



**Chandra X-Ray
Observatory Center**

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Circinus X-1: A binary-star system 20,000 light-years from Earth in the constellation of Circinus.

Credit: NASA/Penn State/MIT/N.Brandt and N.Schulz

This animation shows the strong variability over time of the “P Cygni” spectral lines in Circinus X-1 obtained by the Chandra X-ray Observatory. The distinctive spectral signature from Circinus X-1 is produced by a 4.5-million-mile-per-hour wind from a compact pair of orbiting stars in our Galaxy. The P Cygni profile, never detected before in X rays prior to Chandra’s observation of Circinus X-1, is a textbook tool used by scientists to study stellar winds.

Chandra X-ray Observatory ACIS/HETG Image