

What does MTG bring to Sea Surface Temperature monitoring

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EUMETSAT OSI SAF

EUMETSAT MTG event week / 12/12/2025



EUMETSAT
OSI SAF
OCEAN AND SEA ICE



State of the art

What was done before MTG.

“Day 1” product

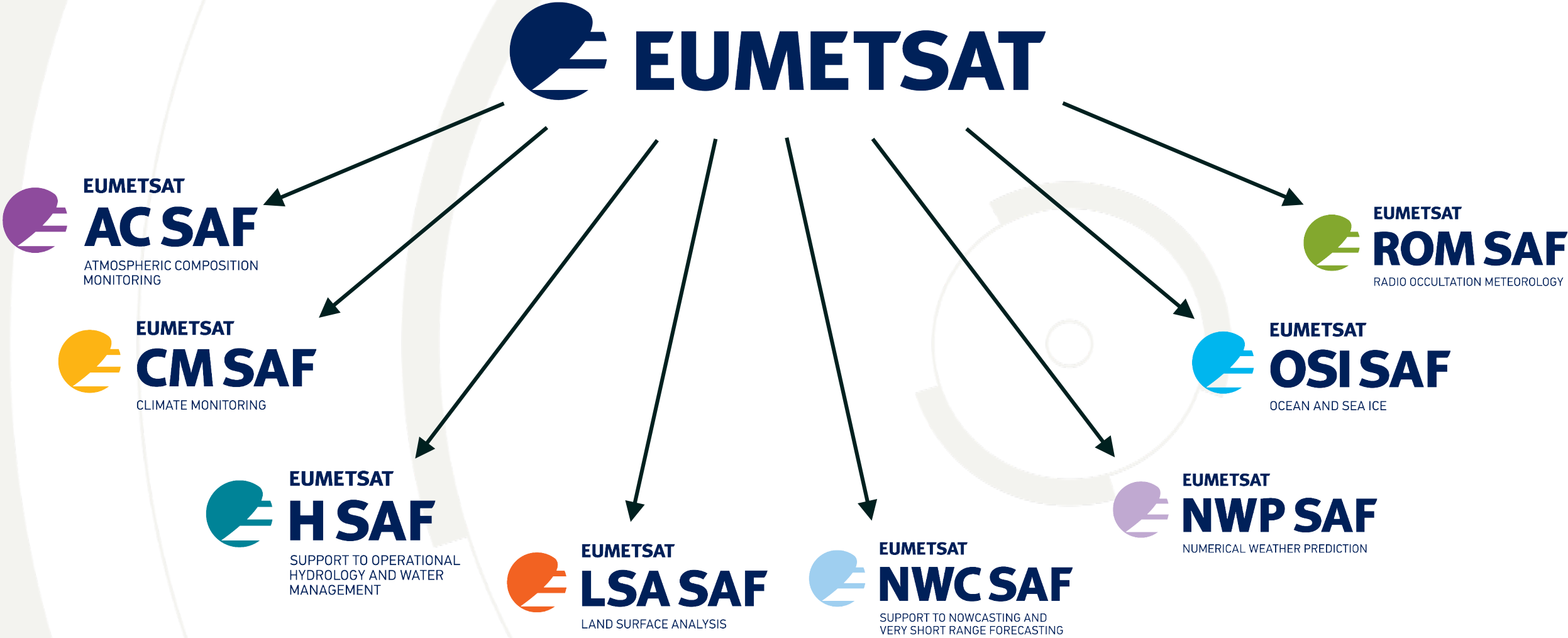
Service continuity.

New products to come

Innovations to expect.

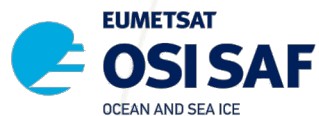


A decentralized production network





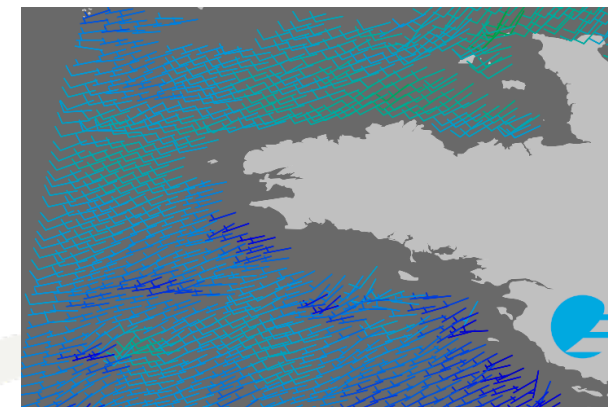
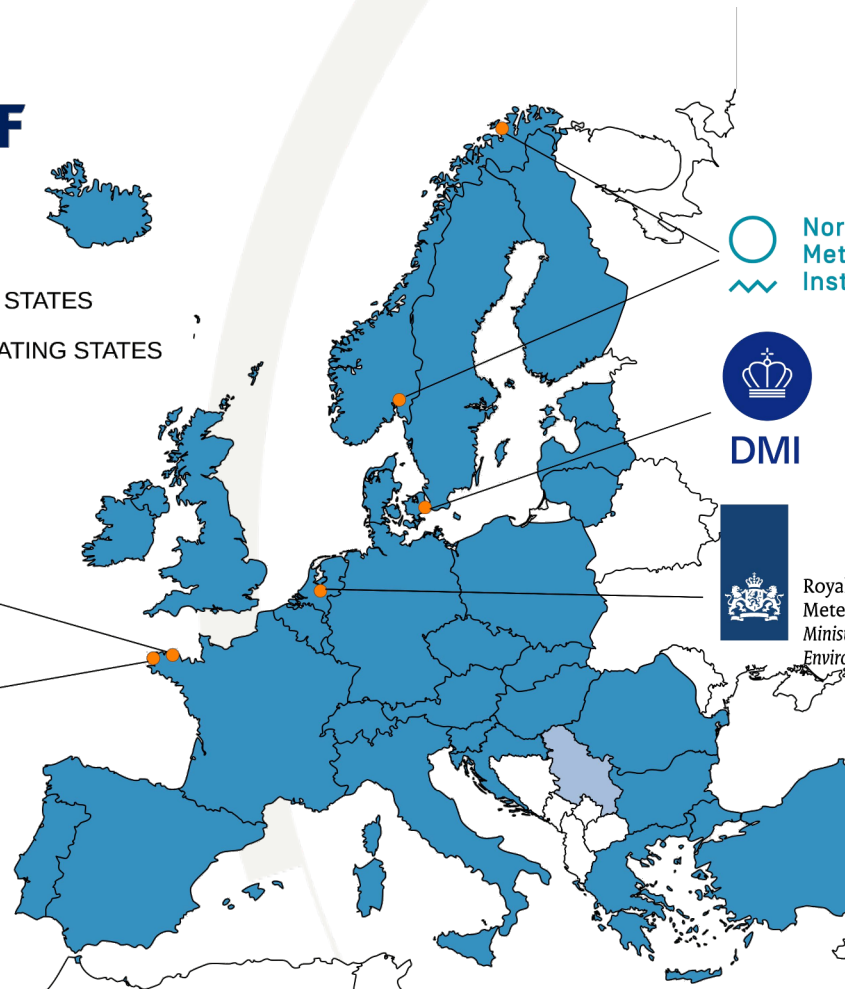
OSI SAF : Ocean and Sea Ice



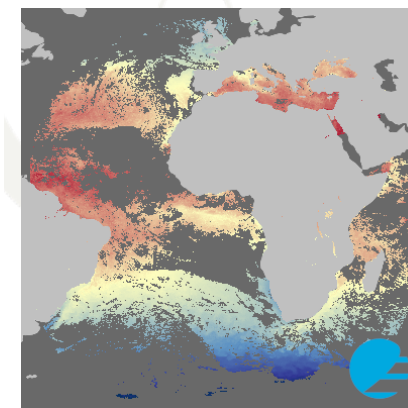
-  EUMETSAT MEMBER STATES
-  EUMETSAT COOPERATING STATES



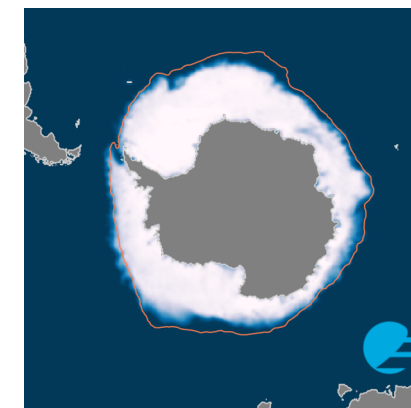
Ifremer



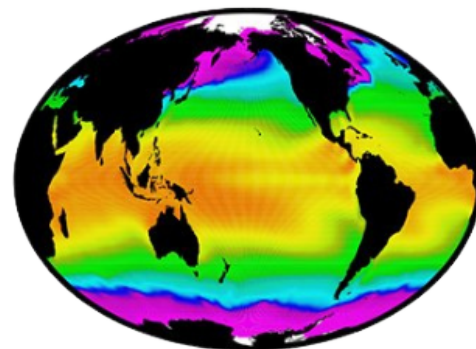
Ocean Winds



Sea Surface
Temperature



Sea Ice

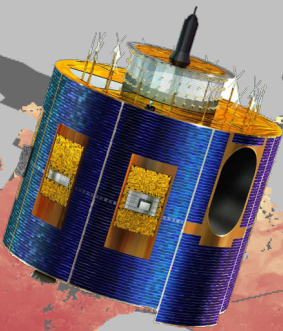
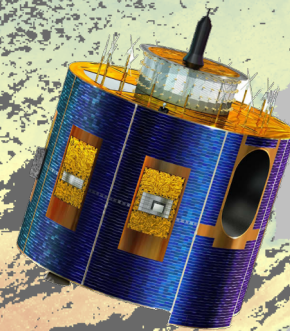
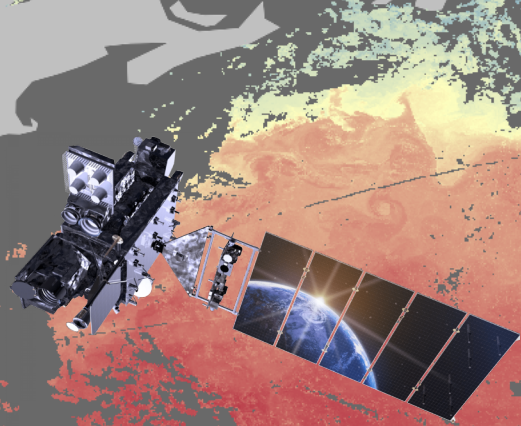


GHR SST

- Data Specification
- Common definitions to the community (depth, resolutions, ...)
- Users training
- Online catalogue
- Documentation
- ...

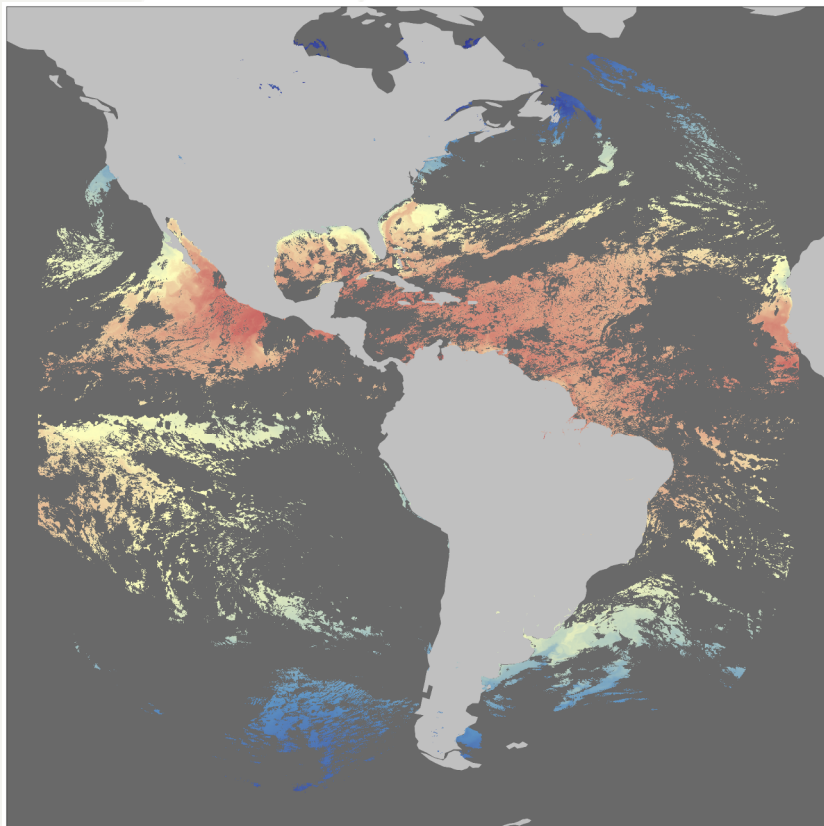
<https://www.ghrsst.org/>

State of the art

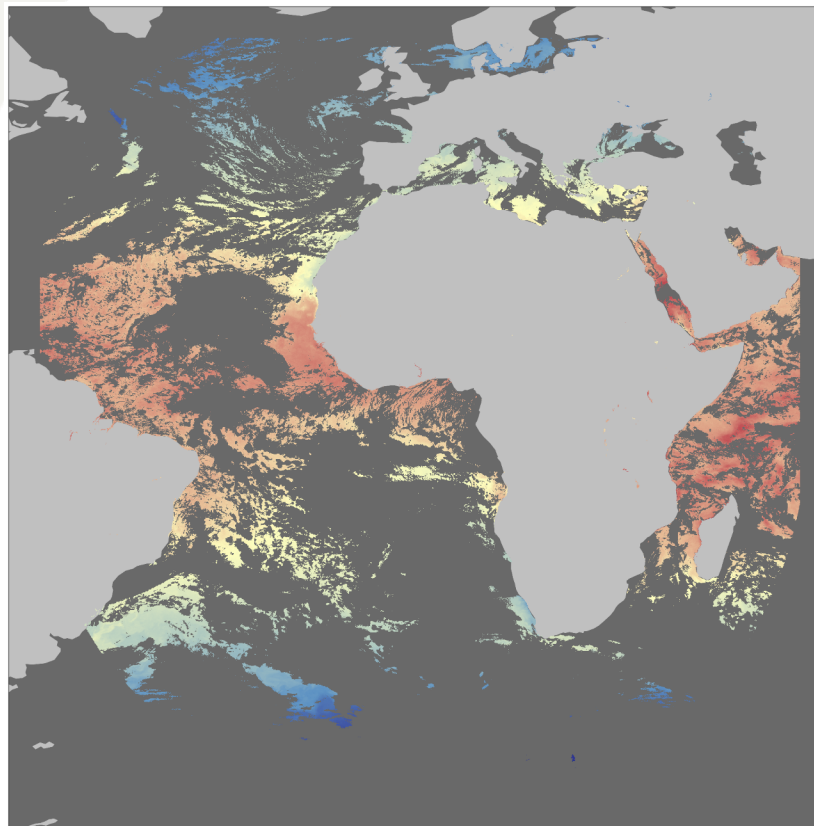




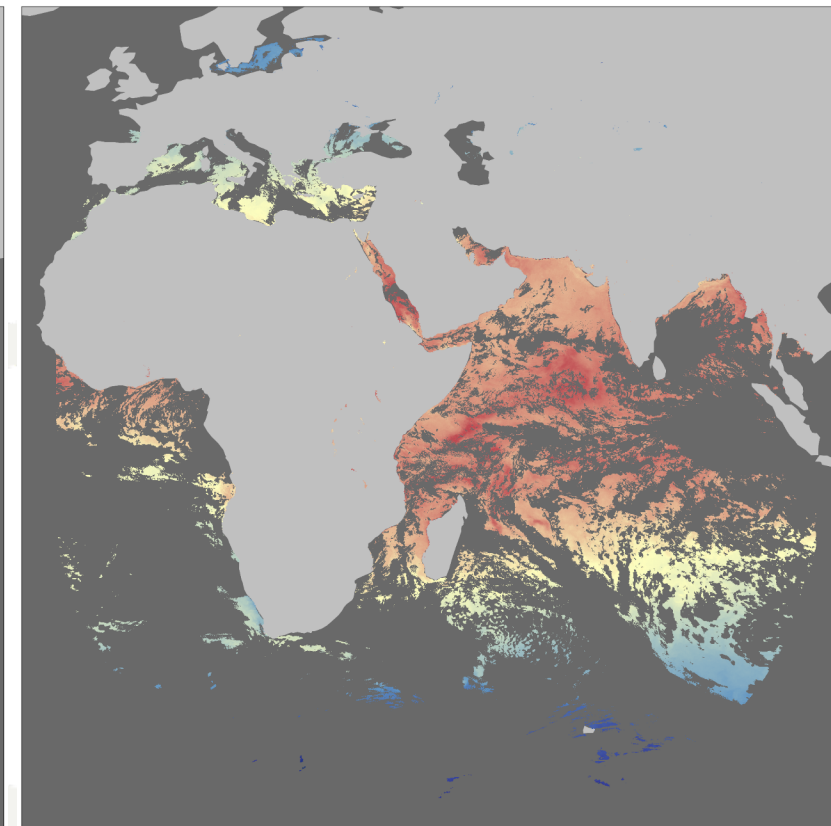
Sea Surface Temperature – 15/11/2025 09:00 UTC



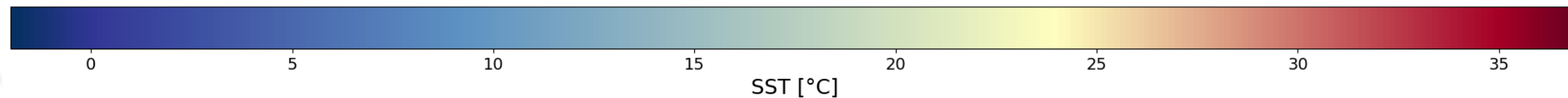
GOES-East
OSI-207-b

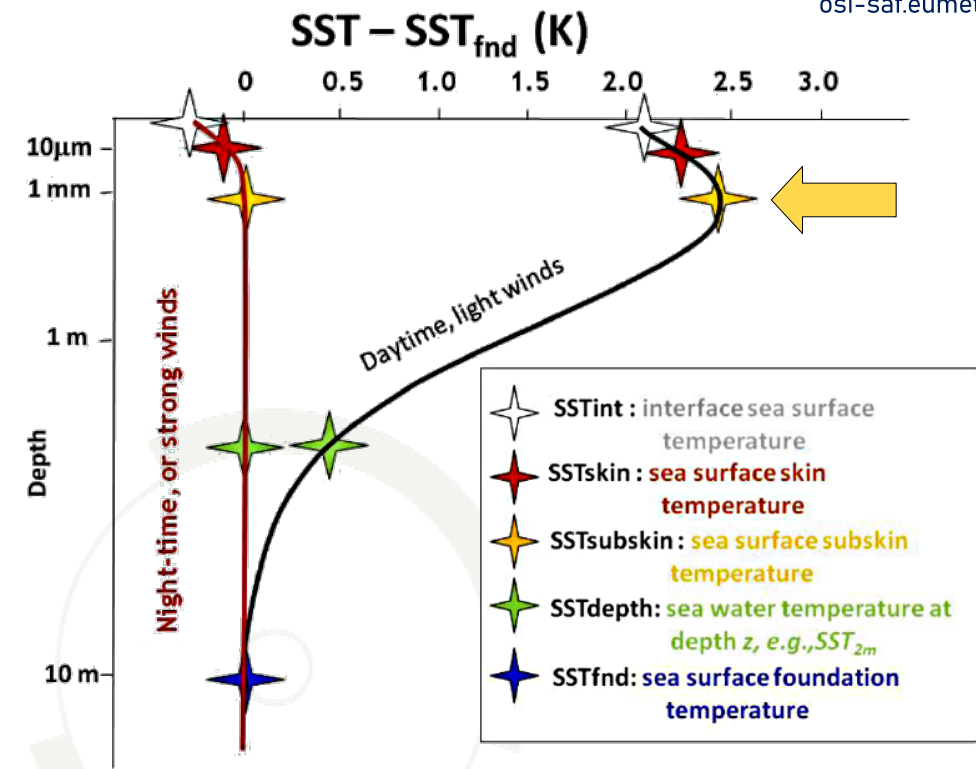
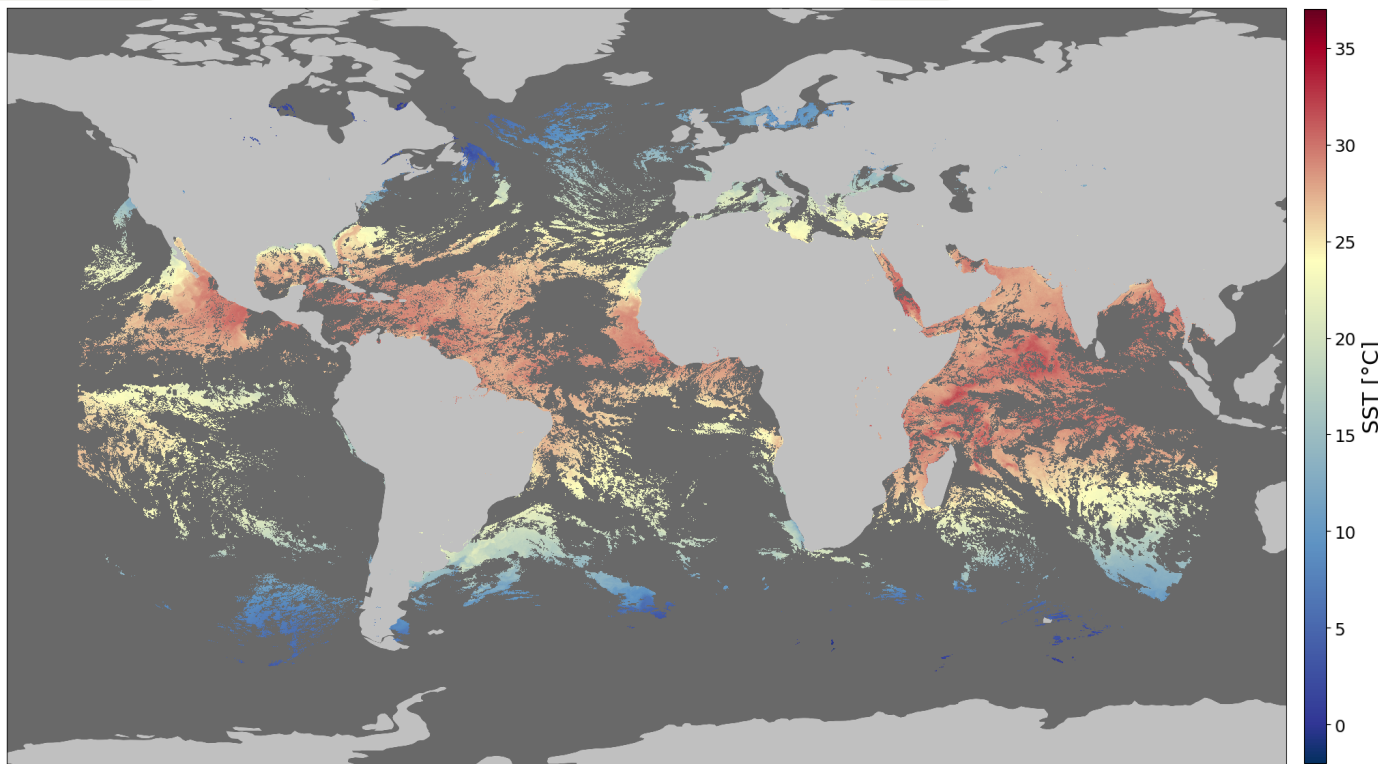


Meteosat 0°
OSI-206-a (NRT)
OSI-250 (CDR 2004-2012)



Meteosat Indian Ocean
OSI-IO-SST



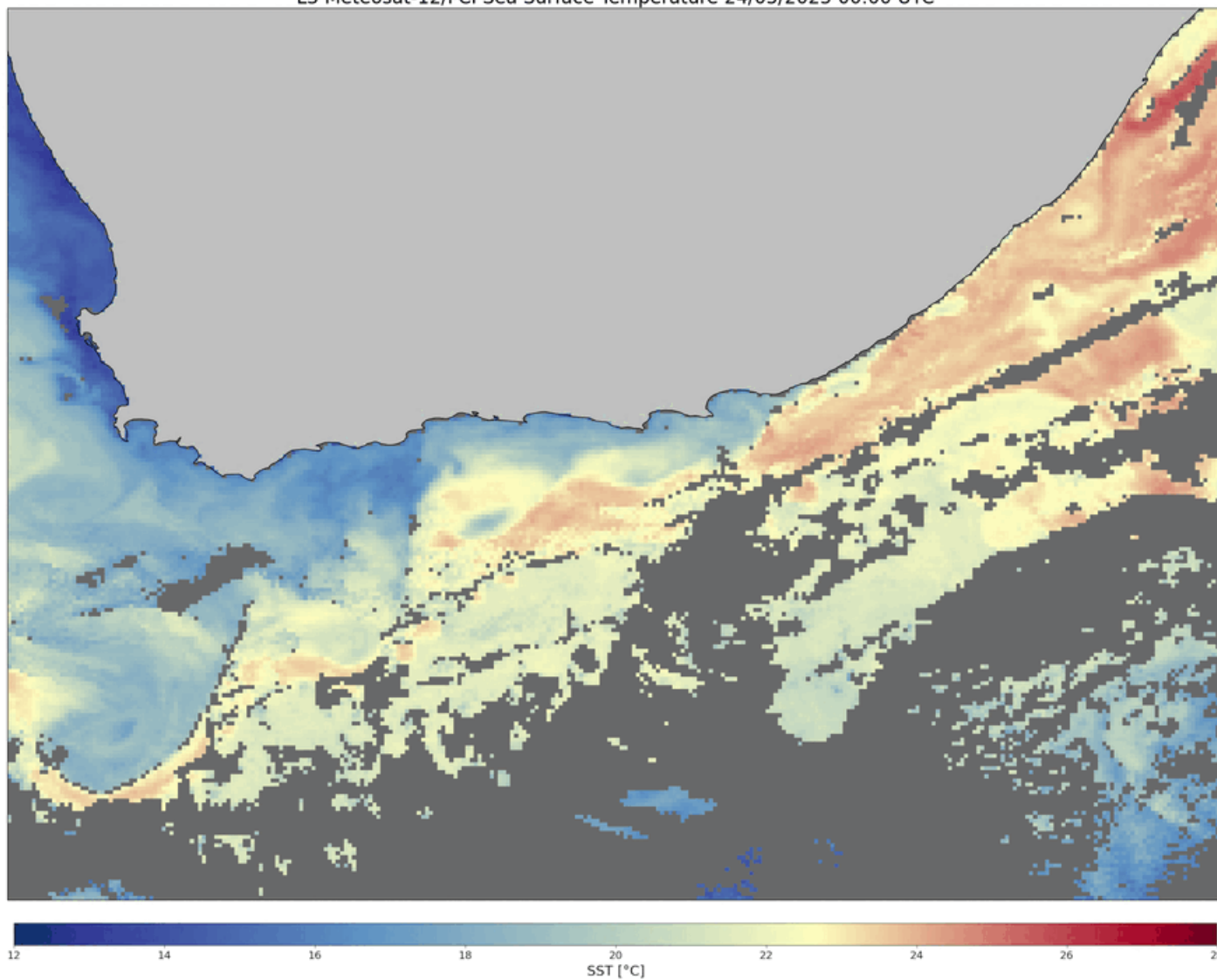


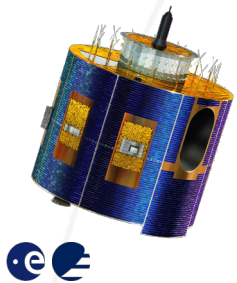
- Hourly
- Sub-skin SST
- Reprojected (0.05° regular grid)
- GHRSSST compliant NetCDF





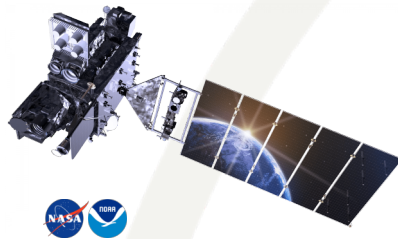
L3 Meteosat-12/FCI Sea Surface Temperature 24/05/2025 00:00 UTC





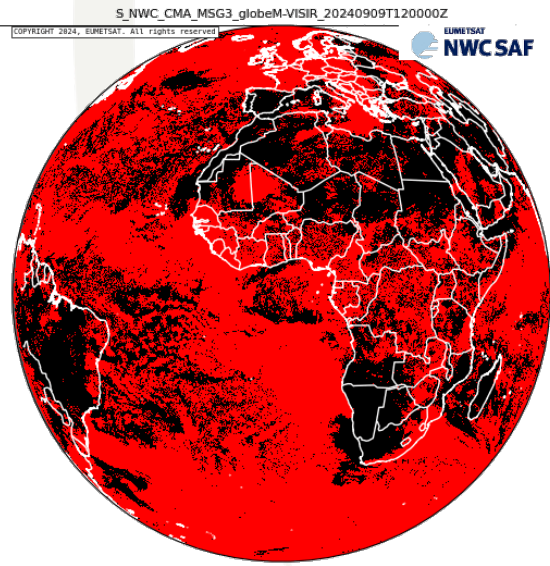
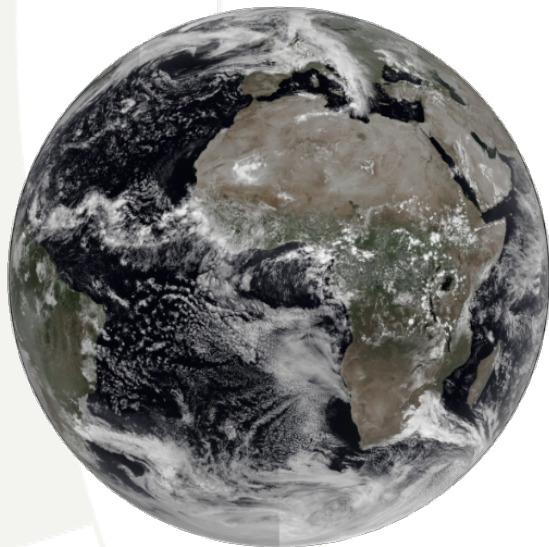
MSG / SEVIRI

10.8 μ m
12 μ m



GOES / ABI

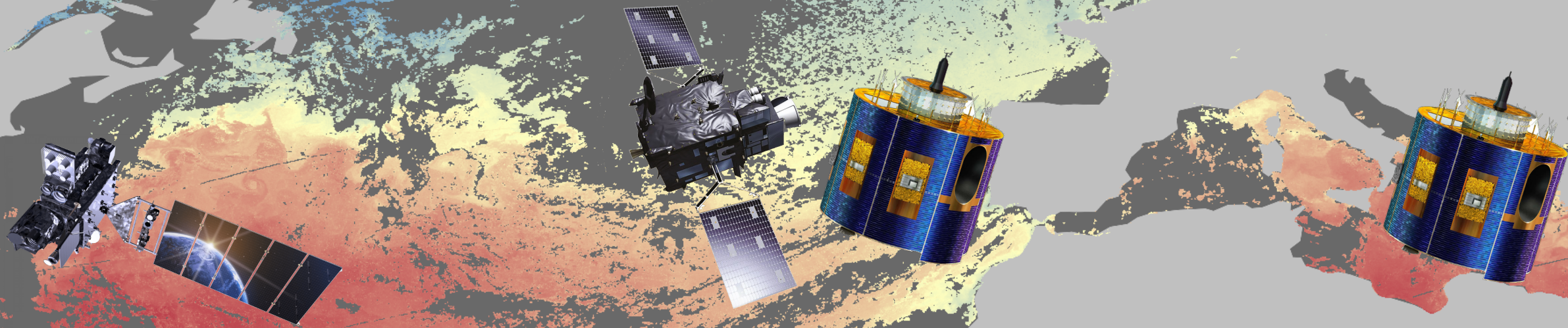
8.5 μ m
10.3 μ m
12.3 μ m

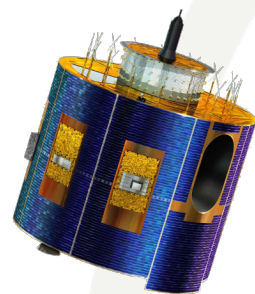


NWC GEO v2021.1 CMA Cloud Mask

- NWC SAF's cloud mask
- Multipectral algorithm
- Correction seasonal / regional biases
 - OSTIA guess
 - ECMWF NWP atmospherical forecast
- GHR SST GDS v2.0
- Daily comparisons with buoys

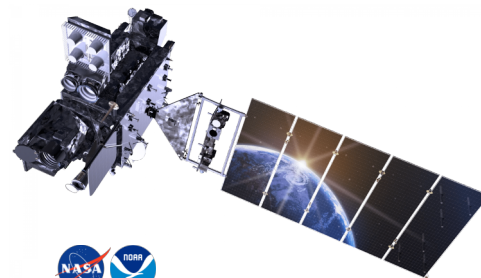
Day 1 products : continuity





MSG / SEVIRI

10.8 μ m
12 μ m



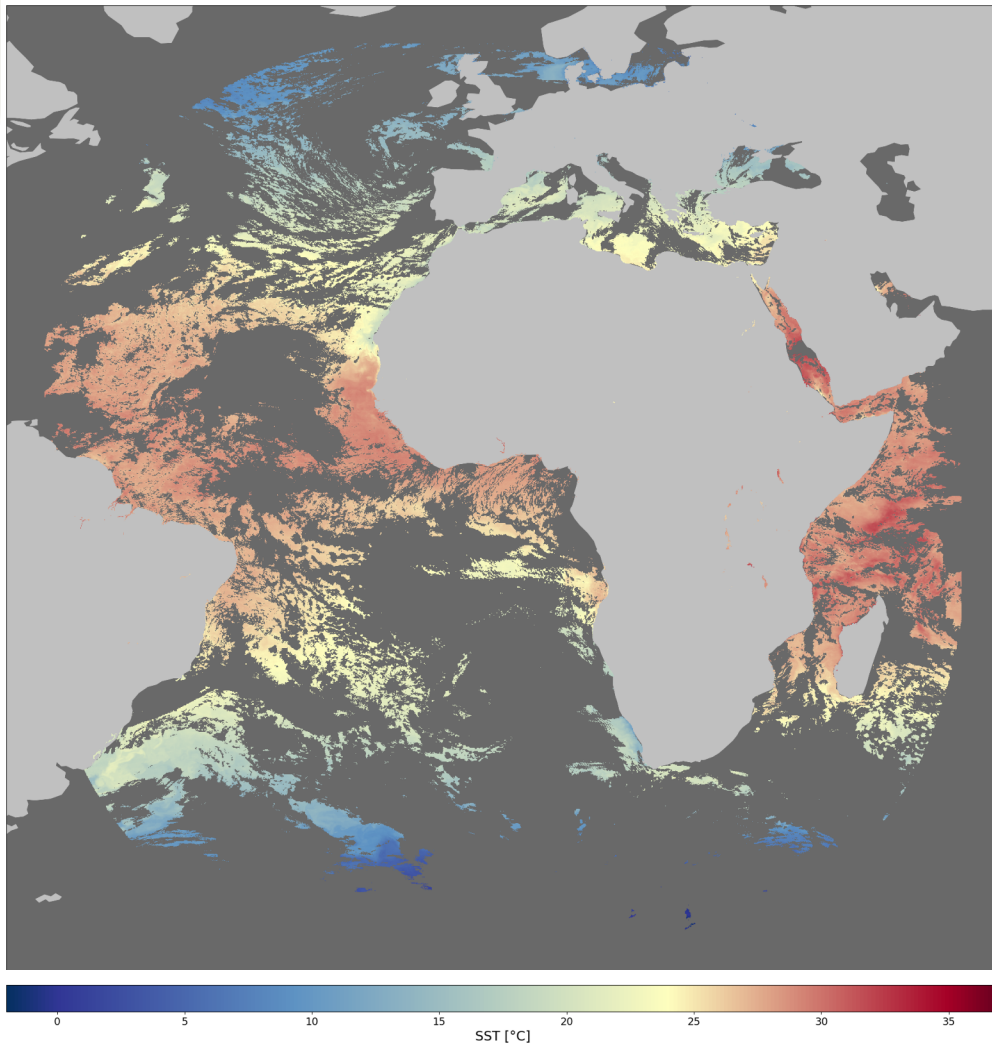
GOES / ABI

8.5 μ m
10.3 μ m
12.3 μ m



MTG / FCI

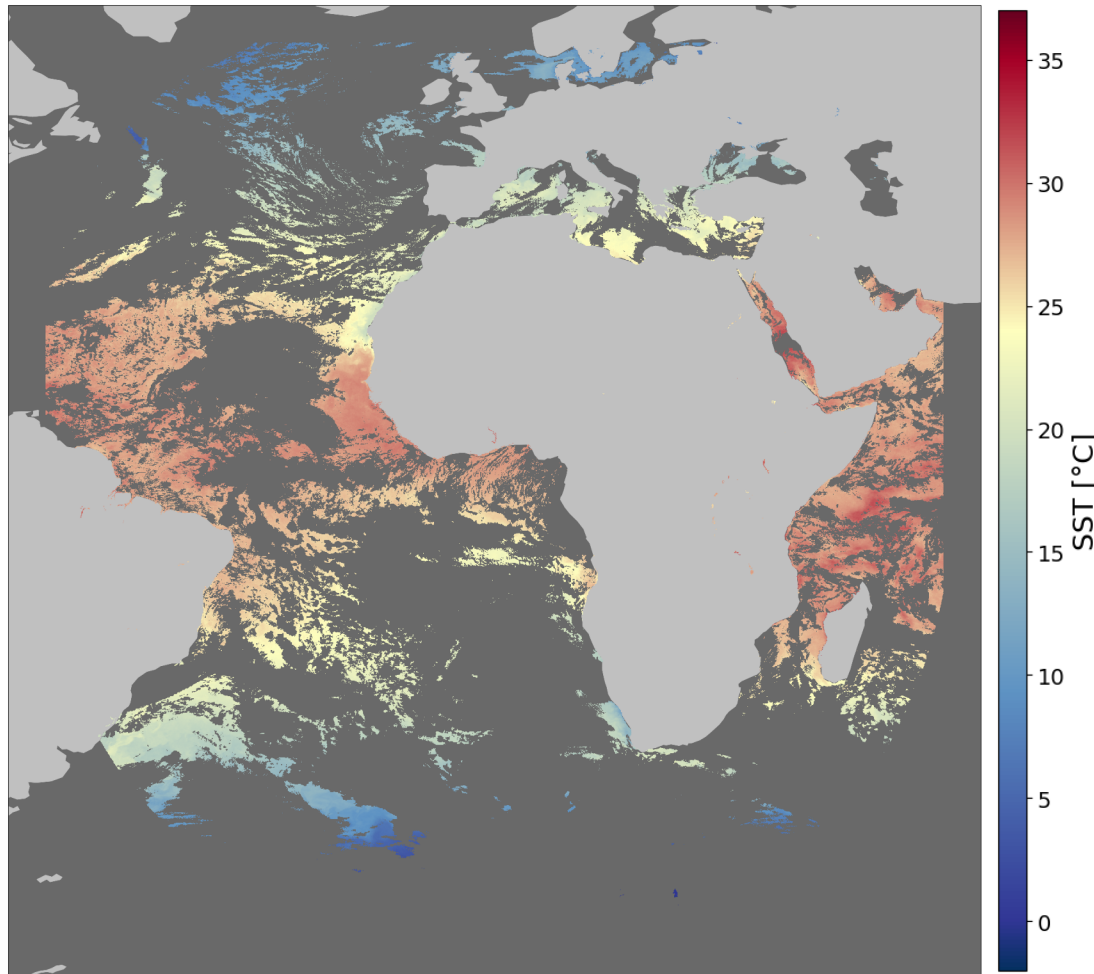
8.7 μ m
10.5 μ m
12.3 μ m



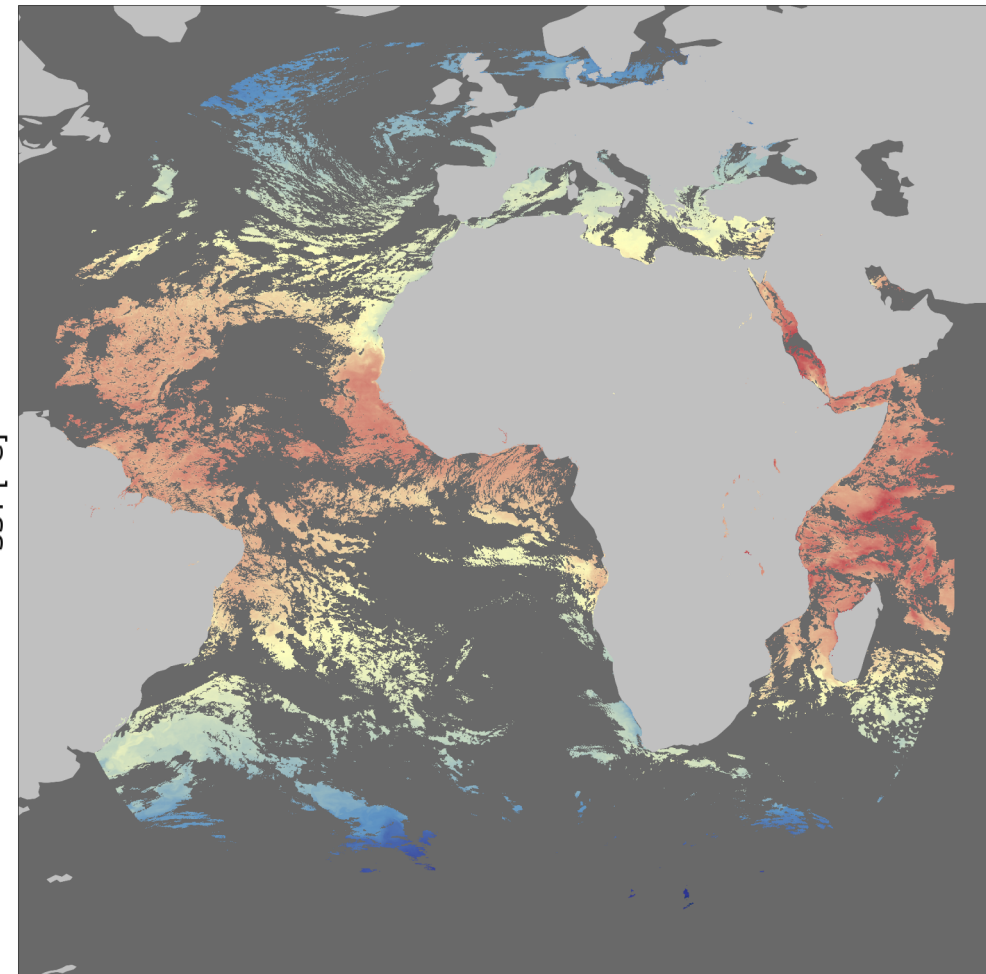
- Same Spatial Sampling (0.05°)
- Same Temporal Sampling (hourly)
 - *better input leads to less clouds*
- 3 channels
- GHRSSST GDS v2.1 (=GOES-19)

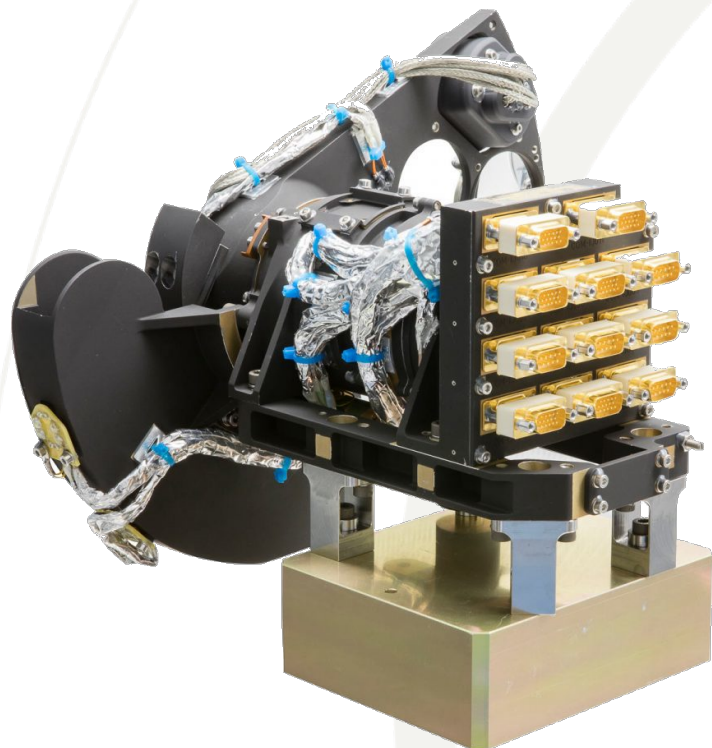
Sea Surface Temperature – 15/11/2025 09:00 UTC

Meteosat-10/SEVIRI (MSG)



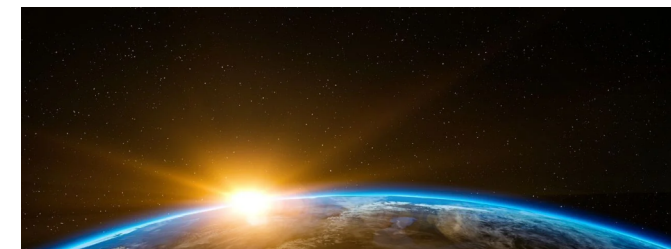
Meteosat-12/FCI (MTG)



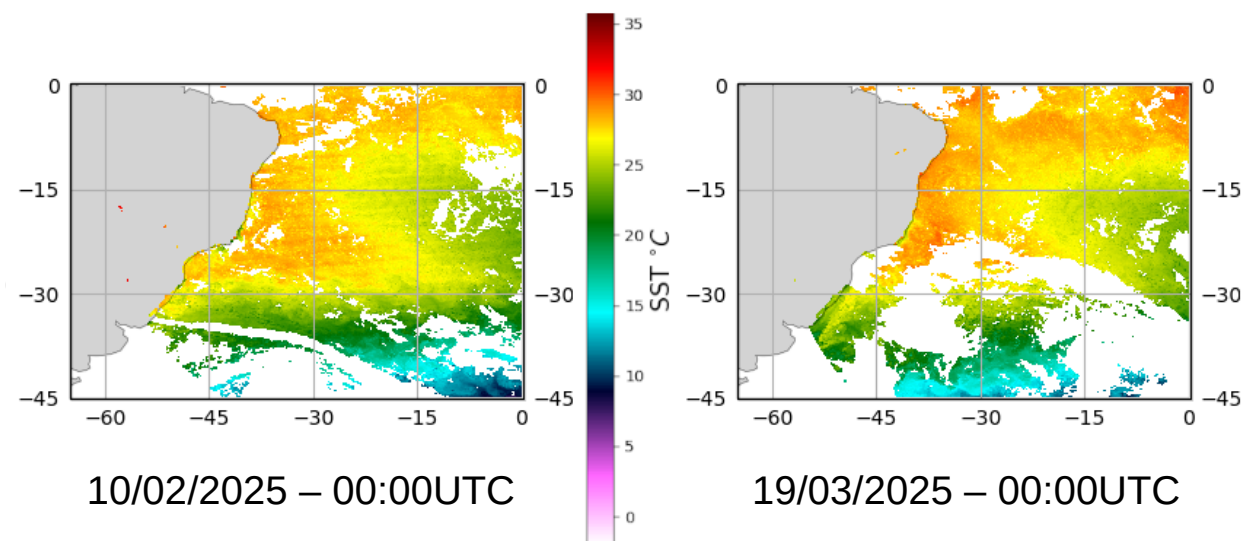


Calibration and Obturation Mechanism

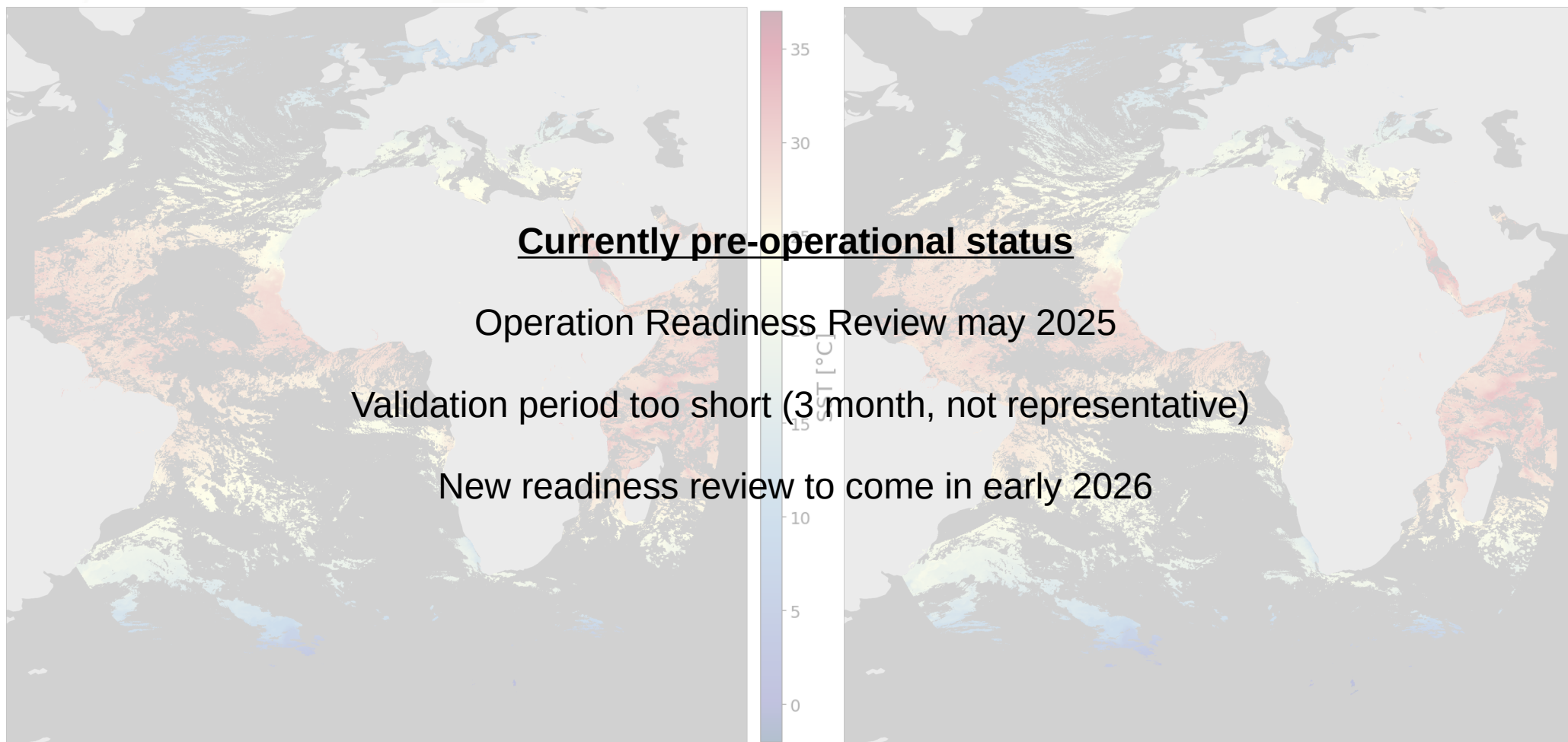
- **MICMICS** : a software platform, using ground targets and cross-platform calibration

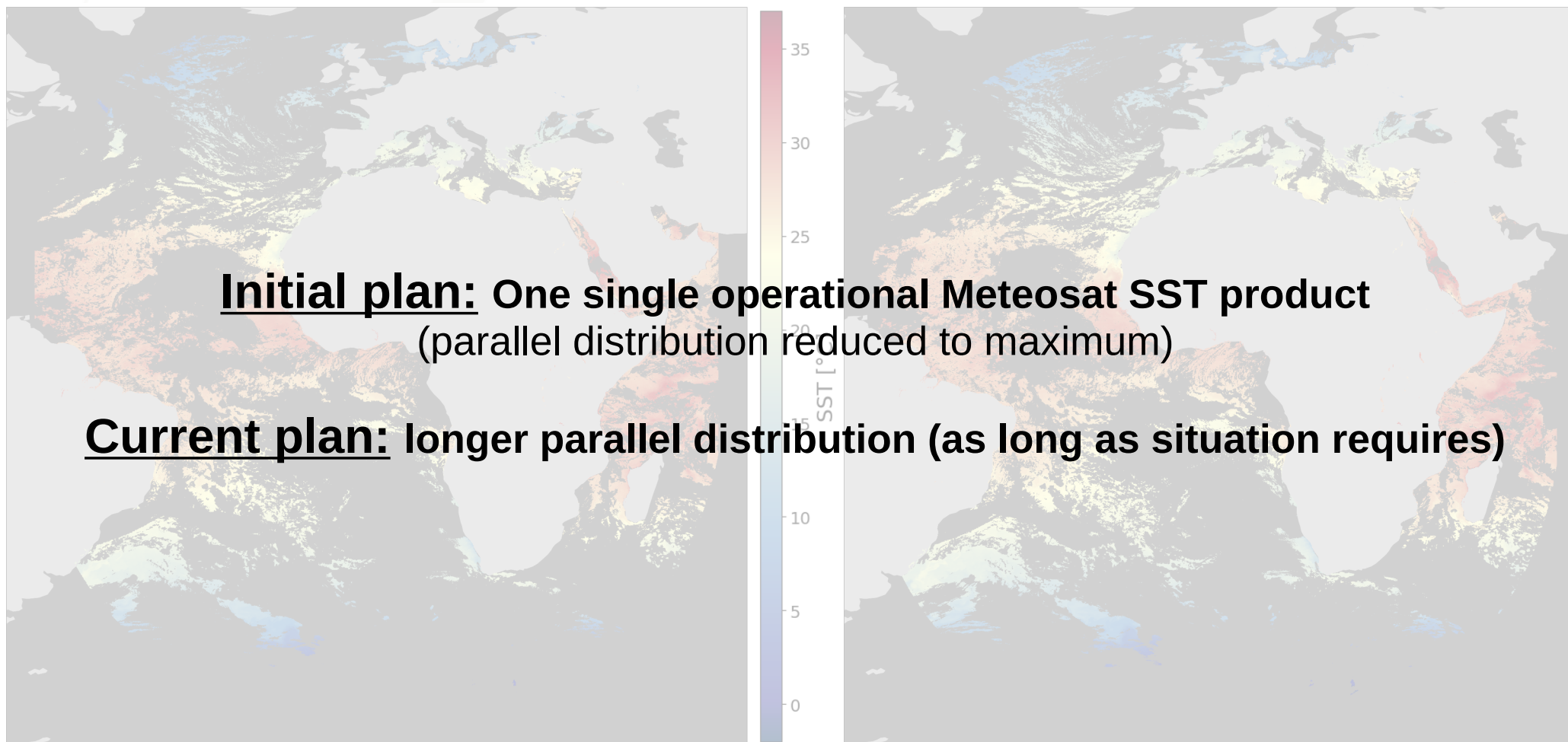


Straylight correction induced stripes

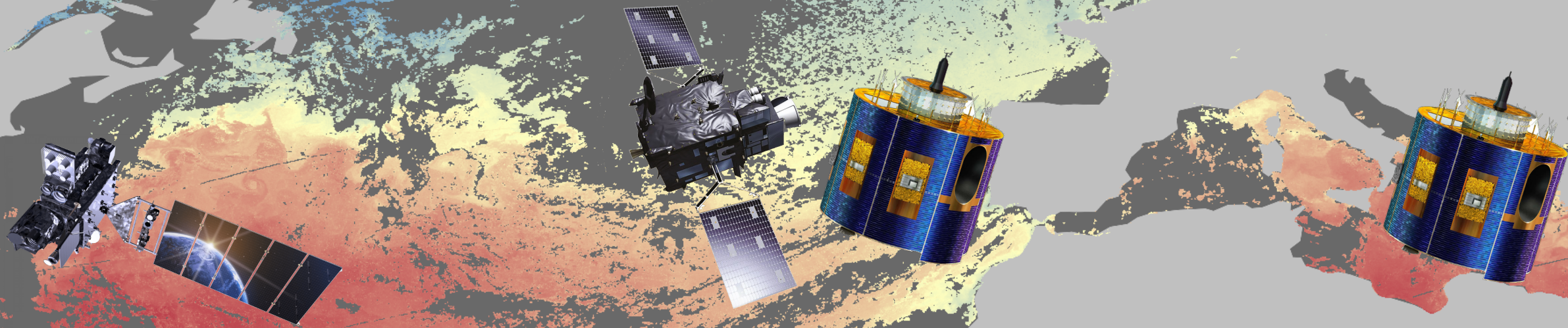


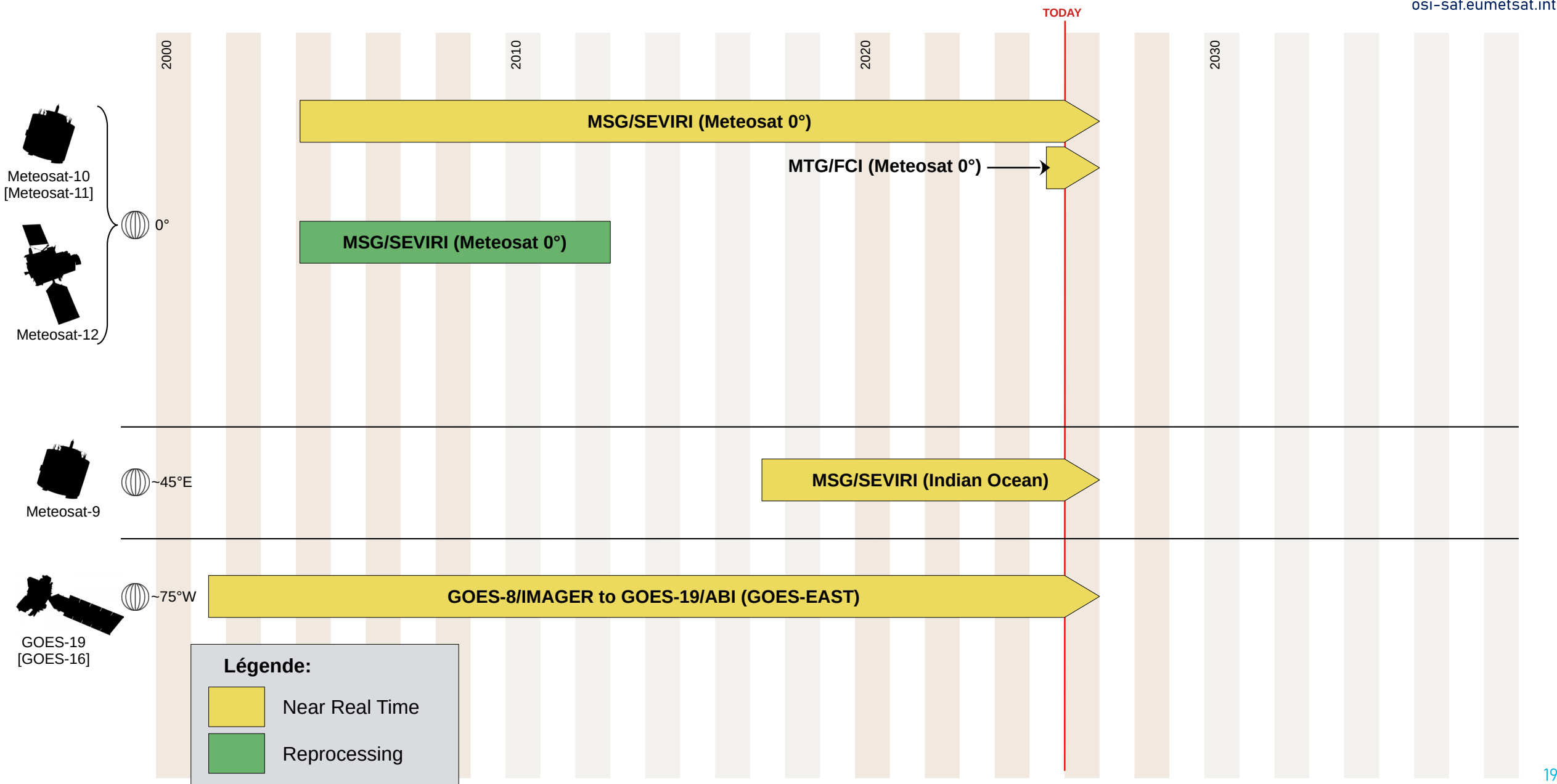
Corrective patch of the correction committed in early March.





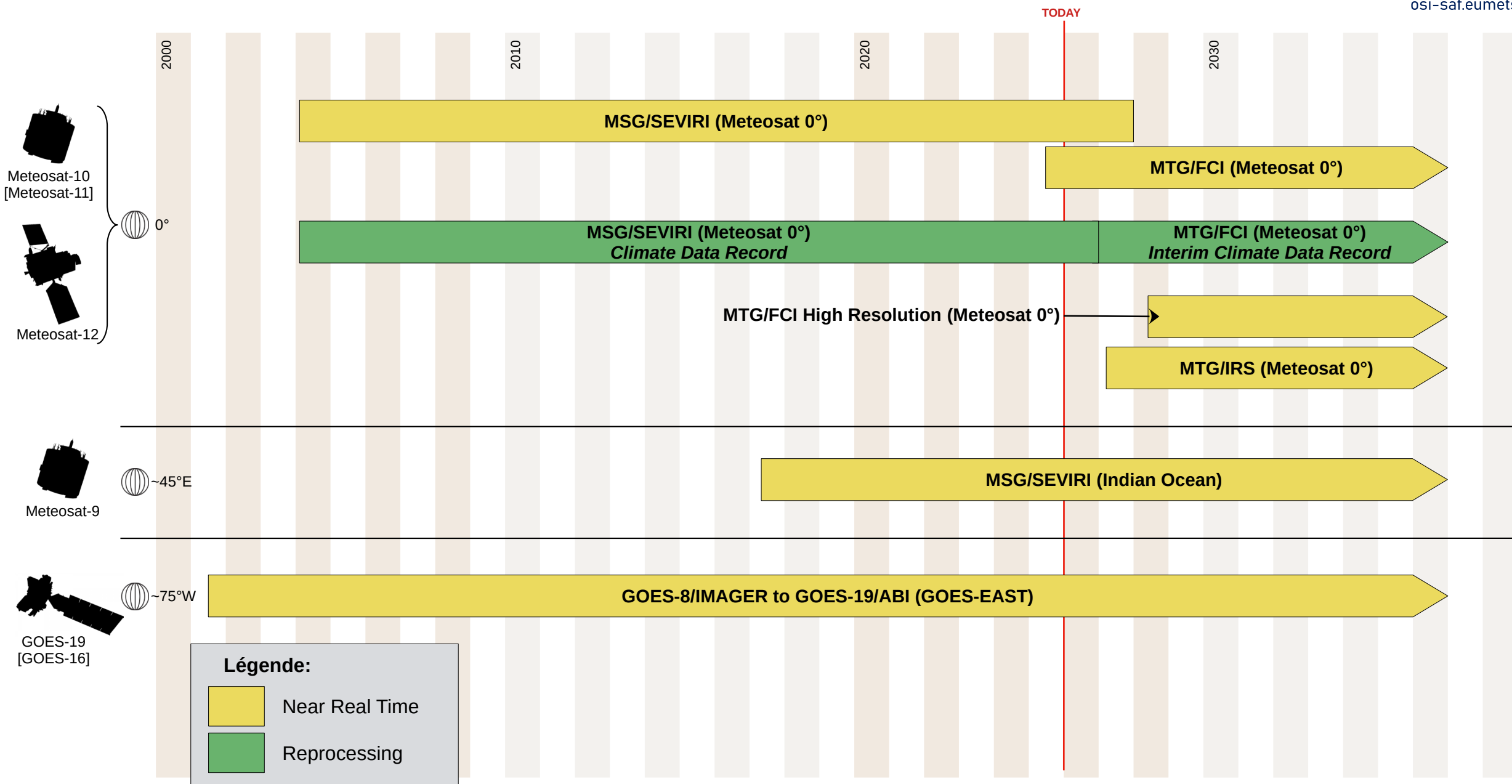
New products to come







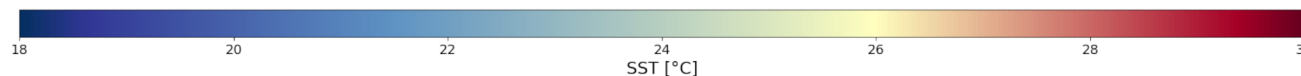
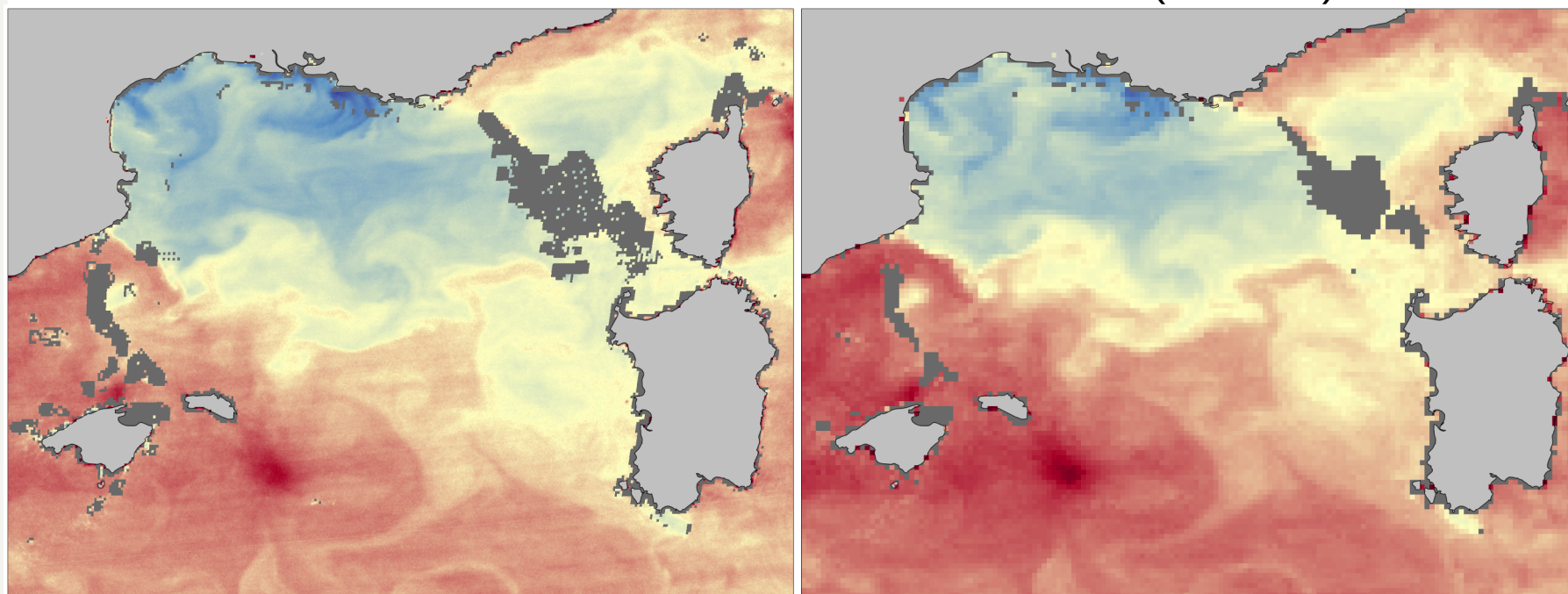
OSI SAF geostationnary satellites timeline – to come



Meteosat-12/FCI – 23/08/2025 13:00UTC

HD SST - 0.01°

SST OSI SAF (OSI-206) - 0.05°



- Canal 10.5 (external atmospheric correction)
- 0.01°
- Hourly L3C
- Skin
- Demo available in 2027

Dedicated to fast-changing coastal surface phenomena



Thank you!
Questions are welcome.