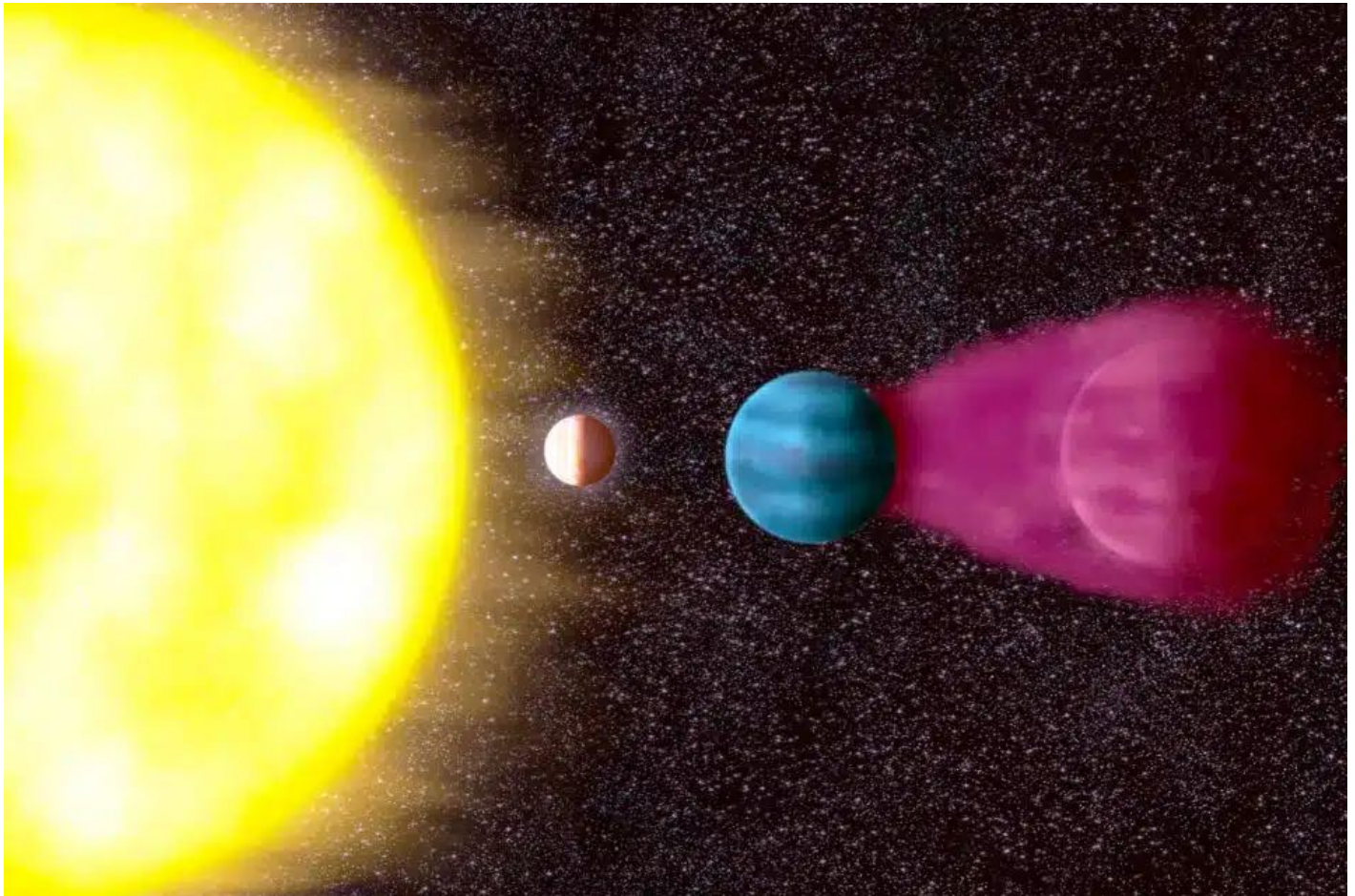


What is HD 63433d?

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About HD 63433d

- It is an Earth-like exoplanet that orbits a sun-like star called HD 63433 (also known as TOI 1726).
 - The star is about 73 light years away from the sun and is part of the group of stars moving together that make up the constellation Ursa Major.
 - The star HD 63433 shares similarities with our sun in size and type but is significantly younger, at roughly 400 million years old.
- It is the smallest confirmed exoplanet, younger than 500 million years old.
- It's also the closest Earth-sized planet discovered so far, and it's about 400 million years old.
- For comparison, Earth and the rest of our solar system are around 4.5 billion years old, meaning HD 63433 d appears to be just around 10% of the age of our planet.
- It's the third planet found in orbit around its star. This planet is eight times closer to its star than Mercury is to the Sun.

- Because of its proximity to its star, which has 99% the mass of our sun, the planet is tidally locked, just like the moon is to Earth.
 - This means that one side of the planet, its dayside, constantly faces the star and is permanently blasted with stellar radiation, while the cooler nightside perpetually faces out into space.
 - This pushes surface temperatures on the planet's dayside up around 2,300 degrees Fahrenheit (1,260 degrees Celsius).
 - Its orbit is remarkably short, completing a full revolution around its star every 4.2 days.
 - Being so hot, so close to its star, and so small, this planet likely lacks a substantial atmosphere.
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Q1) What is a Light Year?

Light-year is the distance light travels in one year. Light zips through interstellar space at 186,000 miles (300,000 kilometers) per second and 5.88 trillion miles (9.46 trillion kilometers) per year. We use light-time to measure the vast distances of space.

Source: [New Earth-like planet discovered in Big Dipper constellation](#)

Source: <https://vajiramandravi.com/current-affairs/hd-63433d/>

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