

KiDS-450: Cosmological parameter constraints from tomographic weak gravitational lensing

Tuesday, 26 July 2016 14:15 (15 minutes)

Summary

The Kilo Degree Survey (KiDS) is an ongoing ESO survey aiming at studying the growth of structures and the expansion history of the Universe using weak gravitational lensing. In this talk I will present the first constraints on cosmological parameters from a tomographic cosmic shear analysis of 450 square degrees. I will discuss how uncertainties in the photometric redshift distribution are accounted for in the analysis as well as uncertainties in the shear estimation. Furthermore I will show how we model astrophysical effects such as intrinsic galaxy alignment and AGN feedbacks in order to estimate unbiased cosmological parameters. Finally I will discuss the level of agreement of our measurements with other cosmological probes and in particular with the Planck results.

Based on (arXiv number)

in preparation; will be submitted to arXiv by the conference date

Primary author: HILDEBRANDT, Hendrik

Presenter: HILDEBRANDT, Hendrik

Session Classification: Dark Energy and Modified Gravity

Track Classification: Dark Energy and Modified Gravity