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Baryon Acoustic Oscillations in the Lyman-alpha forest of BOSS quasars JULIAN BAUTISTA, University of Utah, BARYON OSCILLATION SPECTROSCOPIC SURVEY COLLABORATION — I will present the measurement of baryon acoustic oscillations (BAO) using Lyman-alpha forests of BOSS quasars. The Lyman-alpha absorption in quasar spectra traces the matter distribution along the quasar lines of sight. Using 160,000 high-redshift quasars, the BAO scale is measured at 3% level in the flux correlation function. This translates into a 3% accuracy measurement of the expansion rate at z = 2.3, unique at this redshift. Combined with the local expansion rate, this result requires cosmological models with a dark energy component, as also inferred by previous supernovae studies.

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