}}(0.15)$	641^{+21}_{-20}	χ_{BAO}^2	$6.2 (\nu: 1.0)$
$\sigma_8/h^{0.5}$	$0.982^{+0.033}_{-0.037}$	$H(0.38)$	$83.0^{+2.2}_{-2.2}$	χ_{CMB}^2	$4338 (\nu: 4948297.4)$
$r_{\text{drag}} h$	$99.8^{+2.0}_{-2.0}$	$D_{\text{M}}(0.38)$	1530^{+46}_{-45}	χ_{Abund}^2	$0.79 (\nu: 0.4)$

Best-fit $\chi_{\text{eff}}^2 = 7476.77$; $\Delta\chi_{\text{eff}}^2 = 6292.26$; $\bar{\chi}_{\text{eff}}^2 = 7498.82$; $\Delta\chi_{\text{eff}}^2 = 6292.07$; $R - 1 = 0.00839$
 χ_{eff}^2 : Abund - Yp_Aver2015: 0.05 (Δ -0.04) D_Cooke2017: 0.04 (Δ 0.02) BAO - 6DF: 0.01 (Δ 0.00) MGS: 1.41 (Δ 0.00) DR12BAO: 3.88 (Δ -0.01) CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.86 (Δ -0.08) commander_dx12_v3.2.29: 23.35 (Δ 0.02) CamSpec like_10.7HM: 7050.16

9.9 base_nnu_mnu_CamSpecHM_TT_lowl_lowE_BAO_post_Pantheon18_zre6p5/base_nnu_mnu_plikHM_TT_lowl_lowE_BAO_post_Pantheon18_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02227^{+0.00045}_{-0.00045}$	$\langle d^2 \rangle^{1/2}$	$2.424^{+0.060}_{-0.064}$	$H(0.51)$	$90.3^{+3.1}_{-3.1}$
$\Omega_c h^2$	$0.1201^{+0.0078}_{-0.0078}$	z_{re}	< 9.02	$D_{\text{M}}(0.51)$	1967^{+75}_{-72}
$100\theta_{MC}$	$1.0409^{+0.0012}_{-0.0011}$	$10^9 A_s$	$2.101^{+0.075}_{-0.072}$	$H(0.61)$	$95.9^{+3.2}_{-3.2}$
τ	$0.055^{+0.013}_{-0.012}$	$10^9 A_s e^{-2\tau}$	$1.882^{+0.042}_{-0.044}$	$D_{\text{M}}(0.61)$	2289^{+86}_{-82}
Σm_ν	< 0.175	D_{40}	1221^{+30}_{-30}	$H(2.33)$	$236.8^{+6.9}_{-6.9}$
N_{eff}	$3.13^{+0.47}_{-0.46}$	D_{220}	5714^{+80}_{-79}	$D_{\text{M}}(2.33)$	5732^{+190}_{-180}
$\ln(10^{10} A_s)$	$3.045^{+0.037}_{-0.033}$	D_{810}	2536^{+28}_{-28}	$f\sigma_8(0.15)$	$0.455^{+0.018}_{-0.019}$
n_s	$0.970^{+0.017}_{-0.017}$	D_{1420}	815^{+10}_{-10}	$\sigma_8(0.15)$	$0.751^{+0.030}_{-0.033}$
y_{cal}	$1.0005^{+0.0049}_{-0.0049}$	D_{2000}	$229.5^{+4.5}_{-4.4}$	$f\sigma_8(0.38)$	$0.475^{+0.017}_{-0.019}$
A_{217}^{CIB}	45^{+20}_{-20}	$n_{s,0.002}$	$0.970^{+0.017}_{-0.017}$	$\sigma_8(0.38)$	$0.666^{+0.026}_{-0.031}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.2464^{+0.0062}_{-0.0063}$	$f\sigma_8(0.51)$	$0.474^{+0.017}_{-0.019}$
A_{143}^{tSZ}	$4.3^{+3.7}_{-4.2}$	Y_P^{BBN}	$0.2478^{+0.0063}_{-0.0064}$	$\sigma_8(0.51)$	$0.623^{+0.024}_{-0.029}$
A_{100}^{PS}	254^{+60}_{-60}	$10^5 D/H$	$2.63^{+0.14}_{-0.13}$	$f\sigma_8(0.61)$	$0.469^{+0.017}_{-0.019}$
A_{143}^{PS}	45^{+20}_{-20}	Age/Gyr	$13.72^{+0.45}_{-0.44}$	$\sigma_8(0.61)$	$0.593^{+0.023}_{-0.027}$
A_{217}^{PS}	108^{+20}_{-30}	z_*	$1090.13^{+0.98}_{-0.98}$	$f\sigma_8(2.33)$	$0.299^{+0.011}_{-0.013}$
A^{kSZ}	—	r_*	$144.1^{+4.6}_{-4.3}$	$\sigma_8(2.33)$	$0.309^{+0.012}_{-0.014}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	$100\theta_*$	$1.0410^{+0.0014}_{-0.0013}$	f_{2000}^{143}	31^{+7}_{-7}
c_{217}	$0.9997^{+0.0038}_{-0.0028}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.84^{+0.42}_{-0.40}$	$f_{2000}^{143 \times 217}$	33^{+5}_{-5}
H_0	$68.2^{+2.8}_{-2.7}$	z_{drag}	$1059.8^{+1.7}_{-1.7}$	f_{2000}^{217}	$108.0^{+4.6}_{-4.8}$
Ω_Λ	$0.692^{+0.015}_{-0.015}$	r_{drag}	$146.8^{+4.7}_{-4.5}$	χ_{small}^2	$397.0 (\nu: 1.7)$
Ω_m	$0.308^{+0.015}_{-0.015}$	k_{D}	$0.1408^{+0.0033}_{-0.0034}$	χ_{lowl}^2	$22.7 (\nu: 0.7)$
$\Omega_m h^2$	$0.1431^{+0.0083}_{-0.0082}$	$100\theta_{\text{D}}$	$0.1612^{+0.0012}_{-0.0012}$	χ_{JLA}^2	$1035.01 (\nu: 0.1)$
$\Omega_\nu h^2$	< 0.00186	z_{eq}	3365^{+63}_{-66}	$\chi_{6\text{DF}}^2$	$0.047 (\nu: 0.0)$
$\Omega_m h^3$	$0.0977^{+0.0093}_{-0.0089}$	k_{eq}	$0.01033^{+0.00030}_{-0.00030}$	χ_{MGS}^2	$1.55 (\nu: 0.2)$
σ_8	$0.812^{+0.033}_{-0.035}$	$100\theta_{\text{eq}}$	$0.820^{+0.013}_{-0.012}$	χ_{DR12BAO}^2	$4.4 (\nu: 0.9)$
S_8	$0.822^{+0.034}_{-0.037}$	$100\theta_{\text{s,eq}}$	$0.4528^{+0.0065}_{-0.0060}$	χ_{prior}^2	$7.5 (\nu: 6.4)$
$\sigma_8 \Omega_m^{0.5}$	$0.450^{+0.019}_{-0.020}$	$H(0.15)$	$73.5^{+2.8}_{-2.8}$	χ_{BAO}^2	$6.0 (\nu: 0.6)$
$\sigma_8 \Omega_m^{0.25}$	$0.605^{+0.023}_{-0.026}$	$D_{\text{M}}(0.15)$	636^{+26}_{-25}	χ_{CMB}^2	$4339 (\nu: 4948106.4)$
$\sigma_8/h^{0.5}$	$0.983^{+0.033}_{-0.038}$	$H(0.38)$	$83.6^{+3.0}_{-2.9}$		
$r_{\text{drag}} h$	$100.1^{+1.9}_{-1.9}$	$D_{\text{M}}(0.38)$	1518^{+59}_{-56}		

$$\bar{\chi}_{\text{eff}}^2 = 8533.27; \Delta \bar{\chi}_{\text{eff}}^2 = 6292.03; R - 1 = 0.00802$$

9.10 base_nnu_mnu_CamSpecHM_TTTEEE_lowl_lowE_BAO/base_nnu_mnu_plikHM_TTTEEE_lowl_lowE_BAO

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02233^{+0.00038}_{-0.00038}$	$r_{\text{drag}} h$	$99.7^{+1.8}_{-1.8}$	$H(0.38)$	$82.7^{+2.6}_{-2.5}$
$\Omega_c h^2$	$0.1183^{+0.0064}_{-0.0063}$	$\langle d^2 \rangle^{1/2}$	$2.434^{+0.055}_{-0.057}$	$D_{\text{M}}(0.38)$	1534^{+51}_{-50}
$100\theta_{MC}$	$1.04109^{+0.00091}_{-0.00088}$	z_{re}	$7.6^{+1.6}_{-1.6}$	$H(0.51)$	$89.4^{+2.6}_{-2.6}$
τ	$0.054^{+0.016}_{-0.015}$	$10^9 A_s$	$2.088^{+0.080}_{-0.076}$	$D_{\text{M}}(0.51)$	1988^{+64}_{-64}
Σm_ν	< 0.142	$10^9 A_s e^{-2\tau}$	$1.874^{+0.037}_{-0.037}$	$H(0.61)$	$95.0^{+2.7}_{-2.6}$
N_{eff}	$2.99^{+0.39}_{-0.37}$	D_{40}	1228^{+28}_{-28}	$D_{\text{M}}(0.61)$	2313^{+74}_{-73}
$\ln(10^{10} A_s)$	$3.039^{+0.038}_{-0.037}$	D_{220}	5729^{+76}_{-77}	$H(2.33)$	$235.1^{+5.7}_{-5.6}$
n_s	$0.965^{+0.015}_{-0.015}$	D_{810}	2536^{+27}_{-27}	$D_{\text{M}}(2.33)$	5783^{+160}_{-160}
y_{cal}	$1.0006^{+0.0049}_{-0.0048}$	D_{1420}	$817.2^{+9.7}_{-9.8}$	$f\sigma_8(0.15)$	$0.455^{+0.015}_{-0.016}$
A_{217}^{CIB}	43^{+20}_{-20}	D_{2000}	$231.1^{+3.9}_{-4.0}$	$\sigma_8(0.15)$	$0.747^{+0.025}_{-0.029}$
$\xi^{tSZ-CIB}$	—	$n_{s,0.002}$	$0.965^{+0.015}_{-0.015}$	$f\sigma_8(0.38)$	$0.474^{+0.015}_{-0.016}$
A_{143}^{tSZ}	$4.7^{+3.9}_{-4.3}$	Y_P	$0.2446^{+0.0053}_{-0.0053}$	$\sigma_8(0.38)$	$0.662^{+0.023}_{-0.026}$
A_{100}^{PS}	248^{+60}_{-50}	Y_P^{BBN}	$0.2459^{+0.0053}_{-0.0053}$	$f\sigma_8(0.51)$	$0.472^{+0.015}_{-0.016}$
A_{143}^{PS}	42^{+20}_{-20}	$10^5 D/H$	$2.57^{+0.11}_{-0.10}$	$\sigma_8(0.51)$	$0.620^{+0.022}_{-0.025}$
A_{217}^{PS}	109^{+20}_{-30}	Age/Gyr	$13.85^{+0.38}_{-0.37}$	$f\sigma_8(0.61)$	$0.467^{+0.014}_{-0.016}$
A^{kSZ}	—	z_*	$1089.75^{+0.76}_{-0.74}$	$\sigma_8(0.61)$	$0.590^{+0.021}_{-0.024}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	r_*	$145.2^{+3.8}_{-3.7}$	$f\sigma_8(2.33)$	$0.297^{+0.010}_{-0.011}$
c_{217}	$0.9996^{+0.0037}_{-0.0027}$	$100\theta_*$	$1.0413^{+0.0011}_{-0.0011}$	$\sigma_8(2.33)$	$0.307^{+0.011}_{-0.012}$
H_0	$67.4^{+2.5}_{-2.4}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.95^{+0.35}_{-0.34}$	f_{2000}^{143}	29^{+6}_{-6}
Ω_Λ	$0.689^{+0.014}_{-0.015}$	z_{drag}	$1059.7^{+1.5}_{-1.5}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
Ω_m	$0.311^{+0.015}_{-0.014}$	r_{drag}	$147.9^{+3.9}_{-3.8}$	f_{2000}^{217}	$106.5^{+4.2}_{-4.1}$
$\Omega_m h^2$	$0.1412^{+0.0068}_{-0.0066}$	k_{D}	$0.1402^{+0.0028}_{-0.0028}$	χ_{small}^2	$397.1 (\nu: 1.8)$
$\Omega_\nu h^2$	< 0.00150	$100\theta_{\text{D}}$	$0.16067^{+0.00093}_{-0.00089}$	χ_{lowl}^2	$23.4 (\nu: 0.7)$
$\Omega_m h^3$	$0.0952^{+0.0077}_{-0.0072}$	z_{eq}	3387^{+54}_{-55}	$\chi_{6\text{DF}}^2$	$0.061 (\nu: 0.0)$
σ_8	$0.808^{+0.028}_{-0.029}$	k_{eq}	$0.01029^{+0.00024}_{-0.00024}$	χ_{MGS}^2	$1.32 (\nu: 0.1)$
S_8	$0.822^{+0.029}_{-0.030}$	$100\theta_{\text{eq}}$	$0.816^{+0.011}_{-0.010}$	χ_{DR12BAO}^2	$4.8 (\nu: 1.3)$
$\sigma_8 \Omega_m^{0.5}$	$0.451^{+0.016}_{-0.016}$	$100\theta_{\text{s,eq}}$	$0.4509^{+0.0054}_{-0.0051}$	χ_{prior}^2	$9.7 (\nu: 9.7)$
$\sigma_8 \Omega_m^{0.25}$	$0.603^{+0.019}_{-0.021}$	$H(0.15)$	$72.7^{+2.5}_{-2.4}$	χ_{BAO}^2	$6.2 (\nu: 0.9)$
$\sigma_8/h^{0.5}$	$0.985^{+0.028}_{-0.030}$	$D_{\text{M}}(0.15)$	643^{+23}_{-22}	χ_{CMB}^2	$7358 (\nu: 10476203.6)$

Best-fit $\chi_{\text{eff}}^2 = 11924.95$; $\Delta\chi_{\text{eff}}^2 = 9155.29$; $\bar{\chi}_{\text{eff}}^2 = 11949.25$; $\Delta\bar{\chi}_{\text{eff}}^2 = 9151.08$; $R - 1 = 0.00978$
 χ_{eff}^2 : BAO - 6DF: 0.01 (Δ -0.00) MGS: 1.47 (Δ 0.07) DR12BAO: 3.77 (Δ -0.15) CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.84 (Δ -0.21) commander_dx12_v3_2_29: 23.33 (Δ -0.38) CamSpec like_10.7HM_1400_unified: 11498.54

9.11 base_nnu_mnu_CamSpecHM_TTTEEE_lowl_lowE_BAO_post_Pantheon18/base_nnu_mnu_plikHM_TTTEEE_lowl_lowE_BAO_post_P

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02235^{+0.00038}_{-0.00037}$	$\langle d^2 \rangle^{1/2}$	$2.432^{+0.054}_{-0.057}$	$H(0.51)$	$89.5^{+2.6}_{-2.5}$
$\Omega_c h^2$	$0.1184^{+0.0065}_{-0.0063}$	z_{re}	$7.6^{+1.6}_{-1.6}$	$D_{\text{M}}(0.51)$	1984^{+63}_{-62}
$100\theta_{MC}$	$1.04108^{+0.00091}_{-0.00088}$	$10^9 A_s$	$2.090^{+0.080}_{-0.075}$	$H(0.61)$	$95.1^{+2.7}_{-2.6}$
τ	$0.054^{+0.016}_{-0.015}$	$10^9 A_s e^{-2\tau}$	$1.874^{+0.037}_{-0.037}$	$D_{\text{M}}(0.61)$	2309^{+72}_{-72}
Σm_ν	< 0.136	D_{40}	1227^{+28}_{-28}	$H(2.33)$	$235.3^{+5.7}_{-5.6}$
N_{eff}	$3.00^{+0.39}_{-0.37}$	D_{220}	5729^{+77}_{-77}	$D_{\text{M}}(2.33)$	5776^{+160}_{-160}
$\ln(10^{10} A_s)$	$3.039^{+0.038}_{-0.036}$	D_{810}	2536^{+27}_{-27}	$f\sigma_8(0.15)$	$0.455^{+0.015}_{-0.015}$
n_s	$0.966^{+0.015}_{-0.014}$	D_{1420}	$817.1^{+9.7}_{-9.9}$	$\sigma_8(0.15)$	$0.748^{+0.025}_{-0.028}$
y_{cal}	$1.0006^{+0.0049}_{-0.0049}$	D_{2000}	$231.0^{+3.8}_{-4.0}$	$f\sigma_8(0.38)$	$0.474^{+0.015}_{-0.016}$
A_{217}^{CIB}	43^{+20}_{-20}	$n_{s,0.002}$	$0.966^{+0.015}_{-0.014}$	$\sigma_8(0.38)$	$0.663^{+0.023}_{-0.025}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.2448^{+0.0052}_{-0.0052}$	$f\sigma_8(0.51)$	$0.472^{+0.015}_{-0.016}$
A_{143}^{tSZ}	$4.7^{+3.9}_{-4.3}$	Y_P^{BBN}	$0.2461^{+0.0053}_{-0.0052}$	$\sigma_8(0.51)$	$0.621^{+0.021}_{-0.024}$
A_{100}^{PS}	248^{+60}_{-50}	$10^5 D/H$	$2.57^{+0.11}_{-0.10}$	$f\sigma_8(0.61)$	$0.468^{+0.014}_{-0.015}$
A_{143}^{PS}	42^{+20}_{-20}	Age/Gyr	$13.83^{+0.38}_{-0.37}$	$\sigma_8(0.61)$	$0.591^{+0.020}_{-0.023}$
A_{217}^{PS}	109^{+20}_{-30}	z_*	$1089.75^{+0.77}_{-0.75}$	$f\sigma_8(2.33)$	$0.298^{+0.010}_{-0.011}$
A^{kSZ}	—	r_*	$145.1^{+3.7}_{-3.7}$	$\sigma_8(2.33)$	$0.307^{+0.011}_{-0.012}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	$100\theta_*$	$1.0413^{+0.0011}_{-0.0011}$	f_{2000}^{143}	29^{+6}_{-6}
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.94^{+0.35}_{-0.34}$	$f_{2000}^{143 \times 217}$	32^{+5}_{-4}
H_0	$67.6^{+2.4}_{-2.3}$	z_{drag}	$1059.7^{+1.5}_{-1.4}$	f_{2000}^{217}	$106.6^{+4.2}_{-4.1}$
Ω_Λ	$0.691^{+0.014}_{-0.014}$	r_{drag}	$147.8^{+3.9}_{-3.8}$	χ_{small}^2	$397.1 (\nu: 1.8)$
Ω_m	$0.309^{+0.014}_{-0.014}$	k_{D}	$0.1403^{+0.0028}_{-0.0028}$	χ_{lowl}^2	$23.3 (\nu: 0.7)$
$\Omega_m h^2$	$0.1413^{+0.0068}_{-0.0066}$	$100\theta_{\text{D}}$	$0.16069^{+0.00094}_{-0.00089}$	χ_{JLA}^2	$1035.06 (\nu: 0.1)$
$\Omega_\nu h^2$	< 0.00143	z_{eq}	3383^{+52}_{-54}	$\chi_{6\text{DF}}^2$	$0.048 (\nu: 0.0)$
$\Omega_m h^3$	$0.0955^{+0.0077}_{-0.0072}$	k_{eq}	$0.01029^{+0.00024}_{-0.00024}$	χ_{MGS}^2	$1.40 (\nu: 0.1)$
σ_8	$0.809^{+0.027}_{-0.030}$	$100\theta_{\text{eq}}$	$0.817^{+0.010}_{-0.0097}$	χ_{DR12BAO}^2	$4.6 (\nu: 0.9)$
S_8	$0.822^{+0.028}_{-0.029}$	$100\theta_{\text{s,eq}}$	$0.4512^{+0.0052}_{-0.0049}$	χ_{prior}^2	$9.7 (\nu: 9.8)$
$\sigma_8 \Omega_m^{0.5}$	$0.450^{+0.015}_{-0.016}$	$H(0.15)$	$72.8^{+2.4}_{-2.4}$	χ_{BAO}^2	$6.0 (\nu: 0.6)$
$\sigma_8 \Omega_m^{0.25}$	$0.604^{+0.019}_{-0.021}$	$D_{\text{M}}(0.15)$	642^{+22}_{-22}	χ_{CMB}^2	$7358 (\nu: 10475929.4)$
$\sigma_8/h^{0.5}$	$0.984^{+0.027}_{-0.030}$	$H(0.38)$	$82.9^{+2.5}_{-2.4}$		
$r_{\text{drag}} h$	$99.9^{+1.7}_{-1.7}$	$D_{\text{M}}(0.38)$	1531^{+50}_{-49}		

Best-fit $\chi_{\text{eff}}^2 = 12959.81$; $\Delta\chi_{\text{eff}}^2 = 9155.27$; $\bar{\chi}_{\text{eff}}^2 = 12984.10$; $\Delta\bar{\chi}_{\text{eff}}^2 = 9151.00$; $R - 1 = 0.01027$
 χ_{eff}^2 : BAO - 6DF: 0.00 (Δ -0.01) MGS: 1.54 (Δ 0.13) DR12BAO: 3.67 (Δ -0.25) CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.79 (Δ -0.07) commander_dx12_v3_2_29: 23.28 (Δ -0.31) CamSpec like_10.7HM_1400_unified: 11498.65 SN - JLA Pantheon18: 1034.85 (Δ -0.06)

9.12 base_nnu_mnu_CamSpecHM_TTTEEE_lowl_lowE_BAO_post_Aver15/base_nnu_mnu_plikHM_TTTEEE_lowl_lowE_BAO_post_Aver15

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02232^{+0.00035}_{-0.00035}$	$\langle d^2 \rangle^{1/2}$	$2.434^{+0.054}_{-0.057}$	$H(0.51)$	$89.3^{+2.2}_{-2.1}$
$\Omega_c h^2$	$0.1179^{+0.0055}_{-0.0053}$	z_{re}	$7.6^{+1.6}_{-1.6}$	$D_{\text{M}}(0.51)$	1991^{+55}_{-54}
$100\theta_{MC}$	$1.04113^{+0.00083}_{-0.00081}$	$10^9 A_s$	$2.086^{+0.076}_{-0.073}$	$H(0.61)$	$94.9^{+2.3}_{-2.2}$
τ	$0.054^{+0.016}_{-0.015}$	$10^9 A_s e^{-2\tau}$	$1.872^{+0.033}_{-0.033}$	$D_{\text{M}}(0.61)$	2317^{+63}_{-62}
Σm_ν	< 0.139	D_{40}	1229^{+27}_{-27}	$H(2.33)$	$234.8^{+4.8}_{-4.7}$
N_{eff}	$2.97^{+0.32}_{-0.31}$	D_{220}	5729^{+77}_{-77}	$D_{\text{M}}(2.33)$	5792^{+130}_{-130}
$\ln(10^{10} A_s)$	$3.038^{+0.036}_{-0.035}$	D_{810}	2535^{+27}_{-27}	$f\sigma_8(0.15)$	$0.455^{+0.015}_{-0.015}$
n_s	$0.964^{+0.013}_{-0.013}$	D_{1420}	$817.3^{+9.6}_{-9.7}$	$\sigma_8(0.15)$	$0.746^{+0.025}_{-0.026}$
y_{cal}	$1.0006^{+0.0049}_{-0.0049}$	D_{2000}	$231.2^{+3.7}_{-3.7}$	$f\sigma_8(0.38)$	$0.473^{+0.014}_{-0.015}$
A_{217}^{CIB}	43^{+20}_{-20}	$n_{s,0.002}$	$0.964^{+0.013}_{-0.013}$	$\sigma_8(0.38)$	$0.662^{+0.022}_{-0.024}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.2443^{+0.0044}_{-0.0044}$	$f\sigma_8(0.51)$	$0.472^{+0.014}_{-0.015}$
A_{143}^{tSZ}	$4.7^{+3.9}_{-4.3}$	Y_P^{BBN}	$0.2456^{+0.0044}_{-0.0044}$	$\sigma_8(0.51)$	$0.619^{+0.021}_{-0.022}$
A_{100}^{PS}	247^{+60}_{-50}	$10^5 D/H$	$2.567^{+0.093}_{-0.088}$	$f\sigma_8(0.61)$	$0.467^{+0.014}_{-0.015}$
A_{143}^{PS}	41^{+20}_{-20}	Age/Gyr	$13.87^{+0.32}_{-0.31}$	$\sigma_8(0.61)$	$0.589^{+0.020}_{-0.021}$
A_{217}^{PS}	109^{+20}_{-30}	z_*	$1089.72^{+0.68}_{-0.67}$	$f\sigma_8(2.33)$	$0.2970^{+0.0093}_{-0.010}$
A^{kSZ}	—	r_*	$145.4^{+3.1}_{-3.1}$	$\sigma_8(2.33)$	$0.306^{+0.011}_{-0.011}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	$100\theta_*$	$1.04137^{+0.00099}_{-0.00097}$	f_{2000}^{143}	29^{+6}_{-6}
c_{217}	$0.9996^{+0.0037}_{-0.0027}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.97^{+0.29}_{-0.29}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
H_0	$67.3^{+2.1}_{-2.1}$	z_{drag}	$1059.6^{+1.3}_{-1.3}$	f_{2000}^{217}	$106.4^{+4.1}_{-4.0}$
Ω_Λ	$0.689^{+0.014}_{-0.015}$	r_{drag}	$148.1^{+3.3}_{-3.2}$	χ_{small}^2	$397.1 (\nu: 1.8)$
Ω_m	$0.311^{+0.015}_{-0.014}$	k_{D}	$0.1401^{+0.0024}_{-0.0023}$	χ_{lowl}^2	$23.4 (\nu: 0.6)$
$\Omega_m h^2$	$0.1408^{+0.0058}_{-0.0056}$	$100\theta_{\text{D}}$	$0.16062^{+0.00080}_{-0.00077}$	χ_{Aver15}^2	$0.34 (\nu: 0.1)$
$\Omega_\nu h^2$	< 0.00145	z_{eq}	3388^{+52}_{-53}	$\chi_{6\text{DF}}^2$	$0.061 (\nu: 0.0)$
$\Omega_m h^3$	$0.0948^{+0.0063}_{-0.0061}$	k_{eq}	$0.01028^{+0.00022}_{-0.00022}$	χ_{MGS}^2	$1.30 (\nu: 0.1)$
σ_8	$0.808^{+0.027}_{-0.028}$	$100\theta_{\text{eq}}$	$0.816^{+0.010}_{-0.0097}$	χ_{DR12BAO}^2	$4.8 (\nu: 1.3)$
S_8	$0.822^{+0.028}_{-0.029}$	$100\theta_{\text{s,eq}}$	$0.4507^{+0.0052}_{-0.0049}$	χ_{prior}^2	$9.6 (\nu: 9.7)$
$\sigma_8 \Omega_m^{0.5}$	$0.450^{+0.016}_{-0.016}$	$H(0.15)$	$72.5^{+2.1}_{-2.1}$	χ_{BAO}^2	$6.2 (\nu: 0.9)$
$\sigma_8 \Omega_m^{0.25}$	$0.603^{+0.019}_{-0.021}$	$D_{\text{M}}(0.15)$	644^{+19}_{-19}	χ_{CMB}^2	$7358 (\nu: 10475842.1)$
$\sigma_8/h^{0.5}$	$0.984^{+0.028}_{-0.030}$	$H(0.38)$	$82.6^{+2.1}_{-2.1}$		
$r_{\text{drag}} h$	$99.7^{+1.8}_{-1.8}$	$D_{\text{M}}(0.38)$	1537^{+44}_{-43}		

Best-fit $\chi_{\text{eff}}^2 = 11924.93$; $\Delta\chi_{\text{eff}}^2 = 9155.42$; $\bar{\chi}_{\text{eff}}^2 = 11949.22$; $\Delta\bar{\chi}_{\text{eff}}^2 = 9151.04$; $R - 1 = 0.01005$
 χ_{eff}^2 : Abund - Yp_Aver2015: 0.00 (Δ 0.00) BAO - 6DF: 0.01 (Δ -0.01) MGS: 1.41 (Δ 0.06) DR12BAO: 3.90 (Δ -0.15) CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.83 (Δ -0.22) commander_dx12_v3.2.29: 23.45 (Δ -0.19) CamSpec like_10.7HM_1400_unified: 11498.32

9.13 base_nnu_mnu_CamSpecHM_TTTEEE_lowl_lowE_BAO_post_Cooke17_Aver15/base_nnu_mnu_plikHM_TTTEEE_lowl_lowE_BAO_po

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02232^{+0.00035}_{-0.00035}$	$\langle d^2 \rangle^{1/2}$	$2.434^{+0.054}_{-0.057}$	$H(0.51)$	$89.4^{+2.1}_{-2.1}$
$\Omega_c h^2$	$0.1184^{+0.0051}_{-0.0050}$	z_{re}	$7.6^{+1.6}_{-1.6}$	$D_{\text{M}}(0.51)$	1988^{+53}_{-52}
$100\theta_{MC}$	$1.04107^{+0.00079}_{-0.00077}$	$10^9 A_s$	$2.088^{+0.076}_{-0.072}$	$H(0.61)$	$95.0^{+2.2}_{-2.1}$
τ	$0.054^{+0.016}_{-0.015}$	$10^9 A_s e^{-2\tau}$	$1.874^{+0.032}_{-0.031}$	$D_{\text{M}}(0.61)$	2313^{+60}_{-60}
Σm_ν	< 0.140	D_{40}	1228^{+27}_{-27}	$H(2.33)$	$235.2^{+4.5}_{-4.4}$
N_{eff}	$2.99^{+0.30}_{-0.29}$	D_{220}	5727^{+77}_{-77}	$D_{\text{M}}(2.33)$	5782^{+130}_{-120}
$\ln(10^{10} A_s)$	$3.039^{+0.036}_{-0.035}$	D_{810}	2536^{+27}_{-27}	$f\sigma_8(0.15)$	$0.455^{+0.015}_{-0.015}$
n_s	$0.965^{+0.013}_{-0.013}$	D_{1420}	$816.9^{+9.4}_{-9.6}$	$\sigma_8(0.15)$	$0.747^{+0.024}_{-0.026}$
y_{cal}	$1.0006^{+0.0049}_{-0.0049}$	D_{2000}	$231.0^{+3.5}_{-3.6}$	$f\sigma_8(0.38)$	$0.474^{+0.014}_{-0.015}$
A_{217}^{CIB}	43^{+20}_{-20}	$n_{s,0.002}$	$0.965^{+0.013}_{-0.013}$	$\sigma_8(0.38)$	$0.663^{+0.022}_{-0.024}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.2446^{+0.0041}_{-0.0041}$	$f\sigma_8(0.51)$	$0.473^{+0.014}_{-0.015}$
A_{143}^{tSZ}	$4.7^{+3.9}_{-4.3}$	Y_P^{BBN}	$0.2460^{+0.0041}_{-0.0041}$	$\sigma_8(0.51)$	$0.620^{+0.021}_{-0.022}$
A_{100}^{PS}	248^{+60}_{-50}	$10^5 D/H$	$2.577^{+0.083}_{-0.080}$	$f\sigma_8(0.61)$	$0.468^{+0.013}_{-0.015}$
A_{143}^{PS}	42^{+20}_{-20}	Age/Gyr	$13.84^{+0.30}_{-0.30}$	$\sigma_8(0.61)$	$0.590^{+0.020}_{-0.021}$
A_{217}^{PS}	109^{+20}_{-30}	z_*	$1089.79^{+0.62}_{-0.61}$	$f\sigma_8(2.33)$	$0.2975^{+0.0091}_{-0.010}$
A^{kSZ}	—	r_*	$145.2^{+2.9}_{-2.9}$	$\sigma_8(2.33)$	$0.307^{+0.011}_{-0.011}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	$100\theta_*$	$1.04130^{+0.00094}_{-0.00091}$	f_{2000}^{143}	29^{+6}_{-6}
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.94^{+0.27}_{-0.27}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
H_0	$67.4^{+2.1}_{-2.0}$	z_{drag}	$1059.7^{+1.2}_{-1.2}$	f_{2000}^{217}	$106.6^{+3.9}_{-3.9}$
Ω_Λ	$0.689^{+0.014}_{-0.015}$	r_{drag}	$147.9^{+3.1}_{-3.0}$	χ_{small}^2	$397.1 (\nu: 1.7)$
Ω_m	$0.311^{+0.015}_{-0.014}$	k_{D}	$0.1402^{+0.0023}_{-0.0022}$	χ_{lowl}^2	$23.3 (\nu: 0.6)$
$\Omega_m h^2$	$0.1413^{+0.0054}_{-0.0052}$	$100\theta_{\text{D}}$	$0.16070^{+0.00072}_{-0.00069}$	χ_{Aver15}^2	$0.34 (\nu: 0.1)$
$\Omega_\nu h^2$	< 0.00147	z_{eq}	3387^{+52}_{-53}	χ_{Cooke17}^2	$0.39 (\nu: 0.1)$
$\Omega_m h^3$	$0.0953^{+0.0060}_{-0.0057}$	k_{eq}	$0.01030^{+0.00021}_{-0.00021}$	$\chi_{6\text{DF}}^2$	$0.061 (\nu: 0.0)$
σ_8	$0.809^{+0.026}_{-0.028}$	$100\theta_{\text{eq}}$	$0.816^{+0.010}_{-0.0097}$	χ_{MGS}^2	$1.30 (\nu: 0.1)$
S_8	$0.823^{+0.028}_{-0.030}$	$100\theta_{\text{s,eq}}$	$0.4508^{+0.0052}_{-0.0050}$	χ_{DR12BAO}^2	$4.9 (\nu: 1.3)$
$\sigma_8 \Omega_m^{0.5}$	$0.451^{+0.015}_{-0.016}$	$H(0.15)$	$72.7^{+2.0}_{-2.0}$	χ_{prior}^2	$9.6 (\nu: 9.8)$
$\sigma_8 \Omega_m^{0.25}$	$0.604^{+0.019}_{-0.021}$	$D_{\text{M}}(0.15)$	643^{+19}_{-18}	χ_{BAO}^2	$6.2 (\nu: 0.9)$
$\sigma_8/h^{0.5}$	$0.985^{+0.028}_{-0.030}$	$H(0.38)$	$82.7^{+2.1}_{-2.0}$	χ_{CMB}^2	$7357 (\nu: 10475816.7)$
$r_{\text{drag}} h$	$99.7^{+1.8}_{-1.8}$	$D_{\text{M}}(0.38)$	1534^{+42}_{-42}	χ_{Abund}^2	$0.73 (\nu: 0.2)$

Best-fit $\chi_{\text{eff}}^2 = 11925.20$; $\Delta\chi_{\text{eff}}^2 = 9155.17$; $\bar{\chi}_{\text{eff}}^2 = 11949.45$; $\Delta\bar{\chi}_{\text{eff}}^2 = 9150.90$; $R - 1 = 0.01051$
 χ_{eff}^2 : Abund - Yp_Aver2015: 0.02 (Δ 0.01) D_Cooke2017: 0.18 (Δ -0.21) BAO - 6DF: 0.01 (Δ -0.01) MGS: 1.41 (Δ 0.06) DR12BAO: 3.90 (Δ -0.16) CMB - small_100x143_offlike5_EE_Aplanck_B: 395.85 (Δ -0.18) commander_dx12_v3.2.29: 23.31 (Δ -0.36) CamSpec like_10.7HM_1400_unified: 11498.48

9.14 base_nnu_mnu_CamSpecHM_TTTEEE_lowl_lowE_BAO_post_Pantheon18_zre6p5/base_nnu_mnu_plikHM_TTTEEE_lowl_lowE_BAO

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02236^{+0.00038}_{-0.00037}$	$\langle d^2 \rangle^{1/2}$	$2.434^{+0.053}_{-0.054}$	$H(0.51)$	$89.6^{+2.6}_{-2.5}$
$\Omega_c h^2$	$0.1184^{+0.0065}_{-0.0063}$	z_{re}	< 9.00	$D_{\text{M}}(0.51)$	1983^{+64}_{-62}
$100\theta_{MC}$	$1.04108^{+0.00091}_{-0.00087}$	$10^9 A_s$	$2.095^{+0.072}_{-0.067}$	$H(0.61)$	$95.2^{+2.7}_{-2.6}$
τ	$0.056^{+0.013}_{-0.012}$	$10^9 A_s e^{-2\tau}$	$1.874^{+0.037}_{-0.037}$	$D_{\text{M}}(0.61)$	2308^{+73}_{-71}
Σm_ν	< 0.137	D_{40}	1227^{+28}_{-28}	$H(2.33)$	$235.3^{+5.7}_{-5.6}$
N_{eff}	$3.00^{+0.39}_{-0.37}$	D_{220}	5729^{+76}_{-77}	$D_{\text{M}}(2.33)$	5775^{+160}_{-160}
$\ln(10^{10} A_s)$	$3.042^{+0.034}_{-0.032}$	D_{810}	2536^{+27}_{-27}	$f\sigma_8(0.15)$	$0.455^{+0.015}_{-0.015}$
n_s	$0.966^{+0.015}_{-0.014}$	D_{1420}	$817.1^{+9.7}_{-9.9}$	$\sigma_8(0.15)$	$0.749^{+0.024}_{-0.028}$
y_{cal}	$1.0006^{+0.0049}_{-0.0049}$	D_{2000}	$231.1^{+3.9}_{-4.0}$	$f\sigma_8(0.38)$	$0.474^{+0.015}_{-0.015}$
A_{217}^{CIB}	43^{+20}_{-20}	$n_{s,0.002}$	$0.966^{+0.015}_{-0.014}$	$\sigma_8(0.38)$	$0.664^{+0.022}_{-0.025}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.2448^{+0.0052}_{-0.0052}$	$f\sigma_8(0.51)$	$0.473^{+0.014}_{-0.015}$
A_{143}^{tSZ}	$4.7^{+3.9}_{-4.3}$	Y_P^{BBN}	$0.2461^{+0.0053}_{-0.0053}$	$\sigma_8(0.51)$	$0.621^{+0.021}_{-0.024}$
A_{100}^{PS}	248^{+60}_{-50}	$10^5 D/H$	$2.57^{+0.11}_{-0.10}$	$f\sigma_8(0.61)$	$0.468^{+0.014}_{-0.015}$
A_{143}^{PS}	42^{+20}_{-20}	Age/Gyr	$13.83^{+0.38}_{-0.37}$	$\sigma_8(0.61)$	$0.591^{+0.020}_{-0.023}$
A_{217}^{PS}	109^{+20}_{-30}	z_*	$1089.75^{+0.77}_{-0.75}$	$f\sigma_8(2.33)$	$0.2982^{+0.0099}_{-0.010}$
A^{kSZ}	—	r_*	$145.1^{+3.8}_{-3.7}$	$\sigma_8(2.33)$	$0.308^{+0.011}_{-0.012}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	$100\theta_*$	$1.0413^{+0.0011}_{-0.0011}$	f_{2000}^{143}	29^{+6}_{-6}
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.94^{+0.35}_{-0.34}$	$f_{2000}^{143 \times 217}$	32^{+5}_{-4}
H_0	$67.6^{+2.4}_{-2.3}$	z_{drag}	$1059.7^{+1.4}_{-1.5}$	f_{2000}^{217}	$106.5^{+4.2}_{-4.1}$
Ω_Λ	$0.691^{+0.014}_{-0.014}$	r_{drag}	$147.8^{+3.9}_{-3.8}$	χ_{small}^2	$397.1 (\nu: 1.9)$
Ω_m	$0.309^{+0.014}_{-0.014}$	k_{D}	$0.1403^{+0.0028}_{-0.0028}$	χ_{lowl}^2	$23.3 (\nu: 0.7)$
$\Omega_m h^2$	$0.1413^{+0.0068}_{-0.0066}$	$100\theta_{\text{D}}$	$0.16069^{+0.00094}_{-0.00089}$	χ_{JLA}^2	$1035.05 (\nu: 0.1)$
$\Omega_\nu h^2$	< 0.00144	z_{eq}	3383^{+52}_{-53}	$\chi_{6\text{DF}}^2$	$0.047 (\nu: 0.0)$
$\Omega_m h^3$	$0.0955^{+0.0077}_{-0.0072}$	k_{eq}	$0.01029^{+0.00024}_{-0.00024}$	χ_{MGS}^2	$1.41 (\nu: 0.1)$
σ_8	$0.810^{+0.026}_{-0.030}$	$100\theta_{\text{eq}}$	$0.817^{+0.010}_{-0.0097}$	χ_{DR12BAO}^2	$4.5 (\nu: 0.9)$
S_8	$0.822^{+0.028}_{-0.029}$	$100\theta_{\text{s,eq}}$	$0.4513^{+0.0052}_{-0.0049}$	χ_{prior}^2	$9.7 (\nu: 9.8)$
$\sigma_8 \Omega_m^{0.5}$	$0.450^{+0.015}_{-0.016}$	$H(0.15)$	$72.8^{+2.4}_{-2.4}$	χ_{BAO}^2	$6.0 (\nu: 0.6)$
$\sigma_8 \Omega_m^{0.25}$	$0.604^{+0.019}_{-0.021}$	$D_{\text{M}}(0.15)$	642^{+22}_{-22}	χ_{CMB}^2	$7358 (\nu: 10475819.9)$
$\sigma_8/h^{0.5}$	$0.985^{+0.027}_{-0.029}$	$H(0.38)$	$82.9^{+2.5}_{-2.4}$		
$r_{\text{drag}} h$	$99.9^{+1.7}_{-1.7}$	$D_{\text{M}}(0.38)$	1531^{+50}_{-49}		

$$\bar{\chi}_{\text{eff}}^2 = 12983.89; \Delta\bar{\chi}_{\text{eff}}^2 = 9150.96; R - 1 = 0.01046$$

9.15 base_nnu_mnu_CamSpecHM_TT_lowl_lowE_lensing_BAO/base_nnu_mnu_plikHM_TT_lowl_lowE_lensing_BAO

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02222^{+0.00047}_{-0.00046}$	$\langle d^2 \rangle^{1/2}$	$2.433^{+0.047}_{-0.047}$	$H(0.51)$	$89.8^{+3.1}_{-3.1}$
$\Omega_c h^2$	$0.1195^{+0.0076}_{-0.0073}$	z_{re}	$7.7^{+1.5}_{-1.5}$	$D_{\text{M}}(0.51)$	1978^{+77}_{-74}
$100\theta_{MC}$	$1.0410^{+0.0011}_{-0.0011}$	$10^9 A_s$	$2.096^{+0.078}_{-0.072}$	$H(0.61)$	$95.4^{+3.2}_{-3.2}$
τ	$0.055^{+0.016}_{-0.015}$	$10^9 A_s e^{-2\tau}$	$1.879^{+0.040}_{-0.041}$	$D_{\text{M}}(0.61)$	2302^{+88}_{-85}
Σm_ν	< 0.140	D_{40}	1226^{+29}_{-29}	$H(2.33)$	$236.1^{+6.8}_{-6.7}$
N_{eff}	$3.07^{+0.47}_{-0.45}$	D_{220}	5718^{+80}_{-79}	$D_{\text{M}}(2.33)$	5758^{+190}_{-190}
$\ln(10^{10} A_s)$	$3.042^{+0.037}_{-0.035}$	D_{810}	2536^{+27}_{-27}	$f\sigma_8(0.15)$	$0.457^{+0.013}_{-0.013}$
n_s	$0.967^{+0.017}_{-0.017}$	D_{1420}	815^{+10}_{-10}	$\sigma_8(0.15)$	$0.751^{+0.024}_{-0.025}$
y_{cal}	$1.0006^{+0.0048}_{-0.0048}$	D_{2000}	$229.8^{+4.4}_{-4.4}$	$f\sigma_8(0.38)$	$0.475^{+0.013}_{-0.013}$
A_{217}^{CIB}	44^{+20}_{-20}	$n_{s,0.002}$	$0.967^{+0.017}_{-0.017}$	$\sigma_8(0.38)$	$0.666^{+0.022}_{-0.023}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.2456^{+0.0063}_{-0.0063}$	$f\sigma_8(0.51)$	$0.474^{+0.013}_{-0.013}$
A_{143}^{tSZ}	$4.4^{+3.8}_{-4.2}$	Y_P^{BBN}	$0.2469^{+0.0063}_{-0.0063}$	$\sigma_8(0.51)$	$0.623^{+0.021}_{-0.022}$
A_{100}^{PS}	253^{+60}_{-60}	$10^5 D/H$	$2.62^{+0.13}_{-0.13}$	$f\sigma_8(0.61)$	$0.469^{+0.013}_{-0.013}$
A_{143}^{PS}	45^{+20}_{-20}	Age/Gyr	$13.78^{+0.45}_{-0.44}$	$\sigma_8(0.61)$	$0.593^{+0.020}_{-0.021}$
A_{217}^{PS}	108^{+30}_{-30}	z_*	$1090.07^{+0.95}_{-0.93}$	$f\sigma_8(2.33)$	$0.299^{+0.010}_{-0.010}$
A^{kSZ}	—	r_*	$144.6^{+4.5}_{-4.3}$	$\sigma_8(2.33)$	$0.308^{+0.011}_{-0.011}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	$100\theta_*$	$1.0412^{+0.0014}_{-0.0013}$	f_{2000}^{143}	31^{+7}_{-7}
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.89^{+0.41}_{-0.40}$	$f_{2000}^{143 \times 217}$	33^{+5}_{-5}
H_0	$67.8^{+2.9}_{-2.8}$	z_{drag}	$1059.6^{+1.7}_{-1.7}$	f_{2000}^{217}	$107.7^{+4.7}_{-4.7}$
Ω_Λ	$0.690^{+0.016}_{-0.016}$	r_{drag}	$147.3^{+4.6}_{-4.5}$	χ_{lensing}^2	$9.52 (\nu: 0.4)$
Ω_m	$0.310^{+0.016}_{-0.016}$	k_{D}	$0.1404^{+0.0033}_{-0.0033}$	χ_{simall}^2	$397.1 (\nu: 1.6)$
$\Omega_m h^2$	$0.1423^{+0.0081}_{-0.0078}$	$100\theta_{\text{D}}$	$0.1611^{+0.0012}_{-0.0011}$	χ_{lowl}^2	$23.2 (\nu: 0.8)$
$\Omega_\nu h^2$	< 0.00150	z_{eq}	3377^{+61}_{-61}	$\chi_{6\text{DF}}^2$	$0.061 (\nu: 0.0)$
$\Omega_m h^3$	$0.0965^{+0.0093}_{-0.0087}$	k_{eq}	$0.01032^{+0.00027}_{-0.00026}$	χ_{MGS}^2	$1.40 (\nu: 0.2)$
σ_8	$0.812^{+0.025}_{-0.026}$	$100\theta_{\text{eq}}$	$0.817^{+0.012}_{-0.011}$	χ_{DR12BAO}^2	$4.8 (\nu: 1.4)$
S_8	$0.825^{+0.025}_{-0.025}$	$100\theta_{\text{s,eq}}$	$0.4517^{+0.0059}_{-0.0057}$	χ_{prior}^2	$7.4 (\nu: 6.3)$
$\sigma_8 \Omega_m^{0.5}$	$0.452^{+0.014}_{-0.014}$	$H(0.15)$	$73.0^{+2.9}_{-2.9}$	χ_{CMB}^2	$4348 (\nu: 4947674.2)$
$\sigma_8 \Omega_m^{0.25}$	$0.606^{+0.017}_{-0.017}$	$D_{\text{M}}(0.15)$	640^{+27}_{-26}	χ_{BAO}^2	$6.2 (\nu: 1.0)$
$\sigma_8/h^{0.5}$	$0.987^{+0.023}_{-0.024}$	$H(0.38)$	$83.1^{+3.0}_{-3.0}$		
$r_{\text{drag}} h$	$99.8^{+2.0}_{-2.0}$	$D_{\text{M}}(0.38)$	1527^{+61}_{-59}		

Best-fit $\chi_{\text{eff}}^2 = 7485.59$; $\Delta\chi_{\text{eff}}^2 = 6292.37$; $\bar{\chi}_{\text{eff}}^2 = 7507.28$; $\Delta\bar{\chi}_{\text{eff}}^2 = 6291.66$; $R - 1 = 0.00494$

χ_{eff}^2 : BAO - 6DF: 0.01 (Δ 0.00) MGS: 1.47 (Δ 0.00) DR12BAO: 3.77 (Δ 0.01) CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.90 (Δ 0.09) simall_100x143_offlike5_EE_Aplanck_L
395.85 (Δ 0.00) commander_dx12_v3_2_29: 23.31 (Δ -0.01) CamSpec like_10.7HM: 7049.94

9.16 base_nnu_mnu_CamSpecHM_TT_lowl_lowE_lensing_BAO_post_Pantheon18/base_nnu_mnu_plikHM_TT_lowl_lowE_lensing_BAO_post_Pantheon18

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02224^{+0.00046}_{-0.00045}$	$\langle d^2 \rangle^{1/2}$	$2.432^{+0.046}_{-0.047}$	$H(0.51)$	$90.0^{+3.1}_{-3.0}$
$\Omega_c h^2$	$0.1196^{+0.0076}_{-0.0073}$	z_{re}	$7.7^{+1.5}_{-1.5}$	$D_{\text{M}}(0.51)$	1974^{+74}_{-72}
$100\theta_{MC}$	$1.0410^{+0.0011}_{-0.0011}$	$10^9 A_s$	$2.098^{+0.077}_{-0.071}$	$H(0.61)$	$95.6^{+3.2}_{-3.1}$
τ	$0.055^{+0.016}_{-0.015}$	$10^9 A_s e^{-2\tau}$	$1.880^{+0.040}_{-0.041}$	$D_{\text{M}}(0.61)$	2297^{+85}_{-82}
Σm_ν	< 0.135	D_{40}	1225^{+29}_{-29}	$H(2.33)$	$236.2^{+6.8}_{-6.6}$
N_{eff}	$3.08^{+0.47}_{-0.45}$	D_{220}	5718^{+80}_{-79}	$D_{\text{M}}(2.33)$	5750^{+190}_{-180}
$\ln(10^{10} A_s)$	$3.043^{+0.036}_{-0.034}$	D_{810}	2536^{+27}_{-27}	$f\sigma_8(0.15)$	$0.456^{+0.013}_{-0.013}$
n_s	$0.968^{+0.017}_{-0.017}$	D_{1420}	815^{+10}_{-10}	$\sigma_8(0.15)$	$0.752^{+0.024}_{-0.024}$
y_{cal}	$1.0006^{+0.0048}_{-0.0048}$	D_{2000}	$229.8^{+4.4}_{-4.4}$	$f\sigma_8(0.38)$	$0.475^{+0.013}_{-0.013}$
A_{217}^{CIB}	44^{+20}_{-20}	$n_{s,0.002}$	$0.968^{+0.017}_{-0.017}$	$\sigma_8(0.38)$	$0.667^{+0.022}_{-0.022}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.2458^{+0.0062}_{-0.0062}$	$f\sigma_8(0.51)$	$0.474^{+0.013}_{-0.013}$
A_{143}^{tSZ}	$4.4^{+3.8}_{-4.2}$	Y_P^{BBN}	$0.2471^{+0.0062}_{-0.0063}$	$\sigma_8(0.51)$	$0.624^{+0.021}_{-0.021}$
A_{100}^{PS}	253^{+60}_{-50}	$10^5 D/H$	$2.62^{+0.13}_{-0.13}$	$f\sigma_8(0.61)$	$0.470^{+0.013}_{-0.013}$
A_{143}^{PS}	45^{+20}_{-20}	Age/Gyr	$13.77^{+0.44}_{-0.43}$	$\sigma_8(0.61)$	$0.594^{+0.020}_{-0.020}$
A_{217}^{PS}	108^{+20}_{-30}	z_*	$1090.08^{+0.94}_{-0.93}$	$f\sigma_8(2.33)$	$0.299^{+0.010}_{-0.010}$
A^{kSZ}	—	r_*	$144.5^{+4.4}_{-4.3}$	$\sigma_8(2.33)$	$0.309^{+0.011}_{-0.011}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	$100\theta_*$	$1.0411^{+0.0014}_{-0.0013}$	f_{2000}^{143}	31^{+7}_{-7}
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.88^{+0.41}_{-0.40}$	$f_{2000}^{143 \times 217}$	33^{+5}_{-5}
H_0	$68.0^{+2.8}_{-2.7}$	z_{drag}	$1059.6^{+1.7}_{-1.7}$	f_{2000}^{217}	$107.8^{+4.6}_{-4.6}$
Ω_Λ	$0.692^{+0.015}_{-0.015}$	r_{drag}	$147.2^{+4.6}_{-4.5}$	χ_{lensing}^2	$9.54 (\nu: 0.4)$
Ω_m	$0.308^{+0.015}_{-0.015}$	k_{D}	$0.1405^{+0.0033}_{-0.0032}$	χ_{small}^2	$397.1 (\nu: 1.7)$
$\Omega_m h^2$	$0.1424^{+0.0081}_{-0.0077}$	$100\theta_{\text{D}}$	$0.1611^{+0.0012}_{-0.0011}$	χ_{lowl}^2	$23.0 (\nu: 0.7)$
$\Omega_\nu h^2$	< 0.00144	z_{eq}	3373^{+58}_{-58}	χ_{JLA}^2	$1035.04 (\nu: 0.1)$
$\Omega_m h^3$	$0.0968^{+0.0091}_{-0.0086}$	k_{eq}	$0.01032^{+0.00027}_{-0.00027}$	$\chi_{6\text{DF}}^2$	$0.048 (\nu: 0.0)$
σ_8	$0.813^{+0.025}_{-0.026}$	$100\theta_{\text{eq}}$	$0.818^{+0.011}_{-0.011}$	χ_{MGS}^2	$1.49 (\nu: 0.2)$
S_8	$0.824^{+0.025}_{-0.025}$	$100\theta_{\text{s,eq}}$	$0.4521^{+0.0057}_{-0.0055}$	χ_{DR12BAO}^2	$4.5 (\nu: 1.0)$
$\sigma_8 \Omega_m^{0.5}$	$0.452^{+0.014}_{-0.014}$	$H(0.15)$	$73.2^{+2.8}_{-2.8}$	χ_{prior}^2	$7.5 (\nu: 6.3)$
$\sigma_8 \Omega_m^{0.25}$	$0.606^{+0.017}_{-0.017}$	$D_{\text{M}}(0.15)$	638^{+26}_{-25}	χ_{CMB}^2	$4348 (\nu: 4947686.6)$
$\sigma_8/h^{0.5}$	$0.987^{+0.022}_{-0.023}$	$H(0.38)$	$83.3^{+2.9}_{-2.9}$	χ_{BAO}^2	$6.0 (\nu: 0.6)$
$r_{\text{drag}} h$	$100.0^{+1.9}_{-1.9}$	$D_{\text{M}}(0.38)$	1523^{+58}_{-57}		

Best-fit $\chi_{\text{eff}}^2 = 8520.27$; $\Delta\chi_{\text{eff}}^2 = 6292.12$; $\bar{\chi}_{\text{eff}}^2 = 8542.17$; $\Delta\bar{\chi}_{\text{eff}}^2 = 6291.67$; $R - 1 = 0.00504$
 χ_{eff}^2 : BAO - 6DF: 0.00 (Δ 0.00) MGS: 1.54 (Δ 0.00) DR12BAO: 3.65 (Δ -0.01) CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.87 (Δ 0.06) small_100x143_offlike5_EE_Aplanck: 395.85 (Δ -0.00) commander_dx12_v3.2_29: 23.25 (Δ -0.07) CamSpec like_10.7HM: 7050.07 SN - JLA Pantheon18: 1034.86 (Δ 0.00)

9.17 base_nnu_mnu_CamSpecHM_TT_lowl_lowE_lensing_BAO_post_Aver15/base_nnu_mnu_plikHM_TT_lowl_lowE_lensing_BAO_post_Aver15

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02219^{+0.00043}_{-0.00042}$	$\langle d^2 \rangle^{1/2}$	$2.436^{+0.045}_{-0.045}$	$H(0.51)$	$89.5^{+2.5}_{-2.4}$
$\Omega_c h^2$	$0.1186^{+0.0061}_{-0.0059}$	z_{re}	$7.7^{+1.5}_{-1.5}$	$D_{\text{M}}(0.51)$	1987^{+62}_{-61}
$100\theta_{MC}$	$1.0411^{+0.0010}_{-0.0010}$	$10^9 A_s$	$2.091^{+0.072}_{-0.067}$	$H(0.61)$	$95.1^{+2.6}_{-2.5}$
τ	$0.054^{+0.016}_{-0.014}$	$10^9 A_s e^{-2\tau}$	$1.875^{+0.035}_{-0.035}$	$D_{\text{M}}(0.61)$	2312^{+70}_{-69}
Σm_ν	< 0.131	D_{40}	1228^{+27}_{-27}	$H(2.33)$	$235.2^{+5.4}_{-5.2}$
N_{eff}	$3.01^{+0.37}_{-0.36}$	D_{220}	5718^{+80}_{-79}	$D_{\text{M}}(2.33)$	5780^{+150}_{-150}
$\ln(10^{10} A_s)$	$3.040^{+0.034}_{-0.032}$	D_{810}	2535^{+27}_{-27}	$f\sigma_8(0.15)$	$0.456^{+0.013}_{-0.013}$
n_s	$0.965^{+0.014}_{-0.014}$	D_{1420}	815^{+10}_{-10}	$\sigma_8(0.15)$	$0.749^{+0.021}_{-0.023}$
y_{cal}	$1.0006^{+0.0048}_{-0.0048}$	D_{2000}	$230.2^{+4.1}_{-4.1}$	$f\sigma_8(0.38)$	$0.475^{+0.012}_{-0.012}$
A_{217}^{CIB}	44^{+20}_{-20}	$n_{s,0.002}$	$0.965^{+0.014}_{-0.014}$	$\sigma_8(0.38)$	$0.664^{+0.019}_{-0.021}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.2448^{+0.0049}_{-0.0050}$	$f\sigma_8(0.51)$	$0.473^{+0.012}_{-0.012}$
A_{143}^{tSZ}	$4.5^{+3.8}_{-4.2}$	Y_P^{BBN}	$0.2461^{+0.0049}_{-0.0050}$	$\sigma_8(0.51)$	$0.621^{+0.018}_{-0.020}$
A_{100}^{PS}	252^{+60}_{-50}	$10^5 D/H$	$2.61^{+0.11}_{-0.11}$	$f\sigma_8(0.61)$	$0.469^{+0.012}_{-0.012}$
A_{143}^{PS}	44^{+20}_{-20}	Age/Gyr	$13.84^{+0.36}_{-0.35}$	$\sigma_8(0.61)$	$0.591^{+0.018}_{-0.019}$
A_{217}^{PS}	108^{+20}_{-30}	z_*	$1089.98^{+0.82}_{-0.81}$	$f\sigma_8(2.33)$	$0.2980^{+0.0089}_{-0.0091}$
A^{kSZ}	—	r_*	$145.2^{+3.5}_{-3.4}$	$\sigma_8(2.33)$	$0.3073^{+0.0098}_{-0.010}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	$100\theta_*$	$1.0413^{+0.0012}_{-0.0012}$	f_{2000}^{143}	30^{+7}_{-6}
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.94^{+0.33}_{-0.32}$	$f_{2000}^{143 \times 217}$	33^{+5}_{-5}
H_0	$67.5^{+2.4}_{-2.3}$	z_{drag}	$1059.4^{+1.5}_{-1.4}$	f_{2000}^{217}	$107.4^{+4.4}_{-4.3}$
Ω_Λ	$0.689^{+0.015}_{-0.016}$	r_{drag}	$147.9^{+3.7}_{-3.6}$	χ_{lensing}^2	$9.40 (\nu: 0.4)$
Ω_m	$0.311^{+0.016}_{-0.015}$	k_{D}	$0.1400^{+0.0026}_{-0.0026}$	χ_{simall}^2	$397.0 (\nu: 1.6)$
$\Omega_m h^2$	$0.1413^{+0.0064}_{-0.0062}$	$100\theta_{\text{D}}$	$0.16093^{+0.00096}_{-0.00095}$	χ_{lowl}^2	$23.4 (\nu: 0.7)$
$\Omega_\nu h^2$	< 0.00138	z_{eq}	3381^{+57}_{-56}	χ_{Aver15}^2	$0.49 (\nu: 0.2)$
$\Omega_m h^3$	$0.0953^{+0.0072}_{-0.0068}$	k_{eq}	$0.01029^{+0.00023}_{-0.00023}$	$\chi_{6\text{DF}}^2$	$0.063 (\nu: 0.0)$
σ_8	$0.810^{+0.022}_{-0.024}$	$100\theta_{\text{eq}}$	$0.817^{+0.011}_{-0.010}$	χ_{MGS}^2	$1.34 (\nu: 0.1)$
S_8	$0.825^{+0.025}_{-0.025}$	$100\theta_{\text{s,eq}}$	$0.4513^{+0.0054}_{-0.0053}$	χ_{DR12BAO}^2	$4.8 (\nu: 1.5)$
$\sigma_8 \Omega_m^{0.5}$	$0.452^{+0.014}_{-0.014}$	$H(0.15)$	$72.7^{+2.4}_{-2.3}$	χ_{prior}^2	$7.4 (\nu: 6.2)$
$\sigma_8 \Omega_m^{0.25}$	$0.605^{+0.016}_{-0.017}$	$D_{\text{M}}(0.15)$	643^{+22}_{-21}	χ_{CMB}^2	$4347 (\nu: 4947866.3)$
$\sigma_8/h^{0.5}$	$0.987^{+0.022}_{-0.023}$	$H(0.38)$	$82.8^{+2.4}_{-2.3}$	χ_{BAO}^2	$6.2 (\nu: 1.0)$
$r_{\text{drag}} h$	$99.7^{+1.9}_{-1.9}$	$D_{\text{M}}(0.38)$	1534^{+49}_{-48}		

Best-fit $\chi_{\text{eff}}^2 = 7485.47$; $\Delta\chi_{\text{eff}}^2 = 6292.19$; $\bar{\chi}_{\text{eff}}^2 = 7507.32$; $\Delta\bar{\chi}_{\text{eff}}^2 = 6291.70$; $R - 1 = 0.00578$
 χ_{eff}^2 : Abund - Yp_Aver2015: 0.01 (Δ 0.01) BAO - 6DF: 0.01 (Δ 0.00) MGS: 1.41 (Δ 0.00) DR12BAO: 3.88 (Δ -0.00) CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.80 (Δ 0.10) simall_100x143_offlike5_EE_Aplanck_B: 395.86 (Δ 0.00) commander_dx12_v3_2_29: 23.49 (Δ -0.13) CamSpec like_10.7HM: 7049.95

9.18 base_nnu_mnu_CamSpecHM_TT_lowl_lowE_lensing_BAO_post_Cooke17_Aver15/base_nnu_mnu_plikHM_TT_lowl_lowE_lensing_BAO

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02219^{+0.00043}_{-0.00042}$	z_{re}	$7.7^{+1.5}_{-1.5}$	$H(0.61)$	$95.1^{+2.4}_{-2.3}$
$\Omega_c h^2$	$0.1187^{+0.0055}_{-0.0054}$	$10^9 A_s$	$2.091^{+0.072}_{-0.066}$	$D_{\text{M}}(0.61)$	2311^{+67}_{-66}
$100\theta_{MC}$	$1.04104^{+0.00097}_{-0.00097}$	$10^9 A_s e^{-2\tau}$	$1.875^{+0.033}_{-0.033}$	$H(2.33)$	$235.3^{+4.9}_{-4.9}$
τ	$0.054^{+0.016}_{-0.014}$	D_{40}	1228^{+27}_{-27}	$D_{\text{M}}(2.33)$	5778^{+140}_{-140}
Σm_ν	< 0.131	D_{220}	5717^{+78}_{-78}	$f\sigma_8(0.15)$	$0.456^{+0.013}_{-0.013}$
N_{eff}	$3.02^{+0.33}_{-0.33}$	D_{810}	2535^{+27}_{-27}	$\sigma_8(0.15)$	$0.749^{+0.020}_{-0.022}$
$\ln(10^{10} A_s)$	$3.040^{+0.034}_{-0.032}$	D_{1420}	$815.3^{+9.7}_{-9.8}$	$f\sigma_8(0.38)$	$0.475^{+0.012}_{-0.012}$
n_s	$0.965^{+0.014}_{-0.014}$	D_{2000}	$230.1^{+3.8}_{-3.8}$	$\sigma_8(0.38)$	$0.664^{+0.019}_{-0.021}$
y_{cal}	$1.0006^{+0.0048}_{-0.0048}$	$n_{s,0.002}$	$0.965^{+0.014}_{-0.014}$	$f\sigma_8(0.51)$	$0.474^{+0.011}_{-0.012}$
A_{217}^{CIB}	44^{+20}_{-20}	Y_P	$0.2449^{+0.0045}_{-0.0046}$	$\sigma_8(0.51)$	$0.622^{+0.018}_{-0.019}$
$\xi^{tSZ-CIB}$	—	Y_P^{BBN}	$0.2462^{+0.0045}_{-0.0046}$	$f\sigma_8(0.61)$	$0.469^{+0.011}_{-0.012}$
A_{143}^{tSZ}	$4.4^{+3.8}_{-4.2}$	$10^5 D/H$	$2.610^{+0.097}_{-0.096}$	$\sigma_8(0.61)$	$0.591^{+0.017}_{-0.019}$
A_{100}^{PS}	252^{+60}_{-50}	Age/Gyr	$13.83^{+0.34}_{-0.33}$	$f\sigma_8(2.33)$	$0.2982^{+0.0086}_{-0.0088}$
A_{143}^{PS}	44^{+20}_{-20}	z_*	$1090.00^{+0.70}_{-0.70}$	$\sigma_8(2.33)$	$0.3075^{+0.0095}_{-0.010}$
A_{217}^{PS}	108^{+20}_{-30}	r_*	$145.1^{+3.3}_{-3.2}$	f_{2000}^{143}	30^{+6}_{-6}
A^{kSZ}	—	$100\theta_*$	$1.0413^{+0.0011}_{-0.0011}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-4}
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.93^{+0.30}_{-0.30}$	f_{2000}^{217}	$107.5^{+4.1}_{-4.1}$
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	z_{drag}	$1059.4^{+1.4}_{-1.4}$	χ^2_{lensing}	$9.41 (\nu: 0.4)$
H_0	$67.5^{+2.3}_{-2.2}$	r_{drag}	$147.8^{+3.4}_{-3.3}$	χ^2_{small}	$397.0 (\nu: 1.6)$
Ω_Λ	$0.689^{+0.015}_{-0.016}$	k_{D}	$0.1401^{+0.0025}_{-0.0025}$	χ^2_{lowl}	$23.3 (\nu: 0.6)$
Ω_m	$0.311^{+0.016}_{-0.015}$	$100\theta_{\text{D}}$	$0.16096^{+0.00083}_{-0.00082}$	χ^2_{Aver15}	$0.44 (\nu: 0.2)$
$\Omega_m h^2$	$0.1414^{+0.0059}_{-0.0057}$	z_{eq}	3381^{+56}_{-56}	χ^2_{Cooke17}	$0.28 (\nu: 0.1)$
$\Omega_\nu h^2$	< 0.00138	k_{eq}	$0.01030^{+0.00022}_{-0.00021}$	$\chi^2_{6\text{DF}}$	$0.063 (\nu: 0.0)$
$\Omega_m h^3$	$0.0955^{+0.0067}_{-0.0064}$	$100\theta_{\text{eq}}$	$0.817^{+0.011}_{-0.010}$	χ^2_{MGS}	$1.34 (\nu: 0.1)$
σ_8	$0.811^{+0.022}_{-0.024}$	$100\theta_{\text{s,eq}}$	$0.4513^{+0.0054}_{-0.0053}$	χ^2_{DR12BAO}	$4.8 (\nu: 1.5)$
S_8	$0.825^{+0.025}_{-0.025}$	$H(0.15)$	$72.7^{+2.3}_{-2.2}$	χ^2_{prior}	$7.4 (\nu: 6.2)$
$\sigma_8 \Omega_m^{0.5}$	$0.452^{+0.013}_{-0.014}$	$D_{\text{M}}(0.15)$	643^{+21}_{-20}	χ^2_{CMB}	$4347 (\nu: 4947830.1)$
$\sigma_8 \Omega_m^{0.25}$	$0.605^{+0.015}_{-0.016}$	$H(0.38)$	$82.8^{+2.3}_{-2.2}$	χ^2_{BAO}	$6.2 (\nu: 1.0)$
$\sigma_8/h^{0.5}$	$0.987^{+0.022}_{-0.023}$	$D_{\text{M}}(0.38)$	1533^{+46}_{-46}	χ^2_{Abund}	$0.72 (\nu: 0.3)$
$r_{\text{drag}} h$	$99.7^{+1.9}_{-1.9}$	$H(0.51)$	$89.5^{+2.3}_{-2.3}$		
$\langle d^2 \rangle^{1/2}$	$2.436^{+0.045}_{-0.045}$	$D_{\text{M}}(0.51)$	1986^{+58}_{-58}		

Best-fit $\chi^2_{\text{eff}} = 7485.51$; $\Delta\chi^2_{\text{eff}} = 6292.18$; $\bar{\chi}^2_{\text{eff}} = 7507.35$; $\Delta\bar{\chi}^2_{\text{eff}} = 6291.71$; $R - 1 = 0.00593$
 χ^2_{eff} : Abund - Yp_Aver2015: 0.04 (Δ 0.01) D_Cooke2017: 0.04 (Δ -0.03) BAO - 6DF: 0.01 (Δ 0.00) MGS: 1.47 (Δ 0.00) DR12BAO: 3.76 (Δ 0.00) CMB - smi-cadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.82 (Δ 0.05) small_100x143_offlike5_EE_Aplanck_B: 395.85 (Δ -0.00) commander_dx12_v3_2_29: 23.32 (Δ -0.00) CamSpec like_10.7HM: 7049.98

9.19 base_nnu_mnu_CamSpecHM_TT_lowl_lowE_lensing_BAO_post_Pantheon18_zre6p5/base_nnu_mnu_plikHM_TT_lowl_lowE_lensing_BAO

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02225^{+0.00046}_{-0.00045}$	$\langle d^2 \rangle^{1/2}$	$2.432^{+0.046}_{-0.047}$	$H(0.51)$	$90.0^{+3.0}_{-3.0}$
$\Omega_c h^2$	$0.1196^{+0.0075}_{-0.0073}$	z_{re}	< 9.04	$D_{\text{M}}(0.51)$	1973^{+74}_{-71}
$100\theta_{MC}$	$1.0410^{+0.0011}_{-0.0011}$	$10^9 A_s$	$2.101^{+0.071}_{-0.067}$	$H(0.61)$	$95.6^{+3.2}_{-3.1}$
τ	$0.056^{+0.013}_{-0.012}$	$10^9 A_s e^{-2\tau}$	$1.880^{+0.040}_{-0.041}$	$D_{\text{M}}(0.61)$	2297^{+85}_{-82}
Σm_ν	< 0.137	D_{40}	1224^{+29}_{-29}	$H(2.33)$	$236.2^{+6.8}_{-6.6}$
N_{eff}	$3.09^{+0.47}_{-0.45}$	D_{220}	5718^{+80}_{-79}	$D_{\text{M}}(2.33)$	5749^{+190}_{-180}
$\ln(10^{10} A_s)$	$3.045^{+0.035}_{-0.031}$	D_{810}	2536^{+27}_{-27}	$f\sigma_8(0.15)$	$0.456^{+0.013}_{-0.013}$
n_s	$0.968^{+0.017}_{-0.017}$	D_{1420}	815^{+10}_{-10}	$\sigma_8(0.15)$	$0.752^{+0.023}_{-0.024}$
y_{cal}	$1.0006^{+0.0048}_{-0.0048}$	D_{2000}	$229.8^{+4.4}_{-4.4}$	$f\sigma_8(0.38)$	$0.476^{+0.013}_{-0.013}$
A_{217}^{CIB}	44^{+20}_{-20}	$n_{s,0.002}$	$0.968^{+0.017}_{-0.017}$	$\sigma_8(0.38)$	$0.667^{+0.021}_{-0.022}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.2458^{+0.0062}_{-0.0062}$	$f\sigma_8(0.51)$	$0.475^{+0.013}_{-0.013}$
A_{143}^{tSZ}	$4.4^{+3.8}_{-4.2}$	Y_P^{BBN}	$0.2471^{+0.0062}_{-0.0063}$	$\sigma_8(0.51)$	$0.624^{+0.020}_{-0.021}$
A_{100}^{PS}	253^{+60}_{-50}	$10^5 D/H$	$2.62^{+0.13}_{-0.13}$	$f\sigma_8(0.61)$	$0.470^{+0.013}_{-0.013}$
A_{143}^{PS}	45^{+20}_{-20}	Age/Gyr	$13.76^{+0.44}_{-0.43}$	$\sigma_8(0.61)$	$0.594^{+0.020}_{-0.020}$
A_{217}^{PS}	108^{+20}_{-30}	z_*	$1090.07^{+0.94}_{-0.93}$	$f\sigma_8(2.33)$	$0.2997^{+0.0099}_{-0.0099}$
A^{kSZ}	—	r_*	$144.5^{+4.4}_{-4.3}$	$\sigma_8(2.33)$	$0.309^{+0.011}_{-0.011}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	$100\theta_*$	$1.0411^{+0.0014}_{-0.0013}$	f_{2000}^{143}	31^{+7}_{-7}
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.88^{+0.41}_{-0.40}$	$f_{2000}^{143 \times 217}$	33^{+5}_{-5}
H_0	$68.0^{+2.8}_{-2.7}$	z_{drag}	$1059.6^{+1.7}_{-1.7}$	f_{2000}^{217}	$107.8^{+4.6}_{-4.6}$
Ω_Λ	$0.692^{+0.015}_{-0.015}$	r_{drag}	$147.2^{+4.6}_{-4.4}$	χ_{lensing}^2	$9.52 (\nu: 0.4)$
Ω_m	$0.308^{+0.015}_{-0.015}$	k_{D}	$0.1406^{+0.0033}_{-0.0032}$	χ_{small}^2	$397.1 (\nu: 1.7)$
$\Omega_m h^2$	$0.1424^{+0.0081}_{-0.0077}$	$100\theta_{\text{D}}$	$0.1611^{+0.0012}_{-0.0011}$	χ_{lowl}^2	$23.0 (\nu: 0.7)$
$\Omega_\nu h^2$	< 0.00146	z_{eq}	3372^{+57}_{-58}	χ_{JLA}^2	$1035.03 (\nu: 0.1)$
$\Omega_m h^3$	$0.0969^{+0.0091}_{-0.0086}$	k_{eq}	$0.01032^{+0.00027}_{-0.00027}$	$\chi_{6\text{DF}}^2$	$0.047 (\nu: 0.0)$
σ_8	$0.814^{+0.025}_{-0.026}$	$100\theta_{\text{eq}}$	$0.818^{+0.011}_{-0.011}$	χ_{MGS}^2	$1.50 (\nu: 0.2)$
S_8	$0.825^{+0.025}_{-0.025}$	$100\theta_{\text{s,eq}}$	$0.4522^{+0.0056}_{-0.0054}$	χ_{DR12BAO}^2	$4.4 (\nu: 0.9)$
$\sigma_8 \Omega_m^{0.5}$	$0.452^{+0.014}_{-0.014}$	$H(0.15)$	$73.2^{+2.8}_{-2.8}$	χ_{prior}^2	$7.4 (\nu: 6.3)$
$\sigma_8 \Omega_m^{0.25}$	$0.606^{+0.017}_{-0.017}$	$D_{\text{M}}(0.15)$	638^{+25}_{-25}	χ_{CMB}^2	$4348 (\nu: 4947727.2)$
$\sigma_8/h^{0.5}$	$0.987^{+0.022}_{-0.024}$	$H(0.38)$	$83.3^{+2.9}_{-2.9}$	χ_{BAO}^2	$6.0 (\nu: 0.6)$
$r_{\text{drag}} h$	$100.0^{+1.9}_{-1.9}$	$D_{\text{M}}(0.38)$	1523^{+58}_{-56}		

$\bar{\chi}_{\text{eff}}^2 = 8542.04$; $\Delta\bar{\chi}_{\text{eff}}^2 = 6291.69$; $R - 1 = 0.00589$

9.20 base_nnu_mnu_CamSpecHM_TTTEEE_lowl_lowE_lensing_BAO/base_nnu_mnu_plikHM_TTTEEE_lowl_lowE_lensing_BAO

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02232^{+0.00038}_{-0.00038}$	$\langle d^2 \rangle^{1/2}$	$2.439^{+0.044}_{-0.044}$	$H(0.51)$	$89.3^{+2.6}_{-2.5}$
$\Omega_c h^2$	$0.1179^{+0.0062}_{-0.0059}$	z_{re}	$7.7^{+1.5}_{-1.5}$	$D_{\text{M}}(0.51)$	1991^{+64}_{-63}
$100\theta_{MC}$	$1.04114^{+0.00089}_{-0.00089}$	$10^9 A_s$	$2.090^{+0.072}_{-0.068}$	$H(0.61)$	$94.9^{+2.7}_{-2.6}$
τ	$0.055^{+0.015}_{-0.014}$	$10^9 A_s e^{-2\tau}$	$1.873^{+0.035}_{-0.035}$	$D_{\text{M}}(0.61)$	2317^{+73}_{-72}
Σm_ν	< 0.123	D_{40}	1231^{+27}_{-27}	$H(2.33)$	$234.8^{+5.5}_{-5.4}$
N_{eff}	$2.96^{+0.38}_{-0.36}$	D_{220}	5732^{+76}_{-75}	$D_{\text{M}}(2.33)$	5793^{+160}_{-150}
$\ln(10^{10} A_s)$	$3.040^{+0.034}_{-0.033}$	D_{810}	2536^{+27}_{-26}	$f\sigma_8(0.15)$	$0.456^{+0.012}_{-0.012}$
n_s	$0.964^{+0.015}_{-0.014}$	D_{1420}	$817.5^{+9.6}_{-9.7}$	$\sigma_8(0.15)$	$0.748^{+0.021}_{-0.022}$
y_{cal}	$1.0007^{+0.0048}_{-0.0047}$	D_{2000}	$231.3^{+3.8}_{-3.9}$	$f\sigma_8(0.38)$	$0.474^{+0.011}_{-0.012}$
A_{217}^{CIB}	43^{+20}_{-20}	$n_{s,0.002}$	$0.964^{+0.015}_{-0.014}$	$\sigma_8(0.38)$	$0.663^{+0.019}_{-0.021}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.2442^{+0.0051}_{-0.0051}$	$f\sigma_8(0.51)$	$0.473^{+0.011}_{-0.012}$
A_{143}^{tSZ}	$4.7^{+3.9}_{-4.3}$	Y_P^{BBN}	$0.2455^{+0.0052}_{-0.0051}$	$\sigma_8(0.51)$	$0.621^{+0.019}_{-0.020}$
A_{100}^{PS}	247^{+60}_{-50}	$10^5 D/H$	$2.57^{+0.10}_{-0.094}$	$f\sigma_8(0.61)$	$0.468^{+0.011}_{-0.012}$
A_{143}^{PS}	41^{+20}_{-20}	Age/Gyr	$13.87^{+0.37}_{-0.37}$	$\sigma_8(0.61)$	$0.591^{+0.018}_{-0.019}$
A_{217}^{PS}	109^{+20}_{-30}	z_*	$1089.71^{+0.75}_{-0.69}$	$f\sigma_8(2.33)$	$0.2976^{+0.0090}_{-0.0091}$
A^{kSZ}	—	r_*	$145.5^{+3.6}_{-3.6}$	$\sigma_8(2.33)$	$0.3069^{+0.0098}_{-0.010}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	$100\theta_*$	$1.0414^{+0.0011}_{-0.0011}$	f_{2000}^{143}	29^{+6}_{-6}
c_{217}	$0.9996^{+0.0037}_{-0.0027}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.97^{+0.34}_{-0.33}$	$f_{2000}^{143 \times 217}$	31^{+4}_{-4}
H_0	$67.3^{+2.4}_{-2.4}$	z_{drag}	$1059.6^{+1.4}_{-1.5}$	f_{2000}^{217}	$106.3^{+4.2}_{-4.1}$
Ω_Λ	$0.689^{+0.014}_{-0.015}$	r_{drag}	$148.2^{+3.8}_{-3.7}$	χ_{lensing}^2	$9.19 (\nu: 0.3)$
Ω_m	$0.311^{+0.015}_{-0.014}$	k_{D}	$0.1400^{+0.0027}_{-0.0027}$	χ_{small}^2	$397.1 (\nu: 1.6)$
$\Omega_m h^2$	$0.1407^{+0.0065}_{-0.0062}$	$100\theta_{\text{D}}$	$0.16060^{+0.00092}_{-0.00085}$	χ_{lowl}^2	$23.6 (\nu: 0.7)$
$\Omega_\nu h^2$	< 0.00129	z_{eq}	3390^{+50}_{-51}	$\chi_{6\text{DF}}^2$	$0.060 (\nu: 0.0)$
$\Omega_m h^3$	$0.0947^{+0.0075}_{-0.0070}$	k_{eq}	$0.01029^{+0.00022}_{-0.00022}$	χ_{MGS}^2	$1.31 (\nu: 0.1)$
σ_8	$0.810^{+0.022}_{-0.024}$	$100\theta_{\text{eq}}$	$0.8154^{+0.0097}_{-0.0093}$	χ_{DR12BAO}^2	$4.8 (\nu: 1.3)$
S_8	$0.824^{+0.022}_{-0.022}$	$100\theta_{\text{s,eq}}$	$0.4505^{+0.0049}_{-0.0047}$	χ_{prior}^2	$9.6 (\nu: 9.7)$
$\sigma_8 \Omega_m^{0.5}$	$0.451^{+0.012}_{-0.012}$	$H(0.15)$	$72.5^{+2.4}_{-2.4}$	χ_{CMB}^2	$7366 (\nu: 10475893.8)$
$\sigma_8 \Omega_m^{0.25}$	$0.604^{+0.015}_{-0.016}$	$D_{\text{M}}(0.15)$	644^{+22}_{-22}	χ_{BAO}^2	$6.2 (\nu: 0.9)$
$\sigma_8/h^{0.5}$	$0.987^{+0.021}_{-0.022}$	$H(0.38)$	$82.6^{+2.5}_{-2.4}$		
$r_{\text{drag}} h$	$99.7^{+1.8}_{-1.8}$	$D_{\text{M}}(0.38)$	1537^{+51}_{-50}		

Best-fit $\chi_{\text{eff}}^2 = 11933.58$; $\Delta\chi_{\text{eff}}^2 = 9155.42$; $\bar{\chi}_{\text{eff}}^2 = 11957.66$; $\Delta\bar{\chi}_{\text{eff}}^2 = 9150.85$; $R - 1 = 0.00614$
 χ_{eff}^2 : BAO - 6DF: 0.01 (Δ -0.00) MGS: 1.41 (Δ 0.00) DR12BAO: 3.90 (Δ -0.02) CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.62 (Δ -0.05) small_100x143_offlike5_EE_Aplanc
395.85 (Δ -0.21) commander_dx12_v3.2.29: 23.58 (Δ -0.06) CamSpec like_10.7HM_1400_unified: 11498.22

9.21 base_nnu_mnu_CamSpecHM_TTTEEE_lowl_lowE_lensing_BAO_post_Pantheon18/base_nnu_mnu_plikHM_TTTEEE_lowl_lowE_lensing

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02234^{+0.00037}_{-0.00037}$	$\langle d^2 \rangle^{1/2}$	$2.437^{+0.043}_{-0.044}$	$H(0.51)$	$89.4^{+2.6}_{-2.5}$
$\Omega_c h^2$	$0.1180^{+0.0061}_{-0.0059}$	z_{re}	$7.7^{+1.5}_{-1.5}$	$D_{\text{M}}(0.51)$	1988^{+62}_{-61}
$100\theta_{MC}$	$1.04113^{+0.00089}_{-0.00089}$	$10^9 A_s$	$2.092^{+0.072}_{-0.068}$	$H(0.61)$	$95.0^{+2.6}_{-2.5}$
τ	$0.055^{+0.015}_{-0.014}$	$10^9 A_s e^{-2\tau}$	$1.873^{+0.035}_{-0.035}$	$D_{\text{M}}(0.61)$	2313^{+71}_{-70}
Σm_ν	< 0.116	D_{40}	1230^{+26}_{-26}	$H(2.33)$	$234.9^{+5.5}_{-5.3}$
N_{eff}	$2.97^{+0.38}_{-0.36}$	D_{220}	5732^{+76}_{-75}	$D_{\text{M}}(2.33)$	5786^{+150}_{-150}
$\ln(10^{10} A_s)$	$3.040^{+0.034}_{-0.033}$	D_{810}	2536^{+27}_{-26}	$f\sigma_8(0.15)$	$0.455^{+0.012}_{-0.012}$
n_s	$0.965^{+0.014}_{-0.014}$	D_{1420}	$817.5^{+9.6}_{-9.6}$	$\sigma_8(0.15)$	$0.749^{+0.021}_{-0.022}$
y_{cal}	$1.0007^{+0.0048}_{-0.0047}$	D_{2000}	$231.3^{+3.8}_{-3.9}$	$f\sigma_8(0.38)$	$0.474^{+0.011}_{-0.012}$
A_{217}^{CIB}	43^{+20}_{-20}	$n_{s,0.002}$	$0.965^{+0.014}_{-0.014}$	$\sigma_8(0.38)$	$0.664^{+0.019}_{-0.020}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.2444^{+0.0051}_{-0.0050}$	$f\sigma_8(0.51)$	$0.473^{+0.011}_{-0.012}$
A_{143}^{tSZ}	$4.7^{+3.9}_{-4.3}$	Y_P^{BBN}	$0.2457^{+0.0051}_{-0.0050}$	$\sigma_8(0.51)$	$0.622^{+0.018}_{-0.019}$
A_{100}^{PS}	247^{+60}_{-50}	$10^5 D/H$	$2.57^{+0.10}_{-0.095}$	$f\sigma_8(0.61)$	$0.468^{+0.011}_{-0.012}$
A_{143}^{PS}	41^{+20}_{-20}	Age/Gyr	$13.85^{+0.36}_{-0.36}$	$\sigma_8(0.61)$	$0.591^{+0.018}_{-0.018}$
A_{217}^{PS}	109^{+20}_{-30}	z_*	$1089.71^{+0.75}_{-0.70}$	$f\sigma_8(2.33)$	$0.2981^{+0.0088}_{-0.0088}$
A^{kSZ}	—	r_*	$145.4^{+3.6}_{-3.6}$	$\sigma_8(2.33)$	$0.3075^{+0.0097}_{-0.0098}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	$100\theta_*$	$1.0414^{+0.0011}_{-0.0011}$	f_{2000}^{143}	29^{+6}_{-6}
c_{217}	$0.9996^{+0.0037}_{-0.0027}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.96^{+0.33}_{-0.33}$	$f_{2000}^{143 \times 217}$	31^{+4}_{-4}
H_0	$67.4^{+2.4}_{-2.3}$	z_{drag}	$1059.7^{+1.4}_{-1.4}$	f_{2000}^{217}	$106.4^{+4.2}_{-4.1}$
Ω_Λ	$0.690^{+0.013}_{-0.014}$	r_{drag}	$148.1^{+3.7}_{-3.7}$	χ_{lensing}^2	$9.21 (\nu: 0.3)$
Ω_m	$0.310^{+0.014}_{-0.013}$	k_{D}	$0.1401^{+0.0027}_{-0.0027}$	χ_{small}^2	$397.1 (\nu: 1.7)$
$\Omega_m h^2$	$0.1408^{+0.0066}_{-0.0062}$	$100\theta_{\text{D}}$	$0.16062^{+0.00092}_{-0.00084}$	χ_{lowl}^2	$23.5 (\nu: 0.6)$
$\Omega_\nu h^2$	< 0.00123	z_{eq}	3387^{+48}_{-49}	χ_{JLA}^2	$1035.06 (\nu: 0.1)$
$\Omega_m h^3$	$0.0950^{+0.0074}_{-0.0069}$	k_{eq}	$0.01029^{+0.00022}_{-0.00022}$	$\chi_{6\text{DF}}^2$	$0.047 (\nu: 0.0)$
σ_8	$0.810^{+0.022}_{-0.023}$	$100\theta_{\text{eq}}$	$0.8161^{+0.0093}_{-0.0090}$	χ_{MGS}^2	$1.39 (\nu: 0.1)$
S_8	$0.823^{+0.022}_{-0.022}$	$100\theta_{\text{s,eq}}$	$0.4509^{+0.0047}_{-0.0046}$	χ_{DR12BAO}^2	$4.6 (\nu: 0.9)$
$\sigma_8 \Omega_m^{0.5}$	$0.451^{+0.012}_{-0.012}$	$H(0.15)$	$72.7^{+2.4}_{-2.3}$	χ_{prior}^2	$9.6 (\nu: 9.7)$
$\sigma_8 \Omega_m^{0.25}$	$0.604^{+0.015}_{-0.015}$	$D_{\text{M}}(0.15)$	643^{+22}_{-21}	χ_{CMB}^2	$7366 (\nu: 10475859.4)$
$\sigma_8/h^{0.5}$	$0.987^{+0.020}_{-0.021}$	$H(0.38)$	$82.7^{+2.5}_{-2.4}$	χ_{BAO}^2	$6.0 (\nu: 0.6)$
$r_{\text{drag}} h$	$99.8^{+1.6}_{-1.7}$	$D_{\text{M}}(0.38)$	1534^{+49}_{-48}		

Best-fit $\chi_{\text{eff}}^2 = 12968.49$; $\Delta\chi_{\text{eff}}^2 = 9155.38$; $\bar{\chi}_{\text{eff}}^2 = 12992.58$; $\Delta\bar{\chi}_{\text{eff}}^2 = 9150.85$; $R - 1 = 0.00612$
 χ_{eff}^2 : BAO - 6DF: 0.01 (Δ 0.00) MGS: 1.47 (Δ 0.00) DR12BAO: 3.77 (Δ -0.00) CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.66 (Δ 0.05) simall_100x143_offlike5_EE_Aplanck: 395.86 (Δ -0.06) commander_dx12_v3.2_29: 23.43 (Δ -0.09) CamSpec like_10.7HM_1400_unified: 11498.34 SN - JLA Pantheon18: 1034.88 (Δ 0.00)

9.22 base_nnu_mnu_CamSpecHM_TTTEEE_lowl_lowE_lensing_BAO_post_Aver15/base_nnu_mnu_plikHM_TTTEEE_lowl_lowE_lensing_B

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02231^{+0.00035}_{-0.00035}$	$\langle d^2 \rangle^{1/2}$	$2.439^{+0.043}_{-0.043}$	$H(0.51)$	$89.2^{+2.2}_{-2.1}$
$\Omega_c h^2$	$0.1177^{+0.0052}_{-0.0050}$	z_{re}	$7.7^{+1.5}_{-1.5}$	$D_{\text{M}}(0.51)$	1993^{+54}_{-54}
$100\theta_{MC}$	$1.04116^{+0.00081}_{-0.00082}$	$10^9 A_s$	$2.088^{+0.069}_{-0.065}$	$H(0.61)$	$94.7^{+2.2}_{-2.2}$
τ	$0.055^{+0.015}_{-0.014}$	$10^9 A_s e^{-2\tau}$	$1.871^{+0.031}_{-0.032}$	$D_{\text{M}}(0.61)$	2320^{+62}_{-61}
Σm_ν	< 0.120	D_{40}	1231^{+25}_{-25}	$H(2.33)$	$234.6^{+4.7}_{-4.5}$
N_{eff}	$2.95^{+0.32}_{-0.30}$	D_{220}	5732^{+76}_{-74}	$D_{\text{M}}(2.33)$	5799^{+130}_{-130}
$\ln(10^{10} A_s)$	$3.039^{+0.033}_{-0.032}$	D_{810}	2536^{+27}_{-26}	$f\sigma_8(0.15)$	$0.456^{+0.012}_{-0.012}$
n_s	$0.963^{+0.013}_{-0.013}$	D_{1420}	$817.5^{+9.5}_{-9.6}$	$\sigma_8(0.15)$	$0.748^{+0.020}_{-0.021}$
y_{cal}	$1.0007^{+0.0048}_{-0.0047}$	D_{2000}	$231.4^{+3.6}_{-3.7}$	$f\sigma_8(0.38)$	$0.474^{+0.011}_{-0.011}$
A_{217}^{CIB}	42^{+20}_{-20}	$n_{s,0.002}$	$0.963^{+0.013}_{-0.013}$	$\sigma_8(0.38)$	$0.663^{+0.018}_{-0.020}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.2440^{+0.0043}_{-0.0043}$	$f\sigma_8(0.51)$	$0.473^{+0.011}_{-0.011}$
A_{143}^{tSZ}	$4.8^{+3.9}_{-4.3}$	Y_P^{BBN}	$0.2453^{+0.0043}_{-0.0043}$	$\sigma_8(0.51)$	$0.620^{+0.017}_{-0.019}$
A_{100}^{PS}	246^{+60}_{-50}	$10^5 D/H$	$2.562^{+0.092}_{-0.084}$	$f\sigma_8(0.61)$	$0.468^{+0.011}_{-0.011}$
A_{143}^{PS}	41^{+20}_{-20}	Age/Gyr	$13.88^{+0.31}_{-0.31}$	$\sigma_8(0.61)$	$0.590^{+0.016}_{-0.018}$
A_{217}^{PS}	109^{+20}_{-30}	z_*	$1089.69^{+0.67}_{-0.63}$	$f\sigma_8(2.33)$	$0.2974^{+0.0081}_{-0.0084}$
A^{kSZ}	—	r_*	$145.6^{+3.1}_{-3.0}$	$\sigma_8(2.33)$	$0.3067^{+0.0089}_{-0.0095}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	$100\theta_*$	$1.04141^{+0.00097}_{-0.00098}$	f_{2000}^{143}	29^{+6}_{-6}
c_{217}	$0.9996^{+0.0037}_{-0.0027}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.98^{+0.28}_{-0.28}$	$f_{2000}^{143 \times 217}$	31^{+4}_{-4}
H_0	$67.2^{+2.1}_{-2.0}$	z_{drag}	$1059.5^{+1.3}_{-1.3}$	f_{2000}^{217}	$106.3^{+4.0}_{-3.9}$
Ω_Λ	$0.689^{+0.013}_{-0.014}$	r_{drag}	$148.3^{+3.2}_{-3.1}$	χ_{lensing}^2	$9.16 (\nu: 0.3)$
Ω_m	$0.311^{+0.014}_{-0.013}$	k_{D}	$0.1399^{+0.0023}_{-0.0023}$	χ_{small}^2	$397.0 (\nu: 1.6)$
$\Omega_m h^2$	$0.1405^{+0.0056}_{-0.0053}$	$100\theta_{\text{D}}$	$0.16057^{+0.00079}_{-0.00074}$	χ_{lowl}^2	$23.6 (\nu: 0.6)$
$\Omega_\nu h^2$	< 0.00126	z_{eq}	3391^{+48}_{-48}	χ_{Aver15}^2	$0.31 (\nu: 0.1)$
$\Omega_m h^3$	$0.0944^{+0.0062}_{-0.0059}$	k_{eq}	$0.01028^{+0.00020}_{-0.00020}$	$\chi_{6\text{DF}}^2$	$0.059 (\nu: 0.0)$
σ_8	$0.809^{+0.021}_{-0.023}$	$100\theta_{\text{eq}}$	$0.8152^{+0.0092}_{-0.0090}$	χ_{MGS}^2	$1.30 (\nu: 0.1)$
S_8	$0.824^{+0.022}_{-0.022}$	$100\theta_{\text{s,eq}}$	$0.4504^{+0.0047}_{-0.0046}$	χ_{DR12BAO}^2	$4.8 (\nu: 1.3)$
$\sigma_8 \Omega_m^{0.5}$	$0.451^{+0.012}_{-0.012}$	$H(0.15)$	$72.5^{+2.1}_{-2.0}$	χ_{prior}^2	$9.6 (\nu: 9.6)$
$\sigma_8 \Omega_m^{0.25}$	$0.604^{+0.014}_{-0.015}$	$D_{\text{M}}(0.15)$	645^{+19}_{-19}	χ_{CMB}^2	$7366 (\nu: 10475776.6)$
$\sigma_8/h^{0.5}$	$0.987^{+0.021}_{-0.021}$	$H(0.38)$	$82.5^{+2.1}_{-2.1}$	χ_{BAO}^2	$6.2 (\nu: 0.8)$
$r_{\text{drag}} h$	$99.7^{+1.7}_{-1.8}$	$D_{\text{M}}(0.38)$	1539^{+43}_{-43}		

Best-fit $\chi_{\text{eff}}^2 = 11933.58$; $\Delta\chi_{\text{eff}}^2 = 9155.39$; $\bar{\chi}_{\text{eff}}^2 = 11957.68$; $\Delta\bar{\chi}_{\text{eff}}^2 = 9150.90$; $R - 1 = 0.00718$
 χ_{eff}^2 : Abund - Yp_Aver2015: 0.01 (Δ 0.00) BAO - 6DF: 0.01 (Δ -0.00) MGS: 1.41 (Δ 0.06) DR12BAO: 3.88 (Δ -0.16) CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.62 (Δ -0.03) small_100x143_offlike5_EE_Aplanck_B: 395.85 (Δ -0.01) commander_dx12_v3_2_29: 23.55 (Δ -0.16) CamSpec like_10.7HM_1400_unified: 11498.33

9.23 base_nnu_mnu_CamSpecHM_TTTEEE_lowl_lowE_lensing_BAO_post_Cooke17_Aver15/base_nnu_mnu_plikHM_TTTEEE_lowl_lowE_lensing_BAO_post_Cooke17_Aver15

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02231^{+0.00035}_{-0.00036}$	z_{re}	$7.7^{+1.5}_{-1.5}$	$H(0.61)$	$94.9^{+2.1}_{-2.1}$
$\Omega_c h^2$	$0.1182^{+0.0049}_{-0.0048}$	$10^9 A_s$	$2.090^{+0.069}_{-0.065}$	$D_{\text{M}}(0.61)$	2315^{+60}_{-59}
$100\theta_{MC}$	$1.04110^{+0.00078}_{-0.00078}$	$10^9 A_s e^{-2\tau}$	$1.874^{+0.030}_{-0.031}$	$H(2.33)$	$235.0^{+4.4}_{-4.3}$
τ	$0.055^{+0.015}_{-0.014}$	D_{40}	1230^{+25}_{-25}	$D_{\text{M}}(2.33)$	5788^{+130}_{-120}
Σm_ν	< 0.122	D_{220}	5730^{+75}_{-74}	$f\sigma_8(0.15)$	$0.456^{+0.011}_{-0.011}$
N_{eff}	$2.97^{+0.30}_{-0.29}$	D_{810}	2536^{+26}_{-26}	$\sigma_8(0.15)$	$0.749^{+0.019}_{-0.021}$
$\ln(10^{10} A_s)$	$3.040^{+0.033}_{-0.031}$	D_{1420}	$817.2^{+9.4}_{-9.4}$	$f\sigma_8(0.38)$	$0.475^{+0.011}_{-0.011}$
n_s	$0.964^{+0.013}_{-0.012}$	D_{2000}	$231.1^{+3.5}_{-3.5}$	$\sigma_8(0.38)$	$0.664^{+0.017}_{-0.019}$
y_{cal}	$1.0006^{+0.0048}_{-0.0047}$	$n_{s,0.002}$	$0.964^{+0.013}_{-0.012}$	$f\sigma_8(0.51)$	$0.473^{+0.011}_{-0.011}$
A_{217}^{CIB}	43^{+20}_{-20}	Y_P	$0.2444^{+0.0040}_{-0.0041}$	$\sigma_8(0.51)$	$0.621^{+0.017}_{-0.018}$
$\xi^{tSZ-CIB}$	—	Y_P^{BBN}	$0.2457^{+0.0041}_{-0.0041}$	$f\sigma_8(0.61)$	$0.468^{+0.010}_{-0.011}$
A_{143}^{tSZ}	$4.7^{+3.9}_{-4.3}$	$10^5 D/H$	$2.572^{+0.084}_{-0.078}$	$\sigma_8(0.61)$	$0.591^{+0.016}_{-0.018}$
A_{100}^{PS}	247^{+60}_{-50}	Age/Gyr	$13.86^{+0.30}_{-0.29}$	$f\sigma_8(2.33)$	$0.2978^{+0.0079}_{-0.0084}$
A_{143}^{PS}	42^{+20}_{-20}	z_*	$1089.76^{+0.61}_{-0.58}$	$\sigma_8(2.33)$	$0.3072^{+0.0088}_{-0.0095}$
A_{217}^{PS}	109^{+20}_{-30}	r_*	$145.3^{+2.9}_{-2.8}$	f_{2000}^{143}	29^{+6}_{-6}
A^{kSZ}	—	$100\theta_*$	$1.04133^{+0.00093}_{-0.00093}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.96^{+0.27}_{-0.26}$	f_{2000}^{217}	$106.5^{+3.9}_{-3.8}$
c_{217}	$0.9996^{+0.0037}_{-0.0027}$	z_{drag}	$1059.6^{+1.2}_{-1.2}$	χ^2_{lensing}	$9.21 (\nu: 0.3)$
H_0	$67.3^{+2.0}_{-2.0}$	r_{drag}	$148.0^{+3.0}_{-3.0}$	χ^2_{simall}	$397.0 (\nu: 1.6)$
Ω_Λ	$0.689^{+0.013}_{-0.014}$	k_{D}	$0.1401^{+0.0022}_{-0.0022}$	χ^2_{lowl}	$23.5 (\nu: 0.6)$
Ω_m	$0.311^{+0.014}_{-0.013}$	$100\theta_{\text{D}}$	$0.16065^{+0.00072}_{-0.00069}$	χ^2_{Aver15}	$0.31 (\nu: 0.1)$
$\Omega_m h^2$	$0.1410^{+0.0052}_{-0.0051}$	z_{eq}	3390^{+48}_{-48}	χ^2_{Cooke17}	$0.43 (\nu: 0.1)$
$\Omega_\nu h^2$	< 0.00129	k_{eq}	$0.01030^{+0.00019}_{-0.00019}$	$\chi^2_{6\text{DF}}$	$0.059 (\nu: 0.0)$
$\Omega_m h^3$	$0.0950^{+0.0059}_{-0.0057}$	$100\theta_{\text{eq}}$	$0.8154^{+0.0091}_{-0.0090}$	χ^2_{MGS}	$1.30 (\nu: 0.1)$
σ_8	$0.810^{+0.020}_{-0.023}$	$100\theta_{\text{s,eq}}$	$0.4505^{+0.0047}_{-0.0046}$	χ^2_{DR12BAO}	$4.8 (\nu: 1.3)$
S_8	$0.825^{+0.022}_{-0.022}$	$H(0.15)$	$72.6^{+2.0}_{-2.0}$	χ^2_{prior}	$9.6 (\nu: 9.7)$
$\sigma_8 \Omega_m^{0.5}$	$0.452^{+0.012}_{-0.012}$	$D_{\text{M}}(0.15)$	644^{+19}_{-18}	χ^2_{CMB}	$7366 (\nu: 10475730.6)$
$\sigma_8 \Omega_m^{0.25}$	$0.605^{+0.014}_{-0.015}$	$H(0.38)$	$82.7^{+2.0}_{-2.0}$	χ^2_{BAO}	$6.2 (\nu: 0.8)$
$\sigma_8/h^{0.5}$	$0.987^{+0.021}_{-0.022}$	$D_{\text{M}}(0.38)$	1536^{+42}_{-41}	χ^2_{Abund}	$0.74 (\nu: 0.2)$
$r_{\text{drag}} h$	$99.7^{+1.7}_{-1.8}$	$H(0.51)$	$89.3^{+2.1}_{-2.0}$		
$\langle d^2 \rangle^{1/2}$	$2.439^{+0.043}_{-0.043}$	$D_{\text{M}}(0.51)$	1990^{+53}_{-52}		

Best-fit $\chi^2_{\text{eff}} = 11933.95$; $\Delta\chi^2_{\text{eff}} = 9155.14$; $\bar{\chi}^2_{\text{eff}} = 11957.95$; $\Delta\bar{\chi}^2_{\text{eff}} = 9150.69$; $R - 1 = 0.00786$
 χ^2_{eff} : Abund - Yp_Aver2015: 0.00 (Δ -0.00) D.Cooke2017: 0.27 (Δ -0.16) BAO - 6DF: 0.01 (Δ -0.01) MGS: 1.41 (Δ 0.06) DR12BAO: 3.89 (Δ -0.17) CMB - smi-cadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.70 (Δ -0.05) simall_100x143_offlike5_EE_Aplanck_B: 395.85 (Δ 0.00) commander_dx12_v3_2_29: 23.46 (Δ -0.16) CamSpec like_10.7HM_1400_unified: 11498.26

9.24 base_nnu_mnu_CamSpecHM_TTTEEE_lowl_lowE_lensing_BAO_post_Pantheon18_zre6p5/base_nnu_mnu_plikHM_TTTEEE_lowl_low

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02234^{+0.00037}_{-0.00037}$	$\langle d^2 \rangle^{1/2}$	$2.438^{+0.042}_{-0.043}$	$H(0.51)$	$89.4^{+2.6}_{-2.5}$
$\Omega_c h^2$	$0.1180^{+0.0062}_{-0.0059}$	z_{re}	$7.8^{+1.2}_{-1.3}$	$D_{\text{M}}(0.51)$	1987^{+62}_{-61}
$100\theta_{MC}$	$1.04112^{+0.00089}_{-0.00089}$	$10^9 A_s$	$2.095^{+0.066}_{-0.062}$	$H(0.61)$	$95.0^{+2.6}_{-2.5}$
τ	$0.056^{+0.013}_{-0.012}$	$10^9 A_s e^{-2\tau}$	$1.873^{+0.035}_{-0.035}$	$D_{\text{M}}(0.61)$	2313^{+71}_{-70}
Σm_ν	< 0.117	D_{40}	1229^{+26}_{-26}	$H(2.33)$	$234.9^{+5.5}_{-5.3}$
N_{eff}	$2.98^{+0.38}_{-0.36}$	D_{220}	5732^{+76}_{-74}	$D_{\text{M}}(2.33)$	5785^{+150}_{-150}
$\ln(10^{10} A_s)$	$3.042^{+0.031}_{-0.030}$	D_{810}	2536^{+27}_{-26}	$f\sigma_8(0.15)$	$0.456^{+0.012}_{-0.012}$
n_s	$0.965^{+0.014}_{-0.014}$	D_{1420}	$817.4^{+9.6}_{-9.6}$	$\sigma_8(0.15)$	$0.749^{+0.021}_{-0.022}$
y_{cal}	$1.0006^{+0.0048}_{-0.0047}$	D_{2000}	$231.3^{+3.8}_{-3.9}$	$f\sigma_8(0.38)$	$0.474^{+0.011}_{-0.011}$
A_{217}^{CIB}	43^{+20}_{-20}	$n_{s,0.002}$	$0.965^{+0.014}_{-0.014}$	$\sigma_8(0.38)$	$0.665^{+0.019}_{-0.020}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.2444^{+0.0051}_{-0.0050}$	$f\sigma_8(0.51)$	$0.473^{+0.011}_{-0.011}$
A_{143}^{tSZ}	$4.7^{+3.9}_{-4.3}$	Y_P^{BBN}	$0.2457^{+0.0051}_{-0.0050}$	$\sigma_8(0.51)$	$0.622^{+0.018}_{-0.019}$
A_{100}^{PS}	247^{+60}_{-50}	$10^5 D/H$	$2.57^{+0.10}_{-0.095}$	$f\sigma_8(0.61)$	$0.468^{+0.011}_{-0.011}$
A_{143}^{PS}	41^{+20}_{-20}	Age/Gyr	$13.85^{+0.36}_{-0.36}$	$\sigma_8(0.61)$	$0.592^{+0.017}_{-0.018}$
A_{217}^{PS}	109^{+20}_{-30}	z_*	$1089.71^{+0.75}_{-0.70}$	$f\sigma_8(2.33)$	$0.2983^{+0.0088}_{-0.0088}$
A^{kSZ}	—	r_*	$145.4^{+3.6}_{-3.6}$	$\sigma_8(2.33)$	$0.3077^{+0.0096}_{-0.0098}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	$100\theta_*$	$1.0414^{+0.0011}_{-0.0011}$	f_{2000}^{143}	29^{+6}_{-6}
c_{217}	$0.9996^{+0.0037}_{-0.0027}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.96^{+0.33}_{-0.33}$	$f_{2000}^{143 \times 217}$	31^{+4}_{-4}
H_0	$67.5^{+2.4}_{-2.3}$	z_{drag}	$1059.7^{+1.4}_{-1.4}$	f_{2000}^{217}	$106.4^{+4.2}_{-4.1}$
Ω_Λ	$0.691^{+0.013}_{-0.014}$	r_{drag}	$148.0^{+3.7}_{-3.7}$	χ_{lensing}^2	$9.18 (\nu: 0.3)$
Ω_m	$0.309^{+0.014}_{-0.013}$	k_{D}	$0.1401^{+0.0027}_{-0.0027}$	χ_{small}^2	$397.1 (\nu: 1.7)$
$\Omega_m h^2$	$0.1408^{+0.0066}_{-0.0062}$	$100\theta_{\text{D}}$	$0.16063^{+0.00092}_{-0.00084}$	χ_{lowl}^2	$23.4 (\nu: 0.6)$
$\Omega_\nu h^2$	< 0.00124	z_{eq}	3386^{+48}_{-49}	χ_{JLA}^2	$1035.05 (\nu: 0.1)$
$\Omega_m h^3$	$0.0950^{+0.0074}_{-0.0069}$	k_{eq}	$0.01028^{+0.00022}_{-0.00022}$	$\chi_{6\text{DF}}^2$	$0.046 (\nu: 0.0)$
σ_8	$0.811^{+0.022}_{-0.023}$	$100\theta_{\text{eq}}$	$0.8162^{+0.0093}_{-0.0089}$	χ_{MGS}^2	$1.40 (\nu: 0.1)$
S_8	$0.823^{+0.022}_{-0.022}$	$100\theta_{\text{s,eq}}$	$0.4509^{+0.0047}_{-0.0045}$	χ_{DR12BAO}^2	$4.5 (\nu: 0.9)$
$\sigma_8 \Omega_m^{0.5}$	$0.451^{+0.012}_{-0.012}$	$H(0.15)$	$72.7^{+2.4}_{-2.3}$	χ_{prior}^2	$9.6 (\nu: 9.6)$
$\sigma_8 \Omega_m^{0.25}$	$0.605^{+0.015}_{-0.015}$	$D_{\text{M}}(0.15)$	643^{+22}_{-21}	χ_{CMB}^2	$7366 (\nu: 10475912.1)$
$\sigma_8/h^{0.5}$	$0.987^{+0.020}_{-0.021}$	$H(0.38)$	$82.7^{+2.5}_{-2.4}$	χ_{BAO}^2	$6.0 (\nu: 0.5)$
$r_{\text{drag}} h$	$99.9^{+1.6}_{-1.7}$	$D_{\text{M}}(0.38)$	1534^{+49}_{-48}		

$\bar{\chi}_{\text{eff}}^2 = 12992.45$; $\Delta\bar{\chi}_{\text{eff}}^2 = 9150.89$; $R - 1 = 0.00689$

11 nnu+yhe

11.1 base_nnu_yhe_CamSpecHM_TTTEEE_lowl_lowE/base_nnu_yhe_plikHM_TTTEEE_lowl_lowE

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02223^{+0.00045}_{-0.00045}$	$\sigma_8/h^{0.5}$	$0.987^{+0.024}_{-0.024}$	$H(0.15)$	$71.4^{+3.8}_{-3.5}$
$\Omega_c h^2$	$0.117^{+0.010}_{-0.0091}$	$r_{\text{drag}} h$	$98.6^{+2.6}_{-2.6}$	$D_{\text{M}}(0.15)$	656^{+35}_{-35}
$100\theta_{MC}$	$1.0416^{+0.0026}_{-0.0026}$	$\langle d^2 \rangle^{1/2}$	$2.447^{+0.062}_{-0.063}$	$H(0.38)$	$81.5^{+3.9}_{-3.6}$
τ	$0.053^{+0.016}_{-0.016}$	z_{re}	$7.5^{+1.6}_{-1.7}$	$D_{\text{M}}(0.38)$	1562^{+79}_{-79}
N_{eff}	$2.83^{+0.64}_{-0.58}$	$10^9 A_s$	$2.079^{+0.083}_{-0.078}$	$H(0.51)$	$88.2^{+4.0}_{-3.7}$
Y_{He}	$0.251^{+0.041}_{-0.041}$	$10^9 A_s e^{-2\tau}$	$1.869^{+0.041}_{-0.042}$	$D_{\text{M}}(0.51)$	2022^{+99}_{-100}
$\ln(10^{10} A_s)$	$3.034^{+0.039}_{-0.038}$	D_{40}	1233^{+35}_{-35}	$H(0.61)$	$93.8^{+4.2}_{-3.8}$
n_s	$0.961^{+0.018}_{-0.018}$	D_{220}	5724^{+77}_{-78}	$D_{\text{M}}(0.61)$	2352^{+110}_{-110}
y_{cal}	$1.0006^{+0.0049}_{-0.0049}$	D_{810}	2536^{+28}_{-27}	$H(2.33)$	$233.6^{+8.6}_{-8.0}$
A_{217}^{CIB}	43^{+10}_{-20}	D_{1420}	$816.8^{+9.8}_{-10}$	$D_{\text{M}}(2.33)$	5853^{+240}_{-250}
$\xi^{tSZ-CIB}$	—	D_{2000}	$230.9^{+4.0}_{-4.4}$	$f\sigma_8(0.15)$	$0.458^{+0.017}_{-0.017}$
A_{143}^{tSZ}	$4.7^{+3.9}_{-4.3}$	$n_{s,0.002}$	$0.961^{+0.018}_{-0.018}$	$\sigma_8(0.15)$	$0.741^{+0.025}_{-0.024}$
A_{100}^{PS}	248^{+60}_{-50}	Y_P	$0.251^{+0.041}_{-0.041}$	$f\sigma_8(0.38)$	$0.474^{+0.015}_{-0.015}$
A_{143}^{PS}	42^{+20}_{-20}	Y_P^{BBN}	$0.253^{+0.041}_{-0.041}$	$\sigma_8(0.38)$	$0.656^{+0.023}_{-0.022}$
A_{217}^{PS}	109^{+30}_{-30}	Age/Gyr	$14.01^{+0.57}_{-0.59}$	$f\sigma_8(0.51)$	$0.472^{+0.015}_{-0.014}$
A^{kSZ}	—	z_*	$1090.0^{+1.1}_{-1.0}$	$\sigma_8(0.51)$	$0.613^{+0.022}_{-0.021}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	r_*	$146.5^{+5.6}_{-5.7}$	$f\sigma_8(0.61)$	$0.466^{+0.015}_{-0.014}$
c_{217}	$0.9996^{+0.0037}_{-0.0027}$	$100\theta_*$	$1.0417^{+0.0019}_{-0.0019}$	$\sigma_8(0.61)$	$0.583^{+0.021}_{-0.020}$
H_0	$66.1^{+3.8}_{-3.5}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$14.06^{+0.52}_{-0.53}$	$f\sigma_8(2.33)$	$0.294^{+0.011}_{-0.011}$
Ω_{Λ}	$0.680^{+0.021}_{-0.023}$	z_{drag}	$1059.5^{+1.8}_{-1.8}$	$\sigma_8(2.33)$	$0.303^{+0.012}_{-0.011}$
Ω_m	$0.320^{+0.023}_{-0.021}$	r_{drag}	$149.2^{+5.8}_{-5.9}$	f_{2000}^{143}	29^{+7}_{-7}
$\Omega_m h^2$	$0.140^{+0.010}_{-0.0092}$	k_{D}	$0.1390^{+0.0054}_{-0.0050}$	$f_{2000}^{143 \times 217}$	32^{+5}_{-5}
$\Omega_m h^3$	$0.092^{+0.011}_{-0.011}$	$100\theta_{\text{D}}$	$0.1607^{+0.0013}_{-0.0012}$	f_{2000}^{217}	$106.8^{+4.8}_{-4.6}$
σ_8	$0.803^{+0.026}_{-0.025}$	z_{eq}	3421^{+89}_{-86}	χ_{simall}^2	$397.0 (\nu: 1.5)$
S_8	$0.829^{+0.034}_{-0.033}$	k_{eq}	$0.01029^{+0.00033}_{-0.00031}$	χ_{lowl}^2	$23.9 (\nu: 1.3)$
$\sigma_8 \Omega_m^{0.5}$	$0.454^{+0.018}_{-0.018}$	$100\theta_{\text{eq}}$	$0.810^{+0.016}_{-0.016}$	χ_{prior}^2	$9.7 (\nu: 9.8)$
$\sigma_8 \Omega_m^{0.25}$	$0.604^{+0.020}_{-0.019}$	$100\theta_{\text{s,eq}}$	$0.4478^{+0.0079}_{-0.0079}$	χ_{CMB}^2	$7359 (\nu: 10474628.8)$

Best-fit $\chi_{\text{eff}}^2 = 11920.00$; $\Delta\chi_{\text{eff}}^2 = 9155.28$; $\bar{\chi}_{\text{eff}}^2 = 11943.57$; $\Delta\bar{\chi}_{\text{eff}}^2 = 9150.40$; $R - 1 = 0.00989$

χ_{eff}^2 : CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.87 (Δ -0.16) commander_dx12.v3.2.29: 23.44 (Δ -0.82) CamSpec like_10.7HM_1400_unified: 11498.75

11.2 base_nnu_yhe_CamSpecHM_TTTEEE_lowl_lowE_post_BAO/base_nnu_yhe_plikHM_TTTEEE_lowl_lowE_post_BAO

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02236^{+0.00038}_{-0.00038}$	$\langle d^2 \rangle^{1/2}$	$2.429^{+0.053}_{-0.052}$	$H(0.51)$	$89.1^{+3.7}_{-3.4}$
$\Omega_c h^2$	$0.118^{+0.010}_{-0.0092}$	z_{re}	$7.7^{+1.6}_{-1.6}$	$D_{\text{M}}(0.51)$	1995^{+85}_{-87}
$100\theta_{MC}$	$1.0414^{+0.0026}_{-0.0026}$	$10^9 A_s$	$2.090^{+0.082}_{-0.076}$	$H(0.61)$	$94.7^{+3.9}_{-3.6}$
τ	$0.055^{+0.016}_{-0.015}$	$10^9 A_s e^{-2\tau}$	$1.873^{+0.040}_{-0.041}$	$D_{\text{M}}(0.61)$	2321^{+98}_{-99}
N_{eff}	$2.94^{+0.60}_{-0.59}$	D_{40}	1225^{+31}_{-32}	$H(2.33)$	$234.6^{+8.6}_{-8.0}$
Y_{He}	$0.251^{+0.042}_{-0.041}$	D_{220}	5729^{+77}_{-78}	$D_{\text{M}}(2.33)$	5801^{+220}_{-230}
$\ln(10^{10} A_s)$	$3.039^{+0.039}_{-0.037}$	D_{810}	2536^{+27}_{-27}	$f\sigma_8(0.15)$	$0.454^{+0.015}_{-0.015}$
n_s	$0.966^{+0.015}_{-0.015}$	D_{1420}	$816.9^{+9.8}_{-10}$	$\sigma_8(0.15)$	$0.744^{+0.025}_{-0.024}$
y_{cal}	$1.0006^{+0.0048}_{-0.0047}$	D_{2000}	$230.7^{+4.0}_{-4.4}$	$f\sigma_8(0.38)$	$0.472^{+0.015}_{-0.015}$
A_{217}^{CIB}	43^{+10}_{-20}	$n_{s,0.002}$	$0.966^{+0.015}_{-0.015}$	$\sigma_8(0.38)$	$0.659^{+0.022}_{-0.022}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.251^{+0.042}_{-0.041}$	$f\sigma_8(0.51)$	$0.470^{+0.015}_{-0.014}$
A_{143}^{tSZ}	$4.7^{+3.9}_{-4.3}$	Y_P^{BBN}	$0.252^{+0.042}_{-0.042}$	$\sigma_8(0.51)$	$0.617^{+0.021}_{-0.021}$
A_{100}^{PS}	249^{+60}_{-50}	Age/Gyr	$13.89^{+0.53}_{-0.54}$	$f\sigma_8(0.61)$	$0.465^{+0.015}_{-0.014}$
A_{143}^{PS}	43^{+20}_{-20}	z_*	$1089.9^{+1.2}_{-1.0}$	$\sigma_8(0.61)$	$0.587^{+0.020}_{-0.020}$
A_{217}^{PS}	108^{+20}_{-30}	r_*	$145.7^{+5.5}_{-5.6}$	$f\sigma_8(2.33)$	$0.296^{+0.010}_{-0.010}$
A^{kSZ}	—	$100\theta_*$	$1.0415^{+0.0019}_{-0.0018}$	$\sigma_8(2.33)$	$0.305^{+0.011}_{-0.011}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.99^{+0.50}_{-0.51}$	f_{2000}^{143}	30^{+7}_{-7}
c_{217}	$0.9997^{+0.0038}_{-0.0028}$	z_{drag}	$1059.9^{+1.6}_{-1.7}$	$f_{2000}^{143 \times 217}$	32^{+5}_{-5}
H_0	$67.2^{+3.2}_{-3.0}$	r_{drag}	$148.3^{+5.6}_{-5.7}$	f_{2000}^{217}	$107.0^{+4.7}_{-4.6}$
Ω_{Λ}	$0.689^{+0.014}_{-0.014}$	k_{D}	$0.1397^{+0.0053}_{-0.0050}$	χ_{simall}^2	$397.1 (\nu: 1.8)$
Ω_m	$0.311^{+0.014}_{-0.014}$	$100\theta_{\text{D}}$	$0.1608^{+0.0013}_{-0.0011}$	χ_{lowl}^2	$23.1 (\nu: 0.8)$
$\Omega_m h^2$	$0.141^{+0.010}_{-0.0093}$	z_{eq}	3389^{+65}_{-63}	$\chi_{6\text{DF}}^2$	$0.064 (\nu: 0.0)$
$\Omega_m h^3$	$0.094^{+0.011}_{-0.010}$	k_{eq}	$0.01027^{+0.00033}_{-0.00031}$	χ_{MGS}^2	$1.27 (\nu: 0.1)$
σ_8	$0.805^{+0.026}_{-0.025}$	$100\theta_{\text{eq}}$	$0.816^{+0.011}_{-0.011}$	χ_{DR12BAO}^2	$4.9 (\nu: 1.3)$
S_8	$0.820^{+0.029}_{-0.028}$	$100\theta_{\text{s,eq}}$	$0.4508^{+0.0057}_{-0.0056}$	χ_{prior}^2	$9.8 (\nu: 9.9)$
$\sigma_8 \Omega_m^{0.5}$	$0.449^{+0.016}_{-0.015}$	$H(0.15)$	$72.4^{+3.3}_{-3.1}$	χ_{BAO}^2	$6.2 (\nu: 0.9)$
$\sigma_8 \Omega_m^{0.25}$	$0.601^{+0.019}_{-0.019}$	$D_{\text{M}}(0.15)$	646^{+29}_{-29}	χ_{CMB}^2	$7359 (\nu: 10474187.6)$
$\sigma_8/h^{0.5}$	$0.982^{+0.022}_{-0.021}$	$H(0.38)$	$82.5^{+3.5}_{-3.3}$		
$r_{\text{drag}} h$	$99.6^{+1.7}_{-1.7}$	$D_{\text{M}}(0.38)$	1540^{+67}_{-68}		

$$\bar{\chi}_{\text{eff}}^2 = 11949.72; \Delta\bar{\chi}_{\text{eff}}^2 = 9149.85; R - 1 = 0.01974$$

11.3 base_nnu_yhe_CamSpecHM_TTTEEE_lowl_lowE_post_lensing/base_nnu_yhe_plikHM_TTTEEE_lowl_lowE_post_lensing

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02222^{+0.00044}_{-0.00044}$	$r_{\text{drag}} h$	$98.5^{+2.5}_{-2.4}$	$H(0.38)$	$81.3^{+3.9}_{-3.5}$
$\Omega_c h^2$	$0.1163^{+0.0095}_{-0.0084}$	$\langle d^2 \rangle^{1/2}$	$2.450^{+0.049}_{-0.050}$	$D_{\text{M}}(0.38)$	1567^{+76}_{-78}
$100\theta_{MC}$	$1.0417^{+0.0025}_{-0.0025}$	z_{re}	$7.6^{+1.5}_{-1.5}$	$H(0.51)$	$88.0^{+4.0}_{-3.6}$
τ	$0.054^{+0.015}_{-0.015}$	$10^9 A_s$	$2.079^{+0.073}_{-0.072}$	$D_{\text{M}}(0.51)$	2028^{+96}_{-99}
N_{eff}	$2.80^{+0.63}_{-0.56}$	$10^9 A_s e^{-2\tau}$	$1.867^{+0.039}_{-0.039}$	$H(0.61)$	$93.6^{+4.1}_{-3.7}$
Y_{He}	$0.251^{+0.040}_{-0.041}$	D_{40}	1235^{+33}_{-33}	$D_{\text{M}}(0.61)$	2358^{+110}_{-110}
$\ln(10^{10} A_s)$	$3.034^{+0.035}_{-0.035}$	D_{220}	5726^{+77}_{-76}	$H(2.33)$	$233.2^{+8.2}_{-7.5}$
n_s	$0.960^{+0.018}_{-0.018}$	D_{810}	2536^{+27}_{-27}	$D_{\text{M}}(2.33)$	5868^{+230}_{-240}
y_{cal}	$1.0006^{+0.0047}_{-0.0047}$	D_{1420}	$817.0^{+9.7}_{-9.9}$	$f\sigma_8(0.15)$	$0.458^{+0.013}_{-0.013}$
A_{217}^{CIB}	43^{+10}_{-20}	D_{2000}	$231.1^{+4.0}_{-4.3}$	$\sigma_8(0.15)$	$0.740^{+0.022}_{-0.021}$
$\xi^{tSZ-CIB}$	—	$n_{s,0.002}$	$0.960^{+0.018}_{-0.018}$	$f\sigma_8(0.38)$	$0.474^{+0.012}_{-0.012}$
A_{143}^{tSZ}	$4.7^{+3.9}_{-4.3}$	Y_P	$0.251^{+0.040}_{-0.041}$	$\sigma_8(0.38)$	$0.655^{+0.021}_{-0.020}$
A_{100}^{PS}	248^{+60}_{-50}	Y_P^{BBN}	$0.253^{+0.040}_{-0.041}$	$f\sigma_8(0.51)$	$0.471^{+0.012}_{-0.012}$
A_{143}^{PS}	42^{+20}_{-20}	Age/Gyr	$14.05^{+0.55}_{-0.57}$	$\sigma_8(0.51)$	$0.613^{+0.020}_{-0.019}$
A_{217}^{PS}	109^{+20}_{-30}	z_*	$1089.9^{+1.1}_{-1.0}$	$f\sigma_8(0.61)$	$0.466^{+0.012}_{-0.012}$
A^{kSZ}	—	r_*	$146.8^{+5.4}_{-5.6}$	$\sigma_8(0.61)$	$0.583^{+0.020}_{-0.019}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	$100\theta_*$	$1.0418^{+0.0018}_{-0.0018}$	$f\sigma_8(2.33)$	$0.293^{+0.010}_{-0.0099}$
c_{217}	$0.9996^{+0.0038}_{-0.0027}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$14.09^{+0.49}_{-0.51}$	$\sigma_8(2.33)$	$0.302^{+0.011}_{-0.011}$
H_0	$65.9^{+3.7}_{-3.4}$	z_{drag}	$1059.4^{+1.8}_{-1.8}$	f_{2000}^{143}	29^{+7}_{-7}
Ω_{Λ}	$0.679^{+0.020}_{-0.021}$	r_{drag}	$149.6^{+5.5}_{-5.7}$	$f_{2000}^{143 \times 217}$	32^{+5}_{-5}
Ω_m	$0.321^{+0.021}_{-0.020}$	k_{D}	$0.1388^{+0.0052}_{-0.0048}$	f_{2000}^{217}	$106.7^{+4.7}_{-4.6}$
$\Omega_m h^2$	$0.1392^{+0.0096}_{-0.0086}$	$100\theta_{\text{D}}$	$0.1607^{+0.0013}_{-0.0011}$	χ^2_{lensing}	$9.03 (\nu: 0.3)$
$\Omega_m h^3$	$0.0918^{+0.011}_{-0.0098}$	z_{eq}	3424^{+86}_{-83}	χ^2_{small}	$396.9 (\nu: 1.3)$
σ_8	$0.802^{+0.023}_{-0.022}$	k_{eq}	$0.01027^{+0.00030}_{-0.00027}$	χ^2_{lowl}	$24.1 (\nu: 1.2)$
S_8	$0.829^{+0.026}_{-0.026}$	$100\theta_{\text{eq}}$	$0.809^{+0.015}_{-0.015}$	χ^2_{prior}	$9.6 (\nu: 9.6)$
$\sigma_8 \Omega_m^{0.5}$	$0.454^{+0.014}_{-0.014}$	$100\theta_{\text{s,eq}}$	$0.4475^{+0.0076}_{-0.0075}$	χ^2_{CMB}	$7367 (\nu: 10475018.9)$
$\sigma_8 \Omega_m^{0.25}$	$0.603^{+0.015}_{-0.015}$	$H(0.15)$	$71.2^{+3.7}_{-3.4}$		
$\sigma_8/h^{0.5}$	$0.988^{+0.019}_{-0.019}$	$D_{\text{M}}(0.15)$	658^{+34}_{-34}		

$$\bar{\chi}^2_{\text{eff}} = 11952.22; \Delta\bar{\chi}^2_{\text{eff}} = 9150.58; R - 1 = 0.01363$$

11.4 base_nnu_yhe_CamSpecHM_TTTEEE_lowl_lowE_post_BAO_lensing/base_nnu_yhe_plikHM_TTTEEE_lowl_lowE_post_BAO_lensing

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02235^{+0.00037}_{-0.00038}$	$\langle d^2 \rangle^{1/2}$	$2.436^{+0.043}_{-0.044}$	$H(0.51)$	$89.0^{+3.6}_{-3.3}$
$\Omega_c h^2$	$0.1173^{+0.0094}_{-0.0086}$	z_{re}	$7.8^{+1.4}_{-1.4}$	$D_{\text{M}}(0.51)$	1999^{+84}_{-85}
$100\theta_{MC}$	$1.0415^{+0.0025}_{-0.0025}$	$10^9 A_s$	$2.095^{+0.071}_{-0.067}$	$H(0.61)$	$94.6^{+3.7}_{-3.4}$
τ	$0.056^{+0.015}_{-0.014}$	$10^9 A_s e^{-2\tau}$	$1.873^{+0.037}_{-0.038}$	$D_{\text{M}}(0.61)$	2326^{+96}_{-98}
N_{eff}	$2.92^{+0.59}_{-0.54}$	D_{40}	1228^{+30}_{-30}	$H(2.33)$	$234.4^{+8.0}_{-7.5}$
Y_{He}	$0.251^{+0.041}_{-0.041}$	D_{220}	5732^{+76}_{-77}	$D_{\text{M}}(2.33)$	5810^{+210}_{-220}
$\ln(10^{10} A_s)$	$3.042^{+0.033}_{-0.032}$	D_{810}	2537^{+26}_{-27}	$f\sigma_8(0.15)$	$0.455^{+0.012}_{-0.012}$
n_s	$0.965^{+0.015}_{-0.015}$	D_{1420}	$817.3^{+9.6}_{-10}$	$\sigma_8(0.15)$	$0.744^{+0.022}_{-0.021}$
y_{cal}	$1.0008^{+0.0047}_{-0.0047}$	D_{2000}	$230.9^{+4.0}_{-4.4}$	$f\sigma_8(0.38)$	$0.473^{+0.012}_{-0.012}$
A_{217}^{CIB}	43^{+10}_{-20}	$n_{s,0.002}$	$0.965^{+0.015}_{-0.015}$	$\sigma_8(0.38)$	$0.660^{+0.020}_{-0.019}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.251^{+0.041}_{-0.041}$	$f\sigma_8(0.51)$	$0.471^{+0.012}_{-0.012}$
A_{143}^{tSZ}	$4.7^{+3.9}_{-4.3}$	Y_P^{BBN}	$0.252^{+0.041}_{-0.041}$	$\sigma_8(0.51)$	$0.617^{+0.019}_{-0.018}$
A_{100}^{PS}	249^{+60}_{-50}	Age/Gyr	$13.91^{+0.51}_{-0.52}$	$f\sigma_8(0.61)$	$0.466^{+0.012}_{-0.012}$
A_{143}^{PS}	43^{+20}_{-20}	z_*	$1089.9^{+1.2}_{-1.0}$	$\sigma_8(0.61)$	$0.587^{+0.018}_{-0.017}$
A_{217}^{PS}	109^{+20}_{-30}	r_*	$145.8^{+5.2}_{-5.3}$	$f\sigma_8(2.33)$	$0.2961^{+0.0093}_{-0.0091}$
A^{kSZ}	—	$100\theta_*$	$1.0416^{+0.0018}_{-0.0018}$	$\sigma_8(2.33)$	$0.305^{+0.010}_{-0.0098}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$14.00^{+0.47}_{-0.48}$	f_{2000}^{143}	30^{+7}_{-7}
c_{217}	$0.9996^{+0.0038}_{-0.0028}$	z_{drag}	$1059.8^{+1.6}_{-1.7}$	$f_{2000}^{143 \times 217}$	32^{+5}_{-5}
H_0	$67.0^{+3.2}_{-3.0}$	r_{drag}	$148.5^{+5.3}_{-5.4}$	f_{2000}^{217}	$106.9^{+4.7}_{-4.6}$
Ω_{Λ}	$0.688^{+0.014}_{-0.014}$	k_{D}	$0.1396^{+0.0051}_{-0.0048}$	χ_{lensing}^2	$9.17 (\nu: 0.3)$
Ω_m	$0.312^{+0.014}_{-0.014}$	$100\theta_{\text{D}}$	$0.1608^{+0.0013}_{-0.0011}$	χ_{small}^2	$397.2 (\nu: 1.8)$
$\Omega_m h^2$	$0.1403^{+0.0096}_{-0.0087}$	z_{eq}	3394^{+63}_{-64}	χ_{lowl}^2	$23.3 (\nu: 0.8)$
$\Omega_m h^3$	$0.094^{+0.010}_{-0.010}$	k_{eq}	$0.01027^{+0.00030}_{-0.00028}$	$\chi_{6\text{DF}}^2$	$0.071 (\nu: 0.0)$
σ_8	$0.805^{+0.023}_{-0.022}$	$100\theta_{\text{eq}}$	$0.815^{+0.011}_{-0.011}$	χ_{MGS}^2	$1.20 (\nu: 0.1)$
S_8	$0.822^{+0.023}_{-0.023}$	$100\theta_{\text{s,eq}}$	$0.4504^{+0.0056}_{-0.0055}$	χ_{DR12BAO}^2	$5.1 (\nu: 1.4)$
$\sigma_8 \Omega_m^{0.5}$	$0.450^{+0.013}_{-0.012}$	$H(0.15)$	$72.3^{+3.2}_{-3.0}$	χ_{prior}^2	$9.7 (\nu: 9.8)$
$\sigma_8 \Omega_m^{0.25}$	$0.602^{+0.015}_{-0.015}$	$D_{\text{M}}(0.15)$	647^{+29}_{-29}	χ_{CMB}^2	$7368 (\nu: 10475100.3)$
$\sigma_8/h^{0.5}$	$0.984^{+0.018}_{-0.017}$	$H(0.38)$	$82.3^{+3.5}_{-3.2}$	χ_{BAO}^2	$6.4 (\nu: 0.9)$
$r_{\text{drag}} h$	$99.5^{+1.7}_{-1.7}$	$D_{\text{M}}(0.38)$	1543^{+66}_{-66}		

$$\bar{\chi}_{\text{eff}}^2 = 11958.81; \Delta\bar{\chi}_{\text{eff}}^2 = 9150.35; R - 1 = 0.01792$$

11.5 base_nnu_yhe_CamSpecHM_TTTEEE_lowl_lowE_post_zre6p5/base_nnu_yhe_plikHM_TTTEEE_lowl_lowE_post_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02224^{+0.00044}_{-0.00044}$	$\sigma_8/h^{0.5}$	$0.989^{+0.023}_{-0.023}$	$H(0.15)$	$71.4^{+3.8}_{-3.5}$
$\Omega_c h^2$	$0.117^{+0.010}_{-0.0091}$	$r_{\text{drag}} h$	$98.7^{+2.6}_{-2.5}$	$D_{\text{M}}(0.15)$	655^{+35}_{-34}
$100\theta_{MC}$	$1.0416^{+0.0026}_{-0.0026}$	$\langle d^2 \rangle^{1/2}$	$2.449^{+0.061}_{-0.061}$	$H(0.38)$	$81.6^{+3.9}_{-3.6}$
τ	$0.055^{+0.013}_{-0.011}$	z_{re}	< 8.88	$D_{\text{M}}(0.38)$	1561^{+78}_{-78}
N_{eff}	$2.84^{+0.64}_{-0.58}$	$10^9 A_s$	$2.085^{+0.074}_{-0.070}$	$H(0.51)$	$88.3^{+4.0}_{-3.7}$
Y_{He}	$0.252^{+0.041}_{-0.041}$	$10^9 A_s e^{-2\tau}$	$1.869^{+0.041}_{-0.042}$	$D_{\text{M}}(0.51)$	2021^{+99}_{-99}
$\ln(10^{10} A_s)$	$3.037^{+0.035}_{-0.034}$	D_{40}	1233^{+35}_{-35}	$H(0.61)$	$93.9^{+4.1}_{-3.8}$
n_s	$0.961^{+0.018}_{-0.018}$	D_{220}	5724^{+77}_{-77}	$D_{\text{M}}(0.61)$	2350^{+110}_{-110}
y_{cal}	$1.0006^{+0.0048}_{-0.0049}$	D_{810}	2536^{+27}_{-27}	$H(2.33)$	$233.6^{+8.6}_{-8.0}$
A_{217}^{CIB}	43^{+10}_{-20}	D_{1420}	$816.8^{+9.7}_{-10}$	$D_{\text{M}}(2.33)$	5851^{+240}_{-240}
$\xi^{tSZ-CIB}$	—	D_{2000}	$230.9^{+4.0}_{-4.4}$	$f\sigma_8(0.15)$	$0.458^{+0.017}_{-0.017}$
A_{143}^{tSZ}	$4.7^{+3.9}_{-4.3}$	$n_{s,0.002}$	$0.961^{+0.018}_{-0.018}$	$\sigma_8(0.15)$	$0.742^{+0.024}_{-0.023}$
A_{100}^{PS}	248^{+60}_{-50}	Y_P	$0.252^{+0.041}_{-0.041}$	$f\sigma_8(0.38)$	$0.475^{+0.015}_{-0.015}$
A_{143}^{PS}	42^{+20}_{-20}	Y_P^{BBN}	$0.253^{+0.041}_{-0.041}$	$\sigma_8(0.38)$	$0.657^{+0.022}_{-0.021}$
A_{217}^{PS}	109^{+20}_{-30}	Age/Gyr	$14.01^{+0.57}_{-0.58}$	$f\sigma_8(0.51)$	$0.472^{+0.015}_{-0.014}$
A^{kSZ}	—	z_*	$1090.0^{+1.1}_{-1.0}$	$\sigma_8(0.51)$	$0.614^{+0.021}_{-0.020}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	r_*	$146.5^{+5.6}_{-5.7}$	$f\sigma_8(0.61)$	$0.467^{+0.014}_{-0.014}$
c_{217}	$0.9996^{+0.0037}_{-0.0027}$	$100\theta_*$	$1.0417^{+0.0019}_{-0.0019}$	$\sigma_8(0.61)$	$0.584^{+0.021}_{-0.020}$
H_0	$66.1^{+3.7}_{-3.5}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$14.06^{+0.52}_{-0.53}$	$f\sigma_8(2.33)$	$0.294^{+0.011}_{-0.010}$
Ω_{Λ}	$0.680^{+0.021}_{-0.022}$	z_{drag}	$1059.5^{+1.8}_{-1.8}$	$\sigma_8(2.33)$	$0.303^{+0.012}_{-0.011}$
Ω_m	$0.320^{+0.022}_{-0.021}$	r_{drag}	$149.2^{+5.8}_{-5.9}$	f_{2000}^{143}	29^{+7}_{-7}
$\Omega_m h^2$	$0.140^{+0.010}_{-0.0093}$	k_{D}	$0.1391^{+0.0054}_{-0.0050}$	$f_{2000}^{143 \times 217}$	32^{+5}_{-5}
$\Omega_m h^3$	$0.092^{+0.011}_{-0.011}$	$100\theta_{\text{D}}$	$0.1607^{+0.0013}_{-0.0012}$	f_{2000}^{217}	$106.8^{+4.8}_{-4.6}$
σ_8	$0.804^{+0.026}_{-0.025}$	z_{eq}	3420^{+88}_{-85}	χ_{simall}^2	$396.9 (\nu: 1.5)$
S_8	$0.829^{+0.033}_{-0.033}$	k_{eq}	$0.01029^{+0.00033}_{-0.00031}$	χ_{lowl}^2	$23.9 (\nu: 1.3)$
$\sigma_8 \Omega_m^{0.5}$	$0.454^{+0.018}_{-0.018}$	$100\theta_{\text{eq}}$	$0.810^{+0.015}_{-0.015}$	χ_{prior}^2	$9.7 (\nu: 9.8)$
$\sigma_8 \Omega_m^{0.25}$	$0.604^{+0.019}_{-0.019}$	$100\theta_{\text{s,eq}}$	$0.4479^{+0.0078}_{-0.0078}$	χ_{CMB}^2	$7358 (\nu: 10474635.7)$

$\bar{\chi}_{\text{eff}}^2 = 11943.30$; $\Delta\bar{\chi}_{\text{eff}}^2 = 9150.41$; $R - 1 = 0.00937$

11.6 base_nnu_yhe_CamSpecHM_TTTEEE_lowl_lowE_post_BAO_zre6p5/base_nnu_yhe_plikHM_TTTEEE_lowl_lowE_post_BAO_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02236^{+0.00038}_{-0.00038}$	$\langle d^2 \rangle^{1/2}$	$2.432^{+0.051}_{-0.050}$	$H(0.51)$	$89.2^{+3.7}_{-3.4}$
$\Omega_c h^2$	$0.118^{+0.010}_{-0.0092}$	z_{re}	< 8.99	$D_{\text{M}}(0.51)$	1994^{+85}_{-87}
$100\theta_{MC}$	$1.0414^{+0.0026}_{-0.0026}$	$10^9 A_s$	$2.094^{+0.074}_{-0.070}$	$H(0.61)$	$94.7^{+3.9}_{-3.6}$
τ	$0.056^{+0.013}_{-0.012}$	$10^9 A_s e^{-2\tau}$	$1.873^{+0.040}_{-0.041}$	$D_{\text{M}}(0.61)$	2321^{+97}_{-100}
N_{eff}	$2.95^{+0.60}_{-0.59}$	D_{40}	1225^{+31}_{-32}	$H(2.33)$	$234.6^{+8.6}_{-7.9}$
Y_{He}	$0.251^{+0.042}_{-0.042}$	D_{220}	5728^{+76}_{-77}	$D_{\text{M}}(2.33)$	5801^{+220}_{-230}
$\ln(10^{10} A_s)$	$3.042^{+0.035}_{-0.034}$	D_{810}	2536^{+27}_{-27}	$f\sigma_8(0.15)$	$0.454^{+0.015}_{-0.015}$
n_s	$0.966^{+0.015}_{-0.015}$	D_{1420}	$816.9^{+9.7}_{-10}$	$\sigma_8(0.15)$	$0.744^{+0.024}_{-0.023}$
y_{cal}	$1.0006^{+0.0048}_{-0.0047}$	D_{2000}	$230.7^{+4.0}_{-4.4}$	$f\sigma_8(0.38)$	$0.472^{+0.015}_{-0.014}$
A_{217}^{CIB}	43^{+10}_{-20}	$n_{s,0.002}$	$0.966^{+0.015}_{-0.015}$	$\sigma_8(0.38)$	$0.660^{+0.022}_{-0.021}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.251^{+0.042}_{-0.042}$	$f\sigma_8(0.51)$	$0.471^{+0.015}_{-0.014}$
A_{143}^{tSZ}	$4.7^{+3.9}_{-4.3}$	Y_P^{BBN}	$0.252^{+0.042}_{-0.042}$	$\sigma_8(0.51)$	$0.618^{+0.021}_{-0.020}$
A_{100}^{PS}	249^{+60}_{-50}	Age/Gyr	$13.89^{+0.53}_{-0.54}$	$f\sigma_8(0.61)$	$0.466^{+0.014}_{-0.014}$
A_{143}^{PS}	43^{+20}_{-20}	z_*	$1089.9^{+1.2}_{-1.0}$	$\sigma_8(0.61)$	$0.588^{+0.020}_{-0.019}$
A_{217}^{PS}	108^{+20}_{-30}	r_*	$145.7^{+5.4}_{-5.6}$	$f\sigma_8(2.33)$	$0.296^{+0.010}_{-0.0097}$
A^{kSZ}	—	$100\theta_*$	$1.0415^{+0.0019}_{-0.0018}$	$\sigma_8(2.33)$	$0.306^{+0.011}_{-0.010}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.98^{+0.50}_{-0.51}$	f_{2000}^{143}	30^{+7}_{-7}
c_{217}	$0.9997^{+0.0038}_{-0.0028}$	z_{drag}	$1059.9^{+1.7}_{-1.7}$	$f_{2000}^{143 \times 217}$	32^{+5}_{-5}
H_0	$67.2^{+3.2}_{-3.0}$	r_{drag}	$148.3^{+5.6}_{-5.7}$	f_{2000}^{217}	$107.0^{+4.7}_{-4.6}$
Ω_{Λ}	$0.689^{+0.014}_{-0.014}$	k_{D}	$0.1397^{+0.0054}_{-0.0049}$	χ_{small}^2	$397.1 (\nu: 1.8)$
Ω_m	$0.311^{+0.014}_{-0.014}$	$100\theta_{\text{D}}$	$0.1608^{+0.0013}_{-0.0011}$	χ_{lowl}^2	$23.1 (\nu: 0.8)$
$\Omega_m h^2$	$0.141^{+0.010}_{-0.0093}$	z_{eq}	3389^{+65}_{-64}	$\chi_{6\text{DF}}^2$	$0.062 (\nu: 0.0)$
$\Omega_m h^3$	$0.094^{+0.011}_{-0.010}$	k_{eq}	$0.01027^{+0.00033}_{-0.00031}$	χ_{MGS}^2	$1.28 (\nu: 0.1)$
σ_8	$0.806^{+0.026}_{-0.025}$	$100\theta_{\text{eq}}$	$0.816^{+0.011}_{-0.011}$	χ_{DR12BAO}^2	$4.9 (\nu: 1.3)$
S_8	$0.820^{+0.029}_{-0.027}$	$100\theta_{\text{s,eq}}$	$0.4508^{+0.0057}_{-0.0056}$	χ_{prior}^2	$9.8 (\nu: 10.0)$
$\sigma_8 \Omega_m^{0.5}$	$0.449^{+0.016}_{-0.015}$	$H(0.15)$	$72.4^{+3.3}_{-3.1}$	χ_{BAO}^2	$6.2 (\nu: 0.8)$
$\sigma_8 \Omega_m^{0.25}$	$0.602^{+0.019}_{-0.018}$	$D_{\text{M}}(0.15)$	646^{+29}_{-30}	χ_{CMB}^2	$7359 (\nu: 10474129.4)$
$\sigma_8/h^{0.5}$	$0.983^{+0.021}_{-0.020}$	$H(0.38)$	$82.5^{+3.6}_{-3.3}$		
$r_{\text{drag}} h$	$99.6^{+1.7}_{-1.7}$	$D_{\text{M}}(0.38)$	1540^{+67}_{-68}		

$$\bar{\chi}_{\text{eff}}^2 = 11949.50; \Delta\bar{\chi}_{\text{eff}}^2 = 9149.86; R - 1 = 0.02228$$

11.7 base_nnu_yhe_CamSpecHM_TTTEEE_lowl_lowE_post_lensing_zre6p5/base_nnu_yhe_plikHM_TTTEEE_lowl_lowE_post_lensing_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02223^{+0.00044}_{-0.00043}$	$r_{\text{drag}} h$	$98.6^{+2.4}_{-2.4}$	$H(0.38)$	$81.3^{+3.9}_{-3.5}$
$\Omega_c h^2$	$0.1163^{+0.0095}_{-0.0084}$	$\langle d^2 \rangle^{1/2}$	$2.451^{+0.048}_{-0.049}$	$D_{\text{M}}(0.38)$	1565^{+76}_{-78}
$100\theta_{MC}$	$1.0417^{+0.0025}_{-0.0026}$	z_{re}	< 8.82	$H(0.51)$	$88.0^{+4.0}_{-3.6}$
τ	$0.055^{+0.013}_{-0.011}$	$10^9 A_s$	$2.083^{+0.070}_{-0.062}$	$D_{\text{M}}(0.51)$	2026^{+96}_{-98}
N_{eff}	$2.80^{+0.63}_{-0.56}$	$10^9 A_s e^{-2\tau}$	$1.867^{+0.039}_{-0.039}$	$H(0.61)$	$93.6^{+4.1}_{-3.7}$
Y_{He}	$0.252^{+0.041}_{-0.041}$	D_{40}	1234^{+32}_{-32}	$D_{\text{M}}(0.61)$	2357^{+110}_{-110}
$\ln(10^{10} A_s)$	$3.036^{+0.033}_{-0.030}$	D_{220}	5726^{+76}_{-76}	$H(2.33)$	$233.2^{+8.2}_{-7.5}$
n_s	$0.960^{+0.018}_{-0.017}$	D_{810}	2536^{+27}_{-27}	$D_{\text{M}}(2.33)$	5865^{+230}_{-240}
y_{cal}	$1.0006^{+0.0047}_{-0.0047}$	D_{1420}	$817.0^{+9.6}_{-9.9}$	$f\sigma_8(0.15)$	$0.458^{+0.013}_{-0.013}$
A_{217}^{CIB}	43^{+10}_{-20}	D_{2000}	$231.1^{+4.0}_{-4.3}$	$\sigma_8(0.15)$	$0.741^{+0.022}_{-0.021}$
$\xi^{tSZ-CIB}$	—	$n_{s,0.002}$	$0.960^{+0.018}_{-0.017}$	$f\sigma_8(0.38)$	$0.474^{+0.012}_{-0.012}$
A_{143}^{tSZ}	$4.7^{+3.9}_{-4.3}$	Y_P	$0.252^{+0.041}_{-0.041}$	$\sigma_8(0.38)$	$0.656^{+0.021}_{-0.020}$
A_{100}^{PS}	248^{+60}_{-50}	Y_P^{BBN}	$0.253^{+0.041}_{-0.041}$	$f\sigma_8(0.51)$	$0.472^{+0.012}_{-0.012}$
A_{143}^{PS}	42^{+20}_{-20}	Age/Gyr	$14.04^{+0.55}_{-0.57}$	$\sigma_8(0.51)$	$0.613^{+0.020}_{-0.019}$
A_{217}^{PS}	109^{+20}_{-30}	z_*	$1089.9^{+1.1}_{-1.0}$	$f\sigma_8(0.61)$	$0.466^{+0.012}_{-0.012}$
A^{kSZ}	—	r_*	$146.8^{+5.4}_{-5.6}$	$\sigma_8(0.61)$	$0.583^{+0.019}_{-0.018}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	$100\theta_*$	$1.0418^{+0.0018}_{-0.0018}$	$f\sigma_8(2.33)$	$0.294^{+0.010}_{-0.0097}$
c_{217}	$0.9996^{+0.0038}_{-0.0027}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$14.09^{+0.49}_{-0.51}$	$\sigma_8(2.33)$	$0.303^{+0.011}_{-0.010}$
H_0	$65.9^{+3.7}_{-3.4}$	z_{drag}	$1059.5^{+1.8}_{-1.8}$	f_{2000}^{143}	29^{+7}_{-7}
Ω_{Λ}	$0.680^{+0.020}_{-0.021}$	r_{drag}	$149.5^{+5.5}_{-5.7}$	$f_{2000}^{143 \times 217}$	32^{+5}_{-5}
Ω_m	$0.320^{+0.021}_{-0.020}$	k_{D}	$0.1388^{+0.0052}_{-0.0048}$	f_{2000}^{217}	$106.7^{+4.7}_{-4.5}$
$\Omega_m h^2$	$0.1392^{+0.0096}_{-0.0085}$	$100\theta_{\text{D}}$	$0.1607^{+0.0013}_{-0.0011}$	χ_{lensing}^2	$9.01 (\nu: 0.3)$
$\Omega_m h^3$	$0.092^{+0.011}_{-0.010}$	z_{eq}	3422^{+85}_{-82}	χ_{small}^2	$396.9 (\nu: 1.4)$
σ_8	$0.803^{+0.023}_{-0.022}$	k_{eq}	$0.01027^{+0.00030}_{-0.00027}$	χ_{lowl}^2	$24.0 (\nu: 1.2)$
S_8	$0.829^{+0.026}_{-0.026}$	$100\theta_{\text{eq}}$	$0.810^{+0.015}_{-0.014}$	χ_{prior}^2	$9.6 (\nu: 9.6)$
$\sigma_8 \Omega_m^{0.5}$	$0.454^{+0.014}_{-0.014}$	$100\theta_{\text{s,eq}}$	$0.4477^{+0.0075}_{-0.0073}$	χ_{CMB}^2	$7367 (\nu: 10475141.0)$
$\sigma_8 \Omega_m^{0.25}$	$0.604^{+0.015}_{-0.015}$	$H(0.15)$	$71.2^{+3.7}_{-3.4}$		
$\sigma_8/h^{0.5}$	$0.989^{+0.018}_{-0.018}$	$D_{\text{M}}(0.15)$	657^{+34}_{-34}		

$$\bar{\chi}_{\text{eff}}^2 = 11952.01; \Delta\bar{\chi}_{\text{eff}}^2 = 9150.66; R - 1 = 0.01202$$

11.8 base_nnu_yhe_CamSpecHM_TTTEEE_lowl_lowE_post_BAO_lensing_zre6p5/base_nnu_yhe_plikHM_TTTEEE_lowl_lowE_post_BAO_lensing_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02235^{+0.00037}_{-0.00038}$	$\langle d^2 \rangle^{1/2}$	$2.437^{+0.042}_{-0.042}$	$H(0.51)$	$89.0^{+3.6}_{-3.3}$
$\Omega_c h^2$	$0.1173^{+0.0094}_{-0.0086}$	z_{re}	$7.9^{+1.2}_{-1.3}$	$D_{\text{M}}(0.51)$	1999^{+83}_{-85}
$100\theta_{MC}$	$1.0415^{+0.0025}_{-0.0025}$	$10^9 A_s$	$2.097^{+0.065}_{-0.064}$	$H(0.61)$	$94.6^{+3.7}_{-3.4}$
τ	$0.057^{+0.013}_{-0.012}$	$10^9 A_s e^{-2\tau}$	$1.873^{+0.037}_{-0.038}$	$D_{\text{M}}(0.61)$	2326^{+96}_{-98}
N_{eff}	$2.92^{+0.59}_{-0.54}$	D_{40}	1228^{+30}_{-30}	$H(2.33)$	$234.3^{+8.1}_{-7.5}$
Y_{He}	$0.251^{+0.041}_{-0.041}$	D_{220}	5732^{+75}_{-77}	$D_{\text{M}}(2.33)$	5810^{+210}_{-220}
$\ln(10^{10} A_s)$	$3.043^{+0.031}_{-0.030}$	D_{810}	2537^{+26}_{-27}	$f\sigma_8(0.15)$	$0.455^{+0.012}_{-0.012}$
n_s	$0.965^{+0.015}_{-0.015}$	D_{1420}	$817.3^{+9.6}_{-10}$	$\sigma_8(0.15)$	$0.745^{+0.021}_{-0.021}$
y_{cal}	$1.0008^{+0.0047}_{-0.0047}$	D_{2000}	$230.9^{+4.0}_{-4.4}$	$f\sigma_8(0.38)$	$0.473^{+0.012}_{-0.012}$
A_{217}^{CIB}	43^{+10}_{-20}	$n_{s,0.002}$	$0.965^{+0.015}_{-0.015}$	$\sigma_8(0.38)$	$0.660^{+0.019}_{-0.019}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.251^{+0.041}_{-0.041}$	$f\sigma_8(0.51)$	$0.471^{+0.012}_{-0.012}$
A_{143}^{tSZ}	$4.7^{+3.9}_{-4.3}$	Y_P^{BBN}	$0.252^{+0.041}_{-0.041}$	$\sigma_8(0.51)$	$0.618^{+0.019}_{-0.018}$
A_{100}^{PS}	249^{+60}_{-50}	Age/Gyr	$13.91^{+0.51}_{-0.52}$	$f\sigma_8(0.61)$	$0.466^{+0.012}_{-0.012}$
A_{143}^{PS}	43^{+20}_{-20}	z_*	$1089.9^{+1.2}_{-1.0}$	$\sigma_8(0.61)$	$0.588^{+0.018}_{-0.017}$
A_{217}^{PS}	109^{+20}_{-30}	r_*	$145.8^{+5.2}_{-5.3}$	$f\sigma_8(2.33)$	$0.2963^{+0.0092}_{-0.0090}$
A^{kSZ}	—	$100\theta_*$	$1.0416^{+0.0018}_{-0.0018}$	$\sigma_8(2.33)$	$0.305^{+0.010}_{-0.0097}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$14.00^{+0.47}_{-0.49}$	f_{2000}^{143}	29^{+7}_{-7}
c_{217}	$0.9996^{+0.0038}_{-0.0028}$	z_{drag}	$1059.8^{+1.6}_{-1.7}$	$f_{2000}^{143 \times 217}$	32^{+5}_{-5}
H_0	$67.0^{+3.2}_{-2.9}$	r_{drag}	$148.5^{+5.3}_{-5.4}$	f_{2000}^{217}	$106.9^{+4.7}_{-4.6}$
Ω_{Λ}	$0.688^{+0.014}_{-0.014}$	k_{D}	$0.1396^{+0.0051}_{-0.0048}$	χ_{lensing}^2	$9.13 (\nu: 0.3)$
Ω_m	$0.312^{+0.014}_{-0.014}$	$100\theta_{\text{D}}$	$0.1608^{+0.0013}_{-0.0011}$	χ_{small}^2	$397.2 (\nu: 1.8)$
$\Omega_m h^2$	$0.1403^{+0.0095}_{-0.0087}$	z_{eq}	3393^{+63}_{-64}	χ_{lowl}^2	$23.3 (\nu: 0.8)$
$\Omega_m h^3$	$0.0941^{+0.010}_{-0.0099}$	k_{eq}	$0.01027^{+0.00030}_{-0.00028}$	$\chi_{6\text{DF}}^2$	$0.069 (\nu: 0.0)$
σ_8	$0.806^{+0.022}_{-0.022}$	$100\theta_{\text{eq}}$	$0.815^{+0.011}_{-0.011}$	χ_{MGS}^2	$1.21 (\nu: 0.1)$
S_8	$0.822^{+0.023}_{-0.023}$	$100\theta_{\text{s,eq}}$	$0.4504^{+0.0056}_{-0.0055}$	χ_{DR12BAO}^2	$5.1 (\nu: 1.3)$
$\sigma_8 \Omega_m^{0.5}$	$0.450^{+0.013}_{-0.012}$	$H(0.15)$	$72.3^{+3.3}_{-3.0}$	χ_{prior}^2	$9.7 (\nu: 9.9)$
$\sigma_8 \Omega_m^{0.25}$	$0.602^{+0.015}_{-0.015}$	$D_{\text{M}}(0.15)$	647^{+29}_{-29}	χ_{CMB}^2	$7367 (\nu: 10475079.5)$
$\sigma_8/h^{0.5}$	$0.984^{+0.017}_{-0.017}$	$H(0.38)$	$82.3^{+3.5}_{-3.2}$	χ_{BAO}^2	$6.3 (\nu: 0.9)$
$r_{\text{drag}} h$	$99.5^{+1.7}_{-1.6}$	$D_{\text{M}}(0.38)$	1543^{+65}_{-67}		

$$\bar{\chi}_{\text{eff}}^2 = 11958.67; \Delta\bar{\chi}_{\text{eff}}^2 = 9150.36; R - 1 = 0.01939$$

11.9 base_nnu_yhe_CamSpecHM_TTTEEE_lowl_lowE_Aver15/base_nnu_yhe_plikHM_TTTEEE_lowl_lowE_Aver15

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02222^{+0.00043}_{-0.00042}$	$r_{\text{drag}} h$	$98.6^{+2.6}_{-2.5}$	$H(0.38)$	$81.8^{+3.4}_{-3.2}$
$\Omega_c h^2$	$0.1179^{+0.0075}_{-0.0071}$	$\langle d^2 \rangle^{1/2}$	$2.448^{+0.059}_{-0.061}$	$D_{\text{M}}(0.38)$	1555^{+70}_{-69}
$100\theta_{MC}$	$1.0411^{+0.0013}_{-0.0012}$	z_{re}	$7.5^{+1.5}_{-1.6}$	$H(0.51)$	$88.6^{+3.4}_{-3.3}$
τ	$0.053^{+0.016}_{-0.015}$	$10^9 A_s$	$2.079^{+0.079}_{-0.078}$	$D_{\text{M}}(0.51)$	2013^{+88}_{-86}
N_{eff}	$2.90^{+0.49}_{-0.46}$	$10^9 A_s e^{-2\tau}$	$1.871^{+0.039}_{-0.039}$	$H(0.61)$	$94.2^{+3.5}_{-3.3}$
Y_{He}	$0.2439^{+0.0076}_{-0.0078}$	D_{40}	1236^{+31}_{-31}	$D_{\text{M}}(0.61)$	2342^{+100}_{-98}
$\ln(10^{10} A_s)$	$3.034^{+0.037}_{-0.038}$	D_{220}	5725^{+78}_{-79}	$H(2.33)$	$234.5^{+6.7}_{-6.5}$
n_s	$0.960^{+0.017}_{-0.017}$	D_{810}	2535^{+28}_{-27}	$D_{\text{M}}(2.33)$	5830^{+200}_{-200}
y_{cal}	$1.0005^{+0.0049}_{-0.0049}$	D_{1420}	$817.1^{+9.8}_{-9.6}$	$f\sigma_8(0.15)$	$0.458^{+0.017}_{-0.017}$
A_{217}^{CIB}	43^{+20}_{-20}	D_{2000}	$231.2^{+3.8}_{-3.8}$	$\sigma_8(0.15)$	$0.742^{+0.023}_{-0.023}$
$\xi^{tSZ-CIB}$	—	$n_{s,0.002}$	$0.960^{+0.017}_{-0.017}$	$f\sigma_8(0.38)$	$0.475^{+0.015}_{-0.015}$
A_{143}^{tSZ}	$4.7^{+3.9}_{-4.4}$	Y_P	$0.2439^{+0.0076}_{-0.0078}$	$\sigma_8(0.38)$	$0.657^{+0.021}_{-0.021}$
A_{100}^{PS}	247^{+60}_{-50}	Y_P^{BBN}	$0.2452^{+0.0076}_{-0.0079}$	$f\sigma_8(0.51)$	$0.472^{+0.014}_{-0.014}$
A_{143}^{PS}	41^{+20}_{-20}	Age/Gyr	$13.95^{+0.48}_{-0.48}$	$\sigma_8(0.51)$	$0.614^{+0.021}_{-0.020}$
A_{217}^{PS}	109^{+20}_{-30}	z_*	$1089.80^{+0.69}_{-0.70}$	$f\sigma_8(0.61)$	$0.467^{+0.013}_{-0.013}$
A^{kSZ}	—	r_*	$145.9^{+4.6}_{-4.5}$	$\sigma_8(0.61)$	$0.584^{+0.020}_{-0.019}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	$100\theta_*$	$1.0414^{+0.0014}_{-0.0013}$	$f\sigma_8(2.33)$	$0.294^{+0.010}_{-0.010}$
c_{217}	$0.9996^{+0.0037}_{-0.0027}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$14.01^{+0.42}_{-0.42}$	$\sigma_8(2.33)$	$0.303^{+0.011}_{-0.011}$
H_0	$66.4^{+3.4}_{-3.2}$	z_{drag}	$1059.3^{+1.5}_{-1.5}$	f_{2000}^{143}	29^{+6}_{-6}
Ω_{Λ}	$0.680^{+0.021}_{-0.022}$	r_{drag}	$148.6^{+4.7}_{-4.7}$	$f_{2000}^{143 \times 217}$	31^{+4}_{-4}
Ω_m	$0.320^{+0.022}_{-0.021}$	k_{D}	$0.1397^{+0.0037}_{-0.0035}$	f_{2000}^{217}	$106.3^{+4.1}_{-4.1}$
$\Omega_m h^2$	$0.1407^{+0.0078}_{-0.0074}$	$100\theta_{\text{D}}$	$0.16054^{+0.00086}_{-0.00083}$	χ_{small}^2	$396.9 (\nu: 1.4)$
$\Omega_m h^3$	$0.0935^{+0.0095}_{-0.0087}$	z_{eq}	3414^{+80}_{-78}	χ_{lowl}^2	$24.1 (\nu: 1.1)$
σ_8	$0.804^{+0.024}_{-0.024}$	k_{eq}	$0.01032^{+0.00027}_{-0.00027}$	χ_{Aver15}^2	$0.97 (\nu: 0.9)$
S_8	$0.830^{+0.032}_{-0.032}$	$100\theta_{\text{eq}}$	$0.811^{+0.015}_{-0.015}$	χ_{prior}^2	$9.7 (\nu: 9.6)$
$\sigma_8 \Omega_m^{0.5}$	$0.454^{+0.018}_{-0.018}$	$100\theta_{\text{s,eq}}$	$0.4482^{+0.0075}_{-0.0074}$	χ_{CMB}^2	$7358 (\nu: 10475184.4)$
$\sigma_8 \Omega_m^{0.25}$	$0.604^{+0.018}_{-0.018}$	$H(0.15)$	$71.7^{+3.3}_{-3.2}$		
$\sigma_8/h^{0.5}$	$0.987^{+0.023}_{-0.024}$	$D_{\text{M}}(0.15)$	653^{+31}_{-31}		

Best-fit $\chi_{\text{eff}}^2 = 11924.04$; $\Delta\chi_{\text{eff}}^2 = 9159.20$; $\bar{\chi}_{\text{eff}}^2 = 11943.94$; $\Delta\bar{\chi}_{\text{eff}}^2 = 9150.72$; $R - 1 = 0.01231$
 χ_{eff}^2 : Abund - Yp_Aver2015: 0.01 (Δ 0.00) CMB - simall_100x143_offlike5_EE_Aplanck_B: 399.05 (Δ 3.02) commander_dx12_v3.2.29: 23.05 (Δ -1.17) CamSpec like_10.7HM_1400_unified: 11499.50

11.10 base_nnu_yhe_CamSpecHM_TTTEEE_lowl_lowE_Aver15_post_BAO/base_nnu_yhe_plikHM_TTTEEE_lowl_lowE_Aver15_post_BAO

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02234^{+0.00037}_{-0.00037}$	$\langle d^2 \rangle^{1/2}$	$2.430^{+0.051}_{-0.051}$	$H(0.51)$	$89.5^{+3.0}_{-2.9}$
$\Omega_c h^2$	$0.1185^{+0.0076}_{-0.0071}$	z_{re}	$7.6^{+1.5}_{-1.6}$	$D_{\text{M}}(0.51)$	1987^{+72}_{-71}
$100\theta_{MC}$	$1.0410^{+0.0012}_{-0.0012}$	$10^9 A_s$	$2.089^{+0.078}_{-0.075}$	$H(0.61)$	$95.1^{+3.1}_{-3.0}$
τ	$0.054^{+0.016}_{-0.015}$	$10^9 A_s e^{-2\tau}$	$1.874^{+0.039}_{-0.038}$	$D_{\text{M}}(0.61)$	2312^{+82}_{-82}
N_{eff}	$3.01^{+0.47}_{-0.43}$	D_{40}	1227^{+27}_{-27}	$H(2.33)$	$235.4^{+6.7}_{-6.2}$
Y_{He}	$0.2439^{+0.0076}_{-0.0080}$	D_{220}	5729^{+77}_{-77}	$D_{\text{M}}(2.33)$	5779^{+180}_{-180}
$\ln(10^{10} A_s)$	$3.039^{+0.037}_{-0.036}$	D_{810}	2536^{+28}_{-27}	$f\sigma_8(0.15)$	$0.454^{+0.014}_{-0.015}$
n_s	$0.965^{+0.014}_{-0.014}$	D_{1420}	$817.2^{+9.7}_{-9.5}$	$\sigma_8(0.15)$	$0.744^{+0.023}_{-0.022}$
y_{cal}	$1.0006^{+0.0049}_{-0.0048}$	D_{2000}	$231.0^{+3.7}_{-3.7}$	$f\sigma_8(0.38)$	$0.472^{+0.014}_{-0.014}$
A_{217}^{CIB}	43^{+20}_{-20}	$n_{s,0.002}$	$0.965^{+0.014}_{-0.014}$	$\sigma_8(0.38)$	$0.660^{+0.021}_{-0.020}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.2439^{+0.0076}_{-0.0080}$	$f\sigma_8(0.51)$	$0.471^{+0.014}_{-0.014}$
A_{143}^{tSZ}	$4.7^{+3.9}_{-4.3}$	Y_P^{BBN}	$0.2452^{+0.0076}_{-0.0080}$	$\sigma_8(0.51)$	$0.618^{+0.020}_{-0.019}$
A_{100}^{PS}	248^{+60}_{-50}	Age/Gyr	$13.84^{+0.43}_{-0.44}$	$f\sigma_8(0.61)$	$0.466^{+0.014}_{-0.014}$
A_{143}^{PS}	42^{+20}_{-20}	z_*	$1089.74^{+0.69}_{-0.69}$	$\sigma_8(0.61)$	$0.588^{+0.019}_{-0.018}$
A_{217}^{PS}	109^{+20}_{-30}	r_*	$145.1^{+4.3}_{-4.3}$	$f\sigma_8(2.33)$	$0.296^{+0.010}_{-0.0092}$
A^{kSZ}	—	$100\theta_*$	$1.0413^{+0.0013}_{-0.0013}$	$\sigma_8(2.33)$	$0.305^{+0.011}_{-0.0099}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.93^{+0.39}_{-0.40}$	f_{2000}^{143}	29^{+6}_{-6}
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	z_{drag}	$1059.7^{+1.3}_{-1.4}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
H_0	$67.4^{+2.7}_{-2.6}$	r_{drag}	$147.8^{+4.4}_{-4.5}$	f_{2000}^{217}	$106.6^{+4.0}_{-4.0}$
Ω_{Λ}	$0.689^{+0.014}_{-0.014}$	k_{D}	$0.1403^{+0.0036}_{-0.0034}$	χ_{small}^2	$397.0 (\nu: 1.6)$
Ω_m	$0.311^{+0.014}_{-0.014}$	$100\theta_{\text{D}}$	$0.16067^{+0.00083}_{-0.00081}$	χ_{lowl}^2	$23.2 (\nu: 0.6)$
$\Omega_m h^2$	$0.1415^{+0.0078}_{-0.0073}$	z_{eq}	3383^{+54}_{-53}	χ_{Aver15}^2	$0.97 (\nu: 0.9)$
$\Omega_m h^3$	$0.0954^{+0.0091}_{-0.0081}$	k_{eq}	$0.01030^{+0.00027}_{-0.00026}$	$\chi_{6\text{DF}}^2$	$0.062 (\nu: 0.0)$
σ_8	$0.805^{+0.025}_{-0.024}$	$100\theta_{\text{eq}}$	$0.817^{+0.010}_{-0.010}$	χ_{MGS}^2	$1.27 (\nu: 0.1)$
S_8	$0.820^{+0.027}_{-0.028}$	$100\theta_{\text{s,eq}}$	$0.4512^{+0.0051}_{-0.0051}$	χ_{DR12BAO}^2	$4.9 (\nu: 1.3)$
$\sigma_8 \Omega_m^{0.5}$	$0.449^{+0.015}_{-0.015}$	$H(0.15)$	$72.7^{+2.8}_{-2.6}$	χ_{prior}^2	$9.7 (\nu: 9.6)$
$\sigma_8 \Omega_m^{0.25}$	$0.602^{+0.018}_{-0.018}$	$D_{\text{M}}(0.15)$	643^{+25}_{-25}	χ_{BAO}^2	$6.3 (\nu: 0.9)$
$\sigma_8/h^{0.5}$	$0.981^{+0.021}_{-0.021}$	$H(0.38)$	$82.8^{+2.9}_{-2.8}$	χ_{CMB}^2	$7358 (\nu: 10473886.4)$
$r_{\text{drag}} h$	$99.6^{+1.7}_{-1.7}$	$D_{\text{M}}(0.38)$	1534^{+56}_{-56}		

$$\bar{\chi}_{\text{eff}}^2 = 11949.86; \Delta\bar{\chi}_{\text{eff}}^2 = 9149.82; R - 1 = 0.01509$$

11.11 base_nnu_yhe_CamSpecHM_TTTEEE_lowl_lowE_Aver15_post_lensing/base_nnu_yhe_plikHM_TTTEEE_lowl_lowE_Aver15_post_len

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02220^{+0.00043}_{-0.00042}$	$r_{\text{drag}} h$	$98.5^{+2.4}_{-2.4}$	$H(0.38)$	$81.6^{+3.3}_{-3.2}$
$\Omega_c h^2$	$0.1173^{+0.0073}_{-0.0069}$	$\langle d^2 \rangle^{1/2}$	$2.451^{+0.047}_{-0.048}$	$D_{\text{M}}(0.38)$	1560^{+69}_{-69}
$100\theta_{MC}$	$1.0412^{+0.0013}_{-0.0012}$	z_{re}	$7.5^{+1.5}_{-1.6}$	$H(0.51)$	$88.3^{+3.4}_{-3.2}$
τ	$0.053^{+0.015}_{-0.015}$	$10^9 A_s$	$2.077^{+0.073}_{-0.072}$	$D_{\text{M}}(0.51)$	2020^{+87}_{-86}
N_{eff}	$2.87^{+0.49}_{-0.46}$	$10^9 A_s e^{-2\tau}$	$1.869^{+0.037}_{-0.038}$	$H(0.61)$	$93.9^{+3.4}_{-3.3}$
Y_{He}	$0.2439^{+0.0075}_{-0.0079}$	D_{40}	1237^{+28}_{-29}	$D_{\text{M}}(0.61)$	2349^{+99}_{-98}
$\ln(10^{10} A_s)$	$3.034^{+0.035}_{-0.035}$	D_{220}	5727^{+78}_{-77}	$H(2.33)$	$234.0^{+6.6}_{-6.3}$
n_s	$0.959^{+0.017}_{-0.017}$	D_{810}	2535^{+27}_{-27}	$D_{\text{M}}(2.33)$	5845^{+200}_{-200}
y_{cal}	$1.0006^{+0.0049}_{-0.0049}$	D_{1420}	$817.3^{+9.7}_{-9.7}$	$f\sigma_8(0.15)$	$0.458^{+0.013}_{-0.013}$
A_{217}^{CIB}	42^{+20}_{-20}	D_{2000}	$231.4^{+3.8}_{-3.8}$	$\sigma_8(0.15)$	$0.741^{+0.021}_{-0.021}$
$\xi^{tSZ-CIB}$	—	$n_{s,0.002}$	$0.959^{+0.017}_{-0.017}$	$f\sigma_8(0.38)$	$0.474^{+0.011}_{-0.011}$
A_{143}^{tSZ}	$4.8^{+3.9}_{-4.3}$	Y_P	$0.2439^{+0.0075}_{-0.0079}$	$\sigma_8(0.38)$	$0.656^{+0.020}_{-0.020}$
A_{100}^{PS}	246^{+60}_{-50}	Y_P^{BBN}	$0.2453^{+0.0075}_{-0.0079}$	$f\sigma_8(0.51)$	$0.472^{+0.011}_{-0.011}$
A_{143}^{PS}	41^{+20}_{-20}	Age/Gyr	$13.99^{+0.48}_{-0.48}$	$\sigma_8(0.51)$	$0.613^{+0.020}_{-0.019}$
A_{217}^{PS}	109^{+20}_{-30}	z_*	$1089.77^{+0.66}_{-0.65}$	$f\sigma_8(0.61)$	$0.466^{+0.011}_{-0.011}$
A^{kSZ}	—	r_*	$146.2^{+4.5}_{-4.5}$	$\sigma_8(0.61)$	$0.583^{+0.019}_{-0.019}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	$100\theta_*$	$1.0415^{+0.0014}_{-0.0013}$	$f\sigma_8(2.33)$	$0.294^{+0.010}_{-0.0098}$
c_{217}	$0.9996^{+0.0037}_{-0.0027}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$14.04^{+0.41}_{-0.41}$	$\sigma_8(2.33)$	$0.302^{+0.011}_{-0.011}$
H_0	$66.1^{+3.3}_{-3.1}$	z_{drag}	$1059.2^{+1.5}_{-1.5}$	f_{2000}^{143}	29^{+6}_{-6}
Ω_{Λ}	$0.679^{+0.020}_{-0.021}$	r_{drag}	$149.0^{+4.7}_{-4.6}$	$f_{2000}^{143 \times 217}$	31^{+4}_{-4}
Ω_m	$0.321^{+0.021}_{-0.020}$	k_{D}	$0.1395^{+0.0036}_{-0.0035}$	f_{2000}^{217}	$106.2^{+4.1}_{-4.0}$
$\Omega_m h^2$	$0.1402^{+0.0076}_{-0.0071}$	$100\theta_{\text{D}}$	$0.16048^{+0.00085}_{-0.00083}$	χ^2_{lensing}	$9.02 (\nu: 0.3)$
$\Omega_m h^3$	$0.0928^{+0.0094}_{-0.0085}$	z_{eq}	3418^{+74}_{-74}	χ^2_{small}	$396.8 (\nu: 1.2)$
σ_8	$0.803^{+0.022}_{-0.022}$	k_{eq}	$0.01030^{+0.00024}_{-0.00024}$	χ^2_{lowl}	$24.3 (\nu: 1.0)$
S_8	$0.829^{+0.025}_{-0.025}$	$100\theta_{\text{eq}}$	$0.810^{+0.014}_{-0.013}$	χ^2_{Aver15}	$0.97 (\nu: 0.9)$
$\sigma_8 \Omega_m^{0.5}$	$0.454^{+0.014}_{-0.014}$	$100\theta_{\text{s,eq}}$	$0.4479^{+0.0070}_{-0.0068}$	χ^2_{prior}	$9.6 (\nu: 9.5)$
$\sigma_8 \Omega_m^{0.25}$	$0.604^{+0.014}_{-0.014}$	$H(0.15)$	$71.5^{+3.3}_{-3.1}$	χ^2_{CMB}	$7366 (\nu: 10474841.4)$
$\sigma_8/h^{0.5}$	$0.987^{+0.018}_{-0.018}$	$D_{\text{M}}(0.15)$	655^{+31}_{-30}		

$$\bar{\chi}^2_{\text{eff}} = 11952.31; \Delta\bar{\chi}^2_{\text{eff}} = 9150.44; R - 1 = 0.01285$$

11.12 base_nnu_yhe_CamSpecHM_TTTEEE_lowl_lowE_Aver15_post_BAO_lensing/base_nnu_yhe_plikHM_TTTEEE_lowl_lowE_Aver15_po

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02233^{+0.00036}_{-0.00037}$	$\langle d^2 \rangle^{1/2}$	$2.437^{+0.042}_{-0.042}$	$H(0.51)$	$89.3^{+3.0}_{-2.8}$
$\Omega_c h^2$	$0.1182^{+0.0073}_{-0.0067}$	z_{re}	$7.8^{+1.4}_{-1.4}$	$D_{\text{M}}(0.51)$	1991^{+71}_{-71}
$100\theta_{MC}$	$1.0411^{+0.0012}_{-0.0012}$	$10^9 A_s$	$2.094^{+0.069}_{-0.065}$	$H(0.61)$	$94.9^{+3.1}_{-2.9}$
τ	$0.055^{+0.015}_{-0.014}$	$10^9 A_s e^{-2\tau}$	$1.874^{+0.037}_{-0.036}$	$D_{\text{M}}(0.61)$	2317^{+81}_{-81}
N_{eff}	$2.98^{+0.45}_{-0.42}$	D_{40}	1230^{+26}_{-26}	$H(2.33)$	$235.1^{+6.4}_{-6.0}$
Y_{He}	$0.2439^{+0.0075}_{-0.0079}$	D_{220}	5733^{+77}_{-76}	$D_{\text{M}}(2.33)$	5789^{+170}_{-180}
$\ln(10^{10} A_s)$	$3.041^{+0.032}_{-0.031}$	D_{810}	2537^{+27}_{-26}	$f\sigma_8(0.15)$	$0.455^{+0.012}_{-0.012}$
n_s	$0.964^{+0.014}_{-0.014}$	D_{1420}	$817.5^{+9.7}_{-9.5}$	$\sigma_8(0.15)$	$0.745^{+0.021}_{-0.020}$
y_{cal}	$1.0007^{+0.0048}_{-0.0048}$	D_{2000}	$231.2^{+3.8}_{-3.7}$	$f\sigma_8(0.38)$	$0.473^{+0.012}_{-0.012}$
A_{217}^{CIB}	43^{+20}_{-20}	$n_{s,0.002}$	$0.964^{+0.014}_{-0.014}$	$\sigma_8(0.38)$	$0.660^{+0.019}_{-0.018}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.2439^{+0.0075}_{-0.0079}$	$f\sigma_8(0.51)$	$0.471^{+0.012}_{-0.011}$
A_{143}^{tSZ}	$4.7^{+3.9}_{-4.3}$	Y_P^{BBN}	$0.2452^{+0.0076}_{-0.0080}$	$\sigma_8(0.51)$	$0.618^{+0.018}_{-0.017}$
A_{100}^{PS}	247^{+60}_{-50}	Age/Gyr	$13.86^{+0.42}_{-0.43}$	$f\sigma_8(0.61)$	$0.466^{+0.012}_{-0.011}$
A_{143}^{PS}	41^{+20}_{-20}	z_*	$1089.73^{+0.67}_{-0.66}$	$\sigma_8(0.61)$	$0.588^{+0.018}_{-0.017}$
A_{217}^{PS}	109^{+20}_{-30}	r_*	$145.3^{+4.1}_{-4.2}$	$f\sigma_8(2.33)$	$0.2964^{+0.0092}_{-0.0086}$
A^{kSZ}	—	$100\theta_*$	$1.0413^{+0.0013}_{-0.0013}$	$\sigma_8(2.33)$	$0.306^{+0.010}_{-0.0092}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.95^{+0.38}_{-0.39}$	f_{2000}^{143}	29^{+6}_{-6}
c_{217}	$0.9996^{+0.0037}_{-0.0027}$	z_{drag}	$1059.6^{+1.3}_{-1.3}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
H_0	$67.3^{+2.7}_{-2.6}$	r_{drag}	$148.0^{+4.2}_{-4.3}$	f_{2000}^{217}	$106.5^{+4.1}_{-4.0}$
Ω_{Λ}	$0.688^{+0.014}_{-0.014}$	k_{D}	$0.1402^{+0.0034}_{-0.0032}$	χ_{lensing}^2	$9.15 (\nu: 0.3)$
Ω_m	$0.312^{+0.014}_{-0.014}$	$100\theta_{\text{D}}$	$0.16063^{+0.00082}_{-0.00079}$	χ_{simall}^2	$397.1 (\nu: 1.7)$
$\Omega_m h^2$	$0.1412^{+0.0075}_{-0.0069}$	z_{eq}	3387^{+52}_{-52}	χ_{lowl}^2	$23.4 (\nu: 0.6)$
$\Omega_m h^3$	$0.0950^{+0.0087}_{-0.0079}$	k_{eq}	$0.01029^{+0.00025}_{-0.00024}$	χ_{Aver15}^2	$0.97 (\nu: 0.9)$
σ_8	$0.806^{+0.022}_{-0.021}$	$100\theta_{\text{eq}}$	$0.8159^{+0.0098}_{-0.0096}$	$\chi_{6\text{DF}}^2$	$0.070 (\nu: 0.0)$
S_8	$0.822^{+0.022}_{-0.022}$	$100\theta_{\text{s,eq}}$	$0.4508^{+0.0049}_{-0.0048}$	χ_{MGS}^2	$1.20 (\nu: 0.1)$
$\sigma_8 \Omega_m^{0.5}$	$0.450^{+0.012}_{-0.012}$	$H(0.15)$	$72.5^{+2.8}_{-2.6}$	χ_{DR12BAO}^2	$5.1 (\nu: 1.4)$
$\sigma_8 \Omega_m^{0.25}$	$0.603^{+0.015}_{-0.015}$	$D_{\text{M}}(0.15)$	645^{+24}_{-25}	χ_{prior}^2	$9.6 (\nu: 9.5)$
$\sigma_8/h^{0.5}$	$0.983^{+0.016}_{-0.017}$	$H(0.38)$	$82.6^{+2.9}_{-2.7}$	χ_{CMB}^2	$7367 (\nu: 10474324.0)$
$r_{\text{drag}} h$	$99.5^{+1.7}_{-1.7}$	$D_{\text{M}}(0.38)$	1537^{+56}_{-56}	χ_{BAO}^2	$6.4 (\nu: 0.9)$

$$\bar{\chi}_{\text{eff}}^2 = 11958.76; \Delta\bar{\chi}_{\text{eff}}^2 = 9150.14; R - 1 = 0.01459$$

11.13 base_nnu_yhe_CamSpecHM_TTTEEE_lowl_lowE_Aver15_post_zre6p5/base_nnu_yhe_plikHM_TTTEEE_lowl_lowE_Aver15_post_zre

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02223^{+0.00043}_{-0.00042}$	$r_{\text{drag}} h$	$98.7^{+2.6}_{-2.5}$	$H(0.38)$	$81.9^{+3.3}_{-3.2}$
$\Omega_c h^2$	$0.1180^{+0.0075}_{-0.0072}$	$\langle d^2 \rangle^{1/2}$	$2.451^{+0.058}_{-0.059}$	$D_{\text{M}}(0.38)$	1554^{+69}_{-68}
$100\theta_{MC}$	$1.0411^{+0.0013}_{-0.0012}$	z_{re}	< 8.80	$H(0.51)$	$88.6^{+3.4}_{-3.2}$
τ	$0.054^{+0.013}_{-0.011}$	$10^9 A_s$	$2.086^{+0.070}_{-0.066}$	$D_{\text{M}}(0.51)$	2011^{+87}_{-85}
N_{eff}	$2.91^{+0.49}_{-0.46}$	$10^9 A_s e^{-2\tau}$	$1.871^{+0.039}_{-0.039}$	$H(0.61)$	$94.3^{+3.5}_{-3.3}$
Y_{He}	$0.2439^{+0.0076}_{-0.0078}$	D_{40}	1235^{+31}_{-31}	$D_{\text{M}}(0.61)$	2340^{+99}_{-97}
$\ln(10^{10} A_s)$	$3.037^{+0.035}_{-0.030}$	D_{220}	5724^{+78}_{-78}	$H(2.33)$	$234.6^{+6.7}_{-6.4}$
n_s	$0.960^{+0.017}_{-0.017}$	D_{810}	2535^{+27}_{-28}	$D_{\text{M}}(2.33)$	5826^{+200}_{-200}
y_{cal}	$1.0005^{+0.0049}_{-0.0049}$	D_{1420}	$817.0^{+9.8}_{-9.6}$	$f\sigma_8(0.15)$	$0.459^{+0.016}_{-0.016}$
A_{217}^{CIB}	43^{+20}_{-20}	D_{2000}	$231.2^{+3.8}_{-3.8}$	$\sigma_8(0.15)$	$0.743^{+0.022}_{-0.021}$
$\xi^{tSZ-CIB}$	—	$n_{s,0.002}$	$0.960^{+0.017}_{-0.017}$	$f\sigma_8(0.38)$	$0.475^{+0.014}_{-0.014}$
A_{143}^{tSZ}	$4.7^{+3.9}_{-4.4}$	Y_P	$0.2439^{+0.0076}_{-0.0078}$	$\sigma_8(0.38)$	$0.658^{+0.021}_{-0.020}$
A_{100}^{PS}	247^{+60}_{-50}	Y_P^{BBN}	$0.2452^{+0.0076}_{-0.0079}$	$f\sigma_8(0.51)$	$0.473^{+0.013}_{-0.013}$
A_{143}^{PS}	41^{+20}_{-20}	Age/Gyr	$13.94^{+0.48}_{-0.48}$	$\sigma_8(0.51)$	$0.615^{+0.020}_{-0.019}$
A_{217}^{PS}	109^{+20}_{-30}	z_*	$1089.80^{+0.69}_{-0.70}$	$f\sigma_8(0.61)$	$0.467^{+0.013}_{-0.013}$
A^{kSZ}	—	r_*	$145.8^{+4.5}_{-4.5}$	$\sigma_8(0.61)$	$0.585^{+0.019}_{-0.018}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	$100\theta_*$	$1.0414^{+0.0014}_{-0.0013}$	$f\sigma_8(2.33)$	$0.295^{+0.010}_{-0.0094}$
c_{217}	$0.9996^{+0.0037}_{-0.0027}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$14.00^{+0.42}_{-0.42}$	$\sigma_8(2.33)$	$0.304^{+0.011}_{-0.010}$
H_0	$66.4^{+3.3}_{-3.2}$	z_{drag}	$1059.4^{+1.5}_{-1.5}$	f_{2000}^{143}	29^{+6}_{-6}
Ω_{Λ}	$0.681^{+0.021}_{-0.022}$	r_{drag}	$148.5^{+4.7}_{-4.7}$	$f_{2000}^{143 \times 217}$	31^{+4}_{-4}
Ω_m	$0.319^{+0.022}_{-0.021}$	k_{D}	$0.1398^{+0.0036}_{-0.0035}$	f_{2000}^{217}	$106.3^{+4.1}_{-4.1}$
$\Omega_m h^2$	$0.1408^{+0.0078}_{-0.0074}$	$100\theta_{\text{D}}$	$0.16055^{+0.00086}_{-0.00083}$	χ_{small}^2	$396.8 (\nu: 1.4)$
$\Omega_m h^3$	$0.0936^{+0.0095}_{-0.0087}$	z_{eq}	3412^{+78}_{-78}	χ_{lowl}^2	$24.1 (\nu: 1.1)$
σ_8	$0.805^{+0.023}_{-0.022}$	k_{eq}	$0.01032^{+0.00027}_{-0.00027}$	χ_{Aver15}^2	$0.97 (\nu: 1.0)$
S_8	$0.830^{+0.032}_{-0.032}$	$100\theta_{\text{eq}}$	$0.811^{+0.015}_{-0.014}$	χ_{prior}^2	$9.7 (\nu: 9.6)$
$\sigma_8 \Omega_m^{0.5}$	$0.455^{+0.018}_{-0.017}$	$100\theta_{\text{s,eq}}$	$0.4484^{+0.0075}_{-0.0073}$	χ_{CMB}^2	$7358 (\nu: 10475197.6)$
$\sigma_8 \Omega_m^{0.25}$	$0.605^{+0.018}_{-0.018}$	$H(0.15)$	$71.8^{+3.3}_{-3.1}$		
$\sigma_8/h^{0.5}$	$0.988^{+0.023}_{-0.022}$	$D_{\text{M}}(0.15)$	652^{+31}_{-30}		

$$\bar{\chi}_{\text{eff}}^2 = 11943.65; \Delta\bar{\chi}_{\text{eff}}^2 = 9150.72; R - 1 = 0.01349$$

11.14 base_nnu_yhe_CamSpecHM_TTTEEE_lowl_lowE_Aver15_post_BAO_zre6p5/base_nnu_yhe_plikHM_TTTEEE_lowl_lowE_Aver15_po

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02234^{+0.00036}_{-0.00037}$	$\langle d^2 \rangle^{1/2}$	$2.433^{+0.049}_{-0.047}$	$H(0.51)$	$89.5^{+3.0}_{-2.9}$
$\Omega_c h^2$	$0.1185^{+0.0076}_{-0.0070}$	z_{re}	< 8.93	$D_{\text{M}}(0.51)$	1986^{+71}_{-71}
$100\theta_{MC}$	$1.0410^{+0.0012}_{-0.0012}$	$10^9 A_s$	$2.094^{+0.071}_{-0.066}$	$H(0.61)$	$95.1^{+3.2}_{-2.9}$
τ	$0.055^{+0.013}_{-0.012}$	$10^9 A_s e^{-2\tau}$	$1.874^{+0.039}_{-0.038}$	$D_{\text{M}}(0.61)$	2311^{+81}_{-82}
N_{eff}	$3.01^{+0.47}_{-0.43}$	D_{40}	1227^{+27}_{-27}	$H(2.33)$	$235.4^{+6.7}_{-6.2}$
Y_{He}	$0.2439^{+0.0076}_{-0.0080}$	D_{220}	5729^{+77}_{-76}	$D_{\text{M}}(2.33)$	5778^{+180}_{-180}
$\ln(10^{10} A_s)$	$3.041^{+0.034}_{-0.032}$	D_{810}	2536^{+27}_{-27}	$f\sigma_8(0.15)$	$0.454^{+0.014}_{-0.014}$
n_s	$0.966^{+0.014}_{-0.014}$	D_{1420}	$817.2^{+9.6}_{-9.5}$	$\sigma_8(0.15)$	$0.745^{+0.023}_{-0.021}$
y_{cal}	$1.0006^{+0.0048}_{-0.0048}$	D_{2000}	$231.1^{+3.7}_{-3.7}$	$f\sigma_8(0.38)$	$0.473^{+0.013}_{-0.014}$
A_{217}^{CIB}	43^{+20}_{-20}	$n_{s,0.002}$	$0.966^{+0.014}_{-0.014}$	$\sigma_8(0.38)$	$0.661^{+0.021}_{-0.019}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.2439^{+0.0076}_{-0.0080}$	$f\sigma_8(0.51)$	$0.471^{+0.013}_{-0.013}$
A_{143}^{tSZ}	$4.7^{+3.9}_{-4.3}$	Y_P^{BBN}	$0.2452^{+0.0076}_{-0.0080}$	$\sigma_8(0.51)$	$0.618^{+0.020}_{-0.018}$
A_{100}^{PS}	248^{+60}_{-50}	Age/Gyr	$13.83^{+0.43}_{-0.44}$	$f\sigma_8(0.61)$	$0.466^{+0.013}_{-0.013}$
A_{143}^{PS}	42^{+20}_{-20}	z_*	$1089.74^{+0.69}_{-0.68}$	$\sigma_8(0.61)$	$0.588^{+0.019}_{-0.017}$
A_{217}^{PS}	108^{+20}_{-30}	r_*	$145.1^{+4.2}_{-4.4}$	$f\sigma_8(2.33)$	$0.2967^{+0.0098}_{-0.0089}$
A^{kSZ}	—	$100\theta_*$	$1.0413^{+0.0013}_{-0.0013}$	$\sigma_8(2.33)$	$0.306^{+0.010}_{-0.0094}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.93^{+0.39}_{-0.40}$	f_{2000}^{143}	29^{+6}_{-6}
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	z_{drag}	$1059.7^{+1.3}_{-1.3}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
H_0	$67.5^{+2.7}_{-2.6}$	r_{drag}	$147.7^{+4.4}_{-4.5}$	f_{2000}^{217}	$106.5^{+4.1}_{-4.0}$
Ω_{Λ}	$0.689^{+0.014}_{-0.014}$	k_{D}	$0.1404^{+0.0036}_{-0.0034}$	χ_{small}^2	$397.0 (\nu: 1.7)$
Ω_m	$0.311^{+0.014}_{-0.014}$	$100\theta_{\text{D}}$	$0.16067^{+0.00083}_{-0.00081}$	χ_{lowl}^2	$23.2 (\nu: 0.6)$
$\Omega_m h^2$	$0.1415^{+0.0079}_{-0.0072}$	z_{eq}	3383^{+54}_{-53}	χ_{Aver15}^2	$0.97 (\nu: 0.9)$
$\Omega_m h^3$	$0.0955^{+0.0092}_{-0.0081}$	k_{eq}	$0.01030^{+0.00027}_{-0.00026}$	$\chi_{6\text{DF}}^2$	$0.061 (\nu: 0.0)$
σ_8	$0.806^{+0.024}_{-0.022}$	$100\theta_{\text{eq}}$	$0.8168^{+0.0099}_{-0.0099}$	χ_{MGS}^2	$1.28 (\nu: 0.1)$
S_8	$0.821^{+0.027}_{-0.027}$	$100\theta_{\text{s,eq}}$	$0.4512^{+0.0051}_{-0.0050}$	χ_{DR12BAO}^2	$4.9 (\nu: 1.2)$
$\sigma_8 \Omega_m^{0.5}$	$0.450^{+0.015}_{-0.015}$	$H(0.15)$	$72.7^{+2.8}_{-2.6}$	χ_{prior}^2	$9.7 (\nu: 9.6)$
$\sigma_8 \Omega_m^{0.25}$	$0.602^{+0.017}_{-0.017}$	$D_{\text{M}}(0.15)$	643^{+25}_{-25}	χ_{BAO}^2	$6.2 (\nu: 0.8)$
$\sigma_8/h^{0.5}$	$0.982^{+0.020}_{-0.019}$	$H(0.38)$	$82.8^{+2.9}_{-2.7}$	χ_{CMB}^2	$7358 (\nu: 10473826.7)$
$r_{\text{drag}} h$	$99.6^{+1.7}_{-1.7}$	$D_{\text{M}}(0.38)$	1533^{+56}_{-56}		

$$\bar{\chi}_{\text{eff}}^2 = 11949.59; \Delta\bar{\chi}_{\text{eff}}^2 = 9149.76; R - 1 = 0.01728$$

11.15 base_nnu_yhe_CamSpecHM_TTTEEE_lowl_lowE_Aver15_post_lensing_zre6p5/base_nnu_yhe_plikHM_TTTEEE_lowl_lowE_Aver15_p

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02221^{+0.00042}_{-0.00041}$	$r_{\text{drag}} h$	$98.6^{+2.4}_{-2.2}$	$H(0.38)$	$81.7^{+3.3}_{-3.1}$
$\Omega_c h^2$	$0.1174^{+0.0073}_{-0.0069}$	$\langle d^2 \rangle^{1/2}$	$2.452^{+0.046}_{-0.048}$	$D_{\text{M}}(0.38)$	1558^{+67}_{-68}
$100\theta_{MC}$	$1.0412^{+0.0013}_{-0.0012}$	z_{re}	< 8.76	$H(0.51)$	$88.4^{+3.4}_{-3.2}$
τ	$0.054^{+0.012}_{-0.011}$	$10^9 A_s$	$2.083^{+0.066}_{-0.062}$	$D_{\text{M}}(0.51)$	2017^{+85}_{-85}
N_{eff}	$2.88^{+0.49}_{-0.45}$	$10^9 A_s e^{-2\tau}$	$1.869^{+0.037}_{-0.038}$	$H(0.61)$	$94.0^{+3.4}_{-3.2}$
Y_{He}	$0.2439^{+0.0075}_{-0.0079}$	D_{40}	1237^{+28}_{-28}	$D_{\text{M}}(0.61)$	2346^{+97}_{-97}
$\ln(10^{10} A_s)$	$3.036^{+0.031}_{-0.030}$	D_{220}	5726^{+76}_{-77}	$H(2.33)$	$234.1^{+6.5}_{-6.3}$
n_s	$0.959^{+0.017}_{-0.016}$	D_{810}	2535^{+27}_{-27}	$D_{\text{M}}(2.33)$	5840^{+200}_{-200}
y_{cal}	$1.0005^{+0.0049}_{-0.0049}$	D_{1420}	$817.2^{+9.7}_{-9.6}$	$f\sigma_8(0.15)$	$0.458^{+0.013}_{-0.013}$
A_{217}^{CIB}	42^{+20}_{-20}	D_{2000}	$231.4^{+3.8}_{-3.8}$	$\sigma_8(0.15)$	$0.742^{+0.021}_{-0.020}$
$\xi^{tSZ-CIB}$	—	$n_{s,0.002}$	$0.959^{+0.017}_{-0.016}$	$f\sigma_8(0.38)$	$0.475^{+0.011}_{-0.011}$
A_{143}^{tSZ}	$4.7^{+3.9}_{-4.3}$	Y_P	$0.2439^{+0.0075}_{-0.0079}$	$\sigma_8(0.38)$	$0.657^{+0.020}_{-0.019}$
A_{100}^{PS}	246^{+60}_{-50}	Y_P^{BBN}	$0.2453^{+0.0075}_{-0.0079}$	$f\sigma_8(0.51)$	$0.472^{+0.011}_{-0.011}$
A_{143}^{PS}	41^{+20}_{-20}	Age/Gyr	$13.98^{+0.48}_{-0.48}$	$\sigma_8(0.51)$	$0.614^{+0.019}_{-0.018}$
A_{217}^{PS}	109^{+20}_{-30}	z_*	$1089.76^{+0.66}_{-0.66}$	$f\sigma_8(0.61)$	$0.467^{+0.011}_{-0.011}$
A^{kSZ}	—	r_*	$146.1^{+4.4}_{-4.5}$	$\sigma_8(0.61)$	$0.584^{+0.019}_{-0.017}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	$100\theta_*$	$1.0415^{+0.0014}_{-0.0013}$	$f\sigma_8(2.33)$	$0.2942^{+0.0098}_{-0.0091}$
c_{217}	$0.9996^{+0.0037}_{-0.0027}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$14.03^{+0.41}_{-0.41}$	$\sigma_8(2.33)$	$0.303^{+0.011}_{-0.0099}$
H_0	$66.2^{+3.3}_{-3.1}$	z_{drag}	$1059.3^{+1.5}_{-1.5}$	f_{2000}^{143}	29^{+6}_{-6}
Ω_{Λ}	$0.680^{+0.019}_{-0.020}$	r_{drag}	$148.9^{+4.6}_{-4.6}$	$f_{2000}^{143 \times 217}$	31^{+4}_{-4}
Ω_m	$0.320^{+0.020}_{-0.019}$	k_{D}	$0.1395^{+0.0036}_{-0.0035}$	f_{2000}^{217}	$106.2^{+4.1}_{-4.0}$
$\Omega_m h^2$	$0.1402^{+0.0076}_{-0.0072}$	$100\theta_{\text{D}}$	$0.16049^{+0.00084}_{-0.00082}$	χ_{lensing}^2	$9.00 (\nu: 0.2)$
$\Omega_m h^3$	$0.0930^{+0.0094}_{-0.0085}$	z_{eq}	3415^{+71}_{-72}	χ_{small}^2	$396.8 (\nu: 1.2)$
σ_8	$0.804^{+0.022}_{-0.021}$	k_{eq}	$0.01030^{+0.00024}_{-0.00024}$	χ_{lowl}^2	$24.2 (\nu: 1.0)$
S_8	$0.830^{+0.025}_{-0.025}$	$100\theta_{\text{eq}}$	$0.811^{+0.014}_{-0.013}$	χ_{Aver15}^2	$0.97 (\nu: 0.9)$
$\sigma_8 \Omega_m^{0.5}$	$0.454^{+0.014}_{-0.014}$	$100\theta_{\text{s,eq}}$	$0.4482^{+0.0068}_{-0.0066}$	χ_{prior}^2	$9.6 (\nu: 9.6)$
$\sigma_8 \Omega_m^{0.25}$	$0.604^{+0.014}_{-0.014}$	$H(0.15)$	$71.6^{+3.3}_{-3.0}$	χ_{CMB}^2	$7366 (\nu: 10474856.8)$
$\sigma_8/h^{0.5}$	$0.987^{+0.017}_{-0.018}$	$D_{\text{M}}(0.15)$	654^{+30}_{-30}		

$$\bar{\chi}_{\text{eff}}^2 = 11952.02; \Delta\bar{\chi}_{\text{eff}}^2 = 9150.40; R - 1 = 0.01312$$

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02233^{+0.00036}_{-0.00037}$	$\langle d^2 \rangle^{1/2}$	$2.438^{+0.042}_{-0.040}$	$H(0.51)$	$89.3^{+3.0}_{-2.8}$
$\Omega_c h^2$	$0.1182^{+0.0073}_{-0.0067}$	z_{re}	$7.8^{+1.2}_{-1.3}$	$D_{\text{M}}(0.51)$	1991^{+70}_{-71}
$100\theta_{MC}$	$1.0411^{+0.0012}_{-0.0012}$	$10^9 A_s$	$2.096^{+0.067}_{-0.060}$	$H(0.61)$	$94.9^{+3.1}_{-2.9}$
τ	$0.056^{+0.013}_{-0.012}$	$10^9 A_s e^{-2\tau}$	$1.874^{+0.037}_{-0.036}$	$D_{\text{M}}(0.61)$	2317^{+80}_{-81}
N_{eff}	$2.99^{+0.45}_{-0.41}$	D_{40}	1230^{+26}_{-25}	$H(2.33)$	$235.1^{+6.4}_{-5.9}$
Y_{He}	$0.2439^{+0.0076}_{-0.0079}$	D_{220}	5732^{+77}_{-75}	$D_{\text{M}}(2.33)$	5788^{+170}_{-180}
$\ln(10^{10} A_s)$	$3.043^{+0.031}_{-0.029}$	D_{810}	2536^{+26}_{-26}	$f\sigma_8(0.15)$	$0.455^{+0.012}_{-0.012}$
n_s	$0.965^{+0.014}_{-0.014}$	D_{1420}	$817.5^{+9.6}_{-9.5}$	$\sigma_8(0.15)$	$0.745^{+0.020}_{-0.019}$
y_{cal}	$1.0007^{+0.0048}_{-0.0048}$	D_{2000}	$231.2^{+3.8}_{-3.7}$	$f\sigma_8(0.38)$	$0.473^{+0.011}_{-0.011}$
A_{217}^{CIB}	43^{+20}_{-20}	$n_{s,0.002}$	$0.965^{+0.014}_{-0.014}$	$\sigma_8(0.38)$	$0.661^{+0.019}_{-0.018}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.2439^{+0.0076}_{-0.0079}$	$f\sigma_8(0.51)$	$0.472^{+0.011}_{-0.011}$
A_{143}^{tSZ}	$4.7^{+3.9}_{-4.3}$	Y_P^{BBN}	$0.2452^{+0.0076}_{-0.0079}$	$\sigma_8(0.51)$	$0.618^{+0.018}_{-0.017}$
A_{100}^{PS}	247^{+60}_{-50}	Age/Gyr	$13.86^{+0.42}_{-0.43}$	$f\sigma_8(0.61)$	$0.467^{+0.011}_{-0.011}$
A_{143}^{PS}	41^{+20}_{-20}	z_*	$1089.73^{+0.67}_{-0.66}$	$\sigma_8(0.61)$	$0.588^{+0.018}_{-0.016}$
A_{217}^{PS}	109^{+20}_{-30}	r_*	$145.3^{+4.1}_{-4.2}$	$f\sigma_8(2.33)$	$0.2966^{+0.0091}_{-0.0084}$
A^{kSZ}	—	$100\theta_*$	$1.0413^{+0.0013}_{-0.0013}$	$\sigma_8(2.33)$	$0.3057^{+0.0098}_{-0.0091}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.95^{+0.38}_{-0.39}$	f_{2000}^{143}	29^{+6}_{-6}
c_{217}	$0.9996^{+0.0038}_{-0.0027}$	z_{drag}	$1059.6^{+1.3}_{-1.3}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
H_0	$67.3^{+2.7}_{-2.6}$	r_{drag}	$148.0^{+4.2}_{-4.3}$	f_{2000}^{217}	$106.5^{+4.1}_{-4.0}$
Ω_{Λ}	$0.688^{+0.013}_{-0.014}$	k_{D}	$0.1402^{+0.0034}_{-0.0032}$	χ_{lensing}^2	$9.11 (\nu: 0.2)$
Ω_m	$0.312^{+0.014}_{-0.013}$	$100\theta_{\text{D}}$	$0.16063^{+0.00082}_{-0.00079}$	χ_{simall}^2	$397.1 (\nu: 1.7)$
$\Omega_m h^2$	$0.1412^{+0.0075}_{-0.0069}$	z_{eq}	3387^{+52}_{-52}	χ_{lowl}^2	$23.4 (\nu: 0.6)$
$\Omega_m h^3$	$0.0951^{+0.0088}_{-0.0079}$	k_{eq}	$0.01029^{+0.00025}_{-0.00024}$	χ_{Aver15}^2	$0.97 (\nu: 0.9)$
σ_8	$0.807^{+0.022}_{-0.021}$	$100\theta_{\text{eq}}$	$0.8160^{+0.0097}_{-0.0095}$	$\chi_{6\text{DF}}^2$	$0.068 (\nu: 0.0)$
S_8	$0.822^{+0.022}_{-0.022}$	$100\theta_{\text{s,eq}}$	$0.4508^{+0.0049}_{-0.0048}$	χ_{MGS}^2	$1.21 (\nu: 0.1)$
$\sigma_8 \Omega_m^{0.5}$	$0.450^{+0.012}_{-0.012}$	$H(0.15)$	$72.5^{+2.8}_{-2.6}$	χ_{DR12BAO}^2	$5.1 (\nu: 1.3)$
$\sigma_8 \Omega_m^{0.25}$	$0.603^{+0.015}_{-0.014}$	$D_{\text{M}}(0.15)$	645^{+24}_{-24}	χ_{prior}^2	$9.6 (\nu: 9.5)$
$\sigma_8/h^{0.5}$	$0.983^{+0.016}_{-0.016}$	$H(0.38)$	$82.6^{+2.9}_{-2.7}$	χ_{CMB}^2	$7367 (\nu: 10474273.7)$
$r_{\text{drag}} h$	$99.5^{+1.7}_{-1.6}$	$D_{\text{M}}(0.38)$	1537^{+56}_{-56}	χ_{BAO}^2	$6.3 (\nu: 0.9)$

$$\bar{\chi}_{\text{eff}}^2 = 11958.57; \Delta\bar{\chi}_{\text{eff}}^2 = 9150.10; R - 1 = 0.01608$$

12 nrun

12.1 base_nrun_CamSpecHM_TT_lowl_lowE/base_nrun_plikHM_TT_lowl_lowE

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02216^{+0.00046}_{-0.00046}$	$r_{\text{drag}} h$	$98.5^{+3.2}_{-3.2}$	$H(0.15)$	$72.3^{+1.6}_{-1.5}$
$\Omega_c h^2$	$0.1207^{+0.0042}_{-0.0041}$	$\langle d^2 \rangle^{1/2}$	$2.448^{+0.075}_{-0.074}$	$D_{\text{M}}(0.15)$	647^{+16}_{-16}
$100\theta_{MC}$	$1.04081^{+0.00095}_{-0.00093}$	z_{re}	$7.6^{+1.7}_{-1.7}$	$H(0.38)$	$82.6^{+1.1}_{-1.1}$
τ	$0.053^{+0.017}_{-0.016}$	$10^9 A_s$	$2.097^{+0.075}_{-0.073}$	$D_{\text{M}}(0.38)$	1541^{+31}_{-31}
$\ln(10^{10} A_s)$	$3.043^{+0.036}_{-0.035}$	$10^9 A_s e^{-2\tau}$	$1.885^{+0.029}_{-0.028}$	$H(0.51)$	$89.37^{+0.90}_{-0.85}$
n_s	$0.962^{+0.012}_{-0.012}$	D_{40}	1224^{+42}_{-41}	$D_{\text{M}}(0.51)$	1995^{+37}_{-36}
n_{run}	$-0.004^{+0.015}_{-0.015}$	D_{220}	5708^{+83}_{-81}	$H(0.61)$	$95.05^{+0.72}_{-0.68}$
y_{cal}	$1.0004^{+0.0049}_{-0.0049}$	D_{810}	2536^{+28}_{-28}	$D_{\text{M}}(0.61)$	2321^{+39}_{-39}
A_{217}^{CIB}	45^{+20}_{-20}	D_{1420}	814^{+10}_{-10}	$H(2.33)$	$236.8^{+2.6}_{-2.5}$
$\xi^{tSZ-CIB}$	—	D_{2000}	$229.1^{+3.9}_{-3.9}$	$D_{\text{M}}(2.33)$	5775^{+32}_{-33}
A_{143}^{tSZ}	$4.3^{+3.7}_{-4.2}$	$n_{s,0.002}$	$0.975^{+0.046}_{-0.046}$	$f\sigma_8(0.15)$	$0.463^{+0.024}_{-0.023}$
A_{100}^{PS}	255^{+60}_{-50}	Y_P	$0.24530^{+0.00019}_{-0.00021}$	$\sigma_8(0.15)$	$0.749^{+0.015}_{-0.015}$
A_{143}^{PS}	46^{+20}_{-20}	Y_P^{BBN}	$0.24663^{+0.00019}_{-0.00021}$	$f\sigma_8(0.38)$	$0.480^{+0.019}_{-0.019}$
A_{217}^{PS}	107^{+30}_{-30}	$10^5 D/H$	$2.626^{+0.088}_{-0.084}$	$\sigma_8(0.38)$	$0.663^{+0.012}_{-0.012}$
A^{kSZ}	—	Age/Gyr	$13.824^{+0.073}_{-0.073}$	$f\sigma_8(0.51)$	$0.477^{+0.016}_{-0.016}$
c_{100}	$0.9985^{+0.0022}_{-0.0027}$	z_*	$1090.25^{+0.82}_{-0.81}$	$\sigma_8(0.51)$	$0.620^{+0.011}_{-0.011}$
c_{217}	$0.9998^{+0.0038}_{-0.0028}$	r_*	$144.43^{+0.95}_{-0.97}$	$f\sigma_8(0.61)$	$0.472^{+0.014}_{-0.014}$
H_0	$66.9^{+1.8}_{-1.8}$	$100\theta_*$	$1.04101^{+0.00093}_{-0.00091}$	$\sigma_8(0.61)$	$0.590^{+0.010}_{-0.010}$
Ω_Λ	$0.679^{+0.025}_{-0.027}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.874^{+0.088}_{-0.090}$	$f\sigma_8(2.33)$	$0.2971^{+0.0052}_{-0.0051}$
Ω_m	$0.321^{+0.027}_{-0.025}$	z_{drag}	$1059.49^{+0.97}_{-0.97}$	$\sigma_8(2.33)$	$0.3060^{+0.0055}_{-0.0053}$
$\Omega_m h^2$	$0.1435^{+0.0040}_{-0.0039}$	r_{drag}	$147.16^{+0.97}_{-0.99}$	f_{2000}^{143}	32^{+6}_{-6}
$\Omega_m h^3$	$0.09599^{+0.00097}_{-0.00096}$	k_{D}	$0.1406^{+0.0011}_{-0.0011}$	$f_{2000}^{143 \times 217}$	34^{+5}_{-5}
σ_8	$0.812^{+0.018}_{-0.018}$	$100\theta_{\text{D}}$	$0.16102^{+0.00057}_{-0.00056}$	f_{2000}^{217}	$108.3^{+4.2}_{-4.3}$
S_8	$0.839^{+0.048}_{-0.046}$	z_{eq}	3413^{+95}_{-93}	χ_{small}^2	$397.0 (\nu: 1.5)$
$\sigma_8 \Omega_m^{0.5}$	$0.460^{+0.026}_{-0.025}$	k_{eq}	$0.01042^{+0.00029}_{-0.00028}$	χ_{lowl}^2	$23.1 (\nu: 2.2)$
$\sigma_8 \Omega_m^{0.25}$	$0.611^{+0.023}_{-0.023}$	$100\theta_{\text{eq}}$	$0.811^{+0.018}_{-0.017}$	χ_{prior}^2	$7.5 (\nu: 6.5)$
$\sigma_8/h^{0.5}$	$0.993^{+0.031}_{-0.031}$	$100\theta_{\text{s,eq}}$	$0.4483^{+0.0091}_{-0.0090}$	χ_{CMB}^2	$4339 (\nu: 4947889.5)$

Best-fit $\chi_{\text{eff}}^2 = 7471.52$; $\Delta\chi_{\text{eff}}^2 = 6292.07$; $\bar{\chi}_{\text{eff}}^2 = 7492.14$; $\Delta\bar{\chi}_{\text{eff}}^2 = 6291.92$; $R - 1 = 0.00818$

χ_{eff}^2 : CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.90 (Δ -0.01) commander_dx12_v3_2_29: 22.73 (Δ -0.01) CamSpec like_10.7HM: 7050.50

12.2 base_nrun_CamSpecHM_TT_lowl_lowE_post_BAO/base_nrun_plikHM_TT_lowl_lowE_post_BAO

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02225^{+0.00042}_{-0.00041}$	z_{re}	$7.7^{+1.6}_{-1.7}$	$H(0.51)$	$89.70^{+0.59}_{-0.57}$
$\Omega_c h^2$	$0.1190^{+0.0024}_{-0.0024}$	$10^9 A_s$	$2.095^{+0.077}_{-0.072}$	$D_{\text{M}}(0.51)$	1981^{+22}_{-22}
$100\theta_{MC}$	$1.04103^{+0.00085}_{-0.00083}$	$10^9 A_s e^{-2\tau}$	$1.877^{+0.025}_{-0.025}$	$H(0.61)$	$95.30^{+0.51}_{-0.49}$
τ	$0.055^{+0.017}_{-0.016}$	D_{40}	1217^{+39}_{-39}	$D_{\text{M}}(0.61)$	2305^{+24}_{-23}
$\ln(10^{10} A_s)$	$3.042^{+0.036}_{-0.035}$	D_{220}	5715^{+80}_{-79}	$H(2.33)$	$235.8^{+1.6}_{-1.5}$
n_s	$0.9664^{+0.0092}_{-0.0089}$	D_{810}	2535^{+28}_{-27}	$D_{\text{M}}(2.33)$	5765^{+25}_{-25}
n_{run}	$-0.003^{+0.015}_{-0.015}$	D_{1420}	815^{+10}_{-10}	$f\sigma_8(0.15)$	$0.454^{+0.015}_{-0.015}$
y_{cal}	$1.0005^{+0.0049}_{-0.0049}$	D_{2000}	$229.6^{+3.7}_{-3.7}$	$\sigma_8(0.15)$	$0.746^{+0.014}_{-0.014}$
A_{217}^{CIB}	45^{+20}_{-20}	$n_{s,0.002}$	$0.976^{+0.047}_{-0.045}$	$f\sigma_8(0.38)$	$0.473^{+0.013}_{-0.013}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.24534^{+0.00016}_{-0.00019}$	$\sigma_8(0.38)$	$0.662^{+0.012}_{-0.012}$
A_{143}^{tSZ}	$4.4^{+3.8}_{-4.3}$	Y_P^{BBN}	$0.24667^{+0.00016}_{-0.00019}$	$f\sigma_8(0.51)$	$0.471^{+0.012}_{-0.011}$
A_{100}^{PS}	254^{+60}_{-50}	$10^5 D/H$	$2.608^{+0.079}_{-0.076}$	$\sigma_8(0.51)$	$0.619^{+0.011}_{-0.011}$
A_{143}^{PS}	45^{+20}_{-20}	Age/Gyr	$13.801^{+0.058}_{-0.058}$	$f\sigma_8(0.61)$	$0.467^{+0.011}_{-0.011}$
A_{217}^{PS}	107^{+30}_{-30}	z_*	$1089.98^{+0.61}_{-0.60}$	$\sigma_8(0.61)$	$0.589^{+0.010}_{-0.010}$
A^{kSZ}	—	r_*	$144.79^{+0.65}_{-0.65}$	$f\sigma_8(2.33)$	$0.2971^{+0.0053}_{-0.0051}$
c_{100}	$0.9985^{+0.0022}_{-0.0027}$	$100\theta_*$	$1.04123^{+0.00084}_{-0.00081}$	$\sigma_8(2.33)$	$0.3064^{+0.0055}_{-0.0053}$
c_{217}	$0.9998^{+0.0038}_{-0.0027}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.906^{+0.064}_{-0.063}$	f_{2000}^{143}	31^{+6}_{-7}
H_0	$67.7^{+1.1}_{-1.1}$	z_{drag}	$1059.59^{+0.95}_{-0.95}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-5}
Ω_Λ	$0.690^{+0.014}_{-0.015}$	r_{drag}	$147.50^{+0.72}_{-0.72}$	f_{2000}^{217}	$108.0^{+4.1}_{-4.3}$
Ω_m	$0.310^{+0.015}_{-0.014}$	k_{D}	$0.14035^{+0.00095}_{-0.00096}$	χ_{small}^2	$397.2 (\nu: 1.8)$
$\Omega_m h^2$	$0.1419^{+0.0024}_{-0.0023}$	$100\theta_{\text{D}}$	$0.16097^{+0.00055}_{-0.00055}$	χ_{lowl}^2	$22.6 (\nu: 1.7)$
$\Omega_m h^3$	$0.09598^{+0.00097}_{-0.00097}$	z_{eq}	3374^{+57}_{-55}	$\chi_{6\text{DF}}^2$	$0.056 (\nu: 0.0)$
σ_8	$0.807^{+0.016}_{-0.015}$	k_{eq}	$0.01030^{+0.00017}_{-0.00017}$	χ_{MGS}^2	$1.37 (\nu: 0.1)$
S_8	$0.820^{+0.030}_{-0.029}$	$100\theta_{\text{eq}}$	$0.818^{+0.010}_{-0.010}$	χ_{DR12BAO}^2	$4.7 (\nu: 1.3)$
$\sigma_8 \Omega_m^{0.5}$	$0.449^{+0.016}_{-0.016}$	$100\theta_{\text{s,eq}}$	$0.4520^{+0.0053}_{-0.0054}$	χ_{prior}^2	$7.6 (\nu: 6.6)$
$\sigma_8 \Omega_m^{0.25}$	$0.602^{+0.016}_{-0.016}$	$H(0.15)$	$72.93^{+0.93}_{-0.93}$	χ_{BAO}^2	$6.1 (\nu: 0.8)$
$\sigma_8/h^{0.5}$	$0.981^{+0.023}_{-0.023}$	$D_{\text{M}}(0.15)$	$640.8^{+9.2}_{-9.1}$	χ_{CMB}^2	$4339 (\nu: 4947755.4)$
$r_{\text{drag}} h$	$99.8^{+1.8}_{-1.8}$	$H(0.38)$	$83.00^{+0.70}_{-0.69}$		
$\langle d^2 \rangle^{1/2}$	$2.423^{+0.055}_{-0.056}$	$D_{\text{M}}(0.38)$	1529^{+19}_{-18}		

$\bar{\chi}_{\text{eff}}^2 = 7498.15$; $\Delta \bar{\chi}_{\text{eff}}^2 = 6291.68$; $R - 1 = 0.01937$

12.3 base_nrun_CamSpecHM_TT_lowl_lowE_post_lensing/base_nrun_plikHM_TT_lowl_lowE_post_lensing

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02217^{+0.00044}_{-0.00044}$	$\langle d^2 \rangle^{1/2}$	$2.443^{+0.052}_{-0.053}$	$H(0.38)$	$82.66^{+0.91}_{-0.89}$
$\Omega_c h^2$	$0.1202^{+0.0032}_{-0.0031}$	z_{re}	$7.6^{+1.6}_{-1.7}$	$D_{\text{M}}(0.38)$	1538^{+25}_{-24}
$100\theta_{MC}$	$1.04084^{+0.00090}_{-0.00089}$	$10^9 A_s$	$2.095^{+0.067}_{-0.065}$	$H(0.51)$	$89.43^{+0.74}_{-0.71}$
τ	$0.053^{+0.016}_{-0.016}$	$10^9 A_s e^{-2\tau}$	$1.883^{+0.024}_{-0.023}$	$D_{\text{M}}(0.51)$	1992^{+29}_{-29}
$\ln(10^{10} A_s)$	$3.042^{+0.032}_{-0.031}$	D_{40}	1225^{+40}_{-39}	$H(0.61)$	$95.10^{+0.61}_{-0.60}$
n_s	$0.963^{+0.010}_{-0.010}$	D_{220}	5711^{+82}_{-80}	$D_{\text{M}}(0.61)$	2317^{+31}_{-31}
n_{run}	$-0.003^{+0.015}_{-0.015}$	D_{810}	2536^{+27}_{-27}	$H(2.33)$	$236.5^{+1.9}_{-1.9}$
y_{cal}	$1.0004^{+0.0049}_{-0.0049}$	D_{1420}	814^{+10}_{-10}	$D_{\text{M}}(2.33)$	5773^{+29}_{-29}
A_{217}^{CIB}	45^{+20}_{-20}	D_{2000}	$229.3^{+3.8}_{-3.8}$	$f\sigma_8(0.15)$	$0.461^{+0.016}_{-0.016}$
$\xi^{tSZ-CIB}$	—	$n_{s,0.002}$	$0.972^{+0.046}_{-0.045}$	$\sigma_8(0.15)$	$0.748^{+0.011}_{-0.011}$
A_{143}^{tSZ}	$4.3^{+3.7}_{-4.3}$	Y_P	$0.24531^{+0.00018}_{-0.00020}$	$f\sigma_8(0.38)$	$0.478^{+0.012}_{-0.013}$
A_{100}^{PS}	254^{+60}_{-50}	Y_P^{BBN}	$0.24664^{+0.00019}_{-0.00020}$	$\sigma_8(0.38)$	$0.6627^{+0.0097}_{-0.0096}$
A_{143}^{PS}	46^{+20}_{-20}	$10^5 D/H$	$2.623^{+0.085}_{-0.082}$	$f\sigma_8(0.51)$	$0.476^{+0.011}_{-0.011}$
A_{217}^{PS}	107^{+30}_{-30}	Age/Gyr	$13.820^{+0.067}_{-0.066}$	$\sigma_8(0.51)$	$0.6199^{+0.0092}_{-0.0091}$
A^{kSZ}	—	z_*	$1090.19^{+0.73}_{-0.71}$	$f\sigma_8(0.61)$	$0.4703^{+0.0093}_{-0.0095}$
c_{100}	$0.9985^{+0.0022}_{-0.0026}$	r_*	$144.53^{+0.74}_{-0.74}$	$\sigma_8(0.61)$	$0.5897^{+0.0089}_{-0.0087}$
c_{217}	$0.9998^{+0.0037}_{-0.0027}$	$100\theta_*$	$1.04105^{+0.00088}_{-0.00088}$	$f\sigma_8(2.33)$	$0.2971^{+0.0047}_{-0.0047}$
H_0	$67.1^{+1.4}_{-1.4}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.883^{+0.070}_{-0.070}$	$\sigma_8(2.33)$	$0.3060^{+0.0052}_{-0.0051}$
Ω_Λ	$0.682^{+0.019}_{-0.020}$	z_{drag}	$1059.49^{+0.97}_{-0.97}$	f_{2000}^{143}	32^{+6}_{-6}
Ω_m	$0.318^{+0.020}_{-0.019}$	r_{drag}	$147.26^{+0.78}_{-0.78}$	$f_{2000}^{143 \times 217}$	34^{+4}_{-5}
$\Omega_m h^2$	$0.1430^{+0.0030}_{-0.0029}$	k_{D}	$0.14054^{+0.00096}_{-0.00096}$	f_{2000}^{217}	$108.2^{+4.1}_{-4.2}$
$\Omega_m h^3$	$0.09596^{+0.00096}_{-0.00095}$	$100\theta_{\text{D}}$	$0.16102^{+0.00057}_{-0.00056}$	χ^2_{lensing}	$9.60 (\nu: 0.4)$
σ_8	$0.811^{+0.012}_{-0.013}$	z_{eq}	3403^{+72}_{-70}	χ^2_{small}	$397.0 (\nu: 1.4)$
S_8	$0.834^{+0.032}_{-0.032}$	k_{eq}	$0.01039^{+0.00022}_{-0.00021}$	χ^2_{lowl}	$23.2 (\nu: 2.2)$
$\sigma_8 \Omega_m^{0.5}$	$0.457^{+0.018}_{-0.017}$	$100\theta_{\text{eq}}$	$0.813^{+0.013}_{-0.013}$	χ^2_{prior}	$7.5 (\nu: 6.4)$
$\sigma_8 \Omega_m^{0.25}$	$0.609^{+0.015}_{-0.015}$	$100\theta_{\text{s,eq}}$	$0.4492^{+0.0069}_{-0.0069}$	χ^2_{CMB}	$4348 (\nu: 4947812.1)$
$\sigma_8/h^{0.5}$	$0.990^{+0.021}_{-0.021}$	$H(0.15)$	$72.4^{+1.2}_{-1.2}$		
$r_{\text{drag}} h$	$98.8^{+2.5}_{-2.4}$	$D_{\text{M}}(0.15)$	646^{+13}_{-12}		

$\bar{\chi}^2_{\text{eff}} = 7501.08$; $\Delta \bar{\chi}^2_{\text{eff}} = 6291.80$; $R - 1 = 0.01225$

12.4 base_nrun_CamSpecHM_TT_lowl_lowE_post_BAO_lensing/base_nrun_plikHM_TT_lowl_lowE_post_BAO_lensing

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02225^{+0.00041}_{-0.00041}$	z_{re}	$7.9^{+1.5}_{-1.5}$	$H(0.51)$	$89.67^{+0.56}_{-0.55}$
$\Omega_c h^2$	$0.1191^{+0.0022}_{-0.0021}$	$10^9 A_s$	$2.103^{+0.068}_{-0.063}$	$D_{\text{M}}(0.51)$	1982^{+20}_{-20}
$100\theta_{MC}$	$1.04101^{+0.00083}_{-0.00082}$	$10^9 A_s e^{-2\tau}$	$1.879^{+0.023}_{-0.022}$	$H(0.61)$	$95.28^{+0.49}_{-0.48}$
τ	$0.056^{+0.016}_{-0.015}$	D_{40}	1221^{+39}_{-38}	$D_{\text{M}}(0.61)$	2306^{+22}_{-22}
$\ln(10^{10} A_s)$	$3.046^{+0.032}_{-0.030}$	D_{220}	5720^{+78}_{-78}	$H(2.33)$	$235.9^{+1.4}_{-1.4}$
n_s	$0.9660^{+0.0088}_{-0.0085}$	D_{810}	2536^{+27}_{-27}	$D_{\text{M}}(2.33)$	5765^{+25}_{-25}
n_{run}	$-0.003^{+0.015}_{-0.015}$	D_{1420}	815^{+10}_{-10}	$f\sigma_8(0.15)$	$0.456^{+0.012}_{-0.012}$
y_{cal}	$1.0007^{+0.0049}_{-0.0048}$	D_{2000}	$229.7^{+3.8}_{-3.7}$	$\sigma_8(0.15)$	$0.748^{+0.011}_{-0.011}$
A_{217}^{CIB}	45^{+20}_{-20}	$n_{s,0.002}$	$0.974^{+0.047}_{-0.045}$	$f\sigma_8(0.38)$	$0.474^{+0.010}_{-0.010}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.24534^{+0.00017}_{-0.00018}$	$\sigma_8(0.38)$	$0.6629^{+0.0099}_{-0.0096}$
A_{143}^{tSZ}	$4.4^{+3.8}_{-4.3}$	Y_P^{BBN}	$0.24667^{+0.00017}_{-0.00018}$	$f\sigma_8(0.51)$	$0.4728^{+0.0089}_{-0.0089}$
A_{100}^{PS}	253^{+60}_{-50}	$10^5 D/H$	$2.609^{+0.079}_{-0.076}$	$\sigma_8(0.51)$	$0.6204^{+0.0093}_{-0.0090}$
A_{143}^{PS}	45^{+20}_{-20}	Age/Gyr	$13.803^{+0.057}_{-0.057}$	$f\sigma_8(0.61)$	$0.4679^{+0.0082}_{-0.0082}$
A_{217}^{PS}	108^{+30}_{-30}	z_*	$1090.00^{+0.60}_{-0.59}$	$\sigma_8(0.61)$	$0.5903^{+0.0089}_{-0.0086}$
A^{kSZ}	—	r_*	$144.76^{+0.59}_{-0.57}$	$f\sigma_8(2.33)$	$0.2977^{+0.0046}_{-0.0044}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	$100\theta_*$	$1.04121^{+0.00082}_{-0.00080}$	$\sigma_8(2.33)$	$0.3069^{+0.0050}_{-0.0047}$
c_{217}	$0.9998^{+0.0037}_{-0.0027}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.903^{+0.058}_{-0.056}$	f_{2000}^{143}	31^{+6}_{-7}
H_0	$67.60^{+0.98}_{-0.98}$	z_{drag}	$1059.59^{+0.95}_{-0.95}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-5}
Ω_Λ	$0.689^{+0.013}_{-0.013}$	r_{drag}	$147.46^{+0.65}_{-0.65}$	f_{2000}^{217}	$107.9^{+4.1}_{-4.2}$
Ω_m	$0.311^{+0.013}_{-0.013}$	k_{D}	$0.14038^{+0.00090}_{-0.00091}$	χ_{lensing}^2	$9.41 (\nu: 0.3)$
$\Omega_m h^2$	$0.1420^{+0.0021}_{-0.0021}$	$100\theta_{\text{D}}$	$0.16097^{+0.00055}_{-0.00054}$	χ_{simall}^2	$397.3 (\nu: 1.8)$
$\Omega_m h^3$	$0.09599^{+0.00095}_{-0.00095}$	z_{eq}	3378^{+50}_{-50}	χ_{lowl}^2	$22.8 (\nu: 1.8)$
σ_8	$0.809^{+0.012}_{-0.012}$	k_{eq}	$0.01031^{+0.00015}_{-0.00015}$	$\chi_{6\text{DF}}^2$	$0.056 (\nu: 0.0)$
S_8	$0.824^{+0.024}_{-0.023}$	$100\theta_{\text{eq}}$	$0.8174^{+0.0092}_{-0.0092}$	χ_{MGS}^2	$1.30 (\nu: 0.1)$
$\sigma_8 \Omega_m^{0.5}$	$0.451^{+0.013}_{-0.013}$	$100\theta_{\text{s,eq}}$	$0.4516^{+0.0048}_{-0.0047}$	χ_{DR12BAO}^2	$4.8 (\nu: 1.1)$
$\sigma_8 \Omega_m^{0.25}$	$0.604^{+0.012}_{-0.012}$	$H(0.15)$	$72.87^{+0.84}_{-0.85}$	χ_{prior}^2	$7.5 (\nu: 6.5)$
$\sigma_8/h^{0.5}$	$0.984^{+0.018}_{-0.018}$	$D_{\text{M}}(0.15)$	$641.4^{+8.5}_{-8.3}$	χ_{CMB}^2	$4348 (\nu: 4947999.8)$
$r_{\text{drag}} h$	$99.7^{+1.7}_{-1.6}$	$H(0.38)$	$82.97^{+0.65}_{-0.65}$	χ_{BAO}^2	$6.1 (\nu: 0.7)$
$\langle d^2 \rangle^{1/2}$	$2.431^{+0.046}_{-0.046}$	$D_{\text{M}}(0.38)$	1530^{+17}_{-17}		

$$\bar{\chi}_{\text{eff}}^2 = 7507.23; \Delta \bar{\chi}_{\text{eff}}^2 = 6291.89; R - 1 = 0.02103$$

12.5 base_nrun_CamSpecHM_TT_lowl_lowE_post_zre6p5/base_nrun_plikHM_TT_lowl_lowE_post_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02217^{+0.00045}_{-0.00045}$	$r_{\text{drag}} h$	$98.5^{+3.2}_{-3.1}$	$H(0.15)$	$72.3^{+1.6}_{-1.5}$
$\Omega_c h^2$	$0.1206^{+0.0041}_{-0.0040}$	$\langle d^2 \rangle^{1/2}$	$2.450^{+0.074}_{-0.073}$	$D_{\text{M}}(0.15)$	647^{+16}_{-16}
$100\theta_{MC}$	$1.04082^{+0.00095}_{-0.00092}$	z_{re}	< 9.01	$H(0.38)$	$82.6^{+1.1}_{-1.1}$
τ	$0.055^{+0.014}_{-0.012}$	$10^9 A_s$	$2.103^{+0.065}_{-0.060}$	$D_{\text{M}}(0.38)$	1541^{+31}_{-31}
$\ln(10^{10} A_s)$	$3.046^{+0.031}_{-0.029}$	$10^9 A_s e^{-2\tau}$	$1.885^{+0.029}_{-0.028}$	$H(0.51)$	$89.39^{+0.89}_{-0.85}$
n_s	$0.963^{+0.012}_{-0.012}$	D_{40}	1223^{+41}_{-41}	$D_{\text{M}}(0.51)$	1995^{+36}_{-36}
n_{run}	$-0.004^{+0.015}_{-0.015}$	D_{220}	5709^{+82}_{-81}	$H(0.61)$	$95.07^{+0.72}_{-0.67}$
y_{cal}	$1.0004^{+0.0049}_{-0.0049}$	D_{810}	2536^{+28}_{-28}	$D_{\text{M}}(0.61)$	2320^{+39}_{-39}
A_{217}^{CIB}	45^{+20}_{-20}	D_{1420}	814^{+10}_{-10}	$H(2.33)$	$236.7^{+2.6}_{-2.5}$
$\xi^{tSZ-CIB}$	—	D_{2000}	$229.2^{+3.9}_{-3.8}$	$D_{\text{M}}(2.33)$	5775^{+32}_{-33}
A_{143}^{tSZ}	$4.3^{+3.7}_{-4.2}$	$n_{s,0.002}$	$0.976^{+0.046}_{-0.045}$	$f\sigma_8(0.15)$	$0.464^{+0.024}_{-0.023}$
A_{100}^{PS}	255^{+60}_{-50}	Y_P	$0.24531^{+0.00019}_{-0.00020}$	$\sigma_8(0.15)$	$0.750^{+0.014}_{-0.014}$
A_{143}^{PS}	46^{+20}_{-20}	Y_P^{BBN}	$0.24663^{+0.00019}_{-0.00021}$	$f\sigma_8(0.38)$	$0.480^{+0.019}_{-0.019}$
A_{217}^{PS}	107^{+30}_{-30}	$10^5 D/H$	$2.624^{+0.087}_{-0.084}$	$\sigma_8(0.38)$	$0.664^{+0.012}_{-0.010}$
A^{kSZ}	—	Age/Gyr	$13.823^{+0.072}_{-0.073}$	$f\sigma_8(0.51)$	$0.478^{+0.016}_{-0.016}$
c_{100}	$0.9985^{+0.0022}_{-0.0027}$	z_*	$1090.23^{+0.82}_{-0.80}$	$\sigma_8(0.51)$	$0.621^{+0.010}_{-0.0096}$
c_{217}	$0.9998^{+0.0038}_{-0.0028}$	r_*	$144.44^{+0.95}_{-0.97}$	$f\sigma_8(0.61)$	$0.472^{+0.014}_{-0.014}$
H_0	$67.0^{+1.8}_{-1.8}$	$100\theta_*$	$1.04103^{+0.00093}_{-0.00091}$	$\sigma_8(0.61)$	$0.5908^{+0.0093}_{-0.0089}$
Ω_Λ	$0.680^{+0.025}_{-0.026}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.874^{+0.088}_{-0.090}$	$f\sigma_8(2.33)$	$0.2976^{+0.0045}_{-0.0042}$
Ω_m	$0.320^{+0.026}_{-0.025}$	z_{drag}	$1059.51^{+0.95}_{-0.95}$	$\sigma_8(2.33)$	$0.3064^{+0.0047}_{-0.0044}$
$\Omega_m h^2$	$0.1434^{+0.0040}_{-0.0039}$	r_{drag}	$147.16^{+0.97}_{-0.99}$	f_{2000}^{143}	32^{+6}_{-6}
$\Omega_m h^3$	$0.09601^{+0.00096}_{-0.00095}$	k_{D}	$0.1406^{+0.0011}_{-0.0011}$	$f_{2000}^{143 \times 217}$	34^{+5}_{-5}
σ_8	$0.813^{+0.017}_{-0.017}$	$100\theta_{\text{D}}$	$0.16101^{+0.00057}_{-0.00056}$	f_{2000}^{217}	$108.3^{+4.2}_{-4.3}$
S_8	$0.840^{+0.048}_{-0.046}$	z_{eq}	3411^{+95}_{-93}	χ_{small}^2	$397.0 (\nu: 1.5)$
$\sigma_8 \Omega_m^{0.5}$	$0.460^{+0.026}_{-0.025}$	k_{eq}	$0.01041^{+0.00029}_{-0.00028}$	χ_{lowl}^2	$23.0 (\nu: 2.1)$
$\sigma_8 \Omega_m^{0.25}$	$0.611^{+0.023}_{-0.023}$	$100\theta_{\text{eq}}$	$0.811^{+0.017}_{-0.017}$	χ_{prior}^2	$7.5 (\nu: 6.5)$
$\sigma_8/h^{0.5}$	$0.993^{+0.031}_{-0.031}$	$100\theta_{\text{s,eq}}$	$0.4484^{+0.0090}_{-0.0089}$	χ_{CMB}^2	$4338 (\nu: 4947872.6)$

$\bar{\chi}_{\text{eff}}^2 = 7491.87$; $\Delta\bar{\chi}_{\text{eff}}^2 = 6291.89$; $R - 1 = 0.00915$

12.6 base_nrun_CamSpecHM_TT_lowl_lowE_post_BAO_zre6p5/base_nrun_plikHM_TT_lowl_lowE_post_BAO_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02226^{+0.00042}_{-0.00041}$	z_{re}	< 9.10	$H(0.51)$	$89.71^{+0.58}_{-0.57}$
$\Omega_c h^2$	$0.1189^{+0.0024}_{-0.0024}$	$10^9 A_s$	$2.100^{+0.067}_{-0.062}$	$D_{\text{M}}(0.51)$	1980^{+22}_{-22}
$100\theta_{MC}$	$1.04104^{+0.00085}_{-0.00082}$	$10^9 A_s e^{-2\tau}$	$1.877^{+0.025}_{-0.024}$	$H(0.61)$	$95.31^{+0.51}_{-0.49}$
τ	$0.056^{+0.014}_{-0.013}$	D_{40}	1217^{+39}_{-39}	$D_{\text{M}}(0.61)$	2305^{+24}_{-23}
$\ln(10^{10} A_s)$	$3.045^{+0.032}_{-0.030}$	D_{220}	5715^{+80}_{-79}	$H(2.33)$	$235.8^{+1.6}_{-1.5}$
n_s	$0.9665^{+0.0091}_{-0.0089}$	D_{810}	2535^{+28}_{-27}	$D_{\text{M}}(2.33)$	5764^{+25}_{-25}
n_{run}	$-0.003^{+0.015}_{-0.015}$	D_{1420}	815^{+10}_{-10}	$f\sigma_8(0.15)$	$0.454^{+0.015}_{-0.014}$
y_{cal}	$1.0005^{+0.0049}_{-0.0049}$	D_{2000}	$229.6^{+3.7}_{-3.7}$	$\sigma_8(0.15)$	$0.747^{+0.013}_{-0.012}$
A_{217}^{CIB}	45^{+20}_{-20}	$n_{s,0.002}$	$0.977^{+0.046}_{-0.045}$	$f\sigma_8(0.38)$	$0.473^{+0.013}_{-0.012}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.24535^{+0.00016}_{-0.00019}$	$\sigma_8(0.38)$	$0.662^{+0.011}_{-0.010}$
A_{143}^{tSZ}	$4.4^{+3.8}_{-4.3}$	Y_P^{BBN}	$0.24667^{+0.00016}_{-0.00019}$	$f\sigma_8(0.51)$	$0.472^{+0.011}_{-0.011}$
A_{100}^{PS}	254^{+60}_{-50}	$10^5 D/H$	$2.607^{+0.079}_{-0.076}$	$\sigma_8(0.51)$	$0.620^{+0.010}_{-0.0094}$
A_{143}^{PS}	45^{+20}_{-20}	Age/Gyr	$13.801^{+0.058}_{-0.058}$	$f\sigma_8(0.61)$	$0.467^{+0.010}_{-0.0098}$
A_{217}^{PS}	107^{+30}_{-30}	z_*	$1089.97^{+0.61}_{-0.59}$	$\sigma_8(0.61)$	$0.5898^{+0.0094}_{-0.0089}$
A^{kSZ}	—	r_*	$144.79^{+0.65}_{-0.64}$	$f\sigma_8(2.33)$	$0.2975^{+0.0047}_{-0.0044}$
c_{100}	$0.9985^{+0.0022}_{-0.0027}$	$100\theta_*$	$1.04123^{+0.00083}_{-0.00080}$	$\sigma_8(2.33)$	$0.3068^{+0.0049}_{-0.0045}$
c_{217}	$0.9998^{+0.0038}_{-0.0027}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.906^{+0.063}_{-0.062}$	f_{2000}^{143}	31^{+6}_{-7}
H_0	$67.7^{+1.1}_{-1.1}$	z_{drag}	$1059.60^{+0.94}_{-0.96}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-5}
Ω_{Λ}	$0.690^{+0.014}_{-0.015}$	r_{drag}	$147.50^{+0.72}_{-0.72}$	f_{2000}^{217}	$108.0^{+4.2}_{-4.2}$
Ω_m	$0.310^{+0.015}_{-0.014}$	k_{D}	$0.14035^{+0.00095}_{-0.00095}$	χ_{small}^2	$397.1 (\nu: 1.9)$
$\Omega_m h^2$	$0.1418^{+0.0024}_{-0.0023}$	$100\theta_{\text{D}}$	$0.16097^{+0.00055}_{-0.00054}$	χ_{lowl}^2	$22.5 (\nu: 1.6)$
$\Omega_m h^3$	$0.09599^{+0.00097}_{-0.00097}$	z_{eq}	3374^{+57}_{-56}	$\chi_{6\text{DF}}^2$	$0.055 (\nu: 0.0)$
σ_8	$0.808^{+0.015}_{-0.014}$	k_{eq}	$0.01030^{+0.00017}_{-0.00017}$	χ_{MGS}^2	$1.38 (\nu: 0.1)$
S_8	$0.821^{+0.029}_{-0.028}$	$100\theta_{\text{eq}}$	$0.818^{+0.010}_{-0.010}$	χ_{DR12BAO}^2	$4.7 (\nu: 1.2)$
$\sigma_8 \Omega_m^{0.5}$	$0.450^{+0.016}_{-0.015}$	$100\theta_{\text{s,eq}}$	$0.4520^{+0.0053}_{-0.0054}$	χ_{prior}^2	$7.6 (\nu: 6.6)$
$\sigma_8 \Omega_m^{0.25}$	$0.603^{+0.016}_{-0.015}$	$H(0.15)$	$72.94^{+0.93}_{-0.92}$	χ_{BAO}^2	$6.1 (\nu: 0.8)$
$\sigma_8/h^{0.5}$	$0.982^{+0.022}_{-0.021}$	$D_{\text{M}}(0.15)$	$640.8^{+9.2}_{-9.0}$	χ_{CMB}^2	$4338 (\nu: 4947821.7)$
$r_{\text{drag}} h$	$99.8^{+1.8}_{-1.8}$	$H(0.38)$	$83.01^{+0.70}_{-0.69}$		
$\langle d^2 \rangle^{1/2}$	$2.425^{+0.054}_{-0.054}$	$D_{\text{M}}(0.38)$	1529^{+18}_{-18}		

$$\bar{\chi}_{\text{eff}}^2 = 7497.95; \Delta \bar{\chi}_{\text{eff}}^2 = 6291.73; R - 1 = 0.02138$$

12.7 base_nrun_CamSpecHM_TT_lowl_lowE_post_lensing_zre6p5/base_nrun_plikHM_TT_lowl_lowE_post_lensing_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02219^{+0.00044}_{-0.00043}$	$\langle d^2 \rangle^{1/2}$	$2.444^{+0.052}_{-0.053}$	$H(0.38)$	$82.70^{+0.89}_{-0.85}$
$\Omega_c h^2$	$0.1201^{+0.0030}_{-0.0030}$	z_{re}	< 8.94	$D_{\text{M}}(0.38)$	1537^{+24}_{-24}
$100\theta_{MC}$	$1.04086^{+0.00089}_{-0.00089}$	$10^9 A_s$	$2.100^{+0.058}_{-0.054}$	$H(0.51)$	$89.47^{+0.72}_{-0.69}$
τ	$0.055^{+0.013}_{-0.012}$	$10^9 A_s e^{-2\tau}$	$1.882^{+0.024}_{-0.023}$	$D_{\text{M}}(0.51)$	1991^{+28}_{-28}
$\ln(10^{10} A_s)$	$3.044^{+0.028}_{-0.026}$	D_{40}	1224^{+39}_{-39}	$H(0.61)$	$95.12^{+0.61}_{-0.58}$
n_s	$0.964^{+0.010}_{-0.0098}$	D_{220}	5712^{+82}_{-80}	$D_{\text{M}}(0.61)$	2316^{+30}_{-30}
n_{run}	$-0.003^{+0.014}_{-0.015}$	D_{810}	2536^{+27}_{-27}	$H(2.33)$	$236.4^{+1.9}_{-1.9}$
y_{cal}	$1.0004^{+0.0049}_{-0.0049}$	D_{1420}	814^{+10}_{-10}	$D_{\text{M}}(2.33)$	5772^{+28}_{-29}
A_{217}^{CIB}	45^{+20}_{-20}	D_{2000}	$229.3^{+3.8}_{-3.8}$	$f\sigma_8(0.15)$	$0.461^{+0.016}_{-0.016}$
$\xi^{tSZ-CIB}$	—	$n_{s,0.002}$	$0.973^{+0.045}_{-0.045}$	$\sigma_8(0.15)$	$0.749^{+0.011}_{-0.010}$
A_{143}^{tSZ}	$4.3^{+3.7}_{-4.3}$	Y_P	$0.24532^{+0.00018}_{-0.00020}$	$f\sigma_8(0.38)$	$0.478^{+0.012}_{-0.013}$
A_{100}^{PS}	254^{+60}_{-50}	Y_P^{BBN}	$0.24664^{+0.00018}_{-0.00020}$	$\sigma_8(0.38)$	$0.6634^{+0.0092}_{-0.0083}$
A_{143}^{PS}	46^{+20}_{-20}	$10^5 D/H$	$2.621^{+0.084}_{-0.081}$	$f\sigma_8(0.51)$	$0.476^{+0.010}_{-0.011}$
A_{217}^{PS}	107^{+30}_{-30}	Age/Gyr	$13.818^{+0.065}_{-0.065}$	$\sigma_8(0.51)$	$0.6206^{+0.0088}_{-0.0077}$
A^{kSZ}	—	z_*	$1090.16^{+0.70}_{-0.70}$	$f\sigma_8(0.61)$	$0.4704^{+0.0092}_{-0.0094}$
c_{100}	$0.9985^{+0.0022}_{-0.0027}$	r_*	$144.55^{+0.73}_{-0.73}$	$\sigma_8(0.61)$	$0.5903^{+0.0080}_{-0.0076}$
c_{217}	$0.9998^{+0.0037}_{-0.0028}$	$100\theta_*$	$1.04107^{+0.00088}_{-0.00087}$	$f\sigma_8(2.33)$	$0.2974^{+0.0042}_{-0.0039}$
H_0	$67.2^{+1.4}_{-1.4}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.885^{+0.069}_{-0.069}$	$\sigma_8(2.33)$	$0.3064^{+0.0046}_{-0.0042}$
Ω_Λ	$0.683^{+0.019}_{-0.019}$	z_{drag}	$1059.51^{+0.95}_{-0.95}$	f_{2000}^{143}	32^{+6}_{-6}
Ω_m	$0.317^{+0.019}_{-0.019}$	r_{drag}	$147.28^{+0.77}_{-0.77}$	$f_{2000}^{143 \times 217}$	34^{+4}_{-5}
$\Omega_m h^2$	$0.1429^{+0.0029}_{-0.0029}$	k_{D}	$0.14053^{+0.00096}_{-0.00096}$	f_{2000}^{217}	$108.1^{+4.1}_{-4.2}$
$\Omega_m h^3$	$0.09597^{+0.00095}_{-0.00094}$	$100\theta_{\text{D}}$	$0.16101^{+0.00056}_{-0.00055}$	χ^2_{lensing}	$9.58 (\nu: 0.4)$
σ_8	$0.811^{+0.012}_{-0.012}$	z_{eq}	3400^{+70}_{-69}	χ^2_{small}	$396.9 (\nu: 1.4)$
S_8	$0.834^{+0.032}_{-0.032}$	k_{eq}	$0.01038^{+0.00021}_{-0.00021}$	χ^2_{lowl}	$23.1 (\nu: 2.1)$
$\sigma_8 \Omega_m^{0.5}$	$0.457^{+0.018}_{-0.017}$	$100\theta_{\text{eq}}$	$0.813^{+0.013}_{-0.013}$	χ^2_{prior}	$7.5 (\nu: 6.4)$
$\sigma_8 \Omega_m^{0.25}$	$0.609^{+0.015}_{-0.015}$	$100\theta_{\text{s,eq}}$	$0.4495^{+0.0067}_{-0.0066}$	χ^2_{CMB}	$4347 (\nu: 4947764.8)$
$\sigma_8/h^{0.5}$	$0.990^{+0.021}_{-0.021}$	$H(0.15)$	$72.5^{+1.2}_{-1.2}$		
$r_{\text{drag}} h$	$98.9^{+2.4}_{-2.3}$	$D_{\text{M}}(0.15)$	645^{+12}_{-12}		

$\bar{\chi}^2_{\text{eff}} = 7500.82$; $\Delta \bar{\chi}^2_{\text{eff}} = 6291.79$; $R - 1 = 0.01490$

12.8 base_nrun_CamSpecHM_TT_lowl_lowE_post_BAO_lensing_zre6p5/base_nrun_plikHM_TT_lowl_lowE_post_BAO_lensing_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02225^{+0.00041}_{-0.00041}$	z_{re}	$7.9^{+1.2}_{-1.4}$	$H(0.51)$	$89.68^{+0.55}_{-0.54}$
$\Omega_c h^2$	$0.1191^{+0.0021}_{-0.0021}$	$10^9 A_s$	$2.105^{+0.060}_{-0.058}$	$D_{\text{M}}(0.51)$	1982^{+20}_{-20}
$100\theta_{MC}$	$1.04102^{+0.00083}_{-0.00082}$	$10^9 A_s e^{-2\tau}$	$1.879^{+0.023}_{-0.022}$	$H(0.61)$	$95.29^{+0.49}_{-0.47}$
τ	$0.057^{+0.014}_{-0.013}$	D_{40}	1220^{+38}_{-38}	$D_{\text{M}}(0.61)$	2306^{+22}_{-21}
$\ln(10^{10} A_s)$	$3.047^{+0.029}_{-0.028}$	D_{220}	5720^{+78}_{-78}	$H(2.33)$	$235.8^{+1.4}_{-1.4}$
n_s	$0.9661^{+0.0088}_{-0.0085}$	D_{810}	2536^{+27}_{-27}	$D_{\text{M}}(2.33)$	5765^{+25}_{-25}
n_{run}	$-0.003^{+0.015}_{-0.015}$	D_{1420}	815^{+10}_{-10}	$f\sigma_8(0.15)$	$0.456^{+0.012}_{-0.012}$
y_{cal}	$1.0007^{+0.0049}_{-0.0048}$	D_{2000}	$229.7^{+3.8}_{-3.7}$	$\sigma_8(0.15)$	$0.748^{+0.011}_{-0.010}$
A_{217}^{CIB}	45^{+20}_{-20}	$n_{s,0.002}$	$0.975^{+0.046}_{-0.044}$	$f\sigma_8(0.38)$	$0.4743^{+0.0099}_{-0.0099}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.24534^{+0.00017}_{-0.00018}$	$\sigma_8(0.38)$	$0.6632^{+0.0096}_{-0.0087}$
A_{143}^{tSZ}	$4.4^{+3.8}_{-4.3}$	Y_P^{BBN}	$0.24667^{+0.00017}_{-0.00018}$	$f\sigma_8(0.51)$	$0.4730^{+0.0088}_{-0.0087}$
A_{100}^{PS}	253^{+60}_{-50}	$10^5 D/H$	$2.608^{+0.079}_{-0.075}$	$\sigma_8(0.51)$	$0.6207^{+0.0090}_{-0.0081}$
A_{143}^{PS}	45^{+20}_{-20}	Age/Gyr	$13.802^{+0.057}_{-0.057}$	$f\sigma_8(0.61)$	$0.4681^{+0.0081}_{-0.0080}$
A_{217}^{PS}	107^{+30}_{-30}	z_*	$1089.99^{+0.60}_{-0.58}$	$\sigma_8(0.61)$	$0.5906^{+0.0086}_{-0.0077}$
A^{kSZ}	—	r_*	$144.76^{+0.58}_{-0.57}$	$f\sigma_8(2.33)$	$0.2978^{+0.0043}_{-0.0041}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	$100\theta_*$	$1.04121^{+0.00082}_{-0.00080}$	$\sigma_8(2.33)$	$0.3071^{+0.0046}_{-0.0043}$
c_{217}	$0.9998^{+0.0038}_{-0.0027}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.903^{+0.058}_{-0.056}$	f_{2000}^{143}	31^{+6}_{-7}
H_0	$67.62^{+0.98}_{-0.97}$	z_{drag}	$1059.60^{+0.95}_{-0.96}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-5}
Ω_{Λ}	$0.689^{+0.013}_{-0.013}$	r_{drag}	$147.47^{+0.65}_{-0.65}$	f_{2000}^{217}	$107.9^{+4.1}_{-4.2}$
Ω_m	$0.311^{+0.013}_{-0.013}$	k_{D}	$0.14038^{+0.00090}_{-0.00090}$	χ_{lensing}^2	$9.38 (\nu: 0.3)$
$\Omega_m h^2$	$0.1420^{+0.0021}_{-0.0021}$	$100\theta_{\text{D}}$	$0.16097^{+0.00055}_{-0.00054}$	χ_{simall}^2	$397.2 (\nu: 1.9)$
$\Omega_m h^3$	$0.09599^{+0.00095}_{-0.00095}$	z_{eq}	3377^{+50}_{-50}	χ_{lowl}^2	$22.8 (\nu: 1.8)$
σ_8	$0.809^{+0.012}_{-0.011}$	k_{eq}	$0.01031^{+0.00015}_{-0.00015}$	$\chi_{6\text{DF}}^2$	$0.054 (\nu: 0.0)$
S_8	$0.824^{+0.024}_{-0.023}$	$100\theta_{\text{eq}}$	$0.8175^{+0.0091}_{-0.0090}$	χ_{MGS}^2	$1.31 (\nu: 0.1)$
$\sigma_8 \Omega_m^{0.5}$	$0.451^{+0.013}_{-0.013}$	$100\theta_{\text{s,eq}}$	$0.4517^{+0.0048}_{-0.0047}$	χ_{DR12BAO}^2	$4.7 (\nu: 1.1)$
$\sigma_8 \Omega_m^{0.25}$	$0.604^{+0.012}_{-0.012}$	$H(0.15)$	$72.88^{+0.84}_{-0.84}$	χ_{prior}^2	$7.5 (\nu: 6.5)$
$\sigma_8/h^{0.5}$	$0.984^{+0.017}_{-0.017}$	$D_{\text{M}}(0.15)$	$641.3^{+8.4}_{-8.3}$	χ_{CMB}^2	$4347 (\nu: 4948045.2)$
$r_{\text{drag}} h$	$99.7^{+1.7}_{-1.6}$	$H(0.38)$	$82.97^{+0.65}_{-0.64}$	χ_{BAO}^2	$6.1 (\nu: 0.7)$
$\langle d^2 \rangle^{1/2}$	$2.431^{+0.045}_{-0.045}$	$D_{\text{M}}(0.38)$	1530^{+17}_{-17}		

$$\bar{\chi}_{\text{eff}}^2 = 7507.10; \Delta \bar{\chi}_{\text{eff}}^2 = 6291.93; R - 1 = 0.02288$$

12.9 base_nrun_CamSpecHM_TTTEEE_lowl_lowE/base_nrun_plikHM_TTTEEE_lowl_lowE

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02234^{+0.00032}_{-0.00032}$	$r_{\text{drag}} h$	$99.1^{+2.1}_{-2.1}$	$H(0.15)$	$72.7^{+1.0}_{-1.0}$
$\Omega_c h^2$	$0.1200^{+0.0028}_{-0.0028}$	$\langle d^2 \rangle^{1/2}$	$2.438^{+0.058}_{-0.058}$	$D_{\text{M}}(0.15)$	644^{+10}_{-10}
$100\theta_{MC}$	$1.04089^{+0.00062}_{-0.00062}$	z_{re}	$7.7^{+1.6}_{-1.7}$	$H(0.38)$	$82.84^{+0.75}_{-0.73}$
τ	$0.054^{+0.017}_{-0.016}$	$10^9 A_s$	$2.099^{+0.077}_{-0.072}$	$D_{\text{M}}(0.38)$	1534^{+21}_{-20}
$\ln(10^{10} A_s)$	$3.044^{+0.036}_{-0.035}$	$10^9 A_s e^{-2\tau}$	$1.883^{+0.026}_{-0.026}$	$H(0.51)$	$89.60^{+0.59}_{-0.57}$
n_s	$0.9646^{+0.0094}_{-0.0096}$	D_{40}	1222^{+36}_{-36}	$D_{\text{M}}(0.51)$	1987^{+24}_{-24}
n_{run}	$-0.003^{+0.014}_{-0.014}$	D_{220}	5725^{+78}_{-77}	$H(0.61)$	$95.25^{+0.48}_{-0.46}$
y_{cal}	$1.0005^{+0.0049}_{-0.0049}$	D_{810}	2538^{+28}_{-28}	$D_{\text{M}}(0.61)$	2311^{+26}_{-26}
A_{217}^{CIB}	44^{+20}_{-20}	D_{1420}	$815.8^{+9.8}_{-9.8}$	$H(2.33)$	$236.5^{+1.7}_{-1.7}$
$\xi^{tSZ-CIB}$	—	D_{2000}	$230.1^{+3.6}_{-3.6}$	$D_{\text{M}}(2.33)$	5765^{+21}_{-22}
A_{143}^{tSZ}	$4.5^{+3.8}_{-4.3}$	$n_{s,0.002}$	$0.975^{+0.042}_{-0.042}$	$f\sigma_8(0.15)$	$0.459^{+0.017}_{-0.017}$
A_{100}^{PS}	252^{+60}_{-60}	Y_P	$0.24538^{+0.00012}_{-0.00013}$	$\sigma_8(0.15)$	$0.748^{+0.014}_{-0.014}$
A_{143}^{PS}	44^{+20}_{-20}	Y_P^{BBN}	$0.24671^{+0.00012}_{-0.00013}$	$f\sigma_8(0.38)$	$0.477^{+0.014}_{-0.014}$
A_{217}^{PS}	108^{+30}_{-30}	$10^5 D/H$	$2.592^{+0.061}_{-0.057}$	$\sigma_8(0.38)$	$0.663^{+0.012}_{-0.012}$
A^{kSZ}	—	Age/Gyr	$13.801^{+0.049}_{-0.049}$	$f\sigma_8(0.51)$	$0.475^{+0.012}_{-0.012}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	z_*	$1089.96^{+0.55}_{-0.54}$	$\sigma_8(0.51)$	$0.620^{+0.011}_{-0.011}$
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	r_*	$144.46^{+0.68}_{-0.66}$	$f\sigma_8(0.61)$	$0.470^{+0.011}_{-0.011}$
H_0	$67.3^{+1.2}_{-1.2}$	$100\theta_*$	$1.04107^{+0.00061}_{-0.00061}$	$\sigma_8(0.61)$	$0.590^{+0.010}_{-0.010}$
Ω_Λ	$0.684^{+0.016}_{-0.017}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.876^{+0.064}_{-0.062}$	$f\sigma_8(2.33)$	$0.2974^{+0.0052}_{-0.0050}$
Ω_m	$0.316^{+0.017}_{-0.016}$	z_{drag}	$1059.86^{+0.68}_{-0.69}$	$\sigma_8(2.33)$	$0.3064^{+0.0054}_{-0.0052}$
$\Omega_m h^2$	$0.1430^{+0.0027}_{-0.0027}$	r_{drag}	$147.13^{+0.70}_{-0.67}$	f_{2000}^{143}	30^{+6}_{-6}
$\Omega_m h^3$	$0.09625^{+0.00068}_{-0.00072}$	k_{D}	$0.14080^{+0.00076}_{-0.00082}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-4}
σ_8	$0.810^{+0.016}_{-0.016}$	$100\theta_{\text{D}}$	$0.16080^{+0.00041}_{-0.00039}$	f_{2000}^{217}	$107.4^{+4.1}_{-4.2}$
S_8	$0.831^{+0.034}_{-0.033}$	z_{eq}	3401^{+65}_{-64}	χ_{small}^2	$397.1 (\nu: 1.8)$
$\sigma_8 \Omega_m^{0.5}$	$0.455^{+0.019}_{-0.018}$	k_{eq}	$0.01038^{+0.00020}_{-0.00019}$	χ_{lowl}^2	$22.8 (\nu: 1.6)$
$\sigma_8 \Omega_m^{0.25}$	$0.607^{+0.017}_{-0.017}$	$100\theta_{\text{eq}}$	$0.813^{+0.012}_{-0.012}$	χ_{prior}^2	$9.7 (\nu: 9.9)$
$\sigma_8/h^{0.5}$	$0.988^{+0.024}_{-0.025}$	$100\theta_{\text{s,eq}}$	$0.4495^{+0.0062}_{-0.0061}$	χ_{CMB}^2	$7358 (\nu: 10476453.5)$

Best-fit $\chi_{\text{eff}}^2 = 11920.76$; $\Delta\chi_{\text{eff}}^2 = 9155.36$; $\bar{\chi}_{\text{eff}}^2 = 11943.38$; $\Delta\bar{\chi}_{\text{eff}}^2 = 9151.16$; $R - 1 = 0.00835$

χ_{eff}^2 : CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.88 (Δ -0.19) commander_dx12_v3_2_29: 22.85 (Δ 0.60) CamSpec like_10.7HM_1400_unified: 11499.86

12.10 base_nrun_CamSpecHM_TTTEEE_lowl_lowE_post_BAO/base_nrun_plikHM_TTTEEE_lowl_lowE_post_BAO

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02239^{+0.00030}_{-0.00032}$	z_{re}	$7.7^{+1.6}_{-1.7}$	$H(0.51)$	$89.76^{+0.47}_{-0.45}$
$\Omega_c h^2$	$0.1192^{+0.0020}_{-0.0020}$	$10^9 A_s$	$2.099^{+0.077}_{-0.072}$	$D_{\text{M}}(0.51)$	1980^{+18}_{-18}
$100\theta_{MC}$	$1.04098^{+0.00058}_{-0.00059}$	$10^9 A_s e^{-2\tau}$	$1.879^{+0.024}_{-0.024}$	$H(0.61)$	$95.38^{+0.39}_{-0.38}$
τ	$0.055^{+0.017}_{-0.016}$	D_{40}	1220^{+36}_{-35}	$D_{\text{M}}(0.61)$	2304^{+19}_{-19}
$\ln(10^{10} A_s)$	$3.044^{+0.036}_{-0.035}$	D_{220}	5728^{+77}_{-75}	$H(2.33)$	$236.0^{+1.3}_{-1.3}$
n_s	$0.9666^{+0.0081}_{-0.0082}$	D_{810}	2538^{+27}_{-27}	$D_{\text{M}}(2.33)$	5760^{+19}_{-19}
n_{run}	$-0.003^{+0.014}_{-0.014}$	D_{1420}	$816.4^{+9.5}_{-9.4}$	$f\sigma_8(0.15)$	$0.455^{+0.014}_{-0.013}$
y_{cal}	$1.0006^{+0.0049}_{-0.0048}$	D_{2000}	$230.4^{+3.5}_{-3.5}$	$\sigma_8(0.15)$	$0.747^{+0.014}_{-0.013}$
A_{217}^{CIB}	44^{+20}_{-20}	$n_{s,0.002}$	$0.975^{+0.043}_{-0.042}$	$f\sigma_8(0.38)$	$0.473^{+0.012}_{-0.012}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.24540^{+0.00011}_{-0.00013}$	$\sigma_8(0.38)$	$0.662^{+0.012}_{-0.011}$
A_{143}^{tSZ}	$4.6^{+3.8}_{-4.3}$	Y_P^{BBN}	$0.24673^{+0.00011}_{-0.00013}$	$f\sigma_8(0.51)$	$0.472^{+0.011}_{-0.011}$
A_{100}^{PS}	251^{+60}_{-50}	$10^5 D/H$	$2.582^{+0.060}_{-0.054}$	$\sigma_8(0.51)$	$0.620^{+0.011}_{-0.011}$
A_{143}^{PS}	43^{+20}_{-20}	Age/Gyr	$13.790^{+0.043}_{-0.043}$	$f\sigma_8(0.61)$	$0.467^{+0.010}_{-0.010}$
A_{217}^{PS}	108^{+20}_{-30}	z_*	$1089.82^{+0.47}_{-0.45}$	$\sigma_8(0.61)$	$0.590^{+0.010}_{-0.010}$
A^{kSZ}	—	r_*	$144.63^{+0.53}_{-0.52}$	$f\sigma_8(2.33)$	$0.2974^{+0.0052}_{-0.0050}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	$100\theta_*$	$1.04116^{+0.00057}_{-0.00058}$	$\sigma_8(2.33)$	$0.3066^{+0.0054}_{-0.0052}$
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.891^{+0.052}_{-0.050}$	f_{2000}^{143}	30^{+6}_{-6}
H_0	$67.69^{+0.90}_{-0.87}$	z_{drag}	$1059.92^{+0.66}_{-0.71}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
Ω_{Λ}	$0.690^{+0.012}_{-0.012}$	r_{drag}	$147.29^{+0.58}_{-0.56}$	f_{2000}^{217}	$107.2^{+4.0}_{-4.2}$
Ω_m	$0.310^{+0.012}_{-0.012}$	k_{D}	$0.14067^{+0.00069}_{-0.00075}$	χ_{small}^2	$397.2 (\nu: 2.0)$
$\Omega_m h^2$	$0.1422^{+0.0020}_{-0.0020}$	$100\theta_{\text{D}}$	$0.16077^{+0.00042}_{-0.00038}$	χ_{lowl}^2	$22.7 (\nu: 1.5)$
$\Omega_m h^3$	$0.09625^{+0.00070}_{-0.00073}$	z_{eq}	3383^{+47}_{-47}	$\chi_{6\text{DF}}^2$	$0.052 (\nu: 0.0)$
σ_8	$0.808^{+0.015}_{-0.015}$	k_{eq}	$0.01032^{+0.00014}_{-0.00014}$	χ_{MGS}^2	$1.30 (\nu: 0.1)$
S_8	$0.822^{+0.026}_{-0.026}$	$100\theta_{\text{eq}}$	$0.8169^{+0.0089}_{-0.0087}$	χ_{DR12BAO}^2	$4.8 (\nu: 1.0)$
$\sigma_8 \Omega_m^{0.5}$	$0.450^{+0.014}_{-0.014}$	$100\theta_{\text{s,eq}}$	$0.4513^{+0.0045}_{-0.0045}$	χ_{prior}^2	$9.7 (\nu: 10.1)$
$\sigma_8 \Omega_m^{0.25}$	$0.603^{+0.015}_{-0.014}$	$H(0.15)$	$72.96^{+0.77}_{-0.75}$	χ_{BAO}^2	$6.1 (\nu: 0.6)$
$\sigma_8/h^{0.5}$	$0.982^{+0.021}_{-0.021}$	$D_{\text{M}}(0.15)$	$640.6^{+7.5}_{-7.5}$	χ_{CMB}^2	$7358 (\nu: 10476241.1)$
$r_{\text{drag}} h$	$99.7^{+1.6}_{-1.5}$	$H(0.38)$	$83.05^{+0.58}_{-0.55}$		
$\langle d^2 \rangle^{1/2}$	$2.427^{+0.051}_{-0.052}$	$D_{\text{M}}(0.38)$	1528^{+15}_{-15}		

$$\bar{\chi}_{\text{eff}}^2 = 11949.15; \Delta\bar{\chi}_{\text{eff}}^2 = 9150.67; R - 1 = 0.01377$$

12.11 base_nrun_CamSpecHM_TTTEEE_lowl_lowE_post_lensing/base_nrun_plikHM_TTTEEE_lowl_lowE_post_lensing

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02234^{+0.00031}_{-0.00032}$	$\langle d^2 \rangle^{1/2}$	$2.439^{+0.045}_{-0.046}$	$H(0.38)$	$82.86^{+0.66}_{-0.65}$
$\Omega_c h^2$	$0.1199^{+0.0024}_{-0.0024}$	z_{re}	$7.7^{+1.5}_{-1.5}$	$D_{\text{M}}(0.38)$	1533^{+18}_{-18}
$100\theta_{MC}$	$1.04089^{+0.00061}_{-0.00060}$	$10^9 A_s$	$2.100^{+0.066}_{-0.062}$	$H(0.51)$	$89.62^{+0.53}_{-0.52}$
τ	$0.054^{+0.016}_{-0.015}$	$10^9 A_s e^{-2\tau}$	$1.883^{+0.023}_{-0.023}$	$D_{\text{M}}(0.51)$	1986^{+21}_{-21}
$\ln(10^{10} A_s)$	$3.044^{+0.031}_{-0.030}$	D_{40}	1224^{+36}_{-35}	$H(0.61)$	$95.26^{+0.44}_{-0.43}$
n_s	$0.9648^{+0.0086}_{-0.0088}$	D_{220}	5727^{+78}_{-78}	$D_{\text{M}}(0.61)$	2310^{+23}_{-23}
n_{run}	$-0.003^{+0.014}_{-0.014}$	D_{810}	2538^{+27}_{-27}	$H(2.33)$	$236.4^{+1.5}_{-1.5}$
y_{cal}	$1.0006^{+0.0049}_{-0.0049}$	D_{1420}	$816.0^{+9.7}_{-9.7}$	$D_{\text{M}}(2.33)$	5765^{+21}_{-21}
A_{217}^{CIB}	44^{+20}_{-20}	D_{2000}	$230.2^{+3.6}_{-3.5}$	$f\sigma_8(0.15)$	$0.459^{+0.013}_{-0.013}$
$\xi^{tSZ-CIB}$	—	$n_{s,0.002}$	$0.973^{+0.042}_{-0.041}$	$\sigma_8(0.15)$	$0.748^{+0.011}_{-0.011}$
A_{143}^{tSZ}	$4.5^{+3.8}_{-4.3}$	Y_P	$0.24538^{+0.00012}_{-0.00013}$	$f\sigma_8(0.38)$	$0.476^{+0.010}_{-0.011}$
A_{100}^{PS}	252^{+60}_{-60}	Y_P^{BBN}	$0.24671^{+0.00012}_{-0.00013}$	$\sigma_8(0.38)$	$0.6630^{+0.0096}_{-0.0094}$
A_{143}^{PS}	44^{+20}_{-20}	$10^5 D/H$	$2.591^{+0.061}_{-0.057}$	$f\sigma_8(0.51)$	$0.4747^{+0.0091}_{-0.0092}$
A_{217}^{PS}	108^{+20}_{-30}	Age/Gyr	$13.800^{+0.047}_{-0.048}$	$\sigma_8(0.51)$	$0.6203^{+0.0091}_{-0.0089}$
A^{kSZ}	—	z_*	$1089.94^{+0.52}_{-0.51}$	$f\sigma_8(0.61)$	$0.4694^{+0.0083}_{-0.0084}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	r_*	$144.49^{+0.57}_{-0.57}$	$\sigma_8(0.61)$	$0.5901^{+0.0086}_{-0.0086}$
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	$100\theta_*$	$1.04108^{+0.00060}_{-0.00060}$	$f\sigma_8(2.33)$	$0.2974^{+0.0045}_{-0.0044}$
H_0	$67.4^{+1.1}_{-1.0}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.878^{+0.054}_{-0.054}$	$\sigma_8(2.33)$	$0.3065^{+0.0049}_{-0.0047}$
Ω_Λ	$0.685^{+0.014}_{-0.015}$	z_{drag}	$1059.87^{+0.68}_{-0.70}$	f_{2000}^{143}	30^{+6}_{-6}
Ω_m	$0.315^{+0.015}_{-0.014}$	r_{drag}	$147.16^{+0.60}_{-0.59}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-4}
$\Omega_m h^2$	$0.1429^{+0.0023}_{-0.0023}$	k_{D}	$0.14078^{+0.00070}_{-0.00074}$	f_{2000}^{217}	$107.4^{+4.1}_{-4.2}$
$\Omega_m h^3$	$0.09624^{+0.00068}_{-0.00070}$	$100\theta_{\text{D}}$	$0.16080^{+0.00041}_{-0.00038}$	χ_{lensing}^2	$9.38 (\nu: 0.3)$
σ_8	$0.810^{+0.012}_{-0.012}$	z_{eq}	3398^{+54}_{-54}	χ_{simall}^2	$397.0 (\nu: 1.4)$
S_8	$0.830^{+0.025}_{-0.025}$	k_{eq}	$0.01037^{+0.00017}_{-0.00017}$	χ_{lowl}^2	$23.0 (\nu: 1.7)$
$\sigma_8 \Omega_m^{0.5}$	$0.455^{+0.014}_{-0.014}$	$100\theta_{\text{eq}}$	$0.814^{+0.010}_{-0.010}$	χ_{prior}^2	$9.7 (\nu: 10.1)$
$\sigma_8 \Omega_m^{0.25}$	$0.607^{+0.013}_{-0.013}$	$100\theta_{\text{s,eq}}$	$0.4497^{+0.0052}_{-0.0052}$	χ_{CMB}^2	$7367 (\nu: 10476264.8)$
$\sigma_8/h^{0.5}$	$0.987^{+0.018}_{-0.018}$	$H(0.15)$	$72.69^{+0.91}_{-0.89}$		
$r_{\text{drag}} h$	$99.1^{+1.8}_{-1.8}$	$D_{\text{M}}(0.15)$	$643.3^{+9.0}_{-9.0}$		

$\bar{\chi}_{\text{eff}}^2 = 11952.22$; $\Delta\bar{\chi}_{\text{eff}}^2 = 9150.95$; $R - 1 = 0.01144$

12.12 base_nrun_CamSpecHM_TTTEEE_lowl_lowE_post_BAO_lensing/base_nrun_plikHM_TTTEEE_lowl_lowE_post_BAO_lensing

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02239^{+0.00030}_{-0.00032}$	z_{re}	$7.8^{+1.4}_{-1.5}$	$H(0.51)$	$89.75^{+0.44}_{-0.43}$
$\Omega_c h^2$	$0.1192^{+0.0018}_{-0.0018}$	$10^9 A_s$	$2.104^{+0.065}_{-0.061}$	$D_{\text{M}}(0.51)$	1980^{+17}_{-17}
$100\theta_{MC}$	$1.04097^{+0.00058}_{-0.00059}$	$10^9 A_s e^{-2\tau}$	$1.880^{+0.022}_{-0.022}$	$H(0.61)$	$95.37^{+0.38}_{-0.37}$
τ	$0.056^{+0.015}_{-0.014}$	D_{40}	1223^{+35}_{-35}	$D_{\text{M}}(0.61)$	2304^{+18}_{-18}
$\ln(10^{10} A_s)$	$3.046^{+0.031}_{-0.029}$	D_{220}	5731^{+77}_{-75}	$H(2.33)$	$236.1^{+1.2}_{-1.2}$
n_s	$0.9664^{+0.0079}_{-0.0079}$	D_{810}	2538^{+27}_{-26}	$D_{\text{M}}(2.33)$	5760^{+19}_{-18}
n_{run}	$-0.002^{+0.014}_{-0.014}$	D_{1420}	$816.6^{+9.5}_{-9.4}$	$f\sigma_8(0.15)$	$0.456^{+0.011}_{-0.011}$
y_{cal}	$1.0007^{+0.0048}_{-0.0048}$	D_{2000}	$230.5^{+3.4}_{-3.5}$	$\sigma_8(0.15)$	$0.748^{+0.011}_{-0.011}$
A_{217}^{CIB}	44^{+20}_{-20}	$n_{s,0.002}$	$0.973^{+0.042}_{-0.041}$	$f\sigma_8(0.38)$	$0.4743^{+0.0091}_{-0.0092}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.24540^{+0.00011}_{-0.00013}$	$\sigma_8(0.38)$	$0.6631^{+0.0097}_{-0.0093}$
A_{143}^{tSZ}	$4.6^{+3.9}_{-4.3}$	Y_P^{BBN}	$0.24673^{+0.00011}_{-0.00013}$	$f\sigma_8(0.51)$	$0.4730^{+0.0083}_{-0.0084}$
A_{100}^{PS}	251^{+60}_{-60}	$10^5 D/H$	$2.583^{+0.060}_{-0.053}$	$\sigma_8(0.51)$	$0.6206^{+0.0091}_{-0.0087}$
A_{143}^{PS}	43^{+20}_{-20}	Age/Gyr	$13.791^{+0.043}_{-0.042}$	$f\sigma_8(0.61)$	$0.4681^{+0.0078}_{-0.0078}$
A_{217}^{PS}	109^{+20}_{-30}	z_*	$1089.83^{+0.46}_{-0.45}$	$\sigma_8(0.61)$	$0.5905^{+0.0087}_{-0.0083}$
A^{kSZ}	—	r_*	$144.62^{+0.48}_{-0.47}$	$f\sigma_8(2.33)$	$0.2978^{+0.0045}_{-0.0042}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	$100\theta_*$	$1.04116^{+0.00057}_{-0.00058}$	$\sigma_8(2.33)$	$0.3070^{+0.0048}_{-0.0045}$
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.890^{+0.047}_{-0.046}$	f_{2000}^{143}	30^{+6}_{-6}
H_0	$67.66^{+0.82}_{-0.81}$	z_{drag}	$1059.92^{+0.66}_{-0.71}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
Ω_Λ	$0.689^{+0.011}_{-0.011}$	r_{drag}	$147.28^{+0.53}_{-0.51}$	f_{2000}^{217}	$107.2^{+4.0}_{-4.2}$
Ω_m	$0.311^{+0.011}_{-0.011}$	k_{D}	$0.14069^{+0.00065}_{-0.00071}$	χ_{lensing}^2	$9.28 (\nu: 0.2)$
$\Omega_m h^2$	$0.1423^{+0.0018}_{-0.0018}$	$100\theta_{\text{D}}$	$0.16077^{+0.00042}_{-0.00038}$	χ_{simall}^2	$397.2 (\nu: 1.7)$
$\Omega_m h^3$	$0.09625^{+0.00068}_{-0.00071}$	z_{eq}	3384^{+42}_{-43}	χ_{lowl}^2	$22.9 (\nu: 1.6)$
σ_8	$0.809^{+0.012}_{-0.012}$	k_{eq}	$0.01033^{+0.00013}_{-0.00013}$	$\chi_{6\text{DF}}^2$	$0.051 (\nu: 0.0)$
S_8	$0.824^{+0.021}_{-0.021}$	$100\theta_{\text{eq}}$	$0.8166^{+0.0080}_{-0.0077}$	χ_{MGS}^2	$1.26 (\nu: 0.1)$
$\sigma_8 \Omega_m^{0.5}$	$0.451^{+0.011}_{-0.011}$	$100\theta_{\text{s,eq}}$	$0.4511^{+0.0041}_{-0.0040}$	χ_{DR12BAO}^2	$4.8 (\nu: 0.8)$
$\sigma_8 \Omega_m^{0.25}$	$0.604^{+0.011}_{-0.011}$	$H(0.15)$	$72.93^{+0.71}_{-0.70}$	χ_{prior}^2	$9.6 (\nu: 10.0)$
$\sigma_8/h^{0.5}$	$0.984^{+0.017}_{-0.017}$	$D_{\text{M}}(0.15)$	$640.8^{+7.0}_{-7.0}$	χ_{CMB}^2	$7367 (\nu: 10476338.3)$
$r_{\text{drag}} h$	$99.6^{+1.4}_{-1.4}$	$H(0.38)$	$83.04^{+0.54}_{-0.53}$	χ_{BAO}^2	$6.1 (\nu: 0.5)$
$\langle d^2 \rangle^{1/2}$	$2.432^{+0.042}_{-0.043}$	$D_{\text{M}}(0.38)$	1529^{+14}_{-14}		

$$\bar{\chi}_{\text{eff}}^2 = 11958.12; \Delta\bar{\chi}_{\text{eff}}^2 = 9150.80; R - 1 = 0.01586$$

12.13 base_nrun_CamSpecHM_TTTEEE_lowl_lowE_post_Riess18/base_nrun_plikHM_TTTEEE_lowl_lowE_post_Riess18

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02247^{+0.00033}_{-0.00033}$	$\langle d^2 \rangle^{1/2}$	$2.415^{+0.057}_{-0.057}$	$H(0.38)$	$83.30^{+0.74}_{-0.71}$
$\Omega_c h^2$	$0.1184^{+0.0026}_{-0.0026}$	z_{re}	$7.8^{+1.7}_{-1.6}$	$D_{\text{M}}(0.38)$	1522^{+19}_{-19}
$100\theta_{MC}$	$1.04109^{+0.00059}_{-0.00062}$	$10^9 A_s$	$2.100^{+0.080}_{-0.073}$	$H(0.51)$	$89.95^{+0.60}_{-0.56}$
τ	$0.056^{+0.017}_{-0.016}$	$10^9 A_s e^{-2\tau}$	$1.876^{+0.025}_{-0.025}$	$D_{\text{M}}(0.51)$	1972^{+23}_{-23}
$\ln(10^{10} A_s)$	$3.044^{+0.037}_{-0.035}$	D_{40}	1216^{+37}_{-35}	$H(0.61)$	$95.53^{+0.49}_{-0.45}$
n_s	$0.9686^{+0.0092}_{-0.0093}$	D_{220}	5733^{+80}_{-75}	$D_{\text{M}}(0.61)$	2295^{+24}_{-25}
n_{run}	$-0.003^{+0.014}_{-0.014}$	D_{810}	2537^{+27}_{-27}	$H(2.33)$	$235.6^{+1.6}_{-1.6}$
y_{cal}	$1.0006^{+0.0047}_{-0.0047}$	D_{1420}	$817.1^{+9.3}_{-9.2}$	$D_{\text{M}}(2.33)$	5753^{+21}_{-22}
A_{217}^{CIB}	43^{+20}_{-20}	D_{2000}	$230.7^{+3.5}_{-3.4}$	$f\sigma_8(0.15)$	$0.451^{+0.017}_{-0.016}$
$\xi^{tSZ-CIB}$	—	$n_{s,0.002}$	$0.977^{+0.042}_{-0.042}$	$\sigma_8(0.15)$	$0.745^{+0.015}_{-0.014}$
A_{143}^{tSZ}	$4.6^{+3.9}_{-4.2}$	Y_P	$0.24543^{+0.00012}_{-0.00013}$	$f\sigma_8(0.38)$	$0.470^{+0.014}_{-0.014}$
A_{100}^{PS}	250^{+60}_{-50}	Y_P^{BBN}	$0.24676^{+0.00012}_{-0.00013}$	$\sigma_8(0.38)$	$0.661^{+0.013}_{-0.012}$
A_{143}^{PS}	42^{+20}_{-20}	$10^5 D/H$	$2.568^{+0.061}_{-0.058}$	$f\sigma_8(0.51)$	$0.469^{+0.012}_{-0.012}$
A_{217}^{PS}	108^{+30}_{-30}	Age/Gyr	$13.775^{+0.048}_{-0.049}$	$\sigma_8(0.51)$	$0.619^{+0.012}_{-0.011}$
A^{kSZ}	—	z_*	$1089.66^{+0.53}_{-0.53}$	$f\sigma_8(0.61)$	$0.465^{+0.011}_{-0.011}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	r_*	$144.77^{+0.64}_{-0.63}$	$\sigma_8(0.61)$	$0.589^{+0.011}_{-0.010}$
c_{217}	$0.9997^{+0.0038}_{-0.0027}$	$100\theta_*$	$1.04127^{+0.00059}_{-0.00061}$	$f\sigma_8(2.33)$	$0.2974^{+0.0055}_{-0.0050}$
H_0	$68.1^{+1.2}_{-1.1}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.904^{+0.060}_{-0.060}$	$\sigma_8(2.33)$	$0.3069^{+0.0057}_{-0.0051}$
Ω_Λ	$0.694^{+0.015}_{-0.016}$	z_{drag}	$1060.05^{+0.69}_{-0.72}$	f_{2000}^{143}	30^{+6}_{-6}
Ω_m	$0.306^{+0.016}_{-0.015}$	r_{drag}	$147.41^{+0.69}_{-0.65}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
$\Omega_m h^2$	$0.1415^{+0.0025}_{-0.0025}$	k_{D}	$0.14060^{+0.00074}_{-0.00080}$	f_{2000}^{217}	$107.0^{+4.0}_{-4.2}$
$\Omega_m h^3$	$0.09631^{+0.00070}_{-0.00073}$	$100\theta_{\text{D}}$	$0.16070^{+0.00041}_{-0.00038}$	χ_{small}^2	$397.3 (\nu: 2.5)$
σ_8	$0.806^{+0.017}_{-0.015}$	z_{eq}	3366^{+60}_{-61}	χ_{lowl}^2	$22.4 (\nu: 1.3)$
S_8	$0.814^{+0.032}_{-0.032}$	k_{eq}	$0.01027^{+0.00018}_{-0.00018}$	χ_{H073p45}^2	$10.6 (\nu: 2.6)$
$\sigma_8 \Omega_m^{0.5}$	$0.446^{+0.018}_{-0.018}$	$100\theta_{\text{eq}}$	$0.820^{+0.012}_{-0.011}$	χ_{prior}^2	$9.8 (\nu: 10.0)$
$\sigma_8 \Omega_m^{0.25}$	$0.599^{+0.017}_{-0.017}$	$100\theta_{\text{s,eq}}$	$0.4530^{+0.0058}_{-0.0058}$	χ_{CMB}^2	$7359 (\nu: 10476247.4)$
$\sigma_8/h^{0.5}$	$0.977^{+0.024}_{-0.023}$	$H(0.15)$	$73.28^{+0.99}_{-0.98}$		
$r_{\text{drag}} h$	$100.3^{+2.1}_{-2.0}$	$D_{\text{M}}(0.15)$	$637.4^{+9.7}_{-9.6}$		

$\bar{\chi}_{\text{eff}}^2 = 11955.07$; $\Delta\bar{\chi}_{\text{eff}}^2 = 9150.43$; $R - 1 = 0.04651$

12.14 base_nrun_CamSpecHM_TTTEEE_lowl_lowE_post_zre6p5/base_nrun_plikHM_TTTEEE_lowl_lowE_post_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02234^{+0.00032}_{-0.00032}$	$r_{\text{drag}} h$	$99.1^{+2.1}_{-2.1}$	$H(0.15)$	$72.7^{+1.0}_{-1.0}$
$\Omega_c h^2$	$0.1199^{+0.0028}_{-0.0028}$	$\langle d^2 \rangle^{1/2}$	$2.440^{+0.057}_{-0.056}$	$D_{\text{M}}(0.15)$	644^{+10}_{-10}
$100\theta_{MC}$	$1.04089^{+0.00061}_{-0.00061}$	z_{re}	< 9.06	$H(0.38)$	$82.85^{+0.74}_{-0.72}$
τ	$0.056^{+0.014}_{-0.012}$	$10^9 A_s$	$2.105^{+0.067}_{-0.061}$	$D_{\text{M}}(0.38)$	1534^{+20}_{-20}
$\ln(10^{10} A_s)$	$3.047^{+0.032}_{-0.029}$	$10^9 A_s e^{-2\tau}$	$1.883^{+0.026}_{-0.026}$	$H(0.51)$	$89.61^{+0.59}_{-0.57}$
n_s	$0.9647^{+0.0094}_{-0.0096}$	D_{40}	1222^{+36}_{-36}	$D_{\text{M}}(0.51)$	1986^{+24}_{-24}
n_{run}	$-0.003^{+0.014}_{-0.014}$	D_{220}	5724^{+78}_{-77}	$H(0.61)$	$95.26^{+0.48}_{-0.46}$
y_{cal}	$1.0005^{+0.0049}_{-0.0049}$	D_{810}	2538^{+28}_{-28}	$D_{\text{M}}(0.61)$	2311^{+26}_{-26}
A_{217}^{CIB}	44^{+20}_{-20}	D_{1420}	$815.7^{+9.7}_{-9.8}$	$H(2.33)$	$236.5^{+1.7}_{-1.7}$
$\xi^{tSZ-CIB}$	—	D_{2000}	$230.1^{+3.6}_{-3.6}$	$D_{\text{M}}(2.33)$	5765^{+21}_{-22}
A_{143}^{tSZ}	$4.5^{+3.8}_{-4.3}$	$n_{s,0.002}$	$0.976^{+0.042}_{-0.042}$	$f\sigma_8(0.15)$	$0.460^{+0.017}_{-0.017}$
A_{100}^{PS}	252^{+60}_{-60}	Y_P	$0.24538^{+0.00012}_{-0.00013}$	$\sigma_8(0.15)$	$0.749^{+0.013}_{-0.012}$
A_{143}^{PS}	44^{+20}_{-20}	Y_P^{BBN}	$0.24671^{+0.00012}_{-0.00013}$	$f\sigma_8(0.38)$	$0.477^{+0.014}_{-0.014}$
A_{217}^{PS}	108^{+30}_{-30}	$10^5 D/H$	$2.591^{+0.061}_{-0.057}$	$\sigma_8(0.38)$	$0.664^{+0.011}_{-0.010}$
A^{kSZ}	—	Age/Gyr	$13.801^{+0.048}_{-0.049}$	$f\sigma_8(0.51)$	$0.475^{+0.012}_{-0.012}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	z_*	$1089.95^{+0.54}_{-0.54}$	$\sigma_8(0.51)$	$0.6210^{+0.0098}_{-0.0093}$
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	r_*	$144.47^{+0.67}_{-0.66}$	$f\sigma_8(0.61)$	$0.470^{+0.011}_{-0.011}$
H_0	$67.3^{+1.2}_{-1.2}$	$100\theta_*$	$1.04108^{+0.00060}_{-0.00060}$	$\sigma_8(0.61)$	$0.5908^{+0.0092}_{-0.0087}$
Ω_Λ	$0.685^{+0.016}_{-0.017}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.877^{+0.063}_{-0.061}$	$f\sigma_8(2.33)$	$0.2977^{+0.0046}_{-0.0043}$
Ω_m	$0.315^{+0.017}_{-0.016}$	z_{drag}	$1059.87^{+0.67}_{-0.70}$	$\sigma_8(2.33)$	$0.3068^{+0.0047}_{-0.0044}$
$\Omega_m h^2$	$0.1429^{+0.0027}_{-0.0027}$	r_{drag}	$147.14^{+0.69}_{-0.67}$	f_{2000}^{143}	30^{+6}_{-6}
$\Omega_m h^3$	$0.09625^{+0.00068}_{-0.00071}$	k_{D}	$0.14080^{+0.00076}_{-0.00081}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-4}
σ_8	$0.811^{+0.015}_{-0.014}$	$100\theta_{\text{D}}$	$0.16079^{+0.00041}_{-0.00038}$	f_{2000}^{217}	$107.4^{+4.1}_{-4.2}$
S_8	$0.832^{+0.034}_{-0.033}$	z_{eq}	3400^{+64}_{-64}	χ_{small}^2	$397.0 (\nu: 1.8)$
$\sigma_8 \Omega_m^{0.5}$	$0.455^{+0.018}_{-0.018}$	k_{eq}	$0.01038^{+0.00020}_{-0.00019}$	χ_{lowl}^2	$22.8 (\nu: 1.6)$
$\sigma_8 \Omega_m^{0.25}$	$0.608^{+0.017}_{-0.017}$	$100\theta_{\text{eq}}$	$0.814^{+0.012}_{-0.012}$	χ_{prior}^2	$9.7 (\nu: 9.8)$
$\sigma_8/h^{0.5}$	$0.989^{+0.024}_{-0.023}$	$100\theta_{\text{s,eq}}$	$0.4495^{+0.0061}_{-0.0061}$	χ_{CMB}^2	$7358 (\nu: 10476154.6)$
$\bar{\chi}_{\text{eff}}^2 = 11943.05; \Delta\bar{\chi}_{\text{eff}}^2 = 9151.03; R - 1 = 0.00888$					

12.15 base_nrun_CamSpecHM_TTTEEE_lowl_lowE_post_BAO_zre6p5/base_nrun_plikHM_TTTEEE_lowl_lowE_post_BAO_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02239^{+0.00030}_{-0.00031}$	z_{re}	< 9.11	$H(0.51)$	$89.77^{+0.47}_{-0.45}$
$\Omega_c h^2$	$0.1192^{+0.0020}_{-0.0020}$	$10^9 A_s$	$2.103^{+0.068}_{-0.062}$	$D_{\text{M}}(0.51)$	1979^{+18}_{-18}
$100\theta_{MC}$	$1.04098^{+0.00058}_{-0.00058}$	$10^9 A_s e^{-2\tau}$	$1.879^{+0.024}_{-0.024}$	$H(0.61)$	$95.38^{+0.39}_{-0.37}$
τ	$0.056^{+0.014}_{-0.013}$	D_{40}	1220^{+36}_{-35}	$D_{\text{M}}(0.61)$	2304^{+19}_{-19}
$\ln(10^{10} A_s)$	$3.046^{+0.032}_{-0.029}$	D_{220}	5728^{+78}_{-76}	$H(2.33)$	$236.0^{+1.3}_{-1.3}$
n_s	$0.9666^{+0.0082}_{-0.0081}$	D_{810}	2538^{+27}_{-27}	$D_{\text{M}}(2.33)$	5760^{+19}_{-19}
n_{run}	$-0.003^{+0.014}_{-0.014}$	D_{1420}	$816.3^{+9.4}_{-9.4}$	$f\sigma_8(0.15)$	$0.455^{+0.013}_{-0.013}$
y_{cal}	$1.0006^{+0.0048}_{-0.0048}$	D_{2000}	$230.4^{+3.5}_{-3.5}$	$\sigma_8(0.15)$	$0.748^{+0.012}_{-0.012}$
A_{217}^{CIB}	44^{+20}_{-20}	$n_{s,0.002}$	$0.976^{+0.043}_{-0.042}$	$f\sigma_8(0.38)$	$0.474^{+0.011}_{-0.011}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.24540^{+0.00011}_{-0.00013}$	$\sigma_8(0.38)$	$0.663^{+0.011}_{-0.010}$
A_{143}^{tSZ}	$4.6^{+3.8}_{-4.3}$	Y_P^{BBN}	$0.24673^{+0.00011}_{-0.00013}$	$f\sigma_8(0.51)$	$0.473^{+0.010}_{-0.010}$
A_{100}^{PS}	251^{+60}_{-60}	$10^5 D/H$	$2.582^{+0.059}_{-0.054}$	$\sigma_8(0.51)$	$0.6204^{+0.0099}_{-0.0092}$
A_{143}^{PS}	43^{+20}_{-20}	Age/Gyr	$13.790^{+0.043}_{-0.042}$	$f\sigma_8(0.61)$	$0.4678^{+0.0097}_{-0.0093}$
A_{217}^{PS}	108^{+20}_{-30}	z_*	$1089.82^{+0.46}_{-0.45}$	$\sigma_8(0.61)$	$0.5903^{+0.0093}_{-0.0087}$
A^{kSZ}	—	r_*	$144.63^{+0.53}_{-0.52}$	$f\sigma_8(2.33)$	$0.2977^{+0.0047}_{-0.0043}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	$100\theta_*$	$1.04117^{+0.00057}_{-0.00058}$	$\sigma_8(2.33)$	$0.3070^{+0.0048}_{-0.0044}$
c_{217}	$0.9997^{+0.0038}_{-0.0027}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.891^{+0.052}_{-0.050}$	f_{2000}^{143}	30^{+6}_{-6}
H_0	$67.69^{+0.89}_{-0.87}$	z_{drag}	$1059.93^{+0.65}_{-0.72}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
Ω_{Λ}	$0.690^{+0.012}_{-0.012}$	r_{drag}	$147.29^{+0.58}_{-0.55}$	f_{2000}^{217}	$107.2^{+4.0}_{-4.2}$
Ω_m	$0.310^{+0.012}_{-0.012}$	k_{D}	$0.14068^{+0.00069}_{-0.00075}$	χ_{small}^2	$397.1 (\nu: 2.0)$
$\Omega_m h^2$	$0.1422^{+0.0020}_{-0.0020}$	$100\theta_{\text{D}}$	$0.16076^{+0.00041}_{-0.00038}$	χ_{lowl}^2	$22.7 (\nu: 1.5)$
$\Omega_m h^3$	$0.09625^{+0.00069}_{-0.00073}$	z_{eq}	3383^{+47}_{-47}	$\chi_{6\text{DF}}^2$	$0.052 (\nu: 0.0)$
σ_8	$0.809^{+0.015}_{-0.013}$	k_{eq}	$0.01032^{+0.00014}_{-0.00014}$	χ_{MGS}^2	$1.30 (\nu: 0.1)$
S_8	$0.823^{+0.026}_{-0.025}$	$100\theta_{\text{eq}}$	$0.8170^{+0.0088}_{-0.0086}$	χ_{DR12BAO}^2	$4.7 (\nu: 1.0)$
$\sigma_8 \Omega_m^{0.5}$	$0.451^{+0.014}_{-0.014}$	$100\theta_{\text{s,eq}}$	$0.4513^{+0.0045}_{-0.0045}$	χ_{prior}^2	$9.7 (\nu: 10.0)$
$\sigma_8 \Omega_m^{0.25}$	$0.604^{+0.014}_{-0.014}$	$H(0.15)$	$72.96^{+0.77}_{-0.75}$	χ_{BAO}^2	$6.1 (\nu: 0.6)$
$\sigma_8/h^{0.5}$	$0.983^{+0.021}_{-0.020}$	$D_{\text{M}}(0.15)$	$640.5^{+7.5}_{-7.5}$	χ_{CMB}^2	$7358 (\nu: 10475971.3)$
$r_{\text{drag}} h$	$99.7^{+1.6}_{-1.5}$	$H(0.38)$	$83.06^{+0.58}_{-0.55}$		
$\langle d^2 \rangle^{1/2}$	$2.429^{+0.050}_{-0.049}$	$D_{\text{M}}(0.38)$	1528^{+15}_{-15}		

$$\bar{\chi}_{\text{eff}}^2 = 11948.86; \Delta\bar{\chi}_{\text{eff}}^2 = 9150.54; R - 1 = 0.01438$$

12.16 base_nrun_CamSpecHM_TTTEEE_lowl_lowE_post_lensing_zre6p5/base_nrun_plikHM_TTTEEE_lowl_lowE_post_lensing_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02235^{+0.00031}_{-0.00032}$	$\langle d^2 \rangle^{1/2}$	$2.440^{+0.044}_{-0.045}$	$H(0.38)$	$82.88^{+0.66}_{-0.63}$
$\Omega_c h^2$	$0.1198^{+0.0023}_{-0.0023}$	z_{re}	< 8.95	$D_{\text{M}}(0.38)$	1533^{+17}_{-18}
$100\theta_{MC}$	$1.04090^{+0.00061}_{-0.00060}$	$10^9 A_s$	$2.103^{+0.059}_{-0.054}$	$H(0.51)$	$89.63^{+0.53}_{-0.50}$
τ	$0.055^{+0.013}_{-0.012}$	$10^9 A_s e^{-2\tau}$	$1.882^{+0.023}_{-0.023}$	$D_{\text{M}}(0.51)$	1985^{+20}_{-21}
$\ln(10^{10} A_s)$	$3.046^{+0.028}_{-0.026}$	D_{40}	1224^{+36}_{-35}	$H(0.61)$	$95.27^{+0.44}_{-0.42}$
n_s	$0.9649^{+0.0086}_{-0.0087}$	D_{220}	5727^{+77}_{-77}	$D_{\text{M}}(0.61)$	2310^{+22}_{-23}
n_{run}	$-0.003^{+0.014}_{-0.014}$	D_{810}	2538^{+27}_{-27}	$H(2.33)$	$236.4^{+1.4}_{-1.4}$
y_{cal}	$1.0005^{+0.0049}_{-0.0048}$	D_{1420}	$815.9^{+9.6}_{-9.7}$	$D_{\text{M}}(2.33)$	5764^{+20}_{-21}
A_{217}^{CIB}	44^{+20}_{-20}	D_{2000}	$230.2^{+3.6}_{-3.5}$	$f\sigma_8(0.15)$	$0.459^{+0.013}_{-0.013}$
$\xi^{tSZ-CIB}$	—	$n_{s,0.002}$	$0.973^{+0.042}_{-0.041}$	$\sigma_8(0.15)$	$0.749^{+0.010}_{-0.0095}$
A_{143}^{tSZ}	$4.5^{+3.9}_{-4.2}$	Y_P	$0.24539^{+0.00012}_{-0.00013}$	$f\sigma_8(0.38)$	$0.477^{+0.010}_{-0.010}$
A_{100}^{PS}	252^{+60}_{-60}	Y_P^{BBN}	$0.24671^{+0.00012}_{-0.00013}$	$\sigma_8(0.38)$	$0.6635^{+0.0092}_{-0.0082}$
A_{143}^{PS}	44^{+20}_{-20}	$10^5 D/H$	$2.590^{+0.060}_{-0.056}$	$f\sigma_8(0.51)$	$0.4749^{+0.0090}_{-0.0090}$
A_{217}^{PS}	108^{+20}_{-30}	Age/Gyr	$13.799^{+0.046}_{-0.047}$	$\sigma_8(0.51)$	$0.6208^{+0.0083}_{-0.0079}$
A^{kSZ}	—	z_*	$1089.93^{+0.51}_{-0.50}$	$f\sigma_8(0.61)$	$0.4697^{+0.0081}_{-0.0082}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	r_*	$144.50^{+0.57}_{-0.56}$	$\sigma_8(0.61)$	$0.5906^{+0.0079}_{-0.0075}$
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	$100\theta_*$	$1.04108^{+0.00059}_{-0.00059}$	$f\sigma_8(2.33)$	$0.2977^{+0.0041}_{-0.0038}$
H_0	$67.4^{+1.0}_{-1.0}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.879^{+0.054}_{-0.053}$	$\sigma_8(2.33)$	$0.3068^{+0.0044}_{-0.0041}$
Ω_Λ	$0.686^{+0.014}_{-0.014}$	z_{drag}	$1059.87^{+0.67}_{-0.70}$	f_{2000}^{143}	30^{+6}_{-6}
Ω_m	$0.314^{+0.014}_{-0.014}$	r_{drag}	$147.17^{+0.59}_{-0.58}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-4}
$\Omega_m h^2$	$0.1428^{+0.0022}_{-0.0022}$	k_{D}	$0.14077^{+0.00069}_{-0.00074}$	f_{2000}^{217}	$107.4^{+4.1}_{-4.2}$
$\Omega_m h^3$	$0.09624^{+0.00068}_{-0.00070}$	$100\theta_{\text{D}}$	$0.16079^{+0.00041}_{-0.00038}$	χ_{lensing}^2	$9.35 (\nu: 0.3)$
σ_8	$0.811^{+0.012}_{-0.011}$	z_{eq}	3397^{+53}_{-54}	χ_{small}^2	$397.0 (\nu: 1.5)$
S_8	$0.830^{+0.025}_{-0.025}$	k_{eq}	$0.01037^{+0.00016}_{-0.00016}$	χ_{lowl}^2	$23.0 (\nu: 1.7)$
$\sigma_8 \Omega_m^{0.5}$	$0.455^{+0.014}_{-0.014}$	$100\theta_{\text{eq}}$	$0.814^{+0.010}_{-0.0098}$	χ_{prior}^2	$9.7 (\nu: 10.0)$
$\sigma_8 \Omega_m^{0.25}$	$0.607^{+0.013}_{-0.013}$	$100\theta_{\text{s,eq}}$	$0.4498^{+0.0052}_{-0.0051}$	χ_{CMB}^2	$7367 (\nu: 10475999.2)$
$\sigma_8/h^{0.5}$	$0.988^{+0.018}_{-0.018}$	$H(0.15)$	$72.71^{+0.90}_{-0.87}$		
$r_{\text{drag}} h$	$99.2^{+1.8}_{-1.8}$	$D_{\text{M}}(0.15)$	$643.1^{+8.7}_{-8.9}$		

$\bar{\chi}_{\text{eff}}^2 = 11951.93$; $\Delta\bar{\chi}_{\text{eff}}^2 = 9150.82$; $R - 1 = 0.01119$

12.17 base_nrun_CamSpecHM_TTTEEE_lowl_lowE_post_BAO_lensing_zre6p5/base_nrun_plikHM_TTTEEE_lowl_lowE_post_BAO_lensing

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02239^{+0.00029}_{-0.00031}$	z_{re}	$7.9^{+1.2}_{-1.3}$	$H(0.51)$	$89.75^{+0.44}_{-0.43}$
$\Omega_c h^2$	$0.1192^{+0.0018}_{-0.0018}$	$10^9 A_s$	$2.106^{+0.060}_{-0.056}$	$D_{\text{M}}(0.51)$	1980^{+17}_{-16}
$100\theta_{MC}$	$1.04098^{+0.00058}_{-0.00059}$	$10^9 A_s e^{-2\tau}$	$1.880^{+0.022}_{-0.022}$	$H(0.61)$	$95.37^{+0.37}_{-0.37}$
τ	$0.057^{+0.013}_{-0.012}$	D_{40}	1222^{+35}_{-35}	$D_{\text{M}}(0.61)$	2304^{+18}_{-18}
$\ln(10^{10} A_s)$	$3.047^{+0.029}_{-0.027}$	D_{220}	5731^{+77}_{-75}	$H(2.33)$	$236.1^{+1.2}_{-1.2}$
n_s	$0.9664^{+0.0079}_{-0.0078}$	D_{810}	2538^{+27}_{-26}	$D_{\text{M}}(2.33)$	5760^{+18}_{-18}
n_{run}	$-0.002^{+0.014}_{-0.014}$	D_{1420}	$816.6^{+9.4}_{-9.4}$	$f\sigma_8(0.15)$	$0.456^{+0.011}_{-0.011}$
y_{cal}	$1.0007^{+0.0048}_{-0.0047}$	D_{2000}	$230.5^{+3.4}_{-3.5}$	$\sigma_8(0.15)$	$0.748^{+0.011}_{-0.0097}$
A_{217}^{CIB}	44^{+20}_{-20}	$n_{s,0.002}$	$0.974^{+0.042}_{-0.041}$	$f\sigma_8(0.38)$	$0.4745^{+0.0090}_{-0.0090}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.24540^{+0.00011}_{-0.00013}$	$\sigma_8(0.38)$	$0.6634^{+0.0094}_{-0.0083}$
A_{143}^{tSZ}	$4.6^{+3.9}_{-4.3}$	Y_P^{BBN}	$0.24673^{+0.00011}_{-0.00013}$	$f\sigma_8(0.51)$	$0.4732^{+0.0082}_{-0.0081}$
A_{100}^{PS}	251^{+60}_{-60}	$10^5 D/H$	$2.582^{+0.059}_{-0.053}$	$\sigma_8(0.51)$	$0.6209^{+0.0089}_{-0.0078}$
A_{143}^{PS}	43^{+20}_{-20}	Age/Gyr	$13.790^{+0.042}_{-0.042}$	$f\sigma_8(0.61)$	$0.4683^{+0.0077}_{-0.0075}$
A_{217}^{PS}	109^{+20}_{-30}	z_*	$1089.83^{+0.46}_{-0.44}$	$\sigma_8(0.61)$	$0.5908^{+0.0081}_{-0.0077}$
A^{kSZ}	—	r_*	$144.62^{+0.48}_{-0.46}$	$f\sigma_8(2.33)$	$0.2979^{+0.0042}_{-0.0039}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	$100\theta_*$	$1.04116^{+0.00057}_{-0.00058}$	$\sigma_8(2.33)$	$0.3072^{+0.0044}_{-0.0041}$
c_{217}	$0.9997^{+0.0038}_{-0.0027}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.890^{+0.047}_{-0.045}$	f_{2000}^{143}	30^{+6}_{-6}
H_0	$67.67^{+0.82}_{-0.81}$	z_{drag}	$1059.93^{+0.65}_{-0.72}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
Ω_{Λ}	$0.689^{+0.011}_{-0.011}$	r_{drag}	$147.28^{+0.53}_{-0.51}$	f_{2000}^{217}	$107.2^{+4.0}_{-4.2}$
Ω_m	$0.311^{+0.011}_{-0.011}$	k_{D}	$0.14069^{+0.00065}_{-0.00071}$	χ_{lensing}^2	$9.25 (\nu: 0.2)$
$\Omega_m h^2$	$0.1422^{+0.0018}_{-0.0018}$	$100\theta_{\text{D}}$	$0.16077^{+0.00041}_{-0.00037}$	χ_{simall}^2	$397.2 (\nu: 1.8)$
$\Omega_m h^3$	$0.09625^{+0.00068}_{-0.00071}$	z_{eq}	3384^{+42}_{-43}	χ_{lowl}^2	$22.9 (\nu: 1.6)$
σ_8	$0.810^{+0.012}_{-0.011}$	k_{eq}	$0.01033^{+0.00013}_{-0.00013}$	$\chi_{6\text{DF}}^2$	$0.050 (\nu: 0.0)$
S_8	$0.824^{+0.021}_{-0.021}$	$100\theta_{\text{eq}}$	$0.8167^{+0.0080}_{-0.0077}$	χ_{MGS}^2	$1.27 (\nu: 0.1)$
$\sigma_8 \Omega_m^{0.5}$	$0.451^{+0.011}_{-0.011}$	$100\theta_{\text{s,eq}}$	$0.4511^{+0.0041}_{-0.0040}$	χ_{DR12BAO}^2	$4.7 (\nu: 0.8)$
$\sigma_8 \Omega_m^{0.25}$	$0.605^{+0.011}_{-0.011}$	$H(0.15)$	$72.94^{+0.71}_{-0.70}$	χ_{prior}^2	$9.6 (\nu: 10.0)$
$\sigma_8/h^{0.5}$	$0.984^{+0.016}_{-0.016}$	$D_{\text{M}}(0.15)$	$640.8^{+7.0}_{-6.9}$	χ_{CMB}^2	$7367 (\nu: 10476208.7)$
$r_{\text{drag}} h$	$99.7^{+1.4}_{-1.4}$	$H(0.38)$	$83.04^{+0.53}_{-0.52}$	χ_{BAO}^2	$6.1 (\nu: 0.5)$
$\langle d^2 \rangle^{1/2}$	$2.433^{+0.041}_{-0.042}$	$D_{\text{M}}(0.38)$	1528^{+14}_{-14}		

$$\bar{\chi}_{\text{eff}}^2 = 11957.93; \Delta\bar{\chi}_{\text{eff}}^2 = 9150.73; R - 1 = 0.01735$$

12.18 base_nrun_CamSpecHM_TTTEEE_lowl_lowE_post_Riess18_zre6p5/base_nrun_plikHM_TTTEEE_lowl_lowE_post_Riess18_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02247^{+0.00032}_{-0.00033}$	$\langle d^2 \rangle^{1/2}$	$2.417^{+0.056}_{-0.056}$	$H(0.38)$	$83.30^{+0.74}_{-0.70}$
$\Omega_c h^2$	$0.1184^{+0.0026}_{-0.0026}$	z_{re}	< 9.21	$D_{\text{M}}(0.38)$	1521^{+19}_{-19}
$100\theta_{MC}$	$1.04109^{+0.00059}_{-0.00062}$	$10^9 A_s$	$2.104^{+0.070}_{-0.064}$	$H(0.51)$	$89.96^{+0.59}_{-0.56}$
τ	$0.057^{+0.015}_{-0.013}$	$10^9 A_s e^{-2\tau}$	$1.876^{+0.025}_{-0.025}$	$D_{\text{M}}(0.51)$	1972^{+23}_{-23}
$\ln(10^{10} A_s)$	$3.046^{+0.033}_{-0.031}$	D_{40}	1216^{+37}_{-35}	$H(0.61)$	$95.53^{+0.49}_{-0.45}$
n_s	$0.9686^{+0.0092}_{-0.0093}$	D_{220}	5733^{+81}_{-75}	$D_{\text{M}}(0.61)$	2295^{+24}_{-24}
n_{run}	$-0.003^{+0.014}_{-0.014}$	D_{810}	2537^{+27}_{-27}	$H(2.33)$	$235.6^{+1.6}_{-1.6}$
y_{cal}	$1.0006^{+0.0047}_{-0.0047}$	D_{1420}	$817.0^{+9.3}_{-9.2}$	$D_{\text{M}}(2.33)$	5753^{+21}_{-22}
A_{217}^{CIB}	43^{+20}_{-20}	D_{2000}	$230.7^{+3.5}_{-3.4}$	$f\sigma_8(0.15)$	$0.451^{+0.016}_{-0.017}$
$\xi^{tSZ-CIB}$	—	$n_{s,0.002}$	$0.978^{+0.042}_{-0.041}$	$\sigma_8(0.15)$	$0.746^{+0.013}_{-0.013}$
A_{143}^{tSZ}	$4.6^{+3.9}_{-4.2}$	Y_P	$0.24543^{+0.00012}_{-0.00013}$	$f\sigma_8(0.38)$	$0.470^{+0.014}_{-0.013}$
A_{100}^{PS}	250^{+60}_{-50}	Y_P^{BBN}	$0.24676^{+0.00012}_{-0.00013}$	$\sigma_8(0.38)$	$0.662^{+0.011}_{-0.010}$
A_{143}^{PS}	42^{+20}_{-20}	$10^5 D/H$	$2.567^{+0.061}_{-0.058}$	$f\sigma_8(0.51)$	$0.470^{+0.012}_{-0.012}$
A_{217}^{PS}	108^{+30}_{-30}	Age/Gyr	$13.775^{+0.047}_{-0.049}$	$\sigma_8(0.51)$	$0.620^{+0.010}_{-0.0096}$
A^{kSZ}	—	z_*	$1089.65^{+0.53}_{-0.52}$	$f\sigma_8(0.61)$	$0.465^{+0.011}_{-0.011}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	r_*	$144.78^{+0.65}_{-0.63}$	$\sigma_8(0.61)$	$0.5899^{+0.0098}_{-0.0090}$
c_{217}	$0.9997^{+0.0038}_{-0.0027}$	$100\theta_*$	$1.04127^{+0.00058}_{-0.00061}$	$f\sigma_8(2.33)$	$0.2977^{+0.0049}_{-0.0044}$
H_0	$68.1^{+1.2}_{-1.1}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.904^{+0.059}_{-0.060}$	$\sigma_8(2.33)$	$0.3072^{+0.0050}_{-0.0046}$
Ω_{Λ}	$0.695^{+0.015}_{-0.016}$	z_{drag}	$1060.05^{+0.68}_{-0.73}$	f_{2000}^{143}	30^{+6}_{-6}
Ω_m	$0.305^{+0.016}_{-0.015}$	r_{drag}	$147.41^{+0.68}_{-0.65}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
$\Omega_m h^2$	$0.1415^{+0.0025}_{-0.0025}$	k_{D}	$0.14061^{+0.00074}_{-0.00080}$	f_{2000}^{217}	$107.0^{+4.0}_{-4.2}$
$\Omega_m h^3$	$0.09631^{+0.00069}_{-0.00072}$	$100\theta_{\text{D}}$	$0.16070^{+0.00041}_{-0.00037}$	χ_{small}^2	$397.3 (\nu: 2.6)$
σ_8	$0.807^{+0.015}_{-0.015}$	z_{eq}	3366^{+60}_{-60}	χ_{lowl}^2	$22.4 (\nu: 1.3)$
S_8	$0.814^{+0.032}_{-0.032}$	k_{eq}	$0.01027^{+0.00018}_{-0.00018}$	χ_{H073p45}^2	$10.6 (\nu: 2.6)$
$\sigma_8 \Omega_m^{0.5}$	$0.446^{+0.017}_{-0.018}$	$100\theta_{\text{eq}}$	$0.820^{+0.011}_{-0.011}$	χ_{prior}^2	$9.7 (\nu: 10.0)$
$\sigma_8 \Omega_m^{0.25}$	$0.600^{+0.017}_{-0.016}$	$100\theta_{\text{s,eq}}$	$0.4530^{+0.0060}_{-0.0058}$	χ_{CMB}^2	$7359 (\nu: 10476066.7)$
$\sigma_8/h^{0.5}$	$0.978^{+0.024}_{-0.023}$	$H(0.15)$	$73.29^{+0.98}_{-0.97}$		
$r_{\text{drag}} h$	$100.4^{+2.1}_{-2.0}$	$D_{\text{M}}(0.15)$	$637.3^{+9.7}_{-9.6}$		

$\bar{\chi}_{\text{eff}}^2 = 11954.85$; $\Delta\bar{\chi}_{\text{eff}}^2 = 9150.33$; $R - 1 = 0.05101$

15 nrun+r

15.1 base_nrun_r_CamSpecHM_TT_lowl_lowE/base_nrun_r_plikHM_TT_lowl_lowE

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02222^{+0.00047}_{-0.00046}$	z_{re}	$7.6^{+1.6}_{-1.7}$	$D_{\text{M}}(0.51)$	1992^{+37}_{-37}
$\Omega_c h^2$	$0.1203^{+0.0042}_{-0.0042}$	$10^9 A_s$	$2.098^{+0.075}_{-0.072}$	$H(0.61)$	$95.13^{+0.74}_{-0.69}$
$100\theta_{MC}$	$1.04085^{+0.00093}_{-0.00094}$	$10^9 A_s e^{-2\tau}$	$1.885^{+0.028}_{-0.028}$	$D_{\text{M}}(0.61)$	2317^{+39}_{-40}
τ	$0.054^{+0.017}_{-0.016}$	D_{40}	1233^{+46}_{-43}	$H(2.33)$	$236.6^{+2.5}_{-2.5}$
$\ln(10^{10} A_s)$	$3.044^{+0.035}_{-0.035}$	D_{220}	5706^{+82}_{-82}	$D_{\text{M}}(2.33)$	5772^{+33}_{-34}
n_s	$0.963^{+0.012}_{-0.012}$	D_{810}	2538^{+28}_{-27}	$f\sigma_8(0.15)$	$0.461^{+0.024}_{-0.024}$
n_{run}	$-0.007^{+0.016}_{-0.017}$	D_{1420}	814^{+10}_{-10}	$\sigma_8(0.15)$	$0.748^{+0.015}_{-0.015}$
r	< 0.156	D_{2000}	$229.0^{+3.8}_{-3.8}$	$f\sigma_8(0.38)$	$0.478^{+0.019}_{-0.019}$
y_{cal}	$1.0005^{+0.0049}_{-0.0049}$	$n_{s,0.002}$	$0.987^{+0.053}_{-0.050}$	$\sigma_8(0.38)$	$0.663^{+0.012}_{-0.012}$
A_{217}^{CIB}	45^{+20}_{-20}	Y_P	$0.24533^{+0.00018}_{-0.00021}$	$f\sigma_8(0.51)$	$0.476^{+0.016}_{-0.016}$
$\xi^{tSZ-CIB}$	—	Y_P^{BBN}	$0.24665^{+0.00019}_{-0.00022}$	$\sigma_8(0.51)$	$0.620^{+0.011}_{-0.011}$
A_{143}^{tSZ}	$4.2^{+3.7}_{-4.2}$	$10^5 D/H$	$2.615^{+0.088}_{-0.087}$	$f\sigma_8(0.61)$	$0.470^{+0.014}_{-0.015}$
A_{100}^{PS}	256^{+60}_{-60}	Age/Gyr	$13.816^{+0.074}_{-0.076}$	$\sigma_8(0.61)$	$0.590^{+0.010}_{-0.010}$
A_{143}^{PS}	47^{+20}_{-20}	z_*	$1090.14^{+0.83}_{-0.83}$	$f\sigma_8(2.33)$	$0.2970^{+0.0051}_{-0.0051}$
A_{217}^{PS}	107^{+30}_{-30}	r_*	$144.46^{+0.98}_{-0.96}$	$\sigma_8(2.33)$	$0.3059^{+0.0054}_{-0.0053}$
A^{kSZ}	—	$100\theta_*$	$1.04105^{+0.00091}_{-0.00092}$	$r_{0.002}$	< 0.160
c_{100}	$0.9985^{+0.0022}_{-0.0027}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.877^{+0.090}_{-0.089}$	$r_{0.01}$	< 0.155
c_{217}	$0.9998^{+0.0038}_{-0.0028}$	z_{drag}	$1059.6^{+1.0}_{-0.97}$	$\ln(10^{10} A_t)$	$-0.3^{+1.9}_{-2.5}$
H_0	$67.1^{+1.9}_{-1.8}$	r_{drag}	$147.18^{+0.99}_{-0.97}$	$r_{L=10}$	< 0.0843
Ω_{Λ}	$0.682^{+0.025}_{-0.026}$	k_{D}	$0.1407^{+0.0011}_{-0.0011}$	$10^9 A_t$	< 0.327
Ω_m	$0.318^{+0.026}_{-0.025}$	$100\theta_{\text{D}}$	$0.16095^{+0.00058}_{-0.00057}$	$10^9 A_t e^{-2\tau}$	< 0.293
$\Omega_m h^2$	$0.1432^{+0.0040}_{-0.0040}$	z_{eq}	3406^{+95}_{-95}	f_{2000}^{143}	32^{+7}_{-7}
$\Omega_m h^3$	$0.09606^{+0.00099}_{-0.00097}$	k_{eq}	$0.01040^{+0.00029}_{-0.00029}$	$f_{2000}^{143 \times 217}$	34^{+5}_{-5}
σ_8	$0.811^{+0.018}_{-0.018}$	$100\theta_{\text{eq}}$	$0.812^{+0.018}_{-0.017}$	f_{2000}^{217}	$108.5^{+4.2}_{-4.3}$
S_8	$0.835^{+0.048}_{-0.047}$	$100\theta_{\text{s,eq}}$	$0.4489^{+0.0093}_{-0.0090}$	χ_{simall}^2	$397.3 (\nu: 1.5)$
$\sigma_8 \Omega_m^{0.5}$	$0.457^{+0.026}_{-0.026}$	$H(0.15)$	$72.5^{+1.6}_{-1.5}$	χ_{lowl}^2	$23.7 (\nu: 2.6)$
$\sigma_8 \Omega_m^{0.25}$	$0.609^{+0.023}_{-0.023}$	$D_{\text{M}}(0.15)$	646^{+16}_{-16}	χ_{prior}^2	$7.5 (\nu: 6.5)$
$\sigma_8/h^{0.5}$	$0.990^{+0.032}_{-0.032}$	$H(0.38)$	$82.7^{+1.2}_{-1.1}$	χ_{CMB}^2	$4340 (\nu: 4947760.7)$
$r_{\text{drag}} h$	$98.8^{+3.3}_{-3.1}$	$D_{\text{M}}(0.38)$	1538^{+31}_{-32}		
$\langle d^2 \rangle^{1/2}$	$2.435^{+0.077}_{-0.078}$	$H(0.51)$	$89.46^{+0.92}_{-0.86}$		

Best-fit $\chi_{\text{eff}}^2 = 7471.53$; $\Delta\chi_{\text{eff}}^2 = 6292.12$; $\bar{\chi}_{\text{eff}}^2 = 7493.80$; $\Delta\bar{\chi}_{\text{eff}}^2 = 6291.84$; $R - 1 = 0.00512$

χ_{eff}^2 : CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.90 (Δ -0.00) commander_dx12_v3_2_29: 22.71 (Δ -0.02) CamSpec like_10.7HM: 7050.49

15.2 base_nrun_r_CamSpecHM_TT_lowl_lowE_post_BAO/base_nrun_r_plikHM_TT_lowl_lowE_post_BAO

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02230^{+0.00043}_{-0.00043}$	$10^9 A_s$	$2.097^{+0.076}_{-0.072}$	$D_M(0.61)$	2303^{+24}_{-24}
$\Omega_c h^2$	$0.1189^{+0.0024}_{-0.0024}$	$10^9 A_s e^{-2\tau}$	$1.879^{+0.025}_{-0.024}$	$H(2.33)$	$235.8^{+1.6}_{-1.6}$
$100\theta_{MC}$	$1.04104^{+0.00081}_{-0.00081}$	D_{40}	1228^{+45}_{-42}	$D_M(2.33)$	5763^{+25}_{-26}
τ	$0.055^{+0.017}_{-0.016}$	D_{220}	5712^{+82}_{-80}	$f\sigma_8(0.15)$	$0.453^{+0.015}_{-0.015}$
$\ln(10^{10} A_s)$	$3.043^{+0.036}_{-0.035}$	D_{810}	2537^{+28}_{-27}	$\sigma_8(0.15)$	$0.746^{+0.014}_{-0.013}$
n_s	$0.9668^{+0.0090}_{-0.0088}$	D_{1420}	815^{+10}_{-10}	$f\sigma_8(0.38)$	$0.472^{+0.013}_{-0.013}$
n_{run}	$-0.007^{+0.016}_{-0.017}$	D_{2000}	$229.3^{+3.7}_{-3.7}$	$\sigma_8(0.38)$	$0.661^{+0.012}_{-0.011}$
r	< 0.166	$n_{s,0.002}$	$0.989^{+0.054}_{-0.050}$	$f\sigma_8(0.51)$	$0.471^{+0.011}_{-0.012}$
y_{cal}	$1.0005^{+0.0050}_{-0.0049}$	Y_P	$0.24536^{+0.00017}_{-0.00019}$	$\sigma_8(0.51)$	$0.619^{+0.011}_{-0.011}$
A_{217}^{CIB}	45^{+20}_{-20}	Y_P^{BBN}	$0.24669^{+0.00017}_{-0.00019}$	$f\sigma_8(0.61)$	$0.466^{+0.011}_{-0.011}$
$\xi^{tSZ-CIB}$	—	$10^5 D/H$	$2.600^{+0.081}_{-0.079}$	$\sigma_8(0.61)$	$0.589^{+0.010}_{-0.010}$
A_{143}^{tSZ}	$4.3^{+3.7}_{-4.2}$	Age/Gyr	$13.796^{+0.057}_{-0.058}$	$f\sigma_8(2.33)$	$0.2970^{+0.0052}_{-0.0050}$
A_{100}^{PS}	256^{+60}_{-50}	z_*	$1089.92^{+0.62}_{-0.61}$	$\sigma_8(2.33)$	$0.3063^{+0.0054}_{-0.0052}$
A_{143}^{PS}	46^{+20}_{-20}	r_*	$144.77^{+0.65}_{-0.65}$	$r_{0.002}$	< 0.172
A_{217}^{PS}	107^{+30}_{-30}	$100\theta_*$	$1.04123^{+0.00080}_{-0.00080}$	$r_{0.01}$	< 0.166
A^{kSZ}	—	$D_M(z_*)/\text{Gpc}$	$13.904^{+0.063}_{-0.064}$	$\ln(10^{10} A_t)$	$-0.3^{+1.9}_{-2.5}$
c_{100}	$0.9985^{+0.0022}_{-0.0026}$	z_{drag}	$1059.69^{+0.97}_{-0.98}$	$r_{L=10}$	< 0.0913
c_{217}	$0.9998^{+0.0038}_{-0.0028}$	r_{drag}	$147.46^{+0.73}_{-0.73}$	$10^9 A_t$	< 0.351
H_0	$67.7^{+1.1}_{-1.1}$	k_D	$0.14042^{+0.00098}_{-0.00097}$	$10^9 A_t e^{-2\tau}$	< 0.313
Ω_Λ	$0.691^{+0.014}_{-0.014}$	$100\theta_D$	$0.16091^{+0.00058}_{-0.00056}$	f_{2000}^{143}	32^{+6}_{-6}
Ω_m	$0.309^{+0.014}_{-0.014}$	z_{eq}	3374^{+57}_{-57}	$f_{2000}^{143 \times 217}$	34^{+5}_{-5}
$\Omega_m h^2$	$0.1418^{+0.0024}_{-0.0024}$	k_{eq}	$0.01030^{+0.00017}_{-0.00017}$	f_{2000}^{217}	$108.3^{+4.2}_{-4.3}$
$\Omega_m h^3$	$0.09606^{+0.00099}_{-0.00096}$	$100\theta_{\text{eq}}$	$0.818^{+0.011}_{-0.010}$	χ_{small}^2	$397.4 (\nu: 1.7)$
σ_8	$0.807^{+0.015}_{-0.015}$	$100\theta_{s,\text{eq}}$	$0.4520^{+0.0055}_{-0.0054}$	χ_{lowl}^2	$23.3 (\nu: 2.2)$
S_8	$0.819^{+0.029}_{-0.029}$	$H(0.15)$	$72.98^{+0.95}_{-0.92}$	$\chi_{6\text{DF}}^2$	$0.053 (\nu: 0.0)$
$\sigma_8 \Omega_m^{0.5}$	$0.449^{+0.016}_{-0.016}$	$D_M(0.15)$	$640.3^{+9.2}_{-9.3}$	χ_{MGS}^2	$1.41 (\nu: 0.1)$
$\sigma_8 \Omega_m^{0.25}$	$0.602^{+0.016}_{-0.016}$	$H(0.38)$	$83.05^{+0.72}_{-0.69}$	χ_{DR12BAO}^2	$4.7 (\nu: 1.2)$
$\sigma_8/h^{0.5}$	$0.980^{+0.023}_{-0.023}$	$D_M(0.38)$	1528^{+18}_{-19}	χ_{prior}^2	$7.6 (\nu: 6.5)$
$r_{\text{drag}} h$	$99.9^{+1.9}_{-1.8}$	$H(0.51)$	$89.74^{+0.60}_{-0.57}$	χ_{BAO}^2	$6.1 (\nu: 0.8)$
$\langle d^2 \rangle^{1/2}$	$2.413^{+0.058}_{-0.059}$	$D_M(0.51)$	1979^{+22}_{-22}	χ_{CMB}^2	$4340 (\nu: 4947745.1)$
z_{re}	$7.7^{+1.6}_{-1.7}$	$H(0.61)$	$95.34^{+0.51}_{-0.49}$		

$$\bar{\chi}_{\text{eff}}^2 = 7499.85; \Delta \bar{\chi}_{\text{eff}}^2 = 6291.73; R - 1 = 0.00974$$

15.3 base_nrun_r_CamSpecHM_TT_lowl_lowE_post_zre6p5/base_nrun_r_plikHM_TT_lowl_lowE_post_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02223^{+0.00047}_{-0.00045}$	z_{re}	< 9.04	$D_{\text{M}}(0.51)$	1991^{+36}_{-37}
$\Omega_c h^2$	$0.1203^{+0.0041}_{-0.0041}$	$10^9 A_s$	$2.104^{+0.066}_{-0.060}$	$H(0.61)$	$95.14^{+0.74}_{-0.68}$
$100\theta_{MC}$	$1.04086^{+0.00093}_{-0.00094}$	$10^9 A_s e^{-2\tau}$	$1.885^{+0.028}_{-0.028}$	$D_{\text{M}}(0.61)$	2316^{+39}_{-40}
τ	$0.055^{+0.014}_{-0.012}$	D_{40}	1232^{+46}_{-43}	$H(2.33)$	$236.6^{+2.5}_{-2.5}$
$\ln(10^{10} A_s)$	$3.046^{+0.031}_{-0.029}$	D_{220}	5706^{+82}_{-81}	$D_{\text{M}}(2.33)$	5771^{+32}_{-34}
n_s	$0.964^{+0.012}_{-0.012}$	D_{810}	2537^{+28}_{-27}	$f\sigma_8(0.15)$	$0.461^{+0.024}_{-0.024}$
n_{run}	$-0.008^{+0.016}_{-0.017}$	D_{1420}	814^{+10}_{-10}	$\sigma_8(0.15)$	$0.749^{+0.014}_{-0.014}$
r	< 0.157	D_{2000}	$229.0^{+3.8}_{-3.8}$	$f\sigma_8(0.38)$	$0.478^{+0.019}_{-0.019}$
y_{cal}	$1.0005^{+0.0049}_{-0.0049}$	$n_{s,0.002}$	$0.988^{+0.053}_{-0.050}$	$\sigma_8(0.38)$	$0.663^{+0.012}_{-0.011}$
A_{217}^{CIB}	45^{+20}_{-20}	Y_P	$0.24533^{+0.00018}_{-0.00021}$	$f\sigma_8(0.51)$	$0.476^{+0.016}_{-0.016}$
$\xi^{tSZ-CIB}$	—	Y_P^{BBN}	$0.24666^{+0.00018}_{-0.00021}$	$\sigma_8(0.51)$	$0.621^{+0.011}_{-0.0094}$
A_{143}^{tSZ}	$4.2^{+3.7}_{-4.2}$	$10^5 D/H$	$2.613^{+0.087}_{-0.086}$	$f\sigma_8(0.61)$	$0.471^{+0.014}_{-0.014}$
A_{100}^{PS}	256^{+60}_{-60}	Age/Gyr	$13.814^{+0.073}_{-0.075}$	$\sigma_8(0.61)$	$0.5903^{+0.0094}_{-0.0090}$
A_{143}^{PS}	47^{+20}_{-20}	z_*	$1090.12^{+0.81}_{-0.82}$	$f\sigma_8(2.33)$	$0.2974^{+0.0045}_{-0.0043}$
A_{217}^{PS}	107^{+30}_{-30}	r_*	$144.48^{+0.97}_{-0.96}$	$\sigma_8(2.33)$	$0.3064^{+0.0047}_{-0.0044}$
A^{kSZ}	—	$100\theta_*$	$1.04106^{+0.00091}_{-0.00092}$	$r_{0.002}$	< 0.161
c_{100}	$0.9985^{+0.0022}_{-0.0027}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.878^{+0.090}_{-0.089}$	$r_{0.01}$	< 0.156
c_{217}	$0.9998^{+0.0038}_{-0.0028}$	z_{drag}	$1059.62^{+0.99}_{-0.99}$	$\ln(10^{10} A_t)$	$-0.3^{+1.9}_{-2.5}$
H_0	$67.1^{+1.9}_{-1.8}$	r_{drag}	$147.18^{+0.99}_{-0.97}$	$r_{L=10}$	< 0.0852
Ω_{Λ}	$0.682^{+0.025}_{-0.026}$	k_{D}	$0.1407^{+0.0011}_{-0.0011}$	$10^9 A_t$	< 0.331
Ω_m	$0.318^{+0.026}_{-0.025}$	$100\theta_{\text{D}}$	$0.16094^{+0.00057}_{-0.00057}$	$10^9 A_t e^{-2\tau}$	< 0.296
$\Omega_m h^2$	$0.1431^{+0.0039}_{-0.0040}$	z_{eq}	3405^{+94}_{-95}	f_{2000}^{143}	32^{+6}_{-7}
$\Omega_m h^3$	$0.09608^{+0.00098}_{-0.00096}$	k_{eq}	$0.01039^{+0.00029}_{-0.00029}$	$f_{2000}^{143 \times 217}$	34^{+5}_{-5}
σ_8	$0.811^{+0.017}_{-0.017}$	$100\theta_{\text{eq}}$	$0.812^{+0.018}_{-0.017}$	f_{2000}^{217}	$108.5^{+4.2}_{-4.3}$
S_8	$0.835^{+0.048}_{-0.047}$	$100\theta_{s,\text{eq}}$	$0.4491^{+0.0093}_{-0.0089}$	χ_{small}^2	$397.2 (\nu: 1.5)$
$\sigma_8 \Omega_m^{0.5}$	$0.457^{+0.026}_{-0.026}$	$H(0.15)$	$72.5^{+1.6}_{-1.5}$	χ_{lowl}^2	$23.6 (\nu: 2.5)$
$\sigma_8 \Omega_m^{0.25}$	$0.609^{+0.023}_{-0.023}$	$D_{\text{M}}(0.15)$	645^{+16}_{-16}	χ_{prior}^2	$7.5 (\nu: 6.5)$
$\sigma_8/h^{0.5}$	$0.990^{+0.031}_{-0.032}$	$H(0.38)$	$82.7^{+1.2}_{-1.1}$	χ_{CMB}^2	$4340 (\nu: 4947793.4)$
$r_{\text{drag}} h$	$98.8^{+3.3}_{-3.1}$	$D_{\text{M}}(0.38)$	1538^{+31}_{-32}		
$\langle d^2 \rangle^{1/2}$	$2.437^{+0.077}_{-0.077}$	$H(0.51)$	$89.48^{+0.92}_{-0.86}$		

$$\bar{\chi}_{\text{eff}}^2 = 7493.58; \Delta \bar{\chi}_{\text{eff}}^2 = 6291.86; R - 1 = 0.00549$$

15.4 base_nrun_r_CamSpecHM_TT_lowl_lowE_post_BAO_zre6p5/base_nrun_r_plikHM_TT_lowl_lowE_post_BAO_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02230^{+0.00043}_{-0.00043}$	$10^9 A_s$	$2.102^{+0.067}_{-0.062}$	$D_M(0.61)$	2303^{+24}_{-24}
$\Omega_c h^2$	$0.1189^{+0.0024}_{-0.0024}$	$10^9 A_s e^{-2\tau}$	$1.879^{+0.025}_{-0.024}$	$H(2.33)$	$235.8^{+1.6}_{-1.6}$
$100\theta_{MC}$	$1.04104^{+0.00081}_{-0.00082}$	D_{40}	1228^{+46}_{-42}	$D_M(2.33)$	5762^{+25}_{-25}
τ	$0.056^{+0.014}_{-0.013}$	D_{220}	5712^{+82}_{-80}	$f\sigma_8(0.15)$	$0.454^{+0.015}_{-0.015}$
$\ln(10^{10} A_s)$	$3.045^{+0.032}_{-0.030}$	D_{810}	2537^{+28}_{-27}	$\sigma_8(0.15)$	$0.746^{+0.013}_{-0.012}$
n_s	$0.9668^{+0.0090}_{-0.0088}$	D_{1420}	815^{+10}_{-10}	$f\sigma_8(0.38)$	$0.472^{+0.013}_{-0.012}$
n_{run}	$-0.007^{+0.016}_{-0.017}$	D_{2000}	$229.3^{+3.7}_{-3.7}$	$\sigma_8(0.38)$	$0.662^{+0.011}_{-0.010}$
r	< 0.167	$n_{s,0.002}$	$0.990^{+0.054}_{-0.050}$	$f\sigma_8(0.51)$	$0.471^{+0.011}_{-0.011}$
y_{cal}	$1.0005^{+0.0050}_{-0.0049}$	Y_P	$0.24536^{+0.00016}_{-0.00019}$	$\sigma_8(0.51)$	$0.6194^{+0.0098}_{-0.0094}$
A_{217}^{CIB}	45^{+20}_{-20}	Y_P^{BBN}	$0.24669^{+0.00016}_{-0.00019}$	$f\sigma_8(0.61)$	$0.467^{+0.010}_{-0.010}$
$\xi^{tSZ-CIB}$	—	$10^5 D/H$	$2.599^{+0.081}_{-0.078}$	$\sigma_8(0.61)$	$0.5895^{+0.0093}_{-0.0089}$
A_{143}^{tSZ}	$4.3^{+3.7}_{-4.2}$	Age/Gyr	$13.796^{+0.057}_{-0.058}$	$f\sigma_8(2.33)$	$0.2973^{+0.0046}_{-0.0044}$
A_{100}^{PS}	256^{+60}_{-50}	z_*	$1089.91^{+0.61}_{-0.61}$	$\sigma_8(2.33)$	$0.3066^{+0.0048}_{-0.0045}$
A_{143}^{PS}	46^{+20}_{-20}	r_*	$144.77^{+0.65}_{-0.65}$	$r_{0.002}$	< 0.173
A_{217}^{PS}	107^{+30}_{-30}	$100\theta_*$	$1.04123^{+0.00080}_{-0.00081}$	$r_{0.01}$	< 0.167
A^{kSZ}	—	$D_M(z_*)/\text{Gpc}$	$13.904^{+0.063}_{-0.064}$	$\ln(10^{10} A_t)$	$-0.2^{+1.9}_{-2.5}$
c_{100}	$0.9985^{+0.0022}_{-0.0026}$	z_{drag}	$1059.7^{+1.0}_{-0.99}$	$r_{L=10}$	< 0.0917
c_{217}	$0.9998^{+0.0038}_{-0.0028}$	r_{drag}	$147.46^{+0.73}_{-0.73}$	$10^9 A_t$	< 0.353
H_0	$67.7^{+1.1}_{-1.1}$	k_D	$0.14042^{+0.00098}_{-0.00097}$	$10^9 A_t e^{-2\tau}$	< 0.314
Ω_Λ	$0.691^{+0.014}_{-0.014}$	$100\theta_D$	$0.16091^{+0.00058}_{-0.00056}$	f_{2000}^{143}	32^{+6}_{-6}
Ω_m	$0.309^{+0.014}_{-0.014}$	z_{eq}	3374^{+57}_{-57}	$f_{2000}^{143 \times 217}$	34^{+5}_{-5}
$\Omega_m h^2$	$0.1418^{+0.0024}_{-0.0024}$	k_{eq}	$0.01030^{+0.00017}_{-0.00017}$	f_{2000}^{217}	$108.3^{+4.1}_{-4.3}$
$\Omega_m h^3$	$0.09607^{+0.00099}_{-0.00096}$	$100\theta_{\text{eq}}$	$0.818^{+0.011}_{-0.010}$	χ_{small}^2	$397.3 (\nu: 1.7)$
σ_8	$0.807^{+0.015}_{-0.014}$	$100\theta_{\text{s,eq}}$	$0.4521^{+0.0055}_{-0.0054}$	χ_{lowl}^2	$23.2 (\nu: 2.1)$
S_8	$0.820^{+0.029}_{-0.029}$	$H(0.15)$	$72.99^{+0.95}_{-0.92}$	$\chi_{6\text{DF}}^2$	$0.053 (\nu: 0.0)$
$\sigma_8 \Omega_m^{0.5}$	$0.449^{+0.016}_{-0.016}$	$D_M(0.15)$	$640.2^{+9.2}_{-9.2}$	χ_{MGS}^2	$1.42 (\nu: 0.1)$
$\sigma_8 \Omega_m^{0.25}$	$0.602^{+0.015}_{-0.015}$	$H(0.38)$	$83.06^{+0.72}_{-0.69}$	χ_{DR12BAO}^2	$4.6 (\nu: 1.1)$
$\sigma_8/h^{0.5}$	$0.981^{+0.022}_{-0.022}$	$D_M(0.38)$	1527^{+18}_{-19}	χ_{prior}^2	$7.6 (\nu: 6.5)$
$r_{\text{drag}} h$	$99.9^{+1.9}_{-1.8}$	$H(0.51)$	$89.75^{+0.60}_{-0.57}$	χ_{BAO}^2	$6.1 (\nu: 0.7)$
$\langle d^2 \rangle^{1/2}$	$2.415^{+0.057}_{-0.056}$	$D_M(0.51)$	1979^{+22}_{-22}	χ_{CMB}^2	$4340 (\nu: 4947757.5)$
z_{re}	< 9.12	$H(0.61)$	$95.35^{+0.51}_{-0.49}$		

$$\bar{\chi}_{\text{eff}}^2 = 7499.67; \Delta \bar{\chi}_{\text{eff}}^2 = 6291.73; R - 1 = 0.00851$$

15.5 base_nrun_r_CamSpecHM_TTTEEE_lowl_lowE_lensing/base_nrun_r_plikHM_TTTEEE_lowl_lowE_lensing

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02238^{+0.00032}_{-0.00033}$	z_{re}	$7.8^{+1.5}_{-1.5}$	$D_{\text{M}}(0.51)$	1984^{+22}_{-22}
$\Omega_c h^2$	$0.1197^{+0.0024}_{-0.0024}$	$10^9 A_s$	$2.105^{+0.068}_{-0.062}$	$H(0.61)$	$95.31^{+0.46}_{-0.44}$
$100\theta_{MC}$	$1.04091^{+0.00061}_{-0.00060}$	$10^9 A_s e^{-2\tau}$	$1.883^{+0.023}_{-0.023}$	$D_{\text{M}}(0.61)$	2308^{+23}_{-24}
τ	$0.056^{+0.016}_{-0.015}$	D_{40}	1236^{+43}_{-39}	$H(2.33)$	$236.4^{+1.5}_{-1.5}$
$\ln(10^{10} A_s)$	$3.047^{+0.032}_{-0.030}$	D_{220}	5721^{+79}_{-79}	$D_{\text{M}}(2.33)$	5763^{+21}_{-21}
n_s	$0.9655^{+0.0091}_{-0.0089}$	D_{810}	2540^{+27}_{-27}	$f\sigma_8(0.15)$	$0.458^{+0.013}_{-0.013}$
n_{run}	$-0.007^{+0.015}_{-0.015}$	D_{1420}	$816^{+10}_{-9.9}$	$\sigma_8(0.15)$	$0.748^{+0.011}_{-0.011}$
r	< 0.172	D_{2000}	$230.0^{+3.7}_{-3.6}$	$f\sigma_8(0.38)$	$0.476^{+0.010}_{-0.010}$
y_{cal}	$1.0007^{+0.0049}_{-0.0049}$	$n_{s,0.002}$	$0.988^{+0.048}_{-0.045}$	$\sigma_8(0.38)$	$0.6629^{+0.0097}_{-0.0094}$
A_{217}^{CIB}	44^{+20}_{-20}	Y_P	$0.24540^{+0.00012}_{-0.00013}$	$f\sigma_8(0.51)$	$0.4741^{+0.0091}_{-0.0093}$
$\xi^{tSZ-CIB}$	—	Y_P^{BBN}	$0.24672^{+0.00012}_{-0.00013}$	$\sigma_8(0.51)$	$0.6203^{+0.0092}_{-0.0088}$
A_{143}^{tSZ}	$4.5^{+3.8}_{-4.3}$	$10^5 D/H$	$2.584^{+0.062}_{-0.058}$	$f\sigma_8(0.61)$	$0.4690^{+0.0083}_{-0.0084}$
A_{100}^{PS}	253^{+60}_{-50}	Age/Gyr	$13.795^{+0.048}_{-0.048}$	$\sigma_8(0.61)$	$0.5902^{+0.0088}_{-0.0084}$
A_{143}^{PS}	45^{+20}_{-20}	z_*	$1089.88^{+0.54}_{-0.53}$	$f\sigma_8(2.33)$	$0.2975^{+0.0046}_{-0.0044}$
A_{217}^{PS}	108^{+20}_{-30}	r_*	$144.50^{+0.56}_{-0.56}$	$\sigma_8(2.33)$	$0.3066^{+0.0050}_{-0.0047}$
A^{kSZ}	—	$100\theta_*$	$1.04109^{+0.00060}_{-0.00059}$	$r_{0.002}$	< 0.177
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.880^{+0.053}_{-0.053}$	$r_{0.01}$	< 0.171
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	z_{drag}	$1059.94^{+0.68}_{-0.70}$	$\ln(10^{10} A_t)$	$0.0^{+1.7}_{-2.3}$
H_0	$67.5^{+1.1}_{-1.1}$	r_{drag}	$147.16^{+0.59}_{-0.58}$	$r_{L=10}$	< 0.0931
Ω_{Λ}	$0.686^{+0.015}_{-0.015}$	k_{D}	$0.14081^{+0.00069}_{-0.00072}$	$10^9 A_t$	< 0.362
Ω_m	$0.314^{+0.015}_{-0.015}$	$100\theta_{\text{D}}$	$0.16075^{+0.00041}_{-0.00039}$	$10^9 A_t e^{-2\tau}$	< 0.323
$\Omega_m h^2$	$0.1427^{+0.0023}_{-0.0023}$	z_{eq}	3396^{+55}_{-54}	f_{2000}^{143}	31^{+6}_{-6}
$\Omega_m h^3$	$0.09629^{+0.00067}_{-0.00069}$	k_{eq}	$0.01036^{+0.00017}_{-0.00017}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-5}
σ_8	$0.810^{+0.012}_{-0.012}$	$100\theta_{\text{eq}}$	$0.815^{+0.010}_{-0.010}$	f_{2000}^{217}	$107.7^{+4.1}_{-4.2}$
S_8	$0.828^{+0.025}_{-0.025}$	$100\theta_{s,\text{eq}}$	$0.4500^{+0.0053}_{-0.0052}$	χ^2_{lensing}	$9.56 (\nu: 0.3)$
$\sigma_8 \Omega_m^{0.5}$	$0.454^{+0.014}_{-0.014}$	$H(0.15)$	$72.77^{+0.94}_{-0.92}$	χ^2_{small}	$397.4 (\nu: 1.6)$
$\sigma_8 \Omega_m^{0.25}$	$0.606^{+0.013}_{-0.013}$	$D_{\text{M}}(0.15)$	$642.5^{+9.2}_{-9.2}$	χ^2_{lowl}	$23.8 (\nu: 2.2)$
$\sigma_8/h^{0.5}$	$0.986^{+0.018}_{-0.018}$	$H(0.38)$	$82.93^{+0.69}_{-0.67}$	χ^2_{prior}	$9.7 (\nu: 10.0)$
$r_{\text{drag}} h$	$99.3^{+1.9}_{-1.8}$	$D_{\text{M}}(0.38)$	1532^{+18}_{-19}	χ^2_{CMB}	$7368 (\nu: 10475282.5)$
$\langle d^2 \rangle^{1/2}$	$2.428^{+0.047}_{-0.048}$	$H(0.51)$	$89.67^{+0.55}_{-0.54}$		

Best-fit $\chi^2_{\text{eff}} = 11929.59$; $\Delta\chi^2_{\text{eff}} = 9155.14$; $\bar{\chi}^2_{\text{eff}} = 11953.15$; $\Delta\bar{\chi}^2_{\text{eff}} = 9150.56$; $R - 1 = 0.01351$
 χ^2_{eff} : CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb.consext8: 8.89 (Δ -0.07) small_100x143_offlike5_EE_Aplanck_B: 396.00 (Δ -0.06) commander_dx12_v3_2_29: 23.48 (Δ 0.81) CamSpec like_10.7HM_1400_unified: 11499.08

15.6 base_nrun_r_CamSpecHM_TTTEEE_lowl_lowE_lensing_post_BAO/base_nrun_r_plikHM_TTTEEE_lowl_lowE_lensing_post_BAO

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02242^{+0.00031}_{-0.00031}$	$10^9 A_s$	$2.110^{+0.068}_{-0.062}$	$D_M(0.61)$	2303^{+18}_{-19}
$\Omega_c h^2$	$0.1191^{+0.0019}_{-0.0018}$	$10^9 A_s e^{-2\tau}$	$1.881^{+0.022}_{-0.022}$	$H(2.33)$	$236.0^{+1.2}_{-1.2}$
$100\theta_{MC}$	$1.04098^{+0.00058}_{-0.00058}$	D_{40}	1234^{+44}_{-39}	$D_M(2.33)$	5758^{+19}_{-19}
τ	$0.057^{+0.015}_{-0.014}$	D_{220}	5725^{+79}_{-79}	$f\sigma_8(0.15)$	$0.455^{+0.011}_{-0.011}$
$\ln(10^{10} A_s)$	$3.049^{+0.032}_{-0.029}$	D_{810}	2540^{+27}_{-27}	$\sigma_8(0.15)$	$0.748^{+0.011}_{-0.011}$
n_s	$0.9670^{+0.0081}_{-0.0081}$	D_{1420}	$816.5^{+9.8}_{-9.8}$	$f\sigma_8(0.38)$	$0.4738^{+0.0093}_{-0.0090}$
n_{run}	$-0.007^{+0.015}_{-0.015}$	D_{2000}	$230.2^{+3.6}_{-3.6}$	$\sigma_8(0.38)$	$0.6631^{+0.0099}_{-0.0093}$
r	< 0.176	$n_{s,0.002}$	$0.989^{+0.049}_{-0.046}$	$f\sigma_8(0.51)$	$0.4726^{+0.0085}_{-0.0082}$
y_{cal}	$1.0008^{+0.0048}_{-0.0049}$	Y_P	$0.24541^{+0.00011}_{-0.00012}$	$\sigma_8(0.51)$	$0.6206^{+0.0093}_{-0.0088}$
A_{217}^{CIB}	44^{+20}_{-20}	Y_P^{BBN}	$0.24674^{+0.00012}_{-0.00013}$	$f\sigma_8(0.61)$	$0.4678^{+0.0079}_{-0.0077}$
$\xi^{tSZ-CIB}$	—	$10^5 D/H$	$2.576^{+0.059}_{-0.055}$	$\sigma_8(0.61)$	$0.5906^{+0.0090}_{-0.0084}$
A_{143}^{tSZ}	$4.5^{+3.8}_{-4.3}$	Age/Gyr	$13.786^{+0.043}_{-0.042}$	$f\sigma_8(2.33)$	$0.2978^{+0.0046}_{-0.0043}$
A_{100}^{PS}	252^{+60}_{-50}	z_*	$1089.78^{+0.46}_{-0.45}$	$\sigma_8(2.33)$	$0.3071^{+0.0049}_{-0.0046}$
A_{143}^{PS}	44^{+20}_{-20}	r_*	$144.62^{+0.47}_{-0.48}$	$r_{0.002}$	< 0.181
A_{217}^{PS}	108^{+20}_{-30}	$100\theta_*$	$1.04116^{+0.00058}_{-0.00057}$	$r_{0.01}$	< 0.176
A^{kSZ}	—	$D_M(z_*)/\text{Gpc}$	$13.890^{+0.045}_{-0.046}$	$\ln(10^{10} A_t)$	$0.0^{+1.7}_{-2.3}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	z_{drag}	$1060.00^{+0.66}_{-0.71}$	$r_{L=10}$	< 0.0954
c_{217}	$0.9997^{+0.0038}_{-0.0027}$	r_{drag}	$147.27^{+0.51}_{-0.51}$	$10^9 A_t$	< 0.373
H_0	$67.73^{+0.85}_{-0.84}$	k_D	$0.14072^{+0.00066}_{-0.00068}$	$10^9 A_t e^{-2\tau}$	< 0.331
Ω_Λ	$0.690^{+0.011}_{-0.011}$	$100\theta_D$	$0.16072^{+0.00041}_{-0.00039}$	f_{2000}^{143}	30^{+6}_{-6}
Ω_m	$0.310^{+0.011}_{-0.011}$	z_{eq}	3382^{+43}_{-42}	$f_{2000}^{143 \times 217}$	33^{+4}_{-4}
$\Omega_m h^2$	$0.1422^{+0.0018}_{-0.0018}$	k_{eq}	$0.01032^{+0.00013}_{-0.00013}$	f_{2000}^{217}	$107.6^{+4.1}_{-4.2}$
$\Omega_m h^3$	$0.09630^{+0.00067}_{-0.00069}$	$100\theta_{\text{eq}}$	$0.8171^{+0.0079}_{-0.0080}$	χ^2_{lensing}	$9.49 (\nu: 0.3)$
σ_8	$0.809^{+0.012}_{-0.012}$	$100\theta_{s,\text{eq}}$	$0.4513^{+0.0041}_{-0.0041}$	χ^2_{small}	$397.6 (\nu: 1.9)$
S_8	$0.822^{+0.021}_{-0.021}$	$H(0.15)$	$73.00^{+0.73}_{-0.72}$	χ^2_{lowl}	$23.7 (\nu: 2.2)$
$\sigma_8 \Omega_m^{0.5}$	$0.450^{+0.012}_{-0.011}$	$D_M(0.15)$	$640.2^{+7.2}_{-7.2}$	$\chi^2_{6\text{DF}}$	$0.045 (\nu: 0.0)$
$\sigma_8 \Omega_m^{0.25}$	$0.604^{+0.011}_{-0.011}$	$H(0.38)$	$83.09^{+0.55}_{-0.54}$	χ^2_{MGS}	$1.32 (\nu: 0.1)$
$\sigma_8/h^{0.5}$	$0.983^{+0.017}_{-0.016}$	$D_M(0.38)$	1527^{+14}_{-14}	χ^2_{DR12BAO}	$4.6 (\nu: 0.8)$
$r_{\text{drag}} h$	$99.7^{+1.4}_{-1.4}$	$H(0.51)$	$89.80^{+0.46}_{-0.44}$	χ^2_{prior}	$9.8 (\nu: 9.9)$
$\langle d^2 \rangle^{1/2}$	$2.421^{+0.045}_{-0.044}$	$D_M(0.51)$	1979^{+17}_{-17}	χ^2_{CMB}	$7368 (\nu: 10475132.3)$
z_{re}	$7.9^{+1.5}_{-1.4}$	$H(0.61)$	$95.41^{+0.38}_{-0.37}$	χ^2_{BAO}	$6.00 (\nu: 0.5)$

$$\bar{\chi}^2_{\text{eff}} = 11958.98; \Delta\bar{\chi}^2_{\text{eff}} = 9150.35; R - 1 = 0.01470$$

15.7 base_nrun_r_CamSpecHM_TTTEEE_lowl_lowE_lensing_post_zre6p5/base_nrun_r_plikHM_TTTEEE_lowl_lowE_lensing_post_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02239^{+0.00032}_{-0.00033}$	z_{re}	< 9.05	$D_{\text{M}}(0.51)$	1983^{+21}_{-22}
$\Omega_c h^2$	$0.1197^{+0.0024}_{-0.0024}$	$10^9 A_s$	$2.108^{+0.060}_{-0.057}$	$H(0.61)$	$95.32^{+0.45}_{-0.44}$
$100\theta_{MC}$	$1.04091^{+0.00061}_{-0.00060}$	$10^9 A_s e^{-2\tau}$	$1.883^{+0.023}_{-0.023}$	$D_{\text{M}}(0.61)$	2308^{+23}_{-23}
τ	$0.056^{+0.013}_{-0.013}$	D_{40}	1236^{+43}_{-39}	$H(2.33)$	$236.4^{+1.5}_{-1.4}$
$\ln(10^{10} A_s)$	$3.048^{+0.028}_{-0.027}$	D_{220}	5721^{+79}_{-79}	$D_{\text{M}}(2.33)$	5762^{+21}_{-21}
n_s	$0.9656^{+0.0090}_{-0.0088}$	D_{810}	2540^{+27}_{-27}	$f\sigma_8(0.15)$	$0.458^{+0.013}_{-0.013}$
n_{run}	$-0.007^{+0.015}_{-0.015}$	D_{1420}	$815.8^{+9.9}_{-9.9}$	$\sigma_8(0.15)$	$0.749^{+0.011}_{-0.0098}$
r	< 0.173	D_{2000}	$230.0^{+3.7}_{-3.6}$	$f\sigma_8(0.38)$	$0.476^{+0.010}_{-0.010}$
y_{cal}	$1.0007^{+0.0048}_{-0.0049}$	$n_{s,0.002}$	$0.988^{+0.048}_{-0.045}$	$\sigma_8(0.38)$	$0.6634^{+0.0094}_{-0.0083}$
A_{217}^{CIB}	44^{+20}_{-20}	Y_P	$0.24540^{+0.00012}_{-0.00013}$	$f\sigma_8(0.51)$	$0.4743^{+0.0090}_{-0.0091}$
$\xi^{tSZ-CIB}$	—	Y_P^{BBN}	$0.24673^{+0.00012}_{-0.00013}$	$\sigma_8(0.51)$	$0.6207^{+0.0084}_{-0.0080}$
A_{143}^{tSZ}	$4.5^{+3.8}_{-4.3}$	$10^5 D/H$	$2.583^{+0.062}_{-0.058}$	$f\sigma_8(0.61)$	$0.4692^{+0.0082}_{-0.0082}$
A_{100}^{PS}	253^{+60}_{-50}	Age/Gyr	$13.794^{+0.047}_{-0.048}$	$\sigma_8(0.61)$	$0.5906^{+0.0081}_{-0.0077}$
A_{143}^{PS}	45^{+20}_{-20}	z_*	$1089.87^{+0.53}_{-0.52}$	$f\sigma_8(2.33)$	$0.2977^{+0.0042}_{-0.0039}$
A_{217}^{PS}	108^{+20}_{-30}	r_*	$144.51^{+0.56}_{-0.55}$	$\sigma_8(2.33)$	$0.3068^{+0.0045}_{-0.0042}$
A^{kSZ}	—	$100\theta_*$	$1.04109^{+0.00060}_{-0.00059}$	$r_{0.002}$	< 0.178
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.880^{+0.053}_{-0.053}$	$r_{0.01}$	< 0.172
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	z_{drag}	$1059.95^{+0.67}_{-0.70}$	$\ln(10^{10} A_t)$	$0.0^{+1.7}_{-2.3}$
H_0	$67.5^{+1.1}_{-1.0}$	r_{drag}	$147.16^{+0.59}_{-0.58}$	$r_{L=10}$	< 0.0938
Ω_{Λ}	$0.687^{+0.014}_{-0.015}$	k_{D}	$0.14080^{+0.00069}_{-0.00072}$	$10^9 A_t$	< 0.365
Ω_m	$0.313^{+0.015}_{-0.014}$	$100\theta_{\text{D}}$	$0.16075^{+0.00041}_{-0.00039}$	$10^9 A_t e^{-2\tau}$	< 0.325
$\Omega_m h^2$	$0.1427^{+0.0023}_{-0.0023}$	z_{eq}	3394^{+54}_{-54}	f_{2000}^{143}	31^{+6}_{-6}
$\Omega_m h^3$	$0.09629^{+0.00067}_{-0.00069}$	k_{eq}	$0.01036^{+0.00016}_{-0.00016}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-5}
σ_8	$0.810^{+0.012}_{-0.011}$	$100\theta_{\text{eq}}$	$0.815^{+0.010}_{-0.010}$	f_{2000}^{217}	$107.7^{+4.1}_{-4.2}$
S_8	$0.828^{+0.025}_{-0.025}$	$100\theta_{\text{s,eq}}$	$0.4501^{+0.0052}_{-0.0051}$	χ_{lensing}^2	$9.54 (\nu: 0.3)$
$\sigma_8 \Omega_m^{0.5}$	$0.454^{+0.014}_{-0.014}$	$H(0.15)$	$72.79^{+0.93}_{-0.90}$	χ_{simall}^2	$397.4 (\nu: 1.7)$
$\sigma_8 \Omega_m^{0.25}$	$0.606^{+0.013}_{-0.013}$	$D_{\text{M}}(0.15)$	$642.3^{+9.0}_{-9.1}$	χ_{lowl}^2	$23.8 (\nu: 2.2)$
$\sigma_8/h^{0.5}$	$0.986^{+0.018}_{-0.018}$	$H(0.38)$	$82.94^{+0.68}_{-0.66}$	χ_{prior}^2	$9.7 (\nu: 10.0)$
$r_{\text{drag}} h$	$99.3^{+1.9}_{-1.8}$	$D_{\text{M}}(0.38)$	1531^{+18}_{-18}	χ_{CMB}^2	$7368 (\nu: 10475238.8)$
$\langle d^2 \rangle^{1/2}$	$2.429^{+0.047}_{-0.047}$	$H(0.51)$	$89.68^{+0.55}_{-0.53}$		

$$\bar{\chi}_{\text{eff}}^2 = 11953.00; \Delta\bar{\chi}_{\text{eff}}^2 = 9150.54; R - 1 = 0.01489$$

15.8 base_nrun_r_CamSpecHM_TTTEEE_lowl_lowE_lensing_post_BAO_zre6p5/base_nrun_r_plikHM_TTTEEE_lowl_lowE_lensing_post_BAO

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02243^{+0.00031}_{-0.00031}$	$10^9 A_s$	$2.111^{+0.062}_{-0.059}$	$D_M(0.61)$	2302^{+18}_{-18}
$\Omega_c h^2$	$0.1191^{+0.0019}_{-0.0018}$	$10^9 A_s e^{-2\tau}$	$1.881^{+0.022}_{-0.022}$	$H(2.33)$	$236.0^{+1.2}_{-1.2}$
$100\theta_{MC}$	$1.04098^{+0.00058}_{-0.00058}$	D_{40}	1234^{+44}_{-39}	$D_M(2.33)$	5758^{+19}_{-19}
τ	$0.058^{+0.014}_{-0.013}$	D_{220}	5725^{+79}_{-79}	$f\sigma_8(0.15)$	$0.455^{+0.011}_{-0.011}$
$\ln(10^{10} A_s)$	$3.050^{+0.029}_{-0.028}$	D_{810}	2540^{+27}_{-27}	$\sigma_8(0.15)$	$0.748^{+0.011}_{-0.0099}$
n_s	$0.9671^{+0.0081}_{-0.0081}$	D_{1420}	$816.4^{+9.8}_{-9.8}$	$f\sigma_8(0.38)$	$0.4739^{+0.0092}_{-0.0090}$
n_{run}	$-0.007^{+0.015}_{-0.015}$	D_{2000}	$230.2^{+3.6}_{-3.6}$	$\sigma_8(0.38)$	$0.6633^{+0.0097}_{-0.0086}$
r	< 0.176	$n_{s,0.002}$	$0.990^{+0.048}_{-0.046}$	$f\sigma_8(0.51)$	$0.4727^{+0.0084}_{-0.0081}$
y_{cal}	$1.0008^{+0.0048}_{-0.0050}$	Y_P	$0.24542^{+0.00011}_{-0.00012}$	$\sigma_8(0.51)$	$0.6209^{+0.0087}_{-0.0083}$
A_{217}^{CIB}	44^{+20}_{-20}	Y_P^{BBN}	$0.24674^{+0.00011}_{-0.00012}$	$f\sigma_8(0.61)$	$0.4679^{+0.0078}_{-0.0075}$
$\xi^{tSZ-CIB}$	—	$10^5 D/H$	$2.576^{+0.058}_{-0.055}$	$\sigma_8(0.61)$	$0.5908^{+0.0083}_{-0.0079}$
A_{143}^{tSZ}	$4.5^{+3.8}_{-4.3}$	Age/Gyr	$13.786^{+0.042}_{-0.042}$	$f\sigma_8(2.33)$	$0.2980^{+0.0043}_{-0.0040}$
A_{100}^{PS}	252^{+60}_{-50}	z_*	$1089.77^{+0.46}_{-0.45}$	$\sigma_8(2.33)$	$0.3073^{+0.0045}_{-0.0043}$
A_{143}^{PS}	44^{+20}_{-20}	r_*	$144.62^{+0.47}_{-0.47}$	$r_{0.002}$	< 0.182
A_{217}^{PS}	108^{+20}_{-30}	$100\theta_*$	$1.04116^{+0.00058}_{-0.00057}$	$r_{0.01}$	< 0.176
A^{kSZ}	—	$D_M(z_*)/\text{Gpc}$	$13.891^{+0.045}_{-0.046}$	$\ln(10^{10} A_t)$	$0.0^{+1.6}_{-2.3}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	z_{drag}	$1060.00^{+0.70}_{-0.72}$	$r_{L=10}$	< 0.0957
c_{217}	$0.9997^{+0.0038}_{-0.0027}$	r_{drag}	$147.27^{+0.51}_{-0.51}$	$10^9 A_t$	< 0.373
H_0	$67.74^{+0.85}_{-0.83}$	k_D	$0.14072^{+0.00066}_{-0.00068}$	$10^9 A_t e^{-2\tau}$	< 0.332
Ω_Λ	$0.690^{+0.011}_{-0.011}$	$100\theta_D$	$0.16072^{+0.00041}_{-0.00039}$	f_{2000}^{143}	30^{+6}_{-6}
Ω_m	$0.310^{+0.011}_{-0.011}$	z_{eq}	3382^{+43}_{-42}	$f_{2000}^{143 \times 217}$	33^{+4}_{-4}
$\Omega_m h^2$	$0.1422^{+0.0018}_{-0.0018}$	k_{eq}	$0.01032^{+0.00013}_{-0.00013}$	f_{2000}^{217}	$107.6^{+4.1}_{-4.2}$
$\Omega_m h^3$	$0.09630^{+0.00067}_{-0.00069}$	$100\theta_{\text{eq}}$	$0.8172^{+0.0079}_{-0.0080}$	χ^2_{lensing}	$9.46 (\nu: 0.3)$
σ_8	$0.809^{+0.012}_{-0.011}$	$100\theta_{s,\text{eq}}$	$0.4514^{+0.0041}_{-0.0041}$	χ^2_{simall}	$397.6 (\nu: 2.0)$
S_8	$0.823^{+0.021}_{-0.021}$	$H(0.15)$	$73.01^{+0.73}_{-0.72}$	χ^2_{lowl}	$23.7 (\nu: 2.2)$
$\sigma_8 \Omega_m^{0.5}$	$0.451^{+0.012}_{-0.011}$	$D_M(0.15)$	$640.1^{+7.1}_{-7.1}$	$\chi^2_{6\text{DF}}$	$0.044 (\nu: 0.0)$
$\sigma_8 \Omega_m^{0.25}$	$0.604^{+0.011}_{-0.011}$	$H(0.38)$	$83.10^{+0.55}_{-0.53}$	χ^2_{MGS}	$1.33 (\nu: 0.1)$
$\sigma_8/h^{0.5}$	$0.983^{+0.017}_{-0.016}$	$D_M(0.38)$	1527^{+14}_{-14}	χ^2_{DR12BAO}	$4.6 (\nu: 0.7)$
$r_{\text{drag}} h$	$99.8^{+1.4}_{-1.4}$	$H(0.51)$	$89.80^{+0.45}_{-0.44}$	χ^2_{prior}	$9.8 (\nu: 9.9)$
$\langle d^2 \rangle^{1/2}$	$2.422^{+0.045}_{-0.044}$	$D_M(0.51)$	1978^{+17}_{-17}	χ^2_{CMB}	$7368 (\nu: 10475053.1)$
z_{re}	$8.0^{+1.3}_{-1.4}$	$H(0.61)$	$95.41^{+0.38}_{-0.37}$	χ^2_{BAO}	$5.98 (\nu: 0.4)$

$$\bar{\chi}^2_{\text{eff}} = 11958.86; \Delta\bar{\chi}^2_{\text{eff}} = 9150.30; R - 1 = 0.01525$$

15.9 base_nrun_r_CamSpecHM_TT_lowl_lowE_BK15/base_nrun_r_plikHM_TT_lowl_lowE_BK15

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02215^{+0.00046}_{-0.00045}$	$\sigma_8 \Omega_m^{0.5}$	$0.464^{+0.026}_{-0.025}$	$H(0.38)$	$82.4^{+1.1}_{-1.1}$
$\Omega_c h^2$	$0.1212^{+0.0041}_{-0.0040}$	$\sigma_8 \Omega_m^{0.25}$	$0.615^{+0.023}_{-0.023}$	$D_M(0.38)$	1545^{+31}_{-31}
$100\theta_{MC}$	$1.04076^{+0.00094}_{-0.00093}$	$\sigma_8/h^{0.5}$	$0.998^{+0.031}_{-0.031}$	$H(0.51)$	$89.27^{+0.87}_{-0.83}$
τ	$0.054^{+0.018}_{-0.016}$	$r_{\text{drag}} h$	$98.1^{+3.1}_{-3.1}$	$D_M(0.51)$	2000^{+36}_{-36}
$\ln(10^{10} A_s)$	$3.047^{+0.036}_{-0.034}$	$\langle d^2 \rangle^{1/2}$	$2.456^{+0.074}_{-0.073}$	$H(0.61)$	$94.99^{+0.70}_{-0.66}$
n_s	$0.961^{+0.012}_{-0.011}$	z_{re}	$7.7^{+1.7}_{-1.7}$	$D_M(0.61)$	2325^{+38}_{-38}
n_{run}	$-0.006^{+0.015}_{-0.015}$	$10^9 A_s$	$2.105^{+0.077}_{-0.071}$	$H(2.33)$	$237.1^{+2.5}_{-2.5}$
r	< 0.0623	$10^9 A_s e^{-2\tau}$	$1.889^{+0.028}_{-0.028}$	$D_M(2.33)$	5778^{+32}_{-33}
y_{cal}	$1.0007^{+0.0049}_{-0.0049}$	D_{40}	1232^{+42}_{-41}	$f\sigma_8(0.15)$	$0.467^{+0.024}_{-0.023}$
$A_{B,\text{dust}}$	$4.9^{+2.1}_{-1.9}$	D_{220}	5707^{+82}_{-81}	$\sigma_8(0.15)$	$0.752^{+0.015}_{-0.015}$
$A_{B,\text{sync}}$	< 3.65	D_{810}	2539^{+28}_{-28}	$f\sigma_8(0.38)$	$0.483^{+0.018}_{-0.018}$
$\alpha_{B,\text{dust}}$	—	D_{1420}	814^{+10}_{-10}	$\sigma_8(0.38)$	$0.665^{+0.012}_{-0.012}$
$\beta_{B,\text{dust}}$	$1.60^{+0.19}_{-0.19}$	D_{2000}	$229.0^{+3.8}_{-3.8}$	$f\sigma_8(0.51)$	$0.480^{+0.016}_{-0.016}$
$\alpha_{B,\text{sync}}$	—	$n_{s,0.002}$	$0.980^{+0.047}_{-0.046}$	$\sigma_8(0.51)$	$0.622^{+0.011}_{-0.011}$
$\beta_{B,\text{sync}}$	$-3.10^{+0.52}_{-0.55}$	Y_P	$0.24530^{+0.00018}_{-0.00022}$	$f\sigma_8(0.61)$	$0.474^{+0.014}_{-0.014}$
$\epsilon_{\text{dust,sync}}$	$-0.35^{+0.53}_{-0.57}$	Y_P^{BBN}	$0.24663^{+0.00018}_{-0.00022}$	$\sigma_8(0.61)$	$0.591^{+0.011}_{-0.010}$
A_{217}^{CIB}	45^{+20}_{-20}	$10^5 D/H$	$2.628^{+0.087}_{-0.085}$	$f\sigma_8(2.33)$	$0.2976^{+0.0053}_{-0.0049}$
$\xi^{tSZ-CIB}$	—	Age/Gyr	$13.829^{+0.072}_{-0.073}$	$\sigma_8(2.33)$	$0.3063^{+0.0056}_{-0.0052}$
A_{143}^{tSZ}	$4.2^{+3.7}_{-4.2}$	z_*	$1090.31^{+0.81}_{-0.80}$	$r_{0.002}$	< 0.0591
A_{100}^{PS}	256^{+60}_{-60}	r_*	$144.28^{+0.96}_{-0.94}$	$r_{0.01}$	< 0.0600
A_{143}^{PS}	47^{+20}_{-20}	$100\theta_*$	$1.04097^{+0.00092}_{-0.00091}$	$\ln(10^{10} A_t)$	$-0.9^{+1.5}_{-2.1}$
A_{217}^{PS}	108^{+30}_{-30}	$D_M(z_*)/\text{Gpc}$	$13.861^{+0.088}_{-0.087}$	$r_{L=10}$	< 0.0307
A^{kSZ}	—	z_{drag}	$1059.51^{+0.99}_{-0.99}$	$10^9 A_t$	< 0.131
c_{100}	$0.9985^{+0.0022}_{-0.0027}$	r_{drag}	$147.01^{+0.98}_{-0.96}$	$10^9 A_t e^{-2\tau}$	< 0.117
c_{217}	$0.9998^{+0.0038}_{-0.0028}$	k_D	$0.1408^{+0.0011}_{-0.0011}$	f_{2000}^{143}	32^{+6}_{-6}
H_0	$66.7^{+1.8}_{-1.8}$	$100\theta_D$	$0.16101^{+0.00057}_{-0.00056}$	$f_{2000}^{143 \times 217}$	34^{+5}_{-5}
Ω_Λ	$0.676^{+0.025}_{-0.026}$	z_{eq}	3426^{+94}_{-92}	f_{2000}^{217}	$108.6^{+4.2}_{-4.2}$
Ω_m	$0.324^{+0.026}_{-0.025}$	k_{eq}	$0.01046^{+0.00029}_{-0.00028}$	χ_{BKPLANCK}^2	$739.2 (\nu: 3.7)$
$\Omega_m h^2$	$0.1440^{+0.0039}_{-0.0039}$	$100\theta_{\text{eq}}$	$0.808^{+0.017}_{-0.017}$	χ_{simall}^2	$397.3 (\nu: 1.9)$
$\Omega_m h^3$	$0.09605^{+0.00097}_{-0.00097}$	$100\theta_{s,\text{eq}}$	$0.4470^{+0.0089}_{-0.0087}$	χ_{lowl}^2	$23.6 (\nu: 2.4)$
σ_8	$0.815^{+0.017}_{-0.017}$	$H(0.15)$	$72.1^{+1.5}_{-1.5}$	χ_{prior}^2	$9.1 (\nu: 7.8)$
S_8	$0.847^{+0.047}_{-0.046}$	$D_M(0.15)$	649^{+15}_{-15}	χ_{CMB}^2	$5079 (\nu: 4948255.3)$

Best-fit $\chi_{\text{eff}}^2 = 8206.96$; $\Delta\chi_{\text{eff}}^2 = 6292.16$; $\bar{\chi}_{\text{eff}}^2 = 8233.85$; $\Delta\bar{\chi}_{\text{eff}}^2 = 6292.13$; $R - 1 = 0.00340$
 χ_{eff}^2 : CMB - BK15_dust: 734.86 (Δ 0.15) simall_100x143_offlike5_EE_Aplanck_B: 396.03 (Δ 0.00) commander_dx12_v3_2_29: 22.86 (Δ -0.47) CamSpec like_10.7HM: 7050.61

15.10 base_nrun_r_CamSpecHM_TT_lowl_lowE_BK15_post_BAO/base_nrun_r_plikHM_TT_lowl_lowE_BK15_post_BAO

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02226^{+0.00042}_{-0.00042}$	$\sigma_8/h^{0.5}$	$0.985^{+0.023}_{-0.022}$	$H(0.61)$	$95.29^{+0.50}_{-0.49}$
$\Omega_c h^2$	$0.1192^{+0.0024}_{-0.0024}$	$r_{\text{drag}} h$	$99.6^{+1.8}_{-1.8}$	$D_M(0.61)$	2307^{+23}_{-24}
$100\theta_{MC}$	$1.04103^{+0.00082}_{-0.00084}$	$\langle d^2 \rangle^{1/2}$	$2.427^{+0.056}_{-0.056}$	$H(2.33)$	$236.0^{+1.6}_{-1.5}$
τ	$0.056^{+0.018}_{-0.016}$	z_{re}	$7.9^{+1.7}_{-1.6}$	$D_M(2.33)$	5765^{+25}_{-25}
$\ln(10^{10} A_s)$	$3.047^{+0.038}_{-0.034}$	$10^9 A_s$	$2.105^{+0.080}_{-0.071}$	$f\sigma_8(0.15)$	$0.456^{+0.015}_{-0.015}$
n_s	$0.9659^{+0.0088}_{-0.0088}$	$10^9 A_s e^{-2\tau}$	$1.881^{+0.024}_{-0.024}$	$\sigma_8(0.15)$	$0.748^{+0.014}_{-0.013}$
n_{run}	$-0.005^{+0.015}_{-0.015}$	D_{40}	1224^{+40}_{-39}	$f\sigma_8(0.38)$	$0.474^{+0.013}_{-0.013}$
r	< 0.0658	D_{220}	5716^{+80}_{-80}	$\sigma_8(0.38)$	$0.663^{+0.012}_{-0.011}$
y_{cal}	$1.0008^{+0.0049}_{-0.0049}$	D_{810}	2538^{+28}_{-28}	$f\sigma_8(0.51)$	$0.473^{+0.012}_{-0.011}$
$A_{B,\text{dust}}$	$4.9^{+2.1}_{-1.9}$	D_{1420}	815^{+10}_{-10}	$\sigma_8(0.51)$	$0.620^{+0.011}_{-0.010}$
$A_{B,\text{sync}}$	< 3.63	D_{2000}	$229.5^{+3.8}_{-3.7}$	$f\sigma_8(0.61)$	$0.468^{+0.011}_{-0.010}$
$\alpha_{B,\text{dust}}$	—	$n_{s,0.002}$	$0.983^{+0.048}_{-0.046}$	$\sigma_8(0.61)$	$0.590^{+0.011}_{-0.0099}$
$\beta_{B,\text{dust}}$	$1.60^{+0.19}_{-0.19}$	Y_P	$0.24535^{+0.00016}_{-0.00019}$	$f\sigma_8(2.33)$	$0.2977^{+0.0054}_{-0.0049}$
$\alpha_{B,\text{sync}}$	—	Y_P^{BBN}	$0.24667^{+0.00016}_{-0.00019}$	$\sigma_8(2.33)$	$0.3069^{+0.0057}_{-0.0051}$
$\beta_{B,\text{sync}}$	$-3.10^{+0.51}_{-0.55}$	$10^5 D/H$	$2.607^{+0.080}_{-0.077}$	$r_{0.002}$	< 0.0634
$\epsilon_{\text{dust,sync}}$	$-0.35^{+0.53}_{-0.58}$	Age/Gyr	$13.802^{+0.058}_{-0.057}$	$r_{0.01}$	< 0.0639
A_{217}^{CIB}	45^{+20}_{-20}	z_*	$1089.99^{+0.61}_{-0.61}$	$\ln(10^{10} A_t)$	$-0.8^{+1.4}_{-2.0}$
$\xi^{tSZ-CIB}$	—	r_*	$144.72^{+0.64}_{-0.65}$	$r_{L=10}$	< 0.0329
A_{143}^{tSZ}	$4.3^{+3.8}_{-4.2}$	$100\theta_*$	$1.04122^{+0.00081}_{-0.00083}$	$10^9 A_t$	< 0.138
A_{100}^{PS}	256^{+60}_{-50}	$D_M(z_*)/\text{Gpc}$	$13.899^{+0.063}_{-0.063}$	$10^9 A_t e^{-2\tau}$	< 0.124
A_{143}^{PS}	46^{+20}_{-20}	z_{drag}	$1059.63^{+0.95}_{-0.95}$	f_{2000}^{143}	32^{+6}_{-6}
A_{217}^{PS}	107^{+20}_{-30}	r_{drag}	$147.42^{+0.72}_{-0.72}$	$f_{2000}^{143 \times 217}$	34^{+4}_{-5}
A^{kSZ}	—	k_D	$0.14044^{+0.00096}_{-0.00097}$	f_{2000}^{217}	$108.3^{+4.2}_{-4.2}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	$100\theta_D$	$0.16095^{+0.00057}_{-0.00055}$	χ_{BKPLANCK}^2	$739.9 (\nu: 3.5)$
c_{217}	$0.9998^{+0.0038}_{-0.0028}$	z_{eq}	3381^{+57}_{-56}	χ_{small}^2	$397.5 (\nu: 2.4)$
H_0	$67.6^{+1.1}_{-1.1}$	k_{eq}	$0.01032^{+0.00017}_{-0.00017}$	χ_{lowl}^2	$23.0 (\nu: 1.9)$
Ω_Λ	$0.689^{+0.014}_{-0.015}$	$100\theta_{\text{eq}}$	$0.817^{+0.010}_{-0.010}$	$\chi_{6\text{DF}}^2$	$0.068 (\nu: 0.0)$
Ω_m	$0.311^{+0.015}_{-0.014}$	$100\theta_{\text{s,eq}}$	$0.4513^{+0.0053}_{-0.0053}$	χ_{MGS}^2	$1.27 (\nu: 0.1)$
$\Omega_m h^2$	$0.1421^{+0.0024}_{-0.0023}$	$H(0.15)$	$72.85^{+0.93}_{-0.91}$	χ_{DR12BAO}^2	$5.0 (\nu: 1.6)$
$\Omega_m h^3$	$0.09604^{+0.00097}_{-0.00097}$	$D_M(0.15)$	$641.6^{+9.1}_{-9.1}$	χ_{prior}^2	$9.2 (\nu: 7.7)$
σ_8	$0.809^{+0.016}_{-0.015}$	$H(0.38)$	$82.96^{+0.71}_{-0.68}$	χ_{BAO}^2	$6.4 (\nu: 1.1)$
S_8	$0.824^{+0.029}_{-0.029}$	$D_M(0.38)$	1530^{+18}_{-18}	χ_{CMB}^2	$5079 (\nu: 4948070.9)$
$\sigma_8 \Omega_m^{0.5}$	$0.452^{+0.016}_{-0.016}$	$H(0.51)$	$89.67^{+0.59}_{-0.57}$		
$\sigma_8 \Omega_m^{0.25}$	$0.605^{+0.016}_{-0.016}$	$D_M(0.51)$	1982^{+22}_{-22}		

Best-fit $\chi_{\text{eff}}^2 = 8213.81$; $\Delta\chi_{\text{eff}}^2 = 6292.06$; $\bar{\chi}_{\text{eff}}^2 = 8240.71$; $\Delta\bar{\chi}_{\text{eff}}^2 = 6291.94$; $R - 1 = 0.00691$
 χ_{eff}^2 : BAO - 6DF: 0.03 (Δ -0.01) MGS: 1.22 (Δ 0.06) DR12BAO: 4.37 (Δ -0.20) CMB - BK15_dust: 735.64 (Δ 0.08) small_100x143_offlike5_EE_Aplanck_B: 396.20 (Δ -0.14) commander_dx12_v3_2_29: 22.25 (Δ -0.17) CamSpec like_10.7HM: 7051.59

15.11 base_nrun_r_CamSpecHM_TT_lowl_lowE_BK15_post_lensing/base_nrun_r_plikHM_TT_lowl_lowE_BK15_post_lensing

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02218^{+0.00045}_{-0.00044}$	$\sigma_8 \Omega_m^{0.25}$	$0.610^{+0.015}_{-0.015}$	$H(0.51)$	$89.40^{+0.73}_{-0.70}$
$\Omega_c h^2$	$0.1205^{+0.0031}_{-0.0031}$	$\sigma_8/h^{0.5}$	$0.992^{+0.020}_{-0.020}$	$D_M(0.51)$	1994^{+28}_{-28}
$100\theta_{MC}$	$1.04082^{+0.00090}_{-0.00089}$	$r_{\text{drag}} h$	$98.6^{+2.4}_{-2.4}$	$H(0.61)$	$95.07^{+0.61}_{-0.58}$
τ	$0.054^{+0.017}_{-0.015}$	$\langle d^2 \rangle^{1/2}$	$2.445^{+0.052}_{-0.052}$	$D_M(0.61)$	2319^{+30}_{-31}
$\ln(10^{10} A_s)$	$3.044^{+0.033}_{-0.030}$	z_{re}	$7.6^{+1.6}_{-1.6}$	$H(2.33)$	$236.7^{+1.9}_{-1.9}$
n_s	$0.963^{+0.010}_{-0.0098}$	$10^9 A_s$	$2.099^{+0.069}_{-0.063}$	$D_M(2.33)$	5774^{+29}_{-30}
n_{run}	$-0.005^{+0.015}_{-0.015}$	$10^9 A_s e^{-2\tau}$	$1.885^{+0.024}_{-0.023}$	$f\sigma_8(0.15)$	$0.463^{+0.016}_{-0.016}$
r	< 0.0626	D_{40}	1231^{+41}_{-40}	$\sigma_8(0.15)$	$0.749^{+0.011}_{-0.011}$
y_{cal}	$1.0006^{+0.0048}_{-0.0049}$	D_{220}	5711^{+81}_{-81}	$f\sigma_8(0.38)$	$0.479^{+0.012}_{-0.012}$
$A_{B,\text{dust}}$	$4.9^{+2.1}_{-1.9}$	D_{810}	2537^{+27}_{-27}	$\sigma_8(0.38)$	$0.6634^{+0.0099}_{-0.0093}$
$A_{B,\text{sync}}$	< 3.65	D_{1420}	814^{+10}_{-10}	$f\sigma_8(0.51)$	$0.477^{+0.010}_{-0.010}$
$\alpha_{B,\text{dust}}$	—	D_{2000}	$229.2^{+3.9}_{-3.8}$	$\sigma_8(0.51)$	$0.6204^{+0.0094}_{-0.0088}$
$\beta_{B,\text{dust}}$	$1.60^{+0.19}_{-0.19}$	$n_{s,0.002}$	$0.977^{+0.047}_{-0.046}$	$f\sigma_8(0.61)$	$0.4713^{+0.0092}_{-0.0092}$
$\alpha_{B,\text{sync}}$	—	Y_P	$0.24531^{+0.00018}_{-0.00021}$	$\sigma_8(0.61)$	$0.5902^{+0.0091}_{-0.0085}$
$\beta_{B,\text{sync}}$	$-3.10^{+0.51}_{-0.55}$	Y_P^{BBN}	$0.24664^{+0.00018}_{-0.00021}$	$f\sigma_8(2.33)$	$0.2973^{+0.0048}_{-0.0045}$
$\epsilon_{\text{dust,sync}}$	$-0.35^{+0.53}_{-0.58}$	$10^5 D/H$	$2.623^{+0.085}_{-0.083}$	$\sigma_8(2.33)$	$0.3061^{+0.0053}_{-0.0050}$
A_{217}^{CIB}	45^{+20}_{-20}	Age/Gyr	$13.822^{+0.066}_{-0.067}$	$r_{0.002}$	< 0.0593
$\xi^{tSZ-CIB}$	—	z_*	$1090.21^{+0.72}_{-0.71}$	$r_{0.01}$	< 0.0602
A_{143}^{tSZ}	$4.3^{+3.8}_{-4.2}$	r_*	$144.46^{+0.74}_{-0.72}$	$\ln(10^{10} A_t)$	$-0.9^{+1.5}_{-2.0}$
A_{100}^{PS}	256^{+60}_{-50}	$100\theta_*$	$1.04103^{+0.00088}_{-0.00088}$	$r_{L=10}$	< 0.0308
A_{143}^{PS}	46^{+20}_{-20}	$D_M(z_*)/\text{Gpc}$	$13.876^{+0.070}_{-0.068}$	$10^9 A_t$	< 0.131
A_{217}^{PS}	107^{+20}_{-30}	z_{drag}	$1059.52^{+0.99}_{-0.96}$	$10^9 A_t e^{-2\tau}$	< 0.118
A^{kSZ}	—	r_{drag}	$147.18^{+0.78}_{-0.76}$	f_{2000}^{143}	32^{+6}_{-6}
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	k_D	$0.14062^{+0.00094}_{-0.00096}$	$f_{2000}^{143 \times 217}$	34^{+5}_{-5}
c_{217}	$0.9998^{+0.0038}_{-0.0028}$	$100\theta_D$	$0.16100^{+0.00057}_{-0.00056}$	f_{2000}^{217}	$108.4^{+4.2}_{-4.2}$
H_0	$67.0^{+1.4}_{-1.4}$	z_{eq}	3409^{+70}_{-70}	χ^2_{lensing}	$9.7 (\nu: 0.5)$
Ω_Λ	$0.681^{+0.019}_{-0.020}$	k_{eq}	$0.01040^{+0.00021}_{-0.00021}$	χ^2_{BKPLANCK}	$739.5 (\nu: 3.5)$
Ω_m	$0.319^{+0.020}_{-0.019}$	$100\theta_{\text{eq}}$	$0.812^{+0.013}_{-0.013}$	χ^2_{small}	$397.1 (\nu: 1.5)$
$\Omega_m h^2$	$0.1433^{+0.0029}_{-0.0029}$	$100\theta_{s,\text{eq}}$	$0.4486^{+0.0068}_{-0.0066}$	χ^2_{lowl}	$23.7 (\nu: 2.5)$
$\Omega_m h^3$	$0.09600^{+0.00096}_{-0.00095}$	$H(0.15)$	$72.4^{+1.2}_{-1.2}$	χ^2_{prior}	$9.1 (\nu: 7.7)$
σ_8	$0.812^{+0.012}_{-0.012}$	$D_M(0.15)$	647^{+12}_{-12}	χ^2_{CMB}	$5088 (\nu: 4948020.0)$
S_8	$0.838^{+0.032}_{-0.031}$	$H(0.38)$	$82.60^{+0.90}_{-0.87}$		
$\sigma_8 \Omega_m^{0.5}$	$0.459^{+0.017}_{-0.017}$	$D_M(0.38)$	1540^{+24}_{-24}		

Best-fit $\chi^2_{\text{eff}} = 8216.23$; $\Delta\chi^2_{\text{eff}} = 6292.06$; $\bar{\chi}^2_{\text{eff}} = 8243.12$; $\Delta\bar{\chi}^2_{\text{eff}} = 6291.97$; $R - 1 = 0.00347$

χ^2_{eff} : CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 9.11 (Δ 0.03) BK15_dust: 735.18 (Δ -0.02) small_100x143_offlike5_EE_Aplanck_B: 396.02 (Δ 0.00) com-mander_dx12_v3_2_29: 22.95 (Δ -0.26) CamSpec like_10.7HM: 7050.44

15.12 base_nrun_r_CamSpecHM_TT_lowl_lowE_BK15_post_BAO_lensing/base_nrun_r_plikHM_TT_lowl_lowE_BK15_post_BAO_lensing

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02226^{+0.00042}_{-0.00042}$	$\sigma_8/h^{0.5}$	$0.986^{+0.017}_{-0.017}$	$H(0.61)$	$95.28^{+0.49}_{-0.48}$
$\Omega_c h^2$	$0.1193^{+0.0022}_{-0.0021}$	$r_{\text{drag}} h$	$99.6^{+1.6}_{-1.6}$	$D_M(0.61)$	2307^{+22}_{-22}
$100\theta_{MC}$	$1.04101^{+0.00083}_{-0.00084}$	$\langle d^2 \rangle^{1/2}$	$2.431^{+0.046}_{-0.046}$	$H(2.33)$	$236.0^{+1.4}_{-1.4}$
τ	$0.057^{+0.017}_{-0.015}$	z_{re}	$7.9^{+1.6}_{-1.5}$	$D_M(2.33)$	5766^{+25}_{-25}
$\ln(10^{10} A_s)$	$3.048^{+0.033}_{-0.030}$	$10^9 A_s$	$2.108^{+0.070}_{-0.063}$	$f\sigma_8(0.15)$	$0.457^{+0.012}_{-0.012}$
n_s	$0.9657^{+0.0086}_{-0.0085}$	$10^9 A_s e^{-2\tau}$	$1.881^{+0.023}_{-0.022}$	$\sigma_8(0.15)$	$0.749^{+0.011}_{-0.011}$
n_{run}	$-0.005^{+0.015}_{-0.015}$	D_{40}	1227^{+40}_{-39}	$f\sigma_8(0.38)$	$0.4751^{+0.0099}_{-0.0097}$
r	< 0.0643	D_{220}	5720^{+79}_{-79}	$\sigma_8(0.38)$	$0.664^{+0.010}_{-0.0094}$
y_{cal}	$1.0009^{+0.0049}_{-0.0049}$	D_{810}	2538^{+27}_{-27}	$f\sigma_8(0.51)$	$0.4737^{+0.0088}_{-0.0087}$
$A_{B,\text{dust}}$	$4.9^{+2.1}_{-1.9}$	D_{1420}	815^{+10}_{-10}	$\sigma_8(0.51)$	$0.6210^{+0.0096}_{-0.0089}$
$A_{B,\text{sync}}$	< 3.65	D_{2000}	$229.7^{+3.7}_{-3.7}$	$f\sigma_8(0.61)$	$0.4687^{+0.0081}_{-0.0080}$
$\alpha_{B,\text{dust}}$	—	$n_{s,0.002}$	$0.980^{+0.047}_{-0.046}$	$\sigma_8(0.61)$	$0.5909^{+0.0092}_{-0.0085}$
$\beta_{B,\text{dust}}$	$1.60^{+0.19}_{-0.19}$	Y_P	$0.24535^{+0.00016}_{-0.00019}$	$f\sigma_8(2.33)$	$0.2979^{+0.0048}_{-0.0044}$
$\alpha_{B,\text{sync}}$	—	Y_P^{BBN}	$0.24667^{+0.00016}_{-0.00019}$	$\sigma_8(2.33)$	$0.3072^{+0.0051}_{-0.0047}$
$\beta_{B,\text{sync}}$	$-3.10^{+0.51}_{-0.55}$	$10^5 D/H$	$2.607^{+0.080}_{-0.077}$	$r_{0.002}$	< 0.0617
$\epsilon_{\text{dust,sync}}$	$-0.35^{+0.53}_{-0.58}$	Age/Gyr	$13.803^{+0.057}_{-0.057}$	$r_{0.01}$	< 0.0624
A_{217}^{CIB}	45^{+20}_{-20}	z_*	$1090.00^{+0.60}_{-0.59}$	$\ln(10^{10} A_t)$	$-0.8^{+1.4}_{-2.0}$
$\xi^{tSZ-CIB}$	—	r_*	$144.71^{+0.59}_{-0.58}$	$r_{L=10}$	< 0.0320
A_{143}^{tSZ}	$4.3^{+3.8}_{-4.2}$	$100\theta_*$	$1.04121^{+0.00082}_{-0.00083}$	$10^9 A_t$	< 0.136
A_{100}^{PS}	255^{+60}_{-50}	$D_M(z_*)/\text{Gpc}$	$13.898^{+0.057}_{-0.057}$	$10^9 A_t e^{-2\tau}$	< 0.121
A_{143}^{PS}	46^{+20}_{-20}	z_{drag}	$1059.62^{+0.96}_{-0.95}$	f_{2000}^{143}	31^{+6}_{-6}
A_{217}^{PS}	108^{+20}_{-30}	r_{drag}	$147.41^{+0.67}_{-0.66}$	$f_{2000}^{143 \times 217}$	34^{+4}_{-5}
A^{kSZ}	—	k_D	$0.14044^{+0.00091}_{-0.00091}$	f_{2000}^{217}	$108.2^{+4.2}_{-4.2}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	$100\theta_D$	$0.16095^{+0.00056}_{-0.00055}$	χ^2_{lensing}	$9.42 (\nu: 0.3)$
c_{217}	$0.9998^{+0.0038}_{-0.0028}$	z_{eq}	3382^{+51}_{-50}	χ^2_{BKPLANCK}	$739.8 (\nu: 3.4)$
H_0	$67.55^{+0.99}_{-0.97}$	k_{eq}	$0.01032^{+0.00015}_{-0.00015}$	χ^2_{simall}	$397.5 (\nu: 2.2)$
Ω_Λ	$0.688^{+0.013}_{-0.013}$	$100\theta_{\text{eq}}$	$0.8167^{+0.0092}_{-0.0092}$	χ^2_{lowl}	$23.2 (\nu: 2.1)$
Ω_m	$0.312^{+0.013}_{-0.013}$	$100\theta_{\text{s,eq}}$	$0.4512^{+0.0048}_{-0.0048}$	$\chi^2_{6\text{DF}}$	$0.064 (\nu: 0.0)$
$\Omega_m h^2$	$0.1422^{+0.0021}_{-0.0021}$	$H(0.15)$	$72.83^{+0.86}_{-0.85}$	χ^2_{MGS}	$1.24 (\nu: 0.1)$
$\Omega_m h^3$	$0.09603^{+0.00096}_{-0.00096}$	$D_M(0.15)$	$641.8^{+8.5}_{-8.4}$	χ^2_{DR12BAO}	$5.0 (\nu: 1.3)$
σ_8	$0.810^{+0.012}_{-0.012}$	$H(0.38)$	$82.94^{+0.67}_{-0.65}$	χ^2_{prior}	$9.2 (\nu: 7.7)$
S_8	$0.826^{+0.023}_{-0.023}$	$D_M(0.38)$	1531^{+17}_{-17}	χ^2_{CMB}	$5088 (\nu: 4948181.1)$
$\sigma_8 \Omega_m^{0.5}$	$0.452^{+0.013}_{-0.013}$	$H(0.51)$	$89.66^{+0.56}_{-0.54}$	χ^2_{BAO}	$6.3 (\nu: 0.9)$
$\sigma_8 \Omega_m^{0.25}$	$0.605^{+0.012}_{-0.012}$	$D_M(0.51)$	1983^{+20}_{-20}		

Best-fit $\chi^2_{\text{eff}} = 8222.87$; $\Delta\chi^2_{\text{eff}} = 6292.21$; $\bar{\chi}^2_{\text{eff}} = 8249.75$; $\Delta\bar{\chi}^2_{\text{eff}} = 6292.05$; $R - 1 = 0.00778$
 χ^2_{eff} : BAO - 6DF: 0.04 (Δ 0.00) MGS: 1.16 (Δ 0.00) DR12BAO: 4.57 (Δ 0.01) CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 9.03 (Δ 0.16) BK15_dust: 735.56 (Δ 0.06) simall_100x143_offlike5_EE_Aplanck_B: 396.42 (Δ 0.07) commander_dx12_v3.2.29: 22.43 (Δ -0.37) CamSpec like_10.7HM: 7051.18

15.13 base_nrun_r_CamSpecHM_TT_lowl_lowE_BK15_post_zre6p5/base_nrun_r_plikHM_TT_lowl_lowE_BK15_post_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02216^{+0.00046}_{-0.00045}$	$\sigma_8 \Omega_m^{0.5}$	$0.464^{+0.026}_{-0.025}$	$H(0.38)$	$82.5^{+1.1}_{-1.1}$
$\Omega_c h^2$	$0.1212^{+0.0041}_{-0.0040}$	$\sigma_8 \Omega_m^{0.25}$	$0.615^{+0.022}_{-0.022}$	$D_M(0.38)$	1545^{+30}_{-30}
$100\theta_{MC}$	$1.04077^{+0.00094}_{-0.00092}$	$\sigma_8/h^{0.5}$	$0.998^{+0.030}_{-0.030}$	$H(0.51)$	$89.29^{+0.87}_{-0.82}$
τ	$0.055^{+0.014}_{-0.013}$	$r_{\text{drag}} h$	$98.1^{+3.1}_{-3.0}$	$D_M(0.51)$	1999^{+35}_{-35}
$\ln(10^{10} A_s)$	$3.049^{+0.032}_{-0.029}$	$\langle d^2 \rangle^{1/2}$	$2.458^{+0.073}_{-0.073}$	$H(0.61)$	$95.00^{+0.70}_{-0.65}$
n_s	$0.961^{+0.012}_{-0.011}$	z_{re}	< 9.13	$D_M(0.61)$	2325^{+38}_{-38}
n_{run}	$-0.006^{+0.015}_{-0.015}$	$10^9 A_s$	$2.110^{+0.067}_{-0.062}$	$H(2.33)$	$237.1^{+2.5}_{-2.5}$
r	< 0.0624	$10^9 A_s e^{-2\tau}$	$1.889^{+0.028}_{-0.028}$	$D_M(2.33)$	5777^{+31}_{-32}
y_{cal}	$1.0006^{+0.0049}_{-0.0049}$	D_{40}	1231^{+42}_{-41}	$f\sigma_8(0.15)$	$0.467^{+0.023}_{-0.023}$
$A_{B,\text{dust}}$	$4.9^{+2.1}_{-1.9}$	D_{220}	5708^{+82}_{-81}	$\sigma_8(0.15)$	$0.752^{+0.014}_{-0.013}$
$A_{B,\text{sync}}$	< 3.66	D_{810}	2539^{+28}_{-28}	$f\sigma_8(0.38)$	$0.483^{+0.018}_{-0.018}$
$\alpha_{B,\text{dust}}$	—	D_{1420}	814^{+10}_{-10}	$\sigma_8(0.38)$	$0.666^{+0.012}_{-0.010}$
$\beta_{B,\text{dust}}$	$1.60^{+0.19}_{-0.19}$	D_{2000}	$229.0^{+3.8}_{-3.8}$	$f\sigma_8(0.51)$	$0.480^{+0.015}_{-0.016}$
$\alpha_{B,\text{sync}}$	—	$n_{s,0.002}$	$0.981^{+0.047}_{-0.046}$	$\sigma_8(0.51)$	$0.622^{+0.010}_{-0.0097}$
$\beta_{B,\text{sync}}$	$-3.10^{+0.52}_{-0.55}$	Y_P	$0.24530^{+0.00018}_{-0.00021}$	$f\sigma_8(0.61)$	$0.474^{+0.014}_{-0.014}$
$\epsilon_{\text{dust,sync}}$	$-0.35^{+0.53}_{-0.57}$	Y_P^{BBN}	$0.24663^{+0.00018}_{-0.00021}$	$\sigma_8(0.61)$	$0.5918^{+0.0095}_{-0.0090}$
A_{217}^{CIB}	45^{+20}_{-20}	$10^5 D/H$	$2.626^{+0.087}_{-0.085}$	$f\sigma_8(2.33)$	$0.2979^{+0.0047}_{-0.0043}$
$\xi^{tSZ-CIB}$	—	Age/Gyr	$13.828^{+0.071}_{-0.073}$	$\sigma_8(2.33)$	$0.3067^{+0.0049}_{-0.0045}$
A_{143}^{tSZ}	$4.2^{+3.7}_{-4.2}$	z_*	$1090.29^{+0.80}_{-0.79}$	$r_{0.002}$	< 0.0593
A_{100}^{PS}	256^{+60}_{-60}	r_*	$144.29^{+0.95}_{-0.94}$	$r_{0.01}$	< 0.0601
A_{143}^{PS}	47^{+20}_{-20}	$100\theta_*$	$1.04097^{+0.00092}_{-0.00091}$	$\ln(10^{10} A_t)$	$-0.9^{+1.5}_{-2.1}$
A_{217}^{PS}	108^{+30}_{-30}	$D_M(z_*)/\text{Gpc}$	$13.861^{+0.088}_{-0.087}$	$r_{L=10}$	< 0.0308
A^{kSZ}	—	z_{drag}	$1059.53^{+0.98}_{-0.97}$	$10^9 A_t$	< 0.132
c_{100}	$0.9985^{+0.0022}_{-0.0027}$	r_{drag}	$147.02^{+0.97}_{-0.96}$	$10^9 A_t e^{-2\tau}$	< 0.118
c_{217}	$0.9998^{+0.0038}_{-0.0028}$	k_D	$0.1408^{+0.0011}_{-0.0011}$	f_{2000}^{143}	32^{+6}_{-6}
H_0	$66.7^{+1.8}_{-1.7}$	$100\theta_D$	$0.16100^{+0.00057}_{-0.00056}$	$f_{2000}^{143 \times 217}$	34^{+5}_{-5}
Ω_Λ	$0.676^{+0.025}_{-0.026}$	z_{eq}	3425^{+93}_{-92}	f_{2000}^{217}	$108.6^{+4.2}_{-4.2}$
Ω_m	$0.324^{+0.026}_{-0.025}$	k_{eq}	$0.01045^{+0.00028}_{-0.00028}$	χ_{BKPLANCK}^2	$739.1 (\nu: 3.7)$
$\Omega_m h^2$	$0.1440^{+0.0039}_{-0.0039}$	$100\theta_{\text{eq}}$	$0.809^{+0.017}_{-0.017}$	χ_{small}^2	$397.2 (\nu: 1.9)$
$\Omega_m h^3$	$0.09606^{+0.00097}_{-0.00097}$	$100\theta_{s,\text{eq}}$	$0.4471^{+0.0089}_{-0.0087}$	χ_{lowl}^2	$23.5 (\nu: 2.4)$
σ_8	$0.815^{+0.017}_{-0.016}$	$H(0.15)$	$72.1^{+1.5}_{-1.5}$	χ_{prior}^2	$9.1 (\nu: 7.8)$
S_8	$0.847^{+0.047}_{-0.046}$	$D_M(0.15)$	649^{+15}_{-15}	χ_{CMB}^2	$5078 (\nu: 4948233.2)$

$$\bar{\chi}_{\text{eff}}^2 = 8233.63; \Delta \bar{\chi}_{\text{eff}}^2 = 6292.12; R - 1 = 0.00394$$

15.14 base_nrun_r_CamSpecHM_TT_lowl_lowE_BK15_post_BAO_zre6p5/base_nrun_r_plikHM_TT_lowl_lowE_BK15_post_BAO_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02227^{+0.00042}_{-0.00042}$	$\sigma_8/h^{0.5}$	$0.985^{+0.023}_{-0.021}$	$H(0.61)$	$95.29^{+0.50}_{-0.49}$
$\Omega_c h^2$	$0.1192^{+0.0024}_{-0.0024}$	$r_{\text{drag}} h$	$99.6^{+1.8}_{-1.8}$	$D_{\text{M}}(0.61)$	2306^{+23}_{-24}
$100\theta_{MC}$	$1.04103^{+0.00082}_{-0.00084}$	$\langle d^2 \rangle^{1/2}$	$2.428^{+0.055}_{-0.055}$	$H(2.33)$	$235.9^{+1.6}_{-1.5}$
τ	$0.057^{+0.015}_{-0.014}$	z_{re}	< 9.30	$D_{\text{M}}(2.33)$	5765^{+25}_{-25}
$\ln(10^{10} A_s)$	$3.048^{+0.033}_{-0.031}$	$10^9 A_s$	$2.108^{+0.071}_{-0.065}$	$f\sigma_8(0.15)$	$0.456^{+0.015}_{-0.015}$
n_s	$0.9659^{+0.0088}_{-0.0088}$	$10^9 A_s e^{-2\tau}$	$1.881^{+0.024}_{-0.024}$	$\sigma_8(0.15)$	$0.748^{+0.014}_{-0.012}$
n_{run}	$-0.006^{+0.015}_{-0.015}$	D_{40}	1224^{+40}_{-40}	$f\sigma_8(0.38)$	$0.475^{+0.013}_{-0.012}$
r	< 0.0657	D_{220}	5716^{+80}_{-80}	$\sigma_8(0.38)$	$0.663^{+0.011}_{-0.011}$
y_{cal}	$1.0008^{+0.0049}_{-0.0049}$	D_{810}	2538^{+28}_{-28}	$f\sigma_8(0.51)$	$0.473^{+0.011}_{-0.011}$
$A_{B,\text{dust}}$	$4.9^{+2.1}_{-1.9}$	D_{1420}	815^{+10}_{-10}	$\sigma_8(0.51)$	$0.621^{+0.010}_{-0.0097}$
$A_{B,\text{sync}}$	< 3.64	D_{2000}	$229.5^{+3.8}_{-3.7}$	$f\sigma_8(0.61)$	$0.468^{+0.011}_{-0.010}$
$\alpha_{B,\text{dust}}$	—	$n_{s,0.002}$	$0.984^{+0.048}_{-0.046}$	$\sigma_8(0.61)$	$0.5908^{+0.0098}_{-0.0092}$
$\beta_{B,\text{dust}}$	$1.60^{+0.19}_{-0.19}$	Y_P	$0.24535^{+0.00016}_{-0.00019}$	$f\sigma_8(2.33)$	$0.2979^{+0.0049}_{-0.0045}$
$\alpha_{B,\text{sync}}$	—	Y_P^{BBN}	$0.24668^{+0.00016}_{-0.00019}$	$\sigma_8(2.33)$	$0.3072^{+0.0051}_{-0.0047}$
$\beta_{B,\text{sync}}$	$-3.10^{+0.51}_{-0.55}$	$10^5 D/H$	$2.606^{+0.080}_{-0.077}$	$r_{0.002}$	< 0.0634
$\epsilon_{\text{dust,sync}}$	$-0.35^{+0.53}_{-0.58}$	Age/Gyr	$13.801^{+0.057}_{-0.057}$	$r_{0.01}$	< 0.0639
A_{217}^{CIB}	45^{+20}_{-20}	z_*	$1089.98^{+0.61}_{-0.60}$	$\ln(10^{10} A_t)$	$-0.8^{+1.4}_{-2.0}$
$\xi^{tSZ-CIB}$	—	r_*	$144.72^{+0.65}_{-0.65}$	$r_{L=10}$	< 0.0329
A_{143}^{tSZ}	$4.3^{+3.8}_{-4.2}$	$100\theta_*$	$1.04122^{+0.00081}_{-0.00083}$	$10^9 A_t$	< 0.139
A_{100}^{PS}	255^{+60}_{-50}	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.899^{+0.063}_{-0.063}$	$10^9 A_t e^{-2\tau}$	< 0.124
A_{143}^{PS}	46^{+20}_{-20}	z_{drag}	$1059.64^{+0.94}_{-0.96}$	f_{2000}^{143}	32^{+6}_{-6}
A_{217}^{PS}	107^{+20}_{-30}	r_{drag}	$147.42^{+0.72}_{-0.72}$	$f_{2000}^{143 \times 217}$	34^{+4}_{-5}
A^{kSZ}	—	k_{D}	$0.14044^{+0.00096}_{-0.00096}$	f_{2000}^{217}	$108.3^{+4.2}_{-4.2}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	$100\theta_{\text{D}}$	$0.16095^{+0.00057}_{-0.00055}$	χ_{BKPLANCK}^2	$739.9 (\nu: 3.5)$
c_{217}	$0.9998^{+0.0038}_{-0.0028}$	z_{eq}	3381^{+57}_{-55}	χ_{small}^2	$397.5 (\nu: 2.5)$
H_0	$67.6^{+1.1}_{-1.1}$	k_{eq}	$0.01032^{+0.00017}_{-0.00017}$	χ_{lowl}^2	$22.9 (\nu: 1.9)$
Ω_{Λ}	$0.689^{+0.014}_{-0.015}$	$100\theta_{\text{eq}}$	$0.817^{+0.010}_{-0.010}$	$\chi_{6\text{DF}}^2$	$0.067 (\nu: 0.0)$
Ω_m	$0.311^{+0.015}_{-0.014}$	$100\theta_{\text{s,eq}}$	$0.4514^{+0.0053}_{-0.0053}$	χ_{MGS}^2	$1.28 (\nu: 0.1)$
$\Omega_m h^2$	$0.1421^{+0.0024}_{-0.0023}$	$H(0.15)$	$72.86^{+0.93}_{-0.91}$	χ_{DR12BAO}^2	$5.0 (\nu: 1.6)$
$\Omega_m h^3$	$0.09605^{+0.00097}_{-0.00097}$	$D_{\text{M}}(0.15)$	$641.5^{+9.1}_{-9.0}$	χ_{prior}^2	$9.2 (\nu: 7.7)$
σ_8	$0.810^{+0.015}_{-0.014}$	$H(0.38)$	$82.96^{+0.71}_{-0.68}$	χ_{BAO}^2	$6.3 (\nu: 1.1)$
S_8	$0.825^{+0.029}_{-0.028}$	$D_{\text{M}}(0.38)$	1530^{+18}_{-18}	χ_{CMB}^2	$5079 (\nu: 4948020.1)$
$\sigma_8 \Omega_m^{0.5}$	$0.452^{+0.016}_{-0.016}$	$H(0.51)$	$89.68^{+0.59}_{-0.56}$		
$\sigma_8 \Omega_m^{0.25}$	$0.605^{+0.016}_{-0.015}$	$D_{\text{M}}(0.51)$	1982^{+22}_{-22}		

$$\bar{\chi}_{\text{eff}}^2 = 8240.52; \Delta \bar{\chi}_{\text{eff}}^2 = 6291.91; R - 1 = 0.00672$$

15.15 base_nrun_r_CamSpecHM_TT_lowl_lowE_BK15_post_lensing_zre6p5/base_nrun_r_plikHM_TT_lowl_lowE_BK15_post_lensing_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02219^{+0.00044}_{-0.00044}$	$\sigma_8 \Omega_m^{0.25}$	$0.610^{+0.015}_{-0.015}$	$H(0.51)$	$89.42^{+0.72}_{-0.68}$
$\Omega_c h^2$	$0.1204^{+0.0030}_{-0.0030}$	$\sigma_8/h^{0.5}$	$0.992^{+0.020}_{-0.020}$	$D_M(0.51)$	1993^{+27}_{-28}
$100\theta_{MC}$	$1.04084^{+0.00089}_{-0.00089}$	$r_{\text{drag}} h$	$98.7^{+2.4}_{-2.3}$	$H(0.61)$	$95.09^{+0.60}_{-0.57}$
τ	$0.055^{+0.014}_{-0.012}$	$\langle d^2 \rangle^{1/2}$	$2.445^{+0.052}_{-0.052}$	$D_M(0.61)$	2318^{+29}_{-30}
$\ln(10^{10} A_s)$	$3.046^{+0.028}_{-0.026}$	z_{re}	< 9.01	$H(2.33)$	$236.6^{+1.8}_{-1.9}$
n_s	$0.963^{+0.010}_{-0.0096}$	$10^9 A_s$	$2.104^{+0.060}_{-0.055}$	$D_M(2.33)$	5773^{+28}_{-29}
n_{run}	$-0.005^{+0.015}_{-0.015}$	$10^9 A_s e^{-2\tau}$	$1.885^{+0.023}_{-0.023}$	$f\sigma_8(0.15)$	$0.463^{+0.016}_{-0.016}$
r	< 0.0628	D_{40}	1231^{+40}_{-40}	$\sigma_8(0.15)$	$0.750^{+0.011}_{-0.0099}$
y_{cal}	$1.0006^{+0.0048}_{-0.0049}$	D_{220}	5711^{+81}_{-81}	$f\sigma_8(0.38)$	$0.479^{+0.012}_{-0.012}$
$A_{B,\text{dust}}$	$4.9^{+2.1}_{-1.9}$	D_{810}	2537^{+27}_{-27}	$\sigma_8(0.38)$	$0.6640^{+0.0094}_{-0.0082}$
$A_{B,\text{sync}}$	< 3.65	D_{1420}	814^{+10}_{-10}	$f\sigma_8(0.51)$	$0.477^{+0.010}_{-0.010}$
$\alpha_{B,\text{dust}}$	—	D_{2000}	$229.2^{+3.8}_{-3.8}$	$\sigma_8(0.51)$	$0.6210^{+0.0085}_{-0.0080}$
$\beta_{B,\text{dust}}$	$1.60^{+0.19}_{-0.19}$	$n_{s,0.002}$	$0.978^{+0.046}_{-0.046}$	$f\sigma_8(0.61)$	$0.4715^{+0.0091}_{-0.0092}$
$\alpha_{B,\text{sync}}$	—	Y_P	$0.24532^{+0.00018}_{-0.00021}$	$\sigma_8(0.61)$	$0.5907^{+0.0081}_{-0.0076}$
$\beta_{B,\text{sync}}$	$-3.10^{+0.51}_{-0.55}$	Y_P^{BBN}	$0.24664^{+0.00018}_{-0.00021}$	$f\sigma_8(2.33)$	$0.2976^{+0.0043}_{-0.0039}$
$\epsilon_{\text{dust,sync}}$	$-0.35^{+0.53}_{-0.58}$	$10^5 D/H$	$2.621^{+0.084}_{-0.082}$	$\sigma_8(2.33)$	$0.3065^{+0.0047}_{-0.0043}$
A_{217}^{CIB}	45^{+20}_{-20}	Age/Gyr	$13.820^{+0.064}_{-0.066}$	$r_{0.002}$	< 0.0596
$\xi^{tSZ-CIB}$	—	z_*	$1090.19^{+0.70}_{-0.70}$	$r_{0.01}$	< 0.0605
A_{143}^{tSZ}	$4.3^{+3.8}_{-4.2}$	r_*	$144.48^{+0.73}_{-0.71}$	$\ln(10^{10} A_t)$	$-0.9^{+1.5}_{-2.0}$
A_{100}^{PS}	256^{+60}_{-50}	$100\theta_*$	$1.04104^{+0.00088}_{-0.00087}$	$r_{L=10}$	< 0.0309
A_{143}^{PS}	46^{+20}_{-20}	$D_M(z_*)/\text{Gpc}$	$13.878^{+0.069}_{-0.067}$	$10^9 A_t$	< 0.132
A_{217}^{PS}	107^{+20}_{-30}	z_{drag}	$1059.54^{+0.97}_{-0.98}$	$10^9 A_t e^{-2\tau}$	< 0.118
A^{kSZ}	—	r_{drag}	$147.20^{+0.77}_{-0.75}$	f_{2000}^{143}	32^{+6}_{-6}
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	k_D	$0.14061^{+0.00094}_{-0.00096}$	$f_{2000}^{143 \times 217}$	34^{+5}_{-5}
c_{217}	$0.9998^{+0.0038}_{-0.0028}$	$100\theta_D$	$0.16099^{+0.00057}_{-0.00056}$	f_{2000}^{217}	$108.4^{+4.2}_{-4.2}$
H_0	$67.0^{+1.4}_{-1.3}$	z_{eq}	3407^{+68}_{-69}	χ_{lensing}^2	$9.7 (\nu: 0.5)$
Ω_Λ	$0.681^{+0.019}_{-0.019}$	k_{eq}	$0.01040^{+0.00021}_{-0.00021}$	χ_{BKPLANCK}^2	$739.5 (\nu: 3.5)$
Ω_m	$0.319^{+0.019}_{-0.019}$	$100\theta_{\text{eq}}$	$0.812^{+0.013}_{-0.012}$	χ_{simall}^2	$397.1 (\nu: 1.6)$
$\Omega_m h^2$	$0.1432^{+0.0028}_{-0.0029}$	$100\theta_{s,\text{eq}}$	$0.4488^{+0.0067}_{-0.0064}$	χ_{lowl}^2	$23.6 (\nu: 2.4)$
$\Omega_m h^3$	$0.09601^{+0.00096}_{-0.00095}$	$H(0.15)$	$72.4^{+1.2}_{-1.1}$	χ_{prior}^2	$9.1 (\nu: 7.7)$
σ_8	$0.812^{+0.012}_{-0.012}$	$D_M(0.15)$	646^{+12}_{-12}	χ_{CMB}^2	$5088 (\nu: 4948034.6)$
S_8	$0.837^{+0.032}_{-0.031}$	$H(0.38)$	$82.64^{+0.88}_{-0.84}$		
$\sigma_8 \Omega_m^{0.5}$	$0.459^{+0.017}_{-0.017}$	$D_M(0.38)$	1539^{+23}_{-24}		

$$\bar{\chi}_{\text{eff}}^2 = 8242.90; \Delta \bar{\chi}_{\text{eff}}^2 = 6291.97; R - 1 = 0.00417$$

15.16 base_nrun_r_CamSpecHM_TT_lowl_lowE_BK15_post_BAO_lensing_zre6p5/base_nrun_r_plikHM_TT_lowl_lowE_BK15_post_BAO_lensing

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02226^{+0.00042}_{-0.00042}$	$\sigma_8/h^{0.5}$	$0.986^{+0.017}_{-0.017}$	$H(0.61)$	$95.28^{+0.49}_{-0.48}$
$\Omega_c h^2$	$0.1192^{+0.0021}_{-0.0021}$	$r_{\text{drag}} h$	$99.6^{+1.6}_{-1.6}$	$D_{\text{M}}(0.61)$	2307^{+22}_{-22}
$100\theta_{MC}$	$1.04101^{+0.00082}_{-0.00084}$	$\langle d^2 \rangle^{1/2}$	$2.432^{+0.046}_{-0.045}$	$H(2.33)$	$236.0^{+1.4}_{-1.4}$
τ	$0.057^{+0.014}_{-0.013}$	z_{re}	$8.0^{+1.3}_{-1.4}$	$D_{\text{M}}(2.33)$	5765^{+25}_{-24}
$\ln(10^{10} A_s)$	$3.049^{+0.030}_{-0.028}$	$10^9 A_s$	$2.110^{+0.063}_{-0.059}$	$f\sigma_8(0.15)$	$0.457^{+0.012}_{-0.012}$
n_s	$0.9657^{+0.0085}_{-0.0084}$	$10^9 A_s e^{-2\tau}$	$1.881^{+0.023}_{-0.022}$	$\sigma_8(0.15)$	$0.749^{+0.011}_{-0.010}$
n_{run}	$-0.005^{+0.015}_{-0.015}$	D_{40}	1227^{+40}_{-39}	$f\sigma_8(0.38)$	$0.4753^{+0.0098}_{-0.0097}$
r	< 0.0643	D_{220}	5720^{+79}_{-79}	$\sigma_8(0.38)$	$0.664^{+0.010}_{-0.0087}$
y_{cal}	$1.0009^{+0.0049}_{-0.0049}$	D_{810}	2538^{+27}_{-27}	$f\sigma_8(0.51)$	$0.4739^{+0.0087}_{-0.0086}$
$A_{B,\text{dust}}$	$4.9^{+2.1}_{-1.9}$	D_{1420}	815^{+10}_{-10}	$\sigma_8(0.51)$	$0.6213^{+0.0090}_{-0.0085}$
$A_{B,\text{sync}}$	< 3.65	D_{2000}	$229.7^{+3.7}_{-3.7}$	$f\sigma_8(0.61)$	$0.4689^{+0.0080}_{-0.0079}$
$\alpha_{B,\text{dust}}$	—	$n_{s,0.002}$	$0.981^{+0.047}_{-0.046}$	$\sigma_8(0.61)$	$0.5912^{+0.0086}_{-0.0081}$
$\beta_{B,\text{dust}}$	$1.60^{+0.19}_{-0.19}$	Y_P	$0.24535^{+0.00016}_{-0.00019}$	$f\sigma_8(2.33)$	$0.2981^{+0.0044}_{-0.0041}$
$\alpha_{B,\text{sync}}$	—	Y_P^{BBN}	$0.24667^{+0.00016}_{-0.00019}$	$\sigma_8(2.33)$	$0.3073^{+0.0047}_{-0.0044}$
$\beta_{B,\text{sync}}$	$-3.10^{+0.51}_{-0.54}$	$10^5 D/H$	$2.607^{+0.080}_{-0.077}$	$r_{0.002}$	< 0.0617
$\epsilon_{\text{dust,sync}}$	$-0.35^{+0.53}_{-0.58}$	Age/Gyr	$13.802^{+0.057}_{-0.056}$	$r_{0.01}$	< 0.0624
A_{217}^{CIB}	45^{+20}_{-20}	z_*	$1089.99^{+0.60}_{-0.59}$	$\ln(10^{10} A_t)$	$-0.8^{+1.4}_{-2.0}$
$\xi^{tSZ-CIB}$	—	r_*	$144.71^{+0.58}_{-0.58}$	$r_{L=10}$	< 0.0320
A_{143}^{tSZ}	$4.3^{+3.8}_{-4.2}$	$100\theta_*$	$1.04121^{+0.00082}_{-0.00083}$	$10^9 A_t$	< 0.136
A_{100}^{PS}	255^{+60}_{-50}	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.898^{+0.057}_{-0.057}$	$10^9 A_t e^{-2\tau}$	< 0.121
A_{143}^{PS}	46^{+20}_{-20}	z_{drag}	$1059.63^{+0.95}_{-0.95}$	f_{2000}^{143}	31^{+6}_{-6}
A_{217}^{PS}	108^{+20}_{-30}	r_{drag}	$147.41^{+0.66}_{-0.66}$	$f_{2000}^{143 \times 217}$	34^{+4}_{-5}
A^{kSZ}	—	k_{D}	$0.14044^{+0.00091}_{-0.00091}$	f_{2000}^{217}	$108.2^{+4.2}_{-4.2}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	$100\theta_{\text{D}}$	$0.16095^{+0.00056}_{-0.00055}$	χ^2_{lensing}	$9.39 (\nu: 0.2)$
c_{217}	$0.9998^{+0.0038}_{-0.0028}$	z_{eq}	3382^{+50}_{-49}	χ^2_{BKPLANCK}	$739.8 (\nu: 3.4)$
H_0	$67.56^{+0.98}_{-0.97}$	k_{eq}	$0.01032^{+0.00015}_{-0.00015}$	χ^2_{simall}	$397.5 (\nu: 2.3)$
Ω_{Λ}	$0.689^{+0.013}_{-0.013}$	$100\theta_{\text{eq}}$	$0.8168^{+0.0091}_{-0.0091}$	χ^2_{lowl}	$23.2 (\nu: 2.0)$
Ω_m	$0.311^{+0.013}_{-0.013}$	$100\theta_{\text{s,eq}}$	$0.4513^{+0.0047}_{-0.0047}$	$\chi^2_{6\text{DF}}$	$0.062 (\nu: 0.0)$
$\Omega_m h^2$	$0.1422^{+0.0021}_{-0.0021}$	$H(0.15)$	$72.84^{+0.86}_{-0.84}$	χ^2_{MGS}	$1.25 (\nu: 0.1)$
$\Omega_m h^3$	$0.09604^{+0.00096}_{-0.00096}$	$D_{\text{M}}(0.15)$	$641.7^{+8.4}_{-8.4}$	χ^2_{DR12BAO}	$4.9 (\nu: 1.3)$
σ_8	$0.811^{+0.012}_{-0.011}$	$H(0.38)$	$82.95^{+0.66}_{-0.64}$	χ^2_{prior}	$9.2 (\nu: 7.7)$
S_8	$0.826^{+0.023}_{-0.023}$	$D_{\text{M}}(0.38)$	1530^{+17}_{-17}	χ^2_{CMB}	$5088 (\nu: 4948182.3)$
$\sigma_8 \Omega_m^{0.5}$	$0.452^{+0.013}_{-0.013}$	$H(0.51)$	$89.66^{+0.56}_{-0.54}$	χ^2_{BAO}	$6.3 (\nu: 0.8)$
$\sigma_8 \Omega_m^{0.25}$	$0.605^{+0.012}_{-0.012}$	$D_{\text{M}}(0.51)$	1983^{+20}_{-20}		

$$\bar{\chi}^2_{\text{eff}} = 8249.63; \Delta \bar{\chi}^2_{\text{eff}} = 6292.05; R - 1 = 0.00812$$

15.17 base_nrun_r_CamSpecHM_TTTEEE_lowl_lowE_BK15/base_nrun_r_plikHM_TTTEEE_lowl_lowE_BK15

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02234^{+0.00032}_{-0.00032}$	$\sigma_8 \Omega_m^{0.5}$	$0.457^{+0.018}_{-0.018}$	$H(0.38)$	$82.79^{+0.75}_{-0.73}$
$\Omega_c h^2$	$0.1202^{+0.0028}_{-0.0028}$	$\sigma_8 \Omega_m^{0.25}$	$0.609^{+0.017}_{-0.017}$	$D_M(0.38)$	1536^{+21}_{-21}
$100\theta_{MC}$	$1.04086^{+0.00061}_{-0.00062}$	$\sigma_8/h^{0.5}$	$0.990^{+0.024}_{-0.024}$	$H(0.51)$	$89.56^{+0.59}_{-0.57}$
τ	$0.056^{+0.017}_{-0.016}$	$r_{\text{drag}} h$	$98.9^{+2.2}_{-2.1}$	$D_M(0.51)$	1988^{+24}_{-24}
$\ln(10^{10} A_s)$	$3.048^{+0.036}_{-0.034}$	$\langle d^2 \rangle^{1/2}$	$2.441^{+0.058}_{-0.058}$	$H(0.61)$	$95.22^{+0.48}_{-0.46}$
n_s	$0.9641^{+0.0095}_{-0.0095}$	z_{re}	$7.8^{+1.7}_{-1.6}$	$D_M(0.61)$	2313^{+26}_{-26}
n_{run}	$-0.006^{+0.014}_{-0.014}$	$10^9 A_s$	$2.108^{+0.077}_{-0.071}$	$H(2.33)$	$236.7^{+1.7}_{-1.7}$
r	< 0.0698	$10^9 A_s e^{-2\tau}$	$1.886^{+0.025}_{-0.025}$	$D_M(2.33)$	5766^{+22}_{-22}
y_{cal}	$1.0007^{+0.0049}_{-0.0049}$	D_{40}	1229^{+37}_{-37}	$f\sigma_8(0.15)$	$0.461^{+0.017}_{-0.017}$
$A_{B,\text{dust}}$	$4.9^{+2.1}_{-1.9}$	D_{220}	5723^{+78}_{-77}	$\sigma_8(0.15)$	$0.750^{+0.014}_{-0.014}$
$A_{B,\text{sync}}$	< 3.64	D_{810}	2540^{+28}_{-27}	$f\sigma_8(0.38)$	$0.478^{+0.014}_{-0.014}$
$\alpha_{B,\text{dust}}$	—	D_{1420}	$815.7^{+9.9}_{-9.7}$	$\sigma_8(0.38)$	$0.664^{+0.012}_{-0.011}$
$\beta_{B,\text{dust}}$	$1.60^{+0.19}_{-0.19}$	D_{2000}	$229.9^{+3.6}_{-3.6}$	$f\sigma_8(0.51)$	$0.476^{+0.012}_{-0.012}$
$\alpha_{B,\text{sync}}$	—	$n_{s,0.002}$	$0.983^{+0.044}_{-0.043}$	$\sigma_8(0.51)$	$0.621^{+0.011}_{-0.010}$
$\beta_{B,\text{sync}}$	$-3.10^{+0.52}_{-0.55}$	Y_P	$0.24538^{+0.00012}_{-0.00013}$	$f\sigma_8(0.61)$	$0.471^{+0.011}_{-0.011}$
$\epsilon_{\text{dust,sync}}$	$-0.36^{+0.52}_{-0.57}$	Y_P^{BBN}	$0.24671^{+0.00012}_{-0.00013}$	$\sigma_8(0.61)$	$0.591^{+0.010}_{-0.0098}$
A_{217}^{CIB}	44^{+20}_{-20}	$10^5 D/H$	$2.592^{+0.061}_{-0.058}$	$f\sigma_8(2.33)$	$0.2978^{+0.0052}_{-0.0049}$
$\xi^{tSZ-CIB}$	—	Age/Gyr	$13.803^{+0.049}_{-0.049}$	$\sigma_8(2.33)$	$0.3068^{+0.0054}_{-0.0051}$
A_{143}^{tSZ}	$4.4^{+3.8}_{-4.2}$	z_*	$1089.98^{+0.55}_{-0.55}$	$r_{0.002}$	< 0.0668
A_{100}^{PS}	253^{+60}_{-60}	r_*	$144.40^{+0.68}_{-0.66}$	$r_{0.01}$	< 0.0676
A_{143}^{PS}	45^{+20}_{-20}	$100\theta_*$	$1.04104^{+0.00060}_{-0.00061}$	$\ln(10^{10} A_t)$	$-0.7^{+1.4}_{-1.9}$
A_{217}^{PS}	108^{+30}_{-30}	$D_M(z_*)/\text{Gpc}$	$13.870^{+0.064}_{-0.062}$	$r_{L=10}$	< 0.0347
A^{kSZ}	—	z_{drag}	$1059.88^{+0.66}_{-0.71}$	$10^9 A_t$	< 0.147
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	r_{drag}	$147.07^{+0.70}_{-0.67}$	$10^9 A_t e^{-2\tau}$	< 0.132
c_{217}	$0.9997^{+0.0038}_{-0.0027}$	k_D	$0.14087^{+0.00077}_{-0.00081}$	f_{2000}^{143}	31^{+6}_{-6}
H_0	$67.2^{+1.2}_{-1.2}$	$100\theta_D$	$0.16078^{+0.00041}_{-0.00039}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-4}
Ω_Λ	$0.683^{+0.017}_{-0.017}$	z_{eq}	3407^{+65}_{-65}	f_{2000}^{217}	$107.8^{+4.1}_{-4.2}$
Ω_m	$0.317^{+0.017}_{-0.017}$	k_{eq}	$0.01040^{+0.00020}_{-0.00020}$	χ_{BKPLANCK}^2	$739.7 (\nu: 3.8)$
$\Omega_m h^2$	$0.1432^{+0.0027}_{-0.0027}$	$100\theta_{\text{eq}}$	$0.812^{+0.012}_{-0.012}$	χ_{simall}^2	$397.4 (\nu: 2.1)$
$\Omega_m h^3$	$0.09628^{+0.00067}_{-0.00070}$	$100\theta_{s,\text{eq}}$	$0.4489^{+0.0063}_{-0.0061}$	χ_{lowl}^2	$23.2 (\nu: 1.7)$
σ_8	$0.812^{+0.016}_{-0.015}$	$H(0.15)$	$72.6^{+1.0}_{-1.0}$	χ_{prior}^2	$11.4 (\nu: 11.1)$
S_8	$0.835^{+0.033}_{-0.033}$	$D_M(0.15)$	644^{+10}_{-10}	χ_{CMB}^2	$8098 (\nu: 10476268.6)$

Best-fit $\chi_{\text{eff}}^2 = 12656.13$; $\Delta\chi_{\text{eff}}^2 = 9155.30$; $\bar{\chi}_{\text{eff}}^2 = 12684.91$; $\Delta\bar{\chi}_{\text{eff}}^2 = 9151.07$; $R - 1 = 0.00385$
 χ_{eff}^2 : CMB - BK15_dust: 735.31 (Δ 0.24) simall_100x143_offlike5_EE_Aplanck_B: 396.13 (Δ -0.23) commander_dx12_v3_2_29: 23.09 (Δ 0.66) CamSpec like_10.7HM_1400_unified: 11499.22

15.18 base_nrun_r_CamSpecHM_TTTEEE_lowl_lowE_BK15_post_BAO/base_nrun_r_plikHM_TTTEEE_lowl_lowE_BK15_post_BAO

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02240^{+0.00030}_{-0.00031}$	$\sigma_8/h^{0.5}$	$0.985^{+0.022}_{-0.021}$	$H(0.61)$	$95.37^{+0.38}_{-0.38}$
$\Omega_c h^2$	$0.1193^{+0.0021}_{-0.0021}$	$r_{\text{drag}} h$	$99.6^{+1.6}_{-1.5}$	$D_M(0.61)$	2304^{+19}_{-19}
$100\theta_{MC}$	$1.04097^{+0.00057}_{-0.00058}$	$\langle d^2 \rangle^{1/2}$	$2.428^{+0.052}_{-0.051}$	$H(2.33)$	$236.1^{+1.3}_{-1.3}$
τ	$0.057^{+0.017}_{-0.016}$	z_{re}	$7.9^{+1.7}_{-1.6}$	$D_M(2.33)$	5760^{+19}_{-18}
$\ln(10^{10} A_s)$	$3.048^{+0.037}_{-0.034}$	$10^9 A_s$	$2.109^{+0.079}_{-0.071}$	$f\sigma_8(0.15)$	$0.456^{+0.014}_{-0.013}$
n_s	$0.9664^{+0.0081}_{-0.0082}$	$10^9 A_s e^{-2\tau}$	$1.882^{+0.024}_{-0.023}$	$\sigma_8(0.15)$	$0.748^{+0.014}_{-0.013}$
n_{run}	$-0.005^{+0.014}_{-0.014}$	D_{40}	1226^{+37}_{-36}	$f\sigma_8(0.38)$	$0.475^{+0.012}_{-0.012}$
r	< 0.0714	D_{220}	5727^{+77}_{-77}	$\sigma_8(0.38)$	$0.663^{+0.012}_{-0.011}$
y_{cal}	$1.0008^{+0.0049}_{-0.0049}$	D_{810}	2540^{+27}_{-27}	$f\sigma_8(0.51)$	$0.473^{+0.011}_{-0.011}$
$A_{B,\text{dust}}$	$4.9^{+2.1}_{-1.9}$	D_{1420}	$816.3^{+9.9}_{-9.8}$	$\sigma_8(0.51)$	$0.621^{+0.011}_{-0.010}$
$A_{B,\text{sync}}$	< 3.64	D_{2000}	$230.2^{+3.6}_{-3.5}$	$f\sigma_8(0.61)$	$0.468^{+0.010}_{-0.0098}$
$\alpha_{B,\text{dust}}$	—	$n_{s,0.002}$	$0.984^{+0.044}_{-0.043}$	$\sigma_8(0.61)$	$0.591^{+0.011}_{-0.0099}$
$\beta_{B,\text{dust}}$	$1.60^{+0.19}_{-0.19}$	Y_P	$0.24540^{+0.00011}_{-0.00013}$	$f\sigma_8(2.33)$	$0.2979^{+0.0054}_{-0.0049}$
$\alpha_{B,\text{sync}}$	—	Y_P^{BBN}	$0.24673^{+0.00011}_{-0.00013}$	$\sigma_8(2.33)$	$0.3071^{+0.0056}_{-0.0051}$
$\beta_{B,\text{sync}}$	$-3.11^{+0.51}_{-0.55}$	$10^5 D/H$	$2.581^{+0.059}_{-0.054}$	$r_{0.002}$	< 0.0689
$\epsilon_{\text{dust,sync}}$	$-0.36^{+0.53}_{-0.58}$	Age/Gyr	$13.790^{+0.042}_{-0.042}$	$r_{0.01}$	< 0.0695
A_{217}^{CIB}	44^{+20}_{-20}	z_*	$1089.82^{+0.46}_{-0.46}$	$\ln(10^{10} A_t)$	$-0.7^{+1.4}_{-1.9}$
$\xi^{tSZ-CIB}$	—	r_*	$144.59^{+0.54}_{-0.52}$	$r_{L=10}$	< 0.0357
A_{143}^{tSZ}	$4.5^{+3.8}_{-4.3}$	$100\theta_*$	$1.04115^{+0.00056}_{-0.00057}$	$10^9 A_t$	< 0.150
A_{100}^{PS}	252^{+60}_{-50}	$D_M(z_*)/\text{Gpc}$	$13.888^{+0.051}_{-0.050}$	$10^9 A_t e^{-2\tau}$	< 0.134
A_{143}^{PS}	44^{+20}_{-20}	z_{drag}	$1059.95^{+0.67}_{-0.70}$	f_{2000}^{143}	30^{+6}_{-6}
A_{217}^{PS}	108^{+30}_{-30}	r_{drag}	$147.25^{+0.58}_{-0.56}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-4}
A^{kSZ}	—	k_D	$0.14072^{+0.00070}_{-0.00074}$	f_{2000}^{217}	$107.5^{+4.1}_{-4.1}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	$100\theta_D$	$0.16075^{+0.00041}_{-0.00039}$	χ_{BKPLANCK}^2	$740.0 (\nu: 3.7)$
c_{217}	$0.9997^{+0.0038}_{-0.0027}$	z_{eq}	3386^{+48}_{-48}	χ_{simall}^2	$397.6 (\nu: 2.6)$
H_0	$67.64^{+0.89}_{-0.88}$	k_{eq}	$0.01033^{+0.00015}_{-0.00015}$	χ_{lowl}^2	$23.0 (\nu: 1.6)$
Ω_Λ	$0.689^{+0.012}_{-0.012}$	$100\theta_{\text{eq}}$	$0.8164^{+0.0089}_{-0.0087}$	$\chi_{6\text{DF}}^2$	$0.059 (\nu: 0.0)$
Ω_m	$0.311^{+0.012}_{-0.012}$	$100\theta_{\text{s,eq}}$	$0.4510^{+0.0046}_{-0.0045}$	χ_{MGS}^2	$1.25 (\nu: 0.1)$
$\Omega_m h^2$	$0.1423^{+0.0020}_{-0.0020}$	$H(0.15)$	$72.92^{+0.77}_{-0.76}$	χ_{DR12BAO}^2	$4.9 (\nu: 1.1)$
$\Omega_m h^3$	$0.09628^{+0.00068}_{-0.00071}$	$D_M(0.15)$	$640.9^{+7.6}_{-7.6}$	χ_{prior}^2	$11.3 (\nu: 11.3)$
σ_8	$0.810^{+0.015}_{-0.015}$	$H(0.38)$	$83.03^{+0.56}_{-0.56}$	χ_{BAO}^2	$6.2 (\nu: 0.7)$
S_8	$0.825^{+0.026}_{-0.026}$	$D_M(0.38)$	1529^{+15}_{-15}	χ_{CMB}^2	$8098 (\nu: 10475927.9)$
$\sigma_8 \Omega_m^{0.5}$	$0.452^{+0.014}_{-0.014}$	$H(0.51)$	$89.75^{+0.46}_{-0.45}$		
$\sigma_8 \Omega_m^{0.25}$	$0.605^{+0.015}_{-0.014}$	$D_M(0.51)$	1980^{+18}_{-18}		

Best-fit $\chi_{\text{eff}}^2 = 12662.16$; $\Delta\chi_{\text{eff}}^2 = 9154.77$; $\bar{\chi}_{\text{eff}}^2 = 12690.95$; $\Delta\bar{\chi}_{\text{eff}}^2 = 9150.56$; $R - 1 = 0.00720$
 χ_{eff}^2 : BAO - 6DF: 0.03 (Δ -0.02) MGS: 1.22 (Δ 0.12) DR12BAO: 4.40 (Δ -0.48) CMB - BK15_dust: 735.68 (Δ 0.39) simall.100x143_offlike5_EE_Aplanck_B: 396.13 (Δ -0.64) commander.dx12.v3.2.29: 22.83 (Δ 0.43) CamSpec like.10.7HM.1400_unified: 11499.52

15.19 base_nrun_r_CamSpecHM_TTTEEE_lowl_lowE_BK15_post_lensing/base_nrun_r_plikHM_TTTEEE_lowl_lowE_BK15_lensing

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02235^{+0.00032}_{-0.00032}$	$\sigma_8 \Omega_m^{0.25}$	$0.608^{+0.013}_{-0.013}$	$H(0.51)$	$89.60^{+0.54}_{-0.52}$
$\Omega_c h^2$	$0.1200^{+0.0024}_{-0.0024}$	$\sigma_8/h^{0.5}$	$0.989^{+0.018}_{-0.018}$	$D_M(0.51)$	1987^{+21}_{-22}
$100\theta_{MC}$	$1.04088^{+0.00060}_{-0.00060}$	$r_{\text{drag}} h$	$99.0^{+1.9}_{-1.8}$	$H(0.61)$	$95.25^{+0.44}_{-0.43}$
τ	$0.055^{+0.016}_{-0.015}$	$\langle d^2 \rangle^{1/2}$	$2.438^{+0.046}_{-0.045}$	$D_M(0.61)$	2311^{+23}_{-23}
$\ln(10^{10} A_s)$	$3.047^{+0.031}_{-0.030}$	z_{re}	$7.8^{+1.5}_{-1.5}$	$H(2.33)$	$236.5^{+1.5}_{-1.5}$
n_s	$0.9645^{+0.0089}_{-0.0087}$	$10^9 A_s$	$2.106^{+0.066}_{-0.062}$	$D_M(2.33)$	5765^{+21}_{-21}
n_{run}	$-0.005^{+0.014}_{-0.014}$	$10^9 A_s e^{-2\tau}$	$1.885^{+0.022}_{-0.022}$	$f\sigma_8(0.15)$	$0.460^{+0.013}_{-0.013}$
r	< 0.0692	D_{40}	1230^{+37}_{-37}	$\sigma_8(0.15)$	$0.749^{+0.011}_{-0.011}$
y_{cal}	$1.0007^{+0.0048}_{-0.0048}$	D_{220}	5725^{+78}_{-77}	$f\sigma_8(0.38)$	$0.477^{+0.010}_{-0.010}$
$A_{B,\text{dust}}$	$4.9^{+2.1}_{-1.9}$	D_{810}	2540^{+27}_{-27}	$\sigma_8(0.38)$	$0.6637^{+0.0097}_{-0.0093}$
$A_{B,\text{sync}}$	< 3.63	D_{1420}	$815.9^{+9.9}_{-9.8}$	$f\sigma_8(0.51)$	$0.4755^{+0.0090}_{-0.0091}$
$\alpha_{B,\text{dust}}$	—	D_{2000}	$230.1^{+3.6}_{-3.6}$	$\sigma_8(0.51)$	$0.6209^{+0.0091}_{-0.0087}$
$\beta_{B,\text{dust}}$	$1.60^{+0.19}_{-0.19}$	$n_{s,0.002}$	$0.980^{+0.044}_{-0.043}$	$f\sigma_8(0.61)$	$0.4702^{+0.0082}_{-0.0082}$
$\alpha_{B,\text{sync}}$	—	Y_P	$0.24538^{+0.00012}_{-0.00013}$	$\sigma_8(0.61)$	$0.5907^{+0.0088}_{-0.0084}$
$\beta_{B,\text{sync}}$	$-3.10^{+0.52}_{-0.56}$	Y_P^{BBN}	$0.24671^{+0.00012}_{-0.00013}$	$f\sigma_8(2.33)$	$0.2977^{+0.0046}_{-0.0043}$
$\epsilon_{\text{dust,sync}}$	$-0.36^{+0.52}_{-0.58}$	$10^5 D/H$	$2.590^{+0.061}_{-0.057}$	$\sigma_8(2.33)$	$0.3067^{+0.0049}_{-0.0046}$
A_{217}^{CIB}	44^{+20}_{-20}	Age/Gyr	$13.801^{+0.047}_{-0.047}$	$r_{0.002}$	< 0.0661
$\xi^{tSZ-CIB}$	—	z_*	$1089.95^{+0.52}_{-0.52}$	$r_{0.01}$	< 0.0670
A_{143}^{tSZ}	$4.5^{+3.8}_{-4.3}$	r_*	$144.45^{+0.58}_{-0.56}$	$\ln(10^{10} A_t)$	$-0.7^{+1.4}_{-1.9}$
A_{100}^{PS}	253^{+60}_{-60}	$100\theta_*$	$1.04106^{+0.00059}_{-0.00059}$	$r_{L=10}$	< 0.0343
A_{143}^{PS}	44^{+20}_{-20}	$D_M(z_*)/\text{Gpc}$	$13.875^{+0.055}_{-0.053}$	$10^9 A_t$	< 0.146
A_{217}^{PS}	108^{+30}_{-30}	z_{drag}	$1059.88^{+0.70}_{-0.71}$	$10^9 A_t e^{-2\tau}$	< 0.130
A^{kSZ}	—	r_{drag}	$147.12^{+0.61}_{-0.58}$	f_{2000}^{143}	20^{+16}_{-12}
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	k_D	$0.14082^{+0.00069}_{-0.00073}$	$f_{2000}^{143 \times 217}$	386^{+400}_{-400}
c_{217}	$0.9997^{+0.0038}_{-0.0027}$	$100\theta_D$	$0.16078^{+0.00041}_{-0.00039}$	f_{2000}^{217}	252^{+100}_{-100}
H_0	$67.3^{+1.1}_{-1.1}$	z_{eq}	3402^{+55}_{-55}	χ^2_{lensing}	$16.2 (\nu: 24.0)$
Ω_Λ	$0.684^{+0.015}_{-0.015}$	k_{eq}	$0.01038^{+0.00017}_{-0.00017}$	χ^2_{BKPLANCK}	$1550 (\nu: 328213.0)$
Ω_m	$0.316^{+0.015}_{-0.015}$	$100\theta_{\text{eq}}$	$0.813^{+0.010}_{-0.010}$	χ^2_{small}	$205 (\nu: 18434.3)$
$\Omega_m h^2$	$0.1430^{+0.0023}_{-0.0023}$	$100\theta_{s,\text{eq}}$	$0.4494^{+0.0054}_{-0.0052}$	χ^2_{lowl}	$27 (\nu: 10.0)$
$\Omega_m h^3$	$0.09626^{+0.00066}_{-0.00069}$	$H(0.15)$	$72.65^{+0.92}_{-0.90}$	χ^2_{prior}	$59 (\nu: 1217.3)$
σ_8	$0.811^{+0.012}_{-0.012}$	$D_M(0.15)$	$643.7^{+9.1}_{-9.2}$	χ^2_{CMB}	$8107 (\nu: 10475857.9)$
S_8	$0.832^{+0.025}_{-0.025}$	$H(0.38)$	$82.84^{+0.68}_{-0.66}$		
$\sigma_8 \Omega_m^{0.5}$	$0.456^{+0.014}_{-0.014}$	$D_M(0.38)$	1534^{+18}_{-18}		

Best-fit $\chi^2_{\text{eff}} = 12665.09$; $\Delta\chi^2_{\text{eff}} = 9155.07$; $\bar{\chi}^2_{\text{eff}} = 12693.83$; $\Delta\bar{\chi}^2_{\text{eff}} = 9150.85$; $R - 1 = 0.00535$
 χ^2_{eff} : CMB - smicadx12_Dec5_ftl_mv2_ndclpp.p_teb_consext8: 8.90 (Δ -0.14) BK15_dust: 735.38 (Δ 0.11) small_100x143_offlike5_EE_Aplanck_B: 396.03 (Δ -0.17) com-
mander_dx12_v3.2.29: 23.34 (Δ 0.70) CamSpec like_10.7HM_1400_unified: 11499.17

15.20 base_nrun_r_CamSpecHM_TTTEEE_lowl_lowE_BK15_post_BAO_lensing/base_nrun_r_plikHM_TTTEEE_lowl_lowE_BK15_lensing_p

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02240^{+0.00030}_{-0.00031}$	$\sigma_8/h^{0.5}$	$0.985^{+0.017}_{-0.016}$	$H(0.61)$	$95.37^{+0.38}_{-0.37}$
$\Omega_c h^2$	$0.1193^{+0.0019}_{-0.0019}$	$r_{\text{drag}} h$	$99.6^{+1.5}_{-1.4}$	$D_M(0.61)$	2305^{+18}_{-18}
$100\theta_{MC}$	$1.04097^{+0.00057}_{-0.00058}$	$\langle d^2 \rangle^{1/2}$	$2.431^{+0.043}_{-0.042}$	$H(2.33)$	$236.1^{+1.2}_{-1.2}$
τ	$0.057^{+0.015}_{-0.014}$	z_{re}	$8.0^{+1.5}_{-1.5}$	$D_M(2.33)$	5760^{+18}_{-18}
$\ln(10^{10} A_s)$	$3.050^{+0.031}_{-0.030}$	$10^9 A_s$	$2.111^{+0.067}_{-0.062}$	$f\sigma_8(0.15)$	$0.457^{+0.011}_{-0.011}$
n_s	$0.9663^{+0.0081}_{-0.0080}$	$10^9 A_s e^{-2\tau}$	$1.882^{+0.022}_{-0.022}$	$\sigma_8(0.15)$	$0.749^{+0.011}_{-0.011}$
n_{run}	$-0.005^{+0.014}_{-0.014}$	D_{40}	1228^{+37}_{-36}	$f\sigma_8(0.38)$	$0.4750^{+0.0091}_{-0.0090}$
r	< 0.0702	D_{220}	5730^{+77}_{-77}	$\sigma_8(0.38)$	$0.6639^{+0.0098}_{-0.0094}$
y_{cal}	$1.0009^{+0.0048}_{-0.0048}$	D_{810}	2540^{+27}_{-26}	$f\sigma_8(0.51)$	$0.4737^{+0.0084}_{-0.0082}$
$A_{B,\text{dust}}$	$4.9^{+2.1}_{-1.9}$	D_{1420}	$816.6^{+9.8}_{-9.8}$	$\sigma_8(0.51)$	$0.6213^{+0.0093}_{-0.0088}$
$A_{B,\text{sync}}$	< 3.62	D_{2000}	$230.4^{+3.6}_{-3.6}$	$f\sigma_8(0.61)$	$0.4687^{+0.0078}_{-0.0077}$
$\alpha_{B,\text{dust}}$	—	$n_{s,0.002}$	$0.981^{+0.044}_{-0.043}$	$\sigma_8(0.61)$	$0.5912^{+0.0088}_{-0.0084}$
$\beta_{B,\text{dust}}$	$1.60^{+0.19}_{-0.19}$	Y_P	$0.24540^{+0.00011}_{-0.00013}$	$f\sigma_8(2.33)$	$0.2981^{+0.0045}_{-0.0043}$
$\alpha_{B,\text{sync}}$	—	Y_P^{BBN}	$0.24673^{+0.00011}_{-0.00013}$	$\sigma_8(2.33)$	$0.3073^{+0.0048}_{-0.0046}$
$\beta_{B,\text{sync}}$	$-3.10^{+0.52}_{-0.55}$	$10^5 D/H$	$2.581^{+0.059}_{-0.054}$	$r_{0.002}$	< 0.0675
$\epsilon_{\text{dust,sync}}$	$-0.36^{+0.52}_{-0.58}$	Age/Gyr	$13.790^{+0.042}_{-0.042}$	$r_{0.01}$	< 0.0682
A_{217}^{CIB}	44^{+20}_{-20}	z_*	$1089.83^{+0.46}_{-0.46}$	$\ln(10^{10} A_t)$	$-0.7^{+1.4}_{-1.9}$
$\xi^{tSZ-CIB}$	—	r_*	$144.59^{+0.49}_{-0.47}$	$r_{L=10}$	< 0.0350
A_{143}^{tSZ}	$4.5^{+3.8}_{-4.3}$	$100\theta_*$	$1.04115^{+0.00056}_{-0.00057}$	$10^9 A_t$	< 0.148
A_{100}^{PS}	252^{+60}_{-50}	$D_M(z_*)/\text{Gpc}$	$13.888^{+0.047}_{-0.046}$	$10^9 A_t e^{-2\tau}$	< 0.132
A_{143}^{PS}	44^{+20}_{-20}	z_{drag}	$1059.94^{+0.67}_{-0.70}$	f_{2000}^{143}	30^{+6}_{-6}
A_{217}^{PS}	108^{+30}_{-30}	r_{drag}	$147.25^{+0.53}_{-0.51}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-4}
A^{kSZ}	—	k_D	$0.14072^{+0.00066}_{-0.00070}$	f_{2000}^{217}	$107.4^{+4.1}_{-4.1}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	$100\theta_D$	$0.16075^{+0.00041}_{-0.00039}$	χ^2_{lensing}	$9.33 (\nu: 0.2)$
c_{217}	$0.9997^{+0.0038}_{-0.0027}$	z_{eq}	3386^{+43}_{-44}	χ^2_{BKPLANCK}	$740.0 (\nu: 3.5)$
H_0	$67.64^{+0.85}_{-0.83}$	k_{eq}	$0.01033^{+0.00013}_{-0.00013}$	χ^2_{simall}	$397.5 (\nu: 2.1)$
Ω_Λ	$0.689^{+0.011}_{-0.011}$	$100\theta_{\text{eq}}$	$0.8163^{+0.0082}_{-0.0080}$	χ^2_{lowl}	$23.2 (\nu: 1.7)$
Ω_m	$0.311^{+0.011}_{-0.011}$	$100\theta_{s,\text{eq}}$	$0.4510^{+0.0043}_{-0.0041}$	$\chi^2_{6\text{DF}}$	$0.055 (\nu: 0.0)$
$\Omega_m h^2$	$0.1423^{+0.0018}_{-0.0018}$	$H(0.15)$	$72.92^{+0.73}_{-0.71}$	χ^2_{MGS}	$1.24 (\nu: 0.1)$
$\Omega_m h^3$	$0.09627^{+0.00066}_{-0.00070}$	$D_M(0.15)$	$641.0^{+7.1}_{-7.2}$	χ^2_{DR12BAO}	$4.9 (\nu: 0.9)$
σ_8	$0.810^{+0.012}_{-0.012}$	$H(0.38)$	$83.03^{+0.54}_{-0.53}$	χ^2_{prior}	$11.3 (\nu: 11.4)$
S_8	$0.825^{+0.021}_{-0.021}$	$D_M(0.38)$	1529^{+14}_{-15}	χ^2_{CMB}	$8107 (\nu: 10475828.1)$
$\sigma_8 \Omega_m^{0.5}$	$0.452^{+0.011}_{-0.011}$	$H(0.51)$	$89.75^{+0.45}_{-0.43}$	χ^2_{BAO}	$6.2 (\nu: 0.6)$
$\sigma_8 \Omega_m^{0.25}$	$0.605^{+0.011}_{-0.011}$	$D_M(0.51)$	1980^{+17}_{-17}		

Best-fit $\chi^2_{\text{eff}} = 12671.14$; $\Delta\chi^2_{\text{eff}} = 9154.82$; $\bar{\chi}^2_{\text{eff}} = 12699.90$; $\Delta\bar{\chi}^2_{\text{eff}} = 9150.61$; $R - 1 = 0.00769$
 χ^2_{eff} : BAO - 6DF: 0.03 (Δ 0.00) MGS: 1.22 (Δ 0.00) DR12BAO: 4.43 (Δ 0.00) CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.96 (Δ 0.13) BK15_dust: 735.57
(Δ 0.11) simall_100x143_offlike5_EE_Aplanck_B: 396.36 (Δ -0.43) commander_dx12_v3_2_29: 22.82 (Δ 0.19) CamSpec like_10.7HM_1400_unified: 11499.49

15.21 base_nrun_r_CamSpecHM_TTTEEE_lowl_lowE_BK15_post_zre6p5/base_nrun_r_plikHM_TTTEEE_lowl_lowE_BK15_post_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02234^{+0.00032}_{-0.00032}$	$\sigma_8 \Omega_m^{0.5}$	$0.457^{+0.018}_{-0.018}$	$H(0.38)$	$82.80^{+0.75}_{-0.73}$
$\Omega_c h^2$	$0.1202^{+0.0028}_{-0.0028}$	$\sigma_8 \Omega_m^{0.25}$	$0.610^{+0.017}_{-0.017}$	$D_M(0.38)$	1535^{+21}_{-21}
$100\theta_{MC}$	$1.04086^{+0.00061}_{-0.00062}$	$\sigma_8/h^{0.5}$	$0.991^{+0.024}_{-0.023}$	$H(0.51)$	$89.57^{+0.59}_{-0.57}$
τ	$0.057^{+0.014}_{-0.013}$	$r_{\text{drag}} h$	$98.9^{+2.2}_{-2.1}$	$D_M(0.51)$	1988^{+24}_{-24}
$\ln(10^{10} A_s)$	$3.050^{+0.032}_{-0.030}$	$\langle d^2 \rangle^{1/2}$	$2.442^{+0.057}_{-0.057}$	$H(0.61)$	$95.23^{+0.47}_{-0.46}$
n_s	$0.9641^{+0.0095}_{-0.0095}$	z_{re}	< 9.19	$D_M(0.61)$	2313^{+26}_{-26}
n_{run}	$-0.006^{+0.014}_{-0.014}$	$10^9 A_s$	$2.112^{+0.068}_{-0.063}$	$H(2.33)$	$236.7^{+1.7}_{-1.7}$
r	< 0.0699	$10^9 A_s e^{-2\tau}$	$1.886^{+0.025}_{-0.025}$	$D_M(2.33)$	5766^{+21}_{-22}
y_{cal}	$1.0007^{+0.0049}_{-0.0049}$	D_{40}	1229^{+37}_{-36}	$f\sigma_8(0.15)$	$0.462^{+0.017}_{-0.017}$
$A_{B,\text{dust}}$	$4.9^{+2.1}_{-1.9}$	D_{220}	5723^{+78}_{-77}	$\sigma_8(0.15)$	$0.750^{+0.013}_{-0.012}$
$A_{B,\text{sync}}$	< 3.64	D_{810}	2540^{+28}_{-27}	$f\sigma_8(0.38)$	$0.479^{+0.014}_{-0.014}$
$\alpha_{B,\text{dust}}$	—	D_{1420}	$815.6^{+9.9}_{-9.7}$	$\sigma_8(0.38)$	$0.665^{+0.011}_{-0.010}$
$\beta_{B,\text{dust}}$	$1.60^{+0.19}_{-0.19}$	D_{2000}	$229.9^{+3.6}_{-3.6}$	$f\sigma_8(0.51)$	$0.477^{+0.012}_{-0.012}$
$\alpha_{B,\text{sync}}$	—	$n_{s,0.002}$	$0.983^{+0.043}_{-0.043}$	$\sigma_8(0.51)$	$0.6218^{+0.0099}_{-0.0095}$
$\beta_{B,\text{sync}}$	$-3.10^{+0.52}_{-0.55}$	Y_P	$0.24538^{+0.00012}_{-0.00013}$	$f\sigma_8(0.61)$	$0.471^{+0.011}_{-0.011}$
$\epsilon_{\text{dust,sync}}$	$-0.36^{+0.52}_{-0.57}$	Y_P^{BBN}	$0.24671^{+0.00012}_{-0.00013}$	$\sigma_8(0.61)$	$0.5915^{+0.0093}_{-0.0089}$
A_{217}^{CIB}	44^{+20}_{-20}	$10^5 D/H$	$2.591^{+0.061}_{-0.058}$	$f\sigma_8(2.33)$	$0.2980^{+0.0046}_{-0.0044}$
$\xi^{tSZ-CIB}$	—	Age/Gyr	$13.802^{+0.048}_{-0.049}$	$\sigma_8(2.33)$	$0.3070^{+0.0048}_{-0.0045}$
A_{143}^{tSZ}	$4.4^{+3.8}_{-4.2}$	z_*	$1089.97^{+0.55}_{-0.54}$	$r_{0.002}$	< 0.0670
A_{100}^{PS}	253^{+60}_{-60}	r_*	$144.40^{+0.68}_{-0.66}$	$r_{0.01}$	< 0.0677
A_{143}^{PS}	45^{+20}_{-20}	$100\theta_*$	$1.04105^{+0.00060}_{-0.00061}$	$\ln(10^{10} A_t)$	$-0.7^{+1.4}_{-1.9}$
A_{217}^{PS}	108^{+30}_{-30}	$D_M(z_*)/\text{Gpc}$	$13.871^{+0.064}_{-0.062}$	$r_{L=10}$	< 0.0348
A^{kSZ}	—	z_{drag}	$1059.89^{+0.69}_{-0.68}$	$10^9 A_t$	< 0.147
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	r_{drag}	$147.07^{+0.70}_{-0.67}$	$10^9 A_t e^{-2\tau}$	< 0.132
c_{217}	$0.9997^{+0.0038}_{-0.0027}$	k_D	$0.14087^{+0.00077}_{-0.00081}$	f_{2000}^{143}	31^{+6}_{-6}
H_0	$67.2^{+1.2}_{-1.2}$	$100\theta_D$	$0.16078^{+0.00041}_{-0.00039}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-4}
Ω_Λ	$0.683^{+0.017}_{-0.017}$	z_{eq}	3406^{+65}_{-65}	f_{2000}^{217}	$107.7^{+4.1}_{-4.2}$
Ω_m	$0.317^{+0.017}_{-0.017}$	k_{eq}	$0.01040^{+0.00020}_{-0.00020}$	χ_{BKPLANCK}^2	$739.7 (\nu: 3.8)$
$\Omega_m h^2$	$0.1432^{+0.0027}_{-0.0027}$	$100\theta_{\text{eq}}$	$0.813^{+0.012}_{-0.012}$	χ_{small}^2	$397.4 (\nu: 2.2)$
$\Omega_m h^3$	$0.09628^{+0.00067}_{-0.00070}$	$100\theta_{\text{s,eq}}$	$0.4490^{+0.0062}_{-0.0061}$	χ_{lowl}^2	$23.2 (\nu: 1.7)$
σ_8	$0.813^{+0.015}_{-0.014}$	$H(0.15)$	$72.6^{+1.0}_{-1.0}$	χ_{prior}^2	$11.3 (\nu: 11.1)$
S_8	$0.835^{+0.033}_{-0.033}$	$D_M(0.15)$	644^{+10}_{-10}	χ_{CMB}^2	$8098 (\nu: 10476163.1)$

$\bar{\chi}_{\text{eff}}^2 = 12684.69$; $\Delta\bar{\chi}_{\text{eff}}^2 = 9151.04$; $R - 1 = 0.00378$

15.22 base_nrun_r_CamSpecHM_TTTEEE_lowl_lowE_BK15_post_BAO_zre6p5/base_nrun_r_plikHM_TTTEEE_lowl_lowE_BK15_post_BAO

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02240^{+0.00030}_{-0.00031}$	$\sigma_8/h^{0.5}$	$0.985^{+0.021}_{-0.020}$	$H(0.61)$	$95.37^{+0.38}_{-0.37}$
$\Omega_c h^2$	$0.1193^{+0.0021}_{-0.0021}$	$r_{\text{drag}} h$	$99.6^{+1.6}_{-1.5}$	$D_{\text{M}}(0.61)$	2304^{+19}_{-19}
$100\theta_{MC}$	$1.04097^{+0.00057}_{-0.00058}$	$\langle d^2 \rangle^{1/2}$	$2.429^{+0.051}_{-0.049}$	$H(2.33)$	$236.1^{+1.3}_{-1.3}$
τ	$0.058^{+0.015}_{-0.014}$	z_{re}	$8.0^{+1.3}_{-1.5}$	$D_{\text{M}}(2.33)$	5760^{+18}_{-18}
$\ln(10^{10} A_s)$	$3.050^{+0.033}_{-0.031}$	$10^9 A_s$	$2.112^{+0.070}_{-0.065}$	$f\sigma_8(0.15)$	$0.457^{+0.013}_{-0.013}$
n_s	$0.9664^{+0.0082}_{-0.0082}$	$10^9 A_s e^{-2\tau}$	$1.882^{+0.024}_{-0.023}$	$\sigma_8(0.15)$	$0.749^{+0.013}_{-0.012}$
n_{run}	$-0.005^{+0.014}_{-0.014}$	D_{40}	1226^{+37}_{-36}	$f\sigma_8(0.38)$	$0.475^{+0.012}_{-0.011}$
r	< 0.0715	D_{220}	5727^{+77}_{-77}	$\sigma_8(0.38)$	$0.664^{+0.011}_{-0.010}$
y_{cal}	$1.0008^{+0.0049}_{-0.0049}$	D_{810}	2540^{+27}_{-27}	$f\sigma_8(0.51)$	$0.474^{+0.011}_{-0.0099}$
$A_{B,\text{dust}}$	$4.9^{+2.1}_{-1.9}$	D_{1420}	$816.3^{+9.9}_{-9.8}$	$\sigma_8(0.51)$	$0.621^{+0.010}_{-0.0096}$
$A_{B,\text{sync}}$	< 3.64	D_{2000}	$230.2^{+3.6}_{-3.6}$	$f\sigma_8(0.61)$	$0.4687^{+0.0099}_{-0.0092}$
$\alpha_{B,\text{dust}}$	—	$n_{s,0.002}$	$0.984^{+0.044}_{-0.043}$	$\sigma_8(0.61)$	$0.5912^{+0.0095}_{-0.0091}$
$\beta_{B,\text{dust}}$	$1.60^{+0.19}_{-0.19}$	Y_P	$0.24540^{+0.00011}_{-0.00013}$	$f\sigma_8(2.33)$	$0.2981^{+0.0048}_{-0.0045}$
$\alpha_{B,\text{sync}}$	—	Y_P^{BBN}	$0.24673^{+0.00011}_{-0.00013}$	$\sigma_8(2.33)$	$0.3073^{+0.0049}_{-0.0047}$
$\beta_{B,\text{sync}}$	$-3.11^{+0.51}_{-0.55}$	$10^5 D/H$	$2.581^{+0.058}_{-0.054}$	$r_{0.002}$	< 0.0689
$\epsilon_{\text{dust,sync}}$	$-0.36^{+0.53}_{-0.58}$	Age/Gyr	$13.790^{+0.042}_{-0.042}$	$r_{0.01}$	< 0.0696
A_{217}^{CIB}	44^{+20}_{-20}	z_*	$1089.82^{+0.46}_{-0.46}$	$\ln(10^{10} A_t)$	$-0.7^{+1.4}_{-1.9}$
$\xi^{tSZ-CIB}$	—	r_*	$144.60^{+0.54}_{-0.52}$	$r_{L=10}$	< 0.0357
A_{143}^{tSZ}	$4.5^{+3.8}_{-4.3}$	$100\theta_*$	$1.04115^{+0.00057}_{-0.00057}$	$10^9 A_t$	< 0.151
A_{100}^{PS}	252^{+60}_{-50}	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.888^{+0.051}_{-0.050}$	$10^9 A_t e^{-2\tau}$	< 0.134
A_{143}^{PS}	44^{+20}_{-20}	z_{drag}	$1059.95^{+0.67}_{-0.71}$	f_{2000}^{143}	30^{+6}_{-6}
A_{217}^{PS}	108^{+30}_{-30}	r_{drag}	$147.25^{+0.58}_{-0.56}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-4}
A^{kSZ}	—	k_{D}	$0.14072^{+0.00070}_{-0.00074}$	f_{2000}^{217}	$107.5^{+4.1}_{-4.1}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	$100\theta_{\text{D}}$	$0.16075^{+0.00041}_{-0.00039}$	χ_{BKPLANCK}^2	$740.0 (\nu: 3.7)$
c_{217}	$0.9997^{+0.0038}_{-0.0027}$	z_{eq}	3386^{+48}_{-48}	χ_{small}^2	$397.6 (\nu: 2.6)$
H_0	$67.65^{+0.89}_{-0.88}$	k_{eq}	$0.01033^{+0.00015}_{-0.00015}$	χ_{lowl}^2	$23.0 (\nu: 1.6)$
Ω_{Λ}	$0.689^{+0.012}_{-0.012}$	$100\theta_{\text{eq}}$	$0.8164^{+0.0089}_{-0.0087}$	$\chi_{6\text{DF}}^2$	$0.058 (\nu: 0.0)$
Ω_m	$0.311^{+0.012}_{-0.012}$	$100\theta_{\text{s,eq}}$	$0.4510^{+0.0046}_{-0.0045}$	χ_{MGS}^2	$1.25 (\nu: 0.1)$
$\Omega_m h^2$	$0.1423^{+0.0020}_{-0.0020}$	$H(0.15)$	$72.93^{+0.77}_{-0.75}$	χ_{DR12BAO}^2	$4.9 (\nu: 1.1)$
$\Omega_m h^3$	$0.09628^{+0.00067}_{-0.00071}$	$D_{\text{M}}(0.15)$	$640.9^{+7.5}_{-7.5}$	χ_{prior}^2	$11.3 (\nu: 11.4)$
σ_8	$0.810^{+0.014}_{-0.014}$	$H(0.38)$	$83.04^{+0.56}_{-0.55}$	χ_{BAO}^2	$6.2 (\nu: 0.7)$
S_8	$0.825^{+0.026}_{-0.025}$	$D_{\text{M}}(0.38)$	1529^{+15}_{-15}	χ_{CMB}^2	$8098 (\nu: 10475754.0)$
$\sigma_8 \Omega_m^{0.5}$	$0.452^{+0.014}_{-0.014}$	$H(0.51)$	$89.75^{+0.46}_{-0.45}$		
$\sigma_8 \Omega_m^{0.25}$	$0.605^{+0.014}_{-0.014}$	$D_{\text{M}}(0.51)$	1980^{+18}_{-18}		

$$\bar{\chi}_{\text{eff}}^2 = 12690.74; \Delta\bar{\chi}_{\text{eff}}^2 = 9150.49; R - 1 = 0.00701$$

15.23 base_nrun_r_CamSpecHM_TTTEEE_lowl_lowE_BK15_post_lensing_zre6p5/base_nrun_r_plikHM_TTTEEE_lowl_lowE_BK15_lensing

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02235^{+0.00032}_{-0.00032}$	$\sigma_8 \Omega_m^{0.25}$	$0.608^{+0.013}_{-0.012}$	$H(0.51)$	$89.61^{+0.54}_{-0.52}$
$\Omega_c h^2$	$0.1200^{+0.0024}_{-0.0024}$	$\sigma_8/h^{0.5}$	$0.989^{+0.018}_{-0.017}$	$D_M(0.51)$	1986^{+21}_{-21}
$100\theta_{MC}$	$1.04088^{+0.00060}_{-0.00060}$	$r_{\text{drag}} h$	$99.1^{+1.9}_{-1.8}$	$H(0.61)$	$95.26^{+0.44}_{-0.43}$
τ	$0.056^{+0.014}_{-0.013}$	$\langle d^2 \rangle^{1/2}$	$2.439^{+0.045}_{-0.045}$	$D_M(0.61)$	2311^{+23}_{-23}
$\ln(10^{10} A_s)$	$3.048^{+0.028}_{-0.026}$	z_{re}	$7.9^{+1.2}_{-1.3}$	$H(2.33)$	$236.5^{+1.4}_{-1.5}$
n_s	$0.9647^{+0.0089}_{-0.0086}$	$10^9 A_s$	$2.108^{+0.060}_{-0.056}$	$D_M(2.33)$	5765^{+21}_{-21}
n_{run}	$-0.005^{+0.014}_{-0.014}$	$10^9 A_s e^{-2\tau}$	$1.884^{+0.022}_{-0.022}$	$f\sigma_8(0.15)$	$0.460^{+0.013}_{-0.013}$
r	< 0.0693	D_{40}	1230^{+37}_{-36}	$\sigma_8(0.15)$	$0.750^{+0.011}_{-0.0096}$
y_{cal}	$1.0007^{+0.0048}_{-0.0048}$	D_{220}	5725^{+78}_{-77}	$f\sigma_8(0.38)$	$0.478^{+0.010}_{-0.010}$
$A_{B,\text{dust}}$	$4.9^{+2.1}_{-1.9}$	D_{810}	2540^{+27}_{-26}	$\sigma_8(0.38)$	$0.6641^{+0.0089}_{-0.0085}$
$A_{B,\text{sync}}$	< 3.63	D_{1420}	$815.8^{+9.9}_{-9.8}$	$f\sigma_8(0.51)$	$0.4757^{+0.0089}_{-0.0089}$
$\alpha_{B,\text{dust}}$	—	D_{2000}	$230.1^{+3.6}_{-3.6}$	$\sigma_8(0.51)$	$0.6213^{+0.0084}_{-0.0080}$
$\beta_{B,\text{dust}}$	$1.60^{+0.19}_{-0.19}$	$n_{s,0.002}$	$0.981^{+0.043}_{-0.043}$	$f\sigma_8(0.61)$	$0.4704^{+0.0081}_{-0.0080}$
$\alpha_{B,\text{sync}}$	—	Y_P	$0.24539^{+0.00012}_{-0.00013}$	$\sigma_8(0.61)$	$0.5911^{+0.0080}_{-0.0076}$
$\beta_{B,\text{sync}}$	$-3.10^{+0.52}_{-0.55}$	Y_P^{BBN}	$0.24671^{+0.00012}_{-0.00013}$	$f\sigma_8(2.33)$	$0.2979^{+0.0041}_{-0.0039}$
$\epsilon_{\text{dust,sync}}$	$-0.36^{+0.53}_{-0.58}$	$10^5 D/H$	$2.589^{+0.060}_{-0.057}$	$\sigma_8(2.33)$	$0.3069^{+0.0045}_{-0.0042}$
A_{217}^{CIB}	44^{+20}_{-20}	Age/Gyr	$13.800^{+0.047}_{-0.046}$	$r_{0.002}$	< 0.0662
$\xi^{tSZ-CIB}$	—	z_*	$1089.94^{+0.52}_{-0.52}$	$r_{0.01}$	< 0.0670
A_{143}^{tSZ}	$4.5^{+3.8}_{-4.3}$	r_*	$144.46^{+0.58}_{-0.55}$	$\ln(10^{10} A_t)$	$-0.7^{+1.4}_{-1.9}$
A_{100}^{PS}	252^{+60}_{-60}	$100\theta_*$	$1.04106^{+0.00059}_{-0.00059}$	$r_{L=10}$	< 0.0343
A_{143}^{PS}	44^{+20}_{-20}	$D_M(z_*)/\text{Gpc}$	$13.876^{+0.055}_{-0.052}$	$10^9 A_t$	< 0.146
A_{217}^{PS}	108^{+30}_{-30}	z_{drag}	$1059.89^{+0.69}_{-0.68}$	$10^9 A_t e^{-2\tau}$	< 0.130
A^{kSZ}	—	r_{drag}	$147.12^{+0.61}_{-0.57}$	f_{2000}^{143}	20^{+16}_{-12}
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	k_D	$0.14082^{+0.00069}_{-0.00073}$	$f_{2000}^{143 \times 217}$	386^{+400}_{-400}
c_{217}	$0.9997^{+0.0038}_{-0.0027}$	$100\theta_D$	$0.16078^{+0.00041}_{-0.00039}$	f_{2000}^{217}	252^{+100}_{-100}
H_0	$67.3^{+1.1}_{-1.0}$	z_{eq}	3401^{+54}_{-55}	χ^2_{lensing}	$16.2 (\nu: 23.9)$
Ω_Λ	$0.685^{+0.014}_{-0.015}$	k_{eq}	$0.01038^{+0.00016}_{-0.00017}$	χ^2_{BKPLANCK}	$1550 (\nu: 328175.2)$
Ω_m	$0.315^{+0.015}_{-0.014}$	$100\theta_{\text{eq}}$	$0.814^{+0.010}_{-0.0099}$	χ^2_{simall}	$205 (\nu: 18432.4)$
$\Omega_m h^2$	$0.1430^{+0.0023}_{-0.0023}$	$100\theta_{s,\text{eq}}$	$0.4495^{+0.0053}_{-0.0051}$	χ^2_{lowl}	$27 (\nu: 10.0)$
$\Omega_m h^3$	$0.09626^{+0.00066}_{-0.00069}$	$H(0.15)$	$72.67^{+0.92}_{-0.89}$	χ^2_{prior}	$59 (\nu: 1217.0)$
σ_8	$0.812^{+0.012}_{-0.011}$	$D_M(0.15)$	$643.5^{+9.0}_{-9.1}$	χ^2_{CMB}	$8107 (\nu: 10475808.4)$
S_8	$0.832^{+0.025}_{-0.025}$	$H(0.38)$	$82.85^{+0.67}_{-0.65}$		
$\sigma_8 \Omega_m^{0.5}$	$0.456^{+0.014}_{-0.014}$	$D_M(0.38)$	1534^{+18}_{-18}		

$$\bar{\chi}^2_{\text{eff}} = 12693.65; \Delta\bar{\chi}^2_{\text{eff}} = 9150.83; R - 1 = 0.00582$$

16 omegak

16.1 base_omegak_CamSpecHM_TT_lowl_lowE/base_omegak_plikHM_TT_lowl_lowE

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02256^{+0.00053}_{-0.00052}$	$r_{\text{drag}} h$	77^{+10}_{-10}	$H(0.15)$	58^{+8}_{-8}
$\Omega_c h^2$	$0.1173^{+0.0045}_{-0.0044}$	$\langle d^2 \rangle^{1/2}$	$2.68^{+0.16}_{-0.16}$	$D_{\text{M}}(0.15)$	821^{+100}_{-100}
$100\theta_{MC}$	$1.0413^{+0.0010}_{-0.0010}$	z_{re}	$6.8^{+1.7}_{-1.8}$	$H(0.38)$	$69.8^{+7.6}_{-6.7}$
τ	$0.049^{+0.016}_{-0.018}$	$10^9 A_s$	$2.061^{+0.069}_{-0.075}$	$D_{\text{M}}(0.38)$	1905^{+300}_{-200}
Ω_K	$-0.057^{+0.045}_{-0.050}$	$10^9 A_s e^{-2\tau}$	$1.870^{+0.027}_{-0.027}$	$H(0.51)$	$77.3^{+7.2}_{-6.3}$
$\ln(10^{10} A_s)$	$3.026^{+0.033}_{-0.037}$	D_{40}	1201^{+34}_{-34}	$D_{\text{M}}(0.51)$	2435^{+300}_{-300}
n_s	$0.973^{+0.013}_{-0.012}$	D_{220}	5740^{+82}_{-84}	$H(0.61)$	$83.4^{+6.9}_{-6.1}$
y_{cal}	$1.0000^{+0.0049}_{-0.0049}$	D_{810}	2528^{+28}_{-27}	$D_{\text{M}}(0.61)$	2807^{+300}_{-300}
A_{217}^{CIB}	41^{+20}_{-20}	D_{1420}	$814^{+10}_{-9.9}$	$H(2.33)$	$227.6^{+6.1}_{-5.8}$
$\xi^{tSZ-CIB}$	—	D_{2000}	$232.4^{+4.1}_{-4.0}$	$D_{\text{M}}(2.33)$	6468^{+450}_{-440}
A_{143}^{tSZ}	$4.8^{+4.0}_{-4.1}$	$n_{s,0.002}$	$0.973^{+0.013}_{-0.012}$	$f\sigma_8(0.15)$	$0.538^{+0.048}_{-0.048}$
A_{100}^{PS}	240^{+60}_{-60}	Y_P	$0.24547^{+0.00023}_{-0.00021}$	$\sigma_8(0.15)$	$0.690^{+0.045}_{-0.046}$
A_{143}^{PS}	37^{+20}_{-20}	Y_P^{BBN}	$0.24680^{+0.00023}_{-0.00021}$	$f\sigma_8(0.38)$	$0.512^{+0.019}_{-0.021}$
A_{217}^{PS}	109^{+20}_{-30}	$10^5 D/H$	$2.551^{+0.096}_{-0.095}$	$\sigma_8(0.38)$	$0.594^{+0.047}_{-0.052}$
A^{kSZ}	< 8.32	Age/Gyr	$15.6^{+1.2}_{-1.2}$	$f\sigma_8(0.51)$	$0.491^{+0.013}_{-0.014}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	z_*	$1089.45^{+0.95}_{-0.93}$	$\sigma_8(0.51)$	$0.549^{+0.048}_{-0.052}$
c_{217}	$0.9995^{+0.0036}_{-0.0026}$	r_*	$144.99^{+0.98}_{-0.96}$	$f\sigma_8(0.61)$	$0.474^{+0.014}_{-0.014}$
H_0	52^{+9}_{-8}	$100\theta_*$	$1.04147^{+0.00097}_{-0.00098}$	$\sigma_8(0.61)$	$0.518^{+0.048}_{-0.052}$
Ω_Λ	$0.53^{+0.12}_{-0.13}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.921^{+0.090}_{-0.088}$	$f\sigma_8(2.33)$	$0.257^{+0.027}_{-0.028}$
Ω_m	$0.53^{+0.18}_{-0.16}$	z_{drag}	$1060.2^{+1.0}_{-1.1}$	$\sigma_8(2.33)$	$0.256^{+0.032}_{-0.032}$
$\Omega_m h^2$	$0.1405^{+0.0042}_{-0.0041}$	r_{drag}	$147.60^{+0.96}_{-0.94}$	f_{2000}^{143}	26^{+7}_{-6}
$\Omega_m h^3$	$0.073^{+0.014}_{-0.012}$	k_{D}	$0.1405^{+0.0010}_{-0.0010}$	$f_{2000}^{143 \times 217}$	29^{+5}_{-5}
σ_8	$0.765^{+0.038}_{-0.039}$	$100\theta_{\text{D}}$	$0.16065^{+0.00058}_{-0.00056}$	f_{2000}^{217}	$104.5^{+4.4}_{-4.4}$
S_8	$1.01^{+0.12}_{-0.12}$	z_{eq}	3342^{+100}_{-99}	χ_{simall}^2	$396.7 (\nu: 1.3)$
$\sigma_8 \Omega_m^{0.5}$	$0.553^{+0.067}_{-0.066}$	k_{eq}	$0.01020^{+0.00031}_{-0.00030}$	χ_{lowl}^2	$21.33 (\nu: 0.2)$
$\sigma_8 \Omega_m^{0.25}$	$0.650^{+0.029}_{-0.030}$	$100\theta_{\text{eq}}$	$0.825^{+0.020}_{-0.019}$	χ_{prior}^2	$7.1 (\nu: 5.9)$
$\sigma_8/h^{0.5}$	$1.061^{+0.046}_{-0.048}$	$100\theta_{\text{s,eq}}$	$0.455^{+0.010}_{-0.0099}$	χ_{CMB}^2	$4331 (\nu: 4949706.8)$

Best-fit $\chi_{\text{eff}}^2 = 7463.28$; $\Delta\chi_{\text{eff}}^2 = 6293.45$; $\bar{\chi}_{\text{eff}}^2 = 7484.59$; $\Delta\bar{\chi}_{\text{eff}}^2 = 6292.69$; $R - 1 = 0.03021$

χ_{eff}^2 : CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.53 (Δ 0.01) commander_dx12_v3.2.29: 20.98 (Δ 0.01) CamSpec like_10.7HM: 7045.30

16.2 base_omegak_CamSpecHM_TT_lowl_lowE_post_zre6p5/base_omegak_plikHM_TT_lowl_lowE_post_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02257^{+0.00053}_{-0.00052}$	$r_{\text{drag}} h$	78^{+10}_{-10}	$H(0.15)$	59^{+8}_{-7}
$\Omega_c h^2$	$0.1173^{+0.0045}_{-0.0044}$	$\langle d^2 \rangle^{1/2}$	$2.68^{+0.16}_{-0.16}$	$D_{\text{M}}(0.15)$	812^{+100}_{-100}
$100\theta_{MC}$	$1.0413^{+0.0010}_{-0.0010}$	z_{re}	< 8.35	$H(0.38)$	$70.3^{+7.4}_{-6.5}$
τ	$0.0532^{+0.011}_{-0.0088}$	$10^9 A_s$	$2.079^{+0.052}_{-0.046}$	$D_{\text{M}}(0.38)$	1888^{+200}_{-200}
Ω_K	$-0.054^{+0.043}_{-0.046}$	$10^9 A_s e^{-2\tau}$	$1.869^{+0.027}_{-0.027}$	$H(0.51)$	$77.7^{+7.1}_{-6.2}$
$\ln(10^{10} A_s)$	$3.035^{+0.025}_{-0.022}$	D_{40}	1202^{+34}_{-34}	$D_{\text{M}}(0.51)$	2414^{+300}_{-300}
n_s	$0.973^{+0.013}_{-0.012}$	D_{220}	5739^{+82}_{-84}	$H(0.61)$	$83.8^{+6.8}_{-6.0}$
y_{cal}	$1.0000^{+0.0049}_{-0.0049}$	D_{810}	2528^{+27}_{-27}	$D_{\text{M}}(0.61)$	2784^{+300}_{-300}
A_{217}^{CIB}	41^{+20}_{-20}	D_{1420}	814^{+10}_{-10}	$H(2.33)$	$227.8^{+6.0}_{-5.7}$
$\xi^{tSZ-CIB}$	—	D_{2000}	$232.4^{+4.1}_{-4.0}$	$D_{\text{M}}(2.33)$	6439^{+430}_{-430}
A_{143}^{tSZ}	$4.8^{+4.0}_{-4.0}$	$n_{s,0.002}$	$0.973^{+0.013}_{-0.012}$	$f\sigma_8(0.15)$	$0.536^{+0.047}_{-0.048}$
A_{100}^{PS}	240^{+60}_{-60}	Y_P	$0.24547^{+0.00023}_{-0.00021}$	$\sigma_8(0.15)$	$0.695^{+0.040}_{-0.043}$
A_{143}^{PS}	37^{+20}_{-20}	Y_P^{BBN}	$0.24680^{+0.00023}_{-0.00021}$	$f\sigma_8(0.38)$	$0.513^{+0.019}_{-0.021}$
A_{217}^{PS}	109^{+20}_{-30}	$10^5 D/H$	$2.551^{+0.096}_{-0.095}$	$\sigma_8(0.38)$	$0.599^{+0.045}_{-0.047}$
A^{kSZ}	< 8.29	Age/Gyr	$15.6^{+1.2}_{-1.1}$	$f\sigma_8(0.51)$	$0.493^{+0.012}_{-0.013}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	z_*	$1089.44^{+0.95}_{-0.92}$	$\sigma_8(0.51)$	$0.554^{+0.045}_{-0.047}$
c_{217}	$0.9995^{+0.0036}_{-0.0026}$	r_*	$145.00^{+0.97}_{-0.97}$	$f\sigma_8(0.61)$	$0.476^{+0.012}_{-0.012}$
H_0	53^{+9}_{-8}	$100\theta_*$	$1.04148^{+0.00098}_{-0.0010}$	$\sigma_8(0.61)$	$0.523^{+0.045}_{-0.047}$
Ω_Λ	$0.54^{+0.11}_{-0.12}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.922^{+0.089}_{-0.088}$	$f\sigma_8(2.33)$	$0.260^{+0.025}_{-0.025}$
Ω_m	$0.52^{+0.16}_{-0.15}$	z_{drag}	$1060.2^{+1.0}_{-1.0}$	$\sigma_8(2.33)$	$0.259^{+0.031}_{-0.029}$
$\Omega_m h^2$	$0.1405^{+0.0042}_{-0.0041}$	r_{drag}	$147.61^{+0.95}_{-0.94}$	f_{2000}^{143}	26^{+6}_{-6}
$\Omega_m h^3$	$0.074^{+0.013}_{-0.012}$	k_{D}	$0.1405^{+0.0010}_{-0.0010}$	$f_{2000}^{143 \times 217}$	29^{+5}_{-5}
σ_8	$0.770^{+0.034}_{-0.037}$	$100\theta_{\text{D}}$	$0.16065^{+0.00057}_{-0.00056}$	f_{2000}^{217}	$104.5^{+4.4}_{-4.4}$
S_8	$1.00^{+0.12}_{-0.12}$	z_{eq}	3341^{+100}_{-98}	χ_{simall}^2	$396.4 (\nu: 0.8)$
$\sigma_8 \Omega_m^{0.5}$	$0.550^{+0.066}_{-0.065}$	k_{eq}	$0.01020^{+0.00031}_{-0.00030}$	χ_{lowl}^2	$21.33 (\nu: 0.2)$
$\sigma_8 \Omega_m^{0.25}$	$0.650^{+0.029}_{-0.030}$	$100\theta_{\text{eq}}$	$0.825^{+0.020}_{-0.020}$	χ_{prior}^2	$7.1 (\nu: 5.8)$
$\sigma_8/h^{0.5}$	$1.062^{+0.046}_{-0.048}$	$100\theta_{\text{s,eq}}$	$0.456^{+0.010}_{-0.0099}$	χ_{CMB}^2	$4331 (\nu: 4949727.1)$

$\bar{\chi}_{\text{eff}}^2 = 7484.13$; $\Delta \bar{\chi}_{\text{eff}}^2 = 6292.70$; $R - 1 = 0.03650$

16.3 base_omegak_CamSpecHM_TTTEEE_lowl_lowE/base_omegak_plikHM_TTTEEE_lowl_lowE

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02257^{+0.00036}_{-0.00034}$	$r_{\text{drag}} h$	81^{+10}_{-10}	$H(0.15)$	61^{+8}_{-7}
$\Omega_c h^2$	$0.1180^{+0.0030}_{-0.0029}$	$\langle d^2 \rangle^{1/2}$	$2.62^{+0.13}_{-0.14}$	$D_{\text{M}}(0.15)$	777^{+100}_{-100}
$100\theta_{MC}$	$1.04113^{+0.00065}_{-0.00062}$	z_{re}	$6.8^{+1.7}_{-1.8}$	$H(0.38)$	$72.5^{+6.9}_{-5.9}$
τ	$0.048^{+0.016}_{-0.018}$	$10^9 A_s$	$2.063^{+0.069}_{-0.074}$	$D_{\text{M}}(0.38)$	1815^{+200}_{-200}
Ω_K	$-0.041^{+0.033}_{-0.035}$	$10^9 A_s e^{-2\tau}$	$1.873^{+0.024}_{-0.024}$	$H(0.51)$	$79.7^{+6.6}_{-5.6}$
$\ln(10^{10} A_s)$	$3.027^{+0.033}_{-0.036}$	D_{40}	1206^{+29}_{-28}	$D_{\text{M}}(0.51)$	2328^{+250}_{-240}
n_s	$0.9710^{+0.0095}_{-0.0094}$	D_{220}	5740^{+78}_{-78}	$H(0.61)$	$85.8^{+6.3}_{-5.4}$
y_{cal}	$0.99998^{+0.0049}_{-0.0050}$	D_{810}	2531^{+27}_{-27}	$D_{\text{M}}(0.61)$	2689^{+270}_{-270}
A_{217}^{CIB}	41^{+20}_{-10}	D_{1420}	$814.9^{+9.3}_{-9.4}$	$H(2.33)$	$229.5^{+4.9}_{-4.3}$
$\xi^{tSZ-CIB}$	—	D_{2000}	$232.2^{+3.4}_{-3.4}$	$D_{\text{M}}(2.33)$	6308^{+360}_{-380}
A_{143}^{tSZ}	$4.9^{+4.0}_{-4.2}$	$n_{s,0.002}$	$0.9710^{+0.0095}_{-0.0094}$	$f\sigma_8(0.15)$	$0.521^{+0.042}_{-0.044}$
A_{100}^{PS}	239^{+60}_{-50}	Y_P	$0.24547^{+0.00014}_{-0.00013}$	$\sigma_8(0.15)$	$0.704^{+0.035}_{-0.038}$
A_{143}^{PS}	38^{+20}_{-20}	Y_P^{BBN}	$0.24680^{+0.00014}_{-0.00013}$	$f\sigma_8(0.38)$	$0.506^{+0.018}_{-0.021}$
A_{217}^{PS}	110^{+20}_{-30}	$10^5 D/H$	$2.550^{+0.063}_{-0.064}$	$\sigma_8(0.38)$	$0.610^{+0.039}_{-0.042}$
A^{kSZ}	< 8.05	Age/Gyr	$15.21^{+0.98}_{-0.98}$	$f\sigma_8(0.51)$	$0.490^{+0.012}_{-0.012}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	z_*	$1089.50^{+0.62}_{-0.62}$	$\sigma_8(0.51)$	$0.565^{+0.040}_{-0.042}$
c_{217}	$0.9995^{+0.0036}_{-0.0026}$	r_*	$144.80^{+0.63}_{-0.64}$	$f\sigma_8(0.61)$	$0.4748^{+0.0097}_{-0.011}$
H_0	55^{+8}_{-7}	$100\theta_*$	$1.04130^{+0.00063}_{-0.00061}$	$\sigma_8(0.61)$	$0.534^{+0.040}_{-0.042}$
Ω_Λ	$0.571^{+0.093}_{-0.095}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.906^{+0.058}_{-0.060}$	$f\sigma_8(2.33)$	$0.266^{+0.023}_{-0.023}$
Ω_m	$0.47^{+0.13}_{-0.13}$	z_{drag}	$1060.25^{+0.68}_{-0.69}$	$\sigma_8(2.33)$	$0.267^{+0.028}_{-0.027}$
$\Omega_m h^2$	$0.1412^{+0.0028}_{-0.0027}$	r_{drag}	$147.41^{+0.63}_{-0.63}$	f_{2000}^{143}	26^{+6}_{-6}
$\Omega_m h^3$	$0.078^{+0.012}_{-0.011}$	k_{D}	$0.14068^{+0.00066}_{-0.00069}$	$f_{2000}^{143 \times 217}$	30^{+4}_{-4}
σ_8	$0.776^{+0.029}_{-0.032}$	$100\theta_{\text{D}}$	$0.16059^{+0.00040}_{-0.00039}$	f_{2000}^{217}	$104.6^{+4.0}_{-3.9}$
S_8	$0.967^{+0.099}_{-0.10}$	z_{eq}	3359^{+67}_{-64}	χ_{small}^2	$396.7 (\nu: 1.3)$
$\sigma_8 \Omega_m^{0.5}$	$0.530^{+0.054}_{-0.056}$	k_{eq}	$0.01025^{+0.00020}_{-0.00019}$	χ_{lowl}^2	$21.45 (\nu: 0.2)$
$\sigma_8 \Omega_m^{0.25}$	$0.641^{+0.026}_{-0.027}$	$100\theta_{\text{eq}}$	$0.822^{+0.013}_{-0.013}$	χ_{prior}^2	$9.4 (\nu: 9.1)$
$\sigma_8/h^{0.5}$	$1.045^{+0.041}_{-0.044}$	$100\theta_{\text{s,eq}}$	$0.4537^{+0.0064}_{-0.0065}$	χ_{CMB}^2	$7350 (\nu: 10483821.7)$

Best-fit $\chi_{\text{eff}}^2 = 11914.02$; $\Delta\chi_{\text{eff}}^2 = 9159.51$; $\bar{\chi}_{\text{eff}}^2 = 11937.16$; $\Delta\bar{\chi}_{\text{eff}}^2 = 9154.56$; $R - 1 = 0.03285$

χ_{eff}^2 : CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.63 (Δ 0.08) commander_dx12_v3.2_29: 21.16 (Δ -0.00) CamSpec like_10.7HM_1400_unified: 11495.33

16.4 base_omegak_CamSpecHM_TTTEEE_lowl_lowE_post_zre6p5/base_omegak_plikHM_TTTEEE_lowl_lowE_post_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02257^{+0.00035}_{-0.00034}$	$r_{\text{drag}} h$	82^{+10}_{-10}	$H(0.15)$	62^{+7}_{-7}
$\Omega_c h^2$	$0.1180^{+0.0030}_{-0.0029}$	$\langle d^2 \rangle^{1/2}$	$2.62^{+0.13}_{-0.14}$	$D_{\text{M}}(0.15)$	768^{+90}_{-90}
$100\theta_{MC}$	$1.04114^{+0.00064}_{-0.00063}$	z_{re}	< 8.34	$H(0.38)$	$73.0^{+6.5}_{-5.9}$
τ	$0.0526^{+0.011}_{-0.0083}$	$10^9 A_s$	$2.080^{+0.052}_{-0.046}$	$D_{\text{M}}(0.38)$	1796^{+190}_{-190}
Ω_K	$-0.037^{+0.031}_{-0.032}$	$10^9 A_s e^{-2\tau}$	$1.873^{+0.024}_{-0.024}$	$H(0.51)$	$80.3^{+6.1}_{-5.6}$
$\ln(10^{10} A_s)$	$3.035^{+0.025}_{-0.022}$	D_{40}	1207^{+29}_{-28}	$D_{\text{M}}(0.51)$	2305^{+230}_{-230}
n_s	$0.9711^{+0.0095}_{-0.0093}$	D_{220}	5739^{+78}_{-78}	$H(0.61)$	$86.3^{+5.9}_{-5.4}$
y_{cal}	$0.99998^{+0.0050}_{-0.0050}$	D_{810}	2531^{+28}_{-27}	$D_{\text{M}}(0.61)$	2664^{+250}_{-260}
A_{217}^{CIB}	41^{+20}_{-10}	D_{1420}	$815.0^{+9.5}_{-9.5}$	$H(2.33)$	$229.8^{+4.7}_{-4.4}$
$\xi^{tSZ-CIB}$	—	D_{2000}	$232.2^{+3.4}_{-3.4}$	$D_{\text{M}}(2.33)$	6275^{+340}_{-370}
A_{143}^{tSZ}	$4.9^{+3.9}_{-4.2}$	$n_{s,0.002}$	$0.9711^{+0.0095}_{-0.0093}$	$f\sigma_8(0.15)$	$0.518^{+0.042}_{-0.044}$
A_{100}^{PS}	239^{+60}_{-50}	Y_P	$0.24547^{+0.00014}_{-0.00013}$	$\sigma_8(0.15)$	$0.709^{+0.031}_{-0.032}$
A_{143}^{PS}	38^{+20}_{-20}	Y_P^{BBN}	$0.24680^{+0.00014}_{-0.00013}$	$f\sigma_8(0.38)$	$0.506^{+0.019}_{-0.021}$
A_{217}^{PS}	110^{+20}_{-30}	$10^5 D/H$	$2.550^{+0.063}_{-0.063}$	$\sigma_8(0.38)$	$0.616^{+0.036}_{-0.036}$
A^{kSZ}	< 8.08	Age/Gyr	$15.12^{+0.90}_{-0.95}$	$f\sigma_8(0.51)$	$0.491^{+0.011}_{-0.012}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	z_*	$1089.50^{+0.62}_{-0.62}$	$\sigma_8(0.51)$	$0.571^{+0.037}_{-0.037}$
c_{217}	$0.9995^{+0.0036}_{-0.0027}$	r_*	$144.81^{+0.64}_{-0.65}$	$f\sigma_8(0.61)$	$0.4765^{+0.0087}_{-0.0090}$
H_0	56^{+8}_{-7}	$100\theta_*$	$1.04130^{+0.00063}_{-0.00062}$	$\sigma_8(0.61)$	$0.540^{+0.038}_{-0.037}$
Ω_Λ	$0.580^{+0.082}_{-0.091}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.907^{+0.059}_{-0.060}$	$f\sigma_8(2.33)$	$0.269^{+0.021}_{-0.020}$
Ω_m	$0.46^{+0.12}_{-0.12}$	z_{drag}	$1060.24^{+0.68}_{-0.69}$	$\sigma_8(2.33)$	$0.270^{+0.026}_{-0.024}$
$\Omega_m h^2$	$0.1412^{+0.0028}_{-0.0027}$	r_{drag}	$147.41^{+0.63}_{-0.63}$	f_{2000}^{143}	26^{+6}_{-6}
$\Omega_m h^3$	$0.079^{+0.011}_{-0.011}$	k_{D}	$0.14067^{+0.00066}_{-0.00069}$	$f_{2000}^{143 \times 217}$	30^{+4}_{-4}
σ_8	$0.781^{+0.026}_{-0.026}$	$100\theta_{\text{D}}$	$0.16059^{+0.00040}_{-0.00038}$	f_{2000}^{217}	$104.6^{+3.9}_{-3.9}$
S_8	$0.960^{+0.097}_{-0.10}$	z_{eq}	3358^{+67}_{-64}	χ_{small}^2	$396.3 (\nu: 0.7)$
$\sigma_8 \Omega_m^{0.5}$	$0.526^{+0.053}_{-0.055}$	k_{eq}	$0.01025^{+0.00020}_{-0.00019}$	χ_{lowl}^2	$21.48 (\nu: 0.2)$
$\sigma_8 \Omega_m^{0.25}$	$0.640^{+0.026}_{-0.027}$	$100\theta_{\text{eq}}$	$0.822^{+0.013}_{-0.013}$	χ_{prior}^2	$9.5 (\nu: 9.1)$
$\sigma_8/h^{0.5}$	$1.045^{+0.042}_{-0.044}$	$100\theta_{\text{s,eq}}$	$0.4538^{+0.0064}_{-0.0065}$	χ_{CMB}^2	$7350 (\nu: 10483528.0)$

$$\bar{\chi}_{\text{eff}}^2 = 11936.68; \Delta\bar{\chi}_{\text{eff}}^2 = 9154.46; R - 1 = 0.03528$$

16.5 base_omegak_CamSpecHM_TT_lowl_lowE_BAO/base_omegak_plikHM_TT_lowl_lowE_BAO

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02217^{+0.00045}_{-0.00044}$	z_{re}	$7.5^{+1.6}_{-1.7}$	$H(0.51)$	$90.0^{+1.4}_{-1.3}$
$\Omega_c h^2$	$0.1197^{+0.0044}_{-0.0042}$	$10^9 A_s$	$2.089^{+0.071}_{-0.066}$	$D_{\text{M}}(0.51)$	1975^{+34}_{-33}
$100\theta_{MC}$	$1.04090^{+0.00095}_{-0.00095}$	$10^9 A_s e^{-2\tau}$	$1.879^{+0.027}_{-0.027}$	$H(0.61)$	$95.6^{+1.4}_{-1.4}$
τ	$0.053^{+0.016}_{-0.016}$	D_{40}	1227^{+32}_{-31}	$D_{\text{M}}(0.61)$	2299^{+38}_{-37}
Ω_K	$0.0011^{+0.0051}_{-0.0050}$	D_{220}	5710^{+81}_{-82}	$H(2.33)$	$236.5^{+3.6}_{-3.5}$
$\ln(10^{10} A_s)$	$3.039^{+0.034}_{-0.032}$	D_{810}	2535^{+27}_{-27}	$D_{\text{M}}(2.33)$	5750^{+74}_{-75}
n_s	$0.965^{+0.012}_{-0.012}$	D_{1420}	815^{+10}_{-10}	$f\sigma_8(0.15)$	$0.455^{+0.017}_{-0.017}$
y_{cal}	$1.0005^{+0.0048}_{-0.0049}$	D_{2000}	$229.7^{+3.7}_{-3.6}$	$\sigma_8(0.15)$	$0.748^{+0.019}_{-0.018}$
A_{217}^{CIB}	44^{+20}_{-20}	$n_{s,0.002}$	$0.965^{+0.012}_{-0.012}$	$f\sigma_8(0.38)$	$0.474^{+0.015}_{-0.015}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.24531^{+0.00018}_{-0.00021}$	$\sigma_8(0.38)$	$0.664^{+0.017}_{-0.016}$
A_{143}^{tSZ}	$4.4^{+3.8}_{-4.2}$	Y_P^{BBN}	$0.24663^{+0.00018}_{-0.00021}$	$f\sigma_8(0.51)$	$0.473^{+0.014}_{-0.013}$
A_{100}^{PS}	253^{+60}_{-60}	$10^5 D/H$	$2.625^{+0.085}_{-0.084}$	$\sigma_8(0.51)$	$0.621^{+0.016}_{-0.015}$
A_{143}^{PS}	45^{+20}_{-20}	Age/Gyr	$13.76^{+0.19}_{-0.19}$	$f\sigma_8(0.61)$	$0.468^{+0.013}_{-0.012}$
A_{217}^{PS}	108^{+30}_{-30}	z_*	$1090.16^{+0.86}_{-0.83}$	$\sigma_8(0.61)$	$0.591^{+0.015}_{-0.014}$
A^{kSZ}	—	r_*	$144.66^{+0.94}_{-0.97}$	$f\sigma_8(2.33)$	$0.2980^{+0.0073}_{-0.0069}$
c_{100}	$0.9985^{+0.0022}_{-0.0027}$	$100\theta_*$	$1.04111^{+0.00093}_{-0.00093}$	$\sigma_8(2.33)$	$0.3075^{+0.0081}_{-0.0077}$
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.894^{+0.087}_{-0.089}$	f_{2000}^{143}	31^{+6}_{-6}
H_0	$67.8^{+1.4}_{-1.4}$	z_{drag}	$1059.44^{+0.91}_{-0.88}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-4}
Ω_Λ	$0.689^{+0.015}_{-0.015}$	r_{drag}	$147.39^{+0.93}_{-0.96}$	f_{2000}^{217}	$107.8^{+3.9}_{-3.9}$
Ω_m	$0.310^{+0.015}_{-0.014}$	k_{D}	$0.1404^{+0.0010}_{-0.00099}$	χ_{small}^2	$397.0 (\nu: 1.5)$
$\Omega_m h^2$	$0.1426^{+0.0041}_{-0.0039}$	$100\theta_{\text{D}}$	$0.16105^{+0.00051}_{-0.00052}$	χ_{lowl}^2	$23.4 (\nu: 1.0)$
$\Omega_m h^3$	$0.0967^{+0.0036}_{-0.0035}$	z_{eq}	3391^{+99}_{-94}	$\chi_{6\text{DF}}^2$	$0.055 (\nu: 0.0)$
σ_8	$0.810^{+0.021}_{-0.020}$	k_{eq}	$0.01035^{+0.00030}_{-0.00029}$	χ_{MGS}^2	$1.50 (\nu: 0.2)$
S_8	$0.823^{+0.033}_{-0.032}$	$100\theta_{\text{eq}}$	$0.815^{+0.018}_{-0.018}$	χ_{DR12BAO}^2	$4.5 (\nu: 1.6)$
$\sigma_8 \Omega_m^{0.5}$	$0.451^{+0.018}_{-0.018}$	$100\theta_{\text{s,eq}}$	$0.4503^{+0.0093}_{-0.0094}$	χ_{prior}^2	$7.4 (\nu: 6.2)$
$\sigma_8 \Omega_m^{0.25}$	$0.604^{+0.019}_{-0.018}$	$H(0.15)$	$73.1^{+1.3}_{-1.3}$	χ_{BAO}^2	$6.1 (\nu: 1.2)$
$\sigma_8/h^{0.5}$	$0.983^{+0.026}_{-0.025}$	$D_{\text{M}}(0.15)$	639^{+12}_{-12}	χ_{CMB}^2	$4339 (\nu: 4948133.2)$
$r_{\text{drag}} h$	$99.98^{+2.0}_{-2.0}$	$H(0.38)$	$83.2^{+1.3}_{-1.3}$		
$\langle d^2 \rangle^{1/2}$	$2.428^{+0.059}_{-0.057}$	$D_{\text{M}}(0.38)$	1525^{+27}_{-27}		

Best-fit $\chi_{\text{eff}}^2 = 7477.49$; $\Delta\chi_{\text{eff}}^2 = 6292.12$; $\bar{\chi}_{\text{eff}}^2 = 7498.13$; $\Delta\bar{\chi}_{\text{eff}}^2 = 6291.87$; $R - 1 = 0.00836$
 χ_{eff}^2 : BAO - 6DF: 0.01 (Δ 0.00) MGS: 1.41 (Δ 0.00) DR12BAO: 3.69 (Δ 0.02) CMB - small_100x143_offlike5_EE_Aplanck_B: 395.87 (Δ 0.02) commander_dx12_v3_2_29: 23.19 (Δ -0.15) CamSpec like_10.7HM: 7051.07

16.6 base_omegak_CamSpecHM_TT_lowl_lowE_BAO_post_lensing/base_omegak_plikHM_TT_lowl_lowE_BAO_post_lensing

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02217^{+0.00045}_{-0.00044}$	z_{re}	$7.7^{+1.5}_{-1.5}$	$H(0.51)$	$89.9^{+1.4}_{-1.3}$
$\Omega_c h^2$	$0.1199^{+0.0039}_{-0.0038}$	$10^9 A_s$	$2.096^{+0.063}_{-0.058}$	$D_{\text{M}}(0.51)$	1977^{+34}_{-33}
$100\theta_{MC}$	$1.04089^{+0.00094}_{-0.00093}$	$10^9 A_s e^{-2\tau}$	$1.881^{+0.025}_{-0.024}$	$H(0.61)$	$95.6^{+1.4}_{-1.4}$
τ	$0.054^{+0.016}_{-0.015}$	D_{40}	1229^{+29}_{-28}	$D_{\text{M}}(0.61)$	2300^{+38}_{-38}
Ω_K	$0.0011^{+0.0050}_{-0.0049}$	D_{220}	5715^{+82}_{-82}	$H(2.33)$	$236.5^{+3.3}_{-3.3}$
$\ln(10^{10} A_s)$	$3.043^{+0.030}_{-0.028}$	D_{810}	2536^{+26}_{-27}	$D_{\text{M}}(2.33)$	5751^{+74}_{-74}
n_s	$0.965^{+0.011}_{-0.011}$	D_{1420}	815^{+10}_{-10}	$f\sigma_8(0.15)$	$0.457^{+0.013}_{-0.013}$
y_{cal}	$1.0006^{+0.0049}_{-0.0049}$	D_{2000}	$229.8^{+3.7}_{-3.6}$	$\sigma_8(0.15)$	$0.750^{+0.015}_{-0.015}$
A_{217}^{CIB}	44^{+20}_{-10}	$n_{s,0.002}$	$0.965^{+0.011}_{-0.011}$	$f\sigma_8(0.38)$	$0.475^{+0.011}_{-0.011}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.24531^{+0.00018}_{-0.00021}$	$\sigma_8(0.38)$	$0.665^{+0.014}_{-0.013}$
A_{143}^{tSZ}	$4.4^{+3.8}_{-4.2}$	Y_P^{BBN}	$0.24664^{+0.00018}_{-0.00021}$	$f\sigma_8(0.51)$	$0.474^{+0.010}_{-0.010}$
A_{100}^{PS}	253^{+60}_{-50}	$10^5 D/H$	$2.624^{+0.084}_{-0.083}$	$\sigma_8(0.51)$	$0.622^{+0.013}_{-0.013}$
A_{143}^{PS}	45^{+20}_{-20}	Age/Gyr	$13.77^{+0.19}_{-0.19}$	$f\sigma_8(0.61)$	$0.4690^{+0.0096}_{-0.0096}$
A_{217}^{PS}	108^{+30}_{-30}	z_*	$1090.16^{+0.80}_{-0.80}$	$\sigma_8(0.61)$	$0.592^{+0.013}_{-0.012}$
A^{kSZ}	—	r_*	$144.62^{+0.86}_{-0.87}$	$f\sigma_8(2.33)$	$0.2985^{+0.0064}_{-0.0061}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	$100\theta_*$	$1.04109^{+0.00093}_{-0.00091}$	$\sigma_8(2.33)$	$0.3079^{+0.0073}_{-0.0070}$
c_{217}	$0.9997^{+0.0037}_{-0.0028}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.891^{+0.078}_{-0.079}$	f_{2000}^{143}	31^{+6}_{-6}
H_0	$67.8^{+1.3}_{-1.3}$	z_{drag}	$1059.46^{+0.89}_{-0.86}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-4}
Ω_Λ	$0.688^{+0.013}_{-0.013}$	r_{drag}	$147.35^{+0.85}_{-0.86}$	f_{2000}^{217}	$107.8^{+3.9}_{-3.9}$
Ω_m	$0.311^{+0.013}_{-0.012}$	k_{D}	$0.14044^{+0.00093}_{-0.00094}$	χ_{lensing}^2	$9.41 (\nu: 0.3)$
$\Omega_m h^2$	$0.1427^{+0.0037}_{-0.0036}$	$100\theta_{\text{D}}$	$0.16104^{+0.00052}_{-0.00051}$	χ_{small}^2	$346 (\nu: 8208.0)$
$\Omega_m h^3$	$0.0967^{+0.0035}_{-0.0033}$	z_{eq}	3394^{+89}_{-86}	χ_{lowl}^2	$74 (\nu: 8216.5)$
σ_8	$0.811^{+0.017}_{-0.016}$	k_{eq}	$0.01036^{+0.00027}_{-0.00026}$	$\chi_{6\text{DF}}^2$	$0.24 (\nu: 0.1)$
S_8	$0.826^{+0.025}_{-0.025}$	$100\theta_{\text{eq}}$	$0.814^{+0.017}_{-0.016}$	χ_{MGS}^2	$1.24 (\nu: 0.2)$
$\sigma_8 \Omega_m^{0.5}$	$0.452^{+0.014}_{-0.014}$	$100\theta_{\text{s,eq}}$	$0.4500^{+0.0086}_{-0.0084}$	χ_{DR12BAO}^2	$4.6 (\nu: 1.8)$
$\sigma_8 \Omega_m^{0.25}$	$0.606^{+0.014}_{-0.014}$	$H(0.15)$	$73.1^{+1.3}_{-1.3}$	χ_{prior}^2	$7.4 (\nu: 6.2)$
$\sigma_8/h^{0.5}$	$0.986^{+0.019}_{-0.019}$	$D_{\text{M}}(0.15)$	640^{+12}_{-12}	χ_{CMB}^2	$4348 (\nu: 4948427.8)$
$r_{\text{drag}} h$	$99.9^{+1.9}_{-1.9}$	$H(0.38)$	$83.2^{+1.4}_{-1.3}$	χ_{BAO}^2	$6.1 (\nu: 1.3)$
$\langle d^2 \rangle^{1/2}$	$2.435^{+0.044}_{-0.044}$	$D_{\text{M}}(0.38)$	1526^{+27}_{-27}		

$$\bar{\chi}_{\text{eff}}^2 = 7507.17; \Delta \bar{\chi}_{\text{eff}}^2 = 6292.03; R - 1 = 0.01378$$

16.7 base_omegak_CamSpecHM_TT_lowl_lowE_BAO_post_lensing_Pantheon18/base_omegak_plikHM_TT_lowl_lowE_BAO_post_lensing_P

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02218^{+0.00045}_{-0.00043}$	z_{re}	$7.7^{+1.5}_{-1.5}$	$H(0.51)$	$90.0^{+1.4}_{-1.3}$
$\Omega_c h^2$	$0.1197^{+0.0039}_{-0.0038}$	$10^9 A_s$	$2.097^{+0.063}_{-0.058}$	$D_{\text{M}}(0.51)$	1975^{+33}_{-33}
$100\theta_{MC}$	$1.04091^{+0.00094}_{-0.00093}$	$10^9 A_s e^{-2\tau}$	$1.880^{+0.025}_{-0.024}$	$H(0.61)$	$95.6^{+1.4}_{-1.4}$
τ	$0.055^{+0.016}_{-0.015}$	D_{40}	1228^{+29}_{-28}	$D_{\text{M}}(0.61)$	2299^{+37}_{-38}
Ω_K	$0.0011^{+0.0050}_{-0.0049}$	D_{220}	5716^{+82}_{-82}	$H(2.33)$	$236.4^{+3.4}_{-3.2}$
$\ln(10^{10} A_s)$	$3.043^{+0.030}_{-0.028}$	D_{810}	2536^{+27}_{-27}	$D_{\text{M}}(2.33)$	5750^{+73}_{-75}
n_s	$0.965^{+0.011}_{-0.011}$	D_{1420}	815^{+10}_{-10}	$f\sigma_8(0.15)$	$0.456^{+0.013}_{-0.012}$
y_{cal}	$1.0007^{+0.0049}_{-0.0049}$	D_{2000}	$229.8^{+3.7}_{-3.6}$	$\sigma_8(0.15)$	$0.750^{+0.016}_{-0.015}$
A_{217}^{CIB}	44^{+20}_{-10}	$n_{s,0.002}$	$0.965^{+0.011}_{-0.011}$	$f\sigma_8(0.38)$	$0.475^{+0.011}_{-0.011}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.24531^{+0.00018}_{-0.00020}$	$\sigma_8(0.38)$	$0.665^{+0.014}_{-0.013}$
A_{143}^{tSZ}	$4.4^{+3.8}_{-4.2}$	Y_P^{BBN}	$0.24664^{+0.00018}_{-0.00021}$	$f\sigma_8(0.51)$	$0.473^{+0.010}_{-0.010}$
A_{100}^{PS}	253^{+60}_{-50}	$10^5 D/H$	$2.621^{+0.084}_{-0.083}$	$\sigma_8(0.51)$	$0.622^{+0.013}_{-0.013}$
A_{143}^{PS}	45^{+20}_{-20}	Age/Gyr	$13.76^{+0.19}_{-0.19}$	$f\sigma_8(0.61)$	$0.4686^{+0.0096}_{-0.0095}$
A_{217}^{PS}	108^{+30}_{-30}	z_*	$1090.13^{+0.80}_{-0.79}$	$\sigma_8(0.61)$	$0.592^{+0.013}_{-0.012}$
A^{kSZ}	—	r_*	$144.65^{+0.85}_{-0.85}$	$f\sigma_8(2.33)$	$0.2986^{+0.0064}_{-0.0061}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	$100\theta_*$	$1.04111^{+0.00092}_{-0.00091}$	$\sigma_8(2.33)$	$0.3080^{+0.0072}_{-0.0070}$
c_{217}	$0.9997^{+0.0037}_{-0.0028}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.894^{+0.078}_{-0.079}$	f_{2000}^{143}	31^{+6}_{-6}
H_0	$67.8^{+1.3}_{-1.3}$	z_{drag}	$1059.48^{+0.91}_{-0.88}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-4}
Ω_Λ	$0.689^{+0.012}_{-0.013}$	r_{drag}	$147.38^{+0.84}_{-0.86}$	f_{2000}^{217}	$107.8^{+3.9}_{-3.9}$
Ω_m	$0.310^{+0.012}_{-0.012}$	k_{D}	$0.14042^{+0.00093}_{-0.00094}$	χ_{lensing}^2	$9.42 (\nu: 0.3)$
$\Omega_m h^2$	$0.1425^{+0.0037}_{-0.0036}$	$100\theta_{\text{D}}$	$0.16103^{+0.00051}_{-0.00051}$	χ_{small}^2	$346 (\nu: 8289.8)$
$\Omega_m h^3$	$0.0967^{+0.0035}_{-0.0033}$	z_{eq}	3390^{+88}_{-86}	χ_{lowl}^2	$75 (\nu: 8297.1)$
σ_8	$0.811^{+0.017}_{-0.016}$	k_{eq}	$0.01035^{+0.00027}_{-0.00026}$	χ_{JLA}^2	$1035.07 (\nu: 0.0)$
S_8	$0.824^{+0.025}_{-0.024}$	$100\theta_{\text{eq}}$	$0.815^{+0.017}_{-0.016}$	$\chi_{6\text{DF}}^2$	$0.25 (\nu: 0.1)$
$\sigma_8 \Omega_m^{0.5}$	$0.451^{+0.013}_{-0.013}$	$100\theta_{\text{s,eq}}$	$0.4504^{+0.0085}_{-0.0084}$	χ_{MGS}^2	$1.29 (\nu: 0.3)$
$\sigma_8 \Omega_m^{0.25}$	$0.605^{+0.014}_{-0.014}$	$H(0.15)$	$73.1^{+1.3}_{-1.3}$	χ_{DR12BAO}^2	$4.5 (\nu: 1.4)$
$\sigma_8/h^{0.5}$	$0.985^{+0.019}_{-0.019}$	$D_{\text{M}}(0.15)$	639^{+12}_{-12}	χ_{prior}^2	$7.4 (\nu: 6.2)$
$r_{\text{drag}} h$	$99.98^{+1.8}_{-1.8}$	$H(0.38)$	$83.2^{+1.3}_{-1.3}$	χ_{CMB}^2	$4348 (\nu: 4948473.6)$
$\langle d^2 \rangle^{1/2}$	$2.433^{+0.043}_{-0.043}$	$D_{\text{M}}(0.38)$	1525^{+26}_{-26}	χ_{BAO}^2	$6.0 (\nu: 1.1)$

$$\bar{\chi}_{\text{eff}}^2 = 8542.21; \Delta \bar{\chi}_{\text{eff}}^2 = 6292.06; R - 1 = 0.01384$$

16.8 base_omegak_CamSpecHM_TT_lowl_lowE_BAO_post_zre6p5/base_omegak_plikHM_TT_lowl_lowE_BAO_post_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02217^{+0.00045}_{-0.00044}$	z_{re}	< 8.92	$H(0.51)$	$90.0^{+1.4}_{-1.3}$
$\Omega_c h^2$	$0.1197^{+0.0044}_{-0.0042}$	$10^9 A_s$	$2.095^{+0.061}_{-0.056}$	$D_{\text{M}}(0.51)$	1975^{+34}_{-33}
$100\theta_{MC}$	$1.04091^{+0.00095}_{-0.00095}$	$10^9 A_s e^{-2\tau}$	$1.879^{+0.027}_{-0.027}$	$H(0.61)$	$95.6^{+1.4}_{-1.4}$
τ	$0.054^{+0.013}_{-0.012}$	D_{40}	1226^{+32}_{-31}	$D_{\text{M}}(0.61)$	2299^{+38}_{-38}
Ω_K	$0.0011^{+0.0051}_{-0.0050}$	D_{220}	5710^{+82}_{-81}	$H(2.33)$	$236.4^{+3.7}_{-3.5}$
$\ln(10^{10} A_s)$	$3.042^{+0.029}_{-0.027}$	D_{810}	2535^{+27}_{-27}	$D_{\text{M}}(2.33)$	5751^{+74}_{-75}
n_s	$0.965^{+0.012}_{-0.012}$	D_{1420}	815^{+10}_{-10}	$f\sigma_8(0.15)$	$0.456^{+0.017}_{-0.017}$
y_{cal}	$1.0005^{+0.0049}_{-0.0049}$	D_{2000}	$229.7^{+3.7}_{-3.6}$	$\sigma_8(0.15)$	$0.749^{+0.019}_{-0.017}$
A_{217}^{CIB}	44^{+20}_{-20}	$n_{s,0.002}$	$0.965^{+0.012}_{-0.012}$	$f\sigma_8(0.38)$	$0.474^{+0.015}_{-0.014}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.24531^{+0.00018}_{-0.00021}$	$\sigma_8(0.38)$	$0.664^{+0.016}_{-0.015}$
A_{143}^{tSZ}	$4.4^{+3.8}_{-4.2}$	Y_P^{BBN}	$0.24664^{+0.00018}_{-0.00021}$	$f\sigma_8(0.51)$	$0.473^{+0.014}_{-0.013}$
A_{100}^{PS}	253^{+60}_{-50}	$10^5 D/H$	$2.624^{+0.085}_{-0.084}$	$\sigma_8(0.51)$	$0.622^{+0.015}_{-0.014}$
A_{143}^{PS}	45^{+20}_{-20}	Age/Gyr	$13.76^{+0.19}_{-0.19}$	$f\sigma_8(0.61)$	$0.468^{+0.013}_{-0.012}$
A_{217}^{PS}	108^{+30}_{-30}	z_*	$1090.15^{+0.86}_{-0.83}$	$\sigma_8(0.61)$	$0.592^{+0.014}_{-0.013}$
A^{kSZ}	—	r_*	$144.67^{+0.94}_{-0.98}$	$f\sigma_8(2.33)$	$0.2984^{+0.0071}_{-0.0065}$
c_{100}	$0.9985^{+0.0022}_{-0.0027}$	$100\theta_*$	$1.04112^{+0.00093}_{-0.00093}$	$\sigma_8(2.33)$	$0.3079^{+0.0079}_{-0.0073}$
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.895^{+0.087}_{-0.090}$	f_{2000}^{143}	31^{+6}_{-6}
H_0	$67.8^{+1.4}_{-1.4}$	z_{drag}	$1059.45^{+0.90}_{-0.89}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-4}
Ω_Λ	$0.689^{+0.015}_{-0.015}$	r_{drag}	$147.40^{+0.94}_{-0.97}$	f_{2000}^{217}	$107.8^{+3.9}_{-3.9}$
Ω_m	$0.310^{+0.015}_{-0.014}$	k_{D}	$0.1404^{+0.0010}_{-0.0010}$	χ_{small}^2	$396.9 (\nu: 1.6)$
$\Omega_m h^2$	$0.1425^{+0.0041}_{-0.0039}$	$100\theta_{\text{D}}$	$0.16105^{+0.00052}_{-0.00051}$	χ_{lowl}^2	$23.4 (\nu: 1.0)$
$\Omega_m h^3$	$0.0967^{+0.0036}_{-0.0035}$	z_{eq}	3390^{+99}_{-94}	$\chi_{6\text{DF}}^2$	$0.055 (\nu: 0.0)$
σ_8	$0.811^{+0.020}_{-0.019}$	k_{eq}	$0.01035^{+0.00030}_{-0.00029}$	χ_{MGS}^2	$1.50 (\nu: 0.2)$
S_8	$0.824^{+0.033}_{-0.032}$	$100\theta_{\text{eq}}$	$0.815^{+0.018}_{-0.018}$	χ_{DR12BAO}^2	$4.5 (\nu: 1.6)$
$\sigma_8 \Omega_m^{0.5}$	$0.451^{+0.018}_{-0.018}$	$100\theta_{\text{s,eq}}$	$0.4504^{+0.0094}_{-0.0095}$	χ_{prior}^2	$7.4 (\nu: 6.3)$
$\sigma_8 \Omega_m^{0.25}$	$0.605^{+0.019}_{-0.018}$	$H(0.15)$	$73.1^{+1.3}_{-1.3}$	χ_{BAO}^2	$6.1 (\nu: 1.2)$
$\sigma_8/h^{0.5}$	$0.984^{+0.025}_{-0.024}$	$D_{\text{M}}(0.15)$	639^{+12}_{-12}	χ_{CMB}^2	$4338 (\nu: 4948148.8)$
$r_{\text{drag}} h$	$99.99^{+2.0}_{-2.0}$	$H(0.38)$	$83.2^{+1.3}_{-1.3}$		
$\langle d^2 \rangle^{1/2}$	$2.431^{+0.058}_{-0.055}$	$D_{\text{M}}(0.38)$	1525^{+27}_{-27}		

$$\bar{\chi}_{\text{eff}}^2 = 7497.90; \Delta \bar{\chi}_{\text{eff}}^2 = 6291.86; R - 1 = 0.01053$$

16.9 base_omegak_CamSpecHM_TT_lowl_lowE_BAO_post_lensing_zre6p5/base_omegak_plikHM_TT_lowl_lowE_BAO_post_lensing_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02218^{+0.00045}_{-0.00044}$	z_{re}	< 8.95	$H(0.51)$	$89.9^{+1.4}_{-1.3}$
$\Omega_c h^2$	$0.1198^{+0.0039}_{-0.0038}$	$10^9 A_s$	$2.100^{+0.056}_{-0.052}$	$D_{\text{M}}(0.51)$	1977^{+34}_{-33}
$100\theta_{MC}$	$1.04090^{+0.00094}_{-0.00092}$	$10^9 A_s e^{-2\tau}$	$1.880^{+0.025}_{-0.024}$	$H(0.61)$	$95.5^{+1.4}_{-1.4}$
τ	$0.055^{+0.013}_{-0.012}$	D_{40}	1228^{+29}_{-28}	$D_{\text{M}}(0.61)$	2300^{+38}_{-38}
Ω_K	$0.0010^{+0.0050}_{-0.0049}$	D_{220}	5715^{+83}_{-82}	$H(2.33)$	$236.5^{+3.3}_{-3.3}$
$\ln(10^{10} A_s)$	$3.044^{+0.026}_{-0.025}$	D_{810}	2536^{+26}_{-26}	$D_{\text{M}}(2.33)$	5752^{+74}_{-74}
n_s	$0.965^{+0.011}_{-0.011}$	D_{1420}	815^{+10}_{-10}	$f\sigma_8(0.15)$	$0.457^{+0.013}_{-0.013}$
y_{cal}	$1.0006^{+0.0049}_{-0.0049}$	D_{2000}	$229.8^{+3.7}_{-3.6}$	$\sigma_8(0.15)$	$0.750^{+0.015}_{-0.015}$
A_{217}^{CIB}	44^{+20}_{-10}	$n_{s,0.002}$	$0.965^{+0.011}_{-0.011}$	$f\sigma_8(0.38)$	$0.475^{+0.011}_{-0.011}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.24531^{+0.00018}_{-0.00021}$	$\sigma_8(0.38)$	$0.665^{+0.014}_{-0.013}$
A_{143}^{tSZ}	$4.4^{+3.8}_{-4.2}$	Y_P^{BBN}	$0.24664^{+0.00018}_{-0.00021}$	$f\sigma_8(0.51)$	$0.474^{+0.010}_{-0.010}$
A_{100}^{PS}	252^{+60}_{-50}	$10^5 D/H$	$2.623^{+0.084}_{-0.083}$	$\sigma_8(0.51)$	$0.623^{+0.013}_{-0.012}$
A_{143}^{PS}	45^{+20}_{-20}	Age/Gyr	$13.77^{+0.19}_{-0.19}$	$f\sigma_8(0.61)$	$0.4692^{+0.0096}_{-0.0095}$
A_{217}^{PS}	108^{+30}_{-30}	z_*	$1090.15^{+0.80}_{-0.79}$	$\sigma_8(0.61)$	$0.592^{+0.012}_{-0.012}$
A^{kSZ}	—	r_*	$144.64^{+0.85}_{-0.85}$	$f\sigma_8(2.33)$	$0.2987^{+0.0063}_{-0.0060}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	$100\theta_*$	$1.04110^{+0.00092}_{-0.00091}$	$\sigma_8(2.33)$	$0.3081^{+0.0072}_{-0.0069}$
c_{217}	$0.9997^{+0.0037}_{-0.0028}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.893^{+0.078}_{-0.080}$	f_{2000}^{143}	31^{+6}_{-6}
H_0	$67.8^{+1.3}_{-1.3}$	z_{drag}	$1059.47^{+0.88}_{-0.87}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-4}
Ω_Λ	$0.688^{+0.013}_{-0.013}$	r_{drag}	$147.37^{+0.85}_{-0.85}$	f_{2000}^{217}	$107.8^{+3.9}_{-3.9}$
Ω_m	$0.311^{+0.013}_{-0.012}$	k_{D}	$0.14042^{+0.00094}_{-0.00094}$	χ_{lensing}^2	$9.36 (\nu: 0.3)$
$\Omega_m h^2$	$0.1426^{+0.0036}_{-0.0036}$	$100\theta_{\text{D}}$	$0.16104^{+0.00052}_{-0.00051}$	χ_{small}^2	$346 (\nu: 8176.8)$
$\Omega_m h^3$	$0.0966^{+0.0035}_{-0.0033}$	z_{eq}	3392^{+87}_{-86}	χ_{lowl}^2	$74 (\nu: 8184.3)$
σ_8	$0.812^{+0.016}_{-0.016}$	k_{eq}	$0.01035^{+0.00027}_{-0.00026}$	$\chi_{6\text{DF}}^2$	$0.24 (\nu: 0.1)$
S_8	$0.826^{+0.025}_{-0.025}$	$100\theta_{\text{eq}}$	$0.815^{+0.017}_{-0.016}$	χ_{MGS}^2	$1.25 (\nu: 0.3)$
$\sigma_8 \Omega_m^{0.5}$	$0.452^{+0.014}_{-0.014}$	$100\theta_{\text{s,eq}}$	$0.4502^{+0.0085}_{-0.0084}$	χ_{DR12BAO}^2	$4.6 (\nu: 1.7)$
$\sigma_8 \Omega_m^{0.25}$	$0.606^{+0.014}_{-0.014}$	$H(0.15)$	$73.1^{+1.3}_{-1.3}$	χ_{prior}^2	$7.4 (\nu: 6.2)$
$\sigma_8/h^{0.5}$	$0.986^{+0.019}_{-0.019}$	$D_{\text{M}}(0.15)$	640^{+12}_{-12}	χ_{CMB}^2	$4347 (\nu: 4948409.2)$
$r_{\text{drag}} h$	$99.9^{+1.9}_{-1.9}$	$H(0.38)$	$83.2^{+1.4}_{-1.3}$	χ_{BAO}^2	$6.1 (\nu: 1.3)$
$\langle d^2 \rangle^{1/2}$	$2.436^{+0.043}_{-0.043}$	$D_{\text{M}}(0.38)$	1526^{+27}_{-27}		

$$\bar{\chi}_{\text{eff}}^2 = 7506.97; \Delta \bar{\chi}_{\text{eff}}^2 = 6292.02; R - 1 = 0.01641$$

16.10 base_omegak_CamSpecHM_TT_lowl_lowE_BAO_post_lensing_Pantheon18_zre6p5/base_omegak_plikHM_TT_lowl_lowE_BAO_post_lensing_Pantheon18_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02219^{+0.00045}_{-0.00043}$	z_{re}	< 8.98	$H(0.51)$	$89.9^{+1.4}_{-1.3}$
$\Omega_c h^2$	$0.1196^{+0.0038}_{-0.0038}$	$10^9 A_s$	$2.100^{+0.056}_{-0.053}$	$D_{\text{M}}(0.51)$	1975^{+33}_{-33}
$100\theta_{MC}$	$1.04092^{+0.00094}_{-0.00092}$	$10^9 A_s e^{-2\tau}$	$1.880^{+0.025}_{-0.024}$	$H(0.61)$	$95.6^{+1.4}_{-1.4}$
τ	$0.055^{+0.013}_{-0.012}$	D_{40}	1228^{+29}_{-28}	$D_{\text{M}}(0.61)$	2299^{+37}_{-38}
Ω_K	$0.0010^{+0.0050}_{-0.0049}$	D_{220}	5716^{+82}_{-82}	$H(2.33)$	$236.4^{+3.3}_{-3.2}$
$\ln(10^{10} A_s)$	$3.045^{+0.027}_{-0.025}$	D_{810}	2536^{+27}_{-26}	$D_{\text{M}}(2.33)$	5751^{+73}_{-74}
n_s	$0.965^{+0.011}_{-0.011}$	D_{1420}	815^{+10}_{-10}	$f\sigma_8(0.15)$	$0.456^{+0.013}_{-0.012}$
y_{cal}	$1.0007^{+0.0049}_{-0.0049}$	D_{2000}	$229.9^{+3.7}_{-3.6}$	$\sigma_8(0.15)$	$0.750^{+0.015}_{-0.015}$
A_{217}^{CIB}	44^{+20}_{-10}	$n_{s,0.002}$	$0.965^{+0.011}_{-0.011}$	$f\sigma_8(0.38)$	$0.475^{+0.011}_{-0.011}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.24532^{+0.00018}_{-0.00020}$	$\sigma_8(0.38)$	$0.665^{+0.014}_{-0.013}$
A_{143}^{tSZ}	$4.4^{+3.8}_{-4.2}$	Y_P^{BBN}	$0.24664^{+0.00018}_{-0.00020}$	$f\sigma_8(0.51)$	$0.474^{+0.010}_{-0.0099}$
A_{100}^{PS}	252^{+60}_{-50}	$10^5 D/H$	$2.620^{+0.083}_{-0.082}$	$\sigma_8(0.51)$	$0.622^{+0.013}_{-0.012}$
A_{143}^{PS}	45^{+20}_{-20}	Age/Gyr	$13.77^{+0.19}_{-0.19}$	$f\sigma_8(0.61)$	$0.4688^{+0.0095}_{-0.0093}$
A_{217}^{PS}	108^{+30}_{-30}	z_*	$1090.12^{+0.80}_{-0.78}$	$\sigma_8(0.61)$	$0.592^{+0.012}_{-0.012}$
A^{kSZ}	—	r_*	$144.67^{+0.84}_{-0.85}$	$f\sigma_8(2.33)$	$0.2987^{+0.0063}_{-0.0060}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	$100\theta_*$	$1.04112^{+0.00092}_{-0.00091}$	$\sigma_8(2.33)$	$0.3082^{+0.0071}_{-0.0069}$
c_{217}	$0.9997^{+0.0037}_{-0.0028}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.896^{+0.078}_{-0.079}$	f_{2000}^{143}	31^{+6}_{-6}
H_0	$67.8^{+1.3}_{-1.3}$	z_{drag}	$1059.49^{+0.90}_{-0.89}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-4}
Ω_Λ	$0.689^{+0.012}_{-0.013}$	r_{drag}	$147.40^{+0.84}_{-0.84}$	f_{2000}^{217}	$107.7^{+3.9}_{-3.9}$
Ω_m	$0.310^{+0.012}_{-0.012}$	k_{D}	$0.14040^{+0.00094}_{-0.00094}$	χ_{lensing}^2	$9.37 (\nu: 0.3)$
$\Omega_m h^2$	$0.1425^{+0.0037}_{-0.0036}$	$100\theta_{\text{D}}$	$0.16103^{+0.00051}_{-0.00051}$	χ_{small}^2	$346 (\nu: 8262.3)$
$\Omega_m h^3$	$0.0966^{+0.0035}_{-0.0033}$	z_{eq}	3389^{+87}_{-85}	χ_{lowl}^2	$75 (\nu: 8268.7)$
σ_8	$0.811^{+0.016}_{-0.016}$	k_{eq}	$0.01034^{+0.00027}_{-0.00026}$	χ_{JLA}^2	$1035.06 (\nu: 0.0)$
S_8	$0.824^{+0.025}_{-0.024}$	$100\theta_{\text{eq}}$	$0.815^{+0.016}_{-0.016}$	$\chi_{6\text{DF}}^2$	$0.25 (\nu: 0.1)$
$\sigma_8 \Omega_m^{0.5}$	$0.451^{+0.013}_{-0.013}$	$100\theta_{\text{s,eq}}$	$0.4506^{+0.0084}_{-0.0084}$	χ_{MGS}^2	$1.30 (\nu: 0.3)$
$\sigma_8 \Omega_m^{0.25}$	$0.605^{+0.014}_{-0.014}$	$H(0.15)$	$73.1^{+1.3}_{-1.3}$	χ_{DR12BAO}^2	$4.5 (\nu: 1.4)$
$\sigma_8/h^{0.5}$	$0.985^{+0.018}_{-0.018}$	$D_{\text{M}}(0.15)$	639^{+12}_{-12}	χ_{prior}^2	$7.4 (\nu: 6.2)$
$r_{\text{drag}} h$	$99.99^{+1.8}_{-1.8}$	$H(0.38)$	$83.2^{+1.3}_{-1.3}$	χ_{CMB}^2	$4347 (\nu: 4948449.3)$
$\langle d^2 \rangle^{1/2}$	$2.434^{+0.043}_{-0.042}$	$D_{\text{M}}(0.38)$	1525^{+26}_{-26}	χ_{BAO}^2	$6.0 (\nu: 1.1)$

$$\bar{\chi}_{\text{eff}}^2 = 8542.02; \Delta \bar{\chi}_{\text{eff}}^2 = 6292.05; R - 1 = 0.01706$$

16.11 base_omegak_CamSpecHM_TTTEEE_lowl_lowE_BAO/base_omegak_plikHM_TTTEEE_lowl_lowE_BAO

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02236^{+0.00031}_{-0.00032}$	z_{re}	$7.6^{+1.6}_{-1.6}$	$H(0.51)$	$90.0^{+1.2}_{-1.2}$
$\Omega_c h^2$	$0.1195^{+0.0029}_{-0.0028}$	$10^9 A_s$	$2.094^{+0.070}_{-0.066}$	$D_M(0.51)$	1975^{+32}_{-32}
$100\theta_{MC}$	$1.04094^{+0.00061}_{-0.00062}$	$10^9 A_s e^{-2\tau}$	$1.879^{+0.025}_{-0.023}$	$H(0.61)$	$95.6^{+1.2}_{-1.2}$
τ	$0.054^{+0.016}_{-0.015}$	D_{40}	1226^{+27}_{-26}	$D_M(0.61)$	2298^{+36}_{-36}
Ω_K	$0.0007^{+0.0038}_{-0.0038}$	D_{220}	5727^{+79}_{-78}	$H(2.33)$	$236.4^{+2.5}_{-2.4}$
$\ln(10^{10} A_s)$	$3.041^{+0.033}_{-0.032}$	D_{810}	2537^{+28}_{-27}	$D_M(2.33)$	5750^{+61}_{-63}
n_s	$0.9663^{+0.0089}_{-0.0088}$	D_{1420}	$816.6^{+9.6}_{-9.5}$	$f\sigma_8(0.15)$	$0.455^{+0.014}_{-0.013}$
y_{cal}	$1.0005^{+0.0049}_{-0.0049}$	D_{2000}	$230.6^{+3.2}_{-3.2}$	$\sigma_8(0.15)$	$0.748^{+0.016}_{-0.016}$
A_{217}^{CIB}	43^{+10}_{-20}	$n_{s,0.002}$	$0.9663^{+0.0089}_{-0.0088}$	$f\sigma_8(0.38)$	$0.473^{+0.012}_{-0.012}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.24539^{+0.00012}_{-0.00013}$	$\sigma_8(0.38)$	$0.663^{+0.014}_{-0.014}$
A_{143}^{tSZ}	$4.6^{+3.9}_{-4.3}$	Y_P^{BBN}	$0.24671^{+0.00012}_{-0.00013}$	$f\sigma_8(0.51)$	$0.472^{+0.011}_{-0.011}$
A_{100}^{PS}	250^{+60}_{-50}	$10^5 D/H$	$2.589^{+0.061}_{-0.057}$	$\sigma_8(0.51)$	$0.621^{+0.013}_{-0.013}$
A_{143}^{PS}	43^{+20}_{-20}	Age/Gyr	$13.76^{+0.16}_{-0.16}$	$f\sigma_8(0.61)$	$0.467^{+0.011}_{-0.010}$
A_{217}^{PS}	108^{+30}_{-30}	z_*	$1089.89^{+0.58}_{-0.57}$	$\sigma_8(0.61)$	$0.591^{+0.013}_{-0.012}$
A^{kSZ}	—	r_*	$144.58^{+0.66}_{-0.64}$	$f\sigma_8(2.33)$	$0.2979^{+0.0064}_{-0.0062}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	$100\theta_*$	$1.04112^{+0.00060}_{-0.00061}$	$\sigma_8(2.33)$	$0.3073^{+0.0072}_{-0.0069}$
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	$D_M(z_*)/\text{Gpc}$	$13.887^{+0.061}_{-0.059}$	f_{2000}^{143}	30^{+6}_{-5}
H_0	$67.9^{+1.4}_{-1.3}$	z_{drag}	$1059.86^{+0.64}_{-0.65}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
Ω_Λ	$0.690^{+0.012}_{-0.012}$	r_{drag}	$147.25^{+0.66}_{-0.63}$	f_{2000}^{217}	$106.9^{+3.7}_{-3.7}$
Ω_m	$0.309^{+0.013}_{-0.013}$	k_D	$0.14068^{+0.00069}_{-0.00071}$	χ_{small}^2	$397.1 (\nu: 1.6)$
$\Omega_m h^2$	$0.1425^{+0.0027}_{-0.0027}$	$100\theta_D$	$0.16080^{+0.00038}_{-0.00036}$	χ_{lowl}^2	$23.2 (\nu: 0.6)$
$\Omega_m h^3$	$0.0967^{+0.0028}_{-0.0027}$	z_{eq}	3389^{+65}_{-65}	$\chi_{6\text{DF}}^2$	$0.055 (\nu: 0.0)$
σ_8	$0.809^{+0.017}_{-0.017}$	k_{eq}	$0.01034^{+0.00020}_{-0.00020}$	χ_{MGS}^2	$1.47 (\nu: 0.2)$
S_8	$0.821^{+0.026}_{-0.025}$	$100\theta_{\text{eq}}$	$0.816^{+0.012}_{-0.012}$	χ_{DR12BAO}^2	$4.7 (\nu: 1.8)$
$\sigma_8 \Omega_m^{0.5}$	$0.450^{+0.014}_{-0.014}$	$100\theta_{s,\text{eq}}$	$0.4506^{+0.0063}_{-0.0062}$	χ_{prior}^2	$9.7 (\nu: 9.9)$
$\sigma_8 \Omega_m^{0.25}$	$0.603^{+0.015}_{-0.015}$	$H(0.15)$	$73.2^{+1.3}_{-1.2}$	χ_{BAO}^2	$6.2 (\nu: 1.3)$
$\sigma_8/h^{0.5}$	$0.982^{+0.022}_{-0.021}$	$D_M(0.15)$	639^{+12}_{-12}	χ_{CMB}^2	$7358 (\nu: 10474776.5)$
$r_{\text{drag}} h$	$99.95^{+2.0}_{-1.9}$	$H(0.38)$	$83.3^{+1.2}_{-1.2}$		
$\langle d^2 \rangle^{1/2}$	$2.428^{+0.051}_{-0.050}$	$D_M(0.38)$	1524^{+26}_{-26}		

Best-fit $\chi_{\text{eff}}^2 = 11926.45$; $\Delta\chi_{\text{eff}}^2 = 9155.07$; $\bar{\chi}_{\text{eff}}^2 = 11948.83$; $\Delta\bar{\chi}_{\text{eff}}^2 = 9150.25$; $R - 1 = 0.01869$
 χ_{eff}^2 : BAO - 6DF: 0.01 (Δ -0.01) MGS: 1.47 (Δ 0.13) DR12BAO: 3.65 (Δ -0.26) CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.85 (Δ -0.21) commander_dx12_v3_2_29: 22.88 (Δ -0.33) CamSpec like_10.7HM_1400_unified: 11500.78

16.12 base_omegak_CamSpecHM_TTTEEE_lowl_lowE_BAO_post_lensing/base_omegak_plikHM_TTTEEE_lowl_lowE_BAO_post_lensing

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02236^{+0.00031}_{-0.00032}$	z_{re}	$7.8^{+1.4}_{-1.5}$	$H(0.51)$	$89.9^{+1.2}_{-1.2}$
$\Omega_c h^2$	$0.1195^{+0.0028}_{-0.0027}$	$10^9 A_s$	$2.100^{+0.062}_{-0.059}$	$D_{\text{M}}(0.51)$	1976^{+31}_{-31}
$100\theta_{MC}$	$1.04093^{+0.00062}_{-0.00063}$	$10^9 A_s e^{-2\tau}$	$1.880^{+0.023}_{-0.022}$	$H(0.61)$	$95.5^{+1.2}_{-1.2}$
τ	$0.055^{+0.015}_{-0.014}$	D_{40}	1228^{+25}_{-25}	$D_{\text{M}}(0.61)$	2299^{+35}_{-35}
Ω_K	$0.0006^{+0.0038}_{-0.0038}$	D_{220}	5731^{+78}_{-76}	$H(2.33)$	$236.4^{+2.4}_{-2.3}$
$\ln(10^{10} A_s)$	$3.045^{+0.029}_{-0.028}$	D_{810}	2538^{+26}_{-26}	$D_{\text{M}}(2.33)$	5751^{+62}_{-63}
n_s	$0.9661^{+0.0090}_{-0.0086}$	D_{1420}	$816.9^{+9.4}_{-9.5}$	$f\sigma_8(0.15)$	$0.456^{+0.011}_{-0.011}$
y_{cal}	$1.0007^{+0.0049}_{-0.0048}$	D_{2000}	$230.7^{+3.2}_{-3.2}$	$\sigma_8(0.15)$	$0.749^{+0.014}_{-0.013}$
A_{217}^{CIB}	43^{+10}_{-20}	$n_{s,0.002}$	$0.9661^{+0.0090}_{-0.0086}$	$f\sigma_8(0.38)$	$0.4744^{+0.0095}_{-0.0093}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.24539^{+0.00012}_{-0.00013}$	$\sigma_8(0.38)$	$0.664^{+0.013}_{-0.012}$
A_{143}^{tSZ}	$4.6^{+3.9}_{-4.3}$	Y_P^{BBN}	$0.24672^{+0.00012}_{-0.00013}$	$f\sigma_8(0.51)$	$0.4732^{+0.0088}_{-0.0087}$
A_{100}^{PS}	249^{+60}_{-50}	$10^5 D/H$	$2.588^{+0.061}_{-0.056}$	$\sigma_8(0.51)$	$0.622^{+0.012}_{-0.012}$
A_{143}^{PS}	43^{+20}_{-20}	Age/Gyr	$13.77^{+0.16}_{-0.16}$	$f\sigma_8(0.61)$	$0.4684^{+0.0085}_{-0.0083}$
A_{217}^{PS}	109^{+20}_{-30}	z_*	$1089.89^{+0.58}_{-0.56}$	$\sigma_8(0.61)$	$0.592^{+0.012}_{-0.011}$
A^{kSZ}	—	r_*	$144.57^{+0.62}_{-0.62}$	$f\sigma_8(2.33)$	$0.2983^{+0.0059}_{-0.0058}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	$100\theta_*$	$1.04112^{+0.00061}_{-0.00061}$	$\sigma_8(2.33)$	$0.3077^{+0.0067}_{-0.0066}$
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.886^{+0.057}_{-0.057}$	f_{2000}^{143}	30^{+5}_{-6}
H_0	$67.8^{+1.3}_{-1.3}$	z_{drag}	$1059.88^{+0.63}_{-0.67}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
Ω_Λ	$0.690^{+0.011}_{-0.012}$	r_{drag}	$147.23^{+0.62}_{-0.61}$	f_{2000}^{217}	$106.9^{+3.8}_{-3.7}$
Ω_m	$0.310^{+0.012}_{-0.012}$	k_{D}	$0.14071^{+0.00067}_{-0.00067}$	χ_{lensing}^2	$9.22 (\nu: 0.2)$
$\Omega_m h^2$	$0.1425^{+0.0026}_{-0.0026}$	$100\theta_{\text{D}}$	$0.16079^{+0.00038}_{-0.00036}$	χ_{simall}^2	$344 (\nu: 8479.7)$
$\Omega_m h^3$	$0.0967^{+0.0028}_{-0.0027}$	z_{eq}	3390^{+62}_{-62}	χ_{lowl}^2	$76 (\nu: 8487.0)$
σ_8	$0.810^{+0.015}_{-0.014}$	k_{eq}	$0.01035^{+0.00019}_{-0.00019}$	$\chi_{6\text{DF}}^2$	$0.25 (\nu: 0.1)$
S_8	$0.824^{+0.021}_{-0.021}$	$100\theta_{\text{eq}}$	$0.815^{+0.012}_{-0.012}$	χ_{MGS}^2	$1.22 (\nu: 0.2)$
$\sigma_8 \Omega_m^{0.5}$	$0.451^{+0.012}_{-0.011}$	$100\theta_{\text{s,eq}}$	$0.4505^{+0.0061}_{-0.0060}$	χ_{DR12BAO}^2	$4.8 (\nu: 1.8)$
$\sigma_8 \Omega_m^{0.25}$	$0.605^{+0.012}_{-0.012}$	$H(0.15)$	$73.1^{+1.3}_{-1.2}$	χ_{prior}^2	$9.6 (\nu: 9.7)$
$\sigma_8/h^{0.5}$	$0.984^{+0.017}_{-0.017}$	$D_{\text{M}}(0.15)$	639^{+11}_{-12}	χ_{CMB}^2	$7367 (\nu: 10475349.6)$
$r_{\text{drag}} h$	$99.9^{+1.9}_{-1.8}$	$H(0.38)$	$83.2^{+1.2}_{-1.2}$	χ_{BAO}^2	$6.2 (\nu: 1.3)$
$\langle d^2 \rangle^{1/2}$	$2.434^{+0.040}_{-0.040}$	$D_{\text{M}}(0.38)$	1525^{+25}_{-25}		

$$\bar{\chi}_{\text{eff}}^2 = 11957.96; \Delta\bar{\chi}_{\text{eff}}^2 = 9150.75; R - 1 = 0.03026$$

16.13 base_omegak_CamSpecHM_TTTEEE_lowl_lowE_BAO_post_lensing_Pantheon18/base_omegak_plikHM_TTTEEE_lowl_lowE_BAO_p

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02237^{+0.00031}_{-0.00032}$	z_{re}	$7.8^{+1.4}_{-1.5}$	$H(0.51)$	$90.0^{+1.2}_{-1.2}$
$\Omega_c h^2$	$0.1194^{+0.0028}_{-0.0027}$	$10^9 A_s$	$2.101^{+0.062}_{-0.058}$	$D_{\text{M}}(0.51)$	1974^{+31}_{-31}
$100\theta_{MC}$	$1.04094^{+0.00061}_{-0.00063}$	$10^9 A_s e^{-2\tau}$	$1.880^{+0.023}_{-0.022}$	$H(0.61)$	$95.6^{+1.2}_{-1.2}$
τ	$0.056^{+0.015}_{-0.014}$	D_{40}	1227^{+25}_{-25}	$D_{\text{M}}(0.61)$	2298^{+35}_{-35}
Ω_K	$0.0007^{+0.0038}_{-0.0038}$	D_{220}	5731^{+79}_{-77}	$H(2.33)$	$236.3^{+2.4}_{-2.3}$
$\ln(10^{10} A_s)$	$3.045^{+0.029}_{-0.028}$	D_{810}	2538^{+26}_{-26}	$D_{\text{M}}(2.33)$	5749^{+62}_{-62}
n_s	$0.9663^{+0.0089}_{-0.0086}$	D_{1420}	$817.0^{+9.4}_{-9.5}$	$f\sigma_8(0.15)$	$0.455^{+0.011}_{-0.011}$
y_{cal}	$1.0007^{+0.0049}_{-0.0048}$	D_{2000}	$230.7^{+3.2}_{-3.2}$	$\sigma_8(0.15)$	$0.749^{+0.014}_{-0.013}$
A_{217}^{CIB}	43^{+20}_{-20}	$n_{s,0.002}$	$0.9663^{+0.0089}_{-0.0086}$	$f\sigma_8(0.38)$	$0.4741^{+0.0095}_{-0.0093}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.24539^{+0.00012}_{-0.00013}$	$\sigma_8(0.38)$	$0.664^{+0.012}_{-0.012}$
A_{143}^{tSZ}	$4.6^{+3.9}_{-4.3}$	Y_P^{BBN}	$0.24672^{+0.00012}_{-0.00013}$	$f\sigma_8(0.51)$	$0.4729^{+0.0088}_{-0.0087}$
A_{100}^{PS}	249^{+60}_{-50}	$10^5 D/H$	$2.587^{+0.061}_{-0.056}$	$\sigma_8(0.51)$	$0.622^{+0.012}_{-0.012}$
A_{143}^{PS}	43^{+20}_{-20}	Age/Gyr	$13.76^{+0.16}_{-0.16}$	$f\sigma_8(0.61)$	$0.4682^{+0.0084}_{-0.0083}$
A_{217}^{PS}	109^{+20}_{-30}	z_*	$1089.87^{+0.57}_{-0.56}$	$\sigma_8(0.61)$	$0.592^{+0.012}_{-0.011}$
A^{kSZ}	—	r_*	$144.58^{+0.62}_{-0.61}$	$f\sigma_8(2.33)$	$0.2984^{+0.0059}_{-0.0058}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	$100\theta_*$	$1.04112^{+0.00060}_{-0.00061}$	$\sigma_8(2.33)$	$0.3079^{+0.0067}_{-0.0066}$
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.887^{+0.057}_{-0.057}$	f_{2000}^{143}	30^{+5}_{-6}
H_0	$67.9^{+1.3}_{-1.2}$	z_{drag}	$1059.89^{+0.62}_{-0.68}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
Ω_Λ	$0.690^{+0.011}_{-0.011}$	r_{drag}	$147.25^{+0.61}_{-0.61}$	f_{2000}^{217}	$106.9^{+3.8}_{-3.7}$
Ω_m	$0.309^{+0.012}_{-0.012}$	k_{D}	$0.14070^{+0.00066}_{-0.00067}$	χ_{lensing}^2	$9.23 (\nu: 0.2)$
$\Omega_m h^2$	$0.1424^{+0.0026}_{-0.0026}$	$100\theta_{\text{D}}$	$0.16079^{+0.00038}_{-0.00036}$	χ_{simall}^2	$344 (\nu: 8482.8)$
$\Omega_m h^3$	$0.0967^{+0.0028}_{-0.0027}$	z_{eq}	3388^{+62}_{-61}	χ_{lowl}^2	$76 (\nu: 8489.9)$
σ_8	$0.810^{+0.015}_{-0.014}$	k_{eq}	$0.01034^{+0.00019}_{-0.00019}$	χ_{JLA}^2	$1035.02 (\nu: 0.0)$
S_8	$0.823^{+0.021}_{-0.020}$	$100\theta_{\text{eq}}$	$0.816^{+0.012}_{-0.012}$	$\chi_{6\text{DF}}^2$	$0.25 (\nu: 0.2)$
$\sigma_8 \Omega_m^{0.5}$	$0.451^{+0.011}_{-0.011}$	$100\theta_{\text{s,eq}}$	$0.4507^{+0.0060}_{-0.0060}$	χ_{MGS}^2	$1.27 (\nu: 0.3)$
$\sigma_8 \Omega_m^{0.25}$	$0.604^{+0.012}_{-0.012}$	$H(0.15)$	$73.2^{+1.2}_{-1.2}$	χ_{DR12BAO}^2	$4.6 (\nu: 1.5)$
$\sigma_8/h^{0.5}$	$0.984^{+0.017}_{-0.017}$	$D_{\text{M}}(0.15)$	639^{+11}_{-11}	χ_{prior}^2	$9.6 (\nu: 9.7)$
$r_{\text{drag}} h$	$99.97^{+1.8}_{-1.8}$	$H(0.38)$	$83.3^{+1.2}_{-1.2}$	χ_{CMB}^2	$7367 (\nu: 10475326.5)$
$\langle d^2 \rangle^{1/2}$	$2.433^{+0.040}_{-0.040}$	$D_{\text{M}}(0.38)$	1524^{+25}_{-25}	χ_{BAO}^2	$6.1 (\nu: 1.1)$

$$\bar{\chi}_{\text{eff}}^2 = 12992.90; \Delta\bar{\chi}_{\text{eff}}^2 = 9150.71; R - 1 = 0.03012$$

16.14 base_omegak_CamSpecHM_TTTEEE_lowl_lowE_BAO_post_zre6p5/base_omegak_plikHM_TTTEEE_lowl_lowE_BAO_post_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02236^{+0.00031}_{-0.00032}$	z_{re}	< 8.95	$H(0.51)$	$90.0^{+1.2}_{-1.2}$
$\Omega_c h^2$	$0.1194^{+0.0029}_{-0.0029}$	$10^9 A_s$	$2.099^{+0.061}_{-0.056}$	$D_{\text{M}}(0.51)$	1975^{+32}_{-32}
$100\theta_{MC}$	$1.04094^{+0.00061}_{-0.00062}$	$10^9 A_s e^{-2\tau}$	$1.879^{+0.025}_{-0.023}$	$H(0.61)$	$95.6^{+1.2}_{-1.2}$
τ	$0.055^{+0.013}_{-0.012}$	D_{40}	1226^{+27}_{-26}	$D_{\text{M}}(0.61)$	2298^{+36}_{-36}
Ω_K	$0.0007^{+0.0038}_{-0.0038}$	D_{220}	5727^{+79}_{-78}	$H(2.33)$	$236.3^{+2.5}_{-2.4}$
$\ln(10^{10} A_s)$	$3.044^{+0.029}_{-0.027}$	D_{810}	2536^{+28}_{-27}	$D_{\text{M}}(2.33)$	5750^{+61}_{-63}
n_s	$0.9664^{+0.0089}_{-0.0088}$	D_{1420}	$816.6^{+9.6}_{-9.5}$	$f\sigma_8(0.15)$	$0.455^{+0.013}_{-0.013}$
y_{cal}	$1.0005^{+0.0049}_{-0.0049}$	D_{2000}	$230.6^{+3.2}_{-3.2}$	$\sigma_8(0.15)$	$0.749^{+0.015}_{-0.014}$
A_{217}^{CIB}	43^{+20}_{-20}	$n_{s,0.002}$	$0.9664^{+0.0089}_{-0.0088}$	$f\sigma_8(0.38)$	$0.474^{+0.012}_{-0.011}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.24539^{+0.00012}_{-0.00013}$	$\sigma_8(0.38)$	$0.664^{+0.014}_{-0.013}$
A_{143}^{tSZ}	$4.6^{+3.9}_{-4.3}$	Y_P^{BBN}	$0.24671^{+0.00012}_{-0.00013}$	$f\sigma_8(0.51)$	$0.473^{+0.011}_{-0.010}$
A_{100}^{PS}	249^{+60}_{-50}	$10^5 D/H$	$2.588^{+0.060}_{-0.056}$	$\sigma_8(0.51)$	$0.621^{+0.013}_{-0.012}$
A_{143}^{PS}	43^{+20}_{-20}	Age/Gyr	$13.76^{+0.16}_{-0.16}$	$f\sigma_8(0.61)$	$0.468^{+0.010}_{-0.0095}$
A_{217}^{PS}	108^{+30}_{-30}	z_*	$1089.89^{+0.58}_{-0.56}$	$\sigma_8(0.61)$	$0.591^{+0.012}_{-0.011}$
A^{kSZ}	—	r_*	$144.59^{+0.66}_{-0.64}$	$f\sigma_8(2.33)$	$0.2983^{+0.0062}_{-0.0057}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	$100\theta_*$	$1.04112^{+0.00060}_{-0.00061}$	$\sigma_8(2.33)$	$0.3077^{+0.0069}_{-0.0065}$
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.888^{+0.061}_{-0.059}$	f_{2000}^{143}	30^{+6}_{-5}
H_0	$67.9^{+1.4}_{-1.3}$	z_{drag}	$1059.87^{+0.64}_{-0.66}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
Ω_Λ	$0.690^{+0.012}_{-0.012}$	r_{drag}	$147.26^{+0.66}_{-0.63}$	f_{2000}^{217}	$106.9^{+3.6}_{-3.7}$
Ω_m	$0.309^{+0.013}_{-0.013}$	k_{D}	$0.14068^{+0.00069}_{-0.00071}$	χ_{small}^2	$397.0 (\nu: 1.6)$
$\Omega_m h^2$	$0.1424^{+0.0027}_{-0.0027}$	$100\theta_{\text{D}}$	$0.16080^{+0.00038}_{-0.00036}$	χ_{lowl}^2	$23.2 (\nu: 0.6)$
$\Omega_m h^3$	$0.0967^{+0.0028}_{-0.0027}$	z_{eq}	3388^{+65}_{-65}	$\chi_{6\text{DF}}^2$	$0.054 (\nu: 0.0)$
σ_8	$0.810^{+0.017}_{-0.015}$	k_{eq}	$0.01034^{+0.00020}_{-0.00020}$	χ_{MGS}^2	$1.48 (\nu: 0.2)$
S_8	$0.822^{+0.026}_{-0.025}$	$100\theta_{\text{eq}}$	$0.816^{+0.012}_{-0.012}$	χ_{DR12BAO}^2	$4.7 (\nu: 1.7)$
$\sigma_8 \Omega_m^{0.5}$	$0.450^{+0.014}_{-0.014}$	$100\theta_{\text{s,eq}}$	$0.4507^{+0.0063}_{-0.0062}$	χ_{prior}^2	$9.7 (\nu: 9.8)$
$\sigma_8 \Omega_m^{0.25}$	$0.604^{+0.015}_{-0.014}$	$H(0.15)$	$73.2^{+1.3}_{-1.2}$	χ_{BAO}^2	$6.2 (\nu: 1.3)$
$\sigma_8/h^{0.5}$	$0.983^{+0.021}_{-0.019}$	$D_{\text{M}}(0.15)$	639^{+12}_{-12}	χ_{CMB}^2	$7358 (\nu: 10474683.4)$
$r_{\text{drag}} h$	$99.96^{+2.0}_{-1.9}$	$H(0.38)$	$83.3^{+1.2}_{-1.2}$		
$\langle d^2 \rangle^{1/2}$	$2.431^{+0.050}_{-0.047}$	$D_{\text{M}}(0.38)$	1524^{+26}_{-26}		

$$\bar{\chi}_{\text{eff}}^2 = 11948.57; \Delta\bar{\chi}_{\text{eff}}^2 = 9150.24; R - 1 = 0.01907$$

16.15 base_omegak_CamSpecHM_TTTEEE_lowl_lowE_BAO_post_lensing_zre6p5/base_omegak_plikHM_TTTEEE_lowl_lowE_BAO_post_lensing_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02236^{+0.00031}_{-0.00032}$	z_{re}	$7.8^{+1.2}_{-1.3}$	$H(0.51)$	$89.9^{+1.2}_{-1.2}$
$\Omega_c h^2$	$0.1195^{+0.0028}_{-0.0027}$	$10^9 A_s$	$2.103^{+0.056}_{-0.053}$	$D_{\text{M}}(0.51)$	1976^{+31}_{-31}
$100\theta_{MC}$	$1.04093^{+0.00062}_{-0.00062}$	$10^9 A_s e^{-2\tau}$	$1.880^{+0.023}_{-0.022}$	$H(0.61)$	$95.6^{+1.2}_{-1.2}$
τ	$0.056^{+0.013}_{-0.012}$	D_{40}	1227^{+25}_{-25}	$D_{\text{M}}(0.61)$	2299^{+36}_{-35}
Ω_K	$0.0006^{+0.0038}_{-0.0038}$	D_{220}	5730^{+79}_{-76}	$H(2.33)$	$236.4^{+2.4}_{-2.3}$
$\ln(10^{10} A_s)$	$3.046^{+0.026}_{-0.025}$	D_{810}	2538^{+26}_{-26}	$D_{\text{M}}(2.33)$	5751^{+63}_{-63}
n_s	$0.9663^{+0.0089}_{-0.0086}$	D_{1420}	$816.9^{+9.4}_{-9.4}$	$f\sigma_8(0.15)$	$0.456^{+0.011}_{-0.011}$
y_{cal}	$1.0006^{+0.0049}_{-0.0048}$	D_{2000}	$230.7^{+3.1}_{-3.2}$	$\sigma_8(0.15)$	$0.749^{+0.013}_{-0.013}$
A_{217}^{CIB}	43^{+20}_{-20}	$n_{s,0.002}$	$0.9663^{+0.0089}_{-0.0086}$	$f\sigma_8(0.38)$	$0.4746^{+0.0094}_{-0.0092}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.24539^{+0.00012}_{-0.00013}$	$\sigma_8(0.38)$	$0.665^{+0.012}_{-0.012}$
A_{143}^{tSZ}	$4.6^{+3.9}_{-4.3}$	Y_P^{BBN}	$0.24672^{+0.00012}_{-0.00013}$	$f\sigma_8(0.51)$	$0.4734^{+0.0087}_{-0.0085}$
A_{100}^{PS}	249^{+60}_{-50}	$10^5 D/H$	$2.587^{+0.061}_{-0.056}$	$\sigma_8(0.51)$	$0.622^{+0.012}_{-0.011}$
A_{143}^{PS}	43^{+20}_{-20}	Age/Gyr	$13.77^{+0.16}_{-0.16}$	$f\sigma_8(0.61)$	$0.4686^{+0.0084}_{-0.0079}$
A_{217}^{PS}	109^{+20}_{-30}	z_*	$1089.88^{+0.57}_{-0.55}$	$\sigma_8(0.61)$	$0.592^{+0.011}_{-0.011}$
A^{kSZ}	—	r_*	$144.57^{+0.62}_{-0.62}$	$f\sigma_8(2.33)$	$0.2985^{+0.0058}_{-0.0055}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	$100\theta_*$	$1.04112^{+0.00060}_{-0.00061}$	$\sigma_8(2.33)$	$0.3079^{+0.0066}_{-0.0063}$
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.886^{+0.057}_{-0.057}$	f_{2000}^{143}	30^{+5}_{-6}
H_0	$67.8^{+1.3}_{-1.3}$	z_{drag}	$1059.88^{+0.62}_{-0.67}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
Ω_Λ	$0.690^{+0.011}_{-0.011}$	r_{drag}	$147.24^{+0.62}_{-0.61}$	f_{2000}^{217}	$106.9^{+3.7}_{-3.7}$
Ω_m	$0.310^{+0.012}_{-0.012}$	k_{D}	$0.14070^{+0.00067}_{-0.00067}$	χ_{lensing}^2	$9.18 (\nu: 0.2)$
$\Omega_m h^2$	$0.1425^{+0.0026}_{-0.0026}$	$100\theta_{\text{D}}$	$0.16079^{+0.00038}_{-0.00035}$	χ_{simall}^2	$344 (\nu: 8534.7)$
$\Omega_m h^3$	$0.0967^{+0.0028}_{-0.0027}$	z_{eq}	3389^{+62}_{-62}	χ_{lowl}^2	$77 (\nu: 8542.4)$
σ_8	$0.811^{+0.014}_{-0.014}$	k_{eq}	$0.01034^{+0.00019}_{-0.00019}$	$\chi_{6\text{DF}}^2$	$0.25 (\nu: 0.1)$
S_8	$0.824^{+0.021}_{-0.021}$	$100\theta_{\text{eq}}$	$0.816^{+0.012}_{-0.012}$	χ_{MGS}^2	$1.23 (\nu: 0.2)$
$\sigma_8 \Omega_m^{0.5}$	$0.451^{+0.012}_{-0.011}$	$100\theta_{\text{s,eq}}$	$0.4506^{+0.0060}_{-0.0060}$	χ_{DR12BAO}^2	$4.7 (\nu: 1.8)$
$\sigma_8 \Omega_m^{0.25}$	$0.605^{+0.012}_{-0.012}$	$H(0.15)$	$73.1^{+1.3}_{-1.2}$	χ_{prior}^2	$9.6 (\nu: 9.7)$
$\sigma_8/h^{0.5}$	$0.984^{+0.017}_{-0.016}$	$D_{\text{M}}(0.15)$	639^{+11}_{-12}	χ_{CMB}^2	$7367 (\nu: 10475246.4)$
$r_{\text{drag}} h$	$99.9^{+1.9}_{-1.8}$	$H(0.38)$	$83.2^{+1.2}_{-1.2}$	χ_{BAO}^2	$6.2 (\nu: 1.3)$
$\langle d^2 \rangle^{1/2}$	$2.435^{+0.040}_{-0.039}$	$D_{\text{M}}(0.38)$	1525^{+25}_{-25}		

$$\bar{\chi}_{\text{eff}}^2 = 11957.78; \Delta\bar{\chi}_{\text{eff}}^2 = 9150.73; R - 1 = 0.03337$$

16.16 base_omegak_CamSpecHM_TTTEEE_lowl_lowE_BAO_post_lensing_Pantheon18_zre6p5/base_omegak_plikHM_TTTEEE_lowl_lowE

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02237^{+0.00031}_{-0.00032}$	z_{re}	$7.9^{+1.2}_{-1.3}$	$H(0.51)$	$90.0^{+1.2}_{-1.2}$
$\Omega_c h^2$	$0.1194^{+0.0027}_{-0.0027}$	$10^9 A_s$	$2.104^{+0.056}_{-0.053}$	$D_{\text{M}}(0.51)$	1974^{+31}_{-31}
$100\theta_{MC}$	$1.04094^{+0.00061}_{-0.00062}$	$10^9 A_s e^{-2\tau}$	$1.880^{+0.023}_{-0.022}$	$H(0.61)$	$95.6^{+1.2}_{-1.2}$
τ	$0.056^{+0.013}_{-0.012}$	D_{40}	1227^{+25}_{-25}	$D_{\text{M}}(0.61)$	2298^{+35}_{-35}
Ω_K	$0.0007^{+0.0038}_{-0.0038}$	D_{220}	5731^{+79}_{-76}	$H(2.33)$	$236.3^{+2.4}_{-2.3}$
$\ln(10^{10} A_s)$	$3.046^{+0.027}_{-0.025}$	D_{810}	2538^{+26}_{-26}	$D_{\text{M}}(2.33)$	5749^{+62}_{-62}
n_s	$0.9664^{+0.0089}_{-0.0086}$	D_{1420}	$817.0^{+9.4}_{-9.4}$	$f\sigma_8(0.15)$	$0.455^{+0.011}_{-0.010}$
y_{cal}	$1.0007^{+0.0049}_{-0.0048}$	D_{2000}	$230.8^{+3.2}_{-3.2}$	$\sigma_8(0.15)$	$0.749^{+0.013}_{-0.013}$
A_{217}^{CIB}	43^{+20}_{-20}	$n_{s,0.002}$	$0.9664^{+0.0089}_{-0.0086}$	$f\sigma_8(0.38)$	$0.4742^{+0.0094}_{-0.0091}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.24539^{+0.00012}_{-0.00013}$	$\sigma_8(0.38)$	$0.665^{+0.012}_{-0.012}$
A_{143}^{tSZ}	$4.6^{+3.9}_{-4.3}$	Y_P^{BBN}	$0.24672^{+0.00012}_{-0.00013}$	$f\sigma_8(0.51)$	$0.4731^{+0.0087}_{-0.0085}$
A_{100}^{PS}	249^{+60}_{-50}	$10^5 D/H$	$2.586^{+0.060}_{-0.056}$	$\sigma_8(0.51)$	$0.622^{+0.012}_{-0.011}$
A_{143}^{PS}	43^{+20}_{-20}	Age/Gyr	$13.76^{+0.16}_{-0.16}$	$f\sigma_8(0.61)$	$0.4684^{+0.0083}_{-0.0079}$
A_{217}^{PS}	109^{+20}_{-30}	z_*	$1089.87^{+0.56}_{-0.56}$	$\sigma_8(0.61)$	$0.592^{+0.011}_{-0.011}$
A^{kSZ}	—	r_*	$144.59^{+0.62}_{-0.61}$	$f\sigma_8(2.33)$	$0.2986^{+0.0057}_{-0.0055}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	$100\theta_*$	$1.04113^{+0.00060}_{-0.00061}$	$\sigma_8(2.33)$	$0.3081^{+0.0066}_{-0.0063}$
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.888^{+0.057}_{-0.057}$	f_{2000}^{143}	30^{+5}_{-6}
H_0	$67.9^{+1.3}_{-1.2}$	z_{drag}	$1059.89^{+0.61}_{-0.68}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
Ω_Λ	$0.690^{+0.011}_{-0.011}$	r_{drag}	$147.25^{+0.61}_{-0.61}$	f_{2000}^{217}	$106.8^{+3.7}_{-3.7}$
Ω_m	$0.309^{+0.012}_{-0.012}$	k_{D}	$0.14069^{+0.00066}_{-0.00067}$	χ_{lensing}^2	$9.19 (\nu: 0.2)$
$\Omega_m h^2$	$0.1424^{+0.0026}_{-0.0025}$	$100\theta_{\text{D}}$	$0.16078^{+0.00038}_{-0.00035}$	χ_{simall}^2	$344 (\nu: 8534.9)$
$\Omega_m h^3$	$0.0967^{+0.0028}_{-0.0027}$	z_{eq}	3388^{+62}_{-61}	χ_{lowl}^2	$76 (\nu: 8542.4)$
σ_8	$0.811^{+0.015}_{-0.014}$	k_{eq}	$0.01034^{+0.00019}_{-0.00019}$	χ_{JLA}^2	$1035.02 (\nu: 0.0)$
S_8	$0.823^{+0.021}_{-0.020}$	$100\theta_{\text{eq}}$	$0.816^{+0.012}_{-0.012}$	$\chi_{6\text{DF}}^2$	$0.25 (\nu: 0.2)$
$\sigma_8 \Omega_m^{0.5}$	$0.451^{+0.011}_{-0.011}$	$100\theta_{\text{s,eq}}$	$0.4508^{+0.0060}_{-0.0059}$	χ_{MGS}^2	$1.28 (\nu: 0.3)$
$\sigma_8 \Omega_m^{0.25}$	$0.604^{+0.012}_{-0.012}$	$H(0.15)$	$73.2^{+1.3}_{-1.2}$	χ_{DR12BAO}^2	$4.5 (\nu: 1.5)$
$\sigma_8/h^{0.5}$	$0.984^{+0.017}_{-0.016}$	$D_{\text{M}}(0.15)$	639^{+11}_{-11}	χ_{prior}^2	$9.6 (\nu: 9.7)$
$r_{\text{drag}} h$	$99.99^{+1.8}_{-1.8}$	$H(0.38)$	$83.3^{+1.2}_{-1.2}$	χ_{CMB}^2	$7367 (\nu: 10475227.9)$
$\langle d^2 \rangle^{1/2}$	$2.433^{+0.040}_{-0.038}$	$D_{\text{M}}(0.38)$	1524^{+25}_{-25}	χ_{BAO}^2	$6.1 (\nu: 1.0)$

$$\bar{\chi}_{\text{eff}}^2 = 12992.73; \Delta\bar{\chi}_{\text{eff}}^2 = 9150.67; R - 1 = 0.03308$$

16.17 base_omegak_CamSpecHM_TT_lowl_lowE_lensing/base_omegak_plikHM_TT_lowl_lowE_lensing

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02234^{+0.00049}_{-0.00047}$	$\langle d^2 \rangle^{1/2}$	$2.473^{+0.058}_{-0.057}$	$H(0.38)$	$79.1^{+4.4}_{-4.2}$
$\Omega_c h^2$	$0.1178^{+0.0044}_{-0.0042}$	z_{re}	$7.1^{+1.6}_{-1.9}$	$D_{\text{M}}(0.38)$	1621^{+110}_{-100}
$100\theta_{MC}$	$1.04115^{+0.00097}_{-0.00096}$	$10^9 A_s$	$2.063^{+0.068}_{-0.070}$	$H(0.51)$	$86.0^{+4.3}_{-4.1}$
τ	$0.049^{+0.016}_{-0.017}$	$10^9 A_s e^{-2\tau}$	$1.869^{+0.027}_{-0.026}$	$D_{\text{M}}(0.51)$	2093^{+130}_{-130}
Ω_K	$-0.012^{+0.015}_{-0.015}$	D_{40}	1211^{+34}_{-34}	$H(0.61)$	$91.7^{+4.2}_{-4.1}$
$\ln(10^{10} A_s)$	$3.027^{+0.033}_{-0.034}$	D_{220}	5719^{+82}_{-80}	$D_{\text{M}}(0.61)$	2431^{+150}_{-140}
n_s	$0.970^{+0.012}_{-0.012}$	D_{810}	2530^{+27}_{-27}	$H(2.33)$	$232.7^{+5.0}_{-4.9}$
y_{cal}	$1.0000^{+0.0048}_{-0.0049}$	D_{1420}	$814.2^{+9.8}_{-10}$	$D_{\text{M}}(2.33)$	5957^{+230}_{-220}
A_{217}^{CIB}	44^{+20}_{-20}	D_{2000}	$230.3^{+3.6}_{-3.7}$	$f\sigma_8(0.15)$	$0.472^{+0.020}_{-0.021}$
$\xi^{tSZ-CIB}$	—	$n_{s,0.002}$	$0.970^{+0.012}_{-0.012}$	$\sigma_8(0.15)$	$0.728^{+0.026}_{-0.027}$
A_{143}^{tSZ}	$4.5^{+3.8}_{-4.2}$	Y_P	$0.24538^{+0.00019}_{-0.00021}$	$f\sigma_8(0.38)$	$0.481^{+0.012}_{-0.012}$
A_{100}^{PS}	250^{+60}_{-50}	Y_P^{BBN}	$0.24670^{+0.00019}_{-0.00021}$	$\sigma_8(0.38)$	$0.641^{+0.027}_{-0.028}$
A_{143}^{PS}	43^{+20}_{-20}	$10^5 D/H$	$2.593^{+0.089}_{-0.088}$	$f\sigma_8(0.51)$	$0.4755^{+0.0099}_{-0.0097}$
A_{217}^{PS}	107^{+30}_{-30}	Age/Gyr	$14.29^{+0.60}_{-0.57}$	$\sigma_8(0.51)$	$0.598^{+0.028}_{-0.028}$
A^{kSZ}	—	z_*	$1089.77^{+0.89}_{-0.89}$	$f\sigma_8(0.61)$	$0.4677^{+0.0096}_{-0.0093}$
c_{100}	$0.9985^{+0.0022}_{-0.0026}$	r_*	$145.05^{+0.93}_{-0.96}$	$\sigma_8(0.61)$	$0.568^{+0.027}_{-0.028}$
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	$100\theta_*$	$1.04134^{+0.00095}_{-0.00094}$	$f\sigma_8(2.33)$	$0.285^{+0.015}_{-0.015}$
H_0	$63.3^{+4.8}_{-4.6}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.929^{+0.085}_{-0.087}$	$\sigma_8(2.33)$	$0.291^{+0.018}_{-0.018}$
Ω_Λ	$0.659^{+0.034}_{-0.037}$	z_{drag}	$1059.69^{+0.97}_{-0.94}$	f_{2000}^{143}	30^{+6}_{-6}
Ω_m	$0.353^{+0.050}_{-0.046}$	r_{drag}	$147.73^{+0.91}_{-0.94}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
$\Omega_m h^2$	$0.1407^{+0.0041}_{-0.0039}$	k_{D}	$0.1402^{+0.0010}_{-0.00094}$	f_{2000}^{217}	$106.9^{+4.1}_{-4.2}$
$\Omega_m h^3$	$0.0891^{+0.0084}_{-0.0081}$	$100\theta_{\text{D}}$	$0.16092^{+0.00054}_{-0.00054}$	χ^2_{lensing}	$10.4 (\nu: 2.3)$
σ_8	$0.792^{+0.025}_{-0.026}$	z_{eq}	3348^{+99}_{-94}	χ^2_{small}	$396.7 (\nu: 1.2)$
S_8	$0.858^{+0.042}_{-0.043}$	k_{eq}	$0.01022^{+0.00030}_{-0.00029}$	χ^2_{lowl}	$21.9 (\nu: 0.7)$
$\sigma_8 \Omega_m^{0.5}$	$0.470^{+0.023}_{-0.023}$	$100\theta_{\text{eq}}$	$0.823^{+0.019}_{-0.019}$	χ^2_{prior}	$7.4 (\nu: 6.3)$
$\sigma_8 \Omega_m^{0.25}$	$0.610^{+0.015}_{-0.014}$	$100\theta_{\text{s,eq}}$	$0.4547^{+0.0096}_{-0.0097}$	χ^2_{CMB}	$4346 (\nu: 4948541.2)$
$\sigma_8/h^{0.5}$	$0.996^{+0.021}_{-0.021}$	$H(0.15)$	$68.7^{+4.7}_{-4.4}$		
$r_{\text{drag}} h$	$93.5^{+6.9}_{-6.5}$	$D_{\text{M}}(0.15)$	683^{+49}_{-47}		

Best-fit $\chi^2_{\text{eff}} = 7478.30$; $\Delta\chi^2_{\text{eff}} = 6292.08$; $\bar{\chi}^2_{\text{eff}} = 7499.29$; $\Delta\bar{\chi}^2_{\text{eff}} = 6292.15$; $R - 1 = 0.01550$
 χ^2_{eff} : CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb.consext8: 9.19 (Δ -0.25) small_100x143_offlike5_EE_Aplanck_B: 395.64 (Δ -0.03) commander_dx12_v3_2_29: 21.85 (Δ 0.04) CamSpec like_10.7HM: 7049.24

16.18 base_omegak_CamSpecHM_TT_lowl_lowE_lensing_post_zre6p5/base_omegak_plikHM_TT_lowl_lowE_lensing_post_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02234^{+0.00049}_{-0.00047}$	$\langle d^2 \rangle^{1/2}$	$2.473^{+0.058}_{-0.058}$	$H(0.38)$	$79.4^{+4.3}_{-4.1}$
$\Omega_c h^2$	$0.1177^{+0.0044}_{-0.0042}$	z_{re}	< 8.52	$D_{\text{M}}(0.38)$	1612^{+100}_{-98}
$100\theta_{MC}$	$1.04117^{+0.00097}_{-0.00097}$	$10^9 A_s$	$2.076^{+0.054}_{-0.048}$	$H(0.51)$	$86.3^{+4.2}_{-4.0}$
τ	$0.0526^{+0.012}_{-0.0095}$	$10^9 A_s e^{-2\tau}$	$1.869^{+0.027}_{-0.026}$	$D_{\text{M}}(0.51)$	2083^{+130}_{-120}
Ω_K	$-0.011^{+0.014}_{-0.015}$	D_{40}	1211^{+34}_{-34}	$H(0.61)$	$92.0^{+4.1}_{-3.9}$
$\ln(10^{10} A_s)$	$3.033^{+0.026}_{-0.023}$	D_{220}	5718^{+83}_{-79}	$D_{\text{M}}(0.61)$	2420^{+140}_{-140}
n_s	$0.970^{+0.012}_{-0.012}$	D_{810}	2529^{+27}_{-27}	$H(2.33)$	$232.8^{+5.1}_{-4.9}$
y_{cal}	$1.0000^{+0.0047}_{-0.0049}$	D_{1420}	$814.3^{+9.9}_{-10}$	$D_{\text{M}}(2.33)$	5942^{+220}_{-220}
A_{217}^{CIB}	44^{+20}_{-20}	D_{2000}	$230.3^{+3.6}_{-3.7}$	$f\sigma_8(0.15)$	$0.471^{+0.020}_{-0.020}$
$\xi^{tSZ-CIB}$	—	$n_{s,0.002}$	$0.970^{+0.012}_{-0.012}$	$\sigma_8(0.15)$	$0.731^{+0.025}_{-0.024}$
A_{143}^{tSZ}	$4.5^{+3.8}_{-4.2}$	Y_P	$0.24538^{+0.00019}_{-0.00020}$	$f\sigma_8(0.38)$	$0.481^{+0.012}_{-0.013}$
A_{100}^{PS}	250^{+60}_{-50}	Y_P^{BBN}	$0.24671^{+0.00019}_{-0.00020}$	$\sigma_8(0.38)$	$0.644^{+0.026}_{-0.025}$
A_{143}^{PS}	42^{+20}_{-20}	$10^5 D/H$	$2.591^{+0.088}_{-0.089}$	$f\sigma_8(0.51)$	$0.4759^{+0.0099}_{-0.0096}$
A_{217}^{PS}	107^{+30}_{-30}	Age/Gyr	$14.25^{+0.58}_{-0.55}$	$\sigma_8(0.51)$	$0.601^{+0.026}_{-0.025}$
A^{kSZ}	—	z_*	$1089.75^{+0.88}_{-0.89}$	$f\sigma_8(0.61)$	$0.4684^{+0.0094}_{-0.0088}$
c_{100}	$0.9985^{+0.0022}_{-0.0026}$	r_*	$145.06^{+0.93}_{-0.96}$	$\sigma_8(0.61)$	$0.571^{+0.026}_{-0.025}$
c_{217}	$0.9996^{+0.0037}_{-0.0027}$	$100\theta_*$	$1.04136^{+0.00095}_{-0.00095}$	$f\sigma_8(2.33)$	$0.287^{+0.014}_{-0.014}$
H_0	$63.7^{+4.7}_{-4.5}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.930^{+0.085}_{-0.087}$	$\sigma_8(2.33)$	$0.293^{+0.017}_{-0.017}$
Ω_Λ	$0.663^{+0.032}_{-0.033}$	z_{drag}	$1059.70^{+0.95}_{-0.92}$	f_{2000}^{143}	30^{+6}_{-6}
Ω_m	$0.348^{+0.047}_{-0.044}$	r_{drag}	$147.75^{+0.91}_{-0.94}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
$\Omega_m h^2$	$0.1406^{+0.0041}_{-0.0039}$	k_{D}	$0.1402^{+0.0010}_{-0.00094}$	f_{2000}^{217}	$106.8^{+4.1}_{-4.2}$
$\Omega_m h^3$	$0.0896^{+0.0083}_{-0.0079}$	$100\theta_{\text{D}}$	$0.16091^{+0.00054}_{-0.00054}$	χ^2_{lensing}	$10.3 (\nu: 2.3)$
σ_8	$0.795^{+0.024}_{-0.023}$	z_{eq}	3345^{+99}_{-92}	χ^2_{small}	$396.4 (\nu: 0.7)$
S_8	$0.855^{+0.042}_{-0.042}$	k_{eq}	$0.01021^{+0.00030}_{-0.00028}$	χ^2_{lowl}	$21.9 (\nu: 0.7)$
$\sigma_8 \Omega_m^{0.5}$	$0.468^{+0.023}_{-0.023}$	$100\theta_{\text{eq}}$	$0.824^{+0.019}_{-0.019}$	χ^2_{prior}	$7.4 (\nu: 6.4)$
$\sigma_8 \Omega_m^{0.25}$	$0.610^{+0.015}_{-0.014}$	$100\theta_{\text{s,eq}}$	$0.4549^{+0.0094}_{-0.0097}$	χ^2_{CMB}	$4345 (\nu: 4948727.4)$
$\sigma_8/h^{0.5}$	$0.996^{+0.021}_{-0.022}$	$H(0.15)$	$69.1^{+4.5}_{-4.3}$		
$r_{\text{drag}} h$	$94.1^{+6.7}_{-6.3}$	$D_{\text{M}}(0.15)$	679^{+48}_{-45}		

$\bar{\chi}^2_{\text{eff}} = 7498.95$; $\Delta \bar{\chi}^2_{\text{eff}} = 6292.24$; $R - 1 = 0.01796$

16.19 base_omegak_CamSpecHM_TTTEEE_lowl_lowE_lensing/base_omegak_plikHM_TTTEEE_lowl_lowE_lensing

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02245^{+0.00033}_{-0.00032}$	$\langle d^2 \rangle^{1/2}$	$2.474^{+0.055}_{-0.056}$	$H(0.38)$	$79.4^{+3.9}_{-3.7}$
$\Omega_c h^2$	$0.1183^{+0.0030}_{-0.0029}$	z_{re}	$7.1^{+1.6}_{-1.9}$	$D_{\text{M}}(0.38)$	1614^{+95}_{-91}
$100\theta_{MC}$	$1.04104^{+0.00063}_{-0.00065}$	$10^9 A_s$	$2.066^{+0.068}_{-0.073}$	$H(0.51)$	$86.3^{+3.8}_{-3.6}$
τ	$0.049^{+0.016}_{-0.017}$	$10^9 A_s e^{-2\tau}$	$1.872^{+0.023}_{-0.023}$	$D_{\text{M}}(0.51)$	2084^{+120}_{-110}
Ω_K	$-0.011^{+0.012}_{-0.013}$	D_{40}	1214^{+29}_{-28}	$H(0.61)$	$92.0^{+3.7}_{-3.5}$
$\ln(10^{10} A_s)$	$3.028^{+0.033}_{-0.036}$	D_{220}	5728^{+74}_{-76}	$D_{\text{M}}(0.61)$	2421^{+130}_{-120}
n_s	$0.9691^{+0.0093}_{-0.0096}$	D_{810}	2532^{+26}_{-26}	$H(2.33)$	$233.4^{+3.7}_{-3.6}$
y_{cal}	$1.0000^{+0.0048}_{-0.0048}$	D_{1420}	$815.5^{+9.3}_{-9.2}$	$D_{\text{M}}(2.33)$	5937^{+200}_{-190}
A_{217}^{CIB}	43^{+20}_{-20}	D_{2000}	$230.9^{+3.1}_{-3.2}$	$f\sigma_8(0.15)$	$0.472^{+0.019}_{-0.020}$
$\xi^{tSZ-CIB}$	—	$n_{s,0.002}$	$0.9691^{+0.0093}_{-0.0096}$	$\sigma_8(0.15)$	$0.730^{+0.023}_{-0.024}$
A_{143}^{tSZ}	$4.7^{+3.9}_{-4.3}$	Y_P	$0.24542^{+0.00012}_{-0.00013}$	$f\sigma_8(0.38)$	$0.482^{+0.011}_{-0.012}$
A_{100}^{PS}	247^{+60}_{-50}	Y_P^{BBN}	$0.24675^{+0.00012}_{-0.00013}$	$\sigma_8(0.38)$	$0.643^{+0.024}_{-0.025}$
A_{143}^{PS}	41^{+20}_{-20}	$10^5 D/H$	$2.571^{+0.061}_{-0.058}$	$f\sigma_8(0.51)$	$0.4764^{+0.0084}_{-0.0088}$
A_{217}^{PS}	108^{+20}_{-30}	Age/Gyr	$14.24^{+0.50}_{-0.49}$	$\sigma_8(0.51)$	$0.600^{+0.024}_{-0.025}$
A^{kSZ}	—	z_*	$1089.67^{+0.60}_{-0.58}$	$f\sigma_8(0.61)$	$0.4686^{+0.0078}_{-0.0080}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	r_*	$144.80^{+0.65}_{-0.65}$	$\sigma_8(0.61)$	$0.570^{+0.024}_{-0.025}$
c_{217}	$0.9996^{+0.0037}_{-0.0027}$	$100\theta_*$	$1.04122^{+0.00061}_{-0.00064}$	$f\sigma_8(2.33)$	$0.286^{+0.013}_{-0.014}$
H_0	$63.6^{+4.4}_{-4.2}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.907^{+0.060}_{-0.060}$	$\sigma_8(2.33)$	$0.292^{+0.016}_{-0.017}$
Ω_Λ	$0.659^{+0.034}_{-0.034}$	z_{drag}	$1060.00^{+0.65}_{-0.68}$	f_{2000}^{143}	29^{+6}_{-6}
Ω_m	$0.351^{+0.046}_{-0.045}$	r_{drag}	$147.44^{+0.65}_{-0.64}$	$f_{2000}^{143 \times 217}$	31^{+4}_{-4}
$\Omega_m h^2$	$0.1414^{+0.0028}_{-0.0027}$	k_{D}	$0.14056^{+0.00068}_{-0.00070}$	f_{2000}^{217}	$106.2^{+3.8}_{-3.7}$
$\Omega_m h^3$	$0.0899^{+0.0071}_{-0.0068}$	$100\theta_{\text{D}}$	$0.16072^{+0.00039}_{-0.00037}$	χ_{lensing}^2	$10.5 (\nu: 2.4)$
σ_8	$0.794^{+0.022}_{-0.022}$	z_{eq}	3365^{+66}_{-65}	χ_{small}^2	$396.7 (\nu: 1.1)$
S_8	$0.859^{+0.041}_{-0.041}$	k_{eq}	$0.01027^{+0.00020}_{-0.00020}$	χ_{lowl}^2	$22.04 (\nu: 0.5)$
$\sigma_8 \Omega_m^{0.5}$	$0.470^{+0.023}_{-0.022}$	$100\theta_{\text{eq}}$	$0.820^{+0.013}_{-0.013}$	χ_{prior}^2	$9.6 (\nu: 9.6)$
$\sigma_8 \Omega_m^{0.25}$	$0.611^{+0.013}_{-0.013}$	$100\theta_{\text{s,eq}}$	$0.4531^{+0.0065}_{-0.0065}$	χ_{CMB}^2	$7365 (\nu: 10476274.0)$
$\sigma_8/h^{0.5}$	$0.996^{+0.019}_{-0.020}$	$H(0.15)$	$69.0^{+4.2}_{-4.0}$		
$r_{\text{drag}} h$	$93.7^{+6.4}_{-6.1}$	$D_{\text{M}}(0.15)$	680^{+45}_{-42}		

Best-fit $\chi_{\text{eff}}^2 = 11927.06$; $\Delta\chi_{\text{eff}}^2 = 9155.66$; $\bar{\chi}_{\text{eff}}^2 = 11949.70$; $\Delta\bar{\chi}_{\text{eff}}^2 = 9151.00$; $R - 1 = 0.01965$
 χ_{eff}^2 : CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb.consext8: 9.39 (Δ -0.39) small_100x143_offlike5_EE_Aplanck_B: 395.63 (Δ -0.01) commander_dx12_v3_2_29: 21.83 (Δ -0.01) CamSpec like_10.7HM_1400_unified: 11498.26

16.20 base_omegak_CamSpecHM_TTTEEE_lowl_lowE_lensing_post_zre6p5/base_omegak_plikHM_TTTEEE_lowl_lowE_lensing_post_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02245^{+0.00033}_{-0.00032}$	$\langle d^2 \rangle^{1/2}$	$2.474^{+0.054}_{-0.056}$	$H(0.38)$	$79.8^{+3.7}_{-3.5}$
$\Omega_c h^2$	$0.1183^{+0.0030}_{-0.0029}$	z_{re}	< 8.48	$D_{\text{M}}(0.38)$	1604^{+86}_{-86}
$100\theta_{MC}$	$1.04104^{+0.00062}_{-0.00064}$	$10^9 A_s$	$2.080^{+0.053}_{-0.048}$	$H(0.51)$	$86.6^{+3.6}_{-3.3}$
τ	$0.0526^{+0.011}_{-0.0092}$	$10^9 A_s e^{-2\tau}$	$1.872^{+0.023}_{-0.023}$	$D_{\text{M}}(0.51)$	2073^{+110}_{-110}
Ω_K	$-0.009^{+0.012}_{-0.012}$	D_{40}	1215^{+29}_{-28}	$H(0.61)$	$92.4^{+3.5}_{-3.3}$
$\ln(10^{10} A_s)$	$3.035^{+0.025}_{-0.023}$	D_{220}	5728^{+74}_{-76}	$D_{\text{M}}(0.61)$	2408^{+120}_{-120}
n_s	$0.9693^{+0.0092}_{-0.0096}$	D_{810}	2532^{+26}_{-26}	$H(2.33)$	$233.6^{+3.7}_{-3.5}$
y_{cal}	$1.0000^{+0.0048}_{-0.0048}$	D_{1420}	$815.6^{+9.3}_{-9.2}$	$D_{\text{M}}(2.33)$	5919^{+180}_{-180}
A_{217}^{CIB}	43^{+20}_{-20}	D_{2000}	$230.9^{+3.1}_{-3.1}$	$f\sigma_8(0.15)$	$0.471^{+0.018}_{-0.019}$
$\xi^{tSZ-CIB}$	—	$n_{s,0.002}$	$0.9693^{+0.0092}_{-0.0096}$	$\sigma_8(0.15)$	$0.734^{+0.021}_{-0.020}$
A_{143}^{tSZ}	$4.8^{+3.9}_{-4.3}$	Y_P	$0.24543^{+0.00012}_{-0.00013}$	$f\sigma_8(0.38)$	$0.482^{+0.011}_{-0.012}$
A_{100}^{PS}	247^{+60}_{-50}	Y_P^{BBN}	$0.24675^{+0.00012}_{-0.00013}$	$\sigma_8(0.38)$	$0.647^{+0.022}_{-0.021}$
A_{143}^{PS}	41^{+20}_{-20}	$10^5 D/H$	$2.571^{+0.060}_{-0.059}$	$f\sigma_8(0.51)$	$0.4769^{+0.0083}_{-0.0086}$
A_{217}^{PS}	108^{+20}_{-30}	Age/Gyr	$14.19^{+0.46}_{-0.47}$	$\sigma_8(0.51)$	$0.604^{+0.022}_{-0.021}$
A^{kSZ}	—	z_*	$1089.67^{+0.61}_{-0.59}$	$f\sigma_8(0.61)$	$0.4695^{+0.0074}_{-0.0072}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	r_*	$144.81^{+0.64}_{-0.66}$	$\sigma_8(0.61)$	$0.573^{+0.022}_{-0.021}$
c_{217}	$0.9996^{+0.0037}_{-0.0027}$	$100\theta_*$	$1.04122^{+0.00061}_{-0.00063}$	$f\sigma_8(2.33)$	$0.288^{+0.012}_{-0.011}$
H_0	$64.0^{+4.2}_{-3.9}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.908^{+0.060}_{-0.061}$	$\sigma_8(2.33)$	$0.295^{+0.015}_{-0.014}$
Ω_Λ	$0.663^{+0.030}_{-0.031}$	z_{drag}	$1060.01^{+0.65}_{-0.68}$	f_{2000}^{143}	29^{+6}_{-6}
Ω_m	$0.346^{+0.042}_{-0.040}$	r_{drag}	$147.45^{+0.64}_{-0.65}$	$f_{2000}^{143 \times 217}$	31^{+4}_{-4}
$\Omega_m h^2$	$0.1414^{+0.0028}_{-0.0027}$	k_{D}	$0.14055^{+0.00069}_{-0.00070}$	f_{2000}^{217}	$106.2^{+3.8}_{-3.7}$
$\Omega_m h^3$	$0.0905^{+0.0068}_{-0.0064}$	$100\theta_{\text{D}}$	$0.16072^{+0.00039}_{-0.00037}$	χ^2_{lensing}	$10.5 (\nu: 2.3)$
σ_8	$0.797^{+0.020}_{-0.018}$	z_{eq}	3364^{+67}_{-64}	χ^2_{small}	$396.4 (\nu: 0.7)$
S_8	$0.856^{+0.039}_{-0.040}$	k_{eq}	$0.01027^{+0.00021}_{-0.00020}$	χ^2_{lowl}	$22.10 (\nu: 0.5)$
$\sigma_8 \Omega_m^{0.5}$	$0.469^{+0.021}_{-0.022}$	$100\theta_{\text{eq}}$	$0.821^{+0.013}_{-0.013}$	χ^2_{prior}	$9.6 (\nu: 9.5)$
$\sigma_8 \Omega_m^{0.25}$	$0.611^{+0.013}_{-0.013}$	$100\theta_{\text{s,eq}}$	$0.4531^{+0.0065}_{-0.0066}$	χ^2_{CMB}	$7364 (\nu: 10476260.3)$
$\sigma_8/h^{0.5}$	$0.997^{+0.019}_{-0.020}$	$H(0.15)$	$69.4^{+4.0}_{-3.7}$		
$r_{\text{drag}} h$	$94.4^{+6.0}_{-5.6}$	$D_{\text{M}}(0.15)$	676^{+40}_{-40}		

$\bar{\chi}^2_{\text{eff}} = 11949.31$; $\Delta\bar{\chi}^2_{\text{eff}} = 9151.04$; $R - 1 = 0.03090$

17 r

17.1 base_r_CamSpecHM_TT_lowl_lowE/base_r_plikHM_TT_lowl_lowE

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02213^{+0.00044}_{-0.00042}$	z_{re}	$7.5^{+1.6}_{-1.7}$	$H(0.51)$	$89.41^{+0.90}_{-0.86}$
$\Omega_c h^2$	$0.1202^{+0.0042}_{-0.0041}$	$10^9 A_s$	$2.087^{+0.069}_{-0.066}$	$D_{\text{M}}(0.51)$	1993^{+37}_{-37}
$100\theta_{MC}$	$1.04084^{+0.00092}_{-0.00093}$	$10^9 A_s e^{-2\tau}$	$1.881^{+0.027}_{-0.027}$	$H(0.61)$	$95.07^{+0.73}_{-0.68}$
τ	$0.052^{+0.016}_{-0.016}$	D_{40}	1242^{+38}_{-34}	$D_{\text{M}}(0.61)$	2318^{+39}_{-39}
$\ln(10^{10} A_s)$	$3.038^{+0.033}_{-0.032}$	D_{220}	5705^{+83}_{-82}	$H(2.33)$	$236.5^{+2.5}_{-2.5}$
n_s	$0.965^{+0.012}_{-0.011}$	D_{810}	2535^{+27}_{-27}	$D_{\text{M}}(2.33)$	5775^{+32}_{-33}
r	< 0.111	D_{1420}	815^{+10}_{-10}	$f\sigma_8(0.15)$	$0.461^{+0.024}_{-0.024}$
y_{cal}	$1.0005^{+0.0049}_{-0.0049}$	D_{2000}	$229.7^{+3.6}_{-3.5}$	$\sigma_8(0.15)$	$0.748^{+0.015}_{-0.015}$
A_{217}^{CIB}	44^{+10}_{-20}	$n_{s,0.002}$	$0.965^{+0.012}_{-0.011}$	$f\sigma_8(0.38)$	$0.478^{+0.019}_{-0.019}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.24529^{+0.00018}_{-0.00020}$	$\sigma_8(0.38)$	$0.662^{+0.012}_{-0.012}$
A_{143}^{tSZ}	$4.4^{+3.8}_{-4.2}$	Y_P^{BBN}	$0.24662^{+0.00018}_{-0.00020}$	$f\sigma_8(0.51)$	$0.476^{+0.016}_{-0.016}$
A_{100}^{PS}	252^{+60}_{-50}	$10^5 D/H$	$2.631^{+0.082}_{-0.082}$	$\sigma_8(0.51)$	$0.620^{+0.011}_{-0.011}$
A_{143}^{PS}	45^{+20}_{-20}	Age/Gyr	$13.824^{+0.071}_{-0.074}$	$f\sigma_8(0.61)$	$0.470^{+0.014}_{-0.015}$
A_{217}^{PS}	108^{+30}_{-30}	z_*	$1090.24^{+0.80}_{-0.80}$	$\sigma_8(0.61)$	$0.589^{+0.010}_{-0.010}$
A^{kSZ}	—	r_*	$144.55^{+0.95}_{-0.94}$	$f\sigma_8(2.33)$	$0.2969^{+0.0051}_{-0.0049}$
c_{100}	$0.9985^{+0.0022}_{-0.0027}$	$100\theta_*$	$1.04105^{+0.00090}_{-0.00092}$	$\sigma_8(2.33)$	$0.3058^{+0.0053}_{-0.0051}$
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.885^{+0.088}_{-0.087}$	$r_{0.002}$	< 0.104
H_0	$67.1^{+1.8}_{-1.8}$	z_{drag}	$1059.40^{+0.91}_{-0.88}$	$r_{0.01}$	< 0.108
Ω_Λ	$0.682^{+0.025}_{-0.027}$	r_{drag}	$147.30^{+0.95}_{-0.94}$	$\ln(10^{10} A_t)$	$-0.7^{+1.9}_{-2.5}$
Ω_m	$0.318^{+0.027}_{-0.025}$	k_{D}	$0.1405^{+0.0010}_{-0.0010}$	$r_{L=10}$	< 0.0539
$\Omega_m h^2$	$0.1430^{+0.0040}_{-0.0039}$	$100\theta_{\text{D}}$	$0.16107^{+0.00052}_{-0.00052}$	$10^9 A_t$	< 0.231
$\Omega_m h^3$	$0.09589^{+0.00090}_{-0.00088}$	z_{eq}	3402^{+95}_{-94}	$10^9 A_t e^{-2\tau}$	< 0.208
σ_8	$0.810^{+0.018}_{-0.018}$	k_{eq}	$0.01038^{+0.00029}_{-0.00029}$	f_{2000}^{143}	31^{+6}_{-6}
S_8	$0.834^{+0.049}_{-0.047}$	$100\theta_{\text{eq}}$	$0.813^{+0.018}_{-0.017}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-4}
$\sigma_8 \Omega_m^{0.5}$	$0.457^{+0.027}_{-0.026}$	$100\theta_{\text{s,eq}}$	$0.4493^{+0.0092}_{-0.0090}$	f_{2000}^{217}	$107.7^{+3.9}_{-3.9}$
$\sigma_8 \Omega_m^{0.25}$	$0.608^{+0.024}_{-0.023}$	$H(0.15)$	$72.4^{+1.6}_{-1.5}$	χ_{simall}^2	$397.1 (\nu: 1.4)$
$\sigma_8/h^{0.5}$	$0.989^{+0.032}_{-0.032}$	$D_{\text{M}}(0.15)$	646^{+16}_{-16}	χ_{lowl}^2	$24.8 (\nu: 1.6)$
$r_{\text{drag}} h$	$98.8^{+3.2}_{-3.2}$	$H(0.38)$	$82.6^{+1.1}_{-1.1}$	χ_{prior}^2	$7.5 (\nu: 6.4)$
$\langle d^2 \rangle^{1/2}$	$2.443^{+0.076}_{-0.075}$	$D_{\text{M}}(0.38)$	1539^{+31}_{-31}	χ_{CMB}^2	$4340 (\nu: 4948258.1)$

Best-fit $\chi_{\text{eff}}^2 = 7471.85$; $\Delta\chi_{\text{eff}}^2 = 6292.24$; $\bar{\chi}_{\text{eff}}^2 = 7493.09$; $\Delta\bar{\chi}_{\text{eff}}^2 = 6292.06$; $R - 1 = 0.00732$

χ_{eff}^2 : CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.88 (Δ -0.15) commander_dx12_v3_2_29: 23.22 (Δ -0.39) CamSpec like_10.7HM: 7050.52

17.2 base_r_CamSpecHM_TT_lowl_lowE_post_BAO/base_r_plikHM_TT_lowl_lowE_post_BAO

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02222^{+0.00039}_{-0.00038}$	$10^9 A_s e^{-2\tau}$	$1.875^{+0.023}_{-0.023}$	$H(2.33)$	$235.6^{+1.6}_{-1.5}$
$\Omega_c h^2$	$0.1188^{+0.0024}_{-0.0024}$	D_{40}	1236^{+34}_{-32}	$D_M(2.33)$	5766^{+24}_{-24}
$100\theta_{MC}$	$1.04103^{+0.00081}_{-0.00081}$	D_{220}	5711^{+81}_{-80}	$f\sigma_8(0.15)$	$0.453^{+0.015}_{-0.015}$
τ	$0.053^{+0.016}_{-0.015}$	D_{810}	2534^{+27}_{-28}	$\sigma_8(0.15)$	$0.745^{+0.014}_{-0.013}$
$\ln(10^{10} A_s)$	$3.038^{+0.033}_{-0.032}$	D_{1420}	$816^{+10}_{-9.9}$	$f\sigma_8(0.38)$	$0.472^{+0.013}_{-0.013}$
n_s	$0.9678^{+0.0086}_{-0.0085}$	D_{2000}	$230.0^{+3.5}_{-3.4}$	$\sigma_8(0.38)$	$0.661^{+0.012}_{-0.011}$
r	< 0.117	$n_{s,0.002}$	$0.9678^{+0.0086}_{-0.0085}$	$f\sigma_8(0.51)$	$0.471^{+0.012}_{-0.011}$
y_{cal}	$1.0005^{+0.0049}_{-0.0049}$	Y_P	$0.24533^{+0.00016}_{-0.00017}$	$\sigma_8(0.51)$	$0.618^{+0.011}_{-0.010}$
A_{217}^{CIB}	44^{+10}_{-20}	Y_P^{BBN}	$0.24666^{+0.00016}_{-0.00017}$	$f\sigma_8(0.61)$	$0.466^{+0.011}_{-0.010}$
$\xi^{tSZ-CIB}$	—	$10^5 D/H$	$2.615^{+0.074}_{-0.071}$	$\sigma_8(0.61)$	$0.589^{+0.010}_{-0.0097}$
A_{143}^{tSZ}	$4.5^{+3.9}_{-4.2}$	Age/Gyr	$13.805^{+0.055}_{-0.055}$	$f\sigma_8(2.33)$	$0.2968^{+0.0052}_{-0.0048}$
A_{100}^{PS}	251^{+60}_{-50}	z_*	$1090.01^{+0.58}_{-0.58}$	$\sigma_8(2.33)$	$0.3061^{+0.0053}_{-0.0051}$
A_{143}^{PS}	44^{+20}_{-20}	r_*	$144.86^{+0.63}_{-0.62}$	$r_{0.002}$	< 0.111
A_{217}^{PS}	108^{+20}_{-30}	$100\theta_*$	$1.04123^{+0.00081}_{-0.00081}$	$r_{0.01}$	< 0.114
A^{kSZ}	—	$D_M(z_*)/\text{Gpc}$	$13.912^{+0.062}_{-0.061}$	$\ln(10^{10} A_t)$	$-0.6^{+1.9}_{-2.5}$
c_{100}	$0.9985^{+0.0022}_{-0.0027}$	z_{drag}	$1059.49^{+0.90}_{-0.86}$	$r_{L=10}$	< 0.0574
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	r_{drag}	$147.58^{+0.69}_{-0.68}$	$10^9 A_t$	< 0.244
H_0	$67.7^{+1.1}_{-1.1}$	k_D	$0.14024^{+0.00087}_{-0.00087}$	$10^9 A_t e^{-2\tau}$	< 0.220
Ω_Λ	$0.691^{+0.014}_{-0.015}$	$100\theta_D$	$0.16103^{+0.00051}_{-0.00051}$	f_{2000}^{143}	31^{+6}_{-6}
Ω_m	$0.309^{+0.015}_{-0.014}$	z_{eq}	3370^{+57}_{-55}	$f_{2000}^{143 \times 217}$	33^{+4}_{-4}
$\Omega_m h^2$	$0.1417^{+0.0024}_{-0.0023}$	k_{eq}	$0.01029^{+0.00017}_{-0.00017}$	f_{2000}^{217}	$107.5^{+3.8}_{-3.9}$
$\Omega_m h^3$	$0.09589^{+0.00090}_{-0.00090}$	$100\theta_{\text{eq}}$	$0.819^{+0.010}_{-0.010}$	χ_{small}^2	$397.2 (\nu: 1.5)$
σ_8	$0.806^{+0.016}_{-0.015}$	$100\theta_{s,\text{eq}}$	$0.4523^{+0.0054}_{-0.0054}$	χ_{lowl}^2	$24.2 (\nu: 1.3)$
S_8	$0.819^{+0.030}_{-0.029}$	$H(0.15)$	$72.94^{+0.93}_{-0.92}$	$\chi_{6\text{DF}}^2$	$0.052 (\nu: 0.0)$
$\sigma_8 \Omega_m^{0.5}$	$0.448^{+0.016}_{-0.016}$	$D_M(0.15)$	$640.7^{+9.2}_{-9.1}$	χ_{MGS}^2	$1.42 (\nu: 0.1)$
$\sigma_8 \Omega_m^{0.25}$	$0.601^{+0.016}_{-0.016}$	$H(0.38)$	$83.00^{+0.70}_{-0.68}$	χ_{DR12BAO}^2	$4.6 (\nu: 1.1)$
$\sigma_8/h^{0.5}$	$0.980^{+0.023}_{-0.022}$	$D_M(0.38)$	1529^{+19}_{-18}	χ_{prior}^2	$7.5 (\nu: 6.5)$
$r_{\text{drag}} h$	$99.9^{+1.9}_{-1.9}$	$H(0.51)$	$89.69^{+0.57}_{-0.56}$	χ_{BAO}^2	$6.1 (\nu: 0.7)$
$\langle d^2 \rangle^{1/2}$	$2.421^{+0.056}_{-0.053}$	$D_M(0.51)$	1980^{+22}_{-22}	χ_{CMB}^2	$4340 (\nu: 4947997.1)$
z_{re}	$7.6^{+1.6}_{-1.6}$	$H(0.61)$	$95.29^{+0.49}_{-0.48}$		
$10^9 A_s$	$2.086^{+0.070}_{-0.066}$	$D_M(0.61)$	2305^{+23}_{-23}		

$$\bar{\chi}_{\text{eff}}^2 = 7499.09; \Delta \bar{\chi}_{\text{eff}}^2 = 6291.80; R - 1 = 0.01122$$

17.3 base_r_CamSpecHM_TT_lowl_lowE_post_zre6p5/base_r_plikHM_TT_lowl_lowE_post_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02214^{+0.00044}_{-0.00042}$	z_{re}	< 8.83	$H(0.51)$	$89.43^{+0.90}_{-0.85}$
$\Omega_c h^2$	$0.1201^{+0.0041}_{-0.0041}$	$10^9 A_s$	$2.094^{+0.059}_{-0.054}$	$D_{\text{M}}(0.51)$	1992^{+36}_{-36}
$100\theta_{MC}$	$1.04086^{+0.00092}_{-0.00093}$	$10^9 A_s e^{-2\tau}$	$1.881^{+0.027}_{-0.027}$	$H(0.61)$	$95.09^{+0.73}_{-0.68}$
τ	$0.054^{+0.013}_{-0.011}$	D_{40}	1242^{+38}_{-34}	$D_{\text{M}}(0.61)$	2317^{+39}_{-39}
$\ln(10^{10} A_s)$	$3.042^{+0.028}_{-0.026}$	D_{220}	5705^{+83}_{-82}	$H(2.33)$	$236.4^{+2.5}_{-2.5}$
n_s	$0.965^{+0.011}_{-0.011}$	D_{810}	2535^{+27}_{-27}	$D_{\text{M}}(2.33)$	5774^{+32}_{-33}
r	< 0.111	D_{1420}	815^{+10}_{-10}	$f\sigma_8(0.15)$	$0.461^{+0.024}_{-0.024}$
y_{cal}	$1.0005^{+0.0049}_{-0.0049}$	D_{2000}	$229.8^{+3.6}_{-3.5}$	$\sigma_8(0.15)$	$0.749^{+0.014}_{-0.014}$
A_{217}^{CIB}	44^{+10}_{-20}	$n_{s,0.002}$	$0.965^{+0.011}_{-0.011}$	$f\sigma_8(0.38)$	$0.478^{+0.019}_{-0.019}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.24530^{+0.00018}_{-0.00020}$	$\sigma_8(0.38)$	$0.663^{+0.011}_{-0.010}$
A_{143}^{tSZ}	$4.4^{+3.8}_{-4.2}$	Y_P^{BBN}	$0.24662^{+0.00018}_{-0.00020}$	$f\sigma_8(0.51)$	$0.476^{+0.016}_{-0.016}$
A_{100}^{PS}	252^{+60}_{-50}	$10^5 D/H$	$2.629^{+0.081}_{-0.082}$	$\sigma_8(0.51)$	$0.620^{+0.010}_{-0.0090}$
A_{143}^{PS}	45^{+20}_{-20}	Age/Gyr	$13.823^{+0.071}_{-0.074}$	$f\sigma_8(0.61)$	$0.471^{+0.014}_{-0.014}$
A_{217}^{PS}	108^{+30}_{-30}	z_*	$1090.23^{+0.79}_{-0.80}$	$\sigma_8(0.61)$	$0.5902^{+0.0091}_{-0.0087}$
A^{kSZ}	—	r_*	$144.57^{+0.94}_{-0.94}$	$f\sigma_8(2.33)$	$0.2974^{+0.0044}_{-0.0041}$
c_{100}	$0.9985^{+0.0022}_{-0.0027}$	$100\theta_*$	$1.04106^{+0.00090}_{-0.00092}$	$\sigma_8(2.33)$	$0.3063^{+0.0046}_{-0.0042}$
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.887^{+0.088}_{-0.087}$	$r_{0.002}$	< 0.104
H_0	$67.1^{+1.8}_{-1.8}$	z_{drag}	$1059.41^{+0.90}_{-0.89}$	$r_{0.01}$	< 0.107
Ω_Λ	$0.682^{+0.025}_{-0.026}$	r_{drag}	$147.31^{+0.95}_{-0.94}$	$\ln(10^{10} A_t)$	$-0.7^{+1.9}_{-2.5}$
Ω_m	$0.318^{+0.026}_{-0.025}$	k_{D}	$0.1405^{+0.0010}_{-0.0010}$	$r_{L=10}$	< 0.0536
$\Omega_m h^2$	$0.1429^{+0.0040}_{-0.0039}$	$100\theta_{\text{D}}$	$0.16107^{+0.00051}_{-0.00052}$	$10^9 A_t$	< 0.231
$\Omega_m h^3$	$0.09589^{+0.00090}_{-0.00088}$	z_{eq}	3400^{+94}_{-93}	$10^9 A_t e^{-2\tau}$	< 0.207
σ_8	$0.811^{+0.017}_{-0.017}$	k_{eq}	$0.01038^{+0.00029}_{-0.00029}$	f_{2000}^{143}	31^{+6}_{-6}
S_8	$0.835^{+0.049}_{-0.047}$	$100\theta_{\text{eq}}$	$0.813^{+0.018}_{-0.017}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-4}
$\sigma_8 \Omega_m^{0.5}$	$0.457^{+0.027}_{-0.026}$	$100\theta_{\text{s,eq}}$	$0.4494^{+0.0092}_{-0.0090}$	f_{2000}^{217}	$107.7^{+3.9}_{-3.9}$
$\sigma_8 \Omega_m^{0.25}$	$0.609^{+0.023}_{-0.023}$	$H(0.15)$	$72.4^{+1.6}_{-1.5}$	χ_{small}^2	$397.0 (\nu: 1.3)$
$\sigma_8/h^{0.5}$	$0.990^{+0.032}_{-0.031}$	$D_{\text{M}}(0.15)$	646^{+16}_{-16}	χ_{lowl}^2	$24.8 (\nu: 1.6)$
$r_{\text{drag}} h$	$98.9^{+3.2}_{-3.2}$	$H(0.38)$	$82.7^{+1.1}_{-1.1}$	χ_{prior}^2	$7.5 (\nu: 6.4)$
$\langle d^2 \rangle^{1/2}$	$2.446^{+0.075}_{-0.074}$	$D_{\text{M}}(0.38)$	1539^{+31}_{-31}	χ_{CMB}^2	$4339 (\nu: 4948248.9)$

$$\bar{\chi}_{\text{eff}}^2 = 7492.76; \Delta \bar{\chi}_{\text{eff}}^2 = 6292.03; R - 1 = 0.00713$$

17.4 base_r_CamSpecHM_TT_lowl_lowE_post_BAO_zre6p5/base_r_plikHM_TT_lowl_lowE_post_BAO_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02222^{+0.00039}_{-0.00039}$	$10^9 A_s e^{-2\tau}$	$1.875^{+0.023}_{-0.023}$	$H(2.33)$	$235.6^{+1.6}_{-1.5}$
$\Omega_c h^2$	$0.1188^{+0.0024}_{-0.0024}$	D_{40}	1236^{+34}_{-32}	$D_M(2.33)$	5766^{+24}_{-24}
$100\theta_{MC}$	$1.04103^{+0.00082}_{-0.00081}$	D_{220}	5711^{+81}_{-80}	$f\sigma_8(0.15)$	$0.454^{+0.015}_{-0.015}$
τ	$0.055^{+0.013}_{-0.012}$	D_{810}	2534^{+27}_{-27}	$\sigma_8(0.15)$	$0.746^{+0.012}_{-0.012}$
$\ln(10^{10} A_s)$	$3.040^{+0.029}_{-0.026}$	D_{1420}	$815^{+10}_{-9.9}$	$f\sigma_8(0.38)$	$0.472^{+0.013}_{-0.012}$
n_s	$0.9679^{+0.0085}_{-0.0085}$	D_{2000}	$230.0^{+3.5}_{-3.4}$	$\sigma_8(0.38)$	$0.662^{+0.010}_{-0.0099}$
r	< 0.117	$n_{s,0.002}$	$0.9679^{+0.0085}_{-0.0085}$	$f\sigma_8(0.51)$	$0.471^{+0.011}_{-0.011}$
y_{cal}	$1.0005^{+0.0050}_{-0.0048}$	Y_P	$0.24533^{+0.00016}_{-0.00017}$	$\sigma_8(0.51)$	$0.6193^{+0.0096}_{-0.0091}$
A_{217}^{CIB}	44^{+10}_{-20}	Y_P^{BBN}	$0.24666^{+0.00016}_{-0.00017}$	$f\sigma_8(0.61)$	$0.466^{+0.010}_{-0.010}$
$\xi^{tSZ-CIB}$	—	$10^5 D/H$	$2.615^{+0.074}_{-0.072}$	$\sigma_8(0.61)$	$0.5893^{+0.0091}_{-0.0085}$
A_{143}^{tSZ}	$4.5^{+3.9}_{-4.2}$	Age/Gyr	$13.804^{+0.055}_{-0.056}$	$f\sigma_8(2.33)$	$0.2972^{+0.0045}_{-0.0042}$
A_{100}^{PS}	251^{+60}_{-50}	z_*	$1090.01^{+0.58}_{-0.58}$	$\sigma_8(2.33)$	$0.3066^{+0.0046}_{-0.0043}$
A_{143}^{PS}	44^{+20}_{-20}	r_*	$144.86^{+0.63}_{-0.63}$	$r_{0.002}$	< 0.111
A_{217}^{PS}	108^{+20}_{-30}	$100\theta_*$	$1.04123^{+0.00081}_{-0.00081}$	$r_{0.01}$	< 0.114
A^{kSZ}	—	$D_M(z_*)/\text{Gpc}$	$13.912^{+0.062}_{-0.061}$	$\ln(10^{10} A_t)$	$-0.6^{+1.9}_{-2.6}$
c_{100}	$0.9985^{+0.0022}_{-0.0027}$	z_{drag}	$1059.50^{+0.89}_{-0.86}$	$r_{L=10}$	< 0.0572
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	r_{drag}	$147.58^{+0.69}_{-0.68}$	$10^9 A_t$	< 0.244
H_0	$67.7^{+1.1}_{-1.1}$	k_D	$0.14023^{+0.00087}_{-0.00088}$	$10^9 A_t e^{-2\tau}$	< 0.219
Ω_Λ	$0.691^{+0.014}_{-0.015}$	$100\theta_D$	$0.16103^{+0.00051}_{-0.00051}$	f_{2000}^{143}	30^{+6}_{-6}
Ω_m	$0.309^{+0.015}_{-0.014}$	z_{eq}	3370^{+56}_{-55}	$f_{2000}^{143 \times 217}$	33^{+4}_{-4}
$\Omega_m h^2$	$0.1417^{+0.0024}_{-0.0023}$	k_{eq}	$0.01028^{+0.00017}_{-0.00017}$	f_{2000}^{217}	$107.5^{+3.8}_{-3.9}$
$\Omega_m h^3$	$0.09589^{+0.00090}_{-0.00090}$	$100\theta_{\text{eq}}$	$0.819^{+0.010}_{-0.010}$	χ_{small}^2	$397.1 (\nu: 1.6)$
σ_8	$0.807^{+0.015}_{-0.013}$	$100\theta_{s,\text{eq}}$	$0.4524^{+0.0054}_{-0.0054}$	χ_{lowl}^2	$24.2 (\nu: 1.3)$
S_8	$0.819^{+0.029}_{-0.029}$	$H(0.15)$	$72.95^{+0.93}_{-0.92}$	$\chi_{6\text{DF}}^2$	$0.051 (\nu: 0.0)$
$\sigma_8 \Omega_m^{0.5}$	$0.449^{+0.016}_{-0.016}$	$D_M(0.15)$	$640.6^{+9.2}_{-9.1}$	χ_{MGS}^2	$1.43 (\nu: 0.1)$
$\sigma_8 \Omega_m^{0.25}$	$0.602^{+0.016}_{-0.015}$	$H(0.38)$	$83.01^{+0.70}_{-0.68}$	χ_{DR12BAO}^2	$4.6 (\nu: 1.1)$
$\sigma_8/h^{0.5}$	$0.981^{+0.022}_{-0.022}$	$D_M(0.38)$	1528^{+18}_{-18}	χ_{prior}^2	$7.5 (\nu: 6.5)$
$r_{\text{drag}} h$	$99.9^{+1.9}_{-1.9}$	$H(0.51)$	$89.70^{+0.58}_{-0.56}$	χ_{BAO}^2	$6.1 (\nu: 0.7)$
$\langle d^2 \rangle^{1/2}$	$2.424^{+0.054}_{-0.051}$	$D_M(0.51)$	1980^{+22}_{-22}	χ_{CMB}^2	$4339 (\nu: 4948044.8)$
z_{re}	< 8.91	$H(0.61)$	$95.29^{+0.49}_{-0.47}$		
$10^9 A_s$	$2.092^{+0.060}_{-0.055}$	$D_M(0.61)$	2305^{+23}_{-23}		

$$\bar{\chi}_{\text{eff}}^2 = 7498.81; \Delta \bar{\chi}_{\text{eff}}^2 = 6291.81; R - 1 = 0.01239$$

17.5 base_r_CamSpecHM_TTTEEE_lowl_lowE/base_r_plikHM_TTTEEE_lowl_lowE

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02233^{+0.00031}_{-0.00032}$	z_{re}	$7.5^{+1.5}_{-1.6}$	$H(0.51)$	$89.63^{+0.61}_{-0.58}$
$\Omega_c h^2$	$0.1197^{+0.0028}_{-0.0029}$	$10^9 A_s$	$2.091^{+0.069}_{-0.065}$	$D_{\text{M}}(0.51)$	1985^{+24}_{-25}
$100\theta_{MC}$	$1.04091^{+0.00062}_{-0.00061}$	$10^9 A_s e^{-2\tau}$	$1.880^{+0.023}_{-0.024}$	$H(0.61)$	$95.27^{+0.49}_{-0.47}$
τ	$0.053^{+0.016}_{-0.015}$	D_{40}	1244^{+35}_{-33}	$D_{\text{M}}(0.61)$	2309^{+26}_{-27}
$\ln(10^{10} A_s)$	$3.040^{+0.033}_{-0.032}$	D_{220}	5721^{+77}_{-78}	$H(2.33)$	$236.3^{+1.7}_{-1.7}$
n_s	$0.9665^{+0.0092}_{-0.0090}$	D_{810}	2537^{+27}_{-26}	$D_{\text{M}}(2.33)$	5765^{+22}_{-22}
r	< 0.133	D_{1420}	$816.9^{+9.4}_{-9.5}$	$f\sigma_8(0.15)$	$0.458^{+0.017}_{-0.017}$
y_{cal}	$1.0006^{+0.0048}_{-0.0048}$	D_{2000}	$230.7^{+3.2}_{-3.2}$	$\sigma_8(0.15)$	$0.747^{+0.013}_{-0.013}$
A_{217}^{CIB}	43^{+10}_{-20}	$n_{s,0.002}$	$0.9665^{+0.0092}_{-0.0090}$	$f\sigma_8(0.38)$	$0.475^{+0.014}_{-0.014}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.24538^{+0.00012}_{-0.00013}$	$\sigma_8(0.38)$	$0.662^{+0.011}_{-0.011}$
A_{143}^{tSZ}	$4.7^{+3.9}_{-4.3}$	Y_P^{BBN}	$0.24670^{+0.00012}_{-0.00013}$	$f\sigma_8(0.51)$	$0.474^{+0.012}_{-0.013}$
A_{100}^{PS}	248^{+60}_{-50}	$10^5 D/H$	$2.594^{+0.060}_{-0.056}$	$\sigma_8(0.51)$	$0.620^{+0.010}_{-0.010}$
A_{143}^{PS}	42^{+20}_{-20}	Age/Gyr	$13.800^{+0.049}_{-0.049}$	$f\sigma_8(0.61)$	$0.469^{+0.011}_{-0.011}$
A_{217}^{PS}	109^{+20}_{-30}	z_*	$1089.94^{+0.56}_{-0.55}$	$\sigma_8(0.61)$	$0.5896^{+0.0099}_{-0.0097}$
A^{kSZ}	—	r_*	$144.54^{+0.66}_{-0.64}$	$f\sigma_8(2.33)$	$0.2972^{+0.0050}_{-0.0048}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	$100\theta_*$	$1.04109^{+0.00061}_{-0.00061}$	$\sigma_8(2.33)$	$0.3063^{+0.0052}_{-0.0050}$
c_{217}	$0.9996^{+0.0037}_{-0.0027}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.884^{+0.062}_{-0.060}$	$r_{0.002}$	< 0.127
H_0	$67.4^{+1.2}_{-1.2}$	z_{drag}	$1059.82^{+0.65}_{-0.65}$	$r_{0.01}$	< 0.130
Ω_{Λ}	$0.686^{+0.017}_{-0.017}$	r_{drag}	$147.22^{+0.67}_{-0.64}$	$\ln(10^{10} A_t)$	$-0.4^{+1.8}_{-2.4}$
Ω_m	$0.314^{+0.017}_{-0.017}$	k_{D}	$0.14070^{+0.00070}_{-0.00075}$	$r_{L=10}$	< 0.0655
$\Omega_m h^2$	$0.1427^{+0.0027}_{-0.0027}$	$100\theta_{\text{D}}$	$0.16082^{+0.00039}_{-0.00036}$	$10^9 A_t$	< 0.277
$\Omega_m h^3$	$0.09619^{+0.00063}_{-0.00065}$	z_{eq}	3394^{+64}_{-65}	$10^9 A_t e^{-2\tau}$	< 0.250
σ_8	$0.809^{+0.015}_{-0.015}$	k_{eq}	$0.01036^{+0.00019}_{-0.00020}$	f_{2000}^{143}	29^{+6}_{-5}
S_8	$0.828^{+0.033}_{-0.033}$	$100\theta_{\text{eq}}$	$0.815^{+0.012}_{-0.012}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
$\sigma_8 \Omega_m^{0.5}$	$0.453^{+0.018}_{-0.018}$	$100\theta_{\text{s,eq}}$	$0.4502^{+0.0063}_{-0.0061}$	f_{2000}^{217}	$106.8^{+3.7}_{-3.7}$
$\sigma_8 \Omega_m^{0.25}$	$0.606^{+0.017}_{-0.017}$	$H(0.15)$	$72.7^{+1.1}_{-1.0}$	χ_{small}^2	$397.2 (\nu: 1.5)$
$\sigma_8/h^{0.5}$	$0.985^{+0.024}_{-0.025}$	$D_{\text{M}}(0.15)$	643^{+10}_{-11}	χ_{lowl}^2	$24.9 (\nu: 1.5)$
$r_{\text{drag}} h$	$99.3^{+2.2}_{-2.1}$	$H(0.38)$	$82.89^{+0.77}_{-0.74}$	χ_{prior}^2	$9.7 (\nu: 9.8)$
$\langle d^2 \rangle^{1/2}$	$2.435^{+0.058}_{-0.059}$	$D_{\text{M}}(0.38)$	1532^{+21}_{-21}	χ_{CMB}^2	$7359 (\nu: 10474633.0)$

Best-fit $\chi_{\text{eff}}^2 = 11920.72$; $\Delta\chi_{\text{eff}}^2 = 9154.95$; $\bar{\chi}_{\text{eff}}^2 = 11943.49$; $\Delta\bar{\chi}_{\text{eff}}^2 = 9150.31$; $R - 1 = 0.01020$

χ_{eff}^2 : CMB - small_100x143_offlike5_EE_Aplanck_B: 395.84 (Δ -0.21) commander_dx12.v3.2.29: 23.20 (Δ -0.05) CamSpec like_10.7HM_1400_unified: 11499.52

17.6 base_r_CamSpecHM_TTTEEE_lowl_lowE_post_BAO/base_r_plikHM_TTTEEE_lowl_lowE_post_BAO

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02238^{+0.00028}_{-0.00029}$	$10^9 A_s e^{-2\tau}$	$1.877^{+0.022}_{-0.022}$	$H(2.33)$	$235.9^{+1.3}_{-1.3}$
$\Omega_c h^2$	$0.1190^{+0.0020}_{-0.0021}$	D_{40}	1241^{+35}_{-32}	$D_M(2.33)$	5760^{+18}_{-18}
$100\theta_{MC}$	$1.04099^{+0.00058}_{-0.00058}$	D_{220}	5724^{+77}_{-77}	$f\sigma_8(0.15)$	$0.454^{+0.013}_{-0.013}$
τ	$0.054^{+0.016}_{-0.015}$	D_{810}	2537^{+26}_{-26}	$\sigma_8(0.15)$	$0.746^{+0.013}_{-0.013}$
$\ln(10^{10} A_s)$	$3.040^{+0.033}_{-0.032}$	D_{1420}	$817.4^{+9.3}_{-9.4}$	$f\sigma_8(0.38)$	$0.473^{+0.011}_{-0.011}$
n_s	$0.9682^{+0.0078}_{-0.0076}$	D_{2000}	$230.9^{+3.2}_{-3.2}$	$\sigma_8(0.38)$	$0.662^{+0.011}_{-0.011}$
r	< 0.137	$n_{s,0.002}$	$0.9682^{+0.0078}_{-0.0076}$	$f\sigma_8(0.51)$	$0.471^{+0.011}_{-0.010}$
y_{cal}	$1.0007^{+0.0048}_{-0.0048}$	Y_P	$0.24540^{+0.00011}_{-0.00012}$	$\sigma_8(0.51)$	$0.619^{+0.011}_{-0.010}$
A_{217}^{CIB}	43^{+10}_{-20}	Y_P^{BBN}	$0.24672^{+0.00011}_{-0.00012}$	$f\sigma_8(0.61)$	$0.4666^{+0.0098}_{-0.0097}$
$\xi^{tSZ-CIB}$	—	$10^5 D/H$	$2.585^{+0.055}_{-0.051}$	$\sigma_8(0.61)$	$0.589^{+0.010}_{-0.0097}$
A_{143}^{tSZ}	$4.7^{+4.0}_{-4.3}$	Age/Gyr	$13.791^{+0.041}_{-0.041}$	$f\sigma_8(2.33)$	$0.2972^{+0.0050}_{-0.0048}$
A_{100}^{PS}	248^{+60}_{-50}	z_*	$1089.83^{+0.46}_{-0.45}$	$\sigma_8(2.33)$	$0.3065^{+0.0052}_{-0.0049}$
A_{143}^{PS}	42^{+20}_{-20}	r_*	$144.69^{+0.51}_{-0.50}$	$r_{0.002}$	< 0.131
A_{217}^{PS}	109^{+20}_{-30}	$100\theta_*$	$1.04117^{+0.00057}_{-0.00057}$	$r_{0.01}$	< 0.134
A^{kSZ}	—	$D_M(z_*)/\text{Gpc}$	$13.897^{+0.049}_{-0.048}$	$\ln(10^{10} A_t)$	$-0.3^{+1.7}_{-2.4}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	z_{drag}	$1059.88^{+0.63}_{-0.63}$	$r_{L=10}$	< 0.0678
c_{217}	$0.9996^{+0.0037}_{-0.0027}$	r_{drag}	$147.35^{+0.55}_{-0.52}$	$10^9 A_t$	< 0.285
H_0	$67.74^{+0.90}_{-0.89}$	k_D	$0.14060^{+0.00064}_{-0.00067}$	$10^9 A_t e^{-2\tau}$	< 0.257
Ω_Λ	$0.690^{+0.012}_{-0.012}$	$100\theta_D$	$0.16079^{+0.00038}_{-0.00036}$	f_{2000}^{143}	29^{+5}_{-5}
Ω_m	$0.310^{+0.012}_{-0.012}$	z_{eq}	3378^{+47}_{-48}	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
$\Omega_m h^2$	$0.1420^{+0.0020}_{-0.0020}$	k_{eq}	$0.01031^{+0.00014}_{-0.00015}$	f_{2000}^{217}	$106.7^{+3.6}_{-3.6}$
$\Omega_m h^3$	$0.09619^{+0.00063}_{-0.00065}$	$100\theta_{\text{eq}}$	$0.8177^{+0.0090}_{-0.0087}$	χ_{small}^2	$860 (\nu: 346967.5)$
σ_8	$0.807^{+0.015}_{-0.014}$	$100\theta_{s,\text{eq}}$	$0.4517^{+0.0047}_{-0.0045}$	χ_{lowl}^2	$24.6 (\nu: 1.4)$
S_8	$0.820^{+0.026}_{-0.026}$	$H(0.15)$	$73.00^{+0.78}_{-0.76}$	$\chi_{6\text{DF}}^2$	$0.046 (\nu: 0.0)$
$\sigma_8 \Omega_m^{0.5}$	$0.449^{+0.014}_{-0.014}$	$D_M(0.15)$	$640.2^{+7.6}_{-7.6}$	χ_{MGS}^2	$1.36 (\nu: 0.1)$
$\sigma_8 \Omega_m^{0.25}$	$0.602^{+0.014}_{-0.014}$	$H(0.38)$	$83.08^{+0.57}_{-0.56}$	χ_{DR12BAO}^2	$4.6 (\nu: 0.8)$
$\sigma_8/h^{0.5}$	$0.981^{+0.021}_{-0.021}$	$D_M(0.38)$	1527^{+15}_{-15}	χ_{prior}^2	$9.6 (\nu: 9.7)$
$r_{\text{drag}} h$	$99.8^{+1.6}_{-1.5}$	$H(0.51)$	$89.78^{+0.46}_{-0.45}$	χ_{BAO}^2	$6.0 (\nu: 0.5)$
$\langle d^2 \rangle^{1/2}$	$2.424^{+0.051}_{-0.051}$	$D_M(0.51)$	1979^{+18}_{-18}	χ_{CMB}^2	$7358 (\nu: 10474103.7)$
z_{re}	$7.6^{+1.5}_{-1.6}$	$H(0.61)$	$95.38^{+0.38}_{-0.37}$		
$10^9 A_s$	$2.092^{+0.070}_{-0.065}$	$D_M(0.61)$	2303^{+19}_{-19}		

$$\bar{\chi}_{\text{eff}}^2 = 11949.07; \Delta\bar{\chi}_{\text{eff}}^2 = 9149.90; R - 1 = 0.01061$$

17.7 base_r_CamSpecHM_TTTEEE_lowl_lowE_post_zre6p5/base_r_plikHM_TTTEEE_lowl_lowE_post_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02233^{+0.00031}_{-0.00031}$	z_{re}	< 8.87	$H(0.51)$	$89.64^{+0.61}_{-0.58}$
$\Omega_c h^2$	$0.1196^{+0.0028}_{-0.0029}$	$10^9 A_s$	$2.097^{+0.059}_{-0.054}$	$D_{\text{M}}(0.51)$	1984^{+24}_{-25}
$100\theta_{MC}$	$1.04091^{+0.00062}_{-0.00061}$	$10^9 A_s e^{-2\tau}$	$1.880^{+0.023}_{-0.024}$	$H(0.61)$	$95.28^{+0.49}_{-0.47}$
τ	$0.054^{+0.013}_{-0.011}$	D_{40}	1244^{+35}_{-33}	$D_{\text{M}}(0.61)$	2309^{+26}_{-27}
$\ln(10^{10} A_s)$	$3.043^{+0.028}_{-0.026}$	D_{220}	5721^{+78}_{-79}	$H(2.33)$	$236.3^{+1.7}_{-1.7}$
n_s	$0.9667^{+0.0092}_{-0.0090}$	D_{810}	2537^{+27}_{-27}	$D_{\text{M}}(2.33)$	5764^{+22}_{-22}
r	< 0.133	D_{1420}	$816.9^{+9.5}_{-9.5}$	$f\sigma_8(0.15)$	$0.458^{+0.017}_{-0.017}$
y_{cal}	$1.0006^{+0.0048}_{-0.0049}$	D_{2000}	$230.8^{+3.2}_{-3.2}$	$\sigma_8(0.15)$	$0.748^{+0.013}_{-0.012}$
A_{217}^{CIB}	43^{+10}_{-20}	$n_{s,0.002}$	$0.9667^{+0.0092}_{-0.0090}$	$f\sigma_8(0.38)$	$0.476^{+0.014}_{-0.014}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.24538^{+0.00012}_{-0.00013}$	$\sigma_8(0.38)$	$0.663^{+0.010}_{-0.0098}$
A_{143}^{tSZ}	$4.7^{+3.9}_{-4.3}$	Y_P^{BBN}	$0.24671^{+0.00012}_{-0.00013}$	$f\sigma_8(0.51)$	$0.474^{+0.012}_{-0.012}$
A_{100}^{PS}	248^{+60}_{-50}	$10^5 D/H$	$2.593^{+0.060}_{-0.055}$	$\sigma_8(0.51)$	$0.6204^{+0.0094}_{-0.0088}$
A_{143}^{PS}	42^{+20}_{-20}	Age/Gyr	$13.800^{+0.049}_{-0.049}$	$f\sigma_8(0.61)$	$0.469^{+0.011}_{-0.011}$
A_{217}^{PS}	109^{+20}_{-30}	z_*	$1089.94^{+0.56}_{-0.55}$	$\sigma_8(0.61)$	$0.5903^{+0.0088}_{-0.0083}$
A^{kSZ}	—	r_*	$144.55^{+0.66}_{-0.64}$	$f\sigma_8(2.33)$	$0.2976^{+0.0043}_{-0.0040}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	$100\theta_*$	$1.04110^{+0.00061}_{-0.00061}$	$\sigma_8(2.33)$	$0.3067^{+0.0045}_{-0.0041}$
c_{217}	$0.9996^{+0.0037}_{-0.0027}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.885^{+0.062}_{-0.059}$	$r_{0.002}$	< 0.127
H_0	$67.4^{+1.2}_{-1.2}$	z_{drag}	$1059.83^{+0.64}_{-0.66}$	$r_{0.01}$	< 0.130
Ω_Λ	$0.686^{+0.017}_{-0.017}$	r_{drag}	$147.23^{+0.67}_{-0.64}$	$\ln(10^{10} A_t)$	$-0.4^{+1.8}_{-2.4}$
Ω_m	$0.314^{+0.017}_{-0.017}$	k_{D}	$0.14070^{+0.00070}_{-0.00074}$	$r_{L=10}$	< 0.0657
$\Omega_m h^2$	$0.1426^{+0.0027}_{-0.0027}$	$100\theta_{\text{D}}$	$0.16082^{+0.00039}_{-0.00036}$	$10^9 A_t$	< 0.279
$\Omega_m h^3$	$0.09619^{+0.00063}_{-0.00065}$	z_{eq}	3393^{+63}_{-65}	$10^9 A_t e^{-2\tau}$	< 0.250
σ_8	$0.810^{+0.015}_{-0.014}$	k_{eq}	$0.01036^{+0.00019}_{-0.00020}$	f_{2000}^{143}	29^{+5}_{-5}
S_8	$0.828^{+0.033}_{-0.033}$	$100\theta_{\text{eq}}$	$0.815^{+0.012}_{-0.012}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
$\sigma_8 \Omega_m^{0.5}$	$0.454^{+0.018}_{-0.018}$	$100\theta_{\text{s,eq}}$	$0.4503^{+0.0063}_{-0.0061}$	f_{2000}^{217}	$106.8^{+3.6}_{-3.7}$
$\sigma_8 \Omega_m^{0.25}$	$0.606^{+0.017}_{-0.017}$	$H(0.15)$	$72.8^{+1.1}_{-1.0}$	χ_{simall}^2	$397.1 (\nu: 1.5)$
$\sigma_8/h^{0.5}$	$0.986^{+0.024}_{-0.024}$	$D_{\text{M}}(0.15)$	643^{+10}_{-11}	χ_{lowl}^2	$24.9 (\nu: 1.6)$
$r_{\text{drag}} h$	$99.3^{+2.2}_{-2.1}$	$H(0.38)$	$82.90^{+0.78}_{-0.74}$	χ_{prior}^2	$9.7 (\nu: 9.7)$
$\langle d^2 \rangle^{1/2}$	$2.437^{+0.057}_{-0.057}$	$D_{\text{M}}(0.38)$	1532^{+21}_{-21}	χ_{CMB}^2	$7358 (\nu: 10474557.4)$

$$\bar{\chi}_{\text{eff}}^2 = 11943.24; \Delta\bar{\chi}_{\text{eff}}^2 = 9150.30; R - 1 = 0.00947$$

17.8 base_r_CamSpecHM_TTTEEE_lowl_lowE_post_BAO_zre6p5/base_r_plikHM_TTTEEE_lowl_lowE_post_BAO_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02238^{+0.00028}_{-0.00029}$	$10^9 A_s e^{-2\tau}$	$1.877^{+0.022}_{-0.022}$	$H(2.33)$	$235.9^{+1.3}_{-1.3}$
$\Omega_c h^2$	$0.1190^{+0.0020}_{-0.0021}$	D_{40}	1241^{+35}_{-32}	$D_M(2.33)$	5760^{+18}_{-18}
$100\theta_{MC}$	$1.04099^{+0.00058}_{-0.00058}$	D_{220}	5724^{+77}_{-77}	$f\sigma_8(0.15)$	$0.454^{+0.013}_{-0.013}$
τ	$0.055^{+0.013}_{-0.012}$	D_{810}	2537^{+27}_{-26}	$\sigma_8(0.15)$	$0.747^{+0.012}_{-0.011}$
$\ln(10^{10} A_s)$	$3.043^{+0.029}_{-0.027}$	D_{1420}	$817.4^{+9.3}_{-9.4}$	$f\sigma_8(0.38)$	$0.473^{+0.011}_{-0.011}$
n_s	$0.9683^{+0.0078}_{-0.0076}$	D_{2000}	$230.9^{+3.1}_{-3.2}$	$\sigma_8(0.38)$	$0.662^{+0.010}_{-0.0096}$
r	< 0.138	$n_{s,0.002}$	$0.9683^{+0.0078}_{-0.0076}$	$f\sigma_8(0.51)$	$0.472^{+0.010}_{-0.010}$
y_{cal}	$1.0007^{+0.0048}_{-0.0048}$	Y_P	$0.24540^{+0.00010}_{-0.00012}$	$\sigma_8(0.51)$	$0.6200^{+0.0094}_{-0.0088}$
A_{217}^{CIB}	43^{+20}_{-20}	Y_P^{BBN}	$0.24672^{+0.00011}_{-0.00012}$	$f\sigma_8(0.61)$	$0.4671^{+0.0095}_{-0.0092}$
$\xi^{tSZ-CIB}$	—	$10^5 D/H$	$2.585^{+0.055}_{-0.051}$	$\sigma_8(0.61)$	$0.5900^{+0.0089}_{-0.0083}$
A_{143}^{tSZ}	$4.7^{+4.0}_{-4.3}$	Age/Gyr	$13.790^{+0.041}_{-0.041}$	$f\sigma_8(2.33)$	$0.2976^{+0.0044}_{-0.0041}$
A_{100}^{PS}	248^{+60}_{-50}	z_*	$1089.82^{+0.46}_{-0.45}$	$\sigma_8(2.33)$	$0.3069^{+0.0046}_{-0.0042}$
A_{143}^{PS}	42^{+20}_{-20}	r_*	$144.69^{+0.51}_{-0.50}$	$r_{0.002}$	< 0.132
A_{217}^{PS}	109^{+20}_{-30}	$100\theta_*$	$1.04118^{+0.00057}_{-0.00057}$	$r_{0.01}$	< 0.135
A^{kSZ}	—	$D_M(z_*)/\text{Gpc}$	$13.897^{+0.050}_{-0.048}$	$\ln(10^{10} A_t)$	$-0.3^{+1.7}_{-2.4}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	z_{drag}	$1059.88^{+0.62}_{-0.63}$	$r_{L=10}$	< 0.0680
c_{217}	$0.9996^{+0.0037}_{-0.0027}$	r_{drag}	$147.36^{+0.55}_{-0.53}$	$10^9 A_t$	< 0.287
H_0	$67.75^{+0.91}_{-0.89}$	k_D	$0.14059^{+0.00064}_{-0.00067}$	$10^9 A_t e^{-2\tau}$	< 0.258
Ω_Λ	$0.691^{+0.012}_{-0.012}$	$100\theta_D$	$0.16079^{+0.00038}_{-0.00036}$	f_{2000}^{143}	29^{+5}_{-5}
Ω_m	$0.309^{+0.012}_{-0.012}$	z_{eq}	3378^{+47}_{-48}	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
$\Omega_m h^2$	$0.1420^{+0.0020}_{-0.0020}$	k_{eq}	$0.01031^{+0.00014}_{-0.00015}$	f_{2000}^{217}	$106.7^{+3.6}_{-3.6}$
$\Omega_m h^3$	$0.09620^{+0.00063}_{-0.00065}$	$100\theta_{\text{eq}}$	$0.8178^{+0.0091}_{-0.0087}$	χ_{small}^2	$860 (\nu: 346943.3)$
σ_8	$0.808^{+0.014}_{-0.013}$	$100\theta_{s,\text{eq}}$	$0.4517^{+0.0047}_{-0.0045}$	χ_{lowl}^2	$24.6 (\nu: 1.5)$
S_8	$0.821^{+0.026}_{-0.025}$	$H(0.15)$	$73.01^{+0.78}_{-0.76}$	$\chi_{6\text{DF}}^2$	$0.045 (\nu: 0.0)$
$\sigma_8 \Omega_m^{0.5}$	$0.450^{+0.014}_{-0.014}$	$D_M(0.15)$	$640.1^{+7.6}_{-7.6}$	χ_{MGS}^2	$1.37 (\nu: 0.1)$
$\sigma_8 \Omega_m^{0.25}$	$0.603^{+0.014}_{-0.014}$	$H(0.38)$	$83.08^{+0.57}_{-0.56}$	χ_{DR12BAO}^2	$4.6 (\nu: 0.8)$
$\sigma_8/h^{0.5}$	$0.982^{+0.020}_{-0.019}$	$D_M(0.38)$	1527^{+15}_{-15}	χ_{prior}^2	$9.6 (\nu: 9.6)$
$r_{\text{drag}} h$	$99.8^{+1.6}_{-1.5}$	$H(0.51)$	$89.78^{+0.46}_{-0.45}$	χ_{BAO}^2	$6.0 (\nu: 0.5)$
$\langle d^2 \rangle^{1/2}$	$2.427^{+0.049}_{-0.048}$	$D_M(0.51)$	1979^{+18}_{-18}	χ_{CMB}^2	$7358 (\nu: 10473993.4)$
z_{re}	< 8.93	$H(0.61)$	$95.38^{+0.38}_{-0.37}$		
$10^9 A_s$	$2.097^{+0.061}_{-0.056}$	$D_M(0.61)$	2303^{+19}_{-19}		

$$\bar{\chi}_{\text{eff}}^2 = 11948.86; \Delta\bar{\chi}_{\text{eff}}^2 = 9149.91; R - 1 = 0.01058$$

17.9 base_r_CamSpecHM_TTTEEE_lowl_lowE_lensing/base_r_plikHM_TTTEEE_lowl_lowE_lensing

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02234^{+0.00030}_{-0.00030}$	$10^9 A_s$	$2.095^{+0.061}_{-0.059}$	$H(0.61)$	$95.27^{+0.44}_{-0.42}$
$\Omega_c h^2$	$0.1197^{+0.0024}_{-0.0024}$	$10^9 A_s e^{-2\tau}$	$1.880^{+0.022}_{-0.021}$	$D_M(0.61)$	2309^{+23}_{-23}
$100\theta_{MC}$	$1.04090^{+0.00060}_{-0.00060}$	D_{40}	1244^{+34}_{-31}	$H(2.33)$	$236.3^{+1.4}_{-1.5}$
τ	$0.054^{+0.015}_{-0.014}$	D_{220}	5723^{+77}_{-77}	$D_M(2.33)$	5765^{+20}_{-21}
$\ln(10^{10} A_s)$	$3.042^{+0.029}_{-0.029}$	D_{810}	2537^{+27}_{-26}	$f\sigma_8(0.15)$	$0.458^{+0.013}_{-0.013}$
n_s	$0.9664^{+0.0084}_{-0.0082}$	D_{1420}	$817.0^{+9.5}_{-9.4}$	$\sigma_8(0.15)$	$0.748^{+0.011}_{-0.011}$
r	< 0.128	D_{2000}	$230.7^{+3.2}_{-3.1}$	$f\sigma_8(0.38)$	$0.476^{+0.010}_{-0.011}$
y_{cal}	$1.0006^{+0.0049}_{-0.0048}$	$n_{s,0.002}$	$0.9664^{+0.0084}_{-0.0082}$	$\sigma_8(0.38)$	$0.6629^{+0.0094}_{-0.0093}$
A_{217}^{CIB}	43^{+10}_{-20}	Y_P	$0.24538^{+0.00011}_{-0.00012}$	$f\sigma_8(0.51)$	$0.4742^{+0.0091}_{-0.0093}$
$\xi^{tSZ-CIB}$	—	Y_P^{BBN}	$0.24671^{+0.00011}_{-0.00013}$	$\sigma_8(0.51)$	$0.6203^{+0.0088}_{-0.0087}$
A_{143}^{tSZ}	$4.7^{+3.9}_{-4.3}$	$10^5 D/H$	$2.593^{+0.057}_{-0.054}$	$f\sigma_8(0.61)$	$0.4691^{+0.0083}_{-0.0084}$
A_{100}^{PS}	248^{+60}_{-50}	Age/Gyr	$13.800^{+0.045}_{-0.046}$	$\sigma_8(0.61)$	$0.5901^{+0.0084}_{-0.0083}$
A_{143}^{PS}	42^{+20}_{-20}	z_*	$1089.94^{+0.51}_{-0.51}$	$f\sigma_8(2.33)$	$0.2975^{+0.0044}_{-0.0043}$
A_{217}^{PS}	109^{+20}_{-30}	r_*	$144.54^{+0.56}_{-0.55}$	$\sigma_8(2.33)$	$0.3066^{+0.0048}_{-0.0046}$
A^{kSZ}	—	$100\theta_*$	$1.04109^{+0.00059}_{-0.00059}$	$r_{0.002}$	< 0.122
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	$D_M(z_*)/\text{Gpc}$	$13.883^{+0.053}_{-0.051}$	$r_{0.01}$	< 0.125
c_{217}	$0.9996^{+0.0037}_{-0.0027}$	z_{drag}	$1059.83^{+0.63}_{-0.66}$	$\ln(10^{10} A_t)$	$-0.4^{+1.8}_{-2.4}$
H_0	$67.4^{+1.1}_{-1.1}$	r_{drag}	$147.21^{+0.58}_{-0.55}$	$r_{L=10}$	< 0.0628
Ω_Λ	$0.686^{+0.014}_{-0.015}$	k_D	$0.14071^{+0.00064}_{-0.00068}$	$10^9 A_t$	< 0.268
Ω_m	$0.314^{+0.015}_{-0.014}$	$100\theta_D$	$0.16081^{+0.00038}_{-0.00036}$	$10^9 A_t e^{-2\tau}$	< 0.241
$\Omega_m h^2$	$0.1427^{+0.0022}_{-0.0023}$	z_{eq}	3394^{+54}_{-54}	f_{2000}^{143}	29^{+6}_{-5}
$\Omega_m h^3$	$0.09620^{+0.00061}_{-0.00064}$	k_{eq}	$0.01036^{+0.00016}_{-0.00017}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
σ_8	$0.810^{+0.012}_{-0.012}$	$100\theta_{eq}$	$0.815^{+0.010}_{-0.010}$	f_{2000}^{217}	$106.8^{+3.6}_{-3.6}$
S_8	$0.828^{+0.026}_{-0.025}$	$100\theta_{s,eq}$	$0.4501^{+0.0053}_{-0.0051}$	$\chi^2_{lensing}$	$9.31 (\nu: 0.3)$
$\sigma_8 \Omega_m^{0.5}$	$0.454^{+0.014}_{-0.014}$	$H(0.15)$	$72.73^{+0.92}_{-0.90}$	χ^2_{small}	$397.2 (\nu: 1.4)$
$\sigma_8 \Omega_m^{0.25}$	$0.606^{+0.013}_{-0.013}$	$D_M(0.15)$	$642.8^{+9.1}_{-9.1}$	χ^2_{lowl}	$24.9 (\nu: 1.5)$
$\sigma_8/h^{0.5}$	$0.986^{+0.018}_{-0.018}$	$H(0.38)$	$82.89^{+0.68}_{-0.66}$	χ^2_{prior}	$9.7 (\nu: 9.8)$
$r_{drag} h$	$99.3^{+1.9}_{-1.8}$	$D_M(0.38)$	1533^{+18}_{-18}	χ^2_{CMB}	$7367 (\nu: 10474701.2)$
$\langle d^2 \rangle^{1/2}$	$2.438^{+0.044}_{-0.044}$	$H(0.51)$	$89.63^{+0.54}_{-0.52}$		
z_{re}	$7.6^{+1.4}_{-1.5}$	$D_M(0.51)$	1985^{+21}_{-21}		

Best-fit $\chi^2_{\text{eff}} = 11929.59$; $\Delta\chi^2_{\text{eff}} = 9154.96$; $\bar{\chi}^2_{\text{eff}} = 11952.27$; $\Delta\bar{\chi}^2_{\text{eff}} = 9150.31$; $R - 1 = 0.00977$
 χ^2_{eff} : CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.86 (Δ 0.02) simall_100x143_offlike5_EE_Aplanck_B: 395.87 (Δ -0.18) commander_dx12_v3_2_29: 23.23 (Δ 0.03) CamSpec like_10.7HM.1400_unified: 11499.43

17.10 base_r_CamSpecHM_TTTEEE_lowl_lowE_lensing_post_BAO/base_r_plikHM_TTTEEE_lowl_lowE_lensing_post_BAO

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02238^{+0.00028}_{-0.00029}$	$10^9 A_s e^{-2\tau}$	$1.879^{+0.021}_{-0.021}$	$H(2.33)$	$236.0^{+1.2}_{-1.2}$
$\Omega_c h^2$	$0.1191^{+0.0019}_{-0.0019}$	D_{40}	1242^{+35}_{-31}	$D_M(2.33)$	5761^{+18}_{-18}
$100\theta_{MC}$	$1.04098^{+0.00058}_{-0.00058}$	D_{220}	5727^{+77}_{-76}	$f\sigma_8(0.15)$	$0.455^{+0.011}_{-0.011}$
τ	$0.056^{+0.015}_{-0.014}$	D_{810}	2538^{+26}_{-26}	$\sigma_8(0.15)$	$0.748^{+0.011}_{-0.011}$
$\ln(10^{10} A_s)$	$3.044^{+0.029}_{-0.028}$	D_{1420}	$817.6^{+9.3}_{-9.3}$	$f\sigma_8(0.38)$	$0.4739^{+0.0091}_{-0.0091}$
n_s	$0.9679^{+0.0076}_{-0.0075}$	D_{2000}	$231.0^{+3.1}_{-3.1}$	$\sigma_8(0.38)$	$0.6630^{+0.0095}_{-0.0093}$
r	< 0.133	$n_{s,0.002}$	$0.9679^{+0.0076}_{-0.0075}$	$f\sigma_8(0.51)$	$0.4727^{+0.0083}_{-0.0083}$
y_{cal}	$1.0008^{+0.0048}_{-0.0048}$	Y_P	$0.24540^{+0.00010}_{-0.00012}$	$\sigma_8(0.51)$	$0.6205^{+0.0089}_{-0.0087}$
A_{217}^{CIB}	43^{+20}_{-20}	Y_P^{BBN}	$0.24672^{+0.00010}_{-0.00012}$	$f\sigma_8(0.61)$	$0.4678^{+0.0077}_{-0.0077}$
$\xi^{tSZ-CIB}$	—	$10^5 D/H$	$2.585^{+0.054}_{-0.050}$	$\sigma_8(0.61)$	$0.5905^{+0.0085}_{-0.0083}$
A_{143}^{tSZ}	$4.7^{+4.0}_{-4.3}$	Age/Gyr	$13.791^{+0.041}_{-0.040}$	$f\sigma_8(2.33)$	$0.2978^{+0.0044}_{-0.0043}$
A_{100}^{PS}	248^{+60}_{-50}	z_*	$1089.84^{+0.44}_{-0.43}$	$\sigma_8(2.33)$	$0.3071^{+0.0047}_{-0.0045}$
A_{143}^{PS}	42^{+20}_{-20}	r_*	$144.66^{+0.47}_{-0.45}$	$r_{0.002}$	< 0.127
A_{217}^{PS}	109^{+20}_{-30}	$100\theta_*$	$1.04116^{+0.00057}_{-0.00057}$	$r_{0.01}$	< 0.130
A^{kSZ}	—	$D_M(z_*)/\text{Gpc}$	$13.894^{+0.046}_{-0.044}$	$\ln(10^{10} A_t)$	$-0.4^{+1.8}_{-2.4}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	z_{drag}	$1059.89^{+0.62}_{-0.64}$	$r_{L=10}$	< 0.0652
c_{217}	$0.9996^{+0.0037}_{-0.0027}$	r_{drag}	$147.32^{+0.51}_{-0.48}$	$10^9 A_t$	< 0.278
H_0	$67.69^{+0.83}_{-0.82}$	k_D	$0.14063^{+0.00061}_{-0.00064}$	$10^9 A_t e^{-2\tau}$	< 0.249
Ω_Λ	$0.690^{+0.011}_{-0.011}$	$100\theta_D$	$0.16079^{+0.00037}_{-0.00035}$	f_{2000}^{143}	29^{+5}_{-5}
Ω_m	$0.310^{+0.011}_{-0.011}$	z_{eq}	3381^{+42}_{-43}	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
$\Omega_m h^2$	$0.1421^{+0.0018}_{-0.0018}$	k_{eq}	$0.01032^{+0.00013}_{-0.00013}$	f_{2000}^{217}	$106.7^{+3.6}_{-3.6}$
$\Omega_m h^3$	$0.09621^{+0.00061}_{-0.00064}$	$100\theta_{\text{eq}}$	$0.8172^{+0.0082}_{-0.0079}$	χ^2_{lensing}	$9.27 (\nu: 0.3)$
σ_8	$0.809^{+0.012}_{-0.012}$	$100\theta_{s,\text{eq}}$	$0.4514^{+0.0042}_{-0.0040}$	χ^2_{simall}	$846 (\nu: 339741.4)$
S_8	$0.823^{+0.021}_{-0.021}$	$H(0.15)$	$72.96^{+0.72}_{-0.71}$	χ^2_{lowl}	$24.7 (\nu: 1.4)$
$\sigma_8 \Omega_m^{0.5}$	$0.451^{+0.012}_{-0.011}$	$D_M(0.15)$	$640.6^{+7.1}_{-7.0}$	$\chi^2_{6\text{DF}}$	$0.047 (\nu: 0.0)$
$\sigma_8 \Omega_m^{0.25}$	$0.604^{+0.011}_{-0.011}$	$H(0.38)$	$83.05^{+0.53}_{-0.53}$	χ^2_{MGS}	$1.31 (\nu: 0.1)$
$\sigma_8/h^{0.5}$	$0.983^{+0.016}_{-0.016}$	$D_M(0.38)$	1528^{+14}_{-14}	χ^2_{DR12BAO}	$4.7 (\nu: 0.8)$
$r_{\text{drag}} h$	$99.7^{+1.4}_{-1.4}$	$H(0.51)$	$89.76^{+0.44}_{-0.43}$	χ^2_{prior}	$9.7 (\nu: 10.1)$
$\langle d^2 \rangle^{1/2}$	$2.431^{+0.041}_{-0.041}$	$D_M(0.51)$	1980^{+17}_{-17}	χ^2_{CMB}	$7367 (\nu: 10474640.5)$
z_{re}	$7.8^{+1.4}_{-1.4}$	$H(0.61)$	$95.37^{+0.36}_{-0.36}$	χ^2_{BAO}	$6.01 (\nu: 0.5)$
$10^9 A_s$	$2.100^{+0.061}_{-0.058}$	$D_M(0.61)$	2304^{+18}_{-18}		

$$\bar{\chi}^2_{\text{eff}} = 11958.11; \Delta\bar{\chi}^2_{\text{eff}} = 9150.04; R - 1 = 0.01271$$

17.11 base_r_CamSpecHM_TTTEEE_lowl_lowE_lensing_post_zre6p5/base_r_plikHM_TTTEEE_lowl_lowE_lensing_post_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02234^{+0.00030}_{-0.00030}$	$10^9 A_s$	$2.099^{+0.054}_{-0.050}$	$H(0.61)$	$95.28^{+0.44}_{-0.42}$
$\Omega_c h^2$	$0.1196^{+0.0023}_{-0.0024}$	$10^9 A_s e^{-2\tau}$	$1.880^{+0.022}_{-0.021}$	$D_M(0.61)$	2309^{+22}_{-23}
$100\theta_{MC}$	$1.04090^{+0.00060}_{-0.00059}$	D_{40}	1244^{+34}_{-31}	$H(2.33)$	$236.3^{+1.4}_{-1.4}$
τ	$0.055^{+0.012}_{-0.012}$	D_{220}	5722^{+77}_{-77}	$D_M(2.33)$	5764^{+20}_{-20}
$\ln(10^{10} A_s)$	$3.044^{+0.026}_{-0.024}$	D_{810}	2537^{+27}_{-26}	$f\sigma_8(0.15)$	$0.458^{+0.013}_{-0.013}$
n_s	$0.9666^{+0.0084}_{-0.0082}$	D_{1420}	$816.9^{+9.5}_{-9.3}$	$\sigma_8(0.15)$	$0.749^{+0.010}_{-0.0094}$
r	< 0.128	D_{2000}	$230.8^{+3.1}_{-3.1}$	$f\sigma_8(0.38)$	$0.476^{+0.010}_{-0.010}$
y_{cal}	$1.0006^{+0.0049}_{-0.0048}$	$n_{s,0.002}$	$0.9666^{+0.0084}_{-0.0082}$	$\sigma_8(0.38)$	$0.6634^{+0.0090}_{-0.0080}$
A_{217}^{CIB}	43^{+10}_{-20}	Y_P	$0.24538^{+0.00011}_{-0.00012}$	$f\sigma_8(0.51)$	$0.4744^{+0.0090}_{-0.0092}$
$\xi^{tSZ-CIB}$	—	Y_P^{BBN}	$0.24671^{+0.00011}_{-0.00012}$	$\sigma_8(0.51)$	$0.6208^{+0.0081}_{-0.0076}$
A_{143}^{tSZ}	$4.7^{+3.9}_{-4.3}$	$10^5 D/H$	$2.592^{+0.057}_{-0.053}$	$f\sigma_8(0.61)$	$0.4693^{+0.0082}_{-0.0083}$
A_{100}^{PS}	248^{+60}_{-50}	Age/Gyr	$13.799^{+0.045}_{-0.046}$	$\sigma_8(0.61)$	$0.5906^{+0.0077}_{-0.0073}$
A_{143}^{PS}	42^{+20}_{-20}	z_*	$1089.93^{+0.50}_{-0.50}$	$f\sigma_8(2.33)$	$0.2977^{+0.0040}_{-0.0037}$
A_{217}^{PS}	109^{+20}_{-30}	r_*	$144.55^{+0.56}_{-0.54}$	$\sigma_8(2.33)$	$0.3068^{+0.0042}_{-0.0040}$
A^{kSZ}	—	$100\theta_*$	$1.04109^{+0.00059}_{-0.00059}$	$r_{0.002}$	< 0.122
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	$D_M(z_*)/\text{Gpc}$	$13.884^{+0.053}_{-0.051}$	$r_{0.01}$	< 0.125
c_{217}	$0.9996^{+0.0037}_{-0.0027}$	z_{drag}	$1059.84^{+0.63}_{-0.67}$	$\ln(10^{10} A_t)$	$-0.4^{+1.8}_{-2.4}$
H_0	$67.5^{+1.1}_{-1.0}$	r_{drag}	$147.22^{+0.58}_{-0.55}$	$r_{L=10}$	< 0.0628
Ω_Λ	$0.686^{+0.014}_{-0.014}$	k_D	$0.14071^{+0.00063}_{-0.00068}$	$10^9 A_t$	< 0.269
Ω_m	$0.314^{+0.014}_{-0.014}$	$100\theta_D$	$0.16081^{+0.00038}_{-0.00036}$	$10^9 A_t e^{-2\tau}$	< 0.241
$\Omega_m h^2$	$0.1426^{+0.0022}_{-0.0023}$	z_{eq}	3393^{+53}_{-54}	f_{2000}^{143}	29^{+6}_{-5}
$\Omega_m h^3$	$0.09620^{+0.00061}_{-0.00064}$	k_{eq}	$0.01036^{+0.00016}_{-0.00016}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
σ_8	$0.810^{+0.011}_{-0.011}$	$100\theta_{eq}$	$0.815^{+0.010}_{-0.0098}$	f_{2000}^{217}	$106.8^{+3.6}_{-3.6}$
S_8	$0.829^{+0.026}_{-0.026}$	$100\theta_{s,eq}$	$0.4502^{+0.0053}_{-0.0050}$	$\chi^2_{lensing}$	$9.27 (\nu: 0.2)$
$\sigma_8 \Omega_m^{0.5}$	$0.454^{+0.014}_{-0.014}$	$H(0.15)$	$72.75^{+0.91}_{-0.88}$	χ^2_{small}	$397.2 (\nu: 1.5)$
$\sigma_8 \Omega_m^{0.25}$	$0.606^{+0.013}_{-0.013}$	$D_M(0.15)$	$642.6^{+8.9}_{-9.0}$	χ^2_{lowl}	$24.9 (\nu: 1.5)$
$\sigma_8/h^{0.5}$	$0.987^{+0.018}_{-0.018}$	$H(0.38)$	$82.90^{+0.67}_{-0.64}$	χ^2_{prior}	$9.6 (\nu: 9.8)$
$r_{drag} h$	$99.3^{+1.8}_{-1.8}$	$D_M(0.38)$	1532^{+18}_{-18}	χ^2_{CMB}	$7367 (\nu: 10474721.3)$
$\langle d^2 \rangle^{1/2}$	$2.439^{+0.043}_{-0.043}$	$H(0.51)$	$89.64^{+0.53}_{-0.51}$		
z_{re}	< 8.87	$D_M(0.51)$	1984^{+21}_{-21}		

$$\bar{\chi}^2_{\text{eff}} = 11952.03; \Delta\bar{\chi}^2_{\text{eff}} = 9150.31; R - 1 = 0.00998$$

17.12 base_r_CamSpecHM_TTTEEE_lowl_lowE_lensing_post_BAO_zre6p5/base_r_plikHM_TTTEEE_lowl_lowE_lensing_post_BAO_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02238^{+0.00028}_{-0.00029}$	$10^9 A_s e^{-2\tau}$	$1.878^{+0.021}_{-0.020}$	$H(2.33)$	$236.0^{+1.1}_{-1.2}$
$\Omega_c h^2$	$0.1191^{+0.0018}_{-0.0019}$	D_{40}	1242^{+35}_{-31}	$D_M(2.33)$	5760^{+18}_{-18}
$100\theta_{MC}$	$1.04098^{+0.00057}_{-0.00058}$	D_{220}	5727^{+76}_{-76}	$f\sigma_8(0.15)$	$0.455^{+0.011}_{-0.011}$
τ	$0.056^{+0.013}_{-0.012}$	D_{810}	2538^{+26}_{-25}	$\sigma_8(0.15)$	$0.748^{+0.011}_{-0.0095}$
$\ln(10^{10} A_s)$	$3.045^{+0.026}_{-0.025}$	D_{1420}	$817.5^{+9.2}_{-9.3}$	$f\sigma_8(0.38)$	$0.4741^{+0.0090}_{-0.0089}$
n_s	$0.9679^{+0.0076}_{-0.0075}$	D_{2000}	$231.0^{+3.1}_{-3.1}$	$\sigma_8(0.38)$	$0.6634^{+0.0092}_{-0.0082}$
r	< 0.133	$n_{s,0.002}$	$0.9679^{+0.0076}_{-0.0075}$	$f\sigma_8(0.51)$	$0.4729^{+0.0082}_{-0.0080}$
y_{cal}	$1.0007^{+0.0048}_{-0.0048}$	Y_P	$0.24540^{+0.00010}_{-0.00012}$	$\sigma_8(0.51)$	$0.6209^{+0.0083}_{-0.0079}$
A_{217}^{CIB}	43^{+20}_{-20}	Y_P^{BBN}	$0.24672^{+0.00010}_{-0.00012}$	$f\sigma_8(0.61)$	$0.4680^{+0.0076}_{-0.0074}$
$\xi^{tSZ-CIB}$	—	$10^5 D/H$	$2.585^{+0.054}_{-0.050}$	$\sigma_8(0.61)$	$0.5908^{+0.0079}_{-0.0075}$
A_{143}^{tSZ}	$4.7^{+4.0}_{-4.3}$	Age/Gyr	$13.791^{+0.041}_{-0.040}$	$f\sigma_8(2.33)$	$0.2979^{+0.0041}_{-0.0038}$
A_{100}^{PS}	248^{+60}_{-50}	z_*	$1089.83^{+0.44}_{-0.43}$	$\sigma_8(2.33)$	$0.3072^{+0.0043}_{-0.0041}$
A_{143}^{PS}	42^{+20}_{-20}	r_*	$144.66^{+0.47}_{-0.45}$	$r_{0.002}$	< 0.127
A_{217}^{PS}	109^{+20}_{-30}	$100\theta_*$	$1.04116^{+0.00057}_{-0.00057}$	$r_{0.01}$	< 0.130
A^{kSZ}	—	$D_M(z_*)/\text{Gpc}$	$13.894^{+0.045}_{-0.044}$	$\ln(10^{10} A_t)$	$-0.4^{+1.8}_{-2.4}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	z_{drag}	$1059.89^{+0.62}_{-0.64}$	$r_{L=10}$	< 0.0652
c_{217}	$0.9996^{+0.0037}_{-0.0027}$	r_{drag}	$147.32^{+0.50}_{-0.48}$	$10^9 A_t$	< 0.278
H_0	$67.70^{+0.82}_{-0.82}$	k_D	$0.14063^{+0.00060}_{-0.00063}$	$10^9 A_t e^{-2\tau}$	< 0.249
Ω_Λ	$0.690^{+0.011}_{-0.011}$	$100\theta_D$	$0.16079^{+0.00037}_{-0.00035}$	f_{2000}^{143}	29^{+5}_{-5}
Ω_m	$0.310^{+0.011}_{-0.011}$	z_{eq}	3381^{+42}_{-43}	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
$\Omega_m h^2$	$0.1421^{+0.0018}_{-0.0018}$	k_{eq}	$0.01032^{+0.00013}_{-0.00013}$	f_{2000}^{217}	$106.7^{+3.5}_{-3.6}$
$\Omega_m h^3$	$0.09621^{+0.00061}_{-0.00064}$	$100\theta_{\text{eq}}$	$0.8173^{+0.0081}_{-0.0078}$	χ^2_{lensing}	$9.23 (\nu: 0.2)$
σ_8	$0.810^{+0.011}_{-0.011}$	$100\theta_{s,\text{eq}}$	$0.4515^{+0.0042}_{-0.0040}$	χ^2_{simall}	$844 (\nu: 338390.7)$
S_8	$0.823^{+0.021}_{-0.021}$	$H(0.15)$	$72.97^{+0.71}_{-0.70}$	χ^2_{lowl}	$24.7 (\nu: 1.4)$
$\sigma_8 \Omega_m^{0.5}$	$0.451^{+0.011}_{-0.011}$	$D_M(0.15)$	$640.5^{+7.0}_{-7.0}$	$\chi^2_{6\text{DF}}$	$0.045 (\nu: 0.0)$
$\sigma_8 \Omega_m^{0.25}$	$0.604^{+0.011}_{-0.011}$	$H(0.38)$	$83.06^{+0.53}_{-0.52}$	χ^2_{MGS}	$1.32 (\nu: 0.1)$
$\sigma_8/h^{0.5}$	$0.984^{+0.016}_{-0.016}$	$D_M(0.38)$	1528^{+14}_{-14}	χ^2_{DR12BAO}	$4.6 (\nu: 0.7)$
$r_{\text{drag}} h$	$99.7^{+1.4}_{-1.4}$	$H(0.51)$	$89.76^{+0.44}_{-0.43}$	χ^2_{prior}	$9.7 (\nu: 10.1)$
$\langle d^2 \rangle^{1/2}$	$2.432^{+0.040}_{-0.039}$	$D_M(0.51)$	1979^{+17}_{-17}	χ^2_{CMB}	$7367 (\nu: 10474571.1)$
z_{re}	$7.8^{+1.2}_{-1.3}$	$H(0.61)$	$95.37^{+0.37}_{-0.36}$	χ^2_{BAO}	$5.99 (\nu: 0.4)$
$10^9 A_s$	$2.102^{+0.056}_{-0.052}$	$D_M(0.61)$	2303^{+18}_{-18}		

$$\bar{\chi}^2_{\text{eff}} = 11957.91; \Delta\bar{\chi}^2_{\text{eff}} = 9150.02; R - 1 = 0.01331$$

17.13 base_r_CamSpecHM_TT_lowl_lowE_BK15/base_r_plikHM_TT_lowl_lowE_BK15

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02208^{+0.00043}_{-0.00042}$	$\sigma_8 \Omega_m^{0.25}$	$0.614^{+0.023}_{-0.022}$	$D_M(0.38)$	1546^{+31}_{-31}
$\Omega_c h^2$	$0.1211^{+0.0041}_{-0.0040}$	$\sigma_8/h^{0.5}$	$0.997^{+0.031}_{-0.031}$	$H(0.51)$	$89.24^{+0.88}_{-0.83}$
$100\theta_{MC}$	$1.04075^{+0.00092}_{-0.00093}$	$r_{\text{drag}} h$	$98.1^{+3.1}_{-3.1}$	$D_M(0.51)$	2000^{+36}_{-36}
τ	$0.052^{+0.016}_{-0.015}$	$\langle d^2 \rangle^{1/2}$	$2.461^{+0.074}_{-0.073}$	$H(0.61)$	$94.94^{+0.70}_{-0.65}$
$\ln(10^{10} A_s)$	$3.042^{+0.032}_{-0.032}$	z_{re}	$7.5^{+1.6}_{-1.7}$	$D_M(0.61)$	2326^{+38}_{-39}
n_s	$0.962^{+0.011}_{-0.011}$	$10^9 A_s$	$2.095^{+0.068}_{-0.066}$	$H(2.33)$	$237.0^{+2.5}_{-2.5}$
r	< 0.0585	$10^9 A_s e^{-2\tau}$	$1.886^{+0.027}_{-0.027}$	$D_M(2.33)$	5780^{+31}_{-32}
y_{cal}	$1.0007^{+0.0049}_{-0.0049}$	D_{40}	1243^{+31}_{-30}	$f\sigma_8(0.15)$	$0.467^{+0.024}_{-0.023}$
$A_{B,\text{dust}}$	$4.9^{+2.1}_{-1.9}$	D_{220}	5706^{+81}_{-80}	$\sigma_8(0.15)$	$0.751^{+0.014}_{-0.014}$
$A_{B,\text{sync}}$	< 3.67	D_{810}	2537^{+27}_{-27}	$f\sigma_8(0.38)$	$0.482^{+0.018}_{-0.018}$
$\alpha_{B,\text{dust}}$	—	D_{1420}	815^{+10}_{-10}	$\sigma_8(0.38)$	$0.664^{+0.012}_{-0.012}$
$\beta_{B,\text{dust}}$	$1.60^{+0.19}_{-0.19}$	D_{2000}	$229.6^{+3.6}_{-3.5}$	$f\sigma_8(0.51)$	$0.479^{+0.016}_{-0.016}$
$\alpha_{B,\text{sync}}$	—	$n_{s,0.002}$	$0.962^{+0.011}_{-0.011}$	$\sigma_8(0.51)$	$0.621^{+0.011}_{-0.011}$
$\beta_{B,\text{sync}}$	$-3.10^{+0.52}_{-0.55}$	Y_P	$0.24527^{+0.00018}_{-0.00020}$	$f\sigma_8(0.61)$	$0.473^{+0.014}_{-0.014}$
$\epsilon_{\text{dust,sync}}$	$-0.35^{+0.53}_{-0.57}$	Y_P^{BBN}	$0.24660^{+0.00018}_{-0.00020}$	$\sigma_8(0.61)$	$0.591^{+0.010}_{-0.0099}$
A_{217}^{CIB}	44^{+20}_{-20}	$10^5 D/H$	$2.641^{+0.082}_{-0.081}$	$f\sigma_8(2.33)$	$0.2974^{+0.0050}_{-0.0049}$
$\xi^{tSZ-CIB}$	—	Age/Gyr	$13.836^{+0.070}_{-0.071}$	$\sigma_8(2.33)$	$0.3061^{+0.0053}_{-0.0051}$
A_{143}^{tSZ}	$4.4^{+3.8}_{-4.2}$	z_*	$1090.38^{+0.80}_{-0.79}$	$r_{0.002}$	< 0.0533
A_{100}^{PS}	253^{+60}_{-50}	r_*	$144.37^{+0.93}_{-0.93}$	$r_{0.01}$	< 0.0558
A_{143}^{PS}	45^{+20}_{-20}	$100\theta_*$	$1.04096^{+0.00091}_{-0.00092}$	$\ln(10^{10} A_t)$	$-0.99^{+1.5}_{-2.1}$
A_{217}^{PS}	109^{+30}_{-30}	$D_M(z_*)/\text{Gpc}$	$13.869^{+0.086}_{-0.086}$	$r_{L=10}$	< 0.0274
A^{kSZ}	—	z_{drag}	$1059.34^{+0.89}_{-0.90}$	$10^9 A_t$	< 0.122
c_{100}	$0.9985^{+0.0022}_{-0.0027}$	r_{drag}	$147.13^{+0.93}_{-0.94}$	$10^9 A_t e^{-2\tau}$	< 0.110
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	k_D	$0.1406^{+0.0010}_{-0.0010}$	f_{2000}^{143}	31^{+6}_{-6}
H_0	$66.7^{+1.8}_{-1.8}$	$100\theta_D$	$0.16111^{+0.00052}_{-0.00052}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-4}
Ω_Λ	$0.676^{+0.025}_{-0.026}$	z_{eq}	3421^{+93}_{-92}	f_{2000}^{217}	$108.0^{+3.9}_{-3.9}$
Ω_m	$0.324^{+0.026}_{-0.025}$	k_{eq}	$0.01044^{+0.00029}_{-0.00028}$	χ_{BKPLANCK}^2	$739.2 (\nu: 3.7)$
$\Omega_m h^2$	$0.1438^{+0.0039}_{-0.0038}$	$100\theta_{\text{eq}}$	$0.809^{+0.017}_{-0.017}$	χ_{small}^2	$397.1 (\nu: 1.5)$
$\Omega_m h^3$	$0.09589^{+0.00090}_{-0.00088}$	$100\theta_{\text{s,eq}}$	$0.4474^{+0.0089}_{-0.0087}$	χ_{lowl}^2	$24.8 (\nu: 1.1)$
σ_8	$0.814^{+0.017}_{-0.017}$	$H(0.15)$	$72.1^{+1.5}_{-1.5}$	χ_{prior}^2	$9.1 (\nu: 7.7)$
S_8	$0.845^{+0.047}_{-0.046}$	$D_M(0.15)$	649^{+16}_{-15}	χ_{CMB}^2	$5078 (\nu: 4948240.0)$
$\sigma_8 \Omega_m^{0.5}$	$0.463^{+0.026}_{-0.025}$	$H(0.38)$	$82.4^{+1.1}_{-1.1}$		

Best-fit $\chi_{\text{eff}}^2 = 8207.30$; $\Delta\chi_{\text{eff}}^2 = 6292.23$; $\bar{\chi}_{\text{eff}}^2 = 8233.28$; $\Delta\bar{\chi}_{\text{eff}}^2 = 6292.07$; $R - 1 = 0.00244$
 χ_{eff}^2 : CMB - BK15_dust: 734.95 (Δ 0.08) smalll_100x143_offlike5_EE_Aplanck_B: 396.00 (Δ -0.00) commander_dx12_v3_2_29: 24.16 (Δ -0.10) CamSpec like_10.7HM: 7049.91

17.14 base_r_CamSpecHM_TT_lowl_lowE_BK15_post_BAO/base_r_plikHM_TT_lowl_lowE_BK15_post_BAO

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02220^{+0.00039}_{-0.00038}$	$\sigma_8/h^{0.5}$	$0.984^{+0.022}_{-0.022}$	$D_M(0.51)$	1983^{+21}_{-22}
$\Omega_c h^2$	$0.1191^{+0.0024}_{-0.0024}$	$r_{\text{drag}} h$	$99.6^{+1.8}_{-1.8}$	$H(0.61)$	$95.24^{+0.49}_{-0.47}$
$100\theta_{MC}$	$1.04100^{+0.00082}_{-0.00083}$	$\langle d^2 \rangle^{1/2}$	$2.432^{+0.054}_{-0.053}$	$D_M(0.61)$	2308^{+23}_{-23}
τ	$0.055^{+0.016}_{-0.015}$	z_{re}	$7.7^{+1.5}_{-1.6}$	$H(2.33)$	$235.8^{+1.5}_{-1.5}$
$\ln(10^{10} A_s)$	$3.042^{+0.032}_{-0.032}$	$10^9 A_s$	$2.095^{+0.069}_{-0.066}$	$D_M(2.33)$	5768^{+24}_{-24}
n_s	$0.9668^{+0.0085}_{-0.0083}$	$10^9 A_s e^{-2\tau}$	$1.878^{+0.023}_{-0.023}$	$f\sigma_8(0.15)$	$0.456^{+0.015}_{-0.015}$
r	< 0.0618	D_{40}	1234^{+27}_{-27}	$\sigma_8(0.15)$	$0.747^{+0.013}_{-0.013}$
y_{cal}	$1.0008^{+0.0049}_{-0.0049}$	D_{220}	5715^{+79}_{-79}	$f\sigma_8(0.38)$	$0.474^{+0.013}_{-0.012}$
$A_{B,\text{dust}}$	$4.9^{+2.1}_{-1.9}$	D_{810}	2536^{+27}_{-27}	$\sigma_8(0.38)$	$0.662^{+0.011}_{-0.011}$
$A_{B,\text{sync}}$	< 3.67	D_{1420}	$816^{+10}_{-9.9}$	$f\sigma_8(0.51)$	$0.473^{+0.011}_{-0.011}$
$\alpha_{B,\text{dust}}$	—	D_{2000}	$230.1^{+3.5}_{-3.5}$	$\sigma_8(0.51)$	$0.620^{+0.011}_{-0.010}$
$\beta_{B,\text{dust}}$	$1.59^{+0.19}_{-0.19}$	$n_{s,0.002}$	$0.9668^{+0.0085}_{-0.0083}$	$f\sigma_8(0.61)$	$0.468^{+0.010}_{-0.010}$
$\alpha_{B,\text{sync}}$	—	Y_P	$0.24532^{+0.00015}_{-0.00017}$	$\sigma_8(0.61)$	$0.590^{+0.010}_{-0.0099}$
$\beta_{B,\text{sync}}$	$-3.10^{+0.53}_{-0.55}$	Y_P^{BBN}	$0.24665^{+0.00015}_{-0.00018}$	$f\sigma_8(2.33)$	$0.2975^{+0.0051}_{-0.0049}$
$\epsilon_{\text{dust,sync}}$	$-0.34^{+0.53}_{-0.57}$	$10^5 D/H$	$2.619^{+0.072}_{-0.072}$	$\sigma_8(2.33)$	$0.3067^{+0.0053}_{-0.0050}$
A_{217}^{CIB}	44^{+20}_{-20}	Age/Gyr	$13.809^{+0.055}_{-0.055}$	$r_{0.002}$	< 0.0569
$\xi^{tSZ-CIB}$	—	z_*	$1090.07^{+0.57}_{-0.57}$	$r_{0.01}$	< 0.0592
A_{143}^{tSZ}	$4.4^{+3.8}_{-4.2}$	r_*	$144.79^{+0.62}_{-0.62}$	$\ln(10^{10} A_t)$	$-0.9^{+1.5}_{-2.0}$
A_{100}^{PS}	252^{+60}_{-50}	$100\theta_*$	$1.04121^{+0.00081}_{-0.00082}$	$r_{L=10}$	< 0.0291
A_{143}^{PS}	45^{+20}_{-20}	$D_M(z_*)/\text{Gpc}$	$13.906^{+0.060}_{-0.060}$	$10^9 A_t$	< 0.129
A_{217}^{PS}	108^{+30}_{-30}	z_{drag}	$1059.47^{+0.88}_{-0.87}$	$10^9 A_t e^{-2\tau}$	< 0.116
A^{kSZ}	—	r_{drag}	$147.52^{+0.67}_{-0.67}$	f_{2000}^{143}	31^{+6}_{-6}
c_{100}	$0.9985^{+0.0022}_{-0.0026}$	k_D	$0.14028^{+0.00087}_{-0.00087}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-4}
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	$100\theta_D$	$0.16104^{+0.00050}_{-0.00050}$	f_{2000}^{217}	$107.7^{+3.8}_{-3.9}$
H_0	$67.5^{+1.1}_{-1.1}$	z_{eq}	3377^{+56}_{-55}	χ_{BKPLANCK}^2	$739.9 (\nu: 3.6)$
Ω_Λ	$0.689^{+0.014}_{-0.015}$	k_{eq}	$0.01031^{+0.00017}_{-0.00017}$	χ_{simall}^2	$397.3 (\nu: 1.8)$
Ω_m	$0.311^{+0.015}_{-0.014}$	$100\theta_{\text{eq}}$	$0.817^{+0.010}_{-0.010}$	χ_{lowl}^2	$23.9 (\nu: 0.6)$
$\Omega_m h^2$	$0.1420^{+0.0023}_{-0.0023}$	$100\theta_{\text{s,eq}}$	$0.4517^{+0.0053}_{-0.0053}$	$\chi_{6\text{DF}}^2$	$0.065 (\nu: 0.0)$
$\Omega_m h^3$	$0.09589^{+0.00089}_{-0.00089}$	$H(0.15)$	$72.82^{+0.92}_{-0.91}$	χ_{MGS}^2	$1.29 (\nu: 0.1)$
σ_8	$0.809^{+0.015}_{-0.015}$	$D_M(0.15)$	$641.9^{+9.1}_{-9.0}$	χ_{DR12BAO}^2	$4.9 (\nu: 1.5)$
S_8	$0.824^{+0.029}_{-0.029}$	$H(0.38)$	$82.92^{+0.69}_{-0.67}$	χ_{prior}^2	$9.1 (\nu: 7.8)$
$\sigma_8 \Omega_m^{0.5}$	$0.451^{+0.016}_{-0.016}$	$D_M(0.38)$	1531^{+18}_{-18}	χ_{BAO}^2	$6.3 (\nu: 1.0)$
$\sigma_8 \Omega_m^{0.25}$	$0.604^{+0.015}_{-0.015}$	$H(0.51)$	$89.63^{+0.57}_{-0.55}$	χ_{CMB}^2	$5079 (\nu: 4947898.0)$

Best-fit $\chi_{\text{eff}}^2 = 8214.03$; $\Delta\chi_{\text{eff}}^2 = 6292.09$; $\bar{\chi}_{\text{eff}}^2 = 8239.80$; $\Delta\bar{\chi}_{\text{eff}}^2 = 6291.72$; $R - 1 = 0.00717$
 χ_{eff}^2 : BAO - 6DF: 0.03 (Δ -0.01) MGS: 1.22 (Δ 0.06) DR12BAO: 4.37 (Δ -0.19) CMB - BK15_dust: 735.63 (Δ 0.08) simall_100x143_offlike5_EE_Aplanck_B: 396.19 (Δ 0.00) commander_dx12_v3.2.29: 23.46 (Δ -0.06) CamSpec like_10.7HM: 7050.82

17.15 base_r_CamSpecHM_TT_lowl_lowE_BK15_post_lensing/base_r_plikHM_TT_lowl_lowE_BK15_post_lensing

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02212^{+0.00041}_{-0.00040}$	$\sigma_8 \Omega_m^{0.25}$	$0.610^{+0.015}_{-0.015}$	$D_M(0.38)$	1541^{+24}_{-24}
$\Omega_c h^2$	$0.1205^{+0.0031}_{-0.0030}$	$\sigma_8/h^{0.5}$	$0.992^{+0.020}_{-0.021}$	$H(0.51)$	$89.35^{+0.71}_{-0.69}$
$100\theta_{MC}$	$1.04080^{+0.00088}_{-0.00089}$	$r_{\text{drag}} h$	$98.6^{+2.4}_{-2.4}$	$D_M(0.51)$	1995^{+28}_{-28}
τ	$0.053^{+0.016}_{-0.015}$	$\langle d^2 \rangle^{1/2}$	$2.451^{+0.048}_{-0.049}$	$H(0.61)$	$95.03^{+0.59}_{-0.57}$
$\ln(10^{10} A_s)$	$3.041^{+0.029}_{-0.029}$	z_{re}	$7.5^{+1.5}_{-1.6}$	$D_M(0.61)$	2320^{+30}_{-30}
n_s	$0.9635^{+0.0097}_{-0.0096}$	$10^9 A_s$	$2.092^{+0.061}_{-0.060}$	$H(2.33)$	$236.6^{+1.9}_{-1.8}$
r	< 0.0592	$10^9 A_s e^{-2\tau}$	$1.883^{+0.022}_{-0.022}$	$D_M(2.33)$	5777^{+28}_{-28}
y_{cal}	$1.0007^{+0.0049}_{-0.0049}$	D_{40}	1240^{+27}_{-26}	$f\sigma_8(0.15)$	$0.463^{+0.016}_{-0.016}$
$A_{B,\text{dust}}$	$4.9^{+2.1}_{-1.9}$	D_{220}	5710^{+80}_{-79}	$\sigma_8(0.15)$	$0.749^{+0.011}_{-0.011}$
$A_{B,\text{sync}}$	< 3.65	D_{810}	2536^{+26}_{-26}	$f\sigma_8(0.38)$	$0.479^{+0.012}_{-0.012}$
$\alpha_{B,\text{dust}}$	—	D_{1420}	815^{+10}_{-10}	$\sigma_8(0.38)$	$0.6633^{+0.0094}_{-0.0094}$
$\beta_{B,\text{dust}}$	$1.60^{+0.19}_{-0.19}$	D_{2000}	$229.6^{+3.6}_{-3.5}$	$f\sigma_8(0.51)$	$0.477^{+0.010}_{-0.011}$
$\alpha_{B,\text{sync}}$	—	$n_{s,0.002}$	$0.9635^{+0.0097}_{-0.0096}$	$\sigma_8(0.51)$	$0.6203^{+0.0090}_{-0.0089}$
$\beta_{B,\text{sync}}$	$-3.10^{+0.52}_{-0.55}$	Y_P	$0.24529^{+0.00017}_{-0.00019}$	$f\sigma_8(0.61)$	$0.4713^{+0.0091}_{-0.0093}$
$\epsilon_{\text{dust},\text{sync}}$	$-0.35^{+0.53}_{-0.58}$	Y_P^{BBN}	$0.24661^{+0.00017}_{-0.00019}$	$\sigma_8(0.61)$	$0.5900^{+0.0087}_{-0.0085}$
A_{217}^{CIB}	44^{+20}_{-20}	$10^5 D/H$	$2.634^{+0.078}_{-0.077}$	$f\sigma_8(2.33)$	$0.2972^{+0.0046}_{-0.0045}$
$\xi^{tSZ-CIB}$	—	Age/Gyr	$13.828^{+0.063}_{-0.064}$	$\sigma_8(2.33)$	$0.3061^{+0.0051}_{-0.0050}$
A_{143}^{tSZ}	$4.4^{+3.8}_{-4.2}$	z_*	$1090.28^{+0.69}_{-0.68}$	$r_{0.002}$	< 0.0541
A_{100}^{PS}	253^{+60}_{-50}	r_*	$144.51^{+0.71}_{-0.72}$	$r_{0.01}$	< 0.0566
A_{143}^{PS}	45^{+20}_{-20}	$100\theta_*$	$1.04101^{+0.00087}_{-0.00088}$	$\ln(10^{10} A_t)$	$-0.96^{+1.5}_{-2.1}$
A_{217}^{PS}	108^{+30}_{-30}	$D_M(z_*)/\text{Gpc}$	$13.881^{+0.067}_{-0.068}$	$r_{L=10}$	< 0.0278
A^{kSZ}	—	z_{drag}	$1059.38^{+0.90}_{-0.86}$	$10^9 A_t$	< 0.124
c_{100}	$0.9985^{+0.0022}_{-0.0027}$	r_{drag}	$147.25^{+0.74}_{-0.75}$	$10^9 A_t e^{-2\tau}$	< 0.111
c_{217}	$0.9997^{+0.0038}_{-0.0027}$	k_D	$0.14050^{+0.00089}_{-0.00088}$	f_{2000}^{143}	31^{+6}_{-6}
H_0	$67.0^{+1.4}_{-1.4}$	$100\theta_D$	$0.16108^{+0.00052}_{-0.00051}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-4}
Ω_Λ	$0.680^{+0.019}_{-0.020}$	z_{eq}	3407^{+71}_{-69}	f_{2000}^{217}	$107.9^{+3.8}_{-3.9}$
Ω_m	$0.320^{+0.020}_{-0.019}$	k_{eq}	$0.01040^{+0.00022}_{-0.00021}$	χ_{lensing}^2	$9.55 (\nu: 0.4)$
$\Omega_m h^2$	$0.1432^{+0.0030}_{-0.0029}$	$100\theta_{\text{eq}}$	$0.812^{+0.013}_{-0.013}$	χ_{BKPLANCK}^2	$739.4 (\nu: 3.5)$
$\Omega_m h^3$	$0.09588^{+0.00089}_{-0.00088}$	$100\theta_{s,\text{eq}}$	$0.4487^{+0.0067}_{-0.0066}$	χ_{simall}^2	$397.0 (\nu: 1.3)$
σ_8	$0.812^{+0.012}_{-0.012}$	$H(0.15)$	$72.3^{+1.2}_{-1.2}$	χ_{lowl}^2	$24.5 (\nu: 0.8)$
S_8	$0.838^{+0.032}_{-0.031}$	$D_M(0.15)$	647^{+12}_{-12}	χ_{prior}^2	$9.1 (\nu: 7.8)$
$\sigma_8 \Omega_m^{0.5}$	$0.459^{+0.017}_{-0.017}$	$H(0.38)$	$82.56^{+0.88}_{-0.86}$	χ_{CMB}^2	$5087 (\nu: 4947962.3)$

Best-fit $\chi_{\text{eff}}^2 = 8216.43$; $\Delta\chi_{\text{eff}}^2 = 6292.11$; $\bar{\chi}_{\text{eff}}^2 = 8242.24$; $\Delta\bar{\chi}_{\text{eff}}^2 = 6291.88$; $R - 1 = 0.00337$
 χ_{eff}^2 : CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 9.00 (Δ 0.02) BK15_dust: 735.17 (Δ -0.03) simall_100x143_offlike5_EE_Aplanck_B: 396.01 (Δ 0.01) com-
mander_dx12_v3_2_29: 23.99 (Δ -0.08) CamSpec like_10.7HM: 7049.83

17.16 base_r_CamSpecHM_TT_lowl_lowE_BK15_post_BAO_lensing/base_r_plikHM_TT_lowl_lowE_BK15_post_BAO_lensing

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02220^{+0.00039}_{-0.00038}$	$r_{\text{drag}} h$	$99.6^{+1.6}_{-1.6}$	$D_{\text{M}}(0.61)$	2308^{+21}_{-22}
$\Omega_c h^2$	$0.1192^{+0.0021}_{-0.0021}$	$\langle d^2 \rangle^{1/2}$	$2.437^{+0.042}_{-0.042}$	$H(2.33)$	$235.9^{+1.4}_{-1.4}$
$100\theta_{MC}$	$1.04099^{+0.00082}_{-0.00082}$	z_{re}	$7.8^{+1.4}_{-1.5}$	$D_{\text{M}}(2.33)$	5768^{+23}_{-24}
τ	$0.056^{+0.015}_{-0.014}$	$10^9 A_s$	$2.101^{+0.061}_{-0.057}$	$f\sigma_8(0.15)$	$0.457^{+0.012}_{-0.012}$
$\ln(10^{10} A_s)$	$3.045^{+0.029}_{-0.028}$	$10^9 A_s e^{-2\tau}$	$1.879^{+0.021}_{-0.021}$	$\sigma_8(0.15)$	$0.749^{+0.011}_{-0.011}$
n_s	$0.9664^{+0.0082}_{-0.0080}$	D_{40}	1236^{+26}_{-25}	$f\sigma_8(0.38)$	$0.4751^{+0.0098}_{-0.0098}$
r	< 0.0606	D_{220}	5719^{+79}_{-78}	$\sigma_8(0.38)$	$0.6635^{+0.0096}_{-0.0093}$
y_{cal}	$1.0010^{+0.0048}_{-0.0048}$	D_{810}	2537^{+26}_{-26}	$f\sigma_8(0.51)$	$0.4737^{+0.0087}_{-0.0088}$
$A_{B,\text{dust}}$	$4.9^{+2.1}_{-1.9}$	D_{1420}	$815.9^{+9.8}_{-9.8}$	$\sigma_8(0.51)$	$0.6209^{+0.0091}_{-0.0087}$
$A_{B,\text{sync}}$	< 3.67	D_{2000}	$230.1^{+3.4}_{-3.5}$	$f\sigma_8(0.61)$	$0.4687^{+0.0080}_{-0.0081}$
$\alpha_{B,\text{dust}}$	—	$n_{s,0.002}$	$0.9664^{+0.0082}_{-0.0080}$	$\sigma_8(0.61)$	$0.5908^{+0.0087}_{-0.0083}$
$\beta_{B,\text{dust}}$	$1.60^{+0.19}_{-0.19}$	Y_P	$0.24532^{+0.00015}_{-0.00017}$	$f\sigma_8(2.33)$	$0.2979^{+0.0045}_{-0.0043}$
$\alpha_{B,\text{sync}}$	—	Y_P^{BBN}	$0.24665^{+0.00015}_{-0.00017}$	$\sigma_8(2.33)$	$0.3071^{+0.0048}_{-0.0046}$
$\beta_{B,\text{sync}}$	$-3.10^{+0.53}_{-0.55}$	$10^5 D/H$	$2.618^{+0.072}_{-0.071}$	$r_{0.002}$	< 0.0559
$\epsilon_{\text{dust,sync}}$	$-0.34^{+0.53}_{-0.57}$	Age/Gyr	$13.809^{+0.054}_{-0.054}$	$r_{0.01}$	< 0.0582
A_{217}^{CIB}	44^{+20}_{-20}	z_*	$1090.07^{+0.56}_{-0.56}$	$\ln(10^{10} A_t)$	$-0.9^{+1.5}_{-2.0}$
$\xi^{tSZ-CIB}$	—	r_*	$144.76^{+0.56}_{-0.56}$	$r_{L=10}$	< 0.0286
A_{143}^{tSZ}	$4.4^{+3.8}_{-4.2}$	$100\theta_*$	$1.04119^{+0.00081}_{-0.00082}$	$10^9 A_t$	< 0.127
A_{100}^{PS}	252^{+60}_{-50}	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.903^{+0.056}_{-0.055}$	$10^9 A_t e^{-2\tau}$	< 0.114
A_{143}^{PS}	45^{+20}_{-20}	z_{drag}	$1059.49^{+0.87}_{-0.85}$	f_{2000}^{143}	31^{+6}_{-6}
A_{217}^{PS}	109^{+30}_{-30}	r_{drag}	$147.49^{+0.62}_{-0.62}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-4}
A^{kSZ}	—	k_{D}	$0.14032^{+0.00083}_{-0.00083}$	f_{2000}^{217}	$107.7^{+3.8}_{-3.9}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	$100\theta_{\text{D}}$	$0.16103^{+0.00050}_{-0.00050}$	χ^2_{lensing}	$9.28 (\nu: 0.2)$
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	z_{eq}	3380^{+50}_{-49}	χ^2_{BKPLANCK}	$739.8 (\nu: 3.4)$
H_0	$67.51^{+0.97}_{-0.96}$	k_{eq}	$0.01032^{+0.00015}_{-0.00015}$	χ^2_{small}	$397.3 (\nu: 1.8)$
Ω_{Λ}	$0.688^{+0.013}_{-0.013}$	$100\theta_{\text{eq}}$	$0.8169^{+0.0091}_{-0.0091}$	χ^2_{lowl}	$24.0 (\nu: 0.6)$
Ω_m	$0.312^{+0.013}_{-0.013}$	$100\theta_{\text{s,eq}}$	$0.4514^{+0.0047}_{-0.0047}$	$\chi^2_{6\text{DF}}$	$0.064 (\nu: 0.0)$
$\Omega_m h^2$	$0.1421^{+0.0021}_{-0.0020}$	$H(0.15)$	$72.79^{+0.84}_{-0.83}$	χ^2_{MGS}	$1.23 (\nu: 0.1)$
$\Omega_m h^3$	$0.09591^{+0.00089}_{-0.00088}$	$D_{\text{M}}(0.15)$	$642.2^{+8.3}_{-8.2}$	χ^2_{DR12BAO}	$5.0 (\nu: 1.3)$
σ_8	$0.810^{+0.012}_{-0.012}$	$H(0.38)$	$82.90^{+0.65}_{-0.63}$	χ^2_{prior}	$9.1 (\nu: 7.8)$
S_8	$0.826^{+0.023}_{-0.023}$	$D_{\text{M}}(0.38)$	1531^{+17}_{-17}	χ^2_{CMB}	$5087 (\nu: 4948000.0)$
$\sigma_8 \Omega_m^{0.5}$	$0.452^{+0.013}_{-0.013}$	$H(0.51)$	$89.61^{+0.54}_{-0.52}$	χ^2_{BAO}	$6.3 (\nu: 0.9)$
$\sigma_8 \Omega_m^{0.25}$	$0.605^{+0.012}_{-0.012}$	$D_{\text{M}}(0.51)$	1984^{+20}_{-20}		
$\sigma_8/h^{0.5}$	$0.986^{+0.017}_{-0.017}$	$H(0.61)$	$95.23^{+0.47}_{-0.46}$		

Best-fit $\chi^2_{\text{eff}} = 8223.00$; $\Delta\chi^2_{\text{eff}} = 6292.23$; $\bar{\chi}^2_{\text{eff}} = 8248.72$; $\Delta\bar{\chi}^2_{\text{eff}} = 6291.85$; $R - 1 = 0.00847$
 χ^2_{eff} : BAO - 6DF: 0.05 (Δ 0.00) MGS: 1.10 (Δ 0.00) DR12BAO: 4.77 (Δ -0.00) CMB - smicadx12.Dec5.ftl_mv2.ndclpp-p.teb.consext8: 8.90 (Δ 0.09) BK15.dust: 735.61 (Δ 0.13) small_100x143_offlike5.EE.Aplanck_B: 396.19 (Δ -0.01) commander_dx12.v3.2.29: 23.50 (Δ -0.10) CamSpec like_10.7HM: 7050.59

17.17 base_r_CamSpecHM_TT_lowl_lowE_BK15_post_zre6p5/base_r_plikHM_TT_lowl_lowE_BK15_post_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02209^{+0.00043}_{-0.00042}$	$\sigma_8 \Omega_m^{0.25}$	$0.614^{+0.023}_{-0.022}$	$D_M(0.38)$	1545^{+31}_{-31}
$\Omega_c h^2$	$0.1210^{+0.0041}_{-0.0040}$	$\sigma_8/h^{0.5}$	$0.998^{+0.031}_{-0.030}$	$H(0.51)$	$89.26^{+0.87}_{-0.83}$
$100\theta_{MC}$	$1.04076^{+0.00092}_{-0.00093}$	$r_{\text{drag}} h$	$98.2^{+3.1}_{-3.1}$	$D_M(0.51)$	2000^{+36}_{-36}
τ	$0.054^{+0.013}_{-0.011}$	$\langle d^2 \rangle^{1/2}$	$2.463^{+0.073}_{-0.072}$	$H(0.61)$	$94.96^{+0.70}_{-0.65}$
$\ln(10^{10} A_s)$	$3.045^{+0.028}_{-0.026}$	z_{re}	< 8.89	$D_M(0.61)$	2325^{+38}_{-38}
n_s	$0.963^{+0.011}_{-0.011}$	$10^9 A_s$	$2.101^{+0.058}_{-0.054}$	$H(2.33)$	$236.9^{+2.5}_{-2.4}$
r	< 0.0585	$10^9 A_s e^{-2\tau}$	$1.886^{+0.027}_{-0.026}$	$D_M(2.33)$	5780^{+31}_{-32}
y_{cal}	$1.0007^{+0.0049}_{-0.0048}$	D_{40}	1243^{+31}_{-30}	$f\sigma_8(0.15)$	$0.467^{+0.024}_{-0.023}$
$A_{B,\text{dust}}$	$4.9^{+2.1}_{-1.9}$	D_{220}	5706^{+81}_{-80}	$\sigma_8(0.15)$	$0.752^{+0.014}_{-0.013}$
$A_{B,\text{sync}}$	< 3.67	D_{810}	2537^{+27}_{-27}	$f\sigma_8(0.38)$	$0.483^{+0.018}_{-0.018}$
$\alpha_{B,\text{dust}}$	—	D_{1420}	815^{+10}_{-10}	$\sigma_8(0.38)$	$0.665^{+0.011}_{-0.010}$
$\beta_{B,\text{dust}}$	$1.60^{+0.19}_{-0.19}$	D_{2000}	$229.6^{+3.6}_{-3.5}$	$f\sigma_8(0.51)$	$0.480^{+0.016}_{-0.016}$
$\alpha_{B,\text{sync}}$	—	$n_{s,0.002}$	$0.963^{+0.011}_{-0.011}$	$\sigma_8(0.51)$	$0.6220^{+0.0096}_{-0.0092}$
$\beta_{B,\text{sync}}$	$-3.10^{+0.52}_{-0.55}$	Y_P	$0.24527^{+0.00018}_{-0.00020}$	$f\sigma_8(0.61)$	$0.474^{+0.014}_{-0.014}$
$\epsilon_{\text{dust,sync}}$	$-0.35^{+0.53}_{-0.57}$	Y_P^{BBN}	$0.24660^{+0.00018}_{-0.00020}$	$\sigma_8(0.61)$	$0.5915^{+0.0089}_{-0.0085}$
A_{217}^{CIB}	44^{+20}_{-20}	$10^5 D/H$	$2.639^{+0.082}_{-0.081}$	$f\sigma_8(2.33)$	$0.2978^{+0.0043}_{-0.0041}$
$\xi^{tSZ-CIB}$	—	Age/Gyr	$13.834^{+0.070}_{-0.071}$	$\sigma_8(2.33)$	$0.3066^{+0.0046}_{-0.0042}$
A_{143}^{tSZ}	$4.4^{+3.8}_{-4.2}$	z_*	$1090.37^{+0.79}_{-0.78}$	$r_{0.002}$	< 0.0533
A_{100}^{PS}	253^{+60}_{-50}	r_*	$144.39^{+0.93}_{-0.93}$	$r_{0.01}$	< 0.0558
A_{143}^{PS}	45^{+20}_{-20}	$100\theta_*$	$1.04097^{+0.00091}_{-0.00091}$	$\ln(10^{10} A_t)$	$-0.99^{+1.5}_{-2.1}$
A_{217}^{PS}	109^{+30}_{-30}	$D_M(z_*)/\text{Gpc}$	$13.870^{+0.086}_{-0.086}$	$r_{L=10}$	< 0.0274
A^{kSZ}	—	z_{drag}	$1059.36^{+0.88}_{-0.87}$	$10^9 A_t$	< 0.123
c_{100}	$0.9985^{+0.0022}_{-0.0027}$	r_{drag}	$147.14^{+0.93}_{-0.94}$	$10^9 A_t e^{-2\tau}$	< 0.110
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	k_D	$0.1406^{+0.0010}_{-0.0010}$	f_{2000}^{143}	31^{+6}_{-6}
H_0	$66.7^{+1.8}_{-1.8}$	$100\theta_D$	$0.16110^{+0.00052}_{-0.00052}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-4}
Ω_Λ	$0.677^{+0.025}_{-0.026}$	z_{eq}	3420^{+94}_{-92}	f_{2000}^{217}	$107.9^{+3.8}_{-3.9}$
Ω_m	$0.323^{+0.026}_{-0.025}$	k_{eq}	$0.01044^{+0.00029}_{-0.00028}$	χ_{BKPLANCK}^2	$739.2 (\nu: 3.6)$
$\Omega_m h^2$	$0.1437^{+0.0039}_{-0.0038}$	$100\theta_{\text{eq}}$	$0.809^{+0.017}_{-0.017}$	χ_{simall}^2	$397.0 (\nu: 1.5)$
$\Omega_m h^3$	$0.09590^{+0.00090}_{-0.00089}$	$100\theta_{s,\text{eq}}$	$0.4476^{+0.0089}_{-0.0087}$	χ_{lowl}^2	$24.8 (\nu: 1.1)$
σ_8	$0.815^{+0.017}_{-0.016}$	$H(0.15)$	$72.1^{+1.5}_{-1.5}$	χ_{prior}^2	$9.1 (\nu: 7.7)$
S_8	$0.846^{+0.047}_{-0.046}$	$D_M(0.15)$	649^{+16}_{-15}	χ_{CMB}^2	$5078 (\nu: 4948259.1)$
$\sigma_8 \Omega_m^{0.5}$	$0.463^{+0.026}_{-0.025}$	$H(0.38)$	$82.4^{+1.1}_{-1.1}$		

$$\bar{\chi}_{\text{eff}}^2 = 8233.01; \Delta \bar{\chi}_{\text{eff}}^2 = 6292.07; R - 1 = 0.00318$$

17.18 base_r_CamSpecHM_TT_lowl_lowE_BK15_post_BAO_zre6p5/base_r_plikHM_TT_lowl_lowE_BK15_post_BAO_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02220^{+0.00039}_{-0.00038}$	$\sigma_8/h^{0.5}$	$0.985^{+0.022}_{-0.021}$	$D_M(0.51)$	1983^{+21}_{-21}
$\Omega_c h^2$	$0.1191^{+0.0024}_{-0.0024}$	$r_{\text{drag}} h$	$99.7^{+1.8}_{-1.8}$	$H(0.61)$	$95.24^{+0.49}_{-0.47}$
$100\theta_{MC}$	$1.04101^{+0.00082}_{-0.00083}$	$\langle d^2 \rangle^{1/2}$	$2.433^{+0.053}_{-0.051}$	$D_M(0.61)$	2307^{+23}_{-23}
τ	$0.056^{+0.013}_{-0.012}$	z_{re}	< 9.01	$H(2.33)$	$235.8^{+1.5}_{-1.5}$
$\ln(10^{10} A_s)$	$3.044^{+0.029}_{-0.027}$	$10^9 A_s$	$2.099^{+0.060}_{-0.057}$	$D_M(2.33)$	5768^{+24}_{-24}
n_s	$0.9669^{+0.0085}_{-0.0083}$	$10^9 A_s e^{-2\tau}$	$1.878^{+0.023}_{-0.023}$	$f\sigma_8(0.15)$	$0.456^{+0.015}_{-0.014}$
r	< 0.0617	D_{40}	1234^{+27}_{-27}	$\sigma_8(0.15)$	$0.748^{+0.013}_{-0.012}$
y_{cal}	$1.0008^{+0.0049}_{-0.0049}$	D_{220}	5715^{+79}_{-79}	$f\sigma_8(0.38)$	$0.474^{+0.012}_{-0.012}$
$A_{B,\text{dust}}$	$4.9^{+2.1}_{-1.9}$	D_{810}	2536^{+27}_{-27}	$\sigma_8(0.38)$	$0.663^{+0.010}_{-0.010}$
$A_{B,\text{sync}}$	< 3.67	D_{1420}	$815.7^{+9.9}_{-9.9}$	$f\sigma_8(0.51)$	$0.473^{+0.011}_{-0.011}$
$\alpha_{B,\text{dust}}$	—	D_{2000}	$230.1^{+3.5}_{-3.5}$	$\sigma_8(0.51)$	$0.6206^{+0.0096}_{-0.0092}$
$\beta_{B,\text{dust}}$	$1.60^{+0.19}_{-0.19}$	$n_{s,0.002}$	$0.9669^{+0.0085}_{-0.0083}$	$f\sigma_8(0.61)$	$0.468^{+0.010}_{-0.0098}$
$\alpha_{B,\text{sync}}$	—	Y_P	$0.24532^{+0.00015}_{-0.00017}$	$\sigma_8(0.61)$	$0.5905^{+0.0091}_{-0.0087}$
$\beta_{B,\text{sync}}$	$-3.10^{+0.53}_{-0.55}$	Y_P^{BBN}	$0.24665^{+0.00015}_{-0.00017}$	$f\sigma_8(2.33)$	$0.2977^{+0.0045}_{-0.0043}$
$\epsilon_{\text{dust,sync}}$	$-0.34^{+0.53}_{-0.57}$	$10^5 D/H$	$2.618^{+0.072}_{-0.072}$	$\sigma_8(2.33)$	$0.3070^{+0.0047}_{-0.0044}$
A_{217}^{CIB}	44^{+20}_{-20}	Age/Gyr	$13.808^{+0.054}_{-0.055}$	$r_{0.002}$	< 0.0568
$\xi^{tSZ-CIB}$	—	z_*	$1090.06^{+0.57}_{-0.57}$	$r_{0.01}$	< 0.0591
A_{143}^{tSZ}	$4.4^{+3.8}_{-4.2}$	r_*	$144.79^{+0.62}_{-0.62}$	$\ln(10^{10} A_t)$	$-0.9^{+1.5}_{-2.0}$
A_{100}^{PS}	252^{+60}_{-50}	$100\theta_*$	$1.04121^{+0.00081}_{-0.00082}$	$r_{L=10}$	< 0.0291
A_{143}^{PS}	44^{+20}_{-20}	$D_M(z_*)/\text{Gpc}$	$13.906^{+0.061}_{-0.060}$	$10^9 A_t$	< 0.129
A_{217}^{PS}	108^{+30}_{-30}	z_{drag}	$1059.47^{+0.88}_{-0.84}$	$10^9 A_t e^{-2\tau}$	< 0.116
A^{kSZ}	—	r_{drag}	$147.52^{+0.67}_{-0.67}$	f_{2000}^{143}	31^{+6}_{-6}
c_{100}	$0.9985^{+0.0022}_{-0.0026}$	k_D	$0.14028^{+0.00087}_{-0.00087}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-4}
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	$100\theta_D$	$0.16104^{+0.00050}_{-0.00050}$	f_{2000}^{217}	$107.6^{+3.8}_{-3.9}$
H_0	$67.6^{+1.1}_{-1.0}$	z_{eq}	3377^{+56}_{-55}	χ_{BKPLANCK}^2	$739.9 (\nu: 3.5)$
Ω_Λ	$0.689^{+0.014}_{-0.014}$	k_{eq}	$0.01031^{+0.00017}_{-0.00017}$	χ_{simall}^2	$397.2 (\nu: 1.9)$
Ω_m	$0.311^{+0.014}_{-0.014}$	$100\theta_{\text{eq}}$	$0.818^{+0.010}_{-0.010}$	χ_{lowl}^2	$23.9 (\nu: 0.6)$
$\Omega_m h^2$	$0.1419^{+0.0023}_{-0.0023}$	$100\theta_{s,\text{eq}}$	$0.4517^{+0.0053}_{-0.0053}$	$\chi_{6\text{DF}}^2$	$0.064 (\nu: 0.0)$
$\Omega_m h^3$	$0.09589^{+0.00089}_{-0.00089}$	$H(0.15)$	$72.83^{+0.92}_{-0.90}$	χ_{MGS}^2	$1.30 (\nu: 0.1)$
σ_8	$0.809^{+0.015}_{-0.013}$	$D_M(0.15)$	$641.8^{+9.0}_{-9.0}$	χ_{DR12BAO}^2	$4.9 (\nu: 1.5)$
S_8	$0.824^{+0.029}_{-0.028}$	$H(0.38)$	$82.93^{+0.69}_{-0.67}$	χ_{prior}^2	$9.1 (\nu: 7.7)$
$\sigma_8 \Omega_m^{0.5}$	$0.451^{+0.016}_{-0.015}$	$D_M(0.38)$	1531^{+18}_{-18}	χ_{BAO}^2	$6.3 (\nu: 1.0)$
$\sigma_8 \Omega_m^{0.25}$	$0.604^{+0.015}_{-0.015}$	$H(0.51)$	$89.63^{+0.57}_{-0.55}$	χ_{CMB}^2	$5078 (\nu: 4947874.5)$

$$\bar{\chi}_{\text{eff}}^2 = 8239.57; \Delta \bar{\chi}_{\text{eff}}^2 = 6291.71; R - 1 = 0.00860$$

17.19 base_r_CamSpecHM_TT_lowl_lowE_BK15_post_lensing_zre6p5/base_r_plikHM_TT_lowl_lowE_BK15_post_lensing_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02213^{+0.00041}_{-0.00040}$	$\sigma_8 \Omega_m^{0.25}$	$0.610^{+0.015}_{-0.015}$	$D_M(0.38)$	1540^{+23}_{-23}
$\Omega_c h^2$	$0.1203^{+0.0030}_{-0.0029}$	$\sigma_8/h^{0.5}$	$0.992^{+0.020}_{-0.020}$	$H(0.51)$	$89.38^{+0.70}_{-0.67}$
$100\theta_{MC}$	$1.04082^{+0.00088}_{-0.00088}$	$r_{\text{drag}} h$	$98.7^{+2.3}_{-2.3}$	$D_M(0.51)$	1994^{+27}_{-28}
τ	$0.054^{+0.012}_{-0.011}$	$\langle d^2 \rangle^{1/2}$	$2.452^{+0.048}_{-0.048}$	$H(0.61)$	$95.05^{+0.58}_{-0.55}$
$\ln(10^{10} A_s)$	$3.043^{+0.025}_{-0.024}$	z_{re}	< 8.84	$D_M(0.61)$	2319^{+29}_{-30}
n_s	$0.9639^{+0.0095}_{-0.0094}$	$10^9 A_s$	$2.097^{+0.053}_{-0.049}$	$H(2.33)$	$236.5^{+1.8}_{-1.8}$
r	< 0.0593	$10^9 A_s e^{-2\tau}$	$1.883^{+0.022}_{-0.022}$	$D_M(2.33)$	5776^{+27}_{-28}
y_{cal}	$1.0007^{+0.0049}_{-0.0048}$	D_{40}	1240^{+27}_{-26}	$f\sigma_8(0.15)$	$0.463^{+0.016}_{-0.016}$
$A_{B,\text{dust}}$	$4.9^{+2.1}_{-1.9}$	D_{220}	5710^{+81}_{-79}	$\sigma_8(0.15)$	$0.750^{+0.010}_{-0.0096}$
$A_{B,\text{sync}}$	< 3.66	D_{810}	2536^{+26}_{-26}	$f\sigma_8(0.38)$	$0.479^{+0.012}_{-0.012}$
$\alpha_{B,\text{dust}}$	—	D_{1420}	815^{+10}_{-10}	$\sigma_8(0.38)$	$0.6640^{+0.0086}_{-0.0083}$
$\beta_{B,\text{dust}}$	$1.60^{+0.19}_{-0.19}$	D_{2000}	$229.7^{+3.5}_{-3.5}$	$f\sigma_8(0.51)$	$0.477^{+0.010}_{-0.011}$
$\alpha_{B,\text{sync}}$	—	$n_{s,0.002}$	$0.9639^{+0.0095}_{-0.0094}$	$\sigma_8(0.51)$	$0.6210^{+0.0080}_{-0.0077}$
$\beta_{B,\text{sync}}$	$-3.10^{+0.52}_{-0.55}$	Y_P	$0.24529^{+0.00017}_{-0.00019}$	$f\sigma_8(0.61)$	$0.4715^{+0.0091}_{-0.0093}$
$\epsilon_{\text{dust,sync}}$	$-0.35^{+0.53}_{-0.58}$	Y_P^{BBN}	$0.24662^{+0.00017}_{-0.00019}$	$\sigma_8(0.61)$	$0.5907^{+0.0077}_{-0.0073}$
A_{217}^{CIB}	44^{+20}_{-20}	$10^5 D/H$	$2.632^{+0.077}_{-0.076}$	$f\sigma_8(2.33)$	$0.2976^{+0.0040}_{-0.0038}$
$\xi^{tSZ-CIB}$	—	Age/Gyr	$13.826^{+0.062}_{-0.063}$	$\sigma_8(2.33)$	$0.3065^{+0.0044}_{-0.0041}$
A_{143}^{tSZ}	$4.4^{+3.8}_{-4.2}$	z_*	$1090.26^{+0.67}_{-0.67}$	$r_{0.002}$	< 0.0542
A_{100}^{PS}	253^{+60}_{-50}	r_*	$144.53^{+0.70}_{-0.70}$	$r_{0.01}$	< 0.0567
A_{143}^{PS}	45^{+20}_{-20}	$100\theta_*$	$1.04103^{+0.00086}_{-0.00087}$	$\ln(10^{10} A_t)$	$-0.95^{+1.5}_{-2.1}$
A_{217}^{PS}	108^{+30}_{-30}	$D_M(z_*)/\text{Gpc}$	$13.884^{+0.066}_{-0.066}$	$r_{L=10}$	< 0.0278
A^{kSZ}	—	z_{drag}	$1059.39^{+0.88}_{-0.87}$	$10^9 A_t$	< 0.124
c_{100}	$0.9985^{+0.0022}_{-0.0027}$	r_{drag}	$147.28^{+0.73}_{-0.73}$	$10^9 A_t e^{-2\tau}$	< 0.112
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	k_D	$0.14048^{+0.00089}_{-0.00088}$	f_{2000}^{143}	31^{+6}_{-6}
H_0	$67.0^{+1.4}_{-1.3}$	$100\theta_D$	$0.16108^{+0.00051}_{-0.00051}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-4}
Ω_Λ	$0.681^{+0.018}_{-0.019}$	z_{eq}	3404^{+68}_{-67}	f_{2000}^{217}	$107.9^{+3.8}_{-3.9}$
Ω_m	$0.319^{+0.019}_{-0.018}$	k_{eq}	$0.01039^{+0.00021}_{-0.00020}$	χ_{lensing}^2	$9.53 (\nu: 0.4)$
$\Omega_m h^2$	$0.1431^{+0.0028}_{-0.0028}$	$100\theta_{\text{eq}}$	$0.812^{+0.013}_{-0.012}$	χ_{BKPLANCK}^2	$739.4 (\nu: 3.5)$
$\Omega_m h^3$	$0.09588^{+0.00089}_{-0.00088}$	$100\theta_{\text{s,eq}}$	$0.4490^{+0.0065}_{-0.0064}$	χ_{small}^2	$396.9 (\nu: 1.3)$
σ_8	$0.812^{+0.012}_{-0.011}$	$H(0.15)$	$72.4^{+1.2}_{-1.1}$	χ_{lowl}^2	$24.5 (\nu: 0.8)$
S_8	$0.837^{+0.032}_{-0.031}$	$D_M(0.15)$	646^{+12}_{-12}	χ_{prior}^2	$9.1 (\nu: 7.8)$
$\sigma_8 \Omega_m^{0.5}$	$0.459^{+0.017}_{-0.017}$	$H(0.38)$	$82.59^{+0.87}_{-0.83}$	χ_{CMB}^2	$5087 (\nu: 4947958.0)$

$$\bar{\chi}_{\text{eff}}^2 = 8241.99; \Delta \bar{\chi}_{\text{eff}}^2 = 6291.89; R - 1 = 0.00437$$

17.20 base_r_CamSpecHM_TT_lowl_lowE_BK15_post_BAO_lensing_zre6p5/base_r_plikHM_TT_lowl_lowE_BK15_post_BAO_lensing_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02220^{+0.00038}_{-0.00038}$	$r_{\text{drag}} h$	$99.6^{+1.6}_{-1.6}$	$D_{\text{M}}(0.61)$	2308^{+21}_{-21}
$\Omega_c h^2$	$0.1192^{+0.0021}_{-0.0021}$	$\langle d^2 \rangle^{1/2}$	$2.438^{+0.041}_{-0.041}$	$H(2.33)$	$235.9^{+1.4}_{-1.4}$
$100\theta_{MC}$	$1.04099^{+0.00082}_{-0.00083}$	z_{re}	$7.9^{+1.2}_{-1.3}$	$D_{\text{M}}(2.33)$	5768^{+23}_{-23}
τ	$0.056^{+0.013}_{-0.012}$	$10^9 A_s$	$2.103^{+0.055}_{-0.053}$	$f\sigma_8(0.15)$	$0.457^{+0.012}_{-0.012}$
$\ln(10^{10} A_s)$	$3.046^{+0.026}_{-0.025}$	$10^9 A_s e^{-2\tau}$	$1.879^{+0.021}_{-0.021}$	$\sigma_8(0.15)$	$0.749^{+0.011}_{-0.0098}$
n_s	$0.9665^{+0.0082}_{-0.0079}$	D_{40}	1236^{+26}_{-25}	$f\sigma_8(0.38)$	$0.4753^{+0.0097}_{-0.0098}$
r	< 0.0606	D_{220}	5719^{+78}_{-78}	$\sigma_8(0.38)$	$0.6638^{+0.0094}_{-0.0084}$
y_{cal}	$1.0009^{+0.0048}_{-0.0048}$	D_{810}	2537^{+26}_{-26}	$f\sigma_8(0.51)$	$0.4739^{+0.0087}_{-0.0087}$
$A_{B,\text{dust}}$	$4.9^{+2.1}_{-1.9}$	D_{1420}	$815.9^{+9.8}_{-9.8}$	$\sigma_8(0.51)$	$0.6212^{+0.0088}_{-0.0079}$
$A_{B,\text{sync}}$	< 3.67	D_{2000}	$230.2^{+3.4}_{-3.5}$	$f\sigma_8(0.61)$	$0.4689^{+0.0080}_{-0.0079}$
$\alpha_{B,\text{dust}}$	—	$n_{s,0.002}$	$0.9665^{+0.0082}_{-0.0079}$	$\sigma_8(0.61)$	$0.5911^{+0.0081}_{-0.0078}$
$\beta_{B,\text{dust}}$	$1.60^{+0.19}_{-0.19}$	Y_P	$0.24532^{+0.00016}_{-0.00016}$	$f\sigma_8(2.33)$	$0.2980^{+0.0041}_{-0.0040}$
$\alpha_{B,\text{sync}}$	—	Y_P^{BBN}	$0.24665^{+0.00015}_{-0.00017}$	$\sigma_8(2.33)$	$0.3072^{+0.0044}_{-0.0042}$
$\beta_{B,\text{sync}}$	$-3.10^{+0.53}_{-0.55}$	$10^5 D/H$	$2.618^{+0.072}_{-0.071}$	$r_{0.002}$	< 0.0559
$\epsilon_{\text{dust,sync}}$	$-0.34^{+0.53}_{-0.57}$	Age/Gyr	$13.809^{+0.054}_{-0.054}$	$r_{0.01}$	< 0.0582
A_{217}^{CIB}	44^{+20}_{-20}	z_*	$1090.06^{+0.56}_{-0.56}$	$\ln(10^{10} A_t)$	$-0.9^{+1.5}_{-2.1}$
$\xi^{tSZ-CIB}$	—	r_*	$144.77^{+0.55}_{-0.55}$	$r_{L=10}$	< 0.0286
A_{143}^{tSZ}	$4.4^{+3.8}_{-4.2}$	$100\theta_*$	$1.04120^{+0.00081}_{-0.00082}$	$10^9 A_t$	< 0.127
A_{100}^{PS}	252^{+60}_{-50}	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.904^{+0.055}_{-0.055}$	$10^9 A_t e^{-2\tau}$	< 0.114
A_{143}^{PS}	44^{+20}_{-20}	z_{drag}	$1059.49^{+0.86}_{-0.85}$	f_{2000}^{143}	31^{+6}_{-6}
A_{217}^{PS}	109^{+30}_{-30}	r_{drag}	$147.49^{+0.62}_{-0.62}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-4}
A^{kSZ}	—	k_{D}	$0.14032^{+0.00083}_{-0.00083}$	f_{2000}^{217}	$107.7^{+3.8}_{-3.9}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	$100\theta_{\text{D}}$	$0.16103^{+0.00050}_{-0.00050}$	χ_{lensing}^2	$9.25 (\nu: 0.2)$
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	z_{eq}	3379^{+49}_{-48}	χ_{BKPLANCK}^2	$739.8 (\nu: 3.4)$
H_0	$67.52^{+0.96}_{-0.95}$	k_{eq}	$0.01031^{+0.00015}_{-0.00015}$	χ_{small}^2	$397.3 (\nu: 1.8)$
Ω_{Λ}	$0.688^{+0.012}_{-0.013}$	$100\theta_{\text{eq}}$	$0.8171^{+0.0090}_{-0.0090}$	χ_{lowl}^2	$24.0 (\nu: 0.6)$
Ω_m	$0.312^{+0.013}_{-0.012}$	$100\theta_{\text{s,eq}}$	$0.4515^{+0.0046}_{-0.0047}$	$\chi_{6\text{DF}}^2$	$0.062 (\nu: 0.0)$
$\Omega_m h^2$	$0.1421^{+0.0021}_{-0.0020}$	$H(0.15)$	$72.80^{+0.84}_{-0.83}$	χ_{MGS}^2	$1.25 (\nu: 0.1)$
$\Omega_m h^3$	$0.09591^{+0.00089}_{-0.00088}$	$D_{\text{M}}(0.15)$	$642.1^{+8.2}_{-8.2}$	χ_{DR12BAO}^2	$4.9 (\nu: 1.2)$
σ_8	$0.810^{+0.012}_{-0.011}$	$H(0.38)$	$82.91^{+0.64}_{-0.62}$	χ_{prior}^2	$9.1 (\nu: 7.7)$
S_8	$0.826^{+0.023}_{-0.023}$	$D_{\text{M}}(0.38)$	1531^{+17}_{-17}	χ_{CMB}^2	$5087 (\nu: 4947987.2)$
$\sigma_8 \Omega_m^{0.5}$	$0.452^{+0.013}_{-0.013}$	$H(0.51)$	$89.62^{+0.54}_{-0.52}$	χ_{BAO}^2	$6.2 (\nu: 0.8)$
$\sigma_8 \Omega_m^{0.25}$	$0.605^{+0.012}_{-0.012}$	$D_{\text{M}}(0.51)$	1984^{+20}_{-20}		
$\sigma_8/h^{0.5}$	$0.986^{+0.017}_{-0.017}$	$H(0.61)$	$95.23^{+0.47}_{-0.45}$		

$$\bar{\chi}_{\text{eff}}^2 = 8248.57; \Delta \bar{\chi}_{\text{eff}}^2 = 6291.85; R - 1 = 0.00954$$

17.21 base_r_CamSpecHM_TTTEEE_lowl_lowE_BK15/base_r_plikHM_TTTEEE_lowl_lowE_BK15

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02231^{+0.00031}_{-0.00031}$	$\sigma_8 \Omega_m^{0.25}$	$0.609^{+0.017}_{-0.017}$	$D_M(0.38)$	1535^{+21}_{-21}
$\Omega_c h^2$	$0.1201^{+0.0028}_{-0.0028}$	$\sigma_8/h^{0.5}$	$0.990^{+0.024}_{-0.024}$	$H(0.51)$	$89.56^{+0.60}_{-0.57}$
$100\theta_{MC}$	$1.04087^{+0.00062}_{-0.00061}$	$r_{\text{drag}} h$	$99.0^{+2.1}_{-2.1}$	$D_M(0.51)$	1988^{+24}_{-24}
τ	$0.054^{+0.016}_{-0.015}$	$\langle d^2 \rangle^{1/2}$	$2.446^{+0.057}_{-0.058}$	$H(0.61)$	$95.22^{+0.48}_{-0.46}$
$\ln(10^{10} A_s)$	$3.044^{+0.033}_{-0.032}$	z_{re}	$7.7^{+1.6}_{-1.6}$	$D_M(0.61)$	2313^{+26}_{-26}
n_s	$0.9654^{+0.0088}_{-0.0087}$	$10^9 A_s$	$2.099^{+0.070}_{-0.066}$	$H(2.33)$	$236.5^{+1.7}_{-1.7}$
r	< 0.0654	$10^9 A_s e^{-2\tau}$	$1.883^{+0.024}_{-0.024}$	$D_M(2.33)$	5767^{+21}_{-22}
y_{cal}	$1.0008^{+0.0049}_{-0.0049}$	D_{40}	1240^{+27}_{-27}	$f\sigma_8(0.15)$	$0.461^{+0.017}_{-0.017}$
$A_{B,\text{dust}}$	$4.9^{+2.1}_{-1.9}$	D_{220}	5725^{+78}_{-78}	$\sigma_8(0.15)$	$0.750^{+0.013}_{-0.013}$
$A_{B,\text{sync}}$	< 3.64	D_{810}	2539^{+27}_{-27}	$f\sigma_8(0.38)$	$0.478^{+0.014}_{-0.014}$
$\alpha_{B,\text{dust}}$	—	D_{1420}	$817.0^{+9.6}_{-9.7}$	$\sigma_8(0.38)$	$0.664^{+0.011}_{-0.011}$
$\beta_{B,\text{dust}}$	$1.60^{+0.19}_{-0.19}$	D_{2000}	$230.7^{+3.2}_{-3.3}$	$f\sigma_8(0.51)$	$0.476^{+0.012}_{-0.012}$
$\alpha_{B,\text{sync}}$	—	$n_{s,0.002}$	$0.9654^{+0.0088}_{-0.0087}$	$\sigma_8(0.51)$	$0.621^{+0.011}_{-0.010}$
$\beta_{B,\text{sync}}$	$-3.10^{+0.52}_{-0.55}$	Y_P	$0.24537^{+0.00012}_{-0.00013}$	$f\sigma_8(0.61)$	$0.471^{+0.011}_{-0.011}$
$\epsilon_{\text{dust,sync}}$	$-0.35^{+0.53}_{-0.57}$	Y_P^{BBN}	$0.24670^{+0.00012}_{-0.00013}$	$\sigma_8(0.61)$	$0.591^{+0.010}_{-0.0097}$
A_{217}^{CIB}	43^{+10}_{-20}	$10^5 D/H$	$2.597^{+0.059}_{-0.056}$	$f\sigma_8(2.33)$	$0.2977^{+0.0050}_{-0.0048}$
$\xi^{tSZ-CIB}$	—	Age/Gyr	$13.805^{+0.048}_{-0.049}$	$\sigma_8(2.33)$	$0.3067^{+0.0053}_{-0.0050}$
A_{143}^{tSZ}	$4.7^{+3.9}_{-4.3}$	z_*	$1090.00^{+0.55}_{-0.54}$	$r_{0.002}$	< 0.0604
A_{100}^{PS}	249^{+60}_{-50}	r_*	$144.46^{+0.65}_{-0.63}$	$r_{0.01}$	< 0.0628
A_{143}^{PS}	43^{+20}_{-20}	$100\theta_*$	$1.04106^{+0.00061}_{-0.00060}$	$\ln(10^{10} A_t)$	$-0.8^{+1.4}_{-1.9}$
A_{217}^{PS}	109^{+20}_{-30}	$D_M(z_*)/\text{Gpc}$	$13.876^{+0.061}_{-0.059}$	$r_{L=10}$	< 0.0310
A^{kSZ}	—	z_{drag}	$1059.80^{+0.63}_{-0.67}$	$10^9 A_t$	< 0.137
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	r_{drag}	$147.14^{+0.66}_{-0.64}$	$10^9 A_t e^{-2\tau}$	< 0.123
c_{217}	$0.9996^{+0.0037}_{-0.0027}$	k_D	$0.14077^{+0.00070}_{-0.00074}$	f_{2000}^{143}	30^{+6}_{-5}
H_0	$67.3^{+1.2}_{-1.2}$	$100\theta_D$	$0.16083^{+0.00039}_{-0.00037}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
Ω_Λ	$0.684^{+0.017}_{-0.017}$	z_{eq}	3403^{+63}_{-63}	f_{2000}^{217}	$107.0^{+3.6}_{-3.6}$
Ω_m	$0.316^{+0.017}_{-0.017}$	k_{eq}	$0.01039^{+0.00019}_{-0.00019}$	χ_{BKPLANCK}^2	$739.7 (\nu: 3.6)$
$\Omega_m h^2$	$0.1430^{+0.0026}_{-0.0026}$	$100\theta_{\text{eq}}$	$0.813^{+0.012}_{-0.012}$	χ_{simall}^2	$397.3 (\nu: 1.9)$
$\Omega_m h^3$	$0.09620^{+0.00064}_{-0.00066}$	$100\theta_{s,\text{eq}}$	$0.4493^{+0.0061}_{-0.0060}$	χ_{lowl}^2	$24.4 (\nu: 0.7)$
σ_8	$0.812^{+0.015}_{-0.015}$	$H(0.15)$	$72.6^{+1.0}_{-1.0}$	χ_{prior}^2	$11.3 (\nu: 11.2)$
S_8	$0.833^{+0.033}_{-0.032}$	$D_M(0.15)$	644^{+10}_{-10}	χ_{CMB}^2	$8098 (\nu: 10475178.0)$
$\sigma_8 \Omega_m^{0.5}$	$0.456^{+0.018}_{-0.018}$	$H(0.38)$	$82.79^{+0.75}_{-0.74}$		

Best-fit $\chi_{\text{eff}}^2 = 12656.30$; $\Delta\chi_{\text{eff}}^2 = 9154.79$; $\bar{\chi}_{\text{eff}}^2 = 12684.27$; $\Delta\bar{\chi}_{\text{eff}}^2 = 9150.56$; $R - 1 = 0.00430$
 χ_{eff}^2 : CMB - BK15_dust: 735.45 (Δ 0.25) simall_100x143_offlike5_EE_Aplanck_B: 395.96 (Δ -0.21) commander_dx12_v3_2_29: 23.74 (Δ -0.23) CamSpec like_10.7HM_1400_unified: 11498.91

17.22 base_r_CamSpecHM_TTTEEE_lowl_lowE_BK15_post_BAO/base_r_plikHM_TTTEEE_lowl_lowE_BK15_post_BAO

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02237^{+0.00029}_{-0.00029}$	$\sigma_8/h^{0.5}$	$0.984^{+0.021}_{-0.021}$	$D_M(0.51)$	1980^{+18}_{-18}
$\Omega_c h^2$	$0.1192^{+0.0020}_{-0.0020}$	$r_{\text{drag}} h$	$99.6^{+1.6}_{-1.5}$	$H(0.61)$	$95.35^{+0.38}_{-0.38}$
$100\theta_{MC}$	$1.04098^{+0.00059}_{-0.00059}$	$\langle d^2 \rangle^{1/2}$	$2.433^{+0.051}_{-0.051}$	$D_M(0.61)$	2305^{+19}_{-19}
τ	$0.056^{+0.016}_{-0.015}$	z_{re}	$7.8^{+1.6}_{-1.6}$	$H(2.33)$	$236.0^{+1.3}_{-1.3}$
$\ln(10^{10} A_s)$	$3.045^{+0.033}_{-0.032}$	$10^9 A_s$	$2.101^{+0.071}_{-0.067}$	$D_M(2.33)$	5761^{+18}_{-18}
n_s	$0.9674^{+0.0076}_{-0.0076}$	$10^9 A_s e^{-2\tau}$	$1.880^{+0.022}_{-0.022}$	$f\sigma_8(0.15)$	$0.456^{+0.013}_{-0.013}$
r	< 0.0673	D_{40}	1236^{+26}_{-26}	$\sigma_8(0.15)$	$0.748^{+0.013}_{-0.013}$
y_{cal}	$1.0009^{+0.0049}_{-0.0049}$	D_{220}	5729^{+78}_{-78}	$f\sigma_8(0.38)$	$0.474^{+0.011}_{-0.011}$
$A_{B,\text{dust}}$	$4.9^{+2.1}_{-1.9}$	D_{810}	2539^{+27}_{-27}	$\sigma_8(0.38)$	$0.663^{+0.011}_{-0.011}$
$A_{B,\text{sync}}$	< 3.63	D_{1420}	$817.6^{+9.5}_{-9.6}$	$f\sigma_8(0.51)$	$0.473^{+0.010}_{-0.010}$
$\alpha_{B,\text{dust}}$	—	D_{2000}	$231.0^{+3.2}_{-3.2}$	$\sigma_8(0.51)$	$0.621^{+0.011}_{-0.010}$
$\beta_{B,\text{dust}}$	$1.60^{+0.19}_{-0.19}$	$n_{s,0.002}$	$0.9674^{+0.0076}_{-0.0076}$	$f\sigma_8(0.61)$	$0.4682^{+0.0098}_{-0.0097}$
$\alpha_{B,\text{sync}}$	—	Y_P	$0.24539^{+0.00011}_{-0.00012}$	$\sigma_8(0.61)$	$0.591^{+0.010}_{-0.0098}$
$\beta_{B,\text{sync}}$	$-3.10^{+0.52}_{-0.56}$	Y_P^{BBN}	$0.24672^{+0.00011}_{-0.00012}$	$f\sigma_8(2.33)$	$0.2978^{+0.0051}_{-0.0049}$
$\epsilon_{\text{dust,sync}}$	$-0.35^{+0.53}_{-0.58}$	$10^5 D/H$	$2.587^{+0.056}_{-0.052}$	$\sigma_8(2.33)$	$0.3071^{+0.0053}_{-0.0051}$
A_{217}^{CIB}	43^{+20}_{-20}	Age/Gyr	$13.793^{+0.042}_{-0.042}$	$r_{0.002}$	< 0.0624
$\xi^{tSZ-CIB}$	—	z_*	$1089.86^{+0.46}_{-0.45}$	$r_{0.01}$	< 0.0648
A_{143}^{tSZ}	$4.7^{+3.9}_{-4.3}$	r_*	$144.64^{+0.51}_{-0.50}$	$\ln(10^{10} A_t)$	$-0.7^{+1.4}_{-1.9}$
A_{100}^{PS}	248^{+60}_{-50}	$100\theta_*$	$1.04116^{+0.00058}_{-0.00058}$	$r_{L=10}$	< 0.0320
A_{143}^{PS}	42^{+20}_{-20}	$D_M(z_*)/\text{Gpc}$	$13.892^{+0.050}_{-0.048}$	$10^9 A_t$	< 0.141
A_{217}^{PS}	109^{+20}_{-30}	z_{drag}	$1059.87^{+0.63}_{-0.66}$	$10^9 A_t e^{-2\tau}$	< 0.126
A^{kSZ}	—	r_{drag}	$147.30^{+0.55}_{-0.52}$	f_{2000}^{143}	29^{+5}_{-5}
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	k_D	$0.14064^{+0.00065}_{-0.00069}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
c_{217}	$0.9997^{+0.0038}_{-0.0027}$	$100\theta_D$	$0.16080^{+0.00038}_{-0.00037}$	f_{2000}^{217}	$106.8^{+3.6}_{-3.6}$
H_0	$67.65^{+0.90}_{-0.89}$	z_{eq}	3384^{+47}_{-47}	χ_{BKPLANCK}^2	$740.0 (\nu: 3.5)$
Ω_Λ	$0.689^{+0.012}_{-0.012}$	k_{eq}	$0.01033^{+0.00014}_{-0.00014}$	χ_{simall}^2	$397.4 (\nu: 2.2)$
Ω_m	$0.311^{+0.012}_{-0.012}$	$100\theta_{\text{eq}}$	$0.8167^{+0.0089}_{-0.0086}$	χ_{lowl}^2	$24.0 (\nu: 0.6)$
$\Omega_m h^2$	$0.1422^{+0.0020}_{-0.0020}$	$100\theta_{s,\text{eq}}$	$0.4512^{+0.0046}_{-0.0044}$	$\chi_{6\text{DF}}^2$	$0.056 (\nu: 0.0)$
$\Omega_m h^3$	$0.09621^{+0.00064}_{-0.00067}$	$H(0.15)$	$72.92^{+0.78}_{-0.76}$	χ_{MGS}^2	$1.27 (\nu: 0.1)$
σ_8	$0.810^{+0.015}_{-0.014}$	$D_M(0.15)$	$641.0^{+7.6}_{-7.6}$	χ_{DR12BAO}^2	$4.8 (\nu: 1.0)$
S_8	$0.824^{+0.026}_{-0.025}$	$H(0.38)$	$83.02^{+0.57}_{-0.56}$	χ_{prior}^2	$11.4 (\nu: 11.5)$
$\sigma_8 \Omega_m^{0.5}$	$0.451^{+0.014}_{-0.014}$	$D_M(0.38)$	1529^{+15}_{-15}	χ_{BAO}^2	$6.2 (\nu: 0.7)$
$\sigma_8 \Omega_m^{0.25}$	$0.604^{+0.014}_{-0.014}$	$H(0.51)$	$89.74^{+0.46}_{-0.45}$	χ_{CMB}^2	$8098 (\nu: 10474663.6)$

Best-fit $\chi_{\text{eff}}^2 = 12662.21$; $\Delta\chi_{\text{eff}}^2 = 9154.32$; $\bar{\chi}_{\text{eff}}^2 = 12690.24$; $\Delta\bar{\chi}_{\text{eff}}^2 = 9149.94$; $R - 1 = 0.00669$
 χ_{eff}^2 : BAO - 6DF: 0.02 (Δ -0.02) MGS: 1.28 (Δ 0.12) DR12BAO: 4.24 (Δ -0.42) CMB - BK15_dust: 735.72 (Δ 0.23) simall_100x143_offlike5_EE_Aplanck_B: 396.17 (Δ -0.31) commander_dx12_v3_2_29: 23.32 (Δ -0.25) CamSpec like_10.7HM_1400_unified: 11499.19

17.23 **base_r_CamSpecHM_TTTEEE_lowl_lowE_BK15_post_lensing/base_r_plikHM_TTTEEE_lowl_lowE_BK15_lensing**

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02232^{+0.00030}_{-0.00031}$	$\sigma_8 \Omega_m^{0.25}$	$0.608^{+0.013}_{-0.013}$	$D_M(0.38)$	1534^{+18}_{-18}
$\Omega_c h^2$	$0.1199^{+0.0024}_{-0.0024}$	$\sigma_8/h^{0.5}$	$0.989^{+0.018}_{-0.018}$	$H(0.51)$	$89.58^{+0.54}_{-0.52}$
$100\theta_{MC}$	$1.04088^{+0.00061}_{-0.00061}$	$r_{\text{drag}} h$	$99.1^{+1.9}_{-1.8}$	$D_M(0.51)$	1987^{+21}_{-21}
τ	$0.054^{+0.015}_{-0.014}$	$\langle d^2 \rangle^{1/2}$	$2.444^{+0.043}_{-0.043}$	$H(0.61)$	$95.23^{+0.44}_{-0.43}$
$\ln(10^{10} A_s)$	$3.044^{+0.029}_{-0.028}$	z_{re}	$7.7^{+1.5}_{-1.5}$	$D_M(0.61)$	2312^{+23}_{-23}
n_s	$0.9654^{+0.0083}_{-0.0082}$	$10^9 A_s$	$2.099^{+0.062}_{-0.059}$	$H(2.33)$	$236.5^{+1.4}_{-1.5}$
r	< 0.0654	$10^9 A_s e^{-2\tau}$	$1.883^{+0.022}_{-0.022}$	$D_M(2.33)$	5766^{+20}_{-21}
y_{cal}	$1.0008^{+0.0049}_{-0.0049}$	D_{40}	1240^{+26}_{-25}	$f\sigma_8(0.15)$	$0.460^{+0.013}_{-0.013}$
$A_{B,\text{dust}}$	$4.9^{+2.1}_{-1.9}$	D_{220}	5727^{+77}_{-78}	$\sigma_8(0.15)$	$0.749^{+0.011}_{-0.011}$
$A_{B,\text{sync}}$	< 3.68	D_{810}	2539^{+26}_{-26}	$f\sigma_8(0.38)$	$0.477^{+0.010}_{-0.010}$
$\alpha_{B,\text{dust}}$	—	D_{1420}	$817.0^{+9.6}_{-9.7}$	$\sigma_8(0.38)$	$0.6637^{+0.0096}_{-0.0093}$
$\beta_{B,\text{dust}}$	$1.60^{+0.19}_{-0.19}$	D_{2000}	$230.7^{+3.2}_{-3.3}$	$f\sigma_8(0.51)$	$0.4754^{+0.0090}_{-0.0091}$
$\alpha_{B,\text{sync}}$	—	$n_{s,0.002}$	$0.9654^{+0.0083}_{-0.0082}$	$\sigma_8(0.51)$	$0.6209^{+0.0091}_{-0.0087}$
$\beta_{B,\text{sync}}$	$-3.10^{+0.52}_{-0.55}$	Y_P	$0.24537^{+0.00011}_{-0.00013}$	$f\sigma_8(0.61)$	$0.4701^{+0.0083}_{-0.0083}$
$\epsilon_{\text{dust,sync}}$	$-0.35^{+0.53}_{-0.57}$	Y_P^{BBN}	$0.24670^{+0.00011}_{-0.00013}$	$\sigma_8(0.61)$	$0.5907^{+0.0087}_{-0.0083}$
A_{217}^{CIB}	43^{+20}_{-20}	$10^5 D/H$	$2.596^{+0.058}_{-0.054}$	$f\sigma_8(2.33)$	$0.2977^{+0.0045}_{-0.0043}$
$\xi^{tSZ-CIB}$	—	Age/Gyr	$13.804^{+0.046}_{-0.046}$	$\sigma_8(2.33)$	$0.3068^{+0.0049}_{-0.0046}$
A_{143}^{tSZ}	$4.7^{+3.9}_{-4.3}$	z_*	$1089.98^{+0.52}_{-0.51}$	$r_{0.002}$	< 0.0603
A_{100}^{PS}	249^{+60}_{-50}	r_*	$144.49^{+0.56}_{-0.54}$	$r_{0.01}$	< 0.0628
A_{143}^{PS}	43^{+20}_{-20}	$100\theta_*$	$1.04107^{+0.00060}_{-0.00060}$	$\ln(10^{10} A_t)$	$-0.8^{+1.4}_{-2.0}$
A_{217}^{PS}	109^{+20}_{-30}	$D_M(z_*)/\text{Gpc}$	$13.879^{+0.053}_{-0.051}$	$r_{L=10}$	< 0.0309
A^{kSZ}	—	z_{drag}	$1059.81^{+0.62}_{-0.64}$	$10^9 A_t$	< 0.137
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	r_{drag}	$147.17^{+0.58}_{-0.55}$	$10^9 A_t e^{-2\tau}$	< 0.123
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	k_D	$0.14075^{+0.00065}_{-0.00068}$	f_{2000}^{143}	30^{+5}_{-5}
H_0	$67.3^{+1.1}_{-1.1}$	$100\theta_D$	$0.16083^{+0.00039}_{-0.00036}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
Ω_Λ	$0.685^{+0.014}_{-0.015}$	z_{eq}	3400^{+54}_{-54}	f_{2000}^{217}	$107.0^{+3.6}_{-3.7}$
Ω_m	$0.315^{+0.015}_{-0.014}$	k_{eq}	$0.01038^{+0.00016}_{-0.00017}$	χ^2_{lensing}	$9.28 (\nu: 0.2)$
$\Omega_m h^2$	$0.1429^{+0.0023}_{-0.0023}$	$100\theta_{\text{eq}}$	$0.814^{+0.010}_{-0.010}$	χ^2_{BKPLANCK}	$739.7 (\nu: 3.5)$
$\Omega_m h^3$	$0.09620^{+0.00063}_{-0.00065}$	$100\theta_{s,\text{eq}}$	$0.4496^{+0.0053}_{-0.0051}$	χ^2_{simall}	$397.2 (\nu: 1.6)$
σ_8	$0.811^{+0.012}_{-0.012}$	$H(0.15)$	$72.64^{+0.92}_{-0.90}$	χ^2_{lowl}	$24.3 (\nu: 0.6)$
S_8	$0.832^{+0.025}_{-0.025}$	$D_M(0.15)$	$643.7^{+9.1}_{-9.1}$	χ^2_{prior}	$11.3 (\nu: 11.1)$
$\sigma_8 \Omega_m^{0.5}$	$0.456^{+0.014}_{-0.014}$	$H(0.38)$	$82.83^{+0.67}_{-0.66}$	χ^2_{CMB}	$8107 (\nu: 10474842.2)$

Best-fit $\chi^2_{\text{eff}} = 12665.14$; $\Delta\chi^2_{\text{eff}} = 9154.73$; $\bar{\chi}^2_{\text{eff}} = 12693.08$; $\Delta\bar{\chi}^2_{\text{eff}} = 9150.41$; $R - 1 = 0.00549$
 χ^2_{eff} : CMB - smicadx12_Dec5_ftl_mv2_ndclpp_p_teb_consext8: 8.85 (Δ -0.02) BK15_dust: 735.41 (Δ 0.06) simall_100x143_offlike5_EE_Aplanck_B: 396.01 (Δ -0.17) com-
mander_dx12_v3_2_29: 23.74 (Δ -0.05) CamSpec like_10.7HM_1400_unified: 11498.88

17.24 **base_r_CamSpecHM_TTTEEE_lowl_lowE_BK15_post_BAO_lensing/base_r_plikHM_TTTEEE_lowl_lowE_BK15_lensing_post_BAO**

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02237^{+0.00028}_{-0.00029}$	$r_{\text{drag}} h$	$99.6^{+1.5}_{-1.4}$	$D_{\text{M}}(0.61)$	2305^{+18}_{-18}
$\Omega_c h^2$	$0.1193^{+0.0019}_{-0.0019}$	$\langle d^2 \rangle^{1/2}$	$2.437^{+0.040}_{-0.040}$	$H(2.33)$	$236.1^{+1.2}_{-1.2}$
$100\theta_{MC}$	$1.04097^{+0.00058}_{-0.00059}$	z_{re}	$7.9^{+1.4}_{-1.4}$	$D_{\text{M}}(2.33)$	5761^{+18}_{-18}
τ	$0.056^{+0.015}_{-0.014}$	$10^9 A_s$	$2.105^{+0.062}_{-0.058}$	$f\sigma_8(0.15)$	$0.457^{+0.011}_{-0.011}$
$\ln(10^{10} A_s)$	$3.047^{+0.029}_{-0.028}$	$10^9 A_s e^{-2\tau}$	$1.880^{+0.021}_{-0.021}$	$\sigma_8(0.15)$	$0.749^{+0.011}_{-0.011}$
n_s	$0.9671^{+0.0075}_{-0.0074}$	D_{40}	1238^{+25}_{-25}	$f\sigma_8(0.38)$	$0.4750^{+0.0091}_{-0.0091}$
r	< 0.0668	D_{220}	5732^{+77}_{-77}	$\sigma_8(0.38)$	$0.6638^{+0.0098}_{-0.0094}$
y_{cal}	$1.0010^{+0.0049}_{-0.0049}$	D_{810}	2539^{+26}_{-26}	$f\sigma_8(0.51)$	$0.4737^{+0.0083}_{-0.0082}$
$A_{B,\text{dust}}$	$4.9^{+2.1}_{-1.9}$	D_{1420}	$817.6^{+9.5}_{-9.5}$	$\sigma_8(0.51)$	$0.6213^{+0.0092}_{-0.0088}$
$A_{B,\text{sync}}$	< 3.67	D_{2000}	$231.0^{+3.2}_{-3.2}$	$f\sigma_8(0.61)$	$0.4687^{+0.0077}_{-0.0076}$
$\alpha_{B,\text{dust}}$	—	$n_{s,0.002}$	$0.9671^{+0.0075}_{-0.0074}$	$\sigma_8(0.61)$	$0.5912^{+0.0088}_{-0.0084}$
$\beta_{B,\text{dust}}$	$1.60^{+0.19}_{-0.19}$	Y_P	$0.24539^{+0.00010}_{-0.00012}$	$f\sigma_8(2.33)$	$0.2981^{+0.0045}_{-0.0043}$
$\alpha_{B,\text{sync}}$	—	Y_P^{BBN}	$0.24672^{+0.00010}_{-0.00012}$	$\sigma_8(2.33)$	$0.3073^{+0.0048}_{-0.0045}$
$\beta_{B,\text{sync}}$	$-3.10^{+0.52}_{-0.56}$	$10^5 D/H$	$2.586^{+0.056}_{-0.051}$	$r_{0.002}$	< 0.0617
$\epsilon_{\text{dust,sync}}$	$-0.35^{+0.53}_{-0.58}$	Age/Gyr	$13.793^{+0.042}_{-0.041}$	$r_{0.01}$	< 0.0642
A_{217}^{CIB}	43^{+20}_{-20}	z_*	$1089.86^{+0.45}_{-0.44}$	$\ln(10^{10} A_t)$	$-0.8^{+1.4}_{-1.9}$
$\xi^{tSZ-CIB}$	—	r_*	$144.62^{+0.47}_{-0.45}$	$r_{L=10}$	< 0.0316
A_{143}^{tSZ}	$4.7^{+3.9}_{-4.3}$	$100\theta_*$	$1.04116^{+0.00057}_{-0.00058}$	$10^9 A_t$	< 0.141
A_{100}^{PS}	249^{+60}_{-50}	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.891^{+0.046}_{-0.044}$	$10^9 A_t e^{-2\tau}$	< 0.126
A_{143}^{PS}	42^{+20}_{-20}	z_{drag}	$1059.88^{+0.63}_{-0.67}$	f_{2000}^{143}	29^{+5}_{-5}
A_{217}^{PS}	109^{+20}_{-30}	r_{drag}	$147.29^{+0.51}_{-0.48}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
A^{kSZ}	—	k_{D}	$0.14065^{+0.00061}_{-0.00065}$	f_{2000}^{217}	$106.8^{+3.6}_{-3.7}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	$100\theta_{\text{D}}$	$0.16079^{+0.00038}_{-0.00036}$	χ^2_{lensing}	$9.17 (\nu: 0.2)$
c_{217}	$0.9997^{+0.0038}_{-0.0027}$	z_{eq}	3384^{+42}_{-43}	χ^2_{BKPLANCK}	$739.9 (\nu: 3.5)$
H_0	$67.63^{+0.84}_{-0.83}$	k_{eq}	$0.01033^{+0.00013}_{-0.00013}$	χ^2_{simall}	$397.4 (\nu: 2.0)$
Ω_{Λ}	$0.689^{+0.011}_{-0.011}$	$100\theta_{\text{eq}}$	$0.8165^{+0.0081}_{-0.0078}$	χ^2_{lowl}	$24.1 (\nu: 0.6)$
Ω_m	$0.311^{+0.011}_{-0.011}$	$100\theta_{\text{s,eq}}$	$0.4511^{+0.0042}_{-0.0040}$	$\chi^2_{6\text{DF}}$	$0.054 (\nu: 0.0)$
$\Omega_m h^2$	$0.1423^{+0.0018}_{-0.0018}$	$H(0.15)$	$72.91^{+0.73}_{-0.72}$	χ^2_{MGS}	$1.25 (\nu: 0.1)$
$\Omega_m h^3$	$0.09622^{+0.00063}_{-0.00066}$	$D_{\text{M}}(0.15)$	$641.1^{+7.2}_{-7.1}$	χ^2_{DR12BAO}	$4.8 (\nu: 0.9)$
σ_8	$0.810^{+0.012}_{-0.012}$	$H(0.38)$	$83.02^{+0.54}_{-0.53}$	χ^2_{prior}	$11.4 (\nu: 11.2)$
S_8	$0.825^{+0.021}_{-0.021}$	$D_{\text{M}}(0.38)$	1529^{+14}_{-14}	χ^2_{CMB}	$8107 (\nu: 10474661.4)$
$\sigma_8 \Omega_m^{0.5}$	$0.452^{+0.011}_{-0.011}$	$H(0.51)$	$89.73^{+0.44}_{-0.44}$	χ^2_{BAO}	$6.1 (\nu: 0.6)$
$\sigma_8 \Omega_m^{0.25}$	$0.605^{+0.011}_{-0.011}$	$D_{\text{M}}(0.51)$	1981^{+17}_{-17}		
$\sigma_8/h^{0.5}$	$0.985^{+0.017}_{-0.016}$	$H(0.61)$	$95.35^{+0.37}_{-0.37}$		

Best-fit $\chi^2_{\text{eff}} = 12671.15$; $\Delta\chi^2_{\text{eff}} = 9154.51$; $\bar{\chi}^2_{\text{eff}} = 12699.13$; $\Delta\bar{\chi}^2_{\text{eff}} = 9150.10$; $R - 1 = 0.00878$
 χ^2_{eff} : BAO - 6DF: 0.04 (Δ 0.00) MGS: 1.16 (Δ 0.00) DR12BAO: 4.59 (Δ -0.02) CMB - smicadx12.Dec5_ftl_mv2_ndclpp_p.teb_consext8: 8.87 (Δ 0.13) BK15_dust: 735.58
(Δ 0.08) simall_100x143_offlike5.EE_Aplanck_B: 396.18 (Δ -0.24) commander_dx12.v3.2.29: 23.52 (Δ -0.02) CamSpec like_10.7HM_1400_unified: 11498.90

17.25 base_r_CamSpecHM_TTTEEE_lowl_lowE_BK15_post_zre6p5/base_r_plikHM_TTTEEE_lowl_lowE_BK15_post_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02231^{+0.00031}_{-0.00031}$	$\sigma_8 \Omega_m^{0.25}$	$0.609^{+0.016}_{-0.016}$	$D_M(0.38)$	1535^{+21}_{-21}
$\Omega_c h^2$	$0.1200^{+0.0028}_{-0.0028}$	$\sigma_8/h^{0.5}$	$0.990^{+0.023}_{-0.023}$	$H(0.51)$	$89.57^{+0.60}_{-0.57}$
$100\theta_{MC}$	$1.04088^{+0.00062}_{-0.00062}$	$r_{\text{drag}} h$	$99.0^{+2.1}_{-2.1}$	$D_M(0.51)$	1988^{+24}_{-24}
τ	$0.055^{+0.013}_{-0.012}$	$\langle d^2 \rangle^{1/2}$	$2.448^{+0.056}_{-0.055}$	$H(0.61)$	$95.22^{+0.48}_{-0.46}$
$\ln(10^{10} A_s)$	$3.046^{+0.029}_{-0.027}$	z_{re}	< 8.99	$D_M(0.61)$	2312^{+26}_{-26}
n_s	$0.9655^{+0.0088}_{-0.0087}$	$10^9 A_s$	$2.104^{+0.061}_{-0.057}$	$H(2.33)$	$236.5^{+1.7}_{-1.7}$
r	< 0.0653	$10^9 A_s e^{-2\tau}$	$1.883^{+0.024}_{-0.024}$	$D_M(2.33)$	5767^{+21}_{-22}
y_{cal}	$1.0008^{+0.0049}_{-0.0049}$	D_{40}	1240^{+27}_{-27}	$f\sigma_8(0.15)$	$0.461^{+0.017}_{-0.016}$
$A_{B,\text{dust}}$	$4.9^{+2.1}_{-1.9}$	D_{220}	5724^{+78}_{-78}	$\sigma_8(0.15)$	$0.750^{+0.013}_{-0.012}$
$A_{B,\text{sync}}$	< 3.64	D_{810}	2539^{+27}_{-27}	$f\sigma_8(0.38)$	$0.478^{+0.013}_{-0.013}$
$\alpha_{B,\text{dust}}$	—	D_{1420}	$817.0^{+9.7}_{-9.7}$	$\sigma_8(0.38)$	$0.665^{+0.010}_{-0.0099}$
$\beta_{B,\text{dust}}$	$1.60^{+0.19}_{-0.19}$	D_{2000}	$230.8^{+3.2}_{-3.3}$	$f\sigma_8(0.51)$	$0.476^{+0.012}_{-0.012}$
$\alpha_{B,\text{sync}}$	—	$n_{s,0.002}$	$0.9655^{+0.0088}_{-0.0087}$	$\sigma_8(0.51)$	$0.6217^{+0.0095}_{-0.0090}$
$\beta_{B,\text{sync}}$	$-3.10^{+0.52}_{-0.55}$	Y_P	$0.24537^{+0.00012}_{-0.00013}$	$f\sigma_8(0.61)$	$0.471^{+0.011}_{-0.011}$
$\epsilon_{\text{dust,sync}}$	$-0.35^{+0.53}_{-0.57}$	Y_P^{BBN}	$0.24670^{+0.00012}_{-0.00013}$	$\sigma_8(0.61)$	$0.5914^{+0.0089}_{-0.0085}$
A_{217}^{CIB}	43^{+10}_{-20}	$10^5 D/H$	$2.597^{+0.059}_{-0.056}$	$f\sigma_8(2.33)$	$0.2980^{+0.0045}_{-0.0042}$
$\xi^{tSZ-CIB}$	—	Age/Gyr	$13.805^{+0.048}_{-0.049}$	$\sigma_8(2.33)$	$0.3071^{+0.0046}_{-0.0043}$
A_{143}^{tSZ}	$4.7^{+3.9}_{-4.3}$	z_*	$1090.00^{+0.55}_{-0.54}$	$r_{0.002}$	< 0.0603
A_{100}^{PS}	249^{+60}_{-50}	r_*	$144.46^{+0.65}_{-0.63}$	$r_{0.01}$	< 0.0627
A_{143}^{PS}	43^{+20}_{-20}	$100\theta_*$	$1.04106^{+0.00062}_{-0.00061}$	$\ln(10^{10} A_t)$	$-0.8^{+1.4}_{-1.9}$
A_{217}^{PS}	109^{+20}_{-30}	$D_M(z_*)/\text{Gpc}$	$13.877^{+0.061}_{-0.059}$	$r_{L=10}$	< 0.0309
A^{kSZ}	—	z_{drag}	$1059.81^{+0.62}_{-0.67}$	$10^9 A_t$	< 0.137
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	r_{drag}	$147.15^{+0.66}_{-0.64}$	$10^9 A_t e^{-2\tau}$	< 0.123
c_{217}	$0.9996^{+0.0037}_{-0.0027}$	k_D	$0.14077^{+0.00070}_{-0.00074}$	f_{2000}^{143}	29^{+5}_{-5}
H_0	$67.3^{+1.2}_{-1.2}$	$100\theta_D$	$0.16083^{+0.00039}_{-0.00037}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
Ω_Λ	$0.684^{+0.017}_{-0.017}$	z_{eq}	3402^{+63}_{-63}	f_{2000}^{217}	$106.9^{+3.6}_{-3.6}$
Ω_m	$0.316^{+0.017}_{-0.017}$	k_{eq}	$0.01038^{+0.00019}_{-0.00019}$	χ_{BKPLANCK}^2	$739.6 (\nu: 3.6)$
$\Omega_m h^2$	$0.1430^{+0.0026}_{-0.0026}$	$100\theta_{\text{eq}}$	$0.813^{+0.012}_{-0.012}$	χ_{simall}^2	$397.2 (\nu: 1.9)$
$\Omega_m h^3$	$0.09620^{+0.00064}_{-0.00065}$	$100\theta_{s,\text{eq}}$	$0.4494^{+0.0061}_{-0.0060}$	χ_{lowl}^2	$24.4 (\nu: 0.7)$
σ_8	$0.812^{+0.015}_{-0.014}$	$H(0.15)$	$72.6^{+1.0}_{-1.0}$	χ_{prior}^2	$11.3 (\nu: 11.2)$
S_8	$0.834^{+0.033}_{-0.032}$	$D_M(0.15)$	644^{+10}_{-10}	χ_{CMB}^2	$8097 (\nu: 10475080.1)$
$\sigma_8 \Omega_m^{0.5}$	$0.457^{+0.018}_{-0.018}$	$H(0.38)$	$82.80^{+0.75}_{-0.73}$		

$$\bar{\chi}_{\text{eff}}^2 = 12684.04; \Delta\bar{\chi}_{\text{eff}}^2 = 9150.53; R - 1 = 0.00482$$

17.26 **base_r_CamSpecHM_TTTEEE_lowl_lowE_BK15_post_BAO_zre6p5/base_r_plikHM_TTTEEE_lowl_lowE_BK15_post_BAO_zre6p5**

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02237^{+0.00029}_{-0.00029}$	$\sigma_8/h^{0.5}$	$0.985^{+0.020}_{-0.019}$	$D_M(0.51)$	1980^{+18}_{-18}
$\Omega_c h^2$	$0.1192^{+0.0020}_{-0.0021}$	$r_{\text{drag}} h$	$99.7^{+1.6}_{-1.5}$	$H(0.61)$	$95.35^{+0.38}_{-0.38}$
$100\theta_{MC}$	$1.04098^{+0.00059}_{-0.00059}$	$\langle d^2 \rangle^{1/2}$	$2.435^{+0.050}_{-0.047}$	$D_M(0.61)$	2304^{+19}_{-19}
τ	$0.056^{+0.014}_{-0.013}$	z_{re}	< 9.08	$H(2.33)$	$236.0^{+1.3}_{-1.3}$
$\ln(10^{10} A_s)$	$3.046^{+0.030}_{-0.028}$	$10^9 A_s$	$2.104^{+0.063}_{-0.059}$	$D_M(2.33)$	5761^{+18}_{-18}
n_s	$0.9675^{+0.0076}_{-0.0076}$	$10^9 A_s e^{-2\tau}$	$1.879^{+0.022}_{-0.022}$	$f\sigma_8(0.15)$	$0.456^{+0.013}_{-0.013}$
r	< 0.0673	D_{40}	1236^{+26}_{-26}	$\sigma_8(0.15)$	$0.749^{+0.012}_{-0.012}$
y_{cal}	$1.0009^{+0.0049}_{-0.0049}$	D_{220}	5729^{+78}_{-78}	$f\sigma_8(0.38)$	$0.475^{+0.011}_{-0.011}$
$A_{B,\text{dust}}$	$4.9^{+2.1}_{-1.9}$	D_{810}	2538^{+27}_{-27}	$\sigma_8(0.38)$	$0.664^{+0.010}_{-0.0099}$
$A_{B,\text{sync}}$	< 3.63	D_{1420}	$817.6^{+9.6}_{-9.6}$	$f\sigma_8(0.51)$	$0.473^{+0.010}_{-0.0097}$
$\alpha_{B,\text{dust}}$	—	D_{2000}	$231.0^{+3.2}_{-3.2}$	$\sigma_8(0.51)$	$0.6212^{+0.0096}_{-0.0091}$
$\beta_{B,\text{dust}}$	$1.60^{+0.19}_{-0.19}$	$n_{s,0.002}$	$0.9675^{+0.0076}_{-0.0076}$	$f\sigma_8(0.61)$	$0.4686^{+0.0095}_{-0.0089}$
$\alpha_{B,\text{sync}}$	—	Y_P	$0.24539^{+0.00011}_{-0.00012}$	$\sigma_8(0.61)$	$0.5911^{+0.0091}_{-0.0086}$
$\beta_{B,\text{sync}}$	$-3.10^{+0.52}_{-0.56}$	Y_P^{BBN}	$0.24672^{+0.00011}_{-0.00012}$	$f\sigma_8(2.33)$	$0.2981^{+0.0046}_{-0.0043}$
$\epsilon_{\text{dust,sync}}$	$-0.35^{+0.53}_{-0.57}$	$10^5 D/H$	$2.586^{+0.056}_{-0.052}$	$\sigma_8(2.33)$	$0.3073^{+0.0047}_{-0.0044}$
A_{217}^{CIB}	43^{+20}_{-20}	Age/Gyr	$13.793^{+0.042}_{-0.042}$	$r_{0.002}$	< 0.0624
$\xi^{tSZ-CIB}$	—	z_*	$1089.85^{+0.46}_{-0.45}$	$r_{0.01}$	< 0.0648
A_{143}^{tSZ}	$4.7^{+3.9}_{-4.3}$	r_*	$144.64^{+0.51}_{-0.50}$	$\ln(10^{10} A_t)$	$-0.7^{+1.4}_{-1.9}$
A_{100}^{PS}	248^{+60}_{-50}	$100\theta_*$	$1.04116^{+0.00058}_{-0.00058}$	$r_{L=10}$	< 0.0320
A_{143}^{PS}	42^{+20}_{-20}	$D_M(z_*)/\text{Gpc}$	$13.892^{+0.050}_{-0.048}$	$10^9 A_t$	< 0.141
A_{217}^{PS}	109^{+20}_{-30}	z_{drag}	$1059.87^{+0.63}_{-0.67}$	$10^9 A_t e^{-2\tau}$	< 0.126
A^{kSZ}	—	r_{drag}	$147.30^{+0.55}_{-0.52}$	f_{2000}^{143}	29^{+5}_{-5}
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	k_D	$0.14064^{+0.00065}_{-0.00069}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
c_{217}	$0.9996^{+0.0038}_{-0.0027}$	$100\theta_D$	$0.16080^{+0.00038}_{-0.00037}$	f_{2000}^{217}	$106.8^{+3.6}_{-3.6}$
H_0	$67.65^{+0.90}_{-0.88}$	z_{eq}	3383^{+47}_{-48}	χ^2_{BKPLANCK}	$740.0 (\nu: 3.5)$
Ω_Λ	$0.689^{+0.012}_{-0.012}$	k_{eq}	$0.01033^{+0.00014}_{-0.00015}$	χ^2_{simall}	$397.4 (\nu: 2.2)$
Ω_m	$0.311^{+0.012}_{-0.012}$	$100\theta_{\text{eq}}$	$0.8168^{+0.0089}_{-0.0086}$	χ^2_{lowl}	$24.0 (\nu: 0.6)$
$\Omega_m h^2$	$0.1422^{+0.0019}_{-0.0020}$	$100\theta_{s,\text{eq}}$	$0.4512^{+0.0046}_{-0.0044}$	$\chi^2_{6\text{DF}}$	$0.055 (\nu: 0.0)$
$\Omega_m h^3$	$0.09621^{+0.00064}_{-0.00066}$	$H(0.15)$	$72.93^{+0.78}_{-0.76}$	χ^2_{MGS}	$1.28 (\nu: 0.1)$
σ_8	$0.810^{+0.014}_{-0.013}$	$D_M(0.15)$	$640.9^{+7.6}_{-7.6}$	χ^2_{DR12BAO}	$4.8 (\nu: 1.0)$
S_8	$0.825^{+0.025}_{-0.024}$	$H(0.38)$	$83.03^{+0.57}_{-0.56}$	χ^2_{prior}	$11.4 (\nu: 11.5)$
$\sigma_8 \Omega_m^{0.5}$	$0.452^{+0.014}_{-0.013}$	$D_M(0.38)$	1529^{+15}_{-15}	χ^2_{BAO}	$6.2 (\nu: 0.7)$
$\sigma_8 \Omega_m^{0.25}$	$0.605^{+0.014}_{-0.013}$	$H(0.51)$	$89.74^{+0.46}_{-0.45}$	χ^2_{CMB}	$8098 (\nu: 10474535.5)$

$$\bar{\chi}^2_{\text{eff}} = 12690.02; \Delta\bar{\chi}^2_{\text{eff}} = 9149.88; R - 1 = 0.00713$$

17.27 base_r_CamSpecHM_TTTEEE_lowl_lowE_BK15_post_lensing_zre6p5/base_r_plikHM_TTTEEE_lowl_lowE_BK15_lensing_post_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02232^{+0.00030}_{-0.00030}$	$\sigma_8 \Omega_m^{0.25}$	$0.608^{+0.013}_{-0.013}$	$D_M(0.38)$	1534^{+18}_{-18}
$\Omega_c h^2$	$0.1199^{+0.0023}_{-0.0024}$	$\sigma_8/h^{0.5}$	$0.989^{+0.018}_{-0.017}$	$H(0.51)$	$89.60^{+0.53}_{-0.52}$
$100\theta_{MC}$	$1.04089^{+0.00061}_{-0.00061}$	$r_{\text{drag}} h$	$99.1^{+1.8}_{-1.8}$	$D_M(0.51)$	1986^{+21}_{-21}
τ	$0.055^{+0.013}_{-0.012}$	$\langle d^2 \rangle^{1/2}$	$2.445^{+0.043}_{-0.042}$	$H(0.61)$	$95.24^{+0.44}_{-0.42}$
$\ln(10^{10} A_s)$	$3.046^{+0.026}_{-0.025}$	z_{re}	< 8.93	$D_M(0.61)$	2311^{+22}_{-23}
n_s	$0.9656^{+0.0082}_{-0.0081}$	$10^9 A_s$	$2.103^{+0.055}_{-0.052}$	$H(2.33)$	$236.4^{+1.4}_{-1.4}$
r	< 0.0655	$10^9 A_s e^{-2\tau}$	$1.882^{+0.021}_{-0.022}$	$D_M(2.33)$	5766^{+20}_{-21}
y_{cal}	$1.0008^{+0.0049}_{-0.0049}$	D_{40}	1240^{+26}_{-25}	$f\sigma_8(0.15)$	$0.460^{+0.013}_{-0.013}$
$A_{B,\text{dust}}$	$4.9^{+2.1}_{-1.9}$	D_{220}	5727^{+77}_{-78}	$\sigma_8(0.15)$	$0.750^{+0.010}_{-0.0095}$
$A_{B,\text{sync}}$	< 3.68	D_{810}	2539^{+26}_{-26}	$f\sigma_8(0.38)$	$0.477^{+0.010}_{-0.010}$
$\alpha_{B,\text{dust}}$	—	D_{1420}	$817.0^{+9.6}_{-9.7}$	$\sigma_8(0.38)$	$0.6642^{+0.0088}_{-0.0084}$
$\beta_{B,\text{dust}}$	$1.60^{+0.19}_{-0.19}$	D_{2000}	$230.7^{+3.2}_{-3.3}$	$f\sigma_8(0.51)$	$0.4756^{+0.0090}_{-0.0090}$
$\alpha_{B,\text{sync}}$	—	$n_{s,0.002}$	$0.9656^{+0.0082}_{-0.0081}$	$\sigma_8(0.51)$	$0.6214^{+0.0083}_{-0.0078}$
$\beta_{B,\text{sync}}$	$-3.10^{+0.52}_{-0.55}$	Y_P	$0.24537^{+0.00011}_{-0.00013}$	$f\sigma_8(0.61)$	$0.4704^{+0.0081}_{-0.0081}$
$\epsilon_{\text{dust,sync}}$	$-0.35^{+0.53}_{-0.57}$	Y_P^{BBN}	$0.24670^{+0.00011}_{-0.00013}$	$\sigma_8(0.61)$	$0.5912^{+0.0079}_{-0.0075}$
A_{217}^{CIB}	43^{+20}_{-20}	$10^5 D/H$	$2.595^{+0.058}_{-0.054}$	$f\sigma_8(2.33)$	$0.2979^{+0.0041}_{-0.0038}$
$\xi^{tSZ-CIB}$	—	Age/Gyr	$13.803^{+0.046}_{-0.046}$	$\sigma_8(2.33)$	$0.3070^{+0.0044}_{-0.0041}$
A_{143}^{tSZ}	$4.7^{+3.9}_{-4.3}$	z_*	$1089.97^{+0.51}_{-0.50}$	$r_{0.002}$	< 0.0604
A_{100}^{PS}	249^{+60}_{-50}	r_*	$144.50^{+0.56}_{-0.53}$	$r_{0.01}$	< 0.0629
A_{143}^{PS}	43^{+20}_{-20}	$100\theta_*$	$1.04107^{+0.00061}_{-0.00060}$	$\ln(10^{10} A_t)$	$-0.8^{+1.4}_{-2.0}$
A_{217}^{PS}	109^{+20}_{-30}	$D_M(z_*)/\text{Gpc}$	$13.880^{+0.052}_{-0.051}$	$r_{L=10}$	< 0.0310
A^{kSZ}	—	z_{drag}	$1059.82^{+0.61}_{-0.65}$	$10^9 A_t$	< 0.138
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	r_{drag}	$147.17^{+0.57}_{-0.55}$	$10^9 A_t e^{-2\tau}$	< 0.123
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	k_D	$0.14074^{+0.00065}_{-0.00068}$	f_{2000}^{143}	30^{+5}_{-5}
H_0	$67.3^{+1.1}_{-1.0}$	$100\theta_D$	$0.16082^{+0.00038}_{-0.00036}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
Ω_Λ	$0.685^{+0.014}_{-0.015}$	z_{eq}	3398^{+53}_{-54}	f_{2000}^{217}	$107.0^{+3.6}_{-3.7}$
Ω_m	$0.315^{+0.015}_{-0.014}$	k_{eq}	$0.01037^{+0.00016}_{-0.00016}$	χ_{lensing}^2	$9.26 (\nu: 0.2)$
$\Omega_m h^2$	$0.1429^{+0.0022}_{-0.0022}$	$100\theta_{\text{eq}}$	$0.814^{+0.010}_{-0.0098}$	χ_{BKPLANCK}^2	$739.7 (\nu: 3.5)$
$\Omega_m h^3$	$0.09620^{+0.00063}_{-0.00065}$	$100\theta_{\text{s,eq}}$	$0.4497^{+0.0052}_{-0.0050}$	χ_{simall}^2	$397.1 (\nu: 1.6)$
σ_8	$0.812^{+0.012}_{-0.011}$	$H(0.15)$	$72.66^{+0.91}_{-0.88}$	χ_{lowl}^2	$24.3 (\nu: 0.6)$
S_8	$0.832^{+0.025}_{-0.025}$	$D_M(0.15)$	$643.5^{+8.9}_{-9.0}$	χ_{prior}^2	$11.3 (\nu: 11.1)$
$\sigma_8 \Omega_m^{0.5}$	$0.456^{+0.014}_{-0.014}$	$H(0.38)$	$82.84^{+0.67}_{-0.65}$	χ_{CMB}^2	$8106 (\nu: 10474828.1)$

$\bar{\chi}_{\text{eff}}^2 = 12692.90$; $\Delta\bar{\chi}_{\text{eff}}^2 = 9150.41$; $R - 1 = 0.00651$

17.28 base_r_CamSpecHM_TTTEEE_lowl_lowE_BK15_post_BAO_lensing_zre6p5/base_r_plikHM_TTTEEE_lowl_lowE_BK15_lensing_post

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02237^{+0.00028}_{-0.00029}$	$r_{\text{drag}} h$	$99.6^{+1.4}_{-1.4}$	$D_{\text{M}}(0.61)$	2305^{+18}_{-18}
$\Omega_c h^2$	$0.1192^{+0.0018}_{-0.0019}$	$\langle d^2 \rangle^{1/2}$	$2.438^{+0.040}_{-0.039}$	$H(2.33)$	$236.1^{+1.1}_{-1.2}$
$100\theta_{MC}$	$1.04097^{+0.00058}_{-0.00059}$	z_{re}	$7.9^{+1.2}_{-1.3}$	$D_{\text{M}}(2.33)$	5761^{+18}_{-18}
τ	$0.057^{+0.013}_{-0.013}$	$10^9 A_s$	$2.107^{+0.057}_{-0.054}$	$f\sigma_8(0.15)$	$0.457^{+0.011}_{-0.011}$
$\ln(10^{10} A_s)$	$3.048^{+0.027}_{-0.026}$	$10^9 A_s e^{-2\tau}$	$1.880^{+0.021}_{-0.021}$	$\sigma_8(0.15)$	$0.749^{+0.011}_{-0.0096}$
n_s	$0.9671^{+0.0075}_{-0.0074}$	D_{40}	1237^{+25}_{-25}	$f\sigma_8(0.38)$	$0.4752^{+0.0090}_{-0.0089}$
r	< 0.0668	D_{220}	5732^{+77}_{-77}	$\sigma_8(0.38)$	$0.6641^{+0.0091}_{-0.0087}$
y_{cal}	$1.0010^{+0.0049}_{-0.0049}$	D_{810}	2539^{+26}_{-26}	$f\sigma_8(0.51)$	$0.4738^{+0.0082}_{-0.0080}$
$A_{B,\text{dust}}$	$4.9^{+2.1}_{-1.9}$	D_{1420}	$817.6^{+9.5}_{-9.5}$	$\sigma_8(0.51)$	$0.6216^{+0.0085}_{-0.0082}$
$A_{B,\text{sync}}$	< 3.67	D_{2000}	$231.0^{+3.2}_{-3.2}$	$f\sigma_8(0.61)$	$0.4689^{+0.0076}_{-0.0074}$
$\alpha_{B,\text{dust}}$	—	$n_{s,0.002}$	$0.9671^{+0.0075}_{-0.0074}$	$\sigma_8(0.61)$	$0.5914^{+0.0081}_{-0.0078}$
$\beta_{B,\text{dust}}$	$1.60^{+0.19}_{-0.19}$	Y_P	$0.24539^{+0.00010}_{-0.00012}$	$f\sigma_8(2.33)$	$0.2982^{+0.0042}_{-0.0040}$
$\alpha_{B,\text{sync}}$	—	Y_P^{BBN}	$0.24672^{+0.00010}_{-0.00012}$	$\sigma_8(2.33)$	$0.3075^{+0.0044}_{-0.0042}$
$\beta_{B,\text{sync}}$	$-3.10^{+0.52}_{-0.56}$	$10^5 D/H$	$2.586^{+0.056}_{-0.050}$	$r_{0.002}$	< 0.0617
$\epsilon_{\text{dust,sync}}$	$-0.35^{+0.53}_{-0.58}$	Age/Gyr	$13.793^{+0.042}_{-0.041}$	$r_{0.01}$	< 0.0643
A_{217}^{CIB}	43^{+20}_{-20}	z_*	$1089.86^{+0.45}_{-0.43}$	$\ln(10^{10} A_t)$	$-0.8^{+1.4}_{-1.9}$
$\xi^{tSZ-CIB}$	—	r_*	$144.63^{+0.47}_{-0.45}$	$r_{L=10}$	< 0.0316
A_{143}^{tSZ}	$4.7^{+3.9}_{-4.3}$	$100\theta_*$	$1.04116^{+0.00057}_{-0.00058}$	$10^9 A_t$	< 0.141
A_{100}^{PS}	248^{+60}_{-50}	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.891^{+0.046}_{-0.044}$	$10^9 A_t e^{-2\tau}$	< 0.126
A_{143}^{PS}	42^{+20}_{-20}	z_{drag}	$1059.88^{+0.63}_{-0.67}$	f_{2000}^{143}	29^{+5}_{-5}
A_{217}^{PS}	109^{+20}_{-30}	r_{drag}	$147.29^{+0.51}_{-0.48}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
A^{kSZ}	—	k_{D}	$0.14065^{+0.00061}_{-0.00065}$	f_{2000}^{217}	$106.8^{+3.6}_{-3.7}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	$100\theta_{\text{D}}$	$0.16079^{+0.00037}_{-0.00035}$	χ^2_{lensing}	$9.15 (\nu: 0.2)$
c_{217}	$0.9997^{+0.0038}_{-0.0027}$	z_{eq}	3384^{+42}_{-43}	χ^2_{BKPLANCK}	$739.9 (\nu: 3.5)$
H_0	$67.64^{+0.84}_{-0.82}$	k_{eq}	$0.01033^{+0.00013}_{-0.00013}$	χ^2_{small}	$397.4 (\nu: 2.0)$
Ω_{Λ}	$0.689^{+0.011}_{-0.011}$	$100\theta_{\text{eq}}$	$0.8166^{+0.0080}_{-0.0078}$	χ^2_{lowl}	$24.1 (\nu: 0.6)$
Ω_m	$0.311^{+0.011}_{-0.011}$	$100\theta_{\text{s,eq}}$	$0.4511^{+0.0041}_{-0.0040}$	$\chi^2_{6\text{DF}}$	$0.053 (\nu: 0.0)$
$\Omega_m h^2$	$0.1423^{+0.0018}_{-0.0018}$	$H(0.15)$	$72.92^{+0.73}_{-0.71}$	χ^2_{MGS}	$1.26 (\nu: 0.1)$
$\Omega_m h^3$	$0.09622^{+0.00063}_{-0.00066}$	$D_{\text{M}}(0.15)$	$641.0^{+7.1}_{-7.1}$	χ^2_{DR12BAO}	$4.8 (\nu: 0.9)$
σ_8	$0.811^{+0.012}_{-0.011}$	$H(0.38)$	$83.02^{+0.54}_{-0.53}$	χ^2_{prior}	$11.4 (\nu: 11.2)$
S_8	$0.825^{+0.021}_{-0.021}$	$D_{\text{M}}(0.38)$	1529^{+14}_{-14}	χ^2_{CMB}	$8106 (\nu: 10474666.3)$
$\sigma_8 \Omega_m^{0.5}$	$0.452^{+0.011}_{-0.011}$	$H(0.51)$	$89.73^{+0.44}_{-0.43}$	χ^2_{BAO}	$6.1 (\nu: 0.5)$
$\sigma_8 \Omega_m^{0.25}$	$0.605^{+0.011}_{-0.011}$	$D_{\text{M}}(0.51)$	1981^{+17}_{-17}		
$\sigma_8/h^{0.5}$	$0.986^{+0.016}_{-0.016}$	$H(0.61)$	$95.35^{+0.37}_{-0.37}$		

$\bar{\chi}^2_{\text{eff}} = 12699.00$; $\Delta\bar{\chi}^2_{\text{eff}} = 9150.10$; $R - 1 = 0.00924$

18 w

18.1 base_w_CamSpecHM_TT_lowl_lowE/base_w_plikHM_TT_lowl_lowE

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02216^{+0.00043}_{-0.00043}$	$r_{\text{drag}} h$	125^{+20}_{-30}	$H(0.15)$	$81.7^{+7.8}_{-10}$
$\Omega_c h^2$	$0.1204^{+0.0041}_{-0.0040}$	$\langle d^2 \rangle^{1/2}$	$2.501^{+0.085}_{-0.095}$	$D_{\text{M}}(0.15)$	547^{+100}_{-70}
$100\theta_{MC}$	$1.04084^{+0.00093}_{-0.00093}$	z_{re}	$7.4^{+1.6}_{-1.7}$	$H(0.38)$	$84.0^{+2.1}_{-2.2}$
τ	$0.052^{+0.016}_{-0.016}$	$10^9 A_s$	$2.088^{+0.068}_{-0.068}$	$D_{\text{M}}(0.38)$	1387^{+200}_{-100}
w	$-1.55^{+0.60}_{-0.48}$	$10^9 A_s e^{-2\tau}$	$1.882^{+0.026}_{-0.026}$	$H(0.51)$	$88.2^{+1.9}_{-2.2}$
$\ln(10^{10} A_s)$	$3.039^{+0.032}_{-0.033}$	D_{40}	1228^{+30}_{-30}	$D_{\text{M}}(0.51)$	1841^{+170}_{-120}
n_s	$0.964^{+0.011}_{-0.011}$	D_{220}	5711^{+81}_{-81}	$H(0.61)$	$92.5^{+2.9}_{-2.8}$
y_{cal}	$1.0004^{+0.0048}_{-0.0048}$	D_{810}	2534^{+27}_{-26}	$D_{\text{M}}(0.61)$	2173^{+160}_{-120}
A_{217}^{CIB}	44^{+20}_{-20}	D_{1420}	$814^{+10}_{-9.9}$	$H(2.33)$	$232.3^{+5.3}_{-4.4}$
$\xi^{tSZ-CIB}$	—	D_{2000}	$229.7^{+3.6}_{-3.5}$	$D_{\text{M}}(2.33)$	5749^{+44}_{-43}
A_{143}^{tSZ}	$4.4^{+3.8}_{-4.2}$	$n_{s,0.002}$	$0.964^{+0.011}_{-0.011}$	$f\sigma_8(0.15)$	$0.490^{+0.042}_{-0.040}$
A_{100}^{PS}	252^{+60}_{-50}	Y_P	$0.24530^{+0.00017}_{-0.00020}$	$\sigma_8(0.15)$	$0.90^{+0.13}_{-0.16}$
A_{143}^{PS}	45^{+20}_{-20}	Y_P^{BBN}	$0.24663^{+0.00017}_{-0.00020}$	$f\sigma_8(0.38)$	$0.572^{+0.094}_{-0.11}$
A_{217}^{PS}	108^{+30}_{-30}	$10^5 D/H$	$2.626^{+0.083}_{-0.080}$	$\sigma_8(0.38)$	$0.80^{+0.12}_{-0.15}$
A^{kSZ}	—	Age/Gyr	$13.59^{+0.26}_{-0.19}$	$f\sigma_8(0.51)$	$0.59^{+0.11}_{-0.12}$
c_{100}	$0.9985^{+0.0022}_{-0.0026}$	z_*	$1090.22^{+0.80}_{-0.78}$	$\sigma_8(0.51)$	$0.75^{+0.11}_{-0.14}$
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	r_*	$144.50^{+0.92}_{-0.93}$	$f\sigma_8(0.61)$	$0.59^{+0.11}_{-0.13}$
H_0	> 66.6	$100\theta_*$	$1.04104^{+0.00091}_{-0.00092}$	$\sigma_8(0.61)$	$0.71^{+0.10}_{-0.13}$
Ω_Λ	$0.791^{+0.070}_{-0.12}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.881^{+0.086}_{-0.086}$	$f\sigma_8(2.33)$	$0.356^{+0.048}_{-0.064}$
Ω_m	$0.209^{+0.12}_{-0.070}$	z_{drag}	$1059.47^{+0.88}_{-0.91}$	$\sigma_8(2.33)$	$0.359^{+0.045}_{-0.058}$
$\Omega_m h^2$	$0.1432^{+0.0039}_{-0.0038}$	r_{drag}	$147.23^{+0.93}_{-0.93}$	f_{2000}^{143}	31^{+6}_{-6}
$\Omega_m h^3$	$0.121^{+0.023}_{-0.027}$	k_{D}	$0.1406^{+0.0010}_{-0.0010}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-4}
σ_8	$0.96^{+0.13}_{-0.16}$	$100\theta_{\text{D}}$	$0.16103^{+0.00052}_{-0.00051}$	f_{2000}^{217}	$107.6^{+3.9}_{-3.9}$
S_8	$0.786^{+0.072}_{-0.064}$	z_{eq}	3406^{+93}_{-91}	χ_{simall}^2	$396.8 (\nu: 1.3)$
$\sigma_8 \Omega_m^{0.5}$	$0.431^{+0.039}_{-0.035}$	k_{eq}	$0.01039^{+0.00028}_{-0.00028}$	χ_{lowl}^2	$23.1 (\nu: 0.7)$
$\sigma_8 \Omega_m^{0.25}$	$0.642^{+0.039}_{-0.043}$	$100\theta_{\text{eq}}$	$0.812^{+0.017}_{-0.017}$	χ_{prior}^2	$7.4 (\nu: 6.2)$
$\sigma_8/h^{0.5}$	$1.044^{+0.059}_{-0.067}$	$100\theta_{\text{s,eq}}$	$0.4489^{+0.0089}_{-0.0088}$	χ_{CMB}^2	$4336 (\nu: 4948411.9)$

Best-fit $\chi_{\text{eff}}^2 = 7468.79$; $\Delta\chi_{\text{eff}}^2 = 6292.49$; $\bar{\chi}_{\text{eff}}^2 = 7489.40$; $\Delta\bar{\chi}_{\text{eff}}^2 = 6292.20$; $R - 1 = 0.00889$

χ_{eff}^2 : CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.72 (Δ -0.01) commander_dx12_v3_2_29: 22.46 (Δ -0.18) CamSpec like_10.7HM: 7048.57

18.2 base_w_CamSpecHM-TT_lowl_lowE_post_lensing/base_w_plikHM-TT_lowl_lowE_post_lensing

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02221^{+0.00042}_{-0.00041}$	$\langle d^2 \rangle^{1/2}$	$2.481^{+0.056}_{-0.061}$	$H(0.38)$	$84.5^{+1.9}_{-2.0}$
$\Omega_c h^2$	$0.1193^{+0.0032}_{-0.0030}$	z_{re}	$7.3^{+1.5}_{-1.7}$	$D_{\text{M}}(0.38)$	1378^{+200}_{-100}
$100\theta_{MC}$	$1.04094^{+0.00089}_{-0.00090}$	$10^9 A_s$	$2.080^{+0.063}_{-0.062}$	$H(0.51)$	$88.5^{+1.6}_{-1.8}$
τ	$0.051^{+0.016}_{-0.016}$	$10^9 A_s e^{-2\tau}$	$1.877^{+0.022}_{-0.022}$	$D_{\text{M}}(0.51)$	1829^{+160}_{-110}
w	$-1.54^{+0.54}_{-0.44}$	D_{40}	1222^{+27}_{-26}	$H(0.61)$	$92.7^{+2.6}_{-2.5}$
$\ln(10^{10} A_s)$	$3.035^{+0.030}_{-0.030}$	D_{220}	5714^{+80}_{-80}	$D_{\text{M}}(0.61)$	2161^{+160}_{-110}
n_s	$0.9658^{+0.0098}_{-0.0099}$	D_{810}	2532^{+26}_{-26}	$H(2.33)$	$231.5^{+5.1}_{-3.8}$
y_{cal}	$1.0003^{+0.0048}_{-0.0048}$	D_{1420}	$814^{+10}_{-9.9}$	$D_{\text{M}}(2.33)$	5742^{+42}_{-40}
A_{217}^{CIB}	44^{+20}_{-20}	D_{2000}	$229.7^{+3.6}_{-3.5}$	$f\sigma_8(0.15)$	$0.482^{+0.029}_{-0.028}$
$\xi^{tSZ-CIB}$	—	$n_{s,0.002}$	$0.9658^{+0.0098}_{-0.0099}$	$\sigma_8(0.15)$	$0.89^{+0.12}_{-0.15}$
A_{143}^{tSZ}	$4.4^{+3.8}_{-4.2}$	Y_P	$0.24533^{+0.00017}_{-0.00018}$	$f\sigma_8(0.38)$	$0.564^{+0.079}_{-0.090}$
A_{100}^{PS}	252^{+60}_{-50}	Y_P^{BBN}	$0.24665^{+0.00017}_{-0.00018}$	$\sigma_8(0.38)$	$0.80^{+0.11}_{-0.13}$
A_{143}^{PS}	44^{+20}_{-20}	$10^5 D/H$	$2.616^{+0.079}_{-0.077}$	$f\sigma_8(0.51)$	$0.581^{+0.093}_{-0.11}$
A_{217}^{PS}	108^{+20}_{-30}	Age/Gyr	$13.57^{+0.25}_{-0.18}$	$\sigma_8(0.51)$	$0.75^{+0.10}_{-0.13}$
A^{kSZ}	—	z_*	$1090.06^{+0.71}_{-0.69}$	$f\sigma_8(0.61)$	$0.583^{+0.097}_{-0.12}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	r_*	$144.73^{+0.72}_{-0.74}$	$\sigma_8(0.61)$	$0.709^{+0.094}_{-0.12}$
c_{217}	$0.9997^{+0.0037}_{-0.0028}$	$100\theta_*$	$1.04114^{+0.00088}_{-0.00089}$	$f\sigma_8(2.33)$	$0.356^{+0.045}_{-0.058}$
H_0	> 67.9	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.901^{+0.067}_{-0.069}$	$\sigma_8(2.33)$	$0.359^{+0.042}_{-0.053}$
Ω_Λ	$0.796^{+0.066}_{-0.11}$	z_{drag}	$1059.52^{+0.91}_{-0.89}$	f_{2000}^{143}	31^{+6}_{-6}
Ω_m	$0.204^{+0.11}_{-0.066}$	r_{drag}	$147.45^{+0.74}_{-0.76}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-4}
$\Omega_m h^2$	$0.1422^{+0.0030}_{-0.0029}$	k_{D}	$0.14037^{+0.00089}_{-0.00089}$	f_{2000}^{217}	$107.6^{+3.9}_{-3.9}$
$\Omega_m h^3$	$0.121^{+0.021}_{-0.025}$	$100\theta_{\text{D}}$	$0.16100^{+0.00052}_{-0.00051}$	χ_{lensing}^2	$9.0 (\nu: 0.7)$
σ_8	$0.95^{+0.12}_{-0.15}$	z_{eq}	3382^{+73}_{-69}	χ_{small}^2	$396.7 (\nu: 1.0)$
S_8	$0.774^{+0.068}_{-0.058}$	k_{eq}	$0.01032^{+0.00022}_{-0.00021}$	χ_{lowl}^2	$22.65 (\nu: 0.4)$
$\sigma_8 \Omega_m^{0.5}$	$0.424^{+0.037}_{-0.032}$	$100\theta_{\text{eq}}$	$0.817^{+0.013}_{-0.014}$	χ_{prior}^2	$7.4 (\nu: 6.3)$
$\sigma_8 \Omega_m^{0.25}$	$0.635^{+0.028}_{-0.031}$	$100\theta_{\text{s,eq}}$	$0.4512^{+0.0068}_{-0.0070}$	χ_{CMB}^2	$4345 (\nu: 4948163.8)$
$\sigma_8/h^{0.5}$	$1.034^{+0.043}_{-0.050}$	$H(0.15)$	$82.2^{+7.6}_{-9.8}$		
$r_{\text{drag}} h$	126^{+20}_{-30}	$D_{\text{M}}(0.15)$	543^{+100}_{-70}		

$$\bar{\chi}_{\text{eff}}^2 = 7497.94; \Delta \bar{\chi}_{\text{eff}}^2 = 6291.96; R - 1 = 0.01572$$

18.3 base_w_CamSpecHM_TT_lowl_lowE_post_zre6p5/base_w_plikHM_TT_lowl_lowE_post_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02217^{+0.00043}_{-0.00043}$	$r_{\text{drag}} h$	125^{+20}_{-30}	$H(0.15)$	$81.7^{+7.8}_{-10}$
$\Omega_c h^2$	$0.1203^{+0.0041}_{-0.0039}$	$\langle d^2 \rangle^{1/2}$	$2.504^{+0.084}_{-0.094}$	$D_{\text{M}}(0.15)$	547^{+100}_{-70}
$100\theta_{MC}$	$1.04085^{+0.00093}_{-0.00093}$	z_{re}	< 8.77	$H(0.38)$	$84.1^{+2.1}_{-2.2}$
τ	$0.054^{+0.012}_{-0.011}$	$10^9 A_s$	$2.096^{+0.058}_{-0.053}$	$D_{\text{M}}(0.38)$	1387^{+200}_{-100}
w	$-1.55^{+0.59}_{-0.48}$	$10^9 A_s e^{-2\tau}$	$1.882^{+0.026}_{-0.026}$	$H(0.51)$	$88.2^{+1.9}_{-2.2}$
$\ln(10^{10} A_s)$	$3.042^{+0.027}_{-0.025}$	D_{40}	1228^{+30}_{-30}	$D_{\text{M}}(0.51)$	1840^{+170}_{-120}
n_s	$0.964^{+0.011}_{-0.011}$	D_{220}	5711^{+81}_{-81}	$H(0.61)$	$92.5^{+2.9}_{-2.8}$
y_{cal}	$1.0004^{+0.0048}_{-0.0048}$	D_{810}	2534^{+27}_{-26}	$D_{\text{M}}(0.61)$	2172^{+160}_{-120}
A_{217}^{CIB}	44^{+20}_{-20}	D_{1420}	$814^{+10}_{-9.8}$	$H(2.33)$	$232.3^{+5.3}_{-4.3}$
$\xi^{tSZ-CIB}$	—	D_{2000}	$229.8^{+3.5}_{-3.4}$	$D_{\text{M}}(2.33)$	5749^{+44}_{-43}
A_{143}^{tSZ}	$4.4^{+3.8}_{-4.2}$	$n_{s,0.002}$	$0.964^{+0.011}_{-0.011}$	$f\sigma_8(0.15)$	$0.490^{+0.042}_{-0.040}$
A_{100}^{PS}	252^{+60}_{-50}	Y_P	$0.24531^{+0.00017}_{-0.00020}$	$\sigma_8(0.15)$	$0.90^{+0.13}_{-0.16}$
A_{143}^{PS}	44^{+20}_{-20}	Y_P^{BBN}	$0.24663^{+0.00017}_{-0.00020}$	$f\sigma_8(0.38)$	$0.572^{+0.094}_{-0.11}$
A_{217}^{PS}	108^{+30}_{-30}	$10^5 D/H$	$2.624^{+0.082}_{-0.080}$	$\sigma_8(0.38)$	$0.80^{+0.12}_{-0.15}$
A^{kSZ}	—	Age/Gyr	$13.59^{+0.26}_{-0.19}$	$f\sigma_8(0.51)$	$0.59^{+0.11}_{-0.12}$
c_{100}	$0.9985^{+0.0022}_{-0.0026}$	z_*	$1090.20^{+0.80}_{-0.78}$	$\sigma_8(0.51)$	$0.75^{+0.11}_{-0.14}$
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	r_*	$144.52^{+0.92}_{-0.92}$	$f\sigma_8(0.61)$	$0.59^{+0.11}_{-0.13}$
H_0	> 66.6	$100\theta_*$	$1.04106^{+0.00091}_{-0.00092}$	$\sigma_8(0.61)$	$0.71^{+0.10}_{-0.13}$
Ω_Λ	$0.791^{+0.070}_{-0.12}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.882^{+0.085}_{-0.085}$	$f\sigma_8(2.33)$	$0.357^{+0.048}_{-0.064}$
Ω_m	$0.209^{+0.12}_{-0.070}$	z_{drag}	$1059.49^{+0.90}_{-0.89}$	$\sigma_8(2.33)$	$0.360^{+0.045}_{-0.058}$
$\Omega_m h^2$	$0.1431^{+0.0039}_{-0.0038}$	r_{drag}	$147.25^{+0.93}_{-0.92}$	f_{2000}^{143}	31^{+6}_{-6}
$\Omega_m h^3$	$0.121^{+0.023}_{-0.027}$	k_{D}	$0.1405^{+0.0010}_{-0.0010}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-4}
σ_8	$0.96^{+0.13}_{-0.16}$	$100\theta_{\text{D}}$	$0.16103^{+0.00052}_{-0.00051}$	f_{2000}^{217}	$107.6^{+3.9}_{-3.9}$
S_8	$0.787^{+0.072}_{-0.064}$	z_{eq}	3404^{+93}_{-90}	χ_{small}^2	$396.7 (\nu: 1.2)$
$\sigma_8 \Omega_m^{0.5}$	$0.431^{+0.039}_{-0.035}$	k_{eq}	$0.01039^{+0.00028}_{-0.00027}$	χ_{lowl}^2	$23.1 (\nu: 0.7)$
$\sigma_8 \Omega_m^{0.25}$	$0.643^{+0.039}_{-0.043}$	$100\theta_{\text{eq}}$	$0.813^{+0.017}_{-0.017}$	χ_{prior}^2	$7.4 (\nu: 6.2)$
$\sigma_8/h^{0.5}$	$1.045^{+0.059}_{-0.067}$	$100\theta_{\text{s,eq}}$	$0.4491^{+0.0088}_{-0.0087}$	χ_{CMB}^2	$4336 (\nu: 4948539.1)$

$\bar{\chi}_{\text{eff}}^2 = 7489.13$; $\Delta\bar{\chi}_{\text{eff}}^2 = 6292.25$; $R - 1 = 0.01149$

18.4 base_w_CamSpecHM_TT_lowl_lowE_post_lensing_zre6p5/base_w_plikHM_TT_lowl_lowE_post_lensing_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02223^{+0.00041}_{-0.00041}$	$\langle d^2 \rangle^{1/2}$	$2.483^{+0.055}_{-0.061}$	$H(0.38)$	$84.5^{+1.9}_{-2.1}$
$\Omega_c h^2$	$0.1191^{+0.0031}_{-0.0030}$	z_{re}	< 8.66	$D_{\text{M}}(0.38)$	1379^{+200}_{-100}
$100\theta_{MC}$	$1.04097^{+0.00089}_{-0.00089}$	$10^9 A_s$	$2.088^{+0.052}_{-0.047}$	$H(0.51)$	$88.6^{+1.5}_{-1.8}$
τ	$0.053^{+0.012}_{-0.010}$	$10^9 A_s e^{-2\tau}$	$1.876^{+0.022}_{-0.022}$	$D_{\text{M}}(0.51)$	1830^{+160}_{-110}
w	$-1.53^{+0.54}_{-0.44}$	D_{40}	1221^{+27}_{-25}	$H(0.61)$	$92.8^{+2.5}_{-2.5}$
$\ln(10^{10} A_s)$	$3.038^{+0.025}_{-0.023}$	D_{220}	5714^{+81}_{-81}	$D_{\text{M}}(0.61)$	2161^{+160}_{-110}
n_s	$0.9663^{+0.0095}_{-0.0095}$	D_{810}	2532^{+26}_{-26}	$H(2.33)$	$231.4^{+5.2}_{-3.8}$
y_{cal}	$1.0002^{+0.0048}_{-0.0048}$	D_{1420}	$814^{+10}_{-9.8}$	$D_{\text{M}}(2.33)$	5741^{+43}_{-40}
A_{217}^{CIB}	44^{+20}_{-20}	D_{2000}	$229.8^{+3.6}_{-3.5}$	$f\sigma_8(0.15)$	$0.481^{+0.029}_{-0.028}$
$\xi^{tSZ-CIB}$	—	$n_{s,0.002}$	$0.9663^{+0.0095}_{-0.0095}$	$\sigma_8(0.15)$	$0.89^{+0.12}_{-0.15}$
A_{143}^{tSZ}	$4.5^{+3.8}_{-4.2}$	Y_P	$0.24533^{+0.00017}_{-0.00018}$	$f\sigma_8(0.38)$	$0.562^{+0.079}_{-0.090}$
A_{100}^{PS}	252^{+60}_{-50}	Y_P^{BBN}	$0.24666^{+0.00017}_{-0.00018}$	$\sigma_8(0.38)$	$0.80^{+0.11}_{-0.14}$
A_{143}^{PS}	44^{+20}_{-20}	$10^5 D/H$	$2.613^{+0.078}_{-0.076}$	$f\sigma_8(0.51)$	$0.579^{+0.093}_{-0.11}$
A_{217}^{PS}	108^{+30}_{-30}	Age/Gyr	$13.57^{+0.25}_{-0.18}$	$\sigma_8(0.51)$	$0.75^{+0.10}_{-0.13}$
A^{kSZ}	—	z_*	$1090.03^{+0.69}_{-0.68}$	$f\sigma_8(0.61)$	$0.581^{+0.098}_{-0.12}$
c_{100}	$0.9985^{+0.0022}_{-0.0026}$	r_*	$144.77^{+0.70}_{-0.72}$	$\sigma_8(0.61)$	$0.708^{+0.095}_{-0.12}$
c_{217}	$0.9997^{+0.0037}_{-0.0028}$	$100\theta_*$	$1.04117^{+0.00087}_{-0.00089}$	$f\sigma_8(2.33)$	$0.356^{+0.045}_{-0.058}$
H_0	> 67.7	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.904^{+0.066}_{-0.068}$	$\sigma_8(2.33)$	$0.359^{+0.042}_{-0.053}$
Ω_Λ	$0.795^{+0.067}_{-0.11}$	z_{drag}	$1059.54^{+0.89}_{-0.86}$	f_{2000}^{143}	31^{+6}_{-6}
Ω_m	$0.205^{+0.11}_{-0.067}$	r_{drag}	$147.48^{+0.73}_{-0.74}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-4}
$\Omega_m h^2$	$0.1420^{+0.0029}_{-0.0028}$	k_{D}	$0.14034^{+0.00088}_{-0.00089}$	f_{2000}^{217}	$107.5^{+4.0}_{-3.9}$
$\Omega_m h^3$	$0.121^{+0.022}_{-0.025}$	$100\theta_{\text{D}}$	$0.16100^{+0.00052}_{-0.00051}$	χ_{lensing}^2	$9.0 (\nu: 0.7)$
σ_8	$0.95^{+0.12}_{-0.15}$	z_{eq}	3378^{+70}_{-67}	χ_{small}^2	$396.5 (\nu: 0.9)$
S_8	$0.774^{+0.069}_{-0.058}$	k_{eq}	$0.01031^{+0.00021}_{-0.00021}$	χ_{lowl}^2	$22.61 (\nu: 0.4)$
$\sigma_8 \Omega_m^{0.5}$	$0.424^{+0.038}_{-0.032}$	$100\theta_{\text{eq}}$	$0.817^{+0.013}_{-0.013}$	χ_{prior}^2	$7.4 (\nu: 6.3)$
$\sigma_8 \Omega_m^{0.25}$	$0.635^{+0.028}_{-0.032}$	$100\theta_{\text{s,eq}}$	$0.4516^{+0.0066}_{-0.0067}$	χ_{CMB}^2	$4344 (\nu: 4948292.6)$
$\sigma_8/h^{0.5}$	$1.034^{+0.044}_{-0.051}$	$H(0.15)$	$82.2^{+7.7}_{-9.8}$		
$r_{\text{drag}} h$	126^{+20}_{-30}	$D_{\text{M}}(0.15)$	544^{+100}_{-70}		

$\bar{\chi}_{\text{eff}}^2 = 7497.68$; $\Delta \bar{\chi}_{\text{eff}}^2 = 6292.01$; $R - 1 = 0.02078$

18.5 base_w_CamSpecHM_TTTEEE_lowl_lowE/base_w_plikHM_TTTEEE_lowl_lowE

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02236^{+0.00030}_{-0.00030}$	$r_{\text{drag}} h$	126^{+20}_{-30}	$H(0.15)$	$82.5^{+7.2}_{-9.6}$
$\Omega_c h^2$	$0.1197^{+0.0027}_{-0.0027}$	$\langle d^2 \rangle^{1/2}$	$2.491^{+0.073}_{-0.077}$	$D_{\text{M}}(0.15)$	541^{+100}_{-60}
$100\theta_{MC}$	$1.04093^{+0.00062}_{-0.00062}$	z_{re}	$7.5^{+1.5}_{-1.7}$	$H(0.38)$	$84.5^{+1.6}_{-1.8}$
τ	$0.053^{+0.016}_{-0.016}$	$10^9 A_s$	$2.091^{+0.069}_{-0.067}$	$D_{\text{M}}(0.38)$	1374^{+150}_{-100}
w	$-1.55^{+0.55}_{-0.43}$	$10^9 A_s e^{-2\tau}$	$1.880^{+0.024}_{-0.023}$	$H(0.51)$	$88.5^{+1.6}_{-1.8}$
$\ln(10^{10} A_s)$	$3.040^{+0.033}_{-0.033}$	D_{40}	1224^{+26}_{-25}	$D_{\text{M}}(0.51)$	1826^{+150}_{-100}
n_s	$0.9660^{+0.0085}_{-0.0086}$	D_{220}	5727^{+77}_{-77}	$H(0.61)$	$92.7^{+2.7}_{-2.5}$
y_{cal}	$1.0004^{+0.0049}_{-0.0049}$	D_{810}	2536^{+27}_{-27}	$D_{\text{M}}(0.61)$	2157^{+150}_{-100}
A_{217}^{CIB}	43^{+10}_{-10}	D_{1420}	$816.1^{+9.6}_{-9.6}$	$H(2.33)$	$231.8^{+4.6}_{-3.4}$
$\xi^{tSZ-CIB}$	—	D_{2000}	$230.7^{+3.2}_{-3.2}$	$D_{\text{M}}(2.33)$	5737^{+34}_{-31}
A_{143}^{tSZ}	$4.7^{+3.9}_{-4.3}$	$n_{s,0.002}$	$0.9660^{+0.0085}_{-0.0086}$	$f\sigma_8(0.15)$	$0.486^{+0.032}_{-0.035}$
A_{100}^{PS}	248^{+60}_{-50}	Y_P	$0.24539^{+0.00011}_{-0.00012}$	$\sigma_8(0.15)$	$0.90^{+0.12}_{-0.15}$
A_{143}^{PS}	42^{+20}_{-20}	Y_P^{BBN}	$0.24672^{+0.00011}_{-0.00012}$	$f\sigma_8(0.38)$	$0.569^{+0.082}_{-0.097}$
A_{217}^{PS}	109^{+20}_{-30}	$10^5 D/H$	$2.587^{+0.058}_{-0.055}$	$\sigma_8(0.38)$	$0.80^{+0.11}_{-0.14}$
A^{kSZ}	—	Age/Gyr	$13.56^{+0.24}_{-0.16}$	$f\sigma_8(0.51)$	$0.587^{+0.096}_{-0.12}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	z_*	$1089.90^{+0.54}_{-0.54}$	$\sigma_8(0.51)$	$0.75^{+0.10}_{-0.13}$
c_{217}	$0.9996^{+0.0037}_{-0.0027}$	r_*	$144.52^{+0.62}_{-0.62}$	$f\sigma_8(0.61)$	$0.59^{+0.10}_{-0.12}$
H_0	> 68.3	$100\theta_*$	$1.04111^{+0.00061}_{-0.00061}$	$\sigma_8(0.61)$	$0.715^{+0.095}_{-0.12}$
Ω_Λ	$0.798^{+0.063}_{-0.11}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.882^{+0.058}_{-0.058}$	$f\sigma_8(2.33)$	$0.358^{+0.045}_{-0.060}$
Ω_m	$0.202^{+0.11}_{-0.063}$	z_{drag}	$1059.89^{+0.61}_{-0.65}$	$\sigma_8(2.33)$	$0.361^{+0.042}_{-0.054}$
$\Omega_m h^2$	$0.1427^{+0.0026}_{-0.0025}$	r_{drag}	$147.19^{+0.63}_{-0.62}$	f_{2000}^{143}	29^{+6}_{-5}
$\Omega_m h^3$	$0.122^{+0.021}_{-0.026}$	k_{D}	$0.14076^{+0.00068}_{-0.00072}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
σ_8	$0.96^{+0.12}_{-0.15}$	$100\theta_{\text{D}}$	$0.16078^{+0.00037}_{-0.00036}$	f_{2000}^{217}	$106.7^{+3.6}_{-3.6}$
S_8	$0.777^{+0.062}_{-0.053}$	z_{eq}	3394^{+61}_{-61}	χ_{small}^2	$396.9 (\nu: 1.3)$
$\sigma_8 \Omega_m^{0.5}$	$0.425^{+0.034}_{-0.029}$	k_{eq}	$0.01036^{+0.00019}_{-0.00018}$	χ_{lowl}^2	$22.72 (\nu: 0.4)$
$\sigma_8 \Omega_m^{0.25}$	$0.639^{+0.032}_{-0.037}$	$100\theta_{\text{eq}}$	$0.815^{+0.012}_{-0.011}$	χ_{prior}^2	$9.6 (\nu: 9.7)$
$\sigma_8/h^{0.5}$	$1.039^{+0.050}_{-0.058}$	$100\theta_{\text{s,eq}}$	$0.4502^{+0.0059}_{-0.0058}$	χ_{CMB}^2	$7355 (\nu: 10477868.7)$

Best-fit $\chi_{\text{eff}}^2 = 11918.08$; $\Delta\chi_{\text{eff}}^2 = 9156.71$; $\bar{\chi}_{\text{eff}}^2 = 11940.42$; $\Delta\bar{\chi}_{\text{eff}}^2 = 9151.76$; $R - 1 = 0.01476$

χ_{eff}^2 : CMB - small_100x143_offlike5_EE_Aplanck_B: 395.73 (Δ -0.12) commander_dx12_v3_2_29: 22.18 (Δ -0.27) CamSpec like_10.7HM_1400_unified: 11498.24

18.6 base_w_CamSpecHM_TTTEEE_lowl_lowE_post_lensing/base_w_plikHM_TTTEEE_lowl_lowE_post_lensing

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02239^{+0.00031}_{-0.00030}$	$\langle d^2 \rangle^{1/2}$	$2.481^{+0.051}_{-0.058}$	$H(0.38)$	$84.7^{+1.4}_{-1.7}$
$\Omega_c h^2$	$0.1192^{+0.0024}_{-0.0023}$	z_{re}	$7.4^{+1.4}_{-1.6}$	$D_{\text{M}}(0.38)$	1369^{+140}_{-99}
$100\theta_{MC}$	$1.04096^{+0.00060}_{-0.00061}$	$10^9 A_s$	$2.083^{+0.061}_{-0.060}$	$H(0.51)$	$88.6^{+1.4}_{-1.6}$
τ	$0.052^{+0.015}_{-0.015}$	$10^9 A_s e^{-2\tau}$	$1.877^{+0.022}_{-0.021}$	$D_{\text{M}}(0.51)$	1820^{+140}_{-99}
w	$-1.55^{+0.51}_{-0.40}$	D_{40}	1221^{+24}_{-23}	$H(0.61)$	$92.8^{+2.5}_{-2.3}$
$\ln(10^{10} A_s)$	$3.036^{+0.029}_{-0.029}$	D_{220}	5726^{+77}_{-77}	$D_{\text{M}}(0.61)$	2151^{+140}_{-95}
n_s	$0.9668^{+0.0079}_{-0.0082}$	D_{810}	2534^{+26}_{-26}	$H(2.33)$	$231.5^{+4.3}_{-3.1}$
y_{cal}	$1.0003^{+0.0049}_{-0.0049}$	D_{1420}	$815.8^{+9.3}_{-9.6}$	$D_{\text{M}}(2.33)$	5733^{+32}_{-30}
A_{217}^{CIB}	43^{+20}_{-10}	D_{2000}	$230.6^{+3.1}_{-3.2}$	$f\sigma_8(0.15)$	$0.482^{+0.025}_{-0.027}$
$\xi^{tSZ-CIB}$	—	$n_{s,0.002}$	$0.9668^{+0.0079}_{-0.0082}$	$\sigma_8(0.15)$	$0.90^{+0.11}_{-0.14}$
A_{143}^{tSZ}	$4.7^{+3.9}_{-4.3}$	Y_P	$0.24540^{+0.00011}_{-0.00012}$	$f\sigma_8(0.38)$	$0.566^{+0.074}_{-0.086}$
A_{100}^{PS}	248^{+60}_{-50}	Y_P^{BBN}	$0.24673^{+0.00011}_{-0.00012}$	$\sigma_8(0.38)$	$0.80^{+0.10}_{-0.13}$
A_{143}^{PS}	42^{+20}_{-20}	$10^5 D/H$	$2.583^{+0.057}_{-0.055}$	$f\sigma_8(0.51)$	$0.584^{+0.087}_{-0.10}$
A_{217}^{PS}	109^{+20}_{-30}	Age/Gyr	$13.55^{+0.22}_{-0.15}$	$\sigma_8(0.51)$	$0.751^{+0.094}_{-0.12}$
A^{kSZ}	—	z_*	$1089.83^{+0.52}_{-0.51}$	$f\sigma_8(0.61)$	$0.586^{+0.091}_{-0.11}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	r_*	$144.62^{+0.54}_{-0.54}$	$\sigma_8(0.61)$	$0.713^{+0.089}_{-0.11}$
c_{217}	$0.9996^{+0.0037}_{-0.0027}$	$100\theta_*$	$1.04114^{+0.00060}_{-0.00060}$	$f\sigma_8(2.33)$	$0.358^{+0.042}_{-0.055}$
H_0	> 69.7	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.891^{+0.051}_{-0.051}$	$\sigma_8(2.33)$	$0.361^{+0.039}_{-0.050}$
Ω_Λ	$0.801^{+0.060}_{-0.096}$	z_{drag}	$1059.92^{+0.62}_{-0.63}$	f_{2000}^{143}	29^{+6}_{-5}
Ω_m	$0.199^{+0.096}_{-0.060}$	r_{drag}	$147.28^{+0.56}_{-0.55}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
$\Omega_m h^2$	$0.1422^{+0.0023}_{-0.0022}$	k_{D}	$0.14068^{+0.00063}_{-0.00066}$	f_{2000}^{217}	$106.7^{+3.7}_{-3.7}$
$\Omega_m h^3$	$0.122^{+0.020}_{-0.024}$	$100\theta_{\text{D}}$	$0.16077^{+0.00037}_{-0.00037}$	χ^2_{lensing}	$8.88 (\nu: 0.5)$
σ_8	$0.96^{+0.11}_{-0.14}$	z_{eq}	3384^{+54}_{-53}	χ^2_{small}	$861 (\nu: 347387.2)$
S_8	$0.770^{+0.060}_{-0.050}$	k_{eq}	$0.01033^{+0.00017}_{-0.00016}$	χ^2_{lowl}	$22.51 (\nu: 0.3)$
$\sigma_8 \Omega_m^{0.5}$	$0.422^{+0.033}_{-0.027}$	$100\theta_{\text{eq}}$	$0.817^{+0.010}_{-0.010}$	χ^2_{prior}	$9.7 (\nu: 9.9)$
$\sigma_8 \Omega_m^{0.25}$	$0.635^{+0.026}_{-0.029}$	$100\theta_{\text{s,eq}}$	$0.4512^{+0.0052}_{-0.0052}$	χ^2_{CMB}	$7363 (\nu: 10476146.2)$
$\sigma_8/h^{0.5}$	$1.034^{+0.040}_{-0.047}$	$H(0.15)$	$82.8^{+7.0}_{-9.1}$		
$r_{\text{drag}} h$	127^{+20}_{-20}	$D_{\text{M}}(0.15)$	539^{+90}_{-60}		

$\bar{\chi}^2_{\text{eff}} = 11948.65$; $\Delta\bar{\chi}^2_{\text{eff}} = 9150.93$; $R - 1 = 0.02333$

18.7 base_w_CamSpecHM_TTTEEE_lowl_lowE_post_Riess18/base_w_plikHM_TTTEEE_lowl_lowE_post_Riess18

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02234^{+0.00029}_{-0.00029}$	$\langle d^2 \rangle^{1/2}$	$2.468^{+0.064}_{-0.065}$	$H(0.38)$	$83.82^{+0.77}_{-0.79}$
$\Omega_c h^2$	$0.1199^{+0.0029}_{-0.0027}$	z_{re}	$7.5^{+1.5}_{-1.7}$	$D_{\text{M}}(0.38)$	1466^{+34}_{-32}
$100\theta_{MC}$	$1.04090^{+0.00061}_{-0.00063}$	$10^9 A_s$	$2.092^{+0.068}_{-0.067}$	$H(0.51)$	$89.53^{+0.72}_{-0.75}$
τ	$0.053^{+0.016}_{-0.015}$	$10^9 A_s e^{-2\tau}$	$1.882^{+0.024}_{-0.023}$	$D_{\text{M}}(0.51)$	1916^{+36}_{-34}
w	$-1.21^{+0.11}_{-0.11}$	D_{40}	1228^{+26}_{-25}	$H(0.61)$	$94.56^{+0.76}_{-0.84}$
$\ln(10^{10} A_s)$	$3.041^{+0.032}_{-0.032}$	D_{220}	5728^{+78}_{-75}	$D_{\text{M}}(0.61)$	2242^{+36}_{-34}
n_s	$0.9653^{+0.0085}_{-0.0085}$	D_{810}	2537^{+26}_{-26}	$H(2.33)$	$234.0^{+1.7}_{-1.7}$
y_{cal}	$1.0006^{+0.0048}_{-0.0047}$	D_{1420}	$816.4^{+9.5}_{-9.1}$	$D_{\text{M}}(2.33)$	5748^{+21}_{-21}
A_{217}^{CIB}	43^{+20}_{-10}	D_{2000}	$230.7^{+3.1}_{-3.1}$	$f\sigma_8(0.15)$	$0.470^{+0.021}_{-0.021}$
$\xi^{tSZ-CIB}$	—	$n_{s,0.002}$	$0.9653^{+0.0085}_{-0.0085}$	$\sigma_8(0.15)$	$0.805^{+0.036}_{-0.036}$
A_{143}^{tSZ}	$4.7^{+4.0}_{-4.0}$	Y_P	$0.24538^{+0.00011}_{-0.00012}$	$f\sigma_8(0.38)$	$0.509^{+0.028}_{-0.027}$
A_{100}^{PS}	248^{+50}_{-50}	Y_P^{BBN}	$0.24671^{+0.00011}_{-0.00012}$	$\sigma_8(0.38)$	$0.716^{+0.032}_{-0.032}$
A_{143}^{PS}	42^{+20}_{-20}	$10^5 D/H$	$2.592^{+0.055}_{-0.053}$	$f\sigma_8(0.51)$	$0.514^{+0.029}_{-0.028}$
A_{217}^{PS}	109^{+20}_{-30}	Age/Gyr	$13.689^{+0.061}_{-0.059}$	$\sigma_8(0.51)$	$0.670^{+0.030}_{-0.029}$
A^{kSZ}	—	z_*	$1089.95^{+0.51}_{-0.51}$	$f\sigma_8(0.61)$	$0.512^{+0.030}_{-0.028}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	r_*	$144.47^{+0.65}_{-0.63}$	$\sigma_8(0.61)$	$0.637^{+0.028}_{-0.027}$
c_{217}	$0.9996^{+0.0037}_{-0.0027}$	$100\theta_*$	$1.04109^{+0.00061}_{-0.00061}$	$f\sigma_8(2.33)$	$0.321^{+0.014}_{-0.014}$
H_0	$73.6^{+3.3}_{-3.2}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.877^{+0.061}_{-0.059}$	$\sigma_8(2.33)$	$0.327^{+0.012}_{-0.012}$
Ω_Λ	$0.736^{+0.023}_{-0.025}$	z_{drag}	$1059.86^{+0.57}_{-0.58}$	f_{2000}^{143}	30^{+6}_{-6}
Ω_m	$0.264^{+0.025}_{-0.023}$	r_{drag}	$147.15^{+0.66}_{-0.66}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
$\Omega_m h^2$	$0.1429^{+0.0026}_{-0.0026}$	k_{D}	$0.14079^{+0.00071}_{-0.00073}$	f_{2000}^{217}	$106.9^{+3.7}_{-3.7}$
$\Omega_m h^3$	$0.1052^{+0.0049}_{-0.0050}$	$100\theta_{\text{D}}$	$0.16080^{+0.00037}_{-0.00034}$	χ_{simall}^2	$842 (\nu: 337633.6)$
σ_8	$0.867^{+0.038}_{-0.037}$	z_{eq}	3400^{+62}_{-63}	χ_{lowl}^2	$23.05 (\nu: 0.4)$
S_8	$0.813^{+0.031}_{-0.031}$	k_{eq}	$0.01038^{+0.00019}_{-0.00019}$	χ_{H073p45}^2	$1.0 (\nu: 1.0)$
$\sigma_8 \Omega_m^{0.5}$	$0.445^{+0.017}_{-0.017}$	$100\theta_{\text{eq}}$	$0.814^{+0.012}_{-0.012}$	χ_{prior}^2	$9.7 (\nu: 10.1)$
$\sigma_8 \Omega_m^{0.25}$	$0.621^{+0.021}_{-0.021}$	$100\theta_{\text{s,eq}}$	$0.4496^{+0.0061}_{-0.0060}$	χ_{CMB}^2	$7356 (\nu: 10475473.7)$
$\sigma_8/h^{0.5}$	$1.010^{+0.031}_{-0.030}$	$H(0.15)$	$76.4^{+1.9}_{-1.9}$		
$r_{\text{drag}} h$	$108.3^{+4.8}_{-4.8}$	$D_{\text{M}}(0.15)$	601^{+21}_{-20}		

$\bar{\chi}_{\text{eff}}^2 = 11941.94$; $\Delta\bar{\chi}_{\text{eff}}^2 = 9150.61$; $R - 1 = 0.08175$

18.8 base_w_CamSpecHM_TTTEEE_lowl_lowE_post_zre6p5/base_w_plikHM_TTTEEE_lowl_lowE_post_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02237^{+0.00030}_{-0.00030}$	$r_{\text{drag}} h$	126^{+20}_{-30}	$H(0.15)$	$82.5^{+7.2}_{-9.6}$
$\Omega_c h^2$	$0.1196^{+0.0027}_{-0.0027}$	$\langle d^2 \rangle^{1/2}$	$2.494^{+0.071}_{-0.075}$	$D_{\text{M}}(0.15)$	541^{+100}_{-60}
$100\theta_{MC}$	$1.04093^{+0.00061}_{-0.00061}$	z_{re}	< 8.82	$H(0.38)$	$84.5^{+1.6}_{-1.8}$
τ	$0.055^{+0.013}_{-0.011}$	$10^9 A_s$	$2.097^{+0.059}_{-0.053}$	$D_{\text{M}}(0.38)$	1375^{+200}_{-100}
w	$-1.55^{+0.55}_{-0.43}$	$10^9 A_s e^{-2\tau}$	$1.880^{+0.024}_{-0.023}$	$H(0.51)$	$88.5^{+1.6}_{-1.8}$
$\ln(10^{10} A_s)$	$3.043^{+0.028}_{-0.026}$	D_{40}	1224^{+26}_{-25}	$D_{\text{M}}(0.51)$	1826^{+160}_{-100}
n_s	$0.9661^{+0.0084}_{-0.0086}$	D_{220}	5727^{+77}_{-77}	$H(0.61)$	$92.7^{+2.7}_{-2.5}$
y_{cal}	$1.0004^{+0.0049}_{-0.0049}$	D_{810}	2536^{+27}_{-27}	$D_{\text{M}}(0.61)$	2157^{+150}_{-100}
A_{217}^{CIB}	43^{+10}_{-10}	D_{1420}	$816.1^{+9.6}_{-9.7}$	$H(2.33)$	$231.8^{+4.6}_{-3.4}$
$\xi^{tSZ-CIB}$	—	D_{2000}	$230.8^{+3.2}_{-3.2}$	$D_{\text{M}}(2.33)$	5736^{+34}_{-31}
A_{143}^{tSZ}	$4.7^{+3.9}_{-4.3}$	$n_{s,0.002}$	$0.9661^{+0.0084}_{-0.0086}$	$f\sigma_8(0.15)$	$0.486^{+0.031}_{-0.035}$
A_{100}^{PS}	247^{+60}_{-50}	Y_P	$0.24539^{+0.00011}_{-0.00012}$	$\sigma_8(0.15)$	$0.90^{+0.12}_{-0.15}$
A_{143}^{PS}	42^{+20}_{-20}	Y_P^{BBN}	$0.24672^{+0.00011}_{-0.00012}$	$f\sigma_8(0.38)$	$0.570^{+0.083}_{-0.097}$
A_{217}^{PS}	109^{+20}_{-30}	$10^5 D/H$	$2.587^{+0.056}_{-0.055}$	$\sigma_8(0.38)$	$0.80^{+0.11}_{-0.14}$
A^{kSZ}	—	Age/Gyr	$13.56^{+0.24}_{-0.16}$	$f\sigma_8(0.51)$	$0.587^{+0.096}_{-0.12}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	z_*	$1089.89^{+0.53}_{-0.53}$	$\sigma_8(0.51)$	$0.75^{+0.10}_{-0.13}$
c_{217}	$0.9996^{+0.0037}_{-0.0027}$	r_*	$144.53^{+0.62}_{-0.62}$	$f\sigma_8(0.61)$	$0.59^{+0.10}_{-0.12}$
H_0	> 68.2	$100\theta_*$	$1.04112^{+0.00060}_{-0.00060}$	$\sigma_8(0.61)$	$0.715^{+0.095}_{-0.12}$
Ω_Λ	$0.797^{+0.063}_{-0.11}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.882^{+0.058}_{-0.058}$	$f\sigma_8(2.33)$	$0.359^{+0.045}_{-0.060}$
Ω_m	$0.203^{+0.11}_{-0.063}$	z_{drag}	$1059.90^{+0.60}_{-0.62}$	$\sigma_8(2.33)$	$0.362^{+0.042}_{-0.055}$
$\Omega_m h^2$	$0.1426^{+0.0025}_{-0.0025}$	r_{drag}	$147.20^{+0.63}_{-0.62}$	f_{2000}^{143}	29^{+6}_{-5}
$\Omega_m h^3$	$0.122^{+0.021}_{-0.026}$	k_{D}	$0.14075^{+0.00067}_{-0.00071}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
σ_8	$0.96^{+0.12}_{-0.15}$	$100\theta_{\text{D}}$	$0.16078^{+0.00037}_{-0.00036}$	f_{2000}^{217}	$106.6^{+3.6}_{-3.6}$
S_8	$0.778^{+0.062}_{-0.053}$	z_{eq}	3393^{+61}_{-60}	χ_{small}^2	$396.7 (\nu: 1.3)$
$\sigma_8 \Omega_m^{0.5}$	$0.426^{+0.034}_{-0.029}$	k_{eq}	$0.01036^{+0.00019}_{-0.00018}$	χ_{lowl}^2	$22.72 (\nu: 0.4)$
$\sigma_8 \Omega_m^{0.25}$	$0.639^{+0.032}_{-0.037}$	$100\theta_{\text{eq}}$	$0.815^{+0.011}_{-0.011}$	χ_{prior}^2	$9.6 (\nu: 9.7)$
$\sigma_8/h^{0.5}$	$1.040^{+0.050}_{-0.058}$	$100\theta_{\text{s,eq}}$	$0.4503^{+0.0059}_{-0.0058}$	χ_{CMB}^2	$7355 (\nu: 10477738.1)$

$\bar{\chi}_{\text{eff}}^2 = 11940.09$; $\Delta\bar{\chi}_{\text{eff}}^2 = 9151.71$; $R - 1 = 0.01385$

18.9 base_w_CamSpecHM_TTTEEE_lowl_lowE_post_lensing_zre6p5/base_w_plikHM_TTTEEE_lowl_lowE_post_lensing_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02240^{+0.00031}_{-0.00030}$	$\langle d^2 \rangle^{1/2}$	$2.482^{+0.050}_{-0.057}$	$H(0.38)$	$84.7^{+1.4}_{-1.7}$
$\Omega_c h^2$	$0.1191^{+0.0024}_{-0.0023}$	z_{re}	< 8.60	$D_{\text{M}}(0.38)$	1370^{+140}_{-100}
$100\theta_{MC}$	$1.04097^{+0.00060}_{-0.00060}$	$10^9 A_s$	$2.090^{+0.052}_{-0.047}$	$H(0.51)$	$88.7^{+1.4}_{-1.6}$
τ	$0.054^{+0.012}_{-0.010}$	$10^9 A_s e^{-2\tau}$	$1.877^{+0.022}_{-0.021}$	$D_{\text{M}}(0.51)$	1821^{+150}_{-100}
w	$-1.54^{+0.51}_{-0.41}$	D_{40}	1221^{+24}_{-23}	$H(0.61)$	$92.8^{+2.5}_{-2.3}$
$\ln(10^{10} A_s)$	$3.039^{+0.025}_{-0.022}$	D_{220}	5726^{+76}_{-77}	$D_{\text{M}}(0.61)$	2151^{+140}_{-97}
n_s	$0.9671^{+0.0078}_{-0.0082}$	D_{810}	2534^{+26}_{-26}	$H(2.33)$	$231.4^{+4.4}_{-3.1}$
y_{cal}	$1.0002^{+0.0049}_{-0.0049}$	D_{1420}	$815.8^{+9.4}_{-9.7}$	$D_{\text{M}}(2.33)$	5733^{+33}_{-30}
A_{217}^{CIB}	43^{+10}_{-10}	D_{2000}	$230.7^{+3.1}_{-3.2}$	$f\sigma_8(0.15)$	$0.481^{+0.025}_{-0.027}$
$\xi^{tSZ-CIB}$	—	$n_{s,0.002}$	$0.9671^{+0.0078}_{-0.0082}$	$\sigma_8(0.15)$	$0.90^{+0.11}_{-0.14}$
A_{143}^{tSZ}	$4.7^{+4.0}_{-4.3}$	Y_P	$0.24540^{+0.00011}_{-0.00012}$	$f\sigma_8(0.38)$	$0.565^{+0.074}_{-0.086}$
A_{100}^{PS}	248^{+60}_{-50}	Y_P^{BBN}	$0.24673^{+0.00011}_{-0.00012}$	$\sigma_8(0.38)$	$0.80^{+0.10}_{-0.13}$
A_{143}^{PS}	42^{+20}_{-20}	$10^5 D/H$	$2.581^{+0.056}_{-0.055}$	$f\sigma_8(0.51)$	$0.583^{+0.088}_{-0.10}$
A_{217}^{PS}	109^{+20}_{-30}	Age/Gyr	$13.55^{+0.23}_{-0.16}$	$\sigma_8(0.51)$	$0.750^{+0.095}_{-0.12}$
A^{kSZ}	—	z_*	$1089.81^{+0.50}_{-0.50}$	$f\sigma_8(0.61)$	$0.585^{+0.092}_{-0.11}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	r_*	$144.64^{+0.53}_{-0.53}$	$\sigma_8(0.61)$	$0.713^{+0.090}_{-0.11}$
c_{217}	$0.9996^{+0.0037}_{-0.0027}$	$100\theta_*$	$1.04116^{+0.00059}_{-0.00059}$	$f\sigma_8(2.33)$	$0.358^{+0.043}_{-0.055}$
H_0	> 69.5	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.892^{+0.050}_{-0.050}$	$\sigma_8(2.33)$	$0.361^{+0.040}_{-0.050}$
Ω_Λ	$0.800^{+0.061}_{-0.097}$	z_{drag}	$1059.93^{+0.65}_{-0.65}$	f_{2000}^{143}	29^{+6}_{-5}
Ω_m	$0.200^{+0.097}_{-0.061}$	r_{drag}	$147.30^{+0.56}_{-0.54}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
$\Omega_m h^2$	$0.1422^{+0.0022}_{-0.0022}$	k_{D}	$0.14067^{+0.00062}_{-0.00066}$	f_{2000}^{217}	$106.6^{+3.7}_{-3.6}$
$\Omega_m h^3$	$0.122^{+0.020}_{-0.024}$	$100\theta_{\text{D}}$	$0.16076^{+0.00037}_{-0.00037}$	χ_{lensing}^2	$8.9 (\nu: 0.5)$
σ_8	$0.96^{+0.11}_{-0.14}$	z_{eq}	3382^{+53}_{-52}	χ_{small}^2	$868 (\nu: 350989.6)$
S_8	$0.771^{+0.060}_{-0.050}$	k_{eq}	$0.01032^{+0.00016}_{-0.00016}$	χ_{lowl}^2	$22.49 (\nu: 0.3)$
$\sigma_8 \Omega_m^{0.5}$	$0.422^{+0.033}_{-0.028}$	$100\theta_{\text{eq}}$	$0.8171^{+0.0099}_{-0.010}$	χ_{prior}^2	$9.7 (\nu: 9.8)$
$\sigma_8 \Omega_m^{0.25}$	$0.635^{+0.026}_{-0.030}$	$100\theta_{\text{s,eq}}$	$0.4514^{+0.0051}_{-0.0052}$	χ_{CMB}^2	$7363 (\nu: 10476159.7)$
$\sigma_8/h^{0.5}$	$1.035^{+0.040}_{-0.048}$	$H(0.15)$	$82.7^{+7.1}_{-9.2}$		
$r_{\text{drag}} h$	127^{+20}_{-30}	$D_{\text{M}}(0.15)$	540^{+90}_{-60}		

$\bar{\chi}_{\text{eff}}^2 = 11948.34$; $\Delta\bar{\chi}_{\text{eff}}^2 = 9150.91$; $R - 1 = 0.02464$

18.10 base_w_CamSpecHM_TTTEEE_lowl_lowE_post_Riess18_zre6p5/base_w_plikHM_TTTEEE_lowl_lowE_post_Riess18_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02234^{+0.00029}_{-0.00027}$	$\langle d^2 \rangle^{1/2}$	$2.471^{+0.062}_{-0.058}$	$H(0.38)$	$83.83^{+0.76}_{-0.78}$
$\Omega_c h^2$	$0.1199^{+0.0027}_{-0.0028}$	z_{re}	< 8.86	$D_{\text{M}}(0.38)$	1466^{+34}_{-32}
$100\theta_{MC}$	$1.04091^{+0.00062}_{-0.00063}$	$10^9 A_s$	$2.099^{+0.059}_{-0.053}$	$H(0.51)$	$89.54^{+0.71}_{-0.72}$
τ	$0.054^{+0.013}_{-0.011}$	$10^9 A_s e^{-2\tau}$	$1.882^{+0.024}_{-0.022}$	$D_{\text{M}}(0.51)$	1916^{+36}_{-33}
w	$-1.20^{+0.11}_{-0.11}$	D_{40}	1228^{+26}_{-25}	$H(0.61)$	$94.57^{+0.76}_{-0.81}$
$\ln(10^{10} A_s)$	$3.044^{+0.028}_{-0.026}$	D_{220}	5727^{+75}_{-75}	$D_{\text{M}}(0.61)$	2242^{+36}_{-34}
n_s	$0.9654^{+0.0082}_{-0.0085}$	D_{810}	2537^{+26}_{-26}	$H(2.33)$	$234.0^{+1.7}_{-1.7}$
y_{cal}	$1.0006^{+0.0048}_{-0.0047}$	D_{1420}	$816.4^{+9.5}_{-9.2}$	$D_{\text{M}}(2.33)$	5748^{+20}_{-20}
A_{217}^{CIB}	43^{+20}_{-20}	D_{2000}	$230.7^{+3.1}_{-3.0}$	$f\sigma_8(0.15)$	$0.470^{+0.021}_{-0.020}$
$\xi^{tSZ-CIB}$	—	$n_{s,0.002}$	$0.9654^{+0.0082}_{-0.0085}$	$\sigma_8(0.15)$	$0.806^{+0.036}_{-0.034}$
A_{143}^{tSZ}	$4.7^{+4.0}_{-4.0}$	Y_P	$0.24538^{+0.00011}_{-0.00011}$	$f\sigma_8(0.38)$	$0.510^{+0.028}_{-0.027}$
A_{100}^{PS}	248^{+50}_{-50}	Y_P^{BBN}	$0.24671^{+0.00011}_{-0.00011}$	$\sigma_8(0.38)$	$0.716^{+0.032}_{-0.031}$
A_{143}^{PS}	42^{+20}_{-20}	$10^5 D/H$	$2.591^{+0.052}_{-0.052}$	$f\sigma_8(0.51)$	$0.515^{+0.029}_{-0.028}$
A_{217}^{PS}	109^{+20}_{-30}	Age/Gyr	$13.689^{+0.061}_{-0.059}$	$\sigma_8(0.51)$	$0.670^{+0.030}_{-0.029}$
A^{kSZ}	—	z_*	$1089.95^{+0.49}_{-0.50}$	$f\sigma_8(0.61)$	$0.512^{+0.030}_{-0.028}$
c_{100}	$0.9986^{+0.0023}_{-0.0026}$	r_*	$144.48^{+0.65}_{-0.62}$	$\sigma_8(0.61)$	$0.637^{+0.028}_{-0.027}$
c_{217}	$0.9996^{+0.0038}_{-0.0027}$	$100\theta_*$	$1.04109^{+0.00061}_{-0.00063}$	$f\sigma_8(2.33)$	$0.321^{+0.013}_{-0.013}$
H_0	$73.6^{+3.3}_{-3.2}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.878^{+0.062}_{-0.058}$	$\sigma_8(2.33)$	$0.327^{+0.012}_{-0.012}$
Ω_Λ	$0.736^{+0.023}_{-0.025}$	z_{drag}	$1059.86^{+0.57}_{-0.58}$	f_{2000}^{143}	29^{+6}_{-6}
Ω_m	$0.264^{+0.025}_{-0.023}$	r_{drag}	$147.15^{+0.68}_{-0.65}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
$\Omega_m h^2$	$0.1429^{+0.0025}_{-0.0026}$	k_{D}	$0.14078^{+0.00071}_{-0.00074}$	f_{2000}^{217}	$106.9^{+3.7}_{-3.6}$
$\Omega_m h^3$	$0.1052^{+0.0049}_{-0.0050}$	$100\theta_{\text{D}}$	$0.16080^{+0.00033}_{-0.00033}$	χ_{simall}^2	$851 (\nu: 342194.1)$
σ_8	$0.868^{+0.037}_{-0.036}$	z_{eq}	3399^{+59}_{-63}	χ_{lowl}^2	$23.07 (\nu: 0.4)$
S_8	$0.814^{+0.030}_{-0.030}$	k_{eq}	$0.01037^{+0.00018}_{-0.00019}$	χ_{H073p45}^2	$1.0 (\nu: 1.0)$
$\sigma_8 \Omega_m^{0.5}$	$0.446^{+0.017}_{-0.016}$	$100\theta_{\text{eq}}$	$0.814^{+0.012}_{-0.012}$	χ_{prior}^2	$9.6 (\nu: 10.0)$
$\sigma_8 \Omega_m^{0.25}$	$0.622^{+0.021}_{-0.020}$	$100\theta_{\text{s,eq}}$	$0.4497^{+0.0061}_{-0.0060}$	χ_{CMB}^2	$7356 (\nu: 10475452.2)$
$\sigma_8/h^{0.5}$	$1.012^{+0.030}_{-0.029}$	$H(0.15)$	$76.4^{+1.9}_{-1.9}$		
$r_{\text{drag}} h$	$108.3^{+4.8}_{-4.8}$	$D_{\text{M}}(0.15)$	601^{+21}_{-20}		

$\bar{\chi}_{\text{eff}}^2 = 11941.58$; $\Delta\bar{\chi}_{\text{eff}}^2 = 9150.58$; $R - 1 = 0.09840$

18.11 base_w_CamSpecHM_TTTEEE_lowl_lowE_BAO/base_w_plikHM_TTTEEE_lowl_lowE_BAO

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02235^{+0.00030}_{-0.00030}$	z_{re}	$7.6^{+1.6}_{-1.6}$	$H(0.51)$	$89.67^{+0.50}_{-0.55}$
$\Omega_c h^2$	$0.1196^{+0.0026}_{-0.0025}$	$10^9 A_s$	$2.093^{+0.070}_{-0.067}$	$D_{\text{M}}(0.51)$	1972^{+34}_{-34}
$100\theta_{MC}$	$1.04094^{+0.00061}_{-0.00061}$	$10^9 A_s e^{-2\tau}$	$1.880^{+0.024}_{-0.023}$	$H(0.61)$	$95.20^{+0.64}_{-0.67}$
τ	$0.054^{+0.016}_{-0.015}$	D_{40}	1227^{+25}_{-25}	$D_{\text{M}}(0.61)$	2297^{+33}_{-33}
w	$-1.03^{+0.11}_{-0.12}$	D_{220}	5727^{+80}_{-78}	$H(2.33)$	$235.8^{+1.5}_{-1.5}$
$\ln(10^{10} A_s)$	$3.041^{+0.033}_{-0.033}$	D_{810}	2537^{+27}_{-27}	$D_{\text{M}}(2.33)$	5760^{+18}_{-18}
n_s	$0.9661^{+0.0084}_{-0.0084}$	D_{1420}	$816.6^{+9.7}_{-9.7}$	$f\sigma_8(0.15)$	$0.459^{+0.020}_{-0.019}$
y_{cal}	$1.0005^{+0.0050}_{-0.0049}$	D_{2000}	$230.6^{+3.2}_{-3.2}$	$\sigma_8(0.15)$	$0.756^{+0.038}_{-0.036}$
A_{217}^{CIB}	43^{+10}_{-20}	$n_{s,0.002}$	$0.9661^{+0.0084}_{-0.0084}$	$f\sigma_8(0.38)$	$0.480^{+0.028}_{-0.026}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.24539^{+0.00011}_{-0.00012}$	$\sigma_8(0.38)$	$0.671^{+0.034}_{-0.032}$
A_{143}^{tSZ}	$4.7^{+3.9}_{-4.3}$	Y_P^{BBN}	$0.24671^{+0.00011}_{-0.00012}$	$f\sigma_8(0.51)$	$0.480^{+0.030}_{-0.028}$
A_{100}^{PS}	249^{+60}_{-50}	$10^5 D/H$	$2.590^{+0.057}_{-0.054}$	$\sigma_8(0.51)$	$0.628^{+0.032}_{-0.030}$
A_{143}^{PS}	43^{+20}_{-20}	Age/Gyr	$13.779^{+0.064}_{-0.063}$	$f\sigma_8(0.61)$	$0.475^{+0.031}_{-0.028}$
A_{217}^{PS}	109^{+30}_{-30}	z_*	$1089.91^{+0.51}_{-0.50}$	$\sigma_8(0.61)$	$0.597^{+0.030}_{-0.028}$
A^{kSZ}	—	r_*	$144.56^{+0.61}_{-0.59}$	$f\sigma_8(2.33)$	$0.301^{+0.015}_{-0.014}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	$100\theta_*$	$1.04112^{+0.00060}_{-0.00060}$	$\sigma_8(2.33)$	$0.310^{+0.013}_{-0.012}$
c_{217}	$0.9996^{+0.0037}_{-0.0027}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.885^{+0.058}_{-0.056}$	f_{2000}^{143}	30^{+5}_{-5}
H_0	$68.5^{+3.1}_{-2.7}$	z_{drag}	$1059.86^{+0.64}_{-0.65}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
Ω_Λ	$0.695^{+0.025}_{-0.024}$	r_{drag}	$147.23^{+0.63}_{-0.60}$	f_{2000}^{217}	$106.9^{+3.6}_{-3.6}$
Ω_m	$0.305^{+0.024}_{-0.025}$	k_{D}	$0.14071^{+0.00069}_{-0.00074}$	χ_{small}^2	$397.0 (\nu: 1.6)$
$\Omega_m h^2$	$0.1426^{+0.0025}_{-0.0024}$	$100\theta_{\text{D}}$	$0.16080^{+0.00038}_{-0.00037}$	χ_{lowl}^2	$23.13 (\nu: 0.4)$
$\Omega_m h^3$	$0.0976^{+0.0052}_{-0.0047}$	z_{eq}	3391^{+59}_{-58}	$\chi_{6\text{DF}}^2$	$0.13 (\nu: 0.0)$
σ_8	$0.818^{+0.040}_{-0.038}$	k_{eq}	$0.01035^{+0.00018}_{-0.00018}$	χ_{MGS}^2	$1.83 (\nu: 0.5)$
S_8	$0.824^{+0.027}_{-0.027}$	$100\theta_{\text{eq}}$	$0.815^{+0.011}_{-0.011}$	χ_{DR12BAO}^2	$5.1 (\nu: 1.0)$
$\sigma_8 \Omega_m^{0.5}$	$0.451^{+0.015}_{-0.015}$	$100\theta_{\text{s,eq}}$	$0.4504^{+0.0056}_{-0.0056}$	χ_{prior}^2	$9.7 (\nu: 9.7)$
$\sigma_8 \Omega_m^{0.25}$	$0.607^{+0.022}_{-0.021}$	$H(0.15)$	$73.4^{+1.8}_{-1.7}$	χ_{BAO}^2	$7.0 (\nu: 1.5)$
$\sigma_8/h^{0.5}$	$0.988^{+0.032}_{-0.031}$	$D_{\text{M}}(0.15)$	635^{+20}_{-21}	χ_{CMB}^2	$7357 (\nu: 10475852.7)$
$r_{\text{drag}} h$	$100.8^{+4.4}_{-3.9}$	$H(0.38)$	$83.10^{+0.62}_{-0.61}$		
$\langle d^2 \rangle^{1/2}$	$2.440^{+0.065}_{-0.065}$	$D_{\text{M}}(0.38)$	1520^{+32}_{-33}		

Best-fit $\chi_{\text{eff}}^2 = 11926.60$; $\Delta\chi_{\text{eff}}^2 = 9155.12$; $\bar{\chi}_{\text{eff}}^2 = 11949.21$; $\Delta\bar{\chi}_{\text{eff}}^2 = 9150.61$; $R - 1 = 0.01464$
 χ_{eff}^2 : BAO - 6DF: 0.00 (Δ 0.00) MGS: 1.61 (Δ -0.14) DR12BAO: 4.04 (Δ -0.36) CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.90 (Δ -0.16) commander_dx12_v3_2_29: 22.84 (Δ -0.28) CamSpec like_10.7HM_1400_unified: 11499.85

18.12 base_w_CamSpecHM_TTTEEE_lowl_lowE_BAO_post_lensing/base_w_plikHM_TTTEEE_lowl_lowE_BAO_post_lensing

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02235^{+0.00029}_{-0.00030}$	z_{re}	$7.6^{+1.5}_{-1.5}$	$H(0.51)$	$89.67^{+0.47}_{-0.49}$
$\Omega_c h^2$	$0.1196^{+0.0022}_{-0.0021}$	$10^9 A_s$	$2.096^{+0.064}_{-0.059}$	$D_{\text{M}}(0.51)$	1971^{+32}_{-33}
$100\theta_{MC}$	$1.04093^{+0.00059}_{-0.00060}$	$10^9 A_s e^{-2\tau}$	$1.880^{+0.021}_{-0.021}$	$H(0.61)$	$95.20^{+0.55}_{-0.63}$
τ	$0.054^{+0.015}_{-0.014}$	D_{40}	1228^{+23}_{-23}	$D_{\text{M}}(0.61)$	2296^{+32}_{-33}
w	$-1.035^{+0.099}_{-0.11}$	D_{220}	5729^{+78}_{-77}	$H(2.33)$	$235.8^{+1.4}_{-1.4}$
$\ln(10^{10} A_s)$	$3.042^{+0.030}_{-0.029}$	D_{810}	2537^{+27}_{-27}	$D_{\text{M}}(2.33)$	5760^{+18}_{-18}
n_s	$0.9659^{+0.0078}_{-0.0079}$	D_{1420}	$816.7^{+9.7}_{-9.8}$	$f\sigma_8(0.15)$	$0.459^{+0.015}_{-0.014}$
y_{cal}	$1.0006^{+0.0050}_{-0.0049}$	D_{2000}	$230.7^{+3.2}_{-3.3}$	$\sigma_8(0.15)$	$0.758^{+0.032}_{-0.030}$
A_{217}^{CIB}	43^{+10}_{-10}	$n_{s,0.002}$	$0.9659^{+0.0078}_{-0.0079}$	$f\sigma_8(0.38)$	$0.481^{+0.023}_{-0.021}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.24539^{+0.00011}_{-0.00012}$	$\sigma_8(0.38)$	$0.672^{+0.029}_{-0.027}$
A_{143}^{tSZ}	$4.7^{+3.9}_{-4.3}$	Y_P^{BBN}	$0.24671^{+0.00011}_{-0.00012}$	$f\sigma_8(0.51)$	$0.480^{+0.025}_{-0.022}$
A_{100}^{PS}	249^{+60}_{-50}	$10^5 D/H$	$2.589^{+0.056}_{-0.053}$	$\sigma_8(0.51)$	$0.629^{+0.027}_{-0.025}$
A_{143}^{PS}	43^{+20}_{-20}	Age/Gyr	$13.777^{+0.061}_{-0.061}$	$f\sigma_8(0.61)$	$0.476^{+0.025}_{-0.023}$
A_{217}^{PS}	109^{+20}_{-30}	z_*	$1089.90^{+0.48}_{-0.47}$	$\sigma_8(0.61)$	$0.598^{+0.025}_{-0.023}$
A^{kSZ}	—	r_*	$144.55^{+0.52}_{-0.51}$	$f\sigma_8(2.33)$	$0.302^{+0.013}_{-0.012}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	$100\theta_*$	$1.04112^{+0.00059}_{-0.00059}$	$\sigma_8(2.33)$	$0.310^{+0.011}_{-0.010}$
c_{217}	$0.9997^{+0.0038}_{-0.0027}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.884^{+0.049}_{-0.048}$	f_{2000}^{143}	30^{+5}_{-5}
H_0	$68.5^{+2.8}_{-2.7}$	z_{drag}	$1059.87^{+0.63}_{-0.66}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
Ω_Λ	$0.696^{+0.024}_{-0.023}$	r_{drag}	$147.22^{+0.55}_{-0.52}$	f_{2000}^{217}	$106.9^{+3.6}_{-3.6}$
Ω_m	$0.304^{+0.023}_{-0.024}$	k_{D}	$0.14072^{+0.00063}_{-0.00068}$	χ_{lensing}^2	$9.21 (\nu: 0.3)$
$\Omega_m h^2$	$0.1426^{+0.0021}_{-0.0021}$	$100\theta_{\text{D}}$	$0.16080^{+0.00038}_{-0.00037}$	χ_{simall}^2	$312 (\nu: 12302.4)$
$\Omega_m h^3$	$0.0977^{+0.0047}_{-0.0043}$	z_{eq}	3392^{+49}_{-49}	χ_{lowl}^2	$109 (\nu: 12313.6)$
σ_8	$0.819^{+0.033}_{-0.031}$	k_{eq}	$0.01035^{+0.00015}_{-0.00015}$	$\chi_{6\text{DF}}^2$	$0.53 (\nu: 0.4)$
S_8	$0.824^{+0.021}_{-0.021}$	$100\theta_{\text{eq}}$	$0.8151^{+0.0092}_{-0.0092}$	χ_{MGS}^2	$1.5 (\nu: 0.7)$
$\sigma_8 \Omega_m^{0.5}$	$0.451^{+0.012}_{-0.011}$	$100\theta_{\text{s,eq}}$	$0.4504^{+0.0047}_{-0.0047}$	χ_{DR12BAO}^2	$5.0 (\nu: 0.9)$
$\sigma_8 \Omega_m^{0.25}$	$0.608^{+0.016}_{-0.016}$	$H(0.15)$	$73.4^{+1.7}_{-1.6}$	χ_{prior}^2	$9.7 (\nu: 9.6)$
$\sigma_8/h^{0.5}$	$0.989^{+0.024}_{-0.023}$	$D_{\text{M}}(0.15)$	635^{+19}_{-20}	χ_{CMB}^2	$7366 (\nu: 10475709.2)$
$r_{\text{drag}} h$	$100.9^{+4.0}_{-3.9}$	$H(0.38)$	$83.12^{+0.62}_{-0.60}$	χ_{BAO}^2	$7.0 (\nu: 1.4)$
$\langle d^2 \rangle^{1/2}$	$2.442^{+0.047}_{-0.047}$	$D_{\text{M}}(0.38)$	1519^{+31}_{-32}		

$$\bar{\chi}_{\text{eff}}^2 = 11958.08; \Delta\bar{\chi}_{\text{eff}}^2 = 9150.84; R - 1 = 0.01812$$

18.13 base_w_CamSpecHM_TTTEEE_lowl_lowE_BAO_post_zre6p5/base_w_plikHM_TTTEEE_lowl_lowE_BAO_post_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02235^{+0.00030}_{-0.00030}$	z_{re}	< 8.92	$H(0.51)$	$89.68^{+0.50}_{-0.55}$
$\Omega_c h^2$	$0.1195^{+0.0026}_{-0.0025}$	$10^9 A_s$	$2.098^{+0.061}_{-0.056}$	$D_{\text{M}}(0.51)$	1972^{+34}_{-34}
$100\theta_{MC}$	$1.04094^{+0.00061}_{-0.00061}$	$10^9 A_s e^{-2\tau}$	$1.880^{+0.023}_{-0.023}$	$H(0.61)$	$95.21^{+0.64}_{-0.66}$
τ	$0.055^{+0.013}_{-0.012}$	D_{40}	1227^{+25}_{-25}	$D_{\text{M}}(0.61)$	2297^{+33}_{-33}
w	$-1.03^{+0.11}_{-0.12}$	D_{220}	5727^{+80}_{-78}	$H(2.33)$	$235.8^{+1.4}_{-1.5}$
$\ln(10^{10} A_s)$	$3.044^{+0.029}_{-0.027}$	D_{810}	2537^{+27}_{-27}	$D_{\text{M}}(2.33)$	5760^{+18}_{-18}
n_s	$0.9662^{+0.0084}_{-0.0084}$	D_{1420}	$816.6^{+9.7}_{-9.7}$	$f\sigma_8(0.15)$	$0.459^{+0.020}_{-0.019}$
y_{cal}	$1.0005^{+0.0049}_{-0.0049}$	D_{2000}	$230.7^{+3.2}_{-3.2}$	$\sigma_8(0.15)$	$0.757^{+0.038}_{-0.036}$
A_{217}^{CIB}	43^{+10}_{-20}	$n_{s,0.002}$	$0.9662^{+0.0084}_{-0.0084}$	$f\sigma_8(0.38)$	$0.480^{+0.028}_{-0.026}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.24539^{+0.00011}_{-0.00012}$	$\sigma_8(0.38)$	$0.671^{+0.034}_{-0.032}$
A_{143}^{tSZ}	$4.7^{+3.9}_{-4.3}$	Y_P^{BBN}	$0.24671^{+0.00011}_{-0.00012}$	$f\sigma_8(0.51)$	$0.480^{+0.030}_{-0.028}$
A_{100}^{PS}	249^{+60}_{-50}	$10^5 D/H$	$2.589^{+0.056}_{-0.053}$	$\sigma_8(0.51)$	$0.628^{+0.032}_{-0.030}$
A_{143}^{PS}	43^{+20}_{-20}	Age/Gyr	$13.779^{+0.064}_{-0.062}$	$f\sigma_8(0.61)$	$0.475^{+0.031}_{-0.028}$
A_{217}^{PS}	109^{+30}_{-30}	z_*	$1089.90^{+0.51}_{-0.50}$	$\sigma_8(0.61)$	$0.598^{+0.030}_{-0.028}$
A^{kSZ}	—	r_*	$144.57^{+0.61}_{-0.59}$	$f\sigma_8(2.33)$	$0.301^{+0.015}_{-0.014}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	$100\theta_*$	$1.04113^{+0.00060}_{-0.00060}$	$\sigma_8(2.33)$	$0.310^{+0.013}_{-0.012}$
c_{217}	$0.9996^{+0.0037}_{-0.0027}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.885^{+0.058}_{-0.056}$	f_{2000}^{143}	30^{+5}_{-5}
H_0	$68.4^{+2.9}_{-2.8}$	z_{drag}	$1059.87^{+0.64}_{-0.66}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
Ω_Λ	$0.695^{+0.024}_{-0.024}$	r_{drag}	$147.23^{+0.63}_{-0.60}$	f_{2000}^{217}	$106.9^{+3.6}_{-3.6}$
Ω_m	$0.305^{+0.024}_{-0.024}$	k_{D}	$0.14070^{+0.00068}_{-0.00073}$	χ_{small}^2	$396.9 (\nu: 1.6)$
$\Omega_m h^2$	$0.1425^{+0.0025}_{-0.0024}$	$100\theta_{\text{D}}$	$0.16080^{+0.00038}_{-0.00037}$	χ_{lowl}^2	$23.15 (\nu: 0.4)$
$\Omega_m h^3$	$0.0976^{+0.0052}_{-0.0047}$	z_{eq}	3391^{+59}_{-58}	$\chi_{6\text{DF}}^2$	$0.13 (\nu: 0.0)$
σ_8	$0.819^{+0.040}_{-0.037}$	k_{eq}	$0.01035^{+0.00018}_{-0.00018}$	χ_{MGS}^2	$1.83 (\nu: 0.5)$
S_8	$0.824^{+0.026}_{-0.026}$	$100\theta_{\text{eq}}$	$0.815^{+0.011}_{-0.011}$	χ_{DR12BAO}^2	$5.0 (\nu: 1.0)$
$\sigma_8 \Omega_m^{0.5}$	$0.452^{+0.014}_{-0.014}$	$100\theta_{\text{s,eq}}$	$0.4505^{+0.0056}_{-0.0056}$	χ_{prior}^2	$9.7 (\nu: 9.6)$
$\sigma_8 \Omega_m^{0.25}$	$0.608^{+0.022}_{-0.021}$	$H(0.15)$	$73.4^{+1.8}_{-1.7}$	χ_{BAO}^2	$7.0 (\nu: 1.5)$
$\sigma_8/h^{0.5}$	$0.989^{+0.032}_{-0.031}$	$D_{\text{M}}(0.15)$	635^{+20}_{-21}	χ_{CMB}^2	$7357 (\nu: 10475745.8)$
$r_{\text{drag}} h$	$100.8^{+4.4}_{-3.9}$	$H(0.38)$	$83.10^{+0.62}_{-0.61}$		
$\langle d^2 \rangle^{1/2}$	$2.442^{+0.064}_{-0.062}$	$D_{\text{M}}(0.38)$	1520^{+32}_{-33}		

$$\bar{\chi}_{\text{eff}}^2 = 11948.94; \Delta\bar{\chi}_{\text{eff}}^2 = 9150.58; R - 1 = 0.01259$$

18.14 base_w_CamSpecHM_TTTEEE_lowl_lowE_BAO_post_lensing_zre6p5/base_w_plikHM_TTTEEE_lowl_lowE_BAO_post_lensing_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02236^{+0.00029}_{-0.00030}$	z_{re}	< 8.91	$H(0.51)$	$89.68^{+0.46}_{-0.48}$
$\Omega_c h^2$	$0.1195^{+0.0021}_{-0.0021}$	$10^9 A_s$	$2.099^{+0.056}_{-0.053}$	$D_{\text{M}}(0.51)$	1971^{+32}_{-33}
$100\theta_{MC}$	$1.04094^{+0.00059}_{-0.00060}$	$10^9 A_s e^{-2\tau}$	$1.880^{+0.021}_{-0.021}$	$H(0.61)$	$95.21^{+0.55}_{-0.61}$
τ	$0.055^{+0.013}_{-0.012}$	D_{40}	1228^{+23}_{-23}	$D_{\text{M}}(0.61)$	2296^{+32}_{-33}
w	$-1.033^{+0.099}_{-0.11}$	D_{220}	5729^{+79}_{-77}	$H(2.33)$	$235.8^{+1.4}_{-1.4}$
$\ln(10^{10} A_s)$	$3.044^{+0.027}_{-0.025}$	D_{810}	2537^{+27}_{-27}	$D_{\text{M}}(2.33)$	5760^{+18}_{-18}
n_s	$0.9661^{+0.0077}_{-0.0078}$	D_{1420}	$816.7^{+9.6}_{-9.8}$	$f\sigma_8(0.15)$	$0.459^{+0.015}_{-0.014}$
y_{cal}	$1.0006^{+0.0050}_{-0.0049}$	D_{2000}	$230.7^{+3.2}_{-3.3}$	$\sigma_8(0.15)$	$0.758^{+0.032}_{-0.030}$
A_{217}^{CIB}	43^{+10}_{-10}	$n_{s,0.002}$	$0.9661^{+0.0077}_{-0.0078}$	$f\sigma_8(0.38)$	$0.481^{+0.023}_{-0.021}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.24539^{+0.00011}_{-0.00012}$	$\sigma_8(0.38)$	$0.672^{+0.029}_{-0.027}$
A_{143}^{tSZ}	$4.7^{+3.9}_{-4.3}$	Y_P^{BBN}	$0.24672^{+0.00011}_{-0.00012}$	$f\sigma_8(0.51)$	$0.480^{+0.025}_{-0.022}$
A_{100}^{PS}	249^{+60}_{-50}	$10^5 D/H$	$2.588^{+0.057}_{-0.053}$	$\sigma_8(0.51)$	$0.629^{+0.027}_{-0.025}$
A_{143}^{PS}	43^{+20}_{-20}	Age/Gyr	$13.777^{+0.061}_{-0.061}$	$f\sigma_8(0.61)$	$0.476^{+0.025}_{-0.023}$
A_{217}^{PS}	109^{+20}_{-30}	z_*	$1089.89^{+0.47}_{-0.47}$	$\sigma_8(0.61)$	$0.598^{+0.025}_{-0.024}$
A^{kSZ}	—	r_*	$144.56^{+0.52}_{-0.50}$	$f\sigma_8(2.33)$	$0.302^{+0.013}_{-0.012}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	$100\theta_*$	$1.04112^{+0.00058}_{-0.00059}$	$\sigma_8(2.33)$	$0.310^{+0.011}_{-0.010}$
c_{217}	$0.9996^{+0.0038}_{-0.0027}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.885^{+0.049}_{-0.048}$	f_{2000}^{143}	30^{+5}_{-5}
H_0	$68.5^{+2.7}_{-2.7}$	z_{drag}	$1059.88^{+0.63}_{-0.67}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
Ω_Λ	$0.696^{+0.024}_{-0.023}$	r_{drag}	$147.23^{+0.54}_{-0.51}$	f_{2000}^{217}	$106.9^{+3.6}_{-3.6}$
Ω_m	$0.304^{+0.023}_{-0.024}$	k_{D}	$0.14071^{+0.00062}_{-0.00067}$	χ_{lensing}^2	$9.19 (\nu: 0.2)$
$\Omega_m h^2$	$0.1425^{+0.0020}_{-0.0020}$	$100\theta_{\text{D}}$	$0.16079^{+0.00038}_{-0.00037}$	χ_{simall}^2	$312 (\nu: 12269.0)$
$\Omega_m h^3$	$0.0977^{+0.0047}_{-0.0042}$	z_{eq}	3391^{+49}_{-48}	χ_{lowl}^2	$108 (\nu: 12280.5)$
σ_8	$0.819^{+0.033}_{-0.031}$	k_{eq}	$0.01035^{+0.00015}_{-0.00015}$	$\chi_{6\text{DF}}^2$	$0.53 (\nu: 0.4)$
S_8	$0.824^{+0.021}_{-0.021}$	$100\theta_{\text{eq}}$	$0.8153^{+0.0091}_{-0.0090}$	χ_{MGS}^2	$1.5 (\nu: 0.6)$
$\sigma_8 \Omega_m^{0.5}$	$0.452^{+0.012}_{-0.011}$	$100\theta_{\text{s,eq}}$	$0.4505^{+0.0047}_{-0.0046}$	χ_{DR12BAO}^2	$5.0 (\nu: 0.9)$
$\sigma_8 \Omega_m^{0.25}$	$0.608^{+0.016}_{-0.016}$	$H(0.15)$	$73.4^{+1.7}_{-1.6}$	χ_{prior}^2	$9.7 (\nu: 9.6)$
$\sigma_8/h^{0.5}$	$0.990^{+0.023}_{-0.023}$	$D_{\text{M}}(0.15)$	635^{+19}_{-20}	χ_{CMB}^2	$7366 (\nu: 10475700.2)$
$r_{\text{drag}} h$	$100.9^{+4.0}_{-3.9}$	$H(0.38)$	$83.12^{+0.61}_{-0.60}$	χ_{BAO}^2	$7.0 (\nu: 1.4)$
$\langle d^2 \rangle^{1/2}$	$2.443^{+0.047}_{-0.047}$	$D_{\text{M}}(0.38)$	1520^{+31}_{-32}		

$$\bar{\chi}_{\text{eff}}^2 = 11957.86; \Delta\bar{\chi}_{\text{eff}}^2 = 9150.85; R - 1 = 0.01772$$

18.15 base_w_CamSpecHM_TT_lowl_lowE_BAO_Pantheon18/base_w_plikHM_TT_lowl_lowE_BAO_Pantheon18

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02218^{+0.00040}_{-0.00039}$	z_{re}	$7.6^{+1.6}_{-1.6}$	$H(0.51)$	$89.57^{+0.65}_{-0.66}$
$\Omega_c h^2$	$0.1195^{+0.0030}_{-0.0030}$	$10^9 A_s$	$2.089^{+0.070}_{-0.066}$	$D_{\text{M}}(0.51)$	1977^{+23}_{-23}
$100\theta_{MC}$	$1.04095^{+0.00085}_{-0.00085}$	$10^9 A_s e^{-2\tau}$	$1.878^{+0.024}_{-0.024}$	$H(0.61)$	$95.12^{+0.68}_{-0.68}$
τ	$0.053^{+0.016}_{-0.015}$	D_{40}	1227^{+27}_{-26}	$D_{\text{M}}(0.61)$	2302^{+23}_{-24}
w	$-1.026^{+0.071}_{-0.073}$	D_{220}	5714^{+80}_{-80}	$H(2.33)$	$235.7^{+1.5}_{-1.5}$
$\ln(10^{10} A_s)$	$3.039^{+0.033}_{-0.032}$	D_{810}	2535^{+27}_{-27}	$D_{\text{M}}(2.33)$	5767^{+24}_{-24}
n_s	$0.9655^{+0.0093}_{-0.0094}$	D_{1420}	815^{+10}_{-10}	$f\sigma_8(0.15)$	$0.458^{+0.021}_{-0.021}$
y_{cal}	$1.0005^{+0.0048}_{-0.0049}$	D_{2000}	$229.8^{+3.5}_{-3.5}$	$\sigma_8(0.15)$	$0.754^{+0.027}_{-0.028}$
A_{217}^{CIB}	44^{+20}_{-20}	$n_{s,0.002}$	$0.9655^{+0.0093}_{-0.0094}$	$f\sigma_8(0.38)$	$0.479^{+0.023}_{-0.023}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.24532^{+0.00017}_{-0.00018}$	$\sigma_8(0.38)$	$0.668^{+0.024}_{-0.024}$
A_{143}^{tSZ}	$4.4^{+3.7}_{-4.2}$	Y_P^{BBN}	$0.24664^{+0.00017}_{-0.00018}$	$f\sigma_8(0.51)$	$0.478^{+0.023}_{-0.023}$
A_{100}^{PS}	253^{+60}_{-50}	$10^5 D/H$	$2.621^{+0.076}_{-0.073}$	$\sigma_8(0.51)$	$0.625^{+0.022}_{-0.022}$
A_{143}^{PS}	45^{+20}_{-20}	Age/Gyr	$13.798^{+0.056}_{-0.056}$	$f\sigma_8(0.61)$	$0.473^{+0.023}_{-0.023}$
A_{217}^{PS}	108^{+30}_{-30}	z_*	$1090.11^{+0.64}_{-0.64}$	$\sigma_8(0.61)$	$0.595^{+0.020}_{-0.021}$
A^{kSZ}	—	r_*	$144.71^{+0.74}_{-0.73}$	$f\sigma_8(2.33)$	$0.3000^{+0.0098}_{-0.010}$
c_{100}	$0.9985^{+0.0022}_{-0.0027}$	$100\theta_*$	$1.04115^{+0.00084}_{-0.00084}$	$\sigma_8(2.33)$	$0.3087^{+0.0085}_{-0.0087}$
c_{217}	$0.9997^{+0.0038}_{-0.0027}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.899^{+0.070}_{-0.069}$	f_{2000}^{143}	31^{+6}_{-6}
H_0	$68.2^{+1.6}_{-1.6}$	z_{drag}	$1059.47^{+0.85}_{-0.87}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-4}
Ω_Λ	$0.694^{+0.015}_{-0.015}$	r_{drag}	$147.44^{+0.77}_{-0.76}$	f_{2000}^{217}	$107.8^{+3.8}_{-3.9}$
Ω_m	$0.306^{+0.015}_{-0.015}$	k_{D}	$0.14035^{+0.00093}_{-0.00093}$	χ_{small}^2	$397.0 (\nu: 1.5)$
$\Omega_m h^2$	$0.1423^{+0.0029}_{-0.0029}$	$100\theta_{\text{D}}$	$0.16104^{+0.00051}_{-0.00050}$	χ_{lowl}^2	$23.17 (\nu: 0.5)$
$\Omega_m h^3$	$0.0970^{+0.0032}_{-0.0032}$	z_{eq}	3385^{+69}_{-70}	χ_{JLA}^2	$1035.43 (\nu: 0.5)$
σ_8	$0.815^{+0.030}_{-0.030}$	k_{eq}	$0.01033^{+0.00021}_{-0.00021}$	$\chi_{6\text{DF}}^2$	$0.049 (\nu: 0.0)$
S_8	$0.824^{+0.033}_{-0.032}$	$100\theta_{\text{eq}}$	$0.816^{+0.013}_{-0.013}$	χ_{MGS}^2	$1.64 (\nu: 0.2)$
$\sigma_8 \Omega_m^{0.5}$	$0.451^{+0.018}_{-0.018}$	$100\theta_{\text{s,eq}}$	$0.4509^{+0.0068}_{-0.0066}$	χ_{DR12BAO}^2	$4.8 (\nu: 1.0)$
$\sigma_8 \Omega_m^{0.25}$	$0.607^{+0.022}_{-0.022}$	$H(0.15)$	$73.2^{+1.1}_{-1.0}$	χ_{prior}^2	$7.5 (\nu: 6.4)$
$\sigma_8/h^{0.5}$	$0.988^{+0.031}_{-0.031}$	$D_{\text{M}}(0.15)$	638^{+12}_{-12}	χ_{BAO}^2	$6.5 (\nu: 0.8)$
$r_{\text{drag}} h$	$100.5^{+2.4}_{-2.3}$	$H(0.38)$	$82.97^{+0.68}_{-0.66}$	χ_{CMB}^2	$4338 (\nu: 4947870.7)$
$\langle d^2 \rangle^{1/2}$	$2.438^{+0.067}_{-0.067}$	$D_{\text{M}}(0.38)$	1525^{+20}_{-21}		

Best-fit $\chi_{\text{eff}}^2 = 8513.28$; $\Delta\chi_{\text{eff}}^2 = 6293.04$; $\bar{\chi}_{\text{eff}}^2 = 8532.92$; $\Delta\bar{\chi}_{\text{eff}}^2 = 6291.76$; $R - 1 = 0.00642$
 χ_{eff}^2 : BAO - 6DF: 0.00 (Δ 0.00) MGS: 1.47 (Δ -0.07) DR12BAO: 4.86 (Δ 0.40) CMB - simall_100x143_offlike5_EE_Aplanck_B: 396.06 (Δ 0.21) commander_dx12_v3_2_29: 23.45 (Δ 0.30) CamSpec like_10.7HM: 7049.66 SN - JLA Pantheon18: 1034.75 (Δ 0.03)

18.16 base_w_CamSpecHM_TT_lowl_lowE_BAO_Pantheon18_post_lensing/base_w_plikHM_TT_lowl_lowE_BAO_Pantheon18_post_lensing

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02219^{+0.00039}_{-0.00039}$	z_{re}	$7.6^{+1.5}_{-1.5}$	$H(0.51)$	$89.56^{+0.58}_{-0.59}$
$\Omega_c h^2$	$0.1196^{+0.0025}_{-0.0025}$	$10^9 A_s$	$2.093^{+0.063}_{-0.058}$	$D_{\text{M}}(0.51)$	1976^{+22}_{-22}
$100\theta_{MC}$	$1.04093^{+0.00083}_{-0.00085}$	$10^9 A_s e^{-2\tau}$	$1.879^{+0.021}_{-0.021}$	$H(0.61)$	$95.10^{+0.60}_{-0.62}$
τ	$0.054^{+0.016}_{-0.015}$	D_{40}	1228^{+24}_{-23}	$D_{\text{M}}(0.61)$	2301^{+23}_{-23}
w	$-1.028^{+0.065}_{-0.067}$	D_{220}	5716^{+80}_{-80}	$H(2.33)$	$235.7^{+1.3}_{-1.4}$
$\ln(10^{10} A_s)$	$3.041^{+0.030}_{-0.028}$	D_{810}	2535^{+26}_{-26}	$D_{\text{M}}(2.33)$	5767^{+23}_{-23}
n_s	$0.9652^{+0.0086}_{-0.0085}$	D_{1420}	$815^{+10}_{-9.9}$	$f\sigma_8(0.15)$	$0.459^{+0.015}_{-0.015}$
y_{cal}	$1.0006^{+0.0048}_{-0.0049}$	D_{2000}	$229.8^{+3.5}_{-3.4}$	$\sigma_8(0.15)$	$0.756^{+0.021}_{-0.022}$
A_{217}^{CIB}	44^{+20}_{-20}	$n_{s,0.002}$	$0.9652^{+0.0086}_{-0.0085}$	$f\sigma_8(0.38)$	$0.480^{+0.018}_{-0.018}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.24532^{+0.00016}_{-0.00017}$	$\sigma_8(0.38)$	$0.670^{+0.019}_{-0.019}$
A_{143}^{tSZ}	$4.4^{+3.7}_{-4.2}$	Y_P^{BBN}	$0.24664^{+0.00016}_{-0.00017}$	$f\sigma_8(0.51)$	$0.479^{+0.018}_{-0.018}$
A_{100}^{PS}	253^{+60}_{-50}	$10^5 D/H$	$2.621^{+0.075}_{-0.072}$	$\sigma_8(0.51)$	$0.627^{+0.017}_{-0.018}$
A_{143}^{PS}	45^{+20}_{-20}	Age/Gyr	$13.797^{+0.056}_{-0.056}$	$f\sigma_8(0.61)$	$0.475^{+0.018}_{-0.018}$
A_{217}^{PS}	108^{+30}_{-30}	z_*	$1090.12^{+0.60}_{-0.61}$	$\sigma_8(0.61)$	$0.596^{+0.016}_{-0.017}$
A^{kSZ}	—	r_*	$144.69^{+0.61}_{-0.60}$	$f\sigma_8(2.33)$	$0.3006^{+0.0081}_{-0.0083}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	$100\theta_*$	$1.04113^{+0.00082}_{-0.00083}$	$\sigma_8(2.33)$	$0.3092^{+0.0070}_{-0.0072}$
c_{217}	$0.9997^{+0.0038}_{-0.0028}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.897^{+0.059}_{-0.058}$	f_{2000}^{143}	31^{+6}_{-6}
H_0	$68.2^{+1.6}_{-1.6}$	z_{drag}	$1059.48^{+0.88}_{-0.88}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-4}
Ω_Λ	$0.694^{+0.015}_{-0.015}$	r_{drag}	$147.41^{+0.66}_{-0.65}$	f_{2000}^{217}	$107.7^{+3.8}_{-3.9}$
Ω_m	$0.306^{+0.015}_{-0.015}$	k_{D}	$0.14038^{+0.00084}_{-0.00085}$	χ_{lensing}^2	$9.30 (\nu: 0.3)$
$\Omega_m h^2$	$0.1424^{+0.0024}_{-0.0024}$	$100\theta_{\text{D}}$	$0.16103^{+0.00051}_{-0.00050}$	χ_{simall}^2	$397.0 (\nu: 1.4)$
$\Omega_m h^3$	$0.0971^{+0.0029}_{-0.0029}$	z_{eq}	3387^{+56}_{-56}	χ_{lowl}^2	$23.26 (\nu: 0.4)$
σ_8	$0.817^{+0.023}_{-0.023}$	k_{eq}	$0.01034^{+0.00017}_{-0.00017}$	χ_{JLA}^2	$1035.39 (\nu: 0.4)$
S_8	$0.826^{+0.024}_{-0.024}$	$100\theta_{\text{eq}}$	$0.816^{+0.011}_{-0.010}$	$\chi_{6\text{DF}}^2$	$0.048 (\nu: 0.0)$
$\sigma_8 \Omega_m^{0.5}$	$0.452^{+0.013}_{-0.013}$	$100\theta_{\text{s,eq}}$	$0.4507^{+0.0055}_{-0.0053}$	χ_{MGS}^2	$1.66 (\nu: 0.2)$
$\sigma_8 \Omega_m^{0.25}$	$0.608^{+0.016}_{-0.016}$	$H(0.15)$	$73.2^{+1.1}_{-1.0}$	χ_{DR12BAO}^2	$4.8 (\nu: 0.8)$
$\sigma_8/h^{0.5}$	$0.990^{+0.022}_{-0.023}$	$D_{\text{M}}(0.15)$	637^{+12}_{-12}	χ_{prior}^2	$7.4 (\nu: 6.4)$
$r_{\text{drag}} h$	$100.5^{+2.4}_{-2.3}$	$H(0.38)$	$82.96^{+0.63}_{-0.61}$	χ_{CMB}^2	$4347 (\nu: 4947926.6)$
$\langle d^2 \rangle^{1/2}$	$2.443^{+0.047}_{-0.048}$	$D_{\text{M}}(0.38)$	1524^{+20}_{-20}	χ_{BAO}^2	$6.5 (\nu: 0.6)$

$$\bar{\chi}_{\text{eff}}^2 = 8541.75; \Delta \bar{\chi}_{\text{eff}}^2 = 6291.80; R - 1 = 0.00879$$

18.17 base_w_CamSpecHM_TT_lowl_lowE_BAO_Pantheon18_post_zre6p5/base_w_plikHM_TT_lowl_lowE_BAO_Pantheon18_post_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02219^{+0.00039}_{-0.00039}$	z_{re}	< 8.91	$H(0.51)$	$89.58^{+0.65}_{-0.65}$
$\Omega_c h^2$	$0.1194^{+0.0030}_{-0.0030}$	$10^9 A_s$	$2.095^{+0.060}_{-0.055}$	$D_{\text{M}}(0.51)$	1977^{+22}_{-23}
$100\theta_{MC}$	$1.04095^{+0.00085}_{-0.00085}$	$10^9 A_s e^{-2\tau}$	$1.878^{+0.024}_{-0.024}$	$H(0.61)$	$95.13^{+0.67}_{-0.68}$
τ	$0.055^{+0.013}_{-0.012}$	D_{40}	1227^{+27}_{-26}	$D_{\text{M}}(0.61)$	2302^{+23}_{-24}
w	$-1.025^{+0.071}_{-0.073}$	D_{220}	5714^{+80}_{-80}	$H(2.33)$	$235.7^{+1.5}_{-1.5}$
$\ln(10^{10} A_s)$	$3.042^{+0.028}_{-0.026}$	D_{810}	2534^{+27}_{-27}	$D_{\text{M}}(2.33)$	5767^{+24}_{-24}
n_s	$0.9657^{+0.0093}_{-0.0094}$	D_{1420}	815^{+10}_{-10}	$f\sigma_8(0.15)$	$0.459^{+0.021}_{-0.021}$
y_{cal}	$1.0005^{+0.0048}_{-0.0049}$	D_{2000}	$229.8^{+3.5}_{-3.5}$	$\sigma_8(0.15)$	$0.755^{+0.027}_{-0.028}$
A_{217}^{CIB}	44^{+20}_{-20}	$n_{s,0.002}$	$0.9657^{+0.0093}_{-0.0094}$	$f\sigma_8(0.38)$	$0.479^{+0.023}_{-0.023}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.24532^{+0.00016}_{-0.00018}$	$\sigma_8(0.38)$	$0.669^{+0.023}_{-0.024}$
A_{143}^{tSZ}	$4.4^{+3.7}_{-4.2}$	Y_P^{BBN}	$0.24664^{+0.00016}_{-0.00018}$	$f\sigma_8(0.51)$	$0.478^{+0.023}_{-0.023}$
A_{100}^{PS}	253^{+60}_{-50}	$10^5 D/H$	$2.620^{+0.075}_{-0.073}$	$\sigma_8(0.51)$	$0.626^{+0.021}_{-0.022}$
A_{143}^{PS}	45^{+20}_{-20}	Age/Gyr	$13.798^{+0.056}_{-0.056}$	$f\sigma_8(0.61)$	$0.474^{+0.023}_{-0.023}$
A_{217}^{PS}	108^{+30}_{-30}	z_*	$1090.10^{+0.64}_{-0.64}$	$\sigma_8(0.61)$	$0.596^{+0.020}_{-0.020}$
A^{kSZ}	—	r_*	$144.72^{+0.73}_{-0.72}$	$f\sigma_8(2.33)$	$0.3004^{+0.0097}_{-0.010}$
c_{100}	$0.9985^{+0.0022}_{-0.0027}$	$100\theta_*$	$1.04115^{+0.00083}_{-0.00084}$	$\sigma_8(2.33)$	$0.3091^{+0.0084}_{-0.0084}$
c_{217}	$0.9997^{+0.0038}_{-0.0027}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.900^{+0.070}_{-0.069}$	f_{2000}^{143}	31^{+6}_{-6}
H_0	$68.2^{+1.6}_{-1.6}$	z_{drag}	$1059.47^{+0.84}_{-0.87}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-4}
Ω_{Λ}	$0.694^{+0.015}_{-0.015}$	r_{drag}	$147.45^{+0.77}_{-0.76}$	f_{2000}^{217}	$107.7^{+3.8}_{-3.9}$
Ω_m	$0.306^{+0.015}_{-0.015}$	k_{D}	$0.14035^{+0.00093}_{-0.00092}$	χ_{small}^2	$396.9 (\nu: 1.5)$
$\Omega_m h^2$	$0.1423^{+0.0029}_{-0.0029}$	$100\theta_{\text{D}}$	$0.16104^{+0.00051}_{-0.00050}$	χ_{lowl}^2	$23.2 (\nu: 0.5)$
$\Omega_m h^3$	$0.0970^{+0.0032}_{-0.0032}$	z_{eq}	3384^{+69}_{-70}	χ_{JLA}^2	$1035.42 (\nu: 0.5)$
σ_8	$0.816^{+0.029}_{-0.030}$	k_{eq}	$0.01033^{+0.00021}_{-0.00021}$	$\chi_{6\text{DF}}^2$	$0.049 (\nu: 0.0)$
S_8	$0.825^{+0.032}_{-0.032}$	$100\theta_{\text{eq}}$	$0.816^{+0.013}_{-0.013}$	χ_{MGS}^2	$1.64 (\nu: 0.2)$
$\sigma_8 \Omega_m^{0.5}$	$0.452^{+0.018}_{-0.017}$	$100\theta_{\text{s,eq}}$	$0.4510^{+0.0068}_{-0.0066}$	χ_{DR12BAO}^2	$4.8 (\nu: 1.0)$
$\sigma_8 \Omega_m^{0.25}$	$0.607^{+0.021}_{-0.022}$	$H(0.15)$	$73.2^{+1.1}_{-1.0}$	χ_{prior}^2	$7.5 (\nu: 6.4)$
$\sigma_8/h^{0.5}$	$0.989^{+0.030}_{-0.031}$	$D_{\text{M}}(0.15)$	638^{+12}_{-12}	χ_{BAO}^2	$6.5 (\nu: 0.8)$
$r_{\text{drag}} h$	$100.5^{+2.4}_{-2.3}$	$H(0.38)$	$82.97^{+0.68}_{-0.66}$	χ_{CMB}^2	$4337 (\nu: 4947925.8)$
$\langle d^2 \rangle^{1/2}$	$2.441^{+0.066}_{-0.065}$	$D_{\text{M}}(0.38)$	1524^{+20}_{-21}		

$$\bar{\chi}_{\text{eff}}^2 = 8532.67; \Delta \bar{\chi}_{\text{eff}}^2 = 6291.82; R - 1 = 0.00753$$

18.18 base_w_CamSpecHM_TT_lowl_lowE_BAO_Pantheon18_post_lensing_zre6p5/base_w_plikHM_TT_lowl_lowE_BAO_Pantheon18_post_

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02219^{+0.00039}_{-0.00039}$	z_{re}	< 8.91	$H(0.51)$	$89.57^{+0.58}_{-0.58}$
$\Omega_c h^2$	$0.1195^{+0.0024}_{-0.0024}$	$10^9 A_s$	$2.097^{+0.055}_{-0.051}$	$D_{\text{M}}(0.51)$	1976^{+22}_{-22}
$100\theta_{MC}$	$1.04093^{+0.00083}_{-0.00085}$	$10^9 A_s e^{-2\tau}$	$1.879^{+0.021}_{-0.021}$	$H(0.61)$	$95.11^{+0.59}_{-0.61}$
τ	$0.055^{+0.013}_{-0.012}$	D_{40}	1228^{+24}_{-23}	$D_{\text{M}}(0.61)$	2301^{+23}_{-23}
w	$-1.027^{+0.064}_{-0.066}$	D_{220}	5716^{+81}_{-80}	$H(2.33)$	$235.7^{+1.3}_{-1.3}$
$\ln(10^{10} A_s)$	$3.043^{+0.026}_{-0.024}$	D_{810}	2535^{+26}_{-26}	$D_{\text{M}}(2.33)$	5767^{+23}_{-23}
n_s	$0.9654^{+0.0085}_{-0.0084}$	D_{1420}	$815^{+10}_{-9.9}$	$f\sigma_8(0.15)$	$0.459^{+0.015}_{-0.015}$
y_{cal}	$1.0005^{+0.0048}_{-0.0049}$	D_{2000}	$229.8^{+3.5}_{-3.5}$	$\sigma_8(0.15)$	$0.756^{+0.021}_{-0.022}$
A_{217}^{CIB}	44^{+20}_{-20}	$n_{s,0.002}$	$0.9654^{+0.0085}_{-0.0084}$	$f\sigma_8(0.38)$	$0.480^{+0.018}_{-0.018}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.24532^{+0.00016}_{-0.00017}$	$\sigma_8(0.38)$	$0.670^{+0.019}_{-0.019}$
A_{143}^{tSZ}	$4.4^{+3.7}_{-4.2}$	Y_P^{BBN}	$0.24665^{+0.00016}_{-0.00017}$	$f\sigma_8(0.51)$	$0.479^{+0.018}_{-0.018}$
A_{100}^{PS}	253^{+60}_{-50}	$10^5 D/H$	$2.620^{+0.075}_{-0.072}$	$\sigma_8(0.51)$	$0.627^{+0.017}_{-0.017}$
A_{143}^{PS}	45^{+20}_{-20}	Age/Gyr	$13.797^{+0.056}_{-0.056}$	$f\sigma_8(0.61)$	$0.475^{+0.018}_{-0.018}$
A_{217}^{PS}	108^{+30}_{-30}	z_*	$1090.10^{+0.59}_{-0.60}$	$\sigma_8(0.61)$	$0.597^{+0.016}_{-0.016}$
A^{kSZ}	—	r_*	$144.70^{+0.60}_{-0.59}$	$f\sigma_8(2.33)$	$0.3008^{+0.0080}_{-0.0082}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	$100\theta_*$	$1.04114^{+0.00082}_{-0.00084}$	$\sigma_8(2.33)$	$0.3094^{+0.0070}_{-0.0071}$
c_{217}	$0.9997^{+0.0038}_{-0.0027}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.898^{+0.059}_{-0.058}$	f_{2000}^{143}	31^{+6}_{-6}
H_0	$68.2^{+1.6}_{-1.6}$	z_{drag}	$1059.48^{+0.87}_{-0.89}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-4}
Ω_{Λ}	$0.694^{+0.015}_{-0.015}$	r_{drag}	$147.43^{+0.66}_{-0.64}$	f_{2000}^{217}	$107.7^{+3.8}_{-3.9}$
Ω_m	$0.306^{+0.015}_{-0.015}$	k_{D}	$0.14038^{+0.00084}_{-0.00085}$	χ_{lensing}^2	$9.27 (\nu: 0.3)$
$\Omega_m h^2$	$0.1423^{+0.0023}_{-0.0023}$	$100\theta_{\text{D}}$	$0.16103^{+0.00051}_{-0.00050}$	χ_{simall}^2	$396.9 (\nu: 1.5)$
$\Omega_m h^3$	$0.0971^{+0.0029}_{-0.0029}$	z_{eq}	3386^{+56}_{-56}	χ_{lowl}^2	$23.25 (\nu: 0.4)$
σ_8	$0.817^{+0.023}_{-0.023}$	k_{eq}	$0.01033^{+0.00017}_{-0.00017}$	χ_{JLA}^2	$1035.38 (\nu: 0.4)$
S_8	$0.826^{+0.024}_{-0.024}$	$100\theta_{\text{eq}}$	$0.816^{+0.011}_{-0.010}$	$\chi_{6\text{DF}}^2$	$0.047 (\nu: 0.0)$
$\sigma_8 \Omega_m^{0.5}$	$0.452^{+0.013}_{-0.013}$	$100\theta_{\text{s,eq}}$	$0.4508^{+0.0054}_{-0.0053}$	χ_{MGS}^2	$1.66 (\nu: 0.2)$
$\sigma_8 \Omega_m^{0.25}$	$0.608^{+0.016}_{-0.016}$	$H(0.15)$	$73.2^{+1.0}_{-1.0}$	χ_{DR12BAO}^2	$4.7 (\nu: 0.7)$
$\sigma_8/h^{0.5}$	$0.990^{+0.022}_{-0.022}$	$D_{\text{M}}(0.15)$	637^{+12}_{-12}	χ_{prior}^2	$7.4 (\nu: 6.4)$
$r_{\text{drag}} h$	$100.5^{+2.4}_{-2.3}$	$H(0.38)$	$82.98^{+0.63}_{-0.60}$	χ_{CMB}^2	$4346 (\nu: 4947996.6)$
$\langle d^2 \rangle^{1/2}$	$2.444^{+0.047}_{-0.047}$	$D_{\text{M}}(0.38)$	1524^{+20}_{-20}	χ_{BAO}^2	$6.5 (\nu: 0.6)$

$$\bar{\chi}_{\text{eff}}^2 = 8541.57; \Delta \bar{\chi}_{\text{eff}}^2 = 6291.89; R - 1 = 0.00916$$

18.19 base_w_CamSpecHM_TTTEEE_lowl_lowE_BAO_Pantheon18/base_w_plikHM_TTTEEE_lowl_lowE_BAO_Pantheon18

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02236^{+0.00029}_{-0.00029}$	z_{re}	$7.6^{+1.5}_{-1.6}$	$H(0.51)$	$89.70^{+0.50}_{-0.50}$
$\Omega_c h^2$	$0.1195^{+0.0024}_{-0.0024}$	$10^9 A_s$	$2.094^{+0.070}_{-0.067}$	$D_{\text{M}}(0.51)$	1974^{+21}_{-21}
$100\theta_{MC}$	$1.04094^{+0.00061}_{-0.00058}$	$10^9 A_s e^{-2\tau}$	$1.880^{+0.023}_{-0.023}$	$H(0.61)$	$95.25^{+0.52}_{-0.54}$
τ	$0.054^{+0.016}_{-0.015}$	D_{40}	1227^{+24}_{-24}	$D_{\text{M}}(0.61)$	2298^{+22}_{-22}
w	$-1.024^{+0.065}_{-0.067}$	D_{220}	5727^{+77}_{-78}	$H(2.33)$	$235.9^{+1.2}_{-1.2}$
$\ln(10^{10} A_s)$	$3.042^{+0.033}_{-0.032}$	D_{810}	2537^{+27}_{-27}	$D_{\text{M}}(2.33)$	5760^{+18}_{-18}
n_s	$0.9664^{+0.0081}_{-0.0080}$	D_{1420}	$816.7^{+9.6}_{-9.6}$	$f\sigma_8(0.15)$	$0.458^{+0.017}_{-0.017}$
y_{cal}	$1.0005^{+0.0049}_{-0.0049}$	D_{2000}	$230.7^{+3.2}_{-3.2}$	$\sigma_8(0.15)$	$0.754^{+0.025}_{-0.025}$
A_{217}^{CIB}	43^{+10}_{-20}	$n_{s,0.002}$	$0.9664^{+0.0081}_{-0.0080}$	$f\sigma_8(0.38)$	$0.479^{+0.020}_{-0.020}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.24539^{+0.00011}_{-0.00012}$	$\sigma_8(0.38)$	$0.669^{+0.022}_{-0.022}$
A_{143}^{tSZ}	$4.7^{+3.9}_{-4.3}$	Y_P^{BBN}	$0.24671^{+0.00011}_{-0.00012}$	$f\sigma_8(0.51)$	$0.478^{+0.020}_{-0.020}$
A_{100}^{PS}	249^{+60}_{-50}	$10^5 D/H$	$2.589^{+0.056}_{-0.052}$	$\sigma_8(0.51)$	$0.626^{+0.020}_{-0.020}$
A_{143}^{PS}	42^{+20}_{-20}	Age/Gyr	$13.782^{+0.046}_{-0.045}$	$f\sigma_8(0.61)$	$0.473^{+0.020}_{-0.020}$
A_{217}^{PS}	109^{+20}_{-30}	z_*	$1089.89^{+0.49}_{-0.48}$	$\sigma_8(0.61)$	$0.595^{+0.019}_{-0.019}$
A^{kSZ}	—	r_*	$144.58^{+0.58}_{-0.56}$	$f\sigma_8(2.33)$	$0.3002^{+0.0093}_{-0.0096}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	$100\theta_*$	$1.04113^{+0.00060}_{-0.00057}$	$\sigma_8(2.33)$	$0.3089^{+0.0083}_{-0.0084}$
c_{217}	$0.9997^{+0.0038}_{-0.0027}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.887^{+0.055}_{-0.052}$	f_{2000}^{143}	29^{+5}_{-5}
H_0	$68.2^{+1.7}_{-1.6}$	z_{drag}	$1059.87^{+0.60}_{-0.66}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
Ω_{Λ}	$0.694^{+0.015}_{-0.015}$	r_{drag}	$147.25^{+0.60}_{-0.57}$	f_{2000}^{217}	$106.9^{+3.6}_{-3.6}$
Ω_m	$0.306^{+0.015}_{-0.015}$	k_{D}	$0.14069^{+0.00066}_{-0.00070}$	χ_{simall}^2	$397.0 (\nu: 1.6)$
$\Omega_m h^2$	$0.1425^{+0.0023}_{-0.0023}$	$100\theta_{\text{D}}$	$0.16080^{+0.00038}_{-0.00036}$	χ_{lowl}^2	$23.10 (\nu: 0.4)$
$\Omega_m h^3$	$0.0972^{+0.0029}_{-0.0029}$	z_{eq}	3389^{+54}_{-55}	χ_{JLA}^2	$1035.39 (\nu: 0.5)$
σ_8	$0.816^{+0.027}_{-0.027}$	k_{eq}	$0.01034^{+0.00016}_{-0.00017}$	$\chi_{6\text{DF}}^2$	$0.048 (\nu: 0.0)$
S_8	$0.824^{+0.027}_{-0.027}$	$100\theta_{\text{eq}}$	$0.816^{+0.010}_{-0.010}$	χ_{MGS}^2	$1.65 (\nu: 0.2)$
$\sigma_8 \Omega_m^{0.5}$	$0.451^{+0.015}_{-0.015}$	$100\theta_{\text{s,eq}}$	$0.4506^{+0.0053}_{-0.0052}$	χ_{DR12BAO}^2	$4.7 (\nu: 0.6)$
$\sigma_8 \Omega_m^{0.25}$	$0.607^{+0.018}_{-0.019}$	$H(0.15)$	$73.3^{+1.0}_{-1.0}$	χ_{prior}^2	$9.7 (\nu: 9.7)$
$\sigma_8/h^{0.5}$	$0.987^{+0.027}_{-0.028}$	$D_{\text{M}}(0.15)$	637^{+12}_{-12}	χ_{BAO}^2	$6.4 (\nu: 0.5)$
$r_{\text{drag}} h$	$100.5^{+2.4}_{-2.3}$	$H(0.38)$	$83.09^{+0.55}_{-0.54}$	χ_{CMB}^2	$7357 (\nu: 10475885.9)$
$\langle d^2 \rangle^{1/2}$	$2.438^{+0.058}_{-0.060}$	$D_{\text{M}}(0.38)$	1522^{+20}_{-20}		

Best-fit $\chi_{\text{eff}}^2 = 12961.06$; $\Delta\chi_{\text{eff}}^2 = 9154.81$; $\bar{\chi}_{\text{eff}}^2 = 12983.86$; $\Delta\bar{\chi}_{\text{eff}}^2 = 9150.66$; $R - 1 = 0.00833$
 χ_{eff}^2 : BAO - 6DF: 0.00 (Δ 0.00) MGS: 1.54 (Δ -0.07) DR12BAO: 4.10 (Δ -0.25) CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.88 (Δ -0.18) commander_dx12_v3_2_29: 22.80 (Δ -0.31) CamSpec like_10.7HM_1400_unified: 11499.86 SN - JLA Pantheon18: 1034.72 (Δ -0.02)

18.20 base_w_CamSpecHM_TTTEEE_lowl_lowE_BAO_Pantheon18_post_lensing/base_w_plikHM_TTTEEE_lowl_lowE_BAO_Pantheon18_

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02236^{+0.00029}_{-0.00029}$	z_{re}	$7.7^{+1.4}_{-1.4}$	$H(0.51)$	$89.69^{+0.46}_{-0.47}$
$\Omega_c h^2$	$0.1195^{+0.0020}_{-0.0021}$	$10^9 A_s$	$2.097^{+0.062}_{-0.058}$	$D_{\text{M}}(0.51)$	1973^{+21}_{-21}
$100\theta_{MC}$	$1.04093^{+0.00060}_{-0.00057}$	$10^9 A_s e^{-2\tau}$	$1.880^{+0.021}_{-0.021}$	$H(0.61)$	$95.24^{+0.47}_{-0.50}$
τ	$0.055^{+0.015}_{-0.014}$	D_{40}	1228^{+22}_{-22}	$D_{\text{M}}(0.61)$	2298^{+22}_{-22}
w	$-1.026^{+0.061}_{-0.062}$	D_{220}	5730^{+76}_{-77}	$H(2.33)$	$235.9^{+1.2}_{-1.2}$
$\ln(10^{10} A_s)$	$3.043^{+0.029}_{-0.028}$	D_{810}	2537^{+27}_{-27}	$D_{\text{M}}(2.33)$	5760^{+17}_{-17}
n_s	$0.9661^{+0.0077}_{-0.0076}$	D_{1420}	$816.8^{+9.7}_{-9.6}$	$f\sigma_8(0.15)$	$0.459^{+0.013}_{-0.013}$
y_{cal}	$1.0006^{+0.0049}_{-0.0048}$	D_{2000}	$230.7^{+3.2}_{-3.2}$	$\sigma_8(0.15)$	$0.755^{+0.021}_{-0.021}$
A_{217}^{CIB}	43^{+10}_{-20}	$n_{s,0.002}$	$0.9661^{+0.0077}_{-0.0076}$	$f\sigma_8(0.38)$	$0.479^{+0.016}_{-0.016}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.24539^{+0.00011}_{-0.00012}$	$\sigma_8(0.38)$	$0.670^{+0.018}_{-0.018}$
A_{143}^{tSZ}	$4.7^{+3.8}_{-4.4}$	Y_P^{BBN}	$0.24672^{+0.00011}_{-0.00012}$	$f\sigma_8(0.51)$	$0.479^{+0.017}_{-0.016}$
A_{100}^{PS}	249^{+60}_{-50}	$10^5 D/H$	$2.588^{+0.055}_{-0.052}$	$\sigma_8(0.51)$	$0.627^{+0.017}_{-0.017}$
A_{143}^{PS}	42^{+20}_{-20}	Age/Gyr	$13.781^{+0.046}_{-0.045}$	$f\sigma_8(0.61)$	$0.474^{+0.017}_{-0.016}$
A_{217}^{PS}	109^{+20}_{-30}	z_*	$1089.89^{+0.46}_{-0.46}$	$\sigma_8(0.61)$	$0.596^{+0.016}_{-0.016}$
A^{kSZ}	—	r_*	$144.57^{+0.50}_{-0.49}$	$f\sigma_8(2.33)$	$0.3006^{+0.0080}_{-0.0081}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	$100\theta_*$	$1.04112^{+0.00060}_{-0.00057}$	$\sigma_8(2.33)$	$0.3093^{+0.0071}_{-0.0070}$
c_{217}	$0.9997^{+0.0038}_{-0.0027}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.886^{+0.047}_{-0.046}$	f_{2000}^{143}	29^{+6}_{-5}
H_0	$68.3^{+1.6}_{-1.6}$	z_{drag}	$1059.87^{+0.63}_{-0.63}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
Ω_Λ	$0.694^{+0.015}_{-0.015}$	r_{drag}	$147.23^{+0.53}_{-0.51}$	f_{2000}^{217}	$106.9^{+3.6}_{-3.6}$
Ω_m	$0.306^{+0.015}_{-0.015}$	k_{D}	$0.14071^{+0.00061}_{-0.00065}$	χ_{lensing}^2	$9.18 (\nu: 0.2)$
$\Omega_m h^2$	$0.1425^{+0.0020}_{-0.0020}$	$100\theta_{\text{D}}$	$0.16079^{+0.00037}_{-0.00036}$	χ_{simall}^2	$397.0 (\nu: 1.4)$
$\Omega_m h^3$	$0.0973^{+0.0027}_{-0.0027}$	z_{eq}	3390^{+47}_{-47}	χ_{lowl}^2	$23.17 (\nu: 0.3)$
σ_8	$0.817^{+0.022}_{-0.022}$	k_{eq}	$0.01035^{+0.00014}_{-0.00014}$	χ_{JLA}^2	$1035.36 (\nu: 0.4)$
S_8	$0.824^{+0.021}_{-0.021}$	$100\theta_{\text{eq}}$	$0.8154^{+0.0089}_{-0.0086}$	$\chi_{6\text{DF}}^2$	$0.046 (\nu: 0.0)$
$\sigma_8 \Omega_m^{0.5}$	$0.452^{+0.011}_{-0.012}$	$100\theta_{\text{s,eq}}$	$0.4505^{+0.0046}_{-0.0044}$	χ_{MGS}^2	$1.67 (\nu: 0.2)$
$\sigma_8 \Omega_m^{0.25}$	$0.607^{+0.014}_{-0.014}$	$H(0.15)$	$73.3^{+1.0}_{-1.0}$	χ_{DR12BAO}^2	$4.7 (\nu: 0.5)$
$\sigma_8/h^{0.5}$	$0.988^{+0.020}_{-0.020}$	$D_{\text{M}}(0.15)$	636^{+12}_{-12}	χ_{prior}^2	$9.7 (\nu: 9.9)$
$r_{\text{drag}} h$	$100.5^{+2.4}_{-2.3}$	$H(0.38)$	$83.09^{+0.52}_{-0.51}$	χ_{CMB}^2	$7366 (\nu: 10476057.2)$
$\langle d^2 \rangle^{1/2}$	$2.441^{+0.044}_{-0.045}$	$D_{\text{M}}(0.38)$	1522^{+20}_{-20}	χ_{BAO}^2	$6.38 (\nu: 0.4)$
$\bar{\chi}_{\text{eff}}^2 = 12992.76; \Delta\bar{\chi}_{\text{eff}}^2 = 9150.80; R - 1 = 0.01319$					

18.21 base_w_CamSpecHM_TTTEEE_lowl_lowE_BAO_Pantheon18_post_zre6p5/base_w_plikHM_TTTEEE_lowl_lowE_BAO_Pantheon18_p

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02236^{+0.00029}_{-0.00029}$	z_{re}	< 8.94	$H(0.51)$	$89.70^{+0.50}_{-0.51}$
$\Omega_c h^2$	$0.1195^{+0.0024}_{-0.0024}$	$10^9 A_s$	$2.099^{+0.061}_{-0.056}$	$D_{\text{M}}(0.51)$	1974^{+21}_{-21}
$100\theta_{MC}$	$1.04095^{+0.00061}_{-0.00058}$	$10^9 A_s e^{-2\tau}$	$1.879^{+0.023}_{-0.023}$	$H(0.61)$	$95.25^{+0.52}_{-0.54}$
τ	$0.055^{+0.013}_{-0.012}$	D_{40}	1227^{+24}_{-25}	$D_{\text{M}}(0.61)$	2298^{+22}_{-22}
w	$-1.024^{+0.065}_{-0.067}$	D_{220}	5727^{+76}_{-78}	$H(2.33)$	$235.9^{+1.2}_{-1.2}$
$\ln(10^{10} A_s)$	$3.044^{+0.029}_{-0.027}$	D_{810}	2537^{+27}_{-27}	$D_{\text{M}}(2.33)$	5760^{+18}_{-18}
n_s	$0.9665^{+0.0081}_{-0.0080}$	D_{1420}	$816.7^{+9.6}_{-9.5}$	$f\sigma_8(0.15)$	$0.458^{+0.017}_{-0.017}$
y_{cal}	$1.0005^{+0.0049}_{-0.0049}$	D_{2000}	$230.7^{+3.2}_{-3.2}$	$\sigma_8(0.15)$	$0.755^{+0.025}_{-0.025}$
A_{217}^{CIB}	43^{+10}_{-20}	$n_{s,0.002}$	$0.9665^{+0.0081}_{-0.0080}$	$f\sigma_8(0.38)$	$0.479^{+0.020}_{-0.020}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.24539^{+0.00011}_{-0.00012}$	$\sigma_8(0.38)$	$0.669^{+0.021}_{-0.022}$
A_{143}^{tSZ}	$4.7^{+3.9}_{-4.3}$	Y_P^{BBN}	$0.24672^{+0.00011}_{-0.00012}$	$f\sigma_8(0.51)$	$0.478^{+0.020}_{-0.020}$
A_{100}^{PS}	249^{+60}_{-50}	$10^5 D/H$	$2.588^{+0.055}_{-0.052}$	$\sigma_8(0.51)$	$0.626^{+0.020}_{-0.020}$
A_{143}^{PS}	42^{+20}_{-20}	Age/Gyr	$13.781^{+0.046}_{-0.045}$	$f\sigma_8(0.61)$	$0.474^{+0.020}_{-0.020}$
A_{217}^{PS}	109^{+20}_{-30}	z_*	$1089.89^{+0.49}_{-0.48}$	$\sigma_8(0.61)$	$0.596^{+0.018}_{-0.019}$
A^{kSZ}	—	r_*	$144.58^{+0.58}_{-0.56}$	$f\sigma_8(2.33)$	$0.3005^{+0.0092}_{-0.0093}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	$100\theta_*$	$1.04113^{+0.00060}_{-0.00057}$	$\sigma_8(2.33)$	$0.3093^{+0.0081}_{-0.0080}$
c_{217}	$0.9997^{+0.0038}_{-0.0027}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.887^{+0.054}_{-0.052}$	f_{2000}^{143}	29^{+5}_{-5}
H_0	$68.3^{+1.6}_{-1.6}$	z_{drag}	$1059.87^{+0.60}_{-0.62}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
Ω_{Λ}	$0.694^{+0.015}_{-0.015}$	r_{drag}	$147.25^{+0.59}_{-0.57}$	f_{2000}^{217}	$106.8^{+3.6}_{-3.6}$
Ω_m	$0.306^{+0.015}_{-0.015}$	k_{D}	$0.14069^{+0.00066}_{-0.00069}$	χ_{small}^2	$397.0 (\nu: 1.7)$
$\Omega_m h^2$	$0.1425^{+0.0023}_{-0.0023}$	$100\theta_{\text{D}}$	$0.16080^{+0.00038}_{-0.00035}$	χ_{lowl}^2	$23.12 (\nu: 0.4)$
$\Omega_m h^3$	$0.0972^{+0.0029}_{-0.0029}$	z_{eq}	3389^{+54}_{-55}	χ_{JLA}^2	$1035.39 (\nu: 0.4)$
σ_8	$0.816^{+0.026}_{-0.026}$	k_{eq}	$0.01034^{+0.00016}_{-0.00017}$	$\chi_{6\text{DF}}^2$	$0.047 (\nu: 0.0)$
S_8	$0.824^{+0.027}_{-0.027}$	$100\theta_{\text{eq}}$	$0.816^{+0.010}_{-0.010}$	χ_{MGS}^2	$1.65 (\nu: 0.2)$
$\sigma_8 \Omega_m^{0.5}$	$0.452^{+0.015}_{-0.015}$	$100\theta_{\text{s,eq}}$	$0.4507^{+0.0053}_{-0.0051}$	χ_{DR12BAO}^2	$4.7 (\nu: 0.6)$
$\sigma_8 \Omega_m^{0.25}$	$0.607^{+0.018}_{-0.018}$	$H(0.15)$	$73.3^{+1.0}_{-1.0}$	χ_{prior}^2	$9.7 (\nu: 9.7)$
$\sigma_8/h^{0.5}$	$0.988^{+0.026}_{-0.026}$	$D_{\text{M}}(0.15)$	637^{+12}_{-12}	χ_{BAO}^2	$6.4 (\nu: 0.5)$
$r_{\text{drag}} h$	$100.5^{+2.4}_{-2.3}$	$H(0.38)$	$83.10^{+0.55}_{-0.54}$	χ_{CMB}^2	$7357 (\nu: 10475813.1)$
$\langle d^2 \rangle^{1/2}$	$2.440^{+0.056}_{-0.056}$	$D_{\text{M}}(0.38)$	1522^{+20}_{-20}		

$$\bar{\chi}_{\text{eff}}^2 = 12983.61; \Delta\bar{\chi}_{\text{eff}}^2 = 9150.63; R - 1 = 0.00895$$

18.22 base_w_CamSpecHM_TTTEEE_lowl_lowE_BAO_Pantheon18_post_lensing_zre6p5/base_w_plikHM_TTTEEE_lowl_lowE_BAO_Pantheon18

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02236^{+0.00029}_{-0.00029}$	z_{re}	$7.8^{+1.1}_{-1.3}$	$H(0.51)$	$89.70^{+0.46}_{-0.46}$
$\Omega_c h^2$	$0.1195^{+0.0020}_{-0.0020}$	$10^9 A_s$	$2.100^{+0.055}_{-0.052}$	$D_{\text{M}}(0.51)$	1973^{+21}_{-21}
$100\theta_{MC}$	$1.04094^{+0.00060}_{-0.00058}$	$10^9 A_s e^{-2\tau}$	$1.880^{+0.021}_{-0.021}$	$H(0.61)$	$95.25^{+0.47}_{-0.49}$
τ	$0.055^{+0.013}_{-0.012}$	D_{40}	1228^{+22}_{-22}	$D_{\text{M}}(0.61)$	2298^{+22}_{-22}
w	$-1.025^{+0.061}_{-0.062}$	D_{220}	5729^{+76}_{-77}	$H(2.33)$	$235.8^{+1.2}_{-1.2}$
$\ln(10^{10} A_s)$	$3.045^{+0.026}_{-0.025}$	D_{810}	2537^{+27}_{-27}	$D_{\text{M}}(2.33)$	5760^{+17}_{-17}
n_s	$0.9662^{+0.0076}_{-0.0076}$	D_{1420}	$816.8^{+9.7}_{-9.5}$	$f\sigma_8(0.15)$	$0.459^{+0.013}_{-0.013}$
y_{cal}	$1.0006^{+0.0049}_{-0.0048}$	D_{2000}	$230.7^{+3.2}_{-3.2}$	$\sigma_8(0.15)$	$0.755^{+0.020}_{-0.021}$
A_{217}^{CIB}	43^{+10}_{-10}	$n_{s,0.002}$	$0.9662^{+0.0076}_{-0.0076}$	$f\sigma_8(0.38)$	$0.479^{+0.016}_{-0.016}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.24539^{+0.00011}_{-0.00012}$	$\sigma_8(0.38)$	$0.670^{+0.018}_{-0.018}$
A_{143}^{tSZ}	$4.7^{+3.8}_{-4.4}$	Y_P^{BBN}	$0.24672^{+0.00011}_{-0.00012}$	$f\sigma_8(0.51)$	$0.479^{+0.017}_{-0.016}$
A_{100}^{PS}	249^{+60}_{-50}	$10^5 D/H$	$2.588^{+0.054}_{-0.052}$	$\sigma_8(0.51)$	$0.627^{+0.017}_{-0.017}$
A_{143}^{PS}	42^{+20}_{-20}	Age/Gyr	$13.781^{+0.045}_{-0.045}$	$f\sigma_8(0.61)$	$0.474^{+0.017}_{-0.016}$
A_{217}^{PS}	109^{+20}_{-30}	z_*	$1089.89^{+0.46}_{-0.45}$	$\sigma_8(0.61)$	$0.596^{+0.016}_{-0.016}$
A^{kSZ}	—	r_*	$144.57^{+0.49}_{-0.48}$	$f\sigma_8(2.33)$	$0.3008^{+0.0080}_{-0.0080}$
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	$100\theta_*$	$1.04112^{+0.00060}_{-0.00057}$	$\sigma_8(2.33)$	$0.3095^{+0.0070}_{-0.0068}$
c_{217}	$0.9997^{+0.0038}_{-0.0027}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.886^{+0.047}_{-0.046}$	f_{2000}^{143}	29^{+6}_{-5}
H_0	$68.3^{+1.6}_{-1.6}$	z_{drag}	$1059.88^{+0.63}_{-0.63}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
Ω_Λ	$0.694^{+0.015}_{-0.015}$	r_{drag}	$147.24^{+0.53}_{-0.50}$	f_{2000}^{217}	$106.8^{+3.6}_{-3.6}$
Ω_m	$0.306^{+0.015}_{-0.015}$	k_{D}	$0.14070^{+0.00061}_{-0.00064}$	χ_{lensing}^2	$9.15 (\nu: 0.2)$
$\Omega_m h^2$	$0.1425^{+0.0019}_{-0.0020}$	$100\theta_{\text{D}}$	$0.16079^{+0.00037}_{-0.00036}$	χ_{simall}^2	$397.0 (\nu: 1.5)$
$\Omega_m h^3$	$0.0973^{+0.0027}_{-0.0027}$	z_{eq}	3390^{+46}_{-47}	χ_{lowl}^2	$23.17 (\nu: 0.3)$
σ_8	$0.817^{+0.022}_{-0.022}$	k_{eq}	$0.01035^{+0.00014}_{-0.00014}$	χ_{JLA}^2	$1035.35 (\nu: 0.4)$
S_8	$0.825^{+0.021}_{-0.021}$	$100\theta_{\text{eq}}$	$0.8156^{+0.0089}_{-0.0085}$	$\chi_{6\text{DF}}^2$	$0.046 (\nu: 0.0)$
$\sigma_8 \Omega_m^{0.5}$	$0.452^{+0.011}_{-0.012}$	$100\theta_{\text{s,eq}}$	$0.4506^{+0.0045}_{-0.0044}$	χ_{MGS}^2	$1.67 (\nu: 0.2)$
$\sigma_8 \Omega_m^{0.25}$	$0.608^{+0.014}_{-0.014}$	$H(0.15)$	$73.3^{+1.0}_{-1.0}$	χ_{DR12BAO}^2	$4.6 (\nu: 0.5)$
$\sigma_8/h^{0.5}$	$0.989^{+0.020}_{-0.020}$	$D_{\text{M}}(0.15)$	636^{+12}_{-12}	χ_{prior}^2	$9.7 (\nu: 9.9)$
$r_{\text{drag}} h$	$100.5^{+2.4}_{-2.3}$	$H(0.38)$	$83.10^{+0.52}_{-0.51}$	χ_{CMB}^2	$7366 (\nu: 10476094.8)$
$\langle d^2 \rangle^{1/2}$	$2.442^{+0.043}_{-0.044}$	$D_{\text{M}}(0.38)$	1522^{+20}_{-20}	χ_{BAO}^2	$6.36 (\nu: 0.4)$
$\bar{\chi}_{\text{eff}}^2 = 12992.59; \Delta\bar{\chi}_{\text{eff}}^2 = 9150.80; R - 1 = 0.01370$					

18.23 base_w_CamSpecHM_TT_lowl_lowE_BAO_Riess18_Pantheon18/base_w_plikHM_TT_lowl_lowE_BAO_Riess18_Pantheon18

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02221^{+0.00039}_{-0.00039}$	z_{re}	$7.6^{+1.6}_{-1.7}$	$H(0.51)$	$89.59^{+0.68}_{-0.68}$
$\Omega_c h^2$	$0.1196^{+0.0030}_{-0.0030}$	$10^9 A_s$	$2.091^{+0.071}_{-0.067}$	$D_{\text{M}}(0.51)$	1963^{+21}_{-20}
$100\theta_{MC}$	$1.04097^{+0.00086}_{-0.00085}$	$10^9 A_s e^{-2\tau}$	$1.879^{+0.024}_{-0.024}$	$H(0.61)$	$95.03^{+0.70}_{-0.70}$
τ	$0.053^{+0.017}_{-0.016}$	D_{40}	1227^{+27}_{-26}	$D_{\text{M}}(0.61)$	2288^{+22}_{-21}
w	$-1.063^{+0.068}_{-0.069}$	D_{220}	5716^{+80}_{-79}	$H(2.33)$	$235.3^{+1.5}_{-1.5}$
$\ln(10^{10} A_s)$	$3.040^{+0.034}_{-0.033}$	D_{810}	2535^{+27}_{-27}	$D_{\text{M}}(2.33)$	5763^{+24}_{-24}
n_s	$0.9655^{+0.0094}_{-0.0094}$	D_{1420}	$815^{+10}_{-9.8}$	$f\sigma_8(0.15)$	$0.461^{+0.021}_{-0.021}$
y_{cal}	$1.0005^{+0.0049}_{-0.0049}$	D_{2000}	$230.0^{+3.5}_{-3.4}$	$\sigma_8(0.15)$	$0.765^{+0.026}_{-0.027}$
A_{217}^{CIB}	44^{+20}_{-20}	$n_{s,0.002}$	$0.9655^{+0.0094}_{-0.0094}$	$f\sigma_8(0.38)$	$0.485^{+0.023}_{-0.023}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.24533^{+0.00015}_{-0.00018}$	$\sigma_8(0.38)$	$0.679^{+0.022}_{-0.023}$
A_{143}^{tSZ}	$4.5^{+3.8}_{-4.2}$	Y_P^{BBN}	$0.24665^{+0.00015}_{-0.00018}$	$f\sigma_8(0.51)$	$0.486^{+0.023}_{-0.023}$
A_{100}^{PS}	252^{+60}_{-50}	$10^5 D/H$	$2.616^{+0.074}_{-0.072}$	$\sigma_8(0.51)$	$0.635^{+0.021}_{-0.021}$
A_{143}^{PS}	44^{+20}_{-20}	Age/Gyr	$13.773^{+0.053}_{-0.052}$	$f\sigma_8(0.61)$	$0.481^{+0.022}_{-0.023}$
A_{217}^{PS}	108^{+30}_{-30}	z_*	$1090.09^{+0.64}_{-0.64}$	$\sigma_8(0.61)$	$0.604^{+0.019}_{-0.020}$
A^{kSZ}	—	r_*	$144.65^{+0.74}_{-0.72}$	$f\sigma_8(2.33)$	$0.3047^{+0.0093}_{-0.0097}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	$100\theta_*$	$1.04117^{+0.00084}_{-0.00084}$	$\sigma_8(2.33)$	$0.3127^{+0.0082}_{-0.0084}$
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.893^{+0.070}_{-0.068}$	f_{2000}^{143}	31^{+6}_{-6}
H_0	$69.3^{+1.5}_{-1.5}$	z_{drag}	$1059.54^{+0.85}_{-0.87}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-4}
Ω_Λ	$0.703^{+0.013}_{-0.014}$	r_{drag}	$147.37^{+0.77}_{-0.75}$	f_{2000}^{217}	$107.6^{+3.9}_{-3.9}$
Ω_m	$0.297^{+0.014}_{-0.013}$	k_{D}	$0.14045^{+0.00090}_{-0.00092}$	χ_{simall}^2	$397.0 (\nu: 1.7)$
$\Omega_m h^2$	$0.1425^{+0.0029}_{-0.0029}$	$100\theta_{\text{D}}$	$0.16100^{+0.00051}_{-0.00049}$	χ_{lowl}^2	$23.15 (\nu: 0.5)$
$\Omega_m h^3$	$0.0987^{+0.0030}_{-0.0030}$	z_{eq}	3389^{+68}_{-70}	χ_{H073p45}^2	$6.6 (\nu: 2.7)$
σ_8	$0.827^{+0.028}_{-0.029}$	k_{eq}	$0.01034^{+0.00021}_{-0.00021}$	χ_{JLA}^2	$1036.6 (\nu: 1.8)$
S_8	$0.823^{+0.032}_{-0.032}$	$100\theta_{\text{eq}}$	$0.815^{+0.013}_{-0.012}$	$\chi_{6\text{DF}}^2$	$0.099 (\nu: 0.0)$
$\sigma_8 \Omega_m^{0.5}$	$0.451^{+0.017}_{-0.018}$	$100\theta_{\text{s,eq}}$	$0.4505^{+0.0067}_{-0.0064}$	χ_{MGS}^2	$2.42 (\nu: 0.2)$
$\sigma_8 \Omega_m^{0.25}$	$0.610^{+0.021}_{-0.022}$	$H(0.15)$	$73.83^{+0.95}_{-0.97}$	χ_{DR12BAO}^2	$4.75 (\nu: 0.4)$
$\sigma_8/h^{0.5}$	$0.993^{+0.030}_{-0.031}$	$D_{\text{M}}(0.15)$	630^{+11}_{-10}	χ_{prior}^2	$7.4 (\nu: 6.3)$
$r_{\text{drag}} h$	$102.1^{+2.2}_{-2.2}$	$H(0.38)$	$83.17^{+0.68}_{-0.68}$	χ_{BAO}^2	$7.3 (\nu: 0.7)$
$\langle d^2 \rangle^{1/2}$	$2.446^{+0.065}_{-0.067}$	$D_{\text{M}}(0.38)$	1512^{+19}_{-18}	χ_{CMB}^2	$4337 (\nu: 4948315.3)$

Best-fit $\chi_{\text{eff}}^2 = 8521.38$; $\Delta\chi_{\text{eff}}^2 = 6293.10$; $\bar{\chi}_{\text{eff}}^2 = 8541.10$; $\Delta\bar{\chi}_{\text{eff}}^2 = 6291.99$; $R - 1 = 0.00624$
 χ_{eff}^2 : BAO - 6DF: 0.04 (Δ -0.02) MGS: 2.19 (Δ -0.16) DR12BAO: 4.41 (Δ 0.11) CMB - simall_100x143_offlike5_EE_Aplanck_B: 396.83 (Δ 0.94) commander_dx12_v3_2_29: 23.38 (Δ 0.29) CamSpec like_10.7HM: 7049.34 Hubble - H073p45: 6.64 (Δ 0.34) SN - JLA Pantheon18: 1035.92 (Δ -0.19)

18.24 base_w_CamSpecHM_TT_lowl_lowE_BAO_Riess18_Pantheon18_post_lensing/base_w_plikHM_TT_lowl_lowE_BAO_Riess18_Pantheon18_post_lensing

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02222^{+0.00039}_{-0.00038}$	$10^9 A_s$	$2.092^{+0.064}_{-0.060}$	$H(0.61)$	$95.03^{+0.63}_{-0.63}$
$\Omega_c h^2$	$0.1196^{+0.0025}_{-0.0025}$	$10^9 A_s e^{-2\tau}$	$1.880^{+0.021}_{-0.021}$	$D_M(0.61)$	2288^{+21}_{-21}
$100\theta_{MC}$	$1.04096^{+0.00085}_{-0.00084}$	D_{40}	1227^{+25}_{-23}	$H(2.33)$	$235.3^{+1.3}_{-1.3}$
τ	$0.054^{+0.016}_{-0.015}$	D_{220}	5718^{+79}_{-78}	$D_M(2.33)$	5762^{+23}_{-23}
w	$-1.064^{+0.062}_{-0.061}$	D_{810}	2535^{+26}_{-26}	$f\sigma_8(0.15)$	$0.461^{+0.015}_{-0.015}$
$\ln(10^{10} A_s)$	$3.041^{+0.030}_{-0.029}$	D_{1420}	$815^{+10}_{-9.8}$	$\sigma_8(0.15)$	$0.765^{+0.020}_{-0.021}$
n_s	$0.9653^{+0.0086}_{-0.0087}$	D_{2000}	$230.0^{+3.5}_{-3.4}$	$f\sigma_8(0.38)$	$0.486^{+0.017}_{-0.017}$
y_{cal}	$1.0005^{+0.0048}_{-0.0048}$	$n_{s,0.002}$	$0.9653^{+0.0086}_{-0.0087}$	$\sigma_8(0.38)$	$0.679^{+0.018}_{-0.018}$
A_{217}^{CIB}	44^{+20}_{-20}	Y_P	$0.24533^{+0.00016}_{-0.00017}$	$f\sigma_8(0.51)$	$0.486^{+0.018}_{-0.018}$
$\xi^{tSZ-CIB}$	—	Y_P^{BBN}	$0.24666^{+0.00016}_{-0.00017}$	$\sigma_8(0.51)$	$0.635^{+0.016}_{-0.017}$
A_{143}^{tSZ}	$4.5^{+3.9}_{-4.2}$	$10^5 D/H$	$2.615^{+0.073}_{-0.071}$	$f\sigma_8(0.61)$	$0.482^{+0.017}_{-0.017}$
A_{100}^{PS}	252^{+60}_{-50}	Age/Gyr	$13.772^{+0.054}_{-0.052}$	$\sigma_8(0.61)$	$0.604^{+0.015}_{-0.016}$
A_{143}^{PS}	44^{+20}_{-20}	z_*	$1090.08^{+0.60}_{-0.60}$	$f\sigma_8(2.33)$	$0.3048^{+0.0076}_{-0.0078}$
A_{217}^{PS}	108^{+30}_{-30}	r_*	$144.65^{+0.61}_{-0.61}$	$\sigma_8(2.33)$	$0.3128^{+0.0068}_{-0.0068}$
A^{kSZ}	—	$100\theta_*$	$1.04116^{+0.00084}_{-0.00082}$	f_{2000}^{143}	31^{+6}_{-6}
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	$D_M(z_*)/\text{Gpc}$	$13.893^{+0.060}_{-0.059}$	$f_{2000}^{143\times 217}$	33^{+4}_{-4}
c_{217}	$0.9997^{+0.0038}_{-0.0027}$	z_{drag}	$1059.55^{+0.88}_{-0.84}$	f_{2000}^{217}	$107.6^{+3.8}_{-3.9}$
H_0	$69.3^{+1.4}_{-1.5}$	r_{drag}	$147.37^{+0.66}_{-0.66}$	χ^2_{lensing}	$9.22\ (\nu: 0.3)$
Ω_Λ	$0.703^{+0.013}_{-0.014}$	k_D	$0.14046^{+0.00083}_{-0.00084}$	χ^2_{simall}	$396.9\ (\nu: 1.4)$
Ω_m	$0.297^{+0.014}_{-0.013}$	$100\theta_D$	$0.16099^{+0.00050}_{-0.00049}$	χ^2_{lowl}	$23.18\ (\nu: 0.4)$
$\Omega_m h^2$	$0.1425^{+0.0024}_{-0.0024}$	z_{eq}	3389^{+56}_{-57}	χ^2_{H073p45}	$6.5\ (\nu: 2.6)$
$\Omega_m h^3$	$0.0987^{+0.0027}_{-0.0027}$	k_{eq}	$0.01034^{+0.00017}_{-0.00017}$	χ^2_{JLA}	$1036.6\ (\nu: 1.7)$
σ_8	$0.827^{+0.022}_{-0.022}$	$100\theta_{\text{eq}}$	$0.815^{+0.011}_{-0.010}$	$\chi^2_{6\text{DF}}$	$0.10\ (\nu: 0.0)$
S_8	$0.823^{+0.024}_{-0.024}$	$100\theta_{\text{s,eq}}$	$0.4506^{+0.0055}_{-0.0053}$	χ^2_{MGS}	$2.45\ (\nu: 0.2)$
$\sigma_8 \Omega_m^{0.5}$	$0.451^{+0.013}_{-0.013}$	$H(0.15)$	$73.85^{+0.94}_{-0.97}$	χ^2_{DR12BAO}	$4.65\ (\nu: 0.3)$
$\sigma_8 \Omega_m^{0.25}$	$0.610^{+0.015}_{-0.016}$	$D_M(0.15)$	630^{+11}_{-10}	χ^2_{prior}	$7.4\ (\nu: 6.2)$
$\sigma_8/h^{0.5}$	$0.994^{+0.022}_{-0.022}$	$H(0.38)$	$83.18^{+0.62}_{-0.62}$	χ^2_{CMB}	$4346\ (\nu: 4948332.0)$
$r_{\text{drag}} h$	$102.1^{+2.1}_{-2.2}$	$D_M(0.38)$	1511^{+19}_{-18}	χ^2_{BAO}	$7.2\ (\nu: 0.6)$
$\langle d^2 \rangle^{1/2}$	$2.447^{+0.047}_{-0.047}$	$H(0.51)$	$89.60^{+0.61}_{-0.60}$		
z_{re}	$7.6^{+1.5}_{-1.5}$	$D_M(0.51)$	1963^{+21}_{-20}		

$\bar{\chi}^2_{\text{eff}} = 8549.81; \Delta\bar{\chi}^2_{\text{eff}} = 6292.07; R - 1 = 0.01112$

18.25 base_w_CamSpecHM_TT_lowl_lowE_BAO_Riess18_Pantheon18_post_zre6p5/base_w_plikHM_TT_lowl_lowE_BAO_Riess18_Pantheon18_post_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02222^{+0.00039}_{-0.00038}$	z_{re}	< 8.95	$H(0.51)$	$89.60^{+0.68}_{-0.67}$
$\Omega_c h^2$	$0.1196^{+0.0029}_{-0.0030}$	$10^9 A_s$	$2.097^{+0.061}_{-0.056}$	$D_{\text{M}}(0.51)$	1963^{+21}_{-20}
$100\theta_{MC}$	$1.04098^{+0.00086}_{-0.00084}$	$10^9 A_s e^{-2\tau}$	$1.879^{+0.024}_{-0.024}$	$H(0.61)$	$95.04^{+0.70}_{-0.69}$
τ	$0.055^{+0.013}_{-0.012}$	D_{40}	1227^{+27}_{-26}	$D_{\text{M}}(0.61)$	2288^{+22}_{-21}
w	$-1.062^{+0.068}_{-0.069}$	D_{220}	5716^{+81}_{-79}	$H(2.33)$	$235.3^{+1.5}_{-1.5}$
$\ln(10^{10} A_s)$	$3.043^{+0.029}_{-0.027}$	D_{810}	2535^{+27}_{-27}	$D_{\text{M}}(2.33)$	5762^{+24}_{-24}
n_s	$0.9656^{+0.0093}_{-0.0093}$	D_{1420}	$815^{+10}_{-9.9}$	$f\sigma_8(0.15)$	$0.461^{+0.020}_{-0.020}$
y_{cal}	$1.0005^{+0.0049}_{-0.0049}$	D_{2000}	$230.0^{+3.5}_{-3.4}$	$\sigma_8(0.15)$	$0.766^{+0.026}_{-0.026}$
A_{217}^{CIB}	44^{+20}_{-20}	$n_{s,0.002}$	$0.9656^{+0.0093}_{-0.0093}$	$f\sigma_8(0.38)$	$0.486^{+0.023}_{-0.023}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.24533^{+0.00016}_{-0.00017}$	$\sigma_8(0.38)$	$0.679^{+0.022}_{-0.023}$
A_{143}^{tSZ}	$4.5^{+3.9}_{-4.2}$	Y_P^{BBN}	$0.24666^{+0.00016}_{-0.00017}$	$f\sigma_8(0.51)$	$0.486^{+0.023}_{-0.023}$
A_{100}^{PS}	252^{+60}_{-50}	$10^5 D/H$	$2.615^{+0.074}_{-0.072}$	$\sigma_8(0.51)$	$0.636^{+0.020}_{-0.021}$
A_{143}^{PS}	44^{+20}_{-20}	Age/Gyr	$13.772^{+0.054}_{-0.052}$	$f\sigma_8(0.61)$	$0.482^{+0.022}_{-0.023}$
A_{217}^{PS}	108^{+30}_{-30}	z_*	$1090.08^{+0.64}_{-0.64}$	$\sigma_8(0.61)$	$0.605^{+0.019}_{-0.019}$
A^{kSZ}	—	r_*	$144.66^{+0.74}_{-0.72}$	$f\sigma_8(2.33)$	$0.3050^{+0.0091}_{-0.0094}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	$100\theta_*$	$1.04118^{+0.00085}_{-0.00083}$	$\sigma_8(2.33)$	$0.3131^{+0.0079}_{-0.0080}$
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.894^{+0.070}_{-0.068}$	f_{2000}^{143}	31^{+6}_{-6}
H_0	$69.3^{+1.5}_{-1.5}$	z_{drag}	$1059.55^{+0.84}_{-0.84}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-4}
Ω_{Λ}	$0.703^{+0.013}_{-0.014}$	r_{drag}	$147.37^{+0.77}_{-0.75}$	f_{2000}^{217}	$107.5^{+3.9}_{-3.9}$
Ω_m	$0.297^{+0.014}_{-0.013}$	k_{D}	$0.14045^{+0.00089}_{-0.00092}$	χ_{small}^2	$396.9 (\nu: 1.7)$
$\Omega_m h^2$	$0.1424^{+0.0028}_{-0.0029}$	$100\theta_{\text{D}}$	$0.16100^{+0.00050}_{-0.00049}$	χ_{lowl}^2	$23.16 (\nu: 0.5)$
$\Omega_m h^3$	$0.0986^{+0.0030}_{-0.0030}$	z_{eq}	3389^{+68}_{-69}	χ_{H073p45}^2	$6.6 (\nu: 2.7)$
σ_8	$0.828^{+0.028}_{-0.029}$	k_{eq}	$0.01034^{+0.00021}_{-0.00021}$	χ_{JLA}^2	$1036.5 (\nu: 1.8)$
S_8	$0.823^{+0.032}_{-0.031}$	$100\theta_{\text{eq}}$	$0.815^{+0.013}_{-0.012}$	$\chi_{6\text{DF}}^2$	$0.099 (\nu: 0.0)$
$\sigma_8 \Omega_m^{0.5}$	$0.451^{+0.017}_{-0.017}$	$100\theta_{\text{s,eq}}$	$0.4506^{+0.0067}_{-0.0064}$	χ_{MGS}^2	$2.43 (\nu: 0.2)$
$\sigma_8 \Omega_m^{0.25}$	$0.611^{+0.021}_{-0.021}$	$H(0.15)$	$73.83^{+0.95}_{-0.97}$	χ_{DR12BAO}^2	$4.73 (\nu: 0.4)$
$\sigma_8/h^{0.5}$	$0.994^{+0.030}_{-0.030}$	$D_{\text{M}}(0.15)$	630^{+11}_{-10}	χ_{prior}^2	$7.4 (\nu: 6.3)$
$r_{\text{drag}} h$	$102.1^{+2.2}_{-2.2}$	$H(0.38)$	$83.18^{+0.68}_{-0.67}$	χ_{BAO}^2	$7.3 (\nu: 0.7)$
$\langle d^2 \rangle^{1/2}$	$2.449^{+0.064}_{-0.064}$	$D_{\text{M}}(0.38)$	1512^{+19}_{-18}	χ_{CMB}^2	$4337 (\nu: 4948386.5)$

$$\bar{\chi}_{\text{eff}}^2 = 8540.87; \Delta \bar{\chi}_{\text{eff}}^2 = 6292.04; R - 1 = 0.00534$$

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02222^{+0.00038}_{-0.00038}$	$10^9 A_s$	$2.097^{+0.056}_{-0.051}$	$H(0.61)$	$95.05^{+0.62}_{-0.61}$
$\Omega_c h^2$	$0.1195^{+0.0024}_{-0.0024}$	$10^9 A_s e^{-2\tau}$	$1.879^{+0.021}_{-0.021}$	$D_M(0.61)$	2288^{+22}_{-21}
$100\theta_{MC}$	$1.04097^{+0.00085}_{-0.00083}$	D_{40}	1227^{+25}_{-23}	$H(2.33)$	$235.2^{+1.3}_{-1.3}$
τ	$0.055^{+0.013}_{-0.012}$	D_{220}	5718^{+80}_{-79}	$D_M(2.33)$	5762^{+23}_{-23}
w	$-1.062^{+0.061}_{-0.060}$	D_{810}	2535^{+26}_{-26}	$f\sigma_8(0.15)$	$0.461^{+0.015}_{-0.015}$
$\ln(10^{10} A_s)$	$3.043^{+0.026}_{-0.024}$	D_{1420}	$815.2^{+9.9}_{-9.8}$	$\sigma_8(0.15)$	$0.766^{+0.020}_{-0.021}$
n_s	$0.9656^{+0.0084}_{-0.0085}$	D_{2000}	$230.0^{+3.5}_{-3.4}$	$f\sigma_8(0.38)$	$0.486^{+0.017}_{-0.017}$
y_{cal}	$1.0005^{+0.0048}_{-0.0048}$	$n_{s,0.002}$	$0.9656^{+0.0084}_{-0.0085}$	$\sigma_8(0.38)$	$0.679^{+0.018}_{-0.018}$
A_{217}^{CIB}	44^{+20}_{-20}	Y_P	$0.24533^{+0.00016}_{-0.00016}$	$f\sigma_8(0.51)$	$0.486^{+0.018}_{-0.018}$
$\xi^{tSZ-CIB}$	—	Y_P^{BBN}	$0.24666^{+0.00016}_{-0.00016}$	$\sigma_8(0.51)$	$0.636^{+0.016}_{-0.017}$
A_{143}^{tSZ}	$4.5^{+3.9}_{-4.2}$	$10^5 D/H$	$2.614^{+0.073}_{-0.070}$	$f\sigma_8(0.61)$	$0.482^{+0.017}_{-0.017}$
A_{100}^{PS}	252^{+60}_{-50}	Age/Gyr	$13.772^{+0.054}_{-0.052}$	$\sigma_8(0.61)$	$0.605^{+0.015}_{-0.016}$
A_{143}^{PS}	44^{+20}_{-20}	z_*	$1090.06^{+0.58}_{-0.59}$	$f\sigma_8(2.33)$	$0.3050^{+0.0076}_{-0.0078}$
A_{217}^{PS}	108^{+30}_{-30}	r_*	$144.67^{+0.61}_{-0.60}$	$\sigma_8(2.33)$	$0.3130^{+0.0067}_{-0.0067}$
A^{kSZ}	—	$100\theta_*$	$1.04117^{+0.00084}_{-0.00082}$	f_{2000}^{143}	31^{+6}_{-6}
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	$D_M(z_*)/\text{Gpc}$	$13.895^{+0.059}_{-0.058}$	$f_{2000}^{143\times 217}$	33^{+4}_{-4}
c_{217}	$0.9997^{+0.0038}_{-0.0027}$	z_{drag}	$1059.56^{+0.87}_{-0.85}$	f_{2000}^{217}	$107.6^{+3.8}_{-3.9}$
H_0	$69.3^{+1.4}_{-1.5}$	r_{drag}	$147.38^{+0.66}_{-0.65}$	χ^2_{lensing}	$9.20\ (\nu: 0.3)$
Ω_Λ	$0.703^{+0.013}_{-0.014}$	k_D	$0.14045^{+0.00083}_{-0.00084}$	χ^2_{simall}	$396.9\ (\nu: 1.5)$
Ω_m	$0.297^{+0.014}_{-0.013}$	$100\theta_D$	$0.16099^{+0.00050}_{-0.00049}$	χ^2_{lowl}	$23.16\ (\nu: 0.4)$
$\Omega_m h^2$	$0.1424^{+0.0023}_{-0.0023}$	z_{eq}	3387^{+55}_{-56}	χ^2_{H073p45}	$6.5\ (\nu: 2.6)$
$\Omega_m h^3$	$0.0986^{+0.0026}_{-0.0027}$	k_{eq}	$0.01034^{+0.00017}_{-0.00017}$	χ^2_{JLA}	$1036.5\ (\nu: 1.7)$
σ_8	$0.827^{+0.022}_{-0.022}$	$100\theta_{\text{eq}}$	$0.816^{+0.010}_{-0.010}$	$\chi^2_{6\text{DF}}$	$0.10\ (\nu: 0.0)$
S_8	$0.823^{+0.023}_{-0.024}$	$100\theta_{\text{s,eq}}$	$0.4507^{+0.0054}_{-0.0052}$	χ^2_{MGS}	$2.46\ (\nu: 0.2)$
$\sigma_8 \Omega_m^{0.5}$	$0.451^{+0.013}_{-0.013}$	$H(0.15)$	$73.86^{+0.94}_{-0.97}$	χ^2_{DR12BAO}	$4.62\ (\nu: 0.3)$
$\sigma_8 \Omega_m^{0.25}$	$0.611^{+0.015}_{-0.016}$	$D_M(0.15)$	630^{+11}_{-10}	χ^2_{prior}	$7.4\ (\nu: 6.2)$
$\sigma_8/h^{0.5}$	$0.994^{+0.022}_{-0.022}$	$H(0.38)$	$83.20^{+0.61}_{-0.61}$	χ^2_{CMB}	$4346\ (\nu: 4948436.9)$
$r_{\text{drag}} h$	$102.1^{+2.1}_{-2.2}$	$D_M(0.38)$	1511^{+19}_{-18}	χ^2_{BAO}	$7.2\ (\nu: 0.6)$
$\langle d^2 \rangle^{1/2}$	$2.448^{+0.046}_{-0.046}$	$H(0.51)$	$89.61^{+0.60}_{-0.59}$		
z_{re}	< 8.90	$D_M(0.51)$	1963^{+21}_{-19}		

$\bar{\chi}^2_{\text{eff}} = 8549.61$; $\Delta \bar{\chi}^2_{\text{eff}} = 6292.13$; $R - 1 = 0.01012$

18.27 base_w_CamSpecHM_TTTEEE_lowl_lowE_BAO_Riess18_Pantheon18/base_w_plikHM_TTTEEE_lowl_lowE_BAO_Riess18_Pantheon18

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02237^{+0.00029}_{-0.00029}$	z_{re}	$7.6^{+1.6}_{-1.6}$	$H(0.51)$	$89.72^{+0.52}_{-0.52}$
$\Omega_c h^2$	$0.1195^{+0.0023}_{-0.0023}$	$10^9 A_s$	$2.094^{+0.071}_{-0.066}$	$D_{\text{M}}(0.51)$	1961^{+19}_{-20}
$100\theta_{MC}$	$1.04096^{+0.00060}_{-0.00059}$	$10^9 A_s e^{-2\tau}$	$1.880^{+0.023}_{-0.023}$	$H(0.61)$	$95.16^{+0.54}_{-0.54}$
τ	$0.054^{+0.016}_{-0.015}$	D_{40}	1227^{+25}_{-25}	$D_{\text{M}}(0.61)$	2285^{+20}_{-20}
w	$-1.059^{+0.060}_{-0.062}$	D_{220}	5728^{+76}_{-77}	$H(2.33)$	$235.4^{+1.2}_{-1.2}$
$\ln(10^{10} A_s)$	$3.041^{+0.034}_{-0.032}$	D_{810}	2537^{+27}_{-27}	$D_{\text{M}}(2.33)$	5756^{+17}_{-18}
n_s	$0.9663^{+0.0082}_{-0.0080}$	D_{1420}	$816.8^{+9.4}_{-9.5}$	$f\sigma_8(0.15)$	$0.460^{+0.017}_{-0.017}$
y_{cal}	$1.0005^{+0.0048}_{-0.0049}$	D_{2000}	$230.7^{+3.2}_{-3.2}$	$\sigma_8(0.15)$	$0.764^{+0.024}_{-0.024}$
A_{217}^{CIB}	43^{+20}_{-20}	$n_{s,0.002}$	$0.9663^{+0.0082}_{-0.0080}$	$f\sigma_8(0.38)$	$0.484^{+0.019}_{-0.019}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.24539^{+0.00011}_{-0.00012}$	$\sigma_8(0.38)$	$0.678^{+0.021}_{-0.021}$
A_{143}^{tSZ}	$4.7^{+3.9}_{-4.3}$	Y_P^{BBN}	$0.24672^{+0.00011}_{-0.00012}$	$f\sigma_8(0.51)$	$0.485^{+0.020}_{-0.019}$
A_{100}^{PS}	249^{+60}_{-50}	$10^5 D/H$	$2.587^{+0.055}_{-0.052}$	$\sigma_8(0.51)$	$0.634^{+0.019}_{-0.019}$
A_{143}^{PS}	42^{+20}_{-20}	Age/Gyr	$13.759^{+0.043}_{-0.043}$	$f\sigma_8(0.61)$	$0.480^{+0.019}_{-0.019}$
A_{217}^{PS}	109^{+30}_{-30}	z_*	$1089.88^{+0.49}_{-0.48}$	$\sigma_8(0.61)$	$0.604^{+0.018}_{-0.018}$
A^{kSZ}	—	r_*	$144.56^{+0.56}_{-0.55}$	$f\sigma_8(2.33)$	$0.3045^{+0.0088}_{-0.0088}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	$100\theta_*$	$1.04114^{+0.00059}_{-0.00058}$	$\sigma_8(2.33)$	$0.3126^{+0.0079}_{-0.0078}$
c_{217}	$0.9996^{+0.0037}_{-0.0027}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.885^{+0.053}_{-0.053}$	f_{2000}^{143}	29^{+5}_{-5}
H_0	$69.3^{+1.5}_{-1.5}$	z_{drag}	$1059.89^{+0.61}_{-0.65}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
Ω_{Λ}	$0.703^{+0.013}_{-0.013}$	r_{drag}	$147.22^{+0.58}_{-0.57}$	f_{2000}^{217}	$106.8^{+3.6}_{-3.6}$
Ω_m	$0.297^{+0.013}_{-0.013}$	k_{D}	$0.14073^{+0.00066}_{-0.00069}$	χ_{simall}^2	$397.0 (\nu: 1.7)$
$\Omega_m h^2$	$0.1425^{+0.0022}_{-0.0022}$	$100\theta_{\text{D}}$	$0.16078^{+0.00038}_{-0.00036}$	χ_{lowl}^2	$23.06 (\nu: 0.4)$
$\Omega_m h^3$	$0.0988^{+0.0027}_{-0.0027}$	z_{eq}	3391^{+53}_{-53}	χ_{H073p45}^2	$6.4 (\nu: 2.6)$
σ_8	$0.826^{+0.025}_{-0.025}$	k_{eq}	$0.01035^{+0.00016}_{-0.00016}$	χ_{JLA}^2	$1036.5 (\nu: 1.7)$
S_8	$0.821^{+0.027}_{-0.026}$	$100\theta_{\text{eq}}$	$0.815^{+0.010}_{-0.0098}$	$\chi_{6\text{DF}}^2$	$0.099 (\nu: 0.0)$
$\sigma_8 \Omega_m^{0.5}$	$0.450^{+0.015}_{-0.014}$	$100\theta_{\text{s,eq}}$	$0.4505^{+0.0051}_{-0.0051}$	χ_{MGS}^2	$2.43 (\nu: 0.2)$
$\sigma_8 \Omega_m^{0.25}$	$0.609^{+0.018}_{-0.018}$	$H(0.15)$	$73.92^{+0.96}_{-0.93}$	χ_{DR12BAO}^2	$4.58 (\nu: 0.3)$
$\sigma_8/h^{0.5}$	$0.992^{+0.026}_{-0.026}$	$D_{\text{M}}(0.15)$	629^{+11}_{-11}	χ_{prior}^2	$9.7 (\nu: 9.7)$
$r_{\text{drag}} h$	$102.0^{+2.3}_{-2.1}$	$H(0.38)$	$83.29^{+0.55}_{-0.54}$	χ_{BAO}^2	$7.1 (\nu: 0.7)$
$\langle d^2 \rangle^{1/2}$	$2.444^{+0.058}_{-0.057}$	$D_{\text{M}}(0.38)$	1510^{+18}_{-18}	χ_{CMB}^2	$7357 (\nu: 10475924.6)$

Best-fit $\chi_{\text{eff}}^2 = 12969.03$; $\Delta\chi_{\text{eff}}^2 = 9155.17$; $\bar{\chi}_{\text{eff}}^2 = 12991.92$; $\Delta\bar{\chi}_{\text{eff}}^2 = 9150.91$; $R - 1 = 0.00648$
 χ_{eff}^2 : BAO - 6DF: 0.05 (Δ -0.00) MGS: 2.35 (Δ 0.00) DR12BAO: 4.05 (Δ -0.15) CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.86 (Δ -0.20) commander_dx12_v3_2_29: 22.75 (Δ -0.30) CamSpec like_10.7HM_1400_unified: 11499.61 Hubble - H073p45: 6.54 (Δ 0.44) SN - JLA Pantheon18: 1035.62 (Δ -0.28)

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02237^{+0.00029}_{-0.00029}$	$10^9 A_s$	$2.095^{+0.062}_{-0.058}$	$H(0.61)$	$95.16^{+0.50}_{-0.50}$
$\Omega_c h^2$	$0.1195^{+0.0021}_{-0.0021}$	$10^9 A_s e^{-2\tau}$	$1.880^{+0.021}_{-0.021}$	$D_M(0.61)$	2285^{+20}_{-20}
$100\theta_{MC}$	$1.04095^{+0.00059}_{-0.00057}$	D_{40}	1227^{+23}_{-23}	$H(2.33)$	$235.4^{+1.1}_{-1.1}$
τ	$0.054^{+0.015}_{-0.014}$	D_{220}	5730^{+76}_{-76}	$D_M(2.33)$	5756^{+17}_{-18}
w	$-1.060^{+0.057}_{-0.058}$	D_{810}	2537^{+26}_{-26}	$f\sigma_8(0.15)$	$0.460^{+0.013}_{-0.013}$
$\ln(10^{10} A_s)$	$3.042^{+0.029}_{-0.028}$	D_{1420}	$816.8^{+9.3}_{-9.5}$	$\sigma_8(0.15)$	$0.764^{+0.020}_{-0.020}$
n_s	$0.9662^{+0.0078}_{-0.0076}$	D_{2000}	$230.7^{+3.1}_{-3.2}$	$f\sigma_8(0.38)$	$0.484^{+0.016}_{-0.015}$
y_{cal}	$1.0006^{+0.0048}_{-0.0048}$	$n_{s,0.002}$	$0.9662^{+0.0078}_{-0.0076}$	$\sigma_8(0.38)$	$0.678^{+0.017}_{-0.017}$
A_{217}^{CIB}	43^{+20}_{-20}	Y_P	$0.24539^{+0.00011}_{-0.00012}$	$f\sigma_8(0.51)$	$0.485^{+0.016}_{-0.016}$
$\xi^{tSZ-CIB}$	—	Y_P^{BBN}	$0.24672^{+0.00011}_{-0.00012}$	$\sigma_8(0.51)$	$0.635^{+0.016}_{-0.016}$
A_{143}^{tSZ}	$4.7^{+3.9}_{-4.3}$	$10^5 D/H$	$2.586^{+0.055}_{-0.052}$	$f\sigma_8(0.61)$	$0.481^{+0.016}_{-0.016}$
A_{100}^{PS}	249^{+60}_{-50}	Age/Gyr	$13.759^{+0.042}_{-0.043}$	$\sigma_8(0.61)$	$0.604^{+0.015}_{-0.015}$
A_{143}^{PS}	42^{+20}_{-20}	z_*	$1089.88^{+0.47}_{-0.46}$	$f\sigma_8(2.33)$	$0.3046^{+0.0075}_{-0.0075}$
A_{217}^{PS}	109^{+20}_{-30}	r_*	$144.56^{+0.50}_{-0.48}$	$\sigma_8(2.33)$	$0.3127^{+0.0067}_{-0.0066}$
A^{kSZ}	—	$100\theta_*$	$1.04114^{+0.00058}_{-0.00057}$	f_{2000}^{143}	29^{+5}_{-5}
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	$D_M(z_*)/\text{Gpc}$	$13.885^{+0.048}_{-0.046}$	$f_{2000}^{143\times 217}$	32^{+4}_{-4}
c_{217}	$0.9996^{+0.0037}_{-0.0027}$	z_{drag}	$1059.90^{+0.60}_{-0.66}$	f_{2000}^{217}	$106.8^{+3.6}_{-3.7}$
H_0	$69.3^{+1.5}_{-1.5}$	r_{drag}	$147.22^{+0.53}_{-0.51}$	χ^2_{lensing}	$9.11\ (\nu: 0.2)$
Ω_Λ	$0.703^{+0.013}_{-0.013}$	k_D	$0.14073^{+0.00061}_{-0.00065}$	χ^2_{simall}	$396.9\ (\nu: 1.4)$
Ω_m	$0.297^{+0.013}_{-0.013}$	$100\theta_D$	$0.16078^{+0.00038}_{-0.00036}$	χ^2_{lowl}	$23.09\ (\nu: 0.3)$
$\Omega_m h^2$	$0.1425^{+0.0020}_{-0.0020}$	z_{eq}	3390^{+47}_{-47}	χ^2_{H073p45}	$6.3\ (\nu: 2.6)$
$\Omega_m h^3$	$0.0988^{+0.0025}_{-0.0025}$	k_{eq}	$0.01035^{+0.00014}_{-0.00014}$	χ^2_{JLA}	$1036.5\ (\nu: 1.7)$
σ_8	$0.826^{+0.021}_{-0.021}$	$100\theta_{\text{eq}}$	$0.8155^{+0.0088}_{-0.0087}$	$\chi^2_{6\text{DF}}$	$0.10\ (\nu: 0.0)$
S_8	$0.821^{+0.021}_{-0.021}$	$100\theta_{\text{s,eq}}$	$0.4505^{+0.0045}_{-0.0045}$	χ^2_{MGS}	$2.45\ (\nu: 0.2)$
$\sigma_8 \Omega_m^{0.5}$	$0.450^{+0.012}_{-0.011}$	$H(0.15)$	$73.94^{+0.95}_{-0.93}$	χ^2_{DR12BAO}	$4.55\ (\nu: 0.2)$
$\sigma_8 \Omega_m^{0.25}$	$0.609^{+0.014}_{-0.014}$	$D_M(0.15)$	629^{+11}_{-11}	χ^2_{prior}	$9.7\ (\nu: 9.8)$
$\sigma_8/h^{0.5}$	$0.992^{+0.020}_{-0.020}$	$H(0.38)$	$83.30^{+0.52}_{-0.52}$	χ^2_{CMB}	$7366\ (\nu: 10475893.7)$
$r_{\text{drag}} h$	$102.1^{+2.3}_{-2.1}$	$D_M(0.38)$	1509^{+18}_{-18}	χ^2_{BAO}	$7.1\ (\nu: 0.6)$
$\langle d^2 \rangle^{1/2}$	$2.445^{+0.044}_{-0.044}$	$H(0.51)$	$89.72^{+0.48}_{-0.48}$		
z_{re}	$7.6^{+1.4}_{-1.5}$	$D_M(0.51)$	1961^{+19}_{-19}		

$\bar{\chi}^2_{\text{eff}} = 13000.66; \Delta\bar{\chi}^2_{\text{eff}} = 9150.96; R - 1 = 0.00726$

18.29 base_w_CamSpecHM_TTTEEE_lowl_lowE_BAO_Riess18_Pantheon18_post_zre6p5/base_w_plikHM_TTTEEE_lowl_lowE_BAO_Riess18

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02237^{+0.00029}_{-0.00029}$	z_{re}	< 8.93	$H(0.51)$	$89.72^{+0.52}_{-0.52}$
$\Omega_c h^2$	$0.1195^{+0.0023}_{-0.0023}$	$10^9 A_s$	$2.099^{+0.061}_{-0.056}$	$D_{\text{M}}(0.51)$	1961^{+19}_{-20}
$100\theta_{MC}$	$1.04096^{+0.00060}_{-0.00058}$	$10^9 A_s e^{-2\tau}$	$1.880^{+0.023}_{-0.023}$	$H(0.61)$	$95.17^{+0.54}_{-0.54}$
τ	$0.055^{+0.013}_{-0.012}$	D_{40}	1227^{+25}_{-25}	$D_{\text{M}}(0.61)$	2285^{+20}_{-20}
w	$-1.059^{+0.060}_{-0.062}$	D_{220}	5728^{+77}_{-77}	$H(2.33)$	$235.4^{+1.2}_{-1.2}$
$\ln(10^{10} A_s)$	$3.044^{+0.029}_{-0.027}$	D_{810}	2537^{+27}_{-27}	$D_{\text{M}}(2.33)$	5756^{+17}_{-18}
n_s	$0.9664^{+0.0082}_{-0.0080}$	D_{1420}	$816.7^{+9.5}_{-9.5}$	$f\sigma_8(0.15)$	$0.460^{+0.017}_{-0.016}$
y_{cal}	$1.0005^{+0.0048}_{-0.0049}$	D_{2000}	$230.8^{+3.2}_{-3.2}$	$\sigma_8(0.15)$	$0.765^{+0.023}_{-0.023}$
A_{217}^{CIB}	43^{+20}_{-20}	$n_{s,0.002}$	$0.9664^{+0.0082}_{-0.0080}$	$f\sigma_8(0.38)$	$0.485^{+0.019}_{-0.019}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.24539^{+0.00011}_{-0.00012}$	$\sigma_8(0.38)$	$0.679^{+0.020}_{-0.020}$
A_{143}^{tSZ}	$4.7^{+3.9}_{-4.3}$	Y_P^{BBN}	$0.24672^{+0.00011}_{-0.00012}$	$f\sigma_8(0.51)$	$0.485^{+0.019}_{-0.019}$
A_{100}^{PS}	248^{+60}_{-50}	$10^5 D/H$	$2.586^{+0.055}_{-0.052}$	$\sigma_8(0.51)$	$0.635^{+0.019}_{-0.018}$
A_{143}^{PS}	42^{+20}_{-20}	Age/Gyr	$13.759^{+0.043}_{-0.043}$	$f\sigma_8(0.61)$	$0.481^{+0.019}_{-0.019}$
A_{217}^{PS}	109^{+30}_{-30}	z_*	$1089.88^{+0.49}_{-0.49}$	$\sigma_8(0.61)$	$0.604^{+0.017}_{-0.017}$
A^{kSZ}	—	r_*	$144.56^{+0.56}_{-0.55}$	$f\sigma_8(2.33)$	$0.3048^{+0.0086}_{-0.0085}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	$100\theta_*$	$1.04114^{+0.00059}_{-0.00058}$	$\sigma_8(2.33)$	$0.3129^{+0.0077}_{-0.0074}$
c_{217}	$0.9996^{+0.0037}_{-0.0027}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.885^{+0.053}_{-0.053}$	f_{2000}^{143}	29^{+5}_{-5}
H_0	$69.3^{+1.5}_{-1.5}$	z_{drag}	$1059.90^{+0.61}_{-0.65}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
Ω_Λ	$0.703^{+0.013}_{-0.013}$	r_{drag}	$147.23^{+0.58}_{-0.57}$	f_{2000}^{217}	$106.8^{+3.6}_{-3.6}$
Ω_m	$0.297^{+0.013}_{-0.013}$	k_{D}	$0.14072^{+0.00066}_{-0.00069}$	χ_{small}^2	$397.0 (\nu: 1.7)$
$\Omega_m h^2$	$0.1425^{+0.0022}_{-0.0022}$	$100\theta_{\text{D}}$	$0.16078^{+0.00038}_{-0.00036}$	χ_{lowl}^2	$23.08 (\nu: 0.4)$
$\Omega_m h^3$	$0.0988^{+0.0027}_{-0.0027}$	z_{eq}	3390^{+54}_{-53}	χ_{H073p45}^2	$6.4 (\nu: 2.6)$
σ_8	$0.826^{+0.025}_{-0.025}$	k_{eq}	$0.01035^{+0.00016}_{-0.00016}$	χ_{JLA}^2	$1036.4 (\nu: 1.7)$
S_8	$0.822^{+0.026}_{-0.026}$	$100\theta_{\text{eq}}$	$0.816^{+0.010}_{-0.0099}$	$\chi_{6\text{DF}}^2$	$0.099 (\nu: 0.0)$
$\sigma_8 \Omega_m^{0.5}$	$0.450^{+0.014}_{-0.014}$	$100\theta_{\text{s,eq}}$	$0.4505^{+0.0051}_{-0.0051}$	χ_{MGS}^2	$2.43 (\nu: 0.2)$
$\sigma_8 \Omega_m^{0.25}$	$0.610^{+0.018}_{-0.017}$	$H(0.15)$	$73.92^{+0.96}_{-0.93}$	χ_{DR12BAO}^2	$4.57 (\nu: 0.3)$
$\sigma_8/h^{0.5}$	$0.993^{+0.025}_{-0.025}$	$D_{\text{M}}(0.15)$	629^{+11}_{-11}	χ_{prior}^2	$9.7 (\nu: 9.7)$
$r_{\text{drag}} h$	$102.0^{+2.2}_{-2.2}$	$H(0.38)$	$83.30^{+0.55}_{-0.55}$	χ_{BAO}^2	$7.1 (\nu: 0.7)$
$\langle d^2 \rangle^{1/2}$	$2.446^{+0.056}_{-0.054}$	$D_{\text{M}}(0.38)$	1510^{+18}_{-18}	χ_{CMB}^2	$7357 (\nu: 10475903.8)$

$$\bar{\chi}_{\text{eff}}^2 = 12991.69; \Delta\bar{\chi}_{\text{eff}}^2 = 9150.91; R - 1 = 0.00727$$

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02237^{+0.00029}_{-0.00029}$	$10^9 A_s$	$2.099^{+0.055}_{-0.051}$	$H(0.61)$	$95.17^{+0.49}_{-0.50}$
$\Omega_c h^2$	$0.1195^{+0.0021}_{-0.0020}$	$10^9 A_s e^{-2\tau}$	$1.880^{+0.021}_{-0.021}$	$D_M(0.61)$	2285^{+20}_{-20}
$100\theta_{MC}$	$1.04096^{+0.00059}_{-0.00057}$	D_{40}	1227^{+23}_{-23}	$H(2.33)$	$235.4^{+1.1}_{-1.1}$
τ	$0.055^{+0.012}_{-0.012}$	D_{220}	5730^{+76}_{-76}	$D_M(2.33)$	5756^{+17}_{-18}
w	$-1.059^{+0.057}_{-0.058}$	D_{810}	2537^{+26}_{-26}	$f\sigma_8(0.15)$	$0.460^{+0.013}_{-0.013}$
$\ln(10^{10} A_s)$	$3.044^{+0.026}_{-0.024}$	D_{1420}	$816.7^{+9.3}_{-9.5}$	$\sigma_8(0.15)$	$0.765^{+0.019}_{-0.019}$
n_s	$0.9663^{+0.0077}_{-0.0075}$	D_{2000}	$230.8^{+3.1}_{-3.2}$	$f\sigma_8(0.38)$	$0.484^{+0.015}_{-0.015}$
y_{cal}	$1.0005^{+0.0048}_{-0.0048}$	$n_{s,0.002}$	$0.9663^{+0.0077}_{-0.0075}$	$\sigma_8(0.38)$	$0.678^{+0.017}_{-0.017}$
A_{217}^{CIB}	43^{+20}_{-20}	Y_P	$0.24540^{+0.00011}_{-0.00012}$	$f\sigma_8(0.51)$	$0.485^{+0.016}_{-0.016}$
$\xi^{tSZ-CIB}$	—	Y_P^{BBN}	$0.24672^{+0.00011}_{-0.00012}$	$\sigma_8(0.51)$	$0.635^{+0.016}_{-0.016}$
A_{143}^{tSZ}	$4.7^{+3.9}_{-4.3}$	$10^5 D/H$	$2.585^{+0.055}_{-0.051}$	$f\sigma_8(0.61)$	$0.481^{+0.016}_{-0.016}$
A_{100}^{PS}	248^{+60}_{-50}	Age/Gyr	$13.758^{+0.043}_{-0.043}$	$\sigma_8(0.61)$	$0.604^{+0.015}_{-0.015}$
A_{143}^{PS}	42^{+20}_{-20}	z_*	$1089.87^{+0.46}_{-0.46}$	$f\sigma_8(2.33)$	$0.3047^{+0.0074}_{-0.0074}$
A_{217}^{PS}	109^{+20}_{-30}	r_*	$144.57^{+0.50}_{-0.48}$	$\sigma_8(2.33)$	$0.3129^{+0.0066}_{-0.0064}$
A^{kSZ}	—	$100\theta_*$	$1.04114^{+0.00058}_{-0.00057}$	f_{2000}^{143}	29^{+5}_{-5}
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	$D_M(z_*)/\text{Gpc}$	$13.886^{+0.048}_{-0.046}$	$f_{2000}^{143\times 217}$	32^{+4}_{-4}
c_{217}	$0.9996^{+0.0037}_{-0.0027}$	z_{drag}	$1059.91^{+0.60}_{-0.66}$	f_{2000}^{217}	$106.8^{+3.6}_{-3.7}$
H_0	$69.3^{+1.5}_{-1.5}$	r_{drag}	$147.23^{+0.52}_{-0.51}$	χ^2_{lensing}	$9.08\ (\nu: 0.2)$
Ω_Λ	$0.704^{+0.013}_{-0.013}$	k_D	$0.14072^{+0.00061}_{-0.00065}$	χ^2_{simall}	$396.9\ (\nu: 1.4)$
Ω_m	$0.296^{+0.013}_{-0.013}$	$100\theta_D$	$0.16078^{+0.00038}_{-0.00036}$	χ^2_{lowl}	$23.08\ (\nu: 0.3)$
$\Omega_m h^2$	$0.1425^{+0.0020}_{-0.0020}$	z_{eq}	3389^{+47}_{-47}	χ^2_{H073p45}	$6.4\ (\nu: 2.6)$
$\Omega_m h^3$	$0.0988^{+0.0025}_{-0.0025}$	k_{eq}	$0.01034^{+0.00014}_{-0.00014}$	χ^2_{JLA}	$1036.4\ (\nu: 1.6)$
σ_8	$0.826^{+0.021}_{-0.021}$	$100\theta_{\text{eq}}$	$0.8157^{+0.0088}_{-0.0087}$	$\chi^2_{6\text{DF}}$	$0.10\ (\nu: 0.0)$
S_8	$0.821^{+0.021}_{-0.021}$	$100\theta_{\text{s,eq}}$	$0.4506^{+0.0045}_{-0.0045}$	χ^2_{MGS}	$2.45\ (\nu: 0.2)$
$\sigma_8 \Omega_m^{0.5}$	$0.450^{+0.011}_{-0.011}$	$H(0.15)$	$73.94^{+0.95}_{-0.94}$	χ^2_{DR12BAO}	$4.53\ (\nu: 0.2)$
$\sigma_8 \Omega_m^{0.25}$	$0.610^{+0.014}_{-0.014}$	$D_M(0.15)$	629^{+11}_{-11}	χ^2_{prior}	$9.6\ (\nu: 9.7)$
$\sigma_8/h^{0.5}$	$0.992^{+0.020}_{-0.020}$	$H(0.38)$	$83.31^{+0.52}_{-0.52}$	χ^2_{CMB}	$7365\ (\nu: 10475944.0)$
$r_{\text{drag}} h$	$102.1^{+2.3}_{-2.1}$	$D_M(0.38)$	1509^{+18}_{-18}	χ^2_{BAO}	$7.1\ (\nu: 0.6)$
$\langle d^2 \rangle^{1/2}$	$2.446^{+0.044}_{-0.043}$	$H(0.51)$	$89.73^{+0.48}_{-0.47}$		
z_{re}	< 8.86	$D_M(0.51)$	1960^{+19}_{-19}		

$\bar{\chi}^2_{\text{eff}} = 13000.46; \Delta\chi^2_{\text{eff}} = 9150.99; R - 1 = 0.00765$

19 w+wa

19.1 base_w_wa_CamSpecHM_TT_lowl_lowE_BAO_Pantheon18/base_w_wa_plikHM_TT_lowl_lowE_BAO_Pantheon18

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02213^{+0.00041}_{-0.00040}$	$\langle d^2 \rangle^{1/2}$	$2.463^{+0.080}_{-0.086}$	$D_M(0.38)$	1516^{+27}_{-27}
$\Omega_c h^2$	$0.1205^{+0.0035}_{-0.0036}$	z_{re}	$7.5^{+1.6}_{-1.7}$	$H(0.51)$	$89.9^{+1.0}_{-0.99}$
$100\theta_{MC}$	$1.04082^{+0.00089}_{-0.00090}$	$10^9 A_s$	$2.089^{+0.067}_{-0.067}$	$D_M(0.51)$	1966^{+32}_{-32}
τ	$0.052^{+0.016}_{-0.016}$	$10^9 A_s e^{-2\tau}$	$1.883^{+0.026}_{-0.025}$	$H(0.61)$	$95.28^{+0.88}_{-0.85}$
w	$-0.95^{+0.17}_{-0.16}$	D_{40}	1230^{+28}_{-28}	$D_M(0.61)$	2290^{+34}_{-33}
w_a	$-0.35^{+0.69}_{-0.74}$	D_{220}	5709^{+80}_{-80}	$H(2.33)$	$235.1^{+1.9}_{-1.9}$
$\ln(10^{10} A_s)$	$3.039^{+0.032}_{-0.032}$	D_{810}	2535^{+27}_{-27}	$D_M(2.33)$	5765^{+25}_{-25}
n_s	$0.963^{+0.010}_{-0.010}$	D_{1420}	$814.2^{+9.9}_{-9.9}$	$f\sigma_8(0.15)$	$0.462^{+0.021}_{-0.022}$
y_{cal}	$1.0005^{+0.0049}_{-0.0049}$	D_{2000}	$229.6^{+3.5}_{-3.5}$	$\sigma_8(0.15)$	$0.762^{+0.031}_{-0.032}$
A_{217}^{CIB}	44^{+10}_{-20}	$n_{s,0.002}$	$0.963^{+0.010}_{-0.010}$	$f\sigma_8(0.38)$	$0.483^{+0.025}_{-0.025}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.24529^{+0.00017}_{-0.00019}$	$\sigma_8(0.38)$	$0.676^{+0.027}_{-0.029}$
A_{143}^{tSZ}	$4.4^{+3.8}_{-4.2}$	Y_P^{BBN}	$0.24662^{+0.00017}_{-0.00019}$	$f\sigma_8(0.51)$	$0.484^{+0.026}_{-0.026}$
A_{100}^{PS}	253^{+60}_{-50}	$10^5 D/H$	$2.632^{+0.077}_{-0.077}$	$\sigma_8(0.51)$	$0.633^{+0.025}_{-0.026}$
A_{143}^{PS}	45^{+20}_{-20}	Age/Gyr	$13.778^{+0.071}_{-0.066}$	$f\sigma_8(0.61)$	$0.480^{+0.027}_{-0.026}$
A_{217}^{PS}	108^{+30}_{-30}	z_*	$1090.27^{+0.72}_{-0.71}$	$\sigma_8(0.61)$	$0.602^{+0.024}_{-0.025}$
A^{kSZ}	—	r_*	$144.49^{+0.86}_{-0.83}$	$f\sigma_8(2.33)$	$0.304^{+0.012}_{-0.013}$
c_{100}	$0.9985^{+0.0022}_{-0.0027}$	$100\theta_*$	$1.04103^{+0.00088}_{-0.00088}$	$\sigma_8(2.33)$	$0.3107^{+0.0091}_{-0.0096}$
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	$D_M(z_*)/\text{Gpc}$	$13.880^{+0.079}_{-0.078}$	f_{2000}^{143}	31^{+6}_{-6}
H_0	$68.2^{+1.7}_{-1.6}$	z_{drag}	$1059.41^{+0.87}_{-0.85}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-4}
Ω_Λ	$0.692^{+0.016}_{-0.016}$	r_{drag}	$147.24^{+0.87}_{-0.85}$	f_{2000}^{217}	$107.8^{+3.8}_{-3.9}$
Ω_m	$0.308^{+0.016}_{-0.016}$	k_D	$0.14053^{+0.00099}_{-0.00098}$	χ_{small}^2	$396.9 (\nu: 1.3)$
$\Omega_m h^2$	$0.1433^{+0.0034}_{-0.0035}$	$100\theta_D$	$0.16107^{+0.00051}_{-0.00051}$	χ_{lowl}^2	$23.5 (\nu: 0.6)$
$\Omega_m h^3$	$0.0977^{+0.0034}_{-0.0034}$	z_{eq}	3408^{+81}_{-83}	χ_{JLA}^2	$1035.9 (\nu: 1.2)$
σ_8	$0.824^{+0.033}_{-0.035}$	k_{eq}	$0.01040^{+0.00025}_{-0.00025}$	$\chi_{6\text{DF}}^2$	$0.054 (\nu: 0.0)$
S_8	$0.836^{+0.039}_{-0.040}$	$100\theta_{\text{eq}}$	$0.812^{+0.016}_{-0.015}$	χ_{MGS}^2	$1.89 (\nu: 0.2)$
$\sigma_8 \Omega_m^{0.5}$	$0.458^{+0.021}_{-0.022}$	$100\theta_{\text{s,eq}}$	$0.4487^{+0.0081}_{-0.0076}$	χ_{DR12BAO}^2	$5.0 (\nu: 0.9)$
$\sigma_8 \Omega_m^{0.25}$	$0.614^{+0.026}_{-0.027}$	$H(0.15)$	$73.6^{+1.5}_{-1.4}$	χ_{prior}^2	$7.5 (\nu: 6.3)$
$\sigma_8/h^{0.5}$	$0.998^{+0.036}_{-0.039}$	$D_M(0.15)$	635^{+13}_{-13}	χ_{BAO}^2	$6.9 (\nu: 1.2)$
$r_{\text{drag}} h$	$100.4^{+2.5}_{-2.4}$	$H(0.38)$	$83.5^{+1.2}_{-1.2}$	χ_{CMB}^2	$4337 (\nu: 4948106.3)$

Best-fit $\chi_{\text{eff}}^2 = 8512.97$; $\Delta\chi_{\text{eff}}^2 = 6293.44$; $\bar{\chi}_{\text{eff}}^2 = 8533.43$; $\Delta\bar{\chi}_{\text{eff}}^2 = 6291.96$; $R - 1 = 0.00675$

χ_{eff}^2 : BAO - 6DF: 0.00 (Δ -0.00) MGS: 1.75 (Δ -0.07) DR12BAO: 3.97 (Δ -0.06) CMB - simall_100x143_offlike5_EE_Aplanck_B: 397.31 (Δ 1.44) commander_dx12_v3_2_29: 23.37 (Δ 0.09) CamSpec like_10.7HM: 7049.34 SN - JLA Pantheon18: 1034.74 (Δ -0.03)

19.2 base_w_wa_CamSpecHM_TT_lowl_lowE_BAO_Pantheon18_post_lensing/base_w_wa_plikHM_TT_lowl_lowE_BAO_Pantheon18_post_le

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02215^{+0.00039}_{-0.00038}$	z_{re}	$7.4^{+1.5}_{-1.7}$	$D_{\text{M}}(0.51)$	1966^{+31}_{-31}
$\Omega_c h^2$	$0.1201^{+0.0027}_{-0.0026}$	$10^9 A_s$	$2.087^{+0.062}_{-0.061}$	$H(0.61)$	$95.34^{+0.87}_{-0.85}$
$100\theta_{MC}$	$1.04084^{+0.00086}_{-0.00087}$	$10^9 A_s e^{-2\tau}$	$1.881^{+0.022}_{-0.021}$	$D_{\text{M}}(0.61)$	2290^{+33}_{-34}
τ	$0.052^{+0.015}_{-0.015}$	D_{40}	1229^{+24}_{-24}	$H(2.33)$	$235.0^{+1.9}_{-1.9}$
w	$-0.96^{+0.17}_{-0.15}$	D_{220}	5711^{+79}_{-81}	$D_{\text{M}}(2.33)$	5764^{+25}_{-25}
w_a	$-0.30^{+0.60}_{-0.64}$	D_{810}	2534^{+26}_{-26}	$f\sigma_8(0.15)$	$0.460^{+0.015}_{-0.015}$
$\ln(10^{10} A_s)$	$3.038^{+0.029}_{-0.030}$	D_{1420}	$814^{+10}_{-9.9}$	$\sigma_8(0.15)$	$0.759^{+0.022}_{-0.023}$
n_s	$0.9640^{+0.0086}_{-0.0089}$	D_{2000}	$229.6^{+3.5}_{-3.5}$	$f\sigma_8(0.38)$	$0.481^{+0.018}_{-0.018}$
y_{cal}	$1.0004^{+0.0048}_{-0.0049}$	$n_{s,0.002}$	$0.9640^{+0.0086}_{-0.0089}$	$\sigma_8(0.38)$	$0.673^{+0.020}_{-0.020}$
A_{217}^{CIB}	44^{+10}_{-20}	Y_P	$0.24530^{+0.00016}_{-0.00018}$	$f\sigma_8(0.51)$	$0.481^{+0.019}_{-0.019}$
$\xi^{tSZ-CIB}$	—	Y_P^{BBN}	$0.24663^{+0.00016}_{-0.00018}$	$\sigma_8(0.51)$	$0.630^{+0.019}_{-0.019}$
A_{143}^{tSZ}	$4.4^{+3.8}_{-4.2}$	$10^5 D/H$	$2.628^{+0.074}_{-0.074}$	$f\sigma_8(0.61)$	$0.477^{+0.019}_{-0.019}$
A_{100}^{PS}	253^{+60}_{-50}	Age/Gyr	$13.779^{+0.068}_{-0.066}$	$\sigma_8(0.61)$	$0.600^{+0.017}_{-0.018}$
A_{143}^{PS}	45^{+20}_{-20}	z_*	$1090.21^{+0.62}_{-0.61}$	$f\sigma_8(2.33)$	$0.3029^{+0.0089}_{-0.0094}$
A_{217}^{PS}	108^{+30}_{-30}	r_*	$144.58^{+0.65}_{-0.65}$	$\sigma_8(2.33)$	$0.3100^{+0.0071}_{-0.0072}$
A^{kSZ}	—	$100\theta_*$	$1.04105^{+0.00085}_{-0.00086}$	f_{2000}^{143}	31^{+6}_{-6}
c_{100}	$0.9985^{+0.0022}_{-0.0027}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.888^{+0.062}_{-0.062}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-4}
c_{217}	$0.9997^{+0.0038}_{-0.0027}$	z_{drag}	$1059.43^{+0.88}_{-0.83}$	f_{2000}^{217}	$107.8^{+3.8}_{-3.8}$
H_0	$68.2^{+1.7}_{-1.6}$	r_{drag}	$147.32^{+0.69}_{-0.69}$	χ^2_{lensing}	$9.40 (\nu: 0.5)$
Ω_{Λ}	$0.692^{+0.016}_{-0.016}$	k_{D}	$0.14046^{+0.00087}_{-0.00086}$	χ^2_{small}	$396.8 (\nu: 1.1)$
Ω_m	$0.308^{+0.016}_{-0.016}$	$100\theta_{\text{D}}$	$0.16105^{+0.00051}_{-0.00051}$	χ^2_{lowl}	$23.38 (\nu: 0.4)$
$\Omega_m h^2$	$0.1429^{+0.0026}_{-0.0026}$	z_{eq}	3399^{+61}_{-61}	χ^2_{JLA}	$1035.9 (\nu: 1.1)$
$\Omega_m h^3$	$0.0974^{+0.0030}_{-0.0029}$	k_{eq}	$0.01037^{+0.00019}_{-0.00019}$	$\chi^2_{6\text{DF}}$	$0.054 (\nu: 0.0)$
σ_8	$0.821^{+0.024}_{-0.024}$	$100\theta_{\text{eq}}$	$0.813^{+0.011}_{-0.011}$	χ^2_{MGS}	$1.91 (\nu: 0.2)$
S_8	$0.831^{+0.026}_{-0.026}$	$100\theta_{\text{s,eq}}$	$0.4495^{+0.0059}_{-0.0058}$	χ^2_{DR12BAO}	$4.8 (\nu: 0.8)$
$\sigma_8 \Omega_m^{0.5}$	$0.455^{+0.014}_{-0.014}$	$H(0.15)$	$73.6^{+1.5}_{-1.4}$	χ^2_{prior}	$7.5 (\nu: 6.3)$
$\sigma_8 \Omega_m^{0.25}$	$0.611^{+0.017}_{-0.017}$	$D_{\text{M}}(0.15)$	635^{+13}_{-13}	χ^2_{CMB}	$4346 (\nu: 4947852.3)$
$\sigma_8/h^{0.5}$	$0.994^{+0.024}_{-0.024}$	$H(0.38)$	$83.5^{+1.3}_{-1.2}$	χ^2_{BAO}	$6.8 (\nu: 1.1)$
$r_{\text{drag}} h$	$100.4^{+2.5}_{-2.4}$	$D_{\text{M}}(0.38)$	1516^{+26}_{-27}		
$\langle d^2 \rangle^{1/2}$	$2.455^{+0.052}_{-0.054}$	$H(0.51)$	$89.9^{+1.0}_{-1.0}$		
$\bar{\chi}^2_{\text{eff}} = 8542.20; \Delta \bar{\chi}^2_{\text{eff}} = 6291.90; R - 1 = 0.00753$					

19.3 base_w_wa_CamSpecHM_TT_lowl_lowE_BAO_Pantheon18_post_zre6p5/base_w_wa_plikHM_TT_lowl_lowE_BAO_Pantheon18_post_zr

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02214^{+0.00041}_{-0.00039}$	$\langle d^2 \rangle^{1/2}$	$2.465^{+0.079}_{-0.085}$	$D_M(0.38)$	1516^{+27}_{-27}
$\Omega_c h^2$	$0.1204^{+0.0035}_{-0.0036}$	z_{re}	< 8.82	$H(0.51)$	$89.9^{+1.0}_{-0.99}$
$100\theta_{MC}$	$1.04083^{+0.00089}_{-0.00089}$	$10^9 A_s$	$2.096^{+0.058}_{-0.054}$	$D_M(0.51)$	1966^{+32}_{-31}
τ	$0.054^{+0.012}_{-0.011}$	$10^9 A_s e^{-2\tau}$	$1.882^{+0.026}_{-0.025}$	$H(0.61)$	$95.30^{+0.88}_{-0.84}$
w	$-0.96^{+0.17}_{-0.16}$	D_{40}	1230^{+28}_{-28}	$D_M(0.61)$	2290^{+34}_{-33}
w_a	$-0.34^{+0.68}_{-0.73}$	D_{220}	5708^{+80}_{-81}	$H(2.33)$	$235.1^{+1.9}_{-1.9}$
$\ln(10^{10} A_s)$	$3.042^{+0.027}_{-0.026}$	D_{810}	2535^{+27}_{-27}	$D_M(2.33)$	5765^{+25}_{-25}
n_s	$0.964^{+0.010}_{-0.010}$	D_{1420}	$814.2^{+9.9}_{-9.9}$	$f\sigma_8(0.15)$	$0.462^{+0.021}_{-0.022}$
y_{cal}	$1.0005^{+0.0049}_{-0.0049}$	D_{2000}	$229.6^{+3.5}_{-3.5}$	$\sigma_8(0.15)$	$0.763^{+0.031}_{-0.032}$
A_{217}^{CIB}	44^{+10}_{-20}	$n_{s,0.002}$	$0.964^{+0.010}_{-0.010}$	$f\sigma_8(0.38)$	$0.484^{+0.025}_{-0.025}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.24529^{+0.00017}_{-0.00019}$	$\sigma_8(0.38)$	$0.677^{+0.027}_{-0.028}$
A_{143}^{tSZ}	$4.4^{+3.8}_{-4.2}$	Y_P^{BBN}	$0.24662^{+0.00017}_{-0.00019}$	$f\sigma_8(0.51)$	$0.484^{+0.026}_{-0.026}$
A_{100}^{PS}	252^{+60}_{-50}	$10^5 D/H$	$2.630^{+0.076}_{-0.077}$	$\sigma_8(0.51)$	$0.633^{+0.025}_{-0.026}$
A_{143}^{PS}	45^{+20}_{-20}	Age/Gyr	$13.778^{+0.071}_{-0.066}$	$f\sigma_8(0.61)$	$0.480^{+0.026}_{-0.026}$
A_{217}^{PS}	108^{+20}_{-30}	z_*	$1090.25^{+0.71}_{-0.70}$	$\sigma_8(0.61)$	$0.602^{+0.023}_{-0.024}$
A^{kSZ}	—	r_*	$144.51^{+0.85}_{-0.82}$	$f\sigma_8(2.33)$	$0.304^{+0.012}_{-0.013}$
c_{100}	$0.9985^{+0.0022}_{-0.0027}$	$100\theta_*$	$1.04104^{+0.00087}_{-0.00088}$	$\sigma_8(2.33)$	$0.3110^{+0.0090}_{-0.0094}$
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	$D_M(z_*)/\text{Gpc}$	$13.881^{+0.079}_{-0.077}$	f_{2000}^{143}	31^{+6}_{-6}
H_0	$68.2^{+1.7}_{-1.6}$	z_{drag}	$1059.42^{+0.89}_{-0.86}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-4}
Ω_Λ	$0.692^{+0.016}_{-0.016}$	r_{drag}	$147.25^{+0.86}_{-0.84}$	f_{2000}^{217}	$107.8^{+3.8}_{-3.9}$
Ω_m	$0.308^{+0.016}_{-0.016}$	k_D	$0.14052^{+0.00099}_{-0.00098}$	χ_{small}^2	$396.8 (\nu: 1.3)$
$\Omega_m h^2$	$0.1432^{+0.0034}_{-0.0034}$	$100\theta_D$	$0.16106^{+0.00051}_{-0.00051}$	χ_{lowl}^2	$23.5 (\nu: 0.6)$
$\Omega_m h^3$	$0.0976^{+0.0034}_{-0.0034}$	z_{eq}	3406^{+80}_{-82}	χ_{JLA}^2	$1035.9 (\nu: 1.2)$
σ_8	$0.825^{+0.033}_{-0.035}$	k_{eq}	$0.01040^{+0.00024}_{-0.00025}$	$\chi_{6\text{DF}}^2$	$0.054 (\nu: 0.0)$
S_8	$0.836^{+0.039}_{-0.040}$	$100\theta_{\text{eq}}$	$0.812^{+0.016}_{-0.015}$	χ_{MGS}^2	$1.89 (\nu: 0.2)$
$\sigma_8 \Omega_m^{0.5}$	$0.458^{+0.021}_{-0.022}$	$100\theta_{s,\text{eq}}$	$0.4489^{+0.0080}_{-0.0076}$	χ_{DR12BAO}^2	$4.9 (\nu: 0.9)$
$\sigma_8 \Omega_m^{0.25}$	$0.615^{+0.025}_{-0.027}$	$H(0.15)$	$73.6^{+1.5}_{-1.4}$	χ_{prior}^2	$7.5 (\nu: 6.3)$
$\sigma_8/h^{0.5}$	$0.999^{+0.036}_{-0.038}$	$D_M(0.15)$	635^{+13}_{-13}	χ_{BAO}^2	$6.9 (\nu: 1.2)$
$r_{\text{drag}} h$	$100.4^{+2.5}_{-2.4}$	$H(0.38)$	$83.5^{+1.2}_{-1.2}$	χ_{CMB}^2	$4337 (\nu: 4948141.3)$

$\bar{\chi}_{\text{eff}}^2 = 8533.12$; $\Delta\bar{\chi}_{\text{eff}}^2 = 6291.95$; $R - 1 = 0.00716$

19.4 base_w_wa_CamSpecHM_TT_lowl_lowE_BAO_Pantheon18_post_lensing_zre6p5/base_w_wa_plikHM_TT_lowl_lowE_BAO_Pantheon18

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02216^{+0.00039}_{-0.00038}$	z_{re}	< 8.76	$D_{\text{M}}(0.51)$	1967^{+31}_{-31}
$\Omega_c h^2$	$0.1199^{+0.0026}_{-0.0026}$	$10^9 A_s$	$2.093^{+0.053}_{-0.049}$	$H(0.61)$	$95.35^{+0.87}_{-0.85}$
$100\theta_{MC}$	$1.04086^{+0.00085}_{-0.00087}$	$10^9 A_s e^{-2\tau}$	$1.880^{+0.021}_{-0.021}$	$D_{\text{M}}(0.61)$	2290^{+33}_{-34}
τ	$0.054^{+0.012}_{-0.011}$	D_{40}	1228^{+24}_{-24}	$H(2.33)$	$235.0^{+1.9}_{-1.9}$
w	$-0.96^{+0.17}_{-0.15}$	D_{220}	5711^{+80}_{-81}	$D_{\text{M}}(2.33)$	5764^{+25}_{-25}
w_a	$-0.28^{+0.59}_{-0.63}$	D_{810}	2534^{+26}_{-26}	$f\sigma_8(0.15)$	$0.459^{+0.015}_{-0.015}$
$\ln(10^{10} A_s)$	$3.041^{+0.025}_{-0.023}$	D_{1420}	$814^{+10}_{-9.8}$	$\sigma_8(0.15)$	$0.759^{+0.022}_{-0.023}$
n_s	$0.9645^{+0.0084}_{-0.0084}$	D_{2000}	$229.6^{+3.5}_{-3.5}$	$f\sigma_8(0.38)$	$0.481^{+0.018}_{-0.018}$
y_{cal}	$1.0004^{+0.0049}_{-0.0049}$	$n_{s,0.002}$	$0.9645^{+0.0084}_{-0.0084}$	$\sigma_8(0.38)$	$0.674^{+0.020}_{-0.020}$
A_{217}^{CIB}	44^{+10}_{-20}	Y_P	$0.24531^{+0.00016}_{-0.00018}$	$f\sigma_8(0.51)$	$0.481^{+0.019}_{-0.018}$
$\xi^{tSZ-CIB}$	—	Y_P^{BBN}	$0.24663^{+0.00016}_{-0.00018}$	$\sigma_8(0.51)$	$0.630^{+0.019}_{-0.019}$
A_{143}^{tSZ}	$4.4^{+3.8}_{-4.2}$	$10^5 D/H$	$2.626^{+0.074}_{-0.073}$	$f\sigma_8(0.61)$	$0.477^{+0.019}_{-0.019}$
A_{100}^{PS}	253^{+60}_{-50}	Age/Gyr	$13.779^{+0.068}_{-0.066}$	$\sigma_8(0.61)$	$0.600^{+0.017}_{-0.018}$
A_{143}^{PS}	45^{+20}_{-20}	z_*	$1090.18^{+0.60}_{-0.60}$	$f\sigma_8(2.33)$	$0.3029^{+0.0089}_{-0.0094}$
A_{217}^{PS}	108^{+30}_{-30}	r_*	$144.61^{+0.64}_{-0.63}$	$\sigma_8(2.33)$	$0.3102^{+0.0070}_{-0.0071}$
A^{kSZ}	—	$100\theta_*$	$1.04107^{+0.00084}_{-0.00085}$	f_{2000}^{143}	31^{+6}_{-6}
c_{100}	$0.9985^{+0.0022}_{-0.0027}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.890^{+0.061}_{-0.060}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-4}
c_{217}	$0.9997^{+0.0038}_{-0.0027}$	z_{drag}	$1059.44^{+0.87}_{-0.85}$	f_{2000}^{217}	$107.8^{+3.8}_{-3.8}$
H_0	$68.2^{+1.7}_{-1.6}$	r_{drag}	$147.34^{+0.68}_{-0.67}$	χ_{lensing}^2	$9.39 (\nu: 0.5)$
Ω_{Λ}	$0.693^{+0.015}_{-0.016}$	k_{D}	$0.14044^{+0.00086}_{-0.00086}$	χ_{small}^2	$396.7 (\nu: 1.1)$
Ω_m	$0.307^{+0.016}_{-0.015}$	$100\theta_{\text{D}}$	$0.16105^{+0.00051}_{-0.00050}$	χ_{lowl}^2	$23.35 (\nu: 0.4)$
$\Omega_m h^2$	$0.1428^{+0.0025}_{-0.0025}$	z_{eq}	3396^{+59}_{-60}	χ_{JLA}^2	$1035.9 (\nu: 1.1)$
$\Omega_m h^3$	$0.0973^{+0.0029}_{-0.0029}$	k_{eq}	$0.01036^{+0.00018}_{-0.00018}$	$\chi_{6\text{DF}}^2$	$0.054 (\nu: 0.0)$
σ_8	$0.821^{+0.024}_{-0.024}$	$100\theta_{\text{eq}}$	$0.814^{+0.011}_{-0.011}$	χ_{MGS}^2	$1.91 (\nu: 0.2)$
S_8	$0.831^{+0.026}_{-0.026}$	$100\theta_{\text{s,eq}}$	$0.4498^{+0.0057}_{-0.0055}$	χ_{DR12BAO}^2	$4.8 (\nu: 0.8)$
$\sigma_8 \Omega_m^{0.5}$	$0.455^{+0.014}_{-0.014}$	$H(0.15)$	$73.6^{+1.5}_{-1.4}$	χ_{prior}^2	$7.5 (\nu: 6.4)$
$\sigma_8 \Omega_m^{0.25}$	$0.611^{+0.017}_{-0.017}$	$D_{\text{M}}(0.15)$	635^{+13}_{-13}	χ_{CMB}^2	$4346 (\nu: 4947819.6)$
$\sigma_8/h^{0.5}$	$0.995^{+0.024}_{-0.024}$	$H(0.38)$	$83.5^{+1.3}_{-1.2}$	χ_{BAO}^2	$6.7 (\nu: 1.1)$
$r_{\text{drag}} h$	$100.4^{+2.5}_{-2.4}$	$D_{\text{M}}(0.38)$	1516^{+26}_{-27}		
$\langle d^2 \rangle^{1/2}$	$2.455^{+0.052}_{-0.053}$	$H(0.51)$	$89.9^{+1.0}_{-1.0}$		
$\bar{\chi}_{\text{eff}}^2 = 8541.86$; $\Delta \bar{\chi}_{\text{eff}}^2 = 6291.85$; $R - 1 = 0.00901$					

19.5 base_w_wa_CamSpecHM_TTTEEE_lowl_lowE_BAO_Pantheon18/base_w_wa_plikHM_TTTEEE_lowl_lowE_BAO_Pantheon18

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02233^{+0.00030}_{-0.00030}$	$\langle d^2 \rangle^{1/2}$	$2.451^{+0.066}_{-0.067}$	$D_M(0.38)$	1514^{+27}_{-26}
$\Omega_c h^2$	$0.1199^{+0.0026}_{-0.0026}$	z_{re}	$7.5^{+1.5}_{-1.6}$	$H(0.51)$	$90.06^{+0.98}_{-1.0}$
$100\theta_{MC}$	$1.04089^{+0.00060}_{-0.00060}$	$10^9 A_s$	$2.092^{+0.068}_{-0.067}$	$D_M(0.51)$	1964^{+31}_{-31}
τ	$0.053^{+0.016}_{-0.016}$	$10^9 A_s e^{-2\tau}$	$1.881^{+0.023}_{-0.023}$	$H(0.61)$	$95.49^{+0.82}_{-0.82}$
w	$-0.96^{+0.17}_{-0.16}$	D_{40}	1228^{+25}_{-25}	$D_M(0.61)$	2287^{+34}_{-33}
w_a	$-0.28^{+0.62}_{-0.65}$	D_{220}	5725^{+77}_{-77}	$H(2.33)$	$235.2^{+1.9}_{-1.8}$
$\ln(10^{10} A_s)$	$3.041^{+0.032}_{-0.033}$	D_{810}	2537^{+26}_{-27}	$D_M(2.33)$	5756^{+22}_{-20}
n_s	$0.9653^{+0.0085}_{-0.0085}$	D_{1420}	$816.3^{+9.5}_{-9.5}$	$f\sigma_8(0.15)$	$0.458^{+0.017}_{-0.017}$
y_{cal}	$1.0005^{+0.0049}_{-0.0049}$	D_{2000}	$230.5^{+3.2}_{-3.2}$	$\sigma_8(0.15)$	$0.758^{+0.026}_{-0.027}$
A_{217}^{CIB}	43^{+10}_{-20}	$n_{s,0.002}$	$0.9653^{+0.0085}_{-0.0085}$	$f\sigma_8(0.38)$	$0.479^{+0.020}_{-0.020}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.24538^{+0.00011}_{-0.00012}$	$\sigma_8(0.38)$	$0.673^{+0.023}_{-0.024}$
A_{143}^{tSZ}	$4.6^{+3.9}_{-4.2}$	Y_P^{BBN}	$0.24670^{+0.00011}_{-0.00012}$	$f\sigma_8(0.51)$	$0.480^{+0.021}_{-0.021}$
A_{100}^{PS}	249^{+60}_{-50}	$10^5 D/H$	$2.594^{+0.057}_{-0.054}$	$\sigma_8(0.51)$	$0.630^{+0.022}_{-0.022}$
A_{143}^{PS}	43^{+20}_{-20}	Age/Gyr	$13.763^{+0.065}_{-0.060}$	$f\sigma_8(0.61)$	$0.476^{+0.021}_{-0.021}$
A_{217}^{PS}	109^{+20}_{-30}	z_*	$1089.97^{+0.52}_{-0.51}$	$\sigma_8(0.61)$	$0.599^{+0.020}_{-0.021}$
A^{kSZ}	—	r_*	$144.49^{+0.61}_{-0.59}$	$f\sigma_8(2.33)$	$0.303^{+0.010}_{-0.011}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	$100\theta_*$	$1.04107^{+0.00059}_{-0.00059}$	$\sigma_8(2.33)$	$0.3100^{+0.0083}_{-0.0087}$
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	$D_M(z_*)/\text{Gpc}$	$13.879^{+0.058}_{-0.056}$	f_{2000}^{143}	30^{+6}_{-5}
H_0	$68.3^{+1.6}_{-1.6}$	z_{drag}	$1059.83^{+0.64}_{-0.66}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
Ω_Λ	$0.693^{+0.015}_{-0.016}$	r_{drag}	$147.16^{+0.63}_{-0.60}$	f_{2000}^{217}	$106.9^{+3.6}_{-3.7}$
Ω_m	$0.307^{+0.016}_{-0.015}$	k_D	$0.14076^{+0.00068}_{-0.00073}$	χ_{small}^2	$396.9 (\nu: 1.4)$
$\Omega_m h^2$	$0.1429^{+0.0024}_{-0.0025}$	$100\theta_D$	$0.16082^{+0.00038}_{-0.00036}$	χ_{lowl}^2	$23.27 (\nu: 0.4)$
$\Omega_m h^3$	$0.0975^{+0.0029}_{-0.0030}$	z_{eq}	3399^{+59}_{-59}	χ_{JLA}^2	$1035.9 (\nu: 1.2)$
σ_8	$0.820^{+0.028}_{-0.028}$	k_{eq}	$0.01037^{+0.00018}_{-0.00018}$	$\chi_{6\text{DF}}^2$	$0.054 (\nu: 0.0)$
S_8	$0.829^{+0.030}_{-0.030}$	$100\theta_{\text{eq}}$	$0.814^{+0.011}_{-0.011}$	χ_{MGS}^2	$1.93 (\nu: 0.2)$
$\sigma_8 \Omega_m^{0.5}$	$0.454^{+0.016}_{-0.016}$	$100\theta_{s,\text{eq}}$	$0.4497^{+0.0057}_{-0.0056}$	χ_{DR12BAO}^2	$4.7 (\nu: 0.7)$
$\sigma_8 \Omega_m^{0.25}$	$0.610^{+0.020}_{-0.020}$	$H(0.15)$	$73.7^{+1.4}_{-1.4}$	χ_{prior}^2	$9.7 (\nu: 10.0)$
$\sigma_8/h^{0.5}$	$0.992^{+0.029}_{-0.030}$	$D_M(0.15)$	634^{+13}_{-13}	χ_{BAO}^2	$6.7 (\nu: 1.1)$
$r_{\text{drag}} h$	$100.5^{+2.4}_{-2.4}$	$H(0.38)$	$83.6^{+1.2}_{-1.2}$	χ_{CMB}^2	$7357 (\nu: 10476837.4)$

Best-fit $\chi_{\text{eff}}^2 = 12960.67$; $\Delta\chi_{\text{eff}}^2 = 9155.21$; $\bar{\chi}_{\text{eff}}^2 = 12984.58$; $\Delta\bar{\chi}_{\text{eff}}^2 = 9151.08$; $R - 1 = 0.00938$
 χ_{eff}^2 : BAO - 6DF: 0.00 (Δ 0.00) MGS: 1.82 (Δ 0.00) DR12BAO: 3.77 (Δ -0.15) CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.76 (Δ -0.28) commander_dx12_v3_2_29: 22.92 (Δ -0.22) CamSpec like_10.7HM_1400_unified: 11499.35 SN - JLA Pantheon18: 1034.83 (Δ 0.00)

19.6 base_w_wa_CamSpecHM_TTTEEE_lowl_lowE_BAO_Pantheon18_post_lensing/base_w_wa_plikHM_TTTEEE_lowl_lowE_BAO_Pantheon18_post_lensing

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02234^{+0.00029}_{-0.00030}$	z_{re}	$7.5^{+1.5}_{-1.5}$	$D_{\text{M}}(0.51)$	1963^{+30}_{-30}
$\Omega_c h^2$	$0.1198^{+0.0021}_{-0.0021}$	$10^9 A_s$	$2.092^{+0.062}_{-0.059}$	$H(0.61)$	$95.52^{+0.81}_{-0.82}$
$100\theta_{MC}$	$1.04089^{+0.00059}_{-0.00059}$	$10^9 A_s e^{-2\tau}$	$1.881^{+0.021}_{-0.021}$	$D_{\text{M}}(0.61)$	2287^{+33}_{-32}
τ	$0.053^{+0.015}_{-0.014}$	D_{40}	1228^{+23}_{-23}	$H(2.33)$	$235.2^{+1.9}_{-1.8}$
w	$-0.96^{+0.16}_{-0.15}$	D_{220}	5727^{+77}_{-77}	$D_{\text{M}}(2.33)$	5756^{+22}_{-20}
w_a	$-0.27^{+0.58}_{-0.60}$	D_{810}	2537^{+26}_{-26}	$f\sigma_8(0.15)$	$0.457^{+0.013}_{-0.013}$
$\ln(10^{10} A_s)$	$3.040^{+0.029}_{-0.029}$	D_{1420}	$816.2^{+9.5}_{-9.5}$	$\sigma_8(0.15)$	$0.757^{+0.021}_{-0.021}$
n_s	$0.9654^{+0.0078}_{-0.0078}$	D_{2000}	$230.5^{+3.2}_{-3.2}$	$f\sigma_8(0.38)$	$0.479^{+0.016}_{-0.016}$
y_{cal}	$1.0005^{+0.0049}_{-0.0049}$	$n_{s,0.002}$	$0.9654^{+0.0078}_{-0.0078}$	$\sigma_8(0.38)$	$0.672^{+0.019}_{-0.019}$
A_{217}^{CIB}	43^{+10}_{-20}	Y_P	$0.24538^{+0.00011}_{-0.00012}$	$f\sigma_8(0.51)$	$0.479^{+0.017}_{-0.016}$
$\xi^{tSZ-CIB}$	—	Y_P^{BBN}	$0.24671^{+0.00011}_{-0.00012}$	$\sigma_8(0.51)$	$0.629^{+0.018}_{-0.017}$
A_{143}^{tSZ}	$4.6^{+3.9}_{-4.2}$	$10^5 D/H$	$2.592^{+0.056}_{-0.053}$	$f\sigma_8(0.61)$	$0.475^{+0.017}_{-0.016}$
A_{100}^{PS}	249^{+50}_{-50}	Age/Gyr	$13.763^{+0.062}_{-0.059}$	$\sigma_8(0.61)$	$0.598^{+0.017}_{-0.017}$
A_{143}^{PS}	43^{+20}_{-20}	z_*	$1089.94^{+0.48}_{-0.47}$	$f\sigma_8(2.33)$	$0.3024^{+0.0086}_{-0.0088}$
A_{217}^{PS}	109^{+20}_{-30}	r_*	$144.51^{+0.52}_{-0.50}$	$\sigma_8(2.33)$	$0.3098^{+0.0071}_{-0.0071}$
A^{kSZ}	—	$100\theta_*$	$1.04108^{+0.00058}_{-0.00058}$	f_{2000}^{143}	30^{+5}_{-5}
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.881^{+0.050}_{-0.048}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	z_{drag}	$1059.84^{+0.62}_{-0.64}$	f_{2000}^{217}	$106.9^{+3.6}_{-3.7}$
H_0	$68.3^{+1.6}_{-1.6}$	r_{drag}	$147.19^{+0.55}_{-0.52}$	χ_{lensing}^2	$9.19 (\nu: 0.3)$
Ω_{Λ}	$0.694^{+0.015}_{-0.015}$	k_{D}	$0.14074^{+0.00063}_{-0.00067}$	χ_{small}^2	$396.8 (\nu: 1.2)$
Ω_m	$0.306^{+0.015}_{-0.015}$	$100\theta_{\text{D}}$	$0.16081^{+0.00039}_{-0.00036}$	χ_{lowl}^2	$23.24 (\nu: 0.3)$
$\Omega_m h^2$	$0.1428^{+0.0020}_{-0.0020}$	z_{eq}	3396^{+49}_{-49}	χ_{JLA}^2	$1035.9 (\nu: 1.2)$
$\Omega_m h^3$	$0.0975^{+0.0027}_{-0.0027}$	k_{eq}	$0.01037^{+0.00015}_{-0.00015}$	$\chi_{6\text{DF}}^2$	$0.054 (\nu: 0.0)$
σ_8	$0.819^{+0.022}_{-0.022}$	$100\theta_{\text{eq}}$	$0.8143^{+0.0091}_{-0.0090}$	χ_{MGS}^2	$1.94 (\nu: 0.2)$
S_8	$0.827^{+0.022}_{-0.022}$	$100\theta_{\text{s,eq}}$	$0.4499^{+0.0047}_{-0.0047}$	χ_{DR12BAO}^2	$4.7 (\nu: 0.7)$
$\sigma_8 \Omega_m^{0.5}$	$0.453^{+0.012}_{-0.012}$	$H(0.15)$	$73.7^{+1.4}_{-1.3}$	χ_{prior}^2	$9.7 (\nu: 9.8)$
$\sigma_8 \Omega_m^{0.25}$	$0.609^{+0.015}_{-0.015}$	$D_{\text{M}}(0.15)$	634^{+13}_{-13}	χ_{CMB}^2	$7365 (\nu: 10476528.9)$
$\sigma_8/h^{0.5}$	$0.991^{+0.021}_{-0.021}$	$H(0.38)$	$83.6^{+1.2}_{-1.2}$	χ_{BAO}^2	$6.6 (\nu: 1.1)$
$r_{\text{drag}} h$	$100.5^{+2.4}_{-2.4}$	$D_{\text{M}}(0.38)$	1514^{+25}_{-26}		
$\langle d^2 \rangle^{1/2}$	$2.449^{+0.047}_{-0.047}$	$H(0.51)$	$90.08^{+0.98}_{-0.99}$		

$$\bar{\chi}_{\text{eff}}^2 = 12993.26; \Delta\bar{\chi}_{\text{eff}}^2 = 9151.09; R - 1 = 0.00901$$

19.7 base_w_wa_CamSpecHM_TTTEEE_lowl_lowE_BAO_Pantheon18_post_zre6p5/base_w_wa_plikHM_TTTEEE_lowl_lowE_BAO_Pantheon18

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02233^{+0.00029}_{-0.00030}$	$\langle d^2 \rangle^{1/2}$	$2.454^{+0.065}_{-0.065}$	$D_M(0.38)$	1514^{+27}_{-26}
$\Omega_c h^2$	$0.1199^{+0.0026}_{-0.0026}$	z_{re}	< 8.86	$H(0.51)$	$90.06^{+0.98}_{-1.0}$
$100\theta_{MC}$	$1.04089^{+0.00060}_{-0.00060}$	$10^9 A_s$	$2.098^{+0.059}_{-0.054}$	$D_M(0.51)$	1964^{+31}_{-31}
τ	$0.055^{+0.013}_{-0.011}$	$10^9 A_s e^{-2\tau}$	$1.881^{+0.023}_{-0.023}$	$H(0.61)$	$95.49^{+0.82}_{-0.82}$
w	$-0.96^{+0.17}_{-0.16}$	D_{40}	1228^{+25}_{-25}	$D_M(0.61)$	2287^{+34}_{-33}
w_a	$-0.27^{+0.61}_{-0.64}$	D_{220}	5725^{+76}_{-77}	$H(2.33)$	$235.2^{+1.9}_{-1.8}$
$\ln(10^{10} A_s)$	$3.044^{+0.028}_{-0.026}$	D_{810}	2537^{+26}_{-27}	$D_M(2.33)$	5756^{+22}_{-20}
n_s	$0.9654^{+0.0085}_{-0.0084}$	D_{1420}	$816.2^{+9.5}_{-9.5}$	$f\sigma_8(0.15)$	$0.459^{+0.016}_{-0.017}$
y_{cal}	$1.0005^{+0.0049}_{-0.0049}$	D_{2000}	$230.6^{+3.2}_{-3.2}$	$\sigma_8(0.15)$	$0.759^{+0.026}_{-0.026}$
A_{217}^{CIB}	43^{+10}_{-20}	$n_{s,0.002}$	$0.9654^{+0.0085}_{-0.0084}$	$f\sigma_8(0.38)$	$0.480^{+0.019}_{-0.019}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.24538^{+0.00011}_{-0.00012}$	$\sigma_8(0.38)$	$0.673^{+0.023}_{-0.023}$
A_{143}^{tSZ}	$4.7^{+3.9}_{-4.3}$	Y_P^{BBN}	$0.24670^{+0.00011}_{-0.00012}$	$f\sigma_8(0.51)$	$0.480^{+0.020}_{-0.020}$
A_{100}^{PS}	249^{+60}_{-50}	$10^5 D/H$	$2.593^{+0.057}_{-0.053}$	$\sigma_8(0.51)$	$0.630^{+0.021}_{-0.022}$
A_{143}^{PS}	43^{+20}_{-20}	Age/Gyr	$13.763^{+0.066}_{-0.060}$	$f\sigma_8(0.61)$	$0.476^{+0.021}_{-0.021}$
A_{217}^{PS}	109^{+20}_{-30}	z_*	$1089.96^{+0.52}_{-0.51}$	$\sigma_8(0.61)$	$0.600^{+0.020}_{-0.020}$
A^{kSZ}	—	r_*	$144.50^{+0.61}_{-0.59}$	$f\sigma_8(2.33)$	$0.303^{+0.010}_{-0.011}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	$100\theta_*$	$1.04108^{+0.00059}_{-0.00059}$	$\sigma_8(2.33)$	$0.3103^{+0.0081}_{-0.0083}$
c_{217}	$0.9996^{+0.0037}_{-0.0027}$	$D_M(z_*)/\text{Gpc}$	$13.880^{+0.058}_{-0.056}$	f_{2000}^{143}	30^{+5}_{-5}
H_0	$68.3^{+1.6}_{-1.6}$	z_{drag}	$1059.84^{+0.63}_{-0.63}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
Ω_Λ	$0.693^{+0.015}_{-0.016}$	r_{drag}	$147.17^{+0.63}_{-0.61}$	f_{2000}^{217}	$106.9^{+3.6}_{-3.6}$
Ω_m	$0.307^{+0.016}_{-0.015}$	k_D	$0.14075^{+0.00068}_{-0.00073}$	χ_{small}^2	$396.9 (\nu: 1.4)$
$\Omega_m h^2$	$0.1428^{+0.0024}_{-0.0025}$	$100\theta_D$	$0.16081^{+0.00038}_{-0.00036}$	χ_{lowl}^2	$23.28 (\nu: 0.4)$
$\Omega_m h^3$	$0.0975^{+0.0029}_{-0.0030}$	z_{eq}	3398^{+58}_{-59}	χ_{JLA}^2	$1035.9 (\nu: 1.2)$
σ_8	$0.821^{+0.028}_{-0.028}$	k_{eq}	$0.01037^{+0.00018}_{-0.00018}$	$\chi_{6\text{DF}}^2$	$0.054 (\nu: 0.0)$
S_8	$0.830^{+0.029}_{-0.029}$	$100\theta_{\text{eq}}$	$0.814^{+0.011}_{-0.011}$	χ_{MGS}^2	$1.92 (\nu: 0.2)$
$\sigma_8 \Omega_m^{0.5}$	$0.454^{+0.016}_{-0.016}$	$100\theta_{\text{s,eq}}$	$0.4498^{+0.0057}_{-0.0056}$	χ_{DR12BAO}^2	$4.7 (\nu: 0.7)$
$\sigma_8 \Omega_m^{0.25}$	$0.611^{+0.020}_{-0.020}$	$H(0.15)$	$73.7^{+1.4}_{-1.4}$	χ_{prior}^2	$9.7 (\nu: 10.0)$
$\sigma_8/h^{0.5}$	$0.993^{+0.028}_{-0.029}$	$D_M(0.15)$	634^{+13}_{-13}	χ_{BAO}^2	$6.7 (\nu: 1.1)$
$r_{\text{drag}} h$	$100.4^{+2.4}_{-2.4}$	$H(0.38)$	$83.6^{+1.2}_{-1.2}$	χ_{CMB}^2	$7356 (\nu: 10476696.8)$

$$\bar{\chi}_{\text{eff}}^2 = 12984.26; \Delta\bar{\chi}_{\text{eff}}^2 = 9150.99; R - 1 = 0.00880$$

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02234^{+0.00029}_{-0.00030}$	z_{re}	< 8.81	$D_{\text{M}}(0.51)$	1964^{+30}_{-30}
$\Omega_c h^2$	$0.1197^{+0.0021}_{-0.0021}$	$10^9 A_s$	$2.096^{+0.054}_{-0.050}$	$H(0.61)$	$95.52^{+0.81}_{-0.83}$
$100\theta_{MC}$	$1.04090^{+0.00059}_{-0.00058}$	$10^9 A_s e^{-2\tau}$	$1.880^{+0.021}_{-0.021}$	$D_{\text{M}}(0.61)$	2287^{+33}_{-32}
τ	$0.054^{+0.012}_{-0.011}$	D_{40}	1228^{+23}_{-22}	$H(2.33)$	$235.2^{+1.9}_{-1.8}$
w	$-0.96^{+0.16}_{-0.15}$	D_{220}	5726^{+76}_{-77}	$D_{\text{M}}(2.33)$	5756^{+22}_{-20}
w_a	$-0.26^{+0.55}_{-0.62}$	D_{810}	2536^{+26}_{-26}	$f\sigma_8(0.15)$	$0.458^{+0.013}_{-0.013}$
$\ln(10^{10} A_s)$	$3.043^{+0.026}_{-0.024}$	D_{1420}	$816.2^{+9.5}_{-9.5}$	$\sigma_8(0.15)$	$0.758^{+0.021}_{-0.021}$
n_s	$0.9656^{+0.0077}_{-0.0076}$	D_{2000}	$230.5^{+3.2}_{-3.2}$	$f\sigma_8(0.38)$	$0.479^{+0.016}_{-0.016}$
y_{cal}	$1.0004^{+0.0049}_{-0.0049}$	$n_{s,0.002}$	$0.9656^{+0.0077}_{-0.0076}$	$\sigma_8(0.38)$	$0.672^{+0.019}_{-0.019}$
A_{217}^{CIB}	43^{+10}_{-20}	Y_P	$0.24538^{+0.00011}_{-0.00012}$	$f\sigma_8(0.51)$	$0.479^{+0.017}_{-0.016}$
$\xi^{tSZ-CIB}$	—	Y_P^{BBN}	$0.24671^{+0.00011}_{-0.00012}$	$\sigma_8(0.51)$	$0.629^{+0.018}_{-0.017}$
A_{143}^{tSZ}	$4.6^{+3.9}_{-4.2}$	$10^5 D/H$	$2.591^{+0.056}_{-0.052}$	$f\sigma_8(0.61)$	$0.475^{+0.017}_{-0.016}$
A_{100}^{PS}	249^{+50}_{-50}	Age/Gyr	$13.763^{+0.062}_{-0.059}$	$\sigma_8(0.61)$	$0.599^{+0.017}_{-0.017}$
A_{143}^{PS}	43^{+20}_{-20}	z_*	$1089.93^{+0.48}_{-0.46}$	$f\sigma_8(2.33)$	$0.3025^{+0.0086}_{-0.0088}$
A_{217}^{PS}	109^{+20}_{-30}	r_*	$144.53^{+0.51}_{-0.50}$	$\sigma_8(2.33)$	$0.3100^{+0.0071}_{-0.0069}$
A^{kSZ}	—	$100\theta_*$	$1.04109^{+0.00058}_{-0.00057}$	f_{2000}^{143}	30^{+5}_{-5}
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.882^{+0.049}_{-0.048}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	z_{drag}	$1059.85^{+0.62}_{-0.64}$	f_{2000}^{217}	$106.9^{+3.6}_{-3.7}$
H_0	$68.3^{+1.6}_{-1.6}$	r_{drag}	$147.20^{+0.54}_{-0.52}$	χ_{lensing}^2	$9.18 (\nu: 0.3)$
Ω_{Λ}	$0.694^{+0.015}_{-0.015}$	k_{D}	$0.14073^{+0.00063}_{-0.00067}$	χ_{small}^2	$396.8 (\nu: 1.2)$
Ω_m	$0.306^{+0.015}_{-0.015}$	$100\theta_{\text{D}}$	$0.16080^{+0.00039}_{-0.00036}$	χ_{lowl}^2	$23.23 (\nu: 0.3)$
$\Omega_m h^2$	$0.1427^{+0.0020}_{-0.0020}$	z_{eq}	3395^{+48}_{-48}	χ_{JLA}^2	$1035.9 (\nu: 1.2)$
$\Omega_m h^3$	$0.0974^{+0.0027}_{-0.0027}$	k_{eq}	$0.01036^{+0.00015}_{-0.00015}$	$\chi_{6\text{DF}}^2$	$0.054 (\nu: 0.0)$
σ_8	$0.819^{+0.022}_{-0.022}$	$100\theta_{\text{eq}}$	$0.8146^{+0.0090}_{-0.0089}$	χ_{MGS}^2	$1.94 (\nu: 0.2)$
S_8	$0.828^{+0.022}_{-0.022}$	$100\theta_{\text{s,eq}}$	$0.4501^{+0.0046}_{-0.0046}$	χ_{DR12BAO}^2	$4.6 (\nu: 0.7)$
$\sigma_8 \Omega_m^{0.5}$	$0.453^{+0.012}_{-0.012}$	$H(0.15)$	$73.7^{+1.4}_{-1.3}$	χ_{prior}^2	$9.7 (\nu: 9.8)$
$\sigma_8 \Omega_m^{0.25}$	$0.609^{+0.015}_{-0.014}$	$D_{\text{M}}(0.15)$	634^{+13}_{-13}	χ_{CMB}^2	$7365 (\nu: 10476502.5)$
$\sigma_8/h^{0.5}$	$0.991^{+0.021}_{-0.021}$	$H(0.38)$	$83.6^{+1.2}_{-1.2}$	χ_{BAO}^2	$6.6 (\nu: 1.1)$
$r_{\text{drag}} h$	$100.5^{+2.4}_{-2.4}$	$D_{\text{M}}(0.38)$	1514^{+25}_{-26}		
$\langle d^2 \rangle^{1/2}$	$2.450^{+0.047}_{-0.047}$	$H(0.51)$	$90.08^{+0.98}_{-0.99}$		
$\bar{\chi}_{\text{eff}}^2 = 12993.01; \Delta\bar{\chi}_{\text{eff}}^2 = 9151.08; R - 1 = 0.00841$					

19.9 base_w_wa_CamSpecHM_TT_lowl_lowE_BAO_Riess18_Pantheon18/base_w_wa_plikHM_TT_lowl_lowE_BAO_Riess18_Pantheon18

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02216^{+0.00040}_{-0.00039}$	z_{re}	$7.5^{+1.6}_{-1.7}$	$D_{\text{M}}(0.51)$	1953^{+30}_{-30}
$\Omega_c h^2$	$0.1206^{+0.0035}_{-0.0035}$	$10^9 A_s$	$2.091^{+0.069}_{-0.067}$	$H(0.61)$	$95.17^{+0.87}_{-0.83}$
$100\theta_{MC}$	$1.04085^{+0.00088}_{-0.00088}$	$10^9 A_s e^{-2\tau}$	$1.883^{+0.026}_{-0.025}$	$D_{\text{M}}(0.61)$	2277^{+33}_{-32}
τ	$0.052^{+0.016}_{-0.016}$	D_{40}	1231^{+28}_{-28}	$H(2.33)$	$234.8^{+1.9}_{-1.9}$
w	$-0.99^{+0.17}_{-0.16}$	D_{220}	5711^{+80}_{-80}	$D_{\text{M}}(2.33)$	5761^{+24}_{-25}
w_a	$-0.36^{+0.71}_{-0.76}$	D_{810}	2535^{+27}_{-27}	$f\sigma_8(0.15)$	$0.464^{+0.021}_{-0.022}$
$\ln(10^{10} A_s)$	$3.040^{+0.033}_{-0.032}$	D_{1420}	$814^{+10}_{-9.9}$	$\sigma_8(0.15)$	$0.773^{+0.031}_{-0.031}$
n_s	$0.963^{+0.010}_{-0.010}$	D_{2000}	$229.8^{+3.5}_{-3.4}$	$f\sigma_8(0.38)$	$0.490^{+0.025}_{-0.025}$
y_{cal}	$1.0004^{+0.0049}_{-0.0049}$	$n_{s,0.002}$	$0.963^{+0.010}_{-0.010}$	$\sigma_8(0.38)$	$0.686^{+0.027}_{-0.027}$
A_{217}^{CIB}	44^{+20}_{-20}	Y_P	$0.24531^{+0.00016}_{-0.00019}$	$f\sigma_8(0.51)$	$0.491^{+0.026}_{-0.026}$
$\xi^{tSZ-CIB}$	—	Y_P^{BBN}	$0.24663^{+0.00016}_{-0.00019}$	$\sigma_8(0.51)$	$0.642^{+0.025}_{-0.025}$
A_{143}^{tSZ}	$4.4^{+3.8}_{-4.2}$	$10^5 D/H$	$2.626^{+0.076}_{-0.075}$	$f\sigma_8(0.61)$	$0.488^{+0.027}_{-0.026}$
A_{100}^{PS}	252^{+60}_{-50}	Age/Gyr	$13.754^{+0.067}_{-0.064}$	$\sigma_8(0.61)$	$0.610^{+0.023}_{-0.024}$
A_{143}^{PS}	45^{+20}_{-20}	z_*	$1090.24^{+0.70}_{-0.70}$	$f\sigma_8(2.33)$	$0.308^{+0.011}_{-0.012}$
A_{217}^{PS}	108^{+30}_{-30}	r_*	$144.44^{+0.83}_{-0.82}$	$\sigma_8(2.33)$	$0.3145^{+0.0090}_{-0.0092}$
A^{kSZ}	—	$100\theta_*$	$1.04106^{+0.00087}_{-0.00087}$	f_{2000}^{143}	31^{+6}_{-6}
c_{100}	$0.9985^{+0.0022}_{-0.0027}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.874^{+0.078}_{-0.077}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-4}
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	z_{drag}	$1059.49^{+0.86}_{-0.86}$	f_{2000}^{217}	$107.7^{+3.8}_{-3.9}$
H_0	$69.3^{+1.5}_{-1.5}$	r_{drag}	$147.17^{+0.85}_{-0.83}$	χ_{simall}^2	$396.9 (\nu: 1.4)$
Ω_{Λ}	$0.701^{+0.014}_{-0.015}$	k_{D}	$0.14062^{+0.00097}_{-0.00097}$	χ_{lowl}^2	$23.5 (\nu: 0.6)$
Ω_m	$0.299^{+0.015}_{-0.014}$	$100\theta_{\text{D}}$	$0.16102^{+0.00050}_{-0.00050}$	χ_{H073p45}^2	$6.6 (\nu: 2.8)$
$\Omega_m h^2$	$0.1434^{+0.0034}_{-0.0034}$	z_{eq}	3411^{+80}_{-81}	χ_{JLA}^2	$1036.3 (\nu: 1.5)$
$\Omega_m h^3$	$0.0993^{+0.0033}_{-0.0033}$	k_{eq}	$0.01041^{+0.00024}_{-0.00025}$	$\chi_{6\text{DF}}^2$	$0.14 (\nu: 0.0)$
σ_8	$0.835^{+0.033}_{-0.034}$	$100\theta_{\text{eq}}$	$0.811^{+0.015}_{-0.015}$	χ_{MGS}^2	$2.71 (\nu: 0.3)$
S_8	$0.834^{+0.039}_{-0.039}$	$100\theta_{\text{s,eq}}$	$0.4484^{+0.0078}_{-0.0075}$	χ_{DR12BAO}^2	$5.5 (\nu: 1.0)$
$\sigma_8 \Omega_m^{0.5}$	$0.457^{+0.021}_{-0.021}$	$H(0.15)$	$74.3^{+1.5}_{-1.4}$	χ_{prior}^2	$7.4 (\nu: 6.3)$
$\sigma_8 \Omega_m^{0.25}$	$0.618^{+0.026}_{-0.026}$	$D_{\text{M}}(0.15)$	627^{+12}_{-12}	χ_{BAO}^2	$8.3 (\nu: 2.2)$
$\sigma_8/h^{0.5}$	$1.004^{+0.036}_{-0.037}$	$H(0.38)$	$83.6^{+1.2}_{-1.2}$	χ_{CMB}^2	$4337 (\nu: 4948109.7)$
$r_{\text{drag}} h$	$101.9^{+2.2}_{-2.2}$	$D_{\text{M}}(0.38)$	1503^{+26}_{-26}		
$\langle d^2 \rangle^{1/2}$	$2.470^{+0.080}_{-0.081}$	$H(0.51)$	$89.89^{+0.99}_{-0.98}$		

Best-fit $\chi_{\text{eff}}^2 = 8520.89$; $\Delta\chi_{\text{eff}}^2 = 6293.31$; $\bar{\chi}_{\text{eff}}^2 = 8541.50$; $\Delta\bar{\chi}_{\text{eff}}^2 = 6291.90$; $R - 1 = 0.00869$
 χ_{eff}^2 : BAO - 6DF: 0.07 (Δ -0.03) MGS: 2.43 (Δ -0.24) DR12BAO: 4.45 (Δ -0.16) CMB - simall_100x143_offlike5_EE_Aplanck_B: 396.52 (Δ 0.67) commander_dx12_v3_2_29: 23.60 (Δ 0.22) CamSpec like_10.7HM: 7049.04 Hubble - H073p45: 6.22 (Δ 0.03) SN - JLA Pantheon18: 1035.91 (Δ 0.51)

19.10 base_w_wa_CamSpecHM_TT_lowl_lowE_BAO_Riess18_Pantheon18_post_lensing/base_w_wa_plikHM_TT_lowl_lowE_BAO_Riess18_P

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02219^{+0.00039}_{-0.00039}$	z_{re}	$7.4^{+1.5}_{-1.6}$	$D_{\text{M}}(0.51)$	1953^{+30}_{-30}
$\Omega_c h^2$	$0.1201^{+0.0026}_{-0.0027}$	$10^9 A_s$	$2.086^{+0.063}_{-0.061}$	$H(0.61)$	$95.24^{+0.85}_{-0.84}$
$100\theta_{MC}$	$1.04089^{+0.00085}_{-0.00086}$	$10^9 A_s e^{-2\tau}$	$1.881^{+0.021}_{-0.022}$	$D_{\text{M}}(0.61)$	2278^{+32}_{-32}
τ	$0.052^{+0.016}_{-0.015}$	D_{40}	1228^{+24}_{-24}	$H(2.33)$	$234.7^{+1.9}_{-1.9}$
w	$-0.998^{+0.16}_{-0.15}$	D_{220}	5713^{+79}_{-81}	$D_{\text{M}}(2.33)$	5760^{+25}_{-25}
w_a	$-0.29^{+0.62}_{-0.65}$	D_{810}	2534^{+26}_{-26}	$f\sigma_8(0.15)$	$0.461^{+0.015}_{-0.016}$
$\ln(10^{10} A_s)$	$3.038^{+0.030}_{-0.030}$	D_{1420}	$814^{+10}_{-9.9}$	$\sigma_8(0.15)$	$0.768^{+0.022}_{-0.022}$
n_s	$0.9642^{+0.0088}_{-0.0087}$	D_{2000}	$229.7^{+3.4}_{-3.4}$	$f\sigma_8(0.38)$	$0.486^{+0.018}_{-0.018}$
y_{cal}	$1.0004^{+0.0048}_{-0.0049}$	$n_{s,0.002}$	$0.9642^{+0.0088}_{-0.0087}$	$\sigma_8(0.38)$	$0.682^{+0.019}_{-0.020}$
A_{217}^{CIB}	44^{+20}_{-20}	Y_P	$0.24532^{+0.00016}_{-0.00017}$	$f\sigma_8(0.51)$	$0.487^{+0.018}_{-0.019}$
$\xi^{tSZ-CIB}$	—	Y_P^{BBN}	$0.24664^{+0.00016}_{-0.00017}$	$\sigma_8(0.51)$	$0.638^{+0.018}_{-0.018}$
A_{143}^{tSZ}	$4.4^{+3.8}_{-4.2}$	$10^5 D/H$	$2.620^{+0.074}_{-0.072}$	$f\sigma_8(0.61)$	$0.484^{+0.019}_{-0.019}$
A_{100}^{PS}	253^{+60}_{-60}	Age/Gyr	$13.756^{+0.065}_{-0.064}$	$\sigma_8(0.61)$	$0.607^{+0.017}_{-0.017}$
A_{143}^{PS}	45^{+20}_{-20}	z_*	$1090.16^{+0.62}_{-0.61}$	$f\sigma_8(2.33)$	$0.3067^{+0.0086}_{-0.0090}$
A_{217}^{PS}	108^{+30}_{-30}	r_*	$144.55^{+0.64}_{-0.64}$	$\sigma_8(2.33)$	$0.3134^{+0.0069}_{-0.0069}$
A^{kSZ}	—	$100\theta_*$	$1.04109^{+0.00084}_{-0.00085}$	f_{2000}^{143}	31^{+6}_{-6}
c_{100}	$0.9986^{+0.0022}_{-0.0026}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.885^{+0.061}_{-0.061}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-4}
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	z_{drag}	$1059.52^{+0.87}_{-0.84}$	f_{2000}^{217}	$107.7^{+3.8}_{-3.8}$
H_0	$69.3^{+1.5}_{-1.5}$	r_{drag}	$147.28^{+0.68}_{-0.67}$	χ^2_{lensing}	$9.36 (\nu: 0.5)$
Ω_Λ	$0.702^{+0.013}_{-0.014}$	k_{D}	$0.14053^{+0.00085}_{-0.00085}$	χ^2_{simall}	$396.8 (\nu: 1.2)$
Ω_m	$0.298^{+0.014}_{-0.013}$	$100\theta_{\text{D}}$	$0.16101^{+0.00050}_{-0.00049}$	χ^2_{lowl}	$23.31 (\nu: 0.4)$
$\Omega_m h^2$	$0.1429^{+0.0025}_{-0.0025}$	z_{eq}	3399^{+60}_{-61}	χ^2_{H073p45}	$6.6 (\nu: 2.8)$
$\Omega_m h^3$	$0.0990^{+0.0028}_{-0.0028}$	k_{eq}	$0.01038^{+0.00018}_{-0.00019}$	χ^2_{JLA}	$1036.2 (\nu: 1.5)$
σ_8	$0.830^{+0.023}_{-0.024}$	$100\theta_{\text{eq}}$	$0.813^{+0.012}_{-0.011}$	$\chi^2_{6\text{DF}}$	$0.14 (\nu: 0.0)$
S_8	$0.827^{+0.025}_{-0.026}$	$100\theta_{\text{s,eq}}$	$0.4495^{+0.0059}_{-0.0057}$	χ^2_{MGS}	$2.72 (\nu: 0.3)$
$\sigma_8 \Omega_m^{0.5}$	$0.453^{+0.014}_{-0.014}$	$H(0.15)$	$74.3^{+1.4}_{-1.3}$	χ^2_{DR12BAO}	$5.3 (\nu: 1.0)$
$\sigma_8 \Omega_m^{0.25}$	$0.613^{+0.017}_{-0.017}$	$D_{\text{M}}(0.15)$	628^{+12}_{-12}	χ^2_{prior}	$7.4 (\nu: 6.3)$
$\sigma_8/h^{0.5}$	$0.998^{+0.024}_{-0.024}$	$H(0.38)$	$83.6^{+1.2}_{-1.2}$	χ^2_{CMB}	$4346 (\nu: 4947932.7)$
$r_{\text{drag}} h$	$102.0^{+2.2}_{-2.2}$	$D_{\text{M}}(0.38)$	1504^{+25}_{-25}	χ^2_{BAO}	$8.2 (\nu: 2.2)$
$\langle d^2 \rangle^{1/2}$	$2.458^{+0.052}_{-0.053}$	$H(0.51)$	$89.9^{+1.0}_{-1.0}$		

$$\bar{\chi}^2_{\text{eff}} = 8550.26; \Delta \bar{\chi}^2_{\text{eff}} = 6291.88; R - 1 = 0.01140$$

19.11 base_w_wa_CamSpecHM_TT_lowl_lowE_BAO_Riess18_Pantheon18_post_zre6p5/base_w_wa_plikHM_TT_lowl_lowE_BAO_Riess18_P

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02217^{+0.00040}_{-0.00040}$	z_{re}	< 8.83	$D_{\text{M}}(0.51)$	1953^{+30}_{-30}
$\Omega_c h^2$	$0.1205^{+0.0035}_{-0.0035}$	$10^9 A_s$	$2.097^{+0.059}_{-0.054}$	$H(0.61)$	$95.18^{+0.87}_{-0.84}$
$100\theta_{MC}$	$1.04086^{+0.00087}_{-0.00089}$	$10^9 A_s e^{-2\tau}$	$1.883^{+0.026}_{-0.025}$	$D_{\text{M}}(0.61)$	2277^{+33}_{-32}
τ	$0.054^{+0.013}_{-0.011}$	D_{40}	1231^{+28}_{-28}	$H(2.33)$	$234.8^{+1.9}_{-1.9}$
w	$-0.99^{+0.17}_{-0.16}$	D_{220}	5711^{+80}_{-81}	$D_{\text{M}}(2.33)$	5761^{+25}_{-25}
w_a	$-0.35^{+0.71}_{-0.75}$	D_{810}	2535^{+27}_{-27}	$f\sigma_8(0.15)$	$0.465^{+0.021}_{-0.022}$
$\ln(10^{10} A_s)$	$3.043^{+0.028}_{-0.026}$	D_{1420}	$814^{+10}_{-9.9}$	$\sigma_8(0.15)$	$0.774^{+0.030}_{-0.031}$
n_s	$0.964^{+0.010}_{-0.010}$	D_{2000}	$229.8^{+3.5}_{-3.4}$	$f\sigma_8(0.38)$	$0.490^{+0.025}_{-0.025}$
y_{cal}	$1.0004^{+0.0049}_{-0.0049}$	$n_{s,0.002}$	$0.964^{+0.010}_{-0.010}$	$\sigma_8(0.38)$	$0.687^{+0.027}_{-0.027}$
A_{217}^{CIB}	44^{+20}_{-20}	Y_P	$0.24531^{+0.00016}_{-0.00019}$	$f\sigma_8(0.51)$	$0.492^{+0.026}_{-0.026}$
$\xi^{tSZ-CIB}$	—	Y_P^{BBN}	$0.24663^{+0.00016}_{-0.00019}$	$\sigma_8(0.51)$	$0.642^{+0.025}_{-0.025}$
A_{143}^{tSZ}	$4.4^{+3.8}_{-4.2}$	$10^5 D/H$	$2.625^{+0.077}_{-0.075}$	$f\sigma_8(0.61)$	$0.488^{+0.027}_{-0.026}$
A_{100}^{PS}	252^{+60}_{-50}	Age/Gyr	$13.754^{+0.068}_{-0.065}$	$\sigma_8(0.61)$	$0.611^{+0.023}_{-0.024}$
A_{143}^{PS}	45^{+20}_{-20}	z_*	$1090.23^{+0.70}_{-0.70}$	$f\sigma_8(2.33)$	$0.309^{+0.011}_{-0.012}$
A_{217}^{PS}	108^{+30}_{-30}	r_*	$144.45^{+0.83}_{-0.82}$	$\sigma_8(2.33)$	$0.3149^{+0.0088}_{-0.0090}$
A^{kSZ}	—	$100\theta_*$	$1.04106^{+0.00086}_{-0.00087}$	f_{2000}^{143}	31^{+6}_{-6}
c_{100}	$0.9985^{+0.0022}_{-0.0027}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.875^{+0.078}_{-0.077}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-4}
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	z_{drag}	$1059.50^{+0.85}_{-0.86}$	f_{2000}^{217}	$107.6^{+3.8}_{-3.9}$
H_0	$69.3^{+1.5}_{-1.5}$	r_{drag}	$147.18^{+0.85}_{-0.84}$	χ_{small}^2	$396.8 (\nu: 1.4)$
Ω_{Λ}	$0.701^{+0.014}_{-0.015}$	k_{D}	$0.14061^{+0.00097}_{-0.00097}$	χ_{lowl}^2	$23.5 (\nu: 0.6)$
Ω_m	$0.299^{+0.015}_{-0.014}$	$100\theta_{\text{D}}$	$0.16102^{+0.00051}_{-0.00050}$	χ_{H073p45}^2	$6.6 (\nu: 2.8)$
$\Omega_m h^2$	$0.1433^{+0.0033}_{-0.0034}$	z_{eq}	3410^{+80}_{-80}	χ_{JLA}^2	$1036.3 (\nu: 1.5)$
$\Omega_m h^3$	$0.0993^{+0.0033}_{-0.0033}$	k_{eq}	$0.01041^{+0.00024}_{-0.00025}$	$\chi_{6\text{DF}}^2$	$0.14 (\nu: 0.0)$
σ_8	$0.836^{+0.033}_{-0.034}$	$100\theta_{\text{eq}}$	$0.811^{+0.015}_{-0.015}$	χ_{MGS}^2	$2.71 (\nu: 0.3)$
S_8	$0.834^{+0.039}_{-0.039}$	$100\theta_{\text{s,eq}}$	$0.4485^{+0.0078}_{-0.0075}$	χ_{DR12BAO}^2	$5.4 (\nu: 1.1)$
$\sigma_8 \Omega_m^{0.5}$	$0.457^{+0.021}_{-0.021}$	$H(0.15)$	$74.3^{+1.5}_{-1.4}$	χ_{prior}^2	$7.4 (\nu: 6.3)$
$\sigma_8 \Omega_m^{0.25}$	$0.618^{+0.025}_{-0.026}$	$D_{\text{M}}(0.15)$	627^{+12}_{-12}	χ_{BAO}^2	$8.3 (\nu: 2.2)$
$\sigma_8/h^{0.5}$	$1.005^{+0.036}_{-0.037}$	$H(0.38)$	$83.6^{+1.2}_{-1.2}$	χ_{CMB}^2	$4337 (\nu: 4948120.7)$
$r_{\text{drag}} h$	$101.9^{+2.2}_{-2.2}$	$D_{\text{M}}(0.38)$	1503^{+26}_{-26}		
$\langle d^2 \rangle^{1/2}$	$2.472^{+0.079}_{-0.081}$	$H(0.51)$	$89.9^{+1.0}_{-0.98}$		
$\bar{\chi}_{\text{eff}}^2 = 8541.22; \Delta \bar{\chi}_{\text{eff}}^2 = 6291.88; R - 1 = 0.00801$					

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02220^{+0.00039}_{-0.00039}$	z_{re}	< 8.75	$D_{\text{M}}(0.51)$	1954^{+30}_{-30}
$\Omega_c h^2$	$0.1199^{+0.0025}_{-0.0026}$	$10^9 A_s$	$2.093^{+0.053}_{-0.048}$	$H(0.61)$	$95.25^{+0.85}_{-0.84}$
$100\theta_{MC}$	$1.04091^{+0.00085}_{-0.00086}$	$10^9 A_s e^{-2\tau}$	$1.880^{+0.021}_{-0.021}$	$D_{\text{M}}(0.61)$	2278^{+32}_{-32}
τ	$0.054^{+0.012}_{-0.011}$	D_{40}	1228^{+24}_{-24}	$H(2.33)$	$234.7^{+2.0}_{-1.9}$
w	$-1.00^{+0.16}_{-0.15}$	D_{220}	5713^{+79}_{-81}	$D_{\text{M}}(2.33)$	5759^{+25}_{-25}
w_a	$-0.27^{+0.61}_{-0.63}$	D_{810}	2534^{+26}_{-26}	$f\sigma_8(0.15)$	$0.461^{+0.015}_{-0.016}$
$\ln(10^{10} A_s)$	$3.041^{+0.025}_{-0.023}$	D_{1420}	$814^{+10}_{-9.9}$	$\sigma_8(0.15)$	$0.769^{+0.022}_{-0.022}$
n_s	$0.9646^{+0.0086}_{-0.0085}$	D_{2000}	$229.8^{+3.5}_{-3.4}$	$f\sigma_8(0.38)$	$0.486^{+0.018}_{-0.018}$
y_{cal}	$1.0004^{+0.0048}_{-0.0049}$	$n_{s,0.002}$	$0.9646^{+0.0086}_{-0.0085}$	$\sigma_8(0.38)$	$0.682^{+0.020}_{-0.020}$
A_{217}^{CIB}	44^{+20}_{-20}	Y_P	$0.24532^{+0.00016}_{-0.00017}$	$f\sigma_8(0.51)$	$0.487^{+0.019}_{-0.019}$
$\xi^{tSZ-CIB}$	—	Y_P^{BBN}	$0.24665^{+0.00016}_{-0.00017}$	$\sigma_8(0.51)$	$0.639^{+0.018}_{-0.018}$
A_{143}^{tSZ}	$4.4^{+3.8}_{-4.2}$	$10^5 D/H$	$2.619^{+0.075}_{-0.072}$	$f\sigma_8(0.61)$	$0.484^{+0.019}_{-0.019}$
A_{100}^{PS}	252^{+60}_{-60}	Age/Gyr	$13.756^{+0.065}_{-0.065}$	$\sigma_8(0.61)$	$0.608^{+0.017}_{-0.017}$
A_{143}^{PS}	44^{+20}_{-20}	z_*	$1090.13^{+0.62}_{-0.60}$	$f\sigma_8(2.33)$	$0.3069^{+0.0086}_{-0.0090}$
A_{217}^{PS}	108^{+20}_{-30}	r_*	$144.58^{+0.63}_{-0.62}$	$\sigma_8(2.33)$	$0.3137^{+0.0068}_{-0.0067}$
A^{kSZ}	—	$100\theta_*$	$1.04111^{+0.00083}_{-0.00085}$	f_{2000}^{143}	31^{+6}_{-6}
c_{100}	$0.9985^{+0.0022}_{-0.0026}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.887^{+0.060}_{-0.059}$	$f_{2000}^{143 \times 217}$	33^{+4}_{-4}
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	z_{drag}	$1059.53^{+0.86}_{-0.85}$	f_{2000}^{217}	$107.6^{+3.8}_{-3.8}$
H_0	$69.2^{+1.5}_{-1.5}$	r_{drag}	$147.30^{+0.67}_{-0.66}$	χ^2_{lensing}	$9.35 (\nu: 0.5)$
Ω_{Λ}	$0.702^{+0.013}_{-0.014}$	k_{D}	$0.14051^{+0.00085}_{-0.00085}$	χ^2_{simall}	$396.7 (\nu: 1.1)$
Ω_m	$0.298^{+0.014}_{-0.013}$	$100\theta_{\text{D}}$	$0.16100^{+0.00050}_{-0.00049}$	χ^2_{lowl}	$23.28 (\nu: 0.4)$
$\Omega_m h^2$	$0.1428^{+0.0024}_{-0.0025}$	z_{eq}	3396^{+58}_{-59}	χ^2_{H073p45}	$6.6 (\nu: 2.8)$
$\Omega_m h^3$	$0.0989^{+0.0028}_{-0.0028}$	k_{eq}	$0.01037^{+0.00018}_{-0.00018}$	χ^2_{JLA}	$1036.2 (\nu: 1.4)$
σ_8	$0.830^{+0.023}_{-0.024}$	$100\theta_{\text{eq}}$	$0.814^{+0.011}_{-0.011}$	$\chi^2_{6\text{DF}}$	$0.14 (\nu: 0.0)$
S_8	$0.827^{+0.025}_{-0.026}$	$100\theta_{\text{s,eq}}$	$0.4498^{+0.0058}_{-0.0055}$	χ^2_{MGS}	$2.72 (\nu: 0.3)$
$\sigma_8 \Omega_m^{0.5}$	$0.453^{+0.014}_{-0.014}$	$H(0.15)$	$74.3^{+1.4}_{-1.3}$	χ^2_{DR12BAO}	$5.3 (\nu: 1.0)$
$\sigma_8 \Omega_m^{0.25}$	$0.613^{+0.017}_{-0.017}$	$D_{\text{M}}(0.15)$	628^{+12}_{-12}	χ^2_{prior}	$7.4 (\nu: 6.3)$
$\sigma_8/h^{0.5}$	$0.998^{+0.024}_{-0.024}$	$H(0.38)$	$83.6^{+1.2}_{-1.2}$	χ^2_{CMB}	$4346 (\nu: 4947896.1)$
$r_{\text{drag}} h$	$102.0^{+2.2}_{-2.2}$	$D_{\text{M}}(0.38)$	1504^{+25}_{-25}	χ^2_{BAO}	$8.1 (\nu: 2.2)$
$\langle d^2 \rangle^{1/2}$	$2.459^{+0.052}_{-0.052}$	$H(0.51)$	$89.9^{+1.0}_{-1.0}$		

$$\bar{\chi}^2_{\text{eff}} = 8549.95; \Delta \bar{\chi}^2_{\text{eff}} = 6291.82; R - 1 = 0.01139$$

19.13 base_w_wa_CamSpecHM_TTTEEE_lowl_lowE_BAO_Riess18_Pantheon18/base_w_wa_plikHM_TTTEEE_lowl_lowE_BAO_Riess18_P

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02234^{+0.00030}_{-0.00029}$	z_{re}	$7.5^{+1.5}_{-1.6}$	$D_{\text{M}}(0.51)$	1951^{+30}_{-30}
$\Omega_c h^2$	$0.1200^{+0.0026}_{-0.0025}$	$10^9 A_s$	$2.093^{+0.069}_{-0.066}$	$H(0.61)$	$95.37^{+0.78}_{-0.78}$
$100\theta_{MC}$	$1.04090^{+0.00062}_{-0.00060}$	$10^9 A_s e^{-2\tau}$	$1.882^{+0.023}_{-0.023}$	$D_{\text{M}}(0.61)$	2275^{+33}_{-32}
τ	$0.053^{+0.016}_{-0.015}$	D_{40}	1228^{+25}_{-25}	$H(2.33)$	$234.8^{+1.9}_{-1.8}$
w	$-0.996^{+0.16}_{-0.15}$	D_{220}	5726^{+78}_{-76}	$D_{\text{M}}(2.33)$	5753^{+21}_{-20}
w_a	$-0.28^{+0.62}_{-0.65}$	D_{810}	2537^{+27}_{-27}	$f\sigma_8(0.15)$	$0.460^{+0.017}_{-0.017}$
$\ln(10^{10} A_s)$	$3.041^{+0.033}_{-0.032}$	D_{1420}	$816.4^{+9.6}_{-9.5}$	$\sigma_8(0.15)$	$0.768^{+0.025}_{-0.026}$
n_s	$0.9653^{+0.0085}_{-0.0083}$	D_{2000}	$230.7^{+3.2}_{-3.2}$	$f\sigma_8(0.38)$	$0.485^{+0.019}_{-0.019}$
y_{cal}	$1.0005^{+0.0049}_{-0.0048}$	$n_{s,0.002}$	$0.9653^{+0.0085}_{-0.0083}$	$\sigma_8(0.38)$	$0.682^{+0.023}_{-0.023}$
A_{217}^{CIB}	43^{+20}_{-20}	Y_P	$0.24538^{+0.00011}_{-0.00012}$	$f\sigma_8(0.51)$	$0.487^{+0.020}_{-0.020}$
$\xi^{tSZ-CIB}$	—	Y_P^{BBN}	$0.24671^{+0.00011}_{-0.00012}$	$\sigma_8(0.51)$	$0.638^{+0.021}_{-0.021}$
A_{143}^{tSZ}	$4.7^{+3.9}_{-4.3}$	$10^5 D/H$	$2.592^{+0.056}_{-0.054}$	$f\sigma_8(0.61)$	$0.483^{+0.021}_{-0.020}$
A_{100}^{PS}	249^{+60}_{-50}	Age/Gyr	$13.742^{+0.062}_{-0.057}$	$\sigma_8(0.61)$	$0.607^{+0.020}_{-0.020}$
A_{143}^{PS}	43^{+20}_{-20}	z_*	$1089.96^{+0.51}_{-0.52}$	$f\sigma_8(2.33)$	$0.307^{+0.010}_{-0.011}$
A_{217}^{PS}	109^{+20}_{-30}	r_*	$144.46^{+0.60}_{-0.59}$	$\sigma_8(2.33)$	$0.3136^{+0.0082}_{-0.0083}$
A^{kSZ}	—	$100\theta_*$	$1.04109^{+0.00061}_{-0.00059}$	f_{2000}^{143}	29^{+6}_{-5}
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.876^{+0.056}_{-0.056}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	z_{drag}	$1059.86^{+0.64}_{-0.62}$	f_{2000}^{217}	$106.8^{+3.6}_{-3.6}$
H_0	$69.3^{+1.5}_{-1.5}$	r_{drag}	$147.13^{+0.62}_{-0.60}$	χ_{small}^2	$396.9 (\nu: 1.5)$
Ω_{Λ}	$0.702^{+0.013}_{-0.014}$	k_{D}	$0.14080^{+0.00068}_{-0.00071}$	χ_{lowl}^2	$23.22 (\nu: 0.4)$
Ω_m	$0.298^{+0.014}_{-0.013}$	$100\theta_{\text{D}}$	$0.16080^{+0.00037}_{-0.00036}$	χ_{H073p45}^2	$6.5 (\nu: 2.7)$
$\Omega_m h^2$	$0.1430^{+0.0024}_{-0.0024}$	z_{eq}	3401^{+58}_{-58}	χ_{JLA}^2	$1036.2 (\nu: 1.3)$
$\Omega_m h^3$	$0.0991^{+0.0028}_{-0.0028}$	k_{eq}	$0.01038^{+0.00018}_{-0.00018}$	$\chi_{6\text{DF}}^2$	$0.14 (\nu: 0.0)$
σ_8	$0.830^{+0.027}_{-0.028}$	$100\theta_{\text{eq}}$	$0.814^{+0.011}_{-0.011}$	χ_{MGS}^2	$2.71 (\nu: 0.3)$
S_8	$0.827^{+0.029}_{-0.029}$	$100\theta_{\text{s,eq}}$	$0.4495^{+0.0056}_{-0.0055}$	χ_{DR12BAO}^2	$5.2 (\nu: 1.0)$
$\sigma_8 \Omega_m^{0.5}$	$0.453^{+0.016}_{-0.016}$	$H(0.15)$	$74.3^{+1.4}_{-1.4}$	χ_{prior}^2	$9.6 (\nu: 9.6)$
$\sigma_8 \Omega_m^{0.25}$	$0.613^{+0.020}_{-0.020}$	$D_{\text{M}}(0.15)$	627^{+12}_{-12}	χ_{BAO}^2	$8.1 (\nu: 2.2)$
$\sigma_8/h^{0.5}$	$0.997^{+0.029}_{-0.029}$	$H(0.38)$	$83.8^{+1.2}_{-1.2}$	χ_{CMB}^2	$7357 (\nu: 10476428.2)$
$r_{\text{drag}} h$	$102.0^{+2.2}_{-2.2}$	$D_{\text{M}}(0.38)$	1502^{+25}_{-25}		
$\langle d^2 \rangle^{1/2}$	$2.457^{+0.065}_{-0.066}$	$H(0.51)$	$90.05^{+0.96}_{-0.97}$		

Best-fit $\chi_{\text{eff}}^2 = 12968.70$; $\Delta\chi_{\text{eff}}^2 = 9155.52$; $\bar{\chi}_{\text{eff}}^2 = 12992.43$; $\Delta\bar{\chi}_{\text{eff}}^2 = 9151.17$; $R - 1 = 0.01047$
 χ_{eff}^2 : BAO - 6DF: 0.10 (Δ 0.00) MGS: 2.67 (Δ 0.00) DR12BAO: 4.36 (Δ -0.14) CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.84 (Δ -0.15) commander_dx12_v3_2_29: 22.83 (Δ -0.38) CamSpec like_10.7HM_1400_unified: 11499.24 Hubble - H073p45: 6.18 (Δ 0.28) SN - JLA Pantheon18: 1035.34 (Δ -0.05)

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02235^{+0.00029}_{-0.00029}$	z_{re}	$7.5^{+1.4}_{-1.5}$	$D_{\text{M}}(0.51)$	1951^{+30}_{-30}
$\Omega_c h^2$	$0.1198^{+0.0021}_{-0.0021}$	$10^9 A_s$	$2.091^{+0.061}_{-0.058}$	$H(0.61)$	$95.40^{+0.79}_{-0.78}$
$100\theta_{MC}$	$1.04092^{+0.00061}_{-0.00059}$	$10^9 A_s e^{-2\tau}$	$1.881^{+0.021}_{-0.021}$	$D_{\text{M}}(0.61)$	2275^{+32}_{-32}
τ	$0.053^{+0.015}_{-0.014}$	D_{40}	1228^{+22}_{-23}	$H(2.33)$	$234.8^{+1.9}_{-1.8}$
w	$-0.998^{+0.16}_{-0.15}$	D_{220}	5728^{+77}_{-75}	$D_{\text{M}}(2.33)$	5752^{+21}_{-20}
w_a	$-0.26^{+0.57}_{-0.61}$	D_{810}	2537^{+26}_{-26}	$f\sigma_8(0.15)$	$0.459^{+0.013}_{-0.013}$
$\ln(10^{10} A_s)$	$3.040^{+0.029}_{-0.028}$	D_{1420}	$816.4^{+9.5}_{-9.5}$	$\sigma_8(0.15)$	$0.767^{+0.020}_{-0.020}$
n_s	$0.9655^{+0.0080}_{-0.0078}$	D_{2000}	$230.6^{+3.2}_{-3.2}$	$f\sigma_8(0.38)$	$0.484^{+0.016}_{-0.015}$
y_{cal}	$1.0005^{+0.0049}_{-0.0048}$	$n_{s,0.002}$	$0.9655^{+0.0080}_{-0.0078}$	$\sigma_8(0.38)$	$0.681^{+0.018}_{-0.018}$
A_{217}^{CIB}	43^{+20}_{-20}	Y_P	$0.24539^{+0.00011}_{-0.00012}$	$f\sigma_8(0.51)$	$0.485^{+0.016}_{-0.016}$
$\xi^{tSZ-CIB}$	—	Y_P^{BBN}	$0.24671^{+0.00011}_{-0.00012}$	$\sigma_8(0.51)$	$0.637^{+0.017}_{-0.017}$
A_{143}^{tSZ}	$4.7^{+3.9}_{-4.3}$	$10^5 D/H$	$2.589^{+0.055}_{-0.053}$	$f\sigma_8(0.61)$	$0.482^{+0.016}_{-0.016}$
A_{100}^{PS}	249^{+60}_{-50}	Age/Gyr	$13.742^{+0.060}_{-0.056}$	$\sigma_8(0.61)$	$0.606^{+0.016}_{-0.016}$
A_{143}^{PS}	43^{+20}_{-20}	z_*	$1089.93^{+0.47}_{-0.48}$	$f\sigma_8(2.33)$	$0.3062^{+0.0082}_{-0.0086}$
A_{217}^{PS}	109^{+20}_{-30}	r_*	$144.50^{+0.50}_{-0.50}$	$\sigma_8(2.33)$	$0.3132^{+0.0068}_{-0.0067}$
A^{kSZ}	—	$100\theta_*$	$1.04110^{+0.00060}_{-0.00059}$	f_{2000}^{143}	30^{+5}_{-5}
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.880^{+0.048}_{-0.048}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
c_{217}	$0.9997^{+0.0038}_{-0.0027}$	z_{drag}	$1059.88^{+0.63}_{-0.63}$	f_{2000}^{217}	$106.9^{+3.6}_{-3.7}$
H_0	$69.3^{+1.5}_{-1.5}$	r_{drag}	$147.17^{+0.53}_{-0.52}$	χ^2_{lensing}	$9.16 \ (\nu: 0.3)$
Ω_Λ	$0.703^{+0.013}_{-0.014}$	k_{D}	$0.14077^{+0.00062}_{-0.00065}$	χ^2_{simall}	$396.8 \ (\nu: 1.1)$
Ω_m	$0.297^{+0.014}_{-0.013}$	$100\theta_{\text{D}}$	$0.16079^{+0.00037}_{-0.00037}$	χ^2_{lowl}	$23.16 \ (\nu: 0.3)$
$\Omega_m h^2$	$0.1428^{+0.0020}_{-0.0020}$	z_{eq}	3397^{+49}_{-49}	χ^2_{H073p45}	$6.4 \ (\nu: 2.6)$
$\Omega_m h^3$	$0.0990^{+0.0025}_{-0.0026}$	k_{eq}	$0.01037^{+0.00015}_{-0.00015}$	χ^2_{JLA}	$1036.1 \ (\nu: 1.3)$
σ_8	$0.828^{+0.021}_{-0.022}$	$100\theta_{\text{eq}}$	$0.8143^{+0.0092}_{-0.0091}$	$\chi^2_{6\text{DF}}$	$0.14 \ (\nu: 0.0)$
S_8	$0.824^{+0.022}_{-0.022}$	$100\theta_{\text{s,eq}}$	$0.4499^{+0.0047}_{-0.0047}$	χ^2_{MGS}	$2.73 \ (\nu: 0.3)$
$\sigma_8 \Omega_m^{0.5}$	$0.452^{+0.012}_{-0.012}$	$H(0.15)$	$74.3^{+1.4}_{-1.3}$	χ^2_{DR12BAO}	$5.2 \ (\nu: 1.0)$
$\sigma_8 \Omega_m^{0.25}$	$0.611^{+0.014}_{-0.015}$	$D_{\text{M}}(0.15)$	627^{+11}_{-12}	χ^2_{prior}	$9.6 \ (\nu: 9.4)$
$\sigma_8/h^{0.5}$	$0.995^{+0.021}_{-0.021}$	$H(0.38)$	$83.8^{+1.2}_{-1.2}$	χ^2_{CMB}	$7365 \ (\nu: 10475947.1)$
$r_{\text{drag}} h$	$102.0^{+2.2}_{-2.2}$	$D_{\text{M}}(0.38)$	1502^{+25}_{-25}	χ^2_{BAO}	$8.1 \ (\nu: 2.3)$
$\langle d^2 \rangle^{1/2}$	$2.453^{+0.047}_{-0.048}$	$H(0.51)$	$90.07^{+0.96}_{-0.97}$		

$$\bar{\chi}^2_{\text{eff}} = 13001.06; \Delta\bar{\chi}^2_{\text{eff}} = 9151.04; R - 1 = 0.01205$$

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02234^{+0.00030}_{-0.00029}$	z_{re}	< 8.85	$D_{\text{M}}(0.51)$	1951^{+30}_{-30}
$\Omega_c h^2$	$0.1199^{+0.0025}_{-0.0025}$	$10^9 A_s$	$2.099^{+0.060}_{-0.054}$	$H(0.61)$	$95.37^{+0.78}_{-0.78}$
$100\theta_{MC}$	$1.04091^{+0.00061}_{-0.00060}$	$10^9 A_s e^{-2\tau}$	$1.882^{+0.023}_{-0.023}$	$D_{\text{M}}(0.61)$	2275^{+33}_{-32}
τ	$0.055^{+0.013}_{-0.011}$	D_{40}	1228^{+25}_{-25}	$H(2.33)$	$234.8^{+1.9}_{-1.8}$
w	$-0.997^{+0.16}_{-0.15}$	D_{220}	5726^{+78}_{-76}	$D_{\text{M}}(2.33)$	5753^{+21}_{-20}
w_a	$-0.27^{+0.62}_{-0.65}$	D_{810}	2537^{+27}_{-27}	$f\sigma_8(0.15)$	$0.461^{+0.016}_{-0.016}$
$\ln(10^{10} A_s)$	$3.044^{+0.028}_{-0.026}$	D_{1420}	$816.4^{+9.7}_{-9.5}$	$\sigma_8(0.15)$	$0.769^{+0.025}_{-0.025}$
n_s	$0.9654^{+0.0085}_{-0.0083}$	D_{2000}	$230.7^{+3.2}_{-3.2}$	$f\sigma_8(0.38)$	$0.486^{+0.019}_{-0.019}$
y_{cal}	$1.0005^{+0.0049}_{-0.0048}$	$n_{s,0.002}$	$0.9654^{+0.0085}_{-0.0083}$	$\sigma_8(0.38)$	$0.683^{+0.022}_{-0.023}$
A_{217}^{CIB}	43^{+20}_{-20}	Y_P	$0.24538^{+0.00011}_{-0.00012}$	$f\sigma_8(0.51)$	$0.487^{+0.020}_{-0.020}$
$\xi^{tSZ-CIB}$	—	Y_P^{BBN}	$0.24671^{+0.00011}_{-0.00012}$	$\sigma_8(0.51)$	$0.639^{+0.021}_{-0.021}$
A_{143}^{tSZ}	$4.7^{+3.9}_{-4.3}$	$10^5 D/H$	$2.591^{+0.055}_{-0.054}$	$f\sigma_8(0.61)$	$0.484^{+0.020}_{-0.020}$
A_{100}^{PS}	248^{+60}_{-50}	Age/Gyr	$13.742^{+0.062}_{-0.057}$	$\sigma_8(0.61)$	$0.608^{+0.019}_{-0.020}$
A_{143}^{PS}	42^{+20}_{-20}	z_*	$1089.95^{+0.51}_{-0.51}$	$f\sigma_8(2.33)$	$0.3071^{+0.0099}_{-0.011}$
A_{217}^{PS}	109^{+20}_{-30}	r_*	$144.47^{+0.60}_{-0.59}$	$\sigma_8(2.33)$	$0.3140^{+0.0079}_{-0.0079}$
A^{kSZ}	—	$100\theta_*$	$1.04110^{+0.00061}_{-0.00059}$	f_{2000}^{143}	29^{+6}_{-5}
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.877^{+0.056}_{-0.056}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
c_{217}	$0.9996^{+0.0037}_{-0.0027}$	z_{drag}	$1059.87^{+0.63}_{-0.63}$	f_{2000}^{217}	$106.8^{+3.6}_{-3.6}$
H_0	$69.3^{+1.5}_{-1.5}$	r_{drag}	$147.14^{+0.62}_{-0.60}$	χ_{small}^2	$396.8 \ (\nu: 1.5)$
Ω_Λ	$0.702^{+0.013}_{-0.014}$	k_{D}	$0.14080^{+0.00068}_{-0.00071}$	χ_{lowl}^2	$23.23 \ (\nu: 0.4)$
Ω_m	$0.298^{+0.014}_{-0.013}$	$100\theta_{\text{D}}$	$0.16080^{+0.00037}_{-0.00036}$	χ_{H073p45}^2	$6.4 \ (\nu: 2.7)$
$\Omega_m h^2$	$0.1429^{+0.0024}_{-0.0024}$	z_{eq}	3400^{+58}_{-58}	χ_{JLA}^2	$1036.2 \ (\nu: 1.3)$
$\Omega_m h^3$	$0.0991^{+0.0028}_{-0.0028}$	k_{eq}	$0.01038^{+0.00018}_{-0.00018}$	$\chi_{6\text{DF}}^2$	$0.14 \ (\nu: 0.0)$
σ_8	$0.831^{+0.027}_{-0.027}$	$100\theta_{\text{eq}}$	$0.814^{+0.011}_{-0.011}$	χ_{MGS}^2	$2.72 \ (\nu: 0.3)$
S_8	$0.827^{+0.029}_{-0.029}$	$100\theta_{\text{s,eq}}$	$0.4496^{+0.0056}_{-0.0055}$	χ_{DR12BAO}^2	$5.2 \ (\nu: 1.0)$
$\sigma_8 \Omega_m^{0.5}$	$0.453^{+0.016}_{-0.016}$	$H(0.15)$	$74.3^{+1.4}_{-1.4}$	χ_{prior}^2	$9.7 \ (\nu: 9.6)$
$\sigma_8 \Omega_m^{0.25}$	$0.614^{+0.020}_{-0.020}$	$D_{\text{M}}(0.15)$	627^{+12}_{-12}	χ_{BAO}^2	$8.1 \ (\nu: 2.2)$
$\sigma_8/h^{0.5}$	$0.998^{+0.028}_{-0.028}$	$H(0.38)$	$83.8^{+1.2}_{-1.2}$	χ_{CMB}^2	$7356 \ (\nu: 10476266.5)$
$r_{\text{drag}} h$	$102.0^{+2.2}_{-2.2}$	$D_{\text{M}}(0.38)$	1502^{+25}_{-25}		
$\langle d^2 \rangle^{1/2}$	$2.460^{+0.064}_{-0.064}$	$H(0.51)$	$90.05^{+0.96}_{-0.97}$		

$$\bar{\chi}_{\text{eff}}^2 = 12992.15; \Delta\bar{\chi}_{\text{eff}}^2 = 9151.09; R - 1 = 0.01047$$

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02236^{+0.00029}_{-0.00029}$	z_{re}	< 8.72	$D_{\text{M}}(0.51)$	1951^{+30}_{-30}
$\Omega_c h^2$	$0.1197^{+0.0021}_{-0.0021}$	$10^9 A_s$	$2.096^{+0.053}_{-0.048}$	$H(0.61)$	$95.40^{+0.79}_{-0.78}$
$100\theta_{MC}$	$1.04093^{+0.00060}_{-0.00059}$	$10^9 A_s e^{-2\tau}$	$1.880^{+0.021}_{-0.021}$	$D_{\text{M}}(0.61)$	2275^{+32}_{-32}
τ	$0.054^{+0.012}_{-0.011}$	D_{40}	1227^{+22}_{-22}	$H(2.33)$	$234.8^{+1.9}_{-1.8}$
w	$-1.00^{+0.16}_{-0.15}$	D_{220}	5727^{+77}_{-75}	$D_{\text{M}}(2.33)$	5752^{+21}_{-20}
w_a	$-0.25^{+0.57}_{-0.60}$	D_{810}	2537^{+26}_{-26}	$f\sigma_8(0.15)$	$0.459^{+0.013}_{-0.013}$
$\ln(10^{10} A_s)$	$3.042^{+0.025}_{-0.023}$	D_{1420}	$816.4^{+9.6}_{-9.4}$	$\sigma_8(0.15)$	$0.767^{+0.020}_{-0.020}$
n_s	$0.9657^{+0.0079}_{-0.0076}$	D_{2000}	$230.6^{+3.2}_{-3.1}$	$f\sigma_8(0.38)$	$0.484^{+0.016}_{-0.015}$
y_{cal}	$1.0004^{+0.0049}_{-0.0048}$	$n_{s,0.002}$	$0.9657^{+0.0079}_{-0.0076}$	$\sigma_8(0.38)$	$0.681^{+0.018}_{-0.018}$
A_{217}^{CIB}	43^{+20}_{-20}	Y_P	$0.24539^{+0.00011}_{-0.00012}$	$f\sigma_8(0.51)$	$0.485^{+0.016}_{-0.016}$
$\xi^{tSZ-CIB}$	—	Y_P^{BBN}	$0.24671^{+0.00011}_{-0.00012}$	$\sigma_8(0.51)$	$0.637^{+0.017}_{-0.017}$
A_{143}^{tSZ}	$4.7^{+3.9}_{-4.3}$	$10^5 D/H$	$2.588^{+0.055}_{-0.052}$	$f\sigma_8(0.61)$	$0.482^{+0.016}_{-0.016}$
A_{100}^{PS}	249^{+60}_{-50}	Age/Gyr	$13.742^{+0.061}_{-0.056}$	$\sigma_8(0.61)$	$0.606^{+0.016}_{-0.016}$
A_{143}^{PS}	42^{+20}_{-20}	z_*	$1089.91^{+0.47}_{-0.47}$	$f\sigma_8(2.33)$	$0.3064^{+0.0082}_{-0.0086}$
A_{217}^{PS}	109^{+20}_{-30}	r_*	$144.52^{+0.50}_{-0.49}$	$\sigma_8(2.33)$	$0.3134^{+0.0066}_{-0.0066}$
A^{kSZ}	—	$100\theta_*$	$1.04111^{+0.00060}_{-0.00058}$	f_{2000}^{143}	29^{+5}_{-5}
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.881^{+0.047}_{-0.047}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
c_{217}	$0.9997^{+0.0038}_{-0.0027}$	z_{drag}	$1059.89^{+0.62}_{-0.64}$	f_{2000}^{217}	$106.8^{+3.6}_{-3.7}$
H_0	$69.3^{+1.5}_{-1.5}$	r_{drag}	$147.18^{+0.53}_{-0.51}$	χ_{lensing}^2	$9.15 (\nu: 0.3)$
Ω_{Λ}	$0.703^{+0.013}_{-0.014}$	k_{D}	$0.14076^{+0.00062}_{-0.00064}$	χ_{small}^2	$396.7 (\nu: 1.1)$
Ω_m	$0.297^{+0.014}_{-0.013}$	$100\theta_{\text{D}}$	$0.16079^{+0.00037}_{-0.00036}$	χ_{lowl}^2	$23.15 (\nu: 0.3)$
$\Omega_m h^2$	$0.1427^{+0.0020}_{-0.0020}$	z_{eq}	3395^{+48}_{-48}	χ_{H073p45}^2	$6.4 (\nu: 2.6)$
$\Omega_m h^3$	$0.0989^{+0.0026}_{-0.0026}$	k_{eq}	$0.01036^{+0.00015}_{-0.00015}$	χ_{JLA}^2	$1036.2 (\nu: 1.3)$
σ_8	$0.829^{+0.021}_{-0.021}$	$100\theta_{\text{eq}}$	$0.8146^{+0.0091}_{-0.0088}$	$\chi_{6\text{DF}}^2$	$0.14 (\nu: 0.0)$
S_8	$0.825^{+0.022}_{-0.022}$	$100\theta_{\text{s,eq}}$	$0.4501^{+0.0046}_{-0.0045}$	χ_{MGS}^2	$2.73 (\nu: 0.3)$
$\sigma_8 \Omega_m^{0.5}$	$0.452^{+0.012}_{-0.012}$	$H(0.15)$	$74.3^{+1.4}_{-1.3}$	χ_{DR12BAO}^2	$5.2 (\nu: 1.0)$
$\sigma_8 \Omega_m^{0.25}$	$0.612^{+0.014}_{-0.015}$	$D_{\text{M}}(0.15)$	627^{+12}_{-12}	χ_{prior}^2	$9.6 (\nu: 9.4)$
$\sigma_8/h^{0.5}$	$0.995^{+0.021}_{-0.021}$	$H(0.38)$	$83.8^{+1.2}_{-1.2}$	χ_{CMB}^2	$7365 (\nu: 10475869.6)$
$r_{\text{drag}} h$	$102.0^{+2.2}_{-2.2}$	$D_{\text{M}}(0.38)$	1502^{+25}_{-25}	χ_{BAO}^2	$8.1 (\nu: 2.3)$
$\langle d^2 \rangle^{1/2}$	$2.454^{+0.046}_{-0.047}$	$H(0.51)$	$90.07^{+0.96}_{-0.97}$		

$$\bar{\chi}_{\text{eff}}^2 = 13000.80; \Delta\bar{\chi}_{\text{eff}}^2 = 9151.01; R - 1 = 0.01150$$

20 yhe

20.1 base_yhe_CamSpecHM_TT_lowl_lowE/base_yhe_plikHM_TT_lowl_lowE

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02211^{+0.00059}_{-0.00058}$	$r_{\text{drag}} h$	$98.5^{+3.6}_{-3.6}$	$D_{\text{M}}(0.15)$	648^{+19}_{-19}
$\Omega_c h^2$	$0.1206^{+0.0043}_{-0.0043}$	$\langle d^2 \rangle^{1/2}$	$2.452^{+0.086}_{-0.084}$	$H(0.38)$	$82.5^{+1.5}_{-1.4}$
$100\theta_{MC}$	$1.0408^{+0.0017}_{-0.0018}$	z_{re}	$7.5^{+1.6}_{-1.7}$	$D_{\text{M}}(0.38)$	1542^{+39}_{-39}
τ	$0.052^{+0.016}_{-0.016}$	$10^9 A_s$	$2.089^{+0.075}_{-0.071}$	$H(0.51)$	$89.3^{+1.2}_{-1.2}$
Y_{He}	$0.244^{+0.040}_{-0.042}$	$10^9 A_s e^{-2\tau}$	$1.883^{+0.031}_{-0.030}$	$D_{\text{M}}(0.51)$	1996^{+46}_{-45}
$\ln(10^{10} A_s)$	$3.039^{+0.035}_{-0.034}$	D_{40}	1232^{+44}_{-43}	$H(0.61)$	$95.0^{+1.0}_{-0.98}$
n_s	$0.963^{+0.021}_{-0.021}$	D_{220}	5708^{+82}_{-83}	$D_{\text{M}}(0.61)$	2322^{+49}_{-49}
y_{cal}	$1.0004^{+0.0049}_{-0.0048}$	D_{810}	2535^{+28}_{-27}	$H(2.33)$	$236.7^{+2.6}_{-2.5}$
A_{217}^{CIB}	44^{+20}_{-20}	D_{1420}	814^{+11}_{-10}	$D_{\text{M}}(2.33)$	5778^{+50}_{-50}
$\xi^{tSZ-CIB}$	—	D_{2000}	$229.6^{+4.9}_{-4.9}$	$f\sigma_8(0.15)$	$0.463^{+0.025}_{-0.024}$
A_{143}^{tSZ}	$4.4^{+3.7}_{-4.3}$	$n_{s,0.002}$	$0.963^{+0.021}_{-0.021}$	$\sigma_8(0.15)$	$0.749^{+0.017}_{-0.016}$
A_{100}^{PS}	253^{+60}_{-60}	Y_P	$0.244^{+0.040}_{-0.042}$	$f\sigma_8(0.38)$	$0.479^{+0.019}_{-0.019}$
A_{143}^{PS}	45^{+20}_{-20}	Y_P^{BBN}	$0.245^{+0.040}_{-0.042}$	$\sigma_8(0.38)$	$0.663^{+0.015}_{-0.014}$
A_{217}^{PS}	108^{+20}_{-30}	Age/Gyr	$13.83^{+0.11}_{-0.11}$	$f\sigma_8(0.51)$	$0.477^{+0.016}_{-0.016}$
A^{kSZ}	—	z_*	$1090.3^{+1.3}_{-1.3}$	$\sigma_8(0.51)$	$0.620^{+0.014}_{-0.013}$
c_{100}	$0.9985^{+0.0022}_{-0.0027}$	r_*	$144.48^{+0.96}_{-0.96}$	$f\sigma_8(0.61)$	$0.471^{+0.014}_{-0.015}$
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	$100\theta_*$	$1.04101^{+0.00099}_{-0.00098}$	$\sigma_8(0.61)$	$0.589^{+0.013}_{-0.013}$
H_0	$66.9^{+2.2}_{-2.2}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.879^{+0.089}_{-0.089}$	$f\sigma_8(2.33)$	$0.2969^{+0.0069}_{-0.0067}$
Ω_Λ	$0.679^{+0.028}_{-0.030}$	z_{drag}	$1059.4^{+2.3}_{-2.4}$	$\sigma_8(2.33)$	$0.3057^{+0.0076}_{-0.0074}$
Ω_m	$0.321^{+0.030}_{-0.028}$	r_{drag}	$147.23^{+0.97}_{-0.98}$	f_{2000}^{143}	31^{+8}_{-8}
$\Omega_m h^2$	$0.1433^{+0.0041}_{-0.0040}$	k_{D}	$0.1406^{+0.0015}_{-0.0015}$	$f_{2000}^{143 \times 217}$	33^{+6}_{-6}
$\Omega_m h^3$	$0.0959^{+0.0015}_{-0.0015}$	$100\theta_{\text{D}}$	$0.1610^{+0.0015}_{-0.0016}$	f_{2000}^{217}	$107.8^{+5.4}_{-5.4}$
σ_8	$0.811^{+0.019}_{-0.019}$	z_{eq}	3410^{+97}_{-96}	χ_{simall}^2	$396.9 (\nu: 1.4)$
S_8	$0.838^{+0.050}_{-0.048}$	k_{eq}	$0.01041^{+0.00030}_{-0.00029}$	χ_{lowl}^2	$24.0 (\nu: 2.2)$
$\sigma_8 \Omega_m^{0.5}$	$0.459^{+0.027}_{-0.026}$	$100\theta_{\text{eq}}$	$0.811^{+0.019}_{-0.018}$	χ_{prior}^2	$7.4 (\nu: 6.4)$
$\sigma_8 \Omega_m^{0.25}$	$0.610^{+0.023}_{-0.023}$	$100\theta_{\text{s,eq}}$	$0.4485^{+0.0095}_{-0.0094}$	χ_{CMB}^2	$4339 (\nu: 4948149.8)$
$\sigma_8/h^{0.5}$	$0.992^{+0.032}_{-0.032}$	$H(0.15)$	$72.3^{+1.9}_{-1.9}$		

Best-fit $\chi_{\text{eff}}^2 = 7471.80$; $\Delta\chi_{\text{eff}}^2 = 6292.24$; $\bar{\chi}_{\text{eff}}^2 = 7492.39$; $\Delta\bar{\chi}_{\text{eff}}^2 = 6291.97$; $R - 1 = 0.00648$

χ_{eff}^2 : CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.89 (Δ 0.05) commander_dx12_v3.2.29: 23.34 (Δ -0.35) CamSpec like_10.7HM: 7050.19

20.2 base_yhe_CamSpecHM_TT_lowl_lowE_post_BAO/base_yhe_plikHM_TT_lowl_lowE_post_BAO

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02227^{+0.00049}_{-0.00048}$	$\langle d^2 \rangle^{1/2}$	$2.423^{+0.057}_{-0.056}$	$D_M(0.38)$	1527^{+22}_{-21}
$\Omega_c h^2$	$0.1190^{+0.0024}_{-0.0024}$	z_{re}	$7.7^{+1.6}_{-1.6}$	$H(0.51)$	$89.76^{+0.77}_{-0.75}$
$100\theta_{MC}$	$1.0412^{+0.0015}_{-0.0015}$	$10^9 A_s$	$2.093^{+0.075}_{-0.070}$	$D_M(0.51)$	1979^{+26}_{-26}
τ	$0.054^{+0.016}_{-0.015}$	$10^9 A_s e^{-2\tau}$	$1.879^{+0.029}_{-0.028}$	$H(0.61)$	$95.36^{+0.70}_{-0.69}$
Y_{He}	$0.251^{+0.036}_{-0.038}$	D_{40}	1220^{+33}_{-33}	$D_M(0.61)$	2303^{+28}_{-28}
$\ln(10^{10} A_s)$	$3.041^{+0.036}_{-0.034}$	D_{220}	5715^{+81}_{-80}	$H(2.33)$	$235.8^{+1.6}_{-1.6}$
n_s	$0.969^{+0.016}_{-0.016}$	D_{810}	2535^{+28}_{-27}	$D_M(2.33)$	5762^{+36}_{-37}
y_{cal}	$1.0005^{+0.0049}_{-0.0049}$	D_{1420}	815^{+10}_{-10}	$f\sigma_8(0.15)$	$0.454^{+0.016}_{-0.015}$
A_{217}^{CIB}	45^{+20}_{-20}	D_{2000}	$229.3^{+4.8}_{-4.7}$	$\sigma_8(0.15)$	$0.747^{+0.017}_{-0.016}$
$\xi^{tSZ-CIB}$	—	$n_{s,0.002}$	$0.969^{+0.016}_{-0.016}$	$f\sigma_8(0.38)$	$0.473^{+0.013}_{-0.013}$
A_{143}^{tSZ}	$4.3^{+3.8}_{-4.2}$	Y_P	$0.251^{+0.036}_{-0.038}$	$\sigma_8(0.38)$	$0.663^{+0.015}_{-0.014}$
A_{100}^{PS}	255^{+60}_{-60}	Y_P^{BBN}	$0.253^{+0.036}_{-0.038}$	$f\sigma_8(0.51)$	$0.472^{+0.012}_{-0.012}$
A_{143}^{PS}	46^{+20}_{-20}	Age/Gyr	$13.794^{+0.085}_{-0.084}$	$\sigma_8(0.51)$	$0.620^{+0.014}_{-0.013}$
A_{217}^{PS}	108^{+20}_{-30}	z_*	$1090.2^{+1.3}_{-1.3}$	$f\sigma_8(0.61)$	$0.467^{+0.012}_{-0.011}$
A^{kSZ}	—	r_*	$144.76^{+0.74}_{-0.74}$	$\sigma_8(0.61)$	$0.590^{+0.013}_{-0.013}$
c_{100}	$0.9985^{+0.0022}_{-0.0027}$	$100\theta_*$	$1.04125^{+0.00084}_{-0.00085}$	$f\sigma_8(2.33)$	$0.2977^{+0.0066}_{-0.0064}$
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	$D_M(z_*)/\text{Gpc}$	$13.902^{+0.073}_{-0.074}$	$\sigma_8(2.33)$	$0.3070^{+0.0069}_{-0.0067}$
H_0	$67.7^{+1.2}_{-1.2}$	z_{drag}	$1059.8^{+2.1}_{-2.1}$	f_{2000}^{143}	32^{+8}_{-8}
Ω_Λ	$0.691^{+0.015}_{-0.015}$	r_{drag}	$147.46^{+0.83}_{-0.83}$	$f_{2000}^{143 \times 217}$	34^{+6}_{-6}
Ω_m	$0.309^{+0.015}_{-0.015}$	k_D	$0.1401^{+0.0012}_{-0.0012}$	f_{2000}^{217}	$108.3^{+5.2}_{-5.3}$
$\Omega_m h^2$	$0.1419^{+0.0024}_{-0.0024}$	$100\theta_D$	$0.1613^{+0.0015}_{-0.0014}$	χ_{small}^2	$397.0 (\nu: 1.6)$
$\Omega_m h^3$	$0.0961^{+0.0015}_{-0.0014}$	z_{eq}	3375^{+58}_{-57}	χ_{lowl}^2	$22.7 (\nu: 0.9)$
σ_8	$0.808^{+0.018}_{-0.018}$	k_{eq}	$0.01030^{+0.00018}_{-0.00018}$	$\chi_{6\text{DF}}^2$	$0.055 (\nu: 0.0)$
S_8	$0.821^{+0.030}_{-0.029}$	$100\theta_{\text{eq}}$	$0.818^{+0.011}_{-0.010}$	χ_{MGS}^2	$1.42 (\nu: 0.2)$
$\sigma_8 \Omega_m^{0.5}$	$0.450^{+0.016}_{-0.016}$	$100\theta_{s,\text{eq}}$	$0.4520^{+0.0055}_{-0.0054}$	χ_{DR12BAO}^2	$4.7 (\nu: 1.3)$
$\sigma_8 \Omega_m^{0.25}$	$0.603^{+0.017}_{-0.017}$	$H(0.15)$	$73.0^{+1.1}_{-1.1}$	χ_{prior}^2	$7.5 (\nu: 6.5)$
$\sigma_8/h^{0.5}$	$0.982^{+0.024}_{-0.024}$	$D_M(0.15)$	640^{+10}_{-10}	χ_{BAO}^2	$6.1 (\nu: 0.8)$
$r_{\text{drag}} h$	$99.9^{+1.9}_{-1.9}$	$H(0.38)$	$83.06^{+0.87}_{-0.85}$	χ_{CMB}^2	$4339 (\nu: 4947793.4)$

$$\bar{\chi}_{\text{eff}}^2 = 7498.32; \Delta \bar{\chi}_{\text{eff}}^2 = 6291.79; R - 1 = 0.01513$$

20.3 base_yhe_CamSpecHM_TT_lowl_lowE_post_lensing/base_yhe_plikHM_TT_lowl_lowE_post_lensing

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02212^{+0.00055}_{-0.00054}$	$r_{\text{drag}} h$	$98.7^{+2.8}_{-2.7}$	$D_{\text{M}}(0.15)$	647^{+15}_{-15}
$\Omega_c h^2$	$0.1203^{+0.0031}_{-0.0032}$	$\langle d^2 \rangle^{1/2}$	$2.448^{+0.056}_{-0.057}$	$H(0.38)$	$82.6^{+1.2}_{-1.2}$
$100\theta_{MC}$	$1.0407^{+0.0017}_{-0.0016}$	z_{re}	$7.5^{+1.6}_{-1.7}$	$D_{\text{M}}(0.38)$	1540^{+31}_{-31}
τ	$0.052^{+0.016}_{-0.016}$	$10^9 A_s$	$2.088^{+0.071}_{-0.067}$	$H(0.51)$	$89.4^{+1.0}_{-0.98}$
Y_{He}	$0.242^{+0.039}_{-0.042}$	$10^9 A_s e^{-2\tau}$	$1.881^{+0.028}_{-0.027}$	$D_{\text{M}}(0.51)$	1994^{+37}_{-37}
$\ln(10^{10} A_s)$	$3.039^{+0.034}_{-0.032}$	D_{40}	1233^{+37}_{-37}	$H(0.61)$	$95.03^{+0.90}_{-0.86}$
n_s	$0.963^{+0.019}_{-0.019}$	D_{220}	5711^{+82}_{-82}	$D_{\text{M}}(0.61)$	2320^{+40}_{-40}
y_{cal}	$1.0004^{+0.0049}_{-0.0048}$	D_{810}	2535^{+27}_{-27}	$H(2.33)$	$236.5^{+1.9}_{-1.9}$
A_{217}^{CIB}	44^{+20}_{-20}	D_{1420}	815^{+11}_{-10}	$D_{\text{M}}(2.33)$	5777^{+45}_{-46}
$\xi^{tSZ-CIB}$	—	D_{2000}	$229.8^{+4.9}_{-4.8}$	$f\sigma_8(0.15)$	$0.461^{+0.016}_{-0.016}$
A_{143}^{tSZ}	$4.4^{+3.8}_{-4.2}$	$n_{s,0.002}$	$0.963^{+0.019}_{-0.019}$	$\sigma_8(0.15)$	$0.748^{+0.014}_{-0.014}$
A_{100}^{PS}	253^{+60}_{-60}	Y_P	$0.242^{+0.039}_{-0.042}$	$f\sigma_8(0.38)$	$0.478^{+0.012}_{-0.013}$
A_{143}^{PS}	44^{+20}_{-20}	Y_P^{BBN}	$0.244^{+0.040}_{-0.042}$	$\sigma_8(0.38)$	$0.662^{+0.013}_{-0.013}$
A_{217}^{PS}	108^{+30}_{-30}	Age/Gyr	$13.83^{+0.10}_{-0.11}$	$f\sigma_8(0.51)$	$0.476^{+0.011}_{-0.011}$
A^{kSZ}	—	z_*	$1090.2^{+1.3}_{-1.3}$	$\sigma_8(0.51)$	$0.619^{+0.013}_{-0.013}$
c_{100}	$0.9985^{+0.0022}_{-0.0027}$	r_*	$144.56^{+0.76}_{-0.76}$	$f\sigma_8(0.61)$	$0.4701^{+0.0096}_{-0.0098}$
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	$100\theta_*$	$1.04102^{+0.00094}_{-0.00094}$	$\sigma_8(0.61)$	$0.589^{+0.013}_{-0.012}$
H_0	$67.0^{+1.8}_{-1.7}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.886^{+0.073}_{-0.073}$	$f\sigma_8(2.33)$	$0.2967^{+0.0068}_{-0.0066}$
Ω_Λ	$0.681^{+0.022}_{-0.022}$	z_{drag}	$1059.3^{+2.3}_{-2.3}$	$\sigma_8(2.33)$	$0.3056^{+0.0076}_{-0.0074}$
Ω_m	$0.319^{+0.022}_{-0.022}$	r_{drag}	$147.31^{+0.82}_{-0.82}$	f_{2000}^{143}	31^{+8}_{-8}
$\Omega_m h^2$	$0.1430^{+0.0029}_{-0.0030}$	k_{D}	$0.1406^{+0.0014}_{-0.0013}$	$f_{2000}^{143 \times 217}$	33^{+6}_{-6}
$\Omega_m h^3$	$0.0958^{+0.0015}_{-0.0015}$	$100\theta_{\text{D}}$	$0.1610^{+0.0015}_{-0.0015}$	f_{2000}^{217}	$107.6^{+5.4}_{-5.4}$
σ_8	$0.810^{+0.015}_{-0.015}$	z_{eq}	3403^{+70}_{-71}	χ_{lensing}^2	$9.49 (\nu: 0.4)$
S_8	$0.835^{+0.032}_{-0.032}$	k_{eq}	$0.01039^{+0.00021}_{-0.00022}$	χ_{small}^2	$396.9 (\nu: 1.3)$
$\sigma_8 \Omega_m^{0.5}$	$0.457^{+0.018}_{-0.018}$	$100\theta_{\text{eq}}$	$0.812^{+0.014}_{-0.013}$	χ_{lowl}^2	$23.9 (\nu: 1.6)$
$\sigma_8 \Omega_m^{0.25}$	$0.609^{+0.015}_{-0.015}$	$100\theta_{\text{s,eq}}$	$0.4491^{+0.0070}_{-0.0068}$	χ_{prior}^2	$7.4 (\nu: 6.3)$
$\sigma_8/h^{0.5}$	$0.990^{+0.021}_{-0.021}$	$H(0.15)$	$72.4^{+1.6}_{-1.5}$	χ_{CMB}^2	$4348 (\nu: 4948197.0)$

$\bar{\chi}_{\text{eff}}^2 = 7501.32$; $\Delta \bar{\chi}_{\text{eff}}^2 = 6291.93$; $R - 1 = 0.00730$

20.4 base_yhe_CamSpecHM_TT_lowl_lowE_post_BAO_lensing/base_yhe_plikHM_TT_lowl_lowE_post_BAO_lensing

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02226^{+0.00048}_{-0.00048}$	z_{re}	$7.8^{+1.4}_{-1.5}$	$D_{\text{M}}(0.51)$	1981^{+25}_{-25}
$\Omega_c h^2$	$0.1191^{+0.0022}_{-0.0021}$	$10^9 A_s$	$2.100^{+0.068}_{-0.063}$	$H(0.61)$	$95.32^{+0.69}_{-0.67}$
$100\theta_{MC}$	$1.0412^{+0.0015}_{-0.0015}$	$10^9 A_s e^{-2\tau}$	$1.880^{+0.028}_{-0.027}$	$D_{\text{M}}(0.61)$	2305^{+27}_{-27}
τ	$0.055^{+0.015}_{-0.014}$	D_{40}	1224^{+33}_{-32}	$H(2.33)$	$235.9^{+1.5}_{-1.5}$
Y_{He}	$0.250^{+0.036}_{-0.038}$	D_{220}	5719^{+80}_{-80}	$D_{\text{M}}(2.33)$	5764^{+36}_{-37}
$\ln(10^{10} A_s)$	$3.045^{+0.032}_{-0.030}$	D_{810}	2536^{+27}_{-26}	$f\sigma_8(0.15)$	$0.456^{+0.012}_{-0.012}$
n_s	$0.968^{+0.016}_{-0.016}$	D_{1420}	815^{+10}_{-10}	$\sigma_8(0.15)$	$0.749^{+0.014}_{-0.014}$
y_{cal}	$1.0007^{+0.0048}_{-0.0048}$	D_{2000}	$229.6^{+4.7}_{-4.7}$	$f\sigma_8(0.38)$	$0.475^{+0.011}_{-0.010}$
A_{217}^{CIB}	45^{+20}_{-20}	$n_{s,0.002}$	$0.968^{+0.016}_{-0.016}$	$\sigma_8(0.38)$	$0.664^{+0.013}_{-0.012}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.250^{+0.036}_{-0.038}$	$f\sigma_8(0.51)$	$0.4733^{+0.0099}_{-0.0097}$
A_{143}^{tSZ}	$4.3^{+3.8}_{-4.2}$	Y_P^{BBN}	$0.251^{+0.036}_{-0.038}$	$\sigma_8(0.51)$	$0.621^{+0.012}_{-0.012}$
A_{100}^{PS}	255^{+60}_{-60}	Age/Gyr	$13.798^{+0.084}_{-0.085}$	$f\sigma_8(0.61)$	$0.4684^{+0.0093}_{-0.0092}$
A_{143}^{PS}	46^{+20}_{-20}	z_*	$1090.2^{+1.3}_{-1.3}$	$\sigma_8(0.61)$	$0.591^{+0.012}_{-0.011}$
A_{217}^{PS}	108^{+20}_{-30}	r_*	$144.73^{+0.68}_{-0.68}$	$f\sigma_8(2.33)$	$0.2981^{+0.0061}_{-0.0059}$
A^{kSZ}	—	$100\theta_*$	$1.04123^{+0.00084}_{-0.00085}$	$\sigma_8(2.33)$	$0.3074^{+0.0065}_{-0.0064}$
c_{100}	$0.9986^{+0.0024}_{-0.0028}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.900^{+0.068}_{-0.068}$	f_{2000}^{143}	31^{+8}_{-8}
c_{217}	$0.9997^{+0.0038}_{-0.0029}$	z_{drag}	$1059.8^{+2.1}_{-2.1}$	$f_{2000}^{143 \times 217}$	33^{+6}_{-6}
H_0	$67.6^{+1.2}_{-1.1}$	r_{drag}	$147.44^{+0.78}_{-0.78}$	f_{2000}^{217}	$108.1^{+5.2}_{-5.3}$
Ω_Λ	$0.690^{+0.013}_{-0.014}$	k_{D}	$0.1402^{+0.0011}_{-0.0011}$	χ^2_{lensing}	$9.39 (\nu: 0.3)$
Ω_m	$0.310^{+0.014}_{-0.013}$	$100\theta_{\text{D}}$	$0.1612^{+0.0014}_{-0.0014}$	χ^2_{small}	$397.1 (\nu: 1.7)$
$\Omega_m h^2$	$0.1420^{+0.0021}_{-0.0021}$	z_{eq}	3379^{+51}_{-51}	χ^2_{lowl}	$23.0 (\nu: 0.9)$
$\Omega_m h^3$	$0.0961^{+0.0015}_{-0.0014}$	k_{eq}	$0.01031^{+0.00016}_{-0.00015}$	$\chi^2_{6\text{DF}}$	$0.057 (\nu: 0.0)$
σ_8	$0.810^{+0.016}_{-0.015}$	$100\theta_{\text{eq}}$	$0.8174^{+0.0092}_{-0.0092}$	χ^2_{MGS}	$1.33 (\nu: 0.1)$
S_8	$0.824^{+0.024}_{-0.024}$	$100\theta_{\text{s,eq}}$	$0.4516^{+0.0048}_{-0.0048}$	χ^2_{DR12BAO}	$4.8 (\nu: 1.2)$
$\sigma_8 \Omega_m^{0.5}$	$0.451^{+0.013}_{-0.013}$	$H(0.15)$	$72.9^{+1.0}_{-1.0}$	χ^2_{prior}	$7.4 (\nu: 6.6)$
$\sigma_8 \Omega_m^{0.25}$	$0.605^{+0.013}_{-0.013}$	$D_{\text{M}}(0.15)$	641^{+10}_{-10}	χ^2_{CMB}	$4348 (\nu: 4948080.2)$
$\sigma_8/h^{0.5}$	$0.985^{+0.019}_{-0.019}$	$H(0.38)$	$83.00^{+0.85}_{-0.82}$	χ^2_{BAO}	$6.2 (\nu: 0.8)$
$r_{\text{drag}} h$	$99.7^{+1.7}_{-1.8}$	$D_{\text{M}}(0.38)$	1529^{+21}_{-21}		
$\langle d^2 \rangle^{1/2}$	$2.432^{+0.047}_{-0.045}$	$H(0.51)$	$89.71^{+0.75}_{-0.73}$		

$$\bar{\chi}^2_{\text{eff}} = 7507.45; \Delta \bar{\chi}^2_{\text{eff}} = 6291.93; R - 1 = 0.01905$$

20.5 base_yhe_CamSpecHM_TT_lowl_lowE_post_zre6p5/base_yhe_plikHM_TT_lowl_lowE_post_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02213^{+0.00058}_{-0.00057}$	$r_{\text{drag}} h$	$98.6^{+3.6}_{-3.5}$	$D_{\text{M}}(0.15)$	647^{+19}_{-19}
$\Omega_c h^2$	$0.1205^{+0.0043}_{-0.0042}$	$\langle d^2 \rangle^{1/2}$	$2.454^{+0.086}_{-0.083}$	$H(0.38)$	$82.6^{+1.5}_{-1.4}$
$100\theta_{MC}$	$1.0408^{+0.0017}_{-0.0017}$	z_{re}	< 8.88	$D_{\text{M}}(0.38)$	1541^{+39}_{-38}
τ	$0.054^{+0.013}_{-0.011}$	$10^9 A_s$	$2.096^{+0.064}_{-0.059}$	$H(0.51)$	$89.4^{+1.2}_{-1.2}$
Y_{He}	$0.245^{+0.039}_{-0.041}$	$10^9 A_s e^{-2\tau}$	$1.882^{+0.031}_{-0.030}$	$D_{\text{M}}(0.51)$	1995^{+45}_{-45}
$\ln(10^{10} A_s)$	$3.043^{+0.030}_{-0.028}$	D_{40}	1232^{+43}_{-42}	$H(0.61)$	$95.0^{+1.0}_{-0.98}$
n_s	$0.963^{+0.021}_{-0.021}$	D_{220}	5708^{+82}_{-82}	$D_{\text{M}}(0.61)$	2320^{+49}_{-49}
y_{cal}	$1.0004^{+0.0049}_{-0.0049}$	D_{810}	2535^{+28}_{-27}	$H(2.33)$	$236.6^{+2.5}_{-2.5}$
A_{217}^{CIB}	44^{+20}_{-20}	D_{1420}	814^{+11}_{-11}	$D_{\text{M}}(2.33)$	5776^{+49}_{-50}
$\xi^{tSZ-CIB}$	—	D_{2000}	$229.6^{+4.9}_{-4.8}$	$f\sigma_8(0.15)$	$0.463^{+0.025}_{-0.024}$
A_{143}^{tSZ}	$4.4^{+3.7}_{-4.3}$	$n_{s,0.002}$	$0.963^{+0.021}_{-0.021}$	$\sigma_8(0.15)$	$0.750^{+0.016}_{-0.015}$
A_{100}^{PS}	253^{+60}_{-60}	Y_P	$0.245^{+0.039}_{-0.041}$	$f\sigma_8(0.38)$	$0.480^{+0.019}_{-0.019}$
A_{143}^{PS}	45^{+20}_{-20}	Y_P^{BBN}	$0.246^{+0.039}_{-0.042}$	$\sigma_8(0.38)$	$0.664^{+0.014}_{-0.012}$
A_{217}^{PS}	108^{+20}_{-30}	Age/Gyr	$13.83^{+0.11}_{-0.11}$	$f\sigma_8(0.51)$	$0.477^{+0.016}_{-0.016}$
A^{kSZ}	—	z_*	$1090.3^{+1.3}_{-1.3}$	$\sigma_8(0.51)$	$0.621^{+0.013}_{-0.012}$
c_{100}	$0.9985^{+0.0022}_{-0.0027}$	r_*	$144.50^{+0.96}_{-0.96}$	$f\sigma_8(0.61)$	$0.472^{+0.014}_{-0.014}$
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	$100\theta_*$	$1.04103^{+0.00098}_{-0.00098}$	$\sigma_8(0.61)$	$0.591^{+0.012}_{-0.011}$
H_0	$67.0^{+2.2}_{-2.2}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.880^{+0.089}_{-0.089}$	$f\sigma_8(2.33)$	$0.2975^{+0.0062}_{-0.0060}$
Ω_Λ	$0.680^{+0.028}_{-0.030}$	z_{drag}	$1059.4^{+2.4}_{-2.3}$	$\sigma_8(2.33)$	$0.3063^{+0.0068}_{-0.0066}$
Ω_m	$0.320^{+0.030}_{-0.028}$	r_{drag}	$147.24^{+0.98}_{-0.98}$	f_{2000}^{143}	31^{+8}_{-8}
$\Omega_m h^2$	$0.1432^{+0.0040}_{-0.0040}$	k_{D}	$0.1405^{+0.0015}_{-0.0015}$	$f_{2000}^{143 \times 217}$	33^{+6}_{-6}
$\Omega_m h^3$	$0.0959^{+0.0015}_{-0.0015}$	$100\theta_{\text{D}}$	$0.1611^{+0.0015}_{-0.0015}$	f_{2000}^{217}	$107.8^{+5.3}_{-5.4}$
σ_8	$0.812^{+0.019}_{-0.018}$	z_{eq}	3408^{+97}_{-95}	χ_{small}^2	$396.8 (\nu: 1.4)$
S_8	$0.839^{+0.050}_{-0.048}$	k_{eq}	$0.01040^{+0.00030}_{-0.00029}$	χ_{lowl}^2	$23.9 (\nu: 2.1)$
$\sigma_8 \Omega_m^{0.5}$	$0.459^{+0.027}_{-0.026}$	$100\theta_{\text{eq}}$	$0.812^{+0.019}_{-0.018}$	χ_{prior}^2	$7.4 (\nu: 6.4)$
$\sigma_8 \Omega_m^{0.25}$	$0.611^{+0.023}_{-0.023}$	$100\theta_{\text{s,eq}}$	$0.4487^{+0.0095}_{-0.0093}$	χ_{CMB}^2	$4339 (\nu: 4948151.0)$
$\sigma_8/h^{0.5}$	$0.993^{+0.032}_{-0.031}$	$H(0.15)$	$72.3^{+1.9}_{-1.9}$		

$\bar{\chi}_{\text{eff}}^2 = 7492.12$; $\Delta \bar{\chi}_{\text{eff}}^2 = 6291.97$; $R - 1 = 0.00634$

20.6 base_yhe_CamSpecHM_TT_lowl_lowE_post_BAO_zre6p5/base_yhe_plikHM_TT_lowl_lowE_post_BAO_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02227^{+0.00048}_{-0.00049}$	$\langle d^2 \rangle^{1/2}$	$2.426^{+0.056}_{-0.053}$	$D_M(0.38)$	1527^{+22}_{-21}
$\Omega_c h^2$	$0.1189^{+0.0024}_{-0.0024}$	z_{re}	< 8.99	$H(0.51)$	$89.77^{+0.77}_{-0.75}$
$100\theta_{MC}$	$1.0412^{+0.0015}_{-0.0015}$	$10^9 A_s$	$2.098^{+0.066}_{-0.061}$	$D_M(0.51)$	1979^{+26}_{-26}
τ	$0.055^{+0.013}_{-0.012}$	$10^9 A_s e^{-2\tau}$	$1.879^{+0.029}_{-0.028}$	$H(0.61)$	$95.37^{+0.69}_{-0.68}$
Y_{He}	$0.252^{+0.036}_{-0.038}$	D_{40}	1220^{+33}_{-33}	$D_M(0.61)$	2303^{+28}_{-28}
$\ln(10^{10} A_s)$	$3.044^{+0.031}_{-0.029}$	D_{220}	5715^{+81}_{-80}	$H(2.33)$	$235.8^{+1.6}_{-1.6}$
n_s	$0.969^{+0.016}_{-0.016}$	D_{810}	2535^{+28}_{-27}	$D_M(2.33)$	5761^{+36}_{-37}
y_{cal}	$1.0005^{+0.0049}_{-0.0049}$	D_{1420}	815^{+10}_{-10}	$f\sigma_8(0.15)$	$0.455^{+0.015}_{-0.015}$
A_{217}^{CIB}	45^{+20}_{-20}	D_{2000}	$229.3^{+4.7}_{-4.7}$	$\sigma_8(0.15)$	$0.748^{+0.016}_{-0.015}$
$\xi^{tSZ-CIB}$	—	$n_{s,0.002}$	$0.969^{+0.016}_{-0.016}$	$f\sigma_8(0.38)$	$0.474^{+0.013}_{-0.013}$
A_{143}^{tSZ}	$4.3^{+3.8}_{-4.2}$	Y_P	$0.252^{+0.036}_{-0.038}$	$\sigma_8(0.38)$	$0.663^{+0.014}_{-0.013}$
A_{100}^{PS}	255^{+60}_{-60}	Y_P^{BBN}	$0.253^{+0.036}_{-0.038}$	$f\sigma_8(0.51)$	$0.473^{+0.012}_{-0.012}$
A_{143}^{PS}	46^{+20}_{-20}	Age/Gyr	$13.794^{+0.085}_{-0.084}$	$\sigma_8(0.51)$	$0.621^{+0.013}_{-0.012}$
A_{217}^{PS}	108^{+20}_{-30}	z_*	$1090.2^{+1.3}_{-1.3}$	$f\sigma_8(0.61)$	$0.468^{+0.011}_{-0.011}$
A^{kSZ}	—	r_*	$144.76^{+0.74}_{-0.75}$	$\sigma_8(0.61)$	$0.591^{+0.013}_{-0.011}$
c_{100}	$0.9985^{+0.0022}_{-0.0027}$	$100\theta_*$	$1.04126^{+0.00084}_{-0.00086}$	$f\sigma_8(2.33)$	$0.2981^{+0.0064}_{-0.0058}$
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	$D_M(z_*)/\text{Gpc}$	$13.902^{+0.073}_{-0.074}$	$\sigma_8(2.33)$	$0.3074^{+0.0066}_{-0.0061}$
H_0	$67.8^{+1.2}_{-1.2}$	z_{drag}	$1059.9^{+2.1}_{-2.1}$	f_{2000}^{143}	32^{+8}_{-8}
Ω_Λ	$0.691^{+0.015}_{-0.015}$	r_{drag}	$147.46^{+0.83}_{-0.83}$	$f_{2000}^{143 \times 217}$	34^{+6}_{-6}
Ω_m	$0.309^{+0.015}_{-0.015}$	k_D	$0.1401^{+0.0012}_{-0.0012}$	f_{2000}^{217}	$108.2^{+5.2}_{-5.3}$
$\Omega_m h^2$	$0.1419^{+0.0024}_{-0.0024}$	$100\theta_D$	$0.1613^{+0.0015}_{-0.0014}$	χ_{small}^2	$397.0 (\nu: 1.6)$
$\Omega_m h^3$	$0.0961^{+0.0015}_{-0.0014}$	z_{eq}	3375^{+58}_{-57}	χ_{lowl}^2	$22.7 (\nu: 0.9)$
σ_8	$0.809^{+0.018}_{-0.016}$	k_{eq}	$0.01030^{+0.00018}_{-0.00018}$	$\chi_{6\text{DF}}^2$	$0.054 (\nu: 0.0)$
S_8	$0.822^{+0.030}_{-0.029}$	$100\theta_{\text{eq}}$	$0.818^{+0.010}_{-0.010}$	χ_{MGS}^2	$1.44 (\nu: 0.2)$
$\sigma_8 \Omega_m^{0.5}$	$0.450^{+0.016}_{-0.016}$	$100\theta_{s,\text{eq}}$	$0.4521^{+0.0054}_{-0.0054}$	χ_{DR12BAO}^2	$4.6 (\nu: 1.2)$
$\sigma_8 \Omega_m^{0.25}$	$0.604^{+0.016}_{-0.016}$	$H(0.15)$	$73.0^{+1.1}_{-1.1}$	χ_{prior}^2	$7.5 (\nu: 6.6)$
$\sigma_8/h^{0.5}$	$0.983^{+0.024}_{-0.023}$	$D_M(0.15)$	640^{+11}_{-10}	χ_{BAO}^2	$6.1 (\nu: 0.8)$
$r_{\text{drag}} h$	$99.9^{+1.9}_{-1.9}$	$H(0.38)$	$83.08^{+0.87}_{-0.85}$	χ_{CMB}^2	$4339 (\nu: 4947777.5)$

$\bar{\chi}_{\text{eff}}^2 = 7498.14$; $\Delta \bar{\chi}_{\text{eff}}^2 = 6291.76$; $R - 1 = 0.01531$

20.7 base_yhe_CamSpecHM_TT_lowl_lowE_post_lensing_zre6p5/base_yhe_plikHM_TT_lowl_lowE_post_lensing_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02214^{+0.00055}_{-0.00054}$	$r_{\text{drag}} h$	$98.8^{+2.7}_{-2.6}$	$D_{\text{M}}(0.15)$	646^{+14}_{-15}
$\Omega_c h^2$	$0.1201^{+0.0030}_{-0.0031}$	$\langle d^2 \rangle^{1/2}$	$2.449^{+0.056}_{-0.057}$	$H(0.38)$	$82.6^{+1.2}_{-1.1}$
$100\theta_{MC}$	$1.0408^{+0.0017}_{-0.0016}$	z_{re}	< 8.86	$D_{\text{M}}(0.38)$	1539^{+29}_{-30}
τ	$0.054^{+0.013}_{-0.011}$	$10^9 A_s$	$2.094^{+0.061}_{-0.056}$	$H(0.51)$	$89.4^{+1.0}_{-0.95}$
Y_{He}	$0.243^{+0.039}_{-0.041}$	$10^9 A_s e^{-2\tau}$	$1.880^{+0.028}_{-0.027}$	$D_{\text{M}}(0.51)$	1992^{+35}_{-36}
$\ln(10^{10} A_s)$	$3.042^{+0.029}_{-0.027}$	D_{40}	1231^{+37}_{-36}	$H(0.61)$	$95.07^{+0.89}_{-0.84}$
n_s	$0.963^{+0.019}_{-0.019}$	D_{220}	5712^{+82}_{-82}	$D_{\text{M}}(0.61)$	2318^{+38}_{-40}
y_{cal}	$1.0004^{+0.0049}_{-0.0048}$	D_{810}	2534^{+27}_{-27}	$H(2.33)$	$236.4^{+1.8}_{-1.8}$
A_{217}^{CIB}	44^{+20}_{-20}	D_{1420}	815^{+10}_{-10}	$D_{\text{M}}(2.33)$	5775^{+44}_{-45}
$\xi^{tSZ-CIB}$	—	D_{2000}	$229.7^{+4.8}_{-4.8}$	$f\sigma_8(0.15)$	$0.461^{+0.016}_{-0.016}$
A_{143}^{tSZ}	$4.4^{+3.8}_{-4.2}$	$n_{s,0.002}$	$0.963^{+0.019}_{-0.019}$	$\sigma_8(0.15)$	$0.749^{+0.014}_{-0.013}$
A_{100}^{PS}	253^{+60}_{-60}	Y_P	$0.243^{+0.039}_{-0.041}$	$f\sigma_8(0.38)$	$0.478^{+0.012}_{-0.013}$
A_{143}^{PS}	44^{+20}_{-20}	Y_P^{BBN}	$0.245^{+0.039}_{-0.041}$	$\sigma_8(0.38)$	$0.663^{+0.013}_{-0.012}$
A_{217}^{PS}	108^{+30}_{-30}	Age/Gyr	$13.82^{+0.10}_{-0.10}$	$f\sigma_8(0.51)$	$0.476^{+0.011}_{-0.011}$
A^{kSZ}	—	z_*	$1090.2^{+1.3}_{-1.3}$	$\sigma_8(0.51)$	$0.620^{+0.012}_{-0.012}$
c_{100}	$0.9985^{+0.0022}_{-0.0027}$	r_*	$144.58^{+0.76}_{-0.74}$	$f\sigma_8(0.61)$	$0.4704^{+0.0096}_{-0.0096}$
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	$100\theta_*$	$1.04104^{+0.00093}_{-0.00093}$	$\sigma_8(0.61)$	$0.590^{+0.011}_{-0.011}$
H_0	$67.1^{+1.7}_{-1.6}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.888^{+0.073}_{-0.072}$	$f\sigma_8(2.33)$	$0.2972^{+0.0061}_{-0.0060}$
Ω_Λ	$0.682^{+0.021}_{-0.021}$	z_{drag}	$1059.4^{+2.3}_{-2.2}$	$\sigma_8(2.33)$	$0.3062^{+0.0068}_{-0.0066}$
Ω_m	$0.318^{+0.021}_{-0.021}$	r_{drag}	$147.32^{+0.81}_{-0.81}$	f_{2000}^{143}	31^{+8}_{-8}
$\Omega_m h^2$	$0.1429^{+0.0028}_{-0.0029}$	k_{D}	$0.1405^{+0.0013}_{-0.0013}$	$f_{2000}^{143 \times 217}$	33^{+6}_{-6}
$\Omega_m h^3$	$0.0959^{+0.0015}_{-0.0015}$	$100\theta_{\text{D}}$	$0.1610^{+0.0015}_{-0.0015}$	f_{2000}^{217}	$107.6^{+5.4}_{-5.4}$
σ_8	$0.811^{+0.015}_{-0.014}$	z_{eq}	3400^{+67}_{-69}	χ^2_{lensing}	$9.47 (\nu: 0.4)$
S_8	$0.834^{+0.032}_{-0.032}$	k_{eq}	$0.01038^{+0.00021}_{-0.00021}$	χ^2_{small}	$396.8 (\nu: 1.3)$
$\sigma_8 \Omega_m^{0.5}$	$0.457^{+0.018}_{-0.018}$	$100\theta_{\text{eq}}$	$0.813^{+0.013}_{-0.013}$	χ^2_{lowl}	$23.8 (\nu: 1.5)$
$\sigma_8 \Omega_m^{0.25}$	$0.609^{+0.015}_{-0.015}$	$100\theta_{\text{s,eq}}$	$0.4494^{+0.0069}_{-0.0065}$	χ^2_{prior}	$7.4 (\nu: 6.3)$
$\sigma_8/h^{0.5}$	$0.990^{+0.020}_{-0.021}$	$H(0.15)$	$72.4^{+1.5}_{-1.4}$	χ^2_{CMB}	$4348 (\nu: 4948166.2)$

$\bar{\chi}^2_{\text{eff}} = 7501.05$; $\Delta\bar{\chi}^2_{\text{eff}} = 6291.92$; $R - 1 = 0.00841$

20.8 base_yhe_CamSpecHM_TT_lowl_lowE_post_BAO_lensing_zre6p5/base_yhe_plikHM_TT_lowl_lowE_post_BAO_lensing_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02226^{+0.00048}_{-0.00048}$	z_{re}	$7.9^{+1.2}_{-1.3}$	$D_{\text{M}}(0.51)$	1980^{+24}_{-25}
$\Omega_c h^2$	$0.1191^{+0.0022}_{-0.0021}$	$10^9 A_s$	$2.103^{+0.061}_{-0.058}$	$H(0.61)$	$95.33^{+0.69}_{-0.67}$
$100\theta_{MC}$	$1.0412^{+0.0015}_{-0.0015}$	$10^9 A_s e^{-2\tau}$	$1.880^{+0.028}_{-0.027}$	$D_{\text{M}}(0.61)$	2305^{+27}_{-27}
τ	$0.056^{+0.013}_{-0.012}$	D_{40}	1224^{+33}_{-32}	$H(2.33)$	$235.9^{+1.5}_{-1.5}$
Y_{He}	$0.250^{+0.036}_{-0.037}$	D_{220}	5719^{+80}_{-80}	$D_{\text{M}}(2.33)$	5763^{+36}_{-37}
$\ln(10^{10} A_s)$	$3.046^{+0.029}_{-0.028}$	D_{810}	2536^{+27}_{-26}	$f\sigma_8(0.15)$	$0.456^{+0.012}_{-0.012}$
n_s	$0.968^{+0.016}_{-0.016}$	D_{1420}	815^{+10}_{-10}	$\sigma_8(0.15)$	$0.749^{+0.014}_{-0.013}$
y_{cal}	$1.0007^{+0.0048}_{-0.0047}$	D_{2000}	$229.6^{+4.7}_{-4.6}$	$f\sigma_8(0.38)$	$0.475^{+0.011}_{-0.010}$
A_{217}^{CIB}	45^{+20}_{-20}	$n_{s,0.002}$	$0.968^{+0.016}_{-0.016}$	$\sigma_8(0.38)$	$0.664^{+0.013}_{-0.012}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.250^{+0.036}_{-0.037}$	$f\sigma_8(0.51)$	$0.4735^{+0.0098}_{-0.0095}$
A_{143}^{tSZ}	$4.3^{+3.8}_{-4.2}$	Y_P^{BBN}	$0.251^{+0.036}_{-0.038}$	$\sigma_8(0.51)$	$0.622^{+0.012}_{-0.011}$
A_{100}^{PS}	255^{+60}_{-60}	Age/Gyr	$13.798^{+0.084}_{-0.085}$	$f\sigma_8(0.61)$	$0.4686^{+0.0092}_{-0.0089}$
A_{143}^{PS}	46^{+20}_{-20}	z_*	$1090.2^{+1.3}_{-1.2}$	$\sigma_8(0.61)$	$0.591^{+0.012}_{-0.011}$
A_{217}^{PS}	108^{+20}_{-30}	r_*	$144.73^{+0.68}_{-0.68}$	$f\sigma_8(2.33)$	$0.2983^{+0.0059}_{-0.0055}$
A^{kSZ}	—	$100\theta_*$	$1.04123^{+0.00084}_{-0.00086}$	$\sigma_8(2.33)$	$0.3076^{+0.0064}_{-0.0060}$
c_{100}	$0.9986^{+0.0025}_{-0.0028}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.900^{+0.068}_{-0.068}$	f_{2000}^{143}	31^{+8}_{-8}
c_{217}	$0.9997^{+0.0038}_{-0.0029}$	z_{drag}	$1059.8^{+2.1}_{-2.1}$	$f_{2000}^{143 \times 217}$	33^{+6}_{-6}
H_0	$67.7^{+1.2}_{-1.1}$	r_{drag}	$147.44^{+0.78}_{-0.78}$	f_{2000}^{217}	$108.1^{+5.3}_{-5.3}$
Ω_Λ	$0.690^{+0.013}_{-0.014}$	k_{D}	$0.1402^{+0.0011}_{-0.0011}$	χ^2_{lensing}	$9.35 (\nu: 0.3)$
Ω_m	$0.310^{+0.014}_{-0.013}$	$100\theta_{\text{D}}$	$0.1612^{+0.0014}_{-0.0014}$	χ^2_{small}	$397.1 (\nu: 1.7)$
$\Omega_m h^2$	$0.1420^{+0.0021}_{-0.0021}$	z_{eq}	3378^{+51}_{-50}	χ^2_{lowl}	$23.0 (\nu: 0.9)$
$\Omega_m h^3$	$0.0961^{+0.0015}_{-0.0014}$	k_{eq}	$0.01031^{+0.00016}_{-0.00015}$	$\chi^2_{6\text{DF}}$	$0.055 (\nu: 0.0)$
σ_8	$0.810^{+0.015}_{-0.014}$	$100\theta_{\text{eq}}$	$0.8175^{+0.0091}_{-0.0091}$	χ^2_{MGS}	$1.34 (\nu: 0.1)$
S_8	$0.824^{+0.024}_{-0.023}$	$100\theta_{\text{s,eq}}$	$0.4517^{+0.0048}_{-0.0048}$	χ^2_{DR12BAO}	$4.7 (\nu: 1.2)$
$\sigma_8 \Omega_m^{0.5}$	$0.451^{+0.013}_{-0.013}$	$H(0.15)$	$72.9^{+1.0}_{-1.0}$	χ^2_{prior}	$7.4 (\nu: 6.6)$
$\sigma_8 \Omega_m^{0.25}$	$0.605^{+0.013}_{-0.013}$	$D_{\text{M}}(0.15)$	$640.9^{+9.9}_{-9.9}$	χ^2_{CMB}	$4348 (\nu: 4948124.8)$
$\sigma_8/h^{0.5}$	$0.985^{+0.019}_{-0.018}$	$H(0.38)$	$83.01^{+0.85}_{-0.82}$	χ^2_{BAO}	$6.1 (\nu: 0.8)$
$r_{\text{drag}} h$	$99.8^{+1.7}_{-1.7}$	$D_{\text{M}}(0.38)$	1529^{+20}_{-21}		
$\langle d^2 \rangle^{1/2}$	$2.433^{+0.046}_{-0.044}$	$H(0.51)$	$89.72^{+0.74}_{-0.73}$		

$$\bar{\chi}^2_{\text{eff}} = 7507.34; \Delta \bar{\chi}^2_{\text{eff}} = 6291.96; R - 1 = 0.01969$$

20.9 base_yhe_CamSpecHM_TTTEEE_lowl_lowE/base_yhe_plikHM_TTTEEE_lowl_lowE

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02230^{+0.00041}_{-0.00041}$	$r_{\text{drag}} h$	$99.0^{+2.4}_{-2.3}$	$D_{\text{M}}(0.15)$	644^{+12}_{-13}
$\Omega_c h^2$	$0.1199^{+0.0028}_{-0.0028}$	$\langle d^2 \rangle^{1/2}$	$2.442^{+0.062}_{-0.064}$	$H(0.38)$	$82.8^{+1.0}_{-0.95}$
$100\theta_{MC}$	$1.0408^{+0.0013}_{-0.0012}$	z_{re}	$7.6^{+1.6}_{-1.7}$	$D_{\text{M}}(0.38)$	1535^{+25}_{-26}
τ	$0.053^{+0.016}_{-0.016}$	$10^9 A_s$	$2.092^{+0.074}_{-0.071}$	$H(0.51)$	$89.55^{+0.85}_{-0.79}$
Y_{He}	$0.243^{+0.032}_{-0.030}$	$10^9 A_s e^{-2\tau}$	$1.880^{+0.025}_{-0.025}$	$D_{\text{M}}(0.51)$	1988^{+30}_{-31}
$\ln(10^{10} A_s)$	$3.040^{+0.035}_{-0.034}$	D_{40}	1231^{+34}_{-35}	$H(0.61)$	$95.20^{+0.73}_{-0.68}$
n_s	$0.964^{+0.017}_{-0.015}$	D_{220}	5725^{+77}_{-78}	$D_{\text{M}}(0.61)$	2313^{+32}_{-34}
y_{cal}	$1.0005^{+0.0048}_{-0.0048}$	D_{810}	2537^{+26}_{-26}	$H(2.33)$	$236.4^{+1.7}_{-1.7}$
A_{217}^{CIB}	43^{+10}_{-20}	D_{1420}	$816.5^{+9.7}_{-10}$	$D_{\text{M}}(2.33)$	5768^{+34}_{-36}
$\xi^{tSZ-CIB}$	—	D_{2000}	$230.7^{+4.0}_{-4.4}$	$f\sigma_8(0.15)$	$0.459^{+0.017}_{-0.017}$
A_{143}^{tSZ}	$4.7^{+3.9}_{-4.3}$	$n_{s,0.002}$	$0.964^{+0.017}_{-0.015}$	$\sigma_8(0.15)$	$0.747^{+0.015}_{-0.015}$
A_{100}^{PS}	249^{+60}_{-50}	Y_P	$0.243^{+0.032}_{-0.030}$	$f\sigma_8(0.38)$	$0.476^{+0.014}_{-0.014}$
A_{143}^{PS}	42^{+20}_{-20}	Y_P^{BBN}	$0.244^{+0.032}_{-0.030}$	$\sigma_8(0.38)$	$0.662^{+0.013}_{-0.013}$
A_{217}^{PS}	108^{+30}_{-30}	Age/Gyr	$13.808^{+0.079}_{-0.081}$	$f\sigma_8(0.51)$	$0.474^{+0.012}_{-0.012}$
A^{kSZ}	—	z_*	$1089.9^{+1.1}_{-0.96}$	$\sigma_8(0.51)$	$0.619^{+0.013}_{-0.012}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	r_*	$144.52^{+0.65}_{-0.64}$	$f\sigma_8(0.61)$	$0.469^{+0.011}_{-0.011}$
c_{217}	$0.9997^{+0.0038}_{-0.0028}$	$100\theta_*$	$1.04105^{+0.00067}_{-0.00066}$	$\sigma_8(0.61)$	$0.589^{+0.012}_{-0.012}$
H_0	$67.3^{+1.5}_{-1.4}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.882^{+0.062}_{-0.060}$	$f\sigma_8(2.33)$	$0.2970^{+0.0063}_{-0.0060}$
Ω_Λ	$0.684^{+0.019}_{-0.019}$	z_{drag}	$1059.7^{+1.7}_{-1.7}$	$\sigma_8(2.33)$	$0.3060^{+0.0068}_{-0.0064}$
Ω_m	$0.316^{+0.019}_{-0.019}$	r_{drag}	$147.21^{+0.67}_{-0.66}$	f_{2000}^{143}	29^{+7}_{-7}
$\Omega_m h^2$	$0.1429^{+0.0026}_{-0.0026}$	k_{D}	$0.14079^{+0.00098}_{-0.0012}$	$f_{2000}^{143 \times 217}$	32^{+5}_{-5}
$\Omega_m h^3$	$0.0961^{+0.0011}_{-0.0011}$	$100\theta_{\text{D}}$	$0.1607^{+0.0013}_{-0.0011}$	f_{2000}^{217}	$106.8^{+4.7}_{-4.6}$
σ_8	$0.809^{+0.017}_{-0.016}$	z_{eq}	3398^{+63}_{-63}	χ_{small}^2	$397.0 (\nu: 1.7)$
S_8	$0.830^{+0.033}_{-0.033}$	k_{eq}	$0.01037^{+0.00019}_{-0.00019}$	χ_{lowl}^2	$23.6 (\nu: 1.1)$
$\sigma_8 \Omega_m^{0.5}$	$0.455^{+0.018}_{-0.018}$	$100\theta_{\text{eq}}$	$0.814^{+0.012}_{-0.012}$	χ_{prior}^2	$9.7 (\nu: 9.7)$
$\sigma_8 \Omega_m^{0.25}$	$0.607^{+0.017}_{-0.017}$	$100\theta_{\text{s,eq}}$	$0.4497^{+0.0063}_{-0.0061}$	χ_{CMB}^2	$7358 (\nu: 10475351.2)$
$\sigma_8/h^{0.5}$	$0.987^{+0.024}_{-0.024}$	$H(0.15)$	$72.6^{+1.3}_{-1.2}$		

Best-fit $\chi_{\text{eff}}^2 = 11920.73$; $\Delta\chi_{\text{eff}}^2 = 9155.47$; $\bar{\chi}_{\text{eff}}^2 = 11943.34$; $\Delta\bar{\chi}_{\text{eff}}^2 = 9150.78$; $R - 1 = 0.01242$

χ_{eff}^2 : CMB - simall_100x143_offlike5_EE_Aplanck_B: 395.88 (Δ -0.18) commander_dx12_v3_2_29: 22.85 (Δ -1.09) CamSpec like_10.7HM_1400_unified: 11499.82

20.10 base_yhe_CamSpecHM_TTTEEE_lowl_lowE_post_BAO/base_yhe_plikHM_TTTEEE_lowl_lowE_post_BAO

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02238^{+0.00035}_{-0.00036}$	$\langle d^2 \rangle^{1/2}$	$2.429^{+0.053}_{-0.054}$	$D_M(0.38)$	1528^{+18}_{-19}
$\Omega_c h^2$	$0.1191^{+0.0020}_{-0.0020}$	z_{re}	$7.7^{+1.6}_{-1.7}$	$H(0.51)$	$89.77^{+0.64}_{-0.60}$
$100\theta_{MC}$	$1.0410^{+0.0012}_{-0.0011}$	$10^9 A_s$	$2.095^{+0.076}_{-0.073}$	$D_M(0.51)$	1979^{+21}_{-22}
τ	$0.055^{+0.017}_{-0.016}$	$10^9 A_s e^{-2\tau}$	$1.878^{+0.025}_{-0.024}$	$H(0.61)$	$95.38^{+0.57}_{-0.54}$
Y_{He}	$0.246^{+0.031}_{-0.028}$	D_{40}	1225^{+31}_{-32}	$D_M(0.61)$	2303^{+23}_{-24}
$\ln(10^{10} A_s)$	$3.042^{+0.036}_{-0.035}$	D_{220}	5729^{+77}_{-78}	$H(2.33)$	$236.0^{+1.3}_{-1.3}$
n_s	$0.967^{+0.014}_{-0.013}$	D_{810}	2537^{+26}_{-26}	$D_M(2.33)$	5760^{+28}_{-29}
y_{cal}	$1.0006^{+0.0048}_{-0.0049}$	D_{1420}	$816.7^{+9.7}_{-10}$	$f\sigma_8(0.15)$	$0.455^{+0.013}_{-0.013}$
A_{217}^{CIB}	43^{+20}_{-20}	D_{2000}	$230.6^{+4.1}_{-4.5}$	$\sigma_8(0.15)$	$0.747^{+0.015}_{-0.015}$
$\xi^{tSZ-CIB}$	—	$n_{s,0.002}$	$0.967^{+0.014}_{-0.013}$	$f\sigma_8(0.38)$	$0.473^{+0.012}_{-0.012}$
A_{143}^{tSZ}	$4.7^{+4.0}_{-4.3}$	Y_P	$0.246^{+0.031}_{-0.028}$	$\sigma_8(0.38)$	$0.662^{+0.014}_{-0.013}$
A_{100}^{PS}	250^{+60}_{-50}	Y_P^{BBN}	$0.248^{+0.031}_{-0.028}$	$f\sigma_8(0.51)$	$0.472^{+0.011}_{-0.011}$
A_{143}^{PS}	43^{+20}_{-20}	Age/Gyr	$13.790^{+0.065}_{-0.067}$	$\sigma_8(0.51)$	$0.620^{+0.013}_{-0.012}$
A_{217}^{PS}	108^{+20}_{-30}	z_*	$1089.9^{+1.1}_{-0.99}$	$f\sigma_8(0.61)$	$0.467^{+0.011}_{-0.010}$
A^{kSZ}	—	r_*	$144.65^{+0.56}_{-0.56}$	$\sigma_8(0.61)$	$0.590^{+0.012}_{-0.012}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	$100\theta_*$	$1.04117^{+0.00061}_{-0.00061}$	$f\sigma_8(2.33)$	$0.2975^{+0.0063}_{-0.0061}$
c_{217}	$0.9997^{+0.0038}_{-0.0028}$	$D_M(z_*)/\text{Gpc}$	$13.893^{+0.056}_{-0.055}$	$\sigma_8(2.33)$	$0.3067^{+0.0066}_{-0.0063}$
H_0	$67.7^{+1.1}_{-1.0}$	z_{drag}	$1059.9^{+1.6}_{-1.6}$	f_{2000}^{143}	30^{+7}_{-7}
Ω_Λ	$0.690^{+0.013}_{-0.013}$	r_{drag}	$147.32^{+0.62}_{-0.62}$	$f_{2000}^{143 \times 217}$	32^{+5}_{-5}
Ω_m	$0.310^{+0.013}_{-0.013}$	k_D	$0.14059^{+0.00088}_{-0.0010}$	f_{2000}^{217}	$107.0^{+4.8}_{-4.5}$
$\Omega_m h^2$	$0.1421^{+0.0020}_{-0.0019}$	$100\theta_D$	$0.1608^{+0.0012}_{-0.0011}$	χ_{small}^2	$397.2 (\nu: 2.1)$
$\Omega_m h^3$	$0.0962^{+0.0011}_{-0.0011}$	z_{eq}	3381^{+47}_{-46}	χ_{lowl}^2	$23.0 (\nu: 0.7)$
σ_8	$0.808^{+0.017}_{-0.016}$	k_{eq}	$0.01032^{+0.00014}_{-0.00014}$	$\chi_{6\text{DF}}^2$	$0.053 (\nu: 0.0)$
S_8	$0.822^{+0.026}_{-0.026}$	$100\theta_{\text{eq}}$	$0.8172^{+0.0088}_{-0.0087}$	χ_{MGS}^2	$1.33 (\nu: 0.1)$
$\sigma_8 \Omega_m^{0.5}$	$0.450^{+0.014}_{-0.014}$	$100\theta_{s,\text{eq}}$	$0.4514^{+0.0045}_{-0.0045}$	χ_{DR12BAO}^2	$4.7 (\nu: 1.0)$
$\sigma_8 \Omega_m^{0.25}$	$0.603^{+0.015}_{-0.015}$	$H(0.15)$	$72.98^{+0.94}_{-0.89}$	χ_{prior}^2	$9.7 (\nu: 9.9)$
$\sigma_8/h^{0.5}$	$0.982^{+0.022}_{-0.022}$	$D_M(0.15)$	$640.4^{+8.8}_{-9.1}$	χ_{BAO}^2	$6.1 (\nu: 0.7)$
$r_{\text{drag}} h$	$99.7^{+1.7}_{-1.6}$	$H(0.38)$	$83.07^{+0.74}_{-0.70}$	χ_{CMB}^2	$7358 (\nu: 10474697.6)$

$\bar{\chi}_{\text{eff}}^2 = 11949.00$; $\Delta\bar{\chi}_{\text{eff}}^2 = 9150.09$; $R - 1 = 0.01838$

20.11 base_yhe_CamSpecHM_TTTEEE_lowl_lowE_post_lensing/base_yhe_plikHM_TTTEEE_lowl_lowE_post_lensing

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02229^{+0.00040}_{-0.00040}$	$r_{\text{drag}} h$	$99.0^{+2.1}_{-2.0}$	$D_{\text{M}}(0.15)$	644^{+11}_{-11}
$\Omega_c h^2$	$0.1199^{+0.0024}_{-0.0024}$	$\langle d^2 \rangle^{1/2}$	$2.444^{+0.047}_{-0.049}$	$H(0.38)$	$82.78^{+0.90}_{-0.87}$
$100\theta_{MC}$	$1.0407^{+0.0013}_{-0.0012}$	z_{re}	$7.6^{+1.5}_{-1.5}$	$D_{\text{M}}(0.38)$	1535^{+23}_{-23}
τ	$0.054^{+0.015}_{-0.015}$	$10^9 A_s$	$2.093^{+0.068}_{-0.063}$	$H(0.51)$	$89.54^{+0.77}_{-0.74}$
Y_{He}	$0.241^{+0.032}_{-0.030}$	$10^9 A_s e^{-2\tau}$	$1.880^{+0.024}_{-0.024}$	$D_{\text{M}}(0.51)$	1988^{+27}_{-28}
$\ln(10^{10} A_s)$	$3.041^{+0.032}_{-0.030}$	D_{40}	1232^{+31}_{-32}	$H(0.61)$	$95.19^{+0.67}_{-0.64}$
n_s	$0.964^{+0.016}_{-0.015}$	D_{220}	5728^{+77}_{-77}	$D_{\text{M}}(0.61)$	2313^{+30}_{-30}
y_{cal}	$1.0005^{+0.0048}_{-0.0048}$	D_{810}	2537^{+26}_{-26}	$H(2.33)$	$236.4^{+1.5}_{-1.5}$
A_{217}^{CIB}	43^{+10}_{-20}	D_{1420}	$816.7^{+9.6}_{-9.7}$	$D_{\text{M}}(2.33)$	5769^{+33}_{-34}
$\xi^{tSZ-CIB}$	—	D_{2000}	$230.8^{+4.0}_{-4.3}$	$f\sigma_8(0.15)$	$0.459^{+0.013}_{-0.013}$
A_{143}^{tSZ}	$4.7^{+3.9}_{-4.3}$	$n_{s,0.002}$	$0.964^{+0.016}_{-0.015}$	$\sigma_8(0.15)$	$0.747^{+0.013}_{-0.013}$
A_{100}^{PS}	248^{+60}_{-50}	Y_P	$0.241^{+0.032}_{-0.030}$	$f\sigma_8(0.38)$	$0.476^{+0.010}_{-0.010}$
A_{143}^{PS}	42^{+20}_{-20}	Y_P^{BBN}	$0.243^{+0.032}_{-0.030}$	$\sigma_8(0.38)$	$0.662^{+0.012}_{-0.012}$
A_{217}^{PS}	109^{+30}_{-30}	Age/Gyr	$13.810^{+0.076}_{-0.077}$	$f\sigma_8(0.51)$	$0.4743^{+0.0093}_{-0.0093}$
A^{kSZ}	—	z_*	$1089.9^{+1.0}_{-0.98}$	$\sigma_8(0.51)$	$0.619^{+0.012}_{-0.011}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	r_*	$144.53^{+0.58}_{-0.58}$	$f\sigma_8(0.61)$	$0.4690^{+0.0086}_{-0.0086}$
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	$100\theta_*$	$1.04104^{+0.00065}_{-0.00065}$	$\sigma_8(0.61)$	$0.589^{+0.011}_{-0.011}$
H_0	$67.3^{+1.3}_{-1.3}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.884^{+0.056}_{-0.056}$	$f\sigma_8(2.33)$	$0.2969^{+0.0060}_{-0.0057}$
Ω_Λ	$0.684^{+0.016}_{-0.017}$	z_{drag}	$1059.6^{+1.7}_{-1.7}$	$\sigma_8(2.33)$	$0.3060^{+0.0065}_{-0.0062}$
Ω_m	$0.316^{+0.017}_{-0.016}$	r_{drag}	$147.22^{+0.62}_{-0.61}$	f_{2000}^{143}	29^{+7}_{-7}
$\Omega_m h^2$	$0.1428^{+0.0022}_{-0.0023}$	k_{D}	$0.14082^{+0.00092}_{-0.0011}$	$f_{2000}^{143 \times 217}$	32^{+5}_{-5}
$\Omega_m h^3$	$0.0961^{+0.0011}_{-0.0011}$	$100\theta_{\text{D}}$	$0.1607^{+0.0013}_{-0.0011}$	f_{2000}^{217}	$106.7^{+4.7}_{-4.6}$
σ_8	$0.809^{+0.014}_{-0.014}$	z_{eq}	3398^{+54}_{-55}	χ_{lensing}^2	$9.24 (\nu: 0.3)$
S_8	$0.830^{+0.026}_{-0.025}$	k_{eq}	$0.01037^{+0.00016}_{-0.00017}$	χ_{small}^2	$396.9 (\nu: 1.4)$
$\sigma_8 \Omega_m^{0.5}$	$0.455^{+0.014}_{-0.014}$	$100\theta_{\text{eq}}$	$0.814^{+0.011}_{-0.010}$	χ_{lowl}^2	$23.7 (\nu: 1.0)$
$\sigma_8 \Omega_m^{0.25}$	$0.607^{+0.013}_{-0.013}$	$100\theta_{\text{s,eq}}$	$0.4497^{+0.0054}_{-0.0052}$	χ_{prior}^2	$9.7 (\nu: 9.7)$
$\sigma_8/h^{0.5}$	$0.987^{+0.018}_{-0.018}$	$H(0.15)$	$72.6^{+1.2}_{-1.1}$	χ_{CMB}^2	$7367 (\nu: 10475504.0)$

$$\bar{\chi}_{\text{eff}}^2 = 11952.12; \Delta\bar{\chi}_{\text{eff}}^2 = 9150.78; R - 1 = 0.01489$$

20.12 base_yhe_CamSpecHM_TTTEEE_lowl_lowE_post_BAO_lensing/base_yhe_plikHM_TTTEEE_lowl_lowE_post_BAO_lensing

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02237^{+0.00035}_{-0.00035}$	z_{re}	$7.8^{+1.5}_{-1.5}$	$D_{\text{M}}(0.51)$	1980^{+21}_{-21}
$\Omega_c h^2$	$0.1192^{+0.0018}_{-0.0018}$	$10^9 A_s$	$2.101^{+0.067}_{-0.062}$	$H(0.61)$	$95.35^{+0.55}_{-0.52}$
$100\theta_{MC}$	$1.0410^{+0.0012}_{-0.0011}$	$10^9 A_s e^{-2\tau}$	$1.879^{+0.024}_{-0.024}$	$D_{\text{M}}(0.61)$	2304^{+22}_{-23}
τ	$0.056^{+0.015}_{-0.014}$	D_{40}	1227^{+29}_{-30}	$H(2.33)$	$236.0^{+1.2}_{-1.2}$
Y_{He}	$0.245^{+0.031}_{-0.028}$	D_{220}	5733^{+76}_{-76}	$D_{\text{M}}(2.33)$	5761^{+28}_{-29}
$\ln(10^{10} A_s)$	$3.045^{+0.031}_{-0.030}$	D_{810}	2538^{+26}_{-26}	$f\sigma_8(0.15)$	$0.456^{+0.011}_{-0.011}$
n_s	$0.967^{+0.014}_{-0.013}$	D_{1420}	$817.1^{+9.5}_{-9.7}$	$\sigma_8(0.15)$	$0.748^{+0.013}_{-0.013}$
y_{cal}	$1.0007^{+0.0047}_{-0.0048}$	D_{2000}	$230.8^{+4.0}_{-4.4}$	$f\sigma_8(0.38)$	$0.4743^{+0.0095}_{-0.0096}$
A_{217}^{CIB}	43^{+20}_{-20}	$n_{s,0.002}$	$0.967^{+0.014}_{-0.013}$	$\sigma_8(0.38)$	$0.663^{+0.012}_{-0.011}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.245^{+0.031}_{-0.028}$	$f\sigma_8(0.51)$	$0.4729^{+0.0089}_{-0.0089}$
A_{143}^{tSZ}	$4.7^{+4.0}_{-4.3}$	Y_P^{BBN}	$0.246^{+0.031}_{-0.028}$	$\sigma_8(0.51)$	$0.621^{+0.012}_{-0.011}$
A_{100}^{PS}	249^{+60}_{-50}	Age/Gyr	$13.793^{+0.064}_{-0.066}$	$f\sigma_8(0.61)$	$0.4680^{+0.0085}_{-0.0085}$
A_{143}^{PS}	42^{+20}_{-20}	z_*	$1089.8^{+1.0}_{-0.98}$	$\sigma_8(0.61)$	$0.591^{+0.011}_{-0.010}$
A_{217}^{PS}	109^{+30}_{-30}	r_*	$144.64^{+0.53}_{-0.53}$	$f\sigma_8(2.33)$	$0.2978^{+0.0058}_{-0.0054}$
A^{kSZ}	—	$100\theta_*$	$1.04115^{+0.00061}_{-0.00061}$	$\sigma_8(2.33)$	$0.3070^{+0.0062}_{-0.0058}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.892^{+0.053}_{-0.053}$	f_{2000}^{143}	29^{+7}_{-7}
c_{217}	$0.9997^{+0.0038}_{-0.0028}$	z_{drag}	$1059.9^{+1.6}_{-1.5}$	$f_{2000}^{143 \times 217}$	32^{+5}_{-5}
H_0	$67.7^{+1.0}_{-0.97}$	r_{drag}	$147.31^{+0.59}_{-0.59}$	f_{2000}^{217}	$106.8^{+4.8}_{-4.5}$
Ω_Λ	$0.689^{+0.012}_{-0.012}$	k_{D}	$0.14065^{+0.00086}_{-0.00099}$	χ^2_{lensing}	$9.20 (\nu: 0.3)$
Ω_m	$0.311^{+0.012}_{-0.012}$	$100\theta_{\text{D}}$	$0.1608^{+0.0013}_{-0.0011}$	χ^2_{small}	$397.2 (\nu: 1.9)$
$\Omega_m h^2$	$0.1422^{+0.0018}_{-0.0018}$	z_{eq}	3383^{+43}_{-42}	χ^2_{lowl}	$23.2 (\nu: 0.7)$
$\Omega_m h^3$	$0.0962^{+0.0011}_{-0.0011}$	k_{eq}	$0.01032^{+0.00013}_{-0.00013}$	$\chi^2_{6\text{DF}}$	$0.054 (\nu: 0.0)$
σ_8	$0.809^{+0.014}_{-0.014}$	$100\theta_{\text{eq}}$	$0.8168^{+0.0080}_{-0.0079}$	χ^2_{MGS}	$1.28 (\nu: 0.1)$
S_8	$0.824^{+0.021}_{-0.021}$	$100\theta_{\text{s,eq}}$	$0.4512^{+0.0041}_{-0.0040}$	χ^2_{DR12BAO}	$4.8 (\nu: 1.0)$
$\sigma_8 \Omega_m^{0.5}$	$0.451^{+0.011}_{-0.012}$	$H(0.15)$	$72.93^{+0.90}_{-0.85}$	χ^2_{prior}	$9.7 (\nu: 9.8)$
$\sigma_8 \Omega_m^{0.25}$	$0.604^{+0.012}_{-0.012}$	$D_{\text{M}}(0.15)$	$640.9^{+8.4}_{-8.6}$	χ^2_{CMB}	$7367 (\nu: 10475278.3)$
$\sigma_8/h^{0.5}$	$0.984^{+0.017}_{-0.017}$	$H(0.38)$	$83.03^{+0.71}_{-0.68}$	χ^2_{BAO}	$6.1 (\nu: 0.6)$
$r_{\text{drag}} h$	$99.7^{+1.6}_{-1.5}$	$D_{\text{M}}(0.38)$	1529^{+17}_{-18}		
$\langle d^2 \rangle^{1/2}$	$2.435^{+0.043}_{-0.044}$	$H(0.51)$	$89.74^{+0.62}_{-0.59}$		

$\bar{\chi}^2_{\text{eff}} = 11958.04$; $\Delta\bar{\chi}^2_{\text{eff}} = 9150.40$; $R - 1 = 0.02077$

20.13 base_yhe_CamSpecHM_TTTEEE_lowl_lowE_post_Riess18/base_yhe_plikHM_TTTEEE_lowl_lowE_post_Riess18

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02253^{+0.00042}_{-0.00039}$	$r_{\text{drag}} h$	$100.7^{+2.4}_{-2.2}$	$D_{\text{M}}(0.15)$	635^{+12}_{-12}
$\Omega_c h^2$	$0.1182^{+0.0027}_{-0.0027}$	$\langle d^2 \rangle^{1/2}$	$2.412^{+0.063}_{-0.063}$	$H(0.38)$	$83.47^{+0.97}_{-0.92}$
$100\theta_{MC}$	$1.0414^{+0.0013}_{-0.0012}$	z_{re}	$7.9^{+1.8}_{-1.7}$	$D_{\text{M}}(0.38)$	1517^{+24}_{-25}
τ	$0.057^{+0.019}_{-0.016}$	$10^9 A_s$	$2.104^{+0.078}_{-0.074}$	$H(0.51)$	$90.11^{+0.78}_{-0.77}$
Y_{He}	$0.254^{+0.034}_{-0.029}$	$10^9 A_s e^{-2\tau}$	$1.878^{+0.024}_{-0.024}$	$D_{\text{M}}(0.51)$	1967^{+28}_{-29}
$\ln(10^{10} A_s)$	$3.046^{+0.037}_{-0.035}$	D_{40}	1216^{+33}_{-34}	$H(0.61)$	$95.67^{+0.70}_{-0.66}$
n_s	$0.973^{+0.017}_{-0.015}$	D_{220}	5734^{+73}_{-76}	$D_{\text{M}}(0.61)$	2290^{+31}_{-32}
y_{cal}	$1.0007^{+0.0046}_{-0.0048}$	D_{810}	2538^{+26}_{-26}	$H(2.33)$	$235.6^{+1.6}_{-1.6}$
A_{217}^{CIB}	44^{+10}_{-20}	D_{1420}	$816.9^{+9.7}_{-10}$	$D_{\text{M}}(2.33)$	5746^{+33}_{-35}
$\xi^{tSZ-CIB}$	—	D_{2000}	$230.3^{+4.3}_{-4.6}$	$f\sigma_8(0.15)$	$0.450^{+0.016}_{-0.016}$
A_{143}^{tSZ}	$4.6^{+4.0}_{-4.3}$	$n_{s,0.002}$	$0.973^{+0.017}_{-0.015}$	$\sigma_8(0.15)$	$0.747^{+0.016}_{-0.015}$
A_{100}^{PS}	252^{+50}_{-50}	Y_P	$0.254^{+0.034}_{-0.029}$	$f\sigma_8(0.38)$	$0.470^{+0.014}_{-0.013}$
A_{143}^{PS}	43^{+20}_{-20}	Y_P^{BBN}	$0.256^{+0.034}_{-0.029}$	$\sigma_8(0.38)$	$0.663^{+0.014}_{-0.013}$
A_{217}^{PS}	108^{+20}_{-30}	Age/Gyr	$13.759^{+0.075}_{-0.081}$	$f\sigma_8(0.51)$	$0.470^{+0.012}_{-0.012}$
A^{kSZ}	—	z_*	$1089.9^{+1.1}_{-0.96}$	$\sigma_8(0.51)$	$0.621^{+0.013}_{-0.013}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	r_*	$144.76^{+0.63}_{-0.63}$	$f\sigma_8(0.61)$	$0.465^{+0.012}_{-0.011}$
c_{217}	$0.9997^{+0.0039}_{-0.0028}$	$100\theta_*$	$1.04135^{+0.00070}_{-0.00065}$	$\sigma_8(0.61)$	$0.591^{+0.013}_{-0.012}$
H_0	$68.3^{+1.4}_{-1.4}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.901^{+0.059}_{-0.060}$	$f\sigma_8(2.33)$	$0.2985^{+0.0065}_{-0.0061}$
Ω_Λ	$0.697^{+0.018}_{-0.017}$	z_{drag}	$1060.5^{+1.8}_{-1.6}$	$\sigma_8(2.33)$	$0.3082^{+0.0072}_{-0.0066}$
Ω_m	$0.303^{+0.017}_{-0.018}$	r_{drag}	$147.38^{+0.65}_{-0.66}$	f_{2000}^{143}	30^{+7}_{-7}
$\Omega_m h^2$	$0.1413^{+0.0025}_{-0.0026}$	k_{D}	$0.1403^{+0.0010}_{-0.0012}$	$f_{2000}^{143 \times 217}$	33^{+5}_{-5}
$\Omega_m h^3$	$0.0965^{+0.0011}_{-0.0011}$	$100\theta_{\text{D}}$	$0.1611^{+0.0013}_{-0.0011}$	f_{2000}^{217}	$107.5^{+5.1}_{-4.5}$
σ_8	$0.808^{+0.017}_{-0.016}$	z_{eq}	3362^{+60}_{-62}	χ_{small}^2	$397.5 (\nu: 2.8)$
S_8	$0.812^{+0.032}_{-0.030}$	k_{eq}	$0.01026^{+0.00018}_{-0.00019}$	χ_{lowl}^2	$22.3 (\nu: 0.7)$
$\sigma_8 \Omega_m^{0.5}$	$0.445^{+0.017}_{-0.016}$	$100\theta_{\text{eq}}$	$0.821^{+0.013}_{-0.012}$	χ_{H073p45}^2	$9.8 (\nu: 3.6)$
$\sigma_8 \Omega_m^{0.25}$	$0.599^{+0.017}_{-0.016}$	$100\theta_{\text{s,eq}}$	$0.4535^{+0.0065}_{-0.0059}$	χ_{prior}^2	$9.8 (\nu: 10.6)$
$\sigma_8/h^{0.5}$	$0.978^{+0.025}_{-0.023}$	$H(0.15)$	$73.5^{+1.3}_{-1.2}$	χ_{CMB}^2	$7360 (\nu: 10475893.7)$

$$\bar{\chi}_{\text{eff}}^2 = 11954.03; \Delta\bar{\chi}_{\text{eff}}^2 = 9149.08; R - 1 = 0.04865$$

20.14 base_yhe_CamSpecHM_TTTEEE_lowl_lowE_post_zre6p5/base_yhe_plikHM_TTTEEE_lowl_lowE_post_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02230^{+0.00041}_{-0.00040}$	$r_{\text{drag}} h$	$99.1^{+2.4}_{-2.3}$	$D_{\text{M}}(0.15)$	644^{+12}_{-13}
$\Omega_c h^2$	$0.1199^{+0.0028}_{-0.0028}$	$\langle d^2 \rangle^{1/2}$	$2.445^{+0.060}_{-0.062}$	$H(0.38)$	$82.8^{+1.0}_{-0.95}$
$100\theta_{MC}$	$1.0408^{+0.0013}_{-0.0012}$	z_{re}	< 8.93	$D_{\text{M}}(0.38)$	1535^{+25}_{-26}
τ	$0.055^{+0.013}_{-0.012}$	$10^9 A_s$	$2.098^{+0.063}_{-0.058}$	$H(0.51)$	$89.57^{+0.85}_{-0.79}$
Y_{He}	$0.243^{+0.032}_{-0.030}$	$10^9 A_s e^{-2\tau}$	$1.880^{+0.025}_{-0.025}$	$D_{\text{M}}(0.51)$	1987^{+30}_{-31}
$\ln(10^{10} A_s)$	$3.043^{+0.030}_{-0.028}$	D_{40}	1231^{+34}_{-35}	$H(0.61)$	$95.22^{+0.73}_{-0.68}$
n_s	$0.965^{+0.017}_{-0.015}$	D_{220}	5725^{+77}_{-78}	$D_{\text{M}}(0.61)$	2312^{+32}_{-34}
y_{cal}	$1.0005^{+0.0048}_{-0.0048}$	D_{810}	2537^{+26}_{-26}	$H(2.33)$	$236.4^{+1.7}_{-1.7}$
A_{217}^{CIB}	43^{+10}_{-20}	D_{1420}	$816.5^{+9.7}_{-10}$	$D_{\text{M}}(2.33)$	5767^{+34}_{-36}
$\xi^{tSZ-CIB}$	—	D_{2000}	$230.7^{+4.0}_{-4.4}$	$f\sigma_8(0.15)$	$0.459^{+0.016}_{-0.017}$
A_{143}^{tSZ}	$4.7^{+3.9}_{-4.3}$	$n_{s,0.002}$	$0.965^{+0.017}_{-0.015}$	$\sigma_8(0.15)$	$0.748^{+0.014}_{-0.013}$
A_{100}^{PS}	249^{+60}_{-50}	Y_P	$0.243^{+0.032}_{-0.030}$	$f\sigma_8(0.38)$	$0.477^{+0.013}_{-0.014}$
A_{143}^{PS}	42^{+20}_{-20}	Y_P^{BBN}	$0.244^{+0.032}_{-0.030}$	$\sigma_8(0.38)$	$0.663^{+0.013}_{-0.011}$
A_{217}^{PS}	108^{+30}_{-30}	Age/Gyr	$13.807^{+0.078}_{-0.081}$	$f\sigma_8(0.51)$	$0.475^{+0.012}_{-0.012}$
A^{kSZ}	—	z_*	$1089.9^{+1.1}_{-0.95}$	$\sigma_8(0.51)$	$0.620^{+0.011}_{-0.011}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	r_*	$144.52^{+0.65}_{-0.64}$	$f\sigma_8(0.61)$	$0.470^{+0.011}_{-0.011}$
c_{217}	$0.9997^{+0.0038}_{-0.0028}$	$100\theta_*$	$1.04106^{+0.00067}_{-0.00067}$	$\sigma_8(0.61)$	$0.590^{+0.011}_{-0.010}$
H_0	$67.3^{+1.5}_{-1.4}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.882^{+0.062}_{-0.060}$	$f\sigma_8(2.33)$	$0.2974^{+0.0056}_{-0.0053}$
Ω_Λ	$0.685^{+0.019}_{-0.019}$	z_{drag}	$1059.7^{+1.8}_{-1.7}$	$\sigma_8(2.33)$	$0.3065^{+0.0061}_{-0.0057}$
Ω_m	$0.315^{+0.019}_{-0.019}$	r_{drag}	$147.21^{+0.67}_{-0.66}$	f_{2000}^{143}	29^{+7}_{-7}
$\Omega_m h^2$	$0.1428^{+0.0026}_{-0.0026}$	k_{D}	$0.14078^{+0.00098}_{-0.0012}$	$f_{2000}^{143 \times 217}$	32^{+5}_{-5}
$\Omega_m h^3$	$0.0961^{+0.0011}_{-0.0011}$	$100\theta_{\text{D}}$	$0.1608^{+0.0013}_{-0.0011}$	f_{2000}^{217}	$106.8^{+4.7}_{-4.6}$
σ_8	$0.810^{+0.016}_{-0.015}$	z_{eq}	3398^{+63}_{-63}	χ_{small}^2	$396.9 (\nu: 1.8)$
S_8	$0.831^{+0.032}_{-0.033}$	k_{eq}	$0.01037^{+0.00019}_{-0.00019}$	χ_{lowl}^2	$23.6 (\nu: 1.1)$
$\sigma_8 \Omega_m^{0.5}$	$0.455^{+0.018}_{-0.018}$	$100\theta_{\text{eq}}$	$0.814^{+0.012}_{-0.012}$	χ_{prior}^2	$9.7 (\nu: 9.7)$
$\sigma_8 \Omega_m^{0.25}$	$0.607^{+0.016}_{-0.016}$	$100\theta_{\text{s,eq}}$	$0.4497^{+0.0063}_{-0.0061}$	χ_{CMB}^2	$7358 (\nu: 10475195.0)$
$\sigma_8/h^{0.5}$	$0.988^{+0.023}_{-0.023}$	$H(0.15)$	$72.6^{+1.3}_{-1.2}$		

$\bar{\chi}_{\text{eff}}^2 = 11943.03$; $\Delta\bar{\chi}_{\text{eff}}^2 = 9150.71$; $R - 1 = 0.01121$

20.15 base_yhe_CamSpecHM_TTTEEE_lowl_lowE_post_BAO_zre6p5/base_yhe_plikHM_TTTEEE_lowl_lowE_post_BAO_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02238^{+0.00035}_{-0.00036}$	$\langle d^2 \rangle^{1/2}$	$2.431^{+0.052}_{-0.050}$	$D_M(0.38)$	1527^{+18}_{-19}
$\Omega_c h^2$	$0.1191^{+0.0020}_{-0.0020}$	z_{re}	< 9.03	$H(0.51)$	$89.78^{+0.64}_{-0.60}$
$100\theta_{MC}$	$1.0410^{+0.0012}_{-0.0011}$	$10^9 A_s$	$2.101^{+0.066}_{-0.061}$	$D_M(0.51)$	1979^{+21}_{-22}
τ	$0.056^{+0.014}_{-0.012}$	$10^9 A_s e^{-2\tau}$	$1.878^{+0.025}_{-0.024}$	$H(0.61)$	$95.39^{+0.57}_{-0.53}$
Y_{He}	$0.246^{+0.031}_{-0.028}$	D_{40}	1225^{+31}_{-32}	$D_M(0.61)$	2303^{+23}_{-24}
$\ln(10^{10} A_s)$	$3.045^{+0.031}_{-0.029}$	D_{220}	5728^{+77}_{-77}	$H(2.33)$	$236.0^{+1.3}_{-1.3}$
n_s	$0.968^{+0.014}_{-0.013}$	D_{810}	2537^{+26}_{-26}	$D_M(2.33)$	5760^{+28}_{-29}
y_{cal}	$1.0006^{+0.0048}_{-0.0048}$	D_{1420}	$816.7^{+9.7}_{-10}$	$f\sigma_8(0.15)$	$0.455^{+0.013}_{-0.013}$
A_{217}^{CIB}	43^{+20}_{-20}	D_{2000}	$230.6^{+4.1}_{-4.5}$	$\sigma_8(0.15)$	$0.748^{+0.015}_{-0.013}$
$\xi^{tSZ-CIB}$	—	$n_{s,0.002}$	$0.968^{+0.014}_{-0.013}$	$f\sigma_8(0.38)$	$0.474^{+0.011}_{-0.011}$
A_{143}^{tSZ}	$4.7^{+4.0}_{-4.3}$	Y_P	$0.246^{+0.031}_{-0.028}$	$\sigma_8(0.38)$	$0.663^{+0.013}_{-0.012}$
A_{100}^{PS}	250^{+60}_{-50}	Y_P^{BBN}	$0.248^{+0.031}_{-0.028}$	$f\sigma_8(0.51)$	$0.473^{+0.011}_{-0.010}$
A_{143}^{PS}	43^{+20}_{-20}	Age/Gyr	$13.789^{+0.065}_{-0.067}$	$\sigma_8(0.51)$	$0.621^{+0.012}_{-0.011}$
A_{217}^{PS}	108^{+20}_{-30}	z_*	$1089.9^{+1.1}_{-0.99}$	$f\sigma_8(0.61)$	$0.468^{+0.010}_{-0.0094}$
A^{kSZ}	—	r_*	$144.65^{+0.56}_{-0.56}$	$\sigma_8(0.61)$	$0.591^{+0.011}_{-0.011}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	$100\theta_*$	$1.04117^{+0.00062}_{-0.00061}$	$f\sigma_8(2.33)$	$0.2978^{+0.0057}_{-0.0054}$
c_{217}	$0.9997^{+0.0038}_{-0.0028}$	$D_M(z_*)/\text{Gpc}$	$13.893^{+0.056}_{-0.055}$	$\sigma_8(2.33)$	$0.3071^{+0.0060}_{-0.0057}$
H_0	$67.7^{+1.1}_{-1.0}$	z_{drag}	$1059.9^{+1.6}_{-1.5}$	f_{2000}^{143}	30^{+7}_{-7}
Ω_Λ	$0.690^{+0.013}_{-0.013}$	r_{drag}	$147.32^{+0.62}_{-0.62}$	$f_{2000}^{143 \times 217}$	32^{+5}_{-5}
Ω_m	$0.310^{+0.013}_{-0.013}$	k_D	$0.14059^{+0.00088}_{-0.0010}$	f_{2000}^{217}	$106.9^{+4.8}_{-4.5}$
$\Omega_m h^2$	$0.1421^{+0.0020}_{-0.0019}$	$100\theta_D$	$0.1608^{+0.0012}_{-0.0011}$	χ_{small}^2	$397.1 (\nu: 2.2)$
$\Omega_m h^3$	$0.0962^{+0.0011}_{-0.0011}$	z_{eq}	3381^{+47}_{-46}	χ_{lowl}^2	$23.0 (\nu: 0.7)$
σ_8	$0.809^{+0.016}_{-0.014}$	k_{eq}	$0.01032^{+0.00014}_{-0.00014}$	$\chi_{6\text{DF}}^2$	$0.051 (\nu: 0.0)$
S_8	$0.822^{+0.025}_{-0.025}$	$100\theta_{\text{eq}}$	$0.8173^{+0.0088}_{-0.0086}$	χ_{MGS}^2	$1.34 (\nu: 0.1)$
$\sigma_8 \Omega_m^{0.5}$	$0.450^{+0.014}_{-0.014}$	$100\theta_{s,\text{eq}}$	$0.4515^{+0.0045}_{-0.0045}$	χ_{DR12BAO}^2	$4.7 (\nu: 1.0)$
$\sigma_8 \Omega_m^{0.25}$	$0.604^{+0.014}_{-0.014}$	$H(0.15)$	$72.99^{+0.94}_{-0.89}$	χ_{prior}^2	$9.7 (\nu: 9.8)$
$\sigma_8/h^{0.5}$	$0.983^{+0.021}_{-0.020}$	$D_M(0.15)$	$640.3^{+8.7}_{-9.1}$	χ_{BAO}^2	$6.1 (\nu: 0.6)$
$r_{\text{drag}} h$	$99.8^{+1.7}_{-1.6}$	$H(0.38)$	$83.08^{+0.75}_{-0.70}$	χ_{CMB}^2	$7358 (\nu: 10474541.1)$

$\bar{\chi}_{\text{eff}}^2 = 11948.72$; $\Delta\bar{\chi}_{\text{eff}}^2 = 9150.05$; $R - 1 = 0.01724$

20.16 base_yhe_CamSpecHM_TTTEEE_lowl_lowE_post_lensing_zre6p5/base_yhe_plikHM_TTTEEE_lowl_lowE_post_lensing_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02230^{+0.00039}_{-0.00039}$	$r_{\text{drag}} h$	$99.1^{+2.1}_{-2.0}$	$D_{\text{M}}(0.15)$	644^{+11}_{-11}
$\Omega_c h^2$	$0.1198^{+0.0023}_{-0.0024}$	$\langle d^2 \rangle^{1/2}$	$2.445^{+0.046}_{-0.048}$	$H(0.38)$	$82.81^{+0.90}_{-0.86}$
$100\theta_{MC}$	$1.0408^{+0.0013}_{-0.0012}$	z_{re}	< 8.88	$D_{\text{M}}(0.38)$	1535^{+23}_{-23}
τ	$0.055^{+0.013}_{-0.012}$	$10^9 A_s$	$2.098^{+0.059}_{-0.055}$	$H(0.51)$	$89.56^{+0.77}_{-0.73}$
Y_{He}	$0.242^{+0.032}_{-0.030}$	$10^9 A_s e^{-2\tau}$	$1.880^{+0.024}_{-0.024}$	$D_{\text{M}}(0.51)$	1987^{+27}_{-27}
$\ln(10^{10} A_s)$	$3.043^{+0.028}_{-0.026}$	D_{40}	1232^{+31}_{-32}	$H(0.61)$	$95.21^{+0.66}_{-0.63}$
n_s	$0.964^{+0.016}_{-0.014}$	D_{220}	5728^{+77}_{-77}	$D_{\text{M}}(0.61)$	2312^{+29}_{-30}
y_{cal}	$1.0005^{+0.0048}_{-0.0048}$	D_{810}	2537^{+26}_{-26}	$H(2.33)$	$236.4^{+1.4}_{-1.4}$
A_{217}^{CIB}	43^{+10}_{-20}	D_{1420}	$816.7^{+9.7}_{-9.8}$	$D_{\text{M}}(2.33)$	5768^{+33}_{-33}
$\xi^{tSZ-CIB}$	—	D_{2000}	$230.8^{+4.0}_{-4.3}$	$f\sigma_8(0.15)$	$0.459^{+0.013}_{-0.013}$
A_{143}^{tSZ}	$4.7^{+3.9}_{-4.3}$	$n_{s,0.002}$	$0.964^{+0.016}_{-0.014}$	$\sigma_8(0.15)$	$0.748^{+0.013}_{-0.011}$
A_{100}^{PS}	248^{+60}_{-50}	Y_P	$0.242^{+0.032}_{-0.030}$	$f\sigma_8(0.38)$	$0.476^{+0.010}_{-0.010}$
A_{143}^{PS}	42^{+20}_{-20}	Y_P^{BBN}	$0.243^{+0.032}_{-0.030}$	$\sigma_8(0.38)$	$0.663^{+0.012}_{-0.010}$
A_{217}^{PS}	109^{+30}_{-30}	Age/Gyr	$13.808^{+0.075}_{-0.077}$	$f\sigma_8(0.51)$	$0.4746^{+0.0091}_{-0.0091}$
A^{kSZ}	—	z_*	$1089.9^{+1.1}_{-0.94}$	$\sigma_8(0.51)$	$0.620^{+0.011}_{-0.0098}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	r_*	$144.54^{+0.58}_{-0.57}$	$f\sigma_8(0.61)$	$0.4694^{+0.0085}_{-0.0083}$
c_{217}	$0.9997^{+0.0037}_{-0.0027}$	$100\theta_*$	$1.04105^{+0.00065}_{-0.00065}$	$\sigma_8(0.61)$	$0.590^{+0.010}_{-0.0098}$
H_0	$67.3^{+1.3}_{-1.3}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.885^{+0.056}_{-0.056}$	$f\sigma_8(2.33)$	$0.2973^{+0.0054}_{-0.0052}$
Ω_Λ	$0.685^{+0.016}_{-0.016}$	z_{drag}	$1059.7^{+1.7}_{-1.7}$	$\sigma_8(2.33)$	$0.3063^{+0.0059}_{-0.0057}$
Ω_m	$0.315^{+0.016}_{-0.016}$	r_{drag}	$147.23^{+0.62}_{-0.61}$	f_{2000}^{143}	29^{+7}_{-7}
$\Omega_m h^2$	$0.1428^{+0.0022}_{-0.0023}$	k_{D}	$0.14081^{+0.00092}_{-0.0011}$	$f_{2000}^{143 \times 217}$	32^{+5}_{-5}
$\Omega_m h^3$	$0.0961^{+0.0011}_{-0.0011}$	$100\theta_{\text{D}}$	$0.1607^{+0.0013}_{-0.0011}$	f_{2000}^{217}	$106.6^{+4.7}_{-4.6}$
σ_8	$0.810^{+0.013}_{-0.012}$	z_{eq}	3396^{+53}_{-54}	χ^2_{lensing}	$9.21 (\nu: 0.2)$
S_8	$0.830^{+0.026}_{-0.025}$	k_{eq}	$0.01037^{+0.00016}_{-0.00016}$	χ^2_{small}	$396.9 (\nu: 1.5)$
$\sigma_8 \Omega_m^{0.5}$	$0.455^{+0.014}_{-0.014}$	$100\theta_{\text{eq}}$	$0.814^{+0.010}_{-0.010}$	χ^2_{lowl}	$23.7 (\nu: 1.0)$
$\sigma_8 \Omega_m^{0.25}$	$0.607^{+0.013}_{-0.013}$	$100\theta_{\text{s,eq}}$	$0.4499^{+0.0053}_{-0.0051}$	χ^2_{prior}	$9.7 (\nu: 9.7)$
$\sigma_8/h^{0.5}$	$0.987^{+0.018}_{-0.018}$	$H(0.15)$	$72.6^{+1.1}_{-1.1}$	χ^2_{CMB}	$7367 (\nu: 10475489.5)$

$\bar{\chi}^2_{\text{eff}} = 11951.89$; $\Delta\bar{\chi}^2_{\text{eff}} = 9150.79$; $R - 1 = 0.01571$

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02237^{+0.00035}_{-0.00035}$	z_{re}	$7.9^{+1.2}_{-1.3}$	$D_{\text{M}}(0.51)$	1980^{+20}_{-21}
$\Omega_c h^2$	$0.1192^{+0.0018}_{-0.0018}$	$10^9 A_s$	$2.104^{+0.060}_{-0.057}$	$H(0.61)$	$95.36^{+0.55}_{-0.52}$
$100\theta_{MC}$	$1.0410^{+0.0012}_{-0.0011}$	$10^9 A_s e^{-2\tau}$	$1.879^{+0.024}_{-0.023}$	$D_{\text{M}}(0.61)$	2304^{+22}_{-23}
τ	$0.056^{+0.013}_{-0.012}$	D_{40}	1227^{+29}_{-30}	$H(2.33)$	$236.0^{+1.2}_{-1.2}$
Y_{He}	$0.245^{+0.031}_{-0.028}$	D_{220}	5732^{+76}_{-76}	$D_{\text{M}}(2.33)$	5761^{+27}_{-29}
$\ln(10^{10} A_s)$	$3.046^{+0.029}_{-0.027}$	D_{810}	2538^{+26}_{-26}	$f\sigma_8(0.15)$	$0.456^{+0.011}_{-0.011}$
n_s	$0.967^{+0.014}_{-0.013}$	D_{1420}	$817.0^{+9.5}_{-9.8}$	$\sigma_8(0.15)$	$0.748^{+0.013}_{-0.012}$
y_{cal}	$1.0007^{+0.0047}_{-0.0048}$	D_{2000}	$230.8^{+4.0}_{-4.4}$	$f\sigma_8(0.38)$	$0.4744^{+0.0094}_{-0.0093}$
A_{217}^{CIB}	43^{+20}_{-20}	$n_{s,0.002}$	$0.967^{+0.014}_{-0.013}$	$\sigma_8(0.38)$	$0.663^{+0.012}_{-0.011}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.245^{+0.031}_{-0.028}$	$f\sigma_8(0.51)$	$0.4732^{+0.0088}_{-0.0086}$
A_{143}^{tSZ}	$4.7^{+4.0}_{-4.3}$	Y_P^{BBN}	$0.247^{+0.031}_{-0.028}$	$\sigma_8(0.51)$	$0.621^{+0.011}_{-0.010}$
A_{100}^{PS}	249^{+60}_{-50}	Age/Gyr	$13.792^{+0.064}_{-0.066}$	$f\sigma_8(0.61)$	$0.4683^{+0.0083}_{-0.0081}$
A_{143}^{PS}	42^{+20}_{-20}	z_*	$1089.8^{+1.0}_{-0.98}$	$\sigma_8(0.61)$	$0.591^{+0.010}_{-0.0099}$
A_{217}^{PS}	109^{+30}_{-30}	r_*	$144.64^{+0.53}_{-0.53}$	$f\sigma_8(2.33)$	$0.2980^{+0.0054}_{-0.0051}$
A^{kSZ}	—	$100\theta_*$	$1.04115^{+0.00061}_{-0.00061}$	$\sigma_8(2.33)$	$0.3072^{+0.0057}_{-0.0055}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.893^{+0.053}_{-0.053}$	f_{2000}^{143}	29^{+7}_{-7}
c_{217}	$0.9997^{+0.0038}_{-0.0028}$	z_{drag}	$1059.9^{+1.6}_{-1.5}$	$f_{2000}^{143 \times 217}$	32^{+5}_{-5}
H_0	$67.7^{+1.0}_{-0.95}$	r_{drag}	$147.31^{+0.59}_{-0.59}$	f_{2000}^{217}	$106.8^{+4.8}_{-4.5}$
Ω_{Λ}	$0.689^{+0.012}_{-0.012}$	k_{D}	$0.14064^{+0.00086}_{-0.0010}$	χ_{lensing}^2	$9.17 (\nu: 0.2)$
Ω_m	$0.311^{+0.012}_{-0.012}$	$100\theta_{\text{D}}$	$0.1608^{+0.0012}_{-0.0011}$	χ_{small}^2	$397.2 (\nu: 1.9)$
$\Omega_m h^2$	$0.1422^{+0.0018}_{-0.0018}$	z_{eq}	3382^{+43}_{-42}	χ_{lowl}^2	$23.2 (\nu: 0.7)$
$\Omega_m h^3$	$0.0962^{+0.0011}_{-0.0011}$	k_{eq}	$0.01032^{+0.00013}_{-0.00013}$	$\chi_{6\text{DF}}^2$	$0.052 (\nu: 0.0)$
σ_8	$0.810^{+0.014}_{-0.013}$	$100\theta_{\text{eq}}$	$0.8169^{+0.0080}_{-0.0078}$	χ_{MGS}^2	$1.29 (\nu: 0.1)$
S_8	$0.824^{+0.021}_{-0.021}$	$100\theta_{\text{s,eq}}$	$0.4513^{+0.0041}_{-0.0040}$	χ_{DR12BAO}^2	$4.8 (\nu: 0.9)$
$\sigma_8 \Omega_m^{0.5}$	$0.451^{+0.011}_{-0.011}$	$H(0.15)$	$72.94^{+0.89}_{-0.84}$	χ_{prior}^2	$9.7 (\nu: 9.8)$
$\sigma_8 \Omega_m^{0.25}$	$0.604^{+0.012}_{-0.012}$	$D_{\text{M}}(0.15)$	$640.8^{+8.3}_{-8.6}$	χ_{CMB}^2	$7367 (\nu: 10475217.5)$
$\sigma_8/h^{0.5}$	$0.984^{+0.017}_{-0.017}$	$H(0.38)$	$83.04^{+0.71}_{-0.67}$	χ_{BAO}^2	$6.1 (\nu: 0.6)$
$r_{\text{drag}} h$	$99.7^{+1.6}_{-1.5}$	$D_{\text{M}}(0.38)$	1528^{+17}_{-18}		
$\langle d^2 \rangle^{1/2}$	$2.436^{+0.043}_{-0.042}$	$H(0.51)$	$89.75^{+0.61}_{-0.58}$		

$$\bar{\chi}_{\text{eff}}^2 = 11957.86; \Delta\bar{\chi}_{\text{eff}}^2 = 9150.38; R - 1 = 0.02091$$

20.18 base_yhe_CamSpecHM_TTTEEE_lowl_lowE_post_Riess18_zre6p5/base_yhe_plikHM_TTTEEE_lowl_lowE_post_Riess18_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02253^{+0.00042}_{-0.00039}$	$r_{\text{drag}} h$	$100.7^{+2.4}_{-2.2}$	$D_{\text{M}}(0.15)$	635^{+12}_{-12}
$\Omega_c h^2$	$0.1181^{+0.0027}_{-0.0027}$	$\langle d^2 \rangle^{1/2}$	$2.413^{+0.062}_{-0.062}$	$H(0.38)$	$83.48^{+0.96}_{-0.92}$
$100\theta_{MC}$	$1.0414^{+0.0013}_{-0.0012}$	z_{re}	< 9.37	$D_{\text{M}}(0.38)$	1517^{+24}_{-24}
τ	$0.057^{+0.016}_{-0.014}$	$10^9 A_s$	$2.108^{+0.071}_{-0.065}$	$H(0.51)$	$90.12^{+0.78}_{-0.77}$
Y_{He}	$0.254^{+0.034}_{-0.029}$	$10^9 A_s e^{-2\tau}$	$1.878^{+0.024}_{-0.024}$	$D_{\text{M}}(0.51)$	1967^{+28}_{-29}
$\ln(10^{10} A_s)$	$3.048^{+0.034}_{-0.031}$	D_{40}	1215^{+33}_{-34}	$H(0.61)$	$95.68^{+0.70}_{-0.66}$
n_s	$0.973^{+0.017}_{-0.015}$	D_{220}	5733^{+73}_{-75}	$D_{\text{M}}(0.61)$	2290^{+31}_{-32}
y_{cal}	$1.0007^{+0.0046}_{-0.0048}$	D_{810}	2538^{+25}_{-26}	$H(2.33)$	$235.5^{+1.6}_{-1.6}$
A_{217}^{CIB}	44^{+10}_{-20}	D_{1420}	$816.9^{+9.6}_{-10}$	$D_{\text{M}}(2.33)$	5746^{+33}_{-36}
$\xi^{tSZ-CIB}$	—	D_{2000}	$230.3^{+4.3}_{-4.6}$	$f\sigma_8(0.15)$	$0.450^{+0.016}_{-0.016}$
A_{143}^{tSZ}	$4.6^{+4.0}_{-4.3}$	$n_{s,0.002}$	$0.973^{+0.017}_{-0.015}$	$\sigma_8(0.15)$	$0.748^{+0.015}_{-0.014}$
A_{100}^{PS}	252^{+50}_{-50}	Y_P	$0.254^{+0.034}_{-0.029}$	$f\sigma_8(0.38)$	$0.470^{+0.014}_{-0.013}$
A_{143}^{PS}	43^{+20}_{-20}	Y_P^{BBN}	$0.256^{+0.034}_{-0.029}$	$\sigma_8(0.38)$	$0.664^{+0.014}_{-0.012}$
A_{217}^{PS}	108^{+30}_{-30}	Age/Gyr	$13.758^{+0.075}_{-0.082}$	$f\sigma_8(0.51)$	$0.470^{+0.012}_{-0.012}$
A^{kSZ}	—	z_*	$1089.9^{+1.1}_{-1.0}$	$\sigma_8(0.51)$	$0.622^{+0.013}_{-0.011}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	r_*	$144.76^{+0.63}_{-0.63}$	$f\sigma_8(0.61)$	$0.466^{+0.011}_{-0.011}$
c_{217}	$0.9997^{+0.0038}_{-0.0028}$	$100\theta_*$	$1.04135^{+0.00071}_{-0.00065}$	$\sigma_8(0.61)$	$0.592^{+0.012}_{-0.010}$
H_0	$68.3^{+1.4}_{-1.4}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.901^{+0.058}_{-0.060}$	$f\sigma_8(2.33)$	$0.2988^{+0.0062}_{-0.0054}$
Ω_Λ	$0.697^{+0.018}_{-0.017}$	z_{drag}	$1060.5^{+1.9}_{-1.7}$	$\sigma_8(2.33)$	$0.3085^{+0.0069}_{-0.0058}$
Ω_m	$0.303^{+0.017}_{-0.018}$	r_{drag}	$147.38^{+0.65}_{-0.66}$	f_{2000}^{143}	30^{+7}_{-7}
$\Omega_m h^2$	$0.1413^{+0.0025}_{-0.0026}$	k_{D}	$0.1403^{+0.0010}_{-0.0012}$	$f_{2000}^{143 \times 217}$	33^{+5}_{-5}
$\Omega_m h^3$	$0.0965^{+0.0011}_{-0.0011}$	$100\theta_{\text{D}}$	$0.1611^{+0.0013}_{-0.0011}$	f_{2000}^{217}	$107.5^{+5.1}_{-4.5}$
σ_8	$0.809^{+0.016}_{-0.016}$	z_{eq}	3362^{+60}_{-62}	χ_{small}^2	$397.4 (\nu: 2.9)$
S_8	$0.813^{+0.031}_{-0.030}$	k_{eq}	$0.01026^{+0.00018}_{-0.00019}$	χ_{lowl}^2	$22.3 (\nu: 0.7)$
$\sigma_8 \Omega_m^{0.5}$	$0.445^{+0.017}_{-0.017}$	$100\theta_{\text{eq}}$	$0.822^{+0.012}_{-0.012}$	χ_{H073p45}^2	$9.7 (\nu: 3.6)$
$\sigma_8 \Omega_m^{0.25}$	$0.600^{+0.017}_{-0.016}$	$100\theta_{\text{s,eq}}$	$0.4536^{+0.0064}_{-0.0059}$	χ_{prior}^2	$9.8 (\nu: 10.6)$
$\sigma_8/h^{0.5}$	$0.978^{+0.023}_{-0.023}$	$H(0.15)$	$73.5^{+1.3}_{-1.2}$	χ_{CMB}^2	$7360 (\nu: 10475686.4)$

$$\bar{\chi}_{\text{eff}}^2 = 11953.75; \Delta\bar{\chi}_{\text{eff}}^2 = 9149.01; R - 1 = 0.05858$$

20.19 base_yhe_CamSpecHM_TTTEEE_lowl_lowE_Aver15/base_yhe_plikHM_TTTEEE_lowl_lowE_Aver15

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02230^{+0.00032}_{-0.00032}$	$r_{\text{drag}} h$	$99.1^{+2.2}_{-2.1}$	$D_{\text{M}}(0.15)$	644^{+11}_{-11}
$\Omega_c h^2$	$0.1199^{+0.0028}_{-0.0028}$	$\langle d^2 \rangle^{1/2}$	$2.442^{+0.058}_{-0.058}$	$H(0.38)$	$82.80^{+0.78}_{-0.75}$
$100\theta_{MC}$	$1.04082^{+0.00067}_{-0.00068}$	z_{re}	$7.6^{+1.6}_{-1.6}$	$D_{\text{M}}(0.38)$	1535^{+21}_{-21}
τ	$0.053^{+0.016}_{-0.016}$	$10^9 A_s$	$2.092^{+0.070}_{-0.068}$	$H(0.51)$	$89.56^{+0.62}_{-0.59}$
Y_{He}	$0.2435^{+0.0075}_{-0.0075}$	$10^9 A_s e^{-2\tau}$	$1.881^{+0.024}_{-0.023}$	$D_{\text{M}}(0.51)$	1988^{+25}_{-25}
$\ln(10^{10} A_s)$	$3.041^{+0.033}_{-0.033}$	D_{40}	1230^{+27}_{-26}	$H(0.61)$	$95.21^{+0.50}_{-0.48}$
n_s	$0.9645^{+0.0094}_{-0.0093}$	D_{220}	5725^{+78}_{-78}	$D_{\text{M}}(0.61)$	2312^{+26}_{-27}
y_{cal}	$1.0005^{+0.0049}_{-0.0049}$	D_{810}	2537^{+27}_{-27}	$H(2.33)$	$236.4^{+1.7}_{-1.7}$
A_{217}^{CIB}	43^{+10}_{-20}	D_{1420}	$816.5^{+9.5}_{-9.7}$	$D_{\text{M}}(2.33)$	5767^{+22}_{-23}
$\xi^{tSZ-CIB}$	—	D_{2000}	$230.7^{+3.3}_{-3.3}$	$f\sigma_8(0.15)$	$0.459^{+0.017}_{-0.017}$
A_{143}^{tSZ}	$4.7^{+3.9}_{-4.3}$	$n_{s,0.002}$	$0.9645^{+0.0094}_{-0.0093}$	$\sigma_8(0.15)$	$0.748^{+0.013}_{-0.014}$
A_{100}^{PS}	249^{+60}_{-50}	Y_P	$0.2435^{+0.0075}_{-0.0075}$	$f\sigma_8(0.38)$	$0.476^{+0.014}_{-0.014}$
A_{143}^{PS}	42^{+20}_{-20}	Y_P^{BBN}	$0.2448^{+0.0075}_{-0.0076}$	$\sigma_8(0.38)$	$0.662^{+0.011}_{-0.012}$
A_{217}^{PS}	109^{+30}_{-30}	Age/Gyr	$13.807^{+0.051}_{-0.052}$	$f\sigma_8(0.51)$	$0.475^{+0.012}_{-0.012}$
A^{kSZ}	—	z_*	$1089.92^{+0.59}_{-0.58}$	$\sigma_8(0.51)$	$0.620^{+0.011}_{-0.011}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	r_*	$144.51^{+0.64}_{-0.64}$	$f\sigma_8(0.61)$	$0.469^{+0.011}_{-0.011}$
c_{217}	$0.9996^{+0.0037}_{-0.0027}$	$100\theta_*$	$1.04106^{+0.00061}_{-0.00063}$	$\sigma_8(0.61)$	$0.589^{+0.010}_{-0.010}$
H_0	$67.3^{+1.2}_{-1.2}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.881^{+0.060}_{-0.060}$	$f\sigma_8(2.33)$	$0.2970^{+0.0051}_{-0.0050}$
Ω_Λ	$0.684^{+0.017}_{-0.017}$	z_{drag}	$1059.72^{+0.75}_{-0.74}$	$\sigma_8(2.33)$	$0.3061^{+0.0054}_{-0.0052}$
Ω_m	$0.316^{+0.017}_{-0.017}$	r_{drag}	$147.19^{+0.65}_{-0.64}$	f_{2000}^{143}	29^{+6}_{-6}
$\Omega_m h^2$	$0.1429^{+0.0027}_{-0.0027}$	k_{D}	$0.14079^{+0.00073}_{-0.00076}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
$\Omega_m h^3$	$0.09614^{+0.00068}_{-0.00067}$	$100\theta_{\text{D}}$	$0.16076^{+0.00047}_{-0.00044}$	f_{2000}^{217}	$106.8^{+3.7}_{-3.7}$
σ_8	$0.810^{+0.015}_{-0.015}$	z_{eq}	3399^{+63}_{-63}	χ_{small}^2	$397.0 (\nu: 1.5)$
S_8	$0.830^{+0.033}_{-0.032}$	k_{eq}	$0.01037^{+0.00019}_{-0.00019}$	χ_{lowl}^2	$23.5 (\nu: 0.6)$
$\sigma_8 \Omega_m^{0.5}$	$0.455^{+0.018}_{-0.018}$	$100\theta_{\text{eq}}$	$0.814^{+0.012}_{-0.012}$	χ_{Aver15}^2	$0.9 (\nu: 0.8)$
$\sigma_8 \Omega_m^{0.25}$	$0.607^{+0.017}_{-0.017}$	$100\theta_{\text{s,eq}}$	$0.4496^{+0.0062}_{-0.0060}$	χ_{prior}^2	$9.6 (\nu: 9.5)$
$\sigma_8/h^{0.5}$	$0.987^{+0.024}_{-0.024}$	$H(0.15)$	$72.6^{+1.1}_{-1.0}$	χ_{CMB}^2	$7358 (\nu: 10475471.3)$

Best-fit $\chi_{\text{eff}}^2 = 11927.35$; $\Delta\chi_{\text{eff}}^2 = 9161.78$; $\bar{\chi}_{\text{eff}}^2 = 11943.52$; $\Delta\bar{\chi}_{\text{eff}}^2 = 9150.81$; $R - 1 = 0.01118$
 χ_{eff}^2 : Abund - Yp_Aver2015: 0.08 (Δ 0.06) CMB - simall_100x143_offlike5_EE_Aplanck_B: 402.51 (Δ 6.45) commander_dx12_v3.2.29: 23.31 (Δ -0.17) CamSpec like_10.7HM_1400_unified: 11498.08

20.20 base_yhe_CamSpecHM_TTTEEE_lowl_lowE_Aver15_post_BAO/base_yhe_plikHM_TTTEEE_lowl_lowE_Aver15_post_BAO

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02236^{+0.00029}_{-0.00029}$	z_{re}	$7.7^{+1.6}_{-1.6}$	$D_{\text{M}}(0.51)$	1980^{+18}_{-18}
$\Omega_c h^2$	$0.1191^{+0.0020}_{-0.0020}$	$10^9 A_s$	$2.093^{+0.071}_{-0.068}$	$H(0.61)$	$95.34^{+0.40}_{-0.38}$
$100\theta_{MC}$	$1.04093^{+0.00062}_{-0.00063}$	$10^9 A_s e^{-2\tau}$	$1.877^{+0.022}_{-0.021}$	$D_{\text{M}}(0.61)$	2304^{+19}_{-20}
τ	$0.054^{+0.016}_{-0.015}$	D_{40}	1226^{+25}_{-24}	$H(2.33)$	$236.0^{+1.3}_{-1.3}$
Y_{He}	$0.2437^{+0.0073}_{-0.0074}$	D_{220}	5729^{+77}_{-77}	$D_{\text{M}}(2.33)$	5762^{+19}_{-19}
$\ln(10^{10} A_s)$	$3.041^{+0.034}_{-0.033}$	D_{810}	2536^{+26}_{-27}	$f\sigma_8(0.15)$	$0.455^{+0.013}_{-0.013}$
n_s	$0.9665^{+0.0081}_{-0.0080}$	D_{1420}	$817.0^{+9.4}_{-9.6}$	$\sigma_8(0.15)$	$0.746^{+0.013}_{-0.013}$
y_{cal}	$1.0006^{+0.0048}_{-0.0049}$	D_{2000}	$230.9^{+3.2}_{-3.3}$	$f\sigma_8(0.38)$	$0.473^{+0.012}_{-0.011}$
A_{217}^{CIB}	43^{+20}_{-20}	$n_{s,0.002}$	$0.9665^{+0.0081}_{-0.0080}$	$\sigma_8(0.38)$	$0.662^{+0.012}_{-0.011}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.2437^{+0.0073}_{-0.0074}$	$f\sigma_8(0.51)$	$0.472^{+0.011}_{-0.010}$
A_{143}^{tSZ}	$4.7^{+3.9}_{-4.3}$	Y_P^{BBN}	$0.2451^{+0.0073}_{-0.0074}$	$\sigma_8(0.51)$	$0.619^{+0.011}_{-0.010}$
A_{100}^{PS}	248^{+60}_{-50}	Age/Gyr	$13.795^{+0.043}_{-0.043}$	$f\sigma_8(0.61)$	$0.467^{+0.010}_{-0.0095}$
A_{143}^{PS}	42^{+20}_{-20}	z_*	$1089.79^{+0.50}_{-0.50}$	$\sigma_8(0.61)$	$0.589^{+0.010}_{-0.0098}$
A_{217}^{PS}	109^{+20}_{-30}	r_*	$144.68^{+0.51}_{-0.49}$	$f\sigma_8(2.33)$	$0.2971^{+0.0052}_{-0.0050}$
A^{kSZ}	—	$100\theta_*$	$1.04116^{+0.00057}_{-0.00059}$	$\sigma_8(2.33)$	$0.3064^{+0.0054}_{-0.0052}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.896^{+0.049}_{-0.048}$	f_{2000}^{143}	29^{+6}_{-6}
c_{217}	$0.9996^{+0.0037}_{-0.0027}$	z_{drag}	$1059.79^{+0.75}_{-0.74}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
H_0	$67.66^{+0.92}_{-0.89}$	r_{drag}	$147.34^{+0.55}_{-0.53}$	f_{2000}^{217}	$106.7^{+3.7}_{-3.8}$
Ω_Λ	$0.689^{+0.012}_{-0.012}$	k_{D}	$0.14066^{+0.00066}_{-0.00070}$	χ_{small}^2	$397.1 (\nu: 1.8)$
Ω_m	$0.311^{+0.012}_{-0.012}$	$100\theta_{\text{D}}$	$0.16074^{+0.00047}_{-0.00045}$	χ_{lowl}^2	$23.10 (\nu: 0.4)$
$\Omega_m h^2$	$0.1421^{+0.0019}_{-0.0020}$	z_{eq}	3381^{+46}_{-47}	χ_{Aver15}^2	$0.9 (\nu: 0.8)$
$\Omega_m h^3$	$0.09615^{+0.00069}_{-0.00067}$	k_{eq}	$0.01032^{+0.00014}_{-0.00014}$	$\chi_{6\text{DF}}^2$	$0.052 (\nu: 0.0)$
σ_8	$0.807^{+0.015}_{-0.014}$	$100\theta_{\text{eq}}$	$0.8172^{+0.0088}_{-0.0086}$	χ_{MGS}^2	$1.30 (\nu: 0.1)$
S_8	$0.821^{+0.026}_{-0.025}$	$100\theta_{\text{s,eq}}$	$0.4514^{+0.0046}_{-0.0044}$	χ_{DR12BAO}^2	$4.8 (\nu: 1.0)$
$\sigma_8 \Omega_m^{0.5}$	$0.450^{+0.014}_{-0.014}$	$H(0.15)$	$72.93^{+0.79}_{-0.77}$	χ_{prior}^2	$9.7 (\nu: 9.7)$
$\sigma_8 \Omega_m^{0.25}$	$0.603^{+0.014}_{-0.014}$	$D_{\text{M}}(0.15)$	$640.8^{+7.7}_{-7.8}$	χ_{BAO}^2	$6.1 (\nu: 0.6)$
$\sigma_8/h^{0.5}$	$0.982^{+0.021}_{-0.020}$	$H(0.38)$	$83.03^{+0.58}_{-0.56}$	χ_{CMB}^2	$7357 (\nu: 10474970.7)$
$r_{\text{drag}} h$	$99.7^{+1.6}_{-1.5}$	$D_{\text{M}}(0.38)$	1529^{+15}_{-16}		
$\langle d^2 \rangle^{1/2}$	$2.430^{+0.051}_{-0.049}$	$H(0.51)$	$89.73^{+0.47}_{-0.46}$		

$$\bar{\chi}_{\text{eff}}^2 = 11949.33; \Delta\bar{\chi}_{\text{eff}}^2 = 9150.32; R - 1 = 0.01547$$

20.21 base_yhe_CamSpecHM_TTTEEE_lowl_lowE_Aver15_post_lensing/base_yhe_plikHM_TTTEEE_lowl_lowE_Aver15_post_lensing

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02231^{+0.00031}_{-0.00031}$	$\langle d^2 \rangle^{1/2}$	$2.443^{+0.044}_{-0.044}$	$D_M(0.38)$	1534^{+19}_{-19}
$\Omega_c h^2$	$0.1199^{+0.0024}_{-0.0024}$	z_{re}	$7.6^{+1.5}_{-1.5}$	$H(0.51)$	$89.57^{+0.57}_{-0.54}$
$100\theta_{MC}$	$1.04082^{+0.00066}_{-0.00067}$	$10^9 A_s$	$2.094^{+0.061}_{-0.059}$	$D_M(0.51)$	1987^{+22}_{-22}
τ	$0.054^{+0.015}_{-0.015}$	$10^9 A_s e^{-2\tau}$	$1.881^{+0.022}_{-0.021}$	$H(0.61)$	$95.22^{+0.47}_{-0.45}$
Y_{He}	$0.2434^{+0.0075}_{-0.0075}$	D_{40}	1231^{+24}_{-24}	$D_M(0.61)$	2312^{+24}_{-24}
$\ln(10^{10} A_s)$	$3.042^{+0.029}_{-0.029}$	D_{220}	5727^{+77}_{-78}	$H(2.33)$	$236.4^{+1.5}_{-1.4}$
n_s	$0.9644^{+0.0088}_{-0.0089}$	D_{810}	2537^{+26}_{-27}	$D_M(2.33)$	5767^{+22}_{-22}
y_{cal}	$1.0005^{+0.0048}_{-0.0049}$	D_{1420}	$816.5^{+9.4}_{-9.9}$	$f\sigma_8(0.15)$	$0.459^{+0.013}_{-0.013}$
A_{217}^{CIB}	43^{+20}_{-20}	D_{2000}	$230.7^{+3.2}_{-3.3}$	$\sigma_8(0.15)$	$0.748^{+0.011}_{-0.011}$
$\xi^{tSZ-CIB}$	—	$n_{s,0.002}$	$0.9644^{+0.0088}_{-0.0089}$	$f\sigma_8(0.38)$	$0.476^{+0.010}_{-0.010}$
A_{143}^{tSZ}	$4.7^{+3.9}_{-4.3}$	Y_P	$0.2434^{+0.0075}_{-0.0075}$	$\sigma_8(0.38)$	$0.6624^{+0.0095}_{-0.0095}$
A_{100}^{PS}	249^{+50}_{-50}	Y_P^{BBN}	$0.2448^{+0.0075}_{-0.0075}$	$f\sigma_8(0.51)$	$0.4745^{+0.0091}_{-0.0092}$
A_{143}^{PS}	42^{+20}_{-20}	Age/Gyr	$13.806^{+0.049}_{-0.049}$	$\sigma_8(0.51)$	$0.6198^{+0.0090}_{-0.0089}$
A_{217}^{PS}	109^{+20}_{-30}	z_*	$1089.91^{+0.56}_{-0.55}$	$f\sigma_8(0.61)$	$0.4692^{+0.0083}_{-0.0084}$
A^{kSZ}	—	r_*	$144.52^{+0.56}_{-0.55}$	$\sigma_8(0.61)$	$0.5896^{+0.0086}_{-0.0085}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	$100\theta_*$	$1.04106^{+0.00060}_{-0.00062}$	$f\sigma_8(2.33)$	$0.2971^{+0.0046}_{-0.0044}$
c_{217}	$0.9996^{+0.0038}_{-0.0027}$	$D_M(z_*)/\text{Gpc}$	$13.882^{+0.052}_{-0.052}$	$\sigma_8(2.33)$	$0.3062^{+0.0050}_{-0.0048}$
H_0	$67.3^{+1.1}_{-1.1}$	z_{drag}	$1059.72^{+0.74}_{-0.74}$	f_{2000}^{143}	29^{+6}_{-6}
Ω_Λ	$0.685^{+0.015}_{-0.015}$	r_{drag}	$147.20^{+0.58}_{-0.57}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
Ω_m	$0.315^{+0.015}_{-0.015}$	k_D	$0.14079^{+0.00067}_{-0.00070}$	f_{2000}^{217}	$106.8^{+3.7}_{-3.8}$
$\Omega_m h^2$	$0.1428^{+0.0023}_{-0.0023}$	$100\theta_D$	$0.16075^{+0.00047}_{-0.00044}$	χ^2_{lensing}	$9.25 (\nu: 0.2)$
$\Omega_m h^3$	$0.09614^{+0.00067}_{-0.00066}$	z_{eq}	3398^{+55}_{-54}	χ^2_{small}	$396.9 (\nu: 1.4)$
σ_8	$0.810^{+0.012}_{-0.012}$	k_{eq}	$0.01037^{+0.00017}_{-0.00017}$	χ^2_{lowl}	$23.52 (\nu: 0.4)$
S_8	$0.830^{+0.025}_{-0.025}$	$100\theta_{\text{eq}}$	$0.814^{+0.010}_{-0.010}$	χ^2_{Aver15}	$0.9 (\nu: 0.8)$
$\sigma_8 \Omega_m^{0.5}$	$0.455^{+0.014}_{-0.014}$	$100\theta_{s,\text{eq}}$	$0.4497^{+0.0053}_{-0.0052}$	χ^2_{prior}	$9.7 (\nu: 9.7)$
$\sigma_8 \Omega_m^{0.25}$	$0.607^{+0.013}_{-0.013}$	$H(0.15)$	$72.64^{+0.94}_{-0.93}$	χ^2_{CMB}	$7366 (\nu: 10475624.9)$
$\sigma_8/h^{0.5}$	$0.987^{+0.018}_{-0.018}$	$D_M(0.15)$	$643.8^{+9.4}_{-9.3}$		
$r_{\text{drag}} h$	$99.1^{+1.9}_{-1.9}$	$H(0.38)$	$82.82^{+0.70}_{-0.68}$		

$\bar{\chi}^2_{\text{eff}} = 11952.40$; $\Delta\bar{\chi}^2_{\text{eff}} = 9150.90$; $R - 1 = 0.01479$

20.22 base_yhe_CamSpecHM_TTTEEE_lowl_lowE_Aver15_post_BAO_lensing/base_yhe_plikHM_TTTEEE_lowl_lowE_Aver15_post_BAO.l

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02236^{+0.00029}_{-0.00029}$	z_{re}	$7.8^{+1.5}_{-1.5}$	$D_{\text{M}}(0.51)$	1981^{+17}_{-17}
$\Omega_c h^2$	$0.1192^{+0.0018}_{-0.0019}$	$10^9 A_s$	$2.099^{+0.062}_{-0.058}$	$H(0.61)$	$95.33^{+0.39}_{-0.38}$
$100\theta_{MC}$	$1.04092^{+0.00062}_{-0.00063}$	$10^9 A_s e^{-2\tau}$	$1.878^{+0.021}_{-0.021}$	$D_{\text{M}}(0.61)$	2305^{+18}_{-19}
τ	$0.056^{+0.015}_{-0.014}$	D_{40}	1228^{+23}_{-23}	$H(2.33)$	$236.0^{+1.1}_{-1.2}$
Y_{He}	$0.2437^{+0.0073}_{-0.0074}$	D_{220}	5732^{+76}_{-76}	$D_{\text{M}}(2.33)$	5762^{+19}_{-19}
$\ln(10^{10} A_s)$	$3.044^{+0.029}_{-0.028}$	D_{810}	2537^{+26}_{-26}	$f\sigma_8(0.15)$	$0.456^{+0.011}_{-0.011}$
n_s	$0.9661^{+0.0079}_{-0.0079}$	D_{1420}	$817.2^{+9.3}_{-9.6}$	$\sigma_8(0.15)$	$0.747^{+0.011}_{-0.011}$
y_{cal}	$1.0007^{+0.0048}_{-0.0048}$	D_{2000}	$230.9^{+3.2}_{-3.2}$	$f\sigma_8(0.38)$	$0.4741^{+0.0091}_{-0.0092}$
A_{217}^{CIB}	43^{+20}_{-10}	$n_{s,0.002}$	$0.9661^{+0.0079}_{-0.0079}$	$\sigma_8(0.38)$	$0.6626^{+0.0096}_{-0.0095}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.2437^{+0.0073}_{-0.0074}$	$f\sigma_8(0.51)$	$0.4727^{+0.0082}_{-0.0083}$
A_{143}^{tSZ}	$4.7^{+3.9}_{-4.3}$	Y_P^{BBN}	$0.2450^{+0.0074}_{-0.0074}$	$\sigma_8(0.51)$	$0.6201^{+0.0091}_{-0.0090}$
A_{100}^{PS}	248^{+60}_{-50}	Age/Gyr	$13.795^{+0.042}_{-0.043}$	$f\sigma_8(0.61)$	$0.4678^{+0.0077}_{-0.0078}$
A_{143}^{PS}	42^{+20}_{-20}	z_*	$1089.79^{+0.50}_{-0.48}$	$\sigma_8(0.61)$	$0.5901^{+0.0087}_{-0.0085}$
A_{217}^{PS}	109^{+20}_{-30}	r_*	$144.65^{+0.47}_{-0.46}$	$f\sigma_8(2.33)$	$0.2975^{+0.0045}_{-0.0043}$
A^{kSZ}	—	$100\theta_*$	$1.04115^{+0.00057}_{-0.00058}$	$\sigma_8(2.33)$	$0.3068^{+0.0049}_{-0.0046}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.894^{+0.045}_{-0.044}$	f_{2000}^{143}	29^{+6}_{-6}
c_{217}	$0.9996^{+0.0037}_{-0.0027}$	z_{drag}	$1059.80^{+0.75}_{-0.74}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
H_0	$67.63^{+0.86}_{-0.84}$	r_{drag}	$147.32^{+0.51}_{-0.49}$	f_{2000}^{217}	$106.7^{+3.7}_{-3.7}$
Ω_Λ	$0.689^{+0.011}_{-0.011}$	k_{D}	$0.14068^{+0.00063}_{-0.00067}$	χ^2_{lensing}	$9.18 (\nu: 0.2)$
Ω_m	$0.311^{+0.011}_{-0.011}$	$100\theta_{\text{D}}$	$0.16073^{+0.00046}_{-0.00045}$	χ^2_{simall}	$397.2 (\nu: 1.7)$
$\Omega_m h^2$	$0.1422^{+0.0018}_{-0.0018}$	z_{eq}	3383^{+42}_{-43}	χ^2_{lowl}	$23.21 (\nu: 0.3)$
$\Omega_m h^3$	$0.09617^{+0.00068}_{-0.00067}$	k_{eq}	$0.01032^{+0.00013}_{-0.00013}$	χ^2_{Aver15}	$0.9 (\nu: 0.8)$
σ_8	$0.809^{+0.012}_{-0.012}$	$100\theta_{\text{eq}}$	$0.8168^{+0.0081}_{-0.0078}$	$\chi^2_{6\text{DF}}$	$0.053 (\nu: 0.0)$
S_8	$0.823^{+0.021}_{-0.021}$	$100\theta_{\text{s,eq}}$	$0.4512^{+0.0041}_{-0.0040}$	χ^2_{MGS}	$1.26 (\nu: 0.1)$
$\sigma_8 \Omega_m^{0.5}$	$0.451^{+0.012}_{-0.011}$	$H(0.15)$	$72.91^{+0.74}_{-0.73}$	χ^2_{DR12BAO}	$4.8 (\nu: 0.9)$
$\sigma_8 \Omega_m^{0.25}$	$0.604^{+0.011}_{-0.011}$	$D_{\text{M}}(0.15)$	$641.1^{+7.2}_{-7.3}$	χ^2_{prior}	$9.7 (\nu: 9.6)$
$\sigma_8/h^{0.5}$	$0.984^{+0.016}_{-0.016}$	$H(0.38)$	$83.01^{+0.56}_{-0.54}$	χ^2_{CMB}	$7366 (\nu: 10475555.7)$
$r_{\text{drag}} h$	$99.6^{+1.5}_{-1.4}$	$D_{\text{M}}(0.38)$	1529^{+15}_{-15}	χ^2_{BAO}	$6.1 (\nu: 0.6)$
$\langle d^2 \rangle^{1/2}$	$2.435^{+0.041}_{-0.040}$	$H(0.51)$	$89.72^{+0.46}_{-0.44}$		

$$\bar{\chi}^2_{\text{eff}} = 11958.34; \Delta\bar{\chi}^2_{\text{eff}} = 9150.69; R - 1 = 0.01579$$

20.23 **base_yhe_CamSpecHM_TTTEEE_lowl_lowE_Aver15_post_zre6p5/base_yhe_plikHM_TTTEEE_lowl_lowE_Aver15_post_zre6p5**

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02231^{+0.00032}_{-0.00031}$	$r_{\text{drag}} h$	$99.1^{+2.2}_{-2.1}$	$D_{\text{M}}(0.15)$	644^{+11}_{-11}
$\Omega_c h^2$	$0.1199^{+0.0028}_{-0.0028}$	$\langle d^2 \rangle^{1/2}$	$2.445^{+0.057}_{-0.056}$	$H(0.38)$	$82.82^{+0.78}_{-0.75}$
$100\theta_{MC}$	$1.04083^{+0.00067}_{-0.00068}$	z_{re}	< 8.90	$D_{\text{M}}(0.38)$	1534^{+21}_{-21}
τ	$0.055^{+0.013}_{-0.012}$	$10^9 A_s$	$2.098^{+0.060}_{-0.055}$	$H(0.51)$	$89.57^{+0.62}_{-0.59}$
Y_{He}	$0.2435^{+0.0075}_{-0.0076}$	$10^9 A_s e^{-2\tau}$	$1.880^{+0.024}_{-0.023}$	$D_{\text{M}}(0.51)$	1987^{+24}_{-25}
$\ln(10^{10} A_s)$	$3.043^{+0.028}_{-0.026}$	D_{40}	1230^{+27}_{-27}	$H(0.61)$	$95.22^{+0.50}_{-0.47}$
n_s	$0.9647^{+0.0094}_{-0.0093}$	D_{220}	5725^{+78}_{-78}	$D_{\text{M}}(0.61)$	2312^{+26}_{-27}
y_{cal}	$1.0005^{+0.0049}_{-0.0049}$	D_{810}	2537^{+27}_{-27}	$H(2.33)$	$236.4^{+1.7}_{-1.7}$
A_{217}^{CIB}	43^{+10}_{-20}	D_{1420}	$816.5^{+9.5}_{-9.7}$	$D_{\text{M}}(2.33)$	5767^{+22}_{-23}
$\xi^{tSZ-CIB}$	—	D_{2000}	$230.7^{+3.3}_{-3.3}$	$f\sigma_8(0.15)$	$0.459^{+0.017}_{-0.017}$
A_{143}^{tSZ}	$4.7^{+3.9}_{-4.3}$	$n_{s,0.002}$	$0.9647^{+0.0094}_{-0.0093}$	$\sigma_8(0.15)$	$0.749^{+0.013}_{-0.012}$
A_{100}^{PS}	248^{+60}_{-50}	Y_P	$0.2435^{+0.0075}_{-0.0076}$	$f\sigma_8(0.38)$	$0.477^{+0.013}_{-0.014}$
A_{143}^{PS}	42^{+20}_{-20}	Y_P^{BBN}	$0.2449^{+0.0075}_{-0.0076}$	$\sigma_8(0.38)$	$0.663^{+0.010}_{-0.010}$
A_{217}^{PS}	109^{+30}_{-30}	Age/Gyr	$13.806^{+0.050}_{-0.051}$	$f\sigma_8(0.51)$	$0.475^{+0.012}_{-0.012}$
A^{kSZ}	—	z_*	$1089.92^{+0.59}_{-0.58}$	$\sigma_8(0.51)$	$0.6204^{+0.0095}_{-0.0091}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	r_*	$144.52^{+0.64}_{-0.64}$	$f\sigma_8(0.61)$	$0.470^{+0.011}_{-0.011}$
c_{217}	$0.9996^{+0.0037}_{-0.0027}$	$100\theta_*$	$1.04107^{+0.00061}_{-0.00063}$	$\sigma_8(0.61)$	$0.5902^{+0.0089}_{-0.0085}$
H_0	$67.3^{+1.2}_{-1.2}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.882^{+0.060}_{-0.060}$	$f\sigma_8(2.33)$	$0.2975^{+0.0044}_{-0.0042}$
Ω_Λ	$0.685^{+0.017}_{-0.017}$	z_{drag}	$1059.72^{+0.74}_{-0.74}$	$\sigma_8(2.33)$	$0.3065^{+0.0046}_{-0.0043}$
Ω_m	$0.315^{+0.017}_{-0.017}$	r_{drag}	$147.20^{+0.65}_{-0.64}$	f_{2000}^{143}	29^{+6}_{-6}
$\Omega_m h^2$	$0.1428^{+0.0026}_{-0.0027}$	k_{D}	$0.14078^{+0.00072}_{-0.00076}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
$\Omega_m h^3$	$0.09615^{+0.00068}_{-0.00068}$	$100\theta_{\text{D}}$	$0.16076^{+0.00047}_{-0.00044}$	f_{2000}^{217}	$106.8^{+3.7}_{-3.7}$
σ_8	$0.810^{+0.015}_{-0.014}$	z_{eq}	3398^{+63}_{-63}	χ_{small}^2	$396.9 (\nu: 1.6)$
S_8	$0.831^{+0.033}_{-0.032}$	k_{eq}	$0.01037^{+0.00019}_{-0.00019}$	χ_{lowl}^2	$23.5 (\nu: 0.6)$
$\sigma_8 \Omega_m^{0.5}$	$0.455^{+0.018}_{-0.018}$	$100\theta_{\text{eq}}$	$0.814^{+0.012}_{-0.012}$	χ_{Aver15}^2	$0.9 (\nu: 0.8)$
$\sigma_8 \Omega_m^{0.25}$	$0.607^{+0.016}_{-0.017}$	$100\theta_{\text{s,eq}}$	$0.4497^{+0.0062}_{-0.0060}$	χ_{prior}^2	$9.6 (\nu: 9.5)$
$\sigma_8/h^{0.5}$	$0.988^{+0.023}_{-0.023}$	$H(0.15)$	$72.6^{+1.1}_{-1.0}$	χ_{CMB}^2	$7357 (\nu: 10475390.3)$

$$\bar{\chi}_{\text{eff}}^2 = 11943.23; \Delta\bar{\chi}_{\text{eff}}^2 = 9150.77; R - 1 = 0.01041$$

20.24 base_yhe_CamSpecHM_TTTEEE_lowl_lowE_Aver15_post_BAO_zre6p5/base_yhe_plikHM_TTTEEE_lowl_lowE_Aver15_post_BAO_z

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02236^{+0.00029}_{-0.00029}$	z_{re}	< 8.99	$D_{\text{M}}(0.51)$	1980^{+18}_{-18}
$\Omega_c h^2$	$0.1191^{+0.0020}_{-0.0021}$	$10^9 A_s$	$2.098^{+0.062}_{-0.057}$	$H(0.61)$	$95.35^{+0.40}_{-0.39}$
$100\theta_{MC}$	$1.04093^{+0.00062}_{-0.00063}$	$10^9 A_s e^{-2\tau}$	$1.877^{+0.022}_{-0.021}$	$D_{\text{M}}(0.61)$	2304^{+20}_{-20}
τ	$0.056^{+0.014}_{-0.012}$	D_{40}	1226^{+25}_{-25}	$H(2.33)$	$236.0^{+1.2}_{-1.3}$
Y_{He}	$0.2438^{+0.0073}_{-0.0074}$	D_{220}	5729^{+77}_{-76}	$D_{\text{M}}(2.33)$	5762^{+19}_{-19}
$\ln(10^{10} A_s)$	$3.043^{+0.029}_{-0.027}$	D_{810}	2536^{+26}_{-26}	$f\sigma_8(0.15)$	$0.455^{+0.013}_{-0.013}$
n_s	$0.9666^{+0.0080}_{-0.0081}$	D_{1420}	$817.0^{+9.4}_{-9.6}$	$\sigma_8(0.15)$	$0.747^{+0.012}_{-0.012}$
y_{cal}	$1.0006^{+0.0048}_{-0.0049}$	D_{2000}	$230.9^{+3.2}_{-3.3}$	$f\sigma_8(0.38)$	$0.474^{+0.011}_{-0.011}$
A_{217}^{CIB}	43^{+20}_{-10}	$n_{s,0.002}$	$0.9666^{+0.0080}_{-0.0081}$	$\sigma_8(0.38)$	$0.662^{+0.010}_{-0.0099}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.2438^{+0.0073}_{-0.0074}$	$f\sigma_8(0.51)$	$0.472^{+0.010}_{-0.0097}$
A_{143}^{tSZ}	$4.7^{+3.9}_{-4.3}$	Y_P^{BBN}	$0.2451^{+0.0073}_{-0.0074}$	$\sigma_8(0.51)$	$0.6199^{+0.0096}_{-0.0091}$
A_{100}^{PS}	248^{+60}_{-50}	Age/Gyr	$13.794^{+0.043}_{-0.043}$	$f\sigma_8(0.61)$	$0.4674^{+0.0097}_{-0.0089}$
A_{143}^{PS}	42^{+20}_{-20}	z_*	$1089.79^{+0.50}_{-0.50}$	$\sigma_8(0.61)$	$0.5899^{+0.0091}_{-0.0086}$
A_{217}^{PS}	109^{+20}_{-30}	r_*	$144.68^{+0.51}_{-0.49}$	$f\sigma_8(2.33)$	$0.2975^{+0.0046}_{-0.0043}$
A^{kSZ}	—	$100\theta_*$	$1.04116^{+0.00057}_{-0.00059}$	$\sigma_8(2.33)$	$0.3067^{+0.0048}_{-0.0044}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.896^{+0.049}_{-0.048}$	f_{2000}^{143}	29^{+6}_{-6}
c_{217}	$0.9996^{+0.0037}_{-0.0027}$	z_{drag}	$1059.80^{+0.75}_{-0.74}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
H_0	$67.67^{+0.92}_{-0.89}$	r_{drag}	$147.35^{+0.55}_{-0.53}$	f_{2000}^{217}	$106.7^{+3.7}_{-3.8}$
Ω_{Λ}	$0.690^{+0.012}_{-0.012}$	k_{D}	$0.14065^{+0.00066}_{-0.00070}$	χ_{small}^2	$397.1 (\nu: 1.8)$
Ω_m	$0.310^{+0.012}_{-0.012}$	$100\theta_{\text{D}}$	$0.16073^{+0.00047}_{-0.00045}$	χ_{lowl}^2	$23.11 (\nu: 0.4)$
$\Omega_m h^2$	$0.1421^{+0.0019}_{-0.0020}$	z_{eq}	3380^{+46}_{-47}	χ_{Aver15}^2	$0.9 (\nu: 0.8)$
$\Omega_m h^3$	$0.09616^{+0.00069}_{-0.00067}$	k_{eq}	$0.01032^{+0.00014}_{-0.00014}$	$\chi_{6\text{DF}}^2$	$0.051 (\nu: 0.0)$
σ_8	$0.808^{+0.014}_{-0.013}$	$100\theta_{\text{eq}}$	$0.8173^{+0.0089}_{-0.0085}$	χ_{MGS}^2	$1.31 (\nu: 0.1)$
S_8	$0.822^{+0.026}_{-0.025}$	$100\theta_{\text{s,eq}}$	$0.4515^{+0.0046}_{-0.0044}$	χ_{DR12BAO}^2	$4.7 (\nu: 1.0)$
$\sigma_8 \Omega_m^{0.5}$	$0.450^{+0.014}_{-0.014}$	$H(0.15)$	$72.94^{+0.79}_{-0.77}$	χ_{prior}^2	$9.7 (\nu: 9.7)$
$\sigma_8 \Omega_m^{0.25}$	$0.603^{+0.014}_{-0.013}$	$D_{\text{M}}(0.15)$	$640.7^{+7.7}_{-7.7}$	χ_{BAO}^2	$6.1 (\nu: 0.6)$
$\sigma_8/h^{0.5}$	$0.983^{+0.021}_{-0.019}$	$H(0.38)$	$83.03^{+0.58}_{-0.57}$	χ_{CMB}^2	$7357 (\nu: 10474820.8)$
$r_{\text{drag}} h$	$99.7^{+1.6}_{-1.5}$	$D_{\text{M}}(0.38)$	1528^{+15}_{-16}		
$\langle d^2 \rangle^{1/2}$	$2.432^{+0.050}_{-0.046}$	$H(0.51)$	$89.74^{+0.47}_{-0.46}$		

$$\bar{\chi}_{\text{eff}}^2 = 11949.07; \Delta \bar{\chi}_{\text{eff}}^2 = 9150.26; R - 1 = 0.01536$$

20.25 base_yhe_CamSpecHM_TTTEEE_lowl_lowE_Aver15_post_lensing_zre6p5/base_yhe_plikHM_TTTEEE_lowl_lowE_Aver15_post_lensing

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02232^{+0.00031}_{-0.00031}$	$\langle d^2 \rangle^{1/2}$	$2.444^{+0.043}_{-0.043}$	$D_M(0.38)$	1534^{+18}_{-18}
$\Omega_c h^2$	$0.1198^{+0.0023}_{-0.0024}$	z_{re}	< 8.86	$H(0.51)$	$89.59^{+0.56}_{-0.53}$
$100\theta_{MC}$	$1.04083^{+0.00066}_{-0.00067}$	$10^9 A_s$	$2.098^{+0.054}_{-0.051}$	$D_M(0.51)$	1986^{+21}_{-22}
τ	$0.055^{+0.013}_{-0.012}$	$10^9 A_s e^{-2\tau}$	$1.880^{+0.022}_{-0.021}$	$H(0.61)$	$95.23^{+0.46}_{-0.44}$
Y_{He}	$0.2435^{+0.0074}_{-0.0075}$	D_{40}	1231^{+24}_{-24}	$D_M(0.61)$	2311^{+23}_{-23}
$\ln(10^{10} A_s)$	$3.044^{+0.026}_{-0.024}$	D_{220}	5727^{+77}_{-78}	$H(2.33)$	$236.4^{+1.4}_{-1.4}$
n_s	$0.9646^{+0.0087}_{-0.0086}$	D_{810}	2537^{+26}_{-27}	$D_M(2.33)$	5767^{+21}_{-22}
y_{cal}	$1.0005^{+0.0048}_{-0.0049}$	D_{1420}	$816.5^{+9.4}_{-9.9}$	$f\sigma_8(0.15)$	$0.459^{+0.013}_{-0.013}$
A_{217}^{CIB}	43^{+20}_{-10}	D_{2000}	$230.7^{+3.2}_{-3.3}$	$\sigma_8(0.15)$	$0.748^{+0.010}_{-0.0097}$
$\xi^{tSZ-CIB}$	—	$n_{s,0.002}$	$0.9646^{+0.0087}_{-0.0086}$	$f\sigma_8(0.38)$	$0.476^{+0.010}_{-0.010}$
A_{143}^{tSZ}	$4.7^{+3.9}_{-4.3}$	Y_P	$0.2435^{+0.0074}_{-0.0075}$	$\sigma_8(0.38)$	$0.6630^{+0.0087}_{-0.0085}$
A_{100}^{PS}	248^{+50}_{-50}	Y_P^{BBN}	$0.2448^{+0.0075}_{-0.0075}$	$f\sigma_8(0.51)$	$0.4747^{+0.0090}_{-0.0091}$
A_{143}^{PS}	42^{+20}_{-20}	Age/Gyr	$13.805^{+0.048}_{-0.049}$	$\sigma_8(0.51)$	$0.6203^{+0.0082}_{-0.0079}$
A_{217}^{PS}	109^{+20}_{-30}	z_*	$1089.90^{+0.55}_{-0.54}$	$f\sigma_8(0.61)$	$0.4695^{+0.0081}_{-0.0082}$
A^{kSZ}	—	r_*	$144.53^{+0.55}_{-0.54}$	$\sigma_8(0.61)$	$0.5902^{+0.0078}_{-0.0075}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	$100\theta_*$	$1.04107^{+0.00060}_{-0.00061}$	$f\sigma_8(2.33)$	$0.2974^{+0.0041}_{-0.0038}$
c_{217}	$0.9996^{+0.0038}_{-0.0027}$	$D_M(z_*)/\text{Gpc}$	$13.883^{+0.052}_{-0.051}$	$\sigma_8(2.33)$	$0.3065^{+0.0044}_{-0.0041}$
H_0	$67.4^{+1.1}_{-1.0}$	z_{drag}	$1059.73^{+0.73}_{-0.75}$	f_{2000}^{143}	29^{+6}_{-6}
Ω_Λ	$0.685^{+0.014}_{-0.015}$	r_{drag}	$147.21^{+0.57}_{-0.55}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
Ω_m	$0.315^{+0.015}_{-0.014}$	k_D	$0.14077^{+0.00066}_{-0.00070}$	f_{2000}^{217}	$106.8^{+3.6}_{-3.8}$
$\Omega_m h^2$	$0.1428^{+0.0022}_{-0.0022}$	$100\theta_D$	$0.16075^{+0.00046}_{-0.00044}$	χ_{lensing}^2	$9.21 (\nu: 0.2)$
$\Omega_m h^3$	$0.09615^{+0.00067}_{-0.00066}$	z_{eq}	3396^{+53}_{-53}	χ_{small}^2	$396.9 (\nu: 1.4)$
σ_8	$0.810^{+0.012}_{-0.011}$	k_{eq}	$0.01037^{+0.00016}_{-0.00016}$	χ_{lowl}^2	$23.50 (\nu: 0.4)$
S_8	$0.830^{+0.025}_{-0.025}$	$100\theta_{\text{eq}}$	$0.814^{+0.010}_{-0.0099}$	χ_{Aver15}^2	$0.9 (\nu: 0.8)$
$\sigma_8 \Omega_m^{0.5}$	$0.455^{+0.014}_{-0.014}$	$100\theta_{\text{s,eq}}$	$0.4499^{+0.0052}_{-0.0051}$	χ_{prior}^2	$9.7 (\nu: 9.7)$
$\sigma_8 \Omega_m^{0.25}$	$0.607^{+0.013}_{-0.013}$	$H(0.15)$	$72.67^{+0.92}_{-0.90}$	χ_{CMB}^2	$7366 (\nu: 10475579.3)$
$\sigma_8/h^{0.5}$	$0.987^{+0.018}_{-0.018}$	$D_M(0.15)$	$643.5^{+9.1}_{-9.2}$		
$r_{\text{drag}} h$	$99.1^{+1.9}_{-1.8}$	$H(0.38)$	$82.84^{+0.69}_{-0.66}$		

$\bar{\chi}_{\text{eff}}^2 = 11952.14$; $\Delta\bar{\chi}_{\text{eff}}^2 = 9150.88$; $R - 1 = 0.01491$

20.26 base_yhe_CamSpecHM_TTTEEE_lowl_lowE_Aver15_post_BAO_lensing_zre6p5/base_yhe_plikHM_TTTEEE_lowl_lowE_Aver15_post

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02236^{+0.00030}_{-0.00029}$	z_{re}	$7.8^{+1.2}_{-1.3}$	$D_{\text{M}}(0.51)$	1981^{+17}_{-17}
$\Omega_c h^2$	$0.1192^{+0.0018}_{-0.0019}$	$10^9 A_s$	$2.102^{+0.056}_{-0.053}$	$H(0.61)$	$95.34^{+0.39}_{-0.38}$
$100\theta_{MC}$	$1.04092^{+0.00062}_{-0.00063}$	$10^9 A_s e^{-2\tau}$	$1.878^{+0.021}_{-0.021}$	$D_{\text{M}}(0.61)$	2305^{+18}_{-19}
τ	$0.056^{+0.013}_{-0.012}$	D_{40}	1228^{+23}_{-23}	$H(2.33)$	$236.0^{+1.1}_{-1.2}$
Y_{He}	$0.2437^{+0.0073}_{-0.0074}$	D_{220}	5732^{+76}_{-75}	$D_{\text{M}}(2.33)$	5762^{+19}_{-19}
$\ln(10^{10} A_s)$	$3.045^{+0.026}_{-0.025}$	D_{810}	2537^{+26}_{-26}	$f\sigma_8(0.15)$	$0.456^{+0.011}_{-0.011}$
n_s	$0.9662^{+0.0079}_{-0.0078}$	D_{1420}	$817.1^{+9.3}_{-9.6}$	$\sigma_8(0.15)$	$0.748^{+0.011}_{-0.0098}$
y_{cal}	$1.0007^{+0.0048}_{-0.0048}$	D_{2000}	$230.9^{+3.2}_{-3.2}$	$f\sigma_8(0.38)$	$0.4742^{+0.0090}_{-0.0090}$
A_{217}^{CIB}	43^{+20}_{-10}	$n_{s,0.002}$	$0.9662^{+0.0079}_{-0.0078}$	$\sigma_8(0.38)$	$0.6630^{+0.0093}_{-0.0085}$
$\xi^{tSZ-CIB}$	—	Y_P	$0.2437^{+0.0073}_{-0.0074}$	$f\sigma_8(0.51)$	$0.4729^{+0.0082}_{-0.0081}$
A_{143}^{tSZ}	$4.7^{+3.9}_{-4.3}$	Y_P^{BBN}	$0.2450^{+0.0073}_{-0.0074}$	$\sigma_8(0.51)$	$0.6205^{+0.0085}_{-0.0082}$
A_{100}^{PS}	248^{+60}_{-50}	Age/Gyr	$13.795^{+0.042}_{-0.043}$	$f\sigma_8(0.61)$	$0.4680^{+0.0075}_{-0.0075}$
A_{143}^{PS}	42^{+20}_{-20}	z_*	$1089.79^{+0.49}_{-0.49}$	$\sigma_8(0.61)$	$0.5904^{+0.0081}_{-0.0078}$
A_{217}^{PS}	109^{+20}_{-30}	r_*	$144.66^{+0.46}_{-0.45}$	$f\sigma_8(2.33)$	$0.2977^{+0.0042}_{-0.0040}$
A^{kSZ}	—	$100\theta_*$	$1.04115^{+0.00057}_{-0.00058}$	$\sigma_8(2.33)$	$0.3070^{+0.0044}_{-0.0042}$
c_{100}	$0.9986^{+0.0022}_{-0.0027}$	$D_{\text{M}}(z_*)/\text{Gpc}$	$13.894^{+0.045}_{-0.044}$	f_{2000}^{143}	29^{+6}_{-6}
c_{217}	$0.9996^{+0.0037}_{-0.0027}$	z_{drag}	$1059.80^{+0.74}_{-0.75}$	$f_{2000}^{143 \times 217}$	32^{+4}_{-4}
H_0	$67.64^{+0.86}_{-0.84}$	r_{drag}	$147.33^{+0.50}_{-0.49}$	f_{2000}^{217}	$106.7^{+3.6}_{-3.8}$
Ω_Λ	$0.689^{+0.011}_{-0.011}$	k_{D}	$0.14068^{+0.00063}_{-0.00067}$	χ^2_{lensing}	$9.14 (\nu: 0.2)$
Ω_m	$0.311^{+0.011}_{-0.011}$	$100\theta_{\text{D}}$	$0.16073^{+0.00046}_{-0.00045}$	χ^2_{simall}	$397.2 (\nu: 1.8)$
$\Omega_m h^2$	$0.1422^{+0.0017}_{-0.0018}$	z_{eq}	3382^{+42}_{-43}	χ^2_{lowl}	$23.21 (\nu: 0.3)$
$\Omega_m h^3$	$0.09617^{+0.00068}_{-0.00067}$	k_{eq}	$0.01032^{+0.00013}_{-0.00013}$	χ^2_{Aver15}	$0.9 (\nu: 0.8)$
σ_8	$0.809^{+0.012}_{-0.011}$	$100\theta_{\text{eq}}$	$0.8169^{+0.0081}_{-0.0078}$	$\chi^2_{6\text{DF}}$	$0.051 (\nu: 0.0)$
S_8	$0.824^{+0.021}_{-0.021}$	$100\theta_{\text{s,eq}}$	$0.4513^{+0.0041}_{-0.0040}$	χ^2_{MGS}	$1.27 (\nu: 0.1)$
$\sigma_8 \Omega_m^{0.5}$	$0.451^{+0.012}_{-0.011}$	$H(0.15)$	$72.92^{+0.75}_{-0.72}$	χ^2_{DR12BAO}	$4.8 (\nu: 0.9)$
$\sigma_8 \Omega_m^{0.25}$	$0.604^{+0.011}_{-0.011}$	$D_{\text{M}}(0.15)$	$641.0^{+7.2}_{-7.2}$	χ^2_{prior}	$9.7 (\nu: 9.6)$
$\sigma_8/h^{0.5}$	$0.984^{+0.016}_{-0.016}$	$H(0.38)$	$83.02^{+0.55}_{-0.54}$	χ^2_{CMB}	$7366 (\nu: 10475459.6)$
$r_{\text{drag}} h$	$99.7^{+1.4}_{-1.4}$	$D_{\text{M}}(0.38)$	1529^{+14}_{-15}	χ^2_{BAO}	$6.1 (\nu: 0.5)$
$\langle d^2 \rangle^{1/2}$	$2.436^{+0.040}_{-0.039}$	$H(0.51)$	$89.73^{+0.46}_{-0.44}$		

$$\bar{\chi}^2_{\text{eff}} = 11958.15; \Delta\bar{\chi}^2_{\text{eff}} = 9150.65; R - 1 = 0.01663$$