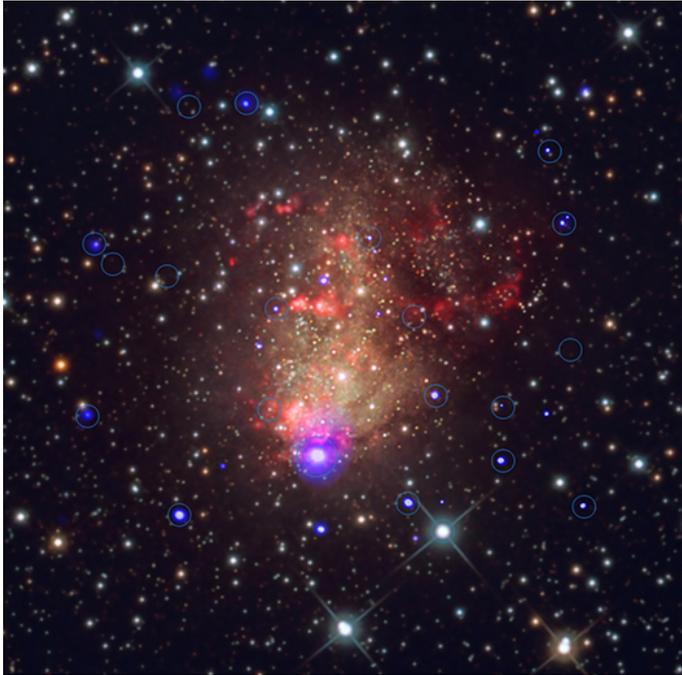




Chandra Science Highlight

IC 10: A Nearby Active Starburst Galaxy



Composite image of IC 10 with X-ray data from Chandra in dark blue and optical data in red, green, and light blue

Scale: Image is 10.3 arcmin (= 6,600 light years) on a side.
Distance estimate: 2.2 million light years

- IC10 is a dwarf galaxy in the Local Group of galaxies, a collection of 50 or more galaxies within 5 million light years of Earth comprised of the Milky Way, Andromeda, and dozens of dwarf galaxies.
- IC10 is the site of an unusually young (~ 6 million years old) burst of star formation.
- The most massive stars in IC10 have sped through their evolution and left behind a black hole (BH) or neutron star (NS).
- Sixteen of the 110 X-ray sources detected in IC10 by Chandra have been identified as systems where a BH or NS is accreting matter from a massive young companion star. Some of these systems may eventually form a BH-BH, BH-NS, or NS-NS pair that will merge and emit gravitational waves.

Credits: X-ray: NASA/CXC/UMass Lowell/S.Laycock et al.
Optical: Bill Snyder Astrophotography

Instrument: ACIS

References:

Laycock S. et al., 2017, ApJ, 836, 50; arXiv:1611.08611
Laycock S. et al., 2017, ApJ [in press]; arXiv:1701.03803

**CXC Operated for NASA by the
Smithsonian Astrophysical Observatory**



July 2017