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Galaxy Clusters in the First Half of Cosmic Time

Results from the XMM-Newton Distant Cluster Project

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Abstract: Observational studies of distant X-ray luminous galaxy clusters can provide a direct view of the assembly phase of the most massive dark matter halos, the early thermodynamic history of the X-ray emitting hot intracluster medium, and the evolution of galaxy populations in the densest environments. Here we discuss the status of our ongoing efforts to find and study systems at z>0.8 within the XMM-Newton Distant Cluster Project (XDCP). This survey has compiled the largest sample of spectroscopically confirmed X-ray clusters to date, currently comprising 31 systems in the redshift range 0.78<z<1.6. We present recent multi-wavelength observations of several newly identified massive high-z clusters.

I. Gallery of selected newly confirmed X-ray luminous galaxy clusters at z=0.8 from the XDCP survey

II. Redshift distribution status of spectroscopically confirmed XDCP clusters

III. XMMU J1230.3+1339 at z=0.975: the assembly of a massive system

IV. Moving into the redshift desert at z≥1.5


References:
- Santos, J.S. et al., A&A, to be submitted
- Nastasi, A. et al., A&A, to be submitted

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