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# Aditya-L1, first space-based Indian observatory to study the Sun, to be launched on September 2

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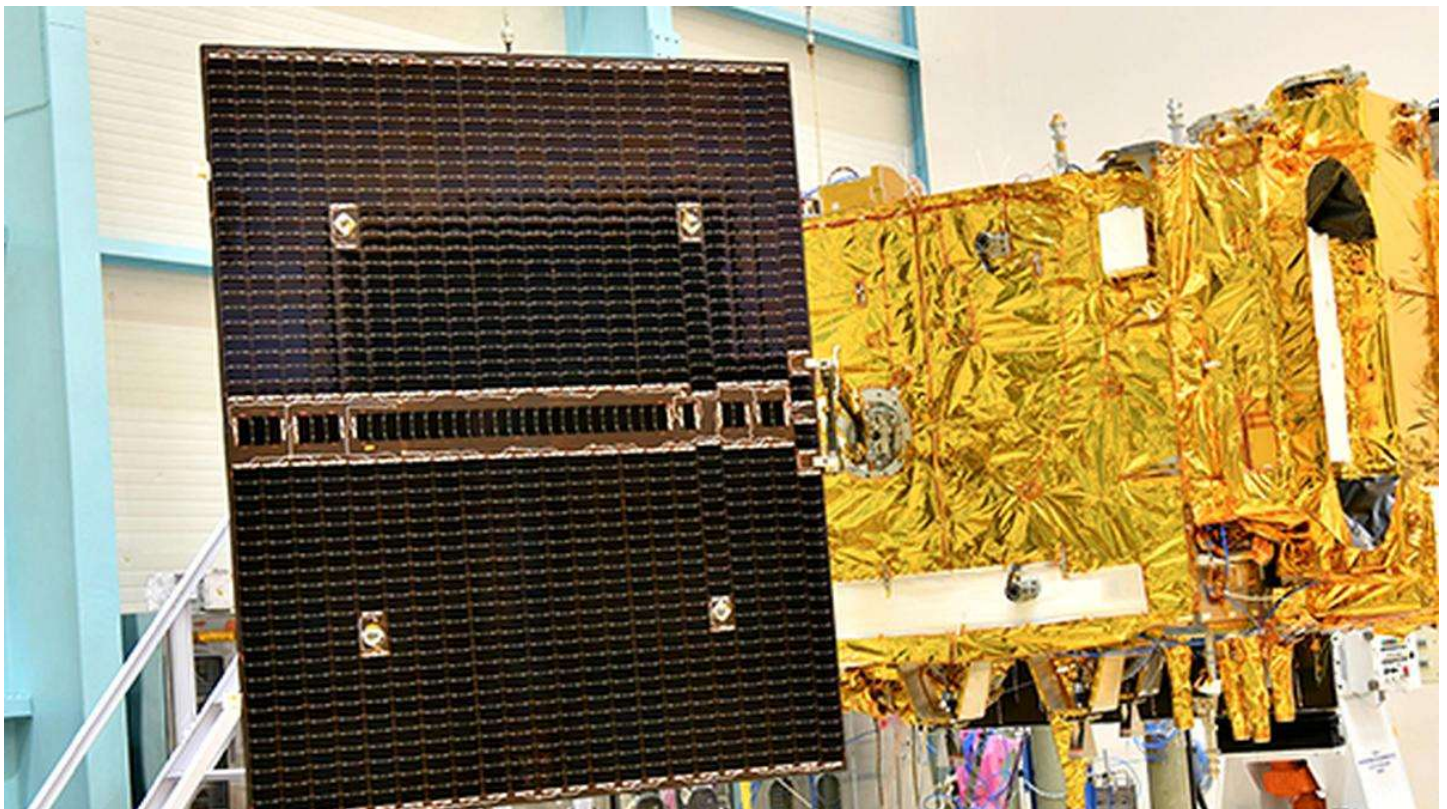
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Aditya-L1, the first space-based Indian observatory to study the Sun, is getting ready for the launch. File | Photo Credit: ANI



“The launch of Aditya-L1, the first space-based Indian observatory to study the sun, is scheduled for September 2, 2023, at 11:50 Hrs. IST from Sriharikota,” ISRO posted on X, formerly Twitter

According to ISRO, the spacecraft will be placed in a halo orbit around the Lagrange point 1 (L1) of the Sun-Earth system, which is about 1.5 million km from the Earth. It is expected to take more than 120 days for the spacecraft to reach the L1.

“A satellite placed in the halo orbit around the L1 point has the major advantage of continuously viewing the sun without any occultation/eclipses. This will provide a greater advantage of observing the solar activities and its effect on space weather in real time. 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 directly view the sun and the remaining three payloads carry out in-situ studies of particles and fields at the Lagrange point L1, thus providing important scientific studies of the propagatory effect of solar dynamics in the interplanetary medium,” states the Aditya L1 mission profile.

The suits of Aditya L1’s payloads are expected to provide crucial information for understanding the phenomenon of coronal heating, coronal mass ejection, pre-flare and flare activities and their characteristics, the dynamics of space weather, propagation of particles and fields etc.

The seven payloads aboard the satellite are Visible Emission Line Coronagraph, Solar Ultraviolet Imaging Telescope , Solar Low Energy X-ray Spectrometer , High Energy L1 Orbiting X-ray Spectrometer , Aditya Solar wind Particle Experiment, Plasma Analyser Package For Aditya ) and Advanced Tri-axial High Resolution Digital Magnetometers.