



**Chandra X-ray
Observatory Center**

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V404 Cygni: A binary system including a black hole about 7,800 light years from Earth.
(Credit: X-ray: NASA/CXC/U.Wisc-Madison/S. Heinz et al.; Optical/IR: PanSTARRS)

Caption: The black hole in V404 Cygni is actively pulling material away from a companion star — with about half the mass of the Sun — into a disk around the invisible object. A burst of X-rays from the black hole detected in 2015 created the high-energy rings from a phenomenon known as light echoes, where light bounces off of dust clouds in between the system and Earth. In a new composite image, X-rays from Chandra (light blue) have been combined with optical data from the Pan-STARRS telescope that show the stars in the field of view. Each of the concentric rings is created by the burst of X-rays reflecting off dust clouds at different distances.

Scale: Image is about 35 arcmin (80 light years) across.

Chandra X-ray Observatory ACIS Image

CXC operated for NASA by the Smithsonian Astrophysical Observatory
