

Q32a Diffuse X-ray Background Spatial-Fluctuation Anisotropy in Suzaku Observations

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We investigated the spatial power spectrum of unresolved X-ray background fluctuation in 0.2–2 keV energy band with *Suzaku*. Total 3 Ms exposure time observations are integrated for averaging with independent line-of-sights. For X-ray background above 0.7 keV, we measured a signal on the scale  $>100$  arcsec, below which any spatial feature smears out due to the limitation of point spread function. To figure out the origin of the density fluctuation on that scale, we simulated *Suzaku* observations of resolved X-ray point sources in deep exposure of *XMM-Newton* COSMOS field. The power spectrum for unresolved X-ray background in simulation is in accordance with the measurement for real observations. This confirmed their extragalactic origin and suggests that the point-source-like AGNs and galaxies have made the main contribution to density fluctuation in 0.7–2 keV. Below 0.7 keV, the power spectrum flattens out, showing no significant clustering feature in scale range of several arc minutes. This is consistent with that foreground diffuse X-ray emission dominates the unresolved background emission instead of extragalactic point sources. In 0.2–0.4 keV, no sign of fluctuation up to 8 arc minutes is detected. This is also consistent with the local bubble and the Heliospheric solar-wind charge-exchange induced emission which we consider to dominate the emission in this energy band.