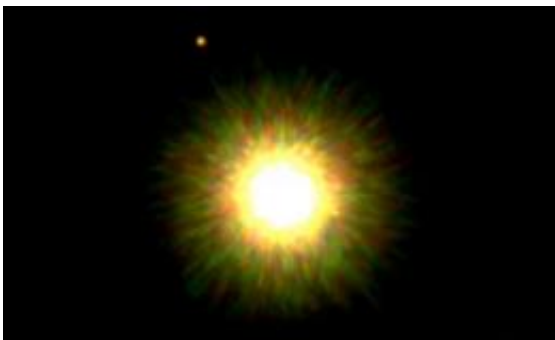


Planet and star are indeed moving together

June 29 2010



Newly confirmed planet is least massive planet known to orbit from its host star (Gemini Observatory)

(PhysOrg.com) -- A planet about eight times the mass of Jupiter has been confirmed to orbit a Sun-like star that's some 300 times farther from its own star than Earth is from its sun.

The newly confirmed planet is the least massive planet known to orbit at such a great distance from its [host star](#).

The discovery, [first reported](#) in September 2008, was made using high-resolution [adaptive optics](#) technology at the Gemini Observatory. These latest results, published in the [Astrophysical Journal](#), were led by David Lafrenière of the University of Montreal Department of Physics and a researcher at the Center for Research in Astrophysics of Quebec.

The suspected planetary system required further observations to confirm

that the planet and star were indeed moving through space together. "Back in 2008 what we knew for sure was that there was this young planetary mass next to a young Sun-like star," says Lafreničre. The extreme proximity of the two objects strongly suggested that they were associated and not just aligned by chance.

"Our new observations rule out this chance alignment possibility, and thus confirms that the planet and the star are related to each other," says Lafreničre.

With its initial detection by the team using the Gemini Observatory in April of 2008 this object became the first likely planet known to orbit a sun-like star that was revealed by direct imaging. At the time of its discovery the team also obtained a spectrum of the planet and was able to determine many of its characteristics, which are confirmed in this new work.

"In retrospect, this makes our initial data the first spectrum of a confirmed exoplanet ever," says Lafreničre, adding the images show water vapor, carbon monoxide and molecular hydrogen in the planet's atmosphere.

More information: Cited article from Astrophysical Journal:
arxiv.org/abs/1006.3070

Provided by University of Montreal

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