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INDIA ON THE MOON



A photo of the Vikram lander on the surface of the Moon, clicked by the Pragyan rover on Wednesday.

ISRO

Solar mission Aditya L-1 in position, set for launch

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NEW DELHI: Space agency Isro on Wednesday released the first photographs of India's lunar lander, the Vikram, on the moon in the clearest spectacle yet of the country's historic achievement, less than an hour after it confirmed that its first mission to study the Sun was on track.

The Vikram and Pragyan, the

rover that took the photo on Monday, have nine more days to explore and study the moon before the spot near the south pole loses sunlight, forcing the solar-powered equipment to stop missions.

Pragyan rover clicked an image of Vikram lander this morning. The image of the mission was taken by the Navigation Camera onboard the rover (NavCam). NavCams for the Chandrayaan-3 Mission are

developed by the Laboratory for Electro-Optics Systems (LEOS), said the Indian Space Research Organisation (Isro) in a tweet.

The photograph was taken at 11.04am on Wednesday, when the rover was around 15 metres from the lander, Isro said.

The moon mission executed to a tee, the agency is now preparing for the blast-off of its workhorse rocket PSLV-C-57, which will lift the Aditya-L1 solar probe into space for what will

also be a historic first for India: the ability to study the sun.

"PSLV-C57/Aditya-L1 Mission: The preparations for the launch are progressing. The Launch Rehearsal - Vehicle Internal Checks are completed," the agency said in a post on X.

Jitendra Singh, Union minister for science and technology and space said that after Chandrayaan-3, India is now aiming for the Sun, and this only proves

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SOLAR MISSION

the country's prowess in the Aditya-L1, the scientist said.

"As PM (Narendra) Modi said, sky is not the limit. There are several big missions lined up for Isro in the coming months and this shows that India is a worthy partner in the field of space missions and applications in the world," the minister said.

A senior scientist from the Indian Institute of Astrophysics explained that the Aditya-L1 mission is designed to study the Sun from a vantage point, Lagrange Point 1. There are seven payloads or instruments on board the spacecraft—some of which will help collect and study the photons released from the Sun while others will help analyse the particles in-situ (at L1).

"The mission will not only help us study the Sun but also the environment at that point. At our institute we have been studying various aspects of the Sun for over 120 years now, but there are still areas that have

THE ADITYA-L1 MISSION WILL ALLOW INDIA'S SCIENTISTS TO UNLOCK NEW INSIGHTS ABOUT THE CENTRE OF OUR SOLAR SYSTEM

not been explored and for this, we need a mission like the Aditya-L1, the scientist said.

The solar probe is scheduled to be launched at 11.50am on Saturday atop the PSLV-C-57 rocket, which is a version of India's workhorse space launcher strapped on with additional engines.

It will then take 125 days to reach the Lagrange Point 1, where it will hover in what is known as a halo orbit and have a clear view of the sun.

The Aditya-L1 mission will allow India's scientists to unlock new insights about the centre of our solar system, with the Lagrange point L1—15 million kms from Earth, expected to give it an unhindered view of the Sun.

Earlier, the mission was conceived as Aditya-1 with a 400 kg class satellite carrying one payload, the Visible Emission Line Coronagraph VELC, that was to be launched in an 800-km low earth orbit.

A Lagrange Point is a spot in space where the force of gravity of the nearest celestial entities cancel each other out, helping an object remain in equilibrium.

Isro scientists said the instruments of Aditya-L1 are tuned to observe the solar atmosphere mainly, the chromosphere and the corona—two outermost layers of the star. The instruments will observe the local environment at L1 and carry out remote sensing and observation.