



Chandra X-ray
Observatory Center

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NGC 4696: A large elliptical galaxy in the Centaurus Galaxy Cluster, about 150 million light years from Earth.

(Credit: X-ray: NASA/CXC/KIPAC/S.Allen et al; Radio: NRAO/VLA/G.Taylor; Infrared: NASA/ESA/McMaster Univ./W.Harris)

Caption: This composite image shows a vast cloud of hot gas (X-ray/red), surrounding high-energy bubbles (radio/blue) on either side of the bright white area around the supermassive black hole. By studying the inner regions of the galaxy with Chandra, scientists estimated the rate at which gas is falling toward the galaxy's supermassive black hole. These data also allowed an estimate of the power required to produce the bubbles, which are each about 10,000 light years in diameter. Surprisingly, the analysis indicates that most of the energy released by the infalling gas goes into producing jets of high-energy particles that create the huge bubbles, rather than into an outpouring of light as observed in many active galactic nuclei.

Scale: Image is 2.3 by 1.6 arcmin per side.

Chandra X-ray Observatory ACIS Image

CXC operated for NASA by the Smithsonian Astrophysical Observatory