



Oct. 17, 2022

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 **Chief Scientist** on the GO-SHIP (<https://usgoship.ucsd.edu> and <http://www.go-ship.org>) decadal re-occupation of the hydrographic section **I05 (32°S) in the Indian Ocean** from **mid-July 2023 through mid-September 2023**. Preferred candidates will have extensive previous experience with organizing and executing oceanographic field studies, and/or will have been a Chief or Co-Chief Scientist or a Principal Investigator on a previous US GO-SHIP cruise.

Deadline for applications (see below for details): November 18, 2022

PARTICULARS:

- We will be sailing on the **R/V *Revelle***
- 55 days at sea
- Departing from Fremantle, Australia and sailing to Cape Town, South Africa.

DUTIES:

All U.S. GO-SHIP chief scientists are 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/Interim 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, and may be involved in the selection of the Co-Chief Scientist should current GO-SHIP post-doctoral fellow choose not to participate. The Chief Scientist will act as a mentor to the Co-Chief Scientist throughout the pre-cruise process. The Chief Scientist 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. The Chief Scientist will attend and contribute to a pre-cruise meeting either in person or remotely organized in coordination with UCSD Marine Operations. The NSF grant will support Chief Scientist travel to the Marine Operations pre-cruise meeting if video conference is not used. To keep the science team apprised of planning developments, along with email communication, the Chief Scientist is expected to maintain an online document or website detailing updates and to organize as necessary pre-cruise video conferences. The Chief Scientist will also be required to take (or shown that they have recently taken) through their own institution or through UCSD, training that speaks to supervision and/or management, as well as conflict resolution.

At sea: In addition to all duties and decision-making responsibilities that normally fall upon a Chief Scientist, 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 prepare, maintain, distribute, and execute a running station and sampling plan that meets cruise and program objectives and efficiently utilizes time and seawater resources; together with the measurement teams will decide sampling depths for each parameter in accordance with GO-SHIP Level 1-3 guidelines; 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; assist with at-sea data review and documentation; support as editor a student-written cruise blog, write weekly reports to the U.S. GO-SHIP community that includes information on both successes and challenges; write the cruise narrative chapter and work with all on-board teams to prepare the draft cruise report before end of 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 the Chief Scientist’s responsibility to train the next generation of GO-SHIP chief scientists.

SUPPORT: Salary support for US GO-SHIP academic Chief Scientists will be negotiated, and is typically supplied via subawards from UCSD/SIO to the participant’s institution (see² below). It typically covers time at-sea, in port, on travel, several weeks of preparation, and several weeks of post-cruise reporting. Travel will be paid by UCSD/SIO.

WHO CAN APPLY: Although preference may be given to those with ongoing or past research in the Indian 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.

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

Alison Macdonald (amacdonald@whoi.edu)

Please provide your CV, a brief summary of your research interests and experience and include the name and email address of a reference. **DEADLINE: November 18, 2022.** (Applications may be accepted after this date but may not receive full consideration.)

The cruise is long and 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 handle such conditions. Lastly cruise schedules are subject to last minute changes. 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:** Blogs from some previous I5 occupations cruises can be found on <http://usgoship-p062017.blogspot.com> or <https://i07n.wordpress.com/>. The blog and weekly reports from the most recent US GO-SHIP cruise (P02) can be found here: <https://usgoship.ucsd.edu/2022/04/11/p02-2022-student-blog/>, and here: <https://usgoship.ucsd.edu/2022/04/16/weekly-reports-from-2022-p02-leg-1/>. 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 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 Scientist 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 previous I05 occupations at:

<https://cchdo.ucsd.edu/search?q=I05>

Section-based graphics and maps from WOCE available from the online Indian Ocean atlas at http://whp-atlas.ucsd.edu/indian_index.html

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

