

CLAWS Newsletter



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by Amita Pilania

INDIA

04 September ([The Hindu](#)): ISRO Successfully Launches EOS-05 Earth Observation Satellite Aboard GSLV-F17

The Indian Space Research Organisation successfully launched the EOS-05 (GISAT-1A) Earth observation satellite aboard a GSLV-F17 rocket from Satish Dhawan Space Centre, Sriharikota. EOS-05 is India's first imaging satellite designed to operate from geosynchronous orbit, enabling repeated observation of a large geographical region for agriculture, disaster management and national security applications, and replaces the EOS-03 satellite lost in a 2021 launch failure.

Strategic Assessment: The successful mission ends a run of setbacks for ISRO's GSLV programme and restores a long-sought geosynchronous imaging capability for near-continuous monitoring of the Indian subcontinent. Persistent-stare Earth observation strengthens India's disaster-response and border-surveillance capacity alongside its civilian remote-sensing applications.

09 September ([ISRO](#)): ISRO Successfully Tests Upgraded CE20 Cryogenic Engine for LVM3

ISRO successfully conducted the flight-acceptance hot test of the CE20 cryogenic engine intended for the seventh operational LVM3 mission. The test was performed at an uprated thrust level of 22 tonnes, supporting efforts to increase the payload capability of the LVM3. The test also demonstrated the LOX Tank Pressurisation Module intended for the C32 stage of the Gaganyaan programme.

Strategic Assessment: The test strengthens India's heavy-lift launch capability and has implications for both future commercial missions and human spaceflight. Higher LVM3 performance will be important as India moves towards more demanding missions, including Gaganyaan and increasingly complex space infrastructure.

09-10 September ([ISRO](#)): ISRO Chairman Attends International Space Summit in Paris

ISRO Chairman and Secretary of the Department of Space participated in the International Space Summit held in Paris on 9-10 September, engaging with counterpart space agencies on cooperation in Earth observation, exploration and space situational awareness. The visit forms part of India's expanding diplomatic engagement on space policy alongside its domestic launch and satellite programme.

Strategic Assessment: High-level participation in major international space forums reflects India's ambition to be recognised as a leading space power shaping global norms, not merely a launch-services provider. Deeper engagement with European and other partners could open avenues for technology exchange and joint missions as India's commercial space sector matures.

19 September ([PIB](#)): SEMICON India 2026 Concludes With Over 25 New MoUs and Announcements

SEMICON India 2026 concluded successfully at Yashobhoomi after three days that featured around 300 international participants and more than 25 memoranda of understanding and strategic collaborations spanning semiconductor materials, manufacturing, power electronics, advanced packaging, logistics, design and skilling. Organisers confirmed India has developed 85,000 semiconductor engineers against a ten-year target achieved in four years.

Strategic Assessment: The volume of agreements signed underscores accelerating momentum in India's push to build a full-spectrum domestic semiconductor ecosystem rather than assembly-only operations. Sustained execution on these commitments, alongside continued talent development, will be the key test of whether India can meet its goal of capturing close to a tenth of the global semiconductor market.

21 September ([Quantum Computing Report](#)): QNu Labs Launches QShield 2.0 to Drive India's Post-Quantum Cryptography Framework

Bengaluru-based QNu Labs launched QShield 2.0, a sovereign, full-stack post-quantum cryptography and crypto-agility platform, at the company's tenth-anniversary event. The platform is designed to help critical-infrastructure sectors begin formal migration to

post-quantum encryption by 2027, in line with the National Quantum Mission Task Force's recommendations under India's National Cryptographic Assessment and Assurance Framework.

Strategic Assessment: The launch reflects growing urgency among Indian policymakers to prepare critical infrastructure for the eventual arrival of cryptographically relevant quantum computers capable of breaking current encryption standards. A credible domestic post-quantum cryptography industry also supports India's broader ambitions for strategic autonomy in cybersecurity and defence-critical communications.



USA

30 August ([NASA](#)): NASA Launches Nancy Grace Roman Space Telescope

NASA's Nancy Grace Roman Space Telescope launched aboard a SpaceX Falcon Heavy rocket from Kennedy Space Center on a three-month journey to the Sun-Earth L2 Lagrange point. Roman carries a field of view at least 100 times larger than Hubble's and is designed to survey the sky roughly a thousand times faster, supporting research into dark energy, dark matter and exoplanets while sending back 1.4 terabytes of data daily, the highest rate of any NASA astrophysics mission to date.

Strategic Assessment: Roman's launch marks a flagship addition to NASA's space-observatory fleet at a moment when the agency is simultaneously pursuing crewed lunar exploration and commercial partnerships. Its wide-field survey capability is expected to generate discoveries at a scale that will keep astronomers occupied for years and could reshape understanding of cosmic expansion.

02 September ([Rocket Lab](#)): Rocket Lab Launches 94th Electron Mission

Rocket Lab successfully launched its 94th Electron mission, continuing one of the highest-cadence small-launch programmes in the industry as the company simultaneously advances toward the debut of its larger, reusable Neutron rocket, now targeted for the fourth quarter of 2026. Neutron's stage-one tank production remains aligned with delivery to the launch pad, though the company has cautioned that the year-end launch window is narrowing.

Strategic Assessment: Electron's sustained flight tempo underscores Rocket Lab's position as the world's leading dedicated small-satellite launcher even as it works to qualify a fundamentally larger vehicle. Neutron's continued schedule pressure illustrates the broader industry challenge of scaling from small, frequent launches to reusable medium-lift capability.

09 September ([AIAA](#)): US Space Force National Security Launch Programme Set to Grow by 91 Missions

The US Space Force's National Security Space Launch programme is projected to expand by 91 missions and nearly USD 17 billion through fiscal year 2032, according to the latest

selected acquisition report, putting total expected procurement at USD 76 billion for 337 launches between fiscal 2004 and 2032. The growth reflects surging demand for resilient, proliferated military satellite architectures.

Strategic Assessment: The scale of projected growth underscores how central assured, high-cadence launch access has become to US military space strategy amid competition with China and Russia. Sustaining this expansion will require broadening the currently narrow pool of qualified launch providers beyond SpaceX's near-term dominance.

13 September ([Space.com](#)): SpaceX Launches 700th Falcon Rocket, Completes O3b mPOWER Constellation

SpaceX marked the 700th launch of its Falcon rocket family by carrying the final three O3b mPOWER satellites into orbit for SES, completing the medium-Earth-orbit broadband constellation. The milestone underscores the scale SpaceX has achieved in commercial and government launch services since Falcon 9's debut.

Strategic Assessment: Reaching 700 Falcon launches highlights the degree to which SpaceX has industrialised orbital access, reshaping cost structures across the global launch market. Completion of the O3b mPOWER constellation strengthens SES's position in enterprise and government connectivity markets that increasingly compete with low-Earth-orbit mega-constellations.

14 September ([Associated Press](#)): US Confirms Deployment of Weapons in Orbit

The United States publicly acknowledged for the first time that it has deployed “on-orbit space control weapons.” Air Force Secretary Troy Meink said the systems were intended to defend the Joint Force against hostile adversary action but did not disclose their type, location or operational capabilities. The announcement was followed by further confirmation from the US Space Force leadership.

Strategic Assessment: The disclosure represents a significant development in the evolution of military space power. Although the exact nature of the systems remains classified, the announcement could intensify strategic competition involving the United States, Russia and

China and raises renewed questions about escalation, space debris, deterrence and the adequacy of existing international rules governing military activities in orbit.

14 September ([Asia Times](#)): US Moves to Close AI Chip Export Loophole Ahead of US-China Summit Talks

US regulators moved to close a loophole after reports that Aivres, a California-based subsidiary of China's Inspur Group, had exported at least USD 5.6 billion in advanced technology to Southeast Asia between 2024 and 2026, including servers equipped with Nvidia's Blackwell chips that ultimately served Chinese customers including ByteDance and Alibaba. The issue is expected to feature in a planned September US-China summit alongside broader AI chip export rules.

Strategic Assessment: The scale of the alleged diversion illustrates the persistent difficulty of enforcing chip export controls against corporate ownership structures designed to sit just below regulatory thresholds. Continued loophole discoveries will keep pressure on Washington to tighten affiliate-ownership rules even as it simultaneously permits some direct chip sales to China.

21 September ([Spaceflight Now](#)): SpaceX Rolls Super Heavy Booster to Pad Ahead of First Orbital Starship Launch

SpaceX moved its Super Heavy booster to the launch pad at Starbase, Texas, ahead of Starship Flight 14, now targeting no earlier than 28 September for the vehicle's first attempt to reach Earth orbit. The mission is planned to deploy 26 Starlink V3 satellites and complete roughly six orbits before a controlled splashdown in the Pacific Ocean, following a full-duration static-fire test of the booster in late August.

Strategic Assessment: An orbital Starship flight would mark a pivotal transition from developmental testing toward operational payload deployment, underpinning both NASA's Artemis lunar lander plans and SpaceX's next-generation Starlink rollout. Continued schedule slips illustrate the technical complexity of qualifying the world's largest rocket for routine orbital service.

19 September ([Quantum Computing Report](#)): IBM Demonstrates Hybrid Error-Mitigation Technique Cutting Sampling Overhead 63-Fold

IBM Research introduced Spacetime Probabilistic Error Cancellation, a hybrid error-handling framework that reduces the sampling overhead required for quantum error mitigation by a factor of 63, according to the company. The technique complements IBM's broader push toward fault-tolerant quantum computing following its earlier demonstration of a 70-logical-qubit computation that classical methods could not practically reproduce.

Strategic Assessment: Substantial reductions in error-mitigation overhead bring near-term quantum processors closer to practical utility for chemistry, materials science and optimisation problems ahead of full fault tolerance. IBM's continued hardware and algorithmic progress keeps competitive pressure on rival quantum computing efforts in Europe and China.



CHINA

31 August ([China in Space](#)): China Delays Chang'e-7 Lunar South Pole Mission to 2027

China confirmed that its Chang'e-7 lunar south pole mission, originally planned for launch in 2026 aboard a Long March 5 rocket, has slipped to no earlier than early 2027 after unfavourable weather forced a delay in August. The mission's tightly linked launch and lunar-landing windows, driven by the need for prolonged sunlight and a low solar angle at the south pole, meant the setback pushed the mission by roughly a year rather than weeks.

Strategic Assessment: The delay illustrates the narrow operational windows governing lunar south-pole missions and the schedule risk they pose even for a well-resourced programme. A later Chang'e-7 could also affect the sequencing of China's International Lunar Research Station roadmap, which depends on the mission's south-pole reconnaissance to select future landing sites.

16 September ([Shanghai Government](#)): China Conducts Record Sea-Based Launch of Shanghai-Built Satellites

China's commercial Orienspace launched eight networking satellites for the Spacesail/Qianfan constellation and an experimental satellite aboard its Gravity-1 rocket from a sea-based platform off Shanghai. The mission carried more than three tonnes of payload to an altitude of about 800 km and set national records for payload mass and orbital altitude for a sea-based launch.

Strategic Assessment: The mission illustrates China's growing integration of satellite manufacturing, commercial launch services and large-scale broadband constellations. Sea-based launch capability can provide greater operational flexibility while supporting the rapid deployment of China's expanding LEO satellite infrastructure.

17 September ([Space.com](#)): China's Long March-12 Launches Ninth SatNet LEO Satellite Group

China launched a Long March-12 rocket from the Wenchang Commercial Launch Site carrying nine satellites for the state-backed SatNet low-Earth-orbit constellation, designated SatNet LEO Group 25. The mission continued China's steady cadence of deployments

supporting its planned large-scale broadband satellite network intended to rival systems such as Starlink.

Strategic Assessment: The launch reflects the sustained pace at which China is building out its sovereign satellite-internet infrastructure through both state-backed and commercial vehicles. Continued deployment at this tempo strengthens China's position in an increasingly competitive global race for large-scale broadband constellations with significant dual-use potential.

18 September ([Konsulter](#)): Huawei Unveils Atlas 960E SuperPoD AI Computing Platform

Huawei launched what it described as the industry's first NPU-based SuperPoD, the Atlas 960E, at Huawei Connect 2026, designed to accelerate training and inference for AI models with up to ten trillion parameters. Built on Huawei's UnifiedBus and Hi-ONE architecture, the system can scale to 4,096 NPUs, and Huawei separately confirmed plans for its next-generation Ascend 960DT chip in the first quarter of 2027.

Strategic Assessment: The unveiling reinforces Huawei's determination to close the AI infrastructure gap with Nvidia through system-level scaling rather than chip-level parity alone. Analysts suggest Huawei's advances could help China meet roughly half its domestic AI processing demand by 2028, accelerating Beijing's push for compute self-sufficiency.

Russia

11 September ([Militarnyi](#)): Russia Advances Plan for BRICS Space Cooperation Council

Roscosmos chief Dmitry Bakanov said Russia and its BRICS partners are moving toward establishing a council to coordinate space cooperation, speaking on the sidelines of a BRICS leaders' gathering in New Delhi. The proposed council's work would include satellite-data sharing, joint missions and use of member states' respective orbital networks.

Strategic Assessment: A BRICS space council would extend Moscow's efforts to build alternative multilateral frameworks for space cooperation outside traditional Western-led institutions such as the Artemis Accords. Its practical impact will depend on the willingness of BRICS members, particularly India and China, to share sensitive satellite data and infrastructure with one another.

19 September ([Spaceflight Now](#)): Russian Progress Cargo Ship Reaches ISS After Launch Delay

Russia's Progress MS-35 cargo spacecraft docked at the International Space Station three days after its 16 September launch from Baikonur Cosmodrome, following a week-long delay caused by a technical issue with the Soyuz-2.1b rocket's third stage. It was the first time the Soyuz-2.1b variant had been used for a Progress mission, and the extended rendezvous profile required 49 orbits rather than the typical two-day approach.

Strategic Assessment: The delay and unusual rendezvous profile highlight the continuing technical strain on Russia's ageing Soyuz launch infrastructure even as it remains the backbone of ISS logistics. Reliable cargo resupply capability remains essential to sustaining Russia's segment of the station through the remainder of its operational life.

23 September ([Defence Blog](#)): Russia's Satellite Constellation Nears 400 Spacecraft

Roscosmos chief Dmitry Bakanov told Russian Prime Minister Mikhail Mishustin that Russia's satellite constellation has grown to nearly 400 spacecraft, with roughly 60 satellites launched in 2026 alone. Officials touted the debut of the Soyuz-5 rocket, a new hydrometeorological satellite, and plans to improve GLONASS navigation accuracy to 2.8

metres by 2027. The Rassvet broadband constellation, by comparison, remains far smaller with about 32 satellites launched against a longer-term goal of over 900 by 2035.

Strategic Assessment: The reported growth signals a modest recovery in Russia's orbital presence after years of contraction, though it remains dwarfed by the scale of US and Chinese commercial constellations. The wide gap between Rassvet's current size and its 2035 target underscores the structural challenges Russia faces in competing in large-scale satellite broadband.



Other Nations

02 September ([Pasqal](#)): Pasqal Signs Research Pact With Saudi Arabia's KACST on Quantum Technology

French quantum computing firm Pasqal signed a multi-year research agreement with Saudi Arabia's King Abdulaziz City for Science and Technology, part of a broader wave of Gulf quantum investment that included a Canadian government commitment of roughly CAD 195 million to photonics firm Xanadu's manufacturing plant. The agreements reflect Saudi Arabia's National Quantum Strategy under Vision 2030, alongside separate Huawei agreements covering quantum-key-distribution feasibility studies with Saudi telecom operator Salam.

Strategic Assessment: Gulf states are increasingly treating quantum computing as a pillar of long-term industrial policy rather than a speculative research bet, mirroring earlier state-led pushes into AI and semiconductors. Partnerships spanning European, Canadian and Chinese quantum firms illustrate how middle powers are hedging across technology blocs rather than aligning exclusively with one.

05 September ([ESA](#)): Isar Aerospace Achieves Europe's First Privately Developed Orbital Launch

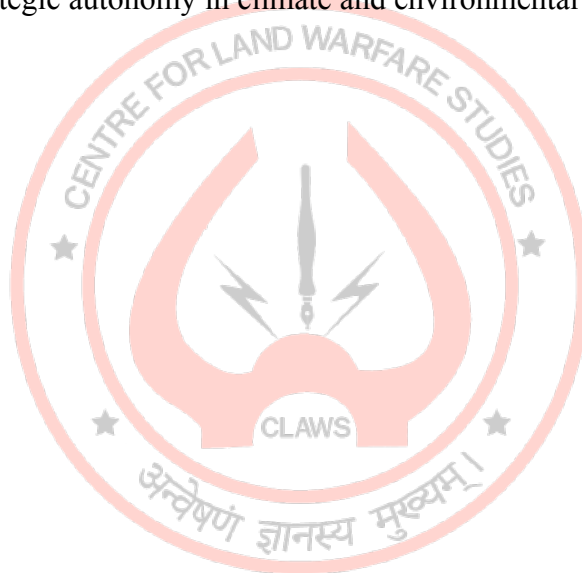
Germany's Isar Aerospace successfully launched its Spectrum rocket from Andøya Spaceport in Norway, placing five small satellites and an experiment into orbit. The mission marked the first time a privately developed rocket from continental Europe successfully reached orbit and represented an important milestone for Europe's independent access to space.

Strategic Assessment: The mission demonstrates the growing role of European commercial launch companies in reducing dependence on external launch providers. The emergence of privately developed European launch systems could strengthen the continent's strategic autonomy in satellite communications, navigation, Earth observation and security applications.

15 September ([Spaceflight Now](#)): Avio Launches Sentinel-3C and FLEX Satellites on Vega-C Rocket

An Avio-operated Vega-C rocket launched Europe's Copernicus Sentinel-3C ocean and land monitoring satellite together with ESA's FLEX Earth Explorer mission from French Guiana, deploying both into sun-synchronous orbit. FLEX will measure the faint fluorescent glow plants emit during photosynthesis to assess vegetation health, flying in tandem with Sentinel-3C roughly one kilometre apart. The mission was Avio's second Vega-C flight since assuming full launch-service responsibility from Arianespace.

Strategic Assessment: The successful dual mission demonstrates Avio's growing independent operational capability following its split from Arianespace, while extending Europe's long-running Earth observation heritage. Continued Sentinel and Earth Explorer launches reinforce European strategic autonomy in climate and environmental monitoring data.



About the Author

Amita Pilania is currently serving as a Research Assistant at the Centre for Land Warfare Studies (CLAWS), New Delhi. Her research focuses primarily on Space and Disruptive Technology. Prior to joining CLAWS, she completed her Master's degree in Defence and Strategic Studies from Amity University, Noida, Uttar Pradesh. She also holds a B.Sc. (Hons.) in Physics from Kalindi College, affiliated with University of Delhi.

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