

April 28, 2025

## Institutional Support for U.S. Academic Research Fleet Cyber Infrastructure

The U.S. Academic Research Fleet (ARF) is critical in the exploration and understanding of our planet. The ARF consists of 17 oceangoing research vessels that serve multiple federal agencies, coordinated under the auspices of the University-National Oceanographic Laboratory System (UNOLS). These ships are fundamentally important to America's global research objectives, and conduct federally-sponsored basic research addressing urgent societal issues involving human health and safety, offshore energy and resources, national security, ocean hazards, biological and physical ocean processes, and all scientific endeavors requiring observations at sea.

As directors, deans, and presidents of academic institutions with students, faculty, and staff that use ARF oceanographic research vessels we urge Congress to ensure the ARF has ***ongoing support to enable satellite communications, shoreside and shipboard digital infrastructure, and technical support for the safe, secure, and effective operation of our research vessels.***

We extend our sincere appreciation to Representative Vince Fong (R-CA) and Representative Haley Stevens (D-MI) for their bipartisan leadership in developing and introducing the ANCHOR Act (H.R. 1223). This important legislation will ensure that U.S. scientists will have the tools and connectivity needed to conduct advanced research, safeguard critical communications, and maintain America's global leadership in ocean science and technology.

As globally-ranging laboratories that operate in the most remote areas of the world, research vessels face unique challenges in providing capable networking and require specialized infrastructure. Scientists and their sensors must communicate in real-time with others on board, as well as with scientists, services and devices in the cloud or on shoreside networks. 21st century oceanographic science and vessel operations require mission-critical cyberinfrastructure to meet operational objectives and enable scientific innovation in seagoing research.

Additionally, as U.S. strategic assets increasingly become targets for cyberattacks (including the ARF), robust cyberinfrastructure is critical. The sensitive research conducted on these ships ensures the nation remains a world leader in innovation and national security, and foreign competitors, such as China, are seeking opportunities to acquire it via offensive cyber operations.

ARF funding must be increased to appropriately support capabilities required for robust, performant and secure networking, in order to mitigate cybersecurity threats as outlined in the [JASON advisory group study \(2021\)](#).

Sincerely,



Bruce Appelgate, PhD  
UNOLS Chair on behalf of:

Bigelow Laboratory for Ocean Sciences

College of Earth, Ocean, and Atmospheric Sciences / Oregon State University

College of Fisheries and Ocean Sciences / University of Alaska Fairbanks (UAF)

Lamont-Doherty Earth Observatory of Columbia University

Large Lakes Observatory, University of Minnesota Duluth

Louisiana Universities Marine Consortium



















Rosenstiel School of Marine, Atmospheric, and Earth Science / University of Miami

School of Ocean, Earth, Science and Technology / University of Hawai'i

Scripps Institution of Oceanography / UC San Diego

University of Washington - School of Oceanography

Woods Hole Oceanographic Institution

<b>Global Class</b> 40 scientists, worldwide range	 Atlantis	 Roger Revelle		 Thompson	 Marcus Langseth	 Sikuliaq
<b>Ocean Class</b> 24 scientists, oceanic range	 Kilo Moana	 Neil Armstrong	 Sally Ride			
<b>Regional Class</b> 20 scientists, continental shelf to abyssal plain	 Endeavor	 Atlantic Explorer	 Hugh Sharp			
<b>Coastal Class</b> 15 scientists, Coastal and local	 Robert G. Sproul	 Blue Heron	 Rachel Carson	 Savannah	 Walton Smith	 Pelican

*The U.S. Academic Research Fleet is composed of 17 oceanographic vessels operated by thirteen different research institutions distributed on each coast and the Great Lakes. Each class of vessel specializes in different research portfolios and geographical range, but all share a need for secure, research-grade broadband internet, digital communications and information technology support.*