



**Chandra X-ray
Observatory Center**

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HD 189733: An exoplanet in orbit around a star about 63 light years from Earth.

(Credit: X-ray: NASA/CXC/SAO/K.Poppenhaeger et al; Illustration: NASA/CXC/M.Weiss)

Caption: Using Chandra and XMM-Newton, astronomers have detected an exoplanet passing in front of its parent star for the first time in X-rays. The artist's illustration shows HD 189733b, a "hot Jupiter" that goes around its star once every 2.2 days. The illustration also reveals the presence of a faint red companion star in the system. The new X-ray observations (inset) suggest that HD 189733b has a larger atmosphere than implied by previous optical studies. HD 189733b is the closest hot Jupiter to Earth, making it a prime target for astronomers who want to learn more about this type of exoplanet and the atmosphere around it.

Scale: Image is 1.5 arcmin across (about 0.02 light years across).

Chandra X-ray Observatory ACIS Image

CXC operated for NASA by the Smithsonian Astrophysical Observatory