



**Chandra X-ray  
Observatory Center**

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**NGC 3627:** A spiral galaxy located about 30 million light years from Earth.  
(Credit: NASA/CXC/Ohio State Univ./C.Grier et al.; Optical: NASA/STScI, ESO/WFI; Infrared: NASA/JPL-Caltech)

**Caption:** This multiwavelength image of the galaxy NGC 3627 contains X-rays from Chandra (blue), infrared data from Spitzer (red), and optical data from Hubble and the Very Large Telescope (yellow). Astronomers conducted a survey of 62 galaxies – which included NGC 3627 – to study the supermassive black holes at their centers. Among this sample, 37 galaxies with X-ray sources are supermassive black hole candidates, and seven were not previously known. Confirming previous Chandra results, this study finds the fraction of galaxies hosting supermassive black holes is much higher than in optical searches for black holes that are relatively inactive.

**Scale:** Main image: 6.8 arcmin across (about 57,000 light years)

*Chandra X-ray Observatory ACIS Image*

*CXC operated for NASA by the Smithsonian Astrophysical Observatory*