

# PO.DAAC & “The Blob”: Discover and Visualize NASA Physical Oceanographic Data

Michelle Gierach, PO.DAAC Project Scientist

Ed Armstrong, PO.DAAC Data Engineer

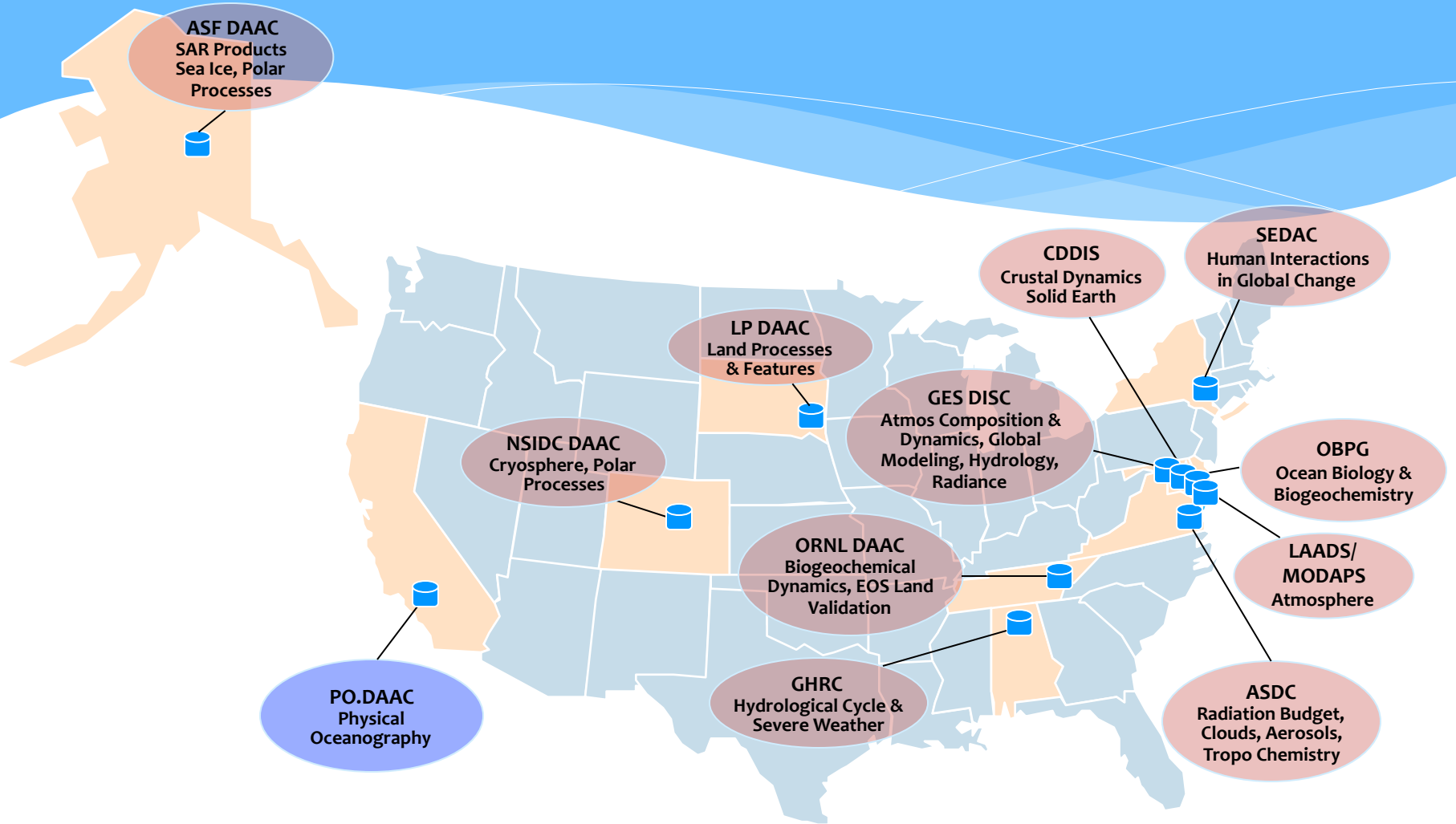
Vardis Tsonetos, PO.DAAC Data Engineer

Jorge Vazquez, PO.DAAC Project Scientist

Jet Propulsion Laboratory / California Institute of Technology

Copyright 2015. All rights reserved.

# PO.DAAC is One of Twelve NASA DAACs



# PO.DAAC Data Holdings



## NASA Missions & Projects

Seasat, TOPEX/Poseidon, Jason-1, NSCAT, SeaWinds on ADEOS-II, QuikSCAT, GRACE, GHRSSST, MEaSUREs, Aquarius, CYGNSS (2016), GRACE-FO (2017)

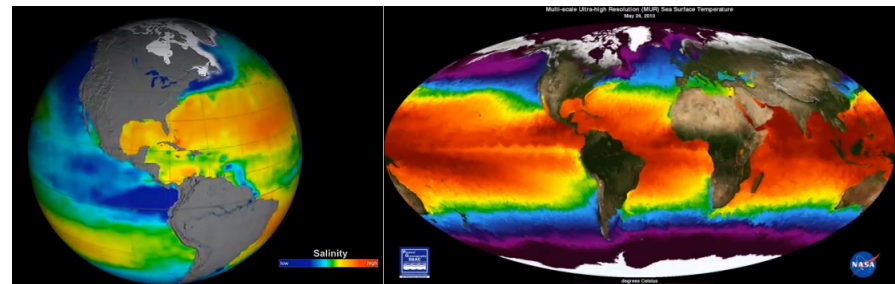
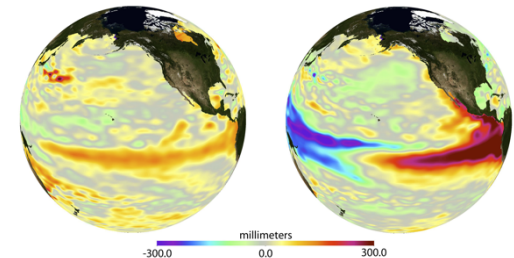
Potentials: SPURS, AirSWOT, SWOT, GRACE-2



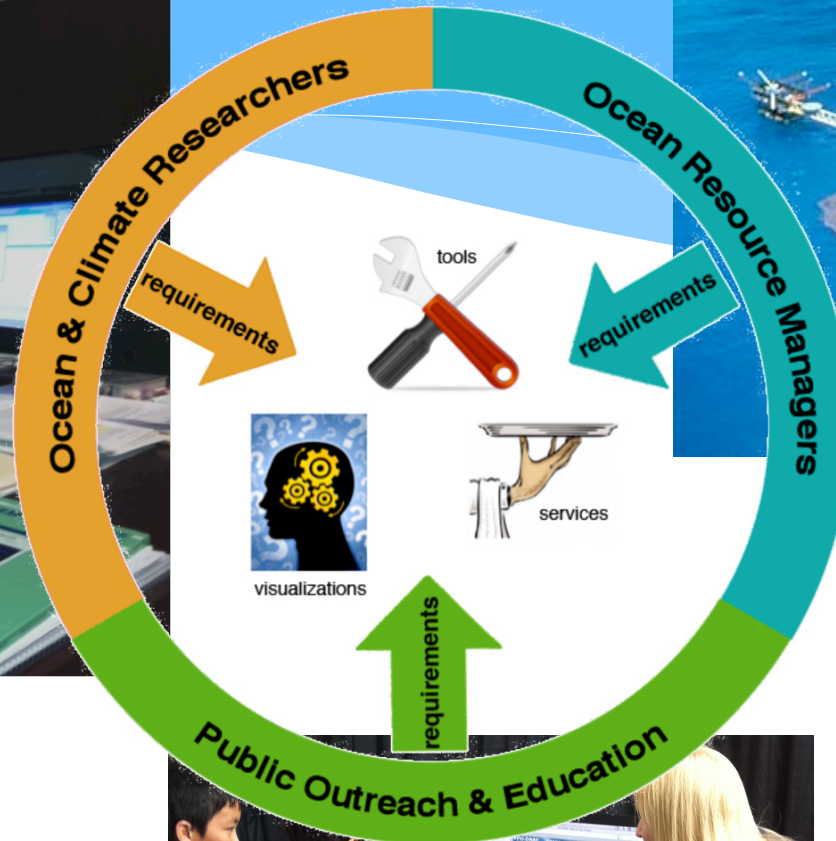
## Ocean & Climate Community Driven

Value-added datasets in support of NASA programs

- Gravity
- Ocean Circulation & Currents
- Ocean Surface Salinity
- Ocean Surface Topography
- Ocean Vector Winds
- Sea Surface Temperature
- Sea Ice
- Ocean Color



# PO.DAAC Customers



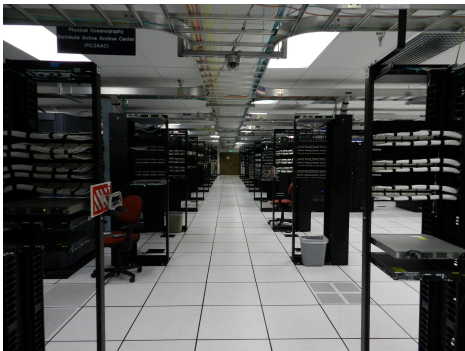


# PO.DAAC Functional Areas



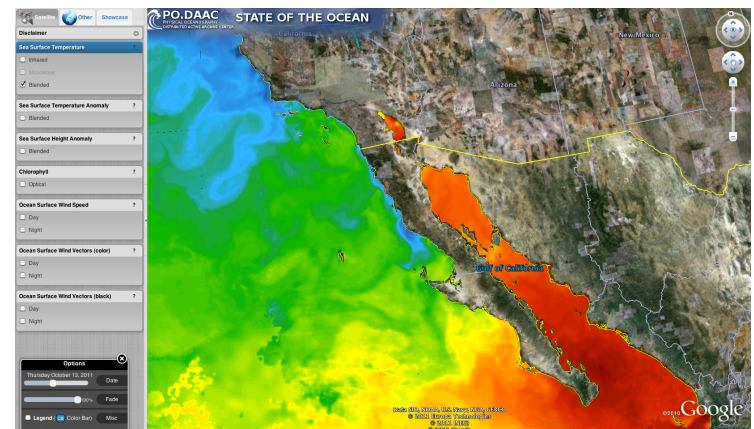
## Data Management & Stewardship

Preserve NASA's data for the benefit of future generations



## Data Access

Provide intuitive services to discover, select, extract and utilize data



## Science Information Services

Provide a knowledgebase to help a broad user community understand and interpret satellite ocean data and related information

HELP

Questions? Answers.

You can ask PO.DAAC. Once click access to:

[ABOUT US](#) [ACRONYMS](#) [GLOSSARY](#) [DATA TERMINOL & FORMAT](#)

The banner features a globe on the left, a smiling woman in the center, and a search bar on the right. Below the search bar are four colored buttons: orange for 'ABOUT US', blue for 'ACRONYMS', green for 'GLOSSARY', and red for 'DATA TERMINOL & FORMAT'.

# Data Access



NASA Jet Propulsion Laboratory  
California Institute of Technology

PO.DAAC  
Physical Oceanography Distributed Active Archive Center

Home Dataset Discovery Data Access Measurements Missions Multimedia Community About Forum

Search  
Access  
Visualize  
Help

**Announcements**

- Connect with PO.DAAC on Twitter! Tuesday, February 4, 2014
- NASA & PO.DAAC Annual Customer Satisfaction Survey 2013 Friday, September 6, 2013
- Aquarius-CAP v2.0 July 2013 data now available from PO.DAAC Tuesday, September 3, 2013

**Events**  
System Alerts

**Image of the Day**  
Greenland Glacier Breaks Speed Record  
During the summer of 2012 the Greenland glacier Jakobshavn Isbrae flowed into the ocean at the fastest speed ever observed for a glacier in Greenland or Antarctica. At its speediest, satellite data indicate, the glacier was careening...

**Spotlight**  
AGU Fall 2013 Meeting Information flash mob at AGU 2013 investigating the state of the art in data science including PO.DAAC's David Monni (fourth from left)

Get PO.DAAC Updates by Email [Subscribe](#)

Privacy | Citing PO.DAAC & Data | Glossary | About PO.DAAC | Contact

PO.DAAC Subsetter  
PHYSICAL OCEANOGRAPHY  
DISTRIBUTED ACTIVE ARCHIVE CENTER

Version 1.1.0

Filters

- DataSets: REMSS-L2P-AMSR
- Region: Global
- DataRange: 2011-10-01T17:06:56Z to 2011-09-28T14:32:26Z

**Data Preview**

Granule Name	Start Time	End Time	Lower Bounds	Upper Bounds
20111001-AMSR-REMSS-L2P-amr_db_v05_r50059.dat-v01.nc	2011-10-01T17:06:56Z	2011-10-01T18:45:48Z	2.22 -88.05	348.88 88.59
20111001-AMSR-REMSS-L2P-amr_db_v05_r50058.dat-v01.nc	2011-10-01T15:29:47Z	2011-10-01T17:02:54Z	-180 -80.83	180 88.64
20111001-AMSR-REMSS-L2P-amr_db_v05_r50057.dat-v01.nc	2011-10-01T13:50:34Z	2011-10-01T15:27:25Z	-180 -88.07	180 88.61
20111001-AMSR-REMSS-L2P-amr_db_v05_r50055.dat-v01.nc	2011-10-01T10:33:15Z	2011-10-01T12:08:25Z	-180 -85.64	180 88.64
20110930-AMSR-REMSS-L2P-amr_db_v05_r50048.dat-v01.nc	2011-09-30T22:58:57Z	2011-10-01T00:36:06Z	-180 -85.16	180 88.64
20110930-AMSR-REMSS-L2P-amr_db_v05_r50044.dat-v01.nc	2011-09-30T16:23:13Z	2011-09-30T17:58:23Z	15.57 -87.99	359.61 88.64
20110930-AMSR-REMSS-L2P-amr_db_v05_r50037.dat-v01.nc	2011-09-30T04:50:57Z	2011-09-30T06:29:48Z	6.49 -85.82	351.18 88.63
20110929-AMSR-REMSS-L2P-amr_db_v05_r50028.dat-v01.nc	2011-09-29T14:03:21Z	2011-09-29T14:32:26Z	-8.04 -80.87	52.03 30.2

Legend: sea\_surface\_temperature (Units: kelvin)

Coverage Preview - displaying Granule Name : 20111001-AMSR-REMSS-L2P-amr\_db\_v05\_r50059.dat-v01.nc

Generate Image Preview

Map coordinates: (lon,lat) : 78.95° E , 30.23° S

PO.DAAC LAS v7.3

Choose dataset: Gravity / GRACE Monthly Ocean Mass Grids of Ocean Bottom Pressure 500km NetCDF

Water\_Thickness : 2

Map: LAS 7/Ferret 6.72 NOAA/PMEL

TIME : 15-AUG-2002 00:00

DATA SET: GRACE Monthly Ocean Mass Grids of Ocean Bottom Pressure

Water\_Thickness (CMeqH2O)

NASA/Caltech | JPL | PO.DAAC | Contacts | Privacy Policy | Powered by NOAA PMEL LAS

Satellite Layers

- Sea Surface Temperature: All Layers Info
- Sea Surface Temperature Anomaly: Info
- Sea Surface Height Anomaly: Info
- Chlorophyll: Info
- Ocean Surface Wind Speed: All Layers Info
- Ocean Surface Wind Vectors: All Layers Info
- Salinity: All Layers Info
- MODIS True Color: All Layers Info
- Ocean Surface Current Speed: All Layers Info
- Ocean Surface Current Vectors: All Layers Info

Satellite Layer Sorter

- Sea Surface Temperature: Blended
- Opacity: 100%
- Blue Marble 4.0: Opacity: 100%

State of the Ocean

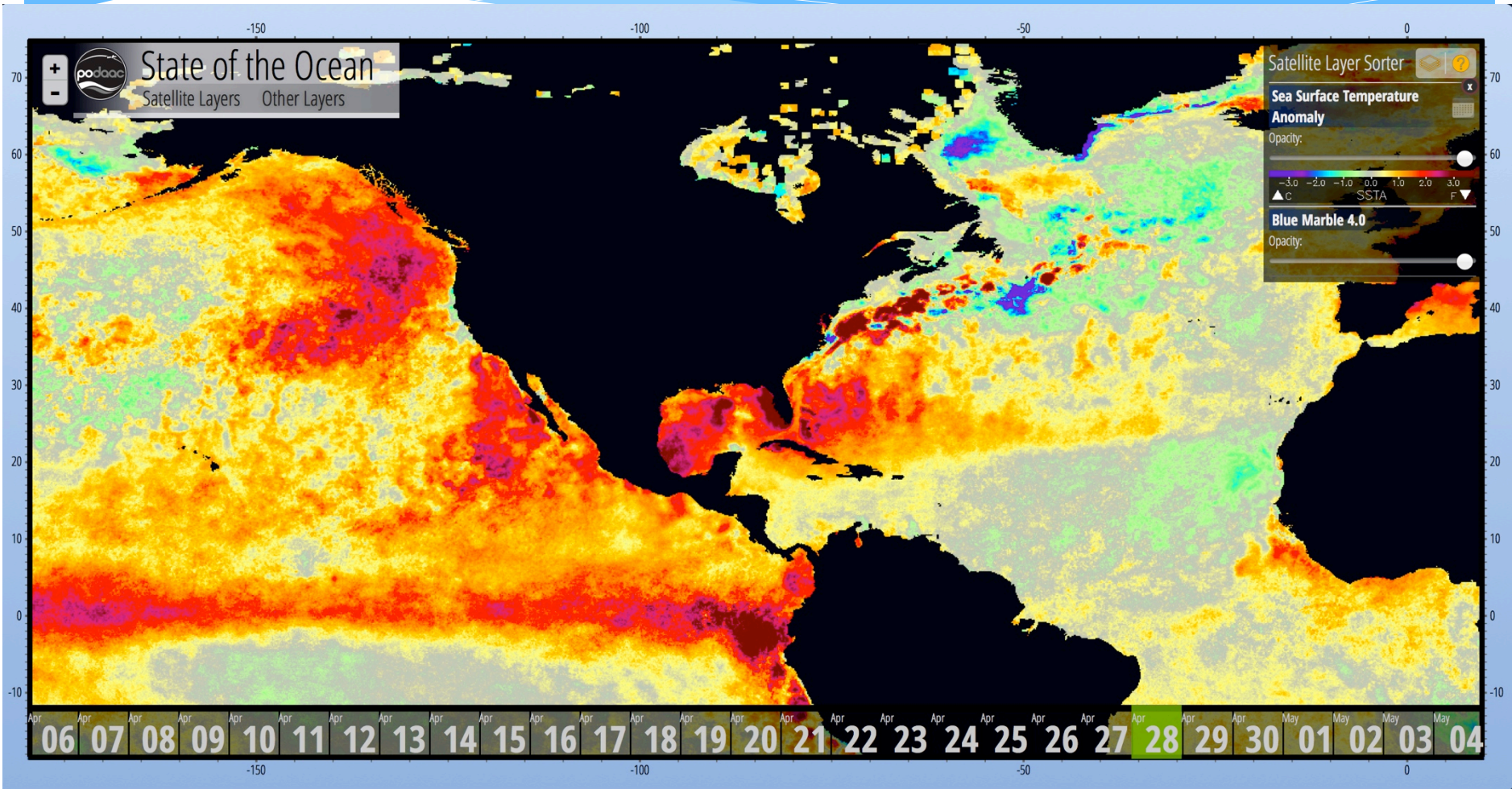
21 22 23 24 25 26 27 28 29 30 31 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18



# PO.DAAC State Of The Ocean (SOTO)



<http://podaac-tools.jpl.nasa.gov/soto-2d/>



# PO.DAAC Live Access Server (LAS)



<http://thredds.jpl.nasa.gov/las/>

Live Access Server (v8.2)  
PO.DAAC LAS V8.2

Help

Data Set  Update Plots  <

Compare 2  Annotations

Plot Options

Print... Link... Difference Mode Auto Colors

DATASET: GHR SST Level 4 AVHRR\_OI Global Blended Sea Surface Temperature Analysis

VARIABLE: analysed sea surface temperature (kelvin)

TIME : 01-APR-2014 00:00

OPeNDAP URL: [http://opendap-uat.jpl.nasa.gov/thredds/dodsC/ncml\\_aggregation/OceanTemperature/ghrsst/aggregate\\_ghrsst\\_NCDC-L4LRblend-GLOB-AVHRR\\_OI.ncml](http://opendap-uat.jpl.nasa.gov/thredds/dodsC/ncml_aggregation/OceanTemperature/ghrsst/aggregate_ghrsst_NCDC-L4LRblend-GLOB-AVHRR_OI.ncml)

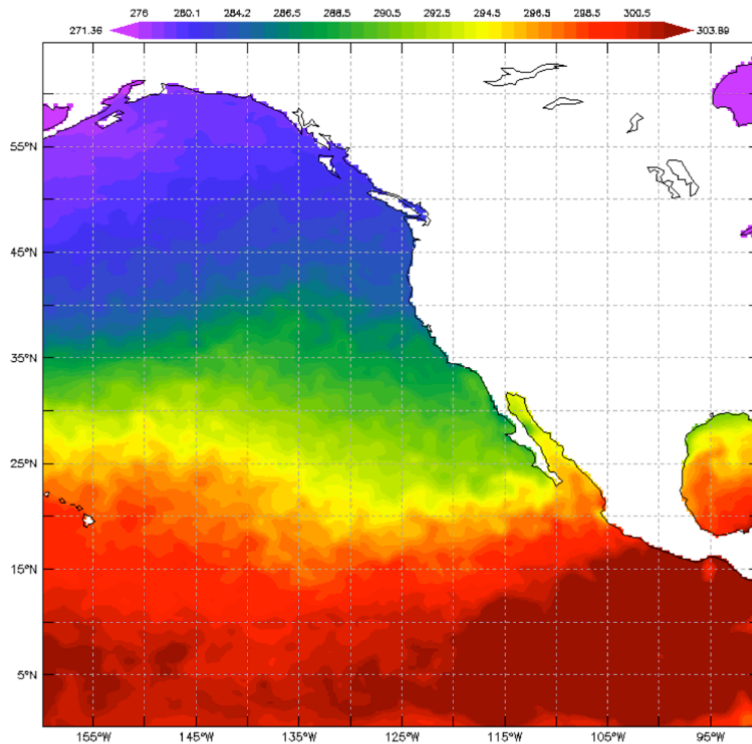
LAS 8./Ferret 6.93 NOAA/PMEL

Print  + analysed sea surface temperature Date/Time: 2014 Apr 01

65 N  
160 W 90 W  
0 S

Compute: None  
over: Area

- Maps
- Latitude-Longitude
- Line Plots
- Time
  - Longitude
  - Latitude
- Hovmöller Plots
- Longitude-time
  - Latitude-time



DATASET: GHR SST Level 4 AVHRR\_OI Global Blended Sea Surface Temperature Analysis

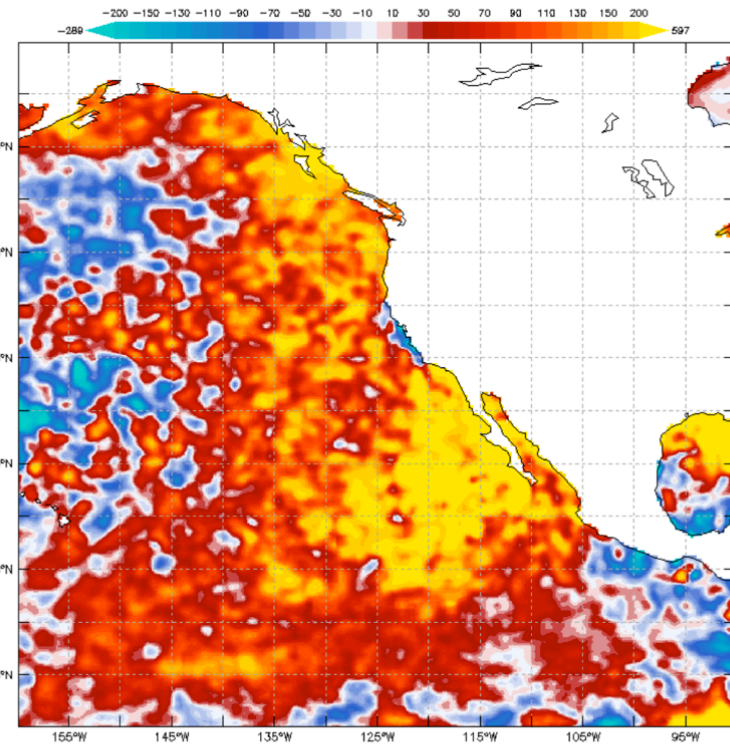
VARIABLE: Difference of analysed sea surface temperature (kelvin)

TIME: 01-APR-2015 00:00 minus 01-APR-2014 00:00

OPeNDAP URL: [http://opendap-uat.jpl.nasa.gov/thredds/dodsC/ncml\\_aggregation/OceanTemperature/ghrsst/aggregate\\_ghrsst\\_NCDC-L4LRblend-GLOB-AVHRR\\_OI.ncml](http://opendap-uat.jpl.nasa.gov/thredds/dodsC/ncml_aggregation/OceanTemperature/ghrsst/aggregate_ghrsst_NCDC-L4LRblend-GLOB-AVHRR_OI.ncml)

LAS 8./Ferret 6.93 NOAA/PMEL

Data Set Print  + analysed sea surface temperature Date/Time: 2015 Apr 01





# Now What?

\* Check out the web portal & try our tools

Webpage	<a href="http://podaac.jpl.nasa.gov">http://podaac.jpl.nasa.gov</a>
FTP	<a href="ftp://podaac.jpl.nasa.gov">ftp://podaac.jpl.nasa.gov</a>
OPeNDAP	<a href="http://opendap.jpl.nasa.gov/">http://opendap.jpl.nasa.gov/</a>
THREDDS	<a href="http://thredds.jpl.nasa.gov/">http://thredds.jpl.nasa.gov/</a>
SOTO	<a href="http://podaac-tools.jpl.nasa.gov/soto-2d/">http://podaac-tools.jpl.nasa.gov/soto-2d/</a>
HiTIDE	<a href="http://podaac-tools.jpl.nasa.gov/hitide/">http://podaac-tools.jpl.nasa.gov/hitide/</a>
LAS	<a href="http://thredds.jpl.nasa.gov/las/">http://thredds.jpl.nasa.gov/las/</a>
Web Services	<a href="http://podaac.jpl.nasa.gov/ws/">http://podaac.jpl.nasa.gov/ws/</a>





# Now What?

\* Let us know what you think!

Questions? **Answers.**



**Ask PO.DAAC.**

FOLLOW US



You can also contact us by email at:  
[podaac@podaac.jpl.nasa.gov](mailto:podaac@podaac.jpl.nasa.gov)