



## Chandra X-Ray Observatory Center

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**NGC 1637:** A spiral galaxy 38 million light years from Earth.

**Credit:** NASA/CXC/Penn State/S. Immler et al.

A series of Chandra observations over a 21-month period provides dramatic evidence of the restless, changing nature of this spiral galaxy. Bright X-ray sources due to neutron stars, black holes and a supernova flashed on and off, giving the galaxy the appearance of a cosmic Christmas tree. The supernova, SN1999em, appears in panels 4 and 49 as the faint source at the five o'clock position just below the diffuse glow in the center of the image. The extremely bright (white) source that appears in all panels at the nine o'clock position is likely a black hole formed relatively recently (in the last million years or so) and is now pulling in gas from an orbiting companion star.

**Scale:** Each panel is 8.5 arcmin per side.

*Chandra X-ray Observatory ACIS Image*

*CXC operated for NASA by the Smithsonian Astrophysical Observatory*