Aditya-L1 into L1 orbit

The **Indian Space Research Organisation (ISRO)** is set to perform a crucial manoeuvre to bind **Aditya-L1**, 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 **PSLV-C57 rocket** from the **Satish Dhawan Space Centre** in Sriharikota.
- Placing a satellite in the halo orbit around the L1 point**allows 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.

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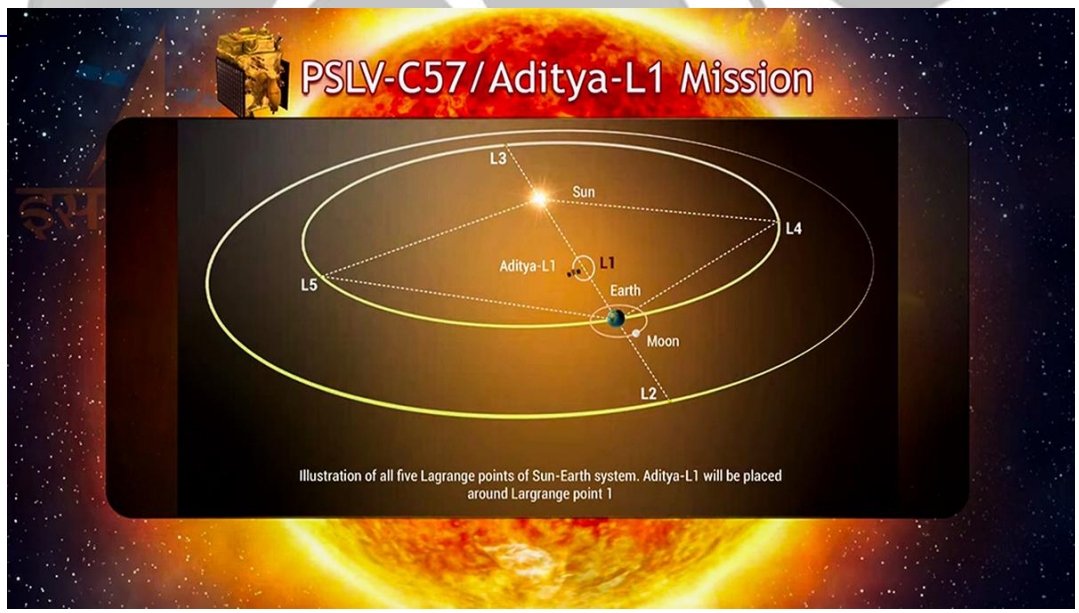

Read more: Aditya-L1 Mission, India's Space Endeavors