



**Chandra X-ray
Observatory Center**

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PSR J0108-1431: The oldest pulsar detected in X-rays at a distance of about 770 light years from Earth. (Credit: X-ray: NASA/CXC/Penn State/G.Pavlov et al.; Optical: ESO/VLT/UCL/R.Mignani et al.; Illustration: NASA/CXC/M.Weiss.)

Caption: The composite image on the left shows X-ray data from the Chandra X-ray Observatory (purple) and optical emission from Very Large Telescope (red, blue and white.) The Chandra source in the center of the image is the ancient pulsar PSR J0108-1431, or J0108 for short. At an age of about 200 million years, this pulsar is the oldest isolated pulsar ever detected in X-rays. This pulsar is slowing down as it ages and converting some of the energy that is being lost into X-rays, more efficiently than for any other known pulsar. The artist's illustration on the right shows what J0108 might look like if viewed close up.

Scale: Left panel is 6.6 arcmin across.

Chandra X-ray Observatory ACIS Image

CXC operated for NASA by the Smithsonian Astrophysical Observatory