

## Aditya-L1 into L1 orbit

The <u>Indian Space Research Organisation (ISRO)</u> is set to perform a crucial manoeuvre to bind <u>Aditya-L1</u>, aiming to place it into orbit around the **Lagrangian point (L1)**, located approximately 1.5 million km from Earth.

- Aditya-L1, the first Indian space-based observatory dedicated to studying the Sun, was launched in September 2023, using a <u>PSLV-C57 rocket</u> from the Satish Dhawan Space Centre in Sriharikota.
- Placing a satellite in the halo orbit around the L1 pointallows continuous observation of the Sun without occultation or eclipse, providing an advantage in monitoring solar activities.
  - L1 is about **1.5 million km from the Earth** and the distance of L1 from Earth is approximately 1% of the Earth-Sun distance.
  - Lagrange points are positions in space where the gravitational forces of two large masses balance the centripetal force for a smaller object to stay in place.
    - Spacecraft leverage these points to minimize fuel consumption and allow spacecraft to maintain their position efficiently.
- Aditya-L1 carries seven payloads to observe the photosphere (the visible surface of the Sun), chromosphere (the second layer between the photosphere and the corona) and the corona (outermost layers of the Sun).
  - These payloads aim to provide crucial information on coronal heating, coronal mass ejection, space weather dynamics, and particle and field propagation.



Read more: Aditya-L1 Mission, India's Space Endeavors

