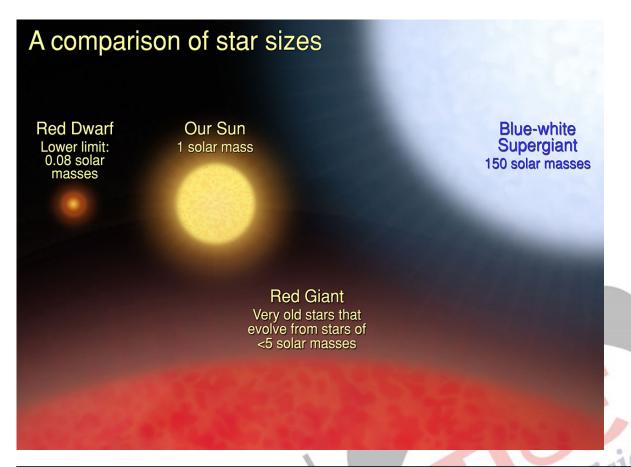


Giant Planet Orbiting Red Dwarf Star

Source: TOI

Astronomers have discovered a **Saturn-sized gaseous planet** orbiting the <u>red dwarf star</u> **TOI-6894** beyond our solar system.

- The planet was studied primarily using data from NASA's <u>Transiting Exoplanet Survey</u>
 <u>Satellite (TESS)</u> and the Very Large Telescope (VLT) operated by the European Southern Observatory in Chile.
 - Planets beyond our solar system are called <u>exoplanets</u>.
- It is the smallest-known star to host such a massive planet challenging conventional theories of planetary formation.
- It is located in the Leo constellation, is just 21% of our Sun's mass, yet hosts a Saturn-sized gas giant—defying current models that suggest small stars typically form only rocky planets like Earth or Mars.
- Red Dwarf: Red dwarfs are the smallest stars, with masses between 7.5% and 50% of the Sun.
 - They have very low luminosity, emitting just 0.01% to 10% of the Sun's brightness, and low surface temperatures give them a red or orange glow.
 - Their slow hydrogen burning allows them to shine for trillions of years, far longer than the Sun's 10-billion-year lifespan.
 - They are the most **common type of star** in the Milky Way galaxy. The **closest star to the Sun**, **Proxima Centauri**, is a red dwarf.



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