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Aditya-L1 systems online, data soon

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A senior ISRO official said that all the seven key instruments were activated in a phased manner between Saturday and Sunday, and the first set of data may be available next week.

"The instruments are being tested now, and we can expect the first set of data coming in by the middle of this month," the official said.

On September 2, the Indian space agency launched the Aditya-L1 spacecraft from the spaceport in Sriharikota. After the launch, a series of Earth-bound manoeuvres were performed to ensure that the craft gathers enough momentum to set off on its 127-day journey.

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[SEVEN KEY INSTRUMENTS ACTIVATED]

Aditya-L1 data to start pouring in soon

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The Aditya-L1 spacecraft is carrying seven instruments or payloads on-board — VELC, which is the primary payload; Solar Ultraviolet Imaging Telescope (SUIT), Solar Low Energy X-ray Spectrometer (SoLEXS), and High Energy L1 Orbiting X-ray Spec-

trometer (HELIOS), which are remote sensing payloads; and Aditya Solar Wind Particle Experiment (ASPEX), Plasma Analyser Package for Aditya (PAPA), and Advanced Tri-axial High Resolution Digital Magnetometers, which are in-situ payloads — to observe the photosphere, chromosphere and corona using electromagnetic and particle and magnetic field detectors.

Using the special vantage point L1, four payloads (VELC, SUIT, SoLEXS, HELIOS) will directly view the sun, and the remaining three payloads (ASPEX, PAPA and Advanced Tri-axial High Resolution Digital Magnetometers) will carry out in-situ studies of particles and fields at L1, providing important scientific studies of the propagatory effect of solar dynamics in the interplanetary medium, the space agency said.

"The VELC will image the Sun's atmosphere, the corona, closer to the Sun than ever before, at high resolution and time cadence. The

payload has 40 different optical elements of high precision and will be kept at a temperature of 22 degrees Celsius in space. In addition, Aditya-L1 carries an ultraviolet imager, two X-ray spectrometers, and four in-situ instruments to measure plasma parameters," ISRO said on Saturday.

Astronomer and former professor at Indian Institute of Astrophysics, RC Kapoor, said: "This is for the first time that ISRO has placed a satellite around the L1. The instruments on-board are also functional now and will be providing some crucial data."

"2023 has been an important year for India's space programme. India created history by successfully landing on the lunar surface, becoming the first country in the world to park itself on the south polar region of the Moon. Some key tests of India's human spaceflight Gaganyaan were also performed successfully, which will pave India's way to the final mission, likely to be launched by 2025.