



Laboratoire LEPRINCE-RINGUET
Ecole polytechnique IN2P3/CNRS

Séminaire

The inner structure of galaxy clusters seen through the Sunyaev-Zel'dovich effects with NIKA

The clusters of galaxies represent the last step of the formation of large scale structures in the Universe. They are both useful cosmological probes and unique astrophysical laboratories. The clusters grow by accretion of surrounding structures and from the merging of subclusters, in very energetic events. Since they contain hot ionized gas, they can be detected and studied by measuring the inverse Compton scattering of cosmic microwave background photons on energetic electrons in clusters, via the Sunyaev-Zel'dovich (SZ) effects. After introducing the role of clusters in our understanding of the assembly of matter in the Universe, I will present recent SZ measurements performed with the NIKA (and NIKA2) camera at the IRAM-30m telescope. These observations are dedicated to the study of the gas pressure and velocity in order to better understand formation of clusters in the distant Universe.

Remi ADAM
LLR

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seminaires@llr.in2p3.fr



Responsables séminaires

Sami Caroff
Jean-Baptiste Sauvan