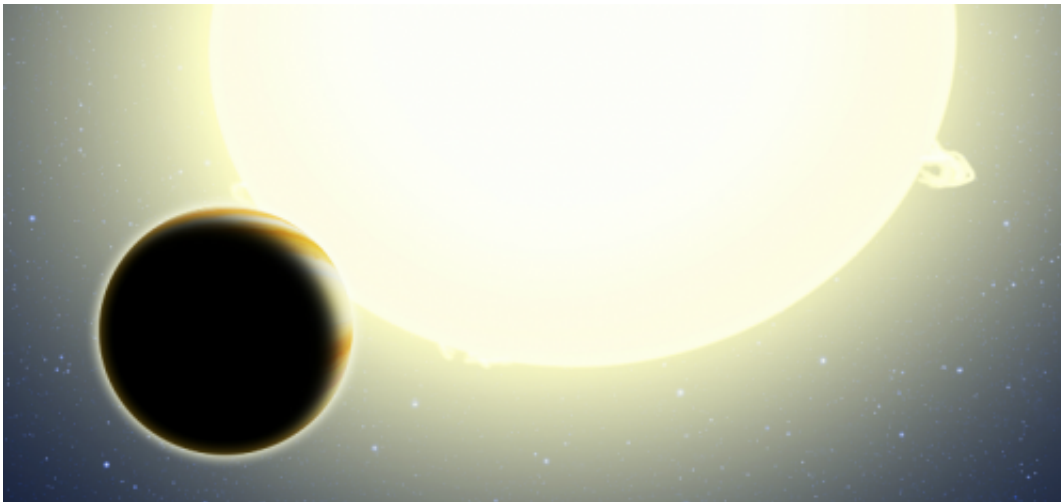


# Astronomer confirms a new "Super-Earth" planet

December 19 2014

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Artist's conception of new exoplanet. Image courtesy of Harvard-Smithsonian Centre for Astrophysics.

A University of British Columbia astronomer is a key player in the [discovery of a new exoplanet](#), out beyond our solar system.

Jaymie Matthews, who doubles as a mission scientist with Canada's first [space telescope](#), put the technology to work to confirm the existence of a new planet 180 light years away from Earth. The newly confirmed [exoplanet](#)'s official name is HIP 116454 b.

The new planet is classified a "Super-Earth": 2.5 times the diameter of

earth and 12 times its mass.

"It could be a miniature version of the ice giant planet Neptune," said Matthews. "An even more exciting possibility is that it's three-quarters water."

Matthews and his team with MOST, the Microvariability and Oscillations of STars satellite helped American researchers confirm a tantalizing hint of a new planet.

A team of U.S. researchers using data from NASA's Kepler space telescope thought they had spotted the tell-tale sign of a new planet. But before they could confirm it the Kepler satellite had moved on from tracking that part of the sky and couldn't go back.

Matthews and his team pointed MOST in the right direction and confirmed what was in the Kepler data. MOST saw the star's light level dim slightly as the exoplanet passed between it and the space telescope.

"This particular planet's calendar wouldn't take many pages," said Matthews. "It orbits its sun every 9.1 days. That's the length of a year on HIP 116454 b."

The new planet is too close to its sun to be habitable, but Matthews is hopeful it is only one of a system of planets around that star that may be more welcoming.

"This Super-Earth may have neighbours, and one might be in the star's [habitable zone](#). Only time and careful study of this system will tell."

The research paper reporting this discovery has been accepted for publication in *The Astrophysical Journal*.

Provided by University of British Columbia

Citation: Astronomer confirms a new "Super-Earth" planet (2014, December 19) retrieved 26 April 2024 from <https://phys.org/news/2014-12-astronomer-super-earth-planet.html>

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