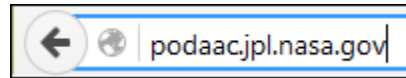


Introducing the PO.DAAC

The PO.DAAC (Physical Oceanography Distributed Active Archive Center) is a gateway to ocean and climate data stored in NASA's data holdings and other ocean and climate archives. The Aquarius datasets can be accessed here.

Using your internet browser, go to <http://podaac.jpl.nasa.gov>

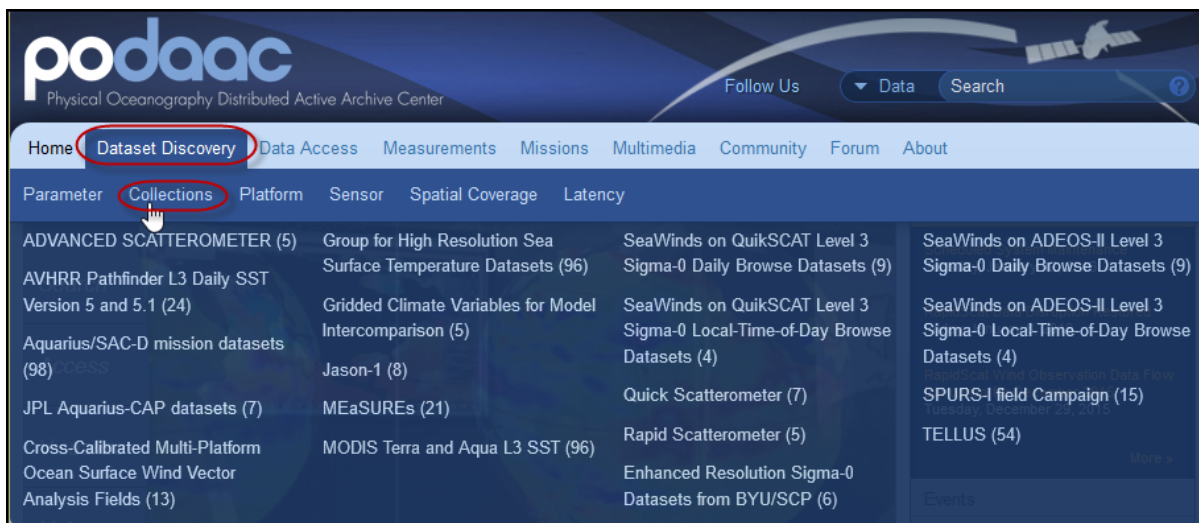


A screenshot of the PO.DAAC website homepage. The page features a dark blue header with the NASA logo and "Jet Propulsion Laboratory California Institute of Technology". Below the header is the "podaac" logo and the text "Physical Oceanography Distributed Active Archive Center". A navigation menu includes "Home", "Dataset Discovery", "Data Access", "Measurements", "Missions", "Multimedia", "Community", "Forum", and "About". The main content area displays a large satellite image of a river basin with a color scale from green to red. To the right of the image is a sidebar with "Announcements" and "System Alerts". At the bottom of the image, there is a text box that reads: "Utilization of Satellite Altimetry for Bangladesh Flood Forecasting and Warning System. Bangladesh has implemented an operational flood forecast system that uses Jason-2 to forecast river heights, such as the Ganges River, up to 8 days ahead of time." Below this text are small icons for "Ganges Basin", "Indus Basin", and "Niger Basin".

There are many avenues within the PO.DAAC website through which you can search for your data.



Click **Dataset Discovery – Parameter** to access datasets by parameter name.



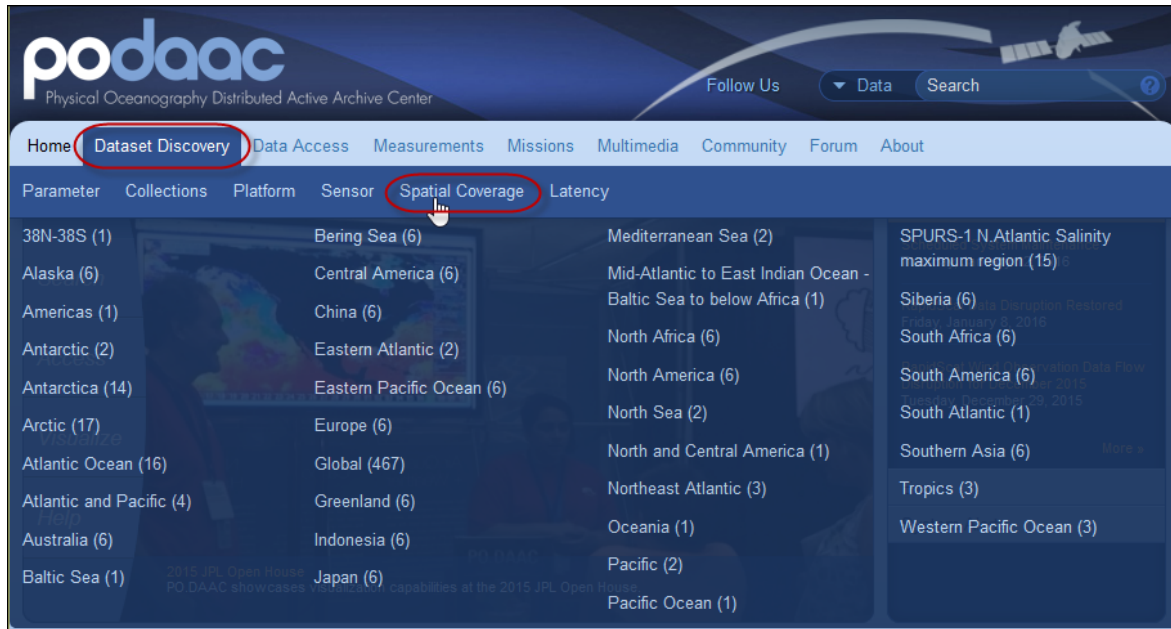
Click **Dataset Discovery – Collections** to access datasets by collection.



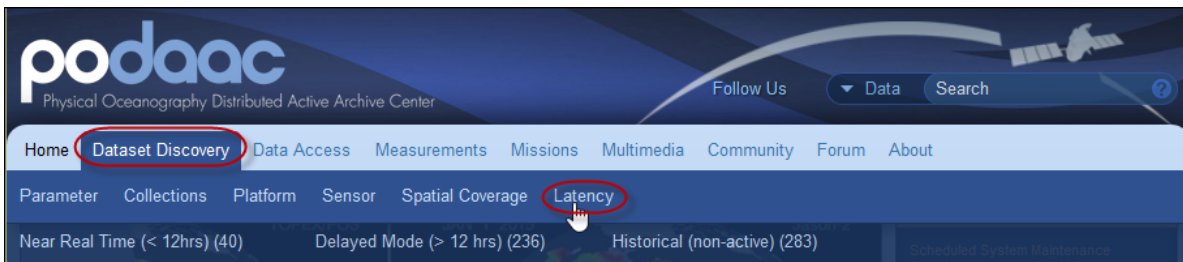
Click **Dataset Discovery – Platform** to access datasets by satellite.



Click **Dataset Discovery – Sensor** to access datasets by sensors within platforms.



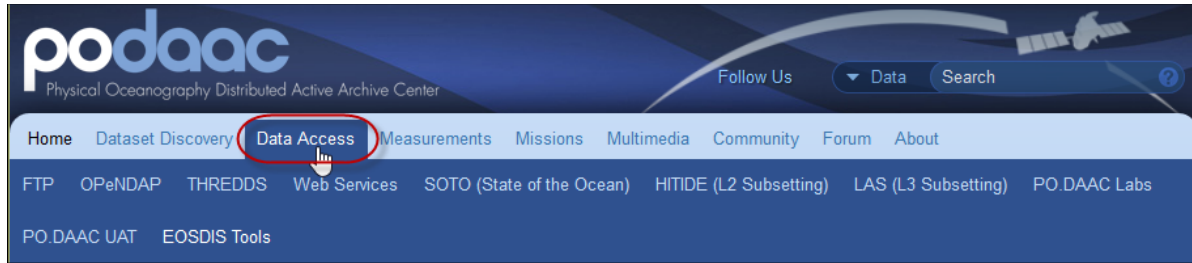
Click **Dataset Discovery – Spatial Coverage** to access datasets by geographical area.



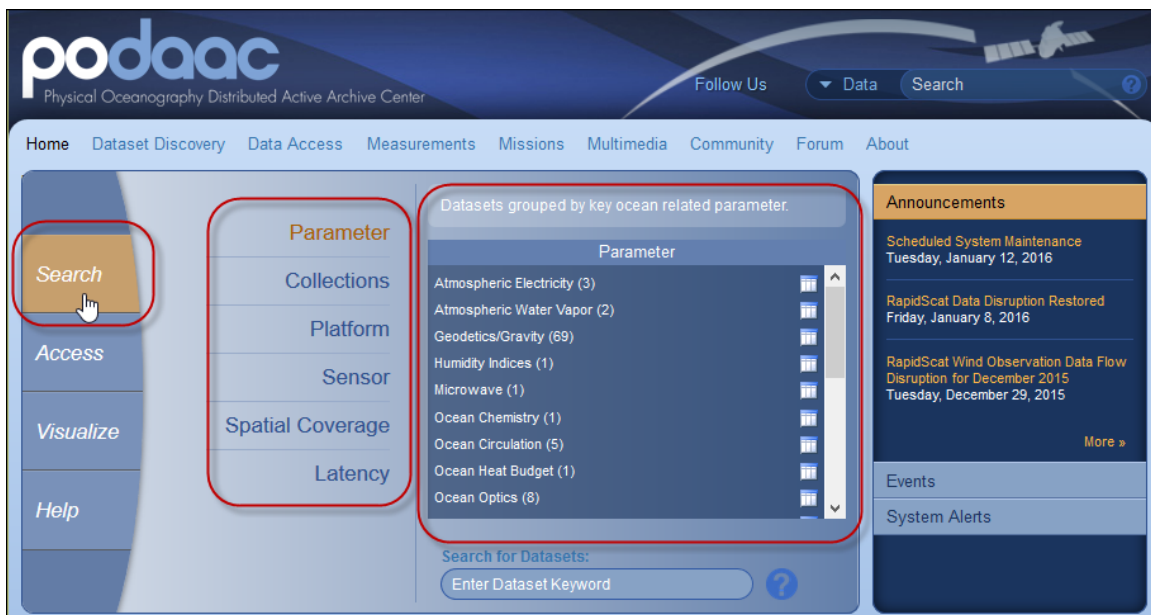
Click **Dataset Discovery – Latency** to access datasets by time lag.

Note: *Near Real Time* datasets have undergone less quality control than **Delayed** or **Historical (non-active)** datasets.

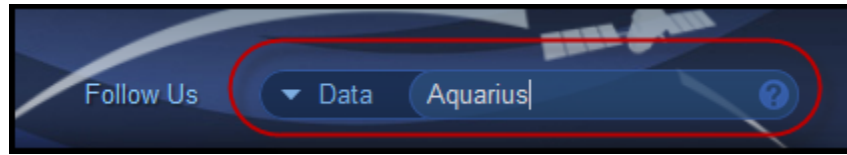




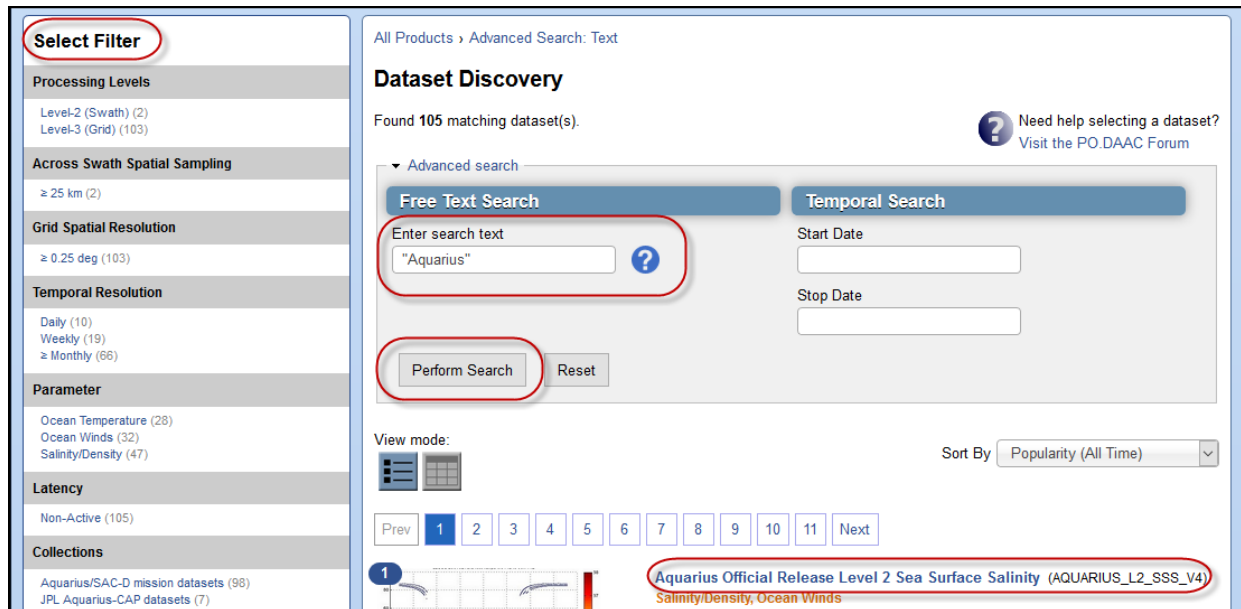
Click **Data Access** to select a Data Access portal through which you can search for individual datasets.



Another way to search the same menu options is click **Search** then select a menu option.



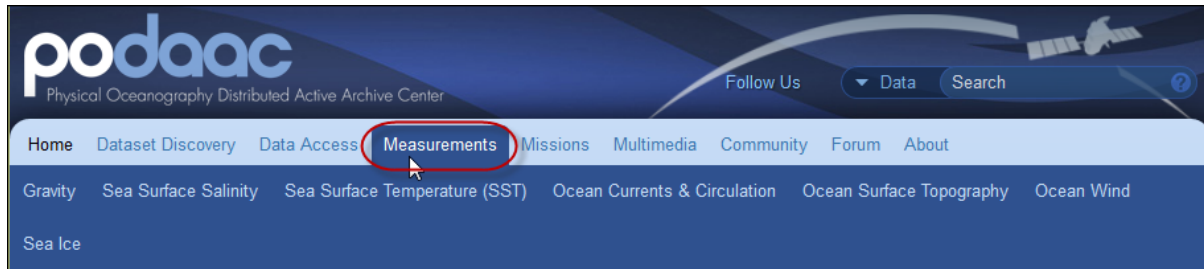
To search by keyword, enter text into the search bar at the top right of the page. Search suggestions appear as you type.



Data Discovery screen:

- **Advanced Search**
 - Add additional search text
 - Start and stop dates
- **Select Filter**
- Links to datasets






Click **Measurements** for information about the different ocean variables and how they are measured.

Here is an example of the Sea Surface Salinity page.

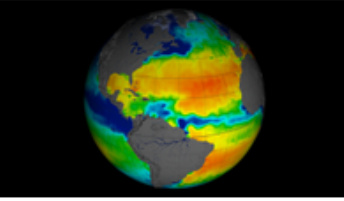
Sea Surface Salinity

Related Mission



Aquarius/SAC-D
The Aquarius/SAC-D observatory launched on June 10, 2011 will take a "skin " reading of ocean salt content.

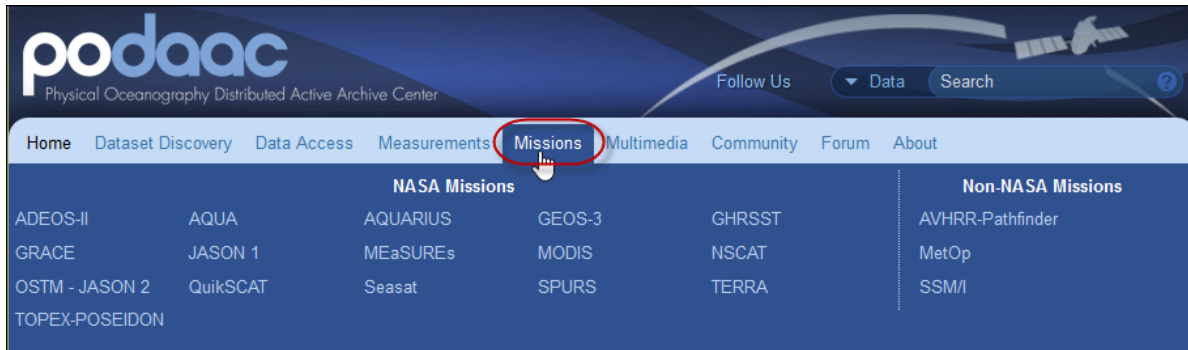
What is Sea Surface Salinity?



Salinity in the ocean is defined as the grams of salt per 1000 grams of water. One gram of salt per 1000 grams of water is defined as one practical salinity unit or one PSU. Salinity varies due to evaporation and precipitation over the ocean as well as river runoff and ice melt. Along with temperature, it is a major factor in contributing to changes in density of seawater and therefore ocean circulation.

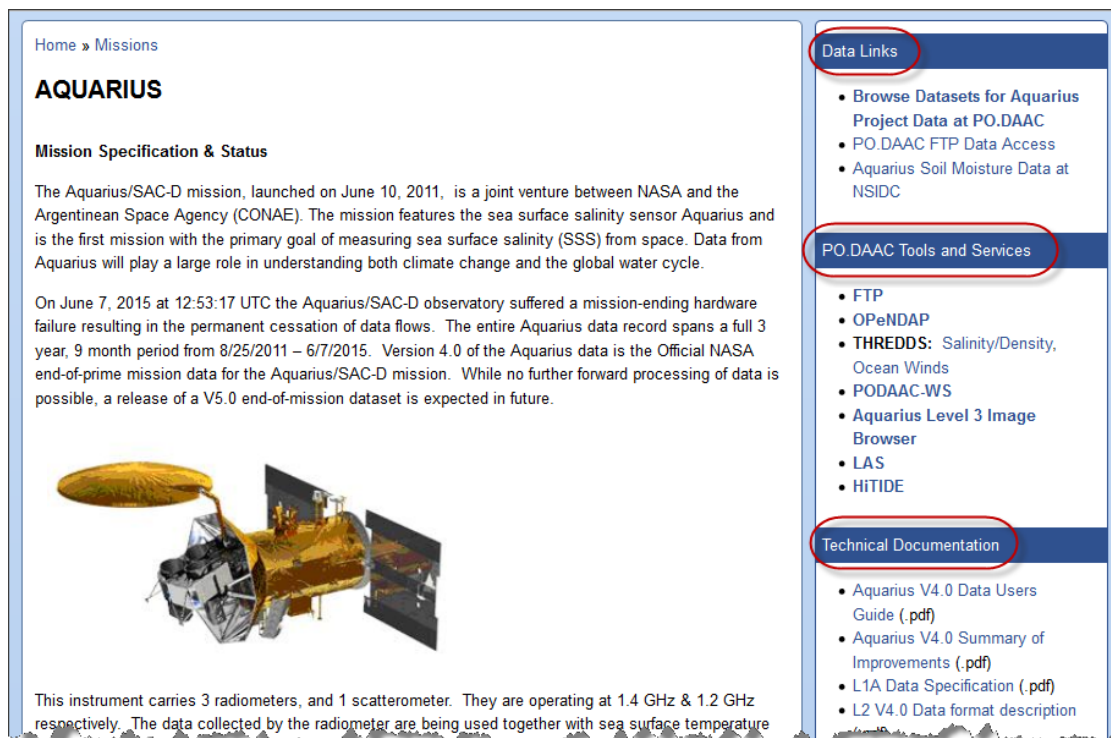
How is Sea Surface Salinity Measured?

The Aquarius mission, launched on June 10, 2011, is the first mission with the primary goal of measuring sea surface salinity (SSS) from space. Data from Aquarius will play a large role in



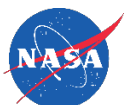
Click **Missions** to learn more about satellite specific missions, their status, recent news, as well as helpful links and documentation.

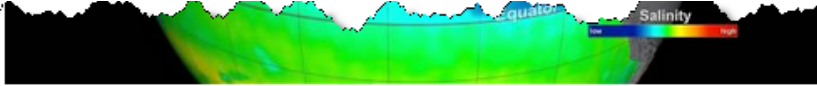
Here is an example of the Aquarius page.



Menus on the right of the page provide helpful links, including

- Data Links
 - Browse Aquarius datasets
 - Aquarius FTP page
- PO.DAAC Tools and Services with a link to Aquarius datasets on THREDDS
- Technical Documentation including the Aquarius Data Users Guide
- Known Aquarius data issues





This video provides a global tour of sea surface salinity using measurements taken by NASA's Aquarius instrument aboard the Aquarius/SAC-D spacecraft, from December 2011 through December 2012. Red represents areas of high salinity, while blue represents areas of low salinity. Aquarius is a focused effort to measure sea surface salinity and will provide the global view of salinity variability needed for climate studies. The mission is a collaboration between NASA and the Space Agency of Argentina (Comisión Nacional de Actividades Espaciales).

View the press release: http://www.nasa.gov/mission_pages/aquarius/news/data-first-year.html
This video is public domain and can be downloaded at: <http://svs.gsfc.nasa.gov/vis/a000000/a004000/a004045/>

See all "Official Aquarius/SAC-D" Announcements
See all PO.DAAC Announcements

Contact:
Salinity@podaac.jpl.nasa.gov

Aquarius Requirements

- 390 km swath
- 8 samples per month near equator
- 0.2 psu (0.0002) accuracy after temporal averaging over a month
- Temporal Resolution 1 month
- Spatial Resolution 100 km

Instrument Specifications

Radiometer & Scatterometer
Footprint size - 62x68, 88x62, 75x100
Footprint size - 78x94, 84x120, 96x156
Orbit 657 km Sun Synchronous

- **Radiometer**
Frequency $f = 1.413 \text{ GHz} \pm 12.5 \text{ MHz}$
Wavelength $\lambda = c/f \sim 0.212 \text{ m}$
L band = 0.39 - 1.55 GHz
- **Scatterometer**
Frequency $f = 1.26 \text{ GHz}$
Wavelength $\lambda = c/f \sim 0.238 \text{ m}$

Scroll down to the bottom of the page for:

- Contact information
- Aquarius Requirements
- Instrument Specifications.