



**Chandra X-ray  
Observatory Center**

Harvard-Smithsonian Center for Astrophysics  
60 Garden St. Cambridge, MA 02138 USA  
<http://chandra.harvard.edu>

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**M81:** A spiral galaxy located about 12 million light years from Earth.  
(Credit: X-ray: NASA/CXC/Wisconsin/D.Pooley & CfA/A.Zezas; Optical: NASA/ESA/CfA/A.Zezas; UV:  
NASA/JPL-Caltech/CfA/J.Huchra et al.; IR: NASA/JPL-Caltech/CfA)

**Caption:** This composite image of M81 includes X-rays from Chandra (blue), optical data from Hubble (green), infrared emission from Spitzer (pink) and ultraviolet data from GALEX (purple). The inset shows a close-up of the Chandra image where a supermassive black hole about 70 million times more massive than the Sun lurks. A new study using data from Chandra and ground-based telescopes, combined with detailed theoretical models, shows that the giant black hole in M81 feeds just like stellar mass black holes, with masses of only about ten times that of the Sun. This discovery supports the implication of Einstein's relativity theory that black holes of all sizes have similar properties, and will be useful for predicting the properties of a conjectured new class of black holes.

**Scale:** Full field image is 3 arcmin across.

*Chandra X-ray Observatory ACIS Image*

*CXC operated for NASA by the Smithsonian Astrophysical Observatory*

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