



**Chandra X-Ray
Observatory Center**

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Rho-Ophiuchi: A molecular cloud about 500 light years from Earth.
Credit: NASA/Penn State/Y.Tsubio et al.

This time-lapse sequence of Chandra images taken over a 27 hour period shows the flaring activity of protostars - stars in their "neonatal stage" that are surrounded by dust and gas. Because these stars are hidden from the view of other types of telescopes, X-ray observations provide astronomers with a look at some of the youngest stars in the universe. Chandra was able to separate out the individual protostars and show that they are characterized by violent, flaring activity that produces X-ray flares 100 to 100,000 times more energetic than the flares from the Sun.

Chandra X-ray Observatory ACIS Image