



August 7, 2023

Greetings,

We are looking for scientists with experience in physical and/or biogeochemical hydrography and in oceanographic expedition organization who would be interested in participating as either **Chief Scientist** or **Co-Chief Scientist** on GO-SHIP's (<https://usgoship.ucsd.edu> and <http://www.go-ship.org>) high-resolution re-occupation of the Indian Ocean **I08S** hydrographic section along $\sim 90^\circ\text{E}$ from $\sim 66.5^\circ$ to 28°S . This cruise has just been scheduled for mid-February to late March 2024. It will be the 4th semi-decadal occupation of this line with previous cruises occurring in 1994, 2007, and 2016.

For the Chief Scientist role, preferred candidates will have previous experience with organizing and executing oceanographic field studies, interest or experience in Indian and/or Southern Ocean science, and/or will have been a Chief or Co-Chief Scientist or a Principal Investigator on a previous US GO-SHIP cruise.

For the Co-Chief role, preferred candidates will have an interest in oceanographic field studies. No at-sea experience or Indian/Southern Ocean expertise is necessary, although could be an advantage. I08S will provide an excellent opportunity to work at sea and the Co-Chief Scientist will have the opportunity to become familiar with and/or extend their knowledge of Indian/Southern Ocean oceanography.

Deadline for applications (see below for application details): September 10, 2023

PARTICULARS:

- Sailing aboard the University of Washington R/V Thomas Thompson
- 41 days at sea, 4 pre-cruise load days, 2 post-cruise unload days.
- Cruise will start and end in Fremantle, Australia
- Timing: Mid-February to late March 2024

CHIEF SCIENTIST DUTIES:

All U.S. GO-SHIP chief scientists are expected to be experienced with sea-going fieldwork.

Pre-cruise: The Chief Scientist:

- Will take over cruise planning and paperwork from Alison Macdonald (U.S. GO-SHIP Executive Council/ Project Manager) at a mutually agreed upon time before the cruise.
- Will lead the selection of student CTD watchstander positions that will be advertised by the U.S. GO-SHIP Executive Council.
- Will act as a mentor to the Co-Chief Scientist throughout the pre-cruise process.
- Will work with the GO-SHIP project manager to organize at least one and possibly more pre-cruise meetings to which participating PIs and vessel operators will be invited. The NSF grant will support Chief Scientist travel to a pre-cruise meeting if video conference is not used.

- Will stay in contact with both sailing and non-sailing participants through email and by maintaining an online document and/or a website detailing updates, and will organize as necessary pre-cruise video conferences to keep the science team apprised of planning developments.
- Will be required to take (or show that they have recently taken) through their own institution or through UCSD, training that speaks to supervision and/or management and/or conflict resolution. They will work with the GO-SHIP Project Manager to coordinate a Bystander Training session and to encourage attendance not only by the early career and first-time participants but all those involved in the cruise and/or its preparation.
- Is ultimately responsible for official pre-cruise activities, including submission and finalization of clearance and permit requests, organization of the sampling groups, lab spaces, berths, and documentation to keep all those involved informed of current plans.

At sea: The Chief Scientist will be the principal point of contact with the Captain and other officers and will participate in the scheduled daily meetings of the ship's leadership team. In addition to all duties and decision-making responsibilities that normally fall upon a Chief Scientist (see below), the Chief Scientist will be the scientist-in-charge of one 12-hour watch. At sea duties include mentoring students assigned to that watch as well as mentoring and assisting the Co-Chief Scientist with the students on the other watch. Together with the Co-Chief and other sampling teams, the Chief Scientist:

- Will maintain knowledge of current weather and ice conditions. Note, the R/V Thompson does not have a reinforced hull and will not approach ice.
- Will prepare, maintain, distribute, and execute a running station and sampling plan that meets cruise and program objectives and safely and efficiently utilizes time and seawater resources.
- Will decide sampling depths for each parameter in accordance with GO-SHIP Level 1-3 guidelines.
- Will see that assistance with water sampling (i.e., “sample cop” and/or drawing samples) is provided on every cast as needed; ensure that the CTD watch runs the CTD console on station and completes the routine forms for each station.
- Will assist with at-sea data review and documentation.
- Will support as editor a student/participant-written cruise blog.
- Will write weekly reports to the U.S. GO-SHIP community that includes information on both successes and challenges. These reports are posted on the GO-SHIP website by the project manager.
- Will write the cruise report narrative chapter.
- Will work with all on-board teams to prepare the draft cruise report before the end of the cruise; leave the ship with a copy of all data collected; and confirm with the ship’s tech that all measured underway are saved and sent to the appropriate archive.

Post-cruise: The Chief Scientist will review and edit the cruise report drafted at sea, and respond as needed to continued inquiries regarding data, quality codes, and documentation. Please note that grant support for post-cruise data analyses is not supported by the NSF grant to SIO unless a specific exception has been made with the program directors.

Mentoring/training: The Chief Scientist will include the Co-Chief Scientist in the planning, cruise, and post-cruise periods, and provide mentorship particularly when the Co-Chief is an early career or inexperienced at-sea scientist. Together with the U.S. GO-SHIP student coordinator and project manager, the chief scientist will be responsible for holding one or more virtual pre-cruise meetings to

prepare students for their upcoming at-sea experience. It is one of a GO-SHIP Chief Scientist's responsibilities to train the next generation of GO-SHIP chief scientists.

CO-CHIEF SCIENTIST DUTIES:

Pre-cruise: Assist Chief Scientist with pre-cruise planning and selection of student participants as needed. Attend pre-cruise meeting and bystander training, as well as student get-togethers (all meetings will be virtual). At the Chief Scientist's discretion can take the lead on one or more aspects of the pre-cruise activities.

At sea: The Co-Chief will be the scientist-in-charge on one 12-hour watch, opposite the Chief Scientist with the following responsibilities: ensuring the CTD watch runs the CTD console and completes routine forms and tasks for each station; mentoring students assigned to the watch; deciding sampling levels for each parameter in accordance with the chief scientist; organizing the CTD watch and rosette operations, assisting with water sampling (directing operations (sample cop) and/or obtaining water parameter samples); and assisting in at-sea data reviews and documentation.¹

Post-cruise: Assist the Chief Scientist with cruise report preparation and review of data, quality codes, and documentation.

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SUPPORT: Salary support for US GO-SHIP academic Chief and co-Chief Scientists will be negotiated. It is usually supplied via subawards from UCSD/SIO to the participant's institution (see² below). It typically covers time at-sea, in port, and on travel. **For the Chief Scientist**, it typically includes one or more months for cruise preparation depending upon when in the process the position begins and the complexity of the cruise preparation, and also includes two or more weeks for post-cruise reporting. **For the Co-Chief Scientist**, it typically includes two to several weeks of preparation. Travel will be paid by UCSD/SIO.

WHO CAN APPLY:

- Chief Scientist: Although preference may be given to those with ongoing or past research in the Indian or Southern Ocean - all are welcome to apply. In the case of multiple qualified applicants for the position, final selection will be made by the U.S. GO-SHIP Executive Council in consultation with the Principal Investigators.
- The co-Chief positions are considered stepping-stones for early career scientists but are also open to high-level scientists/technicians with PhDs or equivalent experience. No at-sea experience is necessary, although it can be a plus. The Chief Scientist will provide training on board. Although preference may be given to those with ongoing research in the Indian or Southern Ocean, all are welcome to apply. In the case of multiple qualified applicants for the position, final selection will be made by the U.S. GO-SHIP Executive Council in consultation with the Principal Investigators.
- All participant passports must have an expiration date at least 6 months past the end of the cruise (April 2024) and at least two blank pages. **Passport details must be available at the time a candidate is selected for this position.**
- While those who are not U.S. citizens or resident aliens, or who do not hold visas that allow them to work in the U.S. are welcome to apply, salary cannot be paid. U.S. GO-SHIP is a project not an institution, so we cannot assist anyone in obtaining such a visa. Also note that visa wait times can be up to year.

HOW TO APPLY: Send email inquiries and/or letters of application to:

Alison Macdonald (amacdonald@whoi.edu)

PROVIDE:

- Your CV.
- A cover letter stating your interest in this expedition and a brief summary of your research/field interests and experience.
- The name and email address of a reference.

Notes:

- If you applied for the same position for either the 2024 A13.5 cruise or the 2023 I05 cruise, you can request to have your previous application applied to this 2024 I08S call. That said, you are of course more than welcome to send additional or updated information.
- If you are applying for the Chief Scientist position but would also be willing to sail as Co-Chief, please state this in your cover letter.

DEADLINE: Sept. 10, 2023.

(Applications may be accepted after this date but may not receive full consideration.)

The cruise is long and will be crossing the ACC. Therefore, it will likely encounter challenging weather with rough sea conditions at some point. We therefore recommend that those who apply be reasonably confident that they can not only handle such conditions but can also organize cruise activities around them. Lastly cruise schedules are subject to last minute changes and the timing for this particular cruise is not yet confirmed. Chief and Co-Chief Scientist candidates should allow for ample available time (minimum 1 month) at either end of the scheduled cruise dates to allow for possible changes.

¹ **Further details on cruise activities:** The blog from the 2016 occupation of I08S can be found here: <http://goship2016-i08s.blogspot.com/>. Links to blogs from several recent GO-SHIP cruises are here: <https://usgoship.ucsd.edu/blogs/> and those from expeditions going back to 2014 can be found here: <https://usgoship.ucsd.edu/go-ship-blogs/>.

Station stops are planned every ~55 kilometers (closer over steep topography and near coasts) where a CTD/rosette is lowered to measure the temperature, salinity, oxygen, currents, optical properties, and other dynamics from just below the sea surface to approximately 10 meters above the ocean bottom. During each of these stations, water samples at up to 36 depths are collected for measurement of various water properties, including several oceanic carbon-related parameters (dissolved organic and inorganic carbon, alkalinity, pH), along with dissolved chlorofluorocarbons and sulfur hexafluoride (SF₆), dissolved oxygen, salinity, and nutrients. While the ship is both underway and on station it continuously pumps surface seawater through sensors for temperature, salinity, partial pressure of CO₂; operate standard meteorological sensors; operates a shipboard Acoustic Doppler Current Profiler and collects along-track bathymetric data. Additional ancillary programs (“Level 2 and 3”) are hosted aboard at a lower priority than the core (“Level 1”) measurements. These may include separate or combined casts for Bio GO-SHIP. We also deploy floats and drifters along the track as requested (some float deployments may require additional rosette sampling).

² **Financial support** for the Chief and Co-Chief Scientists is provided through an NSF grant to UCSD/SIO, coordinated by Lynne Talley (ltalley@ucsd.edu). Except in the case of a directly supported project post-doc, there is no support from this NSF grant for post-cruise scientific analyses, only for time spent on final documentation, which is minimal for this program (almost all work is done at sea). This cruise-specific salary plus benefits support for the Chief Scientist should never exceed $(3.0 * D / 30)$ months (where D = number of days at sea), and in general will be less than this amount, in many cases much less (typically 2.0), depending largely on pre- and post-cruise project-related activities for each person. A contract agreeing to the guidelines set out by the US GO-SHIP Executive Council must be signed before travel preparations can be made.

STILL WANT MORE INFORMATION?

This cruise is a US contribution to international GO-SHIP <http://www.go-ship.org/>, which is part of the Global Ocean Observing System (GOOS) (<https://www.goosocean.org/>). GO-SHIP is tracked along with other GOOS observing systems through JCOMMOPS (<http://www.jcommops.org/board>).

You can read more about the US GO-SHIP program at: <https://usgoship.ucsd.edu/>

You can find data and cruise reports from the previous I08S occupations at <https://cchdo.ucsd.edu/search?q=I08S>.

Further questions can be directed to Alison Macdonald (amacdonald@whoi.edu).

