



**Chandra X-ray  
Observatory Center**

Harvard-Smithsonian Center for Astrophysics  
60 Garden St. Cambridge, MA 02138 USA  
<http://chandra.harvard.edu>

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**IGR J11014-6103:** A pulsar moving at supersonic speeds about 23,000 light years from Earth.  
(Credit: X-ray: NASA/CXC/ISDC/L.Pavan et al, Radio: CSIRO/ATNF/ATCA Optical: 2MASS/  
UMass /IPAC-Caltech/NASA/NSF)

**Caption:** An extraordinary jet trailing behind a runaway pulsar is seen in this composite image that contains X-ray data from Chandra (purple), radio data from the ACTA (green), and optical data from the 2MASS survey (red, green, and blue). The pulsar – a spinning neutron star – and its tail are found in the lower right of this image. The tail stretches for 37 light years, making it the longest X-ray jet ever seen from an object in the Milky Way galaxy. The pulsar is moving away from the center of the supernova remnant (seen in the upper left of the image) where it was born at a speed between 2.5 million and 5 million miles per hour. This supersonic pace makes IGR J11014-6103 one of the fastest moving pulsars ever observed.

**Scale:** Image is 22 arcmin across (about 147 light years)

*Chandra X-ray Observatory ACIS Image*

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*CXC operated for NASA by the Smithsonian Astrophysical Observatory*

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