



**Chandra X-ray  
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**MSH 11-62 and G327.1-1.1:** Two new Chandra images of supernova remnants reveal intricate structures left behind after massive stars exploded.  
(Credit: NASA/CXC/GSFC/T.Temim et al.)

**Caption:** A long observation with Chandra of the supernova remnant MSH 11-62 reveals an irregular shell of hot gas, shown in red, surrounding an extended nebula of high energy X-rays, shown in blue. Even though scientists have yet to detect any pulsations from the central object within MSH 11-62, the structure around it has many of the same characteristics as other pulsar wind nebulas. The reverse shock and other, secondary shocks within MSH 11-62 appear to have begun to crush the pulsar wind nebula, possibly contributing to its elongated shape. (Note: the orientation of this image has been rotated by 24 degrees so that north is pointed to the upper left.)

The Chandra image of G327.1-1.1 shows an outward-moving shock wave (faint red color) and a bright pulsar wind nebula (blue). The pulsar wind nebula appears to have been distorted by the combined action of a reverse shock wave, which may have flattened it, and by the motion of the pulsar, which created a comet, or lobster-like tail. An asymmetric supernova explosion may have given a recoil kick to the pulsar, causing it to move rapidly and drag the pulsar wind nebula along with it. Two structures resembling lobster claws protrude from near the head of the pulsar wind nebula. The origin of these features, which may be produced by the interaction of the pulsar wind with the reverse shock, is unknown.

*Chandra X-ray Observatory ACIS Image*

*CXC operated for NASA by the Smithsonian Astrophysical Observatory*