



**Chandra X-ray
Observatory Center**

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Terzan 5: A globular cluster located about 20,000 light years from Earth.
(Credit: X-ray: NASA/CXC/Univ. of Amsterdam/N.Degenaar, et al.; Optical: NASA, ESA)

Caption: Astronomers observed a binary system with a neutron star (the extremely dense remnant left behind by a supernova explosion) in orbit with a low-mass companion acting in an unusual way. Using X-ray data from Chandra, researchers saw that Terzan 5 CX1 had traits of a "low-mass X-ray binary" before it started behaving like a millisecond pulsar, and then years later returned to its original role. In this new image of the Terzan 5 globular cluster (right), low, medium and high-energy X-rays detected by Chandra are colored red, green and blue respectively. On the left, an image from Hubble shows the same field of view in optical light.

Chandra X-ray Observatory ACIS Image

CXC operated for NASA by the Smithsonian Astrophysical Observatory
