



**Chandra X-ray
Observatory Center**

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3C442A: A system with two merging galaxies in the center.
(Credit: X-ray: NASA/CXC/Univ. of Bristol/Worrall et al.; Radio: NRAO/AUI/NSF)

Caption: X-ray data from NASA's Chandra X-ray Observatory and radio observations from the NSF's Very Large Array show that a role reversal is taking place in the middle of 3C442A. Chandra detects hot gas (blue) that has been pushing aside the radio-bright gas (orange). This is the opposite of what is typically found in these systems when jets from the supermassive black hole in the center create cavities in the hot gas surrounding the galaxy. Astronomers believe an impending merger with another galaxy has caused the unusual dynamics in this system.

Scale: Image is 22 by 13 arcmin.

Chandra X-ray Observatory ACIS Image

CXC operated for NASA by the Smithsonian Astrophysical Observatory
