



**Chandra X-ray
Observatory Center**

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47 Tucanae: A globular cluster located about 15,000 light years from Earth.
(Credit: NASA/CXC/Michigan State/A.Steiner et al)

Caption: New results from Chandra and other X-ray telescopes have provided one of the most reliable determinations yet of the relation between the radius of a neutron star and its mass. Neutron stars, the ultra-dense cores left behind after massive stars collapse, contain the densest matter known in the Universe outside of a black hole. This image contains data from a long Chandra observation of 47 Tucanae, a globular cluster where one of the eight neutron stars in the study is found. Lower-energy X-rays are red, those with intermediate energies are green, and the highest-energy X-rays are shown in blue.

Scale: Image is 2.3 arcmin across. (about 10 light years)

Chandra X-ray Observatory ACIS Image

CXC operated for NASA by the Smithsonian Astrophysical Observatory