

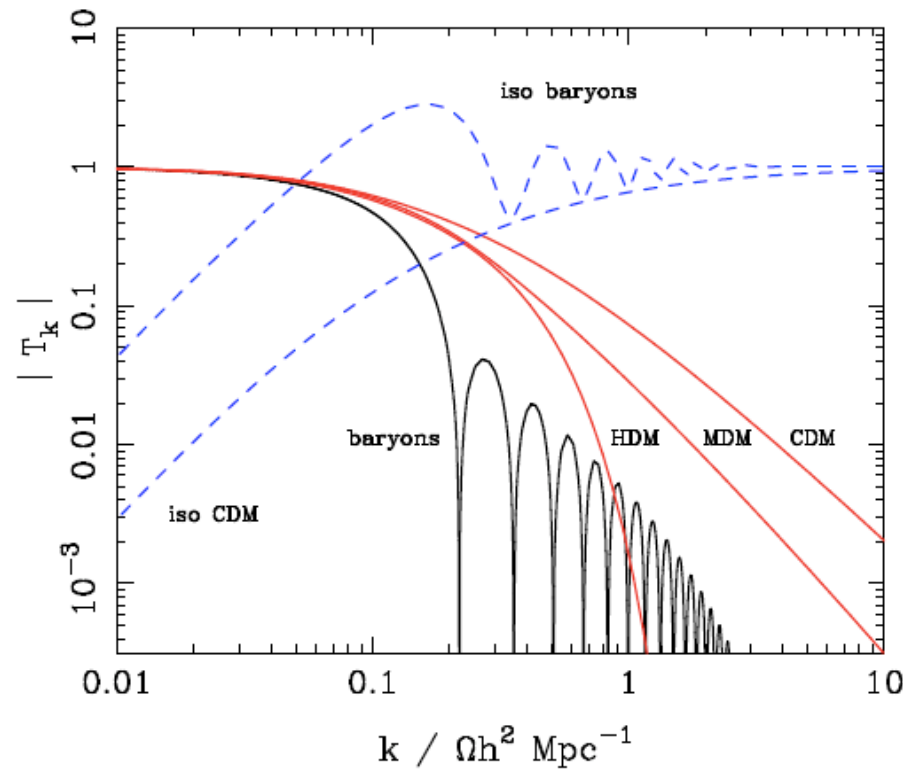
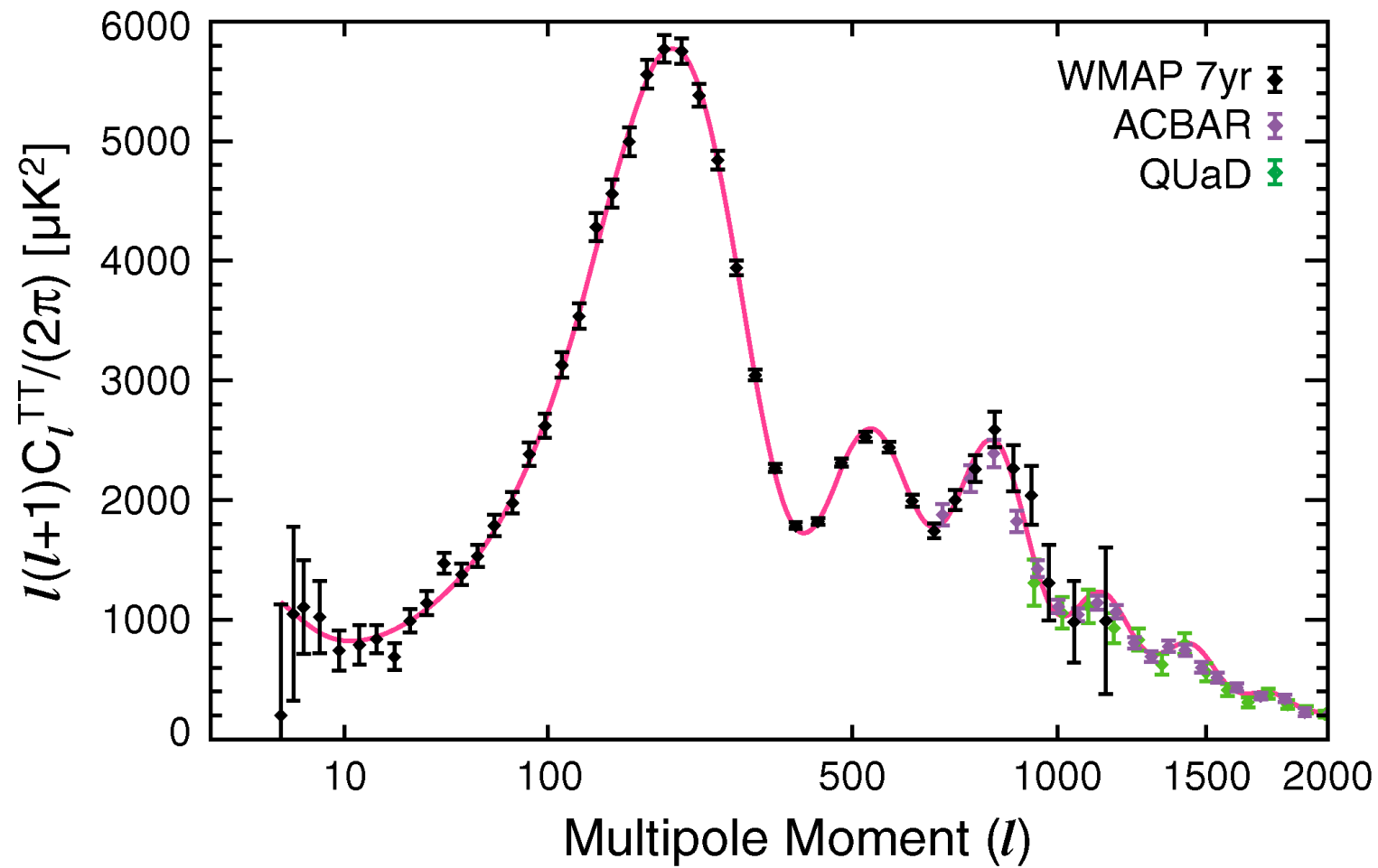


Figure 16. A plot of transfer functions for various adiabatic models, in which $T_k \rightarrow 1$ at small k . A number of possible matter contents are illustrated: pure baryons; pure CDM; pure HDM. For dark-matter models, the characteristic wavenumber scales proportional to $\Omega_m h^2$, marking the break scale corresponding to the horizon length at matter-radiation equality. The scaling for baryonic models does not obey this exactly; the plotted case corresponds to $\Omega_m = 1$, $h = 0.5$.

From Peacock & Heymans

<http://www.roe.ac.uk/~jap/teaching/cos5.html>



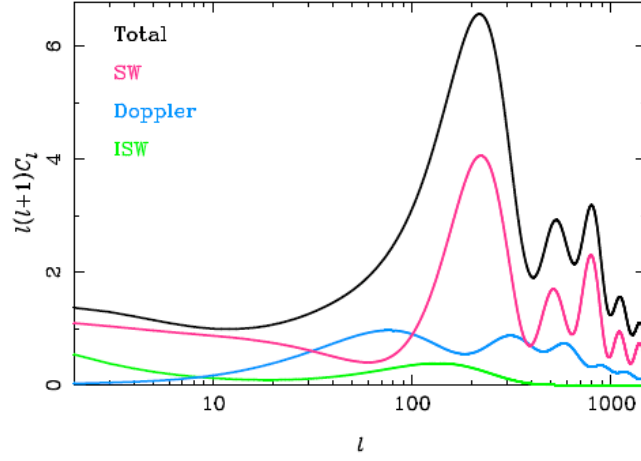


FIGURE 3. Contribution of the various terms in Eq. (20) to the temperature-anisotropy power spectrum from adiabatic initial conditions: $\delta\gamma/4 + \psi$ (denoted SW for Sachs-Wolfe [42]; magenta); Doppler effect from v_b (blue); and the integrated Sachs-Wolfe effect (ISW; green) coming from evolution of the potential along the line of sight. The units of the spectrum are arbitrary.

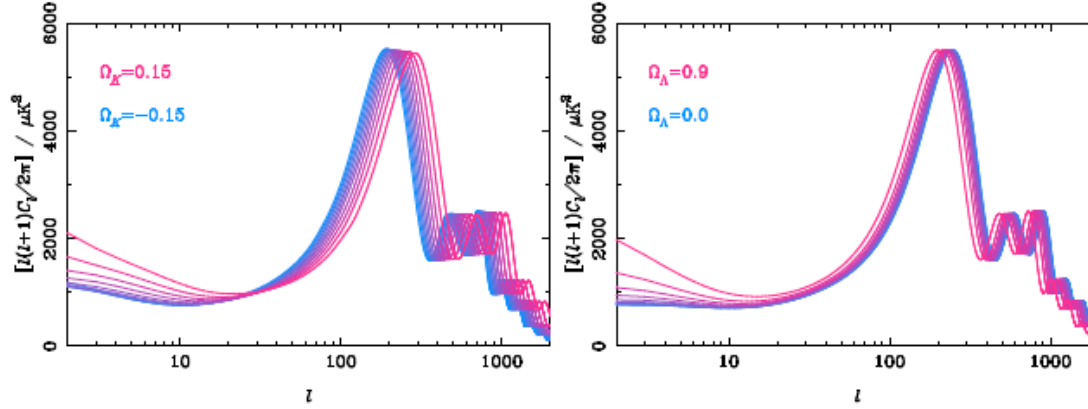
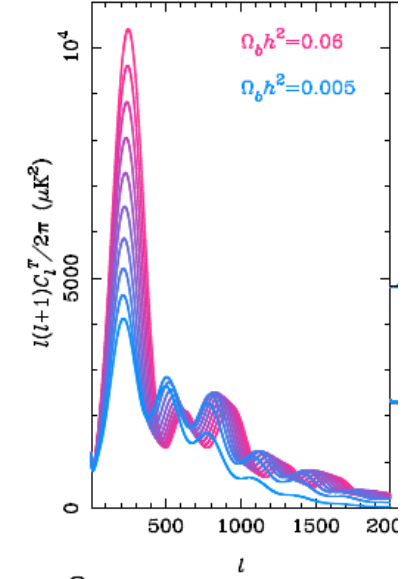


FIGURE 8. Variation of C_l^T with spatial curvature (left) and dark energy density (right). In both cases, $\Omega_b h^2$ and $\Omega_c h^2$ are fixed and the dark energy model is a cosmological constant.

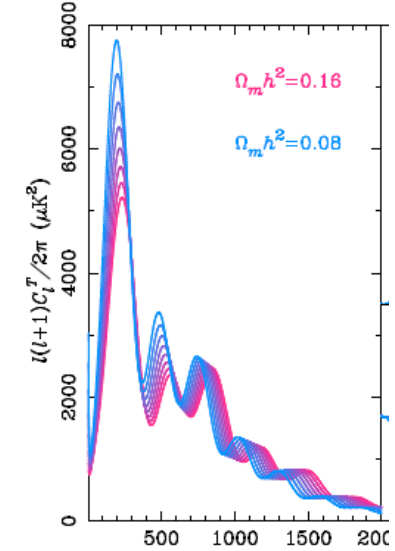


TABLE 1
SUMMARY OF THE COSMOLOGICAL PARAMETERS OF Λ CDM MODEL

Class	Parameter	WMAP 7-year ML ^a	WMAP+BAO+ H_0 ML	WMAP 7-year Mean ^b	WMAP+BAO+ H_0 Mean
Primary	$100\Omega_b h^2$	2.270	2.246	$2.258^{+0.057}_{-0.056}$	2.260 ± 0.053
	$\Omega_c h^2$	0.1107	0.1120	0.1109 ± 0.0056	0.1123 ± 0.0035
	Ω_Λ	0.738	0.728	0.734 ± 0.029	$0.728^{+0.015}_{-0.016}$
	n_s	0.969	0.961	0.963 ± 0.014	0.963 ± 0.012
	τ	0.086	0.087	0.088 ± 0.015	0.087 ± 0.014
	$\Delta_{\mathcal{R}}^2(k_0)^c$	2.38×10^{-9}	2.45×10^{-9}	$(2.43 \pm 0.11) \times 10^{-9}$	$(2.441^{+0.088}_{-0.092}) \times 10^{-9}$
Derived	σ_8	0.803	0.807	0.801 ± 0.030	0.809 ± 0.024
	H_0	71.4 km/s/Mpc	70.2 km/s/Mpc	71.0 ± 2.5 km/s/Mpc	$70.4^{+1.3}_{-1.4}$ km/s/Mpc
	Ω_b	0.0445	0.0455	0.0449 ± 0.0028	0.0456 ± 0.0016
	Ω_c	0.217	0.227	0.222 ± 0.026	0.227 ± 0.014
	$\Omega_m h^2$	0.1334	0.1344	$0.1334^{+0.0056}_{-0.0055}$	0.1349 ± 0.0036
	z_{reion}^d	10.3	10.5	10.5 ± 1.2	10.4 ± 1.2
	t_0^e	13.71 Gyr	13.78 Gyr	13.75 ± 0.13 Gyr	13.75 ± 0.11 Gyr

^aLarson et al. (2010). “ML” refers to the Maximum Likelihood parameters.

^bLarson et al. (2010). “Mean” refers to the mean of the posterior distribution of each parameter. The quoted errors show the 68% confidence levels (CL).

^c $\Delta_{\mathcal{R}}^2(k) = k^3 P_{\mathcal{R}}(k)/(2\pi^2)$ and $k_0 = 0.002 \text{ Mpc}^{-1}$.

^d“Redshift of reionization,” if the universe was reionized instantaneously from the neutral state to the fully ionized state at z_{reion} . Note that these values are somewhat different from those in Table 1 of Komatsu et al. (2009b), largely because of the changes in the treatment of reionization history in the Boltzmann code CAMB (Lewis 2008).

^eThe present-day age of the universe.

From WMAP 7 year paper (arXiv:1001.4538)