

T14b X-Ray Study of Metal Distribution of Abell 3571 Cluster of Galaxies

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In many ways, the most significant observational exploration related to X-ray clusters is the detection of line emission due to highly ionized heavy elements as a strong aspect in their X-ray spectra. Firm determination of this part of the structure can provide wealth of information which is extremely utile to identify the physical state and circumstances of the X-ray emitting gas.

A3571 is a nearby ($z=0.04$) bright, hot (~ 7 keV) and a rich (>100 galaxies) Bautz-Morgan type I cluster of galaxies (Abell et al. 1989). It possesses a giant galaxy MCG05-33-002 with extensive optical halo at the center (Kemp and Meaburn 1991). The ROSAT (PSPC) image of this cluster shows no substructure and no deviation from the azimuthal symmetry (Nevalian et al. 2000). In this study we report and discuss the results of two dimensional temperature and metal distributions in A3571. The metal distribution is investigated by making iron line equivalent width map. By azimuthal temperature profile, we have confirmed the northern half of the A3571 is slightly cooler than the southern half, as it is reported by Markevitch et al. (2000). Equivalent width map also indicates a variation aligned on the same direction. Temperature and abundance distributions suggest a possible cluster infalling or a late merging. Elongation of galaxy distribution (Quintana et al. 1993) supports this consideration.