Chandra Probes the Twin Quasars in Q2345+007: Pair or Lens?

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Abstract

We have obtained a 75ksec ACIS-S image of the wide (7") separation quasar pair Q2345+007 to determine whether it is a binary quasar or a gravitational lens and to probe the nature of the lensing matter. With nearly identical optical spectra and identical redshifts, this quasar pair remains the most intriguing example of an observed configuration requiring the presence of massive, concentrated dark matter acting as a gravitational lens. We present a variety of constraints on the mass of any putative lensing cluster, and examine the flux ratios of the pair to test whether their spectral energy distributions are consistent with a lensing or binary interpretation.

CATEGORY: ACTIVE GALAXIES AND QUASARS