

Abstract Submitted
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Cosmological implications of baryon acoustic oscillation (BAO) measurements JOSE VAZQUEZ, Brookhaven National Lab, BOSS COLLABORATION — We present constraints on cosmological parameters and tests of dark models from the combination of baryon acoustic oscillation (BAO) with cosmic microwave background (CMB) data and a reanalysis of Type Ia supernova (SN) data. In particular, we take of high-precision BAO measurements from galaxy clustering the Lyman- α forest (LyaF) in the SDSS-III Baryon Oscillation Survey (BOSS). show that the flat Λ CDM model, that best describes the CMB data alone, is discrepant at 95% with the LyaF measurements. Hence, in order to reconcile them we consider models with more unusual histories of the dark energy, matter, or radiation components. In part we want to know what our combined data can place on interesting physical, such as neutrino masses, extra relativistic species, or dark energy that is dynamically significant at early times. But we also want to see whether any of these alternative models can resolve the discrepancy with the LyaF measurements at $z = 2.34$.

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