

CEOS MIM Database Quarterly Report

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The CEOS MIM Database provides information on satellites based on an annual survey of CEOS member agencies. It is updated annually and is available online at database.eohandbook.com. This report is a summary of key mission activities from the past quarter and provides a look at the next six months.

Latest News

ALOS-4, the latest in JAXA's Advanced Land Observing Satellite (ALOS) series, successfully launched onboard the agency's H3 rocket on June 30, 2024 from Tanegashima Space Center. ALOS-4 is the successor to ALOS-2, with both missions carrying L-band SAR instruments for monitoring disasters, forests, sea-ice, and infrastructure development. ALOS-4 has an improved **PALSAR-3** instrument, with higher resolution and expanded swath width, enabled by digital beam-forming (DBF) techniques.

ESA's **Arctic Weather Satellite (AWS)** is the protoflight satellite for EUMETSAT's planned **EPS-Sterna** constellation of meteorological microsatellites providing passive microwave soundings for global atmospheric temperature and humidity profiles in all weather conditions, with frequent revisits over the Arctic and Antarctic polar regions. AWS launched on board SpaceX's Transporter-11 mission on August 16, 2024, carrying a cross-track scanning microwave radiometer.

The third **Copernicus Sentinel-2** satellite launched from Europe's Spaceport in French Guiana aboard the final Vega rocket on 4 September 22:50 local time. With Sentinel-2C now in orbit, it will soon replace its predecessor, **Sentinel-2A**, following a brief period of tandem observations. **Sentinel-2D** will eventually take over from **Sentinel-2B**, and **Sentinel-2 Next Generation** will ensure data continuity beyond 2035.



ALOS-4 (JAXA)

Upcoming Launches

Mission	Agencies	Launch	Purpose
Ionosphaera-M N1 & 2	ROSKOSMOS / ROSHYDROMET	November 2024	1st and 2nd satellites of the 5 of the Ionozond constellation for space weather monitoring.
Obzor-R N1	ROSKOSMOS	November 2024	Carries a high resolution X-band SAR instrument, for disaster, sea surface, and environmental monitoring.
CSG-3	ASI / MoD (Italy)	November 2024	3rd in the series of second-generation COSMO-SkyMed satellites, carrying an X-Band SAR instrument.
Aist-2T N1 & 2	ROSKOSMOS	December 2024	First and second in the series of new Russian environmental satellites, carrying a high resolution optical imager.
Resurs-P N5	ROSKOSMOS	December 2024	Carries medium and high resolution multispectral imagers, as well as a hyperspectral imager.
Sentinel-1 C	ESA / European Commission	December 2024	Third in the series of Sentinel-1 C-Band SAR missions, replacing Sentinel-1B, which became non-operational in December 2021.
Kondor-FKA N2	ROSKOSMOS	December 2024	Second in the series of S-band SAR missions for disaster monitoring, sea surface monitoring and environmental management
THEOS-2 Small Satellite	GISTDA	January 2025	Companion mission for THEOS-2A, centred around the transfer of knowledge to Thai engineers of satellite development and operations.
NISAR	NASA / ISRO	February 2025	Will track movement of the Earth's crust and ice cover with the first satellite to carry two SAR instruments with different radar frequencies.
QuickSounder	NOAA / NASA	February 2025	Pathfinder mission carrying an atmospheric sounder, taking advantage of the emerging commercial small spacecraft capabilities.
LOTUSat-1	VAST	February 2025	Vietnamese X-band SAR mission, to support disaster risk reduction and climate change mitigation.
NORSAT-4	NOSA / NDRE	February 2025	Carries an AIS Receiver and a Low Light Imager (LLI), for performing vessel detection in low light conditions.
MicroCarb	CNES / UKSA	March 2025	Carries an imaging spectrometer to measure atmospheric carbon dioxide concentrations.
CO3D	CNES	March 2025	Will provide global Digital Surface Models in 3D, of landmasses between +/- 70° latitudes with a resolution of 1 m.
RISAT-1B	ISRO	March 2025	C-Band SAR mission, for radar backscatter measurements of land, water and ocean surfaces for various applications.
GOSAT-GW	JAXA / MOE / NIES	March 2025	A follow-on mission from GOSAT-1 and GOSAT-2, focusing on greenhouse gases and the global water cycle.
Biomass	ESA	March 2025	Carrying the first space-based P-band SAR instrument, to provide comprehensive measurements of global forest biomass.



First image from Sentinel-2C (ESA)