



ILLUSTRATION



**Chandra X-ray
Observatory Center**

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HOPS 383: A young protostar located about 1,400 light years from Earth.
(Credit: X-ray: NASA/CXC/Aix-Marseille University/N. Grosso et al.; Illustration: NASA/CXC/M. Weiss)

Caption: An X-ray flare from a very young star, or "protostar," detected by Chandra may reset the timeline for when scientists think Sun-like stars start blasting high-energy radiation into space. This illustration shows HOPS 383 surrounded by a donut-shaped cocoon of material (dark brown) that is falling in towards the central star. Much of the light from the infant star is unable to pierce this material, but X-rays from the flare (blue) can. Infrared light is scattered off the inside of the cocoon (white and yellow). An inset shows the Chandra image of the flare, which lasted over 3 hours, taken during observations in December 2017.

Scale: X-ray image is about 9 arcsec (0.06 light years) across.

Chandra X-ray Observatory ACIS Image

CXC operated for NASA by the Smithsonian Astrophysical Observatory