

# US Academic Research Fleet

## 30 Day Status and Recommendations

17March20

UPDATES:

16Mar20

- Canales/OCEANUS Cruise Information – OBS on legs 1 and 3
- OBSIC Canadian cruise start date of 15July20.

17Mar20

- Minor typo updates

### **Discussion**

The UNOLS Council Spring teleconference meeting was held 11-12 March 2020. The main topic of discussion was the impact of COVID-19 on operations of the U.S. Academic Research Fleet ships. The recent declaration of a pandemic, combined with mandatory travel restrictions, the President's Address to the Nation, and concerns about personal safety, has significantly changed stakeholder perspectives on how to manage the risks associated with current and planned ARF operations. A subset of the issues include: Travel bans are preventing research cruise science team members from getting to ports of embarkation; ship operators do not have the equipment needed to properly test new arrivals; ship operators are not equipped to handle travelers who make it to the ship and then exhibit symptoms or if they test positive even if test kits were available; how to mitigate the risk of a ship forced to be quarantined at sea in the event a positive case is discovered after sailing. After long discussion, the consensus position of the stakeholders was to recommend to the Federal agencies that a 30 day pause in ARF operations be implemented immediately.

### **UNOLS Recommendation**

After UNOLS Office consultation with the ARF vessel operators and Chief Scientists for cruises planned on UNOLS designated vessels for the next 30 days, and discussion within the UNOLS Council, UNOLS recommends to NSF and ONR that a 30-day revised plan of vessel activities be implemented. During this time, we will continually monitor the situation and update as appropriate. A summary of each vessel's activities during this time frame are summarized below. We recognize these are the immediate cruises impacted, but also recognize that downstream effects in scheduling will be inevitable.

There are several exceptions to the recommendation for this 30-day temporary pause in operations, either because ships are currently deployed or are so localized that a case-by-case approach may be considered.

Once the situation stabilizes and we see a path forward to re-start research vessel operations safely, then rescheduling of lost work will commence

It is recognized that there are considerable financial impacts related to this pause. Those will be addressed in the future.

## Cruises of note:

Some UNOLS Operators, after reviewing their protocols for risk assessment and determining that the current risk level is low, have made the decision to continue operations in the next 30-days. These are:

- RV LANGSETH / Current Cruise.
- RV RACHEL CARSON local cruise departing 1 April

## RV ATLANTIC EXPLORER

*Current Status:* ATLANTIC EXPLORER is in their homeport of Bermuda.

*Scheduled operations in the next 30 days:*

Chi Sci	Project	Start Date	End Date	Ports of Call	Funding Agency	Cruise Information
Johnson	BATS	03/14/20	03/19/20	Bermuda	NSF	This is a monthly time series with international participants.
Johnson	BATS-Bloom	04/03/20	04/05/20	Bermuda	NSF	This is a seasonal cruise so may be difficult to reschedule.

*Current Risk Mitigation Plans:*

Using UNOLS guidance posted on the UNOLS Website BIOS has been conducting screening of science party personnel as well as proactively discussion risks with Chief Scientist to assess risk jointly. BIOS has no test kits and minimal stock of the recommended supplies on board.

*Recommendations:*

It is recommended that RV ATLANTIC EXPLORER stay in its homeport of St. George's, Bermuda.

## RV ATLANTIS

*Current Status:* ATLANTIS is currently in their home port of Woods Hole, MA.

*Scheduled operations in the next 30 days:*

Chi Sci	Project	Start Date	End Date	Ports of Call	Funding Agency	Information
Siegal	EXPORTS	04/14/20	05/31/20	Woods Hole, MA	NASA	EXPORTS North Atlantic has a diverse science team originating in various parts of the US. Multi-ship operation (coordination with RRS Discovery (UK) and R/V Sarmiento (Spain). NASA seeks to reschedule for 2021 although it is noted that the USARF will not have a global in the Atlantic in 2021.

*Current Risk Mitigation Plans:*

WHOI has developed a detailed questionnaire for crew and science party members to identify at risk personnel. In addition, WHOI ISM plans are being updated to guide the ship in dealing with any issues that arise from the virus.

*Recommendations:*

It is recommended that the ATLANTIS stay in their home port of Woods Hole, MA and readies for the upcoming mid-life refit. The EXPORTs cruise should be rescheduled for 2021 if at all possible.

## RV BLUE HERON

*Current Status:* The vessel BLUE HERON is in their homeport of Duluth.

No operations scheduled for the next 30 days.

## RV ENDEAVOR

*Current Status:* ENDEAVOR is currently underway on the Lohmann cruise. They are scheduled to come into Praia, Sao Tiago, Cape Verde on 17Mar20.

*Scheduled operations in the next 30 days:*

Chi Sci	Project	Start Date	End Date	Ports of Call	Funding Agency	Information
Lohmann	Tropical Atlantic BC	24Feb20	17Mar20	Cape Verde	NSF	This cruise is underway.
Transit	Tropical Atlantic BC	20Mar20	28Mar20	Cape Verde/Port Everglades FL		Transit cruise to reposition the vessel for the next cruise.
Johns	RAPID-MOCHA 2019	5Apr20	22Apr20	Port Everglades, FL	NSF	Continuous (time series) measurements of the shallow and deep western boundary currents east of the Bahamas, at 26.5N, as part of a larger international program to monitor the Atlantic meridional overturning circulation. The science team is all local (RSMAS) but they understand the need to postpone.

*Current Risk Mitigation Plans:*

URI has developed protocols for assessing risk and addressing the virus issue onboard should anyone demonstrate symptoms of the virus.

*Recommendations:*

The ENDEAVOR must stop in the Cape Verde to refuel and reprovision. It is recommended that she then return to her home port of Narragansett, RI. The Johns/RAPID-MOCHA cruise should look to be rescheduled per the guidelines above.

## RV F.G. WALTON SMITH

*Current Status:* RV WALTON SMITH is currently in their home port of Miami, FL.

*Scheduled operations in the next 30 days:*

Chi Sci	Project	Start Date	End Date	Ports of Call	Funding Agency	Information
Kelble	SFER	3/23/20	3/28/20	Miami, FL	NOAA	One of 5 cruises for this project in this year.
Custals	DOC CRM	3/31/20	3/31/20	Miami, FL	NSF	One of two single-day trips in a 3 year cycle for collection of 750 m water in Florida Strait.
Rosenblume	Solving mystery OC	1Jul20	3Aug20	French Guiana	NSF	Coastal expedition to Guianas mudbanks region (Guyana, Suriname, French Guiana, Brazil) to collect suspended sediment, water samples, and multicores at 5 cross-shelf transects (maximum 80 nm linear distance of transects).PI has written to the NSF asking how to prepare.

*Current Risk Mitigation Plans:*

Applying the Guidelines posted on the UNOLS Website for screening personnel and assessing risk.

*Recommendations:*

It is recommended that the RV WALTON SMITH stay in their home port of Miami, FL. The operator should look into rescheduling of the 2 cruises affected by the pause.

## RV HUGH R. SHARP

*Current Status:* HUGH SHARP is currently in their home port of Lewes, DE.

*Scheduled operations in the next 30 days:*

Chi Sci	Project	Start Date	End Date	Ports of Call	Funding Agency	Information
Gawarkiewicz	Shelfbreak PO TFO	3/17/20	3/18/20	Lewes, DE	Navy	Hydrographic surveys over outer continental shelf and upper continental slope in the vicinity of the OOI Pioneer Array. PO component of the Task Force Ocean New England Shelf break Acoustic Experiment

*Current Risk Mitigation Plans:*

Applying the Guidelines posted on the UNOLS Website for screening personnel and assessing risk.

*Recommendations:*

It is recommended that the HUGH SHARP stay put in their home port of Lewes, DE

## RV KILO MOANA

*Current Status:* RV KILO MOANA is currently in the shipyard in Portland, OR

*Scheduled operations in the next 30 days:*

Chi Sci	Project	Start Date	End Date	Ports of Call	Funding Agency	Information
	Shipyard	3/17/20	05/03/20	Portland, OR	ONR, MOSA	The vessel will be in the shipyard for the duration. Further delays are expected as workers are affected by the virus.

*Current Risk Mitigation Plans:*

The shipyard has implemented an “essential personnel only” policy.

*Recommendations:*

It is recommended that the KM proceed as planned in the shipyard. It is anticipated that *Kilo Moana* will be delayed in completing the shipyard period due to COVID-19 impacts on the shipyard’s workforce and limitations on travel for tech reps.

## RV MARCUS G. LANGSETH

*Current Status:* RV LANGSETH is underway to American Samoa where it will stop for fuel and provisions.

*Scheduled operations in the next 30 days:*

Chi Sci	Project	Start Date	End Date	Ports of Call	Funding Agency	Information
Rupert	Hydro Survey	01/23/20	05/05/20	American Samoa , TBD	Navy	Hydro survey cruise.

*Current Risk Mitigation Plans:*

Applying the Guidelines posted on the UNOLS Website for screening personnel and assessing risk.

*Recommendations:*

It is recommended that the LANGSETH continue on the current cruise. Still to be determined is its next port of call. It is expected that it will make its way to the Pacific NW as the next cruises (end of May) are scheduled for that area.

## RV NEIL ARMSTRONG

*Current Status:* The RV NEIL ARMSTRONG is currently in its home port of Woods Hole, MA.

*Scheduled operations in the next 30 days:*

Chi Sci	Project	Start Date	End Date	Ports of Call	Funding Agency	Information
Layton	AZMP Spring 2020	3/20/20	4/10/20	Woods Hole, MA / Halifax, Canada	DFO Canada	Fieldwork on the Scotian Shelf and Slope and Gulf of Maine to describe the hydrography and distribution of nutrients and zooplankton and servicing moorings. Cruise cancelled.
Twomey	Transit	4/12/20	4/14/20	Halifax, Canada /		This is a transit cruise to reposition for the next cruise.

				Woods Hole, MA		
Cruises beyond 30 day window						
Pleudemann	OOI	04/17/20	04/27/20	Woods Hole, MA	NSF-OOI	OOI Pioneer array service cruise. Rescheduling is essential to continue the OOI data delivery.

*Current Risk Mitigation Plans:*

WHOI has developed a detailed questionnaire for crew and science party members to identify at risk personnel. In addition, WHOI ISM plans are being updated to guide the ship in dealing with any issues that arise from the virus.

*Recommendations:*

It is recommended that the NEIL ARMSTRONG stay in its homeport of Woods Hole, MA.

## RV OCEANUS

*Current Status:* RV OCEANUS is currently in her home port of Newport, OR.

*Scheduled operations in the next 30 days:*

Chi Sci	Project	Start Date	End Date	Ports of Call	Funding Agency	Information
Wheatcroft	OSU Field Oceanography	3/20/20	3/29/20	Newport, OR	INST	This is a student cruise which was canceled by the Dean.
Thurber	Oregon Ship Time	4/1/20	4/1/20	Newport, OR	State Funded	This is a student cruise which was canceled by the Dean.
Farrar	S-MODE	4/7/20	4/22/20	Newport, OR	NASA	Cruise in conjunction with NASA fly-over operations. This cruise was postponed by NASA due to aircraft availability.
Cruises beyond the 30 day window						
Canales	Cascadia forearc	5/1/20	7/28/20	Newport, OR	NSF	Complex 4-leg cruise involving LANGSETH and OBSs. OBSs are on Leg 1 and Leg 3. Concerns over COVID-19 affecting the arrival of PI instrumentation that is to come from China. Canada MSR clearance required.

*Current Risk Mitigation Plans:*

Applying the Guidelines posted on the UNOLS Website for screening personnel and assessing risk.

*Recommendations:*

It is recommended that the OCEANUS stay in her home port for Newport, OR with the two student cruises affected by the pause be rescheduled.

## RV PELICAN

*Current Status:* RV PELICAN is currently in her home port of Cocodrie LA.

*Scheduled operations in the next 30 days:*

Chi Sci	Project	Start Date	End Date	Ports of Call	Funding Agency	Cruise Information
Hildebrand	Environ Character	3/16/20	3/20/20	Cocodrie, LA	Navy	Service High Frequency Acoustic Recording Packages (HARPS) in the Gulf of Mexico
Ogle	Mooring deployment	4/6/20	4/19/20	Cocodrie, LA	Other	Mooring deployment

*Current Risk Mitigation Plans:*

Applying the Guidelines posted on the UNOLS Website for screening personnel and assessing risk.

*Recommendations:*

Stand down from ship operations for the next 30 days. Reschedule cruises.

## RV RACHEL CARSON

*Current Status:* RV RACHEL CARSON is currently in her home port of Seattle, WA

*Scheduled operations in the next 30 days:*

Chi Sci	Project	Start Date	End Date	Ports of Call	Funding Agency	Cruise Information
Newton	Ocean Acidification	4/1/20	4/5/20	Seattle, WA	Other	This is a small cruise and all participants are local. <b>Operator and PI would like to proceed as currently planned.</b>

*Current Risk Mitigation Plans:*

Applying the Guidelines posted on the UNOLS Website for screening personnel and assessing risk.

*Recommendations:*

UW recommends carrying out this cruise as it is entirely local: crew, scientists, and operational area provided risk continues to be assessed as Low by both UW Marine Operations and the Chief Scientist. UW will continue to reassess the situation as the cruise departure date nears.

## RV ROGER REVELLE

*Current Status:* The RV ROGER REVELLE is currently nearing the end of their mid-life refit in Portland, OR.

*Scheduled operations in the next 30 days:*

Chi Sci	Project	Start Date	End Date	Ports of Call	Funding Agency	Cruise Information
	Mid-life Refit Shipyard		29Apr20	Portland, OR	ONR, NSF, MOSA	It is anticipated that the shipyard will be delayed as the Corona virus affects the shipyard labor.

*Current Risk Mitigation Plans:*

The shipyard has implemented an “essential personnel only” policy.

*Recommendations:*

It is recommended that the REVELLE continues the mid-life refit shipyard period as planned. It is anticipated that the shipyard will be delayed due to the COVID-19 affecting the workers of the shipyard and limitations on travel for tech reps.

## RV ROBERT GORDON SPROUL

*Current Status:* RV SPROUL is currently in their home port in San Diego, CA

*Scheduled operations in the next 30 days:*

Chi Sci	Project	Start Date	End Date	Ports of Call	Funding Agency	Information
Merrifield	MAS CSP Cruise 2020	4/4/20	4/4/20	San Diego, CA	INST	Collect physical, chemical, biological measurements off of Pt. Loma to evaluate ecosystem health.
MacKinnon	TPADS	4/8/20	4/9/20	San Diego, CA	Navy	Instrument testing cruise. Testing is required as these instruments are to be used on the RV SALLY RIDE in the summer.
D'Spain	Passive Sonar	4/13/20	4/16/20	San Diego, CA	Navy	One of three 4-day trips on the R/V Sproul off the coast of San Diego to 1) deploy/retrieve Autonomous Passive Acoustic Monitoring packages, and conduct controlled acoustic source tows.

*Current Risk Mitigation Plans:*

SIO will stand down from ship operations for 30 days and is recommending doing so for longer - a minimum of 60 days.

*Recommendations:*

Stand down from ship operations for at least 30 days.

## RV SALLY RIDE

*Current Status:* RV SALLY RIDE is currently in their home port in San Diego, CA

*Scheduled operations in the next 30 days:*

Chi Sci	Project	Start Date	End Date	Ports of Call	Funding Agency	Information
Ellett	Instrumentation Cal	3/17/20	3/18/20	San Diego, CA	NSF	Operational cruise to calibrate shipboard instrumentation. Postpone and reschedule if possible.
Constable	Lithospheric Link	3/22/20	3/27/20	San Diego, CA	DARPA	Deploy seafloor electric field recorders, transmit EM signals using a deep-towed transmitter, and recover recorders. Instrumentation for this cruise is being shipped to NZ at the end of the month. Most of the cruise personnel were local although 1 was from HI and 2 others were



						from DC.
Cruises beyond 30 day window that have requested to be postponed						
Choy	S. CA Current	04/21/20	05/02/20	San Diego, CA	NSF	Working in the Southern CA current to conduct mid-water trawls blue-water diving, and the MBARI ROV to collect samples.

*Current Risk Mitigation Plans:*

SIO will implement the at-sea operations for 30 days and is recommending doing so for longer - a minimum of 60 days.

*Recommendations:*

It is recommended that the SALLY RIDE remain in her home port of San Diego throughout the pause. The three affected cruises should look to be rescheduled.

## RV SAVANNAH

*Current Status:* RV SAVANNAH is currently in her home port of Savannah, GA.

*Scheduled operations in the next 30 days:*

Chi Sci	Project	Start Date	End Date	Ports of Call	Funding Agency	Information
Alexander	UGA/SKIO Inst	3/19/20	3/20/20	Savannah, GA	INST	Student cruises scheduled for spring break.
Alexander	UGA/SKIO Inst	3/28/20	3/29/20	Savannah, GA	INST	Student cruises scheduled for spring break.

*Current Risk Mitigation Plans:*

Applying the Guidelines posted on the UNOLS Website for screening personnel and assessing risk.

*Recommendations:*

It is recommended that the SAVANNAH remain in her home port throughout the pause.

## RV SIKULIAQ

*Current Status:* The RV SIKULIAQ is currently dockside in Seattle, WA.

*Scheduled operations in the next 30 days:*

Chi Sci	Project	Start Date	End Date	Ports of Call	Funding Agency	Information
Schmidt	Cascadia GPS-A	3/22/20	3/27/20	Seattle, WA	NSF	First cruise in a 3 year project. Deploy seafloor geodetic transponders and benchmarks for the sea surface at two sites along the Cascadia subduction zone. PI had already scaled back science team to reduce risk. Travel was within CONUS, plus one Canadian (optional).
Dever	Endurance Array OM	3/31/20	4/15/20	Newport, OR	NSF-OOI	Operations and Maintenance of the OOI Endurance Array. Cruise can be completed with personnel from OSU making no extended travel required. Equipment is in Corvallis, OR and ready to be shipped to

						Newport. Rescheduling is imperative for the continuity of the OOI data stream.
Cruises 30 day window that have requested to be postponed						
Wells	OA-Fe Availability	11June20	8Jul20	Seattle, WA	NSF	The Effect of Ocean Acidification on Fe Availability to Phytoplankton in Coastal and Oceanic Waters of the Eastern North Pacific. PI has requested to postpone the cruise.

*Current Risk Mitigation Plans:* Ship has been tied up since early January in Seattle. Standing down from science operations for at least 30-days.

*Recommendations:*

It is recommended that the vessel reposition to Seward, AK for the length of the pause in sea-going operations.

## RV THOMAS G. THOMPSON

*Current Status:* RV THOMPSON is currently underway to Suva Harbor, Fiji Islands.

*Scheduled operations in the next 30 days:*

Chi Sci	Project	Start Date	End Date	Ports of Call	Funding Agency	Information
Beinart	Larv-sym	4/3/20	4/21/2020	Fiji, Tonga, Tahiti	NSF	Investigation of interactions between snail larvae and their bacterial symbionts, as well as investigation of the free-living symbiont populations, at six hydrothermal vent fields in the Lau back-arc basin (Tonga). Includes ROV JASON and AUV Sentry. Foreign Participants – 1 Japanese, 3 Europeans (leg 1 – France, Netherlands, leg 2 Norwegian). Domestic participants – 3 institutions (URI, WHOI and OU) had instituted travel bans for international travel. All cruise cargo is in Fiji ( Jason, Sentry and PI gear).

*Current Risk Mitigation Plans:* Applying the Guidelines posted on the UNOLS Website for screening personnel and assessing risk.

*Recommendations:*

It is recommended that the operator stop in Fiji for fuel and provisions and to pick up all the cargo (Jason, Sentry and PI cargo). From there the vessel should transit back to Seattle for the remainder of the pause.

## NDSF

*Current Status:*

*Scheduled operations in the next 30 days:*

Chi Sci	Project	Start Date	End Date	Ports of Call	Funding Agency	Information
Beinart	Larv-sym	4/3/20	4/21/2020	Fiji, Tonga, Tahiti	NSF	NDSF supports postponement. Both Jason and Sentry are in

						port ready for mob in Fiji.
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*Current Risk Mitigation Plans:*

The NDSF will follow the risk mitigation plans for the vessel on which it is participating.

*Recommendations:*

Work with the UW to load the Jason and Sentry onto the RV THOMPSON for transit back to CONUS.

## HSN

*Current Status and Next Planned Operations:*

The HSN group is in the midst of a turnover from the old Ka-band provide (Worldlink) to the new provider (Marlink). They are scheduled to placing 8 new Fx domes and 3ea 2.4M C/Ku domes (KM, LANGSETH, REVELLE) in the next 4 months. Other ships are getting “adopted” (converted) from Worldlink to Marlink. Trying to do this remotely as much as possible (THOMPSON). Busiest week is in the next 7 days. The UAF install was canceled because the vendor, Marlink, refused to travel to Seattle. Oceanus is scheduled next.

*Recommendations:*

For all operators that have not received a planned INMARSAT Fleet Xpress, Marlink adoption or installation: The HiSeasNet program will be reaching out on a case by case basis if the scheduled service visit is impacted by COVID-19 travel restrictions. If the existing INMARSAT (FX or FBB) service is not adopted by Marlink by March 31st the system will cease to function until the service visit can be rescheduled.

## MarSSAM Coring Group

*Current Status and Next Planned Operations:* The next cruise for the MarSSAM coring group is the Haly cruise immediately following the RV KILO MOANA’s drydock. They realize that this will likely be delayed but this will cause minimal impacts. They have a few small cruises on the OCEANUS in June and are sending coring equipment to the WALTON SMITH in June, HEALY in July and the Berlson cruise on the RIDE in November.

## OBSIC

*Current Status and Next Planned Operations:* OBSIC’s next cruise is the Canales cruise on the RV OCEANUS (1May20 - see OCEANUS above). They will participate in Legs 1 and 3 of the 4 leg cruise. They must participate in leg 1 (OBS deployment) to participate in Leg 3 (OBS recovery). They are scheduled to participate on a Canadian vessel on a cruise beginning 15 July 20.