



Contribution ID: 59

Type: not specified

The LPSZ-CLASH galaxy cluster sample: combining lensing and hydrostatic mass estimates

Wednesday, 30 June 2021 10:00 (20 minutes)

Starting from the clusters presented in the NIKA2 Sunyaev-Zeldovich Large Program (LPSZ) we have selected a common sample with the CLASH (Cluster Lensing And Supernova survey with Hubble) lensing data. For the LPSZ clusters we dispose both of high resolution thermal SZ and XMM-Newton observations from which hydrostatic mass estimates can be derived. In addition, the CLASH dataset provides lensing convergence maps that can be converted in lensing estimates of the total mass of the cluster.

The study of one dimensional mass profiles obtained with these observables allows us to estimate systematics in the mass reconstruction (related to the observables, assumptions and/or modeling), as well as the dependency on the dynamical state of the cluster.

Two-dimensional analysis of the maps can reveal substructures in the cluster and, therefore, inform us about the physical properties of each system. Moreover, we are able to study the hydrostatic mass to lensing mass bias, across different morphology and redshift clusters to give more insight about the hydrostatic mass bias.

Primary author: MUÑOZ ECHEVERRÍA, Miren (LPSC)

Presenter: MUÑOZ ECHEVERRÍA, Miren (LPSC)