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Cosmological information in the redshift-space bispectrum

Wednesday 24 October 2018 15:30 (30 minutes)

We use the Fisher-matrix formalism to investigate whether the galaxy bispectrum in redshift space contains additional cosmological information with respect to the power spectrum alone. In this talk we present detailed forecasts for a Euclid-like survey and consider cosmological models dominated by dark energy and cold dark matter with Gaussian primordial perturbations. Our study shows that there is a clear advantage in combining the power spectrum and the bispectrum to infer the galaxy bias parameters and constraining the dark-energy equation of state. Also it investigates how the bispectrum depends on the orientation of wavevector triangles with respect to the line of sight. Finally we discuss how results depend on the binning strategy for the clustering statistics as well as on the maximum wavenumber.

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Session Classification: Afternoon session