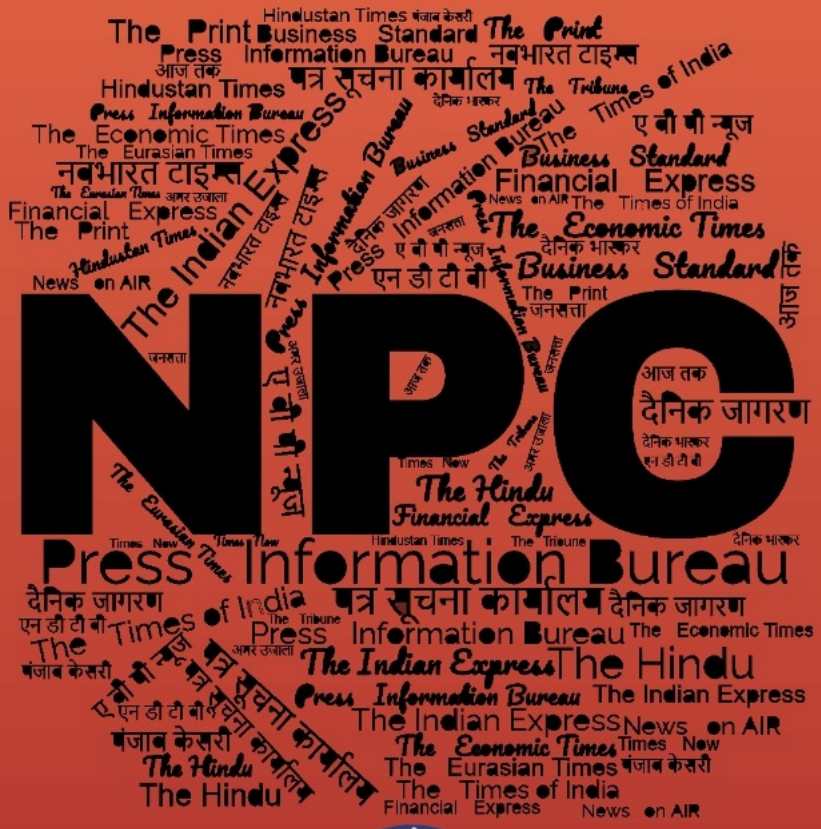
जनवरी
JAN
2026

खंड/Vol. : 51 अंक/Issue : 008
10-12/01/2026

समाचार पत्रों से चयनित अंश
Newspapers Clippings

डीआरडीओ समुदाय को डीआरडीओ प्रौद्योगिकियों, रक्षा प्रौद्योगिकियों, रक्षा नीतियों, अंतर्राष्ट्रीय संबंधों और विज्ञान एवं प्रौद्योगिकी की नूतन जानकारी से अवगत कराने हेतु दैनिक सेवा

A Daily service to keep DRDO Fraternity abreast with DRDO Technologies, Defence Technologies, Defence Policies, International Relations and Science & Technology



रक्षा विज्ञान पुस्तकालय
Defence Science Library
रक्षा वैज्ञानिक सूचना एवं प्रलेखन केंद्र
Defence Scientific Information & Documentation Centre
मेटकॉफ हाउस, दिल्ली - 110 054
Metcalfe House, Delhi - 110 054

CONTENTS

DRDO News

हाइपरसोनिक मिसाइलों से ध्वनि की गति 5 पांच गुना तेज होगा प्रहार

Source: Dainik Jagran, Dt. 11 Jan 2026

- मिसाइलों के विकास में हैदराबाद स्थित डीआरडीएल ने अहम उपलब्धि हासिल की
- हाइपरसोनिक मिसाइल कार्यक्रम के लिए स्क्रैमजेट इंजन का किया सफल परीक्षण

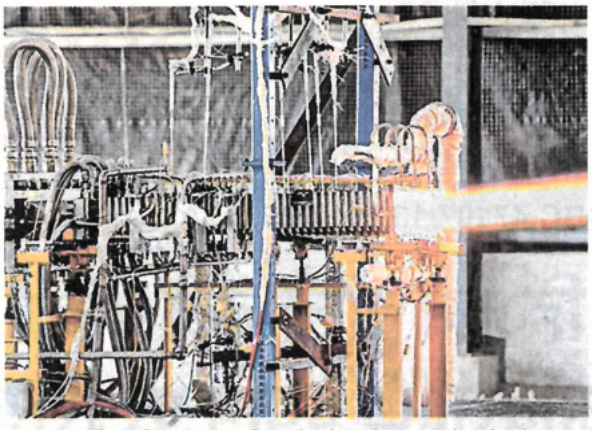
हैदराबाद, एएनआइ : हाइपरसोनिक क्रूज मिसाइलों से आने वाले समय में अब दुश्मन पर ध्वनि की गति से पांच गुना अधिक तेज गति से प्रहार संभव हो पाएगा। हैदराबाद स्थित रक्षा अनुसंधान एवं विकास संगठन (डीआरडीओ) की प्रयोगशाला-रक्षा अनुसंधान एवं विकास प्रयोगशाला (डीआरडीएल) ने हाइपरसोनिक मिसाइलों के विकास में एक अभूतपूर्व उपलब्धि हासिल की है। डीआरडीएल ने 9 जनवरी, 2026 को अपनी अत्याधुनिक स्क्रैमजेट कनेक्ट पाइप टेस्ट (एससीपीटी) केंद्र में अपने एक्टिवली कूल्ड स्क्रैमजेट फुल स्केल कंबस्टर का सफलतापूर्वक एक व्यापक दीर्घकालिक जमीनी परीक्षण किया, जिसमें 12 मिनट से अधिक का रन टाइम हासिल किया गया।

रक्षा मंत्रालय के एक बयान के अनुसार, यह महत्वपूर्ण उपलब्धि 25 अप्रैल, 2025 को किए गए पूर्व लघु परीक्षण पर आधारित है, जो लंबी अवधि का परीक्षण था। यह हाइपरसोनिक मिसाइलों के विकास में एक महत्वपूर्ण कदम है। कंबस्टर और परीक्षण केंद्र का डिजाइन और विकास डीआरडीएल ने किया। इसे उद्योग भागीदारों द्वारा साकार किया गया। इस सफल परीक्षण से भारत उन्नत एयरोस्पेस क्षमताओं में अग्रणी स्थान पर आ गया है। हाइपरसोनिक क्रूज मिसाइल ध्वनि की गति से पांच गुना अधिक (6,100 किमी/घंटे से अधिक) गति से लंबी उड़ान में सक्षम है। यह उपलब्धि अत्याधुनिक एयर-ब्रीदिंग इंजन के माध्यम से हासिल की जाती है, जो लंबी अवधि की उड़ान बनाए रखने के लिए सुपरसोनिक कंबशन का उपयोग करता है।

> देश के लिए ऐसी उपलब्धि को हासिल करना हाइपरसोनिक क्रूज मिसाइल विकास कार्यक्रम के लिए ठोस आधार है।
> - राजनाथ सिंह, रक्षा मंत्री

रक्षा मंत्री ने परीक्षण टीमों को बधाई दी

रक्षा मंत्री राजनाथ सिंह ने फुल स्केल एक्टिवली कूल्ड लांग इग्नूरेशन स्क्रैमजेट इंजन के सफल ग्राउंड परीक्षण के लिए डीआरडीओ, उद्योग भागीदारों और शिक्षाविदों को बधाई दी। एक्स पर रक्षा मंत्री ने लिखा, हैदराबाद स्थित डीआरडीओ की प्रयोगशाला डीआरडीएल ने हाइपरसोनिक मिसाइलों के विकास में एक अभूतपूर्व उपलब्धि हासिल की है। एक जनवरी को डीआरडीओ मुख्यालय में बैठक में रक्षा मंत्री ने कहा था कि डीआरडीओ द्वारा विकसित हथियारों ने आपरेशन सिंदूर में निर्णायक भूमिका निभाई।



शुक्रवार को डीआरडीएल ने अत्याधुनिक स्क्रैमजेट कनेक्ट पाइप टेस्ट केंद्र में एक्टिवली कूल्ड स्क्रैमजेट फुल स्केल कंबस्टर का सफल परीक्षण किया • प्रेट

*

DRDO conducts key test of scramjet engine

Source: Hindustan Times, Dt. 10 Jan 2026

The Defence Research and Development Organisation (DRDO) on Friday conducted a successful ground test of a full-scale actively cooled scramjet engine --- an air breathing engine capable of sustaining combustion during supersonic flights -- with defence minister Rajnath Singh describing the achievement as a “solid foundation” for India’s hypersonic cruise missile programme.

The **Defence Research & Development Laboratory (DRDL)**, a Hyderabad based DRDO laboratory, has achieved “a path-breaking milestone” in the development of hypersonic missiles, the defence ministry said. “DRDL successfully conducted an extensive long-duration ground test of its actively cooled scramjet full scale combustor, achieving a run time of over 12 minutes…,” it said in a statement. The development is being seen as a crucial milestone in developing next-generation hypersonic missiles that can travel at speeds of more than Mach 5 or five times the speed of sound.

Only the United States, Russia and China have developed technologies to field fast-manoeuvring hypersonic missiles that fly at lower altitudes and are extremely hard to track and intercept. These advanced weapons have the potential to bypass existing air defence systems and deliver rapid and high-impact strikes. This significant achievement builds upon the earlier subscale test conducted on April 25, 2025, for long duration, marking a crucial step forward in hypersonic missile development, the defence ministry said. “The combustor and test facility were designed and

developed by the DRDL and realised by industry partners. The successful test positions India at the forefront of advanced aerospace capabilities." An improvement over ramjet technology, the scramjet engine operates efficiently at hypersonic speeds and allows supersonic combustion.

The latest test builds also on a successful ground test of a scramjet engine conducted in January 2025 when DRDL demonstrated a cutting-edge active cooled scramjet combustor ground test for 120 seconds for the first time in India. The key to hypersonic vehicles is the scramjet engine capable of sustaining combustion at supersonic speeds without using any moving parts, the defence ministry said at the time.

On Friday, Singh hailed DRDO and others associated with the latest test of the scramjet engine, He "complimented DRDO, industry partners and academia on the successful ground test of Full Scale Actively Cooled Long Duration Scramjet Engine and stated that the achievement is a solid foundation for the nation's Hypersonic Cruise Missile Development Program," the defence minister's office wrote on X. In November 2024, India announced that DRDO had successfully test-fired the country's first long-range hypersonic missile off the Odisha coast, a step towards strengthening the military's capabilities with a new weapon system.

The hypersonic missile tested was designed to carry various payloads for ranges greater than 1,500 km for the armed forces. It was tracked by various range systems, deployed in multiple domains, and the flight data obtained from down range ship stations confirmed the successful terminal manoeuvres and impact with a high degree of accuracy.

https://www.hindustantimes.com/india-news/drdo-conducts-key-test-of-scramjet-engine-101767983756482.html

*

दुश्मन कहीं भी हो, ढूंढ लेगा भारत का सैटेलाइट

Source: NavBharat Times, Dt. 12 Jan 2026

भारत की अंतरिक्ष एजेंसी ISRO सोमवार को निगरानी रखने वाला एक सैटेलाइट लॉन्च करेगी। इसका नाम अन्वेषा (Anvesha) या EOS-N1 है। इस सैटेलाइट को DRDO ने बनाया है। PSLV-C62 रॉकेट के जरिए श्रीहरिकोटा के सतीश धवन अंतरिक्ष केंद्र से इसे लॉन्च किया जाएगा।

PSLV C62 रॉकेट से इसरो आज लॉन्च करेगा 'अन्वेषा'

यह सैटेलाइट आसमान में भारत की एक और आंख बनेगा। दुश्मनों के छिपे वाहन, हथियार और सैनिकों को स्पेक्ट्रल सिग्नेचर से पहचानकर भारतीय सेना की मदद करेगा। ISRO के मुताबिक, लॉन्च लीकल और सैटेलाइट को जोड़ दिया गया है। सोमवार सुबह 10:18 बजे सैटलाइट की लॉन्चिंग होगी।

मुख्य बातें

- मुख्य पेलोड EOS-N1 के अलावा, PSLV यूरोपीय डेमोंस्ट्रेटर सैटलाइट समेत विदेशी एजेंसियों के 17 सैटलाइट भी ले जाएगा।
- अन्वेषा का इस्तेमाल पर्यावरण की निगरानी, संसाधनों का नक्शा बनाने, आपदा प्रबंधन में मदद करने और योजना बनाने में भी होगा।
- आसमान में भारत की एक और आंख के रूप में काम करेगा। PSLV-C62, पोलर सैटेलाइट लॉन्च वीकल का 64वां मिशन है।

*

Defence News

Navy to induct stealth frigate Taragiri in February

Source: Hindustan Times, Dt. 11 Jan 2026

The Indian Navy is on course to commission its latest locally built stealth frigate, Taragiri, in February. The new year's first induction will further boost the navy's ability to secure the country's interests in the vast Indian Ocean region where China is attempting to strengthen its hold, officials aware of the matter said on Saturday. Taragiri will be the fourth stealth frigate to be commissioned into the navy under the ₹45,000-crore, seven-ship Project 17A, with the rest to be inducted by the year-end, said one of the officials, asking not to be named. Nilgiri, Udaygiri and Himgiri were commissioned last year, and Mahendragiri, Dunagiri and Vindhyagiri will follow Taragiri into the navy this year.

"The navy inducted 12 warships last year in a big boost for self-reliance in the defence manufacturing sector, and we are likely to cross that number in 2026," said a second official, who also asked not to be named. The navy is working on becoming fully self-reliant by 2047, when India celebrates 100 years of independence, and around 60 warships are under construction at various Indian yards. The P-17A platforms showcase the country's warship-building prowess, have an indigenous content of 75% and come with modern weapons, sensors and systems to dominate the sea battlespace. P-17A is a follow-on of the Shivalik-class (P-17) stealth frigates and represents a significant upgrade over the previous warships.

Nilgiri and Udaygiri were built at the Mumbai-based Mazagon Dock Shipbuilders Limited (MDL), which has also constructed Taragiri. Mahendragiri is being constructed at MDL too. Himgiri was built at the Kolkata-based Garden Reach Shipbuilders and Engineers (GRSE) Limited, where Dunagiri and Vindhyagiri are in different stages of construction.

The frigates are equipped with modern weapons, sensors and electronic warfare suites, including the BrahMos supersonic cruise missile, MF-STAR surveillance radar, Barak-8 surface-to-air missile system and anti-submarine warfare capabilities. The warships have a displacement of 6,670 tonnes, are 149 metres long, can reach a top speed of 28 knots and carry 225 personnel. The new platforms will boost the navy's operational capabilities and combat readiness in the Indian Ocean region, a strategic maritime expanse where the challenges include China's carefully calculated power play for influence and defending the rules-based international order.

https://www.hindustantimes.com/india-news/navy-to-induct-stealth-frigate-taragiri-in-february-101768069348428.html

*

India, France near mega Rafale deal amid IAF gaps

Source: The Economic Times, Dt. 10 Jan 2026

India and France are inching closer towards a mega deal for fighter jets, with additional Rafales likely to be ordered to meet the shortfall in the air force inventory. The proposal to acquire the fighter jets is likely to gain steam in the run-up to French President Emmaneal Macron's scheduled

visit to India next month. The Indian Air Force (IAF) has already moved a proposal to acquire a significant number of jets, under a government-to-government deal that will also involve them being manufactured in India. While the final numbers of the jets to be acquired are under discussion, the IAF has a projected requirement of at least 114 modern combat aircraft.

Sources said that the acquisition will require a formal clearance by the Defence Acquisition Council, followed by cost negotiations and finally an approval by the Cabinet Committee on Security. Adequate provisions in the annual budget will also be needed. Last year, India signed a contract for 24 naval variants of the aircraft and has a benchmarked price available for the larger deal that is likely to run into tens of billions of euros.

Manufacturing the Rafales domestically will bring critical technologies to the Indian industrial ecosystem. In June last year, Tata Advanced Systems Limited (TASL) signed agreements with France's Dassault Aviation to manufacture the Rafale fighter aircraft fuselage in India. TASL is setting up a dedicated manufacturing facility in Hyderabad to make four main parts of the fuselage for Indian requirements as well as global orders given to Dassault. The facility is expected to deliver the first units by FY28 and would have a capacity to produce 24 fuselages annually.

Sources said that the current projects underway, including setting up of an engine production plant in Hyderabad and a Maintenance, Repairs and Overhaul (MRO) hub in UP's Jewar, could bring 60% of Rafale manufacturing by value into India.

https://economictimes.indiatimes.com/news/defence/india-france-near-mega-rafale-deal-amid-iaf-gaps/articleshow/126441297.cms?from=mdr

*

Sidelining artillery affects broader national security

-by Vinay Shankar, Director General of Artillery during the 1999 Kargil War

Source: The Economic Times, Dt. 11 Jan 2026

India's defence and military security posture, since Independence, has been shaped, overwhelmingly by the Army. That dominance was inevitable. The early wars that India fought were land wars and for decades the army was the only service of scale, reach and political relevance. Within the Army, however, leadership, doctrine and institutional priorities have been dominated by one arm -- the Infantry. Over time, this dominance expanded to include the Armoured Corp -- as a co-equal 'combat arm'. While this hierarchy was once understandable, it is increasingly misaligned with the realities of modern warfare.

It is noteworthy that through the 1960s and early 1970s, this pattern was briefly disrupted. The Artillery, known for its technical competence, planning, orientation and professional rigour produced a generation of officers who rose to senior command. Their influence was most visible during the 1971 Bangladesh War, widely regarded as India's finest military campaign.

The Western Army Commander, the 15 Corps Commander and more than half of the divisional commanders in Eastern Command were Gunners. So were the chiefs of staff of Eastern Command and 4 Corps. This war demonstrated the decisive integration of manoeuvre and fire-power and the value of leadership that understood not only the contact battle but also the depth battle.

Paradoxically, this success was followed by the gradual marginalisation of the Artillery within the Army's leadership structure. Over time, this created a leadership funnel dominated almost entirely by the Infantry and Armour. This prolonged sidelining has had an often, overlooked consequence: the steady demotivation of successive generations of Artillery officers. For a military that increasingly depends on precision integration and technological sophistication, the loss of motivation has direct implications for combat effectiveness and national security.

Since then, an unwritten but very real imbalance has persisted. Infantry officers, along with a limited number from the Armoured Corps, continue to dominate the Army's senior hierarchy while the Artillery remains confined to an entirely supporting role. India today has perhaps the only Army that still classifies Artillery as a supporting arm.

History offers clear lessons. Napoleon transformed Artillery from a supporting function into a decisive combat arm using massed fire to break enemy lines and dictate the tempo of battle. Stalin famously described Artillery as "The God of War" recognising that destruction or the credible threat of it lies at the heart of warfare. Modern doctrine of almost all armies, including the American, Chinese and Russian, place the Artillery as the centre of firepower dominant operations. India's continued reliance on a colonial era distinction between combat and supporting arms reflects institutional inertia rather than military logic.

This distinction matters because modern warfare is fundamentally about destruction or the 'fear of destruction'. Infantry and Armor are contact battle forces. Their effectiveness is constrained by terrain and direct engagement. Their strength lies in closing with the enemy and holding ground.

Artillery, by contrast, shapes the battlefield across depth. It degrades enemy forces, disrupts reserves and logistics and imposes psychological dominance. As demonstrated during Kargil in 1999, Artillery can be decisive even in the most forbidding terrain. Operation Sindoor has important lessons on the hierarchy of Arms and technologies that would find prominence in future wars.

With long-range rockets, precision-guided munitions, loitering weapons, drones and missile systems, Artillery operates across tactical operational and even strategic levels of war. It integrates intelligence, sensors, communications and effects in a way few other arms do. Artillery officers are trained to think in terms of depth, timing, synchronisation and technology. Unlike the Infantry or Armor, they are required to understand both contact and distant battle all at once.

The leadership requirements of modern warfare are different from those of the past. Future wars will demand leaders who are intellectually agile, technologically literate and comfortable operating beyond linear battlefields and capable of integrating maneuver with fire power and other esoteric domains like space and cyber warfare.

The challenge before India's Army is not to diminish the Infantry or Armor but to broaden its leadership base. A modern military cannot afford inherited hierarchies that privilege tradition over competence. The continued demotivation and marginalisation of key combat capability like that of the Artillery is not just unhealthy for the Army, it is detrimental to the nation's security. Aligning leadership structures with the realities of modern warfare is therefore not of reform alone but of strategic necessity.

https://economictimes.indiatimes.com/news/defence/sidelining-artillery-affects-broader-national-security/articleshow/126455427.cms?from=mdr

*

स्टूडेंट्स ने बनाई चलती-फिरती लैब, जंग के मोर्चे पर ही तैयार कर देगी ड्रोन

Source: NavBharat Times, Dt. 12 Jan 2026

Nirupa.Vatyam@timesgroup.com

■ **हैदराबाद :** बिट्स पिलानी हैदराबाद कैंपस के एक हॉस्टल रूम से शुरू हुए स्टार्टअप अपोलियन डायनेमिक्स ने भारत की ड्रोन युद्धक क्षमता बढ़ाई है। स्टार्टअप ने सेना के लिए चलती-फिरती मोबाइल ड्रोन लैब विकसित की, जो युद्ध के मोर्चे पर रहकर एक महीने में 100 से अधिक FPV ड्रोन तैयार कर सकती है। यह ड्रोन निगरानी और सामरिक ऑपरेशंस में अहम भूमिका निभाते हैं। महज 20 साल के दो छात्रों ने इसे 15-20 दिनों में तैयार कर सेना को सौंपा।

लैब फिलहाल जम्मू में पूरी तरह ऑपरेशनल है और सेना को उपयोग व निर्माण का प्रशिक्षण भी दिया गया। यह यूनिट ट्रक के पीछे तैयार की गई है, जिसमें उडी प्रिंटर, असेंबल इकाइयां और ग्राउंड स्टेशन हैं। अब सेना ड्रोन असेंबलिंग, मरम्मत और मिशन के लिए तुरंत तैयार रह सकती है।

■ युद्ध के मोर्चे पर तैनात रहकर ही एक महीने में तैयार कर सकती है 100 से अधिक FPV ड्रोन

■ महज 20 साल की उम्र के दो छात्रों ने 15 से 20 दिनों के भीतर तैयार कर लैब सेना को सौंपा

सैनिक सीखते हैं ड्रोन असेंबल करना

स्टार्टअप ने जम्मू के रेजिमेंट परिसर में एक ड्रोन लैब बनाने में सेना की मदद की है। यहां उपकरणों का भंडारण, असेंबलिंग, प्रशिक्षण, रखरखाव किया जाता है। अपोलियन के सीईओ जयंत खत्री के अनुसार, यह लैब यूनिट के साथ मिलकर मजबूत व्यवस्था बनाती है। सीटीओ शौर्य चौधरी कहते हैं, इससे ड्रोन निर्माण सीधे सैनिकों के हाथों में आता है, वे खुद असेंबल और मेंटेन करना सीखकर युद्ध की जरूरत के अनुसार बदलाव कर सकते हैं।

सेना ने भी दी शाबाशी

सेना की ओर से भेजे गए प्रशंसा पत्र में कहा गया है कि लैब ने गुणवत्ता और प्रदर्शन के मानकों को पूरा किया है, जिससे FPV ड्रोन की असेंबलिंग, सोल्डरिंग और प्रोग्रामिंग संभव हो पाई। कंपनी की पेशेवर कार्यशैली, तकनीकी दक्षता और प्रतिबद्धता की सराहना की गई है।

*

Critical deals in Operation Sindoor year, Defence spending hits six-year high

Source: The Indian Express, Dt. 10 Jan 2026

The Defence Ministry has recorded 62% capital expenditure in the first eight months of the current fiscal year 2025-26 — the highest in the last six years since the 2019-20 fiscal, according to official data. For the same period in the previous financial year 2024-25, the figure was 41%, as per data. According to the defence ministry, it has achieved 80% (around Rs 1.2 lakh crore) capital expenditure until December 2025.

Among other regular defence procurements, the development, it is understood, is also likely driven by milestone payments of critical procurement deals inked earlier and significant acquisitions made through the emergency route during Operation Sindoor, launched by the Armed Forces in May last year in response to the April 22 Pahalgam terror attack. Data shows that of the capital outlay of Rs 1,80,000 crore in 2025-26, the Defence Ministry spent Rs 1,11,374.67 until November 2025, even as it has spent 67% of its total budget of Rs 6.81 lakh crore during this period, compared to 64% in the same period in 2024-25.

In 2023-24, 53% of the capital budget of Rs 1,62,600 was spent by the ministry, compared to just 48% in the same period in the previous financial year. Of the total defence budget, 68% was spent in 2023-24 until November-end while it was 64% for the same period in previous FY. In FYs 2021-22 and 2020-21, 66% and 63% of the total defence budget was spent until November. The capital expenditure until November for FY 2021-22 was 54% and 61% for 2020-21. Following Operation Sindoor, the three services were tasked with the process of identifying what needs to be procured on a fast-track basis over the next six months till November.

Aside from these, India had inked several significant procurement deals last year. In April last year, India and France had inked an Inter-Governmental Agreement (IGA) for the procurement of 26 Rafale aircraft (22 single-seater and four twin-seater) for the Navy. The procurement included training, simulator, associated equipment, weapons and performance-based logistics as well as additional equipment for the existing Rafale fleet of the IAF. In June 2025, the Defence Ministry signed 13 contracts worth Rs 1,981.90 crore under the Emergency Procurement (EP) mechanism to “enhance situational awareness, lethality, mobility, and protection for troops deployed in CT environments”.

This included a range of Remotely Piloted Aerial Vehicles (RPAVs), loitering munitions, drones and counter-drone systems to Very Short Range Air Defence Systems (VSHORADs) and radars. In September last year, the Ministry had signed a Rs 62,370-crore deal with the state-owned HAL for the procurement of 97 Mk1A Light Combat Aircraft (LCA) for IAF. The order comprises 68 fighters and 29 twin-seaters, along with associated equipment.

https://indianexpress.com/article/india/critical-deals-in-operation-sindoor-year-defence-spending-hits-six-year-high-10465148/

*

Plans for four agile Army battle groups in the east gather pace

Source: The Indian Express, Dt. 12 Jan 2026

The Indian Army’s plans to establish Integrated Battle Groups (IBGs), which will be self-contained, agile, brigade-sized fighting units, have gathered pace and may be implemented soon, starting with the Panagarh-based XVII Corps, the country’s first mountain strike corps (MSC) that faces the frontier with China. Multiple highly-placed sources confirmed to The Indian Express that discussions have been underway to create four IBGs from the two divisions of the XVII MSC — the 59 Division and the 23 Division — after the plans get final government sanction. Each IBG is likely to be commanded by a Major General rank officer and will comprise over 5,000 troops. There will be no brigade commanders in the IBGs.

The XVII MSC is one of the Army’s four strike corps — the other three are the Mathura-based I Corps, the Ambala-based II Corps, and the Bhopal-based XXI Corps. Before 2021, the XVII MSC had one division, but after that, it was equipped with an additional division from an existing corps to arm it further for its role in the eastern theatre. As per current plans, each of the proposed IBGs will have battalions of infantry, artillery regiments, as well as elements of the Corps of Electronics and Mechanical Engineers (EME), Combat Engineers, Army Service Corps, and a field hospital or others.

The IBGs will be able to draw logistics and other support elements from the corps units under corps headquarters and the other holding formations of the XVII MSC if and when needed. A separate group can also be established under the corps headquarters from which the IBGs can draw fire support. The plans of their establishment are still under discussion and could be further refined before being implemented.

They are part of a larger restructuring plan of the Army which includes the creation of Bhairav battalions, Rudra brigades, Divyastra batteries and Shaktibaan units. Rudra brigades have been established with a similar concept as IBGs. Once established, these will be the first IBGs of the Army – a move proposed in one of the four studies initiated by then Army chief General Bipin Rawat – on the restructuring of the Army. The plans to establish IBGs have been under discussion for about seven years now. These plans of capability development are premised on capacity, and not a threat-based model.

The IBGs were proposed with the intention of carrying out both offensive and defensive roles against an adversary's attack. The concept was test-bedded at the IX Corps on the western border with Pakistan around 2019, but remains to be implemented. The IBG concept was also experimented with multiple exercises conducted in the eastern theatre, including Exercise HimVijay in 2019. The establishment of the IBGs will be especially crucial in mountainous terrains. Their agile nature allows for rapid deployment in any area where they are needed, eliminating the wait for the entire corps to mobilise. A corps can comprise up to one lakh troops and takes a much longer time to get deployed.

The strength of an IBG lies in its swift application and its flexible nature, sources said, adding that the creation of the IBGs will also ensure better cohesiveness as agile units for various combined arms operations, and can be deployed under specific theatre commands once they come into existence. In the last 10 years, China has also transitioned from older divisions to smaller, more versatile Combined Arms Brigades (CABs), integrated with tanks, artillery, air defence and support units, designed for joint operations.

https://indianexpress.com/article/india/plans-for-four-agile-army-battle-groups-in-the-east-gather-pace-10468172/

*

Defence to skill, slew of pacts on table as Merz and Modi meet today

Source: The Indian Express, Dt. 12 Jan 2026

India and Germany are set to seal a slew of pacts on semiconductors, critical minerals, a defence and security roadmap, and skill development as German Chancellor Friedrich Merz meets Prime Minister Narendra Modi in Ahmedabad Monday, The Indian Express has learnt.

This is Chancellor Merz's first bilateral visit to India since assuming office last May. He is accompanied by a 25-member delegation of CEOs, including the top executives of a leading submarine manufacturer, indicating that strong defence ties would be part of the agenda. The two sides will unveil a defence and security roadmap, which will also strengthen the defence manufacturing network base in India, and firm up plans to set up a skill development centre in Hyderabad.

Merz and Modi had spoken immediately after the German Chancellor was sworn in and met twice since then — on the sidelines of the G-7 leaders summit in Canada last June and on the margins of the G20 leaders summit in South Africa in November. Significantly, Chancellor Merz's visit sets the ball rolling for a lengthy engagement between India and the European Union, with EU leaders in India for the Republic Day celebrations, followed by the arrival of French President Emmanuel Macron in February for the Artificial Intelligence Impact summit in Delhi.

EU outreach

The German Chancellor's visit sets the stage for a deeper engagement with the EU as its top leaders and French President Macron travel to India weeks later. With India and Europe viewing the Russian aggression in Ukraine differently, both sides will work on reducing their divergences. Later this year, Prime Minister Modi is expected to travel to Germany for inter-governmental consultations with a delegation of top Cabinet ministers. Chancellor Merz, who will land in Ahmedabad during the early hours of Monday, will meet the Prime Minister at the Mahatma Mandir for bilateral talks.

According to sources, the bilateral strategic partnership will be the overarching focus of the conversation. There is a "high degree of mutual trust and confidence" that has guided political and defence ties between the two countries over the past 25 years, sources said. German technology being made available to India for its defence preparedness will also be part of the conversation, they said.

The two leaders will also discuss the war in Ukraine, in which Germany has been part of the Coalition of the Willing in Europe against Russia. Besides, the latest moves by US President Donald Trump to walk out of international organisations and disrupt a rules-based world order — as seen in the capture of Venezuelan President Nicolas Maduro and plans to seize control of Greenland — is expected to dominate the geopolitical conversations as India and Germany aim to fashion a multi-polar world.

They will discuss the China challenge as well, with India viewing Beijing as a strategic threat even as Germany views the Chinese as major trading partners. The two leaders are also expected to discuss the India-EU Free Trade Agreement (FTA) negotiations, which are expected to be finalised by the time EU leaders Ursula von der Leyen, a former German Defence minister, and Antonio Costa, the former Portuguese PM, visit Delhi for the Republic Day parade and the India-EU summit on Jan 26-27. Merz is expected to give a push to the negotiations, as the German automobile industry is believed to be interested in expanding its footprint in the Indian market. Sources described Germany as "a leading partner for India to achieve its Viksit Bharat goal".

According to sources, the bilateral conversations will be based on four pillars:

Germany and Make in India: Over 2,000 German companies are active in India. "More German companies are keen to join the Make in India programme. The Green and Sustainable Development Partnership is contributing to national projects including Green Hydrogen Mission, Sustainable Urban Mobility, Metro projects and Solar Rooftop projects," sources said.

Germany and Skill India: Germany is a leading international partner for skilling people. "Several German entities are partnering with Indian authorities and agencies in this regard," sources said. The German government will help in setting up a skills development centre for professionals in the renewable energy sector. Germany and Green India: German companies have established a presence in the Indian renewable energy, next-generation green infrastructure and related sectors. There will be growing collaboration in green hydrogen and its derivatives.

Next-gen technology partnership: Germany is an important source for high technology products after having liberalised their export controls, and a key partner in areas such as AI, semiconductor, digital, quantums, etc.

Mobility partnership and people-to-people ties will also be on the talks table with about 60,000 Indian students studying in Germany, especially for STEM subjects. Some new concessions for Indian students and their education prospects in Germany are on the anvil. “Germany is also attracting skilled Indian professionals. The German government has welcomed this trend. These developments augur well for India,” sources said. The two leaders will discuss UN reforms, too, as both countries are part of the G-4 grouping — including Japan and Brazil – that is lobbying for inclusion in the UN Security Council.

https://indianexpress.com/article/india/india-germany-ties-defence-to-skill-slew-of-pacts-on-table-as-merz-and-modi-meet-today-10468182/

*

सेफ्टी फीचर में दिक्कत से लाइट यूटिलिटी हेलीकॉप्टर मिलने में देरी

Source: NavBharat Times, Dt. 12 Jan 2026

सेना और एयरफोर्स के पुराने चीता और चेतक हेलिकॉप्टर को करना है रिप्लेस

संसद की स्टैंडिंग कमिटी में भी उठ चुका है मुद्दा, एयरफोर्स को दो LCA-मार्का1 ट्रेनर का भी इंतजार

Poonam.Pandey
@timesofindia.com

■ **नई दिल्ली:** इंडियन एयरफोर्स और आर्मी को हिंदुस्तान एयरोनॉटिक्स लिमिटेड (HAL) से मिलने वाले लाइट यूटिलिटी हेलिकॉप्टर (LUH) का इंतजार काफी लंबा हो गया है। सूत्रों के मुताबिक, LUH के सेफ्टी फीचर में जरूरी सुधार होना है, जिसकी वजह से इसमें लगातार देरी हो रही है। सिर्फ LUH ही नहीं, एयफोर्स को अब तक LCA-मार्क1 जेट भी पूरे नहीं मिल पाए है। इसके पीछे भी सेफ्टी को वजह बताया जा रहा है। HAL से इस बारे में उनका पक्ष जानने की कोशिश की गई लेकिन HAL ने कुछ भी बोलने से इनकार कर दिया।

आर्मी के पास अभी 180 चीता, चेतक, चीतल हेलिकॉप्टर हैं

इंडियन आर्मी और एयरफोर्स लेह और सियाचिन जैसे दुर्गम इलाकों में सामान पहुंचाने और लोगों को एक जगह से दूसरी जगह ले जाने के लिए चीता और चेतक हेलिकॉप्टर का इस्तेमाल करती है। लेकिन पिछले कुछ वर्षों से कई चीता और चेतक हेलिकॉप्टर दुर्घटना का शिकार हुए है। इन्हें रिप्लेस करने की जरूरत कई सालों से बताई जा रही है लेकिन उन्हें रिप्लेस करना अब तक शुरू नहीं हुआ है। HAL लाइट यूटिलिटी हेलिकॉप्टर बना रहा है लेकिन इनमें लगातार देरी हो रही है। आर्मी एविएशन के पास अभी करीब 180 चीता, चेतक और चीतल हेलिकॉप्टर है। करीब 130 हेलिकॉप्टर 30 से 50 साल पुराने है। इन्हें रिप्लेस करने के लिए LUH की जरूरत है। LUH को 2021 में भी इनिशियल ऑपरेशनल क्लियरेंस (IOC) मिल गया था लेकिन तकनीकी दिक्कतों की वजह से ये अब तक आर्मी और एयरफोर्स की जरूरत पूरी करने लायक नहीं बन पाया है।

अब तक मार्क-1 भी नहीं मिले पूरे

एयरफोर्स को अब तक मार्क-1 (यानी तेजस का पुराना वर्जन) भी पूरे नही मिल पाए है। एयरफोर्स ने 40 एलसीए-मार्का (तेजस) का ऑर्डर किया था। इसमे से कुल 38 तेजस एयरफोर्स को मिले है जिसमें 6 ट्रेनर है। दो ट्रेनर अब भी एयरफोर्स को नही मिल सके है। ये मसला 2023 मे संसद की स्टैंडिंग कमिटी के सामने भी उठा था। तब भी एयरफोर्स की तरफ से बताया गया था कि '40 एलसीए काफी वक्त पहले ही मिल जाने चाहिए थे लेकिन अब भी इनमें से दो नही मिल पाए हैं'।

*

Army Chief's visit boosts ties with UAE, Sri Lanka

Source: The Pioneer, Dt. 10 Jan 2026

Army Chief General Upendra Dwivedi's visit to the UAE and Sri Lanka this month has "significantly advanced" defence and military-to-military cooperation with both countries through enhanced strategic dialogues and tangible capacity-building initiatives, officials said on Friday. General Dwivedi visited the Gulf nation from January 5-6 and Sri Lanka from January 7-8.

The visits reinforced India's commitment to deepening defence cooperation, enhancing military-to-military engagement and strengthening strategic partnerships with the friendly nations in West Asia and the Indian Ocean Region, the defence ministry said in a statement. The Army chief's two-nation tour also "bolstered mutual trust, strengthened interoperability and underscored India's role as a reliable and trusted defence partner, it said. The successful engagements reaffirmed India's commitment to fostering peace, stability and cooperative security in the Indian Ocean Region and West Asia, while deepening long-standing defence partnerships with the friendly nations, the officials said.

During his visit to the UAE, Gen Dwivedi held wide-ranging discussions with the senior leadership of the UAE Armed Forces, including the commander of the UAE Land Forces, focusing on strengthening defence cooperation, enhancing interoperability and expanding avenues for joint training and professional military exchanges. The Army chief's trip to the UAE took place weeks after the Gulf nation's Commander of the Presidential Guard, Major General Ali Saif Humaid Alkaabi, visited India.

Gen Dwivedi's visit also followed fast-paced developments in the Gulf region, including escalating tensions between the UAE and Saudi Arabia over the situation in Yemen. "General Upendra Dwivedi, as part of his ongoing visit to the UAE, interacted with Major General Staff Yousef Maayouf Saeed Al Hallami, Commander, UAE Land Forces. The discussions focused on enhancing positive military engagement, training convergence and advancing bilateral defence cooperation between India and the UAE," the Army posted on social media on January 5.

During his visit, the general received detailed briefings on the organisational structure, roles and operational capabilities of the UAE Land Forces and visited key military establishments, where he interacted with officers and troops. "These engagements provided an opportunity to exchange best practices and explore collaboration in areas of mutual interest," a senior official said.

Gen Dwivedi also addressed officers at the UAE National Defence College, underscoring the importance of strategic dialogue, leadership development and shared perspectives on regional and global security challenges. The visit also included an interaction with the Indian Ambassador to the UAE, Deepak Mittal, during which issues of defence diplomacy and cooperation were discussed, the officials said.

On the Sri Lanka leg of his two-nation visit, Gen Dwivedi held substantive discussions with the senior military and civil leadership, including the commander of the Sri Lanka Army, the deputy minister of defence and the defence secretary, focusing on training cooperation, capacity building, defence education and regional security dynamics, the defence ministry said. Reflecting India's enduring commitment to defence capacity building, Gen Dwivedi also addressed officers at the Defence Services Command and Staff College (DSCSC) and interacted with officers and trainees at the Army War College, Buttala, it said. During his visit to the Army War College, he laid the foundation for a sports complex and formally handed over a set of ambulance vans. He later

handed over 20 vehicles and simulators to the Sri Lanka Army, further strengthening operational capability and training infrastructure, the statement said.

The Army chief also paid homage at the Indian Peace Keeping Force (IPKF) War Memorial, honouring the supreme sacrifice of Indian soldiers and reaffirming the shared history and deep people-to-people bonds between India and Sri Lanka, it said. He also interacted with the Indian High Commissioner to Sri Lanka, Santosh Jha, the statement said.

https://dailypioneer.com/news/army-chiefs-visit-boosts-ties-with-uae-sri-lanka

*

Navy Chief reviews combat readiness

Source: The Pioneer, Dt. 10 Jan 2026

PIONEER NEWS SERVICE
New Delhi

Navy Chief Admiral Dinesh K Tripathi witnessed a series of advanced operational drills in a multi-threat environment as part of a comprehensive review of India's combat readiness in the Bay of Bengal and eastern Indian Ocean.

The Indian Navy has maintained an aggressive posture in strategic sea lanes following Operation Sindoor and in view of the evolving security dynamics in the region.

Admiral Tripathi embarked on Eastern Fleet units at sea on Thursday to assess their operational preparedness.

Addressing the units of the Eastern Naval Command, he underscored the "pivotal role" of well-trained and motivated human capital — the men and women in whites — in the optimal deployment of modern weapons, sensors, and uncrewed systems within a fully networked operational environment, a Navy spokesperson said.

Admiral Tripathi also briefed on the readiness of the platforms and personnel, highlighting the Eastern Fleet's capability to operate across the full spectrum of maritime operations.

"The Chief of Naval Staff witnessed a series of advanced operational drills conducted in a multi-threat environment.

These included complex fleet manoeuvres, weapon firings and flying operations," the official said.

Admiral Tripathi commended the units of the Eastern Naval Command for maintaining a high operational tempo.

He praised their focus on sustaining battle-ready platforms, precision in ordnance delivery, and ensuring mission effectiveness under demanding operational conditions, the spokesperson said.

*

Pak Navy test fires LY-80 missile

Source: The Pioneer, Dt. 11 Jan 2026

The Pakistan Navy on Saturday successfully test-fired a surface-to-air missile during an exercise in the North Arabian Sea, according to an official release. It live-fired the LY-80 (N) Surface to Air

Missile (SAM) from the Vertical Launching System at extended range, showing “operational readiness and combat preparedness”, the army said in a statement. “LY-80 (N) SAM successfully engaged and neutralised an aerial target, demonstrating Pakistan Navy's robust air defence capabilities,” it said.

The exercise also featured the successful engagement of surface targets using Loitering Munition (LM), demonstrating precision strike capabilities, when LM successfully engaged and destroyed surface targets, showcasing its “effectiveness in modern naval warfare”, said the statement. Successful open-sea trials of Unmanned Surface Vessel (USV) were also conducted, marking a significant leap in autonomous naval technology.

https://dailypioneer.com/news/pak-navy-test-fires-ly-80-missile

*

Science & Technology News

अंतरिक्ष में भारत आज रचेगा इतिहास

Source: Punjab Kesari, Dt. 12 Jan 2026

नई दिल्ली, (पंजाब केसरी): कल का दिन भारत के लिए ऐतिहासिक होने जा रहा है। भारत नए साल (2026) पर एक स्पेस साइंस के क्षेत्र में एक चमत्कार करने जा रहा है। इस मिशन को आसमान में भारत की आंख स्थापित होने के तौर पर देखा जा रहा है। यहां खास बात यह है कि कल सिर्फ भारत अपना ही मिशन लॉन्च नहीं कर रहा। बल्कि, विदेशी एजेंसी और भारतीय स्टार्टअप्स के 17 सैटेलाइट भी लॉन्च करने जा रहा है। भारतीय अंतरिक्ष अनुसंधान संगठन यानी इसरो 2026 का अपना पहला लॉन्च पीएसएलवी सी62 मिशन सुबह 10:17 बजे श्रीहरिकोटा स्पेसपोर्ट के पहले लॉन्चपैड से करेगा। यह रॉकेट एक एडवांस्ड अर्थ ऑब्जर्वेशन सैटेलाइट ईओएस-एन1 (कोड-नेम 'अन्वेषा') लॉन्च करेगा, जो अंतरिक्ष से भारत की निगरानी क्षमताओं को बढ़ाएगा।

*

Countdown begins as ISRO prepares for its first satellite launch of 2026

Source: The Hindu, Dt. 12 Jan 2026

The 22.5 hour countdown for the launch of the PSLV-C62/EOS-N1 Mission commenced at the Satish Dhawan Space Centre in Sriharikota on Sunday (January 11, 2026). The Indian Space Research Organisation (ISRO) is scheduled to launch the PSLV-C62/EOS-N1 Mission on January 12 from the first launch pad of the Satish Dhawan Space Centre at 10:17 a.m.

The launch of the PSLV-C62/EOS-N1 mission will be the 105th launch from Sriharikota.

According to ISRO the PSLV-C62 vehicle will carry EOS-N1 and 15 co-passenger satellites developed by startup and academia from India and abroad. The EOS-N1 earth observation satellite is said to be built for strategic purposes.

“It is a commercial mission of NewSpace India Limited (NSIL). EOS-N1 and 14 co-passenger satellites will be injected into a Sun Synchronous Orbit and KID Capsule into a re-entry trajectory,” ISRO said.

It added that after injection of EOS-N1 and 14 satellites, PS4 stage will be re-started to de-boost and enter a reentry trajectory, followed by KID Capsule separation. “Both PS4 stage and KID capsule will re-enter into Earth’s Atmosphere and impact will be in the South Pacific Ocean,”ISRO said.

The 15 other co-passenger are: Theos-2 Earth Observation satellite built jointly by Thailand and UK SSTL (UK), CGUSAT by Dhruva Space (India), DSUSAT by Dhruva Space, MOI-1 by Dhruva Space and Takeme2Space (India), LACHIT by Dhruva Space, Thybolt-3 by Dhruva Space and Don Bosco University (India), Munal by Nepal university Antharkshya Pratishtan (Nepal) and MEA, GoI, KID by Orbital Paradigm (Spain) and RIDE! (France), Edusat by AlltoSpace (Brazil), Uaisat by AlltoSpace,Galaxy Explorer by AlltoSpace, Orbital Temple by AlltoSpace, Aldebaran-1 by

AlltoSpace, Sanskarsat by Laxman Gyanpith (India) and AyulSat by OrbitAid (India). The launch of the PSLV-C62/EOS-N1 mission will be the 105th launch from Sriharikota. It will also be the 64th flight of PSLV and the fifth mission of the PSLV-DL variant.

https://www.thehindu.com/sci-tech/science/countdown-for-launch-of-pslv-c62eos-n1-mission-begins/article70497456.ece

*

भारत के 'आदित्य' ने सुलझाई सोर तूफानों की पहेली

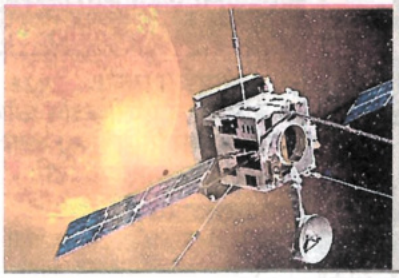
Source: Dainik Jagran, Dt. 11 Jan 2026

बेंगलुरु, प्रेट्र : भारत के "आदित्य" ने सौर तूफानों की पहेली सुलझा दी है। भारतीय अंतरिक्ष अनुसंधान संगठन (इसरो) ने शनिवार को कहा कि आदित्य-एल1 सौर मिशन से यह समझने में मदद मिली है कि शक्तिशाली सौर तूफान पृथ्वी के चुंबकीय क्षेत्र को कैसे प्रभावित कर सकता है।

इसरो ने बयान में कहा, सबसे गंभीर प्रभाव सौर तूफान के अशांत (टर्बुलेंट) क्षेत्र के टकराने के दौरान देखे गए। इसरो ने कहा कि यह अध्ययन अंतरिक्ष मौसम से जुड़ी घटनाओं को समझने और उनके रियल टाइम आकलन की अहमियत को रेखांकित करता है। दिसंबर 2025 में 'एस्ट्रोफिजिकल जर्नल' में प्रकाशित अध्ययन में इसरो के विज्ञानियों और शोध छात्रों ने अक्टूबर 2024 में पृथ्वी को प्रभावित करने वाली अंतरिक्ष की बड़ी मौसमी घटना का विश्लेषण किया। इसमें भारत की पहली सौर वेधशाला आदित्य-एल1 से प्राप्त डाटा के साथ-साथ अन्य अंतरराष्ट्रीय अंतरिक्ष अभियानों के डाटा का इस्तेमाल किया गया।

सौर तूफान का क्या हुआ प्रभाव : इसरो के अनुसार सौर तूफान के टर्बुलेंट क्षेत्र ने पृथ्वी के चुंबकीय क्षेत्र को अत्यधिक रूप से संकुचित कर दिया, जिससे वह असामान्य रूप से पृथ्वी के बहुत करीब आ गया और कुछ समय के लिए भू-स्थिर कक्षा में स्थित कुछ उपग्रह उनके संपर्क में आ गए। ऐसी घटना केवल अत्यंत गंभीर अंतरिक्ष मौसम घटनाओं के दौरान ही होती है।

- मिशन ने सौर तूफानों के पृथ्वी के चुंबकीय क्षेत्र पर प्रभाव को समझने में की मदद
- अंतरिक्ष मौसम की घटनाएं समझने व उनके रियल टाइम आकलन को ये अध्ययन अहम



क्या है स्पेस वेदर

अंतरिक्ष मौसम (स्पेस वेदर) से तात्पर्य अंतरिक्ष में उत्पन्न उन परिस्थितियों से है, जो सूर्य पर होने वाली अस्थायी गतिविधियों जैसे सौर प्लाज़्मा विस्फोट के कारण बनती हैं। इससे पृथ्वी पर उपग्रहों, संचार एवं दिशा सूचक सेवाओं तथा विद्युत ग्रिड अवसंरचना प्रभावित होती हैं।

ईओएस-एन1 सेटेलाइट कल लांच होगा, धरती का करेगा अवलोकन

चेन्नई, प्रेट्र : भारतीय अंतरिक्ष अनुसंधान संगठन (इसरो) 12 जनवरी सोमवार को वर्ष 2026 का अपना पहला अंतरिक्ष मिशन लांच करने जा रहा है। इसरो का पीएसएलवी सी62 राकेट अर्थ आब्जर्वेशन सेटेलाइट (ईओएस-एन1) को अंतरिक्ष में ले जाएगा। पीएसएलवी सी62 राकेट ईओएस-एन1 के साथ 14 अन्य पेलोड को भी अंतरिक्ष में ले जाएगा। यह मिशन इसरो की कमर्शियल शाखा न्यूस्पेस इंडिया लिमिटेड (एनएसआइएल) द्वारा संचालित किया जा रहा है।

इसरो ने शनिवार को कहा, राकेट और उपग्रहों का एकीकरण पूरा हो चुका है। पीएसएलवी सी62 मिशन को 12 जनवरी को सुबह 10:17 बजे श्रीहरिकोटा के सतीश धवन अंतरिक्ष केंद्र से प्रक्षेपित करने की योजना है।

इसरो अध्यक्ष ने तिरुपति में की पूजा

इसरो के अध्यक्ष वी नारायणन ने प्रस्तावित पीएसएलवी-सी62 मिशन की लांचिंग से पहले शनिवार को तिरुपति स्थित वेंकेटेश्वर मंदिर में पूजा अर्चना की। वह राकेट की लघु प्रतिकृति अपने साथ लाए थे।

*

ISRO's Aditya-L1 decodes how solar storms impact Earth's magnetic field

Source: The Hindu, Dt. 11 Jan 2026

The Indian Space Research Organisation (ISRO) on Saturday (January 10, 2026) said its Aditya-L1 solar mission has provided new insights into how a powerful solar storm can impact Earth's magnetic shield. "The most severe effects occurred during the impact of the turbulent region of the solar storm," the space agency said in a statement. In a breakthrough study published in The Astrophysical Journal in December 2025, ISRO scientists and research students analysed a major space weather event that struck Earth in October 2024.

The study used observations from Aditya-L1, India's first solar observatory, along with data from other international space missions to decode the impact of a massive eruption of solar plasma from the Sun. "Space weather refers to conditions in space caused by transient activity on the Sun, such as solar plasma eruptions, which can affect satellites, communication and navigation services, and power grid infrastructure on Earth," the statement said. According to ISRO, the turbulent region of the solar storm "strongly compressed Earth's magnetic field, pushing it

unusually close to the Earth and briefly exposing some satellites in geostationary orbit to harsh space conditions."

The space agency noted that this phenomenon occurs only during severe space weather events. The study also revealed that during the turbulent phase, currents in the auroral region (high latitudes) super-intensified, a process that could heat the upper atmosphere and lead to enhanced atmospheric escape. ISRO said the findings reinforce the need for close monitoring of solar activity, noting that the study highlights the importance of understanding of space weather phenomena and their real-time assessments to safeguard the critical space assets.

https://www.thehindu.com/sci-tech/science/isros-aditya-l1-decodes-how-solar-storms-impact-earths-magnetic-field/article70494901.ece

*

ISRO invites industry to build 1st module for space station

Source: The Times of India, Dt. 11 Jan 2026

India took a formal step towards building its own space station, with Isro inviting Indian industry to develop the first module of the proposed Bharatiya Antariksh Station (BAS). Vikram Sarabhai Space Centre, under the Department of Space, issued an expression of interest (EoI) seeking qualified Indian aerospace manufacturers to build two sets of the BAS-01 structure, the first module planned for India's future space station in low Earth orbit. TOI accessed the EoI issued on Jan 8.

Bidders must be Indian entities with at least five years of experience in aerospace manufacturing, a minimum annual average turnover of Rs 50 crore over last three financial years, relevant quality certifications, and no record of blacklisting. Isro described BAS as the next major milestone in India's human spaceflight programme, aimed at ensuring a sustained human presence in space, following Gaganyaan missions. The BAS-01 module is expected to be the first operational element of the station.

BAS-01 is scheduled for deployment by 2028 and is the first step towards developing five modules by 2035 to complete the full station. According to initial plans that TOI accessed in 2019, BAS, a 20-tonne modular abode, was to have space for three astronauts. Isro is yet to commit to the final design. Union minister Jitendra Singh confirmed that Rs 720 crore was allocated for development of the first module, and procurement activities for long lead items have begun.

Isro is targeting several advanced technologies through this mission, including autonomous rendezvous and docking, robotics, in-orbit refuelling, dedicated crew quarters, intra-vehicular activity suits (worn inside spacecraft), and modular racks for conducting microgravity experiments. According to the EoI document, the industry partner will be responsible for complete development and realisation of BAS-01 structure, including fabrication, welding, assembly, inspection, and proof pressure testing.

https://timesofindia.indiatimes.com/india/isro-invites-industry-to-build-1st-module-for-space-station/articleshow/126458162.cms

*

India closer to becoming 2nd nation to re-fuel on-orbit satellite

Source: The Times of India, Dt. 12 Jan 2026

When OrbitAid's 25-kg Ayulsat lifts off aboard Isro's PSLV-C62 Monday, the mission's success will bring India a step closer to becoming the second country in the world to demonstrate on-orbit satellite refuelling, a capability so far claimed only by China, reports Chethan Kumar.

Last year, China carried out a similar demonstration, but details remain limited and official disclosures sparse. No other spacefaring nation, including the US, has publicly demonstrated the technology in orbit. However, US firm Astroscale is developing a refuelling technology but is yet to launch.

Ayulsat won't demonstrate a full on-orbit re-fuelling. It is designed as a target satellite to validate fuel transfer in the space environment. Unlike more complex servicing missions involving two spacecraft, OrbitAid's first step focuses on internal refuelling within a single satellite, allowing engineers to study how fluids behave in microgravity under real orbital conditions. OrbitAid founder and CEO Sakthikumar R told TOI the first refuelling is expected to take place within four hours of launch.

https://timesofindia.indiatimes.com/india/india-closer-to-becoming-2nd-nation-to-re-fuel-on-orbit-satellite/articleshow/126471583.cms

*

The Tribune

The Statesman

पंजाब केसरी जनसत्ता

The Hindu

The Economic Times

Press Information Bureau

The Indian Express

The Times of India

Hindustan Times

नवभारत टाइम्स

दैनिक जागरण

The Asian Age

The Pioneer