

PRESS RELEASE



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Discovery of a Sub-Saturn like Planet around a Sun-like star

A Team of scientists and engineers led by Prof. Abhijit Chakraborty of Physical Research Laboratory (PRL), Ahmedabad, have discovered a sub-Saturn or super-Neptune size planet (mass of about 27 Earth Mass and size of 6 Earth Radii) around a Sun-like star. The planet will be known as EPIC 211945201b or K2-236b.

The Research work has appeared online in Astronomical Journal of the American Astronomical Society and published by IOP publishing (the DOI of the article is 10.3847/1538-3881/aac436).

The discovery was made by measuring the mass of the planet using the indigenously designed "PRL Advance Radial-velocity Abu-sky Search" (PARAS) spectrograph integrated with 1.2 m Telescope at PRL's Gurushikhar Observatory in Mount Abu, India. Only 23 such planetary systems (including this discovery) are known to this date with masses between 10 and 70 Earth mass and size of 4 to 8 Earth radii with such precise measurement of mass. This discovery is very important for understanding the formation mechanism of such super-Neptune or sub-Saturn kind of planets, that are too close to the host star and as well as planet formations around Sun-like stars.

With this discovery, India has joined a handful of countries, which have discovered planets around stars beyond our solar system. Further, PARAS is the first of its kind spectrograph in Asia, which can measure the mass of a planet going around a star. Very few spectrographs exist around the world that can make such precise measurements.

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