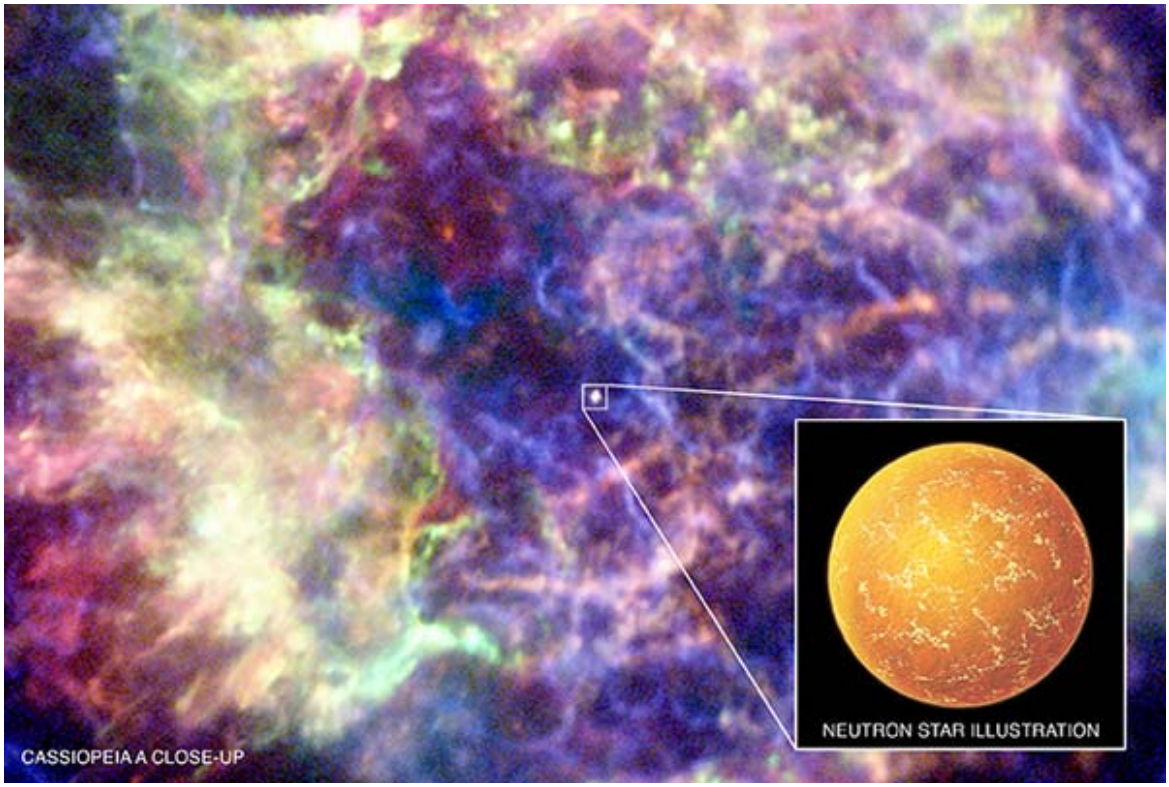


**Chandra X-ray Observatory Center**

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**Cassiopeia A:** A supernova remnant in the Milky Way with a neutron star at its center.
(Credit: X-ray: NASA/CXC/Southampton/W. Ho et al.; Illustration: NASA/CXC/M.Weiss)

**Caption:** New evidence from Chandra suggests that the neutron star at the center of the Cas A supernova remnant has an ultra-thin carbon atmosphere. This uniform carbon atmosphere would explain the lack of X-ray pulsations from this object because the neutron star would be unlikely to display any changes as it rotates. The absence of pulsations has been a mystery since the neutron star was discovered in Chandra's "First Light" image over a decade ago. The carbon atmosphere is thought to be only about four inches thick, with a density similar to diamond and a pressure more than ten times that found at the center of the Earth.

**Scale:** Image is 271 by 48 arcsec.

*Chandra X-ray Observatory ACIS Image*

*CXC operated for NASA by the Smithsonian Astrophysical Observatory*