



**Chandra X-ray
Observatory Center**

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MS 0735.6+7421: A cluster of galaxies 2.6 billion light years from Earth.
(Credit: NASA/CXC/Ohio U./B.McNamara)

Caption: Chandra's image shows two cavities - each 600,000 light years in diameter - in the hot, X-ray emitting gas that pervades the galaxy cluster. Although the cavities contain very little hot gas, they are filled with a two-sided, elongated, magnetized bubble of extremely high-energy electrons that emit radio waves. The cavities appear on opposite sides of a large galaxy at the center of the cluster, which indicates that the cavities were created by jets of high-energy particles launched in an enormous eruption from the vicinity of the galaxy's supermassive black hole. These jets blasted through the galaxy into the surrounding multimillion degree intergalactic gas and pushed the hot gas aside to create the cavities.

Scale: Image is 4.2 arcmin per side

Chandra X-ray Observatory ACIS Image

CXC operated for NASA by the Smithsonian Astrophysical Observatory
