

**T13a            A Comparative Study of X-ray Morphologies of Three Hot Clusters of Galaxies: A3571, A644 and A2255**

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Clues to the evolution of clusters of galaxies can be found in the detailed dynamics of the hot gas and galaxies they contain. Clusters evolve by accreting small groups of galaxies and merging with other clusters, a process that continues at the present epoch. Since merging between clusters is thought to be responsible for significant changes in the physical properties of the ICM, it is very important to define morphological and evolutionary stage of a cluster.

In order to address this issue we have selected three clusters of galaxies A3571 ( $z_1=0.0397$ ), A644 ( $z_2=0.0704$ ) and A2255 ( $z_3=0.0800$ ), which all have plasma temperature of  $\sim 7$  keV and X-ray luminosity of  $1 \times 10^{45}$  ergs  $s^{-1}$ . All three clusters show spherically symmetric structure with slight elongation. We have performed spectro-imaging analysis and found noticeable temperature and abundance variation within the ICM. A3571 and A644 have cool regions in the northern part of the X-ray peak which can be considered as a sign of sub-group infall. A2255 has also slight a cool region in the north and additionally a soft excess on the eastern side of cluster. Based on the two-dimensional analysis results, merger history of clusters is discussed.