SPACE CLUB OF INDIA

WEEKLY SPACE NEWS BULLETIN

SPECIAL EDITION
16 November 2026

REPORTING PERIOD
9–16 November 2026

Inspiring the next generation of space pioneers

Theme: *Space security, launch resilience, India's launch capability and the changing commercial space economy.*

EXECUTIVE BRIEFING



Photographers watch a rocket lift off. Photo: NASA, Unsplash. Graphic: Space Club of India

The past week has been significant for the global space sector. Three developments deserve particular attention:

LAUNCH RELIABILITY:
The failure of United Launch Alliance's Vulcan rocket on 15 November destroyed 40 Amazon Leo satellites, highlighting the strategic and commercial consequences of launch failures.

INDIA'S LAUNCH CAPABILITY:
ISRO completed a cryogenic engine acceptance test for its next GSLV mission and successfully ground-tested a revised PSLV third stage.

SPACE BECOMING A SECURITY DOMAIN:
New demonstrations in satellite surveillance, alongside growing concern about counterspace threats, reinforce the importance of space situational awareness and resilient satellite architectures.

The week's developments show that space is no longer simply a domain of scientific exploration. It is increasingly central to national security, communications, economic competitiveness and strategic power.

EDITORIAL BY



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Founder, Space Club of India

The next space race will not be won merely by putting more satellites into orbit.

Editorial perspective, page 5

1. INDIA: MAJOR DEVELOPMENTS

1. ISRO COMPLETES CRYOGENIC ENGINE TEST FOR GSLV-F19

10 NOVEMBER

ISRO successfully completed a 200-second flight acceptance test of the cryogenic engine for GSLV-F19.

The mission is intended to launch NVS-04, a NavIC navigation satellite.

Main engine and gas generator performed as expected.

The mission is expected in 2027.

> **Strategic significance:** *Strengthens India's independent navigation infrastructure and launch capability.*

Source: ISRO

2. ISRO SUCCESSFULLY TESTS REVISED PSLV THIRD STAGE

12 NOVEMBER

ISRO conducted a successful static ground test of the revised PS3 solid motor at Sriharikota.

The modifications follow anomalies in PSLV-C61 and PSLV-C62. ISRO strengthened design margins, nozzle configuration, sealing systems, material acceptance and quality-control procedures.

Further tests are planned following detailed analysis.

Strategic significance: *A critical step towards restoring confidence in the PSLV, a cornerstone of India's commercial and strategic launch programme.*

Source: ISRO

India assessment: *The two developments are important for different reasons: GSLV advances navigation autonomy, while PSLV's recovery programme is essential for dependable access to orbit.*

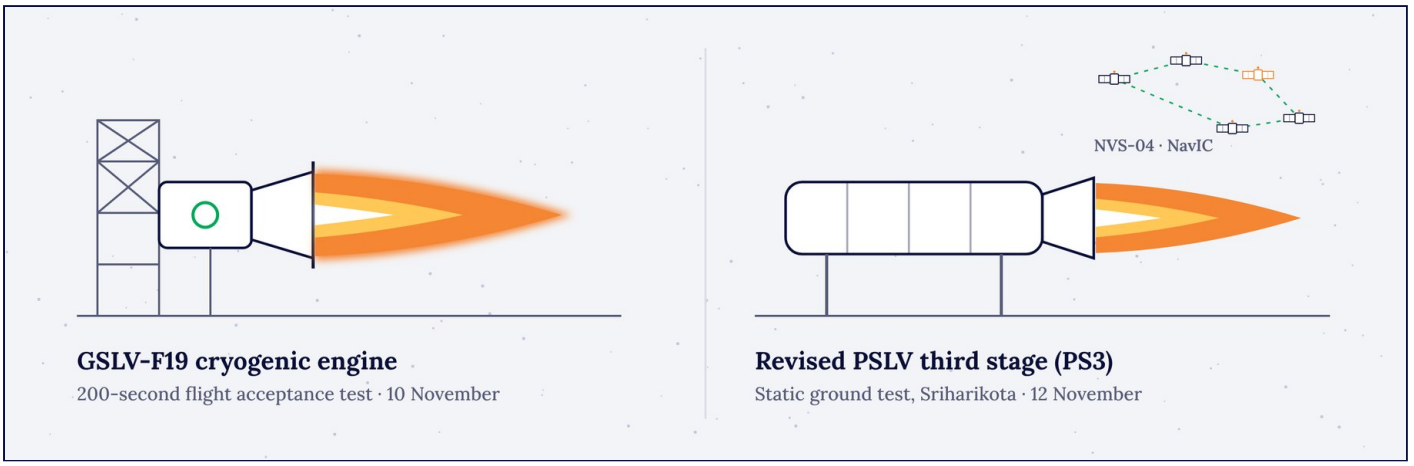


Illustration: Space Club of India

2. GLOBAL SPACE DEVELOPMENTS

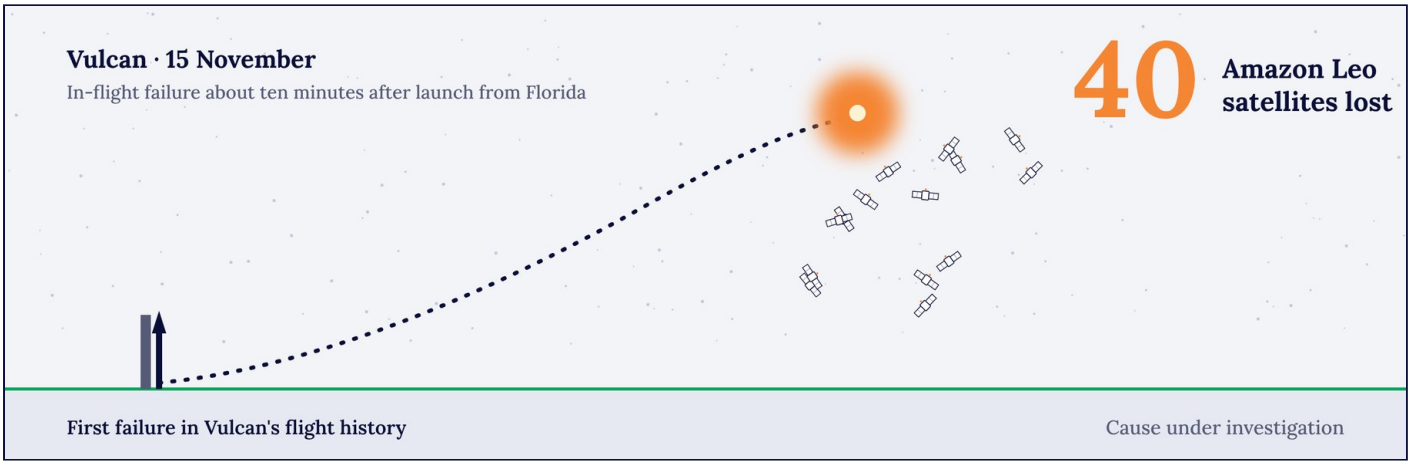


Illustration: Space Club of India

3. MAJOR VULCAN ROCKET FAILURE DESTROYS 40 AMAZON SATELLITES

15 NOVEMBER

United Launch Alliance's Vulcan rocket suffered an in-flight failure approximately ten minutes after launch from Florida.

All 40 Amazon Leo satellites aboard were lost.

The cause remains under investigation.

This was the first failure in Vulcan's flight history.

Amazon's planned satellite broadband deployment faces another setback.

Strategic significance: *Launch reliability is a strategic vulnerability in the race to build large satellite internet constellations.*

Source: Reuters

4. SPACEX CONDUCTS STARSHIP FLIGHT 15

13 NOVEMBER

Starship V3 conducted Flight 15, deploying 26 Starlink V3 satellites into low Earth orbit.

The mission also tested the vehicle's next-generation systems, including booster recovery objectives and spacecraft return operations.

Strategic significance: *SpaceX is developing a reusable heavy-lift architecture that could substantially reduce the cost of deploying large satellite networks and future deep-space missions.*

Source: Starlink Group 31-2 (Starship Flight 15)

5. ROCKET LAB REACHES 100 ELECTRON LAUNCHES

14 NOVEMBER

Rocket Lab's Electron completed its 100th launch, carrying an iQPS synthetic aperture radar satellite into a 575-km orbit.

The milestone demonstrates the growing maturity of commercial small-satellite launch services.

Strategic significance: *Dedicated small-launch capability is becoming increasingly important for responsive Earth observation and defence constellations.*

Source: Rocket Lab

6. CHINA EXPANDS ITS INTERNET SATELLITE CONSTELLATION

9 NOVEMBER

A Long March 12 rocket successfully delivered China's 29th group of low Earth orbit internet satellites.

Strategic significance: *China's continuing constellation expansion is part of the competition to establish independent global satellite broadband infrastructure.*

Source: New Space Economy

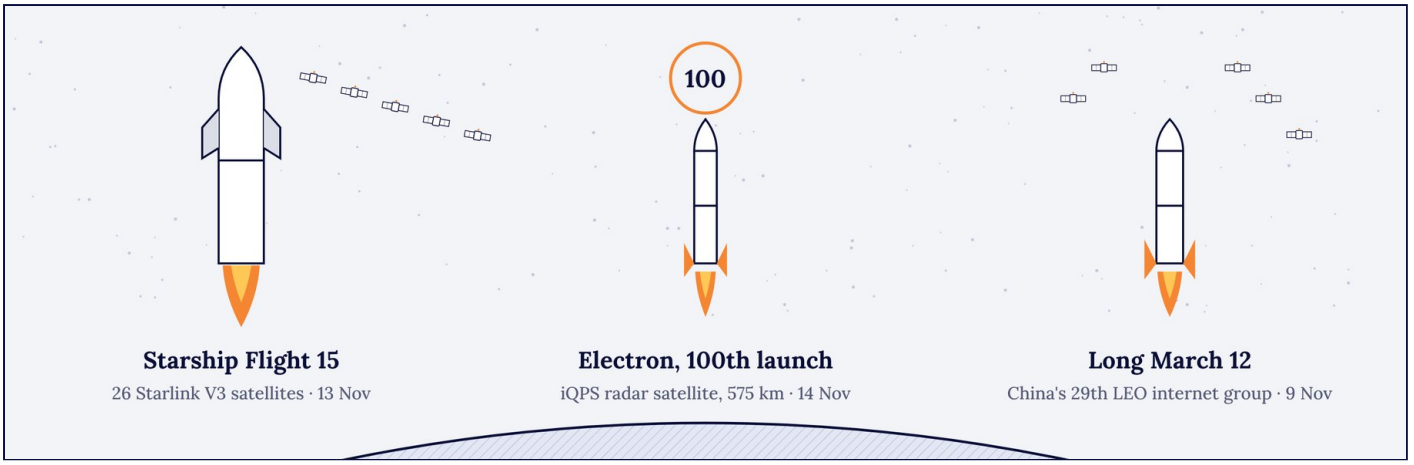


Illustration: Space Club of India

3. SPACE SECURITY AND DEFENCE

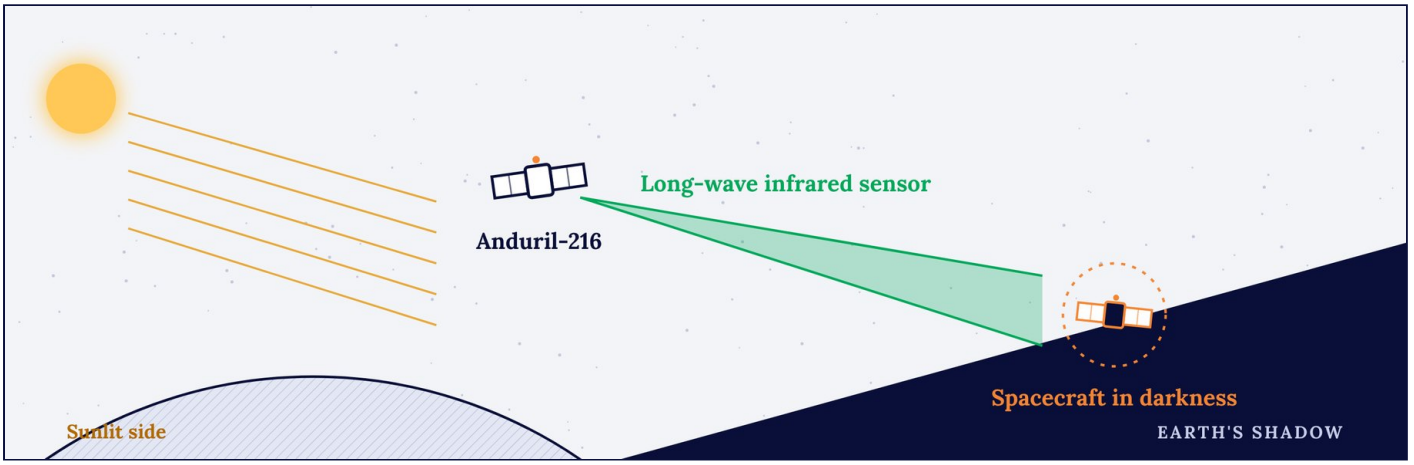


Illustration: Space Club of India

7. ANDURIL DEMONSTRATES SATELLITE TRACKING IN ORBITAL DARKNESS

11 NOVEMBER

US defence technology company Anduril demonstrated a long-wave infrared sensor aboard its Anduril-216 satellite.

The sensor can detect and image other spacecraft even when they are in Earth's shadow.

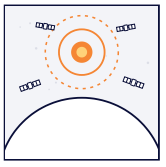
Its significance is particularly important because conventional optical tracking becomes difficult when satellites are not illuminated by sunlight.

Strategic significance: *Space domain awareness is evolving towards persistent tracking of potentially hostile spacecraft, including during orbital manoeuvres in darkness.*

Source: Ars Technica

8. RENEWED ATTENTION TO NUCLEAR THREATS IN ORBIT

12 NOVEMBER



A widely circulated scientific analysis highlighted the catastrophic consequences of a nuclear explosion in orbit, including radiation damage to satellites and disruption of space infrastructure.

The precise scale of damage depends on the altitude, radiation environment and satellite architecture; extreme claims about the proportion of satellites disabled should not be treated as established predictions.

Strategic significance: *Nuclear threats in space could affect military communications, navigation, early warning, financial infrastructure and civilian connectivity.*

Source: GetYourBrief

4. TECHNOLOGY AND COMMERCIAL SPACE

9. FIRST REPORTED 3D-PRINTED STRUCTURE MANUFACTURED IN OPEN SPACE

11 NOVEMBER

Polish company Orbital Matter demonstrated 3D printing aboard its Replicator 2 satellite.

It manufactured a 32.5-cm structural boom in approximately 30 minutes. The boom helped deploy a stowed solar array.

Strategic significance: *In-space manufacturing could eventually enable larger antennas, structures, telescopes and components without having to launch them in their final form.*

Source: ESA

10. US SENATE COMMITTEE PROPOSES HIGHER NASA FUNDING

13 NOVEMBER

The US Senate Appropriations Commerce-Justice-Science Subcommittee proposed approximately US$24.874 billion for NASA in FY2027.

This is above the previous year's congressional allocation of US$24.438 billion and substantially above the administration's proposed US$18.8 billion.

This is a committee proposal, not yet a final enacted budget.

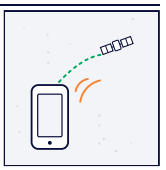
Strategic significance: *The budget debate will influence America's lunar exploration, scientific missions and space technology priorities.*

Source: spacepolicyonline.com

11. JAPAN ADVANCES SATELLITE-TO-SMARTPHONE CONNECTIVITY

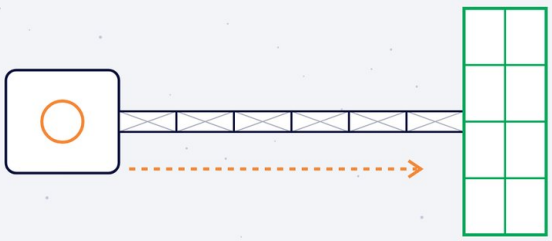
9 NOVEMBER

Rakuten and AST SpaceMobile announced plans for a Japanese joint venture, Rakuten AST, to develop and operate satellite connectivity services for ordinary smartphones.



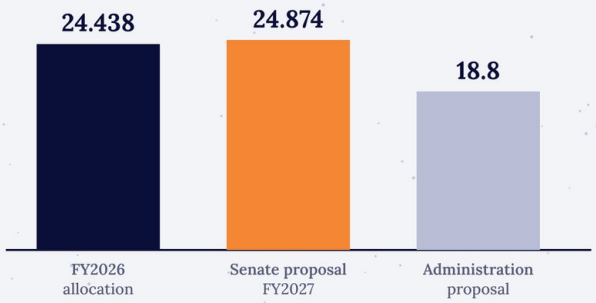
Strategic significance: *Direct-to-device satellite communication is emerging as an important commercial and national communications capability.*

Source: New Space Economy



32.5 cm boom, printed in open space

About 30 minutes · deployed a stowed solar array · 11 Nov



NASA funding, US$ billion

Senate committee proposal for FY2027

Illustration: Space Club of India

5. STRATEGIC ASSESSMENT: WHAT DOES THIS WEEK TELL US?

For India and the Space Club of India, five larger conclusions emerge.

STRATEGIC AREA	IMPLICATION
Launch resilience	Multiple independent launch providers are essential.
Navigation autonomy	NavIC remains strategically important for India.
Space domain awareness	Infrared and persistent satellite tracking will become increasingly important.
Commercial constellations	Broadband, Earth observation and direct-to-device connectivity are expanding markets.
In-space manufacturing	Future space infrastructure may increasingly be manufactured and assembled in orbit.

6. WHAT TO WATCH DURING 16–23 NOVEMBER



18 November:	Expected Chinese Long March 2D launch.
19 November:	Expected US Space Force Falcon 9 mission.
20 November:	Expected Chinese Long March 8A satellite deployment.
21 November:	Expected US national security launch, NROL-136.
23 November:	Expected Ariane 6 mission carrying Amazon Leo satellites, subject to schedule confirmation.

These are announced launch targets, not guaranteed launch dates.

Source: SpaceNexus

7. SPACE CLUB OF INDIA: EDITORIAL PERSPECTIVE

LT GEN PJS PANNU · PVSM, AVSM, VSM (RETD.) · FOUNDER, SPACE CLUB OF INDIA

The next space race will not be won merely by putting more satellites into orbit. It will be won by the ability to protect, connect, manufacture, observe and operate in space under contested conditions.

India needs to develop an integrated approach involving:

Space situational awareness and space traffic management.	Resilient military and civilian satellite constellations.	Indigenous launch systems and reusable launch technology.
Secure satellite communications and navigation.	Space-based intelligence, surveillance and reconnaissance.	A strong private-sector ecosystem for space manufacturing and services.

The intersection of space, cyber, artificial intelligence and national security deserves particular attention.

Space Club of India's focus should be to connect strategic thinking, industry, academia and government into a common national space-security and innovation ecosystem.

SOURCES AND VERIFICATION

The principal sources used for this edition include:

- ISRO – Official website and mission updates
- ISRO – Revised PSLV third-stage test
- ISRO – Cryogenic engine test
- Reuters – Vulcan launch failure
- Ars Technica – Anduril infrared satellite tracking
- European Space Agency – In-space 3D printing
- Rocket Lab – 100th Electron launch
- Space Policy Online – NASA budget proposal

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