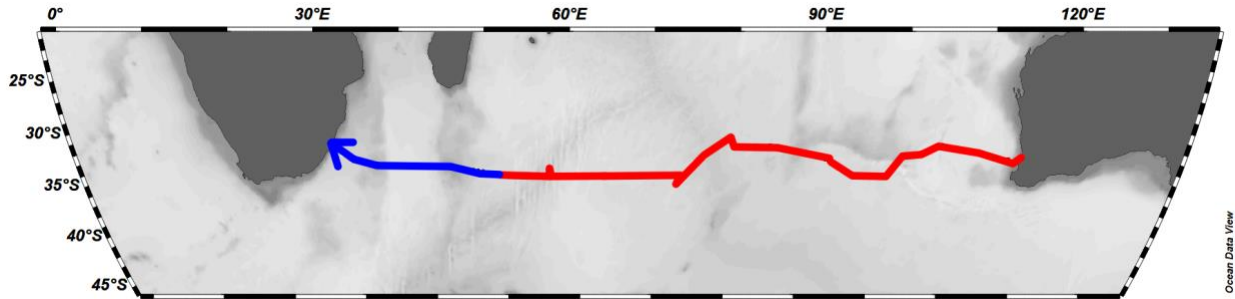


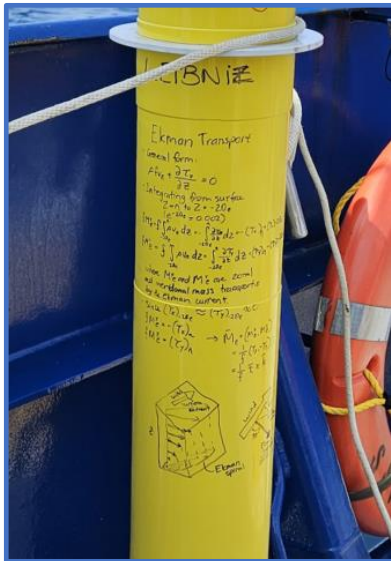
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A map of our planned cruise track with the completed stations covered in previous weeks with a red line and completed since the last update with a blue line.

Highlights

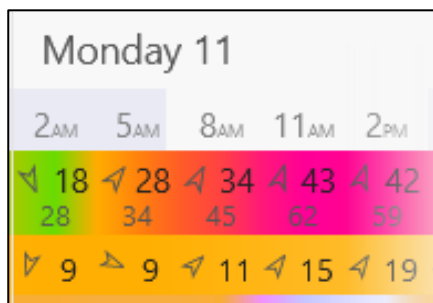


- 196 stations (49 new) completed with 43 stations with biological measurements, with the new bio measurements from separate casts.
- 15 floats (4 new) and 22 drifters (4 new) deployed: 2 SQUID floats, 2 biogeochemical Argo floats (*Leibniz* and *Wildcats*), 2 “Directional Wave Spectra Barometric Drifters” (DWSBDs) and 2 NOAA drifters.
- [I05 blog](#)

The Leibniz float—named after a great thinker and one of the progenitors of calculus—was adorned by Kirsten Petzer with a derivation of Ekman transport. Ekman transport explains one of the stranger aspects of ocean circulation (why the surface ocean rarely moves in the direction that the winds blow)... a delightfully nerdy tribute to a philosopher, oceanography, and a high school. Photo by Aurélie Moulin.

We recently retrieved the rosette from station 196 and began our ~three-day-long transit to Cape Town. This marks the successful completion of our planned science mission aside from the underway measurements over the next few days of transit. Many of us are exhausted, missing loved ones, and out of chocolate/comfort-foods, but we’re also excited to begin winding down the cruise and proud of our hard work over the last month and a half. We still have more work in front of us—finishing up measurements, quality controlling the newest data, packing up gear, shipping everything home, and cleaning our up our living and working spaces for the next cruise—but there’s a large measure of satisfaction in knowing we’ve accomplished so many of our most challenging and uncertain cruise goals.

As a quick debrief on the last week: We managed to finish out the stations despite some challenging conditions. The ~3 knot Agulhas Current made the final few deployments tricky, and strong and variable winds were kicking up a confused sea state with waves also coming up from nearby storm systems. At times we slowed things down by sampling on station because waves were jumping the rails while we were underway (our seawater sampling team is more exposed when they are tapping the sample



bottles). Fortunately, we had banked enough time for this precaution and to ensure that the teams had a chance to thoroughly sample the Agulhas current. A new southerly system is likely to hit us early on our return trip, and the forecast has, for days, seemed determined to remind us of our cutoff time to make it back to meet the pilot outside of Cape Town:

Our schedule decreed and nature agreed: finished or not, on Monday at 7 AM it would be time to head to Cape Town.

A note of gratitude

I wanted to use the rest of this short update to offer my sincere thanks to all involved. The science team has been hard working, competent, good natured, and great company throughout this long time at sea. The crew of the R/V Roger Revelle has also shown their dedication throughout, demonstrating an exceptional degree of professionalism and competence while making us feel welcome and keeping us safe aboard the vessel. Then there were numerous people on land who helped us by providing cruise coordination, advice, troubleshooting, and simple encouragement. It is deeply humbling to be a part of an international effort with contributions from so many people working together to document changes on a planetary scale. You all have my thanks for making this important work possible and most often enjoyable.

The last update will be a debrief on the transit and the demobilization process, and, if everything goes to plan, it will be quite short.

Sunrise on our last day of sampling, dramatically showing off the dusty winds blowing from South Africa and Madagascar. After this long at sea, dust is a novelty.

