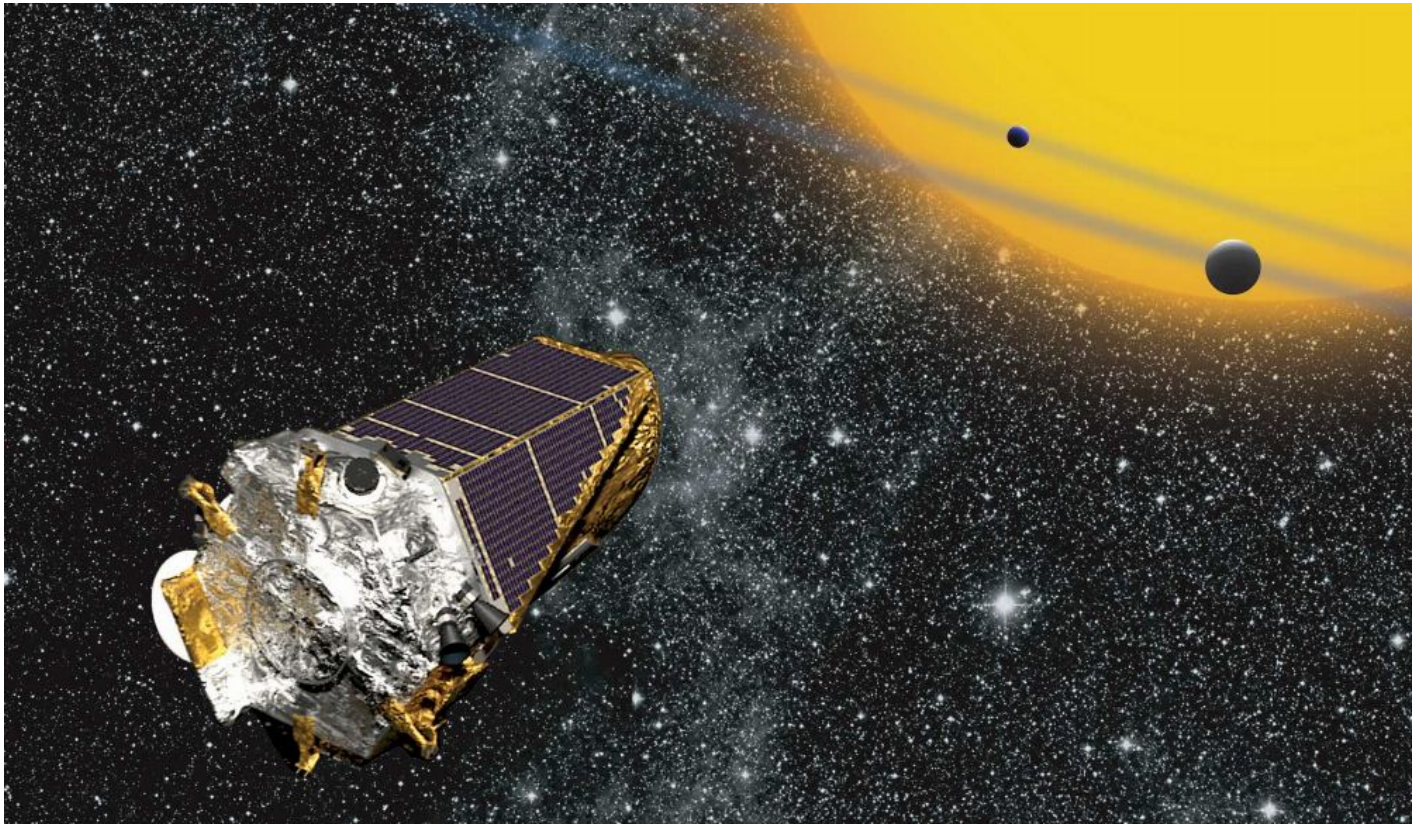


Kepler Space Telescope

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About Kepler Space Telescope

- It was NASA's first planet-hunting mission, assigned to search a portion of the Milky Way galaxy for Earth-sized planets orbiting stars outside our solar system.
- It was launched on March 6, 2009.
- The spacecraft was named after the famed German astronomer Johannes Kepler (1571-1630).
- Its scientific goals included determining the abundance of earth-sized planets and the distribution of sizes and shapes of their orbits, estimating the number of planets in multiple-star systems, and determining the properties of stars that have planetary systems.
- In December 2011, NASA announced that Kepler had found its first planet, Kepler-22b, in the habitable zone of a star.
- On October 30, 2018, after nine years in deep space collecting data, NASA announced that Kepler had run out of fuel. The spacecraft was retired in its current, safe orbit, away from Earth.
- Kepler left behind a legacy of more than 2,600 planet discoveries from outside our solar system, many of which could be promising places for life.
- Features:

- Kepler detected planets by observing transits, or tiny dips in the brightness of a star that occur when a planet crosses in front of the star.
 - The spacecraft was basically a single instrument – a specially designed 3-foot (1-meter) diameter aperture telescope and image sensor array – with a spacecraft built around it.
 - The diameter of the telescope's mirror was 4 feet, 7 inches (1.4 meters), making it one of the largest mirrors beyond Earth's orbit.
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Q1) What is the aperture of a telescope?

A telescope's aperture refers to the diameter of the lens or mirror the telescope uses to collect light. A bigger lens or mirror has a higher aperture, meaning it's able to collect more light. The more light that's collected, the better you'll be able to see faint objects. Aperture power increases dramatically as you size up the lens or mirror; for example, a telescope with a 200 mm aperture will be able to collect four times as much light as a 100 mm aperture.

Source: [Scorching, Seven-Planet System Revealed by New Kepler Exoplanet List](#)

Source: <https://vajiramandravi.com/current-affairs/kepler-space-telescope/>

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