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eScience Institute

echopype: ocean sonar data processing for biological information

Wu-Jung Lee | Applied Physics Laboratory

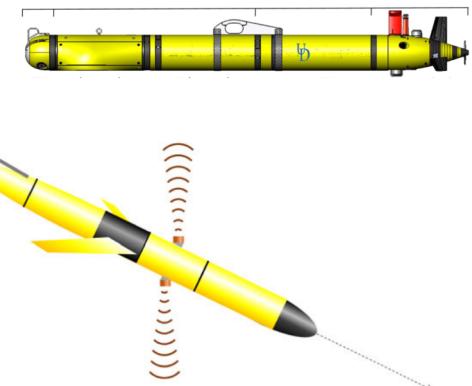
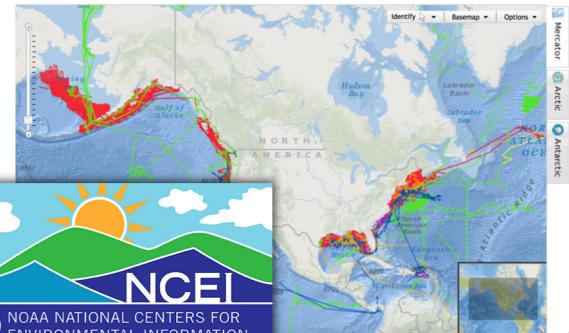
Valentina Staneva | eScience Institute

Kavin Nguyen | Department of Physics

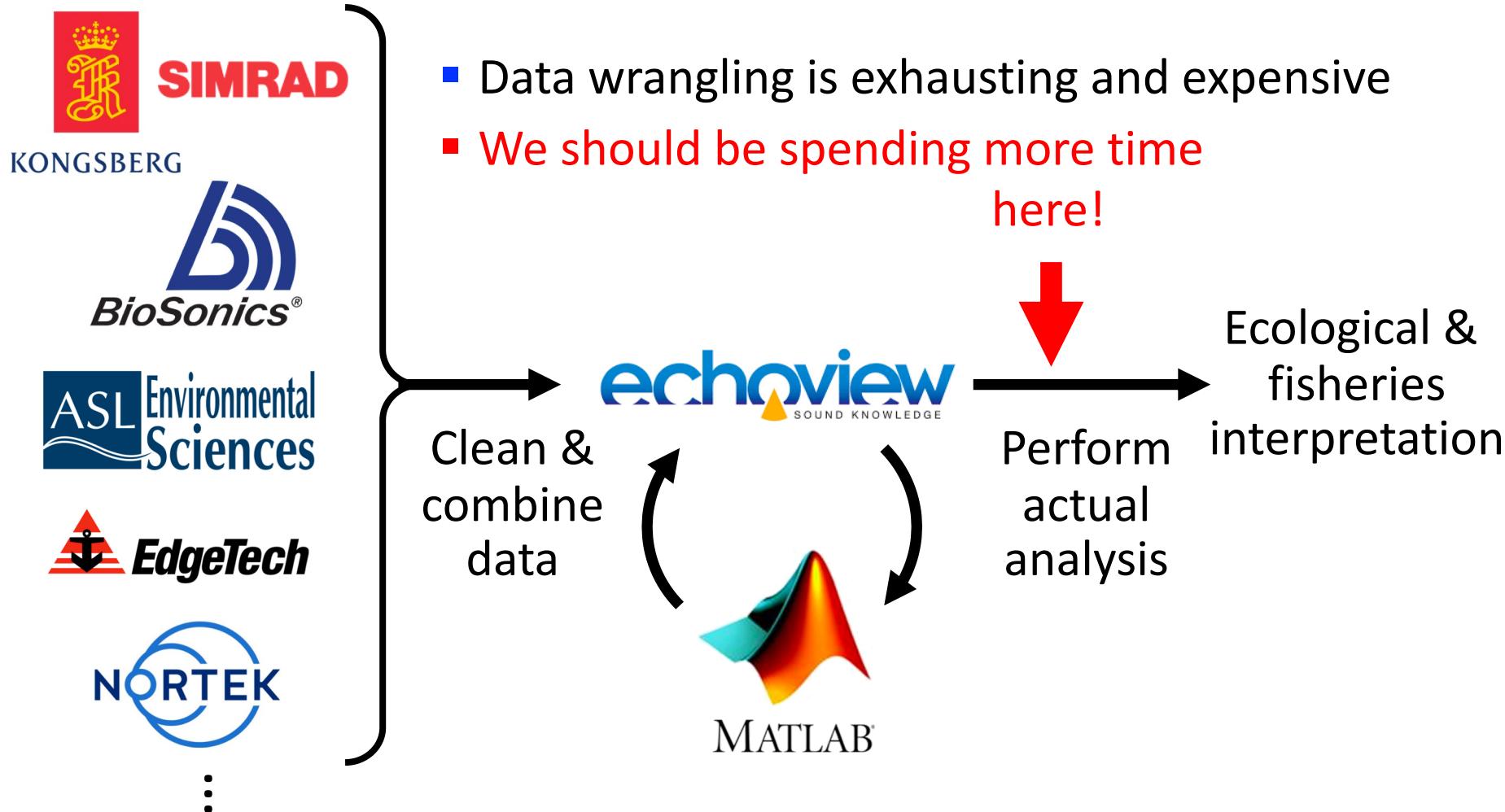
Oceanhackweek 2019 | August 28, 2019

The acoustic data deluge

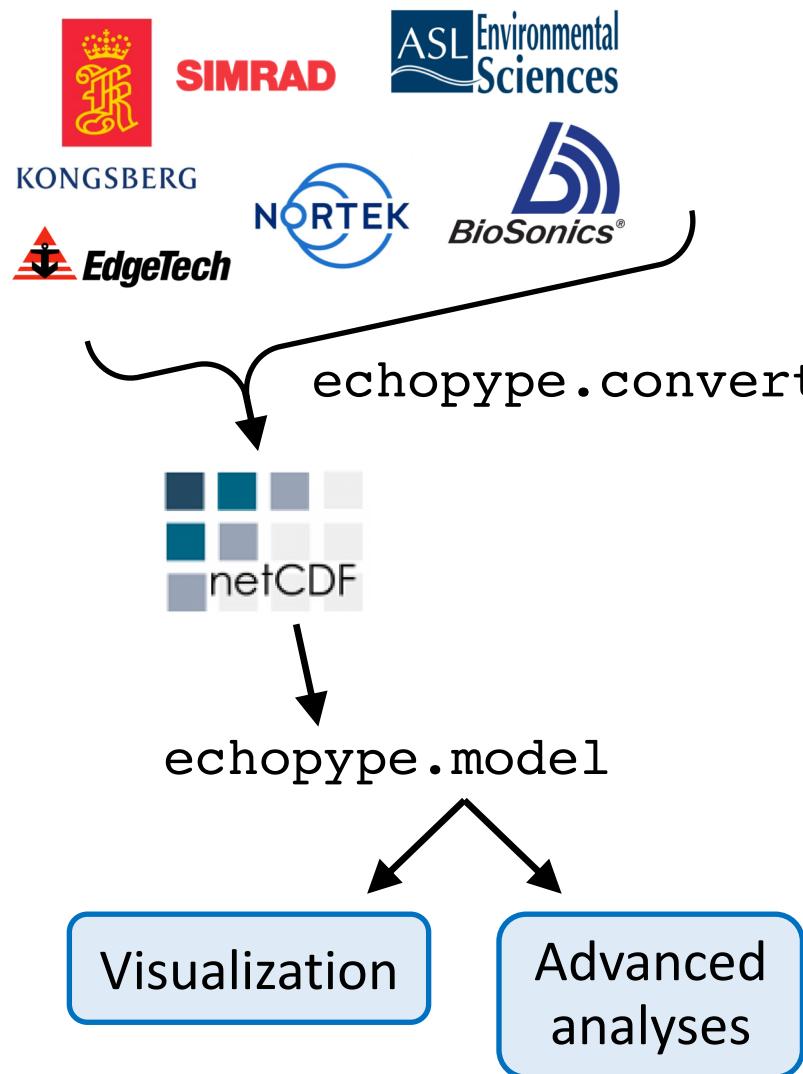
- We have become very good at collecting data
- Continuous data collection on numerous platforms
- Excellent opportunities to study marine ecosystems at scales never before possible



Current common workflow requires extensive data wrangling



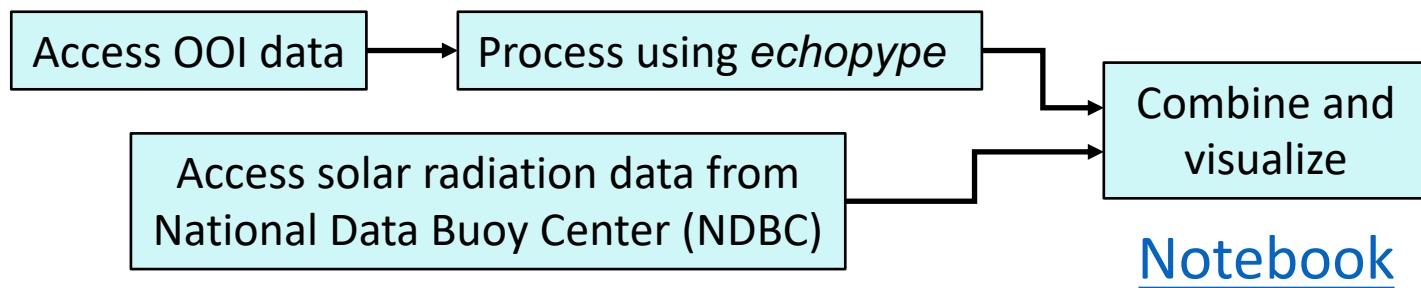
echopype at a glance



- Follow ICES SONAR-netCDF4 for raw data storage when possible
- Take advantage of existing libraries
- Uniform interface to facilitate use and further development
- Calibration
- Other pre-processing

Example notebook

- Watching a solar eclipse using an OOI sonar
- OOI = Ocean Observatories Initiative



echopype

- <https://github.com/OSOceanAcoustics/echopype>



Open-Source Ocean Acoustics

Home for open source tools and resources in ocean acoustics

▪ Join us!

- Full SciPy talk at: http://tiny.cc/echopype_talk

- Contributors

- Frederic Cyr (Memorial Univ)
- Sven Gastauer (UCSD)
- Marian Peña (IEO Spain)
- Mark Langhirt (PSU)
- Erin LaBrecque (freelance)
- Emma Ozanich (UCSD)
- Aaron Marburg (APL-UW)

- pyEcholab developers

- Zac Berkowitz (SOI)
- Rick Towler (AFSC)
- Chuck Anderson (NCEI)
- Veronica Martinez (NCEI)