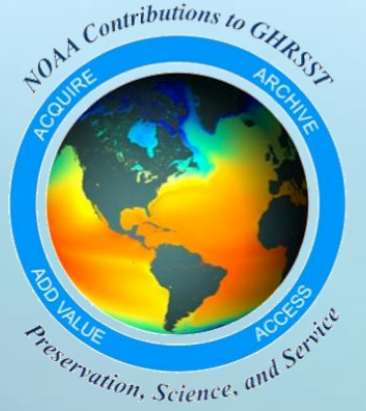
NOAA/NESDIS/NCDC

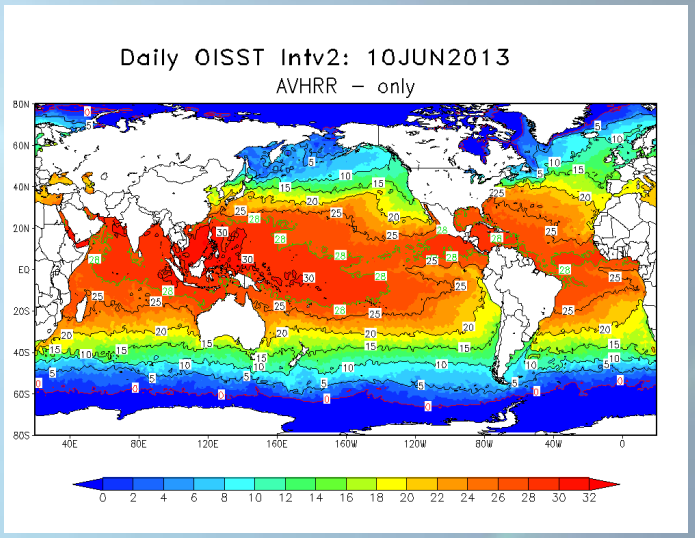
National Climatic Data Center: Status&Updates



V. Banzon
E. Freeman
B. Huang
R.W. Reynolds
H.-M. Zhang

NCDC Operational products

1/4° Daily Optimum Interpolation SST (DOISST) analysis (Level 4)



- **AVHRR-only produced daily**
  - NRT with1-day delay (now using Navy N19 and metOpA)
  - Final with 14-day delay
  - Reprocessing: Pathfinder v5.2 under evaluation
  - http://www.ncdc.noaa.gov/oa/climate/research/sst/oi-daily-information.php
- **AVHRR+AMSR (2002-2011)**
  - No longer operational; revival after AMSR2 is available
  - WindSat identified to bridge gap bet AMSR-E to AMSR2

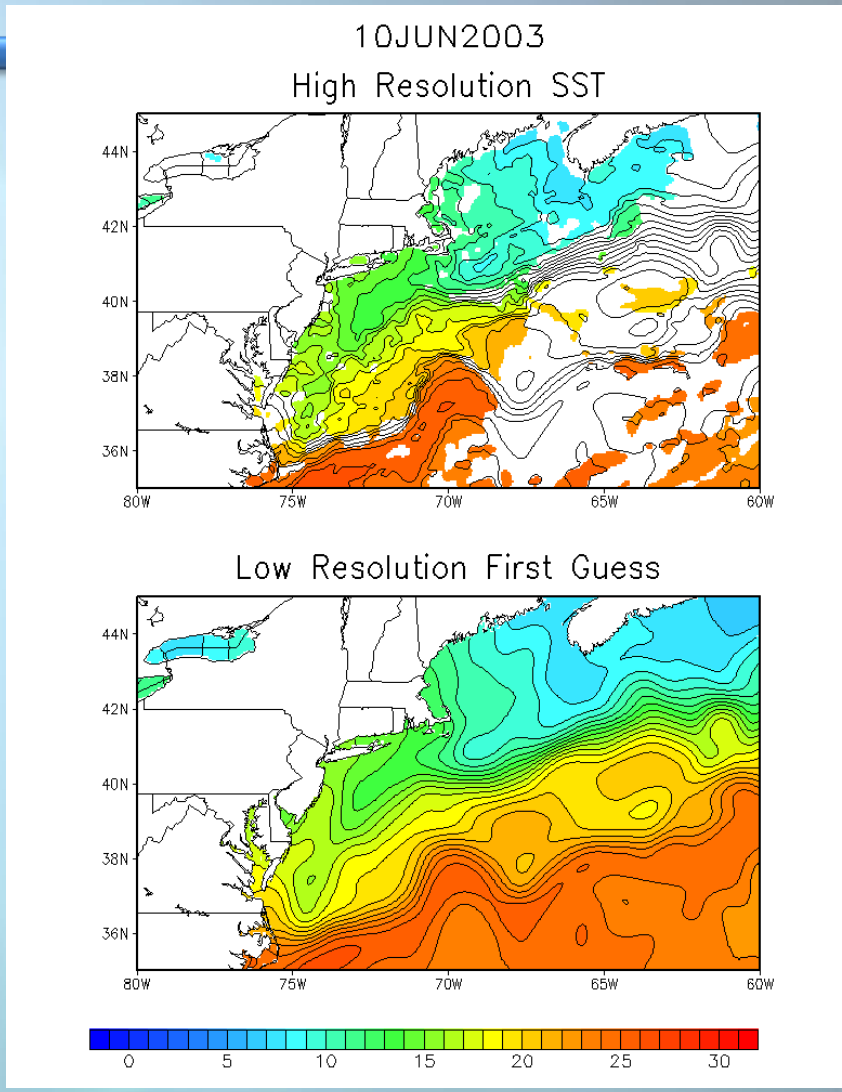
NCDC R&D Products

High resolution daily OISST analysis (Reynolds talk, Th 9 am)

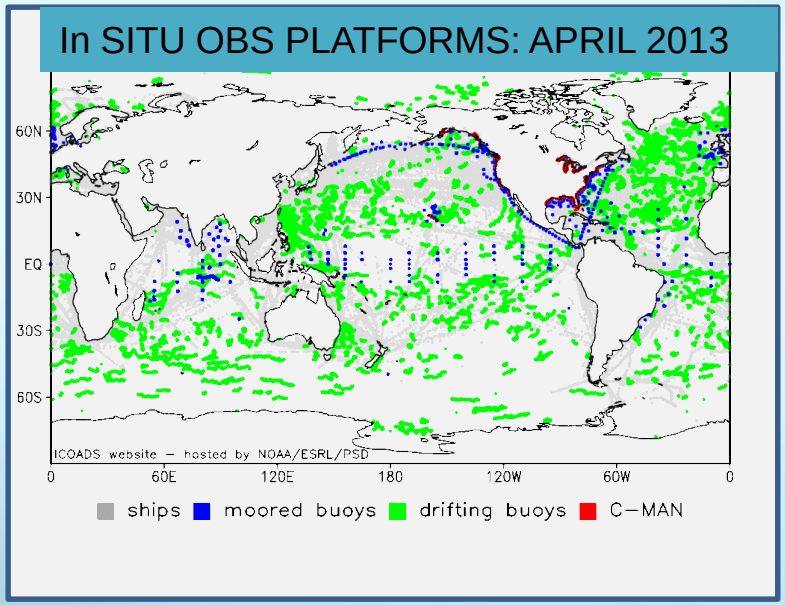
- Level 4 uses Pathfinder AVHRR v.5.2 (1/24 °) and AMSR
- Dataset (2002-2011) will be put online soon for public comment
- Not operational

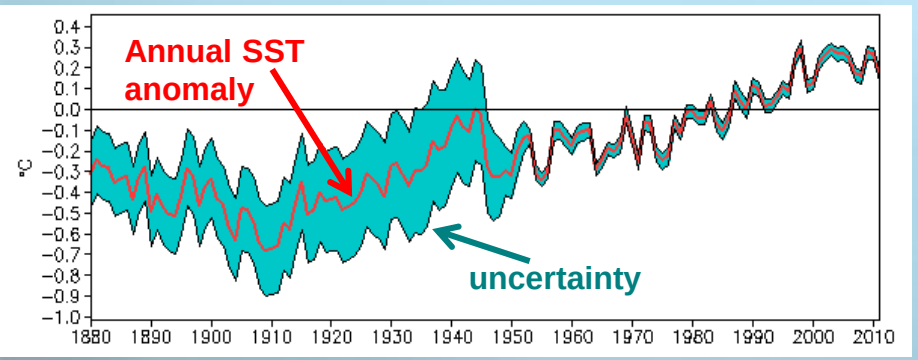
Night-like daily OISST analysis

- Level 4
- No longer nighttime only
- need complete Pathfinder 5.2 with no temporal gaps
- Not yet available publicly



NCDC GHRSST-related products



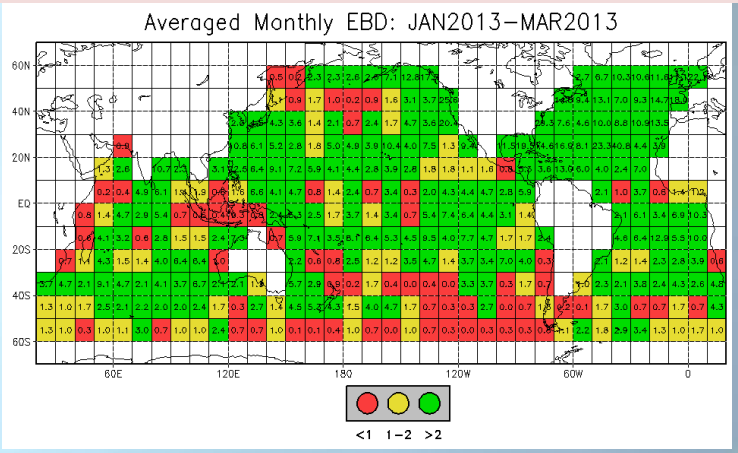


- **International Comprehensive Ocean-Atmosphere Dataset (ICOADS)**
  - transitioning to NCDC
  - underfunded; release 2.6 postponed to end of 2014.
  - In progress: consolidated monthly NRT stream combining GTS ingests at NCDC & NCEP
  - Expanding international partnerships to help continue dataset development and improvements
  - http://icoads.noaa.gov/
- **Extended Reconstruction of Sea Surface Temperature (ERSST)**
  - 2° grid, monthly from 1880's
  - Reconstructed SSTs; available as netCDF; produced monthly and used for seasonal assessments
  - New version beta-release in Fall 2013. Major changes include in-situ SST bias correction, EOT modes computation, and others
  - http://www.ncdc.noaa.gov/ersst/

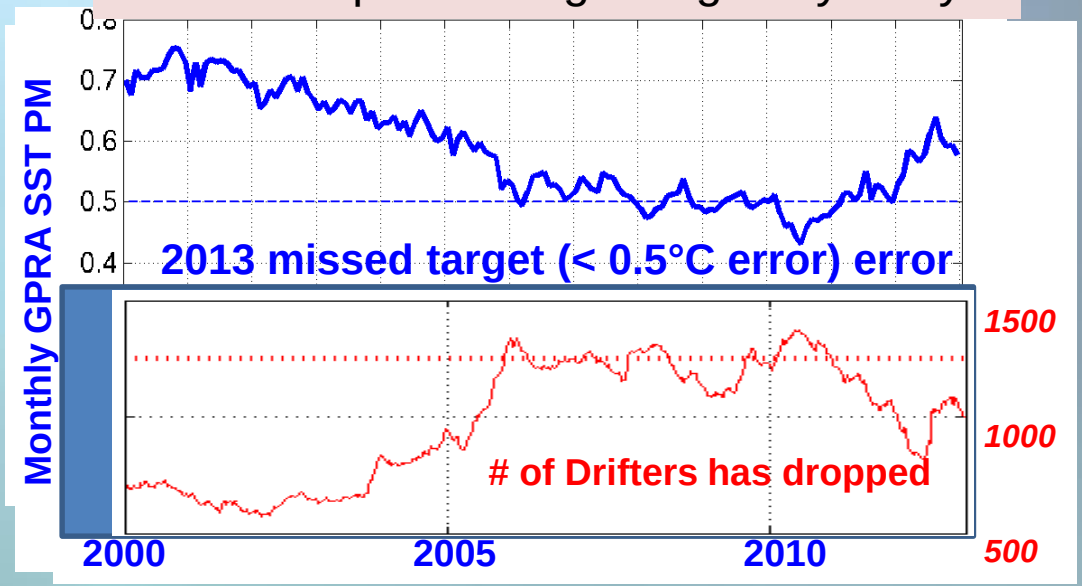
NCDC GHRSST-related products

- **GPRA SST Performance Measure (PM)**
  - Potential Satellite Residual Bias error is computed on a monthly, 10 ° grid
  - Based on number and distribution of in situ obs
  - Used to monitor global buoy array (NOAA-GCOS activity)
  - Produced quarterly for the Climate Program Office and posted at http://www.osmc.noaa.gov/
  - required by Government Performance Results Act (GPRA) , tracked by NOAA and reported to US Congress during budget process

To answer question: where are buoys needed?



To show impact of degrading buoy array



Main Activities since G-XIII

- **Papers:**
  - Reynolds, R. W., D. B. Chelton, J. Roberts-Jones, M. J. Martin, D. Menemenlis, and C. J. Merchant, 2013: Objective determination of feature resolution in two sea surface temperature analyses. J. Climate, 26. 2514-2533.
  - Banzon, Viva F., Richard W. Reynolds, 2013: Use of WindSat to Extend a Microwave-Based Daily Optimum Interpolation Sea Surface Temperature Time Series. J. Climate, 26, 2557–2562. doi: http://dx.doi.org/10.1175/JCLI-D-12-00628.1
- **DOISST operational but code is being updated**
- **2 MB a day transferred daily to PODAAC**

GDS 2.0 Implementation

- **DOISST and Hi-re GDS1.7-compliant**
- **DOISST GDS2.0 compliance scheduled for FY2015 but may happen sooner**
- **Contingent on successful testing of refactored code**

Issues: need advance info

- How many sources of AMSR2 SSTs? Formats? Schedule? What are the differences & How to evaluate their qualities?
- If MetOp B will not use heritage procedures and algorithms, what is the data format, archive plan? Validation plan?
- What is the latest on VIIRS SST, e.g., algorithm and product availability?