

The GHR SST Newsletter

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GHR SST Newsletter – December 2023

Greetings GHR SST Community!

As we ramp up for the end of 2023 and anticipate a new year, it is time for the latest edition of some GHR SST News. The past few months have been marked with the 24th International SST Users' Symposium and GHR SST Science Team Meeting in Ahmedabad and continued strides in bringing the community together around our GHR SST Talks.

As we look ahead to 2024, we are looking forward to GHR SST25 in Canada.

Dive Deeper into GHR SST24: Presentations, Recordings and Photos

Missed GHR SST24 or want to revisit the Science Sessions, Task Team Reports, Agency Reports, Workshops, or GHR SST News Items? We have got you covered.

All presentations and recordings from the event are available on the [GHR SST24 Moodle](#) platform. Whether you want to catch up on a session you missed or delve deeper into a particular topic, the GHR SST24 Moodle is your go-to resource.

The [GHR SST YouTube Channel](#) also features all the recordings from GHR SST24 as well as pre-recorded talks from all 84 contributors to this year's Science Session talks and poster sessions! Find our curated playlists below.

- [Agencies' Reports #GHR SST24 - YouTube](#)
- [Task teams reports #GHR SST24 - YouTube](#)
- [GHR SST24 International SST Users' Symposium and Science Team Meeting - YouTube](#)
- [GHR SST24 Workshop 1: GHR SST Priorities - YouTube](#)
- [GHR SST24 Workshop 2: What are the best practices for SST data producers? - YouTube](#)

This year we had 84 contributors from across the world. You can find a full overview of all contributions to GHR SST24 in the Book of Abstracts [here](#).

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Find pictures from GHRSSST24 on our Padlet [here!](#)

The GHRSSST Community extends its gratitude to ISRO, SAC, DMI and all the contributors who helped make GHRSSST24 a success.

Highlights from the Task Teams

At GHRSSST24, the GHRSSST Task Teams presented their activity reports to the Science Team. Explore the insights from two highlighted task teams below. For additional Task Team reports, visit [the GHRSSST website](#) and catch the recorded presentations on our [playlist](#).

Coral Heat Stress User SST Requirements

Delivered by Task Team Co-Chairs, William Skirving and Jonathan Mittaz, they walk through three ongoing activities that underscore the Coral Heat Stress task team:

1) Updating the Coral Heat Stress SST User Requirements Document

The Task team is undertaking updates to the Coral Heat Stress SST User Requirements document. Three key facets are being tackled:

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- Update SST Resolution: In response to the extreme marine heatwave in the Caribbean, there is a need for higher resolution satellite SST, reaching down to approximately 100-meter resolution (level 4 product).
- Update Diurnal SST Needs: there is a need for mortality products, expands its focus beyond nighttime SST, now incorporating daytime temperatures as well.
- New Section for Polar Waters: Acknowledging a gap in the existing user requirement document, the task team are addressing the unique needs of the marine biology science community operating in polar waters. William has enlisted a team in polar regions to support and enhance coverage in this critical area.

2) Performance of SST Retrieval Algorithms for Monitoring Heat Stress on Coral Reef:

This is a very new activity, which looks at the difference between physical retrieval (CCI and L3 AVHRR-3 on NOAA-19, MetOp-A, MetOp-B) and regression-based satellite SST (ACSP0 and L3 VIIRS on NPP) over coral reefs. There are three sites being looked at which provide three examples of three ocean types within and around coral reefs: Arlington Reef (Great Barrier Reef), Tortugas (Florida Keys), and Redcliffe Bay (within Shark Bay).

The Task Team see this as a worthwhile story to pursue. To do so, some work needs to be done. Namely, creating a more direct comparison by: using the same satellites and sensors, possible use of L2 data, finding more logger data, locating satellite pixels closer to loggers, and matching the time of logger data to satellites more precisely.

3) The Metrology of satellite-based coral reef heat stress monitoring tools

The task team's key highlights in this activity include developing an uncertainty tree for the NOAA Coral Reef Watch satellite-based Degree Heating Week (DHW) product and presenting a poster "A metrological approach to a coral reef bleaching alert system" at the Metrology For Climate Action.

Watch the full recording [here](#) and find the task team report [here](#).

Shipborne Radiometry

Task Team Chair, Werenfrid Wimmer delivered this task team report to the Science Team at GHR SST24. There were three objectives of the task team:

1. Set up a network
2. Have common data format, DOIs
3. Have best practice documents

Activities in the task team have involved:

- The setup of a network including the Danish Meteorological Institute, Rutherford Appleton Laboratory, University of Southampton, University of Miami Rosentiel Marine and Atmospheric

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School, CSIRO/Bureau of Meteorology. For any others willing to join, they should get into contact with Werenfrid.

- The task team also has a web presence which can be found at www.ships4sst.org.
- Data archive at Ifremer
- There is a data format based on the GHR SST L2R format. If users or operators need updates to the fields, they should reach out to Werenfrid.
- There are protocols and procedures on the www.ships4sst.org webpage.
- Inter-comparison from 2022, which show some results will be published.

Moving forward, the Shipborne Radiometry task team has focused on fixing/improving felyx timeliness for shipborne radiometers and ensuring that the archive is up to date during the last half of 2023. Moving into the New Year, the task time will focus on publishing validation results in the first half of 2024.

Watch the full recording [here](#) and find the task report [here](#).

GHR SST Talks

Continuing with the momentum from GHR SST24, our GHR SST Talk series has invited the contributors from the symposium to hold live talks for the community, sharing their work and inciting discussions and knowledge exchange. We have had a great lineup, turnout and discussions during our last talks. If you missed out, you can catch up on the previous talks below:

- [GHR SST Talk: Variability of Yearly Maximum SST in the Bay of Benegal Using GHR SST - YouTube](#)
- [GHR SST Talk: Diurnal variability of INSAT-3D SST in the Indian Ocean - YouTube](#)
- [GHR SST Talk: Multidimensional dynamic data fusion of satellite geophysical datasets - YouTube](#)
- [GHR SST Talk with Marisol Garcia- Reyes on MISST: Multi-sensor Improved Sea Surface Temperature - YouTube](#)

Upcoming GHR SST Talks

You can always find the roster for upcoming GHR SST Talks on our website [here](#). Check our next GHR SST Talks below and register with the links below:

18 December 2023: [GHR SST Talk with Olafur Jonasson on NOAA 1ST MODIS SST Reanalysis \(RAN1\) from Terra and Aqua](#)

10 January 2024: [GHR SST Talk with Danielle Carpenter on Naval Oceanographic Office Sea Surface Temperature Processing and Products](#)

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[25 January GHRSSST Talk with Claudia Fanelli: Improving the effective resolution of satellite-derived SST data via deep learning methods: preliminary results on the application of CNNs and GANs](#)

[31 January 2024: GHRSSST Talk with Zhuomin Li on Sea Surface Temperature Retrieval from HY-1C and HY-1D COCTS in the South China Sea](#)

[14 February 2024: GHRSSST Talk with Kohei Mizobata on Verification of AMSR2 SST in the Arctic Ocean and Implications of Freshwater Distribution on Estimation Error](#)

[15 February 2024: GHRSSST Talk with Craig Donlon on The Copernicus Imaging Microwave Radiometer: Progress toward a new generation of measurements in support of SST](#)

[21 February 2024: GHRSSST Talk with Albert Larson on Flux to Flow: A Clearer View of Earth's Water Cycle via Neural Networks and Satellite Data](#)

New GHRSSST Science Team Members



In October, GHRSSST welcomed new faces to the Science Team.

- [Haifeng Zhang](#)
- [Olafur Jonasson](#)
- [Marisol Garcia-Reyes](#)

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- [Ana Oliveira](#)
- [Pallavi Govekar](#)
- [Pia Nielsen-Englyst](#)
- [Chong Jia](#)
- [Emmanuelle Autret](#)

Save the Dates

The next GHRSSST International SST Users' Symposium and Science Team Meeting locations and dates have been announced!

GHRSSST25 in Montreal, Canada

GHRSSST XXV international science team meeting (GHRSSST25) will be held in Montreal, Canada from 10-14 June 2024 and will be hosted by Environment Canada, Dr. Dorina Surcel-Colan and colleagues.



GHRSSST25

**INTERNATIONAL SST
USERS' SYMPOSIUM &
GHRSSST SCIENCE TEAM MEETING**



Environment Canada
Copernicus
EUMETSAT
Danish Meteorological Institute

In-person in Montreal (Canada) and online
JUNE | 10-14th | 2024

Pre-register [here](#).

GHRSSST26 in Copenhagen, Denmark

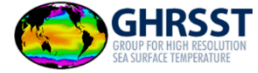
GHRSSST XXVI international science team meeting (GHRSSST26) will be held in Copenhagen, Denmark, from 16-20 June 2025 and will be hosted by the [Danish Meteorological Institute](#), and the Science Team members Jacob Høyer, Ioanna Karagali and Pia Englyst. Read more [here](#).

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GHRSSST26

INTERNATIONAL SST
USERS' SYMPOSIUM &
GHRSSST SCIENCE TEAM MEETING



16 - 20 JUNE 2025
Copenhagen | Hybrid Event

GHRSSST27 in Japan

GHRSSST XXVII international science team meeting (GHRSSST27) will be held in Japan, in June 2026 and will be hosted by the Japan Aerospace Exploration Agency [JAXA](#) and the Science Team member [Misako Kachi](#) and colleagues. Read more [here](#).

GHRSSST27

INTERNATIONAL SST
USERS' SYMPOSIUM &
GHRSSST SCIENCE TEAM MEETING



JUNE 2026
Japan | Hybrid Event



Apply for EUMETSAT Training

Applications are open for EUMETSAT's "Supporting Marine Earth Observation Applications (SMA)" course. It will introduce participants to EUMETSAT's marine data catalogue and will help develop workflows that support your own application specific goals.

The course will run from 26 February 2024 – 22 March 2024.

Read the full course description and apply [here](#)!

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That's it for this newsletter! We wish you all lovely winter holidays and a great end and start to the year.



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