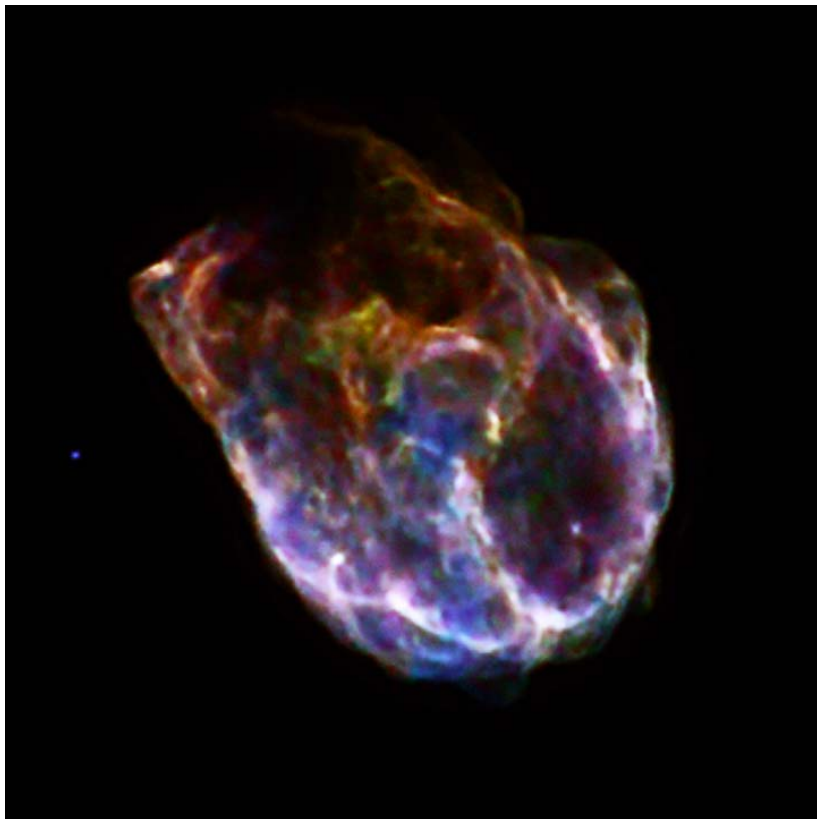




Chandra Science Highlight

N132D: An oxygen-rich supernova remnant in the Large Magellanic Cloud

Chandra X-ray Observatory ACIS image.



Scale: Image is 2.9 arcminutes across

Credit: NASA/CXC/NCSU/K.J.Borkowski et al.

Reference: K. Borkowski et al., 2007 *Astrophys.J.* 671:L45,
also arXiv:0801.0647

This Chandra X-ray Observatory image shows the remnant of the explosion of a massive star in the Large Magellanic Cloud, a small galaxy about 160,000 light years from Earth. The colors in this image show low energy X-rays (red), intermediate energy X-rays (green) and high energy X-rays (blue).

- N132D is the remnant of a supernova explosion that occurred when the core of a massive star collapsed to form a neutron star or black hole (core-collapse supernova). The estimated age of the remnant is 3,000 years.
- Most of the oxygen in the universe is thought to be dispersed into space by core-collapse supernovas.
- The oxygen ejecta from such supernovas is most readily detected through its X-radiation. Chandra observations have revealed the presence of substantial amounts of oxygen in N132D, particularly in the green regions near the center of the image.
- The majority of the X-ray emission from N132D is from surrounding gas swept up and heated by a shock wave produced by the supernova.