

A13.5 2024 Cruise Update: Part 1 of 7

Greetings from the eastern Atlantic! We are currently on day 8 of our 8-day transit to our first CTD station in the Gulf of Guinea. It has been a long transit, but we are excited to start doing stations very shortly.

GO-SHIP A13.5 officially started on February 1st at approximately 09:30 LT, when the *R/V Marcus G. Langseth* left port from Porto Grande, Cabo Verde. This is the third attempt at a re-occupation of A13.5, following curtailed cruises in 2020 and 2022. The last time this line was occupied was 2010, so we were all very thankful that the departure from Cabo Verde proceeded according to plan. One minor hiccup was a Covid case discovered on board, but the affected person quarantined for five days, and following that period the entire ship was re-tested and given a clean bill of health. On our first day out, we were even accompanied by a pod of dolphins, which are traditionally understood as a sign of good fortune!

Although we boarded the ship on January 31st, mobilization began much earlier. One of the challenges and opportunities of this cruise is to figure out how to incorporate all of our hydrographic procedures and measurements onto the *Langseth*, which is primarily a seismological survey ship. In particular, due to limited space and concerns of flooding on the main deck, we are not utilizing laboratory vans for this cruise, instead moving instruments from the DIC and transient tracer (e.g., CFCs) groups into one of the ship's laboratory spaces. In order to set everything up, our primary mobilization period occurred from January 8-12 in Norfolk, VA. We found this relatively lengthy and domestic shore-side mobilization to be crucially important for making final decisions on laboratory spaces in what was, to all of us, an unfamiliar space.



Normally in dedicated lab vans, the DIC and transient tracer groups moved their equipment into a lab space on the Langseth. DIC analyst Chuck Featherstone (NOAA/AOML) working at the computer. Photo by Zach Erickson (NOAA/PMEL)

For most on the ship, the pace of life these past 7 days has been rather calm. In order to save time on the transit (and preserve a weather day for the southern portion of the line), we are taking the shortest path to our first station. This takes us through many countries' Exclusive Economic Zones (EEZs), in which we do not have permission to record measurements. Therefore, rather than our usual intensive underway sampling procedure, only a few groups are taking sparing underway samples during those times when we find ourselves in international

waters. The CTD team has, however, been busy with the herculean task of setting up the deck of the ship and the hydrographic survey equipment for intensive use. We have conducted a number of CTD test casts along the way to make sure we are well prepared when stations begin! Others have found time to explore the ship, make final modifications to laboratory arrangements, decorate BGC-Argo floats, tour the ship's engine room, and start the cruise blog (check it out at <https://www.go-bgc.org/expedition-logs/south-atlantic-2024>)!



BGC-Argo float decorating party – from left to right, Kristian Furnes (U. Oslo), Daniel Sandborn (Large Lakes Observatory), Jesse Anderson (Earth & Space Research), Eva Jundt (TAMU), and Max Pacatte (UCSB). Photo by Teresa Kennedy (UT Tyler/URI).

The second week of our cruise will begin with a bang – our first few stations are on the continental shelf and slope, and then we start our shortened spacing ($1/3^\circ$) near the equator. However, we have had fair winds and calm seas since departure, and are hoping for more of the same as we start moving our way south down the line.

Until next week,
Zach and Jesse

Feb. 8, 2024



Ian Smith (AOML/CIMAS; left), Christian Saiz (AOML/CIMAS; center), and Koray Ergun (Langseth technician; right) recovering the CTD during a test cast. Photo by Zach Erickson.