

Chandra Peers at Cosmic Super Bubbles

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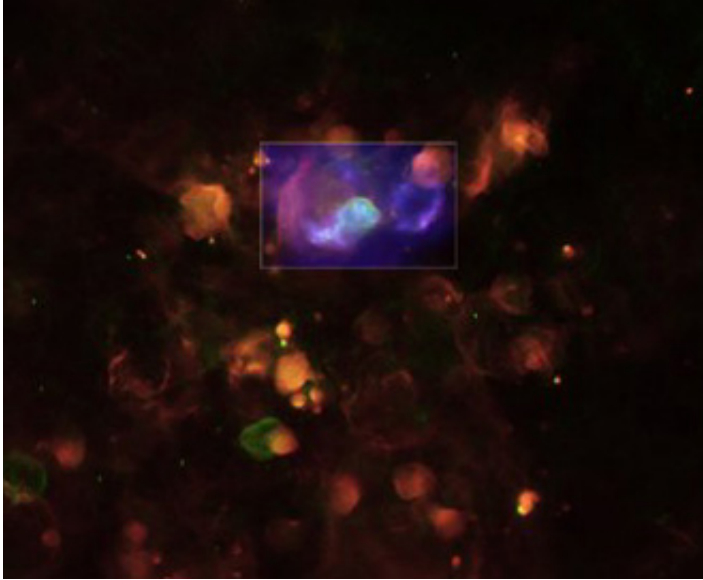


Image credit: NASA/CXC/UIUC/R.Williams et al.; Optical: NOAO/CTIO/MCELS coll.; Radio: ATCA/UIUC/R.Williams et al.

Using the Chandra X-ray Observatory, astronomers explored a particular region of clouds and gas where stars are forming in one of the Milky Way's closest galactic neighbors.

Combining X-ray data (blue and purple) with other wavelengths, researchers found evidence for the formation of a so-called superbubble. Superbubbles are formed when smaller structures from individual stars and supernovas combine into one giant cavity. The Chandra data shows evidence for three supernova explosions in this relatively small region.

At a distance of only 200,000 light years, the Small Magellanic Cloud (SMC) is one of the Milky Way's closest galactic neighbors. With its millions of stars, the SMC offers astronomers a chance to study phenomena across the stellar life cycle. In various regions of the SMC, massive stars and supernovas are creating expanding envelopes of dust and gas. Evidence for these structures is found in optical (red) and radio (green) data in this composite image.

Astronomers used Chandra to peer into one particular region of clouds of gas and plasma where stars are forming. This area, known as LHα115-N19 or N19 for short, is filled with ionized hydrogen gas and it is where many massive stars are expelling dust and gas through stellar winds.

Source: NASA

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