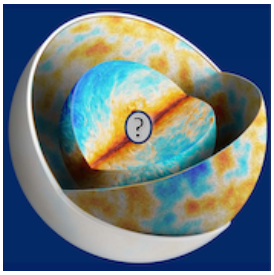

ID de Contribution: **2** Type: **Non spécifié**

Direct measurement of the hydrostatic bias

mardi 21 juin 2022 15:20 (40 minutes)

The NIKA2 Sunyaev Zel'dovich Large Program (LPSZ) aims at studying 45 clusters of galaxies at intermediate and high redshift ($0.5 < z < 0.9$). A joint analysis of the thermal SZ (tSZ) effect on CMB at millimetre wavelength with the NIKA2 camera and in X-ray with XMM-Newton satellite permits the reconstruction of clusters'thermodynamical properties and hydrostatic masses. These mass estimates are fundamental for cluster cosmology with the next generation of CMB experiments. Here, we test the robustness of LPSZ hydrostatic mass estimates against systematic effects induced by the data processing or the modelling. We illustrate these systematic effects with a multi-probe analysis of the well known galaxy cluster CL J1226.9+3332, which is a massive and high redshift cluster that has already been observed at several wavelengths. In addition, using Cluster Lensing And Supernova survey with Hubble (CLASH) observations we obtain estimates of the lensing masses for a common sample with the LPSZ. From this we are able to compare the different mass estimates and test the impact of systematic effects on the hydrostatic to lensing cluster mass bias.

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