

Reconstruction of Density field for Baryonic Acoustic Oscillations

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The dominant effect of the nonlinear evolution of the density field is the smoothing of the Baryonic Acoustic Oscillation (BAO) feature, the standard reconstruction technique has shown to reverse this smoothing recovering the linear density field. The standard reconstruction technique has been tested with simulations and very recently, it has been applied to SDSS galaxy data enabling a significant improvement in the precision of the BAO distance measurements.

We explore different methods to improve the standard reconstruction technique (Padmanabhan et al. 2012) and we tested with simulations and apply on SDSS-II/BOSS Data.

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