



**Chandra X-ray  
Observatory Center**

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**Cygnus A:** A large galaxy in the middle of a galaxy cluster about 760 million light years away.  
(Credit: X-ray: NASA/CXC/Columbia Univ./A. Johnson et al.; Optical: NASA/STScI)

**Caption:** A ricocheting jet blasting from a giant black hole has been captured by Chandra. In this composite image of Cygnus A, X-rays from Chandra (red, green, and blue) are combined with an optical view from Hubble of the galaxies and stars in the same field of view. Chandra's data reveal the presence of a powerful jet of particles and electromagnetic energy that has shot out from the black hole and slammed into a wall of hot gas, then ricocheted to punch a hole in a cloud of energetic particles, before it collides with another part of the gas wall.

**Scale:** About 2.5 arcmin (about 540,000 light years across)

*Chandra X-ray Observatory ACIS Image*

*CXC operated for NASA by the Smithsonian Astrophysical Observatory*