



**Chandra X-ray
Observatory Center**

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Illustration of Sculptor Wall (with Spectrum of M31): A supermassive black hole in the center of Andromeda
(Credit: X-ray (NASA/CXC/SAO/Li et al.), Optical (DSS))

Caption: The large image here shows an optical view, with the Digitized Sky Survey, of the Andromeda Galaxy, otherwise known as M31. The inset shows Chandra images of a small region in the center of Andromeda. The image on the left shows a sum of Chandra images taken before January 2006 and the image on the right shows a sum of images taken after January 2006. Before 2006, three X-ray sources are clearly visible, including one faint source close to the center of the image. After 2006, a fourth source, called M31*, appears just below and to the right of the central source, produced by material falling onto the supermassive black hole in M31.

Scale: Optical image is 1 degree across; inset image is 8 arcsec across

Chandra X-ray Observatory HRC Image

CXC operated for NASA by the Smithsonian Astrophysical Observatory