



7 August 2024

Dear UNOLS Council,

The Fleet Improvement Committee (FIC) expresses its deep concern regarding the current and projected lack of Global Class Research Vessel (GCRV) capacity within the US Academic Research Fleet (ARF). The demand for GCRVs is at an all-time high, yet the available capacity has diminished, creating significant challenges for the scientific community. The US is ill-prepared for the future. We need academic research vessels to conduct basic science, to monitor our natural world, and to prepare for a changing climate. Our capacity is eroding and the time to act is now.

How and why have we arrived at this poor and diminished capacity? The retirement of global class RVs *Knorr* and *Melville* marked a substantial loss in our fleet's capabilities. These vessels were replaced with the Ocean Class Research Vessels (OCRVs) RVs *Neil Armstrong* and *Sally Ride*. While these replacements are valuable assets with superb sensors and over-the-side handling capabilities, they do not fully compensate for the reduction in capabilities that the GCRVs provided. Specifically, there has been a major net loss in berths, lab-space, deck-space, endurance, and overall science capability. The specialized capabilities and additional berths offered by RVs *Knorr* and *Melville* were integral to supporting large-scale, interdisciplinary research projects that are increasingly essential in the sea-going community's efforts to understand and mitigate global environmental challenges.

	Main Deck Area (ft <sup>2</sup> )	Stbd Rail Length* (ft)	Total Labs	Berthing Capacity	LOA m (ft)	Endurance (days)
% Change	-31%	-48%	-25%	-35%	-15%	-18%

*Table 1: Percentage change in capabilities after global class RVs Knorr and Melville were retired and replaced with ocean class RVs Neil Armstrong and Sally Ride.*

The impact of the lack of GCRV capacity is evident in the increasing trend of rescheduling cruises that originally requested GCRVs onto ocean or intermediate class RVs. Since 2018, we have observed a significant uptick in the number of such rescheduled cruises, with more than ten cruises per year now being accommodated by vessels that are not ideally suited for their intended missions or are pushed to the following year ( Please see: [Requested Global Scheduled on Ocean](#) Ocean time-series studies are also impacted; limited availability of vessels has led to interruptions in once regularly-spaced monitoring of time-series stations and moored research platforms, which limits our capacity to measure ecological and biogeochemical change. This trend compromises the quality and scope of the scientific research, leading to delays and, in some cases, the inability to conduct critical studies. The FIC surveyed Chief Scientists of cruises that originally requested GCRVs and sailed on a different class. The results of the survey depicted overwhelmingly negative impacts on the planned research (Please see: [FIC Survey](#)).

The United States Navy and the Office of Naval Research recognized the extraordinary value of Global Class Research Vessels to the ocean sciences through their funding of service life extension programs

(i.e. midlife refits). However, the Congressional Budget Office's analysis of the Navy's annual, 30-year shipbuilding plan does not include non-Battle Force ships, such as the replacements for any of the three Navy-owned Global Class AGORs – also known as Auxiliary General Oceanographic Research vessels. Consequently, the Navy has no formal build plan for any new research vessels (INCLUDE LINK TO DSOS PANEL PRESENTATION). It is up to us - the oceanographic research community - to motivate the procurement of new GCRVs.

Furthermore, the next decade will see the end of service life for three GCRVs (RVs *Thompson*, *Revelle*, and *Atlantis*) as well as OCRV RV *Kilo Moana*. Additionally, RVs *Sikuliaq*, *Sally Ride*, and *Neil Armstrong* will reach the timeline for midlife refits, which historically take a year or more. All of this will place a huge strain on the system for being able to conduct seagoing science particularly for long duration, major integrated science programs. The time to act is now.

The FIC strongly advocates for the addition of new GCRVs to the ARF. These vessels are essential for maintaining the high standards of oceanographic research required to address pressing global issues, such as climate change, ocean acidification, and biodiversity loss. The capacity to conduct long-duration, deep-ocean missions with large, multidisciplinary shipboard parties utilizing advanced technological capabilities is paramount to the success of our scientific endeavors.

We urge the UNOLS Council to prioritize the procurement and commissioning of new GCRVs to replace the retiring vessels and to expand the fleet's capacity to meet the growing demand. Ensuring that our research fleet is adequately equipped is not only critical for the advancement of science, but also for maintaining the United States' leadership in oceanographic research.

Sincerely,



R. Kipp Shearman  
UNOLS Fleet Improvement Committee Chair