Talk-12

Galaxy Clusters: Mass estimates & Substructures

Yu-Ying Zhang

AIfA, University of Bonn.

Abstract

Galaxy clusters are the most massive, almost virialized structures in the Universe. According to the hierarchical structure formation model, being the last formed structures they keep memory of the initial conditions and are good tracers of the density field on large scales (>100 Mpc/h). Therefore, cluster surveys provide key probes to constrain the cosmological parameters. A crucial task to perform high precision cluster cosmological experiments is to obtain the knowledge linking baryonic context and dark matter in clusters as well as the physics of their interplay. Here we present the progress of such studies via mass estimates and substructure measurements in galaxy clusters using X-ray and weak lensing approaches and show the recently updated results for a better performance of the cluster cosmology.

About the speaker:

Research assistant in the Argelander-Institut fuer Astronomie (AIfA), University of Bonn.

She received Ph.D. in 2005 in Max-Planck-Institute and Ludwid-Maximilians University.

Her research interests are observational cosmology including the areas of dark energy, large scale structure and clusters of galaxies.

She are working on X-ray studies using XMM-Newton satellite for her interests.