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Scientists Decode Solar Eruptions Using Aditya-L1 and Proba-3

Scientists from Bengaluru and international collaborators jointly analyzed solar coronal mass ejections (CMEs) using data from India's Aditya-L1 mission and Europe's Proba-3.

A joint scientific study combining spectroscopic data from India's Aditya-L1 and imaging data from Europe's Proba-3 to decode solar eruptions and coronal mass ejections.

KEY EXAM POINTS

- Scientists from Bengaluru and international partners analyzed solar eruptions using India's **Aditya-L1** mission and Europe's **Proba-3**.
- The **Visible Emission Line Coronagraph (VELC)** onboard Aditya-L1 conducted spectroscopic observations of the solar corona.
- The **ASPIICS** instrument onboard Proba-3 performed imaging observations of the solar corona.
- Researchers at the **Indian Institute of Astrophysics (IIA)** combined spectroscopic and imaging data to study coronal mass ejections (CMEs).
- These joint observations provided deeper insights into **coronal mass ejection (CME)** evolution than observations from a single spacecraft.

DID YOU KNOW..!?

Aditya-L1 is India's first dedicated solar space observatory mission launched by **ISRO** to study the Sun's corona.

The **Visible Emission Line Coronagraph (VELC)** payload on Aditya-L1 was primarily designed and developed by the **Indian Institute of Astrophysics (IIA)**.

Lagrange Point 1 (L1) is located approximately **1.5 million kilometers** from Earth, where Aditya-L1 is stationed in a halo orbit.

The **European Space Agency (ESA)** developed the **Proba-3** mission for precise formation flying and solar corona studies.

Coronal Mass Ejections (CMEs) are massive expulsions of plasma and magnetic field from the solar corona into interplanetary space.

ISRO headquarters is located in **Bengaluru**, Karnataka, serving as the primary hub for India's space program.

REVISION FLASHCARD

Aditya-L1's VELC and Europe's Proba-3 conducted joint observations to decode solar coronal mass ejections.

Syllabus Relevance: High relevance for TNPSC Group 1 and 2 under Unit 1 (General Science - Space Technology and ISRO missions).

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