

Cosmology Seminar

Dr. David Schlegel
Lawrence Berkeley Lab

BOSS: The Baryon Oscillation Spectroscopic Survey

The Baryon Oscillation Spectroscopic Survey (BOSS) is a Stage III dark energy experiment beginning this year. I will describe the current status of baryon acoustic oscillation (BAO) results as standard rulers for dark energy, and the design goals of the BOSS experiment. For the five years from 2009-2014, we will map 1.5 million galaxies at $z < 0.7$. A simultaneous survey of 160,000 QSOs will map the hydrogen gas in absorption at redshifts $2.3 < z < 3$. BOSS will provide the definitive measurement of the low redshift ($z < 0.7$) BAO scale, and it will pioneer a powerful new method of measuring BAO at high redshift. This will achieve precise stand-alone constraints on the properties of dark energy, the curvature of space, and the Hubble constant.

Thursday, May 8, 2008
12:10 PM – Room 416 PHY/GEO