We are looking for students to participate in a hydrographic long-line cruise (6 weeks) in **December 2021 - March 2022 (dates to be finalized)** on the GO-SHIP (https://usgoship.ucsd.edu and http://www.go-ship.org) decadal re-occupation of the hydrographic section **A13.5 in the Atlantic Ocean**. (This 2021-2022 cruise is actually a re-occupation following a truncated A13.5 in 2020, due to COVID-19.)

Deadline for applications (see below for details): May 31, 2021

PARTICULARS:

- We will be sailing on the **NOAA Ship Ronald H. Brown**
- Chief Scientist – Dr. Denis Pierrot (NOAA/AOML) denis.pierrot@noaa.gov
- 45 days, departing from Cape Verde and returning to Cape Town (South Africa).

The US GO-SHIP program collects data for global CO_2 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 2021 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/.

US GO-SHIP pays all travel costs. It also pays student salary/tuition 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.

We are seeking 2 students for CTD/deck operations (typically PO background), 1 student to assist with CFC analysis (typically chemistry background), and 1 student to assist with LADCP (Lowered Acoustic Doppler Current Profiler) operations, so a total of 4 students.

NOTE that dates and ports can change during final ship scheduling, but any such changes are usually minor.

A valid passport and appropriate visa are required for participation in the cruises. U.S. citizenship is not required.

If you have any interest:

(1) **CTD students:** Please contact Lynne Talley (ltalley@ucsd.edu) - co-chair U.S. GO-SHIP Executive Council, or the Chief Scientist of the cruise (see below for email), to let us

know that you are contemplating applying, and to get more information if you have questions.

CFC students: Please contact CFC PI Rolf Sonnerup (Rolf.Sonnerup@noaa.gov)

LADCP students: Please contact LADCP PI Andreas Thurnherr (ant@ldeo.columbia.edu)

(2) Talk to your advisor to be sure that this will work with your program.

(3) After that, if you want to proceed - please send a cover letter indicating your interest and information about your background (CV, include the academic program you are part of, who your advisor is, what kind of research you are carrying out if you are at that stage, any prior cruise experience).

Graduate students in good standing at US institutions will be given preference. Undergraduates and postdocs (though only student salary covered) may apply too. Students from institutions outside the US are welcome to apply, however we cannot cover their salary, but only the travel costs.

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 CFC student will collect CFC samples and perform onboard CFC analysis as part of the CFC science team. The LADCP student will receive training prior to the cruise at Lamont-Doherty Earth Observatory and will be responsible for LADCP operations.

This is a great opportunity to get out to sea, participate in collecting hydrographic data down to the bottom of the ocean at the very highest reference standards of accuracy, to get started or continue looking at phenomena that interest you. It will be an interesting and useful experience whether or not you've got experience at sea thus far, and we encourage any of you to consider coming along.

Thanks,

Denis Pierrot
(chief scientist for A13.5, denis.pierrot@noaa.gov)

Lynne Talley and Gregory C. Johnson

(co-chairs U.S. GO-SHIP Executive Council)