



OCEAN
OBSERVATORIES
INITIATIVE

OOI 2.0 PMO Update and Community Engagement Activities

John Trowbridge & Darlene Trew Crist

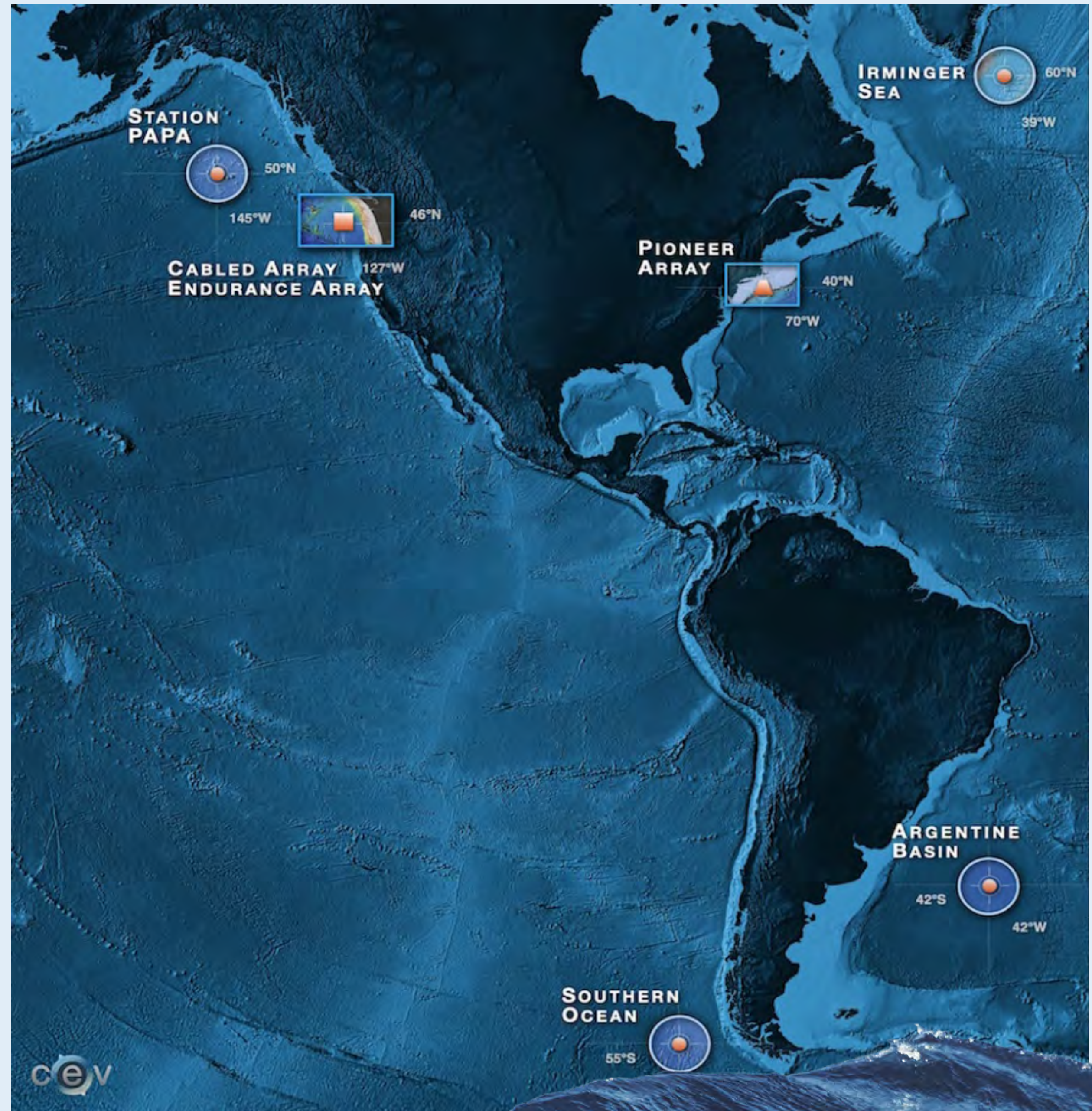
OOI Facilities Board Meeting

May 13, 2020



Systems & Activities

- Seven interdisciplinary marine arrays at three scales:
 - Regional Cabled
 - Coastal Endurance
 - Coastal Pioneer
 - Global Irminger Sea and Station Papa (ongoing)
 - Global Argentine Basin and Southern Ocean (suspended)
- Cyberinfrastructure & Data Delivery
- Community Engagement



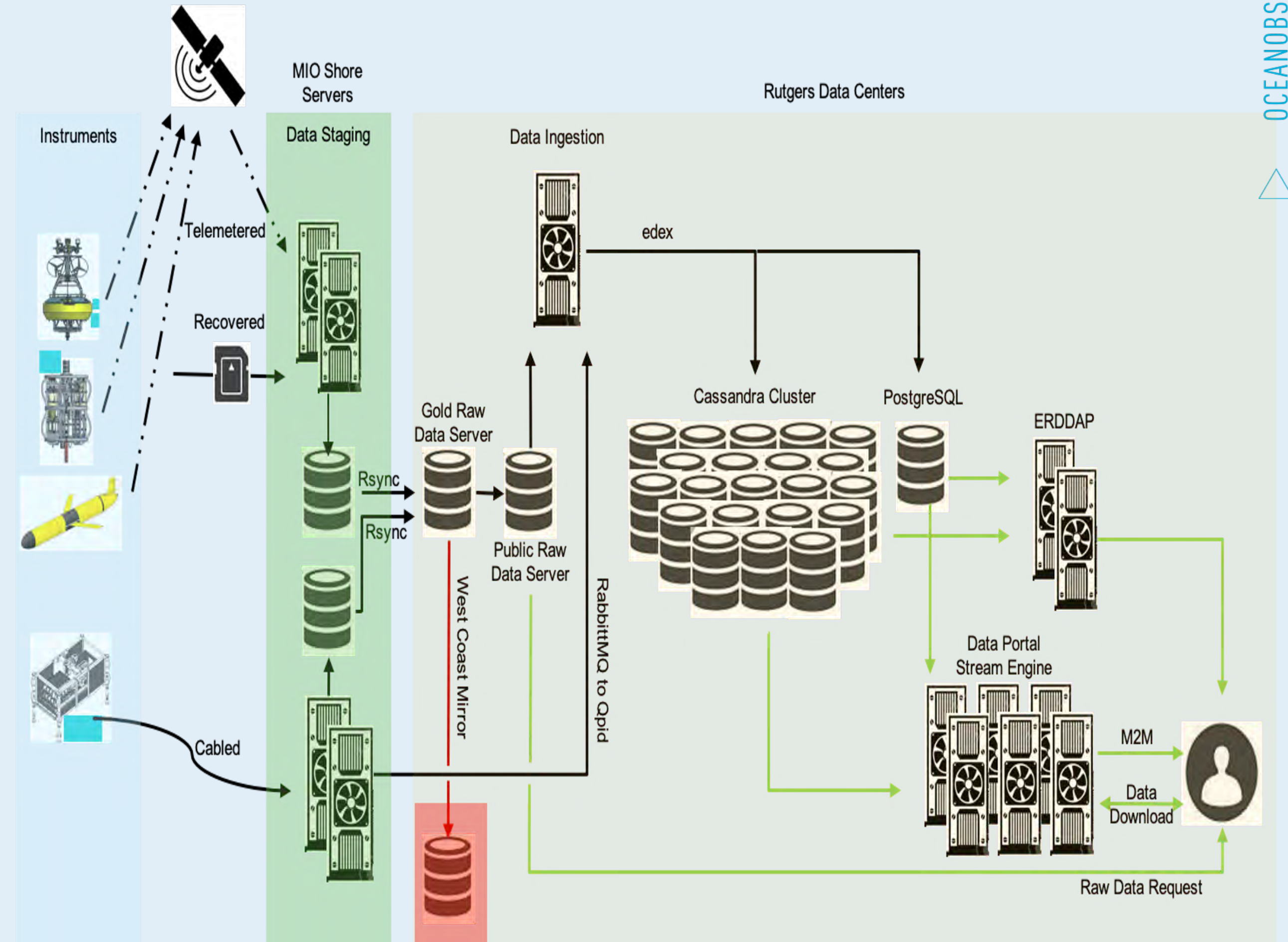
Marine Operations

- Eight major cruises in AWP for PYII (Oct 2019 thru Sep 2020):
 - ✓ Fall '19 Pioneer
 - ✓ Winter '20 Southern Ocean
 - Spring '20 Endurance & Pioneer
 - Summer '20 Regional Cabled & Papa
 - Fall '20 Endurance
- Continuous glider operation
- Refurbishment
- Details in upcoming MIO presentations



Cyberinfrastructure & Data Delivery

- Ongoing operation of existing systems
- New data discovery tool (Keryx)
- Continued QARTOD implementation
- New PI & upgrade for hardware/network:
 - Risks brought forward by Rutgers
 - RFP released to UW, OSU, Axiom
 - Proposals due June 2020
 - Review panel with external expertise & OOIFB representation
 - Target new sub-awardee 10/2020
 - Implementation in PYIII with parallel operation before shut-down of existing system
- Details in upcoming presentations



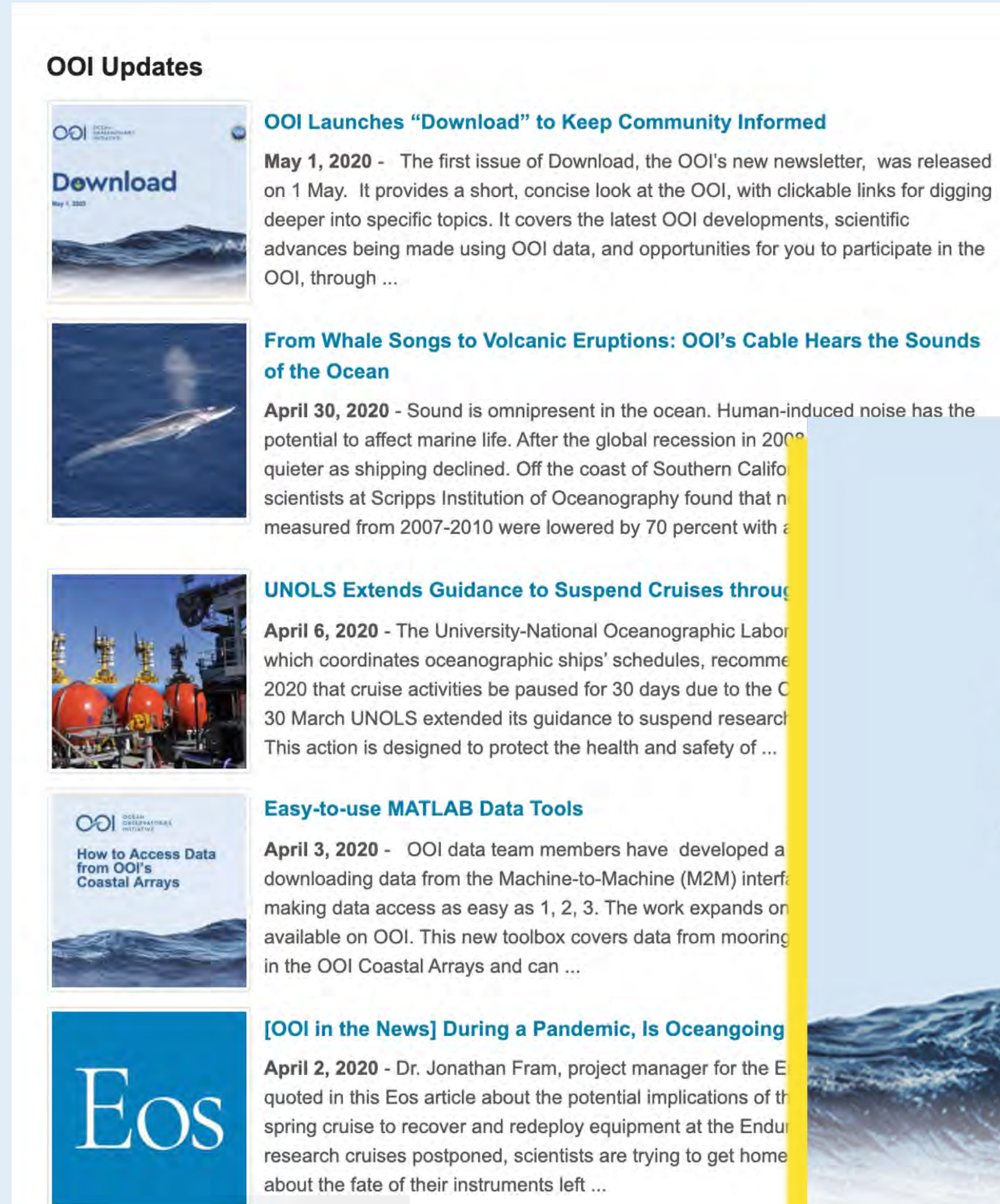
Ocean Sciences Meeting

Stocking, staffing, and scheduling



Making OOI More Visible

- Regular web posts
- Newsletter
- Social media
- New branding
- New website



OOI Updates

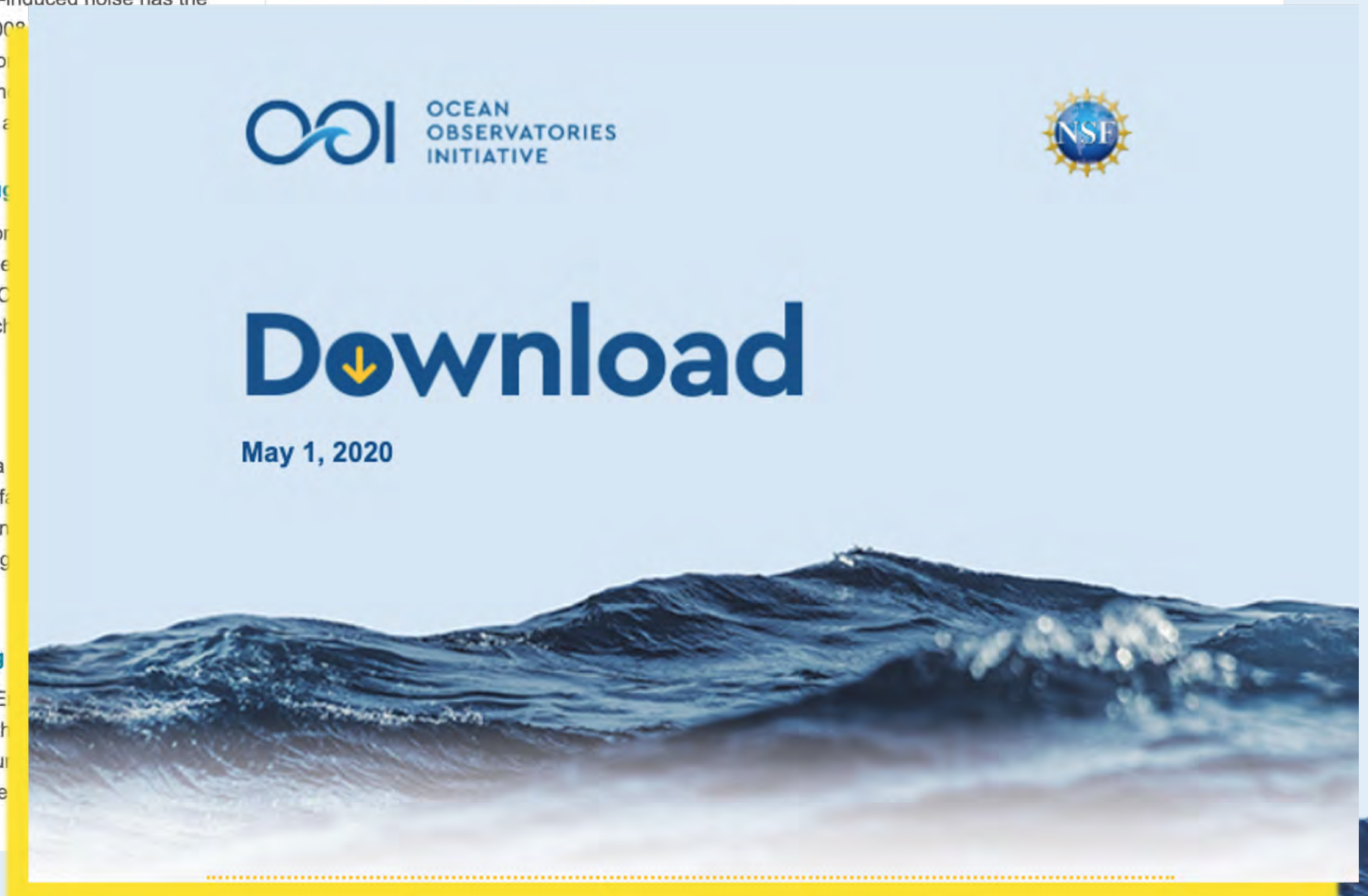
- OOI Launches "Download" to Keep Community Informed**
May 1, 2020 - The first issue of Download, the OOI's new newsletter, was released on 1 May. It provides a short, concise look at the OOI, with clickable links for digging deeper into specific topics. It covers the latest OOI developments, scientific advances being made using OOI data, and opportunities for you to participate in the OOI, through ...
- From Whale Songs to Volcanic Eruptions: OOI's Cable Hears the Sounds of the Ocean**
April 30, 2020 - Sound is omnipresent in the ocean. Human-induced noise has the potential to affect marine life. After the global recession in 2009, the ocean became quieter as shipping declined. Off the coast of Southern California, scientists at Scripps Institution of Oceanography found that noise levels measured from 2007-2010 were lowered by 70 percent with a ...
- UNOLS Extends Guidance to Suspend Cruises through 2020**
April 6, 2020 - The University-National Oceanographic Laboratory (UNOLS), which coordinates oceanographic ships' schedules, recommended in late 2020 that cruise activities be paused for 30 days due to the COVID-19 pandemic. On 30 March UNOLS extended its guidance to suspend research cruises until further notice. This action is designed to protect the health and safety of ...
- Easy-to-use MATLAB Data Tools**
April 3, 2020 - OOI data team members have developed a new toolbox for downloading data from the Machine-to-Machine (M2M) interface, making data access as easy as 1, 2, 3. The work expands on existing tools available on OOI. This new toolbox covers data from mooring data available in the OOI Coastal Arrays and can ...
- [OOI in the News] During a Pandemic, Is Oceangoing Possible?**
April 2, 2020 - Dr. Jonathan Fram, project manager for the Endeavor research cruises, is quoted in this Eos article about the potential implications of the COVID-19 pandemic on spring cruise to recover and redeploy equipment at the Endeavor research cruises postponed, scientists are trying to get home. About the fate of their instruments left ...



Ocean Observatories
@oceanobserv

The OOI is a long-term, NSF-funded program to provide 25-30 years of sustained ocean measurements.

oceanobservatories.org Joined May 2010



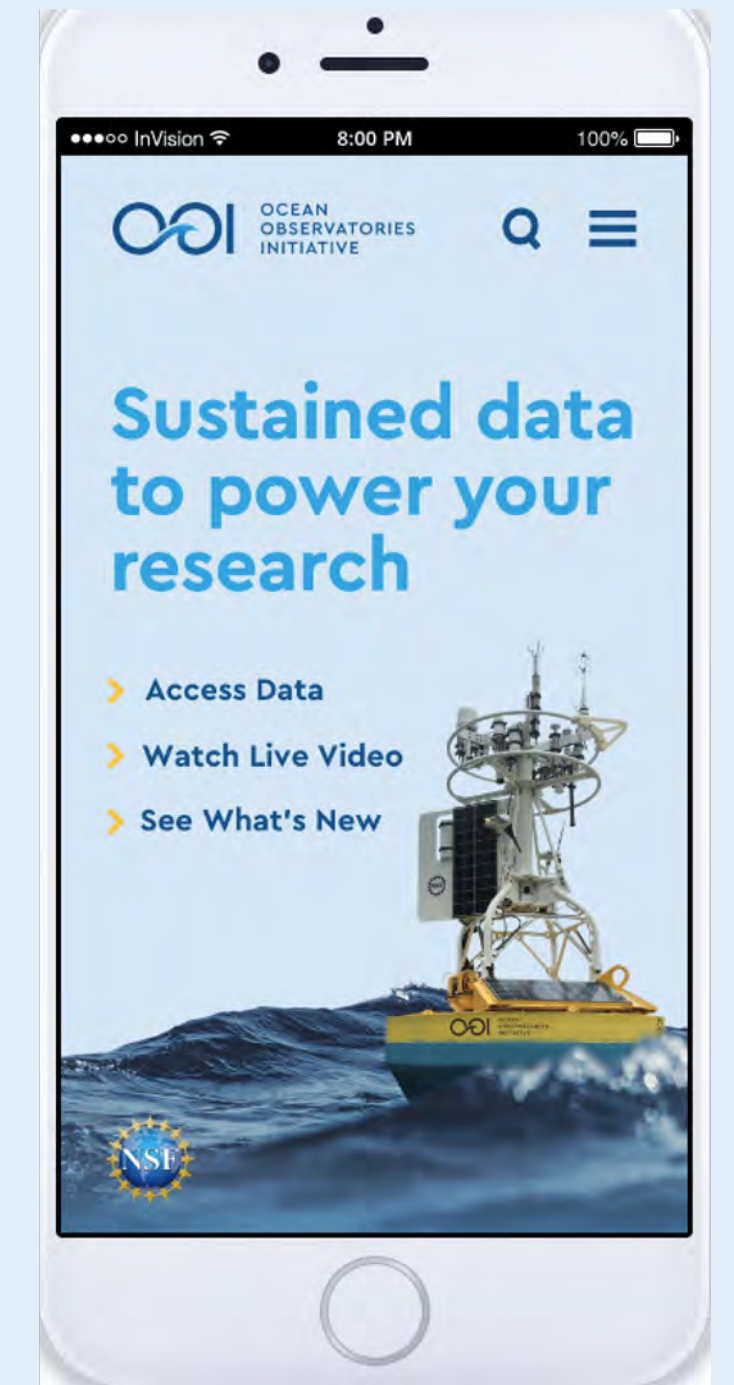
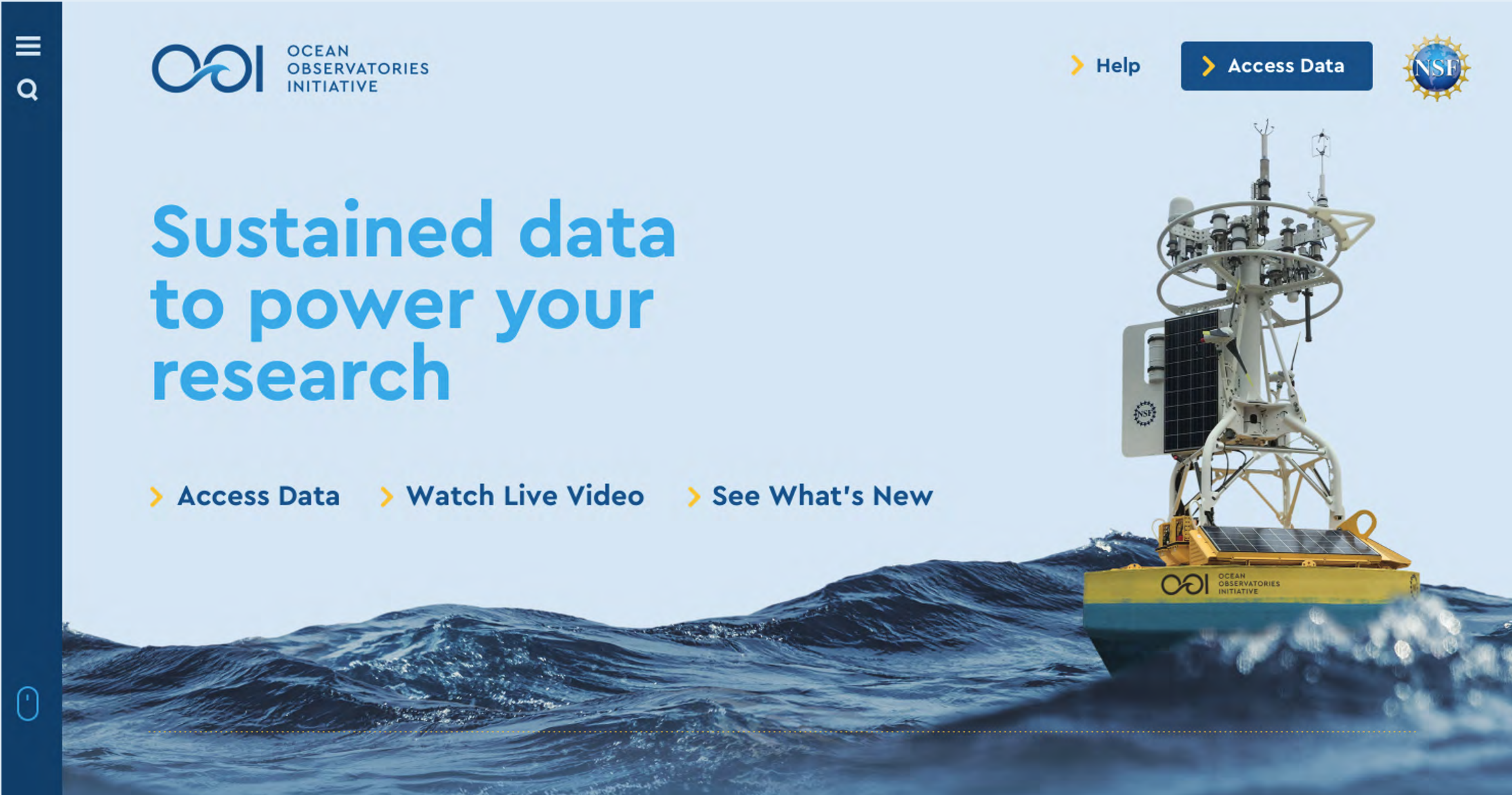
OOI OCEAN OBSERVATORIES INITIATIVE NSF

Download

May 1, 2020



New website



New Data Discovery Tool

Ocean Observatories Initiative NSF

Home Catalog Map 5 Data Views 8 Settings Share Help Feedback

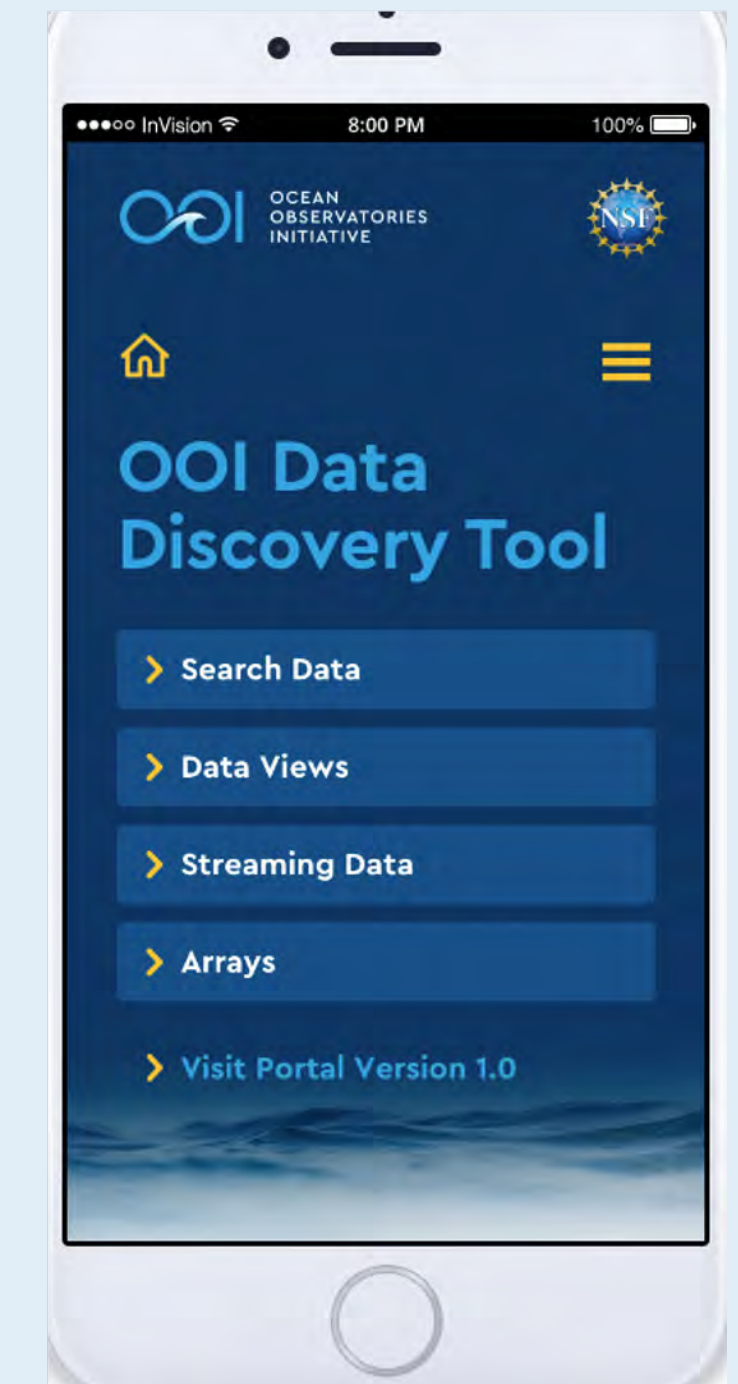
OOI Data Discovery Tool

[Search Data](#) [Data Views](#) [Streaming Data](#) [Arrays](#) [Visit Portal Version 1.0](#)

Welcome to the Ocean Observatories Initiative Data Discovery Tool, where you can:

- Search and download cabled, uncabled, and recovered data for

Global



THE OCEAN OBSERVATORIES INITIATIVE

Our Blue Planet by the Numbers

By Daniel Heinz

The ocean covers 70 percent of the Earth's surface, contains 97 percent of its water, and is crucial to regulating climate. With funding from the National Science Foundation, the Ocean Observatories Initiative (OOI), led by Woods Hole Oceanographic Institution, has plugged into the ocean at an unprecedented scale.

OOI is a 25-year, science-driven observation network that provides real-time data about our ocean and makes it publicly available. With this information, we can illuminate the effects

of far-reaching phenomena like climate change and ocean acidification. The program comprises two coastal arrays named Pioneer and Endurance, (operated by WHOI and Oregon State University), two global arrays, Irminger and Station Papa, (operated by WHOI), a Regional Cabled Array (operated by University of Washington), and a cyberinfrastructure operated by Rutgers University. These five arrays have amassed millions of data points, each telling the story of our changing blue planet. ▲



This is an example of a platform, which typically consists of instrument-equipped moorings and autonomous underwater vehicles.

HARSH ENVIRONMENT

Some arrays are deliberately set in the middle of some of the harshest seas on Earth. That's where the ocean has some interesting things to tell us.

EQUIPMENT WORKING AT DEPTH

Temps as low as **35**^{°F} and up to **662**^{°F}

AVERAGE WINDS UP TO SWELLS AS LARGE AS

45 mph **50** FEET
ALONG THE IRMINGER SEA

INSTRUMENTS

THIRTY-SIX Different types of instruments

80 PLATFORMS **800** Total instruments

200 Different parameters of the ocean being measured

1,682,880

Pounds of equipment moved for just one (Pioneer) array!
That's the weight of **20** humpback whales

EXPEDITIONS & EXPERTS

49 Missions

159 159 scientists, engineers, data experts, and staff

REGIONAL CABLED ARRAY

1.5 Gigabytes of data sent per second

571 MILES OF SUBMARINE CABLE INSTALLED enough cable to stretch to the International Space Station and back

TWELVE MILLION meters (7,456 miles) that profilers have traveled along moorings

GLIDERS

245 Glider deployments

THE EQUIVALENT OF **FIFTY** years of data collected

194,489 MILES COVERED

- Global: 72,080 miles
- Pioneer: 54,680 miles
- Endurance: 67,729 miles

DATA

73 billion ROWS OF DATA STORED

36 TRILLION Terabytes of data provided

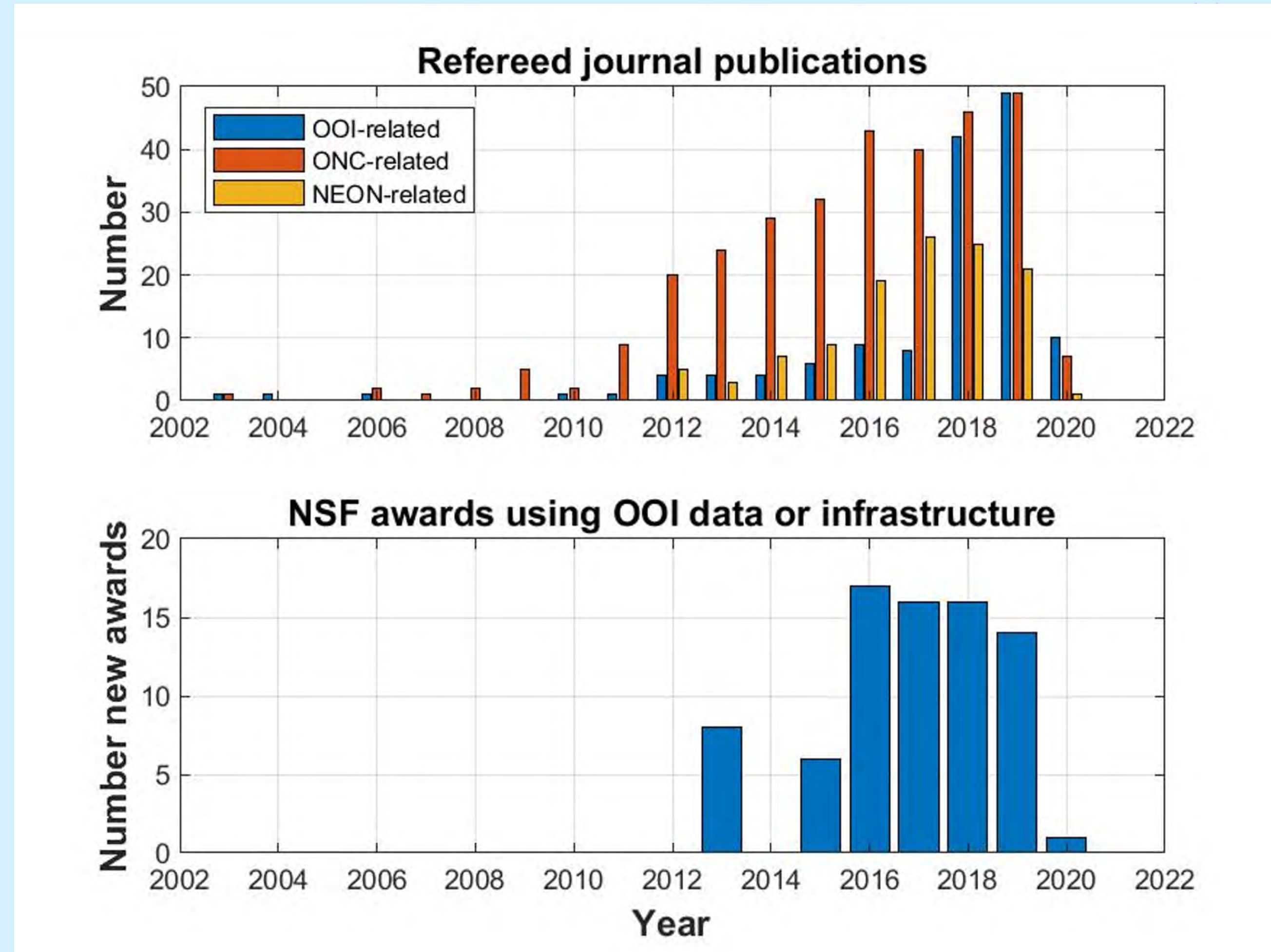
189 MILLION DOWNLOAD REQUESTS

SIX Years of data (and growing)



Community Engagement moving forward

- Goals of Community Engagement Plan:
 - Optimize the OOI
 - Build a robust user community
 - Cultivate new users
- Metrics:
 - ✓ Publications, Citations & Funding
 - Abstracts
 - Google analytics
 - Newsletter subscribers
 - Social media engagement
 - Conferences & workshops
 - Media coverage
- Challenge:
 - “We’d like to see metrics on how OOI data used by the community is changing the way Ocean Science and Education is being done.”
 - Three-legged stool: OOI Program, OOIFB, OCE Education Portfolio





OCEAN
OBSERVATORIES
INITIATIVE

Questions?



OCEANOBSERVATORIES.ORG

