Protostar

July 18, 2025 • vajiramandravi.com

Protostar Latest News

A team of researchers at the IIST, Thiruvananthapuram, recently discovered radio emission with a special property known as circular polarisation near a massive young protostar that is still forming about 4,500 light-years from Earth.

About Protostar

- A protostar is an **early stage in the star formation process**.
- It is a **large mass of gas and dust** formed as a result of the **contraction of a giant molecular cloud** in the interstellar medium.
- **As the cloud collapses, gravitational energy** is **converted into heat,** warming the still-forming protostar.
- It may last from **100,000 to 10 million years**, depending on the mass of the star.
- It **begins with an increase in density in the molecular cloud core** and **ends with the formation of a pre-main-sequence star**.

- Pre-main-sequence stars of similar mass to the Sun are known as T-Tauri stars.
- **Once hydrogen fusion ignites in the core** of a star, it **begins producing energy** and **becomes a main sequence star.**
- Protostars are usually **surrounded by dust,** whic**h blocks the light that they emit**, so they are **difficult to observe** in the visible spectrum.

Source: TH
