



## Chandra X-Ray Observatory Center

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**SNR 0540-69.3:** A supernova remnant in the Large Magellanic Cloud, a galaxy 160,000 light years from Earth.

**Credit:** NASA/CXC/SAO

Chandra's image of SNR 0540-69.3 reveals two aspects of the enormous power released when a massive star explodes. An implosion crushed material into an extremely dense (10 miles in diameter) neutron star, triggering an explosion that sent a shock wave rumbling through space at speeds in excess of 5 million miles per hour. The central intense white blaze of high-energy particles about 3 light years across was created by a rapidly rotating neutron star, or pulsar. Surrounding the white blaze is a shell of hot gas 40 light years in diameter that marks the location of the supernova shock wave. The colors red, green and blue in the image correspond to low, medium and high-energy X-rays, respectively.

**Scale:** Image is 1.7 arcmin per side.

*Chandra X-ray Observatory ACIS Image*

*CXC operated for NASA by the Smithsonian Astrophysical Observatory*