

# Happy Halloween!



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# Dear Fellow Explorers,

### OECI Years 6 - 10: Looking back and looking ahead

With the recent news of NOAA renewing the OECI for five more years (years 6 - 10), it is a great opportunity to reflect on what we have accomplished during the first five years. This reflection is necessary to identify our strengths, exploration gaps we have not yet filled, and areas where we can improve moving forward.

The overarching mission of OECI is to accelerate and advance ocean exploration. We have worked towards achieving this goal with almost 700 days at sea, more than 300 uncrewed systems deployments, and more than 1.5 million km2 of the seafloor mapped. A major component of advancing ocean exploration is developing new technologies and seeing them through to the operations stage. Examples of this include UNH acquiring the AS VDriX, making modifications to the vehicle, and using DriX in tandem with WHOI's AUVMesobot to develop a new sampling method: Verified Directed Sampling. The OECI has also adapted thein situ eDNA sampling equipment originally designed for AUVMesobot by WHOI and Aquatic Labs to be utilized across multiple platforms. During our fourth year, the OECI was the first to deploy an in situ raman+fluorescence spectrometer in collaboration with Impossible Sensing.

Another OECI focus for advancing ocean exploration is training the next generation of ocean explorers and engaging the broader community, especially underrepresented and underserved communities. The OECI has aided in funding 191 university student opportunities, including HBCU students and community college students through the leadership of USM and URI respectively, and accumulated over 4.9 million views of OET's live stream, which were broadcast in 4 different languages to increase access for local communities in the Pacific.

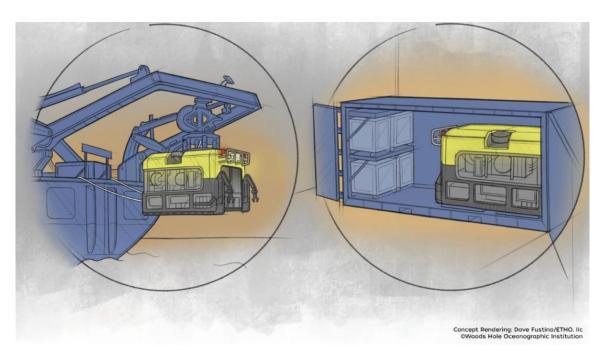
The OECI is proud of all the work it has accomplished, however, we always seek to improve. Focused areas of improvement include amplifying early career voices to OECI leadership. This has been accomplished though appointing Associate Council of Fellows members which provides early careers the opportunity to participate in the proposal generation process. The OECI will also host its first graduate student conference in 2025 to build a stronger community across institutions among graduate students. The OECI is also engaging with the broader ocean exploration community by hosting the 2024 National Ocean Exploration Forum earlier this month with a focus on telepresence.

The ocean is vast and most of it remains unexplored. To address this, we must expand our capabilities to explore more efficiently and effectively, and years 6-10 will be filled with exciting opportunities to do just that. Applying the advancements of years 1-5 (including 47 technology transitions for ocean exploration equipment), we will continue our work in remote Pacific Islands, the Gulf of Mexico, the Atlantic and the Great Lakes. We will advance our uncrewed systems operational paradigms, and devise and support education and engagement programs targeted at underserved communities.

None of this work – past, present, and future – would be possible without funding from NOAA Ocean Exploration, other federal funders, and the collaborative efforts from all affiliated institutions including URI, WHOI, USM, UNH, and OET. We are thrilled to continue exploring, engaging, and improving over the next five years!

#### Deepest Regards, Adam

# WHOI and OECI receives NSF and NOAA funding for a new family of remotely operated vehicles



WHOI and OECI have received complementary awards from the U.S. NSF and NOAA to produce two medium-size Remotely Operated Vehicles (mROVs). The vehicles will support the growing demand to conduct research, exploration, and restoration on the seafloor and in the water column from ships with limited deck space and berthing. The vehicles are scheduled to begin construction in 2024, start engineering trials in late 2025, and be fully available for the scientific community in 2027.

Read the full press release here!

#### Long Range AUV in the Great Lakes

WHOI operates three Tethys-class long range AUV's (LRAUV), and this winter, they are heading to Lake Erie. Led by Dr. Mike Jakuba and in collaboration with NOAA GLERL and OECI, the LRAUV will perform surveys investigating plankton ecology during the winter months. While the AUVs were designed and built by MBARI, Jakuba's team at WHOI designed unique payloads for the vehicles based on project needs. For this project, the LRAUV will be equipped with a fisheries sonar, typical physical oceanographic instruments, and fluorometers.

In Lake Erie, all buoys with monitoring instrumentation must be removed every winter due to the potential of ice build up in the lakes. This project will provide data that is key to understanding how winter conditions may influence summertime algal blooms in the lake. The first LRAUV deployments will take place in early 2025 (January, February, and March) with one week-long deployments each month. The team will deploy the vehicle again in December 2025 and into 2026.

#### 2024 National Ocean Exploration Forum

From October 16-17, 2024, OECI hosted the eighth National Ocean Exploration Forum at the New England Aquarium, in Boston, Massachusetts. This forum brought together a targeted group of attendees from over 53 organizations, spanning commercial, federal, academia, philanthropy, and non-profit sectors. Following NOAA Ocean Exploration Director Jeremy Weirich's opening remarks, the three keynote speakers - Captain Bill Mowitt (NOAA UxS), Jelmer de Winter (Fugro), and Darlene Lim (NASA) - enlightened us with their perspectives on remote operations and the future of ocean exploration. During forum planning, OECI early career researchers received Science Facilitation Training. Throughout this two-day event, they facilitated four breakout sessions that focused on the following topics: Interoperability, AI/ML + Human/Situational Awareness, a Remote Operations Task Analysis, and a Cost-Benefit Analysis and Workforce Assessment for Remote Operations. Guided by these topics, each breakout room discussed how we can transition to more remote operations and identified the key challenges in moving ship-based operations to shore. These discussions were summarized during the panel discussions at the end of each day. Products from the forum will include a report and a publication, both of which will be publicly available. Lastly, a reception was held in the aquarium during which the attendees were able to network with colleagues and the expert, local oceanographers – the Aquarium's penguins.



#### **OECI Focused NOAA Ocean Exploration Science Seminar Series**

The OECI-focused NOAA Science Seminar series culminated yesterday with the final seminar: Operational Exploration in American Samoa. If you missed any of the live seminars, they are available on the ISC's YouTube page (linked below).

Seminar 1: Preparing for the Ocean Data Revolution

Seminar 2: Midwater Exploration through Multi-Vehicle Operations

<u>Seminar 3: Building the Blue Economy Workforce</u> <u>Seminar 4: Ocean Exploration in American Samoa</u>

## Announcements, Events, and Opportunities

#### 2025 DeSSC New User Program

The DeSSC invites postdoctoral researchers and early to mid-career faculty based in the United States to participate in a specialized workshop to facilitate their development of federally-funded research programs utilizing deep-submergence assets. This new user workshop will take place at the Woods Hole Oceanographic Institution from February 11 to February 13, 2024, and will include the annual DeSSC meeting on February 12th.

Online Application for travel and lodging support

Deadline: Friday, December 6, 2024

Questions? Contact Alice Doyle at alice@unols.org

#### MTS Call for Papers

Submissions for the Call for Papers for MTS Journal special issue on closing mapping gaps are due November 29, 2024. Find submission info <u>here</u>.

#### Ocean Dumping in Southern California Documentary

A documentary film, "Out of Plain Sight," focused on ocean dumping, will premiere at DOC NYC, the largest documentary film festival in the country. The film will premiere in New York City on Saturday, November 16 at 6 pm ET at the Village East Theaters by Angelika, and a second screening on Monday, November 18 at 9 pm ET. DOC NYC also offers a "virtual screening" option for folks to watch the movie at home during a limited window of time in November. Here is the link to get in-person or virtual screening tickets.

#### **Funding Solicitation**

The National Offshore Wind Research & Development Consortium intends to run a competitive solicitation titled "Solicitation 4.0 – Innovations in Floating Offshore Wind," with a funding pool of \$10.6 million.

Proposal submissions due - November 14, 2024 by 3pm PDT

Find more information here:

https://nationaloffshorewind.org/solicitations/

#### **Hydrographic Services Review Panel**

The solicitation period for new Hydrographic Services Review Panel members is now open!

https://www.federalregister.gov/documents/2024/06/03/2024-12106/hydrographic-services-review-panel

2025 is a "bye" year, so the closing date for this solicitation is February 21, 2025 with new members, if selected, starting their four year term on January 1, 2026.

Please see the linked Federal Register Notice above for more information and please share broadly! We are looking for an array of experts in the disciplines related to hydrographic data and services, marine transportation, port administration, vessel pilotage, coastal and fishery management, and others from all regions of the country.

Inner Space Center | Inner Space Center University of Rhode Island Graduate School of Oceanography | Narragansett, RI 02882 US

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