Observing the millimeter Universe with the NIKA2 camera



Contribution ID: 21

Type: not specified

Calibrating Weak Lensing Biases in Galaxy Clusters

Wednesday, 30 June 2021 09:30 (30 minutes)

Recovering the projected mass density distribution of galaxy clusters represents one of the most important steps for future wide-field surveys. This will allow us to use clusters as a cosmological tool by measuring their abundance and clustering as a function of mass and redshift.

In this talk, I will present the calibration of the weak lensing mass bias simulating space-based observations. The lens clusters are build up from the mass maps of the large data-set simulations of the 300 project. Obtaining the cluster-halo properties adopting a parametric method presents as a fast and efficient method; however, the mass and the concentration obtained are biased with respect to the true ones. Knowing with per cent accuracy the biases and distributions with regard to the truths will allow us to mitigate the systematics and uncertainties in future cluster surveys maximising the return of the observational experiment.

Primary authors: GIOCOLI, Carlo (INAF - OAS Bologna / Istituto Nazionale di Fisica Nucleare); Dr GIOCOLI, Carlo (INAF - OAS Bologna / INFN)

Presenter: GIOCOLI, Carlo (INAF - OAS Bologna / Istituto Nazionale di Fisica Nucleare)