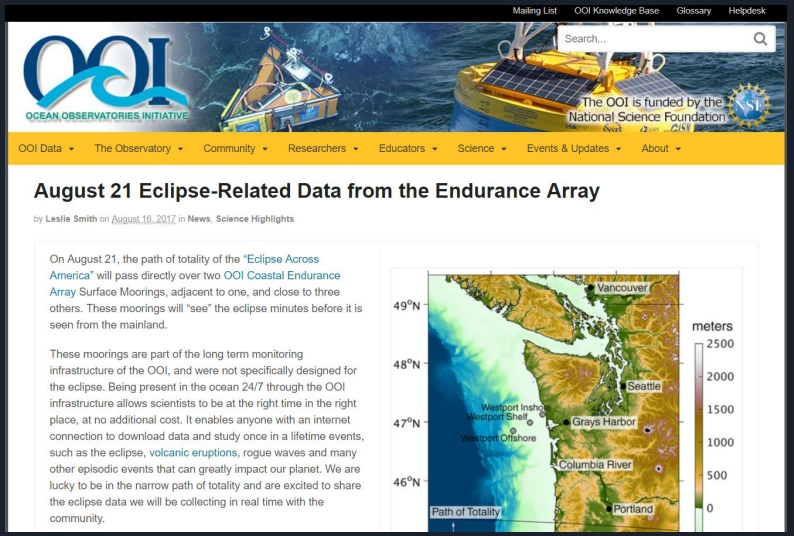
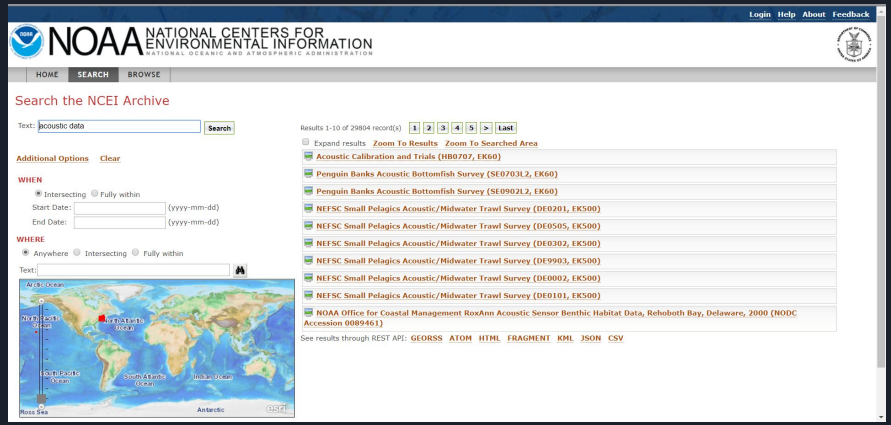
Echopype

An open-source software for
converting echosounder data to NetCDF4

Why?/What?

Lot's of acoustic data available on OOI/IOOS platforms + vessels of opportunity





- HOW do we access it?
- What are echosounder data?
  - Discrete Frequency (Continuous wave)
  - Broadband (Frequency modulated)

How is it collected?

-Ship-based EK60, EK80

-Moorings and Autonomous platforms - AZFP, WBAT

Stored in Proprietary formats (.Raw, .01A, etc.)

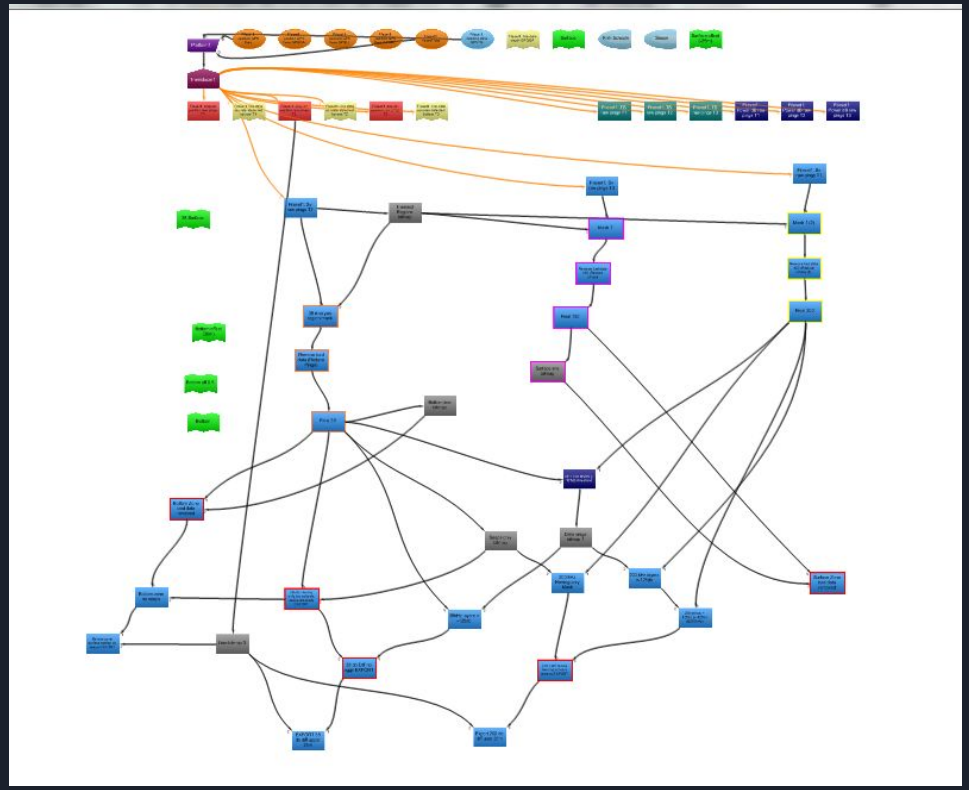
Objective/So What?

- Proprietary Software is useful, but expensive (Echoview)

- Open-source package that converts all these formats to NetCDF4

  International Council for the Exploration of the Seas (ICES) convention

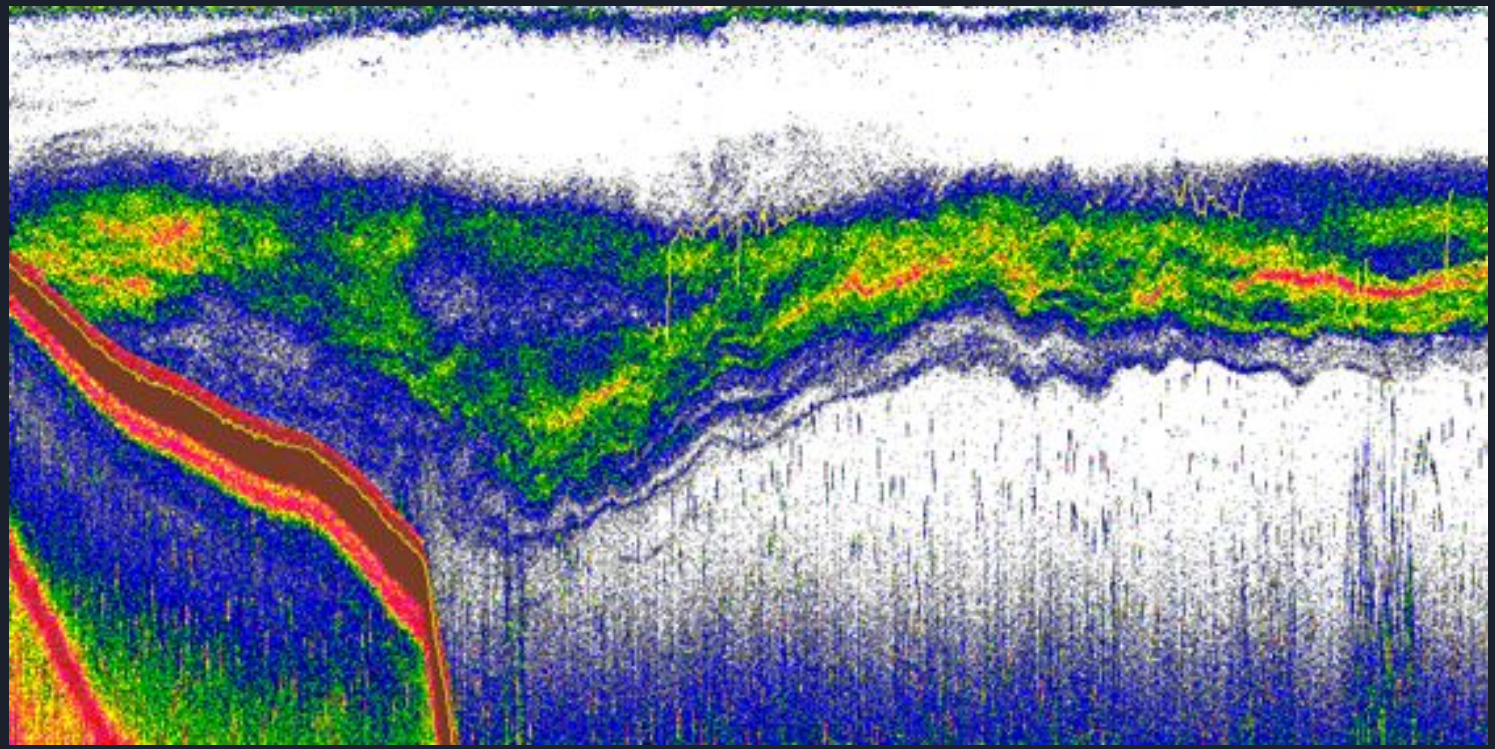
- Easily usable for scientists, reproducible methods, standard for database storage



ICES International Council for the Exploration of the Sea

CIEM Conseil International pour l'Exploration de la Mer

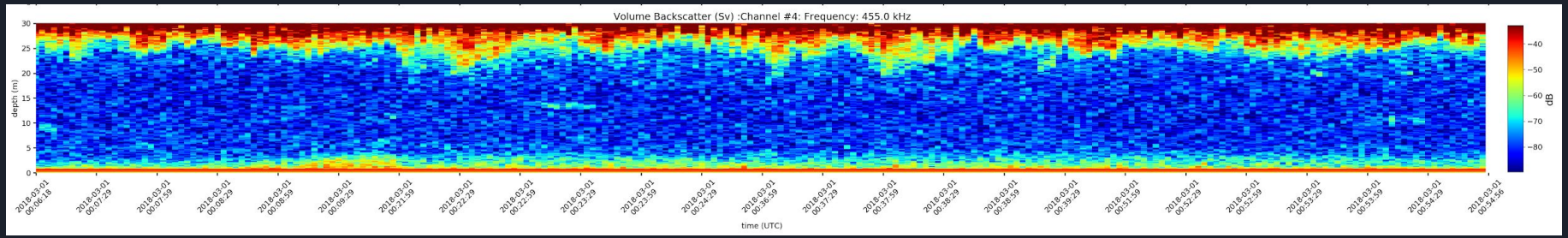
What is acoustic data?



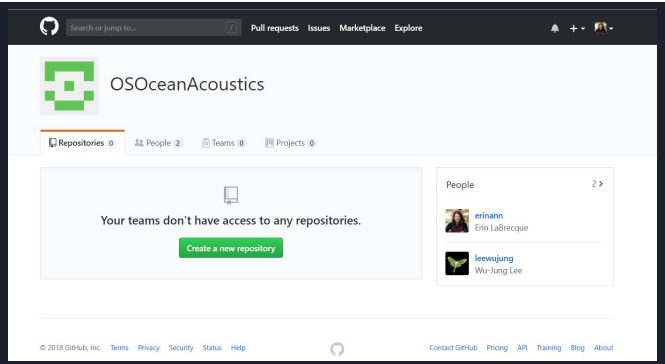
Accomplished this week

- Merge existing codes (in Python and Matlab)
- Fix bugs
- Use Github to keep our versions straight

During the week, Mark was able to debug existing code for AZFP and produce this echogram:

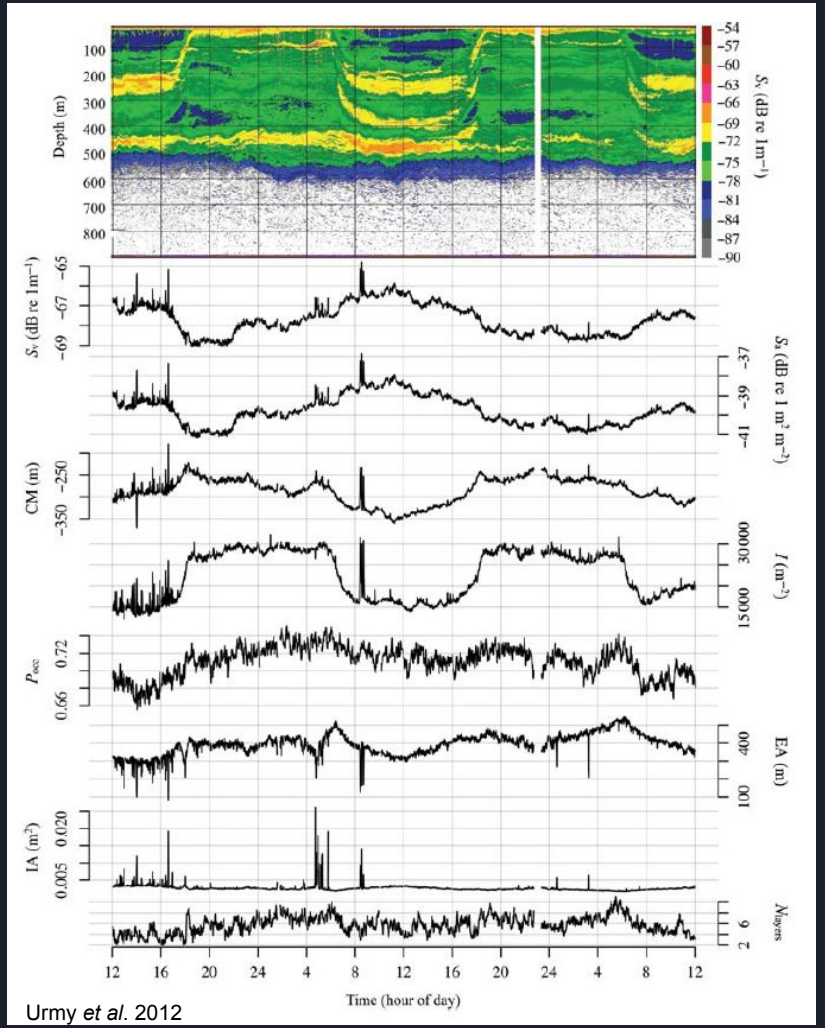


- Set up OSOcean Acoustics Group on Github to keep working...



What's Next?

- Contribute to previous efforts - Pyecholab, EchoR
- Keeping building open-source package for acoustic data analysis.
- Use global acoustic data to develop and measure indices of change



Urmy *et al*. 2012