



**Chandra X-ray  
Observatory Center**

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**RX J1532.9+3021:** The black hole is in a galaxy cluster located about 3.9 billion light years from Earth. (Credit: X-ray: NASA/CXC/Stanford/J.Hlavacek-Larrondo et al, Optical: NASA/ESA/STScI/M.Postman & CLASH team)

**Caption:** Astronomers have used NASA's Chandra X-ray Observatory and other telescopes to reveal one of the most powerful black holes known. The supermassive black hole is in the center of a galaxy cluster named RX J1532.9+3021 located about 3.9 billion light years from Earth. The image here is a composite of X-ray data from Chandra revealing hot gas in the cluster in purple and optical data from the Hubble Space Telescope showing galaxies in yellow. Supersonic jets generated by the black hole have drilled into the hot gas and pushed it aside, forming the large cavities that can be seen on either side of the central galaxy (mouse over the image for a labeled version).

**Scale:** Image is 1.6 arcmin on a side (about 1.6 million light years)

*Chandra X-ray Observatory ACIS Image*

*CXC operated for NASA by the Smithsonian Astrophysical Observatory*

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