



Hindustan Times

FIRST VOICE. LAST WORD.

[MY INDIA] SOLAR MISSION

Aditya-L1 completes second Earth-bound manoeuvre



The Indian Space Research Organisation (ISRO) on Tuesday successfully performed the second Earth-bound manoeuvre for the Aditya-L1 spacecraft, India's maiden mission to study the sun. The second Earth-bound manoeuvre (EBN#2) is performed successfully from ISTRAC, Bengaluru (ISRO Telemetry, Tracking and Command Network). ISTRAC/ISRO's ground stations at Mauritius, Bengaluru and Port Blair tracked the satellite during this operation. The new orbit attained is 282 km x 40225 km. The next manoeuvre (EBN#3) is set for September 10, 2023, around 02:30 Hrs," the space agency said in a statement. On September 3, a day after being launched from the Satish Dhawan Space Centre in Sriharikota, the first orbit-raising manoeuvre was performed for Aditya-L1. The agency will conduct three more of such operations over the next 13 days to raise the spacecraft's orbit so that it gathers enough momentum to be launched into its 1.5 million km journey.

Aditya-L1 successfully performs second Earth-bound manoeuvre

HT Correspondent

letters@hindustantimes.com

NEW DELHI: The Indian Space Research Organisation (ISRO) in the early hours on Tuesday successfully performed the second Earth-bound manoeuvre for the Aditya-L1 spacecraft, India's maiden mission to study the Sun.

The second Earth-bound manoeuvre (EBN#2) is performed successfully from ISTRAC, Bengaluru (ISRO Telemetry, Tracking and Command Network). ISTRAC/ISRO's ground stations at Mauritius, Bengaluru and Port Blair tracked the satellite during this operation. The new orbit attained is 282 km x 40225 km. The next manoeuvre (EBN#3) is scheduled for September 10, 2023, around 02:30 Hrs," the space agency said in a statement.

On September 3, a day after being launched from the Satish Dhawan Space Centre in Sriharikota, the first orbit-raising manoeuvre was performed for



Aditya-L1 spacecraft is set to perform the next Earth-bound manoeuvre on Sept 10.

Aditya-L1. After the first two manoeuvres, the agency will conduct three more of such operations over the next 13 days to raise the spacecraft's orbit so that it gathers enough momentum to be launched into its 1.5 million km journey.

Earth-bound manoeuvres involve firing rockets and angle

adjustments. How this works can be understood by the analogy of a person on a swing. To make the swing go higher, a pressure by shifting the body weight is applied when the swing is coming down towards the ground.

Once Aditya-L1 gains enough velocity through the series of manoeuvres, it will slingshot around to its intended path towards the Lagrange Point-L1 or L2, where it will start a five-year study to understand various aspects of the Sun, the nearest star to Earth.

L1 is an imaginary point in space, around 1.5 million km from Earth towards the Sun, where gravitational forces of celestial objects work in such a way that a spacecraft can be parked in what is known as a halo orbit, an oval that shifts on three axes. Once Aditya-L1 arrives at the L1 point, another manoeuvre will be performed to bind the craft to the orbit, the space agency said.

Moon, in a 3D-ready shot



ISRO on Tuesday shared a 3D anaglyph of Chandrayaan-3's Vikram lander created using Nav Cam Stereo Images, which consist of both a left and right image captured by the Pragyan rover. "An anaglyph is a simple visualisation of the object or terrain in three dimensions from stereo or multi-view images," the space agency explained.