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Physical Oceanography Distributed Active Archive Center

The Latest at PO.DAAC: Data and Services

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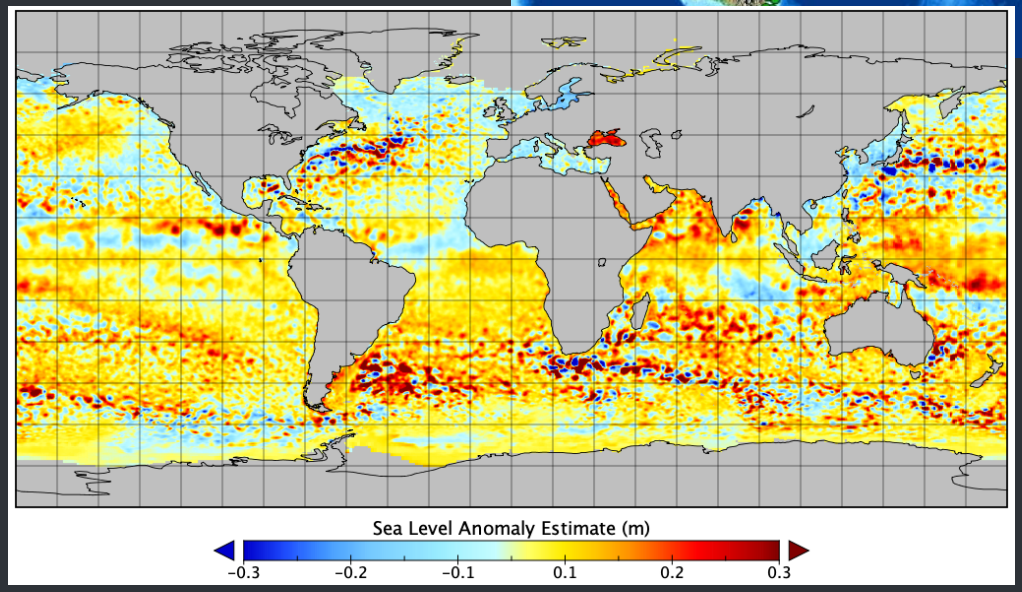
Outline

- Datasets
  - OMG
  - SSHA grids Version 1812
  - GRACE-FO
  - Pre-SWOT Hydrology Version 2
  - ECCO
  - Jason-CS/Sentinel-6
- Services
  - Animations
  - Citations
  - Discoverability
  - Github code sharing
  - Cloud

Datasets

- OMG
  - Bathymetry – Multi and Single beam
  - Airborne eXpendable Conductivity Temperature Depth (AXCTD)
  - CTD coming January 2020
- SSHA Grids Version 1812
  - 1/6 degree, 5 day resolution grids
  - NASA MEaSUREs
- GRACE-FO
  - L1a & b
  - L2 spherical harmonics
  - L3 water equivalent thickness grids
  - L3 GIA grids
  - L3 gridded Mascons coming soon



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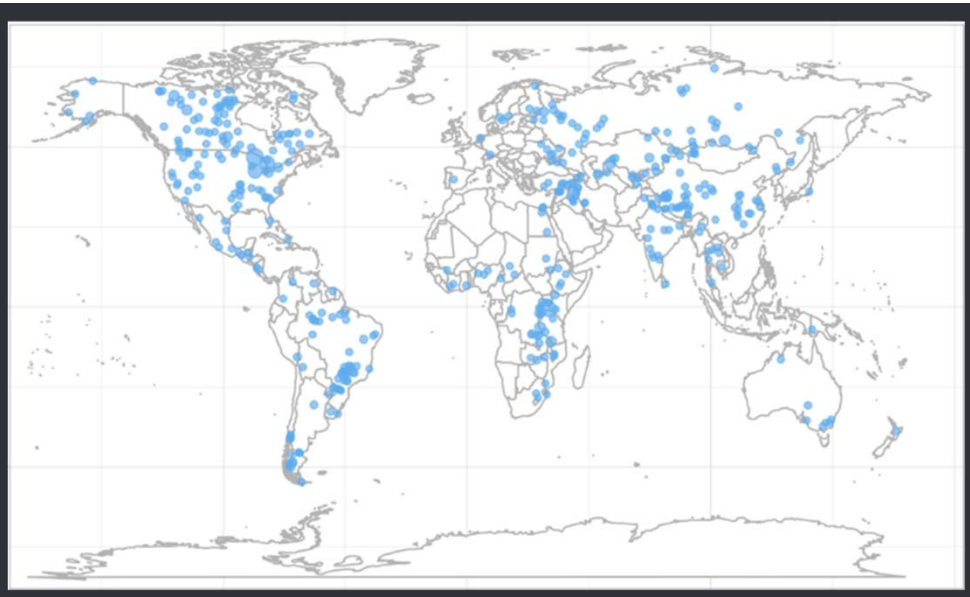
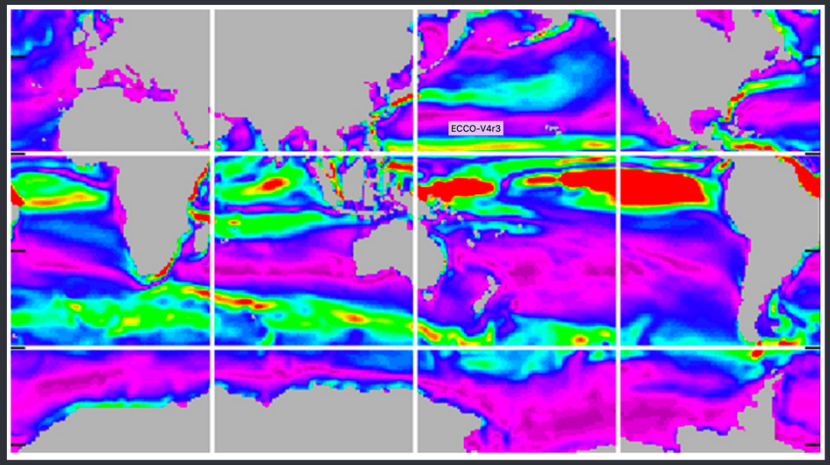
Upcoming Datasets



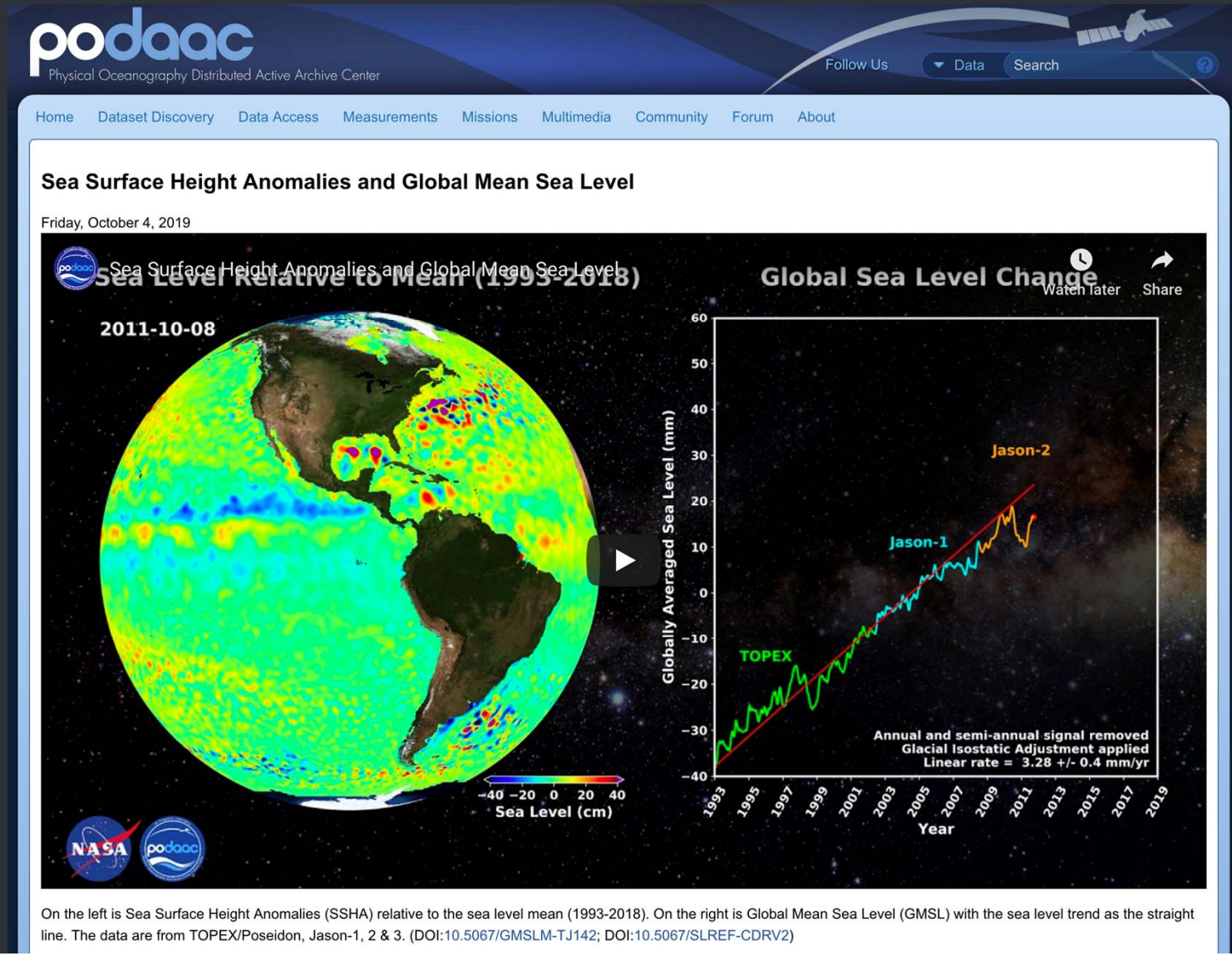
- Pre-SWOT Hydrology
  - November 2019
  - Lake height and storage time series
  - Lake area
  - River height time series
- ECCO
  - Estimating the Climate and Circulation of the Ocean
  - 0.5 degree daily grids (early 2020)
  - 0.1 degree daily grids (spring 2020) on the cloud
- Jason-CS/Sentinel-6
  - Launch November 2020
  - On the cloud



Data Animations: https://podaac.jpl.nasa.gov/AnimationsImages/Animations

New datasets will have animations generated

Also posted on PO.DAAC's YouTube channel



Data Citations (come to the demo for more info)

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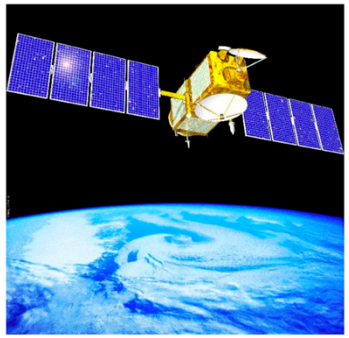
OSTM - JASON 2 QuikSCAT Saildrone Seasat SMAP S-NPP SPURS SWOT TERRA TOPEX-POSEIDON

Home » Missions

JASON 1

31 Publications Cited Datasets from this mission >>

Citation metrics available for years (2016-2017)



Jason-1 is a follow-on altimetric mission to the very successful TOPEX/Poseidon mission. It is a joint mission between NASA and CNES (French space agency). It launched 7 December 2001 and began data collection on 15 January 2002. Jason-1 is capable of measuring significant wave height, sigma naught (sigma0), dry and wet troposphere and ionosphere, which can be used to calculate sea surface height and anomalies and total electron content. Jason-1 had a repeat period of approximately 10 days with 254 passes per cycle.

After the launch of OSTM/Jason-2 on 20 June 2008 and several successful months of data collection, Jason-1 was moved to a new interleaved orbit in relation to OSTM. Originally they were in tandem. Jason-1 began maneuvering to the new orbit 26 January 2009 (cycle 260) and the altimeter was placed in standby, i.e. no altimeter data collection. 10 February 2009 the altimeter was turned back on, but Jason-1 was still maneuvering to the new orbit. The maneuver was completed 14 February 2009 and cycle 263 was the first complete cycle for the new orbit.

After experiencing multiple safeholds, in February and March of 2012, it was decided by the project that Jason-1 should enter into a new orbit that was more conducive for geodetic studies. The basis for this decision was to ensure the safety of the orbit that is used by OSTM/Jason-2 and future missions, such as Jason-3 and Jason-CS. This new orbit provides an opportunity to study the marine geodetic field in more detail. The geodetic mission began 7 May 2012 at cycle 500. The regular Jason-1 mission ended with cycle 374 pass 173 on 3 March 2012. It now takes Jason-1 406 days to complete a cycle, but the data have been separated into 11 days

Close

Publications citing datasets related to JASON1

Citation metrics available for years (2016-2017)

Search:

Year	Citation	Dataset
2016	AVISO (2011), AVISO Level 4 Absolute Dynamic Topography for Climate Model Comparison. Ver. 1. PO.DAAC, CA, USA. [Available at http://dx.doi.org/10.5067/DYNTO-1D1M1, last accessed 15 Jun. 2004.] Vertical heat flux in the ocean: Estimates from observations and from a coupled general circulation model, Journal of Geophysical,https://doi.org/10.1002 /2016JC011647	AVISO Level 4 Absolute Dynamic Topography for Climate Model Comparison
2016	An ongoing shift in Pacific Ocean sea level, Journal of,https://doi.org/10.1002/2016JC011815	Reconstructed Sea Level Version 1
2016	Windwaveinduced velocity in ATI SAR ocean surface currents: First experimental evidence from an airborne campaign, Journal of,https://doi.org/10.1002/2015JC011459	OSCAR third degree resolution ocean surface currents
2016	Earth Space Research (ESR), 2009. OSCAR third degree resolution ocean surface currents. Ver 1. http://podaac.jpl.nasa.gov/dataset/OSCAR_L4_OC_third-deg, pO.DAAC, CA, USA. Dataset accessed [2016-04-05] Risk assessment for marine spills along European coastlines, Marine pollution bulletin,https://doi.org/10.1016/j.marpolbul.2016.09.015	OSCAR third degree resolution ocean surface currents
2016	Spatial and temporal variability of central Indian Ocean salinity fronts observed by SMOS, Remote sensing of environment,https://doi.org/10.1016/j.rse.2016.02.049	OSCAR 1 degree ocean surface currents
2016	J-OFURO3, nagoya.repo.nii.ac.jp	OSCAR third degree resolution ocean surface currents
2016	Validation of Satellite-Derived Salinity in the Equatorial Pacific With Specific Emphasis on the 201415 ENSO Event, IEEE Geoscience and Remote,https://doi.org/10.1109 /LGRS.2016.2619980	OSCAR third degree resolution ocean surface currents

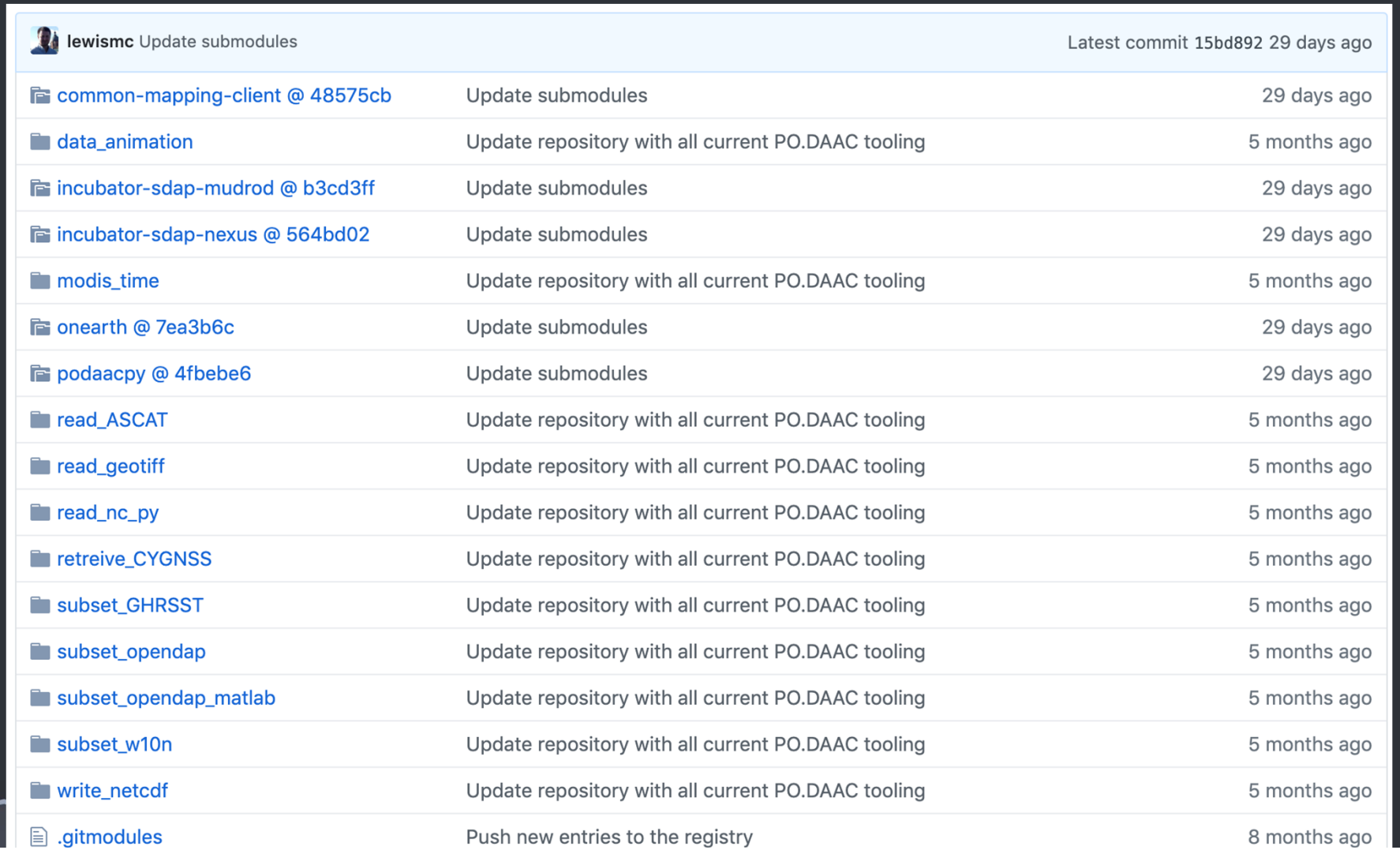
Total number of records: 31

Discoverability

- Webportal has schema.org tags, helps search engines find information
  - Well formatted metadata = better discoverability
  - PO.DAAC data best practices https://podaac.jpl.nasa.gov/PO.DAAC_DataManagementPractices
  - Sample Data Management Plan (DMP) https://podaac.jpl.nasa.gov/NASA_ROSES_DataManagementPlan
- Upcoming
  - Search by DOI on PO.DAAC web portal
  - Retired/obsolete datasets will have a message that a newer version is available and a link
  - Datasets with multiple versions will have groupings

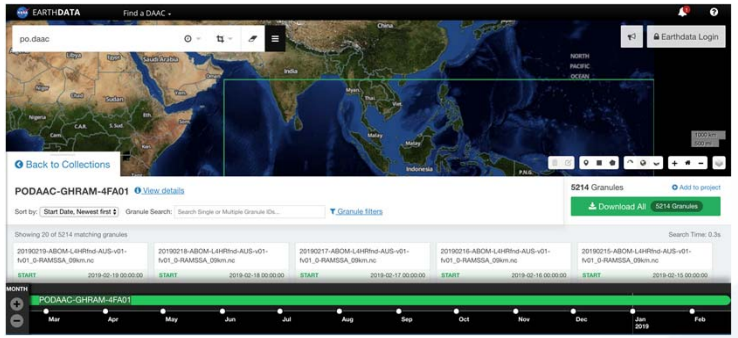
https://github.com/nasa/podaac_tools_and_services

Data readers and subsetters using various software and APIs



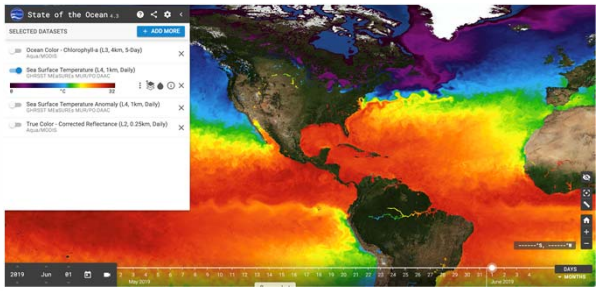
lewismc Update submodules		Latest commit 15bd892 29 days ago
common-mapping-client @ 48575cb	Update submodules	29 days ago
data_animation	Update repository with all current PO.DAAC tooling	5 months ago
incubator-sdap-mudrod @ b3cd3ff	Update submodules	29 days ago
incubator-sdap-nexus @ 564bd02	Update submodules	29 days ago
modis_time	Update repository with all current PO.DAAC tooling	5 months ago
onearth @ 7ea3b6c	Update submodules	29 days ago
podaacpy @ 4fbebe6	Update submodules	29 days ago
read_ASCAT	Update repository with all current PO.DAAC tooling	5 months ago
read_geotiff	Update repository with all current PO.DAAC tooling	5 months ago
read_nc_py	Update repository with all current PO.DAAC tooling	5 months ago
retreive_CYGNSS	Update repository with all current PO.DAAC tooling	5 months ago
subset_GHRSST	Update repository with all current PO.DAAC tooling	5 months ago
subset_opendap	Update repository with all current PO.DAAC tooling	5 months ago
subset_opendap_matlab	Update repository with all current PO.DAAC tooling	5 months ago
subset_w10n	Update repository with all current PO.DAAC tooling	5 months ago
write_netcdf	Update repository with all current PO.DAAC tooling	5 months ago
.gitmodules	Push new entries to the registry	8 months ago

PO.DAAC Cloud Data Flow (see poster)



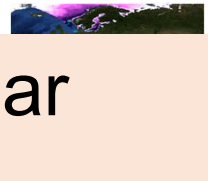
https://search.earthdata.nasa.gov

Data Production

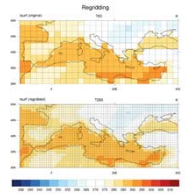


Visualize Data

State of the Ocean (SOTO)



by area of interest



Re-grid

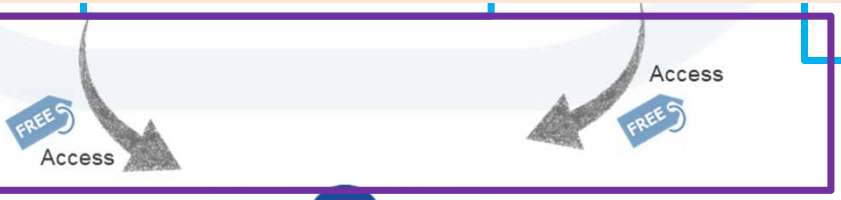
to model resolution

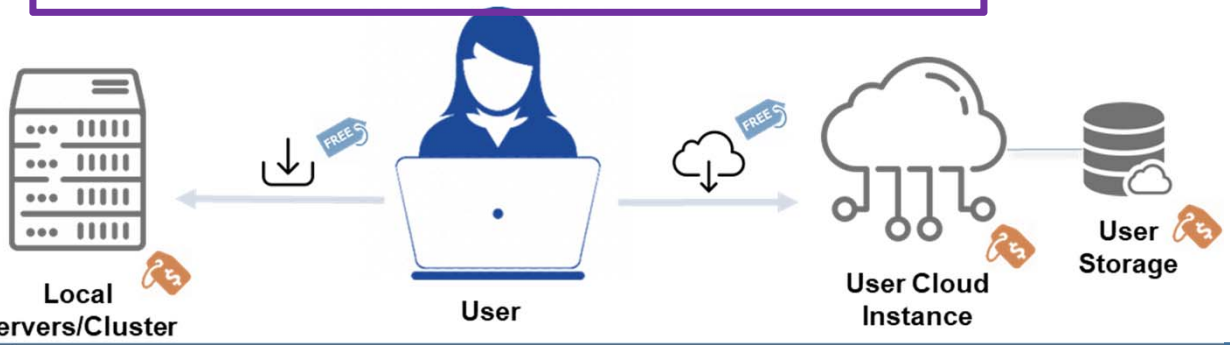
Data Services on the Cloud Webinar
March 2020

API-based **access** to metadata/data

Scripted Access: PO.DAAC Webservices 2.0

Or download





Demo: Tuesday during the poster session

- Data Citations
- Earthdata Search – search all NASA Earth science data
- Sneak Peak of new PO.DAAC website

Questions

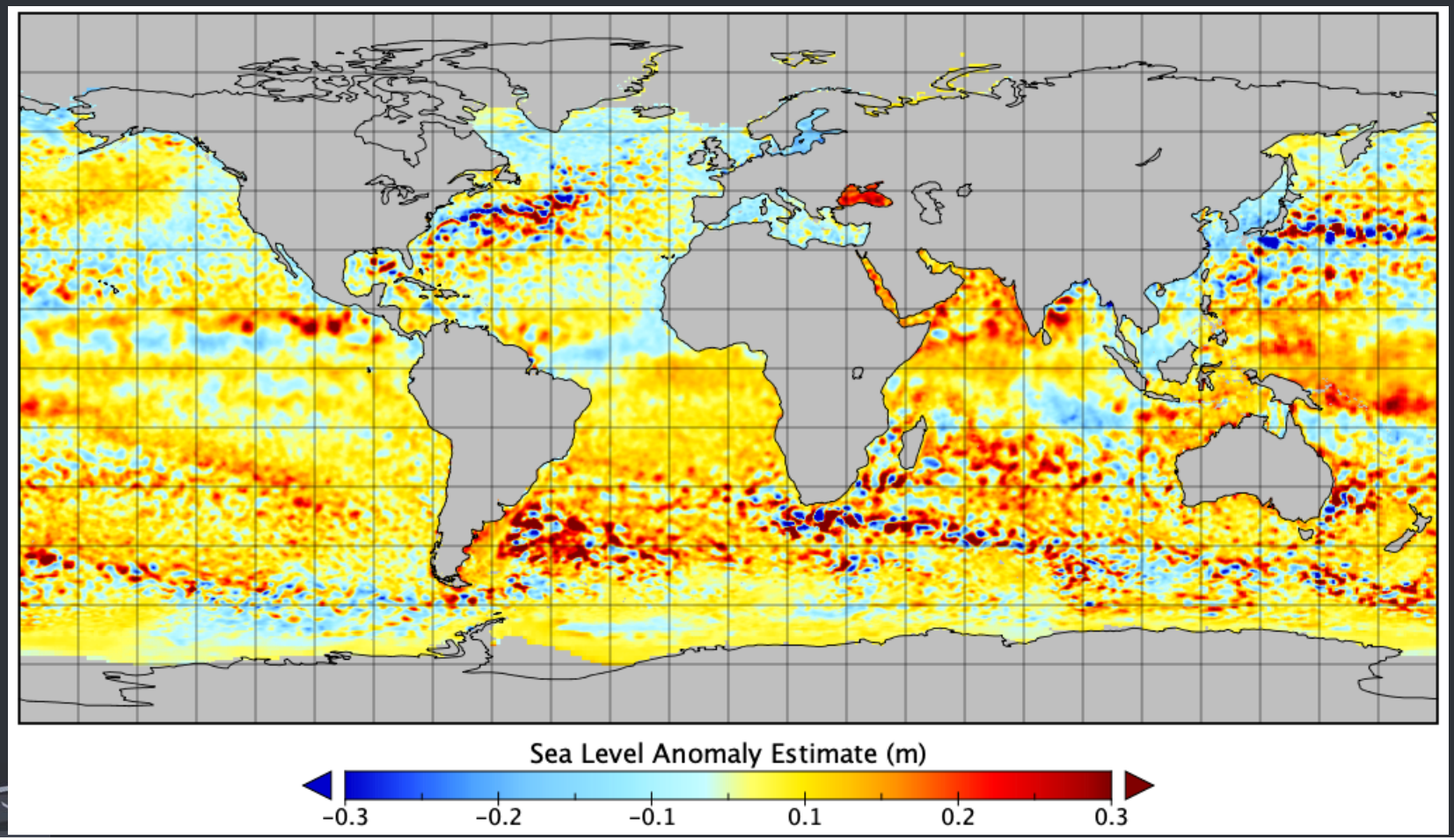
- Web Portal
  - https://podaac.jpl.nasa.gov
- Forum
  - https://podaac.jpl.nasa.gov/forum/
- GitHub
  - https://github.com/nasa/podaac_tools_and_services

Demo (slide not part of presentation, Tuesday 4:00 central time)

- Current PO.DAAC portal
  - Dataset citations
  - Current SWOT mission page
- Teaser of SWOT micro page
  - Micro page will be available before AGU (?) so if users go to current mission page it's going to drastically change soon
- Earthdata search
  - Search for PO.DAAC datasets
  - Show can do spatial search with polygon and shapefile

SSHA Grids Version 1812

- 2 satellites at a time
- Historical and interim



Estimating the Climate and Circulation of the Ocean (ECCO early 2020)

- 0.5 degree daily grids in netCDF
- 80 variables, some 3D
- 0.1 degree daily grids available on the cloud later in 2020