

**GOVERNMENT OF INDIA
DEPARTMENT OF SPACE**

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Monthly Summary of Department of Space for the month of March and April, 2025

A. March 2025:

- The fourth stage (PS4) of the PSLV vehicle used for PSLV-C60/SPADEX mission, that is currently functioning as the PSLV Orbital Experimental Module (POEM-4), successfully completed 1000 orbits on March 04, 2025. The POEM-4 has carried the maximum number of payloads till date compared to previous three POEM missions.
- The construction of the new launch complex at Kulasekarapattinam, Tamil Nadu commenced on March 05, 2025 with the commencement of the construction for the first work package which includes construction of three major facilities.
- The first successful hot test of the Semicryogenic engine (SE2000) in the Intermediate configuration, designated as Power Head Test Article (PHTA), was carried out on March 28, 2025 at ISRO Propulsion Complex (IPRC) Mahendragiri, for a duration of 2.5 seconds. The test validated the integrated performance of the critical subsystems such as the pre-burner, turbo pumps, start system and control components.
- Under First Uncrewed Gaganyaan (G1) Mission:
 - ❖ For Human Rated Launch Vehicle (HLVM3), stacking of second solid motor is completed. Structural Qualification Test of Orbital Module Adaptor is completed.
 - ❖ Static test of High-Altitude Escape Motor of CES was carried out. Vacuum ignition of CES Jettisoning Motor/Low Altitude Escape Motor of CES was carried out. Qualification tests of Crew Module Thermal Protection System is completed. Static Test of Service Module is also completed
- The National Database for Emergency Management (NDEM) site has been deployed at Integrated Control Room for Emergency Response (ICRER), New Delhi, and the assigned URL is <https://ndem.in>.
- A Solar Occultation Experiment (SOE), a first-of-its-kind attempt in the country, was developed to demonstrate the solar occultation technique for vertical profiling of atmospheric aerosols and thin clouds. Laboratory tests of the system have been performed to assess the proper functionality of the experiment. Payload is being extensively operated in the open field and the performance of the system is found to be satisfactory, paving the way for solar occultation experiment onboard high altitude balloon.
- ISRO delegates attended the 43rd annual meet of Inter-Agency Space Debris Coordination Committee (IADC) and delivered agency statement during the opening plenary, presented the agency status and actively participated in the working group deliberations on lunar space debris mitigation, collision avoidance decision making, beam parking experiments etc.

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- Green Cover Index along National Highways [for National Highway Authority of India (NHAI)]: Green Cover Index, manifesting the health & density of plantations, has been generated along nearly ~30,000km National Highway using IRS LISS-IV data of 2024. The output is integrated with Bhuvan geoportal and has been demonstrated to NHAI officials.
- NRSC/ ISRO's User Interaction Meet 2025 was jointly organized with NSIL, which was attended by about 220 officials from Central/ State Ministries/ Departments. In his inaugural address, Secretary, DoS/Chairman, ISRO emphasized the importance of achieving excellence on the use of space technology for grass-roots level, in India.
- Rashtriya Karmayogi Jan Seva Programme was conducted at ISRO Hq by providing training to 100 officials from Department of Space/ ISRO Hq in three batches.
- The student registration process for the YUVIKA-2025 program is successfully completed and a total of 94,681 registrations received. Out of these, 19,316 students (9,978 males and 9,338 females) have successfully completed the registration by attending the quiz and uploading their final certificates. Screening committee has been formed, and the application screening process is in progress.
- For Earth Observation Satellite System in PPP model, INSPACe sent RFP and draft concession agreement to six shortlisted bidders to give their comments within 10 days. The bidders have submitted 197 queries on the RFP document. The RFP document is revised taking into account the suggestions.
- For Production of 05 nos of PSLV-XL through Indian Industry, NSIL conducted the third Apex Committee (AC-PIC) meeting to review the overall status and monitor the progress of PSLV N1 Launch Vehicle. Industry Consortium (HAL and L&T) delivered Nozzle Divergent Aft & Fore End for PS1 Nozzle, Carbon & Silica Fabric, HPS3 FNC Actuator components, Light alloy structures (Core Base Shroud & Aft End Closure) and Electrical integration elements (Sensors, Wires, Connectors, Harness Accessories Ag- Zn cells) for PSLV N1 vehicle.

B. April, 2025

- Second long duration hot test of the PS4 engine with Satellite Nozzle divergent for a full qualification duration of 665 seconds was successfully completed on April 08, 2025 at ISRO Propulsion Complex (IPRC), Mahendragiri. With this test, all the qualification tests for the Satellite Nozzle divergent are completed and the hardware can be inducted in flight. The induction of satellite nozzle divergent in place of the currently columbium alloy in the PS4 engine will result in significant cost savings.
- A second short duration hot test of the Semicryogenic Engine was successfully conducted at the test facility in IPRC, Mahendragiri on April 24, 2025. In this test, the Engine Power Head Test Article, encompassing all engine systems except the thrust chamber, was subjected to a hot test for a duration of 3.5 seconds, that validated the engine start-up sequence. During the test, the

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engine was successfully ignited and operated up to 60% of its rated power level, demonstrating stable and controlled performance.

- The launch vehicle stacking activities for the forthcoming GSLV-F16/NISAR mission commenced from April 07, 2025 at SDSC, Sriharikota with the launch scheduled in the second half of June 2025.
- The Second Stage (GS2) of ISRO's GSLV launch vehicle was flagged off on April 24, 2025, from the ISRO Propulsion Complex (IPRC), Mahendragiri, to the launch complex at Sriharikota. This liquid stage is identified for the upcoming mission of GSLV (GSLV-F16), that will launch the NASA-ISRO Synthetic Aperture Radar (NISAR) satellite.
- The second stage (PS2) of ISRO's PSLV launch vehicle was flagged off on April 11, 2025 from ISRO Propulsion Complex (IPRC), Mahendragiri, to the launch complex at Sriharikota for the forthcoming mission i.e., PSLV-C61/EOS-09 mission.
- Under First Uncrewed Gaganyaan (G1) Mission:
 - ❖ Human Rated Launch Vehicle (HLVM3): Avionics flight packages for Solid Strap-on Nose Cone for both solid motors are realised.
 - ❖ Vibration tests & Thermovac completed for half humanoid, Telemetry & Telecommand systems of Crew Module, Thermovac of Mission Computer, Vibration test of On-Board Computer for Service Module have been completed.
 - ❖ Feeder station for IDRSS-1 established at ISTRAC, Bangalore. Data and Audio Video transmission and reception demonstrated with GSAT satellite.
- Indian Space Situational Assessment Report-2024 was released by Chairman ISRO/Secretary-DOS on 22nd April 2025.
- High level ISRO delegations participated in the (i) 2025 BRICS Heads of Space Agency Meeting at Brasilia, Brazil during April 28-29, 2025 and (ii) 40th Space Symposium organised by Space Foundation, USA during April 7-10, 2025.
- ISRO conducted the 53rd meeting of International Charter Space and Major Disasters, with in-person the participation of 24 delegates from global space agencies, including two delegates of ISRO. ISRO also assumed the Lead role of the Charter for six months from April 2025.
- As part of North East Student Program for Awareness, Reach and Knowledge on Space (NE-SPARKS), 99 students from 8 North East states visited ISTRAC, URSC and Nehru Planetarium from April 22-23, 2025.