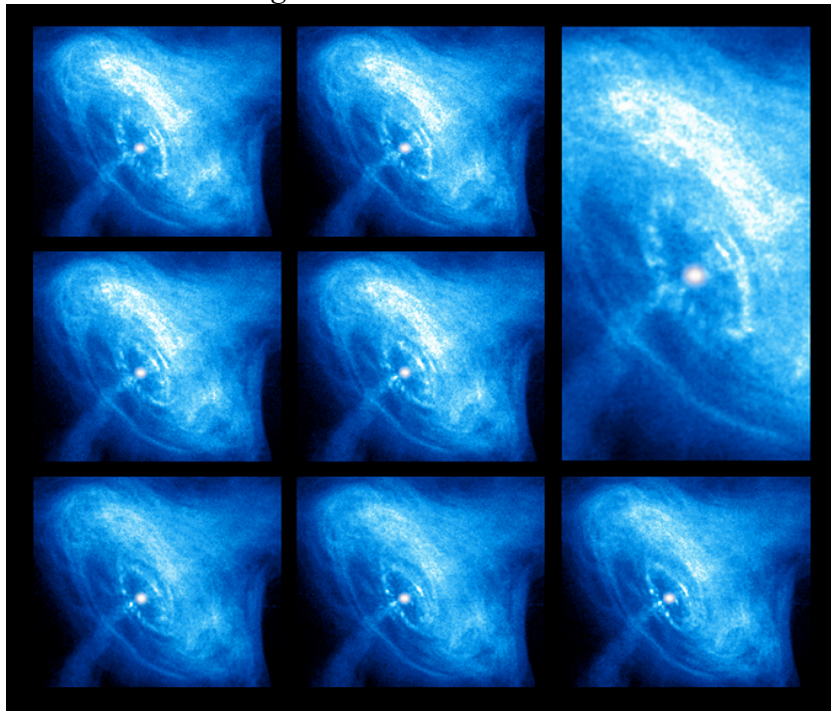




Chandra Science Highlight-I

CRAB NEBULA: SPACE MOVIE REVEALS SHOCKING SECRETS OF THE CRAB PULSAR

Chandra ACIS Image.



- A wisp can be seen moving outward at $\sim 0.5 c$ from the upper right of the inner ring around the pulsar. The wisp appears to merge with a larger outer ring that is visible in both X-ray and optical images.
- The inner X-ray ring consists of about two dozen knots that form, brighten and fade.
- The wisps and diffuse X-ray emission appear to emerge from the inner X-ray ring.
- The data are consistent with the ring and the base of the jet being quasi-stationary shock structures in the equatorial wind and the polar jet from the pulsar.

Reference: J. Hester et al. 2002 *Astrophysical Journal Letters*, 577, L49.

Credit: NASA/CXC/ASU/J. Hester et al.

The Chandra images in this collage were made over a span of 6 months (ordered left to right, except for the close-up). They provide a stunning view of the activity in the inner region around the Crab Nebula pulsar, a rapidly rotating neutron star seen as a bright white dot near the center of the images.