



Where is My Oceanographic Data, and How Do I Get it?



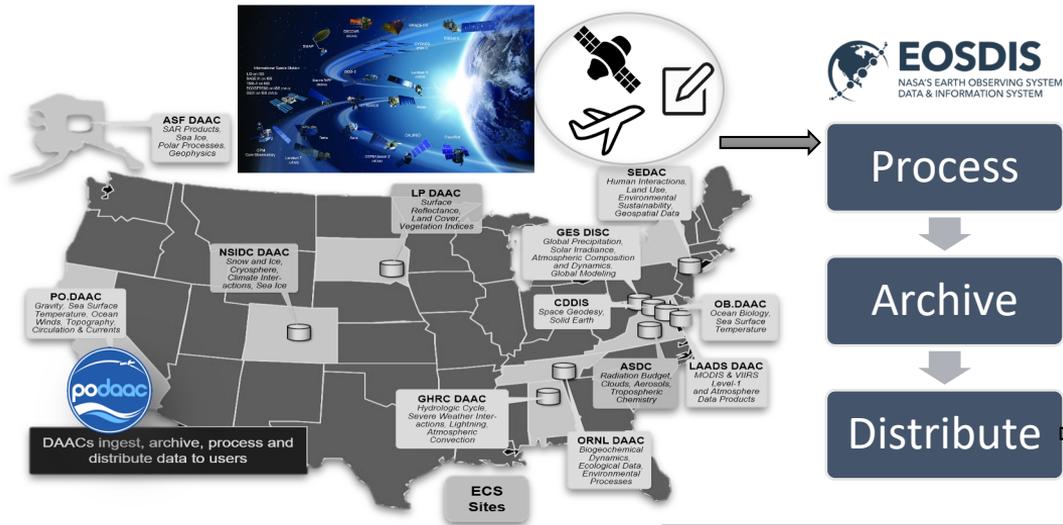
Presented by David Moroni
(David.F.Moroni@jpl.nasa.gov)



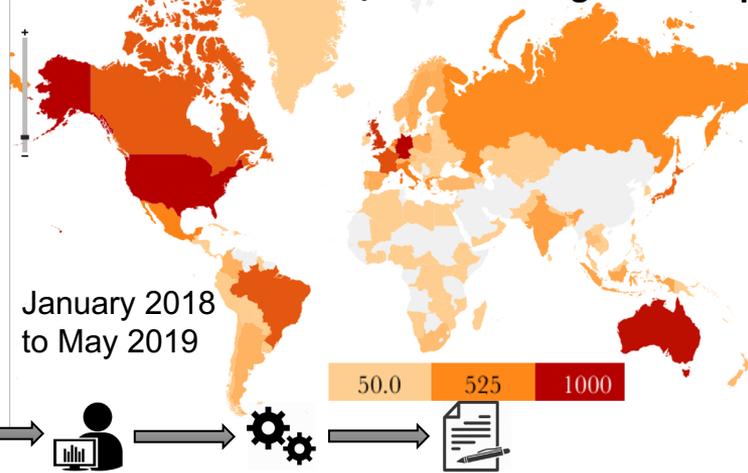
Jet Propulsion Laboratory, California Institute of Technology, Pasadena, CA

Presented at 2019 Fall AGU Meeting, NASA Exhibit Booth Flash Talk

Role of the Physical Oceanography Distributed Active Archive Center (PO.DAAC) <https://podaac.jpl.nasa.gov/>



PO.DAAC Global Data/Services Usage Heatmap



Missions & Projects

Seasat, TOPEX/Poseidon, Jason-1, NSCAT, SeaWinds on ADEOS-II, CYGNSS, GRACE/GRACE-FO, QuikSCAT, GHRSS, MEASUREs, Aquarius, SPURS-1/2, ISS-RapidScat, AirSWOT, OMG, Jason-CS/Sentinel-6 (2020), S-MODE (2020), SWOT (2021)

Parameters

Geodetics/Gravity
Hydrology
Ocean Circulation & Currents
Ocean Surface Salinity
Ocean Surface Topography
Ocean Winds
Sea Surface Temperature
Sea Ice

Tools

The tools section shows various PO.DAAC interfaces:

- Discover:** A search and discovery interface for data products.
- Visualize:** A data visualization interface showing global maps and data overlays.
- Access:** An interface for accessing and downloading data.

Web Portal



Jet Propulsion Laboratory
California Institute of Technology

Physical Oceanography Distributed Active Archive Center

Follow Us

▼ Data Search

Home
Dataset Discovery
Data Access
Measurements
Missions
Multimedia
Community
Forum
About

Search

Access

Visualize

Help

New PO.DAAC animation now available online!
Animation of the GHRSSST global foundation sea surface temperature v1.0 in the GHRSSST Data Processing Specification version 2 (GDS2) format from 23 July 2008 to 7 November 2019.

Announcements

MetOp-C ASCAT Level 2 Ocean Surface Wind Vectors 12.5-km and 25-km Datasets Release
Thursday, November 14, 2019

ABOM GHRSSST Level 4 GAMSSA 28km and RAMSSA 9km v1.0 Datasets Release
Thursday, November 7, 2019

GHRSSST VIIRS L2P JPL reprocessing underway, granule delay expected
Friday, November 1, 2019

[More »](#)

Spotlight

Events

System Alerts

Image of the Day

Sea Surface Height Anomaly: SARAL and Jason-3 Measurements from 08-Nov-2019 to 18-Nov-2019

A suite of tools presented through an interactive, web-based visualization front end.

State of the Ocean (SOTO)

Animations
Dataset Highlights
Ocean Stories
Images

ABOM GHRSSST Level-4 Global Sea Surface Temperature...
November 12, 2019
Animation of the GHRSSST global foundation sea surface temperature v1.0 in the GHRSSST Data Processing Specification version 2 (GDS2)...

Sea Surface Temperature from GHRSSST Level 4 MUR v4...
October 25, 2019
Animation of the global foundation sea surface temperature v4.1 from 1 June 2002 to 23 October 2019. The dataset was created by a team...

[More Animations »](#)

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

[RSS Feed](#) | [Privacy](#) | [Data Citation](#) | [Glossary](#) | [About PO.DAAC](#) | [Contact](#)

Faceted Search : E.g. Search by Platform

| Home | Dataset Discovery | Data Access | Measurements | Missions | Multimedia | Community | Forum | About |
|---------------|-------------------|-------------|--------------|----------|------------------|-----------|-------|-------------------|
| Parameter | Latency | Collections | Platform | Sensor | Spacial Coverage | | | |
| ADEOS-II (9) | | | GOOM-W1 (13) | | METOP-B (15) | | | OSTM/JASON-2 (19) |
| ADEOS-II (22) | | | GEOS-3 (1) | | METOP-C (2) | | | QUIKSCAT (36) |
| ARGO (3) | | | GFO (2) | | MSG2 (13) | | | RV Endeavor (6) |
| Aircraft (1) | | | GOES-11 (4) | | MSG4 (1) | | | RV Knorr (5) |
| Aqua (49) | | | GOES-12 (3) | | MTSAT-1R (1) | | | RV Revelle (10) |

Search By Keyword: E.g. "Wind Vectors"

Processing Levels

Level-1 (2)
Level-2 (Swath) (56)
Level-3 (Grid) (39)
Level-4 (Banded) (3)

Across Swath Spatial Sampling

5-25 km (20)
2-5 km (29)

Grid Spatial Resolution

0.05-0.25 deg (2)
0.25-0.5 deg (99)

Temporal Resolution

← Daily (56)
Daily (13)
Weekly (16)
← Monthly (23)

Parameter

ATMOSPHERIC PRESSURE (3)
ATMOSPHERIC TEMPERATURE (4)
ATMOSPHERIC WINDS (1)
Clouds (1)
HUMIDITY INDICES (2)
OCEAN CHEMISTRY (2)
OCEAN CIRCULATION (2)
OCEAN HEAT BUDGET (2)
[Show More](#)

Latency

Near Real Time (7)
Delayed Mode (7)
Non-Active (105)

Collections

ADVANCED SCATTERMETER (8)
Aquarius/SAC-D mission datasets (31)
JPL SSS CAP datasets (7)
Cross-Calibrated Multi-Platform Ocean Surface Wind Vector Analysis Fields (13)
Climate Data Record (11)
Cyclone Global Navigation Satellite System (4)
Gridded Climate Variables for Model Intercomparison (3)
METSURF (13)
[Show More](#)

Platform

ADEOS-I (7)
ADEOS-II (9)
ARGO (1)
Aqua (6)
Aquarius_SAC-D (34)
CORALS (3)
CYGNSS (4)
DMSP-FO/SIF (4)
[Show More](#)

Sensor

ACDF (2)
AMI (2)
AMSR (2)
AMSR-E (4)
AMSR2 (1)

Dataset Discovery

Related Search Results: [Dataset](#) [Website](#) [Forum](#)

Found 120 matching dataset(s).

? Need help selecting a dataset?
[Visit the PO.DAAC Forum](#)

Free Text Search

Enter search text

wind vectors

[?](#)

[Perform Search](#) [Reset](#)

Temporal Search

Start Date

Stop Date

View mode: List Grid

Sort By: [Popularity \(All Time\)](#)

Prev
1
2
3
4
5
6
7
8
9
10
11
12
Next

1

CYGNSS Level 2 Ocean Surface Heat Flux Science Data Record Version 1.0
(CYGNSS_L2_SURFACE_FLUX_V1.0)
OCEAN HEAT BUDGET
Platform/Sensor: CYGNSS/ODIM
Processing Level: 2
Along/Across Track Resolution: 25 km x 25 km
Start/End Date: 2017-Mar-18 to Present
Description: This dataset contains the Version 1.0 CYGNSS Level 2 Ocean Surface Heat Flux Science Data Record, which provides the time-tagged and geolocated ocean surface heat flux parameters with ... more

2

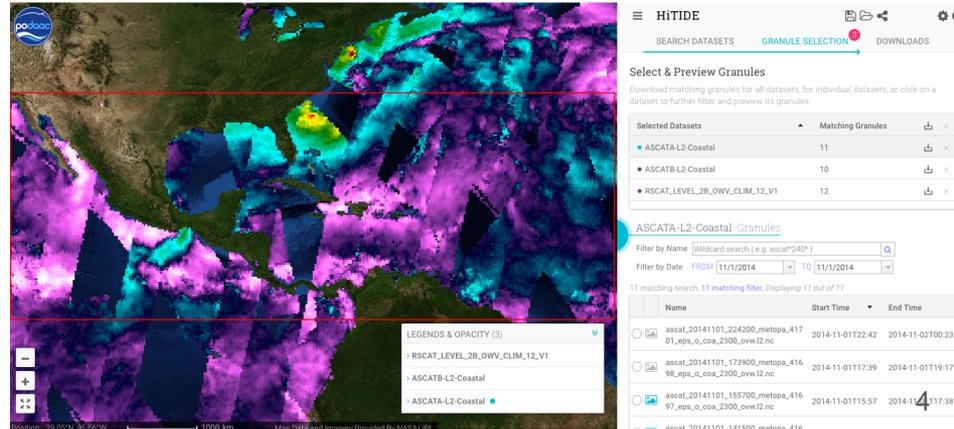
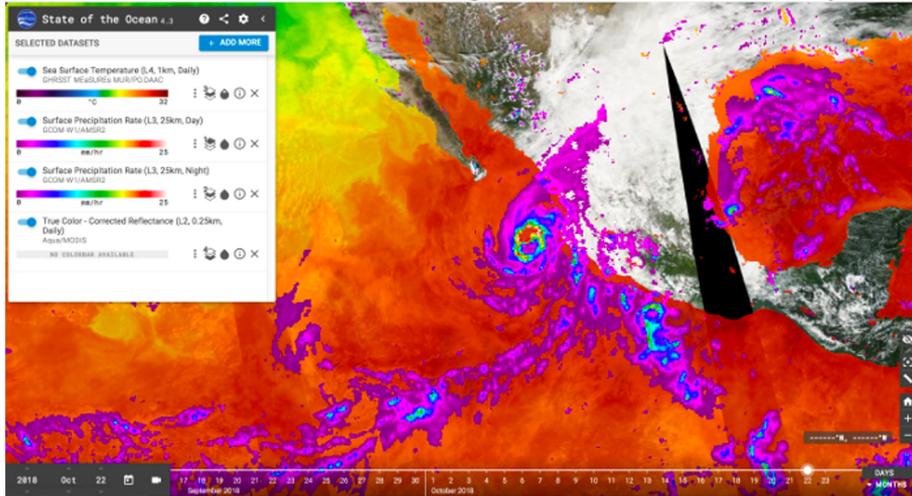
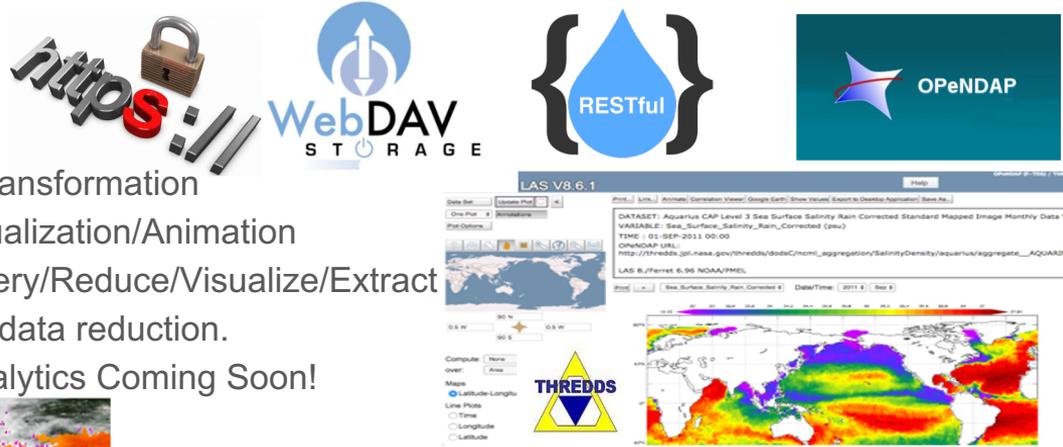
MetOp-C ASCAT Level 2 Ocean Surface Wind Vectors Optimized for Coastal Ocean
(ASCAT-C-L2-Coastal)
Platform/Sensor: METOP-C/ASCAT
Processing Level: 2
Along/Across Track Resolution: 12.5 km x 12.5 km
Start/End Date: 2019-Oct-22 to Present
Description: This dataset contains operational near-real-time Level 2 coastal ocean surface wind vector retrievals from the Advanced Scatterometer (ASCAT) on MetOp-C at 12.5 km sampling resolution ... more

3

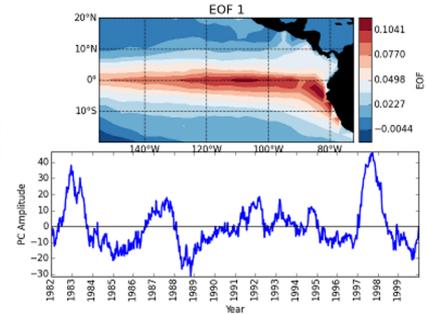
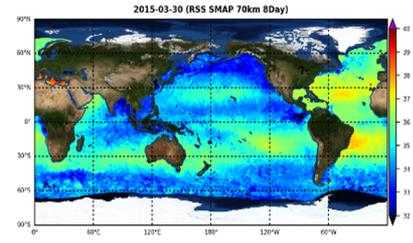
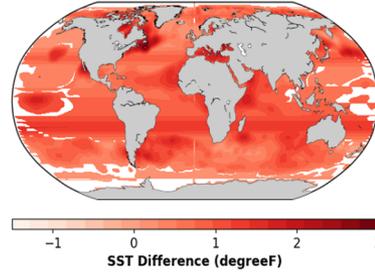
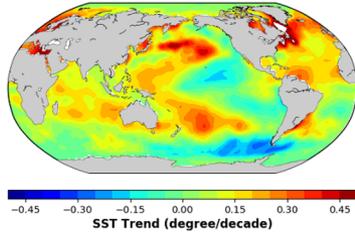
MetOp-C ASCAT Level 2 25.0km Ocean Surface Wind Vectors in Full Orbit Swath
(ASCAT-L2-25km)
OCEAN WINDS
Platform/Sensor: METOP-C/ASCAT
Processing Level: 2
Along/Across Track Resolution: 25 km x 25 km
Start/End Date: 2019-Oct-22 to Present
Description: This dataset contains operational near-real-time Level 2 ocean surface wind vector retrievals from the Advanced Scatterometer (ASCAT) on MetOp-C at 25 km sampling resolution (note: ... more

Tools/Services (<https://podaac.jpl.nasa.gov/dataaccess>)

- HTTPS/Web-Dav “Drive” (FTP Replacement)
- OPeNDAP - Subsetting/Transformation
- THREDDS/LAS - Aggregation/Visualization/Analysis/Reduction/Transformation
- State of the Oceans (SOTO) - Multi-layered Visualization/Animation
- Web Services RESTful API - Metadata/Data Query/Reduce/Visualize/Extract
- HiTIDE - Level 2 (i.e., discrete swath geometry) data reduction.
- HTTPS “Browse” is coming soon! SOTO 5.0 Analytics Coming Soon!



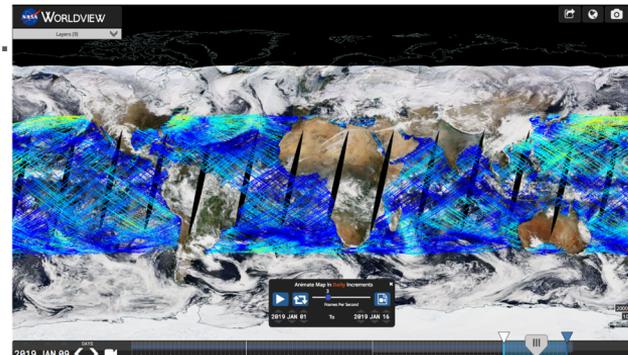
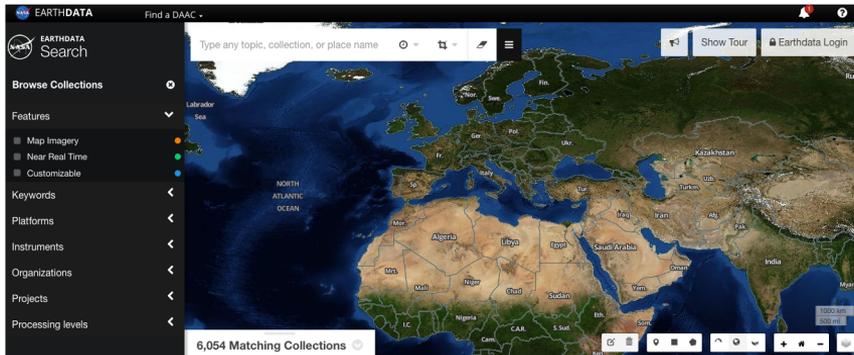
Open-source Software/Tools/Services



- Data Recipes - <https://podaac.jpl.nasa.gov/recipes>
 - Reading/Translation (5), Access/Services (30), Visualization (13), Numerical Analysis (8), Tutorials (3)
- PO.DAAC-PY - Python Library Toolkit for PO.DAAC Web Services
 - Updated as of August 2019 - <https://github.com/nasa/podaacpy>
 - PO.DAAC GitHub:
https://github.com/nasa/podaac_tools_and_services

Common Cross-DAAC Interfaces

- NASA Earthdata Code Collaborative (code-sharing for common services).
 - <https://earthdata.nasa.gov/collaborate/ecc>
- NASA's EOSDIS Earthdata Search Client portal (<https://search.earthdata.nasa.gov>) is already available for all public facing datasets, and will also soon be made available to find and aggregate data from future Big-Data missions across DAACs such as **SWOT** and **NISAR**.
- GIBS/Worldview (<https://worldview.earthdata.nasa.gov/>): provides multi-layered visualization (over 900 multi-variate layers) of satellite-based remote sensing data.





SWOT Microsite Preview



The screenshot shows the SWOT Microsite interface. At the top left is the NASA logo and the text "Jet Propulsion Laboratory California Institute of Technology" and "podaac Physical Oceanography Distributed Active Archive Center". To the right are "Follow Us" and search bars. Below is a navigation menu with items: Home, Dataset Discovery, Data Access, Measurements, Missions, Multimedia, Community, Forum, About. The main content area features a large image of the SWOT satellite in orbit. Below the image is the title "Surface Water and Ocean Topography" and four icons: SWOT MISSION, OCEAN, HYDROSPHERE, and COAST. At the bottom are links for ABOUT MISSION, DATA, NEWS & ANNOUNCEMENTS, and RESOURCES. A "Mission Timeline" chart is overlaid on the right side of the satellite image, showing key events from Sep 2021 to Jun 2025.

Mission Timeline

| Date | Event |
|--------------|----------------------------|
| Sep 24, 2021 | Launch |
| Mar 2022 | Nominal Science |
| Jun 2022 | Reprocessing 1 |
| Nov 2022 | Science Validation Meeting |
| Nov 2022 | Validated Product Release |
| Jun 2023 | Reprocessing 2 |
| Jun 2024 | Reprocessing 3 (TBD) |
| Mar 2025 | Nominal Science Ends |
| Jun 2025 | Reprocessing 4 |

Timeline segments: CalVal 2021 - 2022, Nominal Mission 2022 - 2025, EQM of Extended Mission 2025 - 2025.

MISSION OBJECTIVES

SWOT Mission Objectives

SPATIAL COVERAGE

The Surface Water and Ocean Topography (SWOT) mission aims to provide valuable data and information about the world's oceans and its terrestrial surface water such as lakes, rivers, and wetlands. SWOT is being developed jointly by NASA and Centre National D'Etudes Spatiales (CNES), with contributions from the Canadian Space Agency (CSA) and United Kingdom Space Agency (UKSA). The mission is targeted to launch September 2021.

DATASETS

INSTRUMENTS

MISSION CHARACTERISTICS

RELATED LINKS

SWOT will measure ocean surface topography and land surface water elevation with great accuracy, using interferometry to achieve two-dimensional mapping. Observations from SWOT can be used to better understand ocean currents and processes happening at spatial scales on the order of 15-150 km, something that has not been done before. SWOT will enable high resolution (within 1 km from land) monitoring of coastal regions, including coastal currents, storm surges, and regional sea level change. On land, SWOT will provide measurements of water storage changes (surface water area and water depth) of major lakes, reservoirs, rivers, and wetlands, and support derived estimates of river discharge, which aid in assessing water resources. SWOT will observe rivers wider than 100 m and lakes with a surface area of 15 acres or more (i.e., an outline of 250 m by 250 m or 820 ft by 820 ft).

“Data in Action” Animations Pipeline

<https://podaac.jpl.nasa.gov/animations/>

