



The Nine Planets is an encyclopedic overview with facts and information about mythology and current scientific knowledge of the planets, moons, and other objects in our solar system and beyond. The 9 Planets in Our Solar System



General questions What is an exoplanet? An exoplanet is a planet outside our solar system, usually orbiting another star. They are also sometimes called "extrasolar planets," "extra-" implying that they are outside of our solar system. detailed answer Is there life on other planets? Earth is the only planet we know of with life on [??]



For the first time, astronomers have used NASA's James Webb Space Telescope to take a direct image of a planet outside our solar system. The image, as seen through four different light filters, shows how Webb's powerful infrared gaze can easily capture worlds beyond our solar system, pointing the way to future observations that will

# DIFFERENT PLANETS OUTSIDE OUR SOLAR SYSTEM



Early Release Science. This NIRSpec prism observation of WASP-39 b is just one part of a larger investigation that includes observations of the planet using multiple Webb instruments, as well as observations of two other transiting planets. The investigation, which is part of the Early Release Science program, was designed to provide the exoplanet research ???



How We Search. Exoplanets, or planets in solar systems other than our own, sometimes orbit directly between the Earth and their host star. When the planet orbits in front of its star, it blocks a small amount of light. CfA scientists use the Transiting Exoplanet Survey Satellite (TESS) and the Kepler space telescopes as well as the ground-based robotic telescopes of the MEarth project ???



Another source of rogue planets is our Solar System's Oort Cloud. If other systems also have a cloud of objects like this, they can be an abundant source of rogue planets ejected by stellar activity. "In this way, the parent-civilization may create unique and autonomous daughter-civilizations inhabiting different planets, moons, or regions

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That means worlds outside the solar system are labeled as "Super-Earths, hot Jupiters, and sub-Neptunes" but these planets can be radically different from those of our planetary systems, meaning



Scientists have discovered more than 5,000 planets outside of the Solar System, or "exoplanets". nothing like this exists in our own Solar System, where smaller planets tend to be closer to our star while bigger ones orbit farther away. Astronomers had to come up with a new name ??? hot Jupiters ??? for such giant planets orbiting so



This exoplanetary encyclopedia ??? continuously updated, with more than 5,600 entries ??? combines interactive 3D models and detailed data on all confirmed exoplanets. Click on a planet's name to see a visualization of each world and system, along with vital statistics.

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The search for life beyond Earth is really just getting started, but science has an encouraging early answer: there are plenty of planets in the galaxy, many with similarities to our own. But what we don't know fills volumes. Observations ???



The region outside our Solar System is thick with a steady rain of these high-speed subatomic particles, which would be powerful enough to cause deadly radiation poisoning on a less sheltered planet.



Extrasolar planet, any planetary body that is outside the solar system and that usually orbits a star other than the Sun. Extrasolar planets were first discovered in 1992. More than 5,000 are known, and almost 9,000 await further confirmation. Learn more about extrasolar planets in this article.

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The James Webb Space Telescope will be able to study planets outside our solar system with unparalleled detail ??? including checking to see if their atmospheres give any indication that a planet



The search for life beyond Earth is really just getting started, but science has an encouraging early answer: there are plenty of planets in the galaxy, many with similarities to our own. But what we don't know fills volumes. Observations from the ground and from space have confirmed thousands of planets beyond our solar system. [???



It's actually a system of planets, not unlike how we like to call our own solar system. The name "Epsilon Eridani" stands for the parent star, or their "sun," and it has two probable planets orbiting it: one confirmed (Epsilon Eridani b) another yet unconfirmed (Epsilon Eridani c), making ???



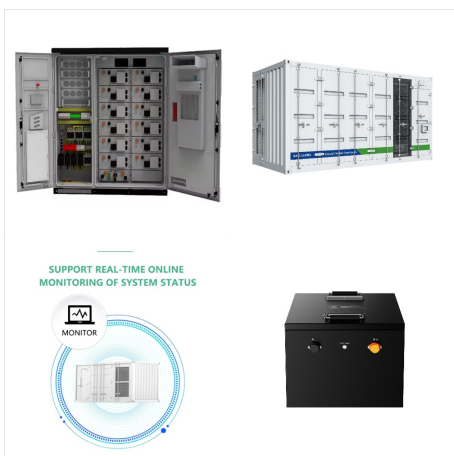
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Exoplanets are planets that exist outside of our solar system, and some of them are really wild. There's one that could be Earth's twin, one that's shaped like a rugby ball, and another that



The stars with the most confirmed planets are the Sun (the Solar System's star) and Kepler-90, with 8 confirmed planets each, followed by TRAPPIST-1 with 7 planets. The 1007 multiplanetary systems are listed below according to the star's distance from Earth. Proxima Centauri, the closest star to the Solar System, has three planets (b, c and d).



Astronomers, however, are still hunting for another possible planet in our solar system, a true ninth planet, after mathematical evidence of its existence was revealed on Jan. 20, 2016. The

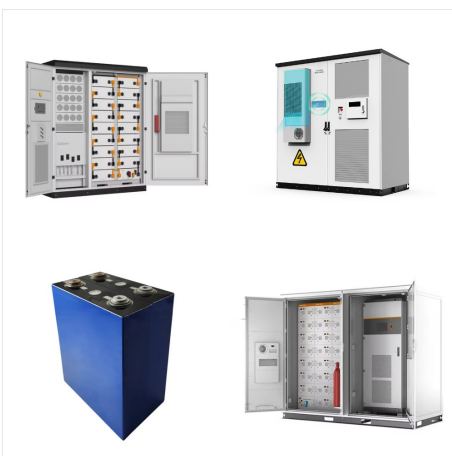
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Exoplanets (planets outside our solar system) are an active area of modern research. Suppose you read an article stating that there is a newly discovered planetary system with three planets. The article states that the outermost planet (Planet C) goes all the way around its star in less time than the innermost planet (Planet A).



Just last month, NASA's Kepler telescope discovered 95 new exoplanets beyond our solar system (on top of the thousands of exoplanets Kepler has discovered so far). The total known planet count beyond our solar system is now more than 3,700. The planets range in size from mostly rocky super-Earths and fluffy mini-Neptunes, to Jupiter-like giants. They include a ???



The Solar System [d] is the gravitationally bound system of the Sun and the objects that orbit it. [11] It formed about 4.6 billion years ago when a dense region of a molecular cloud collapsed, forming the Sun and a protoplanetary disc. The Sun is a typical star that maintains a balanced equilibrium by the fusion of hydrogen into helium at its core, releasing this energy from its ???

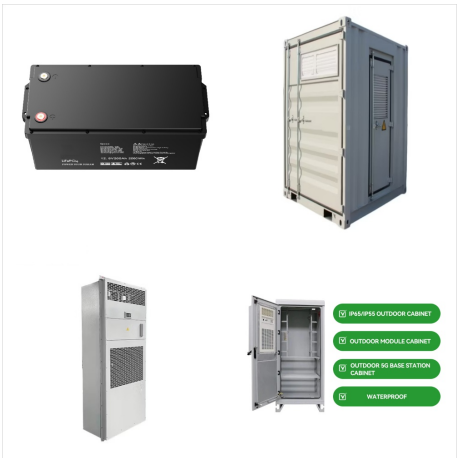
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We can't obtain samples of such information-bearing molecules from planets beyond our solar system, since they are so far away that it would take tens of thousands of years to travel there even in the fastest spaceships ever built. Instead, we'll have to rely on remote detection of potential biosignatures, measuring the types and quantities



Our solar system includes the Sun, eight planets, five dwarf planets, and hundreds of moons, asteroids, and comets. The order and arrangement of the planets and other bodies in our solar system is due to the way the solar system formed. Nearest to the Sun, only rocky material could withstand the heat when the solar system was young.



The more than 5,000 exoplanets confirmed in our galaxy so far include a variety of types ??? some that are similar to planets in our solar system, others vastly different. Among these are a mysterious variety known as "super-Earths" because they are larger than our world and possibly rocky. Download Options



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NASA's Spitzer Space Telescope (2013-2020) was not designed to search for exoplanets, but its infrared instruments made it an excellent exoplanet explorer. It was used in the notable discovery of the TRAPPIST-1 system. In 2018 the Transiting Exoplanet Survey Satellite (TESS) was launched as a successor to Kepler to discover exoplanets in orbit around the brightest dwarf ???



Over the past few decades, researchers have developed a variety of techniques to spot the many planets outside our solar system, often used in combination to confirm the initial discovery and



Beyond our solar system, missions, such as Kepler and TESS, are revealing thousands of planets orbiting other stars. A zoom into the Hubble Space Telescope photograph of an enormous, balloon-like bubble being blown into space by a super-hot, massive star.