



Chandra X-Ray  
Observatory Center

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**M87:** A giant elliptical galaxy in the Virgo galaxy cluster about 50 million light years from Earth.

**Credit:** NASA/CXC/W.Forman et al.

Two Chandra observations of the giant elliptical galaxy M87 were combined to make this long-exposure image. A central jet is surrounded by nearby bright arcs and dark cavities in the multimillion degree Celsius atmosphere of M87. Much further out, at a distance of about fifty thousand light years from the galaxy's center, faint rings can be seen and two spectacular plumes extend beyond the rings. These features, which can be related to repetitive outbursts from the vicinity of the central supermassive black hole, show that the central black hole has been affecting the entire galaxy for a hundred million years or more. (The faint horizontal streaks are instrumental artifacts that occur for bright sources.)

**Scale:** Image is 8.6 x 13.7 arcmin.

*Chandra X-ray Observatory ACIS Image*

*CXC operated for NASA by the Smithsonian Astrophysical Observatory*