GHRSST Long Term Stewardship and Reanalysis Facility

Overview

LTSRF Status

GHRSST Reanalysis

Example L4 Analyses

Future Activities

The GODAE High Resolution SST Reanalysis Project

Kenneth S. Casey
NOAA National Oceanographic Data Center, USA

Craig Donlon
GHRSST-PP International Project Office,
Met Office, UK

The GODAE Symposium
on Ocean Data Assimilation and Prediction in Asia-Oceania

http://ghrsst.nodc.noaa.gov

NOAA NODC

Regional/Global Task Sharing

GHRSST Long Term Stewardship and Reanalysis Facility

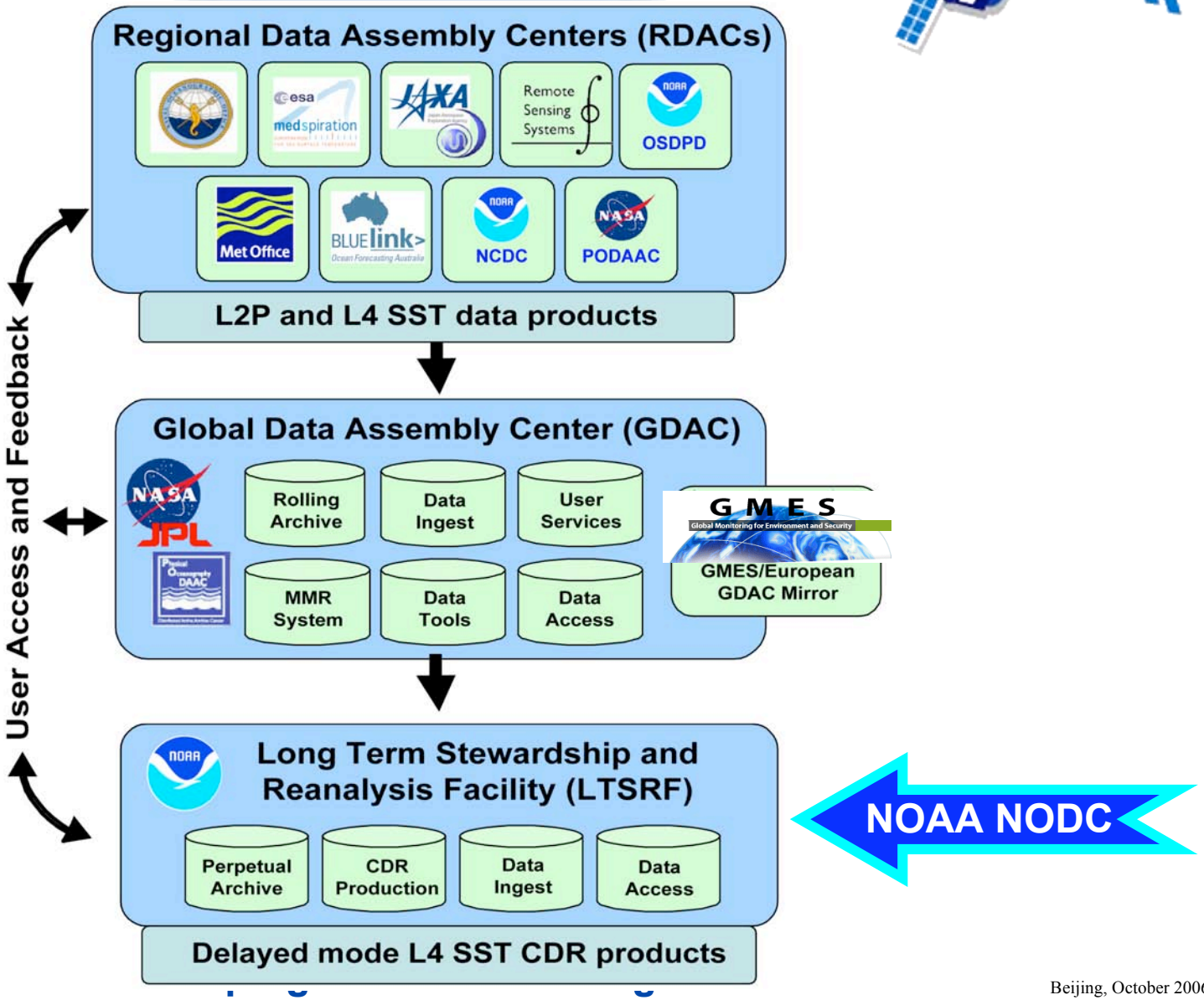
Overview

LTSRF Status

GHRSST Reanalysis

Example L4 Analyses

Future Activities

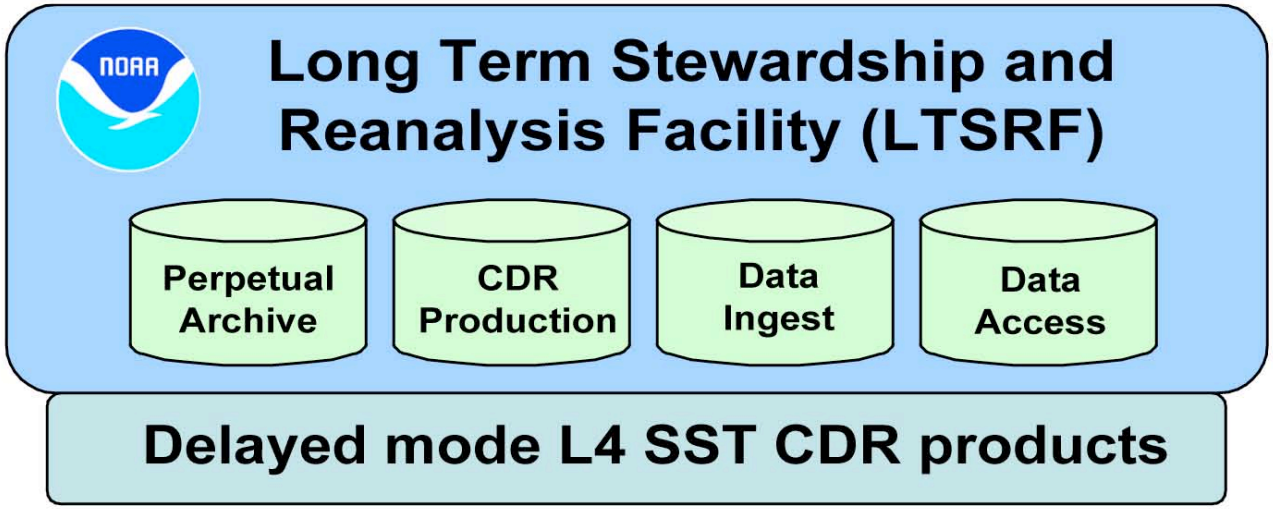


NOAA NODC

Stewardship and Reanalysis

GHRSST Long Term Stewardship and Reanalysis Facility

Overview
LTSRF Status
GHRSST Reanalysis
Example L4 Analyses
Future Activities



US NOAA National Oceanographic Data Center

http://ghrsst.nodc.noaa.gov

NOAA NODC

Stewardship and Reanalysis

GHRSST Long Term Stewardship and Reanalysis Facility

- Overview
- LTSRF Status
- GHRSST Reanalysis
- Example L4 Analyses
- Future Activities

NOAA Satellite and Information Service

National Oceanographic Data Center

>> Search NODC
>> Contact NODC

You are here: NODC Home > Satellite Oceanography Group > GHRSST LTSRF

LTSRF

GHRSST Long Term Stewardship and Reanalysis Facility

NOAA NODC

http://ghrsst.nodc.noaa.gov

Welcome!

Welcome to the Long Term Stewardship and Reanalysis Facility (LTSRF) for the GODAE High Resolution SST (GHRSST) Project, which seeks to rapidly and routinely deliver individual as well as multi-sensor blended SST products with high accuracy and fine spatial resolution. Please see the GHRSST web site for detailed information on this international effort.

NODC maintains the long term archive and works with the NASA JPL/Caltech Physical Oceanography Distributed Active Archive Center (PO.DAAC) Global Data Assembly Center (GDAC) to provide stewardship of these valuable data sets. NODC also leads the reanalysis component of GHRSST-PP, which will periodically reprocess the GHRSST record to produce more accurate and consistent Level 4 (gap free, gridded) SST climate data record analysis products for the global ocean.

Follow the links below to learn more about the GHRSST LTSRF and access the entire collection of GHRSST data (coming soon!):

LTSRF Status	LTSRF News	Access GHRSST Data
LTSRF Documents	LTSRF Home	SST-SI Intercomparisons

Kenneth.Casey@noaa.gov

LTSRF Home

SOG NODC NOAA CLASS AVHRR SST GODAE GAC RSMAS GHRSST-PP MCSST NLSST SeaWiFS GOSTA NPOESS VIIRS OPeNDAP LAS HRPT LAC GAC HDF-SDS DMAC PO.DAAC LTSRF GDAC RDAC L2P L4

| Site Map | Access Data | Submit Data | Intended Use of the Data ? | Customer Service |

Date last modified: Tue, 14-Mar-2006 13:09 UTC | Website problems? Contact the webmaster

NOAA-NESDIS-National Oceanographic Data Center | Privacy Policy | Disclaimer

This is an official website of the U.S. Government

http://ghrsst.nodc.noaa.gov

NOAA NODC

Current Status

GHRSST Long Term Stewardship and Reanalysis Facility

- **Stewardship capability established at US NODC**
  - Automatic daily acquisition and archive from GDAC
  - 30-day delay from observation to archive
  - All available online FTP, HTTP, and OPeNDAP
  - All data searchable via NODC Ocean Archive System - http://www.nodc.noaa.gov/cgi-bin/search/prod/accessionsView.pl/pref
  - Extensive metadata
- **Current Archive Holdings**
  - 1 TB (~20 TB uncompressed) spanning 2005 and 2006
  - 7583 accessions (RDAC/Sensor/Level/Date), ~100k files
  - AMSR-E, AVHRR-16, AVHRR-17, AVHRR-18 (GAC and LAC/HRPT) , MODIS Aqua, SEVIRI, AATSR, TMI
  - Coming Soon: MODIS Terra and GOES

http://ghrsst.nodc.noaa.gov

NOAA NODC

Current Status

GHRSST Long Term Stewardship and Reanalysis Facility

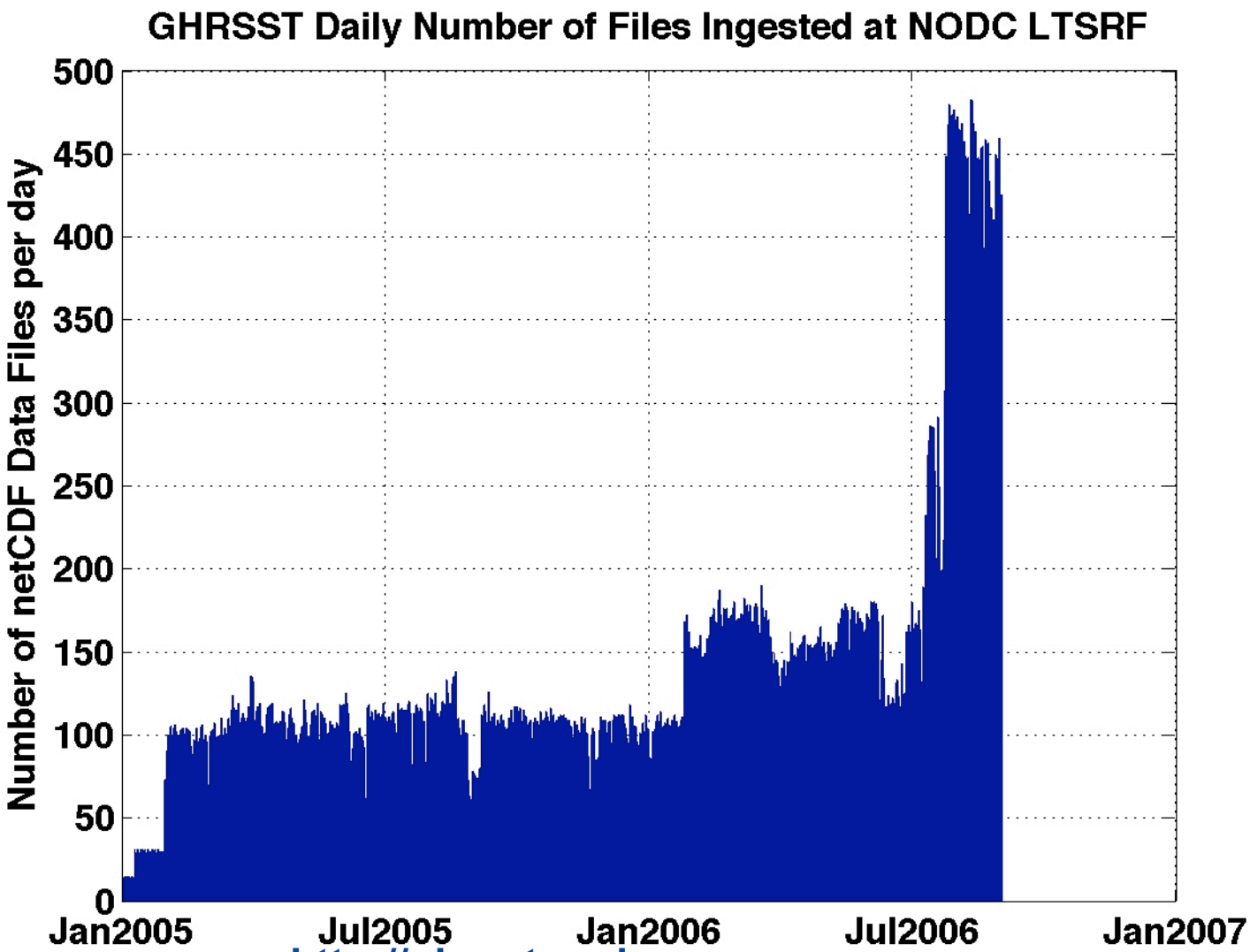
Overview

LTSRF Status

GHRSST Reanalysis

Example L4 Analyses

Future Activities



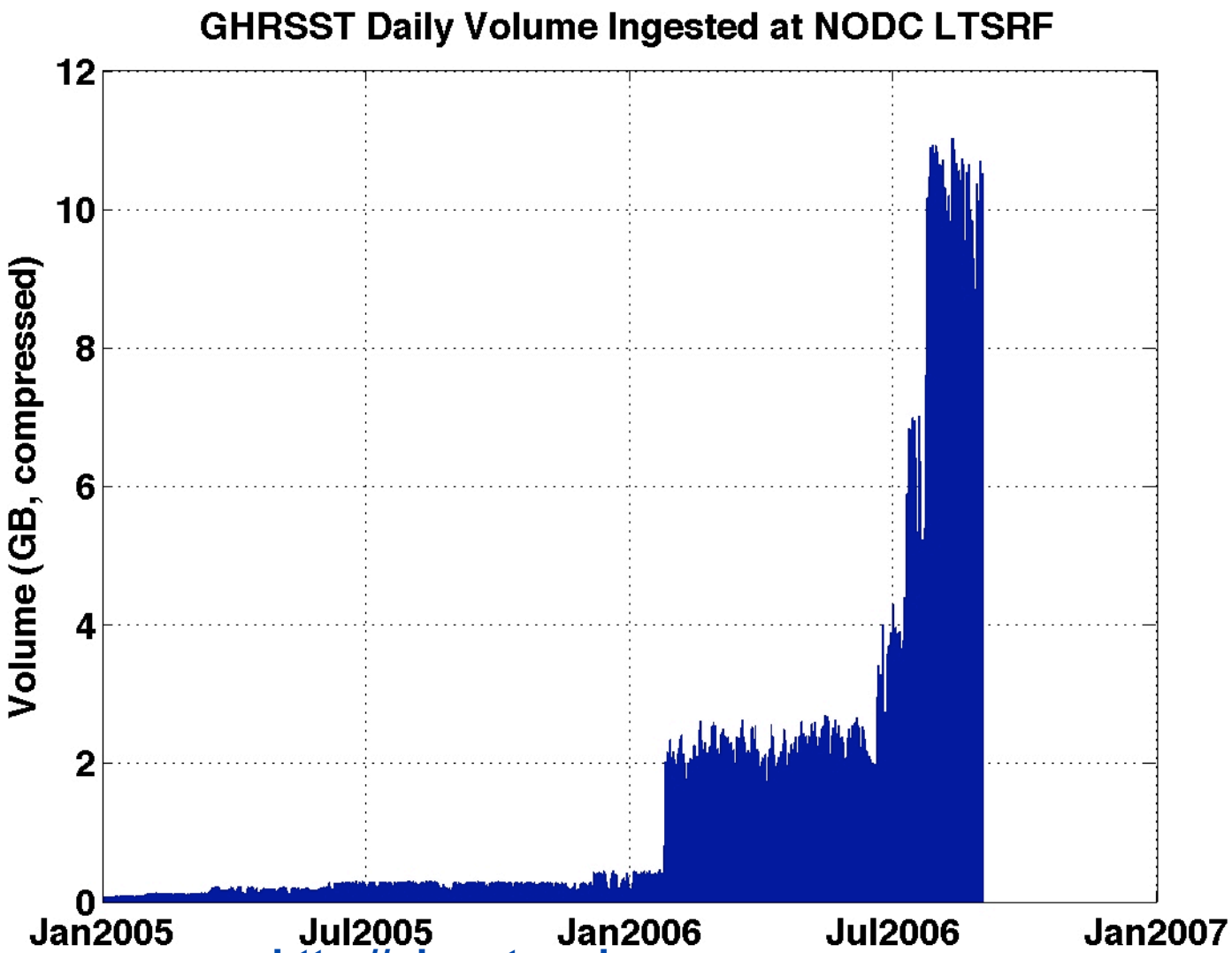
http://ghrsst.nodc.noaa.gov

NOAA NODC

Current Status

GHRSST Long Term Stewardship and Reanalysis Facility

Overview
LTSRF Status
GHRSST Reanalysis
Example L4 Analyses
Future Activities



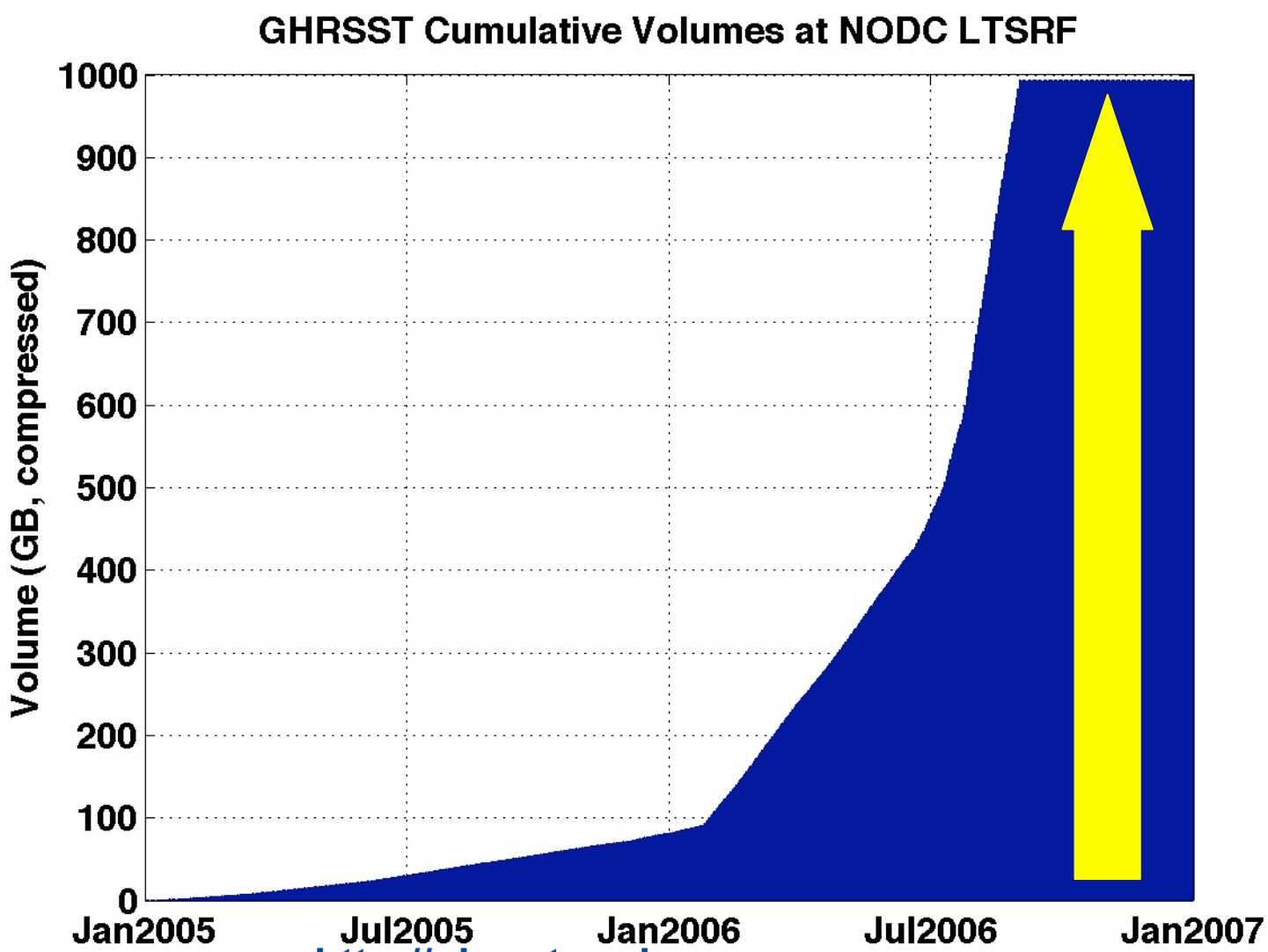
http://ghrsst.nodc.noaa.gov

NOAA NODC

Current Status

GHRSST Long Term Stewardship and Reanalysis Facility

Overview
LTSRF Status
GHRSST Reanalysis
Example L4 Analyses
Future Activities



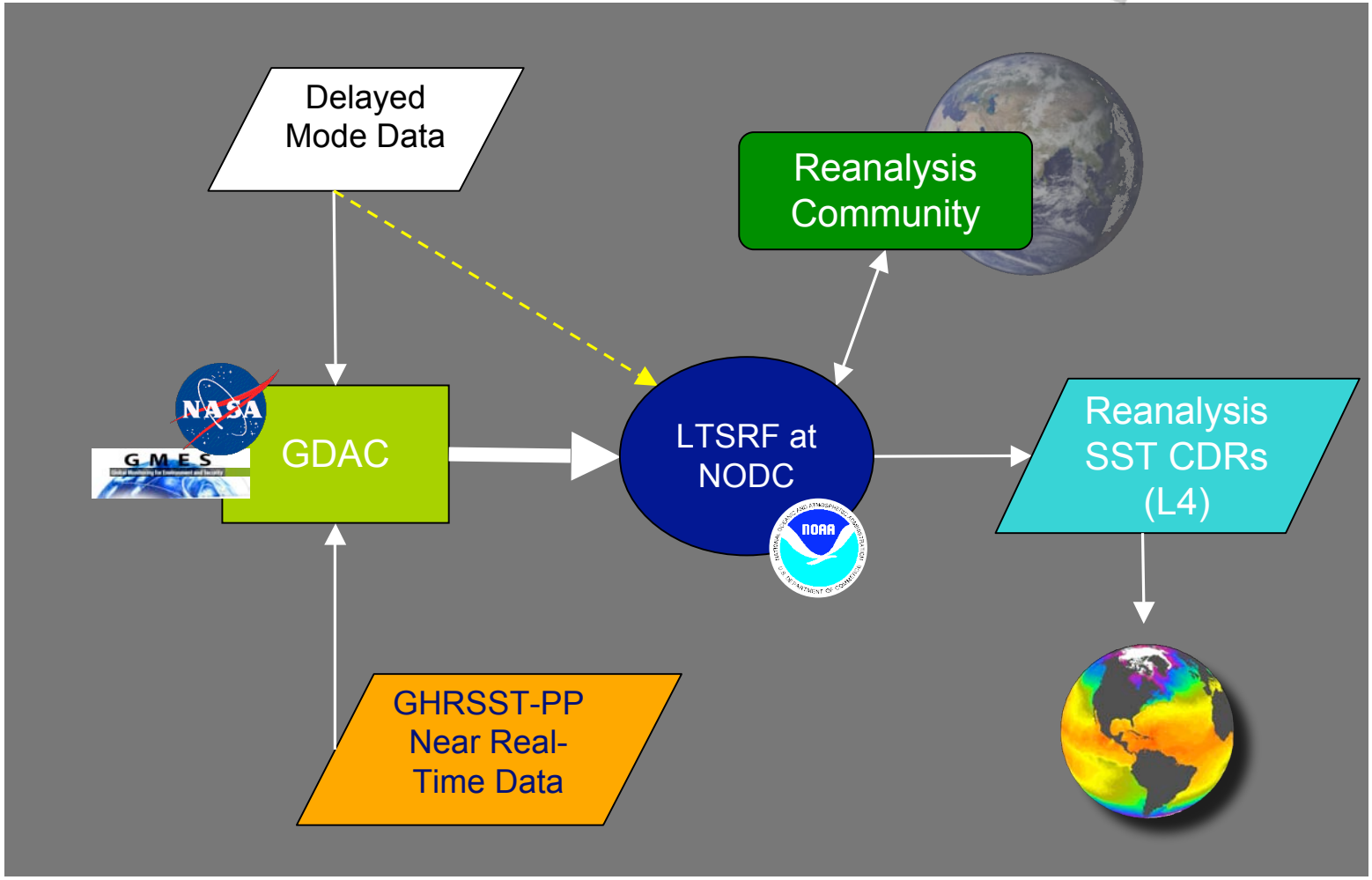
http://ghrsst.nodc.noaa.gov

NOAA NODC

GHRSST Reanalysis System Map

GHRSST Long Term Stewardship and Reanalysis Facility

Overview
LTSRF Status
GHRSST Reanalysis
Example L4 Analyses
Future Activities



NOAA NODC

http://ghrsst.nodc.noaa.gov

Goals of GHRSST Reanalysis

- Create delayed mode *climate data records* with higher accuracy and consistency
- Link to longer term climate data
- Enable a *sustained* reprocessing capability
- Adhere to the GCOS Climate Monitoring Principles

Delayed-Mode Improvements

Reanalysis can improve over near real time analysis by making use of:

- Late-arriving data
- Reprocessed L2P data
- Improved matchups, errors statistics, analysis procedures, diurnal models
- Techniques which require data from "future" observations
- Procedures too demanding for near real time production
- Consistent procedures for entire time series

RAN Technical Advisory Group

GHRSST Long Term Stewardship and Reanalysis Facility

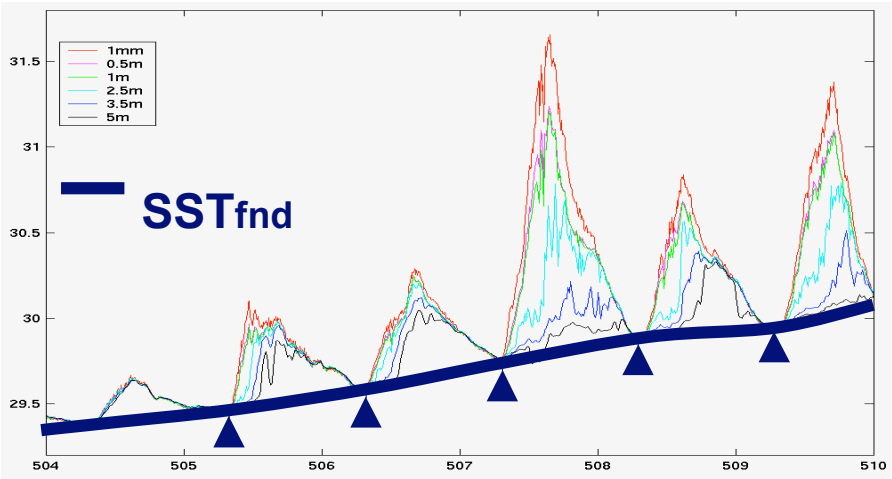
- Ken Casey, Chair
- Ed Armstrong
- Jorge Vazquez
- Craig Donlon
- Hiroshi Kawamura
- Gilles Larnicol
- David Llewellyn-Jones
- Nick Rayner
- Gary Wick
- Dick Reynolds
- Bill Emery
- Jo Murray
- Gary Corlett
- Helen Beggs

http://ghrsst.nodc.noaa.gov

Reanalysis Product Specifications

GHRSST Long Term Stewardship and Reanalysis Facility

- Spatial: Global 5-10km
- Temporal: Once per day
- Type of SST: SST_{fnd}
- Error Stats: Bias and Standard Deviation
- Format: L4 netCDF with CF metadata



(Modified from A. Stuart-Menteth)

http://ghrsst.nodc.noaa.gov

Ensemble Approach Schematic

GHRSST Long Term Stewardship and Reanalysis Facility

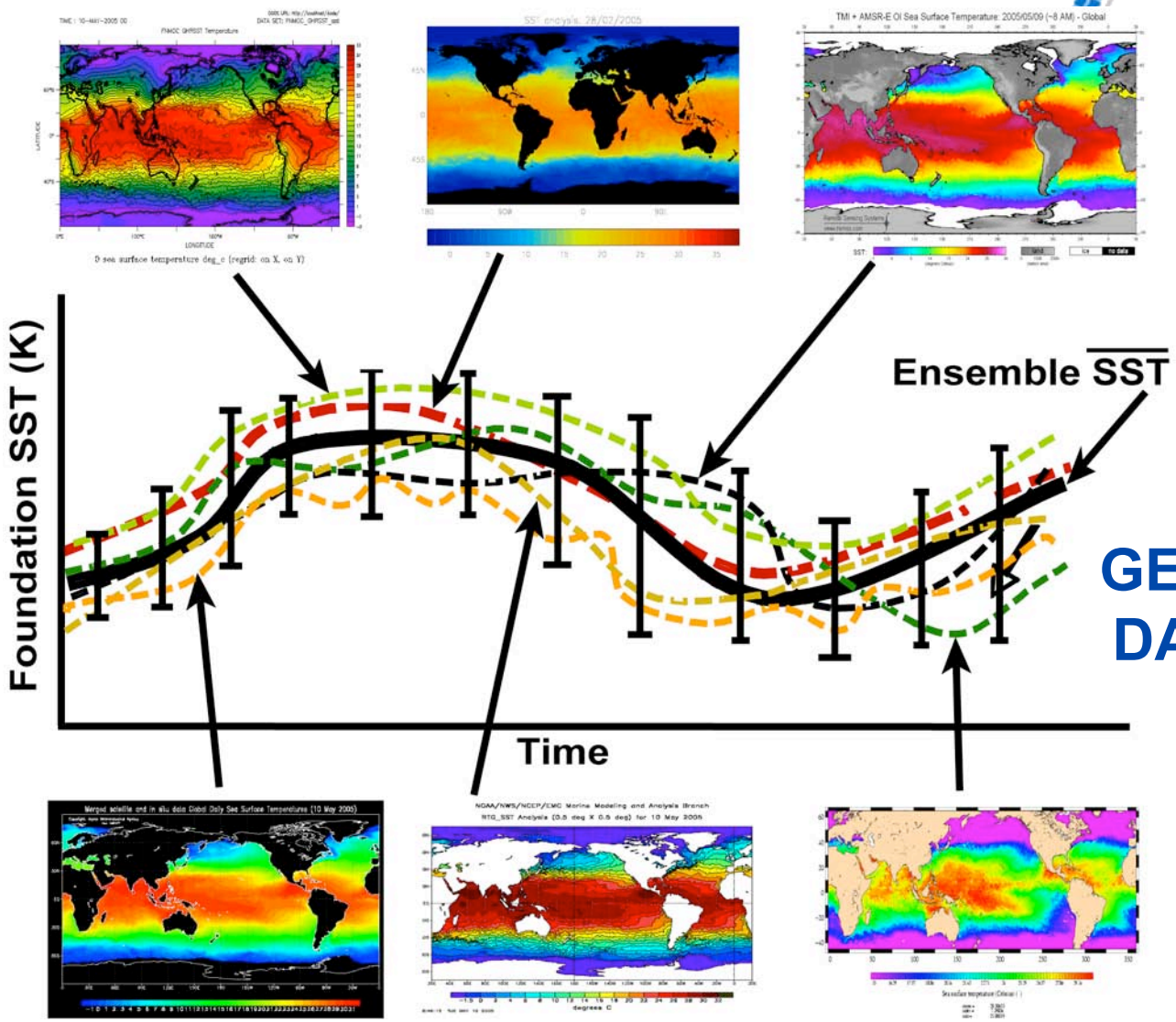
Overview

LTSRF Status

GHRSST Reanalysis

Example L4 Analyses

Future Activities



GEO Task DA-06-03

http://ghrsst.nodc.noaa.gov

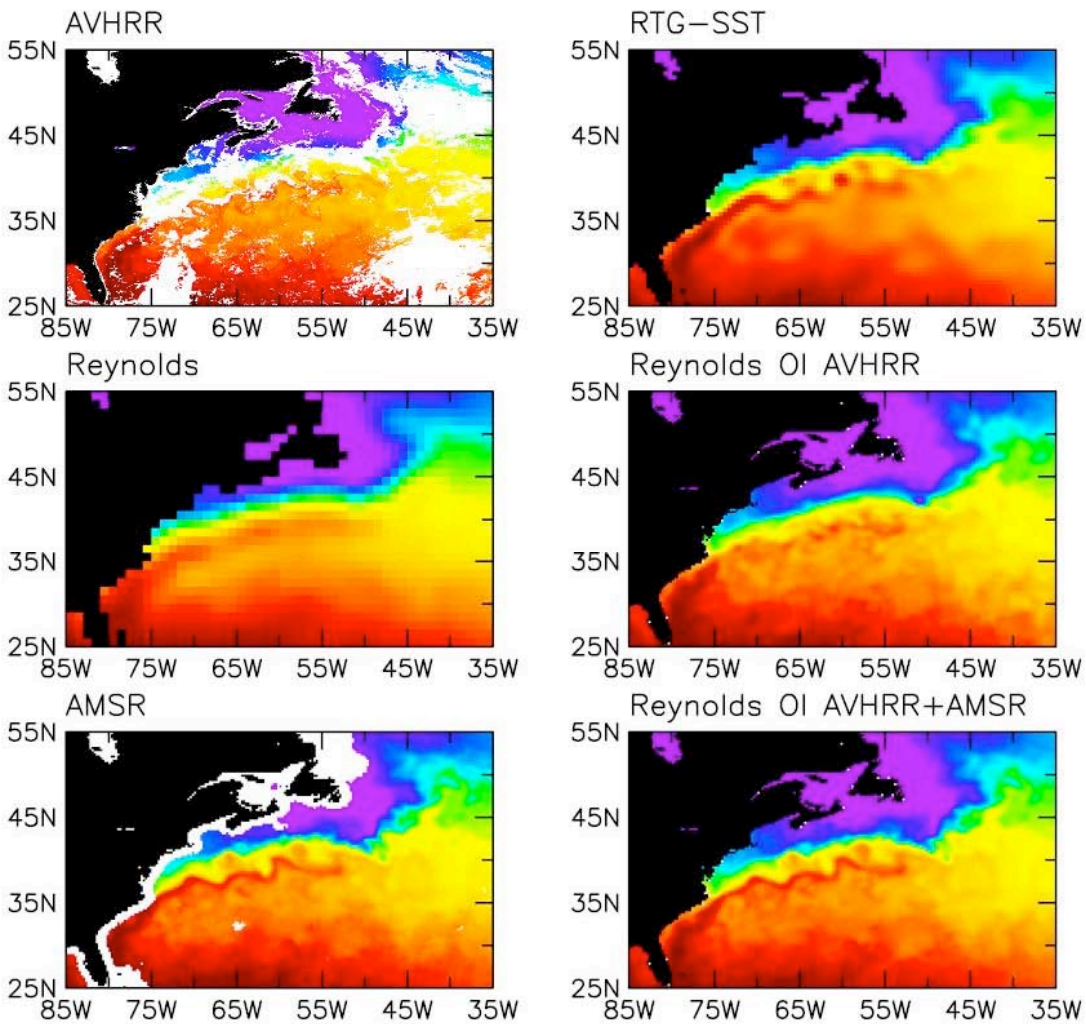
NOAA NODC

Example Analyses

GHRSST Long Term Stewardship and Reanalysis Facility

Overview
LTSRF Status
GHRSST Reanalysis
Example L4 Analyses
Future Activities

New Reynolds Daily OI



http://ghrsst.nodc.noaa.gov

Dick Reynolds
NOAA NCDC

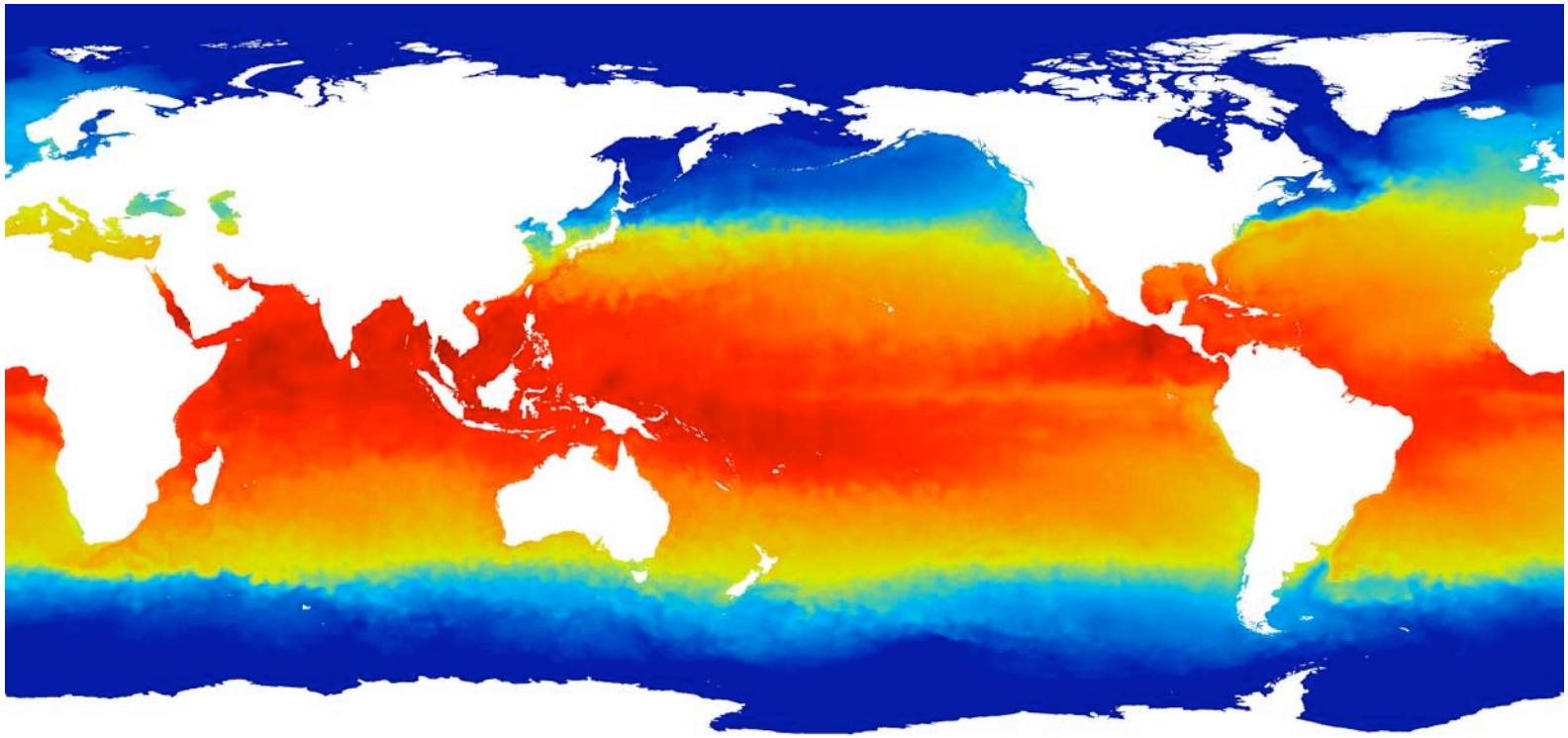
NOAA NODC

Example Analyses

GHRSST Long Term Stewardship and Reanalysis Facility

- Overview
- LTSRF Status
- GHRSST Reanalysis
- Example L4 Analyses
- Future Activities

Met Office OSTIA



Craig Donlon
Met Office, UK

http://ghrsst.nodc.noaa.gov

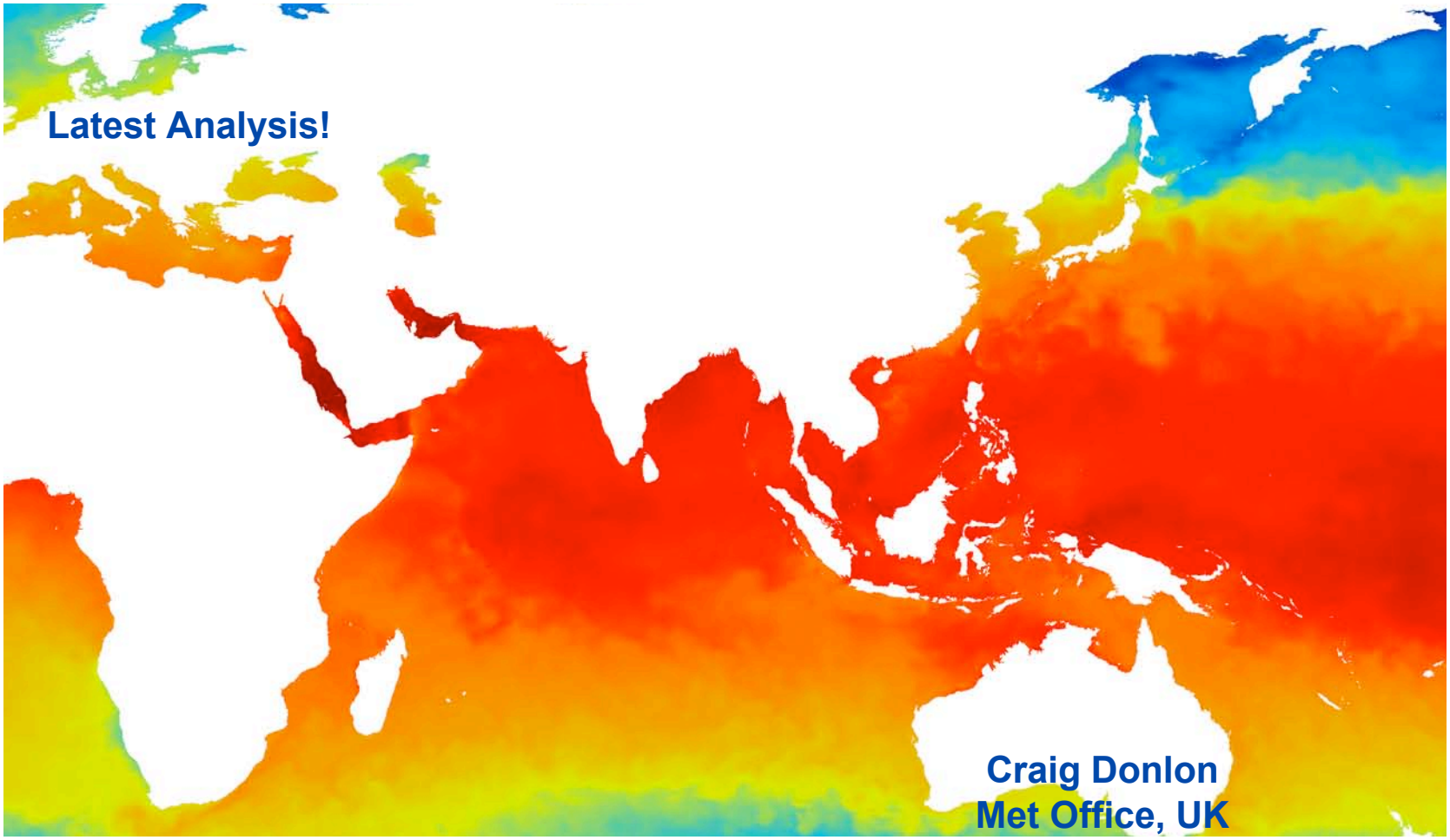
NOAA NODC

Example Analyses

GHRSST Long Term Stewardship and Reanalysis Facility

- Overview
- LTSRF Status
- GHRSST Reanalysis
- Example L4 Analyses
- Future Activities

Met Office OSTIA



http://ghrsst.nodc.noaa.gov

NOAA NODC

Example Analyses

GHRSST Long Term Stewardship and Reanalysis Facility

Overview

LTSRF Status

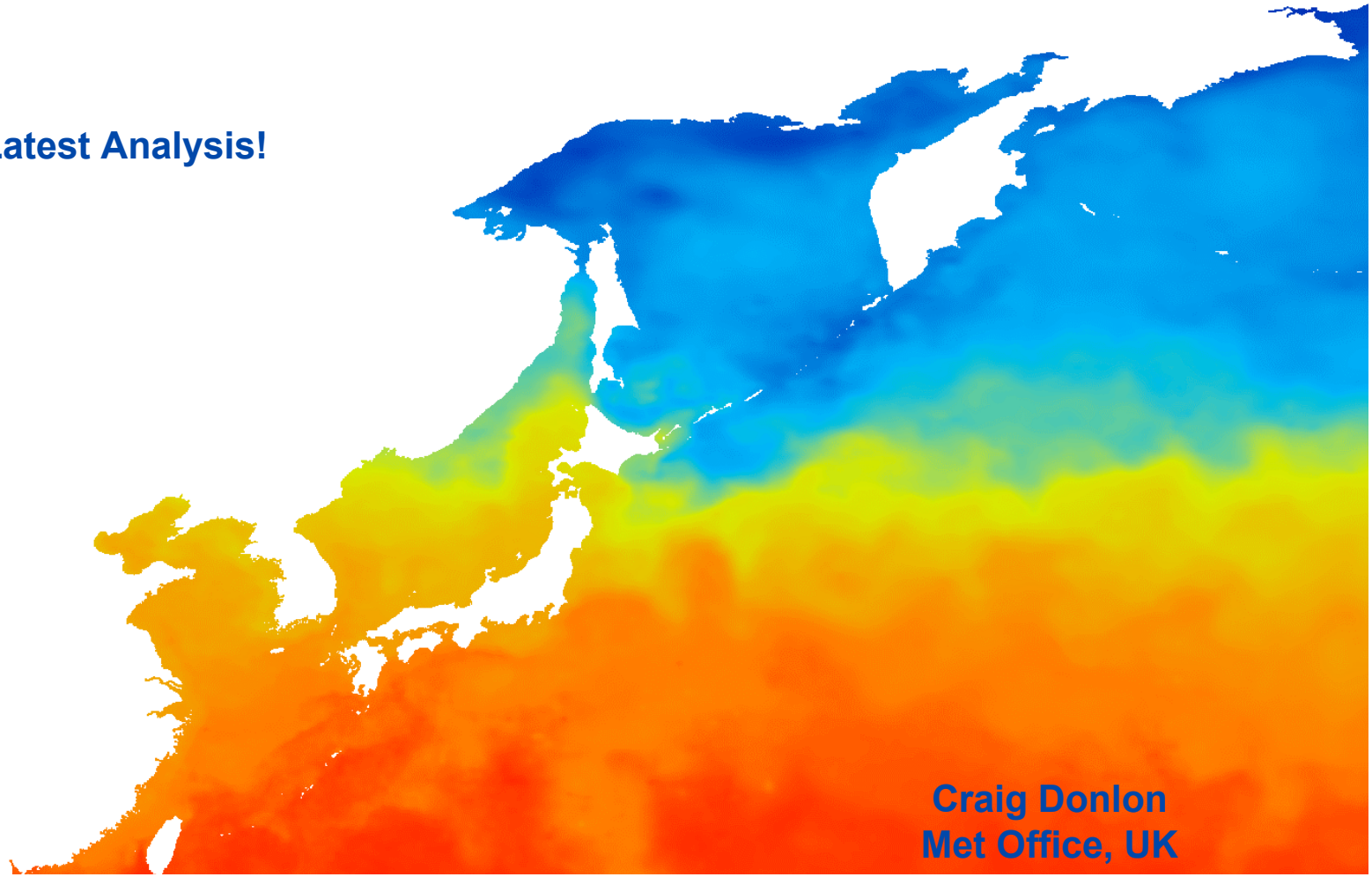
GHRSST Reanalysis

Example L4 Analyses

Future Activities

Met Office OSTIA

Latest Analysis!



http://ghrsst.nodc.noaa.gov

NOAA NODC

Example Analyses

GHRSST Long Term Stewardship and Reanalysis Facility

Overview

LTSRF Status

GHRSST Reanalysis

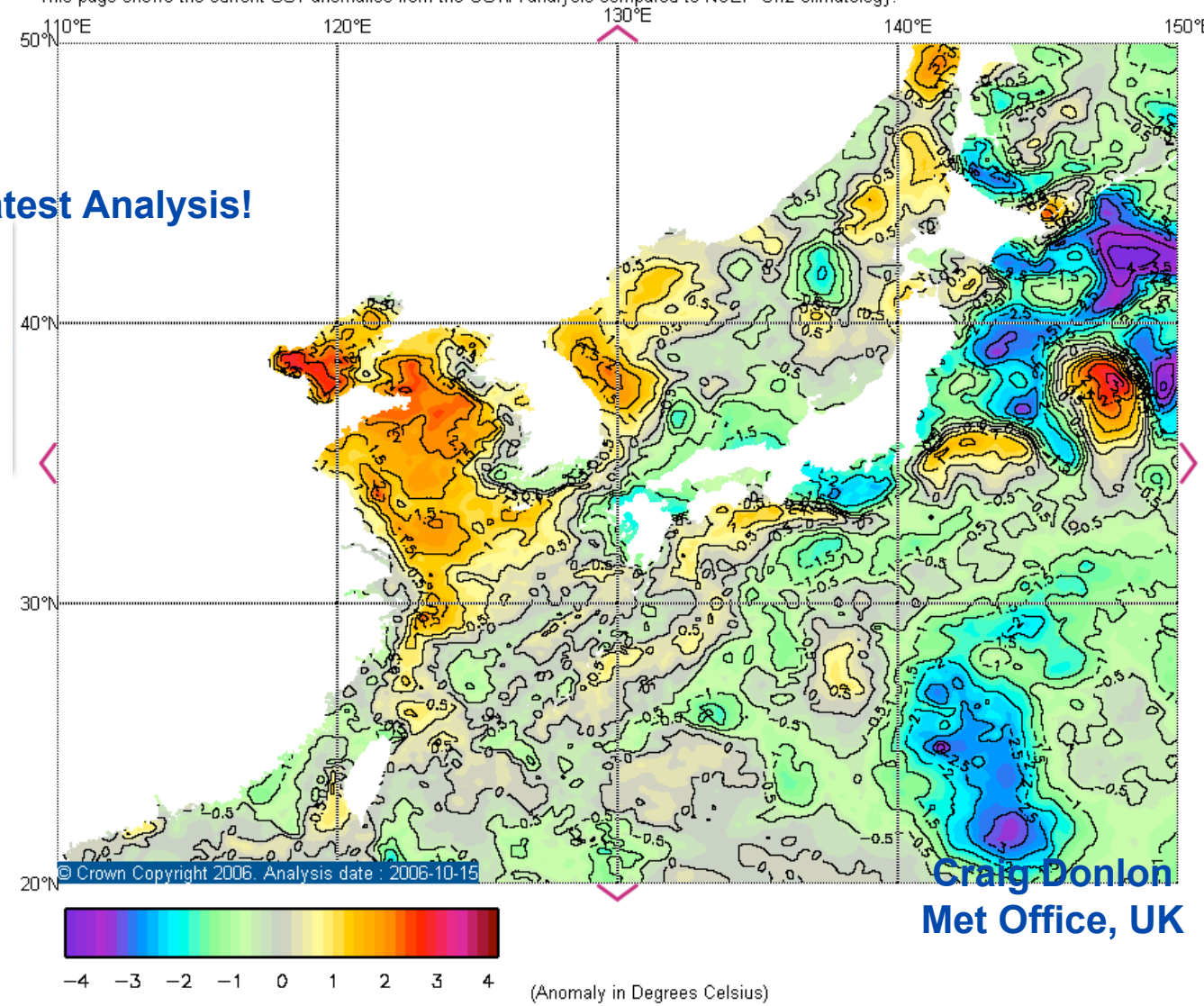
Example L4 Analyses

Future Activities

OSTIA SSTs

This page shows the current SST anomalies from the OSTIA analysis compared to NCEP OIv2 climatology.

Latest Analysis!



Link to this page SST plot for this region.

Craig Donlon
Met Office, UK

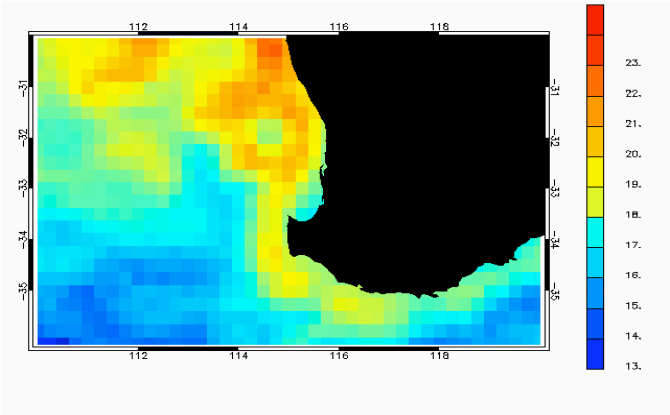
Example Analyses

GHRSST Long Term Stewardship and Reanalysis Facility

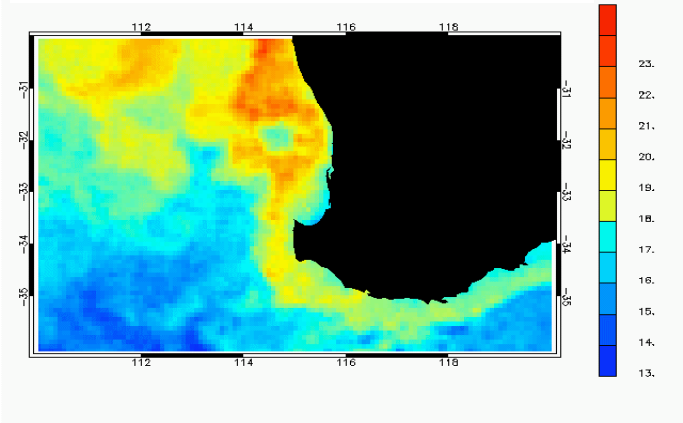
- Overview
- LTSRF Status
- GHRSST Reanalysis
- Example L4 Analyses
- Future Activities

Australian Bureau of Meteorology

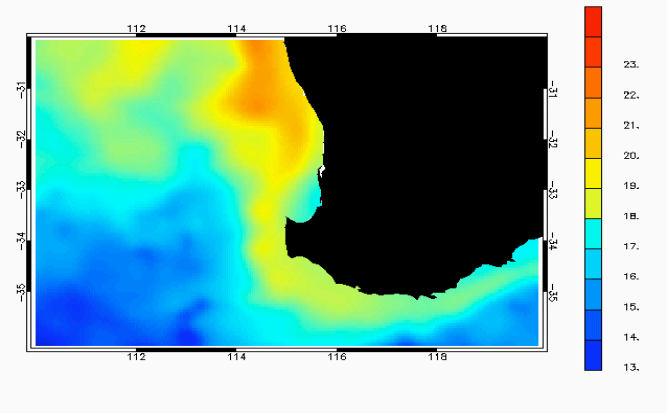
BoM Operational Regional SST1m



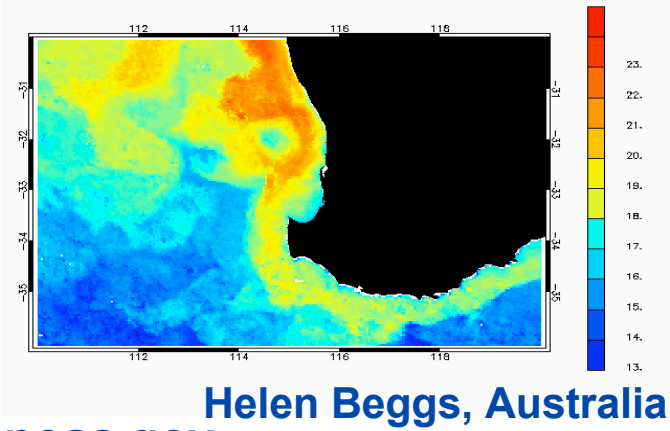
BoM Test Regional SSTfnd



Met Office Global OSTIA SSTfnd



CMAR 3 Day AVHRR SST1m



Helen Beggs, Australian BoM

http://ghrsst.nodc.noaa.gov

NOAA NODC

Ongoing and Future Activities

- Now that archive and stewardship functions are in place, focus on reanalysis efforts (the *RF* in *LTSRF*)
- Clearly identifying (and encouraging) L2P reprocessing efforts
- GCOS SST and SI Intercomparisons: collecting data, unified access
- 1st GHRSST Reanalysis and ensembles

GHRSST Long Term Stewardship and Reanalysis Facility

Overview

LTSRF Status

GHRSST Reanalysis

Example L4 Analyses

Future Activities

Thank-you!

Kenneth.Casey@noaa.gov

http://ghrsst.nodc.noaa.gov

NOAA NODC