



Community Updates

Project Funding Status Updates needed

The 2023 scheduling process for large ships has begun. **We need your help!** If you have recently received project funding information **please login to MFP.us to update the funding status.** This will inform the schedulers what needs to be scheduled. Failure to update funded projects may delay project scheduling. Please help the process and update ALL project funding - funded and declined.

Information on how to update funding status is [here](#). It is a simple 3min process.

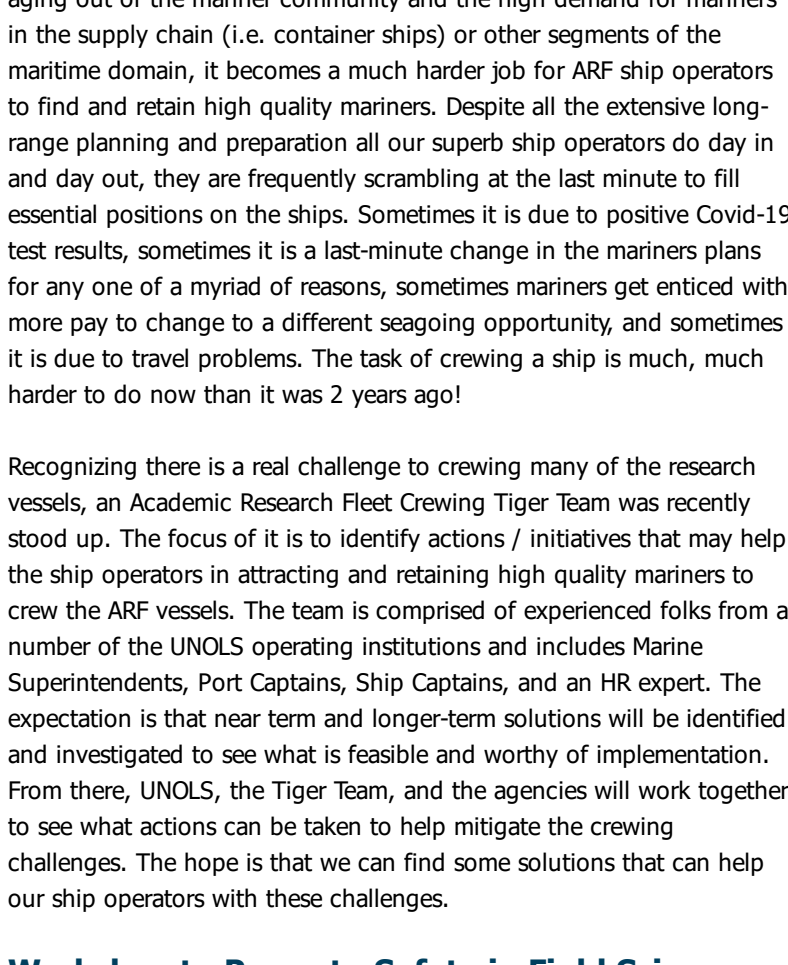
Multibeam Advisory Committee (MAC) Update

by: Vicki Ferrini, Paul Johnson, Kevin Jerram

The Multibeam Advisory Committee (MAC) was formed in 2011 to optimize the quality of seabed mapping data by developing a fleet-wide approach for calibrating, operating and monitoring multibeam systems of the US Academic Research Fleet (USARF). The MAC works closely with vessel operators through routine quality assurance testing (QATs) for existing systems, conducting sea acceptance trials (SATs) for new installations, and reviewing system configurations. Science user support includes providing information about system performance that may influence survey plans, and offering guidance to help optimize data acquisition during surveys and transits. MAC support is available on request by contacting the MAC helpdesk (mac-help@unols.org).

The MAC offers both on-board and remote support for vessel operators, and has supported nearly all vessels in the USARF (some on an annual basis) over the last few years. Wherever possible, the MAC uses established sites to perform a series of tests to gather information about swath coverage, swath accuracy, noise levels, and hardware health for multibeam systems (see figure). Many of the tools used for these assessments are publicly available as Python applications that can be found through the MAC website (<https://mac.unols.org>). The website also makes available reports, cookbooks and other technical resources to help with data acquisition.

Several vessels have completed major upgrades recently, while others are planning similar investments soon, and the MAC is preparing for another productive season in 2022. Given the sparseness of global ocean mapping data and the capabilities of the USARF, acquiring data during transits and cruises where mapping is not a primary science objective provides valuable data resources for the science community. The efforts of the MAC help to ensure that these data are of good quality even when a dedicated mapping specialist is not onboard. Please visit the MAC website and reach out to the help desk with any questions about multibeam data acquisition.



Chief Mate Heather Galtner demonstrates how to use an emergency fire pump during weekly drills aboard Roger Revelle

Addressing Crewing Challenges in the Academic Research Fleet

The UNOLS ship operators are all facing tremendous challenges these days in crewing the ships. COVID-19 has taken its toll on mariners through a constant regimen of quarantines/self-isolations, lock downs during port calls, disrupted shipboard routines, Covid cases in their own families, etc. Couple this fatigue along with other factors such as the aging out of the mariner community and the high demand for mariners in the supply chain (i.e. container ships) or other segments of the maritime domain, it becomes a much harder job for ARF ship operators to find and retain high quality mariners. Despite all the extensive long-range planning and preparation all our superb ship operators do day in and day out, they are frequently scrambling at the last minute to fill essential positions on the ships. Sometimes it is due to positive Covid-19 test results, sometimes it is a last-minute change in the mariners plans for any one of a myriad of reasons, sometimes mariners get enticed with more pay to change to a different seagoing opportunity, and sometimes it is due to travel problems. The task of crewing a ship is much, much harder to do now than it was 2 years ago!

Recognizing there is a real challenge to crewing many of the research vessels, an Academic Research Fleet Crewing Tiger Team was recently stood up. The focus of it is to identify actions / initiatives that may help the ship operators in attracting and retaining high quality mariners to crew the ARF vessels. The team is comprised of experienced folks from a number of the UNOLS operating institutions and includes Marine Superintendents, Port Captains, Ship Captains, and an HR expert. The expectation is that near term and longer-term solutions will be identified and investigated to see what is feasible and worthy of implementation. From there, UNOLS, the Tiger Team, and the agencies will work together to see what actions can be taken to help mitigate the crewing challenges. The hope is that we can find some solutions that can help our ship operators with these challenges.

Workshop to Promote Safety in Field Sciences Report Available

In March 2021, California State University Desert Studies and the Consortium for Ocean Leadership held the Workshop to Promote Safety in Field Sciences. This workshop focused on addressing the special problems of remote research settings in harassment prevention, target support, and incident response.

About 70 participants representing field practitioners from across the natural sciences and social scientists with expertise in the causes and impacts of gender-based harassment attended this three-day virtual meeting. The workshop resulted in 52 recommendations targeted at improving field science culture change, as well as misconduct accountability, policy, and reporting. Diversity, equity, inclusion, and justice (DEIJ) and trainings were additional cross-cutting topics.

The recommendations focus on improving experiences for field participants of all backgrounds and identities. They represent a starting point to inspire and guide scientists, ocean platforms, field stations, academic institutions, professional societies, funding agencies, and other actors in field science in improving the science environment in a collaborative, community-based way. The workshop report of recommendations is available at <https://oceanleadership.org/field-science-safety-workshop/>.

MSR Clearance Updates from the US State Dept.

Representatives of the US State Department Office of Ocean and Polar Affairs gave a highly informative presentation at the UNOLS Annual meeting last fall. Some highlights included:

- The importance of submitting clearance requests early, ESPECIALLY as the world deals with the COVID-19 pandemic.
- Recent MSR Trends and Challenges
- The update in requirements for certain countries.
- The number of outstanding preliminary reports for the fleet.

This presentation is highly recommended for PIs who will be requesting Marine Science Research Clearances in the next few years. The full presentation can be found [here](#). A video recording of the presentation can be found [here](#).

Committee News

2021 RVTEC Annual Meeting a Great Success

The 2021 RVTEC Annual Meeting took place the last week of October. For the second time it was virtual and intended to break attendance records. The event platform Whova was utilized allowing for a much more streamlined event than the previous year which made attendance much simpler. Of the 210 registrants, 184 logged in and attended some portion of the meeting. The average attendance for virtual events on the Whova platform is approximately 70% which we blew out of the water with our attendance rate of 87%.

While the UNOLS community continues to operate in a virtual world of remote meetings it only seemed natural to make it as accessible as possible, for even our colleagues out at sea. To that end, participants were encouraged to utilize the community forum feature of the platform which allowed bandwidth limited individuals to participate in conversations without their browser attempting to download a streaming video.

If you missed RVTEC or are interested in revisiting any of the presentations, the sessions are available as a [playlist](#) on the UNOLS YouTube Channel.

DeSSC Community Meeting switched to virtual

Due to the changes in the Ocean Science Meeting, the Annual DeSSC Community will now be held virtually on Friday 25 February 2022 at 1PM Eastern Standard Time. This is a community meeting that will focus on deep submergence science projects from 2021 as well as other DeSSC business. Anyone interested in deep submergence science is encouraged to attend. Stay tuned to the meeting page [here](#) for more information.

SCOAR to hold a Town Hall at upcoming Ocean Sciences Meeting.

The Science Committee on Oceanographic Aircraft Research (SCOAR) will hold a Town Hall at the upcoming Ocean Sciences Meeting entitled *Expanding the Reach of the Research Fleet: Autonomous (and Piloted) Airborne Systems in Support of Ocean Sciences*.

The townhall is scheduled for Friday, 25 February 2022, at 12:00 PM Eastern Standard Time. It will include a series of lightning presentations where scientists are invited to present one slide in 1-3 minutes discussing any of the following:

- how they have used aircraft in their respective research
- how they would like to use aircraft to support their science
- ideas on the future use of aircraft to support marine science

We hope that that this will be an interactive, community-building discussion that includes newcomers and veterans. If you are interested in giving a lightning talk, please sign-up [here](#).

New Committee Members

All of our committees are staffed by volunteers and we are grateful for their contributions of time and experience. We would like to extend a warm welcome to our newest committee members:

- Laurie Juraneck / OSU - AICC Chair
- Andrew Thurber / OSU - DeSSC Chair
- Jules Hummon / UH - RVTEC Chair
- Maureen Walczak / OSU - Council
- Amy Wagner / MLML - Council
- Chris Cox / NOAA - AICC

Big Thank You to Outgoing Committee Members

Thank you so much to the following individuals for their contributions to the UNOLS community:

- Anna-Louise/PSU - DeSSC Chair
- Sam Laney/WHOI - AICC Chair
- Ola Persson/Univ. of Colorado - AICC
- David Smith/URI - Council
- Lee Ellet/SIO - RVTEC Chair
- Rhian Waller/UMaine - Council

Fleet Highlights

HOV ALVIN Science Verification Expedition postponed

After completing a record 5,338 meters (17,513 feet) dive, post-dive visual inspection of the HOV *Alvin* revealed unexpected damage to several attachment points of the specialized syntactic foam. As a result, further test dives were postponed to allow for thorough inspection of the sub, damage assessment and repairs, and, if necessary, modifications made to ensure its continued safe operation. More information on the test dives can be found [here](#).

Due to these delays, the HOV Alvin Science Verification Expedition (SVE) was postponed. Stay tuned to the R/V ATLANTIS schedule at [MFP.us](#) for updates to the SVE schedule.

R/V ARMSTRONG and PI D'Hondt/URI to challenge piston coring depth record.

This February, the R/V NEIL ARMSTRONG and MarSSAM will be conducting an exciting cruise for Dr. Steve D'Hondt/URI. The fundamental objective of this project is to determine how the subsurface microbial communities and activities across a gradient of oceanic depth zones (sublittoral, bathyal, abyssal, hadal) are impacted by the pressure of the surrounding water. The project will interrogate the genomic composition and community metabolic rates of the subsurface sedimentary communities over this full range of ocean depths. Experiments will be conducted to determine the pressure-dependence of potential processes and genes that are preferentially expressed at in situ pressures by sublittoral, bathyal, abyssal and hadal subsurface communities.

This project will involve sediment cores in and around the Puerto Rico Trench at water depths ranging from 50 to ~8400 m. Their deepest cores could challenge the [piston coring record](#) set on Friday 14 May 2021 onboard the R/V Kaimai. The R/V Kaimai cored to a water depth of 8,023m (26,322ft) and recovered a 37.74m core in a 40m barrel string.

Other cruise operations will include, gravity cores, multi-cores, an autonomous CTD/Niskin system, and hydrocasts with a CTD/Niskin Bottle Rosette.

Good luck to Dr. D'Hondt, OSU MarSSAM group, and the R/V ARMSTRONG on this exciting expedition!

Featured Ship - R/V OCEANUS



Oceanus returning to the OSU pier

Name: R/V OCEANUS

Year Built: 1975

Mid-Life Refit: 1994

Place Built: Sturgeon Bay, Wisconsin

Science Berthing: 13

Crew Berthing: 12

Owner: National Science Foundation

Class of Vessel: Ocean/Intermediate Class Vessels

The Research Vessel *Oceanus* built for the National Science Foundation by Peterson Builders Inc., Sturgeon Bay WI, completed its last science mission as a vessel in the US Academic Research Fleet on November 21, 2021. *RV Oceanus* was delivered on October 28, 1975, as the first of the three "Oceanus class" vessels - *Oceanus*, *Wecoma* and *Endeavor*. At 177 ft in length and with a deck area of 2,159 sq. ft, *Oceanus* accommodates a crew of 12 and a scientific party of 15 for up to 30 days at sea.

Oceanus was operated by Woods Hole Oceanographic Institution until January 2012 when it was transferred to Oregon State University (OSU) after retirement of *Wecoma*. In 1994, the *Oceanus* underwent a major mid-life refit, which included the construction of a new deck house and new pilot house. These additions eliminated difficult to maintain spaces in the ship's hull and superstructure and were not included in the *Wecoma* mid-life.

Oceanus has spent most of its time working along the US West Coast since 2012, with occasional trips to the equator, Hawaii, and Aleutians. The multi-purpose ship has been used to support mooring deployments for the Ocean Observatories Initiative, placement and recovery of Ocean Bottom Seismometer (OBS) arrays for the Cascadia Initiative, CalCOFI, and many other programs focused on studies of the NE Pacific and California Current Ecosystem. Clare Reimers was the chief scientist for the first (OC2104A) and last (OC2111A) cruises of the vessel from OSU facilities in Newport OR. After the vessel lists were secured at OSU facilities in Newport OR, Master Jeremy Fox marked the *Oceanus*' end of service by ringing 8 bells, a tradition at a mariner's death or retirement to say goodbye. Fox said with emotion: "Oceanus, your watch is over, we appreciate your service, rest in peace". After 45 years as a platform for countless at-sea accomplishments, the UNOLS community and the ship's dedicated crew will certainly miss *Oceanus*. OSU will soon pass the Order of the Albatross to the University of Rhode Island as *Endeavor* assumes the distinction of being the oldest ship in the fleet.

Moored lander recovery. Daryl Swensen and Andrew Wloogen handling the line. Photo by David Baker

View across the stern of Oceanus at sunset of final cruise. Photo David Baker

Updates to MFP.us

Viewing Schedules

The 2022 U.S. Academic Research Fleet (ARF) schedules are now available at [mfp.us](#). **You do not need to login and view the schedules.** Simply go to the [mfp.us](#) home page and click the word "Schedule" at the top right corner. Choose the ship to view (click Ships), the time period you would like to see (click on the date) and also what type of view - Hybrid, Timeline, Map.

More details on how to view the schedules is [here](#).

To unsubscribe from UNOLS News, please reply to this email with the word "unsubscribe" in the body. Thank you!

Featured Photo

R/V OCEANUS and a RHI



Photo courtesy of OSU/HTO crew and Andrew Wloogen

Upcoming Events

2022 MSROC Winter Meeting

28 January 2022
Virtual Meeting

SCoAR Town Hall

25 February 2022
Ocean Science - 937-TH19

2022 DeSSC Annual Community Meeting

25 February 2022
Virtual Meeting

2022 DeSSC Spring Meeting

25-26 May 2022
Woods Hole Oceanographic Institution

Did you know...

UNOLS has a Youtube Channel!

If you've missed recent UNOLS meetings, you may find them on our YouTube Channel. Recent Playlists include the UNOLS Annual Meeting and 2021 Virtual RVTEC. Visit our YouTube Channel [here](#).

UNOLS

UNIVERSITY NATIONAL OCEANOGRAPHIC LABORATORY SYSTEM

From the Editor

Thank you to all who contributed information and articles for this issue of UNOLS News. Articles are always welcome and encouraged. Copy, links, or images and questions can be submitted by e-mail to media@unols.org.

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