

The eoPortal Newsletter

May 2026

ICEYE Constellation Launches 70th Satellite

The ICEYE constellation reached a major milestone on March 30, 2026, with the launch of six new synthetic aperture radar (SAR) satellites from Vandenberg Space Force Base, California, as part of SpaceX's Transporter 16 Rideshare Mission. Since the company's inaugural launch in 2018 with the ICEYE-X1 mission, ICEYE has now placed 70 satellites in orbit.

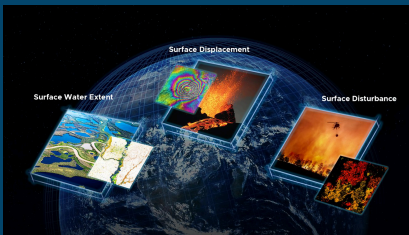


Image credit: ICEYE

ICEYE's X-band SAR satellites provide very high-resolution imaging down to 25 cm resolution, operating independently of cloud cover and daylight. The system enables frequent observations of Earth's surface, supporting rapid detection of changes such as flooding, vessel movement, and infrastructure disruption.

The constellation contributes to ESA's Third Party Missions programme (TPM), providing open access to SAR data for scientific research and algorithm development, and supports the Copernicus Contributing Missions (CCMs) framework by complementing Sentinel observations with high-resolution, all-weather radar imagery. ICEYE also supports the Greek National Smallsat Programme with dedicated SAR satellites and national tasking capability, alongside access to the broader commercial constellation. In March 2026, ICEYE launched a deforestation monitoring service that uses SAR to provide near real-time insights into illegal logging and forest loss, even in persistently cloud-covered tropical regions.

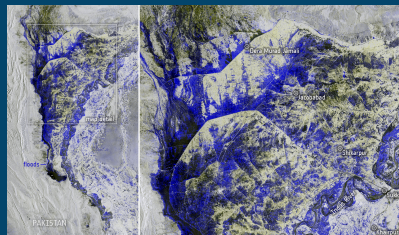
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Synthetic Aperture Radar (SAR)

Synthetic aperture radar (SAR) is a sensing technique that uses reflected microwave signals from Earth's surface to detect flooding, land deformation, and surface change through cloud cover and darkness, supporting mapping and disaster response.

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Flood Monitoring

Satellite flood monitoring employs radar and optical sensors to map flood extent, track water levels, and detect changes in near-real time. These data support forecasting, emergency response, and long-term flood risk assessment globally.

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Oil Spills

Oil spill monitoring from space relies on radar and optical satellites to identify slicks, map their spread and estimate their thickness. These data support clean-up efforts, identify sources, and mitigate environmental damage.

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Launch Highlights

Elektro-L N5 was launched on February 12, 2026 at 23:35 UTC aboard a Proton-M rocket from Baikonur Cosmodrome, Kazakhstan, deploying the geostationary meteorological satellite for continuous Earth imaging.

[Read more](#)

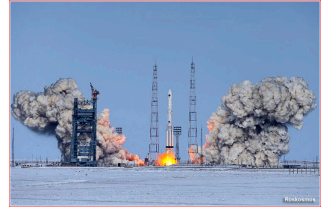


Image credit: ROSKOSMOS

SpaceX's **Transporter 16 Rideshare Mission** launched from Vandenberg Space Force Base's Space Launch Complex 4E (SLC-4E) on March 30, 2026, at 11:02 UTC. It carried several payloads, including:

- [ICEYE](#) - 6 satellites
- [NewSat](#) - 2 satellites
- [HotSat-2](#)
- [GARA1 B](#)
- [HawkEye 360](#) - 3 satellites

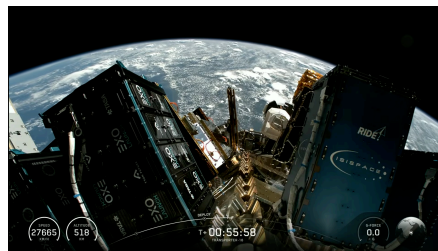


Image credit: SpaceX

- [BRO-19](#)
- [Alba Orbital](#) - 2 satellites
- [AISSat-4](#)
- [Spire Global](#) - 10 satellites
- [D-Orbit ION](#) - 6 satellites



Image credit: Rocket Lab

StriX-6 was launched on March 20, 2026 at 18:10 UTC aboard an Electron rocket from Rocket Lab Launch Complex 1B in the Māhia Peninsula, New Zealand. The mission was dubbed "Eight Days a Week" marking the eighth mission for Synspec's SAR constellation.

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Artemis II was launched on April 1, 2026 at 22:35 UTC aboard a Space Launch System rocket from Kennedy Space Center (LC-39B), Florida, marking the first crewed Orion flight and the first human mission beyond low Earth orbit since Apollo 17 in 1972.

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Image credit: NASA, BBC News



Image credit: CASC

Daqi-2, a high-precision greenhouse gas detection satellite, launched at 04:10 UTC on April 17, 2026, from LA-4 / Pad 603 (SLS-2) at Jiuquan Satellite Launch Center in China, onboard a Long March 4C rocket.

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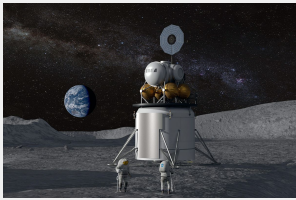
The **CAS500-2** mission was launched on May 3, 2026 from Vandenberg Space Force Base's Space Launch Complex 4E (SLC-4E) in California, at 07:00 UTC, onboard SpaceX's Falcon 9 rocket. This mission represents the 33rd successful flight using the first-stage booster.

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Image credit: SpaceX

Recent Highlights

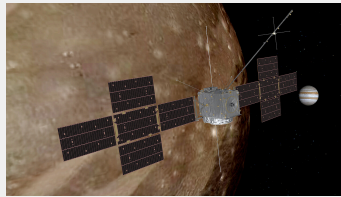


Artemis Program

Non-EO Mission - Lunar Exploration

The Artemis program is a NASA lunar exploration campaign developing crewed missions, spacecraft systems, and surface operations to return humans to the Moon and enable sustained deep space exploration.

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CSES-2

EO Mission - Electromagnetic Field Monitoring

The China Seismo-Electromagnetic Satellite-2 (CSES-2) is a China-Italy mission studying ionospheric disturbances and electromagnetic signals to investigate earthquake precursors and space weather effects.

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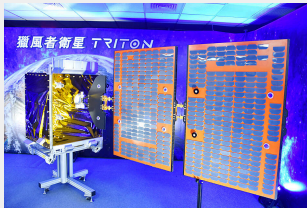


GNSSP

EO Mission - Disaster Monitoring

The Greek National Small Satellite Programme (GNSSP) is a national initiative developing small satellites to provide Earth observation data and support disaster monitoring and maritime awareness.

[Read more](#)

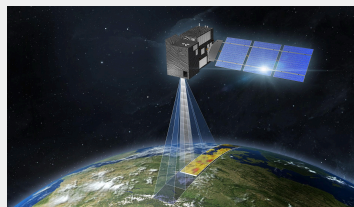


TRITON

EO Mission - Ocean and Climate Monitoring

Taiwan's space-based mission TRITON is designed to monitor atmospheric conditions, ocean parameters, and climate-related variables, supporting environmental analysis and operational forecasting.

[Read more](#)

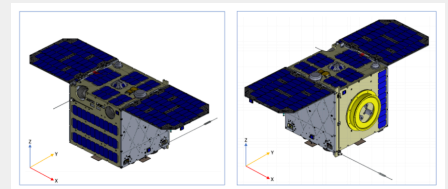


CO2M

EO Mission - Greenhouse Gas Monitoring

CO2M is a Copernicus satellite mission dedicated to measuring atmospheric carbon dioxide and methane concentrations, supporting climate monitoring, emission verification, and global GHG accounting.

[Read more](#)



Diwata-2

EO Mission - Environmental Assessment

The Diwata-2 satellite is a Philippine Earth observation mission which provides high-resolution imagery for disaster monitoring, environmental assessment, and resource management.

[Read more](#)

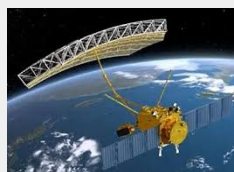


ResourceSat-3

EO Mission - Agricultural Management

ResourceSat-3 is an Indian satellite mission designed to deliver multispectral imaging for monitoring crops, forests, and land resources, supporting agricultural and environmental management.

[Read more](#)

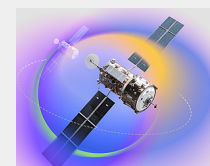


HJ-2

EO Mission - Environmental Monitoring

HJ-2 (Huan Jing-2) is a Chinese Earth observation satellite mission that uses optical and infrared sensors to support environmental monitoring, disaster response, and mapping of natural resources.

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Deloitte-1

Non-EO Mission - On-orbit Cybersecurity

Deloitte-1 is a CubeSat mission from the Deloitte Space programme, developed to test on-orbit cybersecurity systems including intrusion detection and analysis.

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Orbital Debris

Orbital debris refers to the growing population of non-functional objects in Earth orbit, including inactive satellites, discarded rocket stages, and fragments produced by collisions, explosions, or surface degradation. These objects span from intact spacecraft to millimetre-scale fragments, with over 43,000 catalogued objects and millions of smaller debris particles concentrated in low Earth orbit.

The population of debris in Earth orbit is increasing through continuous launch activity, failed or end-of-life spacecraft disposal and high-energy collision events, leading to progressive orbital congestion and long lived debris clouds. Travelling at orbital velocities exceeding 7 kilometres per second, even millimetre-sized particles carry sufficient kinetic energy to damage or disable spacecraft, endanger crewed missions, and increase the likelihood of chain reaction collisions known as the Kessler Syndrome. Mitigation approaches include post-mission disposal, spacecraft passivation to prevent explosions, design that ensures spacecraft fully burn up during atmospheric re-entry, and emerging active debris removal systems, with future efforts focusing on stricter operational guidelines, coordination, and sustainable orbital traffic management.

[Read more](#)

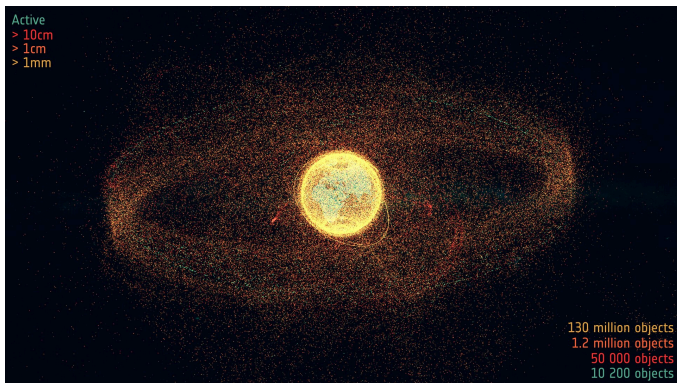


Image credit: ESA

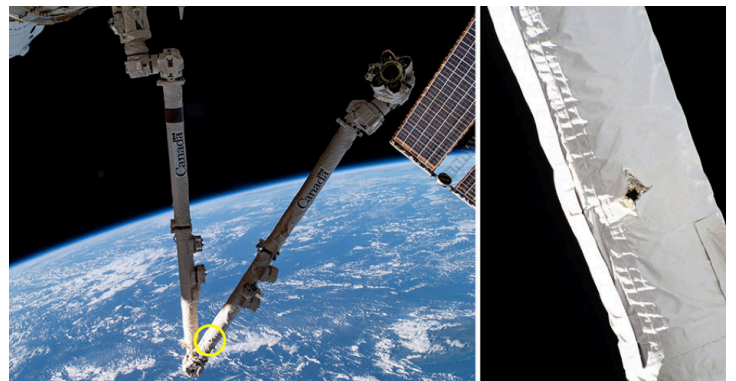
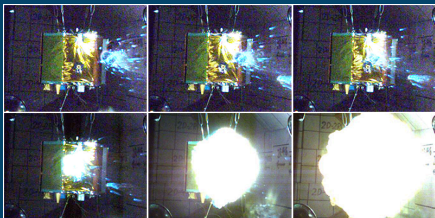


Image credit: NASA, CSA

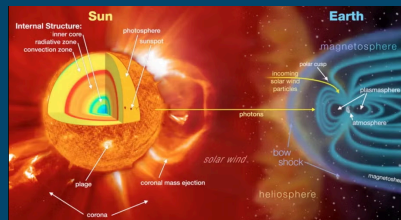
Debrisat



Debrisat was a test satellite destroyed in a controlled hypervelocity impact test to study fragmentation behaviour, generating detailed debris data to improve models, risk assessment, and understanding of how collisions create debris in orbit.

[Read more](#)

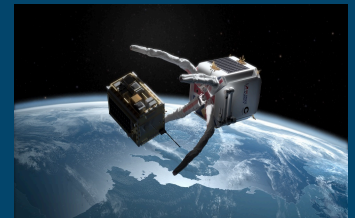
Effect of Solar Cycle



Solar activity influences atmospheric density in low Earth orbit, affecting how quickly objects decay towards Earth. Increased solar radiation expands the atmosphere, accelerating orbital drag on spacecraft and debris.

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Mitigation Methods



Mitigation methods for managing orbital debris focus on reducing fragmentation, limiting long term object persistence, and ensuring safe spacecraft disposal. Developing technologies aim to clear debris from congested orbital regions.

[Read more](#)