

BAO Discussion Section

Will & Pablo's List: Methodology

- What is the best estimator to measure LSS/BAOs?
 - 3D vs 2D clustering: we are essentially 2D, systematics such as photo-z can be modeled more accurately in 2D?
 - $\xi(r)$ vs $P(k)$: bump vs oscillations or $w(\theta)$ vs C_l , whichever makes the error analysis and scale dependent bias modeling tractable
- What priors should be assumed? Ω_b/Ω_m , $\Omega_m h^2$, $\Omega_b h^2$ WMAP3 or Planck on $\Omega_m h^2$ and $\Omega_b h^2$ and so implicitly the baryon fraction
- How best to present results? From 2-D analysis, have r_s/D measured for many different redshifts, but not true for 3D analyses. $D(z)$ or $r_s/D(z)$, $H(z)$ constraints too weak

Will & Pablo's List: Systematics

- How well do we need to model non-linear effects, galaxy bias, redshift space distortions on large-scales to use the shape of the LSS power spectrum to help constrain DE? What tools are needed to address this issue (PT vs. nbody) ? *are redshift space distortions relevant for DES photo-z's?*
- How important is modelling these effects for the BAO? Can we simply assume damping with a Gaussian function, and fit? Does this work for photo-z errors as well? *not for photo-z if there are catastrophic errors*
- How much do BAO degrade as a function of photo-z errors? Can we use LSS analyses to feed back into testing photo-zs? compare radial and angular 2-pt amplitudes to match smoothing compare different galaxy types to get relative photo-z errors *self calibration of photo-z is an act of desperation!*

Will & Pablo's List: Systematics

- What are the degeneracies in these tests with bias and redshift-space distortions?
- Are there more critical systematics affecting BAOs? what is the impact on the measurement $w(z)$?

Will & Pablo's List: Beyond

- Including the bispectrum to get bias, giving large-scale matter clustering amplitude information. Will it work? Will anyone ever believe the results? *yes, no?*
- Including galaxy-galaxy lensing to get bias... *yes, no?*