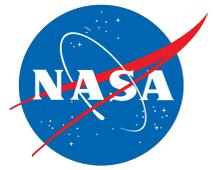




OMG
Science Data System

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



Overview

- The SDS receives data products from the varied data providers which are cataloged and made available to the science team and the public via the OMG portal
- The SDS is in the process of generating and delivering formatted and validated data products to the PO.DAAC for long-term archive and public access



Portal

- The OMG Portal is located at:
 - <https://omg.jpl.nasa.gov>
- Products approved for release are available to the general public (no account needed)
- Raw and preliminary products are available to the science team via login:
 - <https://omg.jpl.nasa.gov/data/>
- Other project-related information (e.g., news, publications, etc.) is updated frequently
- We recently added an About page and have contracted to translate this page into Danish and Greenlandic
- A look-and-feel upgrade for the portal is in the works as well



Portal About Page



The screenshot shows a web browser window with the URL <https://omg.jpl.nasa.gov/portal/about>. The page header includes the NASA logo and the text "Jet Propulsion Laboratory California Institute of Technology". The main content area features a banner with a satellite image of Greenland and the title "Oceans Melting Greenland" next to the OMG logo. Below the banner is a navigation menu with links for Home, About, Data, Announcements, News, Publications, and Gallery. The "About" link is currently selected. A breadcrumb trail shows "Home → About" and a "Log In" button is visible. The main heading is "Why is NASA in Greenland?". The text below explains that Greenland's melting ice affects the whole world and that the ice sheet contains enough water to raise sea levels by 7.4 meters (25 feet) worldwide. Below this text is a large image of Earth from space, with the OMG logo overlaid on the top left. The globe shows Greenland's location northeast of Canada. A caption below the globe states that Greenland is the world's largest island and home to the second largest ice sheet in the world.



Data Product Preparation

- As stated in the OMG proposal:
 - “All OMG data products will be produced in conformance with data formats approved by EOSDIS.”
 - We are using the NetCDF format
- We have been working with PO.DAAC to understand their data product and metadata requirements
 - For the most part, these requirements pertain to Level 2 products and above

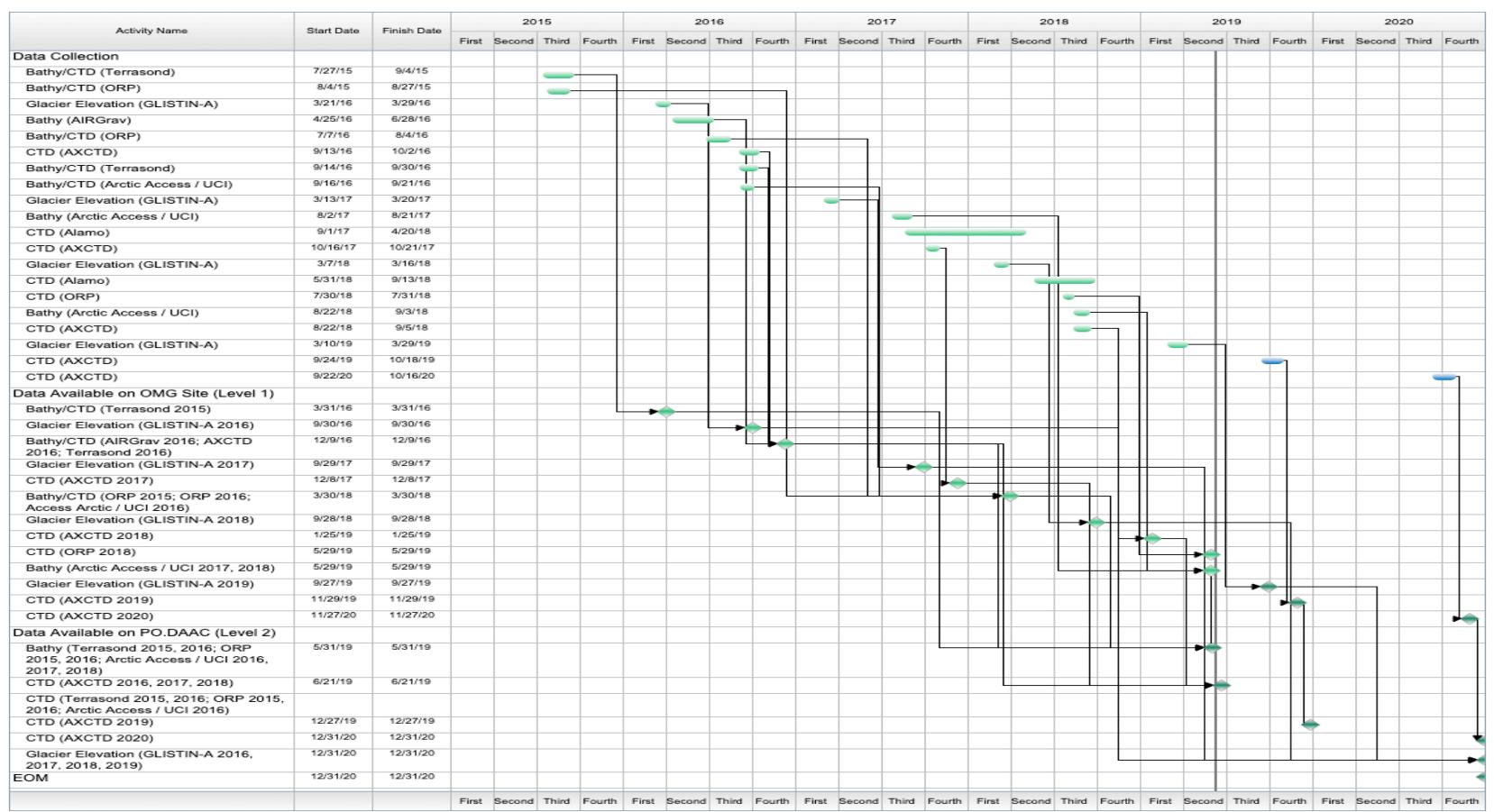


Data Product Preparation cont.

- The first data product includes ship survey bathymetry data from 2015 through 2018
 - The data products have been submitted to PO.DAAC for release
- The next data product in the queue includes the AXCTD data collected to date
- Data products will be designed, generated and delivered to PO.DAAC from now until end of mission
 - Priority given to popular data and data considered low hanging fruit



Data Product Delivery Schedule*



* Not meant to be legible. Just want to show that we are working to a plan.



Next Steps

- Continue to design data products in accordance to PO.DAAC requirements
- Generate these products for review by the PI/Co-Is and PO.DAAC
- Deliver the products to PO.DAAC for release to the public
- Work on the portal upgrade in our spare time

Questions/Comments



OMG Data Distribution, Tools and Services at the PO.DAAC

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

Jessica Hausman, Vardis Tsontos, *David Moroni*

David.F.Moroni@jpl.nasa.gov

PO.DAAC Data Stewardship Team (DST)

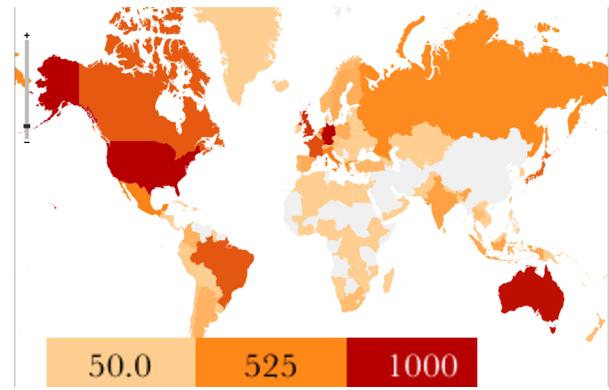
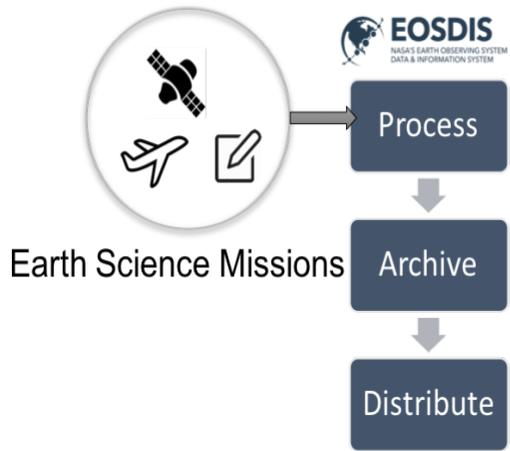
Jet Propulsion Laboratory, California Institute of Technology, Pasadena, CA

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Physical Oceanography Distributed Active Archive Center (PO.DAAC)



Distributed Active Archive Centers (DAAC)

Missions & Projects

Missions Supported

PO.DAAC supports a large fleet of Earth Observing missions, putting key data directly into the hands of Earth science researchers so that they can address key questions about the oceans, environment, and global climate change.

podaac.jpl.nasa.gov/missions

- 600+ datasets
- 250+ TB of data
- 15+ million data files
- 50,000 distinct users served
- 50+ datasets published each year
- 20+ earth observing missions supported

Data Parameters

Learn about core measurements, related missions and instruments

podaac.jpl.nasa.gov/CoreMeasurements

- Gravity
- Sea Surface Salinity
- Sea Surface Temperature
- Ocean Currents & Circulation
- Ocean Surface Topography
- Ocean Wind

Seasat, TOPEX/Poseidon, Jason-1, NSCAT, SeaWinds on ADEOS-II, CYGNSS, GRACE-FO (2018), QuikSCAT, GRACE, GHRSSST, MEaSUREs, Aquarius, SPURS, ISS-RapidScat, AirSWOT, OMG, Jason-CS/Sentinel-6 (2020), SWOT (2021)

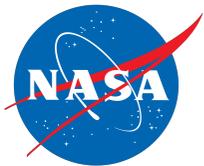
Services for Data Users

- As the designated archive for OMG, providing long-term storage and access, continuing beyond Phase-F.
- Provides opportunities for users to more easily collocate OMG data with satellite data.
- Search, Discovery, Visualization and Access services.

Discover

Visualize

Access



Home » Missions

Oceans Melting Greenland (OMG)



Oceans Melting Greenland (OMG) is a 5-year (2015-2020) NASA Earth Venture Suborbital (EVS-2) mission that aims to improve estimates of sea level rise by addressing the question: To what extent are the oceans melting Greenland's ice from below? OMG will observe changing water temperatures on the continental shelf surrounding Greenland, and how marine glaciers react to the presence of warm, salty Atlantic Water. The complicated geometry of the sea floor steers currents on the shelf and often determines whether Atlantic Water can reach into the long narrow fjords and interact with the coastal glaciers. Because knowledge of these pathways is a critical component of modeling the interaction between the oceans and ice sheet, OMG will facilitate improved measurements of the shape and depth of the sea floor in key regions.

each summer to deploy 250 expendable temperature and salinity probes along the continental shelf to measure the volume and extent of warm, salty Atlantic Water. These data, along with fundamental new and critical observations of airborne marine gravity and ship-based observations of the sea floor geometry will provide a revolutionary dataset for understanding ocean/ice interactions and lead to improved estimates of global sea level rise.

Instruments

- **AXCTD** - Airborne eXpendable Conductivity Temperature Depth is similar to the shipboard CTD, but dropped from a plane and not retrieved. It sends a radio signal with the CTD measurements as the probes fall through the water column.
- **CTD** - Conductivity, Temperature and Depth is a shipboard instrument. It measures water conductivity, which is translated into salinity, temperature and depth. These measurements are then used to calculate density.
- **GLISTIN-A** - Glacier and Ice Surface Topography Interferometer is an airborne single pass interferometric Ka-band radar.

Data Links

Archive during the OMG mission:

- [OMG Mission Page](#)

Archive after completion of the OMG mission:

- [PO.DAAC \(coming soon\)](#)

Documentation

Coming soon

Related Links

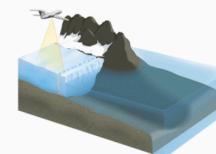
- [OMG Mission Page](#)
- [NASA Sea Level Change](#)

References

[OMG Bibliography >>](#)

Multimedia

[OMG Images and Movies >>](#)





Data

- MBES and SBES bathymetry are available now
 - MBES DOI: 10.5067/OMGEV-MBES1
 - SBES DOI: 10.5067/OMGEV-SBES1
- AXCTD coming in July.
- CTD later this year.
- GLISTN-A and AirGRAV later.
- How to cite our data:

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



All Products > Advanced Search: Text

Dataset Discovery

Found 2 matching dataset(s).

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

Advanced search

Free Text Search

Enter search text

omg



Perform Search

Reset

Temporal Search

Start Date

Stop Date

View mode:

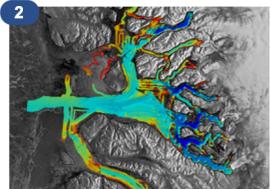
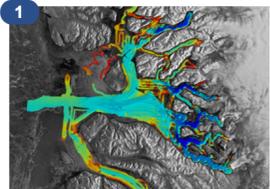


Prev

1

Next

Sort By Popularity (All Time)



OMG Swath Gridded Singlebeam Echo Sounding (SBES) Bathymetry

(OMG_L2_Bathy_SBES_Gridded)

[Bathymetry/Seafloor Topography](#)

Platform/Sensor: OMGSHIP_SBES/SBES

Processing Level: L2

Longitude/Latitude Resolution: degrees x degrees

Start/End Date: 2015-Aug-4 to 2017-Dec-31

Description: This dataset contains in situ depth measurements from Singlebeam Echo Sounding System (SBES) instruments. These depths were used to map the bathymetry around ocean terminating glaciers ... [more](#)

OMG Swath Gridded Multibeam Echo Sounding (MBES) Bathymetry

(OMG_L2_Bathy_MBES_Gridded)

[Bathymetry/Seafloor Topography](#)

Platform/Sensor: OMGSHIP_MBES/MBES

Processing Level: L2

Longitude/Latitude Resolution: degrees x degrees

Start/End Date: 2015-Jul-25 to 2018-Aug-21

Description: This dataset contains in situ depth measurements from Multibeam Echo Sounding System (MBES) instruments. These depths were used to map the bathymetry around ocean terminating glaciers ... [more](#)

June 13, 2019

PO.DAAC

Information Data Access Documentation Citation Granule (File) Listing

DOI 10.5067/OMGEV-SBES1

Short Name OMG_L2_Bathy_SBES_Gridded

Description This dataset contains in situ depth measurements from Singlebeam Echo Sounding System (SBES) instruments. These depths were used to map the bathymetry around ocean terminating glaciers of Greenland. The bathymetry mapping is part of the Oceans Melting Greenland (OMG) project. The goal of the project is to find out what contributions the ocean has on Greenland's melting glaciers. The SBES was onboard a ship so the tracks are not of a swath, but less regularly patterned as the ship is limited as to where it can traverse due to floating glaciers, ice cover and general weather conditions.

Version 1

Dataset Type OPEN

Measurement Oceans > Bathymetry/Seafloor Topography > Bathymetry > None

Information Data Access Documentation Citation Granule (File) Listing

DOI 10.5067/OMGEV-MBES1

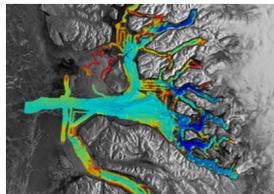
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Version 1

Dataset Type OPEN

Measurement Oceans > Bathymetry/Seafloor Topography > Bathymetry



OMG Swath Gridded Singlebeam Echo Sounding (SBES) Bathymetry

SHARE THIS PAGE

https://podaac.jpl.nasa.gov/dataset/OMG_L2_Bathy_SBES_Gridded

Please contact us if there are any discrepancies or inaccuracies found below.

Information

Data Access

Documentation

Citation

Granule (File) Listing

PO.DAAC DRIVE

<https://podaac-tools.jpl.nasa.gov/drive/files/allData/omg/L2/bathymetry/SBES>

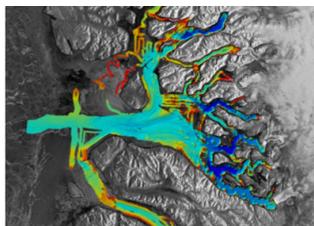
OPENDAP

<https://podaac-opendap.jpl.nasa.gov/opendap/allData/omg/L2/bathymetry/SBES/>

Format (Compression)

NETCDF (NONE)

All Products > Advanced Search: Text



OMG Swath Gridded Singlebeam Echo Sounding (SBES) Bathymetry

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https://podaac.jpl.nasa.gov/dataset/OMG_L2_Bathy_SBES_Gridded

Please contact us if there are any discrepancies or inaccuracies found below.

Information

Data Access

Documentation

Citation

Granule (File) Listing

Citation

OMG. 2019. OMG Swath Gridded Singlebeam Echo Sounding (SBES) Bathymetry. Ver. 1. PO.DAAC, CA, USA. Dataset accessed [YYYY-MM-DD] at <http://dx.doi.org/10.5067/OMGEV-SBES1>.

For more information see [Data Citations and Acknowledgments](#).

Journal Reference

Fenty, I., J.K. Willis, A. Khazendar, S. Dinardo, R. Forsberg, I. Fukumori, D. Holland, M. Jakobsson, D. Moller, J. Morison, A. Meunchow, E. Rignot, M. Schodlock, A.F. Thompson, K. Tino, M. Rutherford, and N. Trenholm. 2016. Oceans Melting Greenland: Early results from NASA's ocean-ice mission in Greenland. *Oceanography* 29(4):72-83, <https://doi.org/10.5670/ocean.2016.100>



Data/Metadata Access



- Need to have a NASA Earthdata Login
 - Same across all DAACs
 - <https://urs.earthdata.nasa.gov/>
- <https://podaac-tools.jpl.nasa.gov/drive/files/allData/omg>
 - FTP replacement – PO.DAAC Drive (HTTPS/WebDav)
- <https://podaac-tools.jpl.nasa.gov/drive/help>
 - Allows you to remotely mount PO.DAAC's data holdings
- <https://opendap.jpl.nasa.gov/opendap/allData/omg>
 - OPeNDAP allows for temporal and spatial subsetting
- <https://podaac.jpl.nasa.gov/ws>
 - Collection/file data and metadata search and extraction.



Questions

Forum - <https://podaac.jpl.nasa.gov/forum/>

Email – podaac@podaac.jpl.nas.gov

PO.DAAC OMG page -

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

How to cite our data -

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