Joint Analysis of Chandra X-ray Observations and Sunyaev-Zeldovich Effect Imaging to Determine the Distance to the Galaxy Cluster MS 0451.6−0305

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[Contributed talk, 15min.]

Abstract

Results are presented for Chandra/ACIS-S and Owens Valley Radio Observatory (OVRO) Sunyaev-Zeldovich effect (SZE) observations of MS 0451.6−0305. We use a maximum-likelihood joint fit spatial analysis of the X-ray and SZE datasets to determine the X-ray surface brightness, core radius, power law index β, background level, SZE decrement, and their associated uncertainties. These quantities are combined with the Chandra-determined electron temperature to obtain an estimate for the angular diameter distance to the cluster, D_A.

CATEGORY: CLUSTERS OF GALAXIES