



What is Kepler 22B?

It was discovered by NASA's Kepler Space Telescope in December 2011 and was the first known transiting planet to orbit within the habitable zone of a Sun-like star, where liquid water could exist on the planet's surface. Kepler-22 is too dim to be seen with the naked eye. Kepler-22b's radius is roughly twice that of Earth.

Is Kepler 22 B a habitable planet?

A possible ocean world orbiting in the habitable zone--the region around a star where the temperature is right for liquid water, a requirement for life on Earth. Kepler-22 b is a super Earth exoplanet that orbits a G-type star. Its mass is 9.1 Earths, it takes 289.9 days to complete one orbit of its star, and is 0.812 AU from its star.

Does Kepler-22 have a habitable zone?

Liquid water is essential for life on Earth. Kepler-22's star is a bit smaller than our sun, so its habitable zone is slightly closer in. The diagram shows an artist's rendering of the planet comfortably orbiting within the habitable zone, similar to where Earth circles the sun. Kepler-22b has a yearly orbit of 289 days.

Where is Kepler 22 located?

The planet's host star, Kepler 22, is actually slightly smaller and cooler than the Sun, and lies 600 light-years from Earth toward the constellation of the Swan (Cygnus). The planet, Kepler 22b, is over twice the radius of the Earth and orbits slightly closer in, but lies in the habitable zone where liquid water could exist on the surface.

Is Kepler 22B a rocky planet?

The planet is about 2.4 times the radius of Earth. Scientists don't yet know if Kepler-22b has a predominantly rocky, gaseous or liquid composition, but its discovery is a step closer to finding Earth-like planets. Previous research hinted at the existence of near-Earth-size planets in habitable zones, but clear confirmation proved elusive.

How many days does Kepler 22B orbit?

Kepler-22b has a yearly orbit of 289 days. The planet is the smallest known to orbit in the middle of the habitable zone of a sun-like star. It's about 2.4 times the size of Earth. Image credit: NASA/Ames/JPL-Caltech



? The Kepler-20 system includes three other planets that are larger than Earth but smaller than Neptune. Kepler-20b, the closest planet, Kepler-20c, the third planet, and Kepler-20d, the fifth planet, orbit their star every 3.7, 10.9 and 77.6 days. All five planets have orbits lying roughly within Mercury's orbit in our solar system.



Recently discovered planet Kepler 22b has therefore instantly become the best place to find life outside our Solar System. The planet's host star, Kepler 22, is actually slightly smaller and cooler than the Sun, and lies 600 light-years from Earth toward the constellation of the Swan (Cygnus).



This diagram compares our own solar system to Kepler-22, a star system containing the first "habitable zone" planet discovered by NASA's Kepler mission. The habitable zone is the sweet spot around a star where temperatures are right for water to exist in its liquid form. Liquid water is essential for life on Earth.



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Much like our solar system, Kepler-62 is home to two habitable zone worlds, Kepler-62f and Kepler-62e. Kepler-62f orbits every 267 days and is only 40 percent larger than Earth, making it the smallest exoplanet known in the habitable zone of another star. The other habitable zone planet, Kepler-62e, orbits every 122 days and is roughly 60



On December 5, NASA announced the discovery of the planet most likely so far to sustain life outside of the Solar System. The exoplanet, given the undramatic name of Kepler 22b, was found by NASA



The Kepler-90 system is one of only two eight-planet candidate systems from Kepler, together with Kepler-385, and the second to be discovered after the Solar System. It was also the only seven-planet candidate system from Kepler before the eighth was discovered in 2017. All of the eight known planet candidates orbit within about 1 AU of Kepler-90.



If the Solar System were such a binary system, the outer limits of the resulting circumstellar habitable zone could extend as far as 2.4 AU. [79] [80] Kepler-22 b, discovered in December 2011 by the Kepler space probe, [140] is the first transiting exoplanet discovered around a ???



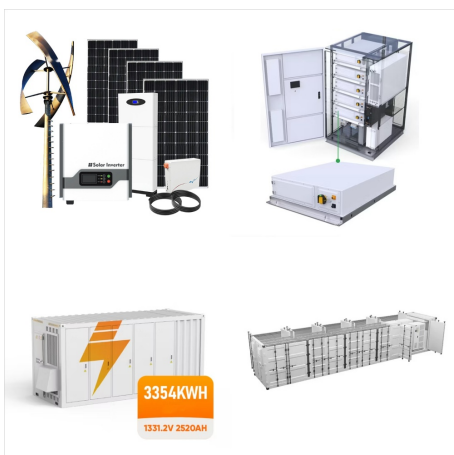
The Solar System [d] is the gravitationally bound system of the Sun and the [22] As helium accumulates at its core, the Sun is and Kuiper belt objects follow highly elliptical orbits. Kepler's laws only account for the influence of the Sun's gravity upon an orbiting body, not the gravitational pulls of different bodies upon each other.



Isaac Newton showed in 1687 that relationships like Kepler's would apply in the Solar System as a consequence of his own laws of motion and law of universal gravitation. The current perihelion, near January 4, is fairly close to the solstice of December 21 or 22. Nomenclature



English: This diagram below compares our own solar system to Kepler-22. The diagram includes the habitable zone where water can exist in liquid form. Kepler-22's star is a bit smaller than our sun, so its habitable zone is slightly closer in. The orbit of Kepler-22b around its star takes 289 days and is about 85% as large as Earth's orbit.



Related: Kepler's Third Law: The movement of solar system planets When was Kepler born? Johannes Kepler was born on Dec. 27, 1571, in the Free Imperial City of Weil der Stadt, which today is near



Kepler Name Kepler-22 b Kepler-22 b Kepler-22 b
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Exoplanet Archive Disposition CONFIRMED
CONFIRMED CONFIRMED CONFIRMED
CONFIRMED CONFIRMED CONFIRMED Vetting
Status Done Done Done Done Done Done Done
Date of Last Parameter Update 2018-08-16
2017-08-31 2015-09-24 2014-12-18 2014-12 ???



This table lists all planets in the system Kepler-22.
Kepler-22 b; Alternative planet names: KOI-87.01,
KOI-87 b, KIC 10593626 b, Gaia DR2
2127941757262806656 b: The following plot shows
the approximate sizes of the planets in this system
The Solar System planets are shown as a
comparison. Note that unless the radius has been
determined



The diagram compares the planets of our inner
solar system to Kepler-186, a five-planet star
system about 500 light-years from Earth in the
constellation Cygnus. The five planets of Kepler-186
orbit an M dwarf, a star that is half the size and
mass of the sun. Kepler-186b, Kepler-186c,
Kepler-186d and Kepler-186, orbit every 4, 7, 13
and 22



On May 22, 2017, using data from Kepler's extended K2 mission, astronomers pinned down the orbital period of the outermost planet in the famous TRAPPIST-1 system???home to seven Earth-size planets. On Dec. 14, 2017, an eighth planet was found in the Kepler-90 system, equal to our own solar system in having the largest number of known



is a miniature solar system that would fit entirely inside the orbit of Mercury. The habitable zone of Kepler-186 is very small compared to that of Kepler-452 or the sun because it is a much smaller, cooler star. The size and extent of the habitable zone of Kepler-452 is nearly the same as that of the sun, but is slightly bigger