

# CEOS MIM Database Quarterly Report

## October 2023

@EOHandbook

The Earth Observation Handbook, prepared by the European Space Agency (ESA) in support of the Committee on Earth Observation Satellites (CEOS), presents the main capabilities of satellite Earth observations, their applications, and a comprehensive overview of present and planned civil space agency Earth observation satellite missions and their instruments. The database which serves as the foundation for the missions, instruments, and measurements information at the heart of the Handbook content is updated annually and is always available online at:

<https://database.eohandbook.com>

This document provides a summary of key mission activities from the past quarter (July to September, 2023), and the coming two quarters (October 2023 to March 2024).

### Latest News

**FY-3F** launched on August 3 from Jiuquan Satellite Launch Centre. As the newest member of the “morning satellite” family among the FY meteorological satellites of the China Meteorological Administration, **FY-3F** will undertake the in-orbit operation of **FY-3C**. The collected data will serve weather forecasting, atmospheric chemistry and climate change monitoring. The satellite will operate in a sun-synchronous orbit, with an altitude of 830 km and a local solar time at ascending node (LTAN) of 14:00.

**THEOS-2** was successfully launched on a Vega rocket from Kourou on 9 October 2023. The Geo-Informatics and Space Technology Development Agency of Thailand (GISTDA) mission carries a high resolution imager. It will be joined in a constellation by **THEOS-2A**, which will also have the ability for video capture.



**THEOS-2**  
(Credit: GISTDA)

### Newest Missions

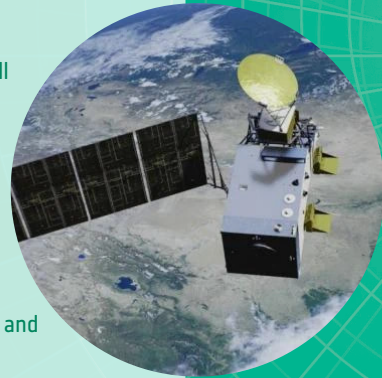
With thanks to CEOS Agency contacts, the annual CEOS MIM Database survey recently concluded. During this process, agencies added numerous new missions and instruments to the database.

NOAA's pair of **Space Weather L1 satellites (A & B)** are due for launch in 2028. They will each carry a coronagraph, magnetometer, the Supra Thermal Ion Sensor (STIS), and the Solar Wind Plasma Sensor (SWiPS). The A satellite will also carry an X-ray Flux Monitor, while the B satellite will have an X-ray Irradiance Sensor.

NASA added five new missions to the database this year, including their series of Atmosphere Observing System (AOS) missions, which includes **AOS-Sky**, **AOS-Storm**, **AOS-PM** (Precipitation Measuring Mission), and **HAWCSat** (High-altitude Aerosols, Water vapour and Clouds Satellite). CSA is a collaborator on **HAWCSat** and **AOS-Sky**, while JAXA and CNES are collaborators on **AOS-Storm** and **AOS-PM**. These missions are planned for launch around 2029-2031. NASA also added **PolSIR**, the Polarized Submillimeter Ice-cloud Radiometer, planned for launch in 2027.

**Himawari-10**, the next mission in the series of Japanese geostationary meteorological satellites, was added by JMA and JAXA. The mission will carry a sounder and imager, and will be launched in 2029 to a longitude of 140.7° East.

The follow up mission to **PRISMA**, **PRISMA2GEN**, was added to the database by ASI. The mission will carry an upgraded hyperspectral camera and the same panchromatic camera as **PRISMA**. Launch is planned for 2027.



**FY-3F** (Credit: NSMC)

The Mass-change And Geoscience International Constellation (**MAGIC**) of ESA and NASA will consist of a pair of satellites due to launch in 2032. NASA will lead the construction of the Mass Change Designated Observable mission (**MCDO**), while ESA will complement this with the Next Generation Gravity Mission (**NGGM**). Together, they will form a constellation to accurately monitor the temporal variations of Earth's gravity field at high resolution in time, following on from the work of previous missions such as **GRACE**, **GOCE**, and **GRACE-FO**.

### Upcoming Launches

Mission	Agencies	Launch	Purpose
INSAT-3DS	ISRO	October 2023	Planned as a spare for India's geostationary meteorological satellite series, carrying both imager and sounder instruments.
Resurs-P N4	ROSKOSMOS	December 2023	Carries medium and high resolution multispectral imagers, as well as a hyperspectral imager.
Meteor-M N2-4	ROSKOSMOS / ROSHYDROMET	December 2023	Next in the series of Russian hydrometeorology satellites.