



**Chandra X-ray
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Tycho's Supernova Remnant: The hot, expanding debris of a supernova observed in 1572.
(Credit: X-ray: NASA/CXC/SAO, Infrared: NASA/JPL-Caltech; Optical: MPIA, Calar Alto, O.Krause et al.)

Caption: This composite image of the Tycho supernova remnant combines X-ray and infrared observations obtained with NASA's Chandra and Spitzer space observatories, respectively, and the Calar Alto observatory, Spain. It shows the scene more than four centuries after the brilliant star explosion witnessed by Tycho Brahe and other astronomers of that era. The explosion has left a blazing hot cloud of expanding debris (green and yellow). The location of the blast's outer shock wave can be seen as a blue sphere of ultra-energetic electrons. Newly synthesized dust in the ejected material and heated pre-existing dust from the area around the supernova radiate at infrared wavelengths of 24 microns (red). Foreground and background stars in the image are white.

Scale: Image is 15 arcmin across.

Chandra X-ray Observatory ACIS Image

CXC operated for NASA by the Smithsonian Astrophysical Observatory