New results on clusters of galaxies observed with XMM-Newton

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Abstract

Galaxy clusters are at the same time the largest as well as the youngest gravitationally bound objects in the universe which attained equilibrium. As galaxy clusters are in the formation process they still contain information on cosmological parameters and structure formation. We will present new results on different nearby clusters of galaxies observed with XMM-Newton. Main issues presented will be cluster temperature profiles and results on spectroimaging. The temperature profiles allow us to determine the total mass of the galaxy clusters with the hydrodynamic approach. Knowing the total mass of galaxy clusters is of crucial importance for cosmological studies. Detailed temperature maps, as we will present, allows to determine the dynamical state of clusters e.g. whether shock waves are present indicating recent merger activity. Furthermore, we will present first results on X-ray selected distant clusters observed with XMM-Newton. For these clusters we will concentrate on morphological studies and global temperature determination.

CATEGORY: CLUSTERS OF GALAXIES