Chandra Science Highlight

NASA's Chandra Releases Doubleheader of Blockbuster Hits



These two images show data from NASA's Chandra X-ray Observatory (blue) of the supernova remnant Cassiopeia A (Cas A; left) and the pulsar wind nebula called the Crab Nebula (right). For Cas A, optical data from the Hubble Space Telescope shows stars in yellow and white. These are still images from two new movies showing Chandra data extending over about two decades. The movies in various formats are available here: <u>https://chandra.harvard.edu/photo/2024/timelapse/animations.html</u>

The CXC is operated for NASA by the Smithsonian Astrophysical Observatory

- X-ray movies of two famous objects in space, the Crab Nebula and Cassiopeia A (Cas A), have been released. These movies are made from about two decades of data collected by NASA's Chandra X-ray Observatory.
- In the Crab Nebula, the movie shows changes in both the rings around the pulsar and the jets it is blasting into space.
- The Cas A movie features the debris field from the supernova remnant, and its blast wave, and how they are expanding.
- These movies show the value of Chandra's X-ray vision remaining as sharp as ever after two decades in space.

Distance estimate: 11,000 light-years (Cas A) and 6,500 light-years (Crab Nebula)

Credits: For Cas A: X-ray: NASA/CXC/SAO; Optical: NASA/STScI; Image Processing: NASA/CXC/SAO/J. Major, A. Jubett, K. Arcand. For the Crab Nebula: X-ray: NASA/CXC/SAO; Image processing: NASA/CXC/SAO/J. Schmidt, J. Major, A. Jubett, K. Arcand

Instrument: ACIS

Reference: Sakai, Y. et al. ApJ, 951, 59; https://arxiv.org/abs/2306.13355

More information: The detailed caption is here:

https://chandra.harvard.edu/photo/2024/timelapse/ and the movies, in different formats, are here:

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