## WMAP Cosmological Parameters

**Model:** lcdm+tens  
**Data:** wmap9+spt+act+snls3

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>$10^9 \Delta^2_{\text{R}}$</td>
<td>$2.360^{+0.089}_{-0.088}$</td>
</tr>
<tr>
<td>$A_{\text{clustered}}$</td>
<td>$&lt; 10$ (95% CL)</td>
</tr>
<tr>
<td>$A_{\text{Poisson}}^{\text{SPT}}$</td>
<td>$&gt; 17$ (95% CL)</td>
</tr>
<tr>
<td>$d_A(z_{eq})$</td>
<td>$14280 \pm 84$ Mpc</td>
</tr>
<tr>
<td>$D_v(z = 0.57)/r_s(z_d)$</td>
<td>$12.99 \pm 0.23$</td>
</tr>
<tr>
<td>$k_{eq}$</td>
<td>$0.00967 \pm 0.00023$</td>
</tr>
<tr>
<td>$\ell_*$</td>
<td>$301.93^{+0.42}_{-0.41}$</td>
</tr>
<tr>
<td>$n_s$</td>
<td>$0.973 \pm 0.010$</td>
</tr>
<tr>
<td>$\Omega_b$</td>
<td>$0.0437 \pm 0.0016$</td>
</tr>
<tr>
<td>$\Omega_c$</td>
<td>$0.214 \pm 0.016$</td>
</tr>
<tr>
<td>$\Omega_{\Lambda}$</td>
<td>$0.742 \pm 0.017$</td>
</tr>
<tr>
<td>$\Omega_m h^2$</td>
<td>$0.1325 \pm 0.0032$</td>
</tr>
<tr>
<td>$r_s(z_d)$</td>
<td>$153.50 \pm 0.93$ Mpc</td>
</tr>
<tr>
<td>$r_s(z_{eq})/D_v(z = 0.2)$</td>
<td>$0.1945 \pm 0.0045$</td>
</tr>
<tr>
<td>$r_s(z_{eq})/D_v(z = 0.44)$</td>
<td>$0.0955 \pm 0.0018$</td>
</tr>
<tr>
<td>$r_s(z_{eq})/D_v(z = 0.57)$</td>
<td>$0.0770 \pm 0.0013$</td>
</tr>
<tr>
<td>$r_s(z_{eq})/D_v(z = 0.73)$</td>
<td>$0.06357 \pm 0.00097$</td>
</tr>
<tr>
<td>$R$</td>
<td>$1.714 \pm 0.11$</td>
</tr>
<tr>
<td>$\sigma_{8\Omega_m^{0.5}}$</td>
<td>$0.407 \pm 0.020$</td>
</tr>
<tr>
<td>$\sigma_{\text{SNLS}}$</td>
<td>$1.43 \pm 0.11$</td>
</tr>
<tr>
<td>$A_{\text{SZ}}$</td>
<td>$&lt; 1.0$ (95% CL)</td>
</tr>
<tr>
<td>$\tau$</td>
<td>$0.086 \pm 0.013$</td>
</tr>
<tr>
<td>$\theta_*$</td>
<td>$0.59617 \pm 0.00082$ °</td>
</tr>
<tr>
<td>$t_{\text{reion}}$</td>
<td>$473^{+65}_{-66}$ Myr</td>
</tr>
<tr>
<td>$z_d$</td>
<td>$1020.02 \pm 0.83$</td>
</tr>
<tr>
<td>$z_{\text{rec}}$</td>
<td>$1088.04^{+0.68}_{-0.67}$</td>
</tr>
<tr>
<td>$z_*$</td>
<td>$1090.82 \pm 0.65$</td>
</tr>
<tr>
<td>$H_0$</td>
<td>$71.8 \pm 1.6$ km/s/Mpc</td>
</tr>
<tr>
<td>$A_{\text{Poisson}}^{\text{ACT}}$</td>
<td>$15.0 \pm 2.3$</td>
</tr>
<tr>
<td>$\ell(\ell + 1)C_{220}/(2\pi)$</td>
<td>$5748 \pm 32 \mu$K$^2$</td>
</tr>
<tr>
<td>$d_A(z_{eq})$</td>
<td>$14116 \pm 86$ Mpc</td>
</tr>
<tr>
<td>$\eta$</td>
<td>$(6.15 \pm 0.10) \times 10^{-10}$</td>
</tr>
<tr>
<td>$n_b$</td>
<td>$(2.526 \pm 0.043) \times 10^{-7}$ cm$^{-3}$</td>
</tr>
<tr>
<td>$n_t$</td>
<td>$&gt; -0.023$ (95% CL)</td>
</tr>
<tr>
<td>$\Omega_b h^2$</td>
<td>$0.0225 \pm 0.00038$</td>
</tr>
<tr>
<td>$\Omega_c h^2$</td>
<td>$0.1100 \pm 0.0033$</td>
</tr>
<tr>
<td>$\Omega_{\Lambda} h^2$</td>
<td>$0.258 \pm 0.017$</td>
</tr>
<tr>
<td>$\Omega_m h^2$</td>
<td>$0.1325 \pm 0.0032$</td>
</tr>
<tr>
<td>$r_s(z_d)/D_v(z = 0.106)$</td>
<td>$0.3570 \pm 0.0089$</td>
</tr>
<tr>
<td>$r_s(z_d)/D_v(z = 0.35)$</td>
<td>$0.1165 \pm 0.0024$</td>
</tr>
<tr>
<td>$r_s(z_d)/D_v(z = 0.54)$</td>
<td>$0.0805 \pm 0.0014$</td>
</tr>
<tr>
<td>$r_s(z_d)/D_v(z = 0.6)$</td>
<td>$0.0739^{+0.0012}_{-0.0013}$</td>
</tr>
<tr>
<td>$r_s(z_d)/D_v(z = 0.73)$</td>
<td>$146.88^{+0.85}_{-0.86}$</td>
</tr>
<tr>
<td>$\sigma_8$</td>
<td>$4.01 \pm 0.017$</td>
</tr>
<tr>
<td>$\sigma_{8\Omega_m^{0.6}}$</td>
<td>$0.355 \pm 0.020$</td>
</tr>
<tr>
<td>$\beta_{\text{SNLS}}$</td>
<td>$3.26 \pm 0.11$</td>
</tr>
<tr>
<td>$t_0$</td>
<td>$13.694 \pm 0.077$ Gyr</td>
</tr>
<tr>
<td>$\theta_*$</td>
<td>$0.010405 \pm 0.000014$</td>
</tr>
<tr>
<td>$t_{\text{rec}}$</td>
<td>$286.0 \pm 1.8$</td>
</tr>
<tr>
<td>$t_*$</td>
<td>$379817^{+3064}_{-3077}$ yr</td>
</tr>
<tr>
<td>$z_{\text{eq}}$</td>
<td>$3172 \pm 76$</td>
</tr>
<tr>
<td>$z_{\text{reion}}$</td>
<td>$10.4 \pm 1.1$</td>
</tr>
</tbody>
</table>