Chandra X-ray Observatory Center

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Exoplanet Survey: Exoplanet Survey: A study of nearly three dozen exoplanets and their host stars. (Credit: Illustration: NASA/CXC/M.Weiss. X-ray: NASA/CXC/Potsdam Univ./N. Ilic et al.)

Caption: Scientists used Chandra and XMM-Newton to test whether large exoplanets closely orbiting their host stars (known as "hot Jupiters") affect their stars. The results, garnered from observations of dozens of star systems, show that these exoplanets can make their host star act younger than it is. This happens because tidal forces from the planet cause the star to spin faster than it otherwise would. An artist's illustration shows one of the systems in the study where a hot Jupiter (lower right) orbits its host star (left) with another star in the distance (upper right). The two stars are themselves in orbit with each other, which was an important factor in the study.

Chandra X-ray Observatory ACIS Image

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