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MAPPING THE OUTER REGIONS OF HIGH-Z CLUSTERS COMBINING X-RAY AND SZ OBSERVATIONS

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Galaxy cluster are the largest bound structures in the Universe. The formed recently, at z~2, and since then they have been growing through accretion of matter from the cosmic web in their outskirts. X-ray follow up observations of SZ selected clusters offer a unique opportunity to study the faint outskirts of these objects. The South Pole Telescope (SPT) 2500d survey detected hundreds of clusters, spanning object in the local Universe up to redshift of 1.8, allowing to characterize the formation and evolution with cosmic time of the most massive structures in the Universe.
In our work, we combine deep Chandra and XMM-Newton observations for a sample of 7 mass selected SPT clusters at redshift above 1.2, to measure the thermodynamic profiles, constraining how the cluster properties evolve with cosmic time.

Topic

Hot and diffuse baryons

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