

# NEWSLETTER

## INDIAN SPACE ASSOCIATION



**INDIA'S SPACE  
ECOSYSTEM  
ACCELERATES:  
INNOVATION, INDUSTRY LEADERSHIP &  
GLOBAL PARTNERSHIPS**

Welcome to **ISpA Newsletter**, a trusted conduit for illuminating the latest strategic endeavours, technological innovations and industry insights shaping the future of sustainable space exploration.

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# MESSAGE FROM DG-ISpA

March 2026 has been a month of accelerated momentum and strategic alignment for India's evolving space ecosystem.

A key highlight during the month was the interaction of our ISpA members with **General Stephen N. Whiting, Commander, U.S. Space Command** and his team. The round table hosted by ISpA brought together defence stakeholders, global partners and Space industry leaders to advance cooperation in critical Space domain . Such engagements reflect the growing importance of space as a strategic domain and reinforce India's role as a trusted partner in shaping a secure and resilient space environment.

On the technology front, **ISRO's successful CE20 cryogenic engine test** at enhanced thrust levels marks a significant step toward improving launch capabilities and mission performance. At the same time, initiatives such as **START-2026** and expanding academic outreach programmes highlight the continued focus on building a future-ready talent pipeline for the sector.

The month also saw strong momentum in India's private space sector, with **Skyroot Aerospace and Agnikul Cosmos advancing propulsion technologies, Bellatrix Aerospace achieving in-orbit validation, Dhruva Space strengthening international collaboration and Digantara securing global SSA contracts.** Emerging players such as Azista Aerospace and Aule Space continued to drive innovation across AI, SSA and autonomous mission technologies, highlighting the growing maturity of the ecosystem.

Institutionally, **IN-SPAcE continues to play a pivotal role in enabling technology transfers**, fostering innovation and strengthening the bridge between research and industry.

ISpA remained actively engaged across multiple platforms, including global partnerships, industry roundtables and policy dialogues, with a continued focus on enabling collaboration, improving regulatory clarity and supporting the growth of startups and MSMEs.

As we move forward, our priorities remain clear: strengthening sovereign capabilities, enabling private sector growth and deepening international partnerships.

I encourage all members to continue contributing through innovation, collaboration and sustained engagement, as we collectively shape a resilient, self-reliant and globally competitive Indian space ecosystem.

## **Lt Gen A K Bhatt**

PVSM UYSM AVSM SM VSM (Retd)  
Director General,  
Indian Space Association (ISpA)  
(Former DGMO, MS & GOC 15 Corps)



# HIGHLIGHTS OF THE MONTH

- [ISRO CONDUCTS CE20 CRYOGENIC ENGINE TEST AT 22-TONNE THRUST](#)
- [ISRO-ESA AGREEMENT SIGNED FOR EARTH OBSERVATION COLLABORATION](#)
- [ISRO SIGNS MOU WITH AIIMS FOR SPACE MEDICINE AND HUMAN SPACEFLIGHT RESEARCH](#)
- [IN-SPACE OPENS MODEL ROCKETRY & CANSAT INDIA STUDENT COMPETITIONS 2026](#)
- [ISRO-EUMETSAT COLLABORATION STRENGTHENED FOR EARTH OBSERVATION AND CLIMATE APPLICATIONS](#)
- [ISRO LAUNCHES START-2026 NATIONAL SPACE AWARENESS PROGRAMME](#)
- [BELLATRIX AEROSPACE RAISES \\$20M AND ACHIEVES FIRST SIGNAL FROM HARBINGER SATELLITE](#)
- [DIGANTARA SECURES INTERNATIONAL SSA CONTRACT WITH THAILAND'S GISTDA](#)

# HIGHLIGHTS OF THE MONTH

- [SKYROOT AEROSPACE COMPLETES 145-SECOND CRYOGENIC ENGINE ENDURANCE TEST](#)
- [AGNIKUL COSMOS TESTS SINGLE-PIECE 3D-PRINTED AGNITE ROCKET ENGINE](#)
- [SPACEX STARLINK CONSTELLATION SURPASSES 10,000 ACTIVE SATELLITES](#)
- [NASA ADVANCES ARTEMIS PROGRAMME AS ASTRONAUTS ENTER FINAL PREPARATIONS FOR CREWED MOON MISSION](#)
- [CHINA'S TIANWEN-3 MARS SAMPLE RETURN MISSION MOVES INTO SPACECRAFT CONSTRUCTION PHASE](#)
- [INDIA-U.S. SPACE COMMAND DIALOGUE HOSTED BY ISpA IN NEW DELHI](#)

# MEMBERS BULLETIN



## AGNIKUL COSMOS

Agnikul Cosmos, has successfully completed a critical test of its Agnite booster engine, claimed to be the largest single-piece 3D-printed rocket engine.

The one-metre-long Inconel engine eliminates traditional assembly processes such as welding and fastening, significantly reducing manufacturing time from seven months to just seven days and lowering costs to nearly one-tenth of conventional methods.

The engine, tested at Agnikul's in-house facility in Chennai, also marks the first of its scale to use electric motor-driven pumps, supporting simplified design and improved reusability.

This breakthrough highlights Agnikul's focus on scalable, high-performance propulsion systems, enabling faster launch readiness and supporting high-frequency launch operations.

The milestone strengthens India's capabilities in advanced manufacturing and responsive launch systems, reinforcing Agnikul's role in the evolving global space launch ecosystem.



## AULE SPACE

Aule Space, has been awarded grant funding under IN-SPACe's Seed Fund Scheme of the Department of Space (DoS).

The company's proposal on autonomous Guidance, Navigation and Control (GNC) systems for rendezvous and docking applications was selected among 68 proposals submitted under the Announcement of Opportunity on "Full Mission Virtualization for Smart Computing and Control."

The initiative aims to advance autonomous mission operations, including capabilities in satellite control, orbital dynamics, space robotics and Space Traffic Management (STM).

This recognition highlights Aule Space's growing capabilities in advanced mission technologies, contributing to the development of autonomous and next-generation space systems in India's private space ecosystem.

# MEMBERS BULLETIN



**BELLATRIX**  
AEROSPACE  
Propelling Dreams

## **BELLATRIX AEROSPACE**

Bellatrix Aerospace, has raised \$20 million in Pre-Series B funding, led by Cactus Partners, with participation from new and existing investors.

The funding marks Bellatrix's transition from flight-proven propulsion technologies to scaled manufacturing readiness, supported by a growing global customer base and strong order backlog. The capital will be utilised to expand manufacturing capacity, fulfil active programmes and strengthen global supply chain infrastructure for the satellite industry.

In parallel, Bellatrix successfully achieved a major technical milestone with its Harbinger satellite, which established first signal acquisition during its initial orbit pass following launch aboard SpaceX Falcon 9 (Transporter-16 mission).

Operating at an altitude of approximately 510 km, the satellite transmitted strong and stable signals, achieving ~30 dB CNR on orbit 5 and ~45 dB CNR on orbit 6, validating its in-orbit performance.



**भारत इलेक्ट्रॉनिक्स**  
BHARAT ELECTRONICS

## **BHARAT ELECTRONICS**

Bharat Electronics Limited (BEL), a member of the Indian Space Association (ISpA), has signed a Memorandum of Understanding (MoU) with Bellatrix Aerospace to collaborate on next-generation satellite systems and payloads for Very Low Earth Orbit (VLEO).

The partnership aims to develop indigenous satellite platforms capable of sustained operations in VLEO, enabling higher-resolution Earth observation, lower latency communications and advanced mission architectures.

By combining BEL's expertise in mission-critical defence electronics and payload systems with Bellatrix's propulsion and satellite subsystem technologies, the collaboration strengthens India's capabilities in this emerging and technically demanding orbital regime.

This initiative marks a significant step toward building a collaborative and self-reliant space technology ecosystem, supporting India's expanding defence, commercial and civilian space ambitions.

# MEMBERS BULLETIN



## DIGANTARA

Digantara, has been awarded a contract by Thailand's Geo-Informatics and Space Technology Development Agency (GISTDA) to support the country's space ecosystem with Space Situational Awareness (SSA) and intelligence capabilities.

Under this engagement, Digantara will extend its space sensing infrastructure to provide enhanced visibility into the orbital environment, enabling informed decision-making and protection of space assets.

This development follows Digantara's recent collaboration with Singapore's Defence Science and Technology Agency (DSTA), reflecting a broader regional shift toward resilient and responsible space operations.

The milestone highlights Digantara's growing global presence in space domain awareness solutions, reinforcing India's role in advancing secure and sustainable space operations internationally.



## INBOUND AEROSPACE

Inbound Aerospace, has signed an MoU with Japan's IDDK Co., Ltd. to explore opportunities in microgravity experiments and in-space manufacturing.

The collaboration will leverage Inbound Aerospace's spacecraft platforms, re-entry capabilities and mission operations, including the development of dedicated spacecraft to host IDDK's Micro Bio Space Lab (MBS-LAB) payloads—an automated platform for conducting microgravity experiments in Low Earth Orbit.

This partnership aims to enable "microgravity as a service" through unmanned, reusable spacecraft, making space-based research more accessible, flexible and cost-effective beyond traditional space station programmes.

The initiative highlights the growing India-Japan collaboration in advanced space technologies and supports the expansion of commercial research opportunities in orbit.

# MEMBERS BULLETIN



## **KEPLER AEROSPACE**

Kepler Aerospace played a key role in supporting Bellatrix Aerospace's Harbinger mission, which successfully established first contact and is delivering strong in-orbit signals following its launch on 30 March 2026 aboard SpaceX Transporter-16.

As the primary ground segment partner, Kepler provided Ground Station-as-a-Service (GSaaS), along with end-to-end mission operations and communication support, including critical onboard subsystem contributions.

Through its network of ground station partners across Europe, South America and Central Asia, Kepler continues to enable reliable telemetry, tracking and command (TT&C), consistent data downlink and continuous mission support throughout the mission lifecycle.



## **SAMTEL AVIONICS**

Samtel Avionics, has announced a strategic expansion into the space sector, backed by an investment of over ₹200 crore.

Building on its strong legacy in the defence sector, the company is establishing dedicated teams to develop space systems and Low Earth Orbit (LEO) satellites, with a focus on indigenous innovation under the "Make in India for the World" vision.

Samtel is also expanding its export capabilities, positioning India as a reliable global supply chain hub amid rising international demand in defence and space technologies.

This move reflects a significant step toward strengthening India's full-stack space ecosystem, driven by domestic manufacturing and technological capabilities.



## **SKYROOT AEROSPACE**

Skyroot Aerospace, successfully conducted a 145-second endurance test of its upgraded Dhawan-III cryogenic rocket engine on an indigenous mobile test stand developed in-house.

The engine is being developed under the Aatmanirbhar Bharat ARISE-ANIC initiative, with a focus on reusability and greener propulsion technologies.

This milestone highlights Skyroot's growing capabilities in advanced propulsion systems and reinforces India's progress toward sustainable and self-reliant launch technologies.

# MEMBERS BULLETIN

**FLIGHT-PROVEN to FACTORY-READY**

**\$20M PRE-SERIES B**

**Inbound**

**IDDK**

CACTUS PARTNERS: HERO ENTERPRISE, GROWX, IN NORTH VENTURES, INFLEIGH VENTURES  
INDUS BRIDGE VENTURES, MONARCH, HELIOS HOLDINGS, STARTUPSEED, SURVAM PARTNERS

**KEPLER AEROSPACE**

BELLATRIX AEROSPACE

Mission Announcement - GSaaS Operation - Critical Subsystem

**KEPLER AEROSPACE**  
successfully supported  
**BELLATRIX'S HARBINGER MISSION**

Kepler Aerospace provided Ground Station as a Service (GSaaS) and critical satellite subsystems for Bellatrix Aerospace's HARBINGER Mission, enabling seamless operations from launch through early orbit, on India's most ambitious propulsion mission.

**T-16** RIDE SHARE MISSION  
**30 MAR** LAUNCH DATE | 2026  
**SSO** TARGET ORBIT

145 Seconds of Continuous Test Firing Proved Stable Combustion and Efficiency

**भारत इलेक्ट्रॉनिक्स**  
**BHARAT ELECTRONICS**  
QUALITY, TECHNOLOGY, INNOVATION

**DIGANTARA - GISTDA**  
MEMORANDUM OF UNDERSTANDING BETWEEN DIGANTARA AND GISTDA

**INSPACE X @AULE**

# ISpA ACTIVITIES

## India-U.S. Space Command Dialogue

**ISpA- Indian Space Association** was honoured to host a landmark, high-level closeddoor industry roundtable on **5th March** in **New Delhi**, welcoming a distinguished U.S. delegation led by **General Stephen N. Whiting, Commander, U.S. Space Command**.

Under the theme **“Transforming the Relationship Utilizing Strategic Technology - Space” (TRUST-Space)**, this closed-door session served as a strategic bridge between the Indian private sector, the U.S. Space Command and American industry partners.

Leadership Highlights:

**Lt Gen Anil Kumar Bhatt (Retd), Director General, ISpA**, set the stage with a visionary overview of India’s space trajectory, highlighting the rapid evolution of the private space ecosystem and its readiness to emerge as a global partner in high-end technologies.

**General Stephen N. Whiting** delivered a stellar opening address, winning over the room with a remarkably candid and collaborative approach toward the Indian industry. His insights underscored the U.S. Space Command’s commitment to building a shared, secure and resilient space domain.

A key highlight of the roundtable discussion was the participation of a select group of space industry companies from both India and the United States, specifically curated by the U.S. Space Command. This handpicked assembly of industry leaders and high-growth startups ensured that the dialogue remained focused on high-end technological synergy and real-world mission requirements.

### **Key Strategic Takeaways:**

The discussion focused on actionable collaboration in the defence space domain, including:

- Moderated with precision by **Tejas Bharadwaj (Carnegie India)**, the dialogue focused on actionable pathways for the Defence Space domain
- Co-production & co-development opportunities between Indian and U.S. industry
- Advancement of Space Domain Awareness (SDA/SSA) technologies
- Progress and future roadmap under INDUS-X and TRUST initiatives
- Strengthening cyber resilience across the space ecosystem
- Enhancing market access through supportive policy and regulatory frameworks

# ISpA ACTIVITIES

## INDIA-U.S. SPACE COMMAND DIALOGUE



# ISpA ACTIVITIES

## ISpA ENGAGES WITH NOVASPACE LEADERSHIP TO STRENGTHEN STRATEGIC COLLABORATION

ISpA continued its international engagements with a meeting between Lt Gen Anil Kumar Bhatt (Retd), Director General, Indian Space Association (ISpA) and the leadership team of Novaspac in New Delhi.

The interaction included Mr. Pacome Revillon (CEO), Mr. Rainer Horn (Partner & Managing Director) and Ms. Surbhi P. Dalmia (Director & India Head). The discussions built on the existing ISpA-Novaspac MoU, reinforcing the partnership and exploring future avenues of collaboration.

The meeting focused on the next phase of growth for India's space sector, with emphasis on strategic expansion, disruptive innovation and identifying tangible areas of cooperation that will shape future joint initiatives.

The engagement highlighted ISpA's continued commitment to strengthening global partnerships and enabling collaborative opportunities for India's space ecosystem.



# ISpA ACTIVITIES

## ISpA PARTNERS FOR INTERNATIONAL CONFERENCE ON SPACECRAFT MISSION OPERATIONS (SMOPS 2026)

ISpA will serve as the Outreach and Technical Partner for the International Conference on Spacecraft Mission Operations (SMOPS 2026), scheduled to be held from 8-10 April 2026 in Bengaluru.

The conference will bring together global space leaders, industry experts, academia and space agencies to discuss advanced technologies shaping secure, resilient and efficient space mission operations.

The programme will feature high-impact technical sessions on key areas including mission operations management, advanced mission design, automation and AI integration, large constellation management and future trends in ground station operations.

Designed as a collaborative platform, the event aims to strengthen engagement between startups, academia, industry and space agencies, while enabling meaningful interaction between users and service providers.

The initiative reflects ISpA's continued commitment to supporting knowledge exchange and fostering collaboration across the space ecosystem.



# ISpA ACTIVITIES

## ISpA PARTICIPATES IN NXT SUMMIT 2026, SHOWCASING INDIA'S EXPANDING SPACE ECOSYSTEM

ISpA participated as a Session Partner at the NXT Summit 2026, reinforcing its commitment to advancing industry-government collaboration in India's rapidly growing space sector.

The summit was graced by Hon'ble Prime Minister Narendra Modi, along with distinguished global leaders including former Heads of Government and senior dignitaries, highlighting the strategic importance of space and the digital economy in India's growth trajectory.

Several ISpA members were invited as speakers, contributing their expertise to discussions on innovation, policy and the future of India's space and deep-tech ecosystem.

A key highlight of the summit was a panel discussion on "India's Space Orbital Shift", moderated by Lt Gen Anil Kumar Bhatt (Retd), Director General, ISpA. The session featured leading industry voices including Sanjay Nekkanti (Founder & CEO, Dhruva Space), Anirudh Sharma (Founder & CEO, Digantara) and Suyash Singh (Founder & CEO, GalaxEye).

The discussion highlighted the transition of India's space sector toward a full-stack ecosystem, encompassing satellite manufacturing, launch services, space situational awareness and downstream applications, with a strong emphasis on indigenous capabilities and global collaboration.

The engagement underscored that as the ecosystem matures, the synergy between policy support, private innovation and strategic vision will continue to shape India's trajectory as a leading global space power.



# ISpA ACTIVITIES





# ISRO

# INDIAN SPACE RESEARCH ORGANISATION

## ISRO CONDUCTED THE 23<sup>RD</sup> NATIONAL SPACE SCIENCE SYMPOSIUM (NSSS-2026) AT NESAC, UMIAM, MEGHALAYA | MARCH 02, 2026

The 23rd edition of the National Space Science Symposium (NSSS-2026), ISRO's premier biennial scientific programme, was held from February 23-27, 2026 at NESAC, Umiam, Meghalaya, bringing together researchers and professionals across space, atmospheric and planetary sciences.

The inaugural session was graced by Shri A. S. Kiran Kumar, former Chairman ISRO, while Dr. V. Narayanan, Chairman ISRO, addressed the event virtually. The symposium included the release of the abstract volume and inauguration of the space exhibition.

Speakers highlighted NSSS as a key platform for sharing outcomes from missions such as Aditya-L1, XPoSat and Chandrayaan, while supporting India's Space Vision 2047 and strengthening regional capacity building.

The symposium featured 817 research papers across six parallel sessions, along with a dedicated student session. It also integrated start-ups and industry participation, promoting innovation and collaboration.

Through outreach initiatives and student engagement programmes, the event supported young researchers and enhanced participation from the North-Eastern region. The symposium concluded on February 27, 2026, with a focus on advancing scientific research and future space exploration goals.





# ISRO

# INDIAN SPACE RESEARCH ORGANISATION

## INAUGURATION OF IIRS ACADEMIC BUILDING AT DEHRADUN | MARCH 02, 2026

The Hon'ble Chairman, ISRO/Secretary, DoS inaugurated the Academic Building of the Indian Institute of Remote Sensing (IIRS), in virtual mode on February 16, 2026. The newly constructed Academic Building has been developed to further strengthen the Institute's education and capacity-building infrastructure in the field of remote sensing, geoinformatics and space applications. The facility features state-of-the-art smart classrooms equipped with advanced audio-visual systems, modern remote sensing and geospatial laboratories, seminar and discussion rooms and well-designed workspaces. Addressing the gathering, Chairman, ISRO/Secretary, DoS appreciated the sustained efforts of the Institute in expanding its academic infrastructure in line with emerging space technologies and national requirements. The inauguration of the Academic Building marks a significant milestone in the continuing growth of IIRS and reinforces its commitment towards excellence in education, research and capacity building in space-based applications.





# ISRO

# INDIAN SPACE RESEARCH ORGANISATION

**PEARL JUBILEE CELEBRATION OF CSSTEAP | MARCH 2, 2026**

Centre of Space Science and Technology Education in Asia and the Pacific (CSSTEAP) celebrated Pearl Jubilee (30 Years) of its Establishment, on February 16, 2026, at CSSTEAP Headquarters, IIRS campus Dehradun. Over the years CSSTEAP has played a significant role in taking space technology to the common person in the Asia and the Pacific region. The event was graced by Shri A.S. Kiran Kumar, Former Secretary DoS/Chairman; Members of CSSTEAP- GB; Senior Retired Officials from ISRO viz. former Centre directors Dr. R. R. Navalgund, Dr. Y. V.N. Krishmurthy, Dr. Senthil Kumar; Directors of ISRO Centres and Units, Dr Prakash Chauhan, Shri M. Ganesh Pillai, Shri Pankaj Damodar Killedar, Dr. Noveline Jacob, Dr. S. P. Aggarwal and The Director of CSSTE - Regional Centre of Morocco. Dr. V. Narayanan, Chairman, ISRO/Secretary DoS virtually participated in the programme. CSSTEAP Alumni, who are presently in senior positions in their respective countries, also attended the programme. Around 85 guests, in person, attended the event at Dehradun.

The programme started with reminiscences by Past Chairmen CSSTEAP-GB and Past Directors of CSSTEAP. Director UNOOSA also sent her video message for the occasion. This was followed by two panel discussions on Future directions for education in Space Science and Technology and Geospatial Technology, respectively followed by the valedictory session in which Chairman, ISRO/Secretary, DoS was the chief guest. The day culminated with well curated cultural programme showcasing Indian culture and cultures from various Asia and the Pacific countries presented by professional artists and CSSTEAP students.





# ISRO

# INDIAN SPACE RESEARCH ORGANISATION

**ISRO SHOWCASED ITS PRESTIGIOUS ACHIEVEMENTS AND ADVANCEMENTS IN “PRAGATISHEEL CHHATTISGARH 2026” AT JANJGIR-CHAMPA, CHHATTISGARH | MARCH 02, 2026**

ISRO showcased its prestigious achievements and advancements in “Pragatisheel Chhattisgarh 2026” at Janjgir-Champa, Chhattisgarh from 19<sup>th</sup> to 21<sup>st</sup> MARCH 2026. Smt. Kamalesh Jangde, Honb’le Member of Parliament, Jajngir-Champa, Shri. Janmejay Mahobe IAS, District Collector & District Magistrate, Janjgir-Champa and other dignitaries paid a visit as part of the inauguration. ISRO pavilion has become a prominent point of attraction for more than 3000 visitors including students and teachers from various schools and colleges in and around Janjgir.



Visit of Smt. Kamalesh Jangde, MP and Shri. Janmejay Mahobe IAS, District Collector& District Magistrate, Jajngir-Champa





# ISRO

# INDIAN SPACE RESEARCH ORGANISATION

## ISRO-EUMETSAT JOINT SCIENCE COOPERATION MEET (FEB 10-12, 2026) | MARCH 04, 2026

The Indian Space Research Organisation (ISRO) and European Organisation for the Exploitation of Meteorological Satellites (EUMETSAT) have been collaborating extensively in the field of space-borne missions for scientific research and operational applications related to Earth sciences. Over the years, this partnership has strengthened through joint efforts in payload development, data sharing, algorithm refinement, calibration/validation (CAL/VAL) and application development. A notable example of this successful collaboration has been ISRO's high-quality ocean surface wind vector data from Scatterometer payloads onboard Oceansat-2, SCATSAT-1 and Oceansat-3, which were widely used by the international scientific community and operational weather agencies. In recent years, cooperation has further expanded in the domain of extreme weather nowcasting using data from EUMETSATs Meteosat Second Generation (MSG) satellites operational over the Indian Ocean region.

To strengthen and expand this collaboration, a joint meeting with EUMETSAT delegation (10 scientists/engineers in person and 7 online) was held at the Space Applications Centre (SAC), ISRO, Ahmedabad, during February 10-12, 2026. Approximately 150 scientists and engineers from various ISRO centres actively participated. The meeting aimed to review the status of scientific cooperation and define future collaborative pathways in payload realization, data processing, retrieval algorithms, CAL/VAL activities and applications. The deliberations included a plenary session followed by five parallel thematic sessions and a special breakout session.

Both ISRO and EUMETSAT agreed on a tiered approach encompassing short, medium and long-term goals focused on scientific algorithm development, CAL/VAL strengthening, data harmonization and enhanced utilization of satellite data for operational and research applications. The meeting reaffirmed the strategic importance of the ISRO-EUMETSAT partnership in advancing Earth observation science and delivering societal benefits through improved weather, ocean and climate services.





# ISRO

# INDIAN SPACE RESEARCH ORGANISATION

**SIGNING OF ESA-ISRO AGREEMENT ON JOINT CALIBRATION/VALIDATION ACTIVITIES AND SCIENTIFIC STUDIES FOR EO MISSIONS | MARCH 07, 2026**

On 4<sup>th</sup> March 2026, Scientific Secretary, ISRO and Director, Earth Observation Programme, ESA have jointly signed Agreement on “ ESA-ISRO Arrangement concerning Joint Calibration and Validation Activities and Scientific Studies for Earth Observation Missions “ in a virtual meeting mode. Event highlights strength of the long-term cooperation in place since 1978 and subsequent renewal in 2002 between two globally significant space research organisations. Signing ceremony was marked by the spirited remarks from the dignitaries regarding the legacy as well as upcoming opportunities rendered possible by research and exploration platforms. Accomplishments in the field of EO, navigation, ground station support as well as human space flight were also referred.

Ms. Simonetta Cheli, Director, EO, ESA emphasized the timeliness of the arrangement, especially in the light of upcoming and innovative sensor FLEX, meant to understand the vegetation biology better as well as the need of setting up calibration and validation campaigns for subsequent valorisation. Shri. M Ganesh Pillai, Scientific Secretary, ISRO recalled the multi-themed cooperation with ESA in terms of ground station support for Chandrayaan, Aditya missions, support from ISRO’s Deep Space Antenna, Joint Statement of intent for Human Spaceflight, including discussion between Chairman, ISRO and DG, ESA and India-EU space Dialogue at Brussels. He reflected on how upcoming missions will go a long way in helping Planet as well as People and need for working closely in future and commended the contribution of ISRO members from EDPO, OIIC, Section-X, DOS for realising the agreement.



Scientific Secretary signing the agreement and ISRO team realising the instrument



Ms Simonetta Cheli, Director, EO Programmes, ESA (Second from top left) offering remarks



# ISRO

# INDIAN SPACE RESEARCH ORGANISATION

**INAUGURATION OF ISRO'S SPACE SCIENCE AND TECHNOLOGY AWARENESS TRAINING (START 2026)  
PROGRAMME ON 11<sup>TH</sup> MARCH 2026 | MARCH 07, 2026**

ISRO's fourth edition of Space Science and Technology Awareness Training (START 2026) programme will be inaugurated by Dr.V.Narayanan, Chairman ISRO / Secretary DoS on 11<sup>th</sup> March 2026 at 15:00 hrs.

Live streaming of inaugural session is available at <https://youtube.com/live/vxusHltqyd8>  
Duration of training: 11<sup>th</sup> March 2026 - 02<sup>nd</sup> April 2026.



**START 2026**  
An online Space Science & Technology Awareness Training

**THEME: Scientific Observations from Space**

Inauguration on: March 11, 2026; 15:00 to 15:30 hours

Inauguration by  
**Dr. V Narayanan**  
Chairman, ISRO / Secretary, DOS  
Chairman, Space Commission

To be followed by the context talk:  
**What, Why and How do we Observe from Space**  
by  
Dr. Tirtha Pratim Das, Director, Science Programme Office, ISRO HQ

Participant registration is open  
For registration visit:  
<https://elearning.isro.gov.in/edusatregistration/>

Inaugural address  
Dr. V Narayanan  
Chairman, ISRO / Secretary, DOS

Opening Remarks  
Shri Ganesh Pillai  
Scientific Secretary, ISRO

Special Remarks  
Shri A S Kiran Kumar  
Former Chairman, ISRO /  
Secretary, DOS

Science Programme Office (SPO), ISRO Headquarters & Indian Institute of Remote Sensing (IIRS), ISRO, Dehradun



# ISRO

# INDIAN SPACE RESEARCH ORGANISATION

**INDIAN SPACE RESEARCH ORGANISATION (ISRO) AND ALL INDIA INSTITUTE OF MEDICAL SCIENCES (AIIMS) NEW DELHI SIGNS FRAMEWORK MEMORANDUM OF UNDERSTANDING FOR COOPERATION IN SPACE MEDICINE AND RESEARCH | MARCH 10, 2026**

Indian Space Research Organisation (ISRO) has signed a Memorandum of Understanding with All India Institute of Medical Sciences (AIIMS) on Cooperation in Space Medicine and Research. The MoU aims to promote joint research aligned with ISRO's priority areas, with a shared objective of advancing human health, performance and safety during human space missions. MoU was signed and exchanged by Shri Dinesh Kumar Singh, Director, Human Spaceflight Centre and Dr Srinivas M, Director, AIIMS in the presence of Dr V Narayanan, Chairman, ISRO & Secretary, DOS.

Long duration Human Space Missions such as Bharatiya Antariksh Station and Crewed Missions to Moon offers unique medical challenges due to the extreme space environment & microgravity. This co-operation is targeted to conduct ground/space-based studies to develop multidisciplinary space medicine expertise, medical devices, procedure & protocols to maintain human health & performance under extreme space environment as well as advance health care for the nation.

Focused research & developments are planned in the fields of human physiology, behavioural health, immunology & gut Microbiome, biomedical, neuroscience & neurophysiology, nutrition & metabolic health, musculoskeletal atrophy & aging in microgravity, infectious diseases control and countermeasures for improving human health & performance in space environment.

Through this research collaboration, ISRO and AIIMS reaffirm their commitment to advancing space medicine, fostering interdisciplinary research and building long-term institutional cooperation to support India's human space flight programme initiatives and it will also spur new innovations and creates new opportunities for the scientific community in the country.





# ISRO

## INDIAN SPACE RESEARCH ORGANISATION

### ISRO CONDUCTS SEA LEVEL TEST OF CRYOGENIC ENGINE AT 22 TONNE THRUST LEVEL WITH FULL AREA NOZZLE | MARCH 12, 2026

ISRO successfully conducted a sea level hot test of its Cryogenic engine (CE20) at 22 tonne thrust using nozzle protection system and multi-element igniter, on March 10, 2026 at ISRO Propulsion Complex, Mahendragiri. Earlier, the sea level tests utilizing nozzle protection system was being carried out at 19 tonne thrust level.

The CE20 cryogenic engine powers the upper cryogenic stage of LVM3 launch vehicle. In order to enhance the payload capability of the LVM3 vehicle, future missions of LVM3 are planned to be operated with an uprated C32 stage with 22 tonne thrust for the CE20 engine. In view of this, the flight acceptance test of the CE20 engine also needs to be conducted at 22 tonne thrust level. Therefore, the present test qualified the sea level testing of the engine with a test duration of 165 seconds at 22t thrust level using the Nozzle Protection System (NPS). The performance of the engine as well as the test facility was as expected during the entire test duration.

Testing the CE20 engine at sea-level possess considerable challenges primarily due to high area ratio nozzle, which has an exit pressure of ~50 mbar. Main concern during testing at sea-level include flow separation inside the nozzle, which leads to severe vibrations & thermal problems at the flow separation plane leading to possible mechanical damage of the nozzle.

The Cryogenic engine utilized for this test has undergone a record maximum number of hot tests (20 No.s) successfully, that has enabled the demonstration of several key technologies using a single engine such as engine ignition using multi element igniter, ignition margin demonstration for Gaganyaan over a wide range of propellants tank pressure and pre-ignition chamber pressure, engine qualification for Gaganyaan at 20 tonne thrust level, demonstration & qualification of 22tonne thrust level operation, boot-strap mode starting of CE20 engine without start-up system for enabling re-start in flight, indigenous turbopumps bearings qualification, indigenous sensor qualification and Nozzle Protection System qualification for high area ratio nozzle hot test at sea level.





# ISRO

## INDIAN SPACE RESEARCH ORGANISATION

### SECRETARY, DOS/ CHAIRMAN, ISRO INAUGURATED START-2026 EVENT | MARCH 12, 2026

On March 11, 2026, Dr. V. Narayanan, Secretary, DoS / Chairman, ISRO, inaugurated the fourth edition of ISRO's online awareness programme, Space Science and Technology Awareness Training (START-2026).

The 2026 edition focuses on the theme "Observation from Space," covering the study of Earth, the solar system and beyond using orbital platforms. The programme comprises 26 lectures by pan-India experts, concluding on April 2, 2026, followed by an online examination. It involves hundreds of academic institutions as nodal centres, enabling group learning and merit-based certification for participants.

In his address, Dr. Narayanan emphasized motivating students to contribute to national development through space exploration, highlighting global trends, international collaboration, academic excellence and cross-disciplinary learning. He noted that many participants will lead India's future space journey. Shri A. S. Kiran Kumar highlighted the programme's success since 2023, benefiting over 1.2 lakh participants and its role in identifying meritorious students for further exposure through NSSS, including participation in NSSS-2026.

Shri M. Ganesh Pillai emphasized continuous improvement and alignment with the National Education Policy, while Dr. Raghavendra Pratap Singh highlighted enhancements in this edition based on past feedback.

START is positioned as a strategic initiative to attract students from physical sciences and technology to the space sector, promoting system-level thinking and supporting India's Amrut Kaal vision for 2047, including goals such as the Indian Space Station and crewed lunar missions. The inaugural event saw participation from ISRO leadership, scientists, academicians and students nationwide. The programme commenced with the context lecture "What, Why and How do we Observe from Space" by Dr. Tirtha Pratim Das.



Left: Chairman, ISRO / Secretary, DOS inaugurating the START-2026 event online, from ISRO Headquarters; Right: Director, IIRS delivering the welcome address from IIRS, Dehradun



# ISRO

## INDIAN SPACE RESEARCH ORGANISATION

### IRNSS-1F SUCCESSFULLY COMPLETED ITS MISSION LIFE OF 10 YEARS | MARCH 13, 2026

IRNSS-1F satellite launched in March 2016 has completed its design mission life of 10 years on 10<sup>th</sup> March 2026.

On 13<sup>th</sup> March 2026, procured on-board Atomic clock stopped functioning. However, the satellite will continue to function in-orbit for various societal applications to provide one way broadcast messaging services.





# ISRO

## INDIAN SPACE RESEARCH ORGANISATION

### USER INTERACTION MEET - 2026 (JOINTLY ORGANISED BY NRSC/ ISRO AND NSIL/DOS) | MARCH 16, 2026

National Remote Sensing Centre (NRSC)/ISRO, along with NewSpace India Limited (NSIL), organised the User Interaction Meet (UIM)-2026 on 13 March 2026 at NRSC, Hyderabad, on the theme “Earth Observation Systems for Viksit Bharat - Trends and Challenges.” UIM is an annual forum to apprise the geospatial user community about access to products and services, applications, advances in data processing and analytics and future EO missions, while also gathering user feedback. Over 400 participants, including 60 industry representatives, attended the event. The programme featured six technical sessions (including a Hindi session) and an exhibition showcasing advancements in geospatial applications and data processing.

Dr. V. Narayanan, Secretary, DoS/Chairman, ISRO, inaugurated the event and delivered the keynote address. The event was also graced by Shri A. S. Kiran Kumar; Ms. Vandita Kaul; Shri A. V. Ranganath; Dr. Novaline Jacob; Shri A. Arunachalam; Dr. Prakash Chauhan; and Dr. S. K. Srivastav. In his address, Dr. Narayanan highlighted the role of space applications in societal development, governance and disaster management. Shri Kiran Kumar emphasized bridging the gap between space technology and citizens, while Ms. Vandita Kaul spoke about its role in public services and business applications. Shri Ranganath highlighted the use of NRSC/ISRO geospatial data by HYDRAA for asset protection, restoration and disaster management.

During the event, Dr. Narayanan released four applications on the Bhuvan Geoportal: HYDRAA-RAKSHA, KASTURI, Bharat Darshan and DIGIPIN-Bhuvan.

Technical sessions covered current and future EO missions, industry-led satellite developments, data dissemination platforms and applications. The panel discussion focused on gaps and future requirements for EO infrastructure, including additional satellites, SAR observations, precise DEMs, ground control points, cloud-based analytics and capacity building.

The discussions underscored that achieving the vision of Viksit Bharat will require a stronger contribution from the geospatial sector, with an enhanced role for industry.





# ISRO

## INDIAN SPACE RESEARCH ORGANISATION

### INTERACTION OF INDIA LEADERSHIP COUNCIL (ILC) MEMBERS WITH SECRETARY, DOS/CHAIRMAN, ISRO | MARCH 16, 2026

Members of India Leadership Council (ILC) visited ISRO Headquarters, Bengaluru and interacted with Secretary, DoS/ Chairman, ISRO on March 14, 2026. The programme was facilitated by Times Group, with a delegation comprising around 36 MDs & CEOs from Indian industries across diversified sectors, including manufacturing, technology, financial services, cybersecurity, data platforms, legal advisory and education.

Scientific Secretary, ISRO formally welcomed the gathering followed by a keynote address by Secretary, DoS/Chairman, ISRO. In his speech, he highlighted the remarkable journey of ISRO from its humble beginnings to its current stature as one of the world's prominent space agencies. He emphasized the contributions of Indian industries to the Indian Space Programme, including the opportunities for the industry to participate in future space projects. Secretary, DoS/Chairman, ISRO along with senior scientists interacted with industry leaders.





# IN-SPACE

INDIAN NATIONAL SPACE  
PROMOTION AND  
AUTHORIZATION CENTRE

## IN-SPACE UNVEILS WORLD'S FIRST HIGH SCHOOL CURRICULUM ON CUBESAT MISSIONS

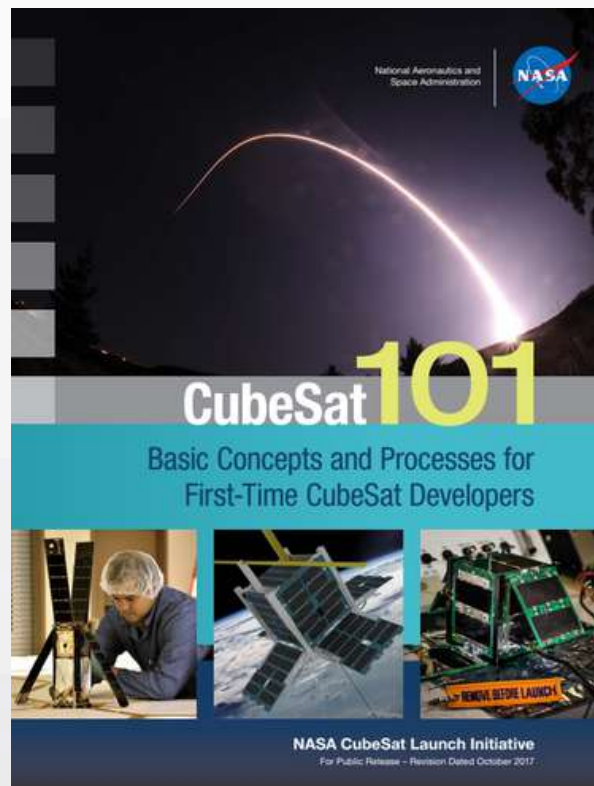
IN-SPACE unveiled “CubeSat 101: Inception to Operations”, developed by Space Kidz India, at DefSat 2026, marking a significant milestone in space education. The publication is the world's first high school curriculum focused on the complete lifecycle of satellite mission design and operations.

The initiative reflects a growing emphasis on bridging the gap between academia and industry, as India's space sector expands with increased private participation and commercial opportunities.

As the NCVET-recognized Assessing and Awarding Body (AAB) for the space sector, IN-SPACE continues to play a key role in ensuring that skill development and technical training align with national standards.

This effort supports the development of a future-ready, mission-oriented workforce, equipped to contribute to India's evolving space ecosystem and its global ambitions.

IN-SPACE congratulated Space Kidz India on this important achievement in advancing space education.





# IN-SPACE

INDIAN NATIONAL SPACE  
PROMOTION AND  
AUTHORIZATION CENTRE

## IN-SPACE FACILITATES TRANSFER OF FOUR SPACE TECHNOLOGIES TO INDUSTRY

MARCH 05, 2026

On 5 March 2026, IN-SPACE, at its headquarters in Ahmedabad, facilitated the transfer of four space technologies to Indian industry through tripartite agreements with NewSpace India Limited (NSIL).

These transfers highlight a growing pathway through which innovations developed at ISRO centres are being transitioned to the private sector for real-world applications and commercial deployment.

The technologies transferred include:

- A paraffin-based Hold Down Release System developed by U R Rao Satellite Centre, transferred to Azista Industries
- An algorithm for sugarcane crop production developed by Space Applications Centre, transferred to AgCane Pvt. Ltd.
- DK-45 dielectric ceramics for satellite communications developed by Vikram Sarabhai Space Centre, transferred to Bhukhanvala Pvt. Ltd.
- Mini SAR: X-band airborne SAR technology developed by Space Applications Centre, transferred to Omnipresent Pvt. Ltd.

These transfers expand the role of Indian industry across the space value chain, spanning satellite subsystems, advanced materials, geospatial applications and sensing technologies.

The initiative underscores IN-SPACE's continued efforts to strengthen the bridge between research and industry, enabling broader participation in both upstream manufacturing and downstream applications and supporting the growth of India's space-enabled economy.





# IN-SPACE

INDIAN NATIONAL SPACE  
PROMOTION AND  
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## IN-SPACE FACILITATES MULTIPLE TECHNOLOGY TRANSFERS TO STRENGTHEN INDUSTRY CAPABILITIES

**IN-SPACE**, in collaboration with **NewSpace India Limited (NSIL)** and **ISRO**, has facilitated a series of strategic technology transfers to Indian companies, enabling the deployment of high-value, space-grade innovations for real-world applications.

These transfers mark a continued shift in how innovations developed within ISRO are moving beyond laboratories into industrial and commercial use.

The technologies span a wide range of domains, including **satellite systems, advanced materials, semiconductors, communication systems and geospatial applications**. Key transfers include a **paraffin-based Hold Down Release System, Mini SAR technology, dielectric ceramics, agricultural algorithms**, as well as **critical semiconductor and power technologies**.

In addition, a broader set of technologies such as silica fibres, RF systems, antenna control systems and advanced modules have been transferred to multiple Indian companies. In total, 18 technology transfers have been facilitated to strengthen domestic capabilities, reduce import dependence and expand industry participation across the space value chain.

These initiatives reinforce India's ability to develop complex, high-value systems within its domestic industrial base, while supporting both strategic and commercial applications. The effort reflects IN-SPACE's continued commitment to building a stronger, self-reliant and globally competitive space ecosystem.



# IN-SPACe

INDIAN NATIONAL SPACE  
PROMOTION AND  
AUTHORIZATION CENTRE

## IN-SPACe OPENS REGISTRATIONS FOR MODEL ROCKETRY AND CANSAT STUDENT COMPETITIONS 2026

IN-SPACe has announced the opening of registrations for the **Model Rocketry India Student Competition 2026 and the CANSAT India Student Competition 2026**, aimed at nurturing the next generation of space innovators. The announcement was made on the sidelines of the IN-SPACe-Confederation of Indian Industry Conclave on strengthening industry-academia-government collaboration.

Organised in association with the SriNarayani Space Development Foundation, Kushinagar, the competitions will provide undergraduate teams an opportunity to design, build, control and launch model rockets and 1 kg CANSAT systems, simulating real-world space mission conditions. Building on the success of the previous edition, which saw participation from 67 teams and ~600 students, the 2026 edition aims to further expand engagement and hands-on learning across institutions.

The competition will span several months, culminating in a national finale around October-November 2026 in Kushinagar, Uttar Pradesh.

The initiative is designed to foster systems engineering skills, teamwork and practical exposure to space mission development, strengthening the talent pipeline for India's growing space ecosystem.

Last date for registration: 30 April 2026

For more details, please visit: <https://lnkd.in/gjfHsDyc>



# IN-SPACE

INDIAN NATIONAL SPACE  
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## IN-SPACE INVITES INDUSTRY PARTICIPATION IN GLOBAL ENGAGEMENT OPPORTUNITIES

IN-SPACE in its endeavor to expand India's private space sector's global footprint, is inviting NGEs to participate in two international engagement opportunities. These events are aimed at strengthening global industry collaboration.

**Opportunity 1: India - Republic of Korea Space Industry Day.** This industry engagement will bring together Indian and Korean space companies to explore partnerships, technology collaboration and business opportunities.

Date: April 20, 2026

Time: 09:00 - 17:00 Hrs

Mode: Physical | Participation open to shortlisted entities

Venue: Bengaluru (exact location to be announced soon)

Application deadline: April 02, 2026

For registration please visit: <https://lnkd.in/gMZiWW36>

**Opportunity 2: Indian Space Industry Delegation to Italy (Veneto Space Meetings 2026).** The delegation will participate in Veneto Space Meetings, one of Europe's leading space industry platforms, along with visits to Italian space companies.

Date: May 11-15, 2026

Mode: Physical | Participation open to shortlisted entities

Venue: Venezia Terminal Passeggeri, Venice, Italy

Application deadline: April 03, 2026

For registration please visit: <https://lnkd.in/gMTUeu9A>

Indian NGEs interested in expanding international partnerships are encouraged to apply before the respective deadlines.



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**VENTURI SPACE ADVANCES THE DEVELOPMENT OF ITS LUNAR ROVER**

MARCH 10, 2026

For the past five years, Venturi Space has been developing lunar mobility solutions, notably the Flip and Flex rovers designed for short-term space missions. But its most ambitious project is Mona Luna, a rover weighing approximately one ton, developed with its own funds and unveiled at the last Paris Air Show. Significantly larger than traditional rovers (200 to 250 kg), it aims to meet the future logistical needs of lunar missions. The European Space Agency (ESA) is currently conducting tests with Venturi in Cologne to validate key technologies, such as hyper-deformable wheels and batteries capable of withstanding the extreme conditions of the Moon. This project could open up new perspectives for the exploration and exploitation of lunar resources.

**PHINIX ORBITAL SYSTEMS DESIGNS NANOSATELLITES TO CLEAN UP SPACE DEBRIS**

MARCH 13, 2026

Phinix Orbital Systems, a startup based in Méaulte (Somme), is developing a nanosatellite called "Demeter" to capture debris from spacecraft still in orbit. The device, which will incorporate onboard AI, will be able to retrieve objects weighing from a few hundred kilograms to several tons. The first tests are planned for 2028. The Demeter demonstrator should allow Phinix Orbital Systems to develop a second, larger satellite called "Persephone."

**GIFAS START'AIR CLUB WELCOMES ITS 100TH STARTUP**

MARCH 27, 2026

The GIFAS Start'Air club celebrated the welcoming of its 100th startup, CGREEN\*\*, at a ceremony held on March 26, 2026. Olivier Andriès, Chairman of GIFAS and CEO of Safran\*, expressed his optimism regarding the challenges facing aerospace startups. GIFAS now has 529 member companies, including many innovative startups in France.



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## ASTROBOTIC TO DEVELOP LUNAR WHEEL FOR ITALIAN SPACE AGENCY'S HABITATION MODULE

MARCH 03, 2026

Astrobotic has been awarded a contract by Thales Alenia Space to develop a lunar wheel assembly for the Multi-Purpose Habitation (MPH) system, part of an Italian Space Agency (ASI) programme in partnership with NASA under the Artemis architecture.

The MPH module is designed to enable astronauts to live and conduct scientific operations on the lunar surface, supporting long-duration missions. As part of this effort, Astrobotic will develop a mobility solution to support operations in the challenging terrain of the lunar south pole.

The wheel system is engineered to provide reliable mobility across uneven lunar terrain, combining lightweight structural design, flexible tread elements and durable materials to ensure traction, efficiency and long-term performance. It is designed to operate over a 10-year mission lifecycle, withstanding extreme conditions including temperature variations, radiation and lunar dust.

The development builds on Astrobotic's prior work in lunar mobility systems and reflects strong collaboration between U.S. and European industry partners to support sustained human presence on the Moon.

This initiative marks a significant step in advancing mobility solutions for future lunar infrastructure, reinforcing the importance of international cooperation in space exploration.





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## PLD SPACE PARTNERS WITH JAPAN'S MITSUBISHI AND RAISES €180 MILLION

MARCH 09, 2026

Spain-based PLD Space has secured €180 million in Series C funding, led by Mitsubishi Electric, marking a significant step toward strengthening Europe's independent launch capabilities.

The funding supports the development of the company's MIURA 5 launch vehicle, with its first test flight planned for 2026. Mitsubishi Electric has also joined as a strategic customer, contracting PLD Space for small satellite launch services in Asia.

PLD Space is positioning itself in the small and medium payload launch segment, with plans to scale up to over 30 launches per year by 2030, supported by Europe's largest private rocket manufacturing facility under development in Spain.

The development comes amid increasing focus on European space sovereignty, with growing public and private investment aimed at ensuring independent access to space and reducing reliance on external launch providers.

This milestone reflects the rising momentum in Europe's private space sector and highlights the strategic importance of diversified, resilient launch capabilities in the evolving global space economy.





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## SOPHIE ADENOT: FIRST INTERVIEW FROM THE ISS

MARCH 09, 2026

ESA astronaut Sophie Adenot, currently aboard the International Space Station (ISS) for the epsilon mission, shared an inspiring message on 8 March 2026 to mark International Women's Day.

Encouraging individuals to pursue their ambitions, she highlighted “ “Believe in your dreams, believe in yourself and believe in that little nothing, that epsilon, that can change everything...”

The message underscores the role of inspiration, inclusivity and representation in space exploration, reinforcing the importance of empowering the next generation in science and technology.





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**SPACEX SURPASSES 10,000 STARLINK SATELLITES IN ORBIT**

MARCH 17, 2026

SpaceX has surpassed a major milestone, with over 10,000 Starlink satellites now active in Low Earth Orbit, marking a significant expansion of its global broadband constellation.

The milestone was achieved following the launch of two Falcon 9 missions on 17 March 2026, deploying a total of 54 satellites—25 from Vandenberg Space Force Base, California and 29 from Cape Canaveral Space Force Station, Florida.

The Starlink constellation currently comprises 10,049 satellites, with the vast majority operational, while over 1,500 satellites launched since 2019 have re-entered Earth's atmosphere as part of lifecycle management.

Both missions demonstrated reusability capabilities, with Falcon 9 boosters successfully completing multiple flights and landing on droneships in the Pacific and Atlantic Oceans.

This milestone underscores the rapid scaling of mega-constellations for global connectivity, positioning Starlink as one of the largest satellite networks in operation and a key player in expanding space-based internet services worldwide.





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**ARIANESPACE SIGNS A CONTRACT WITH KATALYST SPACE TECHNOLOGIES TO LAUNCH THE NEXUS-1 SATELLITE**

MARCH 23, 2026

Arianespace has secured a contract to launch Katalyst Space Technologies' Nexus-1 spacecraft aboard an Ariane 6 launcher in the second half of 2027, marking a significant step in advancing on-orbit servicing capabilities.

The Nexus-1 spacecraft will be deployed into geostationary transfer orbit and will install a space situational awareness sensor on a U.S. Space Force satellite in geostationary orbit. The mission will also include rendezvous and proximity operations to support enhanced space domain awareness.

Nexus-1 is part of Katalyst's broader roadmap to develop servicing spacecraft for both government and commercial applications, aimed at extending satellite lifetimes and improving operational flexibility in orbit.

The contract highlights the growing demand for in-orbit servicing and space domain awareness solutions and reinforces Arianespace's role in supporting complex and innovative space missions using its Ariane 6 heavy-lift launch system.

This development reflects a broader shift in the space sector toward sustainable and adaptive space operations, enabled through advanced servicing technologies.





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## ARIANESPACE TO LAUNCH 32 AMAZON LEO SATELLITES ON ARIANE 64

MARCH 24, 2026

Arianespace is set to launch 32 Amazon LEO satellites on 28 April 2026 aboard the Ariane 64, the most powerful configuration of the Ariane 6 launch vehicle, from the Guiana Space Centre in French Guiana.

The mission, designated VA268 (LE-02), will mark the second Ariane 6 launch for Amazon's LEO constellation, part of a broader series of 18 launches supporting the deployment of Amazon's global broadband network.

The satellites will be deployed into Low Earth Orbit during a mission lasting under two hours, demonstrating Ariane 6's capability to support large-scale constellation deployments.

Amazon LEO aims to deliver fast, reliable internet connectivity to underserved regions worldwide and this launch represents a key step in expanding global satellite-based communications.

The VA268 mission will also mark the 360th launch by Arianespace, as well as the second Ariane 64 mission, highlighting the growing role of European launch systems in supporting next-generation satellite constellations.





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### GRETA ROCKET ENGINE COMPLETES ITS FIRST TEST CAMPAIGN

MARCH 25, 2026

The European Space Agency (ESA) has successfully completed the first hot-fire test campaign of its Greta rocket engine, marking a key milestone in the development of next-generation, sustainable propulsion systems.

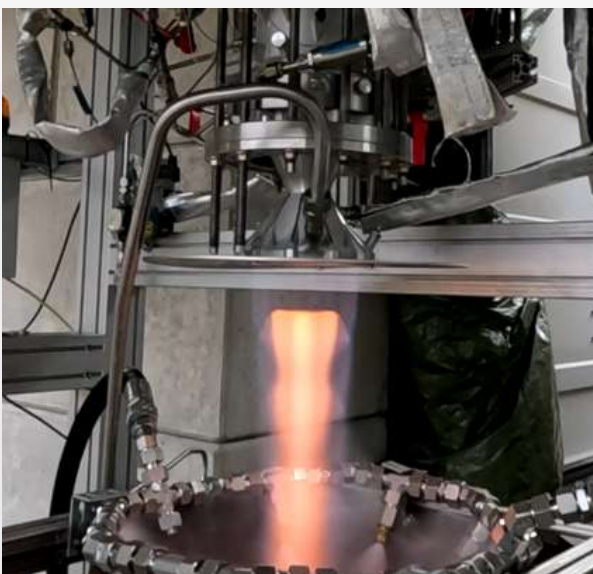
Developed under ESA's Future Launchers Preparatory Programme (FLPP), the 5 kN-class Greta engine demonstrated stable operations, controlled shutdowns and multiple restarts during testing at ArianeGroup's Trauen facility in Germany.

Greta uses hydrogen peroxide and ethanol as propellants, offering a more sustainable alternative with a lower environmental footprint compared to traditional propulsion systems.

The engine is being developed for potential applications in lunar landers and kick stages, including systems such as Astris for the Ariane 6 launcher.

The test campaign also validated the use of advanced manufacturing techniques, including laser-based metal printing for complex engine components, enabling improved performance and efficiency.

The next phase of development is underway, focusing on a flight-ready design, with further testing planned by 2027, supported by European industry partners. This milestone highlights Europe's continued progress toward innovative and environmentally sustainable space propulsion technologies.





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**NORWAY AND ICELAND TURN TO THE EUROPEAN IRIS<sup>2</sup> CONSTELLATION TO SECURE THEIR SPACE  
CONNECTIVITY**  
MARCH 26, 2026

The European Union has signed a Secure Connectivity Agreement with Norway and Iceland, enabling their participation in GOVSATCOM and the IRIS<sup>2</sup> Secure Connectivity Programme, strengthening cooperation in satellite communications and security.

The agreement enhances access to secure, resilient and rapidly deployable satellite connectivity, which is critical for crisis management, emergency response, secure government operations and safe air and maritime navigation, particularly in remote and infrastructure-limited regions.

With GOVSATCOM operational since January 2026, the combined capabilities of GOVSATCOM and IRIS<sup>2</sup> will support climate monitoring, environmental protection and improved access to essential services such as healthcare for remote communities.

The agreement was signed by European Commissioner for Defence and Space Andrius Kubilius, along with Cecilie Myrseth, Norwegian Minister of Trade and Industry and Stefán Haukur Jóhannesson, Ambassador of Iceland to the EU.

This development marks a significant step in strengthening European space cooperation, resilience and technological autonomy, while reinforcing the EU's position as a global leader in secure satellite connectivity.





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**THALES ALENIA SPACE LAUNCHES IOD-2 SATELLITE FOR ESA'S CELESTE MISSION**

MARCH 28, 2026

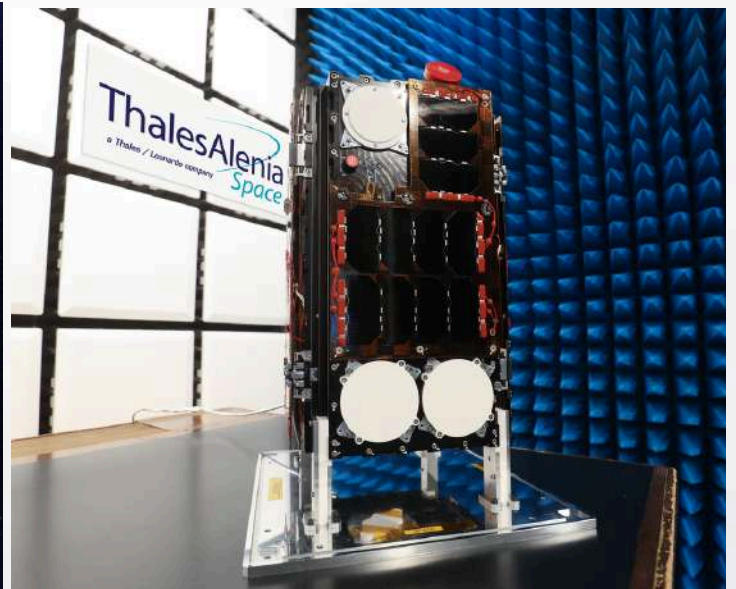
A major milestone in Europe's next-generation satellite navigation capabilities was achieved with the successful launch of the IOD-2 satellite, built by Thales Alenia Space, as part of the European Space Agency's (ESA) Celeste mission. The satellite was launched aboard a Rocket Lab Electron rocket from New Zealand on 28 March 2026.

The IOD-2 CubeSat, weighing approximately 30 kg, will play a key role in validating technologies for a Low Earth Orbit-based Positioning, Navigation and Timing (LEO-PNT) system, aimed at enhancing the performance and resilience of existing navigation systems such as Galileo.

The Celeste mission will deploy a constellation of 11 microsattellites in LEO, demonstrating how a multi-orbit navigation architecture can deliver higher accuracy, improved robustness and reduced latency, while strengthening resistance to jamming and spoofing.

This advancement is expected to enable a range of next-generation applications, including autonomous systems, IoT services and 5G/6G network synchronisation, particularly in challenging environments such as dense urban areas and remote regions.

The launch marks a significant step toward building resilient, high-performance global navigation systems, reinforcing Europe's leadership in satellite navigation innovation.



# ISpA IN NEWS

**The Cloud Beyond The Clouds: Startups Firm Up Orbital AI Data Centre Plans**

01 March 2026 | Inc42

**India Taps Space Startups for Launching 'Bodyguard' Satellites**

05 March 2026 | The Economic Times

**India is planning to deploy bodyguards for its satellites in space. But why?**

05 March 2026 | India Today

**Retd. Lt Gen Anil Kumar Bhatt द्वारा भारत के अंतरिक्ष भविष्य और स्पेस नेतृत्व पर खास बातचीत।**

07 March 2026 | Voice of Space

**A DARK MATTER**

March 2026 | Business Standard  
Blueprint Magazine

**NXT Summit 2026: How India's Private Space Industry Is Driving The Orbital Shift**

13 March 2026 | NewsX

**India expands student participation in space missions, satellite design**

15 March 2026 | Arab News

**India's private space industry finds indirect growth triggers in Union Budget 2026-27**

01 MARCH 2026 | Fortune India

**Space budget sees marginal increase; industry says other announcements to enable spacetech use**

2 MARCH 2026 | Economic Times

**Union Budget 2026: Government allocates ₹13,705 crore for Department of Space**

2 MARCH 2026 | ET Government

**TOI Budget Dialogue 2026: Experts discuss how Budget impacts common man and India's growth tomorrow**

03 MARCH 2026 | The Times of India

**Where India's Defence Space Capabilities Took Shape (Clip Attached) ||**

**MARCH 2026**

MARCH 2026 | Business Standard  
Blueprint Magazine

**Overlooked commercial aspects of human spaceflight**

08 MARCH 2026 | The Times of India

**Beyond ISRO: India's Space Sector Hits A \$44 Billion Turning Point**

10 MARCH 2026 | The Core

**Do tourists going to space need insurance?**

12 MARCH 2026 | Hindustan Times

**AI powers India's space ambitions: From debris tracking to autonomous satellites**

14 MARCH 2026 | The Times Of India

**The intelligence war will now be fought in space. Indian spies are getting ready.**

15 MARCH 2026 | India Today

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**Business Standard**

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A bet on the Chabahar Port

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**COVER STORY**  
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How ready is India for space warfare

**S.L. Narayanhari**  
China's growing satellite capability

**Business Standard BLUEPRINT**

**COVER STORY**

## A DARK MATTER

How ready is India for space warfare

**MOHAMMAD ASIF KHAN AND BHASKAR KUMAR**

In the winter of 2009, as Indian forces prepared to reclaim the heights of Kargil, it faced what one army general described as a "zero-value ability". India did not have real-time satellite images of Pakistan's positions across the Line of Control.

At that time, India lacked advanced intelligence capabilities for military-grade satellite reconnaissance, so a lot of images had to be procured from foreign vendors. Later, former Army Chief General V. Naidu, who was commanding the Indian Army at that time, revealed that India was overcharged by foreign companies, and even then, the images arrived late, often outdated by the time they reached commanders on the ground.

Although India eventually prevailed in the Kargil conflict, the inability to "see" the theatre of operation in real time exposed a critical gap, pointing to the need for a dedicated space security architecture.

It wasn't as if India did not have the scientific or technical infrastructure in place — technological prowess, after all, had long been the nation's calling card. The problem, it can be

**Business Standard BLUEPRINT**

Communication capabilities impeded, too, with the launch of GSAT-7 in 2005, the first dedicated military satellite that gave real-time connectivity to the Indian Navy in the Indian Ocean Region (IOR). It was followed by GSAT-7A, which enhanced communication for the Indian Air Force for network-centric use. These were among the first explicitly defence-related satellites in India's inventory.

"Electro-optical satellites were the mainstay of ISR (intelligence, surveillance, reconnaissance) for a long time. However, SAR has become increasingly important because it provides all-weather capability through day and night and can 'see' through cloud cover," Lt. Gen. A.K. Bhatt (retired), director general of the Indian Space Association (ISA), told the Blueprint.

"This makes SAR a preferred tool for modern ISR and remote sensing," he added.

Navigation with Indian Constellation NavIC, further strengthened India's navigation capabilities. Although initially designed for civilian purposes, it provided encrypted signals which were useful for military use.

Developed by ISRO, NavIC is intended to enable users to determine their own precise geographic location and track their movements across India and up to 1,500 km beyond the country's territorial boundaries.

As of July 2016, six NavIC satellites had been placed in orbit. In a reply to Parliament that month, the government acknowledged that "some of them are not functioning".

At the time of the reply, four satellites were providing position, navigation and timing services, another four were being used for one-way message broadcast, and one had been decommissioned after the end of its service life. Two others had failed to reach their orbit.

A major doctrinal shift came in 2010 with Mission Shakti, the code name for India's anti-satellite (ASAT) test, with

the launch of a Prithvi Defence Vehicle Mark II (PDV Mk II) interceptor missile to shoot down one of its own satellites. Thus, India became the fourth country after the United States, Russia and China to demonstrate ASAT capabilities using indigenous technology.

While India built its ISR capabilities through its CanSat, RISAT, and GSAT satellites, there was a need for a more structured defence-related surveillance architecture, and the first step in this direction came with the creation of the Space Based Surveillance (SBS-1) programme. It was launched by the government headed by Atal Bihari Vajpayee in 2004 and marked the initiation of an indigenous satellite constellation for military intelligence.

Using Cartosat-2A, Cartosat-2B, EOS-0, and RISAT-2, the programme was aimed at deploying a small constellation of satellites to track the movement of ships and strategic activity in the Indian Ocean region. But although it brought together multiple satellite systems, its capabilities were limited in terms of scope and coverage.

SBS-1 is a direct response to the growing gap between existing capabilities and the operational needs of the armed forces

Building on this, SBS-2 was launched in 2013 with six satellites, including Cartosat-2C and RISAT-2A, marking a gradual shift towards integrating different types of sensors, such as electro-optical and radar imaging systems, which can ensure more reliable surveillance under varying conditions.

A planned SBS-3 programme represents the most ambitious leap in this series. Approved in late 2014 for ₹26,068 crore, it aims to deploy a 12-satellite constellation by 2020 in a joint effort of ISRO and the private sector.

"SBS-3 is not just a project — it is a continuous mission. The challenge is command, talking, and data fusion, not just building satellites," C.V.S. Kiran,

a former ISRO engineer and co-founder of Red Bullon Aerospace, an Indian near-space startup, told the Blueprint.

After recent operational experiences, it became clear that there was a gap between what we have and what the armed forces require. SBS is a direct response to that gap," Bhatt said. "I am confident that this will not stop here; we will likely see SBS-4 and SBS-5 as well."

For the armed forces in particular, there is a need for markedly stronger ISR coverage over the sensitive frontiers and western borders, where current satellites can take several days before they revisit a spot.

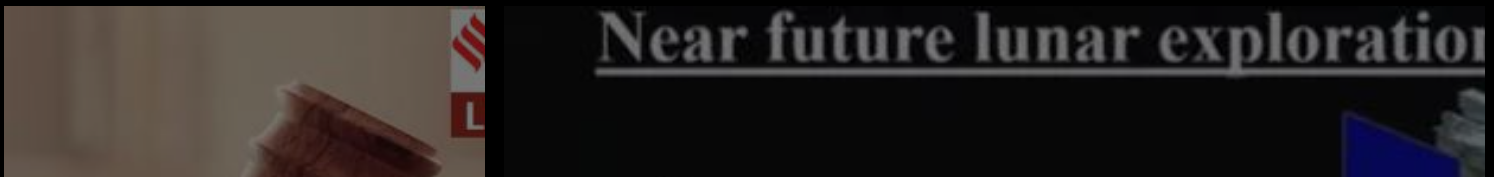
Although SBS Phase-3 is expected to reduce revisit times significantly, meeting operational requirements and achieving real-time situational awareness will require a reduction to one-to-two hours. This will also require a layered architecture that combines satellites with unmanned aerial vehicles and high-altitude balloons.

"The challenge is not really about who is building the satellites. The real challenge is who commands, who

owns, who feeds the data, and how that data is delivered to the force with operational readiness across services," Kiran said.

"What is needed is a mission-oriented programme authority, integrated tasking, and real-time data-to-decision workflow. Otherwise, success will not be measured by the number of launches, but by revisit time, latency, and availability, and how fast actionable intelligence reaches commanders."

While India's space programme has been a success in what it has set out to do, it is a largely civilian system that comes with limitations. The Indian National Space Promotion and Authorisation Centre (INSPIRE), which



**Near future lunar exploration**

# NATIONAL NEWS



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- 2028 - 202

**Chandrayaan-4**

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# NATIONAL NEWS

[Skyroot fires new rocket engine, makes diamonds in the air](#)

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[Achievements of Indian space programme brought changes in lives of common people, says former ISRO chairman](#)

**03 March 2026**

**The Hindu**

[Vodafone teams up with Amazon's satellites to connect masts in Europe and Africa](#)

**03 March 2026**

**ET Satcom**

[Bharat Electronics Signs MoU with Bellatrix Aerospace to Develop Indigenous VLEO Satellites](#)

**05 March 2026**

**Indian Masterminds**

[Readying India's first private rocket, with eye on building 'cabs' for space](#)

**06 March 2026**

**The Times of India**

[BEL, Bellatrix Aerospace Sign MoU To Develop Satellite Systems For Very Low Earth Orbit](#)

**06 March 2026**

**BW BusinessWorld**

[Viasat exploring partnerships across India's space value chain -launch, manufacturing and software: Global President Ben Palmer](#)

**08 March 2026**

**The Times of India**

[DoT may stick to its 5% charge for satcom spectrum](#)

**09 March 2026**

**The Economic Times**

[VodafoneThree to start customer trials of direct-to-device satellite service](#)

**09 March 2026**

**Mobile News**

[AllIMS, ISRO join hands for space medicine research](#)

**10 March 2026**

**The Times of India**

[Rajnath Singh unveils Defence Forces Vision 2047 aimed at military reform](#)

**11 March 2026**

**The Telegraph**

[Skyroot Aerospace bets on 'space taxi' model as Vikram-1 launch near](#)

**11 March 2026**

**Economic Times**

[India's navigation satellite system suffers major setback: 1 of 4 operational IRNSS satellites fails](#)

**15 March 2026**

**Indian Express**

[Gujarat government planning satellite launchpad to boost space sector: Minister](#)

**16 March 2026**

**The Economic Times**

[NavIC satellite: Why atomic clocks are critical—and why their failure is hurting Indian Regional Navigation Satellite System](#)

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**The Economic Times**

[Amazon knocks on DoT's door to get Satcom nod fast](#)

**17 March 2026**

**The Economic Times**

[India's space sector reforms: Strengthening strategic power and global leadership](#)

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**The Tribune**

[10 years in space: ISRO's IRNSS-1F completes its 10-year mission life with lasting impact on NavIC](#)

**17 March 2026**

**Times of India**

[Why NavIC's decline threatens India's geospatial ambitions](#)

**17 March 2026**

**Indian Express**

[Samtel expands into space tech & drone manufacturing, with ₹200 crore investment](#)

**18 March 2026**

**Economic Times**

[Hope and fear: India's space revolution](#)

**18 March 2026**

**BBC**

[India Accounts for 129 Space Debris Objects, Sets Sights on Zero by 2030](#)

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**The Morning Voice**

[Next war would be fought in space, says Dr Prahlada Ramarao, the man behind India's Akash missile, at WION World Pulse summit](#)

**18 March 2026**

**WION News**

[Isro recovers PSLV debris near Tamil Nadu coast that fell from space after launch](#)

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**India Today**

# NATIONAL NEWS

[India has 129 pieces of space junk in orbit. What is Isro doing about it?](#)

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**India Today**

[ISRO's Kulasekarapattinam Launch Site Set For 2026-27 Commissioning: Centre](#)

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**Swarajyamag**

[Eutelsat CEO Fallacher Talks OneWeb Gen 2, Global Competition and Sovereign Demand](#)

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**Satellite Today**

[Losing the way: On ISRO and issues with its NavIC constellation](#)

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**The Hindu**

[Armed forces, ISRO ink pact to expand telemedicine for frontline troops](#)

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**The Tribune**

[Indian startup delivers Akasha300 3D printer to Isro. It can print rocket parts](#)

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[India will become developed nation by 2047: ISRO chief V Narayanan](#)

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**Economic Times**

[ISRO currently studying orbital docking experiments for complex missions, says Jitendra Singh](#)

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[ISRO's Space tech strengthens disaster monitoring in J&K: Govt](#)

**23 March 2026**  
**Greater Kashmir**

[Ahead of Chandrayaan-4, IIT and PRL team decodes moon's titanium-rich rocks](#)

**24 March 2026**  
**The Hindu**

[PSLV setbacks are opportunities to learn and strengthen system: ISRO chairman V. Narayanan](#)

**24 March 2026**  
**The Hindu**

[Eutelsat Targets Rail Sector for Satellite Network Growth](#)

**25 March 2026**  
**AD HOC News**

[ISRO building Bharatiya Antariksh Station: Here's how much 1st module will cost](#)

**25 March 2026**  
**India Today**

[ISRO Builds Path to Orbital Lab as BAS-01 Targets 2028 Launch](#)

**26 March 2026**  
**The Morning Voice**

[Eutelsat expands OneWeb LEO rail connectivity.](#)

**27 March 2026**  
**Satellite Pro**

[India Is Putting 'Bodyguard' Satellites In Orbit. What They Can Do To Chinese Satellites Is The Real Story](#)

**27 March 2026**  
**Swarajyamag**

[Parliamentary Panel Flags Undervalued Transfer Of ISRO Technologies To Private Firm](#)

**28 March 2026**  
**ETV Bharat**

[India's Own Space Station Is Coming: Inside ISRO's ₹1,763 Crore Orbital Independence Mission](#)

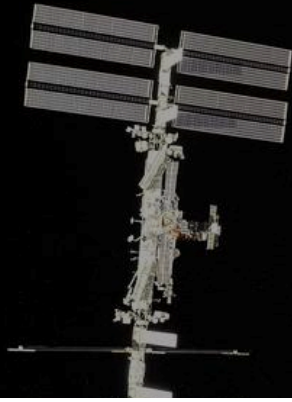
**28 March 2026**  
**Indian masterminds**

[Moon landing to Venus: ISRO's big missions and when they will launch from India](#)

**29 March 2026**  
**India Today**

[Meet Agasthya-1: Ex-Isro scientists are building a rocket to launch in 24 hours](#)

**29 March 2026**  
**India Today**



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- [Blue Origin Formally Enters Race to Develop Data Centers in Space](#)

# INTERNATIONAL NEWS

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## OTHER NATIONS

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- [Japan's 1st HTV-X cargo craft leaves the International Space Station \(photo\)](#)

# GOVERNMENT POLICIES/ CONSULTATIONS/ RECOMMENDATIONS/ ANNOUNCEMENTS

## **Consultation on Draft Telecom Commercial Communications Customer Preference (Third Amendment) Regulations, 2026**

The Telecom Regulatory Authority of India (TRAI) has released a consultation paper on the draft Telecom Commercial Communications Customer Preference (Third Amendment) Regulations, 2026, aimed at strengthening the regulatory framework to curb Unsolicited Commercial Communications (UCC).

Building on the existing 2018 regulations and subsequent amendments, the draft introduces key provisions to enhance consumer protection and improve enforcement mechanisms. These include the integration of AI/ML-based systems for detecting spam communications, stricter compliance requirements for senders and enhanced accountability across telecom service providers.

Notable proposals include:

- Mandatory pre-declaration of Application-to-Person (A2P) calls, with non-compliant calls treated as UCC
- Introduction of termination charges for A2P calls to deter misuse
- Strengthening complaint and appeal mechanisms with defined timelines
- Use of AI-based detection systems to trigger regulatory action against suspected spammers
- Enhanced provisions for KYC verification and enforcement against repeat offenders

The consultation also emphasizes improving transparency, safeguarding consumer preferences and enabling a more robust digital consent framework.

# IspA UPCOMING EVENTS

## INDIAN DEFSPACE SYMPOSIUM 2026

### **Theme: “Strengthening India’s Defence and Space Industry Synergy”**

The **Indian DefSpace Symposium 2026 (IDS 2026)**, the 4th edition of IspA’s premier annual defence-space forum, will convene senior leaders from the Armed Forces, global space agencies, industry, academia and emerging startups to advance India’s defence space capabilities.

The **4th edition** of the **Indian DefSpace Symposium (IDS 2026)** will be held on **23-24 April 2026**, bringing together senior leaders from the Armed Forces, industry, academia, global space agencies and startups to advance India’s defence-space agenda.

Day 1 Theme (23 April):

Commercial Space Operations - Navigating Threats and Military Employment

Day 2 Theme (24 April):

Empowering the Space Industry to Enhance Defence Operational Readiness



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