

**PO.DAAC**

PHYSICAL OCEANOGRAPHY DAAC



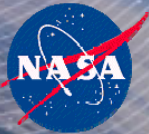
# Latest Developments and New OVW Products at the Physical Oceanography Distributed Active Archive Center (PO.DAAC)

David Moroni

Jet Propulsion Laboratory

California Institute of Technology, Pasadena, CA

Copyright 2009 California Institute of Technology.  
Government Sponsorship Acknowledged.



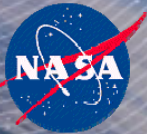
# PO.DAAC

PHYSICAL OCEANOGRAPHY DAAC



## Welcome to PO.DAAC!

- We provide data, tools, and user services for physical ocean parameters including: Circulation/Currents, Gravity, OVW, Salinity, Sea Ice, SST, and OT.
- One of 12 NASA-sponsored DAACs
- Designated archive for many of NASA's EOS missions: Aquarius (2010), GRACE, Jason-1, Nimbus-7, NSCAT, SeaSat, SeaWinds on QuikSCAT/ADEOS-II.
- Additional archive for partner missions and value-added products: AVHRR, GHRSSST, MODIS, SSM/I Pathfinder, TOPEX/Poseidon, WindSat (cal/val).



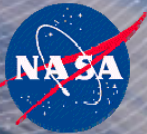
**PO.DAAC**

PHYSICAL OCEANOGRAPHY DAAC



# 2009 Data Usage Distribution





# PO.DAAC

PHYSICAL OCEANOGRAPHY DAAC

[HOME](#)

[DATA CATALOG](#)

[TOOLS & SERVICES](#)

[RELATED SITES](#)

[ANNOUNCEMENTS](#)

[HELP/FAQ](#)

## ANNOUNCEMENTS

The PO.DAAC is pleased to announce the availability of new **Pathfinder SST data** for 2009. [More >>](#)

**GOES SST Update:** GOES-13 replaces the GOES-12 satellite. [More >>](#)

GHRSSST ODYSSEA Level 4 SST products are currently unavailable due to software and hardware upgrades at the producer site (Ifremer, France). They are expected to become available again sometime in May 2010.

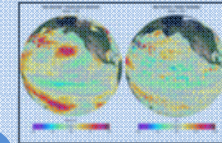
## UPCOMING EVENTS

Come to the 6th Aquarius/SAC-D Science Meeting. [More >>](#)

Join us at the inaugural IOVWST Meeting in Barcelona, Spain on May 18-20, 2010. [More >>](#)

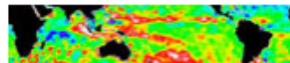
[Register](#) for the GHRSSST XI Science Team Meeting which will be held in Lima, Peru on June 21-25 2010. [More >>](#)

## El Niño Animations



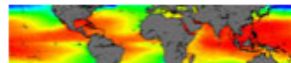
2009/2010 El Niño:  
Sea Surface Temperature  
and Sea Surface Height  
Anomalies  
[Check it out!](#)

## TOPOGRAPHY & GRAVITY



■ OSTM/Jason-2

## SEA SURFACE TEMPERATURE



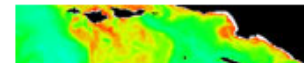
■ AVHRR Pathfinder

## OCEAN WINDS



■ SeaWinds on QuikSCAT

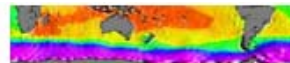
## SPECIAL TOPICS



■ SCCOOS

**NOTE: Re-Design In Progress!**

## CIRCULATION & CURRENTS



■ ECCO2  
■ OSCAR

## DATA PARTNERS



■ Aquarius (Launch 2010)

## PRODUCTS PREVIEW



**NEW! PI Provided Products**  
■ NSCAT ARP  
■ TOPEX TMR  
■ ASCAT Ocean Wind

## NEWS & ANNOUNCEMENTS



**A snag in space-time**  
Astrophysicists use Earth science satellites to explore general relativity.



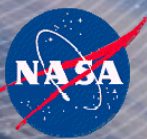
**Datacasting:**  
RSS-based technology for distributing ES data



**Educational Site:**  
[Ocean Motion & Surface Currents](#)

Web: <http://podaac.jpl.nasa.gov/>

FTP: <ftp://podaac.jpl.nasa.gov/>



# PO.DAAC

PHYSICAL OCEANOGRAPHY DAAC



[DATA ACCESS](#)

[OCEAN STATE](#)

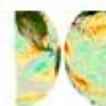
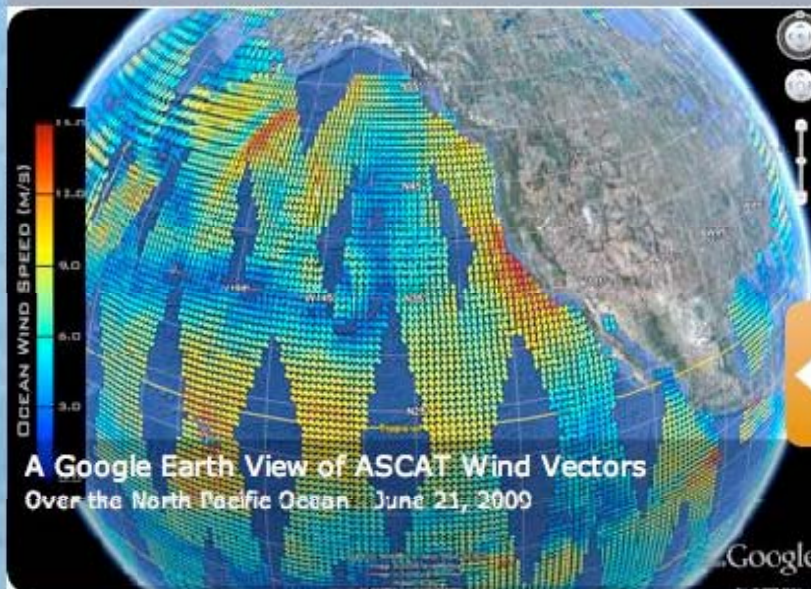
[HELP](#)

[ABOUT](#)

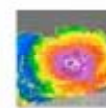
## BROWSE DATASETS

- [Mission](#)
- [Measurement](#)
- [Spatial Coverage](#)
- [Sensor](#)
- [Project](#)

## Recent Images



**SSH & SST Anomalies:**  
 Animations



**SeaWinds on QuikSCAT:**  
 Hurricane Katrina



**ASCAT Wind Vectors:** Google Earth View



**QuikSCAT and TRMM:** Hurricane Floyd

## News & Announcements

**The PO.DAAC is pleased to announce** the "Preview" release of the Advanced Scatterometer (ASCAT) near-real-time (NRT) Level-2 (swath-based) ocean wind vector product. [More >>](#)

**A snag in space-time**  
 Astrophysicists use earth science satellites to explore general relativity. [More >>](#)

**Advisory on Recent QuikSCAT Data Quality and Availability**  
 QuikSCAT has recently experienced significant variability in its antenna spin rate that has likely affected data quality. [More >>](#)

**PO.DAAC is announcing** the availability of AVHRR Pathfinder SST Data. [More >>](#)

**"An Ocean Full of Deserts"**  
 Scientist and satellites watch as the least productive areas of oceans expand. [More >>](#)

## Article of the Month by Jorge Vasquez



### New Pathfinder Version 5.1 Data extends Satellite Derived Climate Data Record (CDR) through the 1982-1983 and 1997-1998 El Niño

The Pathfinder program was jointly created by the National Aeronautics and Space Administration (NASA) and the National Oceanic and Atmospheric Administration (NOAA) through the Earth Observing System (EOS) Program Office.

The focus of the Pathfinder Program was to determine how existing satellite based data sets could be reprocessed and used to study global change. [More >>](#)

## Upcoming Events



**IOVWST Meeting**  
 May 18-20, 2010  
 Mediterranean Marine and Environmental Research Centre  
 Barcelona, Spain  
[More >>](#)



**GHRSSST Science Team Meeting XI**  
 June 21-25, 2010  
 Plaza del Bosque Hotel  
 Lima, Peru  
[More >>](#)

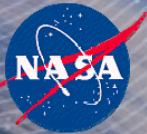


**Ocean Surface Topography Science Team (OST-ST) Meeting**  
 October 18-20, 2010 - Lisbon.

**PO.DAAC begins distribution** of two upgraded Naval Oceanographic Office's (NAVOCEANO) Level 2 Multi-Channel Sea Surface Temperature (MCSS1) Data Sets. [More >>](#)

**PO.DAAC Jason-1 Maneuver Announcement**  
 After more than 7 years of service on the nominal ground track, the Jason-1 satellite will be moved to a new interleaved orbit with OSTM/Jason-2 at the end of repeat cycle 259. [More >>](#)

[Past PO.DAAC News & Announcements](#)

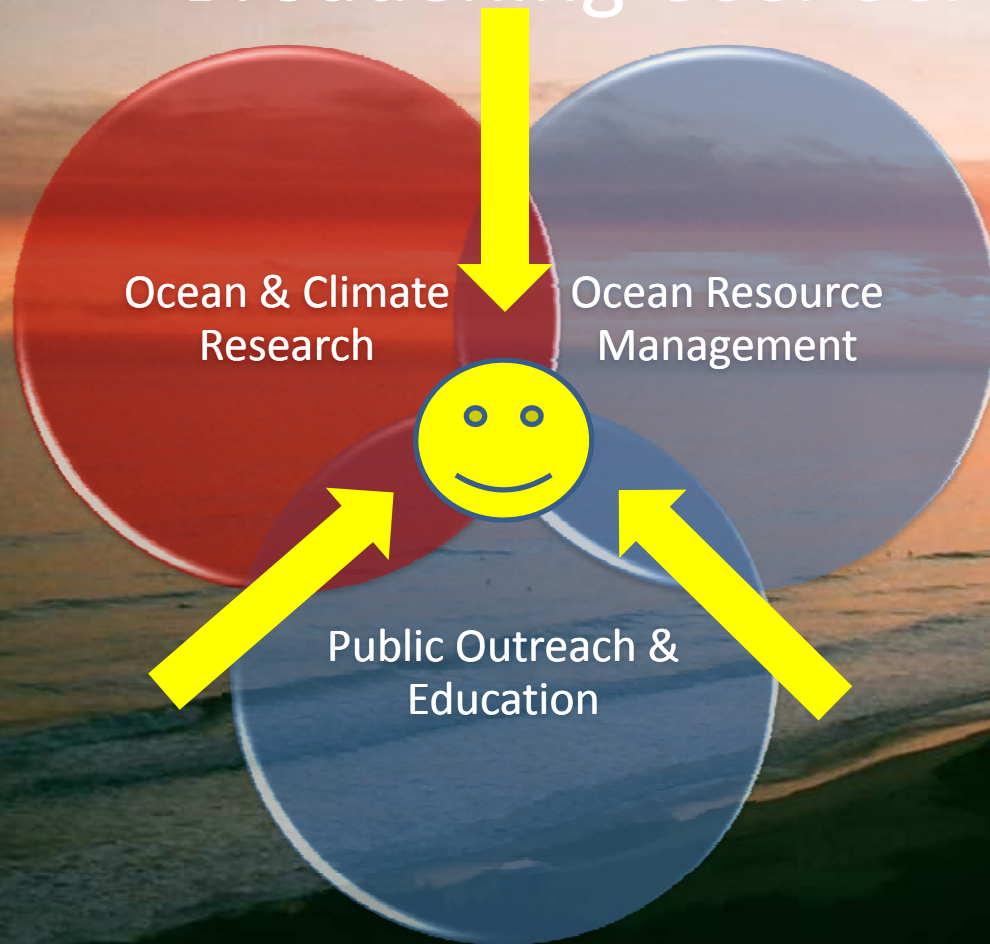


# PO.DAAC

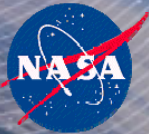
PHYSICAL OCEANOGRAPHY DAAC



## Broadening User Service and Support



- Ocean and Climate Research: biggest driver and highest priority
- Ocean Resource Management: fisheries, wind power farms, oil rigs
- Public Outreach/Education: media outlets, schools, public officials



# PO.DAAC

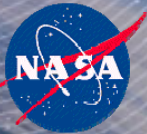
PHYSICAL OCEANOGRAPHY DAAC



## Measuring Our Success

- Metrics collection:
  - Data ingest and access
  - Data and services usage
  - User satisfaction rates
  - Portal access
  - Search engine ranking
- Reminder: please register your name and email at [podaac@podaac.jpl.nasa.gov](mailto:podaac@podaac.jpl.nasa.gov) in order to receive the annual EOSDIS user satisfaction survey.





**PO.DAAC**

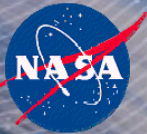
PHYSICAL OCEANOGRAPHY DAAC



# New Ocean Wind Products

- Cross-Calibrated Multi-Platform (CCMP) Ocean Surface Wind Components  
[http://podaac.jpl.nasa.gov/DATA\\_CATALOG/ccmpinfo.html](http://podaac.jpl.nasa.gov/DATA_CATALOG/ccmpinfo.html)
  - July 1987 through June 2009: 22 Year Data Record
  - NetCDF; binary byte-mapped fields for L2.5 datasets
  - Daily Swath Grids, 6-Hourly Level-4 Analyses, Monthly and Pentad Fields
  - 0.25 degree resolution
  - Atlas et al. 2008, 2009
- ASCAT Level 2 Ocean Surface Wind Vectors (KNMI/EUMETSAT)
  - Near-Real-Time (NRT), 2-3 hour latency, NetCDF, CF-compliant
  - 12.5-km dataset: March 3, 2009 - present
  - 25-km dataset: March 28, 2007 - present





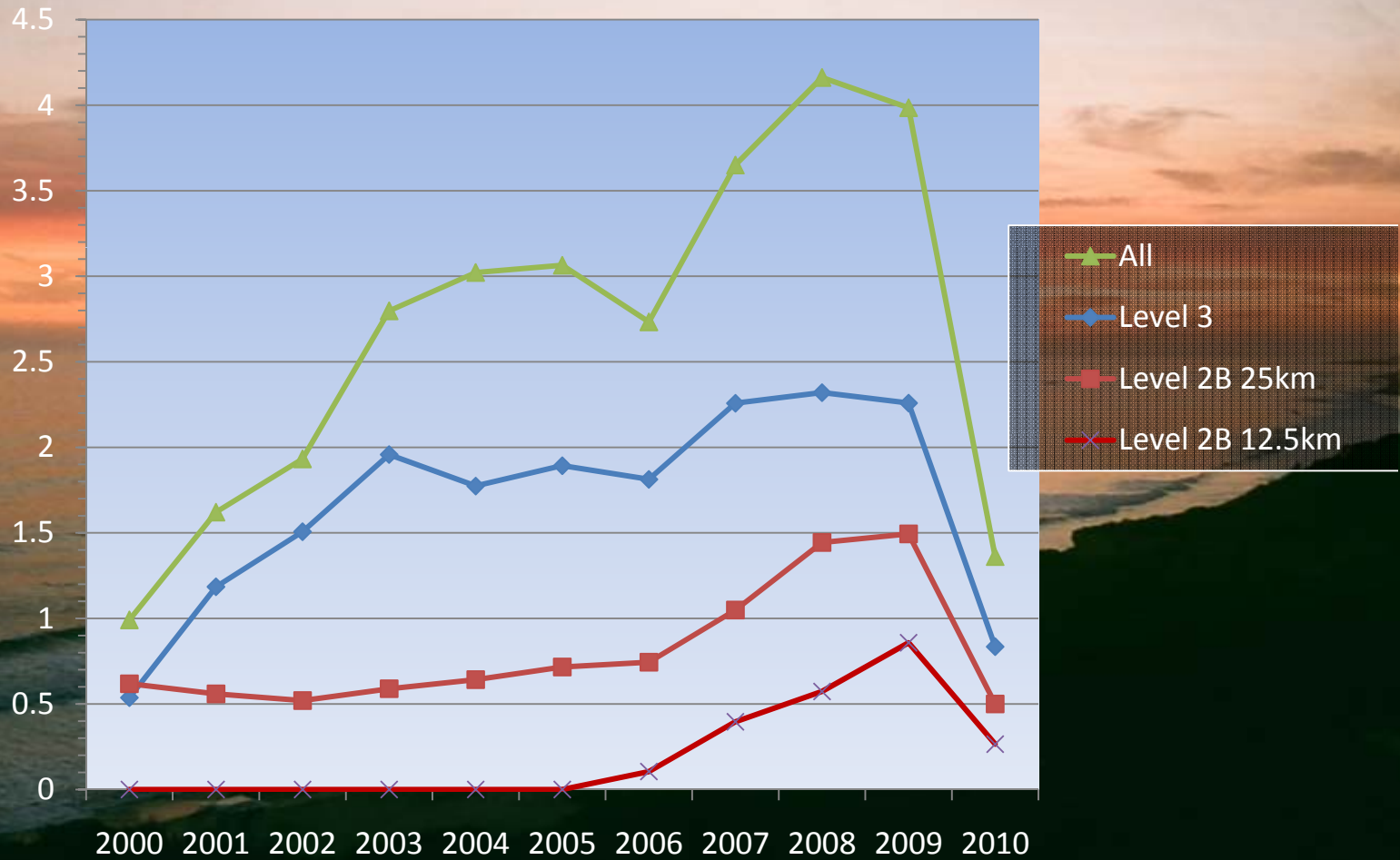
# PO.DAAC

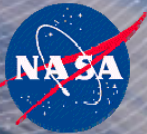
PHYSICAL OCEANOGRAPHY DAAC



## QuikSCAT Annual FTP Usage

Unique Users  
(Thousands)





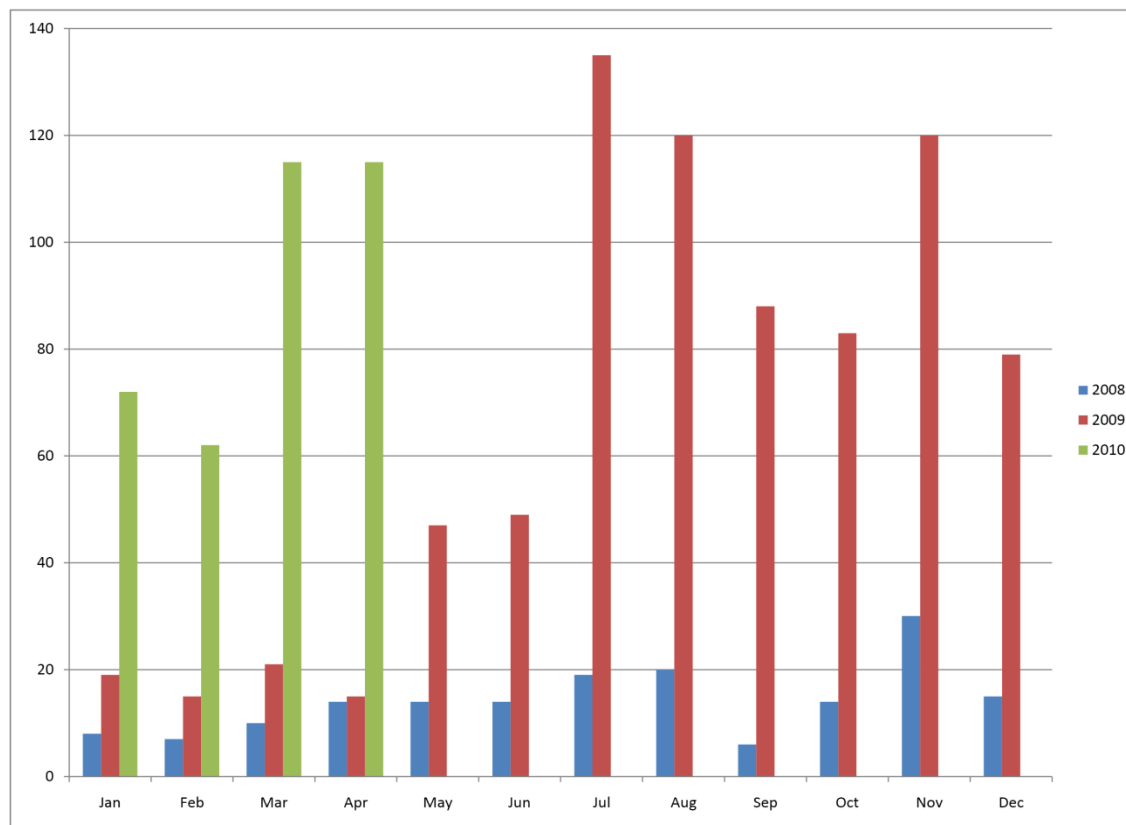
# PO.DAAC

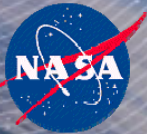
PHYSICAL OCEANOGRAPHY DAAC



## CCMP Usage Metrics

Unique Users





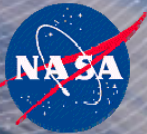
**PO.DAAC**

PHYSICAL OCEANOGRAPHY DAAC



# Services and Tools for Users

- <http://podaac.jpl.nasa.gov/TOOLS/index.html>
- Source data retrieval: FTP, HEFT/ASPERA, and OPeNDAP.
- Level-3 Subsetting via POET
- Hurricane/Typhoon Tracker: NRT QuikSCAT UHR Winds
- Datacasting (RSS-feeds): <http://datacasting.jpl.nasa.gov/>
  - GHR SST L2P, Jason-1 SSH, QuikSCAT UHR Images
- Basic read software, metadata, and guide documentation.
- User Services Help Desk: [podaac@podaac.jpl.nasa.gov](mailto:podaac@podaac.jpl.nasa.gov)



# PO.DAAC

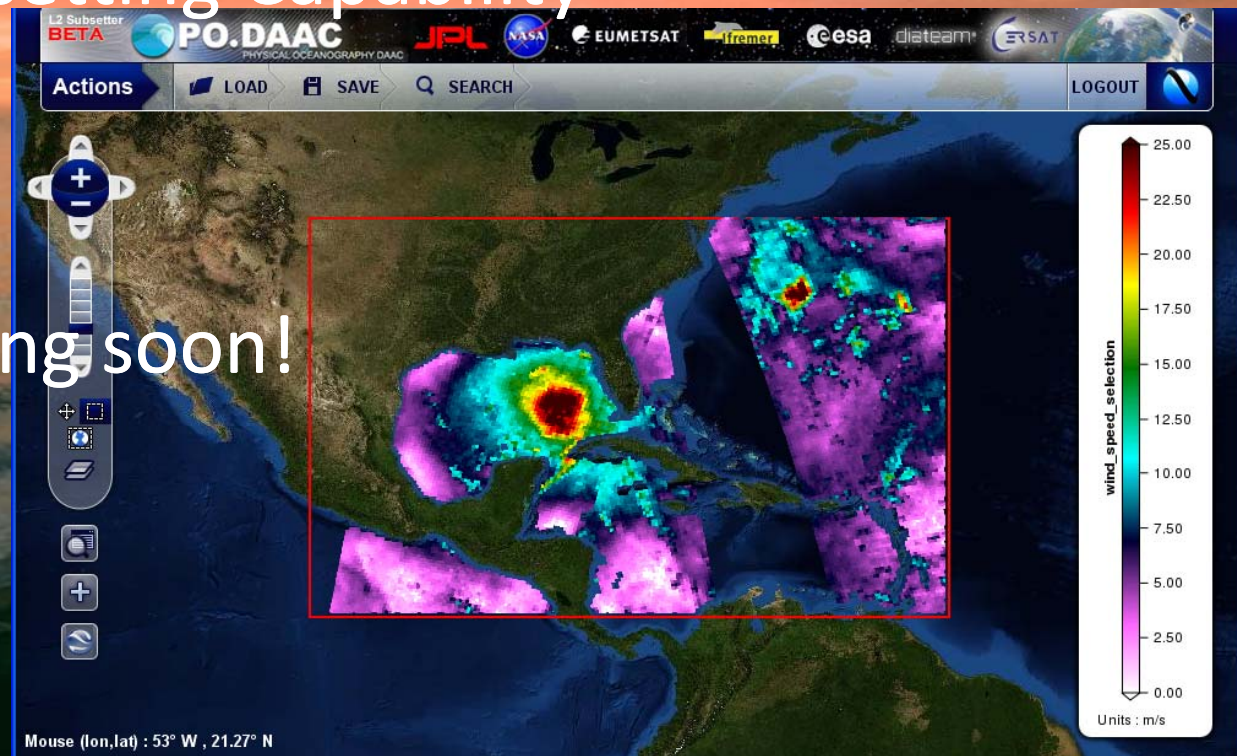
PHYSICAL OCEANOGRAPHY DAAC

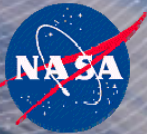


## New Dataminer Tool

- <http://podaac-tools.jpl.nasa.gov/dataminer/>
- Level-2 Subsetting Capability

- ASCAT coming soon!



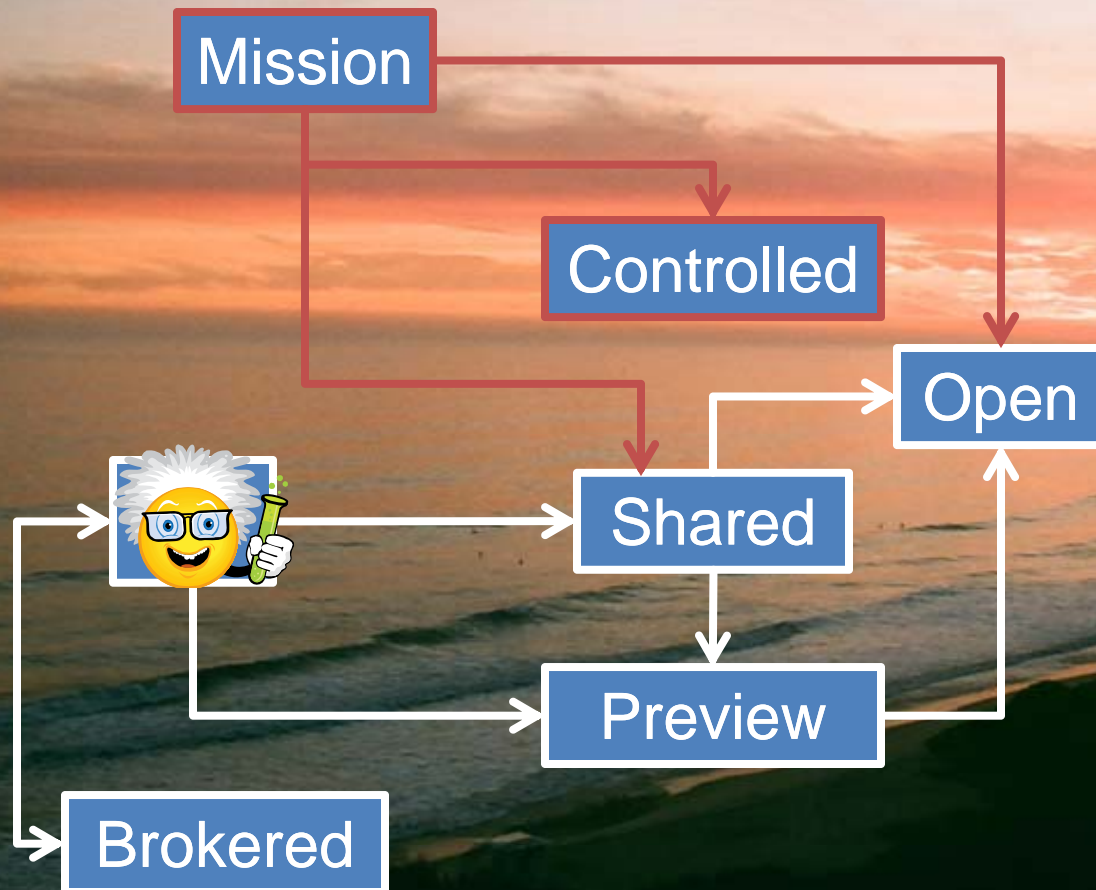


# PO.DAAC

PHYSICAL OCEANOGRAPHY DAAC

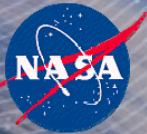


## Product Delivery for PIs



### Definitions:

- Open: standard products that have been fully vetted and validated and have full user support.
- Controlled: restricted access due to mission-sensitive data; usually regulated by ITAR.
- Shared: restricted access to products shared within a group of scientists led by the PI.
- Preview: products intended for public distribution but have limited user support due to a lack of vetting or validation.
- Brokered: products are searchable through the web portal but users are re-directed to the PI's FTP server.



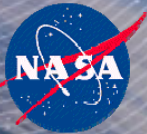
# PO.DAAC

PHYSICAL OCEANOGRAPHY DAAC



## On the Horizon

- Incoming Products:
  - Vanhoff et al. Coastal High Resolution Gridded QuikSCAT Wind and Stress.
  - David Long's Enhanced Resolution QuikSCAT Sigma0 Image product.
- Current Tasks:
  - Implementing new archive and advanced search capabilities.
  - Web and FTP redesign in progress.
  - New products to be included in Dataminer (i.e., ASCAT, TOPEX, Jason-1, etc...).
- Future Direction:
  - Phasing-out POET with new up-dated subsetting tool and interface.
  - Climatologies for PO.DAAC datasets.
  - Dataset Uncertainties for gridded OVW products.
  - Metadata standardization for new products.



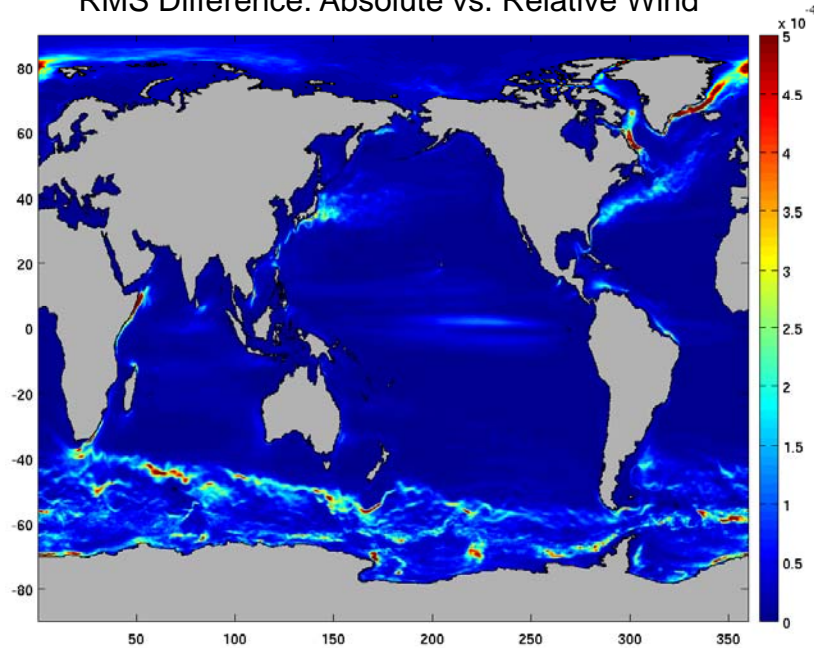
# PO.DAAC

PHYSICAL OCEANOGRAPHY DAAC

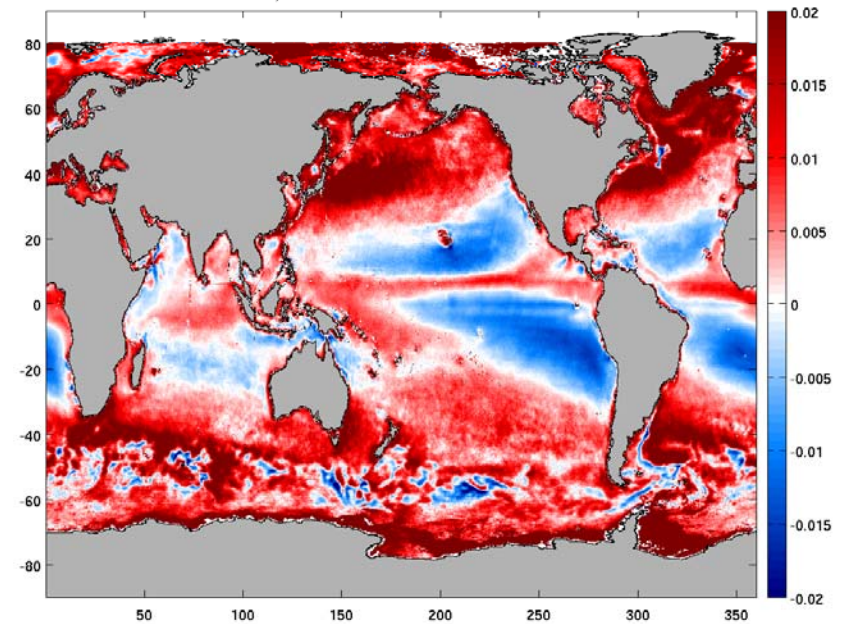


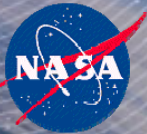
## ECCO-2 Collaboration

RMS Difference: Absolute vs. Relative Wind



RMS Difference: ECCO-2 Relative vs. QuikSCAT





**PO.DAAC**

PHYSICAL OCEANOGRAPHY DAAC



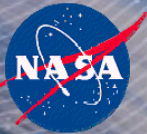
Questions?

[DAVID.F.MORONI@JPL.NASA.GOV](mailto:DAVID.F.MORONI@JPL.NASA.GOV)

Please Register:

[PODAAC@PODAAC.JPL.NASA.GOV](mailto:PODAAC@PODAAC.JPL.NASA.GOV)





**PO.DAAC**

PHYSICAL OCEANOGRAPHY DAAC



## Most Popular Products Via FTP\*

- QuikSCAT Level 3 is PO.DAAC's most popular product in terms of unique users:
  - 2008: 2313 unique users
  - 2009: 877 unique users
- QuikSCAT Level 2B 25km product ranked 2<sup>nd</sup> in 2008 and currently ranked 3<sup>rd</sup> for 2009.

\*Note: these numbers do not reflect usage via HEFT/ASPERA, OPeNDAP, or POET. Total usage numbers are likely to be much higher.