X-ray Jet in the z=1.187 quasar PKS 1127-145 and constraints on the jet emission models.

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Abstract

We have disovered an X-ray jet with Chandra imaging of z=1.187 radio-loud quasar PKS 1127-143. We present both the X-ray analysis and the results of follow-up VLA observations at 1.2 and 8.4 GHz. The X-ray jet extends $\sim$ 30arcsec from the quasar core, corresponding to a projected linear size of $\sim$ 310kpc. The evaluation of the X-ray emission processes is complicated by the observed offsets between X-ray and radio brightness peaks. The synchrotron emission is allowed by the current data, as well as the Compton scattering of the Cosmic Microwave Background photons on the relativistic particles within the jet.

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