



**Chandra X-ray  
Observatory Center**

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**Barnard's Star:** A red dwarf star located about 6 light years from Earth.  
(Credit: X-ray light curve: NASA/CXC/University of Colorado/K. France et al.; Illustration: NASA/CXC/M. Weiss)

**Caption:** A study using Chandra and Hubble has given new insight to how habitable planets that orbit the most common type of stars in the Galaxy might be. The target of the new study is a red dwarf called Barnard's Star that is about 10 billion years old. Separate Chandra and Hubble observations of Barnard's Star in 2019 revealed one X-ray and two ultraviolet flares. These results imply that Barnard's Star unleashes potentially destructive flares about 25% of the time, suggesting that most old red dwarfs may not be hospitable for life. The illustration shows radiation from flares from a red dwarf (right) like Barnard's Star eroding the atmosphere of an orbiting, rocky planet (left). The inset shows an X-ray flare seen in the Chandra observation lasting about 7 hours.

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