BOSTON Boston University College of Arts & Sciences UNIVERSITY Institute for Astrophysical Research

2020–2021 ASTROPHYSICS SEMINAR SERIES

SDSS: 20 years of cosmological results

I will present the cosmological implications from final measurements of clustering using galaxies, quasars, and Ly α forests from the completed Sloan Digital Sky Survey (SDSS) lineage of experiments in large-scale structure. These experiments, composed of data from SDSS, SDSS-II, BOSS, and eBOSS, offer independent measurements of baryon acoustic oscillation (BAO) measurements of angular-diameter distances and Hubble distances relative to the sound horizon, rd, from eight different samples and six measurements of the growth rate parameter, fo8, from redshift-space distortions (RSD). This

composite sample is the most constraining of its kind and allows us to perform a comprehensive assessment of the cosmological model after two decades of dedicated spectroscopic observation. I will discuss the constraints on dark energy, massive neutrinos, and the Hubble tension.



Monday, November 2nd

3:30 - 4:30 p.m. See website for Zoom details Eva-Maria Mueller University of Oxford