

Establishing new glider observatories: in search of processing best practices

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Processing overview

1. Inputs

SeaExplorer
data files

```
sea069.9.gli.sub.1 sea069.9.gli.sub.63  
sea069.9.gli.sub.12 sea069.9.gli.sub.66  
sea069.9.gli.sub.15 sea069.9.gli.sub.69  
sea069.9.gli.sub.18 sea069.9.gli.sub.72  
sea069.9.gli.sub.2 sea069.9.gli.sub.75  
sea069.9.gli.sub.21 sea069.9.gli.sub.78
```

Metadata

```
1 metadata:  
2 institution: Voice of the Ocean Foundation  
3 Metadata_Conventions: CF-1.6, Unidata Dataset Dis  
4 sea_name: Baltic  
5 glider_serial: "44"  
6 wmo_id: "6881672"  
7 comment: "deployment and recovery in Skagerrak"  
8  
9 glider_devices:  
10 optics:  
11 make: WetLabs  
12 model: FLBPC  
13 serial: '6597'
```

2. Processing

PyGlider

Add extra
metadata

Post-processing

See Jody Klymak's
PyGlider poster!

What QC
method
to use?

Should we
standardise to OG1.0?

3. Distribution



ERDDAP > List of All Datasets

117 matching datasets, listed in alphabetical order.

Grid	DAP	Sub-	Data	Table	DAP	Make	W	M	S	Source	Data	Title	Sum-	FGDC,	ISO,	Metadata
	set	data	graph									* The List of All Active Datasets in this ERDDAP *		M		
	set	data	graph									Aster68-20220727T1709		F	I	M



<https://erddap.observations.voiceoftheocean.org/erddap>

ERDDAP
federation?

5. Analysis

Direct download:
.nc, .csv, .mat, json,
.odv, html, many more

Dataset subscription/
notifications

Jupyter notebooks
Erddapy
Example analysis



How to make
exploration/ analysis
easier?

Features

Talk to me about
ERDDAP and data
processing!



⌚ NRT data available within
30 mins of transmission

🌐 Efficient distribution with
ERDDAP

🤖 Minimal human input: one
metadata file per deployment

🔨 Automated (re)processing

📘 Example data analysis
notebooks for non-experts

Goals

- Adopt OG1.0 format
- Connect to other ERDDAPs
- Implement Ocean Best Practices recommended variable processing
- Data flagging

Remaining questions

- What QC to apply?
- Pathway to GTS
- Adding more complex data variables e.g. ADCP
- Interoperability of datasets
- Aligning with FAIR

Observations portal <https://observations.voiceoftheocean.org>

ERDDAP <https://erddap.observations.voiceoftheocean.org/erddap>

Demo notebooks https://github.com/voto-ocean-knowledge/download_glider_data

This poster https://callumrollo.github.io/images/ug2_2022.pdf



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