

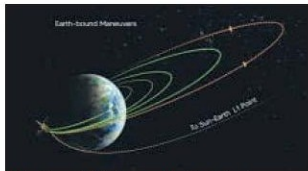


# Hindustan Times

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{ MY INDIA } ADITYA-L1 SOLAR MISSION

## 4th Earth-bound manoeuvre completed successfully: Isro



### Aditya-L1 completed its fourth and final Earth-bound manoeuvre

on Friday morning, the Indian Space Research Organisation said in crucial mission update that set the stage for the trans-Lagrangean Point-1 insertion manoeuvre. "Isro's ground stations at Mauritius, Bengaluru, SDSC-SHAR and Port Blair tracked the satellite during this operation, while a transportable terminal currently stationed in the Fiji Islands for Aditya-L1 will support post-burn operations," Isro said. The craft will be slingshot from the Earth's orbit on September 19 to travel further in its journey to L1, the space agency said.

## Aditya-L1 successfully performs 4th and final Earth-bound manoeuvre

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**NEW DELHI:** Aditya-L1 completed its fourth and final Earth-bound manoeuvre on Friday morning, the Indian Space Research Organisation said in crucial mission update that set the stage for the trans-Lagrangean Point-1 insertion.

"The fourth Earth-bound manoeuvre (EBN#4) is performed successfully. Isro's ground stations at Mauritius, Bengaluru, SDSC-SHAR (Satish Dhawan Space Centre, Sriharikota) and Port Blair tracked the satellite during this operation, while a transportable terminal currently stationed in the Fiji Islands for Aditya-L1 will support post-burn operations," Isro said in a statement.

Earth-bound manoeuvres involve the firing of rockets and



India's first solar mission took off successfully on Sept 2.

some adjustments to angles, as required.

The new orbit attained on Friday is 256kmX121973km, the statement said.

India's first solar mission took off successfully on September 2, embarking on a 125-day journey before it is placed in a halo orbit around Lagrange Point 1 (L1), a spot between the Sun and the

Earth about 15 million kilometres from us.

The craft will be slingshot from the Earth's orbit on September 19 to travel further in its journey to L1, the space agency said.

"The next manoeuvre 'Trans-Lagrangean Point 1 Insertion (TLI)' — a send-off from the Earth — is scheduled for September 19, 2023, around 2am," it said.

L1 refers to Lagrange Point 1, a region 15 million km from Earth towards the Sun, where gravitational forces of celestial objects work in such a way that the 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 strategic placement will

ensure that Aditya-L1 can continuously monitor the Sun. To be sure, the L1 point is only 1% of the Earth-Sun distance.

The mission will allow India's scientists to unlock new insights about the centre of our solar system, by ensuring uninterrupted observations of the Sun.

According to the space agency, 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.

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.