Ocean Exploration Cooperative Institute

Name
NOAA Office of Ocean Exploration and Research

Competition for a Cooperative Institute for Ocean Exploration

- Purpose:
  - Discover and initially characterize new marine flora, fauna, and phenomena in support of NOAA and national priorities
  - Advance NOAA and national undersea technology capabilities in partnership with academia, the private sector, and not-for-profit institutions
  - Enhance the utility of ocean exploration results to stakeholders
- Two proposals received
- Selection announced in May 2019

Ocean Exploration Cooperative Institute

- NOAA selected the University of Rhode Island (URI) to host the Ocean Exploration Cooperative Institute (OECI). URI will lead a unique consortium of four graduate degree-granting institutions, one ocean exploration non-profit, and several task-specific collaborating partners working together to support and technologically enhance core NOAA Ocean Exploration priorities. The consortium institutions are:

THE UNIVERSITY OF RHODE ISLAND | OCEAN EXPLORATION TRUST | Ocean Exploration and Research | Woods Hole Oceanographic Institution | University of New Hampshire | The University of Southern Mississippi

- This cooperative institute is being established to facilitate a long-term collaborative environment between NOAA and the awardees where broad-based exploration, research, technology advancement, and education/outreach capabilities can be developed and sustained. A primary aim for this partnership is to leverage science, technology, and outreach/education capacities that do not currently exist within the agency.
- The selection comes with a commitment of at least $94 million over the course of the five-year award with the potential for renewal for another five years based on performance. URI will provide matching funds of about $3 million on the federal funding that the awardee requested over the five-year term.

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OECI proposes to:

- Involve the broadest possible base of ocean scientists and explorers in the NOAA National Ocean Exploration Program
- Carry out core NOAA ocean exploration campaigns, as determined by OER
- Enhance the national exploration capability by developing a family of mobile remotely operated vehicles and other assets for deployment on vessels of opportunity and by increasingly integrating autonomy (undersea, surface, and aerial vehicles) into exploration planning and mission execution
- Improve the utility and accessibility of all data and samples collected by exploration campaigns
- Interact in real time with onshore scientists during missions executed by telepresence, placing emphasis on needing fewer people at sea each year and providing access to ocean exploration to broader audiences/more people on shore
- Improve outreach to and training of underrepresented populations, students, and the emerging workforce

A priority for OECI is to transition away from the current methods of deep ocean exploration by developing and deploying smaller, less expensive, mobile remotely operated vehicles and autonomous underwater vehicles. These next-generation instruments will help carry out ocean mapping and exploration missions and can be launched from a wide variety of oceanographic vessels, such as the new National Science Foundation regional class Research Vessel *Resolution*, soon to be homeported at URI's Narragansett Bay Campus.

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Fiscal Year 2019 Activities

- Initial funding for CI administrative start-up
- Initial projects
  - Continued mapping and characterization of Pacific EEZ
  - Demonstration of new mobile/fly-away system in Gulf of Mexico
  - Demonstration of Offshore Service Vessel use for ocean exploration in Gulf of Mexico
  - Operational hardening/testing of WHOI and USM ROV and AUV assets
  - Development of ship of opportunity multibeam system (+ future AUV)

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Work Program Development

- Negotiation among partners to meet OER and NOAA requirements
- Opportunity to advance
  - Industry partnerships
  - New modes of operation using a variety of platforms and systems
  - Autonomy (vehicles, platforms, processing)
  - Many other areas
- First major planning meeting December 2019