



**Chandra X-ray  
Observatory Center**

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**M31:** One of six galaxies in a study to examine properties of Type Ia supernovas.  
(Credit: X-ray (NASA/CXC/MPA/M.Gilfanov & A.Bogdan), Infrared (NASA/JPL-Caltech/SSC), Optical (DSS))

**Caption:** This composite image of M31 (a.k.a. the Andromeda galaxy) contains X-rays from Chandra (gold), optical emission (light blue), and infrared data (red). Seen in the inset box, the Chandra data suggest that the main trigger for so-called Type Ia supernovas in this and five other elliptical galaxies is the merger of two white dwarf stars. Type Ia supernovas are important objects used to measure vast cosmic distances.

**Scale:** Image is 60 arcmin across (about 50,000 light years across)

*Chandra X-ray Observatory ACIS Image*

*CXC operated for NASA by the Smithsonian Astrophysical Observatory*