

NASA probe discovers bigger, older cousin to Earth

24/07/2015 14:00 by admin

Washington: NASA's Kepler mission has confirmed the first near-Earth-size planet in the "habitable zone" around a Sun-like star.

This discovery and the introduction of 11 other new small habitable zone candidate planets mark another milestone in the journey to finding another "Earth", the US space agency said in a statement.

The newly discovered Kepler-452b is the smallest planet to date discovered orbiting in the habitable zone -- the area around a star where liquid water could pool on the surface of an orbiting planet -- of a G2-type star, like our Sun.

The confirmation of Kepler-452b brings the total number of confirmed planets to 1,030.

"On the 20th anniversary year of the discovery that proved other suns host planets, the Kepler exoplanet explorer has discovered a planet and star which most closely resemble the Earth and our Sun," said John Grunsfeld, associate administrator of NASA's Science Mission Directorate at the agency's headquarters in Washington, DC.

"This exciting result brings us one step closer to finding an Earth 2.0," he added.

Kepler-452b is 60 percent larger in diameter than Earth and is considered a super-Earth-size planet.

While its mass and composition are not yet determined, previous research suggests that planets the size of Kepler-452b have a good chance of being rocky.

While Kepler-452b is larger than Earth, its 385-day orbit is only five percent longer.

The planet is five percent farther from its parent star Kepler-452 than Earth is from the Sun.

Kepler-452 is six billion years old, 1.5 billion years older than our Sun, has the same temperature, and is 20 percent brighter and has a diameter 10 percent larger.

"We can think of Kepler-452b as an older, bigger cousin to Earth, providing an opportunity to understand and reflect upon Earth's evolving environment," said Jon Jenkins, Kepler data analysis leader at NASA's Ames Research Center in Moffett Field, California.

The Kepler-452 system is located 1,400 light-years away in the constellation Cygnus.

The research paper reporting this finding is forthcoming in The Astronomical Journal.

In addition to confirming Kepler-452b, the Kepler team has increased the number of new exoplanet candidates by 521.

Twelve of the new planet candidates have diameters between one to two times that of Earth, and orbit in their star's habitable zone.

Of these, nine orbit stars that are similar to our Sun in size and temperature.

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