



**Chandra X-Ray
Observatory Center**

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Quasar Pair Q2345+007A,B: A closely aligned pair of quasars about 11 billion light years from Earth in the constellation Pisces.
Credit: NASA/SAO/CXC/P.Green et al.

Chandra's image of the supposed twin quasars Q2345+007 A,B shows that they are not identical twins. Further, the X-ray spectra of the two quasars are different which lends support to the idea that they are distinct objects created by merging galaxies. When galaxies collide, the flow of gas onto the central supermassive black holes of each of the galaxies can be enhanced, resulting in two quasars. Quasar pairs that appear close to one another on the sky and are at the same distance from Earth often turn out to be an illusion due to a gravitationally lensed system. Q2345+007 A,B was thought to be such an illusion because of remarkably similar patterns of their optical and ultraviolet light. However no intervening galaxy or cluster that could be the gravitational lens has been found for this pair.

Scale: Image is 30 arcmin per side.
Chandra X-ray Observatory ACIS Image

CXC operated for NASA by the Smithsonian Astrophysical Observatory