



K2-18b: Potentially Habitable Planet

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Scientists have found **signatures of water vapour** in the atmosphere of K2-18b.

- K2-18b is the **only planet orbiting a star outside the Solar System (exoplanet)** that is known to have **both water and temperatures** that could support life.
- However, K2-18b's size and surface gravity are much larger than Earth's. Its radiation environment, too, maybe hostile.
- K2-18b **orbits** the **cool dwarf star K2-18**, which is about 110 light-years from Earth in the Leo constellation.
- It is **eight times the mass of Earth**. It was discovered in 2015 by NASA's Kepler spacecraft.
- It resides in a **habitable zone or Goldilocks zone**, the area around a star where it is not too hot and not too cold for liquid water to exist on the surface of surrounding planets.
 - The size of the habitable zone clearly depends on the luminosity of the star, which determines the equilibrium temperature of the planet.
 - For low-mass, cool stars, the region is closer to the star, and for higher mass, hotter stars, the region is more distant from the star.

Source: TH