



Agency Brief UNOLS 2019

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**Re-invigorating Navy-relevant ocean
science in the undersea warfare domain**



Research Facilities – Funding Priorities

Oceanographic Research Ship Time – **ONR approved science**

Atmospheric Research Aircraft Time – **ONR approved science**

Arctic Research Vessel Ship Time - *USCGC Healy*

ONR owned Research Vessel Emergent Repair and associated Ship Time

Vessel Compliance, Upgrades, safety improvement and “Greening”

UNOLS Office, ARF group buys

Select Capital Projects

DURIP for permanent install on ARF Vessels

Stable Budget – Just under \$20M/year (including DURIPs)

... but Mid-life Contingency Costs competing with core funding

Congressional Plus up for Midlife was insufficient to meet demand



Research Facilities - Initiatives

Accepting Funds from Navy Research Lab and Navy Oceanographic Command
Multi-year grant with infrequent operators – OSU, UDEL, URI and LUMCON

Open House – Port Visits of Opportunity – Decadal Oceanographic Awareness

Example: R/V Sally Ride at AGU in San Francisco Dec 2019

Awareness with Navy Operating Forces

Example: SEAL exercise aboard R/V Sally Ride

Coordination with Navy Post Graduate School – Oceanography students to sea

Example: CLASI Projects in Monterey Bay

Coordination with Military Sealift Command/Navy Oceanography – T-AGS

Seek lessons learned – maybe funds/mission for ARF?

Visibility in Foreign Research Vessels working in U.S. EEZ

Enhanced approval for Foreign Shipyard work if extended overseas operations

ABS Service Life evaluations of Global's post Mid Life Refit



Research Facilities – Dear Colleague Letter Under Sec of Defense (Research) Oct 10 2019

- A. ITAR generally prohibits foreign persons from **collaborating** with US citizens on projects pertaining to items on the USML without export licensing
- B. Benefit vs Risk of reciprocity
- C. Will the work be Published?

Exports = Disclosing (including oral or visual disclosure) or transferring technical data to a foreign person

"Performing a defense service on behalf of, or for the benefit of, a foreign person, whether in the United States or abroad"

Where the definition of "defense service" includes "the furnishing of assistance (including training) to foreign persons, in U.S. or abroad in the design, development, engineering, manufacture, production, assembly, testing, repair, maintenance, modification, operation, demilitarization, destruction, processing or use of defense articles.



Task Force Ocean Charter

<https://www.onr.navy.mil/task-force-ocean> Visit our Website

At the direction of the Chief of Naval Operations, the Oceanographer of the Navy, in coordination with the Office of Naval Research (ONR), initiated ***Task Force Ocean*** in 2018 with three primary objectives:

- To re-invigorate U.S. Navy-relevant ocean science
- To increase the Navy's capability and capacity to understand and exploit knowledge of the ocean environment
- To better leverage the full range of science and technology (S&T) development in the U.S.



TFO Core Components



Grand Challenge: Contribute to the maintenance of U.S. undersea warfare dominance through better understanding and exploitation of the environment

Primary Components

- Tactical Oceanography Symposium Series
 - Scientist-to-Sea Program
 - Targeted Research



Tactical Oceanography Symposium Series



Semi-annual classified forum for ~ 115 participants to bring together experts from across fundamental research / system development / operational usage

- TOS 1 “Lone-sub Operations” Oct 2018
 - San Diego – co-hosted by UWDC
- TOS 2 “Theater ASW” June 2019
 - Stennis Space Center, MS – co-hosted by CNMOC
- TOS 3 “Distributed Systems” Nov 2019
 - Chantilly, VA
- TOS 4 – Topic TBD May 27-29
 - San Diego, CA





TFO Scientist-to-Sea Program



- Facilitating visits to submarine sonar trainers, tours of submarines, and/or short underway periods in order to:
 - Improve Scientists' understanding of Navy operational challenges in tactically exploiting the ocean environment
- 42 participants thus far (group size is limited by trainer space)
- Locations: Groton / San Diego / Kings Bay / Bangor
- POC: CDR Natalie Laudier





TFO Research



- FY19 ONR Special Notice Solicitation Key Thrust Areas:
 - Linking physical oceanographic variability with acoustic propagation
 - Analysis of large data sets using artificial intelligence and machine learning techniques
 - Through-the-sensor environmental characterization
 - Advanced signal processing techniques
- \$60M+ awarded across 38 projects
 - Selected from 251 White Papers
 - 18 universities, 4 UARCs/FFRDCs, 4 Navy labs/centers, & 3 industry partners
 - Support for 35 Grad Students & 19 Post Docs
 - **Research Vessel time for 6 of the 39 projects.**
- Next Solicitation - TBD

