# NEWSLETTER INDIAN SPACE ASSOCIATION



# EXPLORING THE FINAL FRONTIER:

ISpA Newsletter Unveils Future of Sustainable Space Exploration





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.

# HIGHLIGHTS OF THE MONTH

Indian Space Conclave 2024 underscores Collaboration on Space Challenges and Innovations

India's first analog space mission to simulate extra-terrestrial conditions on Mars and Moon kicks off

With 7 more satellites, Isro plans to provide navigation signals to civilians' mobiles: INSPACe chairman

BSNL launches India's first satellite-to-device service: DoT

India's ISRO to build a space station around Moon

Defence to space, India & Italy announce 5-year action plan

India's PSLV to launch world's first parallel satellite pair for Sun's outer secrets on Dec 4

Japan, Poland to join U.S. military satellite network

Japan launches Kirameki 3 military communications satellite with H3 rocket

China quietly tested its first inflatable space module in orbit









# MEMBERS BULLETIN



#### **BELLATRIX**

- Startups highlighted the lack of a mature local manufacturing ecosystem.
- Companies paid a premium for key components like electronics, chips, solar cells, and valves.
- Bellatrix Aerospace cofounder noted gaps in domestic chemical and material sciences industries.
- Core chemicals were still imported from Germany due to limited regional manufacturers.
- Startups called for increased government support and funding to address these challenges.



#### **GALAXEYE**

- GalaxEye raised \$10M in Series A funding.
- Investors included Mela Ventures, Speciale Invest, Samarthya Investment Advisors, ideaForge, and Infosys.
- Infosys contributed ₹17 crore.
- Funds aimed to support a satellite launch planned for July 2025.



#### **KSPACE**

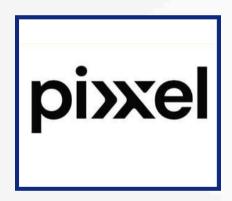
- KSPACE is nearing a milestone of 50 affiliations with leading aerospace industries across Kerala, fostering a robust ecosystem for the sector's growth.
- Strengthened partnerships with ISRO centers, R&D institutions, academic bodies, and professional organizations are driving accelerated growth in Kerala's aerospace industry.
- MoUs with VSSC, DUK, ICTAK, ASAP, and several upcoming agreements underscore our commitment to advancing the aerospace sector.

# MEMBERS BULLETIN



#### MAXAR

- Maxar Intelligence divested its Radar and Sensor Technology (RST) group.
- ARKA Group, based in Danbury, Connecticut, acquired the RST group.
- RST focused on supporting classified U.S. government sensor programs.
- The acquisition value was not disclosed.



#### **PIXXEL**

- Pixxel unveiled its "Fireflies" constellation of six hyperspectral satellites.
- Fireflies featured 5-metre resolution and over 150 spectral bands.
- Satellites captured a 40-kilometre swath for daily global Earth access.
- Launch planned for early 2025 to enhance Earth observation capabilities.



#### **PIERSIGHT**

- PierSight announced its first satellite, Varuna, for maritime monitoring.
- Varuna uses Synthetic Aperture Radar (SAR) for all-weather, roundthe-clock imaging.
- The satellite will launch as a secondary payload aboard ISRO's PSLV POEM platform.
- CEO Gaurav Seth highlighted indigenously developed SAR subsystems, including deployable antenna and thermal systems.
- Varuna aims to demonstrate advanced SAR capabilities in orbit.

# MEMBERS BULLETIN



#### **SUHORA**

- SUHORA, a satellite data solutions company, launched a subscription-based SaaS platform named SPADE.
- The SPADE platform aimed to make satellite data more accessible for critical operations.
- The platform was launched by Space Minister Dr. Jitendra Singh at the Indian Space Conclave 2024.
- During the event, SUHORA received the ISpA Space Industry Award.



#### MEXICAN AMBASSADOR MET CHAIRMAN, ISRO / SECRETARY, DOS

Ambassador of Mexico to the Republic of India, H.E. Mr. Federico Salas met Dr. Somanath S., Chairman, Indian Space Research Organisation (ISRO) / Secretary, Department of Space (DOS)

at Anatriksh Bhavan in Bengaluru today.

Chairman, ISRO / Secretary, DOS highlighted on the successful cooperation pursued by ISRO and Mexican Space Agency (AEM) including development of mobile application for Forest fire monitoring using satellite data and organising 4-day workshop by ISRO officials on the use of space systems for forest fire management for Mexican officials in Mexico in August 2024. He also mentioned about the G20 Satellite mission for environment and climate observation and potential industry level collaboration between India and Mexico.



#### ISRO & ASA SIGN IMPLEMENTING ARRANGEMENT FOR GAGANYAAN

An Implementation Agreement (IA) was signed between Indian Space Research Organisation (ISRO) and Australian Space Agency (ASA) on November 20, 2024 for further strengthening cooperation in space activities between Australia and India. The IA enables cooperation between both space agencies on crew and crew module recovery for Gaganyaan missions. The IA was signed by Shri DK Singh, Director, HSFC on ISRO side at Bengaluru and Shri Jarrod Powell, General Manager, Space Capability Branch, on ASA side at Canberra.

ISRO has embarked on the Human Spaceflight ("Gaganyaan") programme with an objective of demonstrating human space flight capability to Low Earth Orbit in an Indian Crew Module with up to three crew members for up to three days and safely recovering them after the mission. The IA enables the Australian authorities to work with Indian authorities to ensure support for search and rescue of crew and recovery of crew module as part of contingency planning for ascent phase aborts near Australian waters.

India and Australia are enduring strategic partners and both space agencies are working closely and are committed to explore current and future collaboration activities. The signing of the IA is another step forward in the cooperation between Indian and Australian space

agencies.



## MEMBER OF PARLIAMENT AND COMMISSIONER "START-UPS AND DIGITAL INNOVATION HUBS" AT THE GERMAN MINISTRY OF ECONOMIC AFFAIRS AND CLIMATE ACTION, MET CHAIRMAN, ISRO/ SECRETARY DOS

Dr. Anna Christmann, Commissioner "Start-ups and Digital Innovation Hubs" at the Ministry of Economic Affairs and Climate Action / Federal Government Coordinator of German Aerospace Policy/ Member of Parliament, Germany met Dr S Somanath Chairman, ISRO/ Secretary, DOS at Antariksh Bhavan, Bengaluru on November 20, 2024. The opportunities for increased collaboration between the national space agencies, organising a workshop for the space start-ups from both sides, ongoing earth observation data sharing, and cooperation in space optics were discussed during this meeting.



### SATELLITE OBSERVATION OF DEEP DEPRESSION OVER SOUTHWEST BAY OF BENGAL

Deep Depression over Southwest Bay of Bengal is approaching the coastal districts of Tamil Nadu. ISRO satellites are tracking since 23-November-2024. ISRO polar orbiting satellite EOS-06 and geostationary satellite INSAT-3DR are regularly providing valuable information on the status.

ISRO polar orbiting satellite EOS-06 Scatterometer sensor provides the status of ocean winds and their circulation well before the formation of the cyclone.

Satellite derived videos showing the ocean wind intensity & direction during 27-Nov-2024

05-07 NOVEMBER, THE LALIT NEW DELHI

The third edition of the ISpA Indian Space Conclave, Co-Hosted by ISRO and IN-SPACe, took place from 5-7 Nov 2024, in New Delhi, gathering key figures from the government, industry, and academia to discuss the future of India's space sector. The Conclave, attracted over 1,000 attendees, including policymakers, business leaders, researchers, entrepreneurs, and students. The discussions covered topics like commercialization, global partnerships, satellite communications, and human spaceflight, with an emphasis on overcoming financing and manufacturing challenges in the Indian space sector. On the second day, sessions focused on telecom and satellite communication, featuring speakers from the Department of Telecommunications and TRAI.

**Dr. Jitendra Singh, Minister of State for Space**, announced an upcoming ISRO mission (Proba-3) in partnership with the European Space Agency, highlighting India's growing influence in international space missions. This joint mission with the EU, aimed at studying the Sun, is a significant step towards strategic partnerships in space research and exploration. **Dr. Singh also honoured space sector pioneers with ISpA Space Awards**, recognizing the innovations shaping India's space future.

**Dr Chandra Shekhar Pemmasani, Minister of State for Communications**, stated The outcome is not just to compete with terrestrial networks, but to complement them as we integrate the 6G technology and the existing 5G technology into our infrastructure. It is crucial that we bring both, private and government partnerships for resilient networks. He also mentioned space missions under the Prime Minister Narendra Modi-led government have propelled India to the forefront of the global space race.









05-07 NOVEMBER, THE LALIT NEW DELHI







**Dr. S Somanath, Chairman of ISRO**, outlined India's long-term vision for space, aiming for a robust, self-reliant ecosystem with capabilities across satellite manufacturing, space exploration, and human spaceflight. With nearly 450 companies already contributing to space projects, he called for fresh talent and innovation from the private sector to realize India's goals, including a historic lunar mission by 2040. Dr. Somanath emphasized the need for policies supporting data access and space-based applications to drive developments across industries like agriculture and finance.

**European Union Ambassador Hervé Delphin** underscored the strategic alliance between India and the EU in the space sector, with both regions focusing on autonomy in navigation, earth observation, and communication technologies. He spoke of India and the EU's shared commitment to sustainable space governance, including managing space debris and enhancing space traffic protocols. This collaboration is set to expand, with high-level dialogues and joint initiatives paving the way for strengthened cooperation.

The conclave also witnessed the presence of **US Space Command (J-5) led by Maj Gen Brian W Gibson, Director, Plans and Policy, J-5, Unites States Space Force Command.** The Space Command had a brief discussion with various Indian Space Companies and government officials to deepen the cooperation. Maj Gen Gibson also participated in panel discussions and exhibition to understand the Indian Space Ecosystem.

#### 05-07 NOVEMBER, THE LALIT NEW DELHI

**TRAI Chairman, Shri Anil Kumar Lahoti** said that India is making efforts in satellite communication to expand digital connectivity across the country, particularly in remote and underserved areas. By supporting cellular and wi-fi backhaul and developing capabilities for upcoming 5G and 6G networks, these technologies can transform how industries and enterprises connect. He also mentioned that the TRAI will soon bring out its recommendations on satellite spectrum, which is likely to involve details including the methodology of allocation and frequency to be used.

The event also saw a huge participation from government agencies like ISRO, IN-SPACe, MoD, DSA, DoT, TRAI, DST, Embassies, HQ IDS, DRDO, DIPAC, NSIL, JAXA, CNES, etc. This also involved an **fireside chat of Dr Pawan Goenka**, **Chairman IN-SPACe with Space journalist Mr Pallav Bagla**. The fireside chat gave a brief view on the 1000 Cr fund announced by the government.

Conclave also had the participation of a large amount of private space companies. Some of the eminent companies involve Axiom Space, Blue Origin, Thales, Sierra Space, Business France, EY, NASSCOM, AusTrade, Nova Space, University of Texas, PWC, etc. **Mr Gopichand Thotakura, Co-Founder, Preserve Life and the First Indian Civilian Astronaut** also participated in the event.

The event also had a space exhibition arranged to help throw a spotlight on state-of-the-art Technologies, to build awareness among the Space & Defence Clientele and to establish a worldwide reach where various stakeholders are made aware of the global space diversities & their capabilities in the emerging space ecosystem. ISpA also felicitated various space companies with ISpA industry awards for their achievements on this ocassion.

The event had **Airtel, Eutelsat OneWeb, Larsen & Toubro, Nelco and Walchandnagar Industries** as a Platinum Sponsor while **Elena Geo Systems, Kawa Space, Dhruva Space, Maxar and Amity University** as a Silver Sponsor. Conclave was also supported by AGI, Business France, CSDR, ELCINA, GIFAS, INFAN, Geospatial World, The Takshashila Institution, NASSCOM Deep-tech, Amity University, SIDM, MSME and Startups Forum, USIBC, USISPF, VIF, The NFA Post, India Strategic, India Aerospace and Defence Bulletin, Spaceprenure, Life of Soldiers, Punjab Engineering College, etc.



























ISpA
INDUSTRY
AWARDS

2024.

05-07 NOVEMBER, THE LALIT NEW DELHI

#### MEDIA COVERAGE ISC 2024

NOVEMBER 5-7, 2024 | THE LALIT, NEW DELHI

The Indian Space Conclave 3.0 garnered exceptional media attention, reinforcing its stature as a premier platform for fostering collaboration, innovation, and advancements in the space ecosystem. Below is a detailed breakdown of media coverage across various platforms:

Coverage Type	Details	Count
Print Media	National and regional newspapers and magazines.	157
Online Platforms	News portals, blogs, and digital media outlets.	78
Total Coverage	Combined impact across all platforms.	235

#### India must create 'leading' space firi says ISRO chairma





ency's Proba-3 mission in Decemb



ISRO chief urges adustry houses to tak olunge in space secto

Suhora launches ggregating latform

India to launch EU's Proba-3 satellite in

December

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#### idia to launch ESA's roba-3 spacecraft in Dec

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#### ecommendations on atcom soon: Trai chief

e Telecom Regulatory Authority of India (frai) ill soon bring out its recommendations on tellite spectrum, which is likely to involve stails including the methodology of allocation of frequencies to be used, Trai Chairman Anii imar Lahoti said on Wednesday. Speaking at the Indian Space Conclave, ganised by Indian Space Association (ISpA), hoti said under the Indian Space Policy, wate sector participation is encouraged, eating a level playing field and fostering novation in non-terrestrial networks for obal communication. Trai's recommendation e expected to clarify the frequencies to be ed, the pricing of spectrum and the terms an nditions to be met by satellite operators with gard to national security.

BS REPORT

# ISPA ACTIVITIES

### MEDIATEK GLOBAL CONNECT SEMINAR NOVEMBER 12, 2024:

- DG ISpA, spoke on the SatCom environment in India.
- He participated in the panel discussion titled 'Overview of India's Telecom Landscape'.
- The discussion was part of the MediaTek Global Connect seminar.
- The seminar was attended by visiting foreign delegates from the US and UK.



## NATIONAL UNITY & ARMED FORCES DAY CELEBRATION NOVEMBER 13, 2024:

- DG ISpA, attended the National Unity & Armed Forces Day celebration.
- The event was hosted by the Italian Embassy at Hyatt Regency, New Delhi.



# DG ISPA WAS A SPEAKER AT RRU DURING A COURSE ON INDIA-EU PARTNERSHIP: A STRATEGIC NECESSITY FOR GLOBAL STABLITY NOVEMBER 28, 2024

- Director General ISpA attended a virtual session at the RRU Certificate Course.
- The session focused on "India-EU Cooperation in the Field of Space."
- Discussed collaborative opportunities between India and the EU in space technology and exploration.



# ISPA ACTIVITIES

### SEMINAR ON 'BLUE AND SPACE ECONOMY' NOVEMBER 30, 2024:

- DG ISpA, participated as a panellist in a seminar on the "Blue and Space Economy."
- The seminar featured Prof. Teodoro Valente, President of the Italian Space Agency (ASI).
- Held in Mumbai during the port visit of the Italian Ship AMERIGO VESPUCCI.
- Discussed synergies between maritime and space sectors for economic growth.
- Highlighted opportunities for India-Italy collaboration in the blue and space economies.



# ISPA IN NEWS

US startup Axiom Space explores using Indian rockets for space mission

05 Nov 2024 Reuters

More testing facilities, regulatory framework crucial for space tech startups: ISpA chief

05 Nov 2024 The Economic Times

India seeks self-reliance in space sector: ISRO Chairman

05 Nov 2024 ET Satcom

Soaring Higher: India's Bold Vision for Leadership in Space Technology

05 Nov 2024 The Financial Express

ISRO To Launch Proba-3 Sun Observation Mission In December: Union Minister

05 Nov 2024 NDTV

India to launch ESA's Proba-3 spacecraft in December: Jitendra Singh

05 Nov 2024 PTI

Big industry needs to take plunge in space sector: ISRO chief Somanath

05 Nov 2024 PTI

European solar probe reaches Sriharikota; launch by PSLV in December

05 Nov 2024 Deccan Herald

Satellite-based service entity can provide VSAT, GMPCS connectivity under authorisation regime: TRAI chairman

06 Nov 2024 ET Satcom Satcom should be seen as complementary to 5G, 6G networks: Chandra Sekhar Pemmasani

06 Nov 2024 ET Satcom

Recommendations on satcom to be brought out soon: Trai Chairman Lahoti

06 Nov 2024 Business Standard

Revolutionizing connectivity: How satellite communications can bridge India's digital divide

06 Nov 2024 The Financial Express

IN-SPACe gives details of how ₹1,000-cr space VC fund will be invested

07 Nov 2024 The Hindu BusinessLine

Satcom not just a tool but a transformative force bringing Digital India to every household: MoS Pemmasani

07 Nov 2024 FT Government

Space Sector Leaders Call for Greater Global Cooperation to Address Space Opportunities

07 Nov 2024 Times Tech

IN-SPACe taps DoT to cut spectrum price for Spacetech startups

14 Nov 2024 The Financial Express

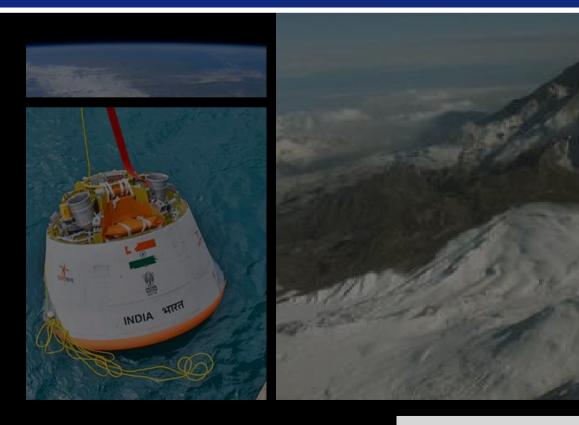
India's push to establish an Earth Observation Satellite ecosystem through Public Private Partnership

16 Nov 2024 The Financial Express

India's spacetech startups take off, but will they reach orbit?

18 Nov 2024 Tech in Asia





India's first analog space mission to simulate extra-terrestrial conditions on Mars and Moon kicks off

01 Nov 2024 The Hindu

India targets 2028 for Chandrayaan-4 sample-return mission to moon's south pole

01 Nov 2024 Space.com

DoT puts brakes on Starlink, Amazon's Satellite Internet plans in India with new security demands

02 Nov 2024 India TV

Raise the Space Bar: As SpaceX provides some of cheapest satellite launches, what can ISRO do to reclaim cost advantage?

03 Nov 2024 The Economic Times

Trai's satcom paper seems to have sidestepped level playing field: former SC Judge to Jio

06 Nov 2024 The Economic Times

Why Isro's low-budget hangover is not sustainable for India's future plans

06 Nov 2024 India Today

Trump 2.0 may bolster India's space and tech scene

07 Nov 2024 The Economic Times

Satellite spectrum: Jio, Airtel bat for restricted validity of 3-5 years

08 Nov 2024 Business Standard

Elon Musk hails India's decision on satellite spectrum allocation as 'promising', but Indian telecos may feel otherwise

08 Nov 2024 Business Today

Chandrayaan-4 will take soil and rock samples from Moon, says former ISRO chairman

09 Nov 2023 The Hindu With 7 more satellites, Isro plans to provide navigation signals to civilians' mobiles: INSPACe chairman

09 Nov 2024 The Times of India

TRAI open house sees Reliance Jio, Bharti Airtel spar with Elon Musk's Starlink, Jeff Bezos' Amazon Kuipar over satcom spectrum norms

09 Nov 2024 ET Telecom

Government to Amazon and Elon Musk's Starlink: Your satellite application can be processed only after ...

10 Nov 2024 The Times of India

Indian Astronaut Will Pilot Mission To International Space Station: Axiom Space

10 Nov 2024 NDTV

IN-SPACe introduces model rocketry workshop for students to foster space innovation

10 Nov 2024 The Times of India

ISRO HSFC & Protoplanet begin talks for collaborative research, mission to Ladakh

12 Nov 2024 The Times of India

NASA and ISRO new NISAR satellite will help monitor Earth's surface changes

12 Nov 2024 The Indian Express

For every rupee spent on ISRO, society got back Rs 2.50: ISRO chief Somanath

12 Nov 2024 Moneycontrol

Isro, IIT Madras partner to tackle thermal challenges faced by spacecraft

12 Nov 2024 India Today

Starlink Seeks Indian Security Clearance For Satellite Broadband: Report

13 Nov 2024 Inc42 Why this Indian think tank is warning against Elon Musk's Starlink

13 Nov 2024 The Times of India

ISRO proposes to build Earth Observation satellite for Mexico

13 Nov 2024 The Economic Times

Isro's Spadex mission: How India will dock two satellites to make one in space

13 Nov 2024 India Today

BSNL launches India's first satellite-todevice service: DoT

14 Nov 2024 ET Telecom

Defence Space Agency conducts maiden 'Exercise Antariksha Abhyas 2024"

14 Nov 2024 Business Standard

India an emerging role model for aspiring space nations - The World Economic Forum

14 Nov 2024 The Times of India

ISRO sets up first space education lab in AP's Keyi Panyor district

14 Nov 2024 Business Standard

At Indian spaceport, Europe's Proba-3 clears 'fit check' ahead of Dec 4 launch

14 Nov 2024 WION

Wary Of NASA Satellites, How Farmers In Punjab Time Crop-Burning, Scientist Explains

15 Nov 2024 NDTV

Shared spectrum use excuse for administrative assignment by satellite lobby: Mukesh Ambani's Reliance Jio

15 Nov 2024 ET Satcom

How India's high-tech satellite launch by SpaceX is strengthening US-India space collaboration

16 Nov 2024 The Financial Express

India adopts CubeSat standard for global satellite play

17 Nov 2024 Mint

Trai's satellite broadband views within 2 months: Anil Kumar Lahoti

18 Nov 2024 ET Satcom

Elon Musk's SpaceX launches ISRO's communication satellite GSAT-N2 into

19 Nov 2024 Hindustan Times

PM Modi, French President Macron discuss working closely in space, energy sectors

19 Nov 2024 The Economic Times

Space, India's final frontier and through the government, a gateway to the stars

19 Nov 2024 The Indian Express

India's ISRO to build a space station around Moon

19 Nov 2024 The Times of India

Trai to release spectrum recommendations for satellite broadband by December

19 Nov 2024 The Economic Times

Vaanam: Space tech accelerator to empower young space entrepreneurs to take the giant leap

19 Nov 2024 Business Standard

Government to ease licence rules for Starlink

20 Nov 2024 The New Indian Express Why space matters in the fight against climate change

20 Nov 2024 Deccan Herald

INR 1,000 Cr Spacetech Fund To Be Operational By Q1 FY26: IN-SPACe's Pawan Goenka

20 Nov 2024 Inc42

Defence to space, India & Italy announce 5-year action plan

20 Nov 2024 The Indian Express

Karnataka pitches for 50 pc of national market share in its draft space tech policy

20 Nov 2024 ThePrint

Australia to help Isro in recovering Gaganyaan astronauts after splashdown

20 Nov 2024 India Today

India eyeing 10 pc of global space economy in next two decades: ISRO chief

20 Nov 2024 United News of India

Bengaluru Tech Summit 2024: Karnataka unveils draft space technology policy

20 Nov 2024 The Hindu

ISRO chief says rising interest in building next SpaceX in India

20 Nov 2024 Yourstory

2nd India-Japan Joint Service Staff Talks on space, cyber collaboration conclude

21 Nov 2024 India Today

SVU inks pact with drones and space tech consortium

21 Nov 2024 The Times of India ISRO's GSAT-20: What's the big Elon Musk Link?

21 Nov 2024 The Financial Express

IN-SPACe looking at private players in ground segments

21 Nov 2024 The Indian Express

Amravati-origin scientist Om part of Oxford Univ-NASA study on ageing

22 Nov 2024 The Times of India

ISRO and SpaceX: India Needs to Realise There's No Such Thing as a Free Launch

22 Nov 2024 The Wire

Isro signs agreement with Australian space agency for Gaganyaan mission

22 Nov 2024 The Times of India

Space, sea should be subjects of cooperation, not conflict: PM Modi

22 Nov 2024 The Indian Express

Geo-satellite data 'sub-optimal' to track stubble fires in Punjab, Haryana: Isro

22 Nov 2024 The Economic Times

ISRO in talks with stakeholders for cutting-edge microgravity research projects, says S Somanath

23 Nov 2024 Business Today

We need to be one among equals in the space sector: Former ISRO chairman Kiran Kumar

23 Nov 2024 The Hindu

IIFCL seeks infra tag for space sector, keen to finance satellite vehicles

24 Nov 2024 Business Standard

City-based space-tech featured in Forbes

24 Nov 2024 The Hans India

Isro gears up for multiple launches; Spadex to demonstrate docking on December 20

24 Nov 2024 The Times of India

Starlink may not be an immediate threat to Jio, Airtel if it enters Indian market

25 Nov 2024 The Economic Times

Gaganyaan's unmanned mission may go to space in March 2025: Report 25 Nov 2024

CNBC TV18

Starlink will remain significantly pricier than traditional broadband . services

25 Nov 2024 Communications Today

Space medicine? Here is why ISRO is focusing on microgravity for medical research

25 Nov 2024 The Week

Gaganyaan's Unmanned Mission May Go To Space Next March, ISRO Ships To Track From Pacific, Atlantic Oceans

25 Nov 2024 News18

India's PSLV to launch world's first parallel satellite pair for Sun's outer secrets on Dec 4

25 Nov 2024 The Indian Express

Government's 'Isro's nod to Shukrayaan': All you need to know about Venus Orbiter Mission

26 Nov 2024 The Times of India

"Geospatial And Quantum Tech Can Achieve 10x Growth By 2030"

26 Nov 2024 **BW** Disrupt

Taramandal Technologies, founded by Andhra University alumni, makes Forbes India and D-Globalist Select-200 list

26 Nov 2024 The Hindu

startup

TakeMe2Space Announces Launch of India's First Al Laboratory in Space

26 Nov 2024 The Financial Express

To auction or allocate: The spectrum debate in the satellite era

27 Nov 2024 Deccan Herald

Satcom airwaves to be assigned administratively: Govt in parliament

27 Nov 2024 ET Satcom

India's Historic Space Mission: Shubhanshu Shukla Joins Axiom Space's ISS Mission in 2025

27 Nov 2024 The Financial Express

A statutory scaffolding for space pursuits

. 27 Nov 2024 The Financial Express

A 'SPACE'ial Achievement Students of ATLAS uGDX become India's first to secure a spot in NASA's 2025 Human Exploration Rover Challenge

27 Nov 2024

Six decades since Thumba launch, slew of private cos prep for flight

27 Nov 2024

Isro plans a busy end to 2024, eyes three big launches in December

27 Nov 2024 India Today

How India's Aditya-L1 Sun Mission Can Revolutionize Solar Storm Predictions Globally

27 Nov 2024 NewsX

Isro plans a busy end to 2024, eyes three big launches in December

27 Nov 2024 India Today

How India's Aditya-L1 Sun Mission Can Revolutionize Solar Storm Predictions Globally

27 Nov 2024 NewsX

Scientists will soon find ways to achieve higher propulsive force to conquer space: Nambi Narayanan

28 Nov 2024 The New Indian Express

divided Satcom providers over licensing norms for satellite earth station gateways

28 Nov 2024 The Economic Times

India's Strategic Balancing Act in Space: Collaboration with the US and the Road to Self-Reliance

28 Nov 2024 The Financial Express

Isro to launch India's first Al laboratory to space aboard PSLV-XL

28 Nov 2024 India Today

India's Gaganyatris Complete First Phase of Training for Historic Axiom-4 **Space Mission** 

29 Nov 2024 Republic World

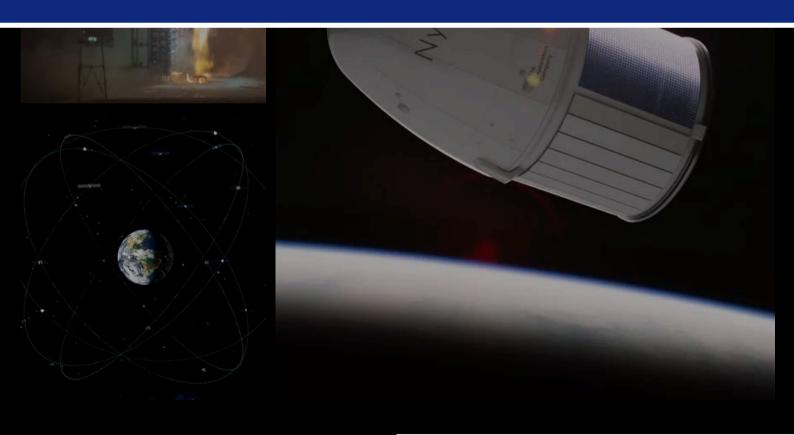
All you need to know about BSNL's direct-to-device satellite connectivity service

29 Nov 2024 The Indian Express

Isro chief endorses Musk's model for space research

30 Nov 2024 The Financial Express





#### **USA**

Astranis partners with Xona Space for U.S. military GPS backup program

01 Nov 2024 Space News

Japan, Poland to join U.S. military satellite network

5 Nov 2024 Space News

U.S. Space Command expands intelligence-sharing program with commercial firms

6 Nov 2024 Space News

Viasat seeking Telesat LEO capacity as Starlink competition mounts

7 Nov 2024 Space News

'Axiom Space' Takes Up Challenge To Build Space Station As ISS Heads For Retirement, Seeks ISRO Technology

10 Nov 2024 NDTV

Rocket Lab wins \$8 million U.S. Air Force contract for engine development

12 Nov 2024 Space News

SpaceX Launches 24 Starlink Satellites In Back-To-Back Space Missions

14 Nov 2024 NDTV

AST SpaceMobile leans on Blue Origin to ramp up satellite launches

14 Nov 2024 Space News Why A Leak Problem On International Space Station Has NASA Worried

16 Nov 2024 NDTV

SpaceX launches Starship to space, Super Heavy rocket explodes in the ocean

20 Nov 2024 India Today

Jeff Bezos's Blue Origin launches 100th woman in history to space

22 Nov 2024 India Today

Rocket Lab launches two Electrons within 24 hours

25 Nov 2024 Space News

SpaceX gets conditional approval for direct-tosmartphone service

26 Nov 2024 Space News

Amazon's Project Kuiper: Bringing Satellite Internet access to all

27 Nov 2024 The Financial Express

Space Force awards Raytheon \$196.7 million for additional work on GPS ground control system

29 Nov 2024 Space News

#### **CHINA**

Chinese launch startup Cosmoleap secures funding for rocket featuring chopstick recovery system

01 Nov 2024 Space News

China's new rocket for crew and moon to launch in 2026

6 Nov 2024 Space News

Chinese private rocket launches 1st satellite for international customer

12 Nov 2024 Space.com

China launches first Haiyang-4 oceanography satellite

14 Nov 2024 Space News

China unveils fully reusable Starship-like rocket concept

14 Nov 2024 Space News

Chinese official endorses cooperation with the U.S. on space exploration

14 Nov 2024 Space News

Tianzhou-8 spacecraft delivers supplies, key experiments to Tiangong space station

15 Nov 2024 Space News

China quietly tested its first inflatable space module in orbit

22 Nov 2024 Space News China launches pair of SuperView Neo-2 radar satellites

25 Nov 2024 Space news

China to launch next-generation Beidou satellites in 2027

28 Nov 2024 Space News

China launches first Long March 12 from new commercial spaceport in boost for country's lunar plans

30 Nov 2024 Space News

China's in-orbit satellite performs Al large-model tests

07 Oct 2024 english.news.cn

China retrieves first reusable, returnable test satellite

11 Oct 2024 english.news.cn

China unveils first-ever space science development program

15 Oct 2024 globaltimes.cn

China launches new Gaofen-12 remote sensing satellite

16 Oct 2024 space news

China successfully launches new satellite group

16 Oct 2024 english.news.cn

#### OTHER NATIONS

Green space: Japan set to test world's first wooden satellite

02 Nov 2024 DD News

Japan launches Kirameki 3 military communications satellite with H3 rocket

4 Nov 2024 Space News

Australia abandons \$5 billion geostationary satellite program to explore 'multi-orbit' options

4 Nov 2024 Space News

World's first wooden satellite, developed by Japan, launched into space

05 Nov 2024 India Today

Somebody moved UK's oldest satellite, and no-one knows who or why

09 Nov 2024 **BBC News** 

'Ticking time bomb': Someone moved UK's oldest satellite, no one knows who did and why

10 Nov 2024 The Times of India

Explained: The significance of Lignosat, the first wooden satellite launched into space

10 Nov 2024 The Indian Express Right now, the Sun is far more active than predicted and small satellites are paying the price

12 Nov 2024 The Conversation

**Denmark signs Artemis Accords** 

14 Nov 2024 Space News

Rivada loses ITU priority for its LEO network as Liechtenstein regulator rescinds license, citing dubious business plan

14 Nov 2024 Space Intel Report

The Exploration Company raises \$160 million for Nyx cargo vehicle

18 Nov 2024 Space News

ESA awards funding to four European launch startups

19 Nov 2024 Space News

Japan Space Agency Halts Epsilon S Rocket Launch Due To Massive Fire At Site

26 Nov 2024 NDTV

Viasat demonstrates D2D satellite connectivity in Saudi Arabia

28 Nov 2024

Communications Today

### **JOB OPENINGS**









SATSURE















### GOVERNMENT POLICIES/ CONSULTATIONS/ RECCOMENDATIONS/ ANNOUNCEMENTS

- Consultation Paper on Framework for Service Authorisations for provision of Broadcasting Services under the Telecommunications Act, 2023
  - <a href="https://www.trai.gov.in/release-publication/consultation">https://www.trai.gov.in/release-publication/consultation</a>
- Consultation Paper on The Terms and Conditions of Network Authorisations to be Granted Under the Telecommunications Act, 2023
  - <a href="https://www.trai.gov.in/release-publication/consultation">https://www.trai.gov.in/release-publication/consultation</a>
- Consultation paper on Regulatory framework for Ground-based Broadcasters
  - <a href="https://www.trai.gov.in/release-publication/consultation">https://www.trai.gov.in/release-publication/consultation</a>