

# The CEOS Virtual Constellation for SST - Overview

David Llewellyn-Jones  
*AATSR Principal Investigator*  
*University of Leicester*  
Chris Merchant  
*University of Edinburgh*



# The CEOS Virtual Constellation for SST

- Introduction
- Relationship to GHRSSST
- Possible issues for WGCV

# Current Status of SST-VC

- Proposed to CEOS by GHRSSST Team
- Proposal Accepted by CEOS Plenary
- Implementation Plan developed in collaboration with CEOS SIT
- Reviewed by GHRSSST Science Team (June 2012) and now being finalised.

# Objectives of SST-VC

(as in current draft of  
Implementation Plan)

- 1) To foster the best quality sea surface temperature data and their availability for applications across all relevant spatial and temporal scales in the most effective and efficient manner through international collaboration, scientific innovation, and rigour
- 2) To Advocate priority areas for funding of SST activities
- 3) To Promote the sharing of data” in support of the SST-VC aim.

# SST-VC and GHRSSST

- GHRSSST provides a user interface, tailored to operational users, from most of the available SST sensors in space.
- Essential features of GHRSSST service:
  - Conversion data from each sensor into agreed format at 1km resolution: L2p (Net CDF)
  - Quality flag for every pixel (Single Sensor Error Statistics - SSES)
  - Timely delivery to users
  - Successful and productive International Cooperation

# GHRST-VC Complementarity

- GHRST is a comprehensive, international and effective user service
- Constellation provides the space segment which underpins the GHRST service
- Together they can ensure that operational users and others will be provided with a stable data-service
- *Currently Constellation objectives are met because of the association with GHRST*

- To CEOS:

- GHR SST provides fully functioning access to an established international user community,
- thereby meeting most of the data-related objectives of the SST VC

- To GHR SST:

- The GHR SST data-service will be underpinned by Space Agencies' commitments to maintain the VC, ensuring continuity of data
- Association with CEOS could lead to a more stable funding basis for GHR SST activities and infrastructure.

# Possible Issue for WGCV

- Currently, owing to data-gap between Envisat (ended April 8<sup>th</sup> 2012) and launch of Sentinel-3 (2014), there is a break in continuity of dual-view SST, which provides the accuracy benchmark
- Hence there is a need for continued collection of *in situ* reference observations of SST which are traceable to international standards
- During Envisat mission, these reference data are provided through the Envisat/AATSR validation programme

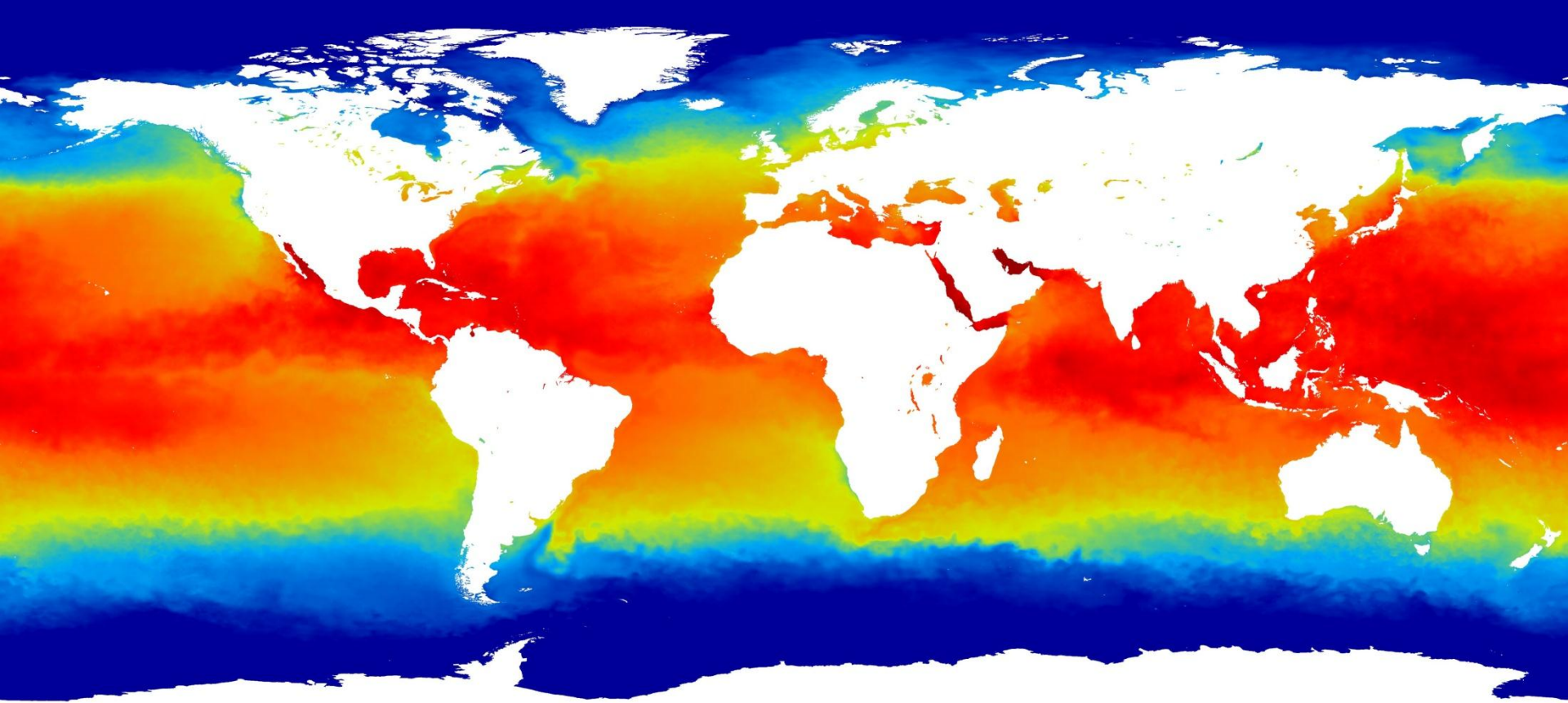




- In absence of satellite (and its validation programme) ,gap-bridging and/or gap-filling schemes are needed
- These require the continued acquisition of traceable *in situ* reference data, despite the absence of the satellite and its validation programme
- This is ‘Generic Validation’
- How should this be promoted - in the absence of a satellite and its validation programme?



- GHRSSST is functioning well today and provides a benchmark for an international, multi-sensor, near-real-time data-service
- However, funding support for GHRSSST is diverse and, in some areas, *ad hoc*.
- It is hoped that the infrastructure for GHRSSST will, in the future, receive stable support from the agencies involved.
- It is recommended that the WGCV follows closely the progress of the SST VC, through pro-active cross-representation.



## Multi-satellite Global SST

- ‘OSTIA’ SST Analysis field
- generated daily by UK Met Office
- A ‘Flagship product from the SST VC