



**Chandra X-ray
Observatory Center**

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M31: Also known as Andromeda and the nearest major galaxy to the Milky Way.
(Credit: X-ray: NASA/CXC/MPE/W.Pietsch et al; Optical: NOAO/AURA/NSF/T.Rector & B.A.Wolpa)

Caption: In this image, Andromeda's central region is seen in a combination of Chandra's X-ray data (blue) and optical light. Hot, X-ray bright gas is seen to envelop the middle of Andromeda. Point sources are also prominent, which mostly reveal pairs of stars that are interacting with each other. Many of these double stars are thought to include white dwarfs pulling large amounts of material away from a companion star. When the amount of gas being dumped onto the white dwarf gets too high a thermonuclear explosion occurs on the surface of the white dwarf, emitting bright X-rays.

Scale: Inset is 12.8 by 9.7 arcmin.

Chandra X-ray Observatory ACIS /HRC Image

CXC operated for NASA by the Smithsonian Astrophysical Observatory