Greetings,

We are seeking students to participate in the 2025 re-occupation of the U.S. GO-SHIP (Global Ocean Ship-based Hydrographic Investigations Program) hydrographic long-line cruise known as **I09N**. This expedition will occupy approximately 125 hydrographic stations along the 95°E meridian in the Indian Ocean from 34°S off the coast of Australia northward to the 18°N Bay of Bengal.

Deadline for applications (details below): Nov 4, 2024, open until filled.

PARTICULARS:

- We will be sailing on the University of Washington's R/V Thomas G. Thompson
- Chief Scientist: Viviane Menezes vmenezes@whoi.edu (she/her)
- 41 days at sea
- The cruise will set out from Fremantle, Australia and end in Phuket, Thailand
- We presently expect this cruise to take place from **mid-March to late April 2025**.
- U.S. GO-SHIP Contacts
    - PI: Lynne Talley ltalley@ucsd.edu (she/her)
    - Project Manager: Alison Macdonald amacdonald@whoi.edu (she/her)

The U.S. GO-SHIP program (http://usgoship.ucsd.edu) collects data for global CO_2 and climate variability programs. Its mission is to provide accurate global measurements covering the ocean basins from coast to coast and top to bottom, with approximately decadal resolution of the changes in inventories of heat, freshwater, carbon, oxygen, nutrients, and transient tracers. U.S. GO-SHIP contributes to International GO-SHIP (http://go-ship.org) and is part of the Global Ocean Observing System (GOOS, https://www.goosocean.org/). Scripps Institution of Oceanography (SIO/UCSD) operates the NSF-funded portion of the US national program, which includes various student positions on this upcoming 2025 NSF/UNOLS cruise.

Graduate students in good standing at US institutions will be given preference. Undergraduates, postdocs, non-students, non-US individuals may also apply

U.S. GO-SHIP pays all travel costs. For this cruise, the program will also pay salary.

- If you are a US graduate student, it pays your current salary.
- If you are not a graduate student but are affiliated with an institution that can accept subcontracts (e.g., an undergraduate), you will receive support similar to a UCSD graduate student.
- If you are not affiliated with an institution that can accept subcontracts you will be temporarily hired by UCSD at a rate similar to a graduate student

Tuition costs will also be covered during the time at sea plus the few travel days before and after the cruise, but if and only if the participant is an enrolled graduate student at a U.S. institution.

We are seeking a total of 5 NSF-funded student participants:

- 4 for conductivity/temperature/depth (CTD) measurements and deck operations (typically, but not always, Physical Oceanography background),
- 1 to assist with transient tracer (e.g., chlorofluorocarbons (CFCs) and SF6) sampling and analyses (typically, but not always, Chemistry or Chemical/Biogeochemical Oceanography background), and

DUTIES: The U.S. GO-SHIP cruises operate 24/7 with 12-hour shifts.

- The **CTD** participants' duties include operating the CTD and rosette bottle system both on deck and in the lab, drawing and documenting water samples (typically salts as well as sampling requested by PIs who do not sail), and contributing to data quality control and analysis alongside the chief and co-chief scientists. We will ask you to contribute to and possibly lead a component of the cruise blogs. You may also be asked to assist other science groups (for example assisting various science teams with their sampling, deploying autonomous sensors).

- The **Tracer** participant will collect transient tracer samples (typically including CFC-11, CFC-12, SF_6, and N_2O) and perform onboard analysis as part of the transient tracer science team. On-board training will be provided.

2015 I09N CTD-cast from R/V Roger Revelle. (Image credit: A. Fay)

Requirements:

- A valid passport is required for participation in the cruise.
- U.S. citizenship is not required.
- Must be able to acquire any visas required for departure and arrival countries.
- Proof of a passport valid through at least the end of September 2025 and with at least 2 consecutive blank pages must be available for review at the time of acceptance of an offer.
- Please **do not** send passport details with your application or ever through email.

For those who are interested:

Be aware that dates and ports can change during final ship scheduling. While such changes are usually minor, candidates are requested to allow two weeks availability before and especially after the cruise period.

The cruise is long and will be crossing from the southern subtropics to the northern subtropics across the equator. Therefore, it will likely encounter challenging weather with rough sea conditions at some point. While we do not expect our science party members to be immune from sea sickness, we recommend that those who apply be reasonably confident that they can handle rough conditions and bring any needed medications.

(1) Let us know that you are contemplating applying and get more information if you have questions. Please contact:

- **CTD candidates:** Chief scientist Viviane Menezes vmenezes@whoi.edu, *cc* Alison Macdonald (amacdonald@whoi.edu)
- **Tracer candidates:** Tracer PI Jim Happell (jhappell@miami.edu), *cc* Alison Macdonald (amacdonald@whoi.edu)

General Questions:

About the program - Alison Macdonald amacdonald@whoi.edu
About the cruise - Viviane Menezes vmenezes@whoi.edu

(2) Talk to your advisor to be sure that this will work with your program. We note, these are full time positions (12-hour workdays, 7 days/week). *Neither participants nor advisors should expect non-US GO-SHIP efforts to be undertaken during the cruise*. We encourage our student participants to make use of the data both on the cruise and beyond, and we encourage mentorship from the science party. However, it is good to be aware that our working hours often focus on measurement collection rather than scientific data analysis.

(3) If you wish to proceed - please send

- **Your CV**. (We do not need your academic transcripts, however if you come from a non-US academic background or hold a non-US academic position, some further explanation of your background and/or current position can be helpful.)
- **A cover letter** indicating your interest and background information, including:
  - For students: year & academic program. For non-students: current position.
  - Name & contact information for your current advisor or supervisor. Do not send reference letters. We will contact your advisor or supervisor.
  - The type of research you are carrying out if you are at that stage,
  - Prior cruise experience if you have any.
- You may apply for more than one position with the same application. Please indicate the position(s) of interest and be sure to simultaneously send to all appropriate contacts as listed above in (1).
- It is possible that other assistant-type positions will be available for one or more of the various lab teams participating on this cruise (not listed). We will share your

application materials with the relevant PIs if these positions become available but let us know if you prefer us not share them. Note, compensation will likely be different from that described in this announcement.

- Please send your materials in **one message** to all the relevant PI(s), the Chief Scientist Viviane Menezes vmenezes@whoi.edu and the project manager (Alison Macdonald (amacdonald@whoi.edu), so that everyone is aware of your interest(s).

Important: please be aware that only a graduate student-level salary can be provided.

Application Deadline: November 4, 2024, open until filled.

This is an excellent opportunity to gain experience in oceanic fieldwork, participate in the collection of full water column hydrographic data of the highest quality available globally, learn new skills, interact, learn from world-class scientists and technicians, and become a valuable member of a team.

Viviane Menezes, I09N Chief Scientist

Leah Chomiak, I09N Co-Chief Scientist

Alison Macdonald, US GO-SHIP Project Manager