

Web resources about R/V Sikuliaq and USCGC Healy for new investigators

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What questions might researchers (especially early career) have about using the Arctic icebreaker fleet for new projects?

Do current web resources provide sufficient information?

What could be added?

General
feasibility

Operating
locations

Timing

Equipment

Procedures
for utilizing
ship time

Personnel
logistics

Major sources of available information:

Welcome to the R/V *Sikuliaq* Science Operations Site. Content here is aimed at science project planning and information for science project members sailing aboard the vessel.

R/V *Sikuliaq* is owned by the [National Science Foundation](#) and operated by the [College of Fisheries and Ocean Sciences](#) at the [University of Alaska Fairbanks](#), as part of the U.S. academic research fleet. The vessel is used by scientists from the U.S. and international oceanographic community through the [University-National Oceanographic Laboratory System](#).

USCGC HEALY (WAGB-20)

Seattle, Washington

The Coast Guard Cutter HEALY (WAGB - 20) is United States' newest and most technologically advanced polar icebreaker.

HEALY is designed to conduct a wide range of research activities, providing more than 4,200 square feet of scientific laboratory space, numerous electronic sensor systems, oceanographic winches, and accommodations for up to 50 scientists. HEALY is designed to break 4.5 feet of ice continuously at three knots and can operate in temperatures as low as -50 degrees F. The science community provided invaluable input on lab lay-outs and science capabilities during design and construction of the ship. At a time when scientific interest in the Arctic Ocean basin is intensifying, HEALY substantially enhances the United States Arctic research capability.

As a Coast Guard cutter, HEALY is also a capable platform for supporting other potential missions in the polar regions, including logistics, search and rescue, ship escort, environmental protection, and enforcement of laws and treaties.

HEALY STATUS

Vessel Name	Operator	LOA	Yr Built /Conv.	Sci Party	Owner
Global Class Vessels					
THOMAS G. THOMPSON	UW	274/84	1991	36	Navy
Operator	CAPT Robert Kamphaus				kamphaus@uw.edu
Technical	Loren Tuttle				lbuttle@uw.edu
Scheduling	CAPT Robert Kamphaus				kamphaus@uw.edu
ROGER REVELLE	SIO	273/83	1996	37	Navy
Operator	CAPT Zoltan Kelety USN/Ret.		1-858-534-1643		zkelety@ucsd.edu
Technical	Lee Ellett		1-858-534-2423		eellet@ucsd.edu
Scheduling	Hannah Delapp		1-858-534-2434		shipsked@ucsd.edu
ATLANTIS	WHOI	274/84	1997	37	Navy
Operator	Timothy Twomey		1-508-289-2624		ttwomey@whoi.edu
Technical	David Fisichella		1-508-289-3777		dfisichella@whoi.edu
Scheduling	Kerry Strom		1-508-289-3938		kstrom@whoi.edu

Questions

General feasibility

- **Who is eligible** to request ship time, on each of these vessels?
- **How expensive** is the ship time? How do I budget for it?
- **Who should I talk to before submitting** my proposal to discuss logistics?
- I've heard IODP cruises must be scheduled 5+ years in advance. **What is the lead time** for icebreaker surveys?
- **Is my project too small**, in terms of # of personnel or # of days? Will my project be less competitive if I can't fill the ship for a long trip? Is there any way to share time, and if so, is that my responsibility to plan?
- **I've never led a research cruise on a vessel of this size.** Is there a way to share time on one of these vessels so I can gain experience and conduct my research?
- **What are the operating depths**, and/or do the vessels have a workboat for coastal waters?
- Do I need to provide an agreement with the ship as part of my proposal package?

Timeline:

- 1+Years Out
- 6+ Months Out
- 2+ Months Out
- 2+ Weeks Out
- [Sailing Aboard R/V Sikuliaq](#)

1+Years Out

- Request Ship Time via [UNOLS](#) or contact the [Marine Superintendent](#)
- Seek [Permits, Permissions and Impact Studies](#)
- Seek Clearance to work in [Foreign Waters](#)
- Explore the [Alaska Sikuliaq Program](#)
- Become familiar with the [UNOLS Research Vessel Safety Standards](#)
- Request Additional Internet Bandwidth to support your cruise. [Internet Access](#) aboard *Sikuliaq* is limited. Email the [Science Operations Manager](#) for information on expandability options and cost.

The *Sikuliaq* page walks through a timeline, and both sites connect to the UNOLS ship time request system. It would be helpful to have some precursor for people writing their first proposal involving icebreaker use.

The *Healy* links to [icefloe.net](#), but

Questions

Where can the vessels work?

- Where will the ship be in the next few years?
- Can I propose work in international waters? (Siberian shelf, Northwest Passage, Hudson Bay, coastal Greenland, etc.)
- Can I propose work outside of the Arctic (e.g., Antarctica)?

What are the timing constraints?

- What is the **maximum length** of cruise I can propose?
- What is the **minimum length** of cruise I can propose?
- If I share time with someone, **do I have to be on board for the entire trip?**
- Can I request that the ship perform a one-day mooring pickup (without me) a year after my research cruise? (Or similar)

The screenshot shows the UNOLS Ship Time Request System interface. At the top, there is a header with the UNOLS logo and the text "Ship Time Request System". Below the header, there are navigation links for "Search Public Records", "Help", and "Log In". The main content area is titled "View Schedule" and includes options to "View" or "Email" the schedule as "Expanded (Text)", "Condensed (Text)", or "Expanded (PDF)". There are also options to "Export" the schedule as "Excel XML", "CSV", "Google Earth Map (KML)", or "Cal Calendar". The schedule details for the vessel "2021 - Sikuliaq" are displayed, including the ship name "SKQ 2021 S8 08Mar2021", the secure ID "Secure - ID #14552", and the version "Version #2 - 3/24/2021". The scheduling contact is listed as "Doug Baird" with the email "dbaird2@alaska.edu" and phone number "(907) 224-5261". A "Notes" section contains several updates and changes to the schedule, such as "2021 US Academic Research Fleet vessel schedules are subject to change as the COVID-19 pandemic evolves" and "08Mar2021: Add 3 days to Mercury Cycling in Arctic". Below the notes, there is a table titled "Associated Cruises" with columns for "Dates", "Ports", "Area/Navly Op", "Lat/Lon", "Chief Scientist", and "Activity/Total Days". The table shows a cruise starting on "01 Jan 2021" and ending on "13 Jan 2021", with ports in "Bellingham, WA, USA" and "USA", and a chief scientist of "Doug Baird".

The UNOLS system shows archived ship schedules, and the upcoming *Sikuliaq* schedule. I could not locate one for the *Healy*.

Suggest adding:

- intro about general areas where these vessels operate
- map of recent operating locations in the last five years (?)
- Notes about where they realistically could operate (given sufficient planning) – Northwest Passage, Hudson Bay, & coastal Greenland are of increasing interest

Questions

Utilizing ship time

- With whom do I coordinate to plan for work in areas of potential sea ice?
- With whom should I work to finalize a cruise plan after the project is funded?
- Is there a science liaison on board? To what extent will I work directly with the captain, and what procedures should I be aware of?
- What permits do I need, and do I need to consult with ship personnel when obtaining those?
- Can I use a drone or other novel instrumentation from the vessel?

Personnel...

- Can I bring undergraduate students on cruises?
- Can I bring a non-university photo/video team or reporter on board?
- I have team members with food allergies, team members who need some physical accommodations, and some who are concerned about sharing mixed-gender rooms. Can those needs be accommodated?

The *Sikuliaq* cruise planning pages address most of these questions. The *Healy* science planning page provides links for berthing plans and on-ice operations. The *Healy* page also provides a link to contact the Marine Science Officer.

Questions

Equipment...

- **What equipment can the ship provide?** And at what stage should I start making those arrangements?
- If I don't have extensive experience using some of the larger equipment on the ship, **can the ship's technicians assist?**
- **How much of my own gear can I bring,** and what are the logistics of transferring it to the ship?
- Can I arrange to bring an **external platform** like JASON? Who among the ship's support staff should I talk to, and at what stage?



Photo skqcourtesy of @iceinmotion

R/V *Sikuliaq* was constructed to the International Association of Classification Societies (IACS) Polar class 5 (PC) year-round science operations in medium first-year ice which may include old ice inclusions.

UNOLS ID	SKQ
ICES Code	33BI
Call Sign	WDG7520
MMSI Number	338417000
IMO Hull Number	9578945

- [Vessel Specifications](#)
- [General Arrangement](#)
- [Overside Handling Systems: A-frame, Cranes and Winches](#)
- [Sikuliaq's Scientific Equipment](#)
 - [Underway Sensors](#)
 - [Underway Displays](#)
- [Van Locations](#)
- [Small Boats](#)
- [Vessel Propulsion System and Power Plant](#)

The *Sikuliaq* pages nicely outline the equipment and specifications, with links to diagrams

The *Healy* pages include a list of equipment, and a general profile diagram of the ship is listed on *icefloe.net*. Additional diagrams (similar to the *Sikuliaq* posts) may be helpful – e.g., science lab dimensions, a-frame diagram, etc.

Would it be feasible and helpful to compile a Q&A document for researchers who want to use these vessels for the first time?

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