

Séminaire de physique des particules et de cosmologie

Mardi 08/10/2019, 16:00-17:00

Orme des Merisiers Salle Claude Itzykson, Bât. 774

Cosmological Parameters from the BOSS Galaxy Power Spectrum

Marko Simonovic

CERN

I will present cosmological parameter measurements from the publicly available Baryon Oscillation Spectroscopic Survey (BOSS) data on anisotropic galaxy clustering in Fourier space. Assuming a minimal Λ CDM cosmology with varied massive neutrinos, fixing the primordial power spectrum tilt, and imposing the big bang nucleosynthesis (BBN) prior on the physical baryon density ω_b , the measured late-Universe parameters are: Hubble constant $H_0 = 67.89 \pm 1.06$ km/s/Mpc, matter density fraction $\Omega_m = 0.295 \pm 0.010$, and the mass fluctuation amplitude $\sigma_8 = 0.721 \pm 0.043$. These parameters were measured directly from the BOSS data and independently of the Planck cosmic microwave background observations.
