WASP 18: IS A PLANET MAKING A STAR ACT OLD BEFORE ITS TIME?

A long (23 h 43m) Chandra observation reveals no X-rays being emitted from WASP-18, as shown in the lower inset box. The same field-of-view in the upper inset box shows that in optical light WASP-18 is a bright source.

- Using established relations between the magnetic activity and X-ray emission of stars and their age, the researchers concluded that WASP-18 is about 100 times less active than it should be at its age.
- WASP-18 is orbited by a planet, called WASP-18b, which has a mass more than ten times Jupiter's mass but is so close to its parent star--1/50 the distance of Earth from the Sun-- that it completes an orbit in less than a day.
- The extreme tidal forces caused by WASP-18b are apparently changing the internal structure of the star, and disrupting the magnetic dynamo that would normally produce conditions for X-ray emission.


Instrument: Chandra ACIS Observation

Scale: Inset image is about 5.3 arcmin across (about 0.5 light years)

Distance Estimate: 326 light years

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