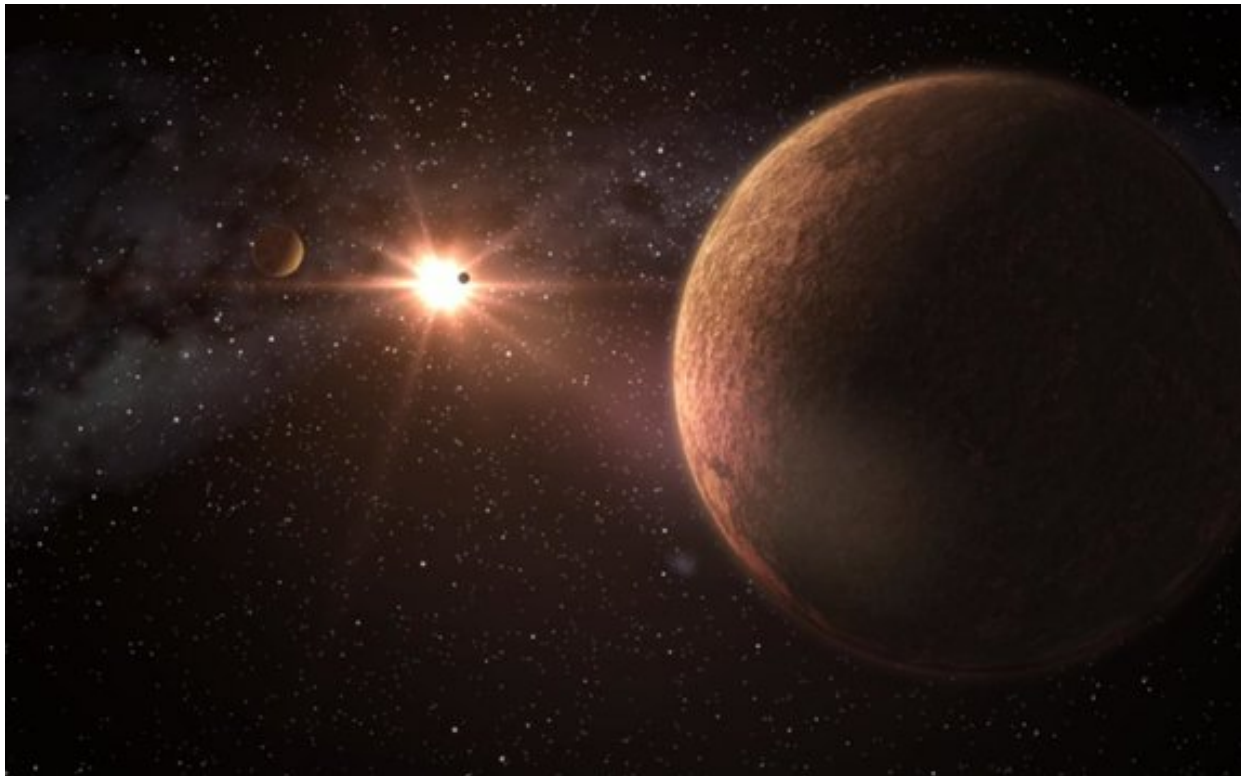


NASA Kepler satellite uncovers solar system with three Earth-sized planets

Earth-sized planets detected from the eclipses they produce in the stellar light of their respective stars



Lee Bell

 @llebeel

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NASA's Kepler satellite, which was launched in 2009 as part of the K2 mission, has uncovered three Earth-sized planets in another solar system.

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The research comes from a team led jointly by professor Javier de Co

at the University of Oviedo, and Rafael Rebolo at the IAC, along with

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other researchers from those two universities, as well as the

University of Geneva and the Gran Telescopio Canarias.

The team's **study reveals the existence** of the three new planetary systems orbiting a star named K2-239. They were detected from the eclipses they produce in the stellar light of their respective star.

The star the planets orbit is located in the constellation of the Sextan at 50 parsecs from the Sun - that means it's about 160 light years away. The researchers found the it has a compact system of at least three rocky planets of similar size to the Earth that orbit the star in much less time than earth does the Sun, being every 5.2, 7.8 and 10.1 days, respectively.

But that wasn't all. The Kepler satellite also found another star, a red dwarf variety, called K2-240, with two super-Earth-like planets about twice the size of our planet.

"Although the atmospheric temperature of red dwarf stars, around which these planets revolve, is 3,450 and 3,800 Kelvin respectively, almost half the temperature of our Sun," the researchers said.

They estimate that all the planets discovered will have temperatures

at least tens of degrees higher than those of the planet Earth due to the strong radiation they receive in their close orbits to their star.

There will be future observation campaigns with the new James Webb space telescope that will aim to characterise the composition of the atmospheres of the newly discovered planets, the researchers said.

The Kepler satellite, while suffering technical problems in 2013, has nevertheless enabled scientists to estimate that there could be as many as 40 billion Earth-size exoplanets orbiting the habitable zones of stars like the Solar System's Sun, as well as red dwarfs, within the Milky Way.

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