EUMETSAT OSI SAF Sea Surface Temperature activities and products

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The Satellite Application Facilities (SAFs) are part of the EUMETSAT ground segment, they form a distributed network of thematic application facilities conducting research, development, and operational activities.

The Ocean and Sea Ice SAF is a consortium which provides comprehensive information derived from meteorological satellites at the ocean-atmosphere interface. As far as Sea Surface Temperature is concerned, the OSI SAF is currently delivering a suite of regional and global products in near real time mode. OSI SAF is processing low earth orbiters Metop and SNPP, and geostationary satellites METEOSAT and GOES.

Recent development include the production of High Latitude Level 2 product of SST and Ice Surface Temperature, METEOSAT08 Level 3 product over Indian Ocean and the reprocessing of METEOSAT archive from 2004 to 2012.

This poster gives an overview of the SST-related OSI SAF current activities and products.

OSI SAF consortium



OSI SAF is a consortium of five partners lead by Météo-France and including the Danish Meteorological Institute, Ifremer, the Norwegian Meteorological Institute and the Royal Netherlands Meteorological Institute.

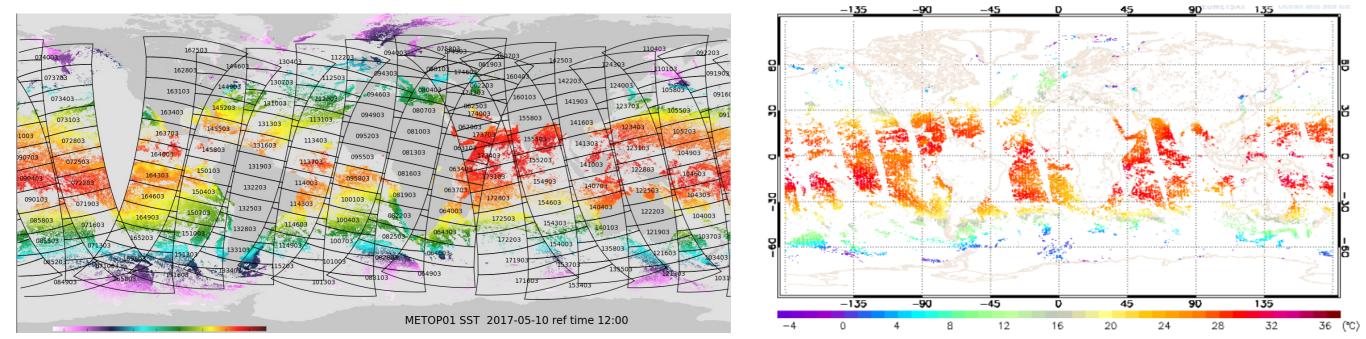
Validation and control

	METOP01 SST d	2017-04-01 0030 2017-04-30 2256 zso 110-180 ql 3-5 n>5 (safol)			
bias -0.21 std 0.56 sst 22.53 12803 cases					



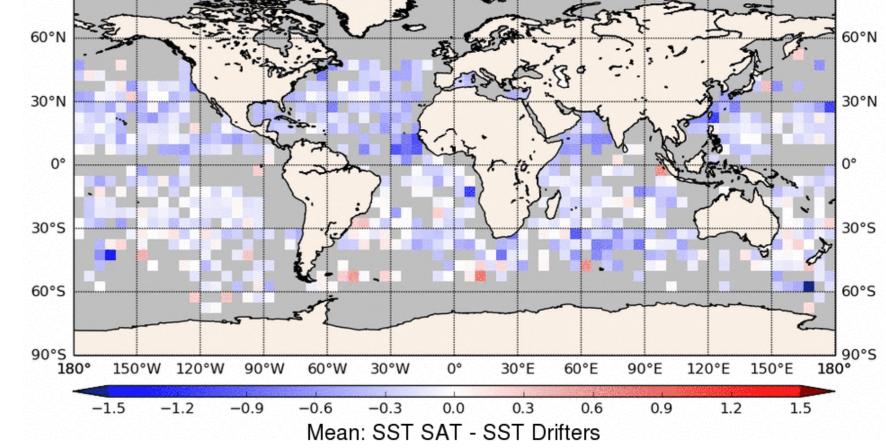
Near-real time production

Product ID	Instrument	Coverage
OSI-201-b	METOP-B/AVHRR	L3 global on a 0.05 $^\circ$ grid/12 hourly
OSI-202-b	METOP-B/AVHRR SNPP/VIIRS	L3 North Atlantic Region/6 hourly
OSI-203	METOP-A/AVHRR NOAA/AVHRR	L3 Atlantic High Latitudes/12 hourly
OSI-204-b	METOP-B/AVHRR	L2 Global full resolution/granules
OSI-205	METOP-A/AVHRR	L2 High Latitudes/granules (SST+IST, available since 01/2017)
OSI-206	METEOSAT10/SEVIRI	L3 60S-60N and 60W-60E on a 0.05 $^\circ$ grid/hourly
OSI-207	GOES13-East	L3 60S-60N and 135W-15W on a 0.05 $^\circ$ grid/hourly
_	METEOSAT08/SEVIRI	L3 60S-60N and 19W-101E on a 0.05 $^\circ$ grid/hourly
OSI-208-b	METOP-B/IASI	L2 global full resolution in satellite projection



OSI SAF scientific team performs routine validation against in situ measurements (drifting buoys) and controls the quality of the products.

EUMETSAT



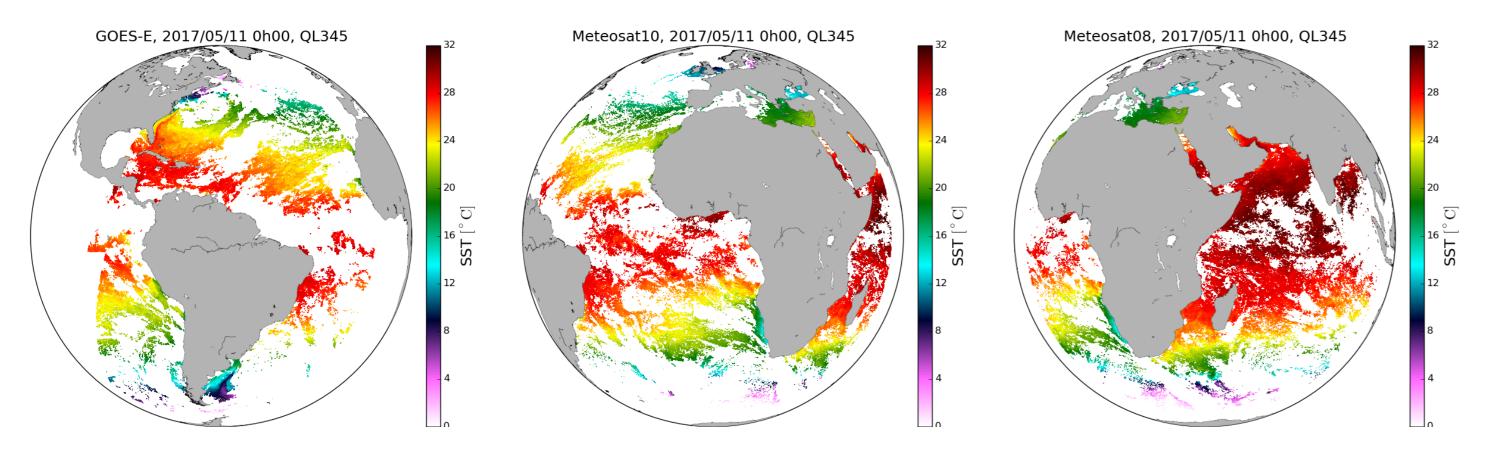
METIS-SST METIS-OC EUMETSAT WEBSITE DAILY DEPENDENCES: GLOBAL OCEANS - S3A SLSTF - M1 AVHRR - M1 IASI METIS-SST Median, Satellite SST - OSTIA, Night, 20170513, outliers retained, Global Oceans Data Sources Satellite SST Products Reference Fields Regions of Interest istograms Time-series Statistics Double Differencing eophy Dependend eferences uickstart Guide Latitude (binsize: 1. 🔄 (download png) 📩 (download csv) 📓 (preset range or heuristics) ◯ Bin #Obs [< >> >] 1 fps $\frac{1}{2}$ 2017 $\frac{1}{2}$ 05 $\frac{1}{2}$ 13 $\frac{1}{2}$ 🔍 Mean Median

MONITORING WEATHER AND CLIMATE FROM SPACE

Validation is also performed externally for instance by users who share their results. Left is a snapshot of the monitoring and evaluation tool METIS developed at EUMETSAT.

Access to the data

Global SST products from Metop-B/AVHRR (left) and IASI (right).



SST from GOES13 (left), Meteosat 10 (left), and Meteosat 8 (right).

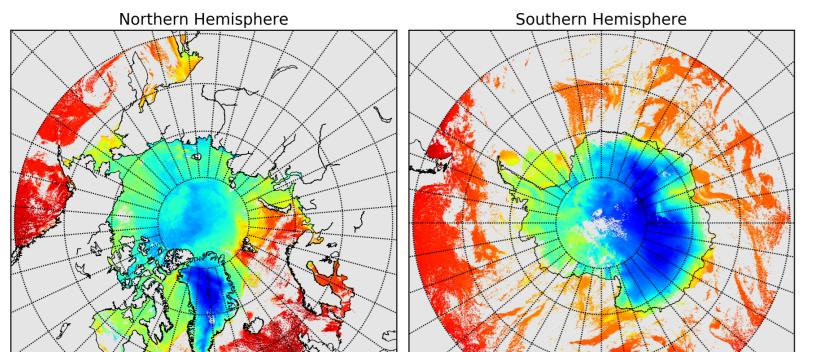
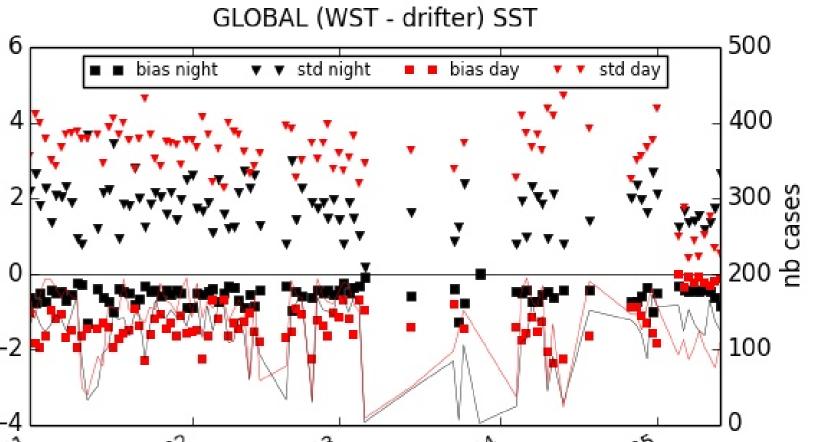


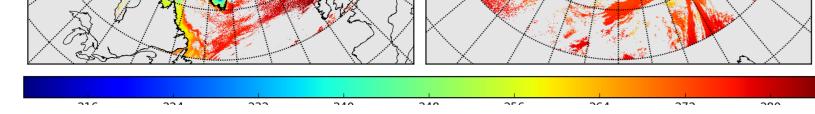
Illustration of the Sea Surface Temperature and Ice Surface Temperature product (OSI-205) from Metop-A/AVHRR: 21/2/2017.

	FTP server http://www.osi-saf.org	All OSI SAF SST products in GHRSST format except L3 Atlantic High Latitude (in GRIB2), in near real time
	PO.DAAC: http://podaac.jpl.nasa.gov/	Same as above except high latitude products
	GHRSST Long Term Stewardship and Reanalysis Facility	Same as PO.DAAC but archive (no near real time)
	EUMETCast (Satellite broadcast system)	All OSI SAF SST products in GHRSST format except L3 Atlantic High Latitude (in GRIB2), in near real time
	EUMETSAT Data Center	Same as above

Contribution to Sentinel3-SLSTR Cal/val

Sentinel-3 is a scientific mission operated by ESA, SST processing being performed at EU-METSAT. OSI SAF with its long term experience in SST retrieval from infra-red radiometers participates to the Cal/Val activities.

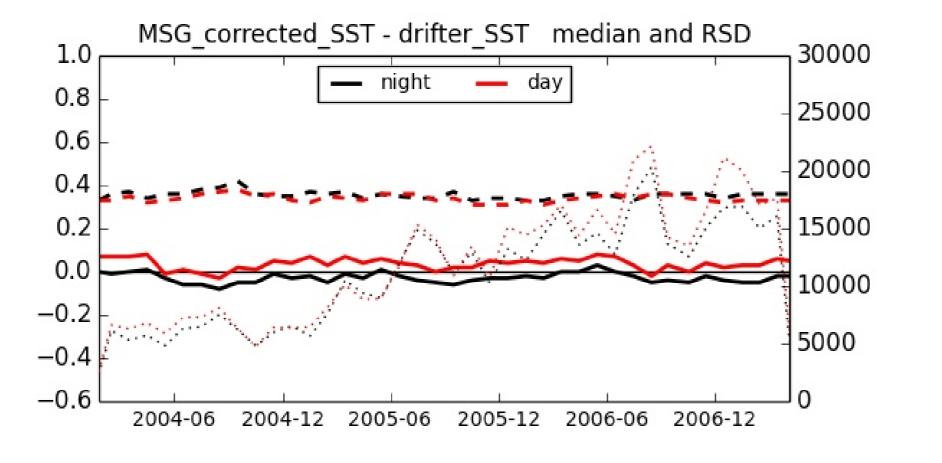




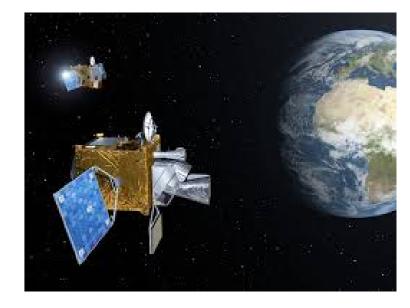
Preparation for future satellite missions

Reprocessing of MSG/SEVIRI archive

Period of the reprocessing: 2004-2012 (for now). ■ Hourly level 3 dataset. ■ 60S-60N and 60W-60E on a 0.05° regular grid. ■ Sub-skin temperature.



- Meteosat Third Generation (MTG)/ Flexible **Combined Imager**: launch in 2021
- Metop Second Generation A/METimage: launch in 2021
- Geostationary Operational Environmental Satellites-R (GOES-R)/Advanced Baseline Imager (ABI): operational in November 2017





For more details: presentation on Thursday 11:30

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