





Victoria McDonald, Jack McNelis

Jet Propulsion Laboratory, California Institute of Technology

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

December 1, 2022 S-MODE Open Data Workshop





Physical Oceanography Distributed Active Archive Center

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

PO.DAAC Manages
NASA's oceanographic and
hydrologic data



Measurements include:

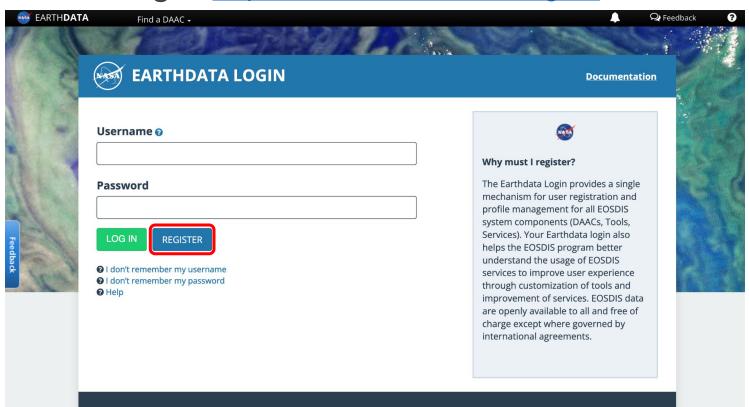
- Gravity
- Ocean winds
- Sea surface temperature
- Ocean surface topography
- Sea surface salinity
- Circulation





Prerequisite:

Earthdata Login: https://urs.earthdata.nasa.gov/

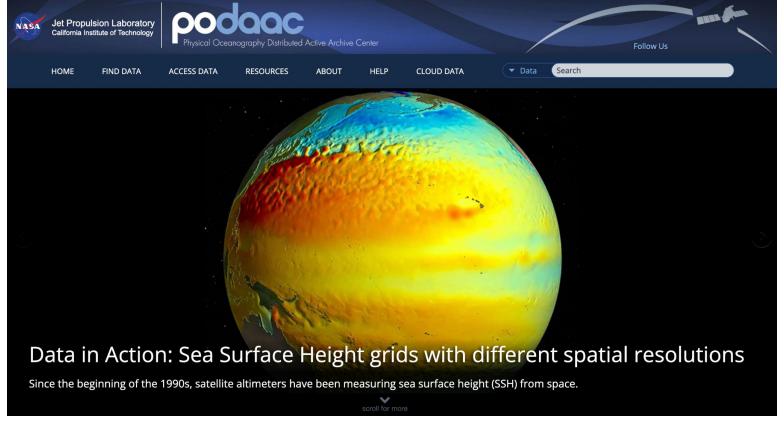




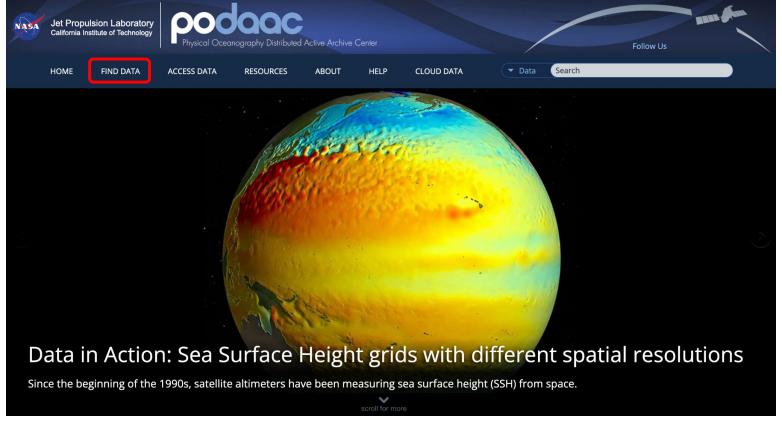
Physical Oceanography Distributed Active Archive Center



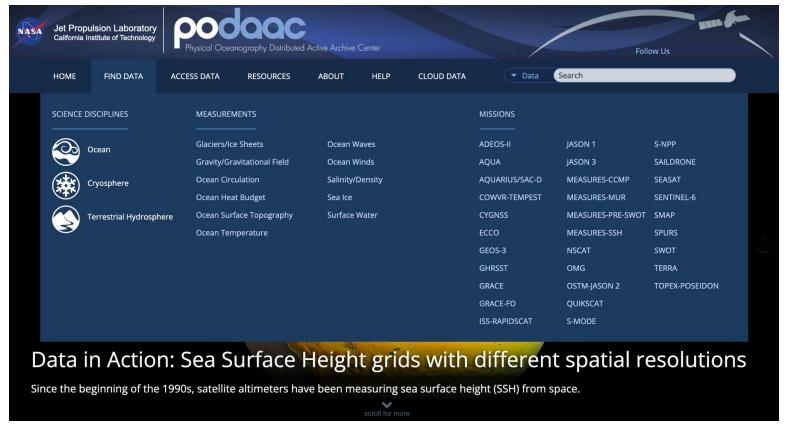




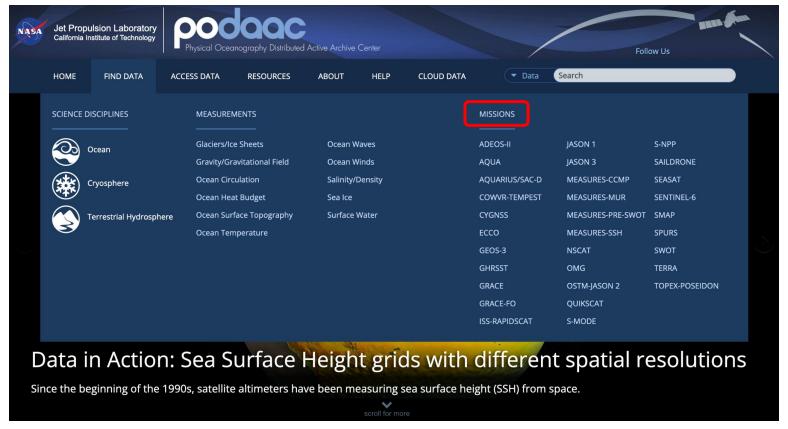




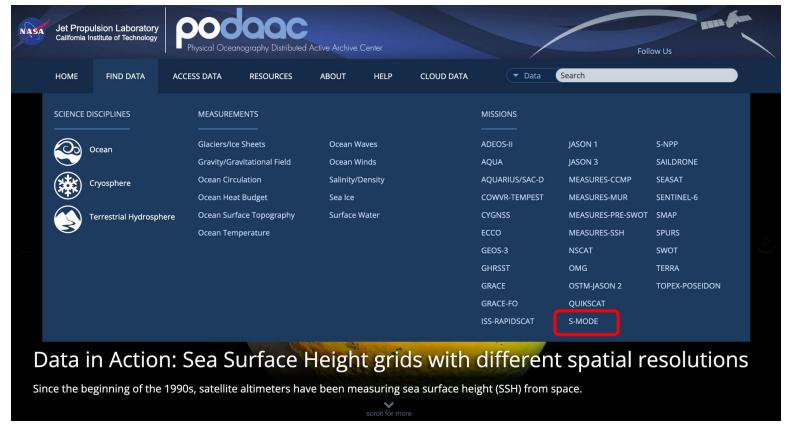




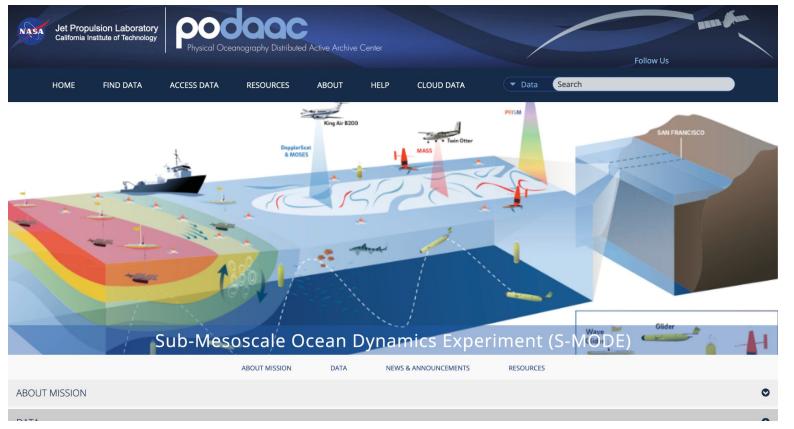








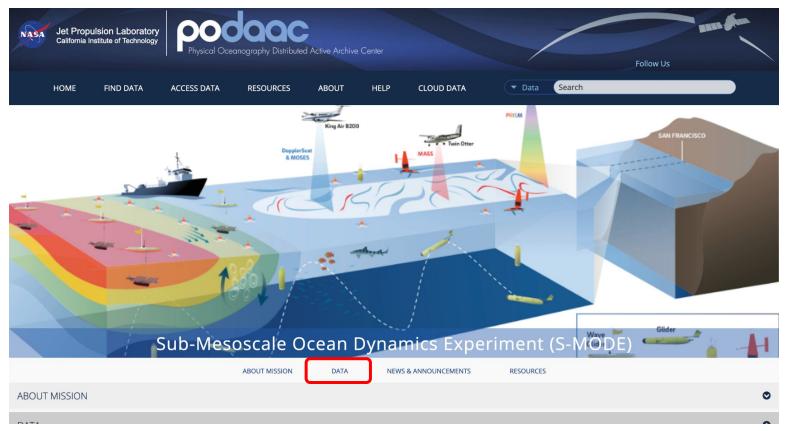
















Found 12 matching dataset(s)

Search Text

Dataset Name	Processing Level	Start/Stop	Format
S-MODE Shipboard Acoustic Doppler Current Profiler Measurements Version 1	NA	2021-Aug-01 to Present	netCDF-4
S-MODE Shipboard Bottle Data Version 1	NA	2021-Aug-01 to Present	netCDF-4
S-MODE Shipboard Conductivity, Temperature, and Depth Measurements Version 1	NA	2021-Aug-01 to Present	netCDF-4
S-MODE Shipboard SUNA nitrate data Version 1	NA	2021-Aug-01 to Present	netCDF-4
S-MODE Shipboard Thermosalinograph and Meteorology Measurements Version 1	NA	2021-Aug-01 to Present	netCDF-4
S-MODE Meteorological Data from Rawinsondes Version 1	NA	2021-Aug-01 to Present	netCDF-4
S-MODE Shipboard Radiometer Measurements Version 1	NA	2021-Aug-01 to Present	netCDF-4



S-MODE Datasets Currently Available

Dataset Name	Processing Level	Format	Number of Files
S-MODE Shipboard Acoustic Doppler Current Profiler Measurements Version 1	N/A	netCDF-4	2
S-MODE Shipboard Bottle Data Version 1	N/A	netCDF-4	1
S-MODE Shipboard Conductivity, Temperature, and Depth Measurements Version 1	N/A	netCDF-4	2
S-MODE Shipboard SUNA Nitrate data Version 1	N/A	netCDF-4	1
S-MODE Shipboard Thermosalinograph and Meteorology Measurements Version 1	N/A	netCDF-4	1
S-MODE Meteorological Data from Rawinsondes Version 1	N/A	netCDF-4	87
S-MODE Shipboard Radiometer Measurements Version 1	N/A	netCDF-4	1
S-MODE Shipboard uCTD and EcoCTD Measurements Version 1	2	netCDF-4	1401
S-MODE Position Data from Surface Drifters Version 1	N/A	netCDF-4	45
S-MODE Temperature and Salinity from Saildrones Version 1	N/A	netCDF-4	10
S-MODE Temperature and Salinity from Slocum Gliders Version 1	2	netCDF-4	16
S-MODE DopplerScatt Level 2 Ocean Winds and Currents Version 1	2	netCDF-4	11
S-MODE DopplerScatt Level 1 Surface Doppler and Radar Backscatter Version 1	1	netCDF-4	7342
S-MODE MOSES Level 2 Atmospherically-Corrected Sea Surface Temperature Version 1	2	netCDF-4	51
S-MODE MASS Level 1 DopVisible Imagery Version 1	1	GeoTIFF	232160
S-MODE MASS Level 1 Visible Imagery Version 1	1	GeoTIFF	605,514
S-MODE MASS Level 1 LWIR Version 1	1	GeoTIFF	6,051,233
S-MODE MASS Level 1 Hyperspectral Version 1	1	Zip	147
S-MODE MASS Level 1 LiDAR Point Cloud Version 1	1	LAZ	181

Coming in December





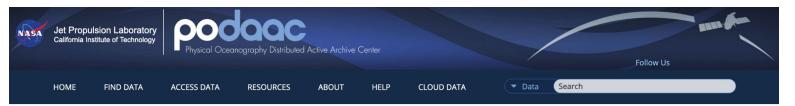
Found 12 matching dataset(s)

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S-MODE Shipboard Bottle Data Version 1	NA	2021-Aug-01 to Present	netCDF-4
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S-MODE Shipboard SUNA nitrate data Version 1	NA	2021-Aug-01 to Present	netCDF-4
S-MODE Shipboard Thermosalinograph and Meteorology Measurements Version 1	NA	2021-Aug-01 to Present	netCDF-4
S-MODE Meteorological Data from Rawinsondes Version 1	NA	2021-Aug-01 to Present	netCDF-4
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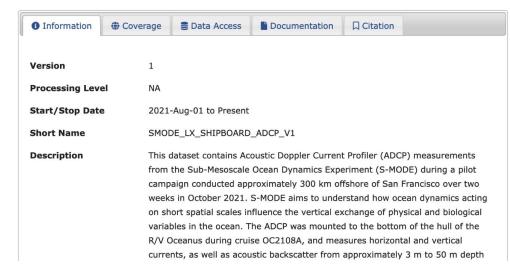


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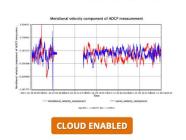


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S-MODE Shipboard Acoustic Doppler Current Profiler Measurements Version 1 (SMODE LX SHIPBOARD ADCP V1)



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Status: ACTIVE

Short Name:

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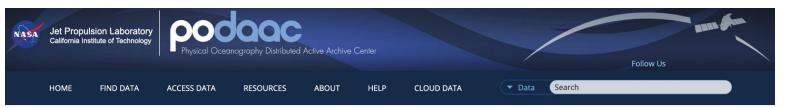
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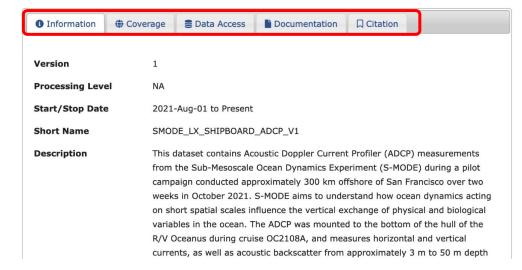


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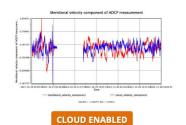


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S-MODE Shipboard Acoustic Doppler Current Profiler Measurements Version 1 (SMODE LX SHIPBOARD ADCP V1)



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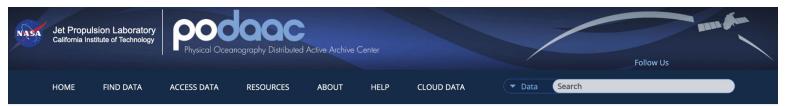
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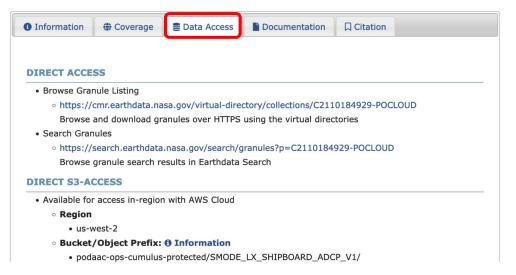


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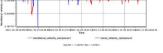
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S-MODE Shipboard Acoustic Doppler Current Profiler Measurements Version 1 (SMODE_LX_SHIPBOARD_ADCP_V1)





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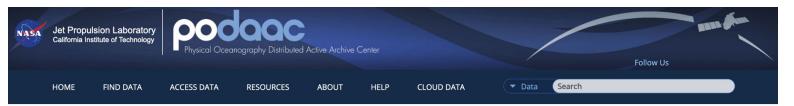
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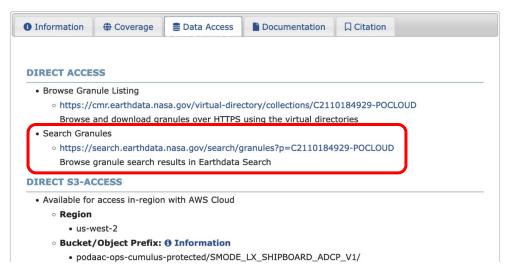


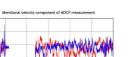
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S-MODE Shipboard Acoustic Doppler Current Profiler Measurements Version 1 (SMODE_LX_SHIPBOARD_ADCP_V1)





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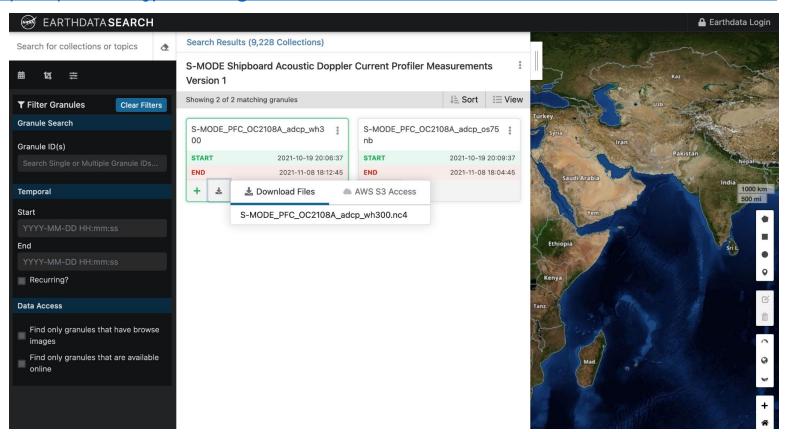
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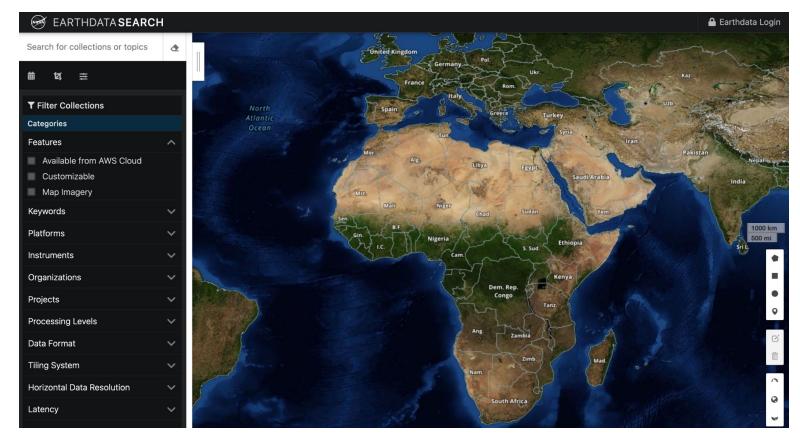


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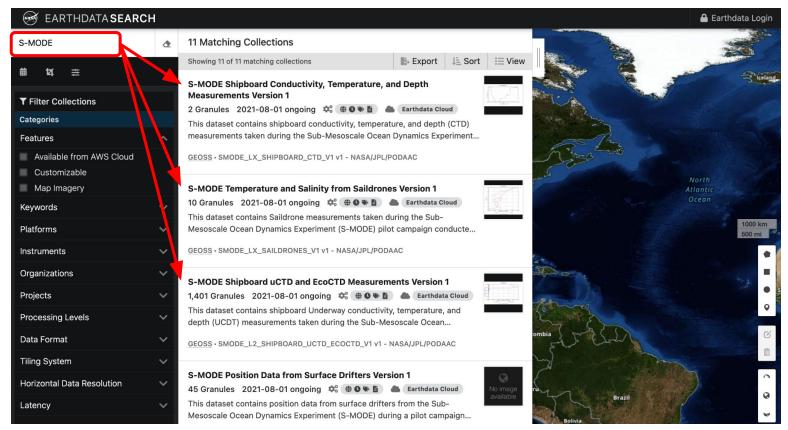
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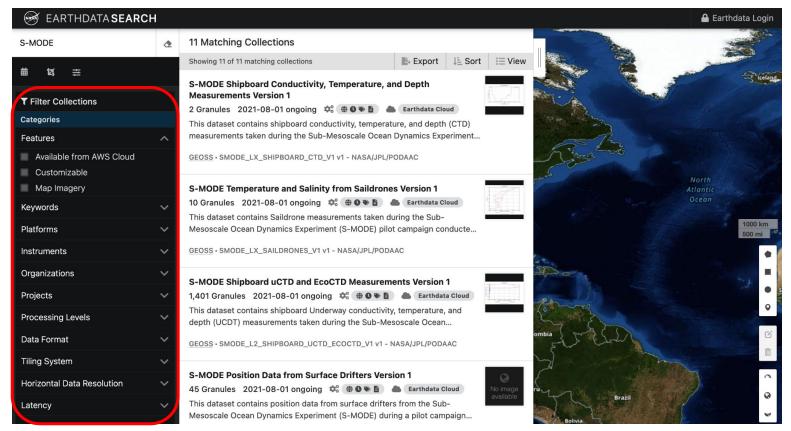
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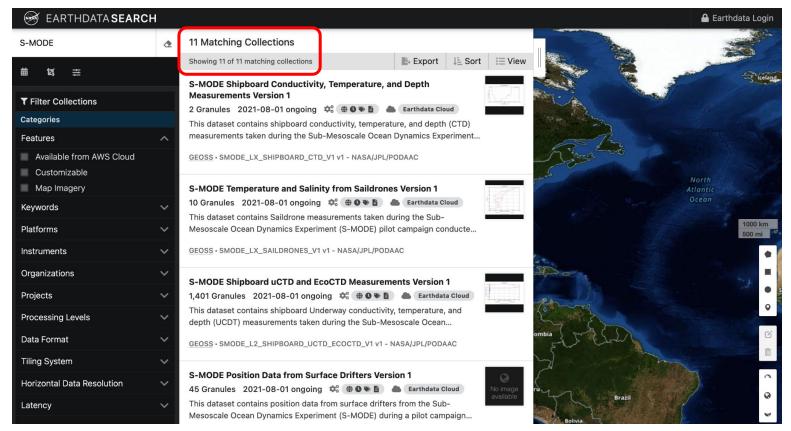




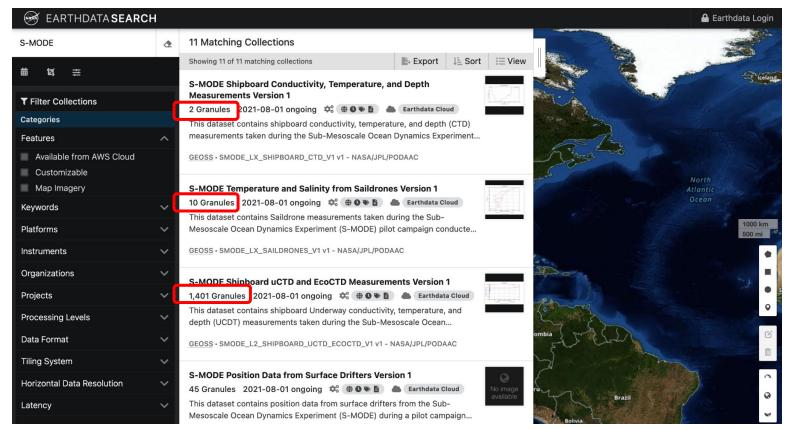




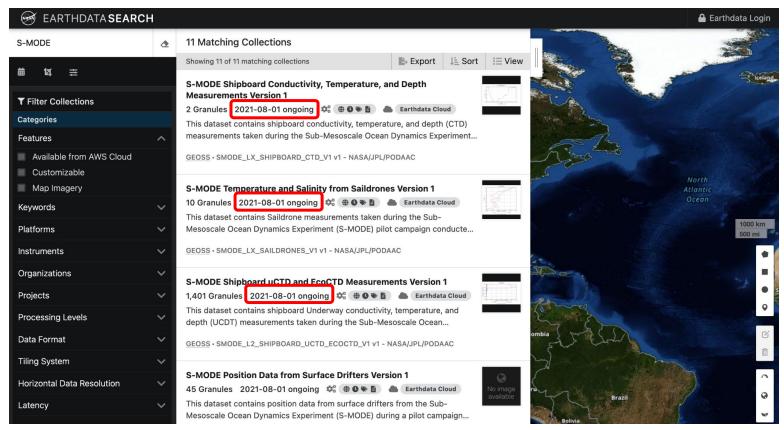
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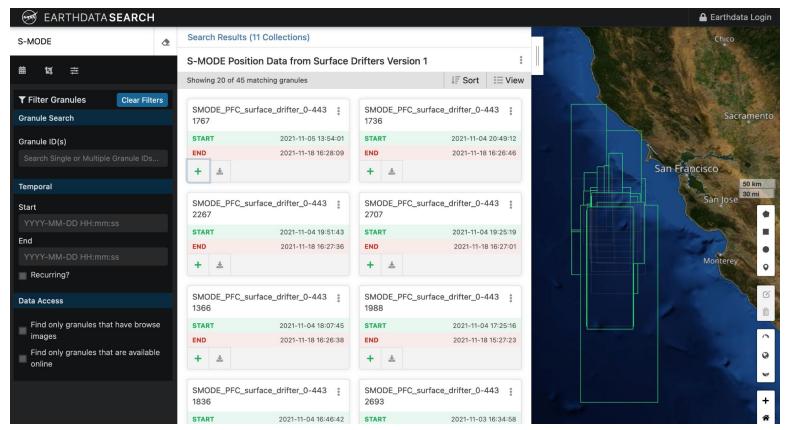




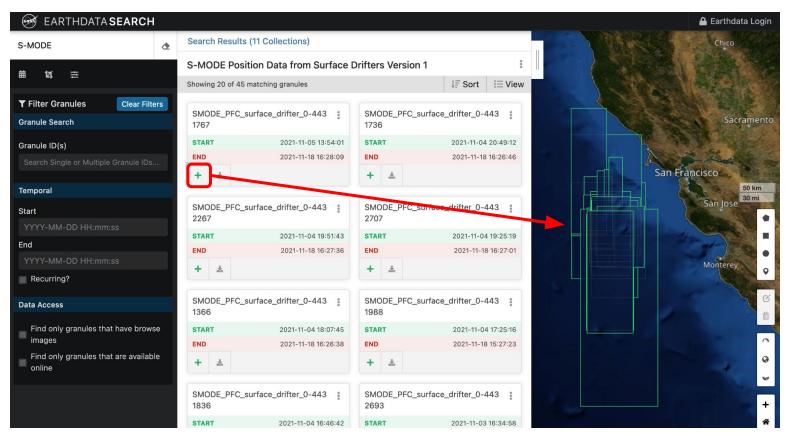




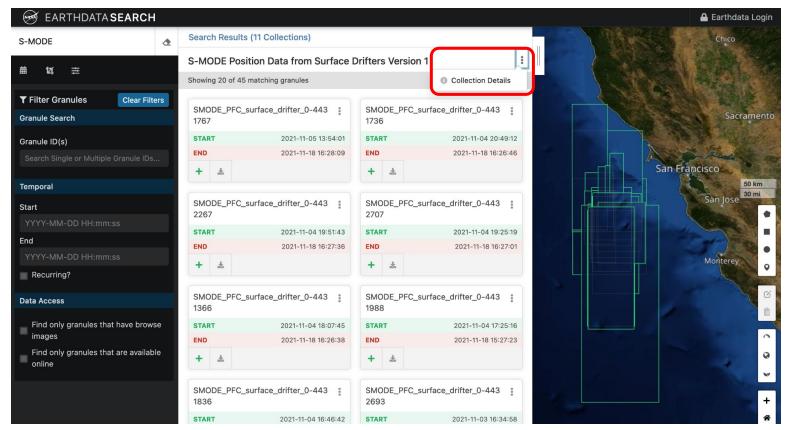




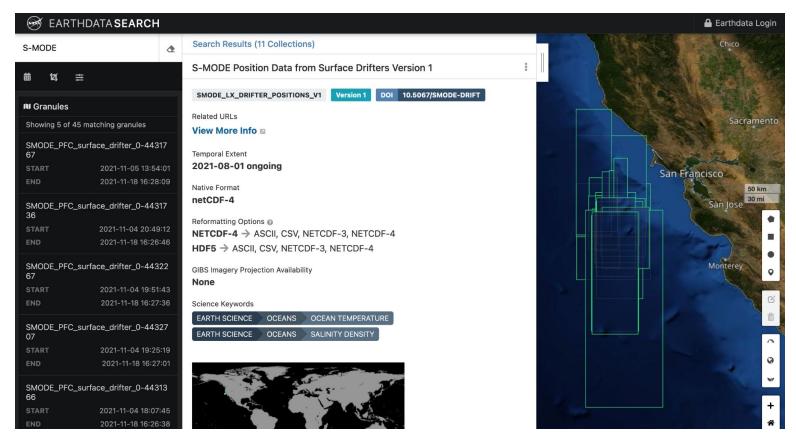




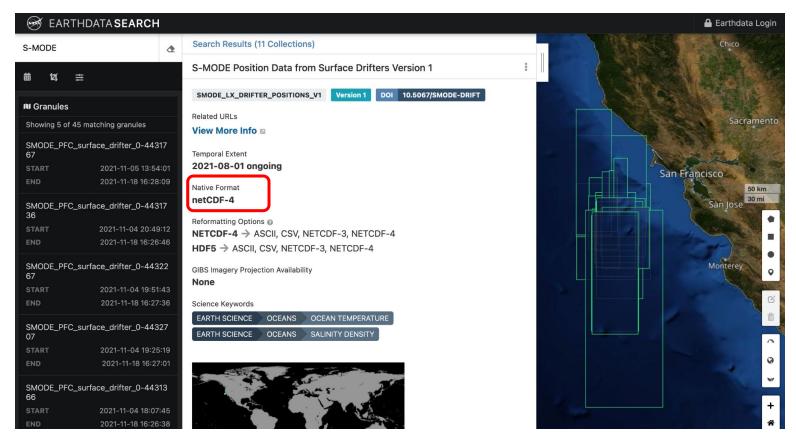




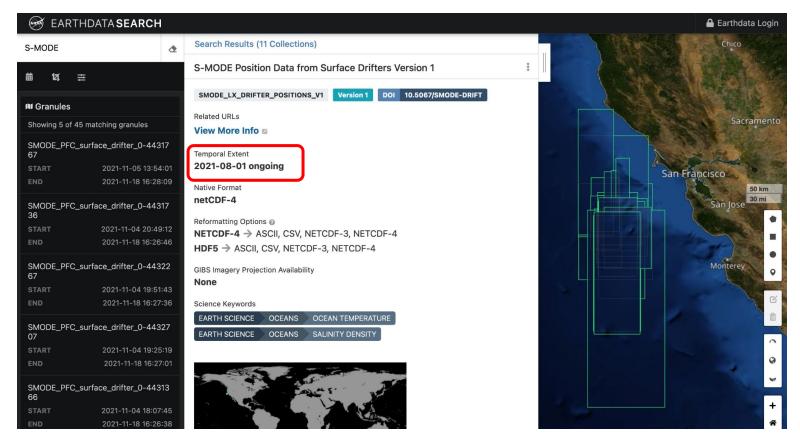




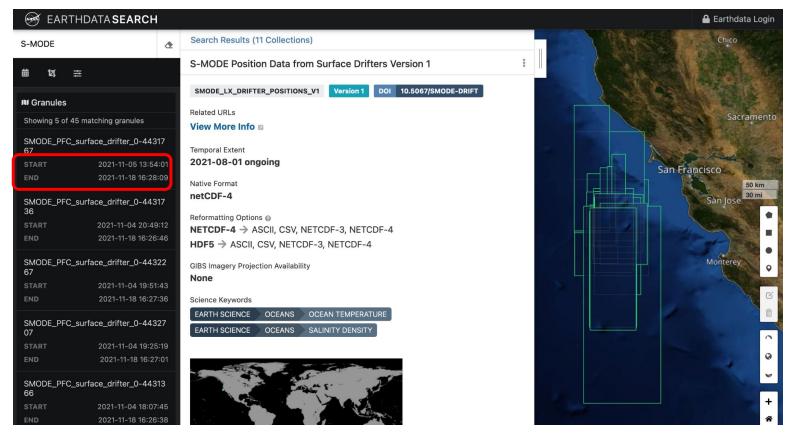






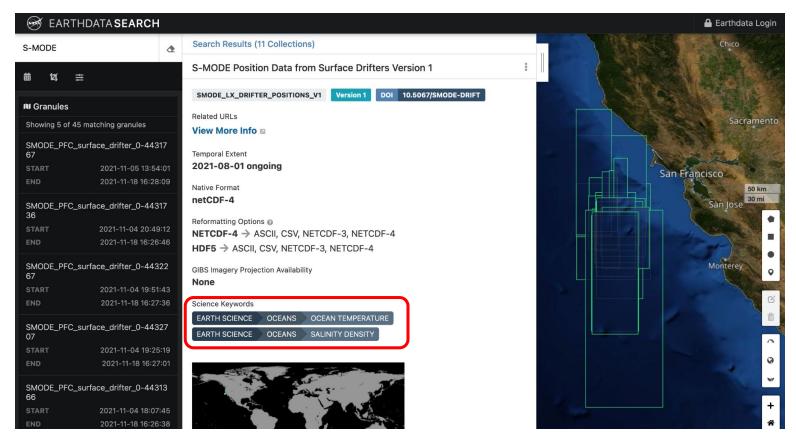




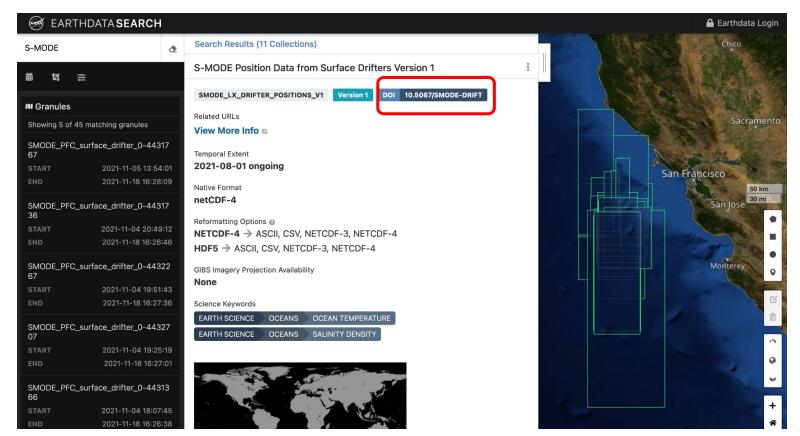




EARTHDATA Search: https://search.earthdata.nasa.gov/search

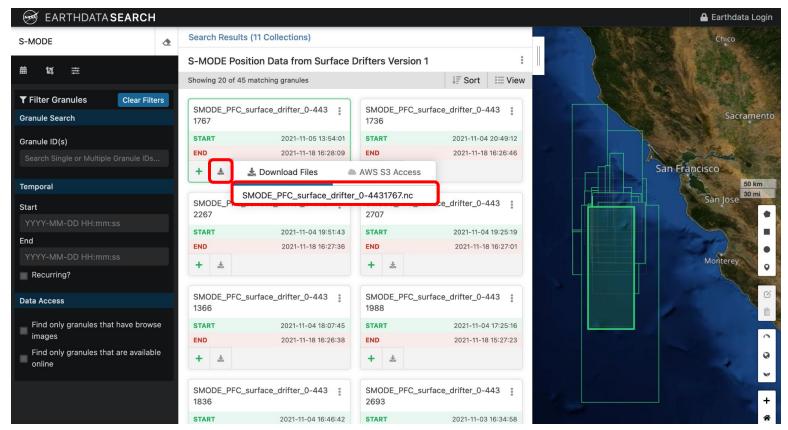






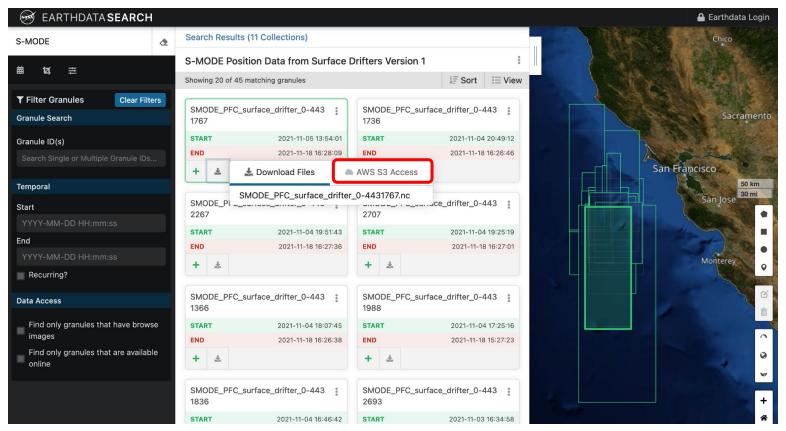


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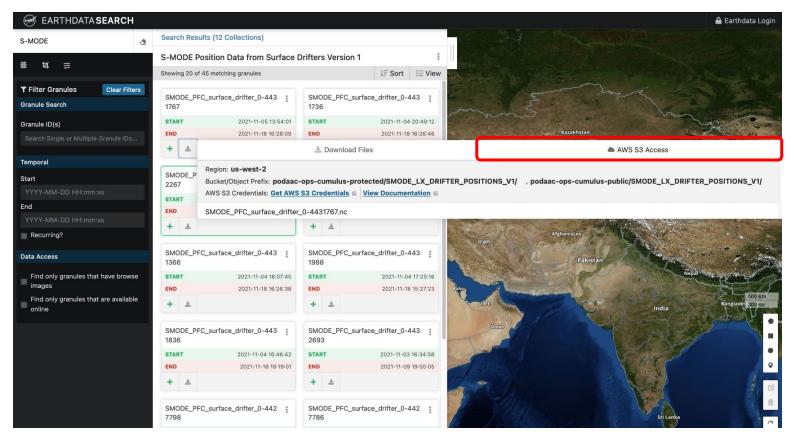


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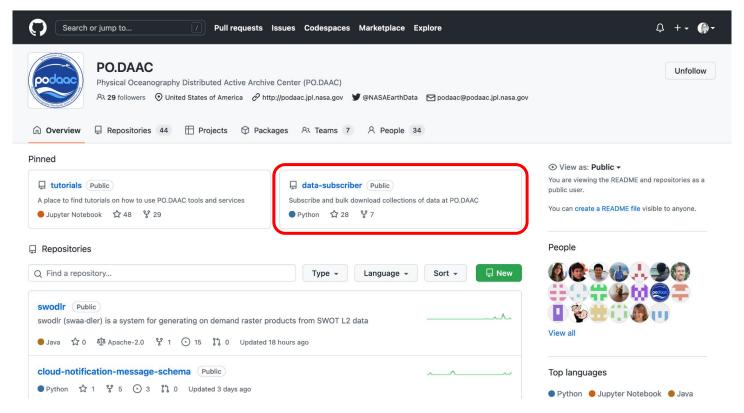






PO.DAAC Data Downloader https://github.com/podaac/data-subscriber

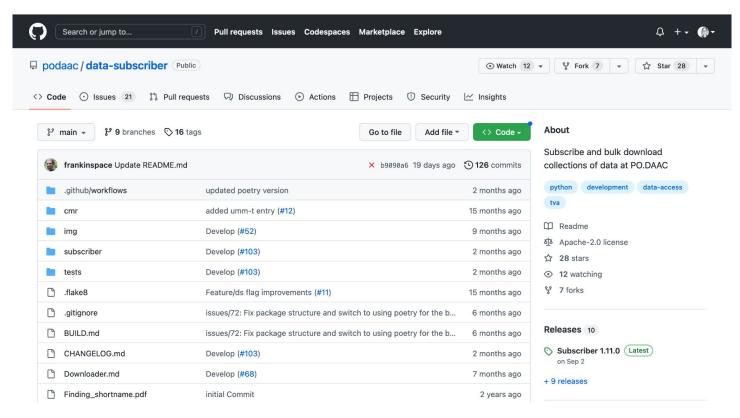
Scripted Access to PO.DAAC Data in the cloud – Video tutorial





PO.DAAC Data Downloader https://github.com/podaac/data-subscriber

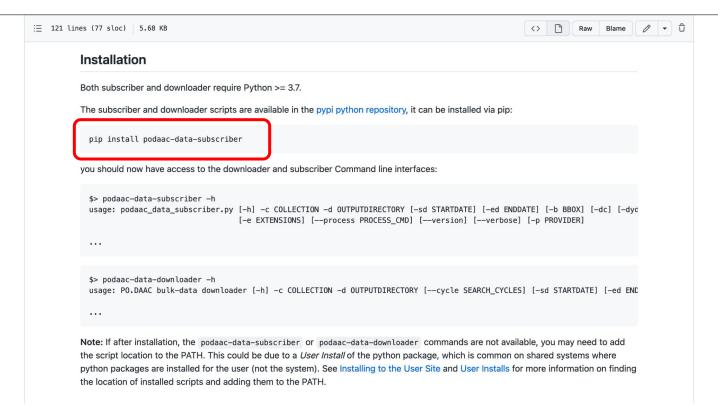
Scripted Access to PO.DAAC Data in the cloud – Video tutorial

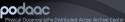




PO.DAAC Data Downloader https://github.com/podaac/data-subscriber

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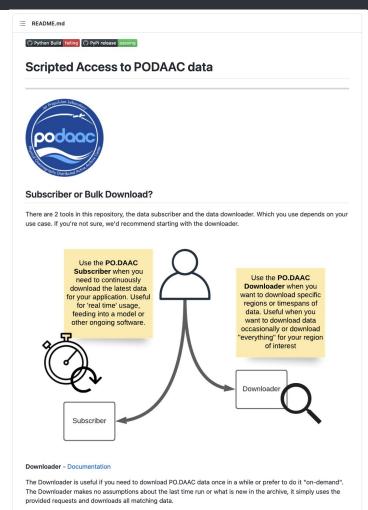


PO.DAAC Data Downloader https://github.com/podaac/data-subscriber

Includes two tools:

- Subscriber
- Downloader

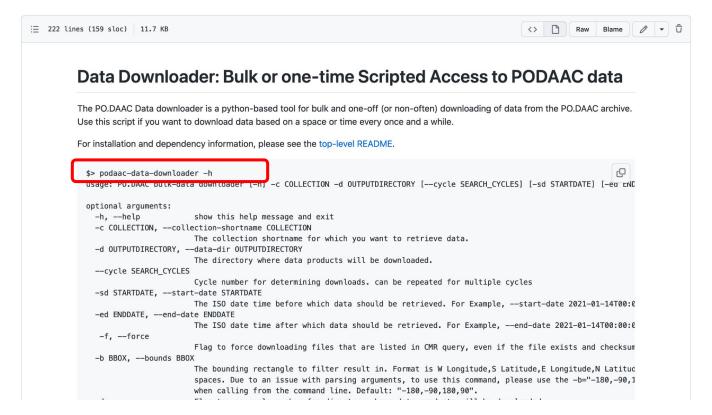
For S-MODE data use the Downloader





PO.DAAC Data Downloader https://github.com/podaac/data-subscriber

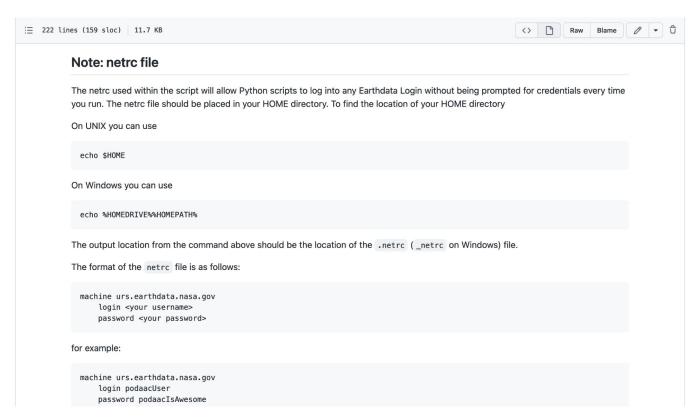
Scripted Access to PO.DAAC Data in the cloud – Video tutorial





PO.DAAC Data Downloader https://github.com/podaac/data-subscriber

Earthdata Script to create .netrc file





https://github.com/podaac/data-subscriber

Run in terminal:

collection shortname

```
$ podaac-data-downloader -c SMODE_LX_DRIFTER_POSITIONS_V1
-d mydata -sd 2021-01-01T00:00:00Z -ed 2022-01-01T00:00Z
```

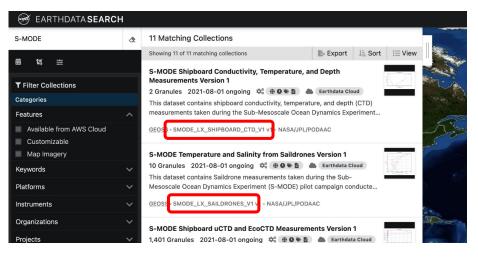


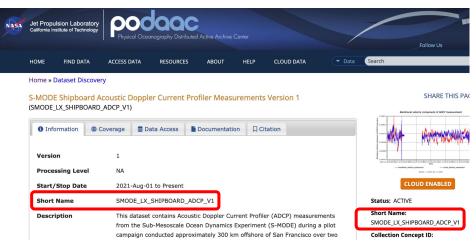
https://github.com/podaac/data-subscriber

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collection shortname

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-d mydata -sd 2021-01-01T00:00:00Z -ed 2022-01-01T00:00Z





https://github.com/podaac/data-subscriber

Run in terminal:

```
$ podaac-data-downloader -c SMODE_LX_DRIFTER_POSITIONS_V1
-d mydata -sd 2021-01-01T00:00:00Z -ed 2022-01-01T00:00:00Z
```

directory to download files into



https://github.com/podaac/data-subscriber

Run in terminal:

```
$ podaac-data-downloader -c SMODE LX_DRIFTER_POSITIONS_V1
-d mydata -sd 2021-01-01T00:00:00Z -ed 2022-01-01T00:00:00Z

start date
```



https://github.com/podaac/data-subscriber

Run in terminal:

```
$ podaac-data-downloader -c SMODE_LX DRIFTER POSITIONS V1
-d mydata -sd 2021-01-01T00:00:00Z -ed 2022-01-01T00:00:00Z
end date
```



https://github.com/podaac/data-subscriber

Run in terminal:

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```
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(base) MT-108783:data vmcdonal$ ls mydata/
SMODE LX DRIFTER POSITIONS V1.citation.txt
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SMODE_PFC_surface_drifter_0-4427840.nc
                                                SMODE_PFC_surface_drifter_0-4431968.nc
SMODE_PFC_surface_drifter_0-4427843.nc
                                                SMODE_PFC_surface_drifter_0-4431973.nc
(base) MT-108783:data vmcdonal$
```



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Resources & User Community Support

- One stop for PO.DAAC Cloud Information: <u>Cloud Data page</u> with About, Cloud Datasets, Access Data, FAQs, Resources and Migration information
- Ask questions or find resources: PO.DAAC in the CLOUD Forum
- Cloud user migration overview, guidance, and resources: PO.DAAC Webinar
- Search and get access links: <u>Earthdata Search Client</u> and <u>guide</u>
- Search and get access links: PO.DAAC Cloud Earthdata Search Portal
- Browse cloud data in web-based browser: CMR Virtual Browse and guiding video
- Scripted data search end-point: <u>Earthdata Common Metadata Repository (CMR) API</u>
- Enable data download or access: Obtain Earthdata Login Account
- Download data regularly: <u>PO.DAAC Data Subscriber Access video</u> and <u>PO.DAAC Data Subscriber instructions</u>
- Bulk Download guide
- OPeNDAP in the cloud
- PO.DAAC scripts and notebooks: <u>PO.DAAC Github</u>
- How to get started in the AWS cloud (e.g. set up an instance): <u>Earthdata Cloud Primer</u>
- How to set up your own Jupyter Hub, Jupyter Lab, or Jupyter Notebooks in AWS cloud.
- Basic How-To tutorials for searching for cloud data and accessing data in the cloud (<u>AGU workshop</u> 2021):
 - Search and get access links from Earthdata Search
 - Earthdata login Authentication (scripted)
 - <u>Direct data access in the cloud</u> (without download)



https://podaac.ipl.nasa.gov/cloud-datasets

