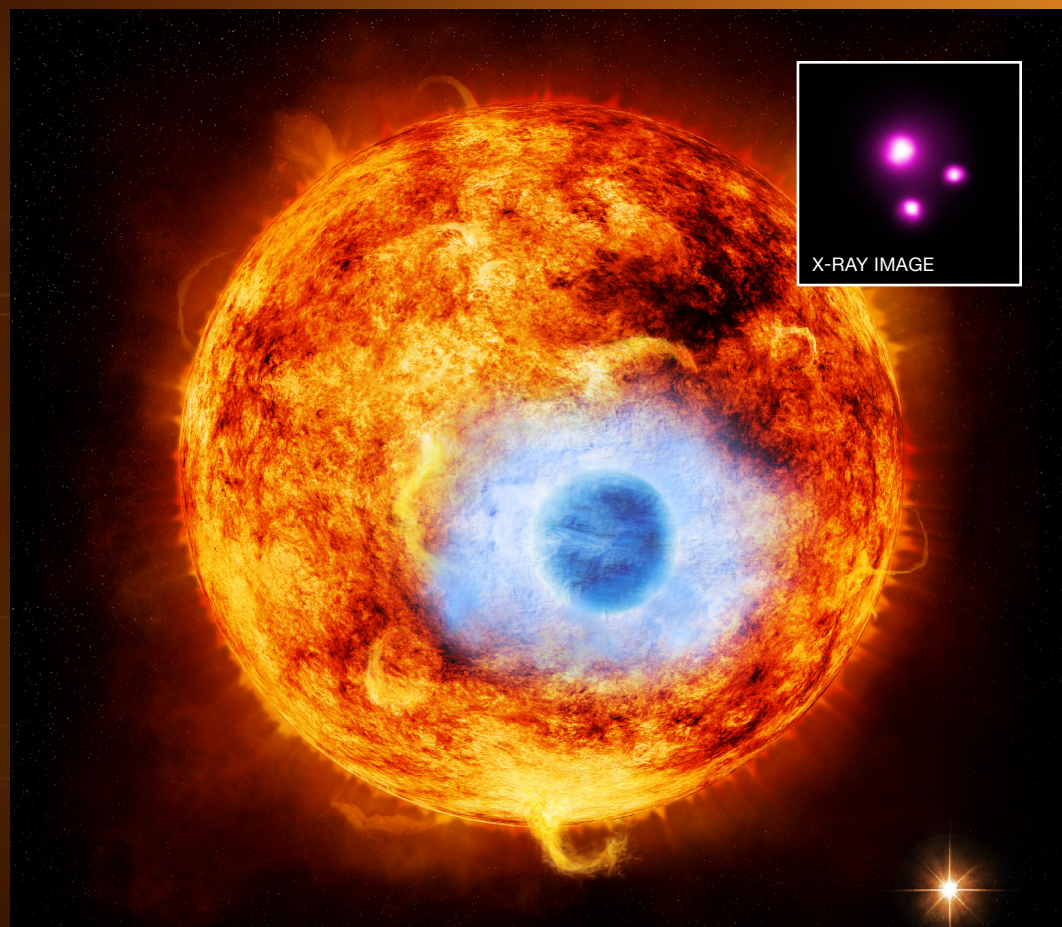


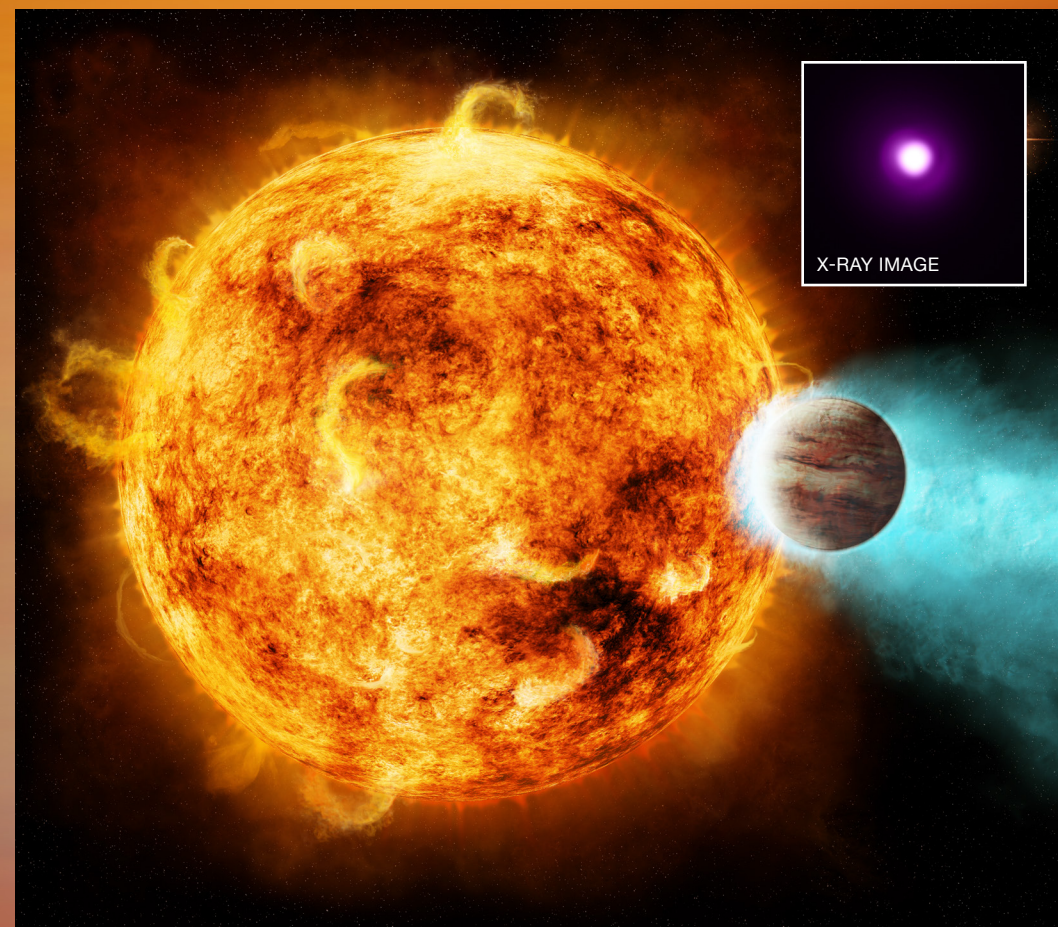
EXOPLANETS

Exoplanets are planets that orbit around stars other than our Sun. Discovered almost 20 years ago using visible light telescopes, thousands of exoplanets and exoplanet candidates have since been discovered and catalogued. X-ray observations from Chandra can detect exoplanets passing in front of their parent stars, and help contribute to the growing knowledge of these exotic worlds.



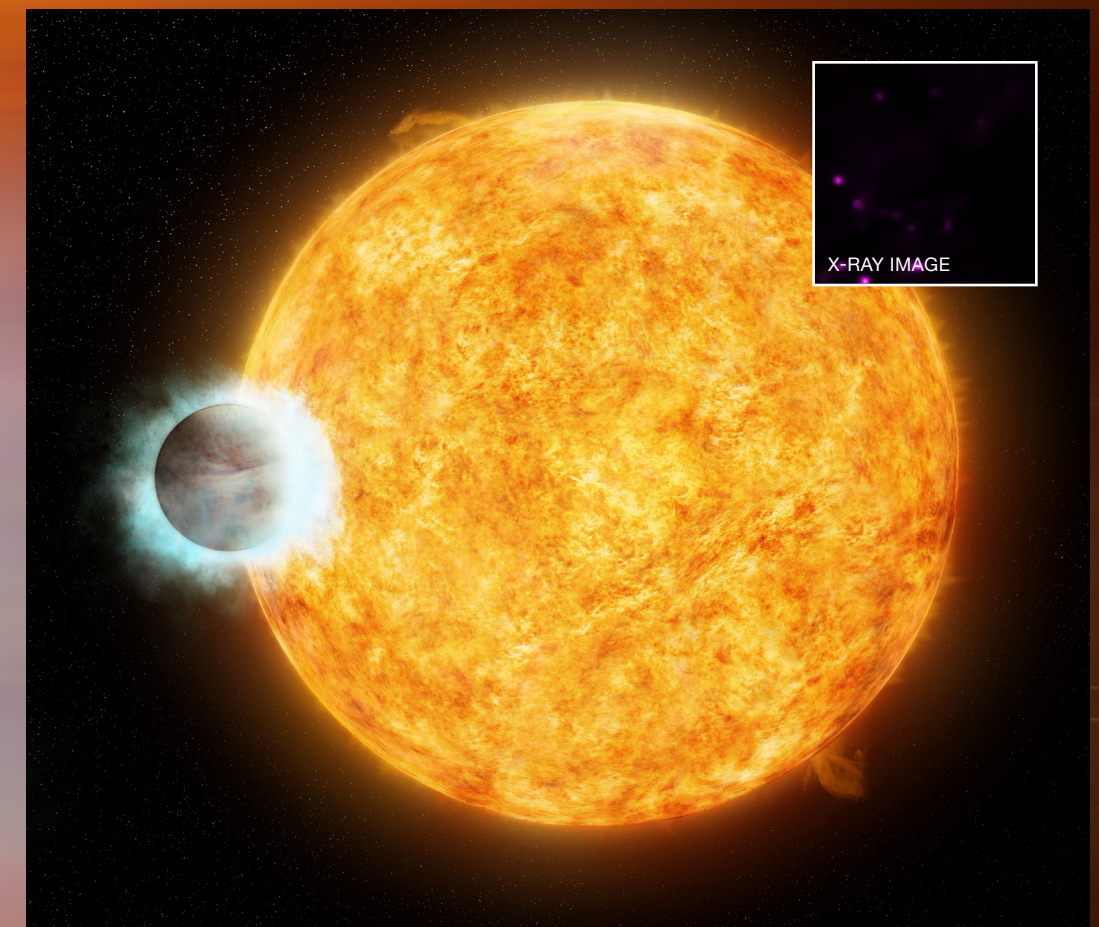
This artist's illustration depicts the planet HD 189733b as it passes in front of its parent star. X-ray data from Chandra suggest that the planet has a larger atmosphere than previously thought. Scientists think the parent star may be evaporating the atmosphere of HD 189733b more quickly than expected.

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



CoRoT-2 is an exoplanet that is in extremely close orbit with its host star, as seen in this artist's illustration. Researchers discovered that the star is blasting the planet with a very high level of X-rays. This intense radiation may be eroding the planet at a rate of 5 million tons of material per second.

Illustration: NASA/CXC/M.Weiss; X-ray: NASA/CXC/Univ of Hamburg/S.Schröter et al



The exoplanet WASP-18b is a huge planet in a very tight orbit around its star, making it a "hot Jupiter". The lack of detection of the host star by Chandra suggests that tidal forces generated by the planet are dampening the star's magnetic fields, making it behave like a much older star than its actual age.

Illustration: NASA/CXC/M.Weiss; X-ray: NASA/CXC/SAO/I.Pillitteri et al