

Isro getting ready for mission to study Sun

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Aditya-L1, the first space-based Indian observatory to study the Sun, is preparing for its launch soon, the Indian Space Research Organisation (Isro) said on Monday.

The satellite, realised at U R Rao Satellite Centre here, has arrived at Isro's spaceport at Sriharikota in Andhra Pradesh, the national space agency said in an update on the mission.

"Mostly September first week," an Isro official told *PTI* when asked about the date of the launch.

The spacecraft is expected to be placed in a halo orbit around the Lagrange point 1 (L1) of the Sun-Earth system, which is about 1.5 million kilometres from the Earth.

A satellite in the halo orbit around the L1 point has a major benefit of continuously viewing the Sun without any occultation/eclipses, Isro noted. "This will provide a greater advantage of observing the solar activities and its effect on space weather in real time," it said.

The spacecraft carries seven payloads to observe the photosphere, chromosphere and the outermost layers of the Sun (the corona) using electromagnetic and particle and magnetic field detectors.

Using the special vantage point L1, four payloads will directly view the Sun and the remaining three payloads would carry out in-situ studies of particles and fields at the L1, thus providing important scientific studies of the propagatory effect of solar dynamics in the interplanetary medium.

"The suits of Aditya L1 payloads are expected to provide most crucial information to understand the problem of coronal heating, coronal mass ejection, pre-flare and flare activities and their characteristics, dynamics of space weather, propagation of particle and fields etc.," Isro said.