



**Chandra X-ray
Observatory Center**

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M31: A spiral galaxy located 2.5 million light years from our own.
(Credit: X-ray (NASA/CXC/SAO/R.Barnard, Z.Lee et al.), Optical (NOAO/AURA/NSF/REU
Prog./B.Schoening, V.Harvey; Descubre Fndn./CAHA/OAUV/DSAVV.Peris))

Caption: Twenty-six black hole candidates – the largest number found in a galaxy outside our own – have been discovered in the Milky Way's galactic neighbor, Andromeda. Using over 150 Chandra observations spread over 13 years, researchers identified the bonanza of stellar-mass black holes, that is, those that form from the collapse of a giant star and typically have masses between five and ten times that of the Sun. This composite graphic shows the Chandra view of the central region of Andromeda, also known as M31, as inset (purple) in context with an optical image (red, green, and blue) of this spiral galaxy. It is expected that billions of years in the future, the Milky Way and Andromeda will collide and many more black holes will be created.

Scale: Optical image is 2 degrees across (about 100,000 light years); inset image is 14 arcmin across (about 12,000 light years)

Chandra X-ray Observatory ACIS Image

CXC operated for NASA by the Smithsonian Astrophysical Observatory