



**Chandra X-Ray  
Observatory Center**

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**Andromeda Galaxy (M31):** The central region of our nearest neighbor spiral galaxy, at a distance of two million light years.

**Credit:** X-ray: NASA/SAO/CXC/M.Garcia et al.; Optical: NASA/GSFC/T.Brown et al.

This image of the central region of the Andromeda Galaxy is a composite of Chandra X-ray data (3 pixelated sources) and Hubble optical data (red contours). A supermassive black hole is thought to be within the highest optical contour on the lower right. These highly accurate positions show that the very cool X-ray source (blue) previously identified with the supermassive black hole in the center of the galaxy is actually about 10 light years south of the center. A second, hotter X-ray source, is found to be at a position consistent with the position of the supermassive black hole.

**Scale:** X-ray image is 1 arcmin on a side.

*Chandra X-ray Observatory ACIS Image*

*CXC operated for NASA by the Smithsonian Astrophysical Observatory*