



October 15, 2021

Greetings,

We are looking for early career scientists with experience in physical or chemical oceanography (hydrography) who would be interested in participating as **co-Chief Scientist** on the second leg of the decadal re-occupation of the U.S. GO-SHIP hydrographic long-line known as P02 (30°N in the Pacific). Leg 2 is ~4 weeks long (**June to July 2022**, dates to be finalized).

**Deadline for applications (see below for details): November 24, 2021**

#### **PARTICULARS:**

- We will be sailing on the **R/V Revelle** (<https://scripps.ucsd.edu/ships/revelle>)
- Chief Scientist – TBD
- Leg 2: 33 days (Honolulu to San Diego)
- U.S. GO-SHIP Contacts
  - PI: Lynne Talley [ltalley@ucsd.edu](mailto:ltalley@ucsd.edu) (she/her)
  - Project Manager: Alison Macdonald [amacdonald@whoi.edu](mailto:amacdonald@whoi.edu) (she/her)

The US GO-SHIP program collects data for global CO<sub>2</sub> and climate variability programs. The website is <http://usgoship.ucsd.edu>. Scripps Institution of Oceanography (UCSD) operates the NSF-funded portion of the US national program, which covers this upcoming 2022 cruise. The website of the international GO-SHIP (Global Ocean Ship-based Hydrographic Investigations Program) program is <http://go-ship.org>. GO-SHIP is part of the Global Ocean Observing System (GOOS) <https://www.goosocean.org/>. This will be the fourth occupation this line that was also sampled in 1993/94, 2003 and 2013.

#### **DUTIES:**

**Pre-cruise:** Assist Chief Scientist with pre-cruise planning as needed. Attend pre-cruise meeting if feasible, and by teleconference if not.

**At sea:** Co-Chief will be scientist-in-charge of 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 assisting with water sampling (directing operations (sample cop) and/or obtaining water parameter samples (e.g. salinity, nutrients); and assisting in at-sea data reviews, reports, and documentation. (See<sup>1</sup> below)

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

**SUPPORT:** Salary support for academic co-Chief Scientists will be negotiated, and is typically supplied via subawards from UCSD/SIO to the participant's institution (see<sup>2</sup> below). It typically covers time at-sea, in port, on travel, and several weeks of preparation. Travel will be paid by UCSD/SIO.

**WHO CAN APPLY:** The co-Chief positions are considered stepping-stones for early career scientists, but are also open to higher-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 Pacific Ocean, all are welcome to apply. If there are multiple qualified applicants for these positions, final selection will be made by the U.S. GO-SHIP Executive Council, in consultation with the Chief Scientist and Principal Investigators.

**HOW TO APPLY:** P02 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 North Pacific oceanography. To join us at-sea for some hard work that will lead to a rewarding experience getting to the subtropical North Pacific first hand. Email letters of application to Alison Macdonald ([amacdonald@whoi.edu](mailto:amacdonald@whoi.edu)) who will forward them to the chief scientist once they are named.

**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 24, 2021**

The cruise is a month 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. Candidates should think carefully before applying if they are prone to motion sickness, and should be free of pre-existing conditions requiring medical care that could flare up during a long period far from ports.

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<sup>1</sup> **Further details on cruise activities:** The Data and Cruise Report from the previous P02 occupation in 2013 can be found at <https://cchdo.ucsd.edu/cruise/318M20130321>. At-sea weekly reports as well as blog posts from the most recent U.S. GO-SHIP cruise A20/A22 can be found on at <https://usgoship-a20-a22-2021.blogspot.com/> and <https://usgoship.ucsd.edu/news/>, respectively. Station stops are planned every ~55 kilometers (closer over steep topography and near coasts) where the 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 ( $\text{SF}_6$ ), dissolved oxygen, salinity, and nutrients. While the ship is both underway and on station it continuously pumps surface seawater through sensors for temperature, salinity, and partial pressure of  $\text{CO}_2$ ; operates 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. We also deploy floats and drifters along the track as requested.

<sup>2</sup> **Financial support** for the co-Chief Scientist is provided through an NSF grant to UCSD/SIO, coordinated by [Lynne Talley \(ltalley@ucsd.edu\)](mailto: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 co-chief scientist should never exceed  $(2.5 * D / 30)$  months (where D = number of days at sea), and in general will be less than this amount, in many cases much less (typically 1.5, respectively), 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 U.S. contribution to international GO-SHIP <https://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 OceanOps (<https://www.ocean-ops.org/board>).

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

You can find data and cruise reports from previous P02 occupations at:

<https://cchdo.ucsd.edu/search?q=P02>

Section-based graphics and maps from WOCE are available from the online Pacific Ocean Atlas at [http://whp-atlas.ucsd.edu/pacific\\_index.html](http://whp-atlas.ucsd.edu/pacific_index.html)

Further questions can be directed to **Alison Macdonald** ([amacdonald@whoi.edu](mailto:amacdonald@whoi.edu)).