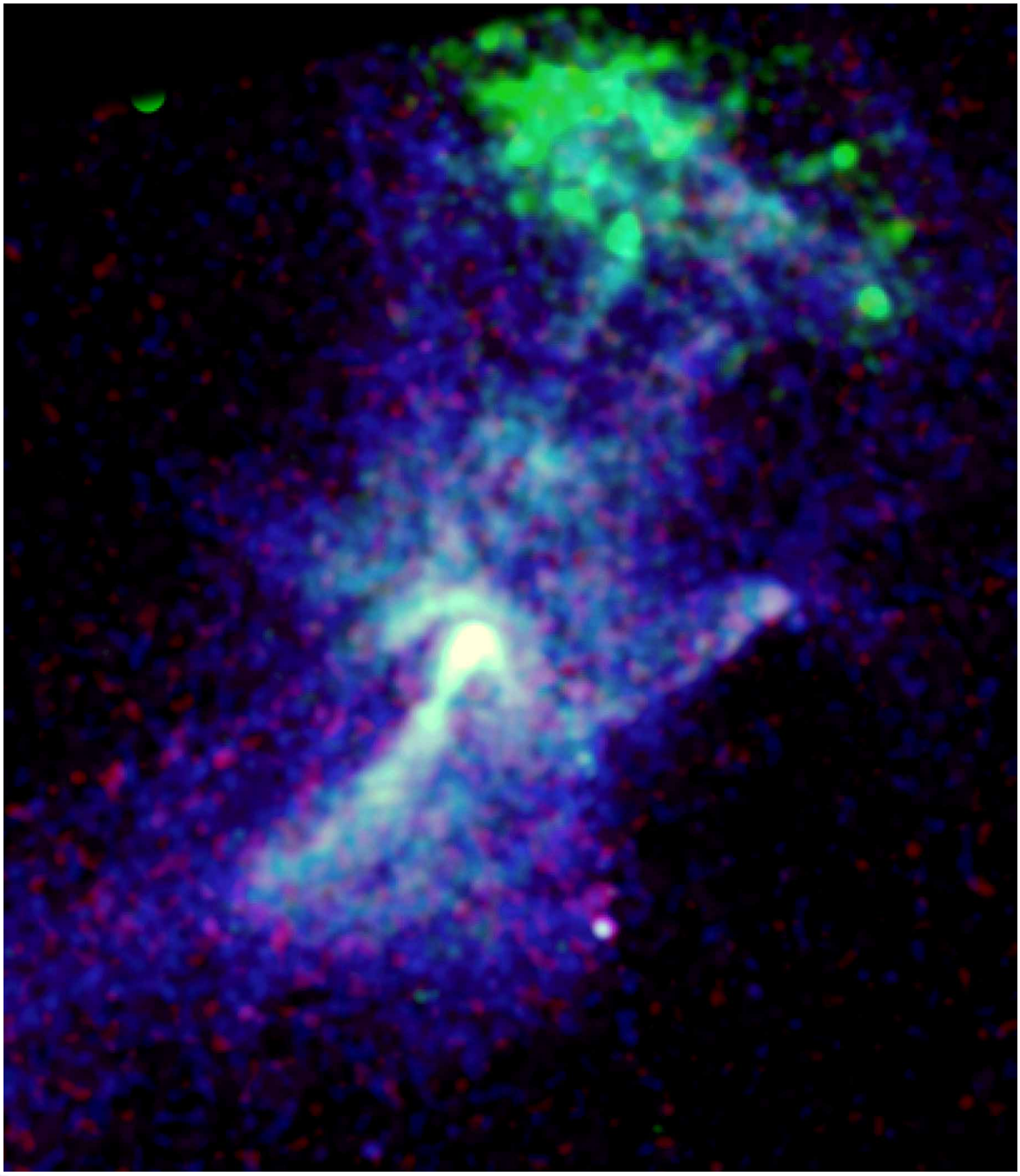

Chandra X-Ray Observatory Center

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1509-58 in SNR G320.4-1.2: A neutron star located about 19,000 light years away in the constellation Circinus.
Credit: NASA/MIT/B.Gaensler et al.

Chandra's image of the rapidly spinning neutron star, or pulsar, B1509-58 shows a central bright source surrounded by an extremely energetic and complex nebula. The blue and purple colors in the nebula indicate X-rays emitted by high-energy particles of matter and anti-matter produced by the quadrillion volt environment around the pulsar. In the lower left of the image, a thin jet almost 20 light years in length traces a beam of particles being shot out from the pulsar's south pole at more than 130 million miles per hour. The small arc just above the pulsar marks a shock wave produced by particles flowing away from the pulsar's equator.

Scale: Image is 10 x 14 arcmin.
Chandra X-ray Observatory ACIS Image