

Reconstruction of large-scale CMB temperature anisotropies with primordial CMB induced in galaxy cluster

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Scattering of cosmic microwave background radiation in galaxy clusters induces polarization signals determined by the quadrupole anisotropy in the photon distribution at the location of clusters. This remote quadrupole derived from the measurements of the induced polarization in galaxy clusters provides the information of local CMB temperature anisotropies. Here we present an algorithm of the reconstruction of large-scale CMB temperature map and conclude that the reconstruction can be good enough to be a consistency test on the puzzles of CMB anomaly, especially for the low quadrupole and axis of evil problems reported in WMAP and Planck data.

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