

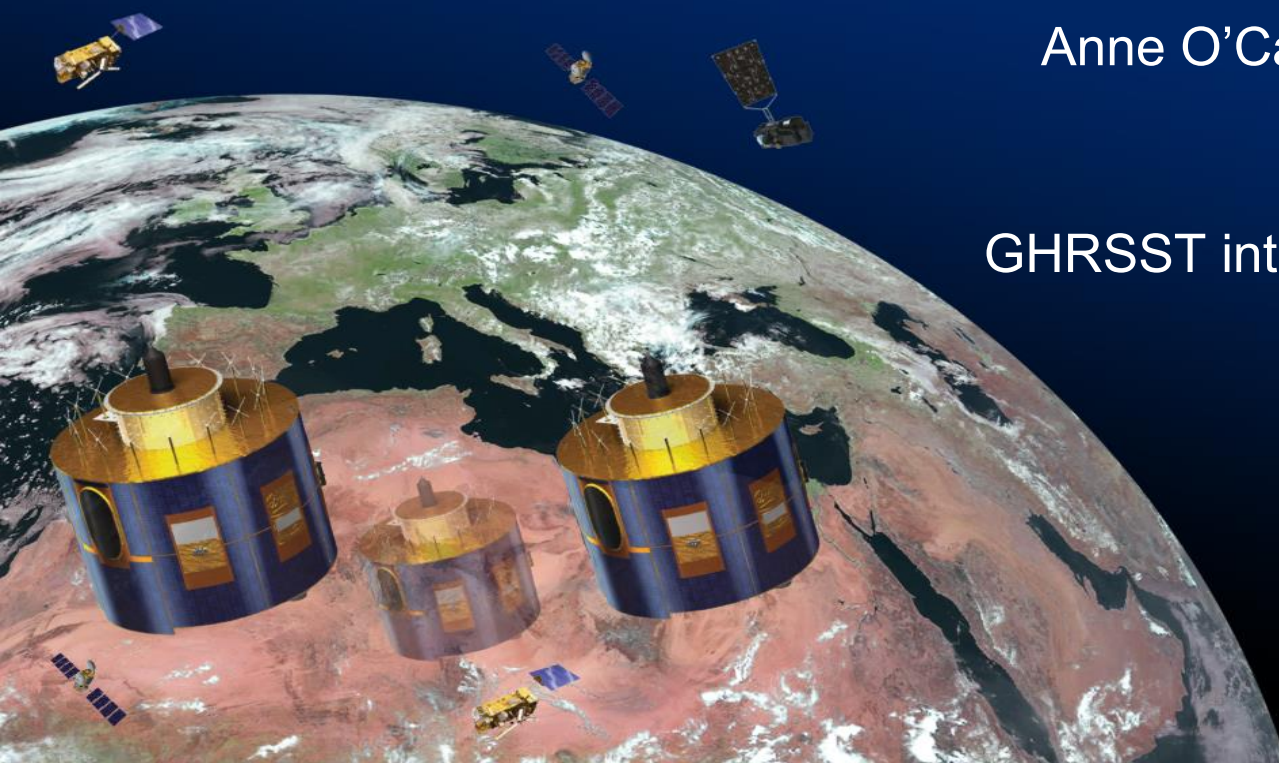
EUMETSAT Sea Surface Temperature activities

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June 2020

GHRSSST international science team meeting

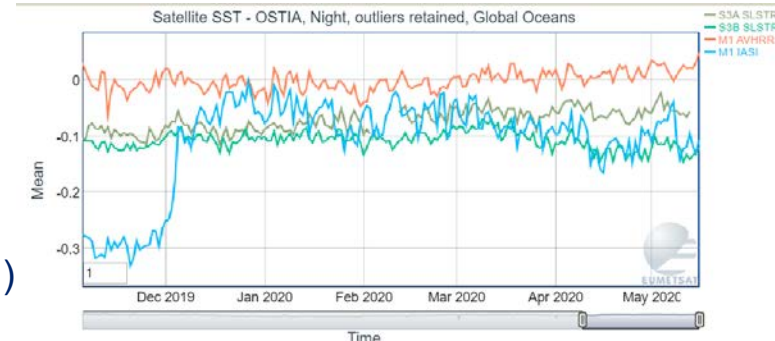
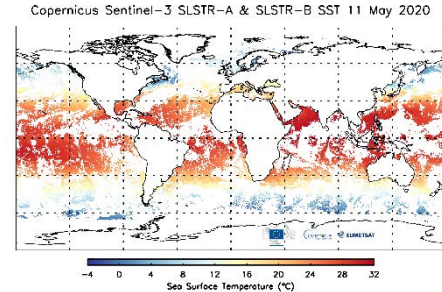
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Highlights since last meeting – SLSTR SST & IASI SST

• Sentinel-3A/B Sea and Land Surface Temperature (SLSTR) SST (skin SST)

- Two operational satellites in orbit – Sentinel-3A (February 2016) and Sentinel-3B (April 2018).
- Last major change in April 2018 (to include Bayesian cloud screening) and the release of S3B SST in March 2019.
- Small update to S3A and S3B SLSTR SST on 15th January 2020 - Update to QL scheme to flag data affected by spacecraft manoeuvres and adjustment to the per pixel time calibration.
- Update to S3B SLSTR SST SSES on 28th May 2020 – to account for an increase in the instrument Cold Finger temperature on 30th March 2020. It is important to always apply the SSES.
- Next steps:
 - Evolution of SLSTR day-2 SST planned for 2023.
 - Sentinel-3C/D launches approx. 2023/2025.
- More information from: <http://slstr.eumetsat.int>



• See presentation by Gary Corlett Session 2: Calibration & Validation (011)

• Metop-IASI SST (skin SST)

- Upgrade of OSI SAF IASI-B SST on 4th December 2019 and Metop-C IASI SST to be available soon.
- Included tuning of previous algorithm and improvement to SSES bias and standard deviations.
- More info: https://www.eumetsat.int/website/home/News/DAT_4686627.html

• **Validation results for SLSTR-A/B, Metop-IASI/AVHRR** continue to be available from

<http://metis.eumetsat.int> – buoy validation plots coming soon!

• More information on EUMETSAT MDB and Cal/Val: see poster by Igor Tomazic (013)

EUMETSAT and Copernicus Surface Temperature Projects

- **GHRSSST Project Office:** (University of Leicester, Karen Veal and Silvia Bragaglia-Pike) 2017-2021
- **Towards Fiducial Reference Measurements of Sea-Surface Temperature by European Drifters (TRUSTED):**
 - 92 HRSST drifting buoys deployed so far (to a maximum of 150 by the end of 2021).
 - One HRSST sensor plus original sensor SST, near surface pressure sensor
 - MDB under preparation for sharing.
 - International HRSST review workshop planned 2-4 March 2021 at Meteo-France Paris (video conferencing available) – open to anyone interested in HRSST drifting buoys for satellite SST validation.
 - See presentation by Gary Corlett in Session 2: Calibration and Validation (012).
- **Thermal infra-red product inter-comparison and validation with FRM radiometers (KIT, University of Southampton):** 2020-2021
 - Inter-comparison of FRM radiometers and validation over Lake Constance in July 2020
- **Evolution of Bayesian cloud detection scheme** (University of Reading): 2020-2021
- **Sea-ice surface temperature retrieval and validation** for Sentinel-3 SLSTR (DMI): 2018-2020
- **Surface Temperature frame contract** under preparation – ITT due out in Autumn 2020 to begin early 2021
 - Includes development of SLSTR day-2 SST and evolution of multi-Surface Temperature Cal/Val tools
- **More information** on projects available from:
<https://www.eumetsat.int/website/home/Data/ScienceActivities/ScienceStudies/index.html>

