

**GOVERNMENT OF INDIA
DEPARTMENT OF SPACE**

Sub: Monthly Summary of Department of space for the month of February, 2024

PART- I (Unclassified)

1. Important policy decisions taken and major achievements during the Month

- Honourable Prime Minister, Shri Narendra Modi visited VSSC, Thiruvananthapuram on 27.02.2024 and inaugurated the following facilities: Trisonic Wind Tunnel facility at VSSC, PSLV Integration Facility at SDSC, Sriharikota and Integrated Engine & Stage Test Facility at IPRC.
- Astronaut wings were bestowed on the four Gaganyaan Astronaut Designates by Hon'ble Prime Minister.
- He also laid the foundation stone for the Second Launch Complex (SLC) at Kulasekharapattinam on 28.02.2024.

A. Space Transportation:

- Launch of GSLV–F14/INSAT-3DS mission was successfully accomplished on February 17, 2024 at 17:35 hrs from SDSC.
- Vacuum ignition test of CE20 E13 cryogenic engine HT-08 successfully conducted for a duration of 2.5 seconds in High altitude test condition at TCT, IPRC on February 13, 2024. With this test, human rating of CE20 engine powering the Human rated-LVM3 vehicle for the Gaganyaan programme has been successfully completed.
- Qualification hot test of the PS4 engine nozzle divergent realized out of Satellite alloy for the restart mission was successfully conducted for a duration of 480 seconds in High altitude test configuration at IPRC on February 14, 2024. The replacement of columbium alloy with indigenous Satellite alloy for realizing the nozzle for the fourth stage of PSLV (PS4) is expected to bring in substantial cost savings.

B. Space Applications:

I. Earth Observation:

- **Agriculture Technology project** (for State governments): Paddy crop phenology extraction for 2023-24 season is in progress for Maharashtra. Satellite data derived crop sown areas were finalized for rabi 2023-24 for Madhya Pradesh.
- **Rejuvenating Watershed for Agriculture Resilience through Innovative Development (REWARD, for MoRD)**: First Technical report of REWARD was submitted to National Rain fed Area Authority.
- **Monitoring the WDC-PMKSY 2.0 projects using geospatial technologies (For MoRD)**: WDC-PMKSY 2.0 project for Uttar Pradesh was

reviewed Secretary, DoLR, MoRD. MoU signed with 12 States for execution of WDC-PMKSY 2.0.

- **Urban Waterbody Information System (UWaIS, for MoH&UA):** Satellite data has been procured for 500 towns. Final databases of 14 towns have been uploaded on to Bhuvan.
- **Automated System for Monitoring of Deforestation (for NER States)** has been developed and submitted to the NER State Forest Departments for feedback.
- 59,685 satellite data products are downloaded by the users from Bhuvan & Bhoonidhi under open & free data access facility.

II. Disaster Management Support:

- NDEM V5.0: Designed & developed News, Alerts & Warnings Modules in NDEM V5.0 Home page. Design and development of a module for computing flood vulnerability for Odisha is initiated.
- Multiple (6-8 times) daily detections of forest fire have been done and disseminated to stakeholders, including FSI.
- 2 IRS products were disseminated to Sentinel Asia for Disaster Management Support.

C. Human Spaceflight:

- Strain gauge bonding activities completed on **G1 Crew Module** hardware. PUF filling and Vapour Barrier Coating activities also completed in apex region of the Crew Module.
- Propellant tanks integration activities completed for Service Module Propulsion System (SMPS) of **G1 Service Module**.
- High altitude Escape Motor Static Test 09 (**HEM ST-09**) successfully completed at SDSC, SHAR.
- Crew Seat and Crew display console integrated to **Crew Training Simulator** hardware.
- Main parachute trial suiting completed for **IADT-01**. Crew Module. Interfaces for Buoyancy Augmentation System (BAS) also completed.

D. Space Sciences:

Space science data pertaining to Chandrayaan-2 and AstroSat missions were uploaded to the public portal of the Indian Space Science Data Centre (ISSDC), for scientific analysis by the community. The total volume of data from these missions, which are made available to public use, stand 48.5 TB.

E. Capacity Building:

- 10 Nos. of ISRO Technical Training Programme (ITTP) were organised on various topics for 150 ISRO technicians of DOS/ISRO Centres/Units.
- During the month, 3 patents were granted and two patent applications are filed at IPO.

F. Training:

1.	One week certificate course on 'Remote Sensing and GIS technology for Disaster Management'	February 05-09, 2024 with 24 participants
2.	Four weeks course under 'AMRUT sub-scheme for enabling master plan formulation'	19 planning officials from Maharashtra, started from Feb 12, 2024
3.	Two-week course titled 'Advanced RS & GIS and its applications in Water Resources'	20 participants from Water Resources Department, Govt. of Rajasthan, began from Feb 26 th , 2024
4	Online Courses & Programmes	
	'Exploring Earth's Moon through Chandrayaan'	4763 participants from 609 Network Institutions
	'Geospatial Analysis using Google Earth Engine	6981 participants from 852 Network Institutions

G. Safe & Sustainable Space Operations:

- Collision Avoidance Analysis was carried out for GSLV-F14/INSAT-3DS mission to clear the nominal lift off time 12:05.
- Daily SOPA (Space Object Proximity Analysis) and re-assessment of close approach situation for 3489 Conjunction Data Messages (CDM) from CSpOC/USSPACECOM were performed for 24 LEO and 30 GSO satellites.
- Two Collision avoidance manoeuvres were carried out for Cartosat-2F and Emisat-1 to avoid close approach with other space objects.
- Re-entry prediction was carried out for 21 large objects that re-entered the atmosphere. An expert team from ISRO participated in the annual re-entry campaign of IADC with ERS-2 as test object and submitted re-entry predictions.
- Un-controlled re-entry of Cartosat-2 was monitored.
- A Structured Training Programme was conducted on "Space Situational Awareness and Debris Management – National and Global Perspective" during 19-23 February, 2024.

H. International Cooperation:

- India – Tunisia Joint Working Group on space cooperation (February 15, 2024), ISRO – CNES Earth Observation JWG to review the TRISHNA realisation activities (February 20, 2024), and ISRO – ESA Expert Group to discuss cooperation in the short duration mission to ISS (February 22, 2024) were organised.
- ISRO officials participated in the 61st session of STSC, UNCOPUOS meeting held at Vienna, Austria (January 29 to February 09, 2024) and 5th meeting of BRICS RSSC Working Group (February 27, 2024).
- Prof. Dr. Martin Kocher, Minister of Labour and Economy, Austria (February 20, 2024), and H.E. Tobias Billstrom, Minister for Foreign Affairs, Sweden (February 20, 2024), visited ISRO HQ and had discussions with Secretary, DOS /Chairman, ISRO.
- Delegation of US Staffers of Congressmen (February 21, 2024) and Mr. Andreas Scheuer, Member of German Parliament (February 23, 2024) visited ISRO and had discussions with senior DOS/ ISRO officials.

I. IN-SPACE Activities:

- Authorization for the launch of GSLV-F14 and establishment & operations of INSAT-3DS mission from SDSC, SHAR by Indian Space Research Organisation was issued by IN-SPACE.
- IN-SPACE has registered 02 additional Indian Entities who wish to disseminate/ sell the primary data pertaining to Indian territory and Ground Sampling Data (GSD) > 30 cm commercially from the Earth Observation / Remote Sensing satellites.
- Five technologies have been transferred to four industries. As on date, a total of 21 technologies have been transferred to Industries through IN-SPACE.
- A review by the Mission Readiness and Launch Clearance Committee for the launch of Agniban Sorted - a suborbital flight by M/s Agnikul was held.
- Technical Centre: Equipment's for RF & Opto-Electronics lab, AIT & Checkout Lab have been delivered and positioned inside the cleanroom. Two numbers of 0.8 m TVAC chambers have been commissioned. Furniture for the Coworking Space have been installed.

J. NSIL Activities:

- **Satellite Building:** GSAT 20 is under Assembly, Integration & testing at URSC. Discussion is ongoing with M/s. SpaceX to finalize the Interface Control Document (ICD) and launch campaign activities.
- **Satcom Services:** 8 Allotment letters for occasional usage of GSAT-10 and GSAT-16 satellite capacity have been issued during the month to be utilised for DSNG applications.
- **Mission Support**
 - NSIL is currently providing Telemetry, Tracking and Command (TTC) support to two foreign customers for their satellites through ISTRAC ground stations.
 - NSIL is in advance stage of discussion with two Indian Industries and a foreign customer for providing TTC support for their satellites/ launch vehicle.

- **Ground Segment:** NSIL is in process of releasing RFP for Supply, Installation, Commission, operation and Maintenance of Ground segment hub for Maritime Asset monitoring.
- **Technology Transfer:** NSIL has signed 5 Technology Transfer Agreements with Indian Industries.

2. No of Cases of ‘Sanction of Prosecution’ pending for more than three months: NIL

3. Particulars of cases in which there has been a departure from the Transaction of Business Rules or established policy of the Government: NIL

4. Status of ongoing Swachhta Abhiyan (progress under Special Campaign):

As per the guidelines of Government, Department has chalked out an action plan for implementation of Swachhta Pakhwada 2024 during 1st to 15th February, 2024 and communicated to DDWS and uploaded on Swachhta Samiksha portal.

Based on this action plan, DOS/ISRO Centres/ Units/ ABs/ CPSEs have observed Swachhta Pakhwada 2024 from 1st to 15th February, 2024 with active participation of senior officials, employees, housing colony residents, CIFS personnel, etc. The photograph of events carried out during Pakhwada were uploaded on Swachhta Samiksha Portal.

Apart from this, Swachhta Pakhwada awards for the year 2023 are also being finalized shortly.

5. Status of Rationalisation of Autonomous Bodies:

EMC has recommended that NARL be governmentalized. The recommendations of the committee in respect of NARL is under review.

All the AB’s under the Department namely, IIST, PRL, NARL & NESAC have been brought under Treasury Single Account.

6. Vacancy position of senior level appointments in the Ministry/Department including Autonomous Bodies/PSUs:

The detailed status regarding all the posts pertaining to Department of Space has been updated on AVMS. The status of updation of vacancy as on 29.02.2024 is as follows:

- Total number of posts required to be entered on AVMS: - 24
- Number of posts filled as on date: - 20
- Number of posts totally vacant as on date: - 04
- Number of posts under premature repatriation – 00
- Number of posts under additional charge arrangement: - 02
- Number of posts that would fall vacant during the next 06 months: - 04

7. List of cases in which ACC directions have not been complied with :- NIL.

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