



U.S. GO-SHIP

March 16, 2020

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 in the Indian Ocean** from **November 2020 through January 2021**. 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): April 15, 2020

PARTICULARS:

- We will be sailing on the **R/V Thompson**
- 54 days, departing from Fremantle, Australia and sailing to Port Elizabeth, 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 Lynne Talley and Jim Swift/Isabella Rosso (U.S. GO-SHIP Executive Council) at a mutually-agreed-upon time before the cruise, will lead selection of student CTD watchstander positions and be involved in the selection of the Co-Chief Scientist, both of which will be advertised by the U.S. GO-SHIP Executive Council. Note that the Chief Scientist is ultimately responsible for official pre-cruise activities, including organization of the sampling groups, lab spaces, berths, and documents. The Chief Scientist will also participate in the pre-cruise meeting either in person or remotely. (The NSF grant will support Chief Scientist travel to the pre-cruise meeting, if teleconference is not used.)

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 daily meetings with the Captain and the Co-chief Scientist to discuss the daily plan; training and mentoring the Co-Chief Scientist; mentoring students assigned to the Chief Scientist's watch and assisting the Co-Chief Scientist with the students on the other watch. Together with the Co-Chief and other sampling team leaders, the Chief Scientist will prepare, maintain, modify, distribute, and execute a running station and sampling plan that meets cruise and program objectives and that efficiently utilizes time and seawater resources taking into account the priority of each observed parameter (Level 1, 2, or 3) in accordance with GO-SHIP guidelines; see that assistance with water sampling (i.e., "sample cop" and/or drawing samples) is provided on every cast; 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; and work with all on-board teams to prepare the draft cruise report before end of cruise.

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, providing mentorship particularly if the Co-Chief Scientist is an early career or inexperienced scientist. The Chief and Co-Chief Scientists will mentor the graduate students on both watches.

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 research in the Indian Ocean, all are welcome to apply. If there are 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 letters of application to Lynne Talley (ltalley@ucsd.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: April 15, 2020**

The cruise is long and will likely pass through 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. Candidates should think carefully before applying if they are prone to motion sickness.

¹ **Further details on cruise activities:** (Blogs from some previous cruises can be found on <http://usgoship-p062017.blogspot.com> or <https://i07n.wordpress.com/>). 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 up to 36 water samples are collected for measurement of various water properties, including a number of oceanic carbon-related parameters (dissolved organic and inorganic carbon, alkalinity, pH, $p\text{CO}_2$), along with dissolved chlorofluorocarbons and sulfur hexafluoride (SF_6), dissolved oxygen, salinity, and nutrients. While the ship is both underway and on station, surface seawater is continuously pumped through sensors for temperature, salinity, and partial pressure of CO_2 ; operate standard meteorological sensors; operate a shipboard Acoustic Doppler Current Profiler; and collect along-track bathymetric data. Additional ancillary programs ("Level 2 and 3") are also hosted, at a lower priority than the core ("Level 1") measurements. Floats and drifters are usually deployed along the track as requested for other observing systems.

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 $(3.0 \cdot D/30)$ 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 Lynne Talley (ltalley@ucsd.edu).