



POEM-4 : SCIENCE & TECHNOLOGY

NEWS: *PSLV-C60 Mission | 10 payload from non-government entities successfully deployed on POEM-4*

WHAT'S IN THE NEWS?

The **PSLV-C60/SpaDeX mission** successfully deployed 10 hosted payloads by private entities using the **POEM-4 module**, showcasing India's efforts to involve the private sector in space activities. The **Indian National Space Promotion and Authorization Centre (IN-SPACe)**, headquartered in Ahmedabad, plays a crucial role in enabling private participation in India's space ecosystem.

Deployment of Hosted Payloads by Private Entities

1. Context

- **Milestone Event:** The Indian National Space Promotion and Authorization Centre (IN-SPACe) announced the successful deployment of 10 hosted payloads by Non-Governmental Entities (NGEs) during ISRO's **PSLV-C60/SpaDeX mission**.
- **Significance:** Demonstrates increasing private sector involvement in India's space exploration efforts.

2. POEM-4 Module

- **Full Form:** PSLV Orbital Experimental Module.
- **Purpose:** Repurposes the spent PS4 stage of the PSLV rocket to host scientific and technological experiments in orbit.
- **Details of POEM-4:**
 - Operated at an altitude of **350 km** with a **55-degree inclination**.
 - Deployed during the PSLV-C60 mission for conducting in-orbit experiments.

3. IN-SPACe

- **Establishment:** Formed following reforms in India's space sector.
- **Objective:** To promote, enable, and regulate private sector participation in space activities.
- **Key Responsibilities:**
 - Facilitation of private sector projects like launch vehicles and satellites.
 - Sharing of ISRO's infrastructure with private players.
 - Ensuring safety compliance and feasibility of projects by NGEs.
- **Structure:** Includes experts from various fields (technical, safety, legal, academia, and government).
- **Headquarters:** **Bopal, Ahmedabad**.
- **Role:** Acts as a bridge between ISRO and private entities to foster innovation and expand space-based activities.



Fourth Edition of PS-4 Orbital Experimental Module

Conventional Mode
PSLV 4th Stage deploys satellite in orbit and then becomes space debris

POEM-4 Adaptation
Modified PSLV 4th stage will deploy the satellite and then orbit as a research station with onboard instruments

The diagram illustrates the sequence of events for the PSLV C60 mission. It shows the rocket ascending from the ground, with various stages and components separating at different altitudes. Key events include: Ignition of PS1, Separation of PS1, Ignition of PS2, Separation of Heatshield, Ignition of PS2, Separation of PS2, Ignition of HPS3, Separation of HPS3, Ignition of PS4, Separation of PS4, and SPADEX Satellites Separation. The diagram also highlights the POEM-4 adaptation, where the modified PSLV 4th stage will orbit as a research station with onboard instruments.

4. Significance of the Initiative

- **Economic Boost:** Enhances India's space economy.
- **Global Standing:** Strengthens India's position in the global space sector.
- **Private Sector Growth:** Reduces entry barriers and fosters collaboration between government and private entities.

Source: <https://www.thehindu.com/sci-tech/pslv-c60-mission-10-payload-from-non-government-entities-successfully-deployed-of-on-poem-4/article69046002.ece>