

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

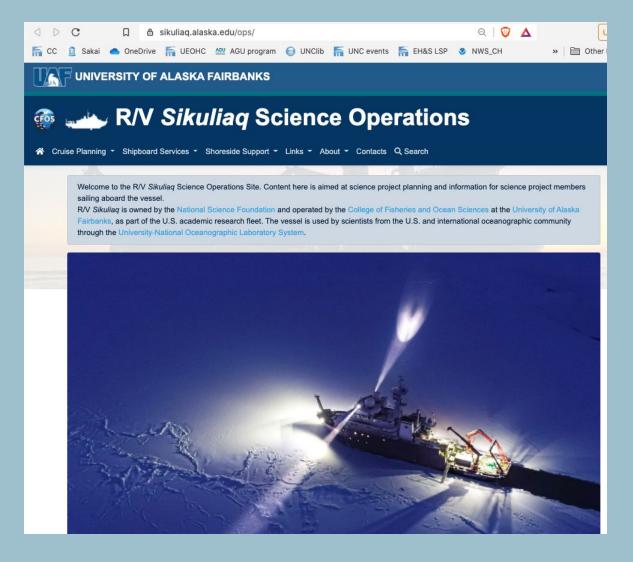
Timing

Equipment

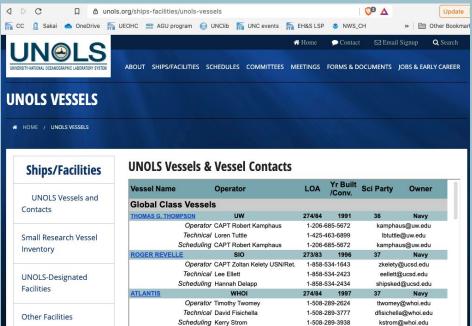
Procedures for utilizing ship time

Personnel logistics

Major sources of available information:







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.

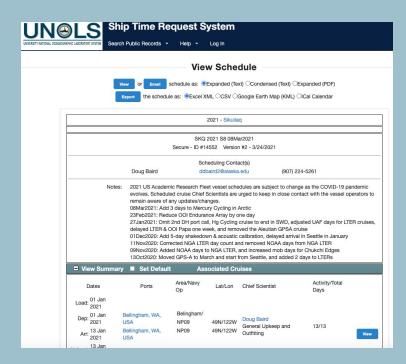
The *Healy* links to icefloe.net, but

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 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

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?

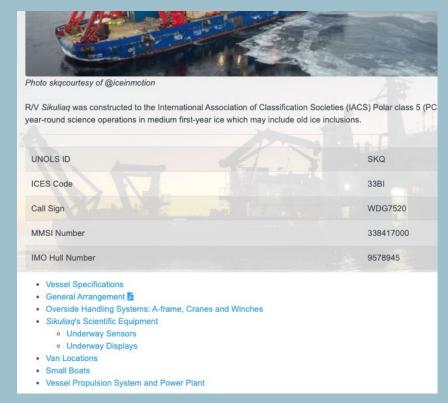
Personnel...

- 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.

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?



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? General feasibility

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