



# NASA RDAC Report to the GHRSSST Science Team

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# NASA RDACs

- \* Current components

- \* **JPL RDAC**

- \* MODIS Aqua and Terra L2P

- \* VIIRS L2P

- \* MUR L4

- \* **JPL\_OUROCEAN RDAC**

- \* G1SST L4



# MODIS and VIIRS L2P

- \* Aqua and Terra L2P, v2014.0
  - \* [https://podaac.ipl.nasa.gov/dataset/MODIS\\_T-JPL-L2P-v2014.0](https://podaac.ipl.nasa.gov/dataset/MODIS_T-JPL-L2P-v2014.0)
  - \* Used as input layer in State Of The Ocean (SOTO) visualization tool
- \* VIIRS L2P, v2016.0
  - \* [https://podaac.ipl.nasa.gov/dataset/VIIRS\\_NPP-JPL-L2P-v2016.0](https://podaac.ipl.nasa.gov/dataset/VIIRS_NPP-JPL-L2P-v2016.0)
  - \* 2012-2018 time series completed March 2018
- \* Operations nominal. Data within 3-4 hours of observation



# G1SST

- \* G1SST status

- \* G1SST to keep producing global maps on the daily basis
- \* The G1SST 2DVAR blending algorithm has been revised for blending L2 VIIRS SSTs, with emphasis on keeping small-scale features resolved by VIIRS.



# MUR L4

- \* MUR improvements

- \* Experimental field "dt\_1km\_data" introduced to indicate temporal proximity to MODIS (and VIIRS) L2P samples at each grid
  - \* Enables MUR L4 to be use as a L3C
  - \* Included in MUR product since mid-2016
- \* Smoothness optimization (given the L2P sampling patterns and timing) using simulated SST dynamics (from 2km global ECCO2 runs)
  - \* Any community interest in such a simulated SST data set?
- \* 25-km grid MUR product
  - \* A by-product of the full MUR production line.
  - \* Part of COVERAGE project

# COVERAGE



(CEOS Ocean Variables Enabling Research and Applications for GEO)

- Collaborative effort within CEOS and 3-year NASA project
  - Involves the 4 Ocean VCs (SST, OST, OCR, OSVW) and GEO projects (MBON, Blue Planet) to enable more widespread use of ocean satellite data in support of applications.
  - Initial Phase focused on creating common 25km global gridded products of 4 Ocean VCs.
  - Platform for improved, integrated ocean data access utilizing emerging data management and cloud capabilities
  - See poster by J. Vazquez et al.

# NASA Physical Oceanography



- \* Recent SST initiatives and proposals
  - \* National Ocean Partnership Program (NOPP)
    - \* **MISST: Continuing the GHRSSST Partnership and Arctic Data** (Chelle Gentemann, Earth Space Research)
  - \* ROSES Physical Oceanography 2017. Three awards.
    - \* **Physical Deterministic SST from MODIS and VIIRS Radiances** (Prabhat Koner, Univ. of Maryland)
    - \* **Merging Optimal Estimation and Multi-Channel Atmospheric Corrections for Accurate SSTs from MODIS and VIIRS** (Peter Minnett, Univ. of Miami)
    - \* **Improved Air-Sea Essential Climate Variables from Aqua AMSR-E and VIIRS** (Frank Wentz, Remote Sensing System)
  - \* **Remote Sensing Journal: Topical Collection "Sea Surface Temperature Retrievals from Remote Sensing"**
    - \* Guest Editor: Jorge Vazquez, JPL. No current deadline on submissions. Changed from Special Issue to Collection.
    - \* Sixteen papers already published. All the papers may be accessed through.
      - \* [http://www.mdpi.com/journal/remotesensing/special\\_issues/SST\\_RS](http://www.mdpi.com/journal/remotesensing/special_issues/SST_RS)