

Consistent lensing and clustering in a low-S8 Universe with BOSS, DES Year 3, HSC Year 1 and KiDS-1000

Friday 9 September 2022 15:50 (10 minutes)

“I will discuss our recent study where we have evaluated the consistency between lensing and clustering probes of large-scale structure based on measurements of projected galaxy clustering from the Baryon Oscillation Spectroscopic Survey (BOSS) combined with overlapping galaxy–galaxy lensing from three surveys: the Dark Energy Survey Year 3 (DES Y3), the Hyper-Suprime Cam survey (HSC) Year 1, and the Kilo-Degree Survey (KiDS-1000). As part of this work we have investigated small scale systematics in modelling lensing and clustering measurements and how they limit our ability to improve our cosmological constraining power. Also in this work, we have performed an intra-lensing-survey study. I will present joint fits to both the clustering and lensing measurements and show how this analysis demonstrates the statistical power of these small-scale measurements, but also indicates that caution is still warranted given current uncertainties in modelling baryonic effects, assembly bias, and selection effects in the foreground sample.”

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