

Ahoy land-dwellers!

The third occupation of the Global Ocean Ship-Based Hydrographic Investigation Program (GO-SHIP) I09N line ("I" for Indian Ocean) is underway and has just completed its first week. During the next 5 weeks we will occupy over 100 stations, closely following the station planning of the last two I09N cruises.

Most of the equipment we will use was already set up for the previous GO-SHIP cruise, I08S, and so, most of the science crew were able to enjoy some time off in Fremantle/Perth (Australia) prior to our departure. We did have a new group from the Bigelow laboratory setting up equipment. They are going to be measuring trace metals as well as a whole suite of biological parameters (genomics, phytoplankton abundance, nutrient uptake, etc) both from underway samples and Niskin samples, through filtration and incubation experiments. All their hard work will add an exciting new set of biological data to this GO-SHIP line.

Prior to departure, a lot of time was devoted to extensive testing of the winch system (called CAST 6) to make sure the cable would not be experiencing too high tensions during deployment and recovery. This winch is responsible for safely taking our equipment into depths of up to 6000m. The rosette (aka CTD) represents the core of our sample operations. It has 36 10-l bottles which collect water at depths of our choosing, from the ocean floor to the surface. From these bottle we collect samples to analyze a wide variety of parameters, ranging from oxygen concentration, pH, and salinity, to lesser known parameters like colored dissolved organic matter or nitrogen isotopes.



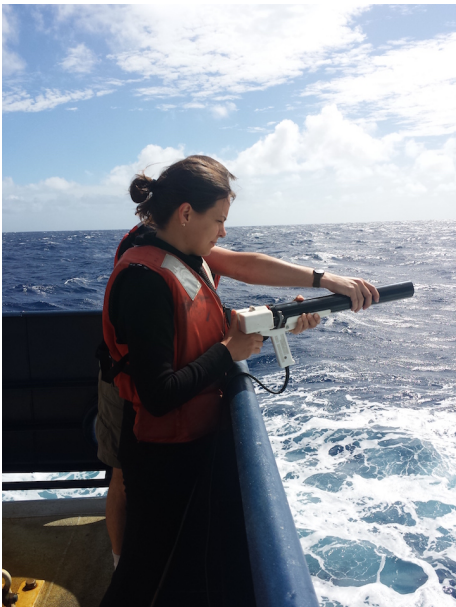
CAST 6 and rosette ready for test station

During our 4-day steam to reach our first station, our CTD-watch standers were trained on CTD console procedures. Some of us also received training on how to operate the A-frame and winch that are being used for the trace metal casts. Because the concentration of these metals in seawater is extremely low, samples cannot be obtained from the Niskins on the rosette (which is made of metal) and need to be obtained from special Niskin bottles, using a non-metal cable.



CTD-watch students are trained on console protocols and A-frame operations. Pictures courtesy of Patrick Mears

While underway our students helped launch XBTs every day. These are expendable bathythermographs that provide a profile of temperature and salinity. There was a bit of discussion on whether they should be called “launches” or “shootings” just based on the deployment system.



Karina Khazmutdinova launches XBT with the help of Brent Devries. Picture courtesy of L. Barbero

So far we have not seen a lot of wildlife other than flying fish, but we are already warning everyone to wake us up should whales or sharks decide to come out and play close to our ship while we are sleeping. Here's hoping!

We are having good weather and relatively calm seas (knock on wood) and are making good speeds in between stations. Right now we are at 21.32°S, 95.00°E doing station 096. Everyone is in good spirits and work is progressing smoothly.

Onwards!
Carmen and Leticia, chief-scientists I09N