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Testing the impact of scale-dependent multiplicative bias on the cosmological analysis of the 3x2pt statistics for Euclid.

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In this work, we study the effect of spatially-varying multiplicative bias on the cosmological parameter estimation in the combined photometric analysis of the 3x2pt statistics for a Euclid DR3 end-to-end forecast. To do so, we consider a spin-0 m-bias map characterized by a Gaussian profile angular power spectrum that has been studied in the literature. Also, we proceed with a conservative approach by choosing the most pessimistic scenario that has already been shown to give biased results exceeding the statistical error in a stage-IV cosmic shear analysis. This corresponds to a profile with a low multipole peak and large amplitude. In a pseudo-Cl analysis we perform the coupling of the m-bias map with the cosmic shear and the galaxy-galaxy lensing spectra and test their impact on the final 3x2pt cosmological analysis with an MCMC forecast for the LCDM and w_0w_a CDM cosmologies and also applying optimistic and pessimistic scale cuts. Finally, we investigate the effect of the masked sky on the results.

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Classification de Session: Weak Lensing End-2-End box, status and performances

Classification de thématique: PSF tool kit, status and performances