

A decorative graphic on the left side of the slide consisting of two overlapping parallelograms. The front one is blue and the back one is a light green. They are positioned diagonally, with the blue one partially covering the green one.

# *Echotype*

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

NOAA NATIONAL CENTERS FOR ENVIRONMENTAL INFORMATION  
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

HOME SEARCH BROWSE

Search the NCEI Archive

Text:

Additional Options

WHEN  
☒ Intersecting ☐ Fully within  
Start Date:   
End Date:

WHERE  
☒ Anywhere ☐ Intersecting ☐ Fully within  
Text:

Results 1-10 of 29804 record(s)

- ☒ Acoustic Calibration and Trials (HB0707, EK60)
- ☒ Penguin Banks Acoustic Bottomfish Survey (SE0703L2, EK60)
- ☒ Penguin Banks Acoustic Bottomfish Survey (SE0902L2, EK60)
- ☒ NEFSC Small Pelagics Acoustic/Midwater Trawl Survey (DE0201, EK500)
- ☒ NEFSC Small Pelagics Acoustic/Midwater Trawl Survey (DE0505, EK500)
- ☒ NEFSC Small Pelagics Acoustic/Midwater Trawl Survey (DE0302, EK500)
- ☒ NEFSC Small Pelagics Acoustic/Midwater Trawl Survey (DE0903, EK500)
- ☒ NEFSC Small Pelagics Acoustic/Midwater Trawl Survey (DE0002, EK500)
- ☒ NEFSC Small Pelagics Acoustic/Midwater Trawl Survey (DE0102, EK500)
- ☒ NEFSC Small Pelagics Acoustic/Midwater Trawl Survey (DE0101, EK500)

NOAA Office for Coastal Management RoxAnn Acoustic Sensor Benthic Habitat Data, Rehoboth Bay, Delaware, 2009 (RDOC Accession 0089461)

See results through REST API: GEORSS ATOM HTML FRAGMENT KML JSON CSV

- 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.)

OOI OCEAN OBSERVATORIES INITIATIVE

Mailing List OOI Knowledge Base Glossary Helpdesk

Search...

The OOI is funded by the National Science Foundation

OOI Data • The Observatory • Community • Researchers • Educators • Science • Events & Updates • About •

### August 21 Eclipse-Related Data from the Endurance Array

by Leslie Smith on August 16, 2017 in News, Science Highlights

On August 21, the path of totality of the "Eclipse Across America" will pass directly over two OOI Coastal Endurance Array Surface Moorings, adjacent to one, and close to three others. These moorings will "see" the eclipse minutes before it is seen from the mainland.

These moorings are part of the long term monitoring infrastructure of the OOI, and were not specifically designed for the eclipse. Being present in the ocean 24/7 through the OOI infrastructure allows scientists to be at the right time in the right place, at no additional cost. It enables anyone with an internet connection to download data and study once in a lifetime events, such as the eclipse, volcanic eruptions, rogue waves and many other episodic events that can greatly impact our planet. We are lucky to be in the narrow path of totality and are excited to share the eclipse data we will be collecting in real time with the community.

Map showing the Path of Totality for the August 21 Eclipse across the Pacific Northwest coast, including locations like Vancouver, Seattle, Grays Harbor, Columbia River, and Portland. The map includes latitude markers (46°N to 49°N) and a depth scale in meters (0 to 2500).

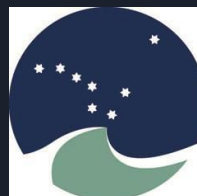
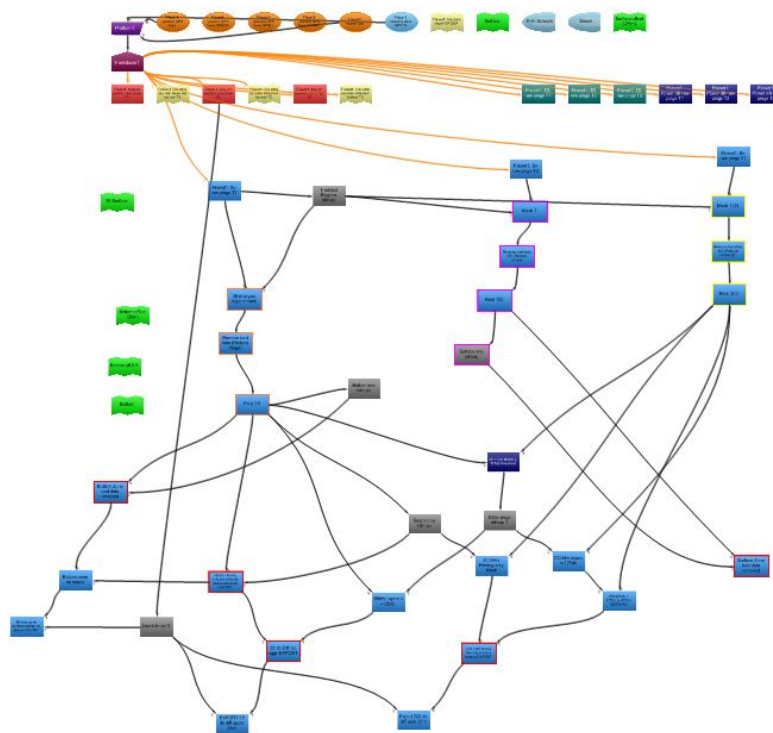
# Objective/So What?

- 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

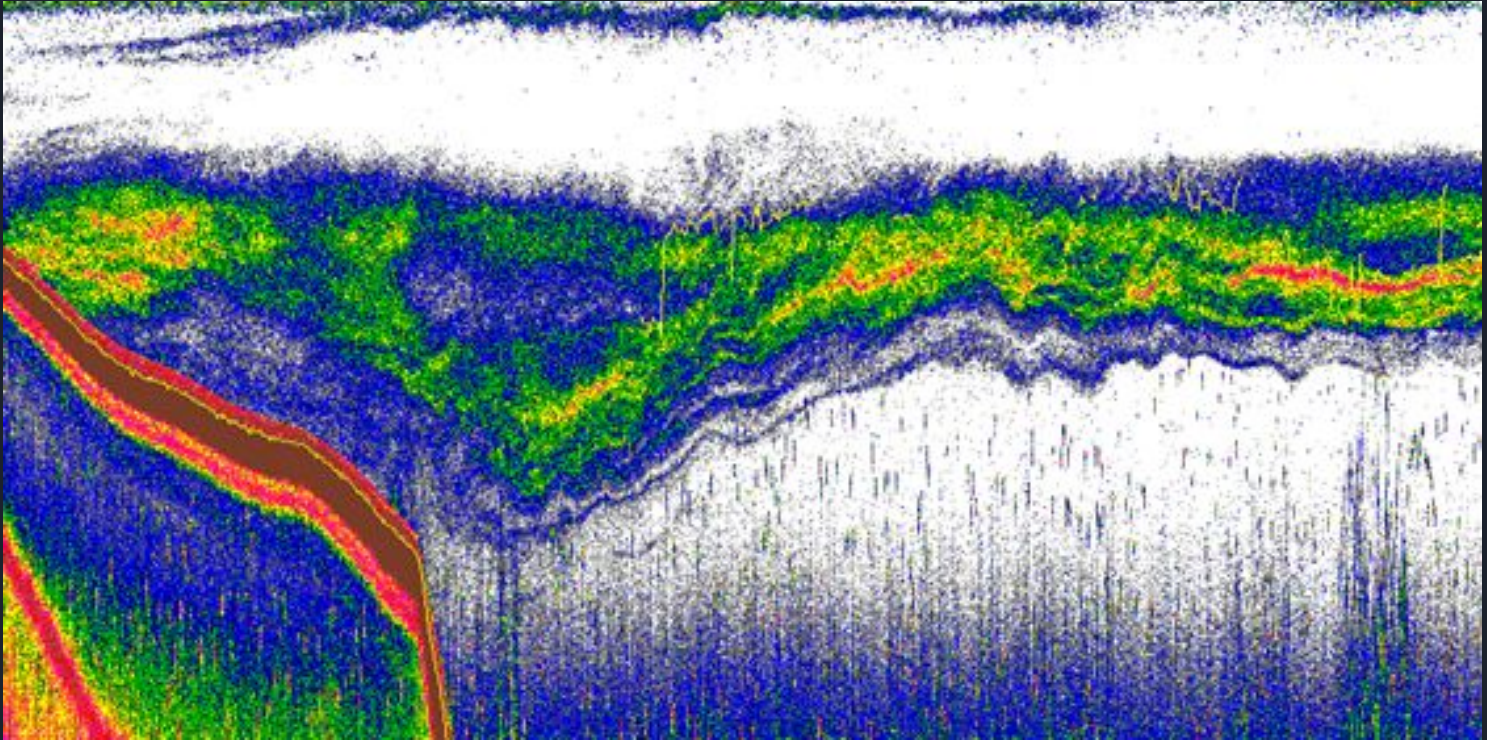


**ICES**  
**CIEM**

International Council for  
the Exploration of the Sea

Conseil International pour  
l'Exploration de la Mer

What is acoustic data?

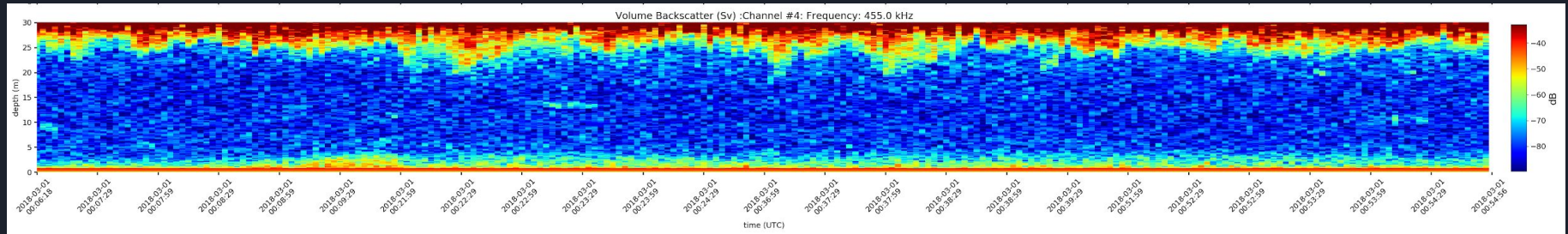




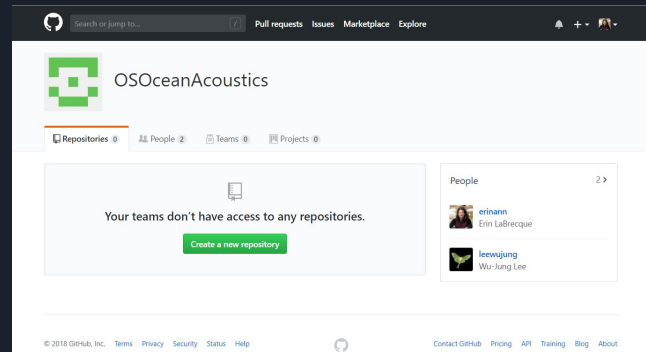
# Accomplished this week

- 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

