



ESPI

European Space
Policy Institute

ESPI Insights

Space Sector Watch



Issue 58
April 2025

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POLICY & PROGRAMMES

3rd ESA Security Conference takes place in Warsaw

On the 14th and 15th April 2025, the 3rd ESA Security Conference took place in Warsaw. The event, which was co-organised by ESA, ESPI, POLSA, and the Polish Ministry of Economic Development and Technology, gathered more than 350 participants and over 30 high-level speakers coming from national, European, and international institutions, industry, and think tanks, as well as representatives of the security community leveraging space solutions.



Credit: Polish EU Council Presidency

Unlike the first and second editions, both of which centred on user needs, the third marked a shift in focus towards a more political framing, reflecting broader developments in the European policy landscape and aligning with the Polish EU Council Presidency's theme "Security, Europe!".

Noting the increasing centrality of security and defence within the European space agenda, discussions acknowledged that, although Europe has become dependent on space infrastructure, investment and strategic coordination in the security domain remains limited. The current geopolitical environment, marked by military conflict in Europe and evolving relations with key international partners, was frequently mentioned as a key driver behind this growing focus.

Participants underscored the importance of improving coherence between national and European initiatives, developing interoperable systems, and enhancing the ability of space assets to serve both civilian and defence purposes. Some speakers raised the idea of institutional innovations, such as expanding European market freedoms to better support strategic space technologies and promote a more agile environment conducive to innovation.

Among the many distinguished contributors, notable highlights included a keynote speech by former Italian Prime Minister Enrico Letta, as well as video statements from EU Commissioner for Defence and Space Andrius Kubilius and former NATO Secretary General Anders Fogh Rasmussen.

The conference was **structured around three thematic panels:**

- Panel 1: Emerging Technologies and Investment in Space & Security
- Panel 2: Industry and Innovation for Europe's Deepening Security Requirements
- Panel 3: Next Generation Space Capabilities for European Crisis Response and Resilience

Throughout the event, several recurring themes emerged:

1. the need to accelerate the development of autonomous European space capabilities in response to shifting geopolitical dynamics,
2. the critical role of sustained innovation and improved coordination in building a resilient and competitive space sector,
3. the importance of involving defence and institutional users early in programme design to ensure that space initiatives address real operational needs.



The African Space Agency becomes operational at its inauguration in Cairo

On April 20th, the African Space Agency (AfSA) officially launched its permanent headquarters in Egypt's Space City, Cairo. The inauguration culminates a nearly decade-long process initiated by the African Union's adoption of the African Space Policy and Strategy in 2016. The high-level ceremony gathered African Union Commission officials, national government and agency representatives, ambassadors, and delegates from ESA, NASA, CNES, UAE, JAXA, and UNOOSA.



Credit: African Space Agency

The programme included a documentary tracing Africa's space journey, messages from global space leaders, and the unveiling of AfSA's logo. African regional leaders reaffirmed their commitment to AfSA's long-term success, recognising it as critical infrastructure for governance, development, and scientific progress. A key outcome was the signing of a Memorandum of Understanding between AfSA and ESA, committing to strengthened cooperation in Earth Observation, technical capacity-building, and institutional development.

ESA prepares €21 billion budget proposal with focus on defence capabilities

ESA is preparing a proposal for a record €21 billion budget to be presented at the November 2025 ministerial summit in Bremen, including plans for a military-grade reconnaissance satellite constellation. The system would provide high-resolution optical and infrared imagery every 20-30 minutes, supporting European defence and security objectives. Prompted by global tensions and recent conflicts, the initiative marks a shift towards increased European space autonomy. ESA Director-General Josef Aschbacher has urged Europe to increase investment in space technology, while emphasising continued cooperation with the U.S. on projects like Artemis. The proposal aims to strengthen Europe's defence capabilities and reduce reliance on non-European systems amid growing geopolitical tensions. ESA is also exploring partnerships with other countries such as Australia, India, and the UAE.

ESA and ALTEC sign €61 million contract for ISS services and exploration

On 8th April 2025, ESA and ALTEC signed a €61 million contract encompassing Training, Logistics, and Operations Support Services (TLO) for the International Space Station (ISS) and future exploration missions, including the Lunar Gateway, for the period 2025-2029. The agreement, finalised at the 40th Space Symposium in the USA, covers astronaut and ground crew training, hardware logistics, real-time mission support, and operational preparedness for the ISS. It also includes preparatory services for upcoming Lunar Gateway missions. ALTEC, which has supported ESA's ISS activities since 2015, won the contract through an open competition launched in 2024.



Spain approves €1 billion loan for PAZ 2 Satellites

Spain has approved a two-year €1.011 billion loan agreement for the development of two PAZ 2 satellites by satellite operator Hisdesat. The loan ensures the continuity of Spain's radar imaging capabilities beyond the lifespan of PAZ-1, launched in 2018, and will be distributed over the course of eight years (2025-2032). Due to Hisdesat's limited funding capacity, the government has bypassed usual budget limitations by invoking special authorisation. Spain owns 30% of Hisdesat, with increasing indirect control through Indra's recent acquisition of Hispasat, which is Hisdesat's majority shareholder.



Credit: Hisdesat

9th European Conference on Space Debris takes place in Bonn

From 1-4 April 2025, the 9th European Conference on Space Debris took place at the World Conference Centre in Bonn. Organised by ESA, with support of the German Space Agency at DLR, the event gathered more than 400 experts from over 300 countries to address the increasing threat posed by space debris. Key topics discussed included: active debris removal, collision avoidance and traffic management, regulatory frameworks and international cooperation, and advancements in debris detection and tracking technologies.

Germany establishes Space Ministry under new Coalition Agreement

Under the new Coalition Agreement between the CSU, CDU, and SPD, Germany will restructure the former Ministry of Education and Research into the new Ministry of Research, Technology and Space (BMFTR). The restructuring aims to create a more centralised and strategic research and innovation system and reflects a shift towards an increased prioritisation of space policy, high-tech innovation, and strategic research fields such as aerospace, AI, and quantum technologies. Dorothee Bär (CSU) will lead the new ministry, with responsibilities including oversight of federal research funding, promotion of space activities, and coordination of Germany's high-tech agenda. Meanwhile, general education policy will transfer to an expanded Ministry of Family Affairs, though the final division of higher education responsibilities remains under discussion.

EU and Ukraine sign agreement on Space Programme participation



Credit: European Commission

The European Commission and Ukrainian Government have signed an agreement allowing Ukraine to participate in key components of the EU Space Programme: Copernicus, Space Weather Events (SWE) and Near-Earth Objects (NEO) sub-components. This deepens an existing partnership under the EU-Ukraine Association Agreement and builds on the 2018 Copernicus cooperation. The agreement will support Ukraine's recovery and resilience through enhanced access to EO data, space weather forecasting, and asteroid risk monitoring.



Ukraine's Ministry of Defence establishes the Space Policy Directorate

At the Space for Ukraine Forum, the Ministry of Defence announced the launch of the **Space Policy Directorate** to lead the development of Ukraine's military space sector. The Directorate will coordinate domestic capabilities and global support to advance Ukraine's military space capacity. A ten-year roadmap was also presented, beginning with an audit of space infrastructure and strategic planning, followed by the development of domestic satellites and space situational awareness systems, and ultimately advancing toward a dedicated space defence segment to enable real-time analytics and strengthen international security capabilities.

Ukraine builds space autonomy through European and Japanese partnerships

Ukraine is reducing its dependence on U.S. space technologies, particularly Starlink, by forging strategic partnerships with Japan, Sweden, France, and Germany to develop a more autonomous **satellite infrastructure**. Ukraine is expanding its use of European and Asian satellite data and aims to scale up alternatives, such as Eutelsat's OneWeb. Domestically, Ukrainian company Stetman has partnered with Sweden's Requtech to produce satellite terminals locally, enhancing Ukraine's operational resilience. **Germany is also funding Ukraine's use of Eutelsat's satellite internet network as an alternative to Starlink**. Eutelsat has provided high-speed connectivity in Ukraine through a German distributor for approximately one year, with current terminal numbers under 1,000, with plans to scale up to 5,000-10,000. The new partnerships follow U.S. limitations on satellite imagery access and growing concerns about the political reliability of U.S. support. Although European alternatives remain limited in scale, Ukraine is steadily building the foundation for independent space-based communications and surveillance.

ESA publishes ESA Space Environment Report 2025

ESA has published the 2025 edition of its annual **ESA Space Environment Report**, highlighting several key takeaways, including the growing recognition of Earth's orbital environment as a finite and increasingly congested resource. Active satellite density now rivals debris levels in parts of LEO, particularly between 600 and 1,000km altitude, with over three uncontrolled re-entries occurring daily. Fragmentation events in 2024 alone added thousands of debris objects, many of which are concentrated in these already over-crowded orbital bands. Despite gradual improvement in mitigation compliance, the total amount of space debris continues to accumulate, especially in LEO and geostationary transfer orbits. The report advocates for urgent active debris removal focused on high-risk objects in densely populated orbital shells, along with more stringent end-of-life measures for satellites.

BRICS countries to establish a Space Council

The heads of the BRICS space agencies have agreed to support the creation of a **BRICS Space Council**, proposed by Roscosmos head Dmitry Bakanov. The council would serve as an advisory body to coordinate joint space projects and address issues such as space sustainability, satellite navigation, debris management, and the peaceful use of space. Bakanov has emphasised that coordinated efforts could create significant synergies, despite distinct space strategies. He also noted that the total number of spacecrafts operated by BRICS countries reaches around 1,500, and that BRICS countries conducted approximately 100 launches from 21 spaceports in 2024, forming a substantial infrastructure base for future cooperation.



Italy advances with study for 100-satellite constellation

Italy has launched the second phase of a feasibility study for a proposed 100-satellite communications constellation, aiming for interoperability with other systems. The initiative supports the goals of Italy's Space Bill, which was passed in March 2025. The Italian Space Agency (ASI) submitted its initial findings in March, with results expected by September 2025. While details currently remain limited, reports indicate that the constellation could reach completion within five years, be leveraged to serve both domestic and international users, and become operational by 2031. This would mark Italy's second major satellite project, following IRIDE, a €1.3 billion Earth Observation constellation of over 60 satellites due by June 2026.

Bundeswehr plans its own satellite constellation

The Bundeswehr is reportedly planning to build its own satellite constellation in space by 2029, with additional systems under consideration. A spokesperson for the Ministry of Defence confirmed the initiative but withheld details on cost and technical specifications due to national security concerns. The Ministry stated that various options for potential constellation development "are being investigated" to address the growing demand for national, space-based reconnaissance capabilities. Currently, the Bundeswehr operates just 8-10 satellites, while experts estimate that deploying a full constellation could cost up to €10 billion.

China to launch Chang'e-8 lunar mission with international partners in 2029

The China National Space Administration (CNSA) has announced its plans to launch the Chang'e-8 lunar mission around 2029, carrying payloads from 11 countries and regions and one international organisation. The mission, targeting the Leibnitz-Beta Plateau near the lunar south pole, will involve scientific research and in-situ resource utilisation experiments, alongside the earlier Chang'e-7 mission, as part of preparations for an International Lunar Research Station. International contributions include rovers, sensors, and scientific instruments from countries such as Italy, Russia, Türkiye, South Africa, Pakistan, and Iran, among others. The payloads have been selected from 41 proposals submitted after CNSA opened the mission to global collaboration in 2023.

ESA advances LEO Cargo Return Phase 2 without geo-return restrictions

ESA will proceed with Phase 2 of its LEO Cargo Return initiative, aimed at developing commercial cargo transport to and from LEO, without geo-return constraints. This provides contractors with greater flexibility in sourcing, design, and launch vehicle choice, enabling the prioritisation of cost-effectiveness and performance over member state origin. The demonstration mission deadline has shifted from 2028 to no later than 2030, with ESA estimating a future cargo demand of 2.4-6.5 tonnes per year, depending on funding and programme developments.



Credit: The Exploration Company



Polish government appoints new head of space agency

Poland's Minister of Development and Technology has appointed Dr. Marta Ewa Wachowicz as the new President of the Polish Space Agency (POLSA), following the dismissal of Grzegorz Wrochna over **alleged mismanagement** in relation to Falcon 9 rocket re-entry and a cyberattack that disrupted agency systems. Dr Wachowicz, who holds a PhD in space physics, was involved in founding POLSA and previously led its Strategy and International Cooperation Department.



Credit: POLSA/Ministry of Development and Technology, Republic of Poland

Russia to launch 240 additional GLONASS satellites in 2030

Russia's Roscosmos has announced plans to launch 240 LEO satellites as an additional segment of the GLONASS navigation system by 2030. The new satellites, set to orbit at 800km, will complement the existing GLONASS constellation at 19,000 km and are expected to enhance signal strength, accuracy, and interference resistance, ensuring full coverage even in challenging environments. The first two demonstration satellites are scheduled for launch in 2030.

U.S. Space Force awards Astrotech with \$77.5 million contract

The U.S. Space Force has awarded Lockheed Martin subsidiary Astrotech Space Operations with a **\$77.5 million, three-year contract to expand satellite processing capacity** at Vandenberg Space Force Base, California, aiming to prevent ground facility constraints from limiting access to space. Astrotech is the main provider of satellite storage and processing services at both Eastern and Western launch ranges. While its Florida facility near Kennedy Space Centre offers 10,219m² of processing space, its Vandenberg site currently has about 3,716m².

Spain joins NATO's NSS6G satellite communications consortium

Spain has joined the NATO SATCOM Services 6th Generation consortium through its Ministry of Defence, becoming one of six countries authorised to provide secure communications under NATO standards. Hisdesat Servicios Estratégicos, as the operator of the SpainSat NG I and II satellites, will deliver these secure satellite services. The development strengthens Spain's role in NATO and supports broader efforts towards achieving European strategic autonomy in government satellite communications.

UN Working Group on PAROS holds first substantive session

The first substantive session of the UN Open-Ended Working Group (OEWG) on the Prevention of an Arms Race in Outer Space (PAROS) convened in Geneva from 7-11 April 2025, aiming to advance discussions on space security through both legal and non-legal measures. While the group was unable to formally adopt an agenda or programme of work, preliminary convergence emerged on key agenda items. Discussions highlighted differing views on structure, mandate interpretation, and the role of civil society, but also reaffirmed widespread support for an inclusive, integrated approach to space governance. Delegations expressed hope that these initial deliberations would provide a constructive base for progress at the next session in July 2025.



NASA Administrator nominee Jared Isaacman announces objectives

During his Senate confirmation hearing on 9th April 2025, President Trump's nominee for NASA Administrator, Jared Isaacman, expressed support for prioritising crewed missions to Mars in line with the administration's vision, whilst also committing to maintain momentum on the Artemis lunar programme. Though acknowledging limitations in the current Artemis architecture, he stated his intention to work within the existing framework while exploring future improvements.

U.S. Armed services committees propose \$150 billion defence funding increase



Credit: U.S. Marine Corps

The House and Senate Armed Services Committees have proposed to increase \$886 billion defence budget by \$150 billion to above \$1 trillion for fiscal year 2025, with \$25 billion dedicated to the "Golden Dome" missile defence initiative. Approximately \$15 billion of the proposed \$25 billion would be used as funding for satellites, space-based sensors and interceptors, and launch infrastructure.

White House marks 35th anniversary of the Hubble Space Telescope

On April 24, 2025, the White House commemorated the 35th anniversary of the Hubble Space Telescope, highlighting its scientific contributions since its 1990 launch. With over 1.5 million observations, it has played a crucial role in advancing astronomical knowledge. The statement reaffirmed U.S. commitment to space exploration, noting the reestablishment of the National Space Council to prioritise space policy at the national level and continued collaboration with the private sector. It also referenced the ongoing ambition of human exploration of Mars, including symbolic milestones such as planting the U.S. flag on the Martian surface. The announcement comes at a time of ongoing reports that the **U.S. administration may significantly cut future science-related funding**, with advocacy groups voicing concern and urging continued support for research and innovation.

U.S. Space Force outlines "Space Warfighting" strategy in new guide

The U.S. Space Force has released "Space Warfighting: A Framework for Planners," detailing how it may conduct operations to defend U.S. space assets and maintain a strategic advantage in space. The document outlines potential measures such as orbital strikes to disable enemy satellites, space link interdiction through electromagnetic or cyber disruption, and terrestrial strikes on ground-based infrastructure. The guide emphasises conducting operations with caution and responsibility, aiming to avoid creating debris or threatening civilian and allied space systems.



Credit: U.S. Space Force



The U.S. publishes new Space Force Doctrine

The U.S. Space Force has released **Space Force Doctrine Document 1 - The Space Force (SFDD-1)**, which outlines core principles, mission, and battle management. Published by Space Training and Readiness Command, the doctrine outlines the strategic purpose, identity, and role of the Space Force, emphasising the importance of national and military space power. It also defines how the Space Force integrates into joint operations and employs space power through functions like space control, global missions, and space access. It also details command principles and readiness structures. SFDD-1 aims to increase understanding of the Space Force's identity, responsibilities, and approach to achieving strategic advantage in space.

DARPA proposes mission to map lunar water ice

DARPA has issued a call for proposals under its **LASSO programme to design a small spacecraft that could map potential lunar water ice and test autonomous navigation in low lunar orbits**. The mission aims to identify areas with $\geq 90\%$ probability of containing $\geq 5\%$ water, with operations lasting up to four years, as well as to evaluate technologies for maintaining stable orbits as low as 10km above the Moon, despite gravitational challenges.

Guyana expands rural connectivity with Starlink for education and telemedicine

Guyana is **deploying SpaceX's Starlink satellite internet to improve connectivity in rural, hinterland, and riverine communities**. The initiative supports the Guyana Online Academy of Learning (GOAL) scholarship programme and expands telemedicine services, aiming to enhance access to education and healthcare in underserved areas. The Guyanese government has licensed Starlink and launched connectivity in 138 communities, with plans to reach 300 health facilities by June 2025. Over 50 telemedicine sites are already operational, enabling remote consultations with specialists and improving service delivery in isolated regions.

FCC and Romania advance review of EPFD Downlink limits

The U.S. Federal Communications Commission (FCC) has **voted to initiate a domestic review of Equivalent Power Flux Density (EPFD) downlink limits**. In parallel, the Prime Minister of Romania has mandated ANCOM, the national telecom regulator, to actively support efforts to revise these limits. The developments reflect growing momentum toward enabling greater deployment of non-geostationary satellite systems, such as Starlink, while maintaining coordination with geostationary satellite operators.

OMB proposes cuts to NOAA's GeoXO satellite programme

The White House OMB has **proposed scaling back NOAA's \$19.6 billion GeoXO satellite programme**, recommending the cancellation of major contracts and the removal of the central satellite to cut costs by 50%. The revised plan would retain only East and West satellites, reduce reliance on NASA, and focus on basic weather monitoring, excluding broader ocean and atmospheric capabilities.



SWF publishes 2025 Global Counterspace Capabilities Report

The Secure World Foundation has published the 2025 Global Counterspace Capabilities report, which analyses counterspace developments across 12 countries, including nations that have conducted debris-causing ASAT tests, such as the United States, Russia, China, and India, as well as those advancing non-destructive technologies. Key updates include U.S. deployment of offensive jamming systems, Russia's GPS and Starlink disruptions, and detailed Chinese proximity operations. The report also tracks 6,851 debris pieces from ASAT tests, with 2,920 remaining in orbit.

CSIS publishes 2024 Space Threat Assessment

The Aerospace Security Project at the Center for Strategic and International Studies (CSIS) has also released the seventh edition of its Space Threat Assessment. The 2024 report evaluates threats to U.S. national security space systems from foreign counterspace capabilities. This year's edition examines the evolving space and counterspace activities of China, Russia, India, Iran, and North Korea, among others.

ASI and Aristotle University of Thessaloniki begin scientific collaboration

The Italian Space Agency (ASI) has started a scientific collaboration with the Earth Observation & Geospatial Application Lab of the Aristotle University of Thessaloniki to use COSMO-SkyMed's SAR technologies to monitor the Santorini volcano. The cooperation comes at a time of renewed volcanic activity, with signs of unrest detected in July 2024 followed by further ground movement linked to Anydros tectono-volcanic activity in February 2025. COSMO-SkyMed images enable the regular and systematic monitoring of the Santorini volcano, complementing data from Copernicus Sentinel-1 and ground networks managed by the Institute for the Study and Monitoring of the Santorini Volcano (ISMOSAV).



In other news

The Kingdom of Saudi Arabia and India sign MoU. The government of the Kingdom of Saudi Arabia, represented by the Saudi Space Agency, has signed a Memorandum of Understanding with the Indian Department of Space to strengthen cooperation in the peaceful uses of space. The agreement was formalised during Indian Prime Minister Narendra Modi's visit to Saudi Arabia and aims to advance bilateral collaboration in civil space activities.

The UAE Space Agency and the Egyptian Space Agency sign MoU during the 2025 NewSpace Africa Conference in Cairo. The agreement outlines several areas for cooperation, including knowledge exchange, capacity-building, and technology and innovation. It aims to promote regional autonomy in space and increase innovation.

Bangladesh becomes the 54th nation to sign the Artemis Accords. At the 2025 Investor Summit in Dhaka on 8th April 2025, Bangladesh officially became the 54th signatory of the Artemis Accords.

HALO module departs Turin for final integration in the United States. The HALO (Habitation and Logistics Outpost) module has departed the Thales Alenia Space plant in Turin for Northrop Grumman's facilities in Gilbert, Arizona.

Roscosmos and NASA officials discuss launches from Baiterek and ISS cooperation. Roscosmos chief Dmitry Bakanov and NASA official Ken Bowersox met at the Baikonur space centre in Kazakhstan to discuss launch plans from the Baiterek complex, ISS cooperation, and the Soyuz MS-27 mission.

NASA is preparing a restructuring and workforce optimisation plan, which may include downsizing, as part of broader government changes under the Trump administration. NASA Acting Administrator Janet Petro has described the process as "unsettling" but emphasised that final decisions will be made by Jared Isaacman, the nominee for NASA Administrator, once confirmed.

Soyuz MS-27 crew arrives at the International Space Station on 8th April 2025 to replace Soyuz MS-26, continuing 24 years of crew rotations. The crew includes two Russian cosmonauts and one NASA astronaut.

China advances toward 2030 crewed moon landing. China's lunar mission remains on schedule, with successful early tests of the Long March 10 rocket, Mengzhou spacecraft and Lanyue lander. Upcoming trials will focus on safety and system reliability.

L3Harris awards \$75,000 grant to Space Foundation at the 40th Space Symposium. The grant will support STEM initiatives under Space Workforce for Tomorrow (SWIFT) and aims to inspire young space enthusiasts. It focuses on addressing the national STEM talent gap by presenting career opportunities and developing a skilled workforce for the expanding space sector.

China to lend Chang'e-5 Moon samples to U.S. universities. China will lend Chang'e-5 lunar samples to seven universities, including Brown and Stony Brook in the U.S., as part of its international space diplomacy. U.S. researchers must comply with the Wolf Amendment limiting China cooperation. Chang'e-6 far-side samples remain restricted to Chinese institutions for now.

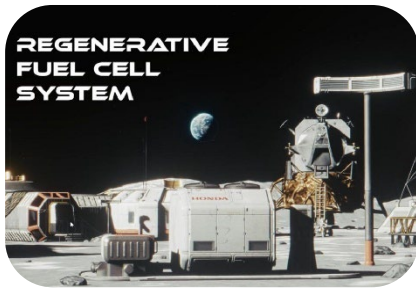


INDUSTRY & BUSINESS

Airbus, Thales and Leonardo propose joint venture to merge space assets

Airbus, Thales and Leonardo have submitted a preliminary consolidation project to the European Commission, aiming to merge their space assets in a joint company, each holding an equal share. Backed by their respective governments, the companies are currently engaged in pre-notification discussions with the European Commission, which is an initial step that precedes a formal request for regulatory approval. The European Commission has previously opposed similar consolidation efforts and will play a central role in determining whether the merger proceeds. Thales and Leonardo already collaborate in the satellite sector through the Space Alliance, with the proposed consolidation marking a more formal step towards unifying Europe's space sector amid growing international competition. If authorised, the venture could be established by 2026.

Honda to test fuel cell technology on ISS for sustainable lunar energy systems



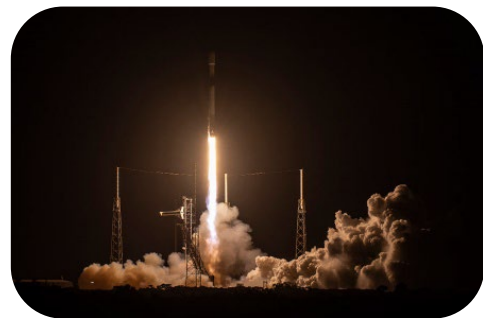
Credit: Honda

Honda will test its advanced water electrolysis system on the ISS in partnership with Sierra Space and Tec-Masters. The system is part of a regenerative fuel cell concept designed to support future lunar habitats by continuously producing oxygen, hydrogen, and electricity in a closed-loop cycle. The test will assess the system's performance, efficiency, and reliability in microgravity, using Sierra Space's Dream Chaser spaceplane for transport and Tec-Masters' expertise in ISS operations. The lightweight, compact design reduces the need

for mechanical compression and large numbers of tanks. The initiative supports Honda's long-term vision of sustainable energy solutions for both space and Earth, marking the first major project from its new U.S.-based Space Development Division.

Exolaunch deploys PHOENIX for ATMOS on SpaceX Bandwagon-3

Exolaunch has successfully deployed PHOENIX, a 250kg re-entry spacecraft developed by ATMOS Space Cargo on SpaceX's Bandwagon-3 rideshare mission. The launch took place on April 21, 2025, aboard a Falcon 9 from Cape Canaveral, marking ATMOS' first commercial re-entry demonstration under German and U.S. regulatory oversight. The mission demonstrated key re-entry technologies, including an inflatable heat shield. While recovery was not conducted due to a trajectory change, PHOENIX successfully transmitted system and payload data.



Credit: SpaceX

The next-generation PHOENIX 2 will feature a propulsion system to enable controlled recovery.



SpinLaunch contracts Kongsberg to deliver 280 microsattellites

SpinLaunch has signed a €122.5 million contract with Norway's Kongsberg NanoAvionics for the development of 280 microsattellites for its Meridian Space LEO broadband constellation. The deal includes two prototypes and marks Kongsberg as the exclusive satellite supplier. The lightweight, high-performance satellites aim to deliver global, high-speed connectivity for enterprise users across various sectors. Kongsberg Defence & Aerospace also acquired a minority stake in SpinLaunch to support commercialisation. Production will increase with a new facility in Vilnius, Lithuania, as SpinLaunch targets a future network of 1,200 satellites.

Rocket Lab confirms D2C strategy and satellite constellation plans

Rocket Lab has confirmed its intention to enter the Direct-to-Consumer (D2C) satellite services market, positioning itself alongside major players such as SpaceX's Starlink and Amazon's Kuiper. The company's newly unveiled "Flatellite" satellite platform is designed to support long orbital lifespans, low-latency, and high-speed connectivity, with applications across defence, national security, and commercial markets. The announcement comes amid competition from other D2C and direct-to-device (D2D) initiatives, including AST SpaceMobile, Telesat's Lightspeed, OneWeb, and Lynk Global. Meanwhile, Rocket Lab faces potential legal challenges, as a shareholder class action alleges the company failed to disclose delays and risks related to its Neutron launch programme.

MDA Space to acquire SatixFy for \$269M

Canada's MDA Space has announced a \$269 million acquisition of Israeli chipmaker SatixFy to enhance its vertically integrated satellite production capabilities. The deal, which includes paying off \$76 million in debt, supports MDA's goal of increasing production to two software-defined satellites per day. Already a key supplier to MDA, SatixFy will support next-generation satellite development with its advanced chips and 60+ patents.



Credit: MDA Space

PLD Space signs launch agreement with D-Orbit for equatorial missions



Credit: PLD Space

International space services company PLD Space signs launch agreement with Italian aerospace company D-Orbit for the deployment of satellites aboard MIURA 5 to equatorial orbit. The agreement secures over 80% of PLD Space's launch manifest through 2027. MIURA 5, which will launch from French Guiana, will provide access to low inclination orbits, a segment of the market with limited options from major launch providers. Commercial missions are scheduled to begin in 2026, with plans to scale up to 30 launches annually by 2030.



Bpifrance selects Latitude as part of the “First Factory” #France2030 initiative

French launch vehicle developer Latitude has been selected for Bpifrance’s “First Factory” initiative, part of the broader #France2030 industrial and innovation strategy. The programme is backed by public funding and supports companies transitioning from early-stage development to large-scale production. Latitude will advance plans to establish its first large-scale manufacturing facility in Reims. The 25,000m² site will support in-house production, assembly, and integration of key rocket components, including engines, tanks, and structures, using advanced techniques such as additive manufacturing. The facility is expected to create approximately 160 industrial jobs by 2030 and enable the production of up to 50 Zephyr launch vehicles annually.

Phantom Space partners with Ubotica Technologies for in-orbit AI processing



Credit: Phantom Space

U.S.-based launch provider and satellite manufacturer Phantom Space has partnered with Ireland’s Ubotica Technologies to integrate AI processing into its upcoming satellite constellation, Phantom Cloud. The aim is to perform data analysis in orbit, reducing the need to transmit large datasets back to Earth and enabling faster, more efficient insights. Founded in 2019, Phantom Space is developing its own launch vehicle named Daytona, manufacturing satellites, and

planning to launch an in-house data-processing constellation. Ubotica’s AI technology will help process and filter satellite data in space, supporting real-time applications and low-latency communications. Phantom Space expects its own constellation to account for 40% of future launch capacity and aims to provide a platform for third-party orbital software applications.

Eutelsat and Panasonic Avionics extend multi-year agreement

Eutelsat and Panasonic Avionics have extended their multi-year, multi-million-dollar capacity agreement on the EUTELSAT 10B satellite to enhance inflight connectivity services. The deal expands Panasonic’s use of the satellite’s high-throughput Ku-band payloads, which cover key regions including the North Atlantic, Europe, Middle East, Africa, and the Indian Ocean. Through the agreement, Panasonic Avionics aims to enhance its Ku-band connectivity network to better serve airline customers throughout the satellite’s coverage area.

Vast reveals Haven-1 Space Station model and announces new partnerships

At the 2025 Space Symposium, U.S.-based Aerospace company Vast presented a full-scale model of its Haven-1 space station, designed for sovereign and scientific missions. The station prioritises comfort and usability, aiming to enhance crew performance. Vast also announced several key partnerships, including a strategic agreement with CASIS, the organisation managing research aboard the ISS. The space station will feature SpaceX Starlink connectivity, enabling unrestricted communication for crew members, including real-time social media sharing and video calls. Vast emphasised the benefits of operating a commercial platform, including greater flexibility, IP ownership, and fewer regulatory constraints compared to government-run stations.



Credit: Vast



Embraer and Intelsat partner to equip E2 Jets with inflight connectivity

Embraer and Intelsat have partnered to provide factory-installed high-speed in-flight satellite connectivity on the new E-Jet E2 aircraft. The system features an electronically steered array antenna, supporting speeds of up to 275 Mbps and operation across LEO and GEO satellite networks. Its low-profile design reduces drag and fuel consumption, aligning with Embraer's sustainability goals. This marks the first multi-orbit system with an electronically steered array to be line-fit on Embraer aircraft, providing reliable, streaming-quality internet from entry into service.

Pulsar Fusion reveals nuclear-powered rocket

UK-based Pulsar Fusion has unveiled the Sunbird, a nuclear-fusion-powered rocket capable of reaching speeds up to 329,000mph. The rocket will use a Dual Direct Fusion Drive fuelled by deuterium and helium-3, aiming to significantly reduce travel times to the Moon, Mars, and beyond, while providing up to 2 MW of power to onboard systems. The Sunbird is designed for long-range orbital transport, aiming to carry 1-2 tonnes of cargo to Mars in under six months or to Pluto in under four years. It features superconducting magnet shielding, Hall-effect thrusters for precision, and a high-radiation-resistant structure. In-orbit tests of the power system are expected later this year, with full fusion propulsion testing set for 2027.



Credit: Pulsar Fusion

Globalsat and Viasat to deploy hybrid connectivity for Brazilian rail network

Globalsat Brasil and Viasat plan to implement a hybrid satellite and LTE connectivity solution for Brazilian logistics company VLI Logística. The ten-year project covers over 1,800 km of railway in São Paulo, Goiás, and Minas Gerais, aiming to modernise communications for railway operations. The system is designed to support VLI's existing onboard technologies and enable future upgrades, including Positive Train Control and advanced signalling systems. The hybrid approach ensures reliable communication in remote areas lacking LTE coverage and facilitates real-time data monitoring and direct communication between control centres and train operators. The project is currently in the commissioning phase.

Viasat demonstrates direct-to-handset satellite connectivity in Brazil

Viasat has conducted Brazil's first successful test of direct-to-handset (D2H) satellite communication, using L-band spectrum and 3GPP Release 17 non-terrestrial network standards. The demonstration enabled two smartphones to communicate directly via satellite without terrestrial infrastructure. Held in Brasília, the event involved government and telecommunications stakeholders, highlighting applications for both consumer connectivity and IoT use cases in agriculture and transportation. The technology aims to address coverage gaps, with only 18% of Brazil's territory currently covered by cellular networks and expand to underserved areas through standards-based satellite solutions.



OroraTech expands wildfire monitoring network with new U.S. office

German satellite operator OroraTech opened its new U.S. headquarters in Denver on 24th April 2025 to connect U.S. agencies with its wildfire detection platform, powered by 10 proprietary heat-tracking satellites and public data. Larimer County, Colorado, became one of its first U.S. customers. OroraTech has also recently signed major wildfire monitoring contracts with Greece and Canada. The company plans to grow its constellation to 96 satellites for near real-time global wildfire tracking as climate risks increase.



Credit: OroraTech



In other news

Commercial space infrastructure developer Axiom Space names Tejpal Bhatia as new CEO.

Axiom Space has promoted its former chief revenue officer to CEO, succeeding co-founder and executive chairman Kam Ghaffarian. Bhatia, who secured over \$1 billion in contracts for Axiom, previously worked at Google and founded several startups. The company is advancing private astronaut missions, a private space station, and new orbital data centres.

Katalyst Space acquires Atomos to expand in-space servicing.

Katalyst Space Technologies has acquired Atomos Space to expand its capabilities in orbital transfers and satellite servicing. The combined team will develop spacecraft for life extension, upgrades, and space domain awareness, with a GEO demonstration mission planned for 2026.

Space-based data proposed to meet growing global demand.

Companies such as Lonestar Data Holdings and Starcloud are progressing with plans to deploy data centres in orbit and on the Moon. Lonestar recently tested a prototype on the lunar surface and aims to deploy a unit in lunar orbit by 2027, while Starcloud plans to begin commercial orbital operations in 2026. Thales Alenia Space also envisions an operational satellite-based data centre network by 2037.



INVESTMENT & FINANCE

Apex secures \$200 million for enhanced satellite buses



Credit: Apex

Apex has raised **\$200 million in a Series C round** co-led by Point72 Ventures and 8VC. Apex builds small satellite buses, between 100 and 500kgs, which offer configuration packages enabling integration of both hardware and software payloads. The company, which launched a demonstrator of its Aries satellite in March 2024, is seeing increased demand for its platforms from national security actors, including the SDA, and following recently announced

initiatives like the Golden Dome. The funding will enable further verticalization of manufacturing processes and the possibility to stock more assembled buses for faster delivery to customers.

Qianxun Spatial Intelligence raises \$137 million for satellite positioning services

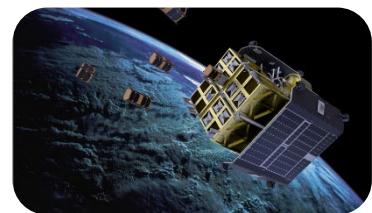
China-based **Qianxun Spatial Intelligence has secured CN¥1 billion (\$137 million) in the second tranche of a Series B round**. The company, a joint venture between state-owned defence corporation Norinco Group and technology giant Alibaba Group, specializes in high-precision satellite positioning solutions powered by a ground-based augmentation system with over 6,000 reference stations. Leveraging AI and multi-sensor collaboration to support applications like autonomous driving, Qianxun Spatial Intelligence claims more than 2.3 billion users across over 230 countries. The investment will enable the development of large geospatial models, strengthen its cloud and chip-enabled product offerings, expand its services outside of China, and improve user experiences in emerging sectors.

Astra secures \$80 million

The U.S. company has raised **\$80 million from undisclosed private investors** since going private in July 2024. Astra initially went public in February 2021 through a SPAC merger. However, the company struggled with repeated launch failures, ultimately facing the threat of bankruptcy. **A take-private transaction was eventually completed by Astra's co-founders Chris Kemp and Adam London**. The capital raised was used to buy out shareholders, cover legal fees, settle secured lenders, and refinance the company. With the additional award of a \$44 million DoD contract in October 2024, Chris Kemp stated that Astra is now in a position to prepare the launch of its Rocket 4 without additional funding.

D-Orbit acquires Planetek, strengthens access to EO analytics

D-Orbit has acquired 100% of the shares of Planetek, an Italian geospatial data SME, for an undisclosed fee. The transaction, referred to as a "strategic business combination," follows several successful collaborations between the two companies. With this acquisition, D-Orbit will leverage Planetek's EO expertise to strengthen its ability to conduct data processing and analysis in space. Both companies will retain their "operational autonomy" while exploring potential synergies moving forward.



Credit: D-Orbit



Aetherflux raises \$50 million for space solar power



Credit: Aetherflux

The U.S. start-up has secured **\$50 million in a Series A round** led by Index Ventures and Interlagos. Aetherflux develops a LEO infrastructure to enable solar power transmission back to Earth through infrared, bypassing traditional energy distribution limitations. Targeting disaster relief and remote military operations, the company has also received funding from the DoD to develop a proof of concept of their technology. The investment will enable subscale testing of core components in preparation for their initial Mission 1, scheduled for 2026.

Northwood secures \$30 million for scalable ground stations

The U.S. start-up has raised **\$30 million in a Series A round** co-led by Alpine Space Ventures and Andreesen Horowitz. Northwood builds ground segment and aims to build the world's largest shared network with 100 Gbps backhaul capacity and multilink coverage, to ensure surge capacity, redundancy, and global reach. Northwood will direct the funding towards scaling up production of its technology and deploying its first operational site.

Revel raises \$30 million for software enhancing critical hardware

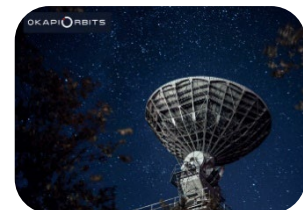
The start-up, which just transitioned out of stealth mode, secured **\$30 million in two transactions**: a \$6.9 million Seed round led by Felicis Ventures and Abstract Ventures, and a \$23.1 million Series A led by Thrive Capital. Revel develops software designed to strengthen and control the critical hardware "underpinning our daily technological infrastructure", such as across advanced industries, including aerospace. The company's first client, Impulse Space, will deploy Revel's software on launch vehicles to accelerate testing campaigns. The investment will go towards technological iteration and go-to-market efforts.

Portal Space Systems secures \$17.5 million for multi-role satellite platforms

The U.S. start-up has raised **\$17.5 million in a seed round led by AlleyCorp**. Portal Space Systems builds Supernova, a satellite platform designed to be "multi-role", able to operate across orbits and in "contested and congested" environments through enhanced manoeuvrability. Portal will use the funding to prepare an initial demonstration of Supernova, covering milestones such as critical design review in Q2 2025, followed by propulsion testing and system integration, for a launch slated by mid-2026.

OKAPI:Orbits raises €13 million for sustainable space operations

The German start-up has secured **€13 million in a Seed round** led by Ventech. OKAPI:Orbits provides end-to-end SSA and Space Traffic Management solutions through three AI-enhanced data analytics platforms. Founded as a spin-off of Technical University Braunschweig, it was awarded in February 2025 an ESA contract for a space debris model, improving risk assessment and enabling safer orbital operations. The investment will go towards hires, technological development, and international expansion.



Credit: OKAPI:Orbits



Chinese start-ups secure “millions of yuan” in early-stage funding



Credit: InfinAstro

Ubinexus to develop communication payloads

The Chinese start-up company has secured **“hundreds of millions of yuan” (¥100 million = €13.4 million) in pre-Series and Series A rounds** of financing. Ubinexus develops satellite communication payload systems and services, and has also deployed the ‘Pingtian’ constellation, which combines remote sensing and IoT communication to gather and compute data in space before transmission back to Earth. The funding will be used to expand R&D and manufacturing operations, and develop an integrated space-ground architecture.

InfinAstro to strengthen on-orbit services capacities

InfinAstro has raised **“tens of millions of yuan” (¥10 million = €1.3 million) in an Angel round** led by Unity Ventures. InfinAstro seeks to reinforce Chinese commercial in-space services. The company manufactures an orbital transfer vehicle called “Space Bus”, which enables precise satellite deployment across multiple orbits. In the future, and also aims to offer satellite life extension, re-entry, and payload delivery services. The investment will serve to accelerate product development.

Light Year Exploration to expand steel manufacturing of rocket parts

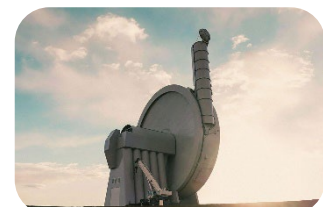
Light Year Exploration has secured **“tens of millions of yuan” in a pre-Series A round** co-led by Golden Rain (Jinyu) Bogor and Yuanhang Capital. The start-up manufactures stainless steel components of launchers’ core structure, such as storage tanks, fairings, and cones, which, it says, are cheaper and comparable in performance to aluminium structures. The capital will go towards R&D, scaling of manufacturing capacity, and hiring.

Startical secures €10.5 million from Spanish Government

Startical has received **€10.5 million in funding from the Spanish Ministry of Transport, Mobility and Sustainable Mobility**, distributed through ENAIRE, the country’s national air navigation manager. Startical is a joint venture between ENAIRE and Indra, a Spanish information and defence technology company. It aims to operate a constellation of 200 LEO satellites, improving the safety and capacity of global air traffic through both surveillance and VHF communications services. The company launched its first satellite in March 2025 as part of the European ECHOES project, and will leverage the investment to continue building its technological demonstration capacities.

SpinLaunch receives \$12 million for satcom constellation

SpinLaunch has announced **\$12 million in strategic investment** from Norway’s Kongsberg Defence & Aerospace. The company’s core technology is a kinetic centrifuge launcher that spin payloads, providing an initial boost before a rocket-based stage places them into orbit. This investment marks a pivot for SpinLaunch, as it will be directed towards the development of a 280-satellite LEO communications constellation called “Meridian”, whose first launches will be conducted on traditional rockets before turning to their kinetic technology. The satellites’ manufacturing was contracted to Kongsberg NanoAvionics, with an in-orbit demonstrator planned for 2026.



Credit: SpinLaunch



In other news

Voyager announces acquisition of LEOcloud to expand into cloud computing: LEOcloud develops its SpaceEdge LEO architecture, designed for secure computing of space-based data and low-latency transmission back to Earth. The acquisition will strengthen Voyager's existing capacities in the sector, supporting customer demand in data processing and analytics, and will reduce latency in mission applications and further enable autonomous spacecraft operations.

Connektica raises €3 million for manufacturing automation platform: The French-Canadian start-up develops an automation software platform enabling companies to scale their production while ensuring traceability and respect of industry standards. Already present in the space sector through contracts with Anywaves and U-Space, Connektica will seek to expand its market and targets 100 SME customers and €3 million in recurring revenues by 2028.

Katalyst Space Technologies acquires Atomos Space for docking operations: Katalyst installs upgrades on satellites through in-orbit servicing, while Atomos develops the Quark spacecraft, capable of docking and Rendezvous and Proximity Operations (RPO), and which is to complete a LEO demonstration in 2024. Katalyst aims to leverage these RPO capabilities for multi-service missions, including satellite upgrades, life extension, and SDA, therefore sharing costs across multiple customers.

Penetrator secures ¥550 million (\$3.8 million) in a Series A round: the Japanese company leverages space-based data and AI in its WHERE platform to inform real-estate transactions. The service targets brokers and businesses looking to develop facilities. The investment will go towards hires and business development abroad.

Exobiosphere raises €2 million in a Seed round led by Expansion Ventures: the Luxembourg-based company leverages microgravity to enhance disease modelling, providing valuable data to AI-driven drug discovery models. Exobiosphere will direct the funding to accelerate the development of its autonomous lab platform.

Solix Group to acquire Cobham Satcom for an undisclosed fee: Cobham Group, a Danish defence and aerospace company, has announced an agreement to sell its Satcom division to private equity firm Solix Group. Cobham Satcom develops secure, satellite-based communications solutions for remote locations. The acquisition, subject to regulatory approval, is expected to close by the end of the year and enable further growth for the company.

Fisica acquires Space Vector for an undisclosed fee: Fisica, an aerospace and defence company formed last year through the acquisition of three L3 Harris businesses, has acquired Space Vector, a manufacturer of batteries, flight termination systems, and radio systems. The acquisition will augment Fisica's product offer.

Privateer secures strategic investment from Taiwan's Far Eastern Group: Privateer merges space-based data sources and analyses them through AI solutions to provide analytics and intelligence in the space domain awareness and EO sectors. The company, which raised a \$56.5 million Series A in May 2024, will leverage the investment to expand into the Asia-Pacific market.

Aurora Avionics raises £500k in investment from public and private investors: Founded by former Orbex employee, Aurora Avionics develops avionics and control systems for launch vehicles, as well as onboard computing devices. The funding will be directed towards hires, technology iteration, and scaling of operations.

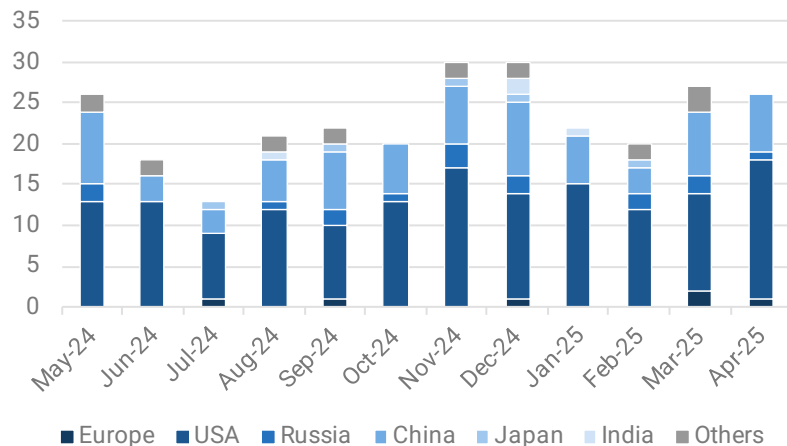


LAUNCHES & SATELLITES

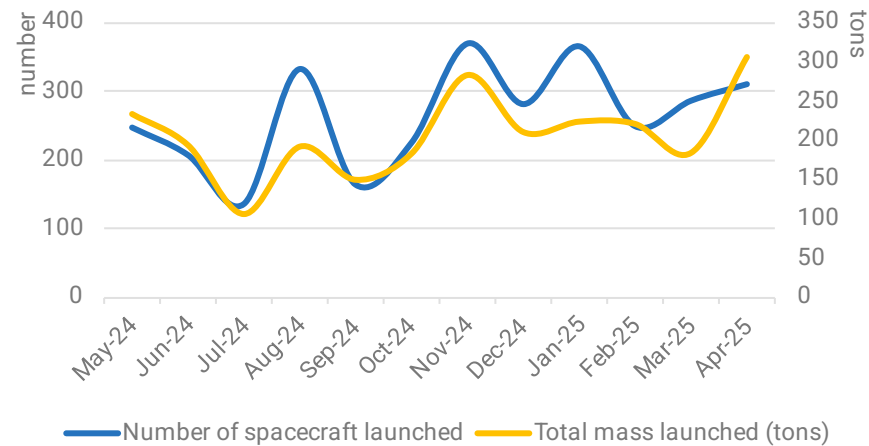
Global space activity statistics

April 2025	Europe	USA	China	Russia	Total
Number of launches	1	17	7	1	26
Number of spacecraft launched	1	311	24	1	337
Mass launched (in kg)	1170	267 543	30 138	7050	305 901

Launch activity over the year



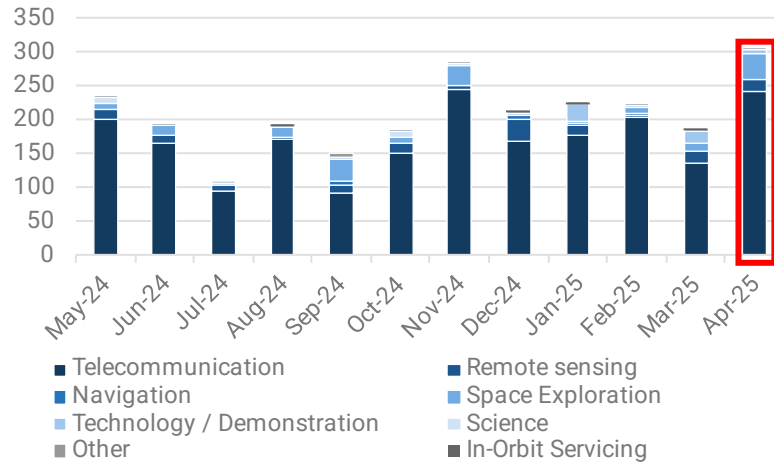
Evolution of the number of launches per launch country



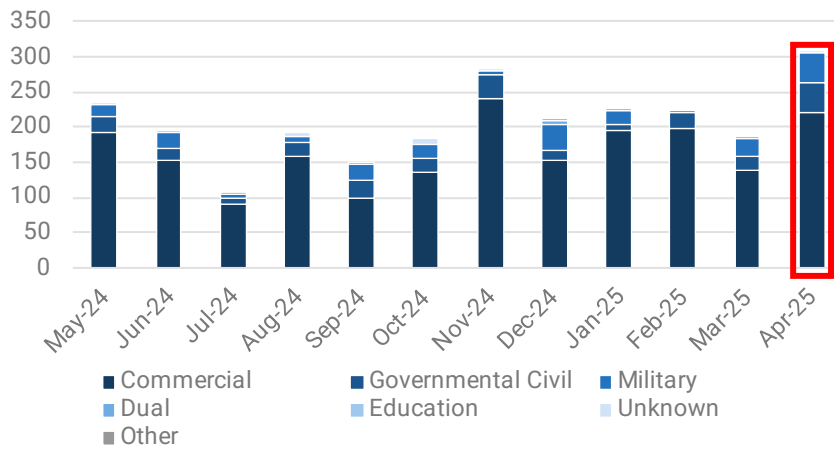
Evolution of launch activity over the year 2024-2025



Satellite missions and markets



Evolution of the total mass launched (tons) per mission (May, 2024-Apr, 2025)



Evolution of the total mass launched (tons), per market (May, 2024-Apr, 2025)

April 2025	Telecommunication	Remote sensing	Exploration	Science	Tech / Dem.	Other
Europe		1170			477	
USA	224 850	16 011	23 055		1000	1350
China	15 000		8028		6960	150
Russia			7050			
Others		800				

Total mass (kg) launched by mission and customer country

April 2025	Commercial	Governmental Civil	Military	Unknown
Europe	250	1397		
USA	219 516	11 000	35 750	
China		23 788	5000	1350
Russia		7050		
Others			800	

Total mass (kg) launched by market and customer country



LAUNCH HIGHLIGHTS

First operational batch of Amazons Kuiper constellation satellites launched

On April 28th, an **Atlas V 551 rocket successfully carried the first operational satellites for Amazon's Project Kuiper into space.** The launch, conducted with an unusual level of confidentiality for a commercial endeavour, marked a major milestone in Amazon's plan to build a satellite internet constellation comprising 3,232 satellites in LEO. These newly launched satellites are the first fully operational units for Project Kuiper, following the deployment of two prototypes in October 2023, which Amazon later confirmed had completed testing successfully. Despite this progress, Amazon is currently running behind its original deployment timeline. According to the conditions of its license from the U.S. Federal Communications Commission (FCC), the company is required to place half of its satellite network into orbit by July 2026, with the full constellation completed by mid-2029. Looking ahead, the bulk of the Kuiper satellites are set to launch aboard three different rockets: Ariane 6 (Arianespace), New Glenn (Blue Origin), and Vulcan Centaur (ULA). All three vehicles have only recently begun operations, with Ariane 6 and Vulcan each completing two launches and New Glenn having flown once so far. The first Ariane 6 mission carrying Kuiper satellites is currently anticipated no earlier than late 2025.



Credit: ULA

ESA Biomass satellite launched on Vega C

A Vega C rocket has successfully delivered the Biomass Earth observation satellite into orbit for the European Space Agency. The satellite was developed by Airbus Defence and Space under ESA's Earth Explorer program, which focuses on scientific missions to better understand our planet.



Credit: Arianespace

Its main instrument is a P-band synthetic aperture radar (SAR) designed to monitor global forest biomass, effectively "weighing" Earth's forests to assess their carbon storage and how it changes over time. Over the next four years, the satellite will conduct interferometric measurements to detect variations in forest structure, height, and carbon content. Additionally, it will collect data over glacial regions and desert landscapes, utilizing its radar's ability to penetrate ice and sand layers, features that are typically challenging for optical sensors. ESA also plans to collaborate with NASA by sharing data with the upcoming NISAR mission, which will carry its own SAR payload operating at different radar frequencies, enabling complementary observations.

Lockheed tech demo satellite launch on Firefly Alpha rocket fails

A Firefly Alpha rocket experienced a malfunction during its April 29 launch, resulting in the failure of a technology demonstrator to reach orbit. The mission's payload was a Lockheed Martin LM 400 satellite, intended to serve as a technology demonstration for the company's mid-sized satellite platform to validate the platform's performance and readiness for future operational missions. The reason for the failure has not been disclosed yet.

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