



18 August 2017

Greetings,

We are looking for students to participate in a coast-to-coast hydrographic cruise (~67 days duration) during the boreal spring of 2018 in the Pacific sector of Southern Ocean on the RVIB N.B. Palmer of the US Antarctic Program (USAP), as part of US GO-SHIP.

Deadline for applications (see below for details): September 22, 2017.

US GO-SHIP (Global Ocean Ship-based Hydrographic Investigations Program) collects data used by global CO₂ and climate variability programs, among others. The website is <http://usgoship.ucsd.edu>. Scripps Institution of Oceanography (SIO, UCSD) operates the NSF-funded portion of the US national program, which covers this upcoming 2018 cruise. The international GO-SHIP website is <http://go-ship.org>.

US GO-SHIP pays all travel costs. It also pays student support costs during the time of the cruise plus the few travel days before and after the cruise, if and only if, the student is enrolled at a U.S. institution. Non-students can apply. However, they can only receive the equivalent of SIO student support.

SPECIFICS:

- 67 days at sea, USAP's RV N.B. Palmer, currently scheduled in the timeframe 3/9/18–5/14/18 (*Dates and ports can change during final ship scheduling.*)
- Port of Departure: Hobart (Tasmania, Australia)
- Port of Arrival: Punta Arenas (Chile)
- Chief scientist Alison Macdonald (WHOI)
- The S04P expedition will occupy a zonal line along ~67°S from 168°E to 70°W with 4 short meridional lines onto the Antarctic Shelf.

We are seeking a total of 6 students:

- **4 students for CTD/deck operations** (typically PO background),
- **1 student for LADCP operations** (typically PO background), and
- **1 student to assist with chlorofluorocarbon (CFC) analysis** (typically chemistry background)

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Important Notes:

- This cruise is one, very long (67-day) leg in the Southern Ocean. It will be cold. Bad weather and rough sea states are expected as storms regularly roll through every 4 to 6 days. Please do not apply if you know that you are subject to incapacitating seasickness that medication will not control.
- A valid passport and appropriate visa are required for participation in the cruises. U.S. citizenship is not required. Strict US Antarctic Program Medical Standards apply.
- Graduate students in good standing at US institutions will be given preference. Undergraduates and postdocs may also apply.

Duties: The repeat hydrography cruises operate 24/7 with 12-hour shifts. CTD student duties include operating the CTD and rosette bottle system both on deck and in the lab, drawing and documenting water samples, and working on data quality control and analysis alongside the chief and co-chief scientists. You may also be asked to assist other science groups and to contribute to the cruise blogs. The LADCP student will ensure that the LADCP is operating on each station and do preliminary data processing; the student will otherwise be part of the CTD student operation; training prior to the cruise will be provided. The CFC student will collect CFC samples and perform onboard CFC analysis as part of the CFC science team.

If interested

(1) **Talk to your advisor** to be sure that this activity will work with your program.

(2) **Contact us:**

- a. **CTD students:** Please contact Lynne Talley (ltalley@ucsd.edu) – co-chair U.S. GO-SHIP Executive Council, and/or Alison Macdonald (amacdonald@whoi.edu) – chief scientist of the cruise, to let us know that you are contemplating applying, and to get more information if you have questions.
 - b. **CFC students:** Please contact Mark Warner (warner@uw.edu) – CFC PI for S04P, and/or the chief scientist, Alison Macdonald (amacdonald@whoi.edu).
 - c. **LADCP students:** Please contact Andreas Thurnherr (ant@ldeo.columbia.edu) and/or the chief scientist, Alison Macdonald (amacdonald@whoi.edu).
 - d. Please let chief scientist, Alison Macdonald (amacdonald@whoi.edu) know if you decide to apply for more than one position
- (3) **If you decide to apply** – please send a cover letter indicating your interest and a few sentences on what you hope to get out of the cruise, along with a CV (include your academic program, your advisor's name and contact information, the type of research you are carrying out if you are at that stage, as well as any prior cruise experience).

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Applications received by the deadline will have precedence. Initial decisions will be made by October 20, 2017 and the first requests for participation will be sent out the following week. We will ask for a quick response so that others may be given the opportunity if an invited student is unable to participate.

Here is your chance to see the open ocean first hand by participating in the collection of full-depth high-accuracy hydrographic observations that will be used to investigate the changing ocean. It will not only be an interesting and useful experience, but also a unique opportunity to visit the Southern Ocean and Antarctic Shelf, catch a selfie with an iceberg, see the Southern Cross and make that all important dash to the portside to see a penguin. So whether or not you already have sea-going experience, we encourage you to consider coming along.

Looking forward to hearing from you,

Lynne Talley and Gregory C. Johnson (co-chairs U.S. GO-SHIP Executive Council)

Alison M. Macdonald (2018 S04P chief scientist)



RVIB N. B. Palmer. Image from <https://iceshelf.wordpress.com/2010/01/>

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