



ID contributo: 22

Tipo: non specificato

Cosmology with galaxy clusters: impact of theoretical and observational systematic uncertainties.

martedì 29 giugno 2021 10:00 (30 minuti)

Galaxy clusters are a powerful cosmological probe, being able to track the evolution of large scale structure in the latest Universe.

In this talk I will focus on how the modelling of the different ingredients entering the analysis (namely the mass-observable relation and the halo mass function) can impact the accuracy and precision of cosmological constraints inferred from galaxy clusters.

I will start with a new analysis of clusters detected in mm wavelengths by the Planck satellite, highlighting the need of an improved description and calibration for the mass-observable relation.

I will also show an independent point of view on the mass calibration problem, through a novel, still under-going, analysis based on the combination of Planck and South Pole Telescope cluster catalogs.

I will conclude my talk focusing on how to improve our analysis in view of future cluster surveys. In particular, I will show how the calibration of the halo mass function can strongly impact the results on cosmological parameters.

This talk will be mainly based on the following papers: A&A 614, A13 (2018), A&A 626, A27 (2019), A&A 643, A20 (2020).

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