

Isro's solar mission targets June-July blast-off

Aditya L1 getting ready, will have seven payloads

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India's first dedicated mission to study the Sun, Aditya L1, is eyeing a June-July launch to embark on a voyage that will take it 1.5 million km away from Earth, from where the satellite will use its payloads to watch the celestial body uninterrupted.

Seven payloads, including the Visible Emission Line Coronagraph (VELC), the mission's primary payload that

took 15 years to build, will be part of the satellite that is currently being readied by Isro.

Developed by the Indian Institute of Astrophysics (IIA), the VELC was formally handed over to Isro on Thursday.

"Currently, we are getting the (Aditya L1) satellite ready. The payload will reach the U R Rao Satellite Centre and will be integrated with the satellite. It will go through extensive testing and evaluation and will be launched on the PSLV, by June-July," said S Somanath, Isro Chairman and Secretary, Department of Space, at the event in Hosakote.

The primary payload

The 90-kg VELC was assembled at the IIA's Centre for Research and Education in Science and Technology cam-

The six other payloads

1 Solar Ultraviolet Imaging Telescope (SUIT) - to provide full disk images of the solar atmosphere

2 Solar Low Energy X-Ray Spectrometer (SoLEXS) - to study the coronal heating mechanism

3 High Energy L1 Orbiting X-Ray Spectrometer (HEL1OS) - to observe dynamic/eruptive events in the corona



One of the payloads getting ready. CREDIT: VELC/IIA

4 Aditya Solar Wind Particle Experiment (ASPEX) - to study solar wind and its spectral characteristics

5 Plasma Analyser Package for Aditya (PAPA) - to understand the composition of solar wind plasma and its energy distribution

6 Magnetometer - to measure the magnitude and nature of the interplanetary magnetic field

pus in Hosakote.

The VELC is designed to facilitate continuous observations of the Sun's atmosphere, the corona. The extremely bright light from the Sun's surface, or disk, makes observation of the lower corona very

difficult.

The VELC comes with an 'internal occulter' that separates out this light, discards it, and sends the remaining light (from the corona) for processing.

"It can image the solar corona as close as 1.05 times

the solar radius. It can also do imaging, spectroscopy, and polarimetry at the same time and can take observations at a very high resolution," Prof B Raghavendra Prasad, Principal Investigator of VELC, said.