

# DO LENSING STATISTICS RULE OUT A COSMOLOGICAL CONSTANT?

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We present new calculations of the gravitational lensing statistics following recent revised knowledge of the luminosity function and internal velocity dispersion of E/S0 galaxies which work as effective lenses for background high-redshift QSOs. We show that the theoretical prediction of the lensing statistics is much smaller than previously expected. In sharp contrast with the earlier statistics supporting an  $\Omega_0 = 1$  universe, the reported small lensing probability from the *Hubble Space Telescope (HST)* snapshot lens survey is in best agreement with a low-density, flat universe with  $\Omega_0 \simeq 0.2$  and  $\Omega_0 + \lambda_0 = 1$ . The age of this universe, combined with the *HST* measurement of a high value of the Hubble constant  $H_0$ , can be reconciled with the age of the oldest globular clusters in the Milky Way (ApJ, 1997, Vol. 489, in press).

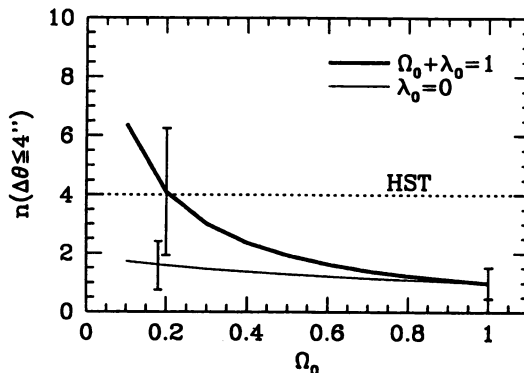


Figure 1. The number of lensed QSOs with  $\Delta\theta \leq 4''$  as a function of  $\Omega_0$  for a universe with  $\lambda_0 = 0$  (thin line) and a flat universe with  $\Omega_0 + \lambda_0 = 1$  (thick line).