The high redshift cluster X-ray Luminosity Temperature relation

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Abstract

We present the X-ray luminosity – gas temperature relation for high redshift clusters of galaxies, derived from Chandra observations. Chandra's high angular resolution allows us to effectively study the spatial distribution of the luminosity in these clusters, allowing a more precise determination of cooling flow regions and the identification of substructure. We compare our high redshift relationship to the low-redshift one, and discuss the implications for its evolution, especially with regards to pre-heating of the cluster gas, spatial non-uniformity in the gas distribution, and the impact of cluster cooling flows. We explore what limits these results place upon the cosmological parameters driving cluster formation.

CATEGORY: CLUSTERS OF GALAXIES