Global Data Assembly Center (GDAC) Report to the GHRSST Science Team

Edward Armstrong, Jorge Vazquez, Yibo Jiang, Rob Toaz, Thomas Huang, Vardis Tsontos, Cynthia Chen, Chris Finch

17th GHRSST Science Team Meeting
Tysons Corner, VA, USA
6 June 2016



National Aeronautics and Space Administration

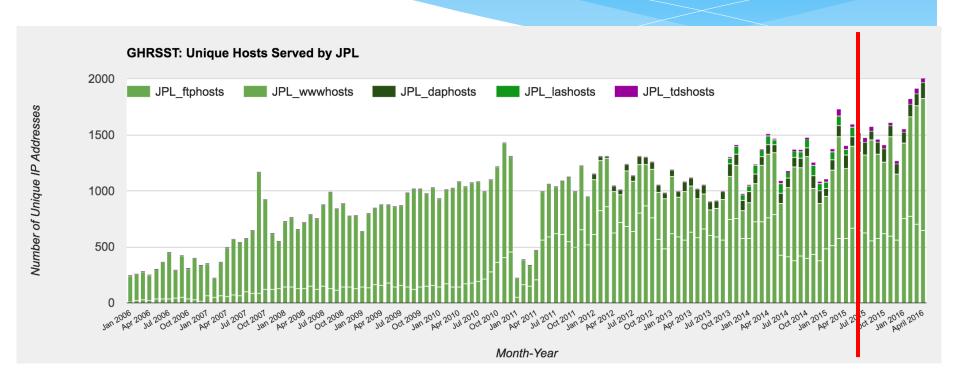
Jet Propulsion LaboratoryCalifornia Institute of Technology
Pasadena, California

© 2016 California Institute of Technology. Government sponsorship acknowledged.

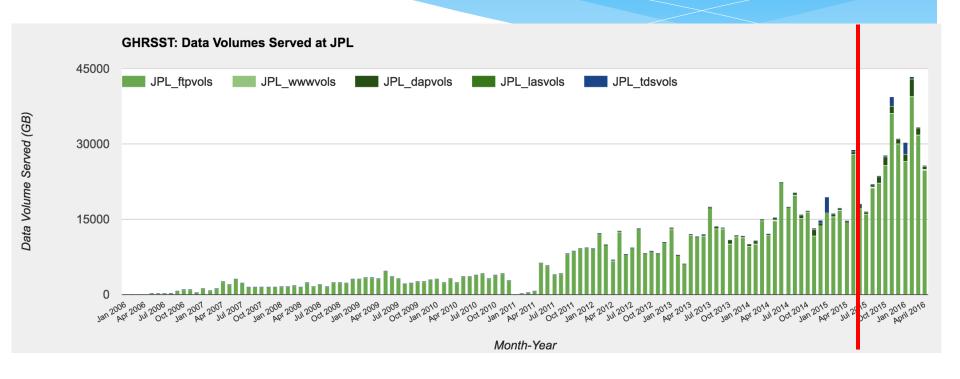
GDAC Highlights

- GHRSST datasets
 - * Nearly all GHRSST datasets are now GDS2
 - Consistent monthly distribution near 3oTBs
 - Support operational datastreams for L2P/L3/L4 data from 15 RDACs
 - * Maintain linkages to data providers and LTSRF archive
 - Coordinating with NASA ESDIS components on Sentinal-3A data
- * Continual development and improvement of tools and services for data usage Web services, Subsetting, Visualization, Data Aggregation, Metadata services
- User community engagement
 - Respond to GHRSST user queries
 - Work with applications users
 - Populating PO.DAAC forum with data recipes and tutorials
- * Coordination on new Regional Global Task Sharing (R/G TS) architecture proposals
 - * Goal: Decentralize the ingest and distribution locations
 - Focus on specific datasets and RDACs

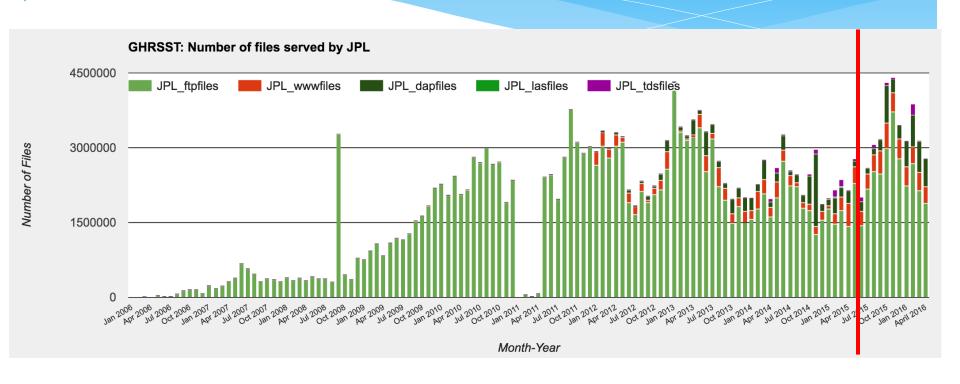
PO.DAC Distribution metrics: Monthly Unique Users

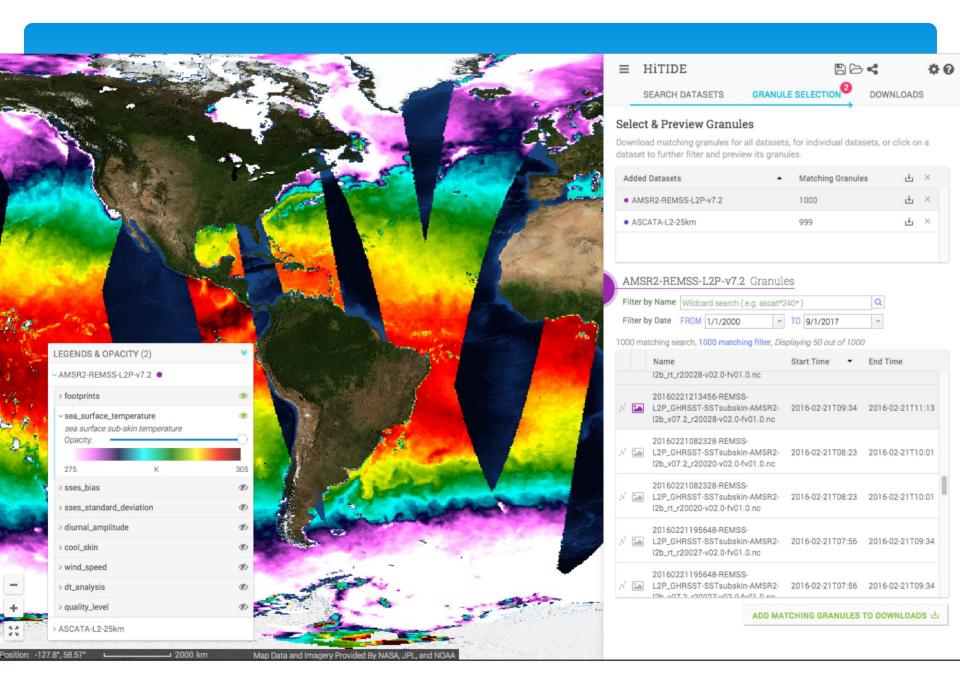


Volume of Monthly Files



Number of Monthly Files

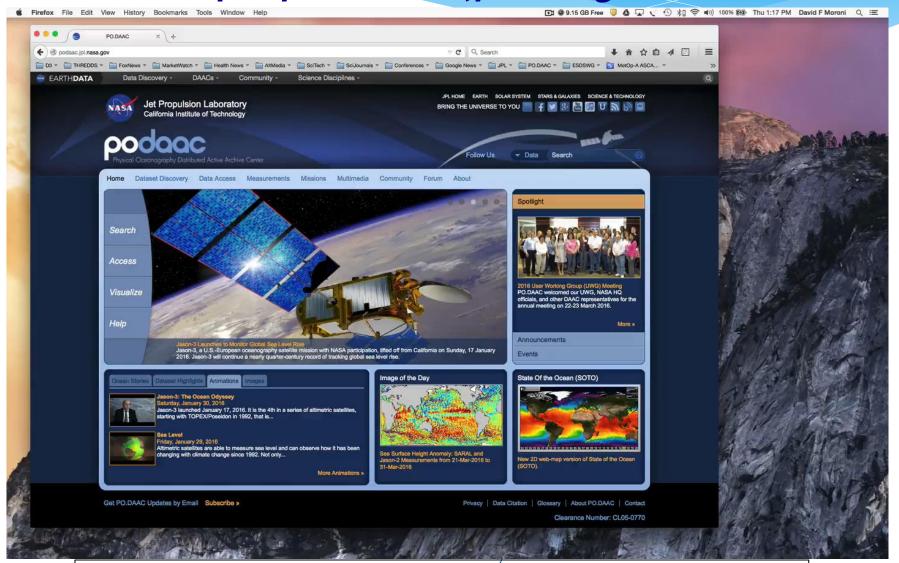




PO.DAAC Drive Demo



https://podaac-uat.jpl.nasa.gov/drive



How to get URS Account: https://urs.earthdata.nasa.gov/users/new

Emerging Technologies

- * Virtual Quality Screening Service (VQSS)
 - * Seamlessly applying GDS2 quality information (quality_level, l2p_flags, etc.) to granule data extraction and subsetting requests
 - Participate in GHRSST data user survey
- * OceanXtremes
 - * Climatology generation, SST anomaly detection and mining using cloud based databases
- * **Distributed Oceanographic Matchup Service (DOMS)**
 - * Satellite to in situ (ICOADS, SPURS, ARGO, SAMOS) matchup service
- See Armstrong et al. Poster on the above three topics
- * Mining and Utilizing Dataset Relevancy from Oceanographic Dataset (MUDROD) Metadata, Usage Metrics, and User Feedback to Improve Data Discovery and Access
 - Improving data search relevancy (finding the right datasets)
 - Text and relevance mining of science literature
 - * Coordinating with NASA Earth Science Data Systems Working Group (ESDSWG) on Search Relevance
 - Chairs: Ed Armstrong and Lewis Mcgibbney

New GDS2 datasets

- * L2P
 - * MODIS v2104.0 Aqua and Terra
 - * Forward stream May 2016. Historical processing to commence soon.
 - * VIIRS ACPSO v2.4
 - * VIIRS NAVO v2
- * L3
 - * AVHRR Metop-B OSI-SAF. Global and and NAR.
 - * VIIRS OSPO
- * L4
 - * GOS Mediterranean and Black Sea
 - * CMCo.1deg
 - * NCELAVHRR OI
 - * REMSS mw_Oi and mw_ir_OI
- * Whats not GDS2??. G1SST L4, ABOM L4, NEODAAS L2P datasets

Summary

- GHRSST GDS2 "catalog" near complete
 - * datasets online, discoverable, available via tools and services
- * PO.DAAC continues to improve tools and services implemented for subsetting, discovery, dataset and granule web services.
 - * New interface "PO.DAAC Drive" for data download
 - * L2 subsetting service (L2SS) and revised HiTide coming
- * Further JPL technology development has implications for GHRSST data and users (Armstrong et al. poster)
- * Issues for consideration:
 - Regional/Global Task Sharing re architecture proposal (in DAS-TAG)
 - Improving access to quality information
 - * Improve search relevance
 - Dataset retirement of GDS1 or underutilized datasets