EUMETSAT updates since CGMS-53 and report on medium to long-term plans

CGMS-54 plenary, item 3

EUMETSAT

- We deploy
- We deliver
- We plan for the future

WE DEPLOY – CURRENT SATELLITES OPERATED BY EUMETSAT

Sentinel series
Low Earth orbit
Marine and atmospheric composition missions for Copernicus.

Sentinel-3A and -3B (98.7° incl.)
Sun-synchronous orbit.

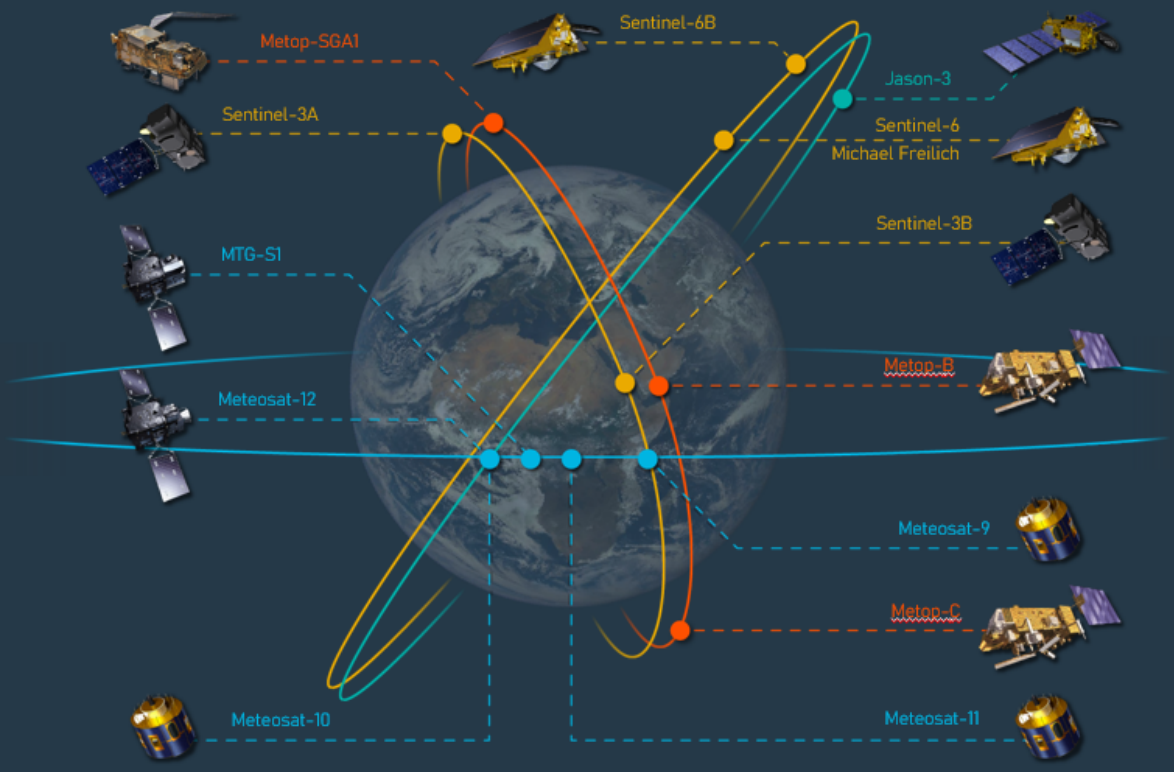
Sentinel-6 Michael Freilich and its replacement, Sentinel-6B (66° incl.)
Non-synchronous orbit.

Jason-3 (66° incl.)
Low Earth, non-synchronous orbit
Global sea surface height observations.

Metop series
Low Earth, sun-synchronous orbit
Global observations for weather forecasting and climate monitoring.

Metop First Generation
Metop-B and -C (98.7° incl.)

Metop Second Generation
Metop-SGA1 (98.7° incl.)
Carries six instruments, including Sentinel-5.



Meteosat series
Geostationary orbit
Imagery for weather forecasting and climate monitoring.

Meteosat Second Generation
Meteosat-9 (45.8° E)
Imagery over Indian Ocean (every 15 min).

Meteosat-10 (0°)
Imagery over Europe (every 5 min).

Meteosat-11 (9.5° E)
Imagery over Europe and North Africa (every 5 min).

Meteosat Third Generation
Meteosat-12 (0°)
Full-disc imagery (every 10 min).

MTG-S1 (3.4° W)
Air quality monitoring instruments, including Sentinel-4.

→ 13 satellites in orbit – 16 by the end of 2026

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WE DEPLOY – RECENT AND PLANNED LAUNCHES

2025

© SpaceX

MTG-S1 successfully launched on 1 July 2025

© CNES, ESA, Arianespace, Optique Vidéo CSG, S. Martin

Metop-SGA1 successfully launched on 13 August 2025

© NASA TV

Copernicus Sentinel-6B successfully launched on 17 November 2025

2026

© Thales Alenia Space–Alban Pichon

MTG-I2 completes environmental tests

© ESA–P. Sebirot

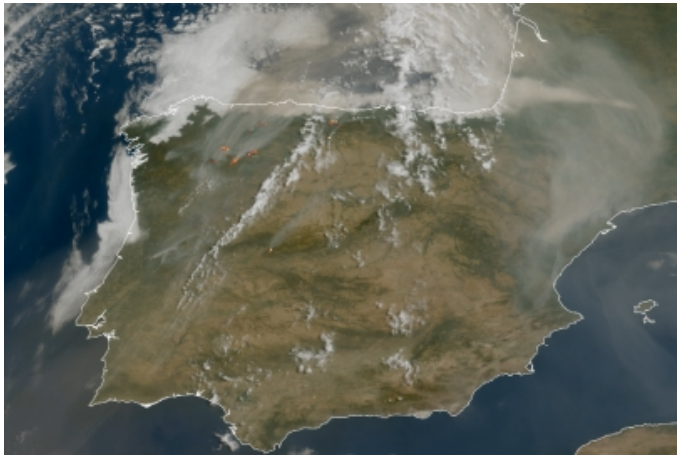
Metop-SGB1 unfolds its solar wind

© Thales Alenia Space

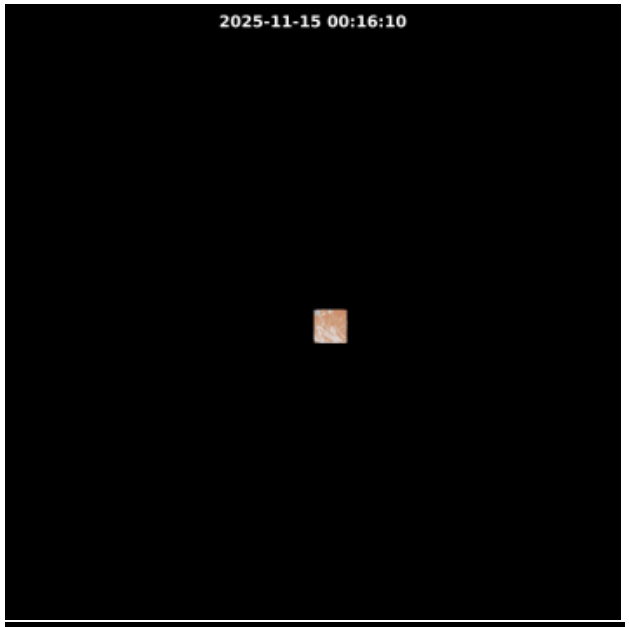
Copernicus Sentinel-3C in the cleanroom

WE DELIVER – IMPROVED OBSERVATIONS & NEW PRODUCTS FROM MTG

- MTG-S/IRS (Commissioning): improved spatial and temporal resolution of 3D atmosphere chemistry, pollution sources, cloud detection; highly beneficial for nowcasting, severe storm forecasting and 3D winds
- MTG-I/FCI+LI (Operational): observations of storms' full cycle and improved tracking of wildfire hotspots, smoke and dust transports, volcano plumes
- More improvements with MTG-S/S-4 (Copernicus) and MTG-I/GEOSAR

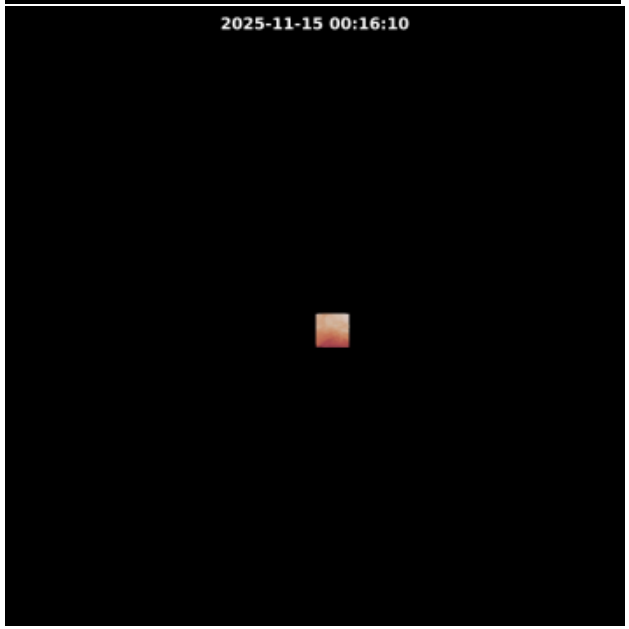


MTG-I/FCI+LI, Portuguese and Spanish fires, 17/08/2025



MTG-S/IRS:

Surface-temperature-sensitive channel, highlighting land and sea surface temperatures as well as cloud-top temperatures and cloud structures.

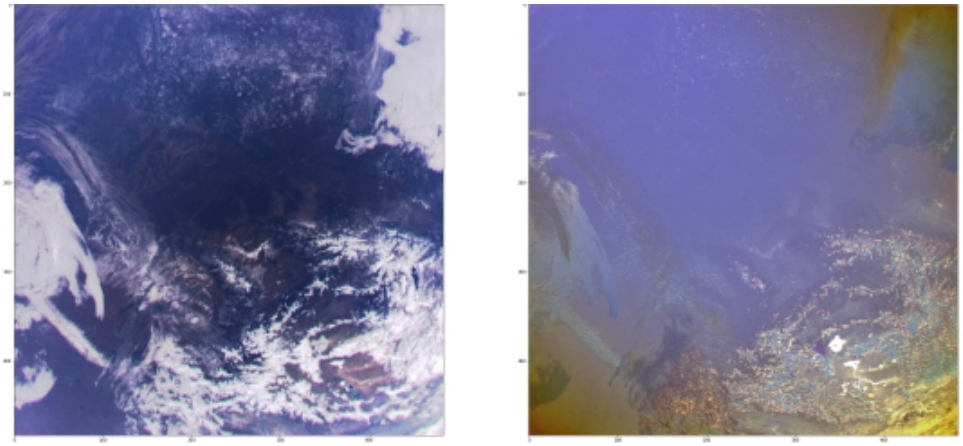


MTG-S/IRS:

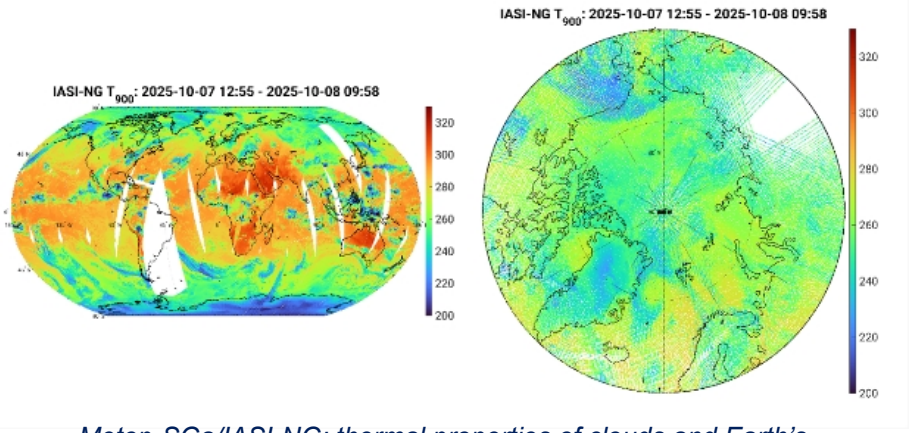
Humidity-sensitive channel, highlighting the atmospheric movement lined to humidity and winds, linked to weather structures

WE DELIVER – IMPROVED OBSERVATIONS & NEW PRODUCTS FROM EPS-SG

- Metop-SGa/METImage (Commissioning): higher-resolution true-colour and IR observations
- Metop-SGa/3MI (Commissioning): enhanced imagery with polarisation of aerosol variables over ocean and land
- Metop-SGa/IASI-NG (Commissioning): increased sounding performance of atmosphere temperature, humidity and composition (ozone, methane, carbon dioxide, aerosols, etc.)
- More improvements with Metop-SGa/MWS, Metop-SGa/RO and Metop-Sga/S-5 (Copernicus)



Metop-SGa/3MI: Xinjiang → Tibet → India, 19/10/2025



Metop-SGa/IASI-NG: thermal properties of clouds and Earth's surface, 07/10/2025

Metop-SGa/METImage: near-global coverage, 25-27/09/25

WE PLAN FOR THE FUTURE – COMPLEMENTING MTG AND EPS-SG IN 2026-2040

While deploying MTG and EPS-SG systems, EUMETSAT is preparing the future – with the objective to complement its portfolio of observations and enhanced its response to the implementation of **WIGOS 2040**.

- **EPS-Sterna**, a microwave sounding constellation – **Approved in January 2026**
- **EPS-Aeolus**, based on the heritage of ESA's Aeolus wind lidar mission – **Proposed in 2026**
- **EUMETSAT Altimetry programme**, continuation of Sentinel-3 and -6 – **Proposed in 2026**

- More **commercial data**, primary focus on RO and MWS – **Ongoing**
- More data from **international partnerships** – **Ongoing**
- **Foresight mechanism** - laying the groundwork for **Meteosat 4th (M4G)** and **EPS 3rd (EPS-TG)** generations – **Started in 2025**

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WE PLAN FOR THE FUTURE – EPS-Sterna, leveraging benefits from CGMS

A possible implementation of the specified **and** flexible backbones of WIGOS 2050

Possible leverage from partners:

Antarctica coverage

A 6-sats MWS constellation based on Sterna design in inclined orbit 50° N-S

3 more planes on different ECT

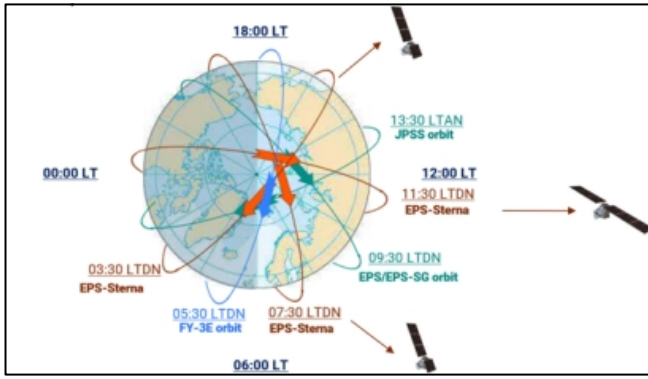
The added-value of CGMS

EPS-Sterna

Coordination on **orbits**

Coordination on **instrument design**

Coordination on **data processing**



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QUESTIONS?

Thank you for your attention