



**Chandra X-ray
Observatory Center**

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MS 0735.6+7421: A galaxy cluster located about 2.6 billion light years away in the constellation of Camelopardus.

(Credit: X-ray: NASA/CXC/Univ. Waterloo/B.McNamara; Optical: NASA/ESA/STScI/Univ. Waterloo/B.McNamara; Radio: NRAO/Ohio Univ./L.Birzan et al.)

Caption: This composite image contains three views of the galaxy cluster MS 0735.6+7421. The optical view from the Hubble Space Telescope shows dozens of galaxies bound together by gravity. The Chandra X-ray Observatory finds diffuse, nearly 50-million-degree gas (blue) that permeates the space between the galaxies. The X-ray data show enormous holes, or cavities, in the gas that are filled with charged particles spiraling around magnetic field lines, which also emit radio waves (red) that are detected by the Very Large Array. The cavities were created by jets of charged particles ejected at nearly light speed from a supermassive black hole a billion times the Sun's mass in the bright central galaxy.

Scale: Image is 3 arcmin per side.

Chandra X-ray Observatory ACIS Image

CXC operated for NASA by the Smithsonian Astrophysical Observatory
