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# L328 Molecular Cloud & Magnetic Fields

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**News Context:** Astronomers at the Indian Institute of Astrophysics (IIA) published a study (Jan 14, 2026) in the Monthly Notices of the Royal Astronomical Society mapping the magnetic fields of the L328 molecular cloud, located 700 light-years away.

- **The Discovery:** Using the **James Clerk Maxwell Telescope (JCMT)** in Hawai'i, researchers traced how magnetic fields remain "remarkably connected" from the massive scale of a gas cloud down to the tiny, collapsing star-forming core.
- **Significance:** Star formation is a tug-of-war between **Gravity** (trying to collapse the cloud) and **Magnetic Fields/Turbulence** (trying to resist it). The study found that magnetic fields are nearly 10 times stronger than thermal energy, proving they are the primary "guides" for how a star is born.
- **The S2 Sub-core:** The team focused on a **VeLLO (Very Low Luminosity Object)** within L328. Since these proto-stars have weak outflows, they serve as "pristine laboratories" to study the primordial magnetic fields before they are disrupted by a full-grown star's energy.

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