OOI 2.0 Program Update
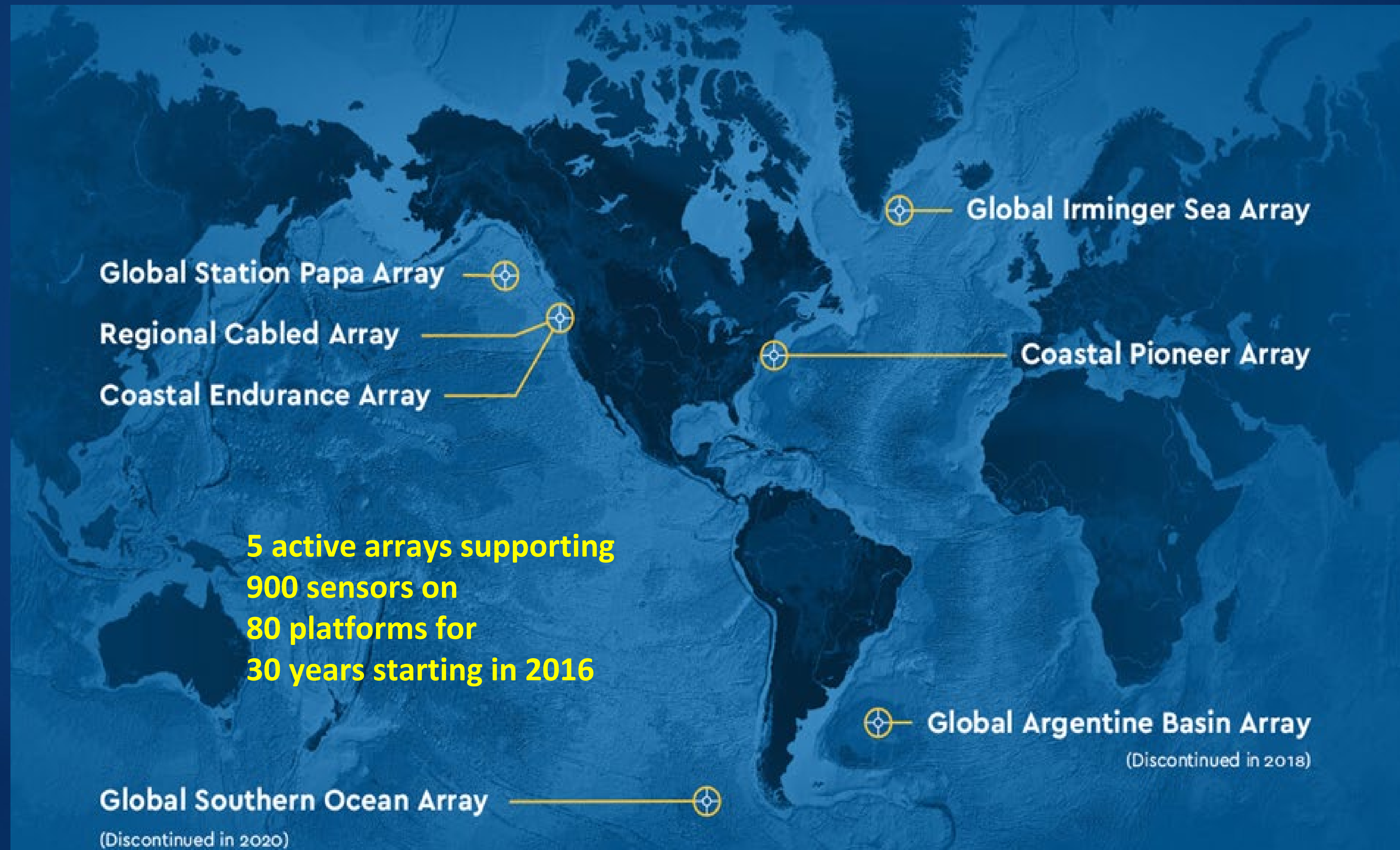
OOI PMO Report

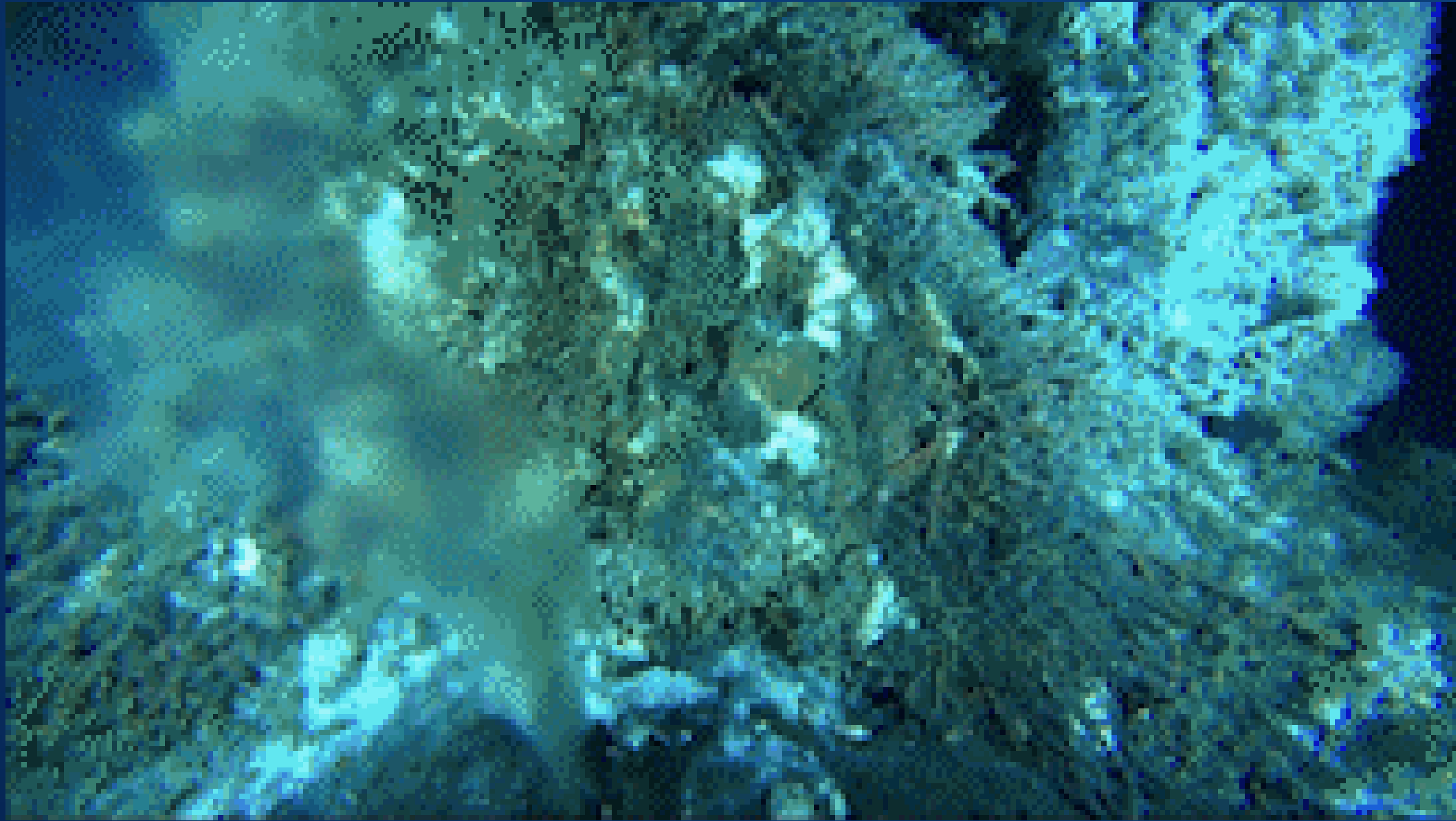**James Edson**

Community Engagement Activities

Darlene Trew Crist

The OOI: A System of Systems (Observatories)

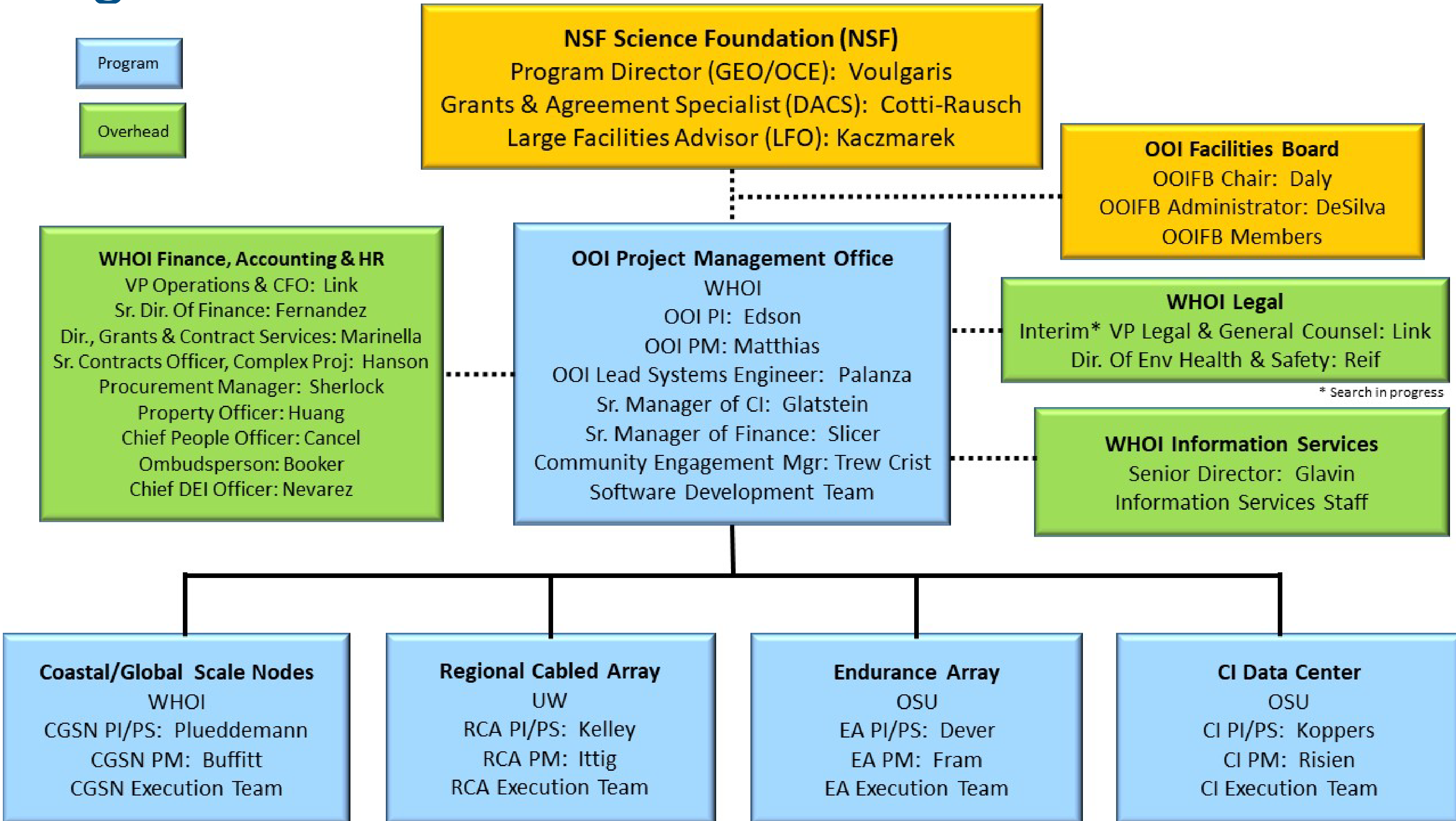# OOI operates & maintains sophisticated instrumentation in demanding locations

Hydrothermal Vents
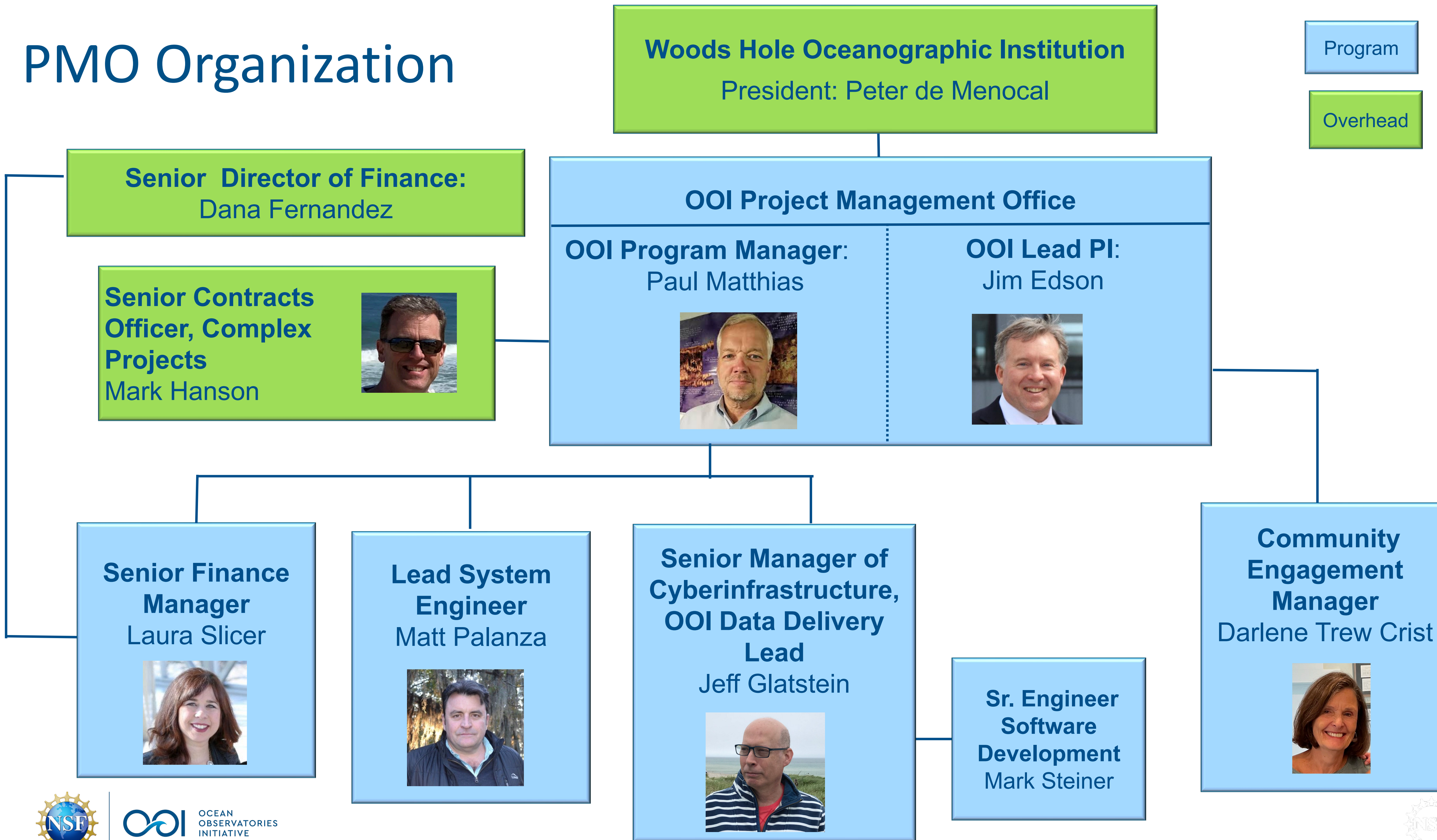

Atmosphere-Ocean Exchange
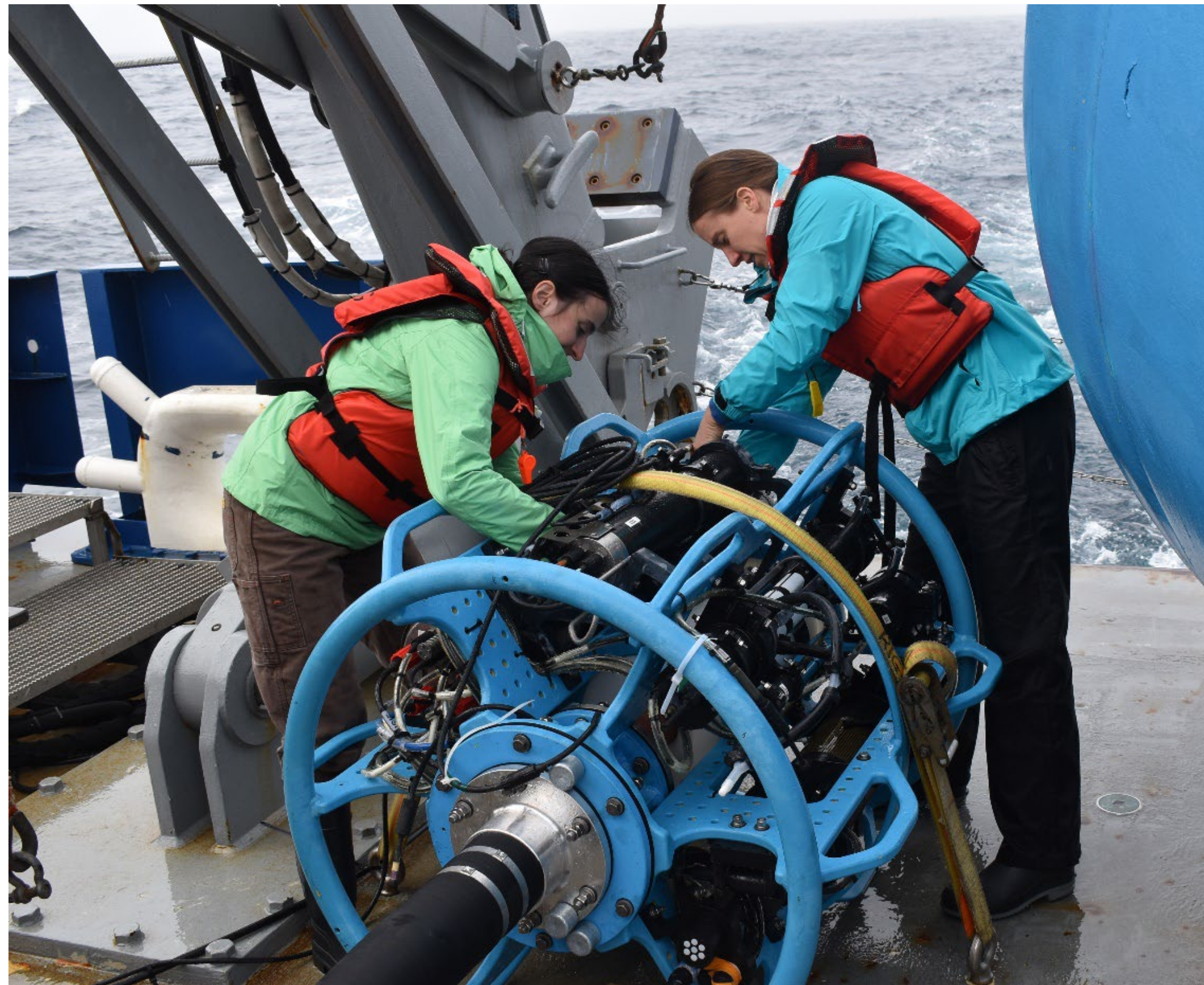
OOI Organization established 2018

PMO Organization

Our Mission

The OOI does not conduct research, the OOI provides research quality data to the user community (scientists, educators, and the general public).

https://oceanobservatories.org/how-to-access-data/

ECV Collected

Surface Variables
- Pressure
- Radiative Fluxes
- Temperature
- Humidity
- Precipitation
- Moisture/Evaporation
- Vector Wind
- DC Stress & Buoyancy Flux

Oceanographic
- Net Surface Heat Flux
- Temperature Profiles
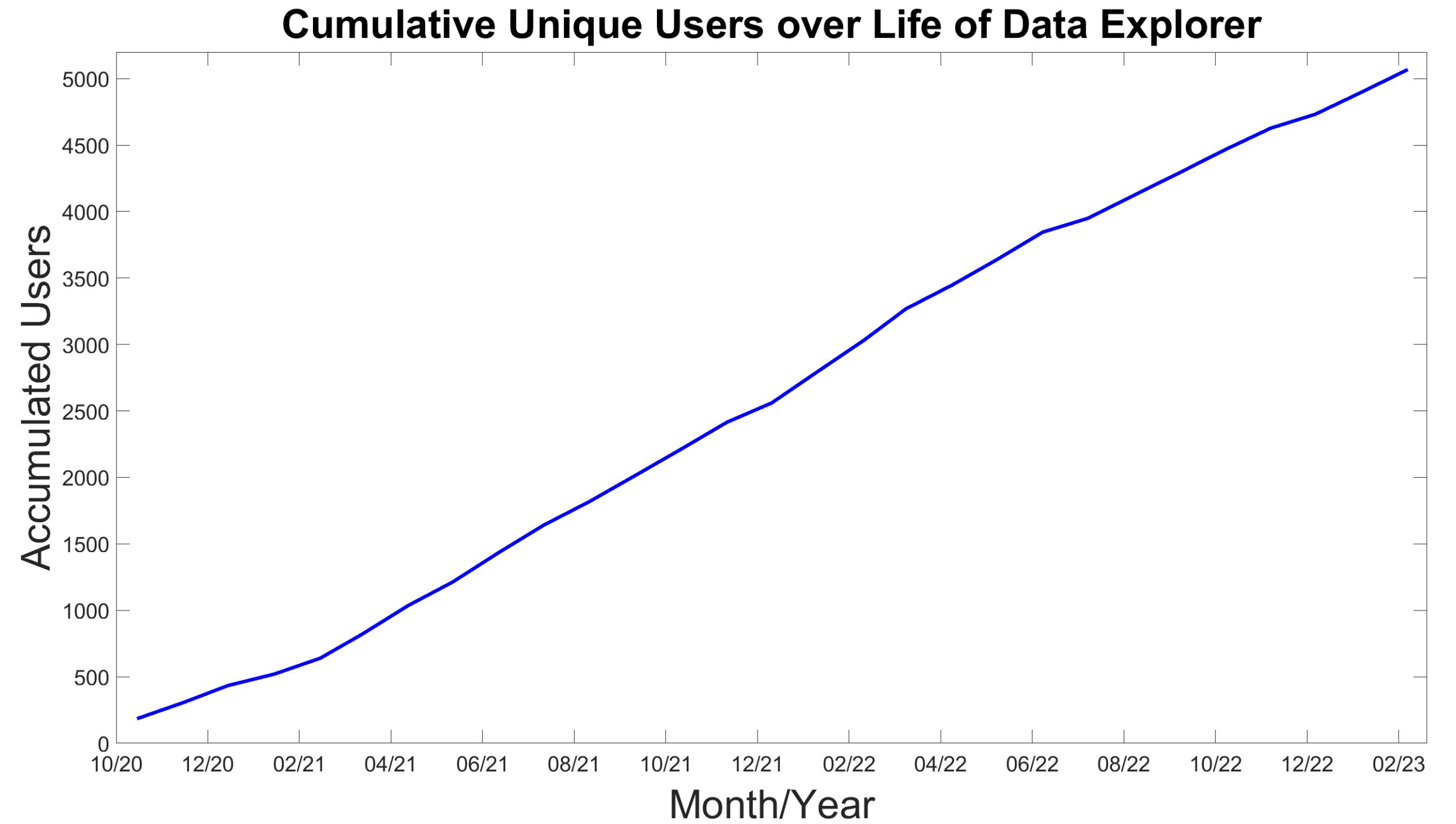- Salinity Profiles
- Currents Profiles
- Sea Level

Biogeochemical Sensors (at multiple depths)
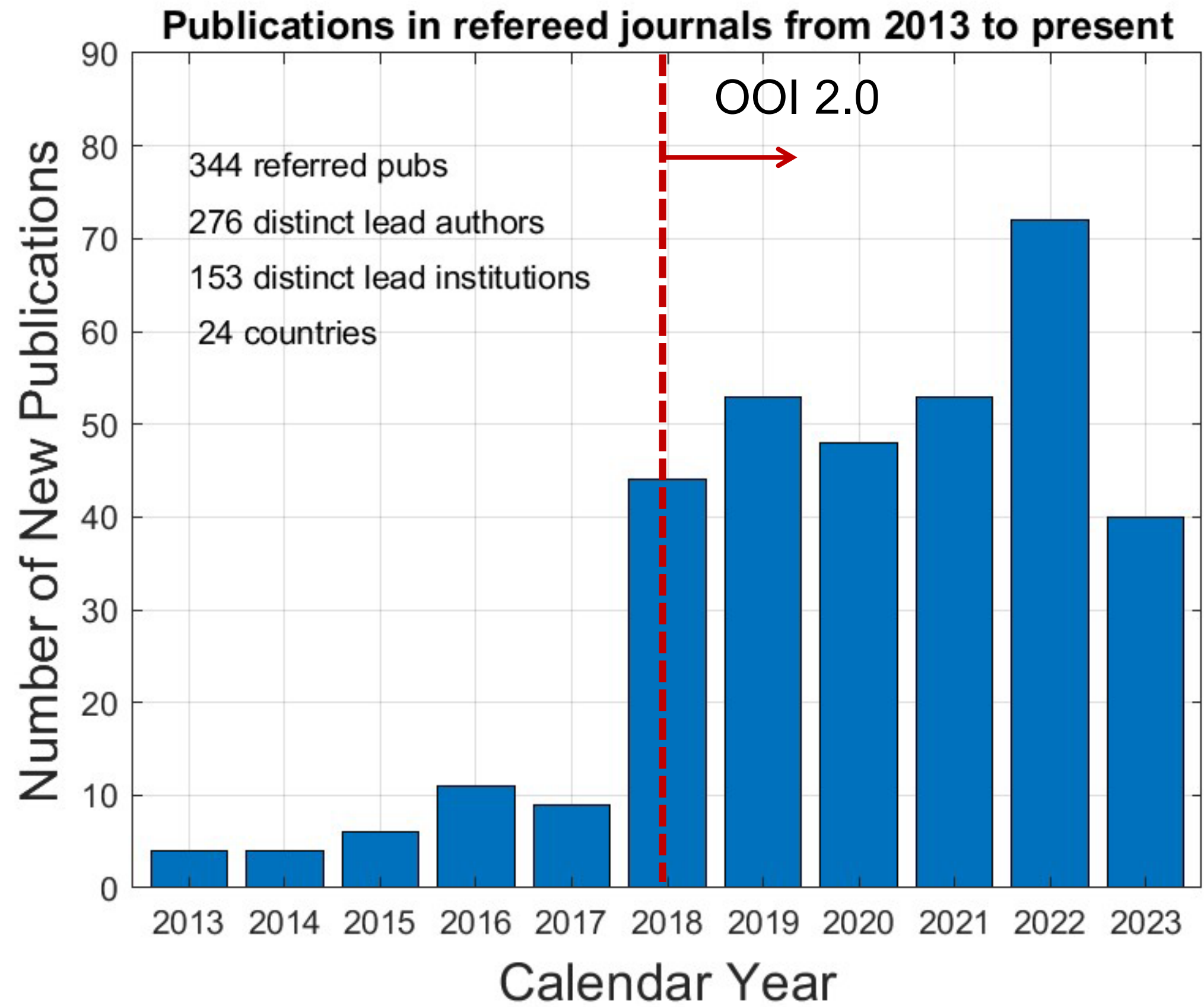- pH
- pCO_2
- Oxygen
- Plankton & zooplankton
- Nitrate
- Chlorophyll *a*

and we monitor an active volcano!

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A Growing User Base

Publications in refereed journals from 2013 to present

OOI 2.0

344 referred pubs
276 distinct lead authors
153 distinct lead institutions
24 countries

Cumulative Unique Users over Life of Data Explorer
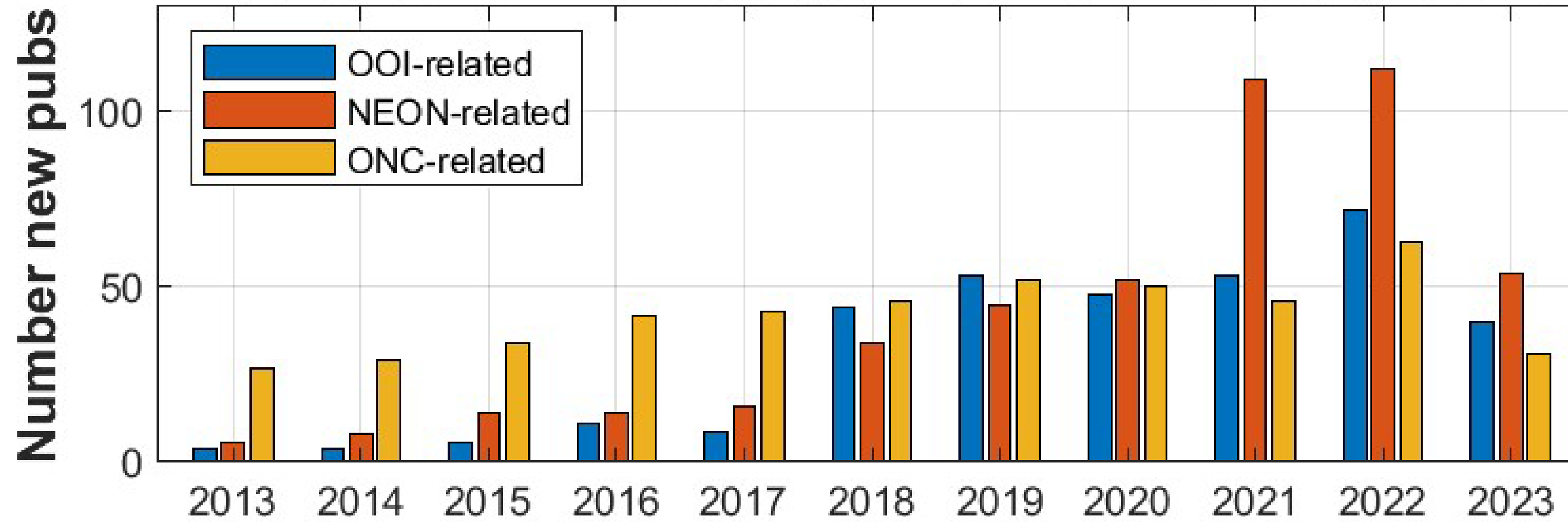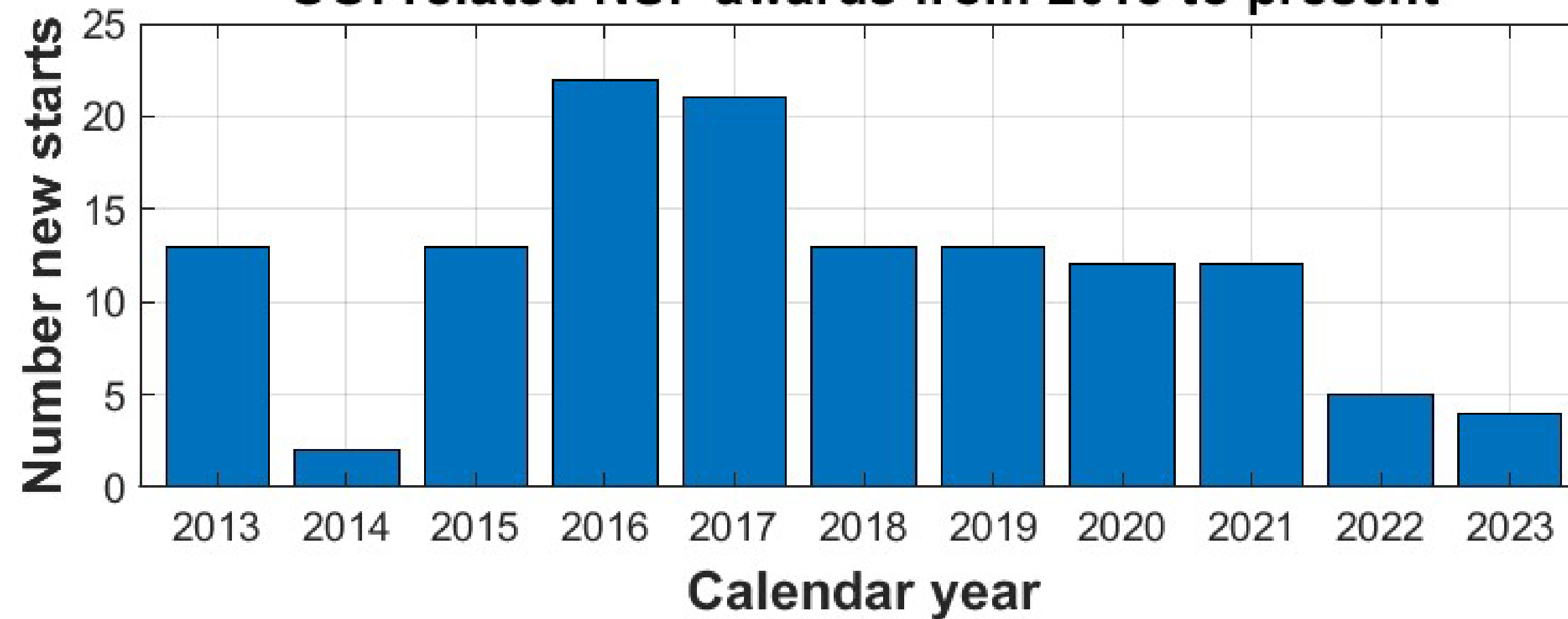
A Growing User Base

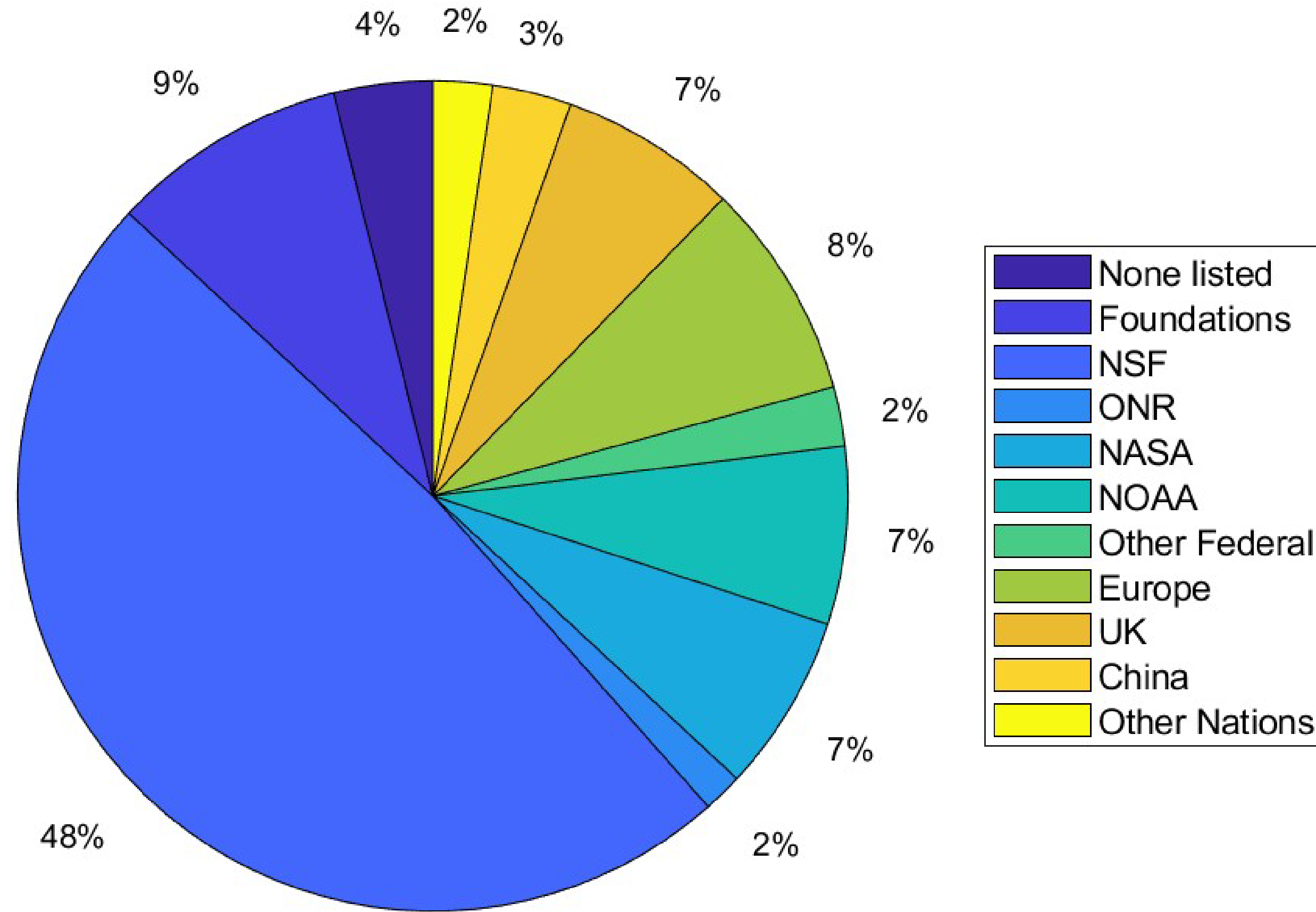Publications in refereed journals from 2013 to present

OOI-related NSF awards from 2013 to present

A Diversified Portfolio of Support

Funding Sources 2013-2019 N=130

Funding Sources 2020-Present N=263

Legend:
- None listed
- Foundations
- NSF
- ONR
- NASA
- NOAA
- Other Federal
- Europe
- UK
- China
- Other Nations
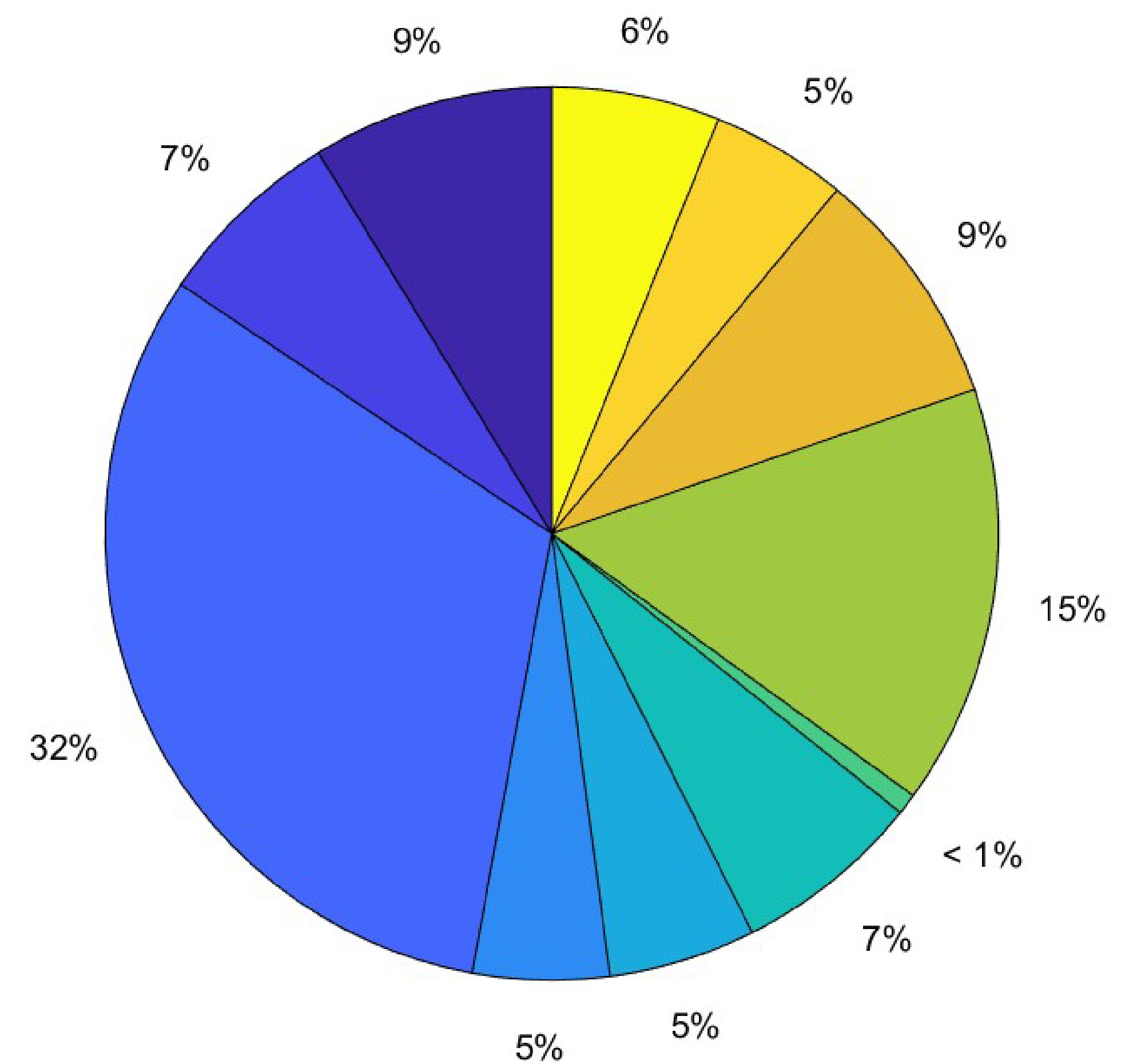
International Partnerships

- **COP 27**

  - Provided the opportunity to describe our involvement in:
    - Blue Carbon – focus on CO_2 exchange & CDR
    - Blue Economy – focus on Offshore Wind
    - Ocean Observing – focus on the OOI.

  - Allowed OOI/WHOI to network with participants and visitors to the Ocean Pavilion leading to Partnerships.

Ed Hill

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International Partnerships

Steve Woodward

Dan Roper

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- **Visit to the UK**

  - Met with scientists and engineers at the National Oceanography Centre (NOC)

  - Met with participants in an Air-Sea Gas Exchange Workshop in London

  - Met with scientists and engineers at Plymouth Marine Laboratory (PML) and Partnership for Observations of the Global Ocean (POGO)

Workshop Participants

Tom Bell   James Fishwick

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OOI 2.5 Proposal Status
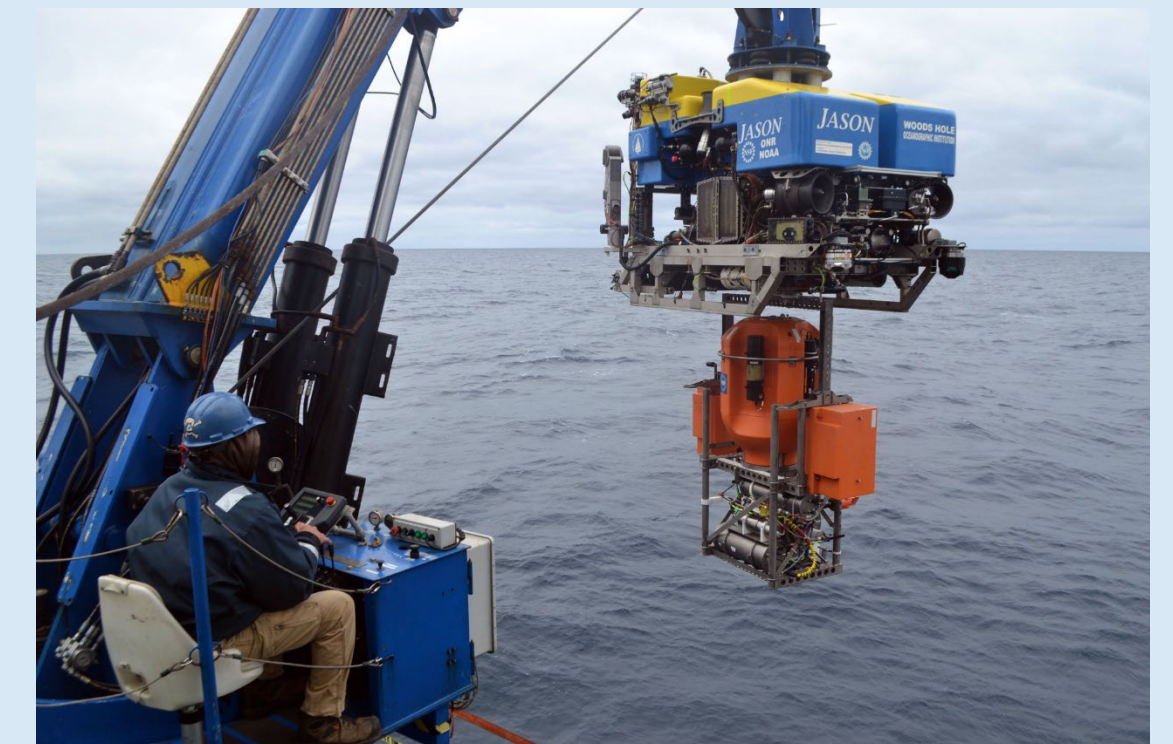

- Proposal Requirements
  - Continue to operate the existing Arrays with our partners at UW and OSU.
  - Use additional Budget provided to address inflation and tech refresh.

- Proposed Program Enhancements
  - **Data QA/QC** (quality assurance/quality control)
  - **Associate Project Scientists** (the next generation)
  - **Tech Refresh** (new and/or improved technology)
  - **DEI** (outreach and hiring)
  - **Community Engagement** (growing the user base)

- Anticipated Timeline
  - ✓ 12 Sept 2022: Proposal Submitted
  - Nov 2022: External Proposal Review Panel
  - Feb 2023: Internal NSF Review and Approval
  - May 2023: Award Terms & Conditions Development
  - Aug 2023: OCE DD Concur of Renewal Award
  - Sep 2023: Renewal of OOI Award

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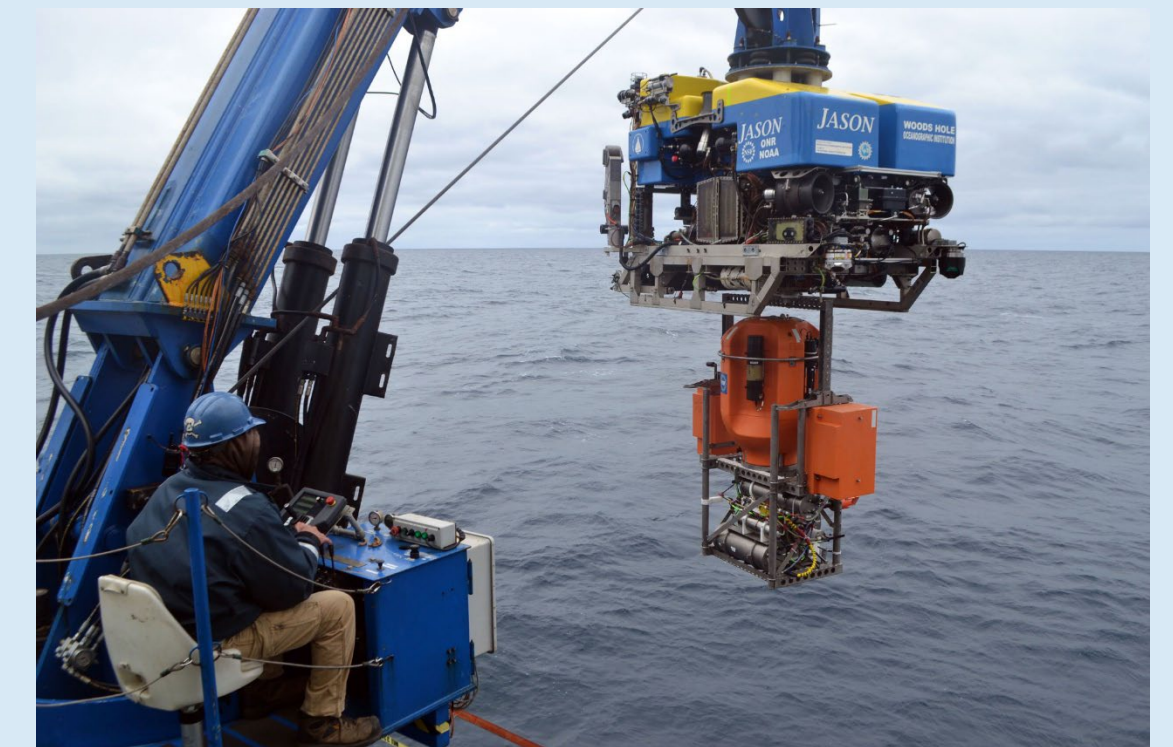

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OOI 2.5 Proposal Status

- September 20th 2023: OOI received official word that the National Science Foundation would award a Cooperative Agreement for support of OOI for five more years.
  - $220M award for OOI 2.5.
  - $61M for anticipated ship costs.

- Proposed Program Enhancements
  - **Data Specialist:** Much needed help with our ongoing QA/CC efforts and generation of curated data sets for the research and educational communities.
  - **Associate Project Scientists:** The next generation of OOI scientists. Discussions have also included hiring post-docs, ECS, visiting scientists, sabbatical support to expose more researchers to OOI.
  - **Data Ambassador:** Teams of scientists/engineers and data specialist to provide presentations and data training sessions for new and existing users.
  - **DEI:** Targeted outreach and additional opportunities for hires
  - **Science User Groups for Research (SUGR) Meetings:** Not to replace OOIFB workshops and other activities, but to enhance interaction with the user community. A goal of SUGR meetings is to build informal mentorships between early-mid-career scientists with more established scientists. Meetings could address tech refresh issues.
  - **Tech Refresh:** Replace aging infrastructure, new data center for CI, improved technology upgrades, and some new sensors

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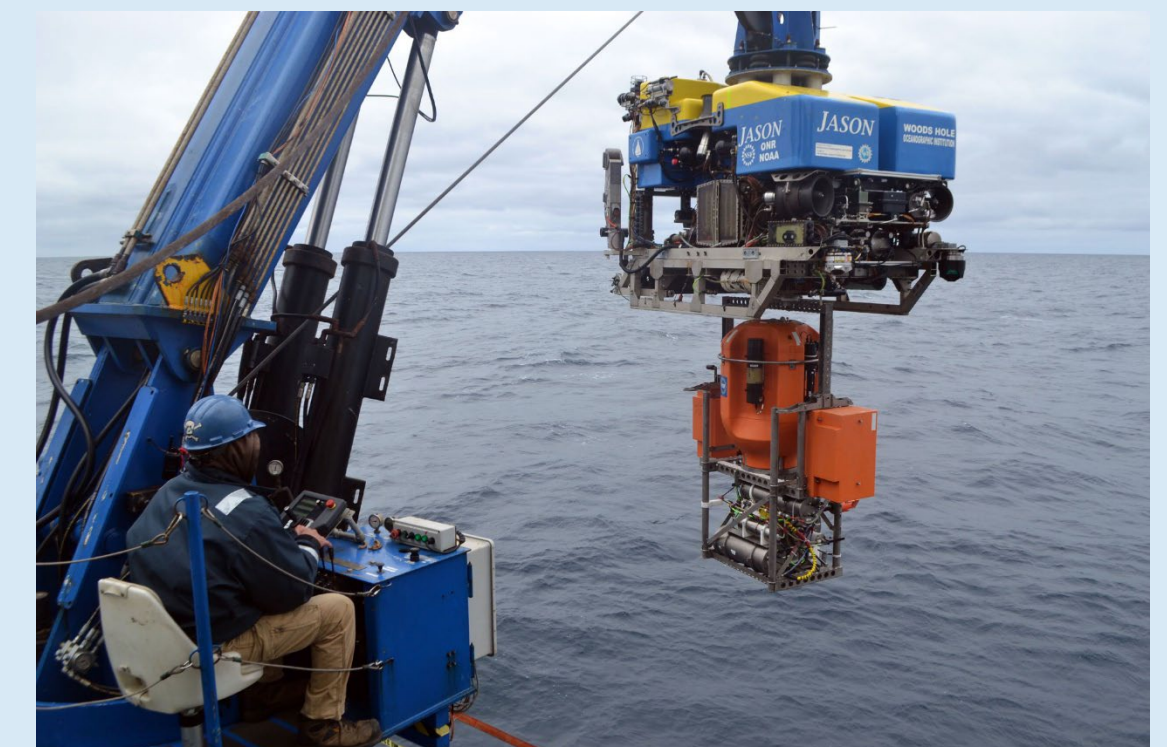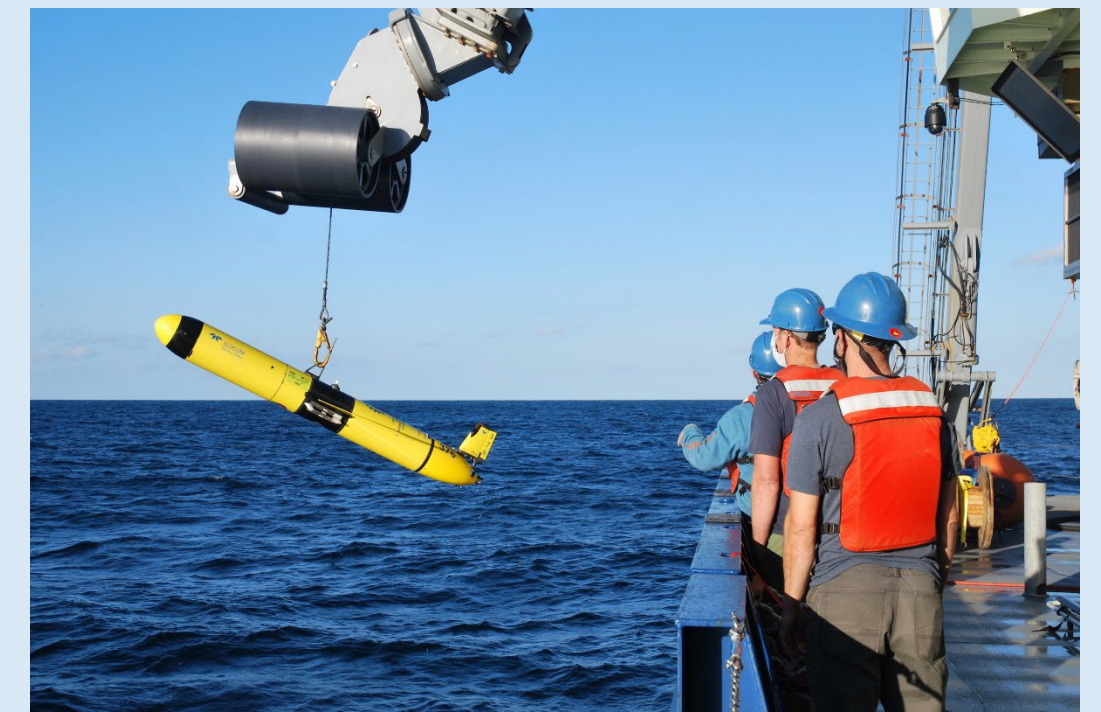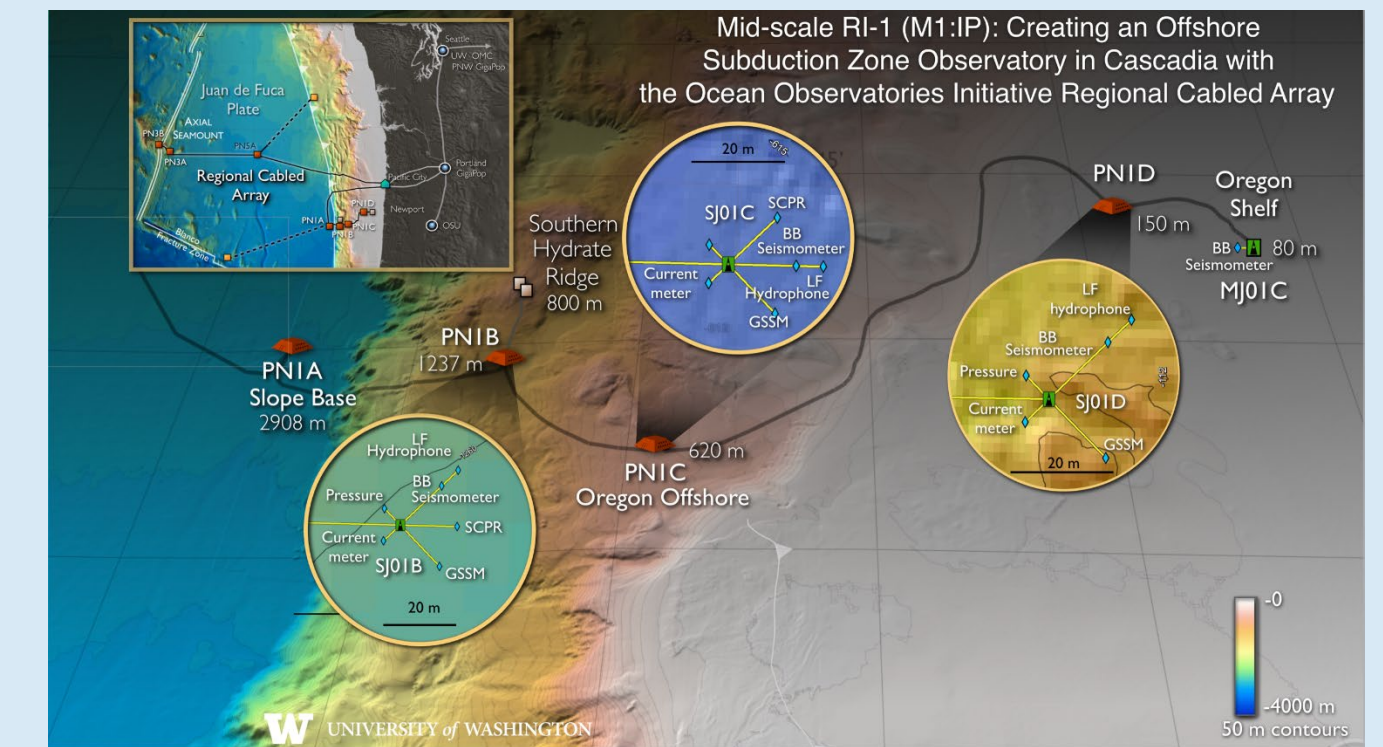
Latest & Greatest

- ## Pioneer Re-location
  Moving the array from the New England Shelf to the Mid-Atlantic Bight. More from Al.
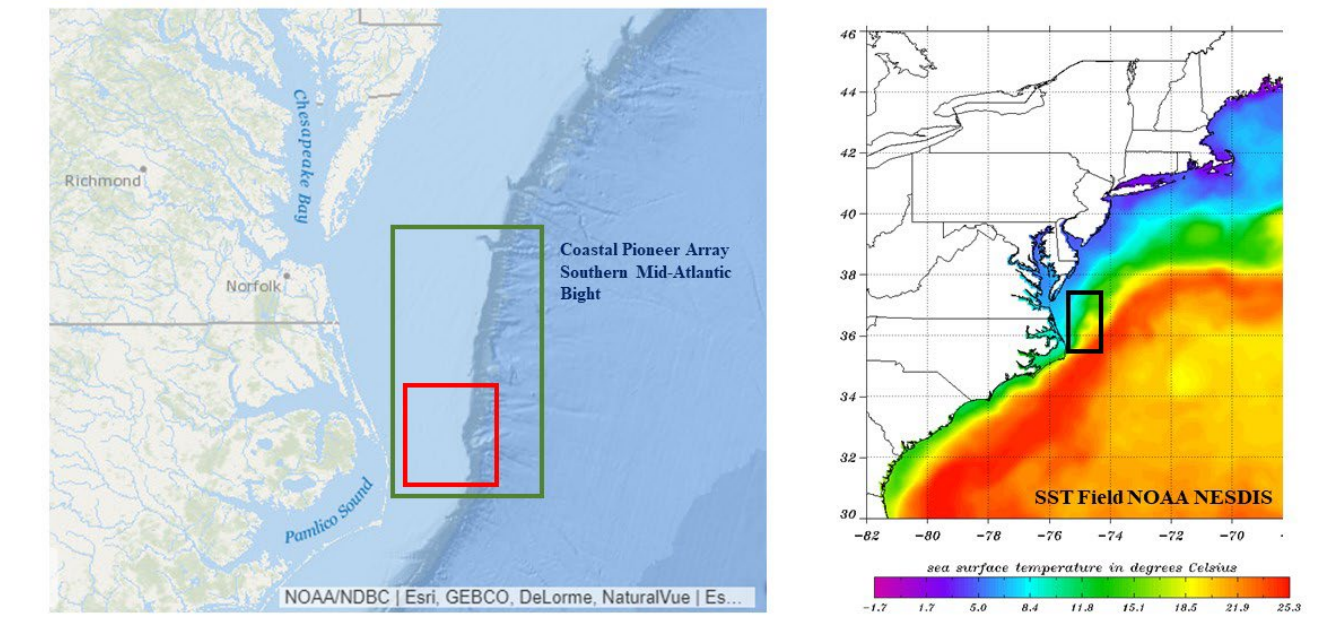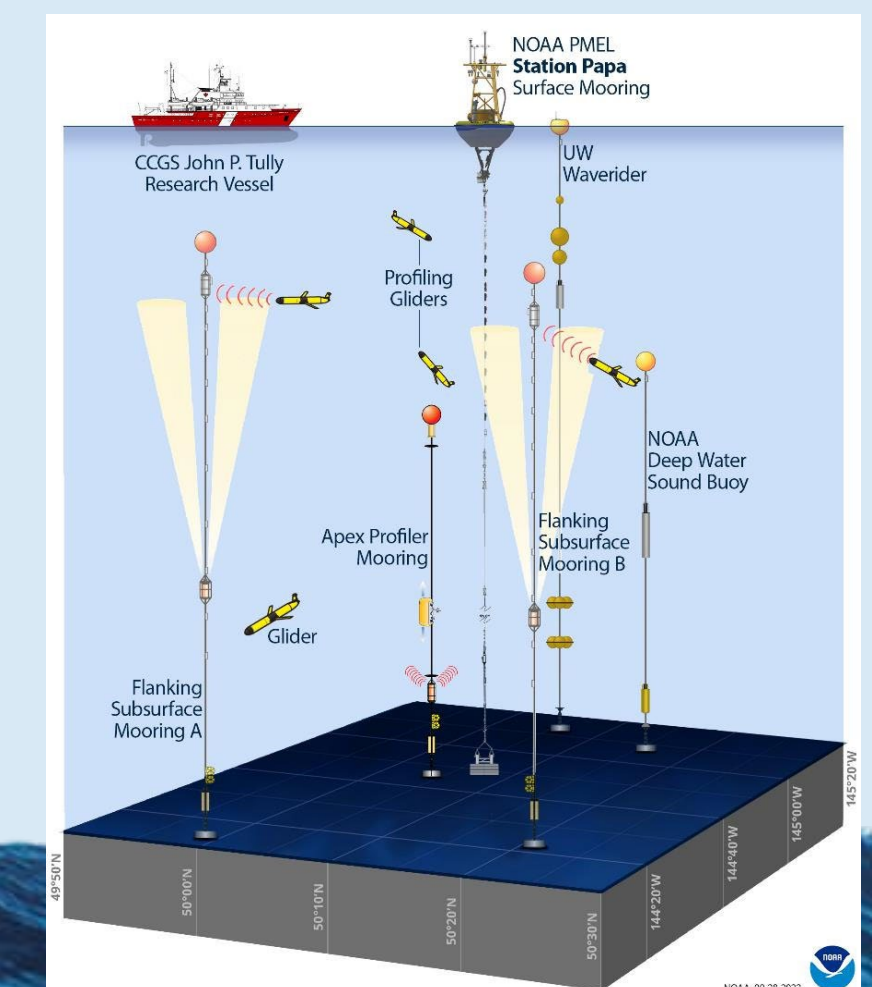

- ## Mid-Scale RI-1 Project
  Creating an Offshore Subduction Zone Observatory in Cascadia with the OOI Regional Cabled Array. More from Deb.

- ## Station Papa
  Effort to better combine the CGSN and PMEL components of Papa into a more integrated array, and to add an FDCHP on the PMEL surface mooring to mimic the Irminger global array.

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Thank You