



Chandra X-ray
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3C 75 in Abell 400: A galaxy cluster with a central galaxy, NGC 1128, that has produced a giant double radio source known as 3C 75.
(Credit: X-ray: NASA/CXC/AifA/D.Hudson & T.Reiprich et al.; Radio: NRAO/VLA/NRL)

Caption: This composite X-ray/radio image of Abell 400 shows radio jets (pink), immersed in a vast cloud of multimillion degree X-ray emitting gas (blue) that pervades the cluster. The jets emanate from the vicinity of two supermassive black holes (bright spots in the image) in the galaxy. Chandra and radio data confirm that the unusual structure is due to the merger of two large galaxies, whose supermassive black holes are bound together by their mutual gravity. The swept-back appearance of the radio jets is produced by the rapid motion of the galaxy through the hot gas of the cluster, in much the same way that a motorcyclist's scarf is swept back while speeding down the road.

Scale: Image is 12 arcmin per side.

Chandra X-ray Observatory ACIS Image

