

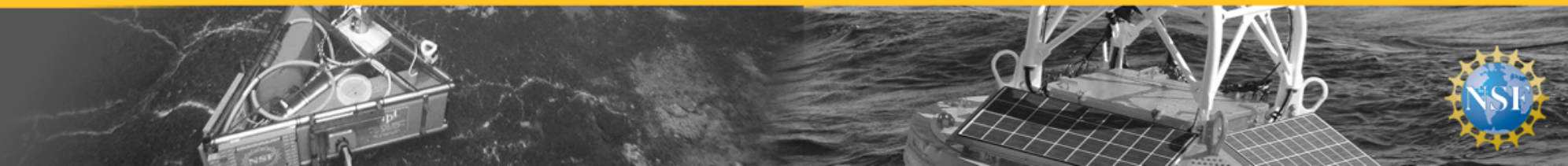
The U.S. National Science Foundation's Ocean Observatories Initiative

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oceanobservatories.org



What is the OOI?

- Integrated infrastructure of science driven platforms & sensors
- Measures physical, chemical, geological, & biological properties from seafloor to air-sea interface
- Examines processes at multiple scales:
 - From broad (ocean basin) to local geographic scales
 - Short-term, stochastic events and large-scale decadal cycles
 - Within sections of wave fronts and stratified nutrient layers
- Delivers data to a vast user community in near-real time, for free
- Expandable architecture accommodates technical advances



OOI Infrastructure

7 Research Arrays incorporating
89 platforms

carrying 857 instruments

which provide over 100,000 scientific and
engineering data products



OOI Planning & History

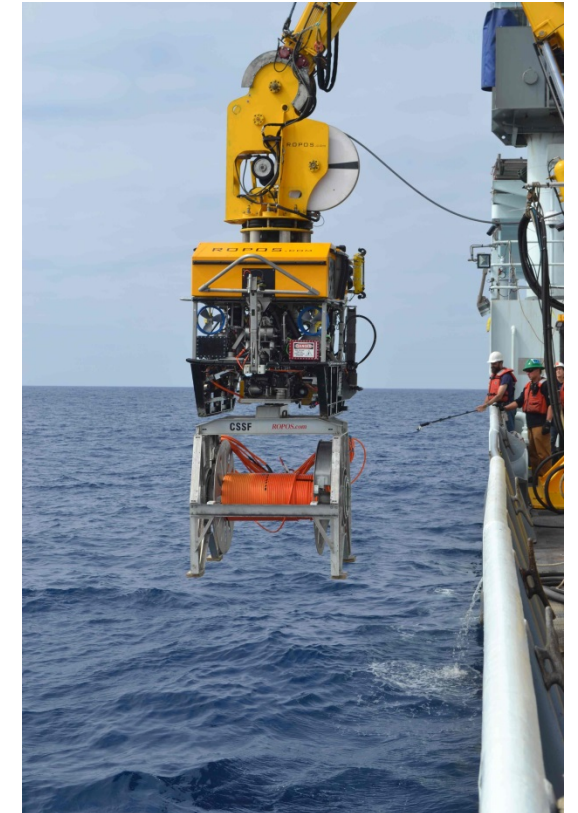
- National Research Council committees and community workshops led to the recommendation that the NSF go forward with the design, construction, and operation of a sustained ocean observing infrastructure.
- A broad NSF call for conceptual (RFA) proposals for the OOI resulted in 48 experimental design submissions, representing the efforts of 550 investigators and spanning 130 research and education institutions
- Through community workshops the science requirements for the OOI were developed and the marine infrastructure was engineered to meet those requirements.
- The infrastructure was built and implemented using instruments and platforms acquired to meet engineering requirements with flow-through to science requirements.
- Construction began in 2009 and was completed in 2016.

OOI Mandates

- Select critical locations, of high science impact yet data sparse due to challenging nature
- Deploy cutting edge platforms and equip with multidisciplinary sensors
- Provide as much real time data as practicable
- Provide as much interactive capability as possible
- Provide additional bandwidth and carrying capacity
- Launch crucial long-term measurements that resolve high frequencies and episodic events
- Make all data available

Recent OOI Highlights

- We're operational! 2016 was our first full year of operations.
- Data is flowing from 89 platforms, carrying 857 instruments, providing over 100,000 scientific and engineering data products.
- The construction phase of OOI was completed.
- NSF accepted and commissioned OOI on 03 Jun.
- In 2016 all 9 planned "turn cruises" were completed.
- All planned 2017 cruises are on schedule (1 complete).
- Cyber Infrastructure – Measurable success stories.
- Partnerships, engagement, and dialogue!



Science Oversight Committee

- **Members of the Science Oversight Committee (SOC) serve as the primary scientific advisors to the OOI Program Director.**
- **Membership:**
 - Four scientists, one each from Pioneer, Endurance, Global, and Cabled Arrays
 - Two reps from Cyber Infrastructure (CI) Team
 - The OOI Program Director
 - Ad Hoc Members (UNOLS OOSC, NSF/OCE)
- **Current Roles and Responsibilities**
 - Develop and maintain the OOI Science Plan (consisting of science themes, focus areas, and objectives) (transitioning to OOI FB)
 - Ensure that the Science Plan serves as the basis for OOI operations (provide input to the OOI Annual Work Plan)
 - Evaluate OOI operations and engineering to ensure that OOI scientific goals and objectives are being optimally achieved
 - Provide feedback on the performance of OOI marine and cyber infrastructure
 - Lead outreach to the scientific community from within the OOI program (conduct and support workshops, user engagement, etc)
- **Way ahead for the SOC? Align with and complement OOI FB?**

OOI Way Ahead – Priority Next Steps

- **Cyber Infrastructure upgrades and enhancements are our TOP priority**
 - Improving our data display and delivery capabilities – our “user experience”
 - Data re-ingest, verification, and making available more real time and legacy data available
- **Steady state operations. What does that look like?**
- **Long term budgets:**
 - How much does OOI cost to run?
 - What can we do to make it run leaner, and more efficiently?
- **Lessons Learned!**
- **Partnerships, engagement, and dialogue!**



Questions?

For more information please check out our website:

oceanobservatories.org

And visit the OOI Data Portal

Data Portal - ooinet.oceanobservatories.org

Ask the Help Desk – help@oceanobservatories.org

