HARMONIZING GLIDER DATA ACCESS WITH ERDDAP

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NOAA/PMEL

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Vice-chair for Data and Information

All files in NetCDF format, but….

TrajectoryProfile feature type
- no defined trajectory or profile ids

Trajectory feature type
- no trajectory id

No trajectory variable

Profile feature type for individual files
- Use ERDDAP to provide access to "collection"

All files in NetCDF format, but….

EGO

IMOS/ AODN

US IOOS

Three different formats potentially mean the user will have to develop two or three different means of converting data in order to use with their favorite client

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Until the "blessed" Ocean Glider data format is implemented by all, how to provide a more uniform access for users?

ERDDAP

Why ERDDAP

- ERDDAP is a data platform that brokers between data producers and data users
- ERDDAP is free/open source software that is widely used in the international community
- Benefits for providers
  - Provides data to users in many different formats
  - Supports Machine-to-Machine services
  - Can augment metadata without rewriting files
- Benefits for users
  - Users can access data with clients of their choice
  - Users won't need to reformat data
  - Supports machine-to-machine capabilities for building community specific access services
  - Can access "collections" of aggregations

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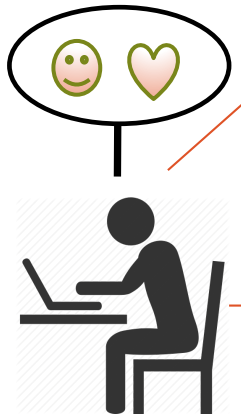
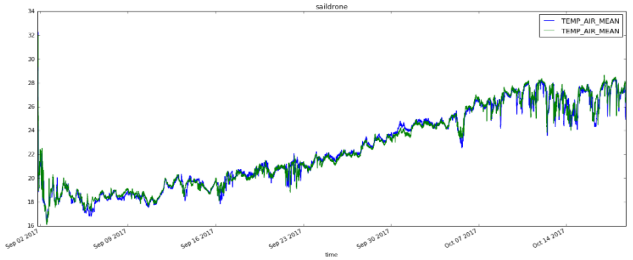
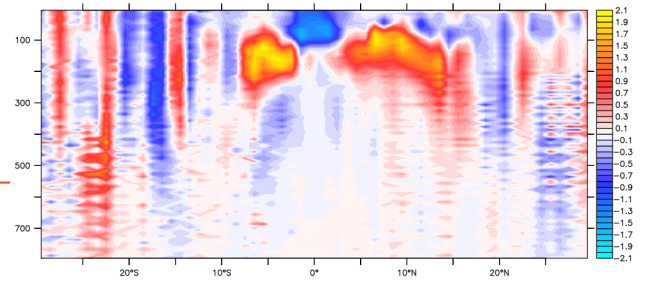
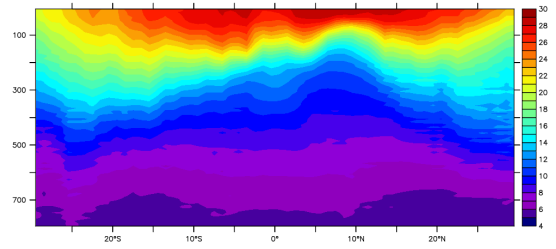
ERDDAP









ERDDAP
Easier access to scientific data

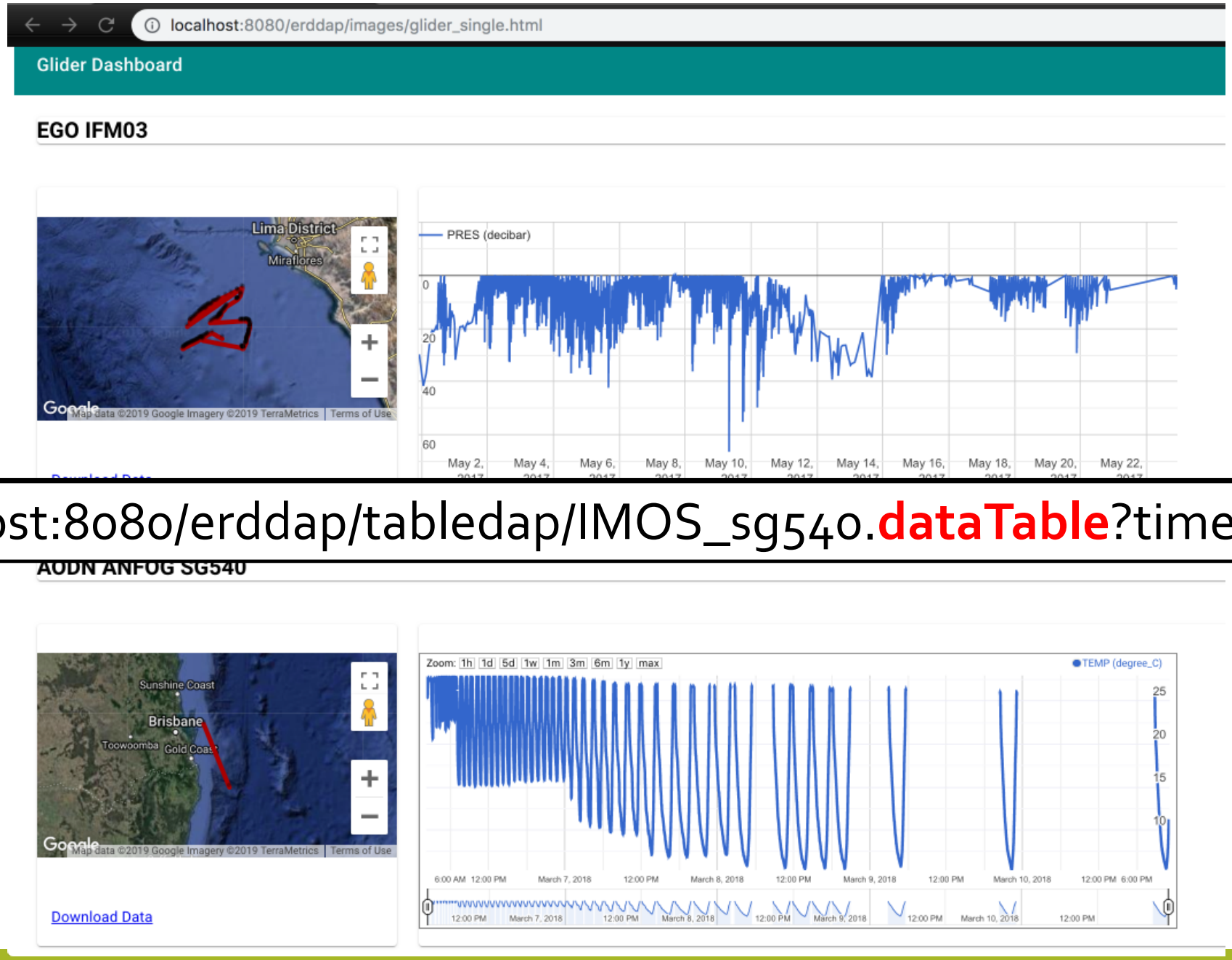
Brought to you by NOAA NMFS SWFSC ERD

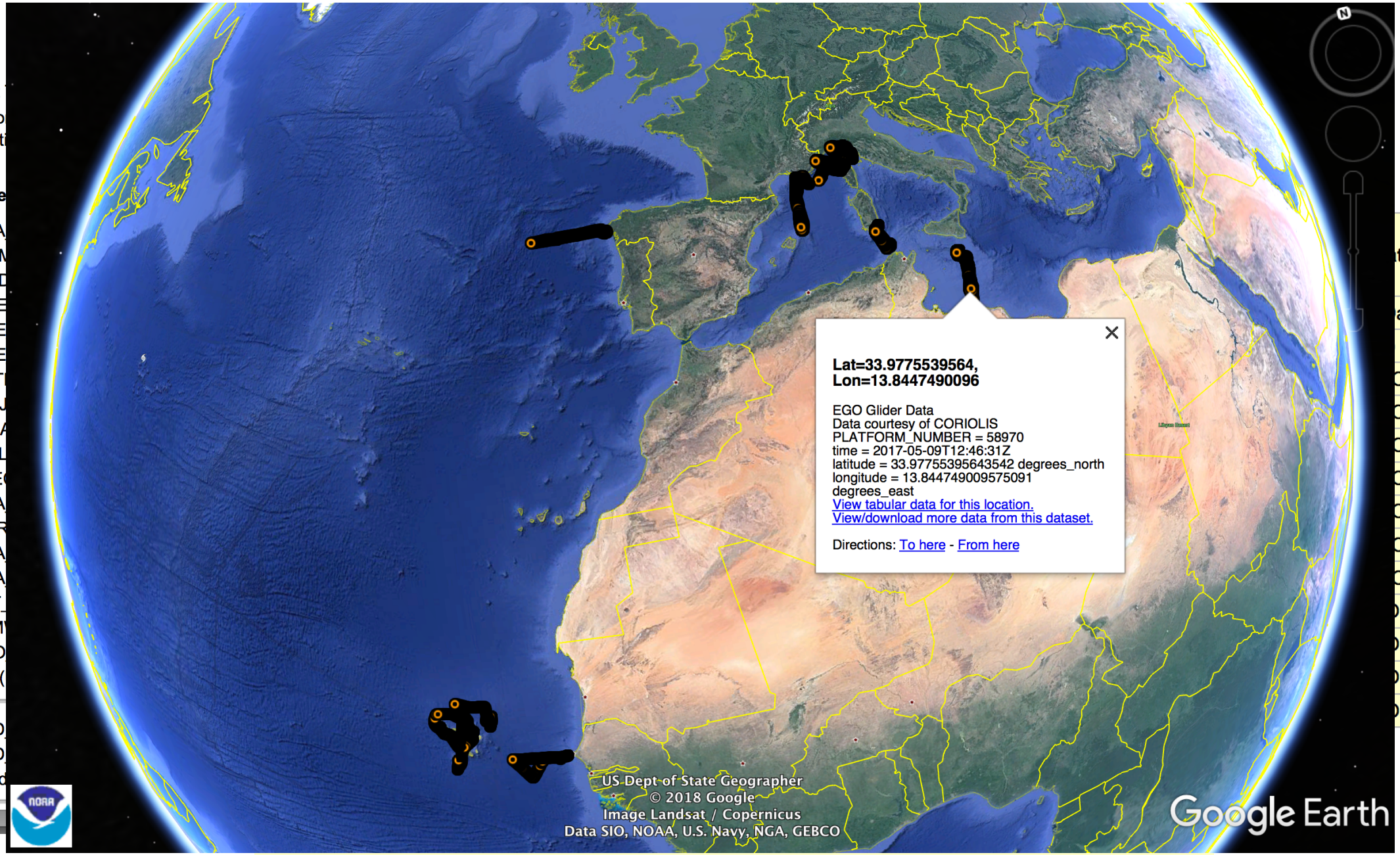
ERDDAP > List of All Datasets

12 matching datasets, listed in alphabetical order.

Grid DAP Data	Sub-set	Table DAP Data	Make A Graph	WMS	Source Data Files	Title	Sum-mary	FGDC, ISO, Metadata	Back-ground Info	RSS	E mail	Institution	Dataset ID
	set	data	graph			* The List of All Active Datasets in this ERDDAP *		M	background			UW	allDatasets
	set	data	graph		files	EGO IFM03 Glider		F I M	background	RSS		CORIOLIS	EGO_ifm03
	set	data	graph		files	EGO IFM07 Glider		F I M	background	RSS		CORIOLIS	EGO_ifm07
	set	data	graph		files	EGO IFM08 Glider		F I M	background	RSS		CORIOLIS	EGO_ifm08
	set	data	graph		files	EGO IFM09 Glider		F I M	background	RSS		CORIOLIS	EGO_ifm09
	set	data	graph		files	EGO IFM12 Glider		F I M	background	RSS		CORIOLIS	EGO_ifm12
	set	data	graph		files	EGO IFM13 Glider		F I M	background	RSS		CORIOLIS	EGO_ifm13
	set	data	graph		files	EGO IFM14 Glider		F I M	background	RSS		CORIOLIS	EGO_ifm14
	set	data	graph		files	Seaglider 1kA glider data from the mission Brisbane20180306A		F I M	background	RSS		ANFOG	IMOS_sg540
	set	data	graph		files	Seaglider 1kA glider data from the mission Brisbane20180320A		F I M	background	RSS		ANFOG	IMOS_sg516
	set	data	graph		files	Seaglider UW glider data from the mission Brisbane20180306D		F I M	background	RSS		ANFOG	IMOS_sg152
	set	data	graph		files	Seaglider UW glider data from the mission Brisbane20180320B		F I M	background	RSS		ANFOG	IMOS_sg154

The information in the table above is also available in other file formats (.csv, .htmlTable, .itx, .json, .jsonlCSV, .jsonlKVP, .mat, .nc, .nccsv, .tsv, .xhtml) via a RESTful web service.


localhost:8080/erddap/images/glider_single.html
Glider Dashboard
EGO IFM03
Lima District
Miraflores
Map data ©2019 Google Imagery ©2019 TerraMetrics
Terms of Use
PRES (decibar)
0
20
40
60
May 2,
May 4,
May 6,
May 8,
May 10,
May 12,
May 14,
May 16,
May 18,
May 20,
May 22,
http://localhost:8080/erddap/tabledap/IMOS_sg540.dataTable?time,TEMP
AODN ANFOG SG540
Sunshine Coast
Brisbane
Toowoomba
Gold Coast
Map data ©2019 Google Imagery ©2019 TerraMetrics
Terms of Use
Download Data
Zoom: 1h 1d 5d 1w 1m 3m 6m 1y max
TEMP (degree_C)
25
20
15
10
6:00 AM 12:00 PM
March 7, 2018
12:00 PM
March 8, 2018
12:00 PM
March 9, 2018
12:00 PM
March 10, 2018
12:00 PM 6:00 PM

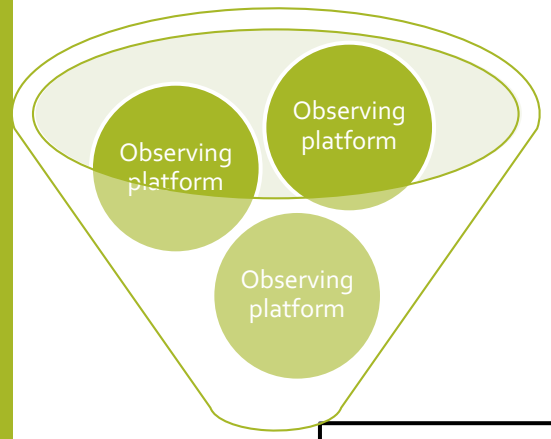

Lat=33.9775539564,
Lon=13.8447490096
EGO Glider Data
Data courtesy of CORIOLIS
PLATFORM_NUMBER = 58970
time = 2017-05-09T12:46:31Z
latitude = 33.97755395643542 degrees_north
longitude = 13.844749009575091 degrees_east
View tabular data for this location.
View/download more data from this dataset.
Directions: To here - From here
US Dept of State Geographer
© 2018 Google
Image Landsat / Copernicus
Data SIO, NOAA, U.S. Navy, NGA, GEBCO
Google Earth

JCOMM Observations Coordination Group

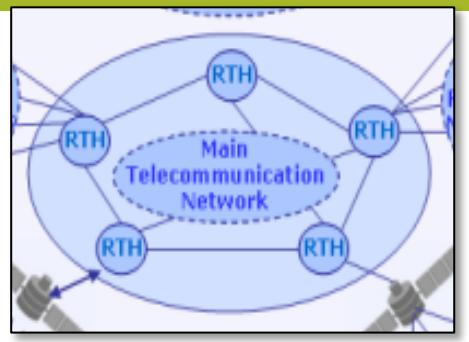
JCOMM OCG is working to improve data interoperability and integration between and within the various observing networks in support of GOOS ECV/EOV/EBV

ERDDAP is the JCOMM OCG recommended data platform

ERDDAP can help harmonize glider data access currently, but will continue to provide benefits to users after implementation of single format



Data harvested from observing platforms and ingested into ERDDAP servers



Data is encoded into BUFR and sent to GTS

Data is harvested from GTS, decoded and ingested into ERDDAP services

Data Center crawls ERDDAP services to grab near real-time data

Data is available through ERDDAP services to end users and their favorite applications

ERDDAP provides data services for accessing data with many popular clients, without the need for reformatting, including:

MATLAB®

Google Earth

Project Jupyter Notebooks

R statistical package

As well as many other open-source analysis and visualization packages and user-scripted machine-to-machine (M2M) services.

JCOMM OCG Open Access to GTS workflow

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Thank you!

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